BEAST PRO 30A G2 BLE
无刷电子调速器说明书

感谢您购买中特威产品, Beast Pro 30A G2电调是我们新一代高性能有感无刷电子调速器(竞赛版本)。无刷动力系统功率强大, 请您在使用设备前仔细阅读本说明书。深圳市中特威科技有限公司有权不经通知变更其产品, 包括其外观和性能参数及使用要求; 对其产品是否适合特定用途不作任何保证、申明或承诺。不承担因第三方产品相关修改所引起的任何责任, 中特威科技有限公司也不承担因应用该产品而产生的任何责任, 包括直接损失或间接损失的赔偿责任。

注意事项

- 不能让小孩在无成人监管的情况下使用此产品。
- 电调在使用过程中可能会变烫, 拿的时候要小心。
- 若需对电调的输入输出线、插头做相关焊接时, 请使用至少60W功率的焊接设备进行焊接。
- 不使用电调时需要断开电池。
- 使用电调时不能靠近易燃物品。
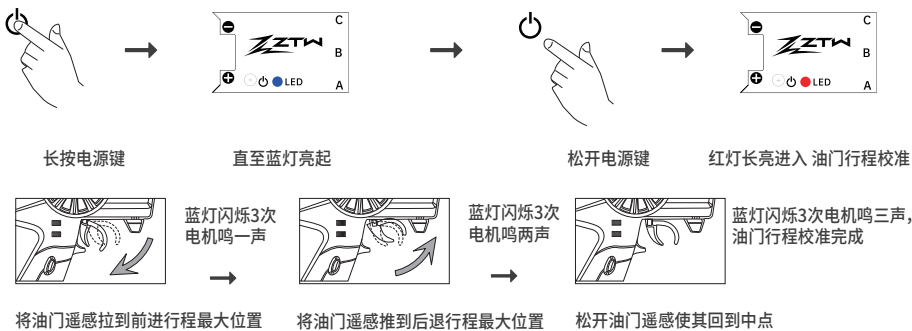- 如果电调出现过热, 冒烟或者着火, 请立即停止使用, 断开电池并寻求帮助。

主要特性

1. 全新的电调固件设计, 丰富的可调参数, 专为1:28蚊车打造。
2. 内置蓝牙模块, 支持手机APP对电调进行参数设置。
3. 多重保护功能:电池低压保护、过温保护、油门信号丢失保护。

产品规格

型号	PN#Model	持续/瞬时电流(A)	输入电压	重量	BEC输出	尺寸(mm) 长*宽*高
1:28 Beast pro 30A G2 BLE	4203013	30A/80A	5-9NC/2-3S LiPo	10	6V/2A	23*14*10

设定油门行程

长按电源键 → 直至蓝灯亮起 → 松开电源键 → 红灯长亮进入 油门行程校准

将油门遥感拉到前进行程最大位置 — 蓝灯闪烁3次 电机鸣一声 → 将油门遥感推到后退行程最大位置 — 蓝灯闪烁3次 电机鸣两声 → 松开油门遥感使其回到中点 — 蓝灯闪烁3次电机鸣三声, 油门行程校准完成

关于下载APP

安卓和苹果APP

(1) 安卓APP下载步骤:

1. 用浏览器扫描右方二维码, 下载APP安装包。

2. 安装APP(ZTW)后, 打开APP, 并允许所有权限即安装成功。

3. 打开手机GPS和蓝牙, 进入ZTW后点击CONNECT选择电调蓝牙并连接。

(2) 苹果APP下载步骤:

1. 用"ZTW"在苹果APP商城搜索或者扫描右方二维码, 找到后点击安装。

2. 安装APP(ZTW)后, 打开APP, 并允许所有权限后安装成功。

3. 打开手机GPS和蓝牙, 进入ZTW 后点击CONNECT选择电调蓝牙并连接。

注: 电调蓝牙出厂默认连接密码为: 0000。(开机状态下长按电源键约10秒, 可恢复出厂默认密码)

编程项说明

类别	设定项名称	设定项说明
油门	油门响应 (Throttle Response)	时间越短, 加速越快。
	滑行 (Coast)	减油门时, 车速不会立即下降, 而是滑行更远。
	油门中位 (Neutral Range)	油门中点宽度越大, 需要拨动油门摇杆越远离中点车才开始启动。
	最小油门 (Min. Throttle)	值越大, 当拨动油门摇杆正好离开中点范围时, 车启动速度越大。
	油门衰减 (Minus)	衰减值越大, 车速越低。
	油门衰减范围 (Minus Range)	在油门摇杆多少范围内使衰减生效, 值越大, 生效范围越大。
	最大前进力度 (Max. Forward force)	值越小, 前进极速越小。
	最大倒车力度 (Max. Reverse force)	值越小, 后退极速越小。
刹车	刹车响应 (Brake Response)	刹车响应时间越短, 刹车越快。
	最小刹车力度 (Min. Brake Force)	进入刹车后, 值越大, 当拨动油门摇杆正好离开中点范围时, 刹车力度越大。
	最大刹车力度 (Max. Brake Force)	值越大, 极限刹车力度越小。
	前拖刹力度 (Forward Drag Brake Force)	油门在中位时, 刹车的力度; 值越小, 车能滑行更远。
	前拖刹响应 (Forward Drag Brake Response)	时间越短, 前进方向刹车越快。
	倒车拖刹力度 (Rev. Drag Brake Force)	油门在中位时, 刹车的力度; 值越小, 车能滑行更远。
	倒车拖刹响应 (Rev. Drag Brake Response)	时间越短, 倒车方向刹车越快。
	PWM频率 (Brake PWM Freq.)	刹车PWM频率。
BOOST 进角	Boost进角 (Boost Timing)	开启Boost进角, 使电机获得更高转速。
	触发方式 (Trigger)	Boost触发方式, 分为油门触发和转速触发。
	油门阈值 (Throttle Threshold)	Boost油门触发阈值, Boost Trigger设为油门触发时, 当油门大于阈值后, Boost将开启。
	转速阈值 (RPM Threshold)	Boost转速触发阈值, Boost Trigger设为转速触发时, 当转速大于阈值后, Boost将开启。
	Boost进角初始角度 (Initial Angle)	Boost初始角度, Boost刚开启时, 打开的进角值。该值越大, 越暴力, 越难以操控。
	Boost进角角度增长率 (Angle Inc. Rate)	Boost进角值增加的速度。该值越大, 越暴力, 越难以操控。
	Boost进角角度下降率 (Angle Dec. Rate)	Boost进角值减小的速度, 该值越大, 速度下降越快; 当速度很高时, 可能会产生类似刹车的效果。
TURBO 进角	Turbo进角 (Turbo Timing)	Turbo进角, 是拉油门达到100%开始开启的进角。
	Turbo进角角度增长率 (Turbo Inc. Rate)	Turbo进角值增加的速度, 该值越大, 越暴力, 越难操控。
	Turbo进角角度下降率 (Turbo Dec. Rate)	Turbo进角值下降的速度, 该值越大, 速度减得越快, 当速度很高时, 可能会产生类似刹车的效果。
	Turbo进角延时 (Delay)	Turbo进角延时, 指拉油门达到100%后延迟一段时间再开启Turbo。
	Turbo进角延时重载(Delay Reload)	重载如延时, 当进角已经触发, 如果油门离开100%, 又快速回到100%时, 是重新延还是不延时。Wait:等到进角减小0后重新延时; Instant: 油门一离开100%就立即开始重新延时。
一般设置	电机转向 (Motor Rotation)	电机旋转的方向。某些车架在默认转向下, 前进与后退是相反的, 此时设置另一个电机选择方向可以纠正这种错误。
	电机极数 (Motor Poles)	电机极对数, 设置正确的电机极对数, 才能得到正确的Boost转速触发阈值。同时, 玩家才可以在手机APP实时数据中看到正确的电机转速。
	运行模式 (Running Mode)	运行模式分为前进/刹车、前进/刹车/后退、前进/后退。
	倒车模式 (Reverse Mode)	当运行模式设置为前进/刹车/后退时, One Shot: 单击油门摇杆倒车, Two Shot: 双击油门摇杆倒车。
	驱动PWM频率 (Drive PWM Freq.)	驱动PWM频率指电调驱动电机旋转时使用的PWM频率。频率低加速快, 但油门线性会变差; 频率越高、油门越细腻, 但会增加电调开关损耗, 导致电调温升过快。
	低压保护 (Cutoff Voltage)	低压保护设置为自动, 电调开机瞬间自动识别锂电节数。
	高温保护 (Cutoff Thermal)	当电调温度上升到设置值时, 电调会自动停止或降速。
	BEC输出(BEC Output)	根据舵机需要设置BEC输出值。
	电机线A/C切换 (A/C Swap)	马达线A/C切换, 设置为No时, 连接电调ABC与电机ABC一一对应; 设置为Yes, 连接电调ABC与电机CBA一一对应。

Brushless Electronic Speed Controller User Manual

ZTW Technology Co.,Ltd.

BEAST PRO 30A G2 BLE

Thank you for purchasing the ZTW product, the Beast Pro 30A G2 ESC is our new generation of high performance sensored brushless electronic speed controller (competition version). The high power systems for RC models can be very dangerous, we strongly suggest that you read this manual carefully before using your speed control. ZTW Model have no control over the use, installation, application, or maintenance of this product, thus no liability shall be assumed nor accepted for any damages, losses of costs resulting from the use of this item.

Caution

- Do not let children use this product without the supervision of an adult.
- The ESC might get hot during use, be careful when handling it.
- When soldering input/output wires and connections, set the iron to 60W minimum.
- Always disconnect the battery after use, do not store with the battery connected.
- Do not use near flammable materials.
- If the ESC overheats, emits smokes or burns, immediately discontinue use, disconnect the battery and seek assistance.
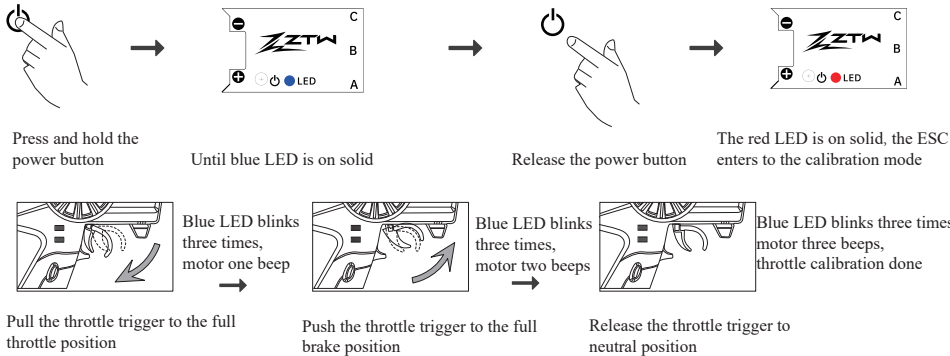
Main Features

- Designed for 1:28 mini cars with new developed firmware and rich adjustable parameters.
- Built-in Bluetooth Module, support to upgrade ESC firmware and set ESC value by phone app.
- Multiple protection functions: low battery voltage protection, over heat protection, throttle signal loss protection.

Product Specification

Type	PN#Model	Cont./Burst Current(A)	Battery cell NiXX\Lipo	Weight (g)	BEC Output	Size(mm) L*W*H
1:28 Beast pro 30A G2 BLE	4203013	30A/80A	5-9NC/2-3S LiPo	10	6V/2A	23*14*10

Throttle Calibration

Press and hold the power button
Until blue LED is on solid
Release the power button
The red LED is on solid, the ESC enters to the calibration mode

Pull the throttle trigger to the full throttle position — Blue LED blinks three times, motor one beep

Push the throttle trigger to the full brake position — Blue LED blinks three times, motor two beeps

Release the throttle trigger to neutral position — Blue LED blinks three times motor three beeps, throttle calibration done

About downloading APP

Android and iOS APPs
(1) Android App downloading procedure:
1.Scan the QR code to download the App (the name of the app is ZTW) with any search engine.

2.Click "DOWNLOAD", "INSTALL", "OPEN", and choose "ALLOW" to all the pop-up questions to turn on Location Services & Bluetooth on your phone, and then click "CONNECT" toconnect the ESC.

(2) iPhone App downloading procedure:

1.Search for "ZTW" in the App Store or scan the QR code to download and install the App.

2.Turn on Location Services & Bluetooth on your phone, open the App /ZTW and then click "CONNECT" to connect the ESC.

Programmable Items

SECTION	PROGRAMMABLE ITEMS	PROGRAMMABLE ITEMS DESCRIPTION
THROTTLE	Throttle Response	The shorter the time, the quicker the acceleration.
	Coast	With this function activated, the car won't slow down immediately but coast for a while when reducing the throttle input.
	Neutral Range	The wider the neutral range, the further the throttle trigger/stick must be moved away from the neutral point. Otherwise, the car won't move.
	Min. Throttle	The bigger the value, the more aggressive the start-up when moving the throttle trigger/stick away from the neutral range.
	Minus	The bigger the throttle minus value, the lower the car speed.
	Minus Range	It determines the throttle range within which the (Throttle) Minus function works. The bigger the value, the wider the effective range.
	Max. Forward force	The lower the value, the slower the maximum speed in the Forward direction.
	Max. Reverse force	The lower the value, the slower the maximum speed in the Reverse direction.
BRAKE	Brake Response	The shorter the time, the quicker the braking.
	Min. Brake Force	After entering the braking mode, the higher the value, the stronger the brake force when moving the throttle trigger/stick away from the neutral range.
	Max. Brake Force	The lower the value, the weaker the maximum brake force.
	Fwd. Drag Brake Force	The brake force when the throttle trigger/stick is at the neutral position. The lower the value, the further the coast.
	Fwd. Drag Brake Response	The shorter the time, the faster the braking in the forward direction.
	Rev. Drag Brake Force	The brake force when the throttle trigger/stick is at the neutral position. The lower the value, the further the coast.
	Rev. Drag Brake Response	The shorter the time, the faster the braking in the Reverse direction.
	PWM Freq.	The PWM frequency for braking.
BOOST	Boost Timing	With this function activated, the motor will be able to get a higher RPM.
	Trigger	It's the way how Boost Timing is triggered, it can be triggered by throttle input or RMP.
	Throttle Threshold	The throttle threshold at which the Boost Timing will be triggered. The Boost Timing will be activated when the Boost Triggering is set to "By Throttle" and the throttle input exceeds the threshold.
	RPM Threshold	The RPM threshold at which the Boost Timing will be triggered. The Boost Timing will be activated when the Boost Triggering is set to "By RMP" and the motor RPM exceeds the RPM threshold.
	Initial Angle	It's the timing value when the Boost Timing is initially activated. The higher the value, the more aggressive the power, and the more difficult to control it.
	Angle Inc. Rate	The higher the value, the more aggressive the power, and the more difficult to control it.
	Angle Dec. Rate	The higher the value, the quicker the speed decrease. The effect, similar to braking, will be generated when the speed is really high.
TURBO	Turbo Timing	It's the timing activated when the throttle input reaches 100%.
	Angle Inc. Rate	The higher the value, the more aggressive the power, and the more difficult to control it.
	Angle Dec. Rate	The higher the value, the faster the speed decrease. The effect, similar to braking, will be generated when the speed is really high.
	Turbo Delay	With this function activated, the Turbo Timing won't be activated immediately after the throttle trigger/stick is moved to the 100% position.
	Delay Reload	It determines whether or not to delay and reload when the throttle trigger/stick is moved away and quickly returned to the 100% point with the Turbo Timing is activated. There are two options: Wait (reload after the turbo timing is decreased to 0), Instant (reload immediately when the throttle trigger/stick is moved away from the 100% position).
GENERAL	Motor Rotation	It's the direction in which motor spins. With the factory default setting, it may run in the opposite direction in some scenarios. This function allows users to switch the rotational direction if necessary.
	Motor Poles	It allows users to manually set the pole count of the motor, so to get the correct RPM threshold at which the Boost Timing will be triggered. And users are able to check the actual motor RMP in the real-time data part of the mobile phone App.
	Running Mode	There are three running modes: Forward/Brake, Forward/Brake/Reverse, and Forward/Reverse.
	Reverse Mode	It's only available when the running mode is set to Forward/Brake/Reverse. There are two options: One Shot (pull the throttle trigger/stick once) & Two Shots (quickly pull the throttle trigger/stick twice).
	Drive PWM Freq.	It's the PWM frequency ESC used for driving motor. The lower the PWM driving frequency, the faster the acceleration, and the worse the throttle linearity; the higher the PWM driving frequency, the smoother the throttle linearity, and it will result in fast temperature increase.
	CutOFF Voltage	With it set to "Auto", the ESC will automatically identify the number of LiPo cells you've plugged in the moment it's powered on.
	CutOFF Thermal	The ESC will automatically cease operation when the internal temperature rises above user-selectable values.
	BEC Output	Select the output of the Battery Eliminator Circuit depending on the operating voltage requirements of the servos.
	A/C Swap	It's for switching the motor wires: A & C. When setting to "No", the output wires at the ESC side will be connected to the motor in the following sequence: A-A, B-B, and C-C; when setting to "Yes", the wiring sequence will be: A-C, B-B, C-A.