



Spider PRO manual Instruction

Thank you for purchasing ZTW Spider Pro Series Brushless Electronic Speed Controller(ESC).Spider Pro series ESCs are especially designed to meet the demand of ever popular FPV RACING multirotors ,and has been improved and bettered base on the various feedback from the market given the compatibility with some new design motor on the market .With better quality and competitive price , Spider Pro will be your best choice for you rmultirotors.

Connecting your ESC:

- Connect your controller with motor wires.
- Solder appropriate connectors to the battery wires.
- Insulate all solder connectors with heat shrink tubes.
- Connect ESC signal cable according to your own flight control instruction.
- Red and Black wires from ESC should connect to battery pack Red and Black wires respectively.



Features:

- Use new generation of the MOSFETs to make sure the ESC low heating and high reliability .
- Supports high RPM motors, can be matched with most of the motors in the RC market .
- Using BLHELI firmware.
- Capable of ONESHOT feature to work better with your flight controllers.
- Super smooth and accurate throttle linearity.
- Super fast Refresh Rate up to 600Hz.

Throttle Calibration:

When you use the ESC for the first time, we would like to suggest you calibrate your throttle end point of your radio system. This will make the throttle response better. Please see following steps of how-to:

1. Power on your radio and push your throttle stick to 100%. (see fig 1)
2. Then connect battery to your ESC, you will hear "W V" from motor to confirm the end point after three seconds.
3. Pull throttle stick back to 0% immediately when you hear "W V".
4. Throttle calibration is done. Please recycle your battery to use ESC.



fig 1



fig 2

Specifications:

Type	PN#Model	Cont./Burst Current(A)	Battery cell NXX\Lipo	Weight (g)	Size(mm) W*L*H	User Program
Spider 12A OPTO	5012301	12A\20A	5-12NC\2-4Lipo	8	15*26*6	NO
Spider Lite 18A OPTO	5018301	18A\30A	5-12NC\2-4Lipo	5.3	12*22*4.3	NO
Spider Lite 20A BEC	5020101	20A\30A	5-12NC\2-4Lipo	8.2	27*14.3*4.5	NO
Spider PRO 20A OPTO 2-4S	5020321	20A\30A	5-12NC\2-4Lipo	9.8	27*14*5.5	NO
Spider PRO 20A HV OPTO 2-6S	5020421	20A\30A	5-18NC\2-6Lipo	12	29*16.5*5.5	NO
Spider PRO 30A HV OPTO 2-6S	5030421	30A\40A	5-18NC\2-6Lipo	12	29*16.5*5.5	NO
Spider PRO Premium 20A OPTO 2-4S	5020331	20A\30A	5-12NC\2-4Lipo	9.8	27*14*5.5	NO
Spider PRO Premium 30A OPTO 2-4S	5030331	30A\40A	5-12NC\2-4Lipo	9.8	27*14*5.5	NO
Spider PRO Premium 20A OPTO 2-6S	5020431	20A\30A	5-18NC\2-6Lipo	11	30.8*16.8*4.7	NO
Spider PRO Premium 30A OPTO 2-6S	5030431	30A\40A	5-18NC\2-6Lipo	11	30.8*16.8*4.7	NO
Spider PRO 20A OPTO 4in1 2-4S	5020341	20A\30A	5-12NC\2-4Lipo	27	43*40*11	NO

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V2.0



Default setting:

The screenshot shows a grid of 16 configuration items, each with a number and a value:

- Closed Loop Mode: 4, Off
- Startup Power: 9, x 0.50
- Motor Direction: 1, Normal
- Input Polarity: 1, Positive
- Closed Loop P-Gain: 9, x 2.00
- Temperature Protection: 1, On
- Demag Compensation: 2, Low
- Beep Strength: 40, 40
- Closed Loop I-Gain: 9, x 2.00
- PWM output Dither: 3, 15
- PWM Frequency/Damped: 3, Damped Light
- Beacon Strength: 80, 80
- Motor Gain: 3, x 1.00
- Low RPM Power Protect: 1, On
- Enable PWM Input: 0, Off
- Beacon Delay: 4, 10 min
- Motor Timing: 4, Medium High
- PPM Min Throttle: 25, 1.100 ms
- PPM Center Throttle: 122, 1.488 ms
- PPM Max Throttle: 225, 1.900 ms

ZTW-Spider PRO 系列航调说明书

尺寸：420*120mm

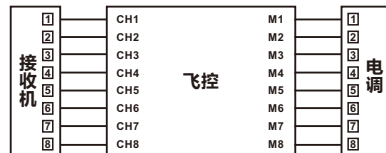


蜘蛛PRO系列多轴专用无刷电子调速器说明书

感谢购买中特威蜘蛛PRO系列多轴电调。中特威蜘蛛PRO多轴系列是为了迎合当前多轴竞赛市场的需求而专门设计的产品，此系列产品秉承了中特威一贯的做工与工艺，拥有极佳的油门曲线，马达启动顺滑，最重要的是极好的稳定性保障了飞机在空中的安全。产品安装容易使用方便，是当前市场上多轴电调的不二选择。郑重声明此产品不是玩具，未成年人必须在成人的监督下使用。中特威对于在使用过程中造成的损失，伤害不负任何责任。

电调接线：

- 电调的马达线与马达连接。
- 电池上焊好与电调相对应的接头。
- 用热缩套管进行绝缘。
- 电调信号线连接到飞控输出端口，连接顺序请参考飞控说明书。
- 最后电池与电调连接。（注意正负极，避免短路）

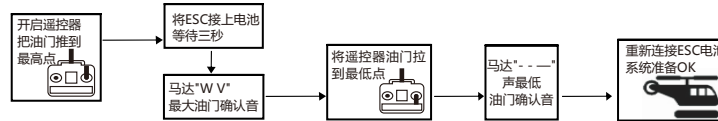


特性：

- 采用新一代MOS管，保证电调超低发热，超高的稳定性。
- 兼容性好，可兼容模型市场上所有主流马达。
- 使用BLHELI软件。
- 支持ONESHOT功能。
- 马达启动顺滑，油门曲线极佳。
- 支持高达600Hz的信号频率 ONESHOT模式下可高达3K。

电调油门行程校准：

油门行程设定说明图(注意:当第一次使用或电调搭配其它遥控设备使用时,均应重新设定油门行程)



产品规格表：

Type	PN#Model	Cont./Burst		Battery cell	Weight (g)	Size(mm) W*L*H	User Program
		Current(A)	NXX\Lipo				
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V2.0



默认值：

The screenshot shows the following default settings:

- Closed Loop Mode: Off
- Startup Power: x 0.50
- Motor Direction: Normal
- Input Polarity: Positive
- Closed Loop P-Gain: x 2.00
- Temperature Protection: On
- Demag Compensation: Low
- Beep Strength: 40
- Closed Loop I-Gain: x 2.00
- PWM output Dither: 15
- PWM Frequency/Damped: Damped Light
- Beacon Strength: 80
- Motor Gain: x 1.00
- Low RPM Power Protect: On
- Enable PWM Input: Off
- Beacon Delay: 10 min
- Motor Timing: Medium High
- PPM Min Throttle: 1.100 ms
- PPM Center Throttle: 1.488 ms
- PPM Max Throttle: 1.900 ms