

01 Disclaimer



Thank you for purchasing this HOBBYWING product! The power of brushless power system is powerful. Any improper use may cause personal injury and damage to the product and related devices. We strongly recommend reading the user manual before use and strictly follow by the safe operating procedure. You will not be liable for any liability arising from the use of this product, including but not limited to reimbursement for incidental or indirect losses. Meanwhile, we do not assume any responsibility caused by unauthorized modification of the product. We have the right to change the product design, appearance, performance and use requirements without notice.

02 Warnings

- Please make sure that all wires and parts is insulated before connecting the ESC, because short circuit will damage the ESC.
- Please connect all parts properly. Poor connection will damage the device and you would not control the vehicle normally.
- Please check power devices and instructions to ensure the matching of power is reasonable.
- Please use 60W of welding devices to weld input/output wire and the plug of the ESC to ensure reliable welding.
- Please do not run at full speed if the tire left the ground, otherwise the tire will burst and cause injury.
- The external temperature of the ESC cannot exceed 90°C/194°F. High temperature will destroy the ESC and the motor. Open the overheat protection function of the ESC.
- Please remember to disconnect the battery and the ESC. If not, the ESC will consume electric energy and the battery will be completely discharged which will lead to the failure of battery or ESC. We are not responsible for any damage caused by this!

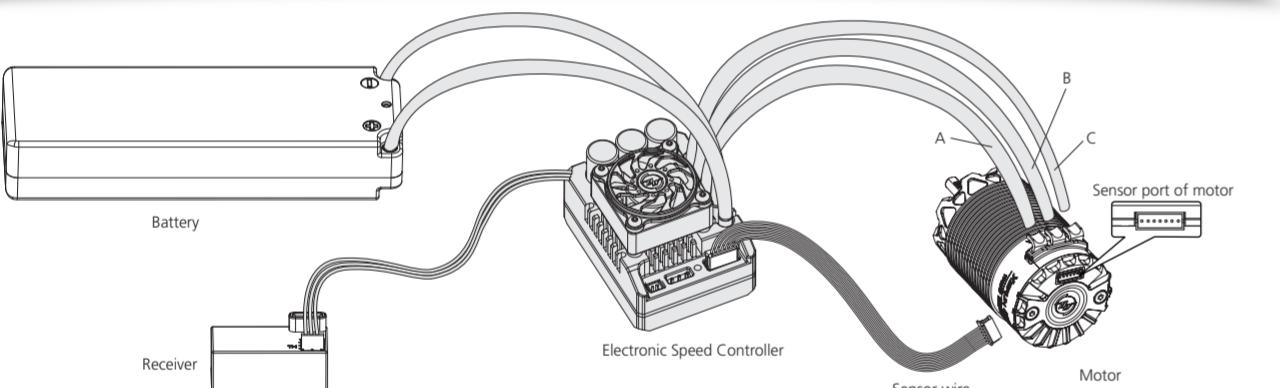
03 Features

- Built-in 5 common profiles, suitable for all 1/8 Racing, select and use instantly. (e.g. Zero timing-Blinky mode, 1/8 Off-Road Racing, 1/8 On-Road Racing, 1/8 GT Racing, 1/8 Sport mode).
- There are 29 built-in adjustable parameters to set various power requirements. The parameters can be imported and exported, which is convenient for drivers to communicate with and learn from each other.
- Support the firmware upgrade of the ESC (The multi-function LCD programming box G2 or OTA Programmer is needed to purchase). You can enjoy the latest functions.
- Support 48 degrees Boost Timing. When using XERUN 4268/4274 G3 motor, the Max. Speed can be promoted by 50%, easily win your rival.
- Multiple built-in voltage protection and protection of the ESC and motor.
- Built-in switch mode BEC with a maximum output of 15A and voltage adjustable from 6V to 8V (step: 0.1V) for usage with servos & other devices require different voltages.
- The built-in reverse connection protection circuit of the ESC avoid the damage to the ESC due to reverse connection.
- The record function of off-line data can read the Max. Temperature and RPM of the ESC and motor by Multifunction LCD Program Box (G2) or HW Link (OTA Programmer is needed to purchase).
- The record function of real-time data: Open this function by connecting the ESC with HW Link (OTA Programmer is needed to purchase) and mobile App can check throttle quantity, Voltage, Current, Temperature, RPM and other data in real time, and obtain the running status of the ESC and motor.

04 Specifications

Mode	XERUN XRB Pro G2
Cont./Peak Current	200A/1080A
Motor Type	Sensored / Sensorless Brushless Motors
Applications	1/8 On-Road/Off-Road/Truggy Racing
Motor Limit	Brushless Motor Limit with 4S LiPo/125 NIMH: 4268/4274 Size 3 Motor, KV<3000;
LiPo/NiMH Cells	6-12 Cells NiMH, 2-4S LiPo
BEC Output	6-8.4V Adjustable, Continuous/Peak Current: 6A/15A(Switch-mode)
Cooling Fan	Powered by the stable BEC voltage of 6-8.4V
Size/Weight	56.1(L)*42.1(W)*38.6(H)mm/ 114g(wires)
Connectors	Input End: No Connectors; Output End: No Connectors
Programming Port	Multifunction LCD Program Box G2,OTA Programmer

05 Connections



1. Motor Wiring:

There is difference between connection of sensored brushless motor and sensorless brushless motor. Please according to the following wiring method:
A. Connect sensored brushless motor:
This is strict wiring order from the ESC to the motor, the three A/B/C motor wires correspondingly. Next, connect the ESC sensor port and the motor sensor port with the stock 6-pin sensor cable. If you don't plug the sensor cable in, your ESC will still work in sensorless mode even if you're using a sensored motor.

Note: If the forward and backward is reverse after installing the motor, please modify "no. 11" parameters "Motor Rotation" to change the direction.

B. Sensorless Motor Wiring:

Users do not need to be worried in r regards to the connectivity with the A/B/C(ESC and motor) as their e is no polarity. You may find it necessary to swap two wirs if the motor runs in reverse.

2. Receiver:

Insert the throttle control flat cable of ESC into the throttle channel (i.e. THROTTLE channel) of the receiver. Since the red line in the flat cable outputs 6-8.4V voltage to the receiver and steering servo. Please do not supply additional power to the receiver, otherwise the electric adjustment may be damaged.

3. Battery Wiring:

Please make sure that the (+) pole of the ESC is connected to the (+) of the battery, and the (-) pole is connected to the (-). If connect reversely, the ESC cannot start up. (Add the picture of connecting battery here.)

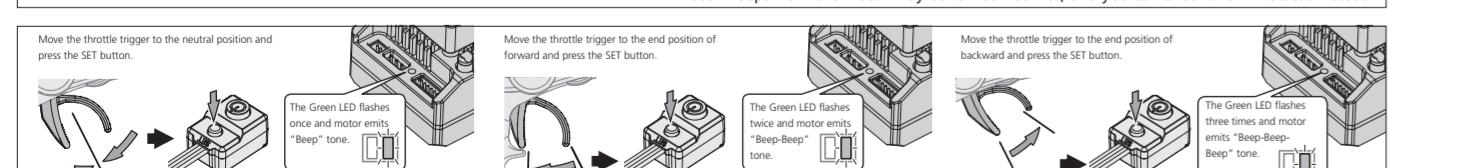
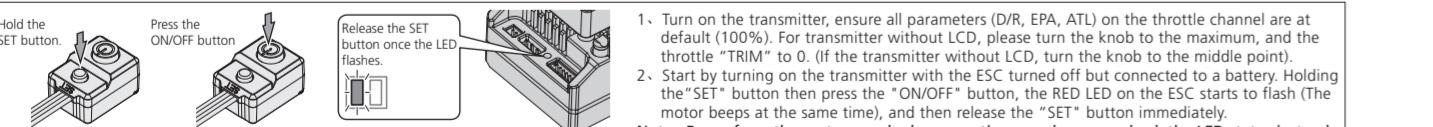
06 ESC Setup

Warning!

This is an extremely powerful system. For your safety and the safety of those around you, we strongly recommend removing the pinion gear attached to the motor before calibrating and setting this system. It is also advisable to keep the wheels in the air when you turn on the ESC.

1 Set the throttle range

When first use the ESC or the transmitter changes "TRIM" tone, DIR/EPA and other parameters, the throttle range is need to reset. We strongly recommend to open the fail safe function of the transmitter, set the signal protection of throttle channel ("F/S"). To close the output or set the protection value to the throttle neutral position. Thus the motor can stop running if the receiver cannot receive the signal of the transmitter. The calibrating steps of throttle is as follows:



2 Power on/off and Beep illustration

1) Illustration of power on/off: Short press the ON/OFF key to turn on the ESC in the off state, and long press the ON/OFF key to turn off the ESC.

2) Beep illustration when turn on the ESC: When turn on ESC under normal conditions (i.e. it is started without pressing the SET key), the motor will emit several Beeps to indicate the LiPo cells. For example, "Beep, Beep, Beep" means 35, "Beep, Beep, Beep" means 45.

3 Programmable Items

Type	ID	Item	Parameters							
General Setting	1A	Running Mode	For/Brake	For/Rev/Brake	For/Rev					
	1B	Reverse Force	25%	50%	75%	100%				
	1C	LiPo Cells	Auto Calculate	2 Cells	3 Cells	4 Cells				
	1D	Cutoff Voltage	Disabled	Auto (3.3V/Cell)	5.0-13.6V (Adjust Step 0.1V)					
	1E	ESC Thermal Protection	Disabled	Enabled						
	1F	Motor Thermal Protection	Disabled	Enabled						
	1G	BEC Voltage		6.0-8.4V (Adjust Step 0.1V)						
	1H	Sensor Mode	Full Sensed	Sensed/Sensorless Hybrid						
	1I	Motor Rotation	CCW	CW						
	1J	Phase-AC Swap	Disabled	Enabled						
Throttle Control	2A	Throttle Rate Control			1-30 (Adjust Step 1)					
	2B	Throttle Curve	Linear	Customized						
	2C	Neutral Range	6%	8%	10%					
	2D	Initial Throttle Force			1-15 (Adjust Step 1)					
	2E	Coast			0-15 (Adjust Step 1)					
	2F	PWM Drive Frequency	2K 3K 4K 8K 12K	16K 24K 32K		Customized				
	2G	Softening Value	0% 10% 20% 25% 30% 35% 40% 45% 55% 60% 65% 70% 75%	0-30° (Adjust Step 1°)						
	2H	Softening Range			0%-100% (Adjust Step 1%)					
	3A	Drag Brake			0%-100% (Adjust Step 1%)					
	3B	Max. Brake Force			0%-100% (Adjust Step 1%)					
	3C	Initial Brake Force	= Drag Brake		0%-50% (Adjust Step 1%)					
	3D	Brake Rate Control			1-20 (Adjust Step 1)					
	3E	Brake Curve	Linear	Customized						
	3F	Brake Frequency	0.5K 1K 2K 4K 8K 16K		Customized					
Timing	4A	Boost Timing			0-48° (Adjust Step 1°)					
	5A	Turbo Timing			0-48° (Adjust Step 1°)					
	5B	Turbo Delay	Instant 0.05s 0.1s 0.15s 0.2s 0.25s 0.35s 0.4s 0.45s 0.5s 0.6s 0.7s 0.8s 0.9s 1.0s	12deg/0.1s 15deg/0.1s 18deg/0.1s 21deg/0.1s 24deg/0.1s 27deg/0.1s 30deg/0.1s						
	5C	Turbo Increase Rate (deg/0.1sec)	Instant 3deg/0.1s 6deg/0.1s 9deg/0.1s 12deg/0.1s 15deg/0.1s 18deg/0.1s 21deg/0.1s 24deg/0.1s 27deg/0.1s 30deg/0.1s							
	5D	Turbo Decrease Rate (deg/0.1sec)	Instant 3deg/0.1s 6deg/0.1s 9deg/0.1s 12deg/0.1s 15deg/0.1s 18deg/0.1s 21deg/0.1s 24deg/0.1s 27deg/0.1s 30deg/0.1s							

1A: Running Mode:

Option 1: Forward with Brake

Racing mode. It has only forward and brake functions. Option 2: Forward/Reverse with Brake.

This option is known to be the "trailing" mode with "Forward or Reverse with Brake" functions. Hobbywing has adopted the "DOUBLE-CLICK" method, that is your vehicle only brakes on the 1st time you push the throttle trigger forward (brake) (1st push). The motor stops when you quickly release the throttle trigger and then re-push the trigger quickly (2nd push), only then the vehicle will reverse. The reverse function will not work if your car does not come to a complete stop. The vehicle only reverses after the motor stops. This method is for preventing vehicle from being accidentally reversed.

Option 3: Forward and Reverse:

This mode is often used by special vehicles. It adopts the "SINGLE-CLICK" method. The vehicle will reverse immediately when you push the throttle trigger forward (brake).

1B: Max. Reverse Force:

The mode is often used by special vehicles. It adopts the "SINGLE-CLICK" method. The vehicle will reverse immediately when you push the throttle trigger forward (brake).

1C: Lipo Cells:

We strongly recommend that you set LiPo cells manually not automatically. When set automatically, the ESC can judge as 25 or 45. If the battery voltage is lower than 9.5V after power on the ESC, it will be judged as 25; if the battery voltage is between 9.5V~13.6V, it will be judged as 35; if higher than 13.6V, it will be judged as 45.

1D: Cutoff Voltage:

The ESC will monitor the battery voltage all the time, once the voltage is lower than the threshold value, the ESC will reduce the power to 50% instantly and cutoff the power output in 40 seconds. When enters into voltage protection, the LED RED will single flash that repeats (☆, ☆, ☆, ☆, ☆.....). Please set the "Cutoff Voltage" to "Disabled" or customized protection threshold value if you are using NiMH batteries.

1E: Motor Thermal Protection:

The ESC calculates the corresponding cutoff voltage as per the number of LiPo cells it detects and the "3.3V/cell" rule. For example, if the ESC detects a 4S, the cutoff voltage protection threshold value is 3.5x4=14.0V.

1F: Softening Value:

The customized cutoff threshold is a voltage for the whole battery pack (adjustable from 5.0V to 13.6V). Please calculate the value as per the number of LiPo cells you are using. For example, when you have 4 cells and you want the cutoff voltage for each cell is 3.0V, you will need to set this item to 12V (3.04V).

1G: External Programming Port:

The output from the ESC will be cut off with the value you have preset. The GREEN LED flashes (☆, ☆, ☆, ☆) when the ESC temperature reaches to the preset value. The output will not resume until the ESC temperature gets down.

1H: Turbo Increase Rate (deg/0.1sec):

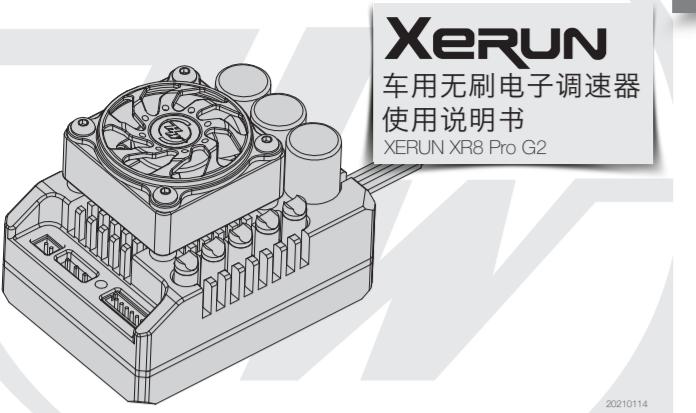
When the ESC has a separate programming port. Please don't connect the throttle control cable to the setting card, otherwise the setting card cannot work.

1I: Turbo Decrease Rate (deg/0.1sec):

This is the method of setting parameters of ESC:

Note: This ESC has a separate programming port. Please don't connect the throttle control cable to the setting card, otherwise the setting card cannot work.

1J: Preset modes:



01 声明



感谢您购买XERUN X8 Pro G2车用无刷电子调速器！
无刷动力系统功率强大，错误的使用可能造成人身伤害和设备损坏。
请在使用设备前仔细阅读说明书。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责任。我们有权利在不经通知的情况下变更产品设计、外观、性能及使用要求。

02 注意事项

- 电调与相关连接部件连接前，请确保所有电线和连接部件绝缘良好，短路将导致烧毁。
- 请务必仔细检查各部件，若连接不良，您可能不能正常控制赛车，或出现设备损坏等其他不可预知的情况。
- 使用此电调前，请查看各设备以及车架说明书，确保动力搭配合理，避免因错误的动力搭配导致电机超载，最终损坏电调。
- 若需对电调的输入、输出线、插头做相关焊接时，为保证焊接牢固，请使用至少60W功率的焊接设备进行焊接。
- 高电压运行，因车子轮胎会向外膨胀，故而请勿将车子腾空后全速运行，否则轮胎可能爆裂并引起严重伤害。
- 勿使电调外部温度超过90°C/194°F，高温将会影响电调并且可能导致电机损坏；建议将电调内部的过温保护功能打开。
- 使用完毕后，切记断开电池与电调的连接。如电池未断开，即使电调开关处于关闭状态，电调也会一直消耗电能，长时间连接电池最终会被完全放电，进而导致电池或电调出现故障。我们不对因此而造成的任何损害负责！

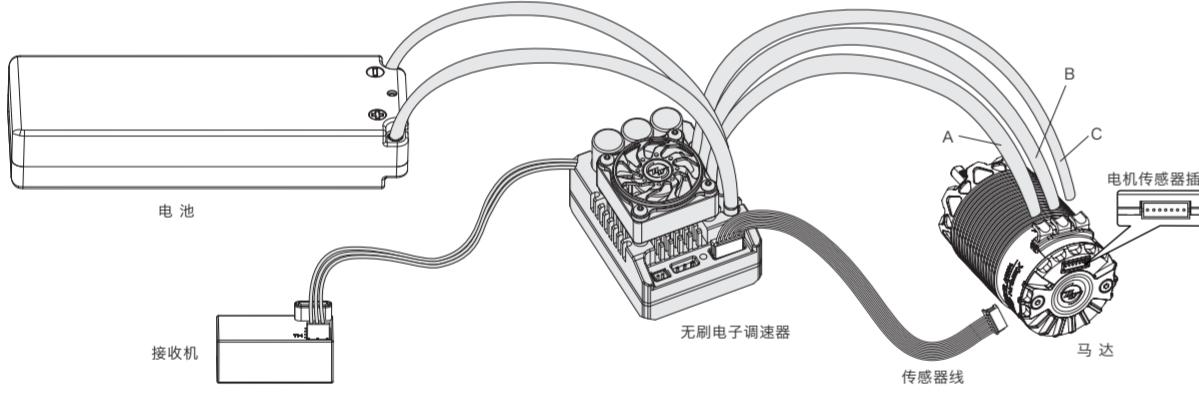
03 产品特色

- 顶级竞赛专用：内置5种常用模式，适合所有1/8竞赛，即选即用。（如：零进角Zero Timing闪灯模式、1/8越野竞赛、1/8平路竞赛、1/8 GT竞赛、1/8娱乐模式）。
- 电调内置29项丰富的可调参数项，方便设置各种动力需求；设定参数可以导入导出，便于车手相互交流和借鉴彼此的设定。
- 支持电调固件升级（需另购多功能LCD G2编程盒或OTA模块），享用最新功能。
- 支持超过4.8倍Boost及Turbo进角，与XERUN 4268/4274 G3电机配套时，最高车速提升50%，轻松超越对手。
- 多重保护功能：电压过低保护、电调及电机过热保护、电调过热保护。
- 内置超强刹车模式EC，持续电流达到6A，瞬间刹车到15A，且支持0-8.4档可调，轻松驱动各种强力舵机及高压舵机。
- 电调内置反接保护电路，无需担心因反接电池而损坏电调，有效解决了因反接电池而导致的电调损坏。
- 离线数据记录功能，可以用LCD (G2)编程盒或HW Link (另购OTA模块)读出电调和电机最高温度、最高转速等数据，便于车手对动力系统运行情况进行分析。
- 实时数据记录功能，通过HW Link (另购OTA模块)手机APP连接电调，打开实时数据记录功能，可实时查看油门、电压、电流、温度、转速等数据，轻松获取电调及电机运行状态。

04 产品规格

型号	XERUN X8 Pro G2									
持续/峰值电流	200A/1080A									
支持电机类型	无感无刷电机、有感无刷电机									
主要适用车型	1/8 电竞/电竞/卡车的专业竞赛									
适用的电机	使用4S锂电池时：尺寸4268/4274电机，KV≤3000									
电池节数	6-12 Cells NiMH, 2-4S Lipo									
BEC输出	6-8.4V可调，持续电流6A，峰值电流15A（开关稳压方式）									
风扇取电方式	从内置BEC取得稳定的6-8.4V									
尺寸/重量	56.1(长)*42.1(宽)*38.6(高)mm / 114g(不含线重)									
插头	输入：无插头 输出：无插头									
参数设定方式	多功能LCD (G2)编程盒/OTA模块									

05 连接电子调速器



请参阅接线说明及接线图正确接线：

1. 连接马达：
连接有感无刷马达与无感无刷马达的方式有差异，请务必遵照如下接线方式：

A. 连接有感无刷马达：
电调与马达连接有严格的接线顺序要求，电调的A/#/B/C必须与电机的A/#/B/#/C三线严格一一对应，用6针感应线把电调与电机的感应口对接。

备注：若接上电机后，车子前进与后退反向，请更改参数项第11项“电机转动方向”，实现电机转向调整。

B. 连接无感无刷马达：
电调与马达相连无严格接线顺序，电调的A/#/B/C可以与电机的三线随意对接，若出现转向相反，任意交换两条马达线即可。

2. 连接接收机：
将接收机的油门控制接线插入接收机的油门通道（即THROTTLE通道）。因为接线中的红线输出6-8.4V电压给接收机及舵机，所以请勿给接收机额外供电，否则可能损坏电调。

3. 连接电池：
电调的输入线有极性之分，插入电池时，请确保电调的(+)极与电池的(+)极相连，(-)极与(-)相连。如果电调接反电，电调将无法开机。

06 设置电子调速器

警惕！
本系统功率强劲，为了您及周边他人的安全，我们强烈建议您在校准及设定该系统前拆下电机小齿，并在车轮悬空的情况下开启电调开关！

1 设定油门行程

电调第一次使用或遥控器更改过油门“TRIM”微调、D/R、EPA等参数后，均需重设油门行程，不然可能会导致无法使用或误动作。
另外我们强烈建议同时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油门中立点位置，使得当接收机无法读取遥控器信号后，电机会停止运转。油门校准步骤如下图所示：



2 开机关机及鸣音说明

1. 开机关机说明：机关状态短按ON/OFF键开机，机关状态长按ON/OFF键关机。

2. 开机关机说明：在正常情况下开机(即不按SET键的情况下开机)，电机会发出几声“哔”鸣音表示锂电节数。例如：“哔哔哔”表示3节锂电池，“哔哔哔哔”表示4节锂电池。

3 编程项目说明

类别	编号	设定项名称 (Programmable Items)	设 定 值 (Parameter Values)									
General Setting	1A	运行模式 (Running Mode)	正转带刹车 (For/Brake)	正反转带刹车 (For/Rev/Brake)	直接反转 (For/Rev)							
	1B	最大倒车力度 (Max. Reverse Force)	25%	50%	75%	100%						
	1C	锂电节数 (LiPo Cells)	自动识别 (Auto Calculate)	2节 (2 Cells)	3节 (3 Cells)	4节 (4 Cells)						
	1D	低压保护阈值 (Cutoff Voltage)	不保护 (Disabled)	自动 (3.5V/节) Auto (3.5V/Cell)	5.0-13.6V (调整量为0.1V)							
	1E	电调过热保护 (ESC Thermal Protection)	不保护 (Disabled)	保护 (Enabled)								
	1F	电机过热保护 (Motor Thermal Protection)	不保护 (Disabled)	保护 (Enabled)								
Throttle Control	1G	BEC电压 (BEC Voltage)					6.0-8.4V (调整量为0.1V)					
	1H	驱动马达模式 (Sensor Mode)	全有感模式 (Full Sensored)	有感/无感混合模式 (Sensored/Sensorless Hybrid)								
	1I	电机转动方向 (Motor Rotation)	逆时针 (CCW)	顺时针 (CW)								
	1J	AC线交换 (Phase-AC Swap)	关闭 (Disabled)	开启 (Enabled)								
Brake Control	2A	油门加速度控制 (Throttle Rate Control)					1-30 (调整量为1)					
	2B	正向油门曲线 (Throttle Curve)	线性 (Linear)	自定义 (Customized)								
	2C	油门中点范围 (Neutral Range)	6%	8%	10%							
	2D	初始启动力度 (Initial Throttle Force)					1-15 (调整量为1)					
	2E	自动油门 (Coast)					0-15 (调整量为1)					
	2F	PWM 驱动频率 (PWM Drive Frequency)	2K	3K	4K	8K	12K	16K	24K	32K	自定义 (Customized)	
	2G	柔化值 (Softening Value)					0-30° (调整量1度)					
	2H	柔化行程 (Softening Range)	0%	10%	20%	25%	30%	35%	40%	45%	55%	60%
	2I	拖刹力度 (Drag Brake Force)					0%-100% (调整量为1%)					
	2J	最大刹车力度 (Max. Brake Force)					0%-100% (调整量为1%)					
	2K	初始刹车力度 (Initial Brake Force)	= 拖刹力度 (= Drag Brake)				0%-50% (调整量为1%)					
	2L	刹车加速度控制 (Brake Rate Control)					1-20 (调整量1)					
	2M	刹车油门曲线 (Brake Curve)	线性 (Linear)	自定义 (Customized)								
	2N	刹车频率 (Brake Frequency)	0.5K	1K	2K	4K	8K	16K				
	2O	Boost进角 (Boost Timing)					0-48° (调整量1度)					
	2P	Turbo 进角 (Turbo Timing)					0-48° (调整量1度)					
	2Q	Turbo 延迟 (Turbo Delay)	立即 (Instant)	0.05s	0.1s	0.15s	0.2s	0.25s	0.3s	0.4s	0.45s	0.5s
	2R	Turbo 释放速度 (Turbo Increase Rate)	立即 (Instant)	3deg/0.1s	6deg/0.1s	9deg/0.1s	12deg/0.1s	15deg/0.1s	18deg/0.1s	21deg/0.1s	24deg/0.1s	27deg/0.1s
	2S	Turbo 关闭速度 (Turbo Decrease Rate)	立即 (Instant)	3deg/0.1s	6deg/0.1s	9deg/0.1s	12deg/0.1s	15deg/0.1s	18deg/0.1s	21deg/0.1s	24deg/0.1s	27deg/0.1s

1A: 运行模式 (Running Mode) :

选择1: 正转带刹车
此模式下，车辆仅能前进和刹车，但不能倒车，该模式通常用于竞赛。

选项2: 反转带刹车

此模式则提供了倒车功能，通常用于训练。“正反带刹车”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停止才会倒车，中点区域会再次推至反向区域时，如果此时电机已停止，则会产生倒车动作，如果电机未停止，则仍是刹车，需要再次将油门摇杆回到中点并推向反向区。此时如果电机已经这样做的目的是防止车辆行驶过程中因多次倒车而造成误倒车。

选项3: 直接正转

此模式采用单击式倒车方法，即油门摇杆在中点区域推至反向区域时，电机立即产生倒车动作，该模式一般用于特种车辆。

1B: 最大倒车力度 (Max. Reverse Force) :

指油门摇杆打到反向的最大位置时所产生的最大倒车力度，选择不同的参数值可以产生不同的倒车速度（一般情况下推荐使用较小的倒车速度，以免因倒车太快而导致失误）。

1C: 键盘节气门 (Throttle Pedal Cells) :

我们强烈建议您以设定参数节省时间而不是采用自动判断的方式来。设定为“自动判断”时，电调会自动判别2节、4节的锂电；若电池电压低于9.5V，则判别为4节锂电。

1D: 低压保护值 (Cutoff Voltage) :

此功能主要是防止锂电池过度放电而造成不可恢复的损坏。电调会时刻监视电池电压，一旦电压低于设定的阈值，电调会立即降低50%，40秒后将切断动力输出。当进入电压保护后，红色LED会亮起。

1E: 电调过热保护 (ESC Thermal Protection) :

此模式则提供了倒车功能，通常用于训练。“正反带刹车”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