Thanks for purchasing our electronic speed controller(ESC). The power system for RC model can be very dangerous, please read this manual carefully. In that we have no control over the correct use, installation, application, or maintenance of our products, no liability shall be assumed nor accepted for any damages, losses or costs resulting from the use of the product.

#### [FEATURES]

- 1. Water-proof and dust-prooffor all weather races.
- 2. Small size with built-in capacitor module.
- 3. Automatic throttle range calibration, easy to use.
- 4. Multiple protections: Low voltage cut-off protection for Lipo or NiMH battery / Over-heat protection / Throttle signal loss protection.
- 5. Easily programmed with the jumpers.

## **[SPECIFICATIONS]**

Model		WP-1040-BRUSHED	WP 4060 PRUSUED	
		WP-1040-BRUSHED-Crawler& Boat *	WP-1060-BRUSHED	
Cont. / Burst Current		Forward: 40A / 180A	Forward: 60A / 360A	
		Backward: 20A / 90A	Backward: 30A / 180A	
Input		2-3S Lipo, 5-9 Cells NiMH		
Cars Applicable		1:10 on-road, off-road Buggy, Truggy, SCT		
		1:10 Crawler, Tank &Boat		
	2S Lipoor	540 or 550 size motor ≥12T	540 or 550 size motor ≥ 8T	
Motor	5-6 cells NiMH	or RPM < 30000 @7.2V	or RPM <45000 @7.2V	
Limit	3S Lipo or	540 or 550 size motor ≥18T	540 or 550 size motor ≥13T	
	7-9 cells NiMH	or RPM < 20000 @7.2V	or RPM <30000 @7.2V	
Resistance		Fwd: 0.002 Ohm, Bwd: 0.004 Ohm	Fwd: 0.0008 Ohm, Bwd: 0.0016 Ohm	
Built-in BEC		2A/6V (Linear mode BEC)	3A/6V (Switch mode BEC)	
Dimension& Weight		WP-1040-BRUSHED: 46.5*34*28.5, 65g	36*30*18, 40g	
		WP-1040-BRUSHED-CRAWLER: 46.5*34*28.5, 70g		
Model		WP-1625-BRUSHED	WD 960 DUAL PRUSHED	
		WP-1625-BRUSHED-Crawler	WP-860-DUAL BRUSHED	
Cont. / Burst Current		Forward: 25A / 100A	Forward: 60A / 360A	
		Backward: 25A / 100A	Backward: 30A / 180A	
Input		2-3S Lipo, 5-9 Cells NiMH	2-4S Lipo, 10-12 Cells NiMH	
Cars Applicable		1:18 & 1:16 on-road, off-road	1:8 on-road, off-road, Buggy, Truggy, Monster	
		1:18 & 1:16 Crawler and Boat	Crawler and Boat	
	2S Lipoor	280, 370 or 380 size motor	540, 550 or 775 size motor ≥12T	
	5-6 cells NiMH	or RPM < 30000 @7.2V	or RPM < 30000 @7.2V	
Motor	3S Lipo or	280, 370 or 380 size motor	540, 550 or 775 size motor ≥18T	
Limit	7-9 cells NiMH	or RPM <20000 @7.2V	or RPM <20000 @7.2V	
	4S Lipoor	Not Available	540, 550 or 775 size motor ≥24T	
	10-12cells NiMH		or RPM <15000 @7.2V	
Resistance		Fwd: 0.003 Ohm, Bwd: 0.003 Ohm	Fwd: 0.001 Ohm, Bwd: 0.002 Ohm	
Built-in BEC		1A/6V(Linear mode BEC)	3A/5V(Switch mode BEC)	
Dimension& Weight		34mm*24mm*14mm, 23.5g	46mm*36mm*26.3mm, 73g	

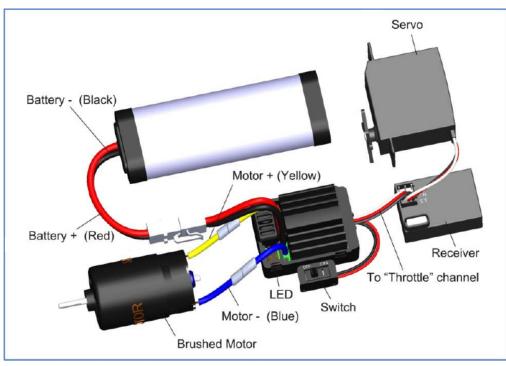
<sup>\*</sup> There are 2 kinds of WP-1040-BRUSHED-Crawler& Boat speed controllers, one has 1 output for 1 motor, and the other one has 2 outputs for 2 motors (2 motors work synchronously).

## **[BEGIN TO USE]**

1. Connect the ESC, motor, receiver, battery and servo according to the following diagram

"+" and "-" wires of the ESC are connected to the battery pack.

Attention: The incorrect polarity will damage the ESC immediately.



The control cable of the ESC (trio wires with black, red and white color) is connected to the throttle channel of the receiver (Usually CH2). The "Motor +" and "Motor -" wires are connected to ESC without any order. If the motor runs in the opposite direction, please swap these two wire connections.

#### 2. Set the Transmitter

Please set the "D/R", "EPA" and "ATL" to 100% for throttle channel (for transmitter without LCD, please turn the knobs to the maximum value), and set the "TRIM" of the throttle channel to 0 (for transmitter without LCD, please turn the TRIM knob to its neutral position).

knob to its neutral position). For Futaba<sup>TM</sup> and the similar transmitters, the direction of throttle channel shall be set to "REV", while

other radio systems shall be set to "NOR".

The "Fail Save" function of the radio system is strongly recommended to be activated. Please make sure that the motor can be stopped when the "Fail Save" happens.

## 3. Throttle Range Setting (Throttle Range Calibration)

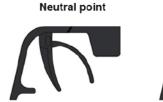
In order to make the ESC match the throttle range of different transmitters, the calibration of the ESC is necessary. To calibrate the ESC, please turn on the transmitter, keep throttle stick at its neutral position, wait for 3 seconds to let the ESC execute self-test and automatic throttle calibration. When the ESC is ready to run, a long beep sound is emitted from the motor.

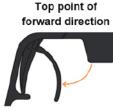
**Note:** Please calibrate the throttle range again when using a new transmitter or changing the settings of the neutral position of throttle channel, D/R, ATV, ATL or EPA parameters, otherwise the ESC may not work properly.

#### **[BEEP SOUND AND LED STATUS]**

The Meaning of Beep Sound	LED Status
<ul> <li>1 short Beep: The battery is NiMH/NiCd</li> </ul>	<ul> <li>When the throttle stick is in neutral range, red LED is off</li> </ul>
<ul> <li>2 short Beeps: The battery is 2S Lipo</li> </ul>	Forward, brake or reverse at partial throttle, red LED blinks
<ul> <li>3 short Beeps: The battery is 3S Lipo</li> </ul>	<ul> <li>Forward, brake or reverse at full throttle, red LED is solid</li> </ul>
<ul> <li>4 short Beeps: The battery is 4S Lipo</li> </ul>	
<ul> <li>1 long Beep: Self-test and throttle calibration is</li> </ul>	
OK, the ESC is ready to run	

# [THROTTLE STICK POSITION]







#### **[SET THE ESC]**

The ESC is programmed by the jumpers (Tweezers is recommended to plug and unplug the jumper).

<sup>\*\*</sup> The WP-860-DUAL BRUSHED has 2 outputs to drive 2 motors synchronously. When driving 2 motors, the Turns of the motors need to be increased.