

USER MANUAL

QUICRUN

Brushed Electronic Speed Controller
1625 • 1060 • 860 20160612



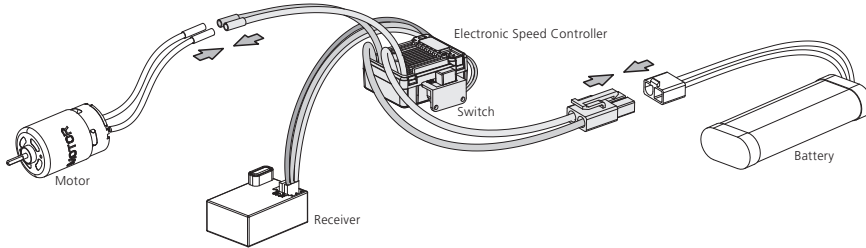
Congratulations and thanks for purchasing Hobbywing QUICRUN series electronic speed controller (ESC) for brushed motor. The power system for RC model can be very dangerous, so please read this manual carefully. Since we have no control over the installation, application, use or maintenance of this product, in no case shall we be liable for any damages, losses or costs.

01 Features

- Water-proof and dust-proof, suitable for all-weather condition races.
- Small size with built-in capacitor module.
- Three running modes: Fwd/Br, Fwd/Rev/Br and Fwd/Rev, fits for various vehicles.
Note 1: Fwd=Forward, Br=Brake, Rev=Reverse.
Note 2: QUICRUN-WP-1625-BRUSHED ESC only has the Fwd / Rev / Br mode.
- Great current endurance capability.
- Great built-in BEC output capacity.
- Automatic throttle range calibration, easy to use.
- Easy to set the ESC parameters with jumpers.
- Multiple protections: Low voltage cut-off protection for battery / Over-heat protection / Throttle signal loss protection.

02 Begin to Use the New Brushed ESC

1 Connections



Turn off the ESC switch, wire the battery, motor, ESC, servo, receiver according to the following diagram. Recheck the wiring to ensure all connections are correct before getting into the next step.



- 1) Once the power is wrongly connected (that means the battery polarity is mistakenly reversed), irreparable damage may occur to the ESC and batteries. Therefore, please pay close attention to the battery polarity.
- 2) Please swap the two wire connections if the motor rotate in the opposite direction.

Specifications

Model	QuicRun-WP-1625-BRUSHED	QuicRun-WP-1060-BRUSHED	QuicRun-WP-860-DUAL-BRUSHED
Fwd. Cont. / Peak Current	25A/100A	60A/360A	60A/360A
Rev. Cont. / Peak Current	25A/100A	30A/180A	30A/180A
Voltage Range	2-3S Lipo or 5-9 NiMH		2-4S Lipo or 5-12 NiMH
Cars Applicable	1/18 & 1/16: Touring Car, Buggy, Monster, Truggy	1/10: Touring Car, Buggy, Short Course Truck, Monster, Truggy, Rock Crawler and Tank	1/8: Touring Car, Buggy, Short Course Truck, Monster, Truggy, Rock Crawler and Tank
Motor Limit	2S Lipo or 6 NiMH: 280, 370 or 380 Size Motor: RPM<30000 @7.2V 3S Lipo or 9 NiMH: 280, 370 or 380 Size Motor: RPM<20000 @7.2V 4S Lipo or 12 NiMH: Not Available	540 or 550 Size Motor: >= 12T or RPM<30000 @7.2V 540 or 550 Size Motor: >= 18T or RPM< 20000 @7.2V	540, 550, 775 Size Motor: >= 12T or RPM<30000 @7.2V 540, 550, 775 Size Motor: >= 18T or RPM<20000 @7.2V 540, 550, 775 Size Motor: >= 24T or RPM<15000 @7.2V
Resistance	Fwd 0.003 Ω, Rev 0.003 Ω	Fwd 0.001 Ω, Rev 0.002 Ω	Fwd 0.001 Ω, Rev 0.002 Ω
BEC Output	1A / 6V (Linear Mode)	3A / 6V (Switch Mode)	3A / 5V (Switch Mode)
Dimension / Weight	34x24x14mm / 23.5g	36.5x32x18mm / 39 g	46x36x26.3mm / 73g
Cooling Fan		Without cooling fan	With cooling fan. It is supplied from receiver.
Running Modes	Forward / Reverse / Brake	Forward / Reverse / Brake, Forward / Brake, Forward / Reverse	Forward / Reverse / Brake, Forward / Brake, Forward / Reverse, Boat

*Note: WP-860-DUAL-BRUSHED has two outputs to drive 2 motors. When driving 2 motors simultaneously, the Turns of the motors need to be increased.

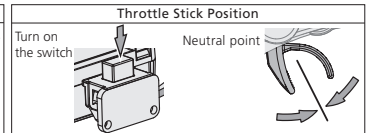
2 Set the Throttle Range

Turn on the transmitter, and set parameters (of the throttle channel) like "D/R", "EPA", "ATL" to 100% (if there is no LCD display on the transmitter, please adjust the corresponding knob to its limit). Set the throttle trim to 0 (if there is no display, then adjust the knob to the neutral position). For FUTABA™ and similar transmitters, set the throttle direction to "REV", while the throttle direction of others to "NOR". Please disable the built-in ABS brake function in your transmitter.

Besides, we strongly recommend users to enable the "Fail Safe (F/S)" function of the transmitter, set the "F/S" of the throttle channel to the Shutdown mode or set the protection value to the neutral position, so the car can be stopped if the receiver fails to get the radio signals from the transmitter.

Calibrate the throttle range: Turn on the ESC switch, set the throttle stick to the neutral point and then wait 3 seconds for the completion of throttle range self-calibration; Beep sound emits if the self-calibration is successfully passed, then the ESC is ready to run.

The Meaning of Beep Sound	LED Status (in Running)
• 1 short Beep: The battery is NiMH	• When the throttle stick is in neutral range, red LED is off
• 2 short Beeps: The battery is 2S Lipo	• Partial throttle forward, partial brake or partial reverse, red LED blinks
• 3 short Beeps: The battery is 3S Lipo	• Full throttle forward, maximum brake or full throttle reverse, red LED is solid on
• 4 short Beeps: The battery is 4S Lipo	
• 1 long Beep: Self-test and throttle range calibration is OK, the ESC is ready to run.	



03 Set the ESC Parameters

How to Set Parameters:

1. QUICRUN-WP-1625 / 1060-BRUSHED ESC uses the jumper cap to set running mode & battery type. (Note: The "running mode" is not programmable for the QUICRUN-WP-1625-BRUSHED ESC.)

Way to set: We suggest users use the tweezers to set parameters by plugging / unplugging the jumper cap (as shown in the picture beside); For example, if want set the battery type to the "Lipo" mode, you only need to plug the jumper cap into left two pins of the battery pin header.

2. QUICRUN-WP-860-DUAL-BRUSHED ESC uses the dial switch to set running mode & battery type.

Way to set: recommend using the tweezers to set parameters by flipping the DIP switch (for detailed explanation, please refer to the following picture); if want to set the battery type to the "Lipo" mode, you only need to flip the battery dial switch to the left position.

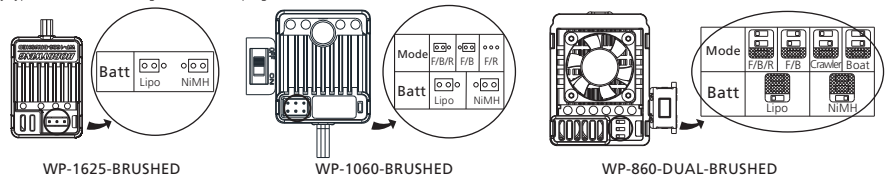
Programmable Items

1. **Running Mode:** 3 Options (Fwd / Br / Rev, Fwd / Br, Fwd / Rev). The "Fwd / Br / Rev" is the default option. Fwd=Forward, Br=Brake, Rev=Reverse

"Fwd / Br / Rev" mode indicates the vehicle can go forward, backward and brake. This mode uses "Double-click" method to make the vehicle reverse. When moving the throttle stick from the neutral zone to backward zone for the 1st time, the ESC begins to brake the motor and the motor slows down but still running, so the backward action is NOT performed immediately. When the throttle stick is moved to the backward zone again, if the motor speed slows down to zero (i.e. stopped), the backward action will happen. This "Double-click" method prevents mistakenly reversing action when the brake function is frequently used in steering. Therefore, this mode is often used in daily practice. For the "Fwd / Br" mode, the vehicle can go forward and brake, but no reversing, so this mode is often used in competitions. And the "Fwd / Rev" mode uses "Single-click" method to make the vehicle reverse, when moving the throttle stick from neutral zone to backward zone, the vehicle reverses immediately, so this mode is usually used for rock crawler. (Note: WP-1625-BRUSHED has no optional running mode except the default "Fwd / Br / Rev" mod.)

"Boat" mode: this mode used some brand-new algorithm that is specially designed for RC boats. (Only the WP-860-DUAL-BRUSHED ESC has this option in its programmable items.)

2. **Battery Type:** 2 Options (Lipo, NiMH), the "Lipo" is the default option.



04 Protection Features

1. **Low Voltage Cutoff Protection:** If the voltage of battery pack is lower than the threshold for 2 seconds, the ESC will enter the protection mode, so the motor speed will be lowered (when voltage is lower than the 1st trigger point) till stopped (when voltage is lower than the 2nd trigger point). When the car stops, the red LED blinks to indicate the low voltage cut-off protection has been activated.

2S Lipo	3S Lipo	4S Lipo	5-9 NiMH
When the voltage is below 6.5V, the output power will be halved. When the voltage is lower than 6.0V, the output will be cut off and won't be resumed again.	When the voltage is below 9.75V, the output power will be halved. When the voltage is lower than 9.0V, the output will be cut off and won't be resumed again.	When the voltage is below 13.0V, the output power will be halved. When the voltage is lower than 12.0V, the output will be cut off and won't be resumed again.	When the voltage is below 4.5V, the output power will be halved. When the voltage is lower than 4.0V, the output will be cut off and won't be resumed again.

Note: when setting the WP-860-DUAL-BRUSHED ESC to the "Boat" mode, the motor will stop running when the LVC protection is activated. Please move the throttle stick to neutral position, after that the motor can be started up again but the output power will be halved.

2. **Over-heat Protection:** When the internal temperature of the ESC is higher than 100 Celsius degrees, this protection will be activated and the output power will be reduced till cut off. The RED LED blinks when the vehicle stops, and the ESC will not resume output power until its temperature is below 80 Celsius degrees.

3. **Throttle signal loss protection:** The ESC will cut off the output power if the throttle signal has been lost for 0.1 second. The "Fail Save" function of the radio system is strongly recommended to be activated.

05 Troubleshooting

Troubles	Possible Causes	Solutions
After power on, no LED lights up, no self-test and no beep sound.	No power is drawn to the ESC; The switch of the ESC is broken.	Check the connections between battery and ESC. Re-solder the connectors if needed; Change the ESC switch.
After turn on, the RED LED blinks but the motor doesn't work.	Throttle wire is wrongly plugged or into the incorrect channel; The ESC can't successfully complete the throttle range self-calibration.	Plug the throttle signal wire correctly (in right direction) into the throttle channel (usually Ch2) of the receiver; Set the "TRIM" of throttle channel to 0 or turn the knob to its neutral position.
The car runs backwards when accelerating forward on the transmitter.	The direction setting of the throttle channel is incorrect in the transmitter or the motor wires are wrongly connected.	Reverse the direction of the throttle channel, from the original "NOR" to "REV" or "REV" to "NOR"; Swap the wires between the ESC and motor.
The vehicle can't reach to the full speed even at the full throttle, and the RED LED doesn't keep lighting.	There are some incorrect settings in the transmitter.	Set D/R, EPA, ATL to 100% for the throttle channel or turn the knobs to maximum value. Set TRIM to 0 or turn the knob to its neutral position.
Vehicle can't reverse.	The corresponding jumper is plugged into the wrong position; Neutral point of the throttle is drifted or deviated.	Insert the jumper into the right location; Set the "TRIM" of the throttle channel to 0 or turn the knob to its neutral point.
Motor suddenly stops running.	The throttle signal is lost; The low voltage cutoff protection or thermal protection (i.e. over heat protection) of the ESC is activated.	Check the connections between ESC and receiver. Check the transmitter and receiver). Check whether the battery voltage of the transmitter is too low; The RED LED on the ESC blinks, denoting the ESC is under low voltage cutoff protection or over-heat protection. Please check the ESC temperature, if it is too hot, please let the ESC cool down. If the battery voltage is low, please change the battery.
The vehicle neither go forward no reverse, but the LED indicators work normally.	The connection between ESC and motor is interrupted; The motor is damaged.	Check the connectors between the motor and ESC to ensure all connections are firm and reliable; Replace a new motor.
The motor accelerates rapidly at the startup moment, but has lockout or cogging problem.	The discharge capacity of the battery is not strong enough; The motor rotates too fast, and the gear ratio is too aggressive; Something wrong with the driveline of the vehicle.	Change a battery with better discharge capability; Use a motor with lower RPM, or smaller pinion to soften the gear ratio; Check the driveline of the vehicle.

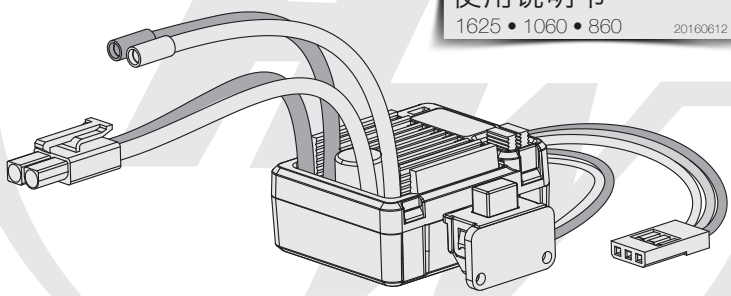


感谢您购买 HOBBYWING 公司 QUICRUN(酷跑)有刷车用电调调速器!由于模型动力系统功率强大,错误的使用可能造成人身伤害和设备损坏。我们强烈建议您在使用设备前仔细阅读本说明书,并严格遵守规定的操作程序。我们不承担因使用本产品而引起的任何责任,包括但不限于对附带损失或间接损失的赔偿责任;同时,我们不承担因擅自对产品进行修改所引起的任何责任。我们有权在不经通知的情况下变更产品设计、外观、性能及使用要求。

QUICRUN

车用有刷电子调速器 使用说明书

1625 • 1060 • 860 20160612

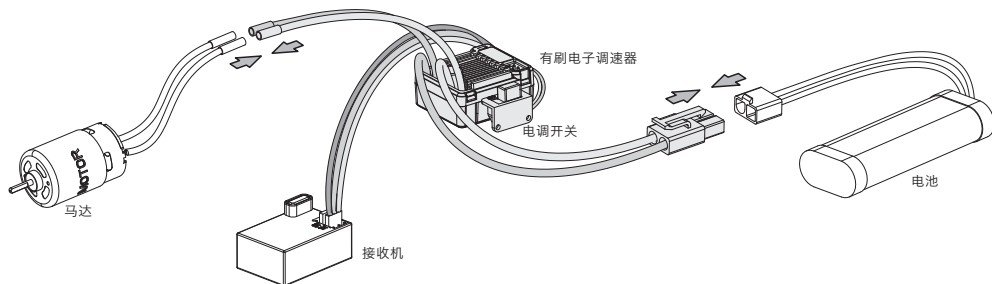


01 产品特点

- 一体式设计(内置电解电容),完全防水防尘,适应各种气候环境;
- 具有“单向 / 双向 / 攀爬”三种运行模式,适用各种车型;
备注: QUICRUN-WP-1625仅有双向运行模式;
QUICRUN-WP-860-DUAL除上述三种模式之外,还具有船用模式。
- 高品质用料,具有强大的耐电流能力;
- 强大的BEC输出能力,超越其他竞争产品;
- 自动油门行程校准,简便易用,尤其适合新手;
- 采用跳线帽设置电调参数,简单明了;
- 具有锂电低压保护、过温保护、油门信号丢失保护等多重保护功能。

02 首次使用车用有刷电子调速器

1 连接电子调速器



1. 此电调不具备电源反接保护功能。如果电源反接,瞬间将可能对电调及电池造成不可恢复的损坏,请使用时特别注意电池极性。建议使用具有防呆功能的电池插头。
2. 若电机转向不对,请将电机两条线互换。

产品规格

型号	QUICRUN-WP-1625-BRUSHED	QUICRUN-WP-1060-BRUSHED	QUICRUN-WP-860-DUAL-BRUSHED
正向: 持续电流/峰值电流 反向: 持续电流/峰值电流	25A/100A 25A/100A	60A/360A 30A/180A	60A/360A 30A/180A
支持电压范围	2-3节锂电(Lipo)或5-9节镍氢(NiMH)电池		
主要适用车型	1/18及1/16: 电房、电越、大脚车、卡车	1/10: 电房、电越、短卡、大脚车、卡车、攀爬车、坦克	1/8: 电房、电越、短卡、大脚车、卡车、攀爬车、坦克
支持电机	2节锂电或6节镍氢 3节锂电或9节镍氢 4节锂电或12节镍氢	540或550尺寸电机: ≥12T或RPM低于30000@7.2V 540或550尺寸电机: ≥18T或RPM低于20000@7.2V	540、550、775尺寸电机: ≥12T或RPM低于30000@7.2V 540、550、775尺寸电机: ≥18T或RPM低于20000@7.2V 540、550、775尺寸电机: ≥24T或RPM低于15000@7.2V
内阻(单桥臂)	正转: 0.003Ω, 反转: 0.003Ω	正转: 0.001Ω, 反转: 0.002Ω	正转: 0.001Ω, 反转: 0.002Ω
BEC 输出	1A / 6V (线性稳压模式)	3A / 6V (开关稳压模式)	3A / 5V (开关稳压模式)
尺寸 / 重量	34x24x14mm / 23.5 克	36.5x32x18mm / 39 克	46x36x26.3mm / 73 克
风扇工作电压		无风扇	有风扇, 风扇从接收机取电
运行模式	双向	单向 / 双向 / 攀爬	单向 / 双向 / 攀爬 / 船用

备注: QUICRUN-WP-860-DUAL-BRUSHED具有2对电机输出线,可驱动2个电机。当同时驱动两个电机时,所支持的电机T数需要增加。这种情况常见于低速双电机攀爬车。

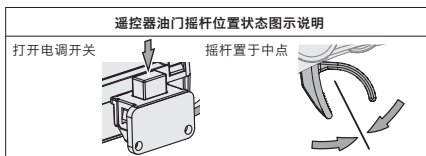
2 设定油门行程

打开遥控器,将油门通道的“D/R”、“EPA”、“ATL”等参数调到100%(如遥控器无显示屏,则将对应旋钮调到最大位置),油门通道的中点微调“TRIM”调为0(如遥控器无显示屏,则将对应旋钮调到中间位置)。FUTABA及类似的遥控器需要将油门通道方向设为“REV”,其它品牌遥控器的油门通道方向应设为“NOR”。

我们强烈建议开启遥控器的失控保护功能,将遥控器油门通道的无信号保护(“F/S”)功能设置为关闭输出方式或将保护值设置为中点位置,使得当接收机无法收到遥控器信号后,电机能够停止运转。

打开电调开关,将遥控器油门摇杆置于中点位置,等待电调自检和自动油门校正过程结束(3秒内完成),听到自检成功鸣音后即可正常运行。

电池节数及自检鸣音说明	行驶过程中指示灯(LED)状态说明
• 鸣叫1声短音,表示镍氢镍镉电池。 • 鸣叫2声短音,表示2S锂电。 • 鸣叫3声短音,表示3S锂电。 • 鸣叫4声短音,表示4S锂电。 • 鸣叫1声长音,表示油门自检校准成功。	• 当油门摇杆处于中点区域时,红色LED熄灭。 • 非全油门前进、刹车、倒车时,红色LED闪烁。 • 全油门前进、刹车、倒车时,红色LED恒亮。



03 参数设定和编程项目说明

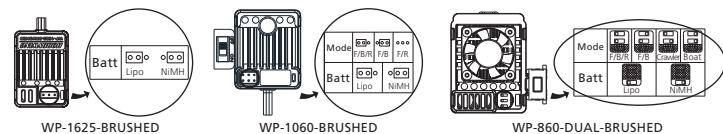
参数设定方式:

1. QUICRUN-WP-1625 / 1060-BRUSHED采用跳线帽设定方式,可以设置运行模式及电池类型(注:1625无“运行模式”设置项)。

设置方法:建议使用镊子并参考下图标示,拔插跳线帽来设置参数;如您想把电池类型设为“锂电”模式时,只需把跳线帽插入电池排针的左侧两PIN即可。

2. QUICRUN-WP-860-DUAL-BRUSHED采用拨码开关设定方式,可以设置运行模式及电池类型。

设置方法:建议使用镊子并参考下图标示,拨动拨码开关来设置参数;如您想把电池类型设为“锂电”模式时,只需把电池拨码开关拨至左侧位置即可。



编程项目说明:

1. 运行模式: 双向(F/B/R)/单向(F/B)/攀爬(F/R), 默认值为“双向”。

备注: F=Forward(前进), B=Brake(刹车), R=Reverse(倒车)。

“双向”模式,即正反转带刹车模式,提供了倒车功能,该模式通常用于日常训练。此模式采用双击式倒车方式,即油门摇杆在第一次从中点区域推至反向区域时,电机只是刹车,不会产生倒车动作;当油门摇杆快速回到中立点区域并第二次推至反向区域时(即所谓的“双击”),如果此时电机已停止,则产生倒车动作。如果电机未停止,则不会倒车,仍是刹车,需要再次将油门回到中点并推向反向区才会倒车,这样做的目的是防止车辆在行驶过程中因多次点刹而造成误倒车。

“单向”模式,即正转带刹车模式,车辆仅能前进和刹车,但不能倒车,该模式通常用于竞速。

“攀爬”模式,即直接正反转模式,采用单击式倒车方式,即油门摇杆从中点区域推至反向区域时,电机立即产生倒车动作,该模式一般用于攀岩车等特殊车辆。(备注: WP-1625-BRUSHED这款电调无运行模式选项,出厂程序设置为“双向”模式,即正反转带刹车模式。)

“船用”模式,此模式采用完全针对船模而设计的全新程序算法(只有WP-860-DUAL-BRUSHED有此参数设置)。

2. 电池类型: 锂电(Lipo) / 镍氢(NiMH), 默认值为“锂电”。

04 保护功能说明

1. 电压保护: 当电调连续2秒检测到电池电压低于保护阈值后,将进入低压保护状态(通常情况下,电调有两级低压保护,第一级是降低输出功率,第二级则彻底关闭输出),且电调上的红灯将持续闪烁。

备注: QUICRUN-WP-860-DUAL-BRUSHED设为船用模式时,进入低压保护后电机停转。此时需先将油门摇杆回到零位位置,然后再次加大油门可让电机继续运行,但只有正常情况时一半的动力输出,请立即靠岸停船。

2. 过温保护: 当电调内部温度高于100°C时将会降低输出功率直至切断输出(发生过温保护时,电调不会突然切断输出,以免突然停车造成意外)。停止后红灯将闪烁,待温度低于80°C后则恢复正常的输出功率。

3. 油门信号丢失保护: 当电调连续0.1秒没有检测到油门信号将会关闭输出,信号恢复后立即恢复正常运行。强烈建议开启遥控器的失控保护功能,将遥控器油门通道的无信号保护“F/S”设置为关闭输出方式或将保护值设置为中点位置(备注: F/S 关闭输出方式是指: 当接收机无法接收到发射机信号时,接收机就不输出任何控制信号到电调。)

2节锂电	3节锂电	4节锂电	5-9节NiMH
电压降至6.5V, 输出功率减半; 电压降至6.0V, 关闭输出, 且不再恢复。	电压降至9.75V, 输出功率减半; 电压降至9.0V, 关闭输出, 且不再恢复。	电压降至13V, 输出功率减半; 电压降至12V, 关闭输出, 且不再恢复。	电压降至4.5V, 输出功率减半; 电压降至4.0V, 关闭输出, 且不再恢复。

05 故障快速处理

故障现象	可能原因	解决方法
上电后指示灯不亮, 不自检, 无鸣音。	电调无工作电源; 电调开关损坏。	检查电池到电调的电源输入通路是否有焊接不良情况, 并重新焊好; 更换电调开关。
上电后红色LED闪烁, 电机无法启动。	电调油门线插反或通道插错; 电调无法成功完成油门自检校准过程。	将电调的油门排线按正确方向插到接收机的油门通道(Throttle, 通常为第二通道 Channel 2); 将遥控器的油门通道的中点微调“TRIM”调为0或相应旋钮调到中点位置。
遥控器做前进操作, 车子反而倒退。	遥控器油门通道方向设置错误或电机接线错误。	将电机的两条线互换; 将遥控器油门通道反向, 从原“NOR”换为“REV”或从原“REV”换为“NOR”。
车子无法达到全速, 油门摇杆打到最大位置, 红灯不恒亮。	遥控器设置错误。	将遥控器油门通道的“D/R”、“EPA”、“ATL”等参数调到100%或相应旋钮调到最大位置, 油门通道的中点微调“TRIM”调为0或相应旋钮调到中点位置。
车子无法倒车。	“运行模式”跳线帽位置错误; 遥控器油门中点偏移。	将“运行模式”跳线帽插入正确位置; 将遥控器的油门通道的中点微调“TRIM”调为0或相应旋钮调到中点位置。
电机转动过程中, 突然停转。	油门信号丢失; 电调进入电池低压保护或过热保护状态。	检查遥控器电池电压是否过低, 接收机是否工作正常; 电调红灯闪烁表示低压或过热保护, 请更换电池组或检查电调温度。
车子无法前进也无法倒车, 指示灯正常。	电调和电机之间的连接中断; 电机损坏。	检查电机和电调之间的连接, 确保连接可靠; 更换新电机。
电机启动时急加速, 电机有卡住或停顿的现象。	电池放电能力不够; 电机转速过高, 齿轮比搭配过于激进; 车子传动系统有问题。	更换放电能力强的电池; 更换低速电机, 或将减速比提高; 检查车架传动系统是否顺畅。