

### 01 Important Notice

- ★ Make sure all cable and connectors are in sulted condition before connecting the ESC to other corresponding electronics, otherwise short circuit may damage the ESC.
- ★ Make sure all connecting part are proper connected to prevent lose control of your car or damage of the equipments.
- ★ Before using, read this manual, car manual and check your driving system specs carefully, secure that all the system are compatible to prevent over loading of the motor which may lead to burn the ESC.
- ★ If you need to re-solder the cables or connectors, make sure to use soldering machine not less than 50W.
- ★ Make sure the ESC working temperature is not over 90°C/194°F, high temperature will damage the ESC and also may lead damage to the motor. Suggested temperature cutoff setting should be 105°C/221°F.
- ★ After using, please disconnect the ESC with the battery. When the battery is connected to the battery, there is battery consumption even the ESC is switched off. Although the consumption is very low, it may lead to over discharging on the battery and damage the battery. We will be not responsible for any damage aroused by that.

### 02 Features

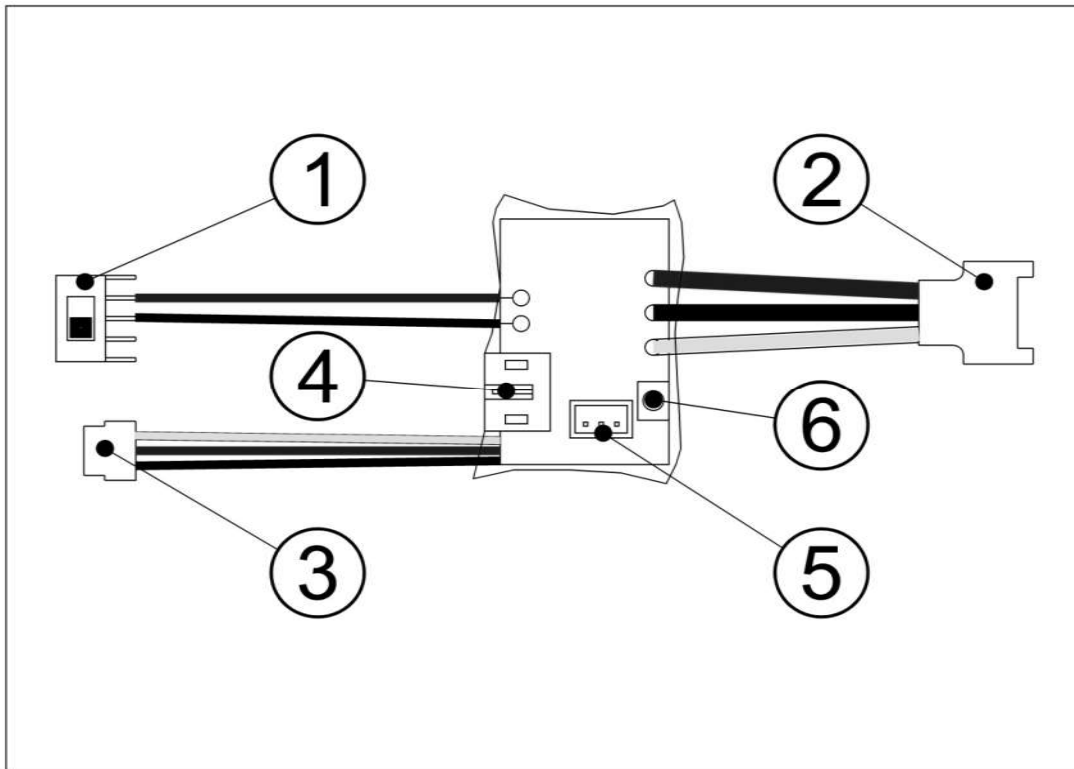
- ★ Compatible with sensed or sensorless motors(Only working under sensorless mode). And compatible with most brushless motors available in the market.
- ★ Equipped with reset connecting socket. ESC could be easily reset with program card connecting to the ESC and it is no need to use the ESC cable to the receiver.
- ★ Proportional brake: 4 Max. brake settings, 4 initial brake settings and 8 drag brake settings
- ★ 9 punch settings from mild to extremely wild for different car, tyre and grounds.
- ★ Several types protection: low voltage cutoff, overheat cutoff, lose control cutoff and motor locked cutoff.

### 03 Specifications

<b>Model No.</b>	ESC-MINI-HW483
<b>Continuos/Peak current</b>	10A/60A
<b>Compatible Motors</b>	Sensorless brushless motors、 Sensed brushless motors(Working under sensorless mode )
<b>Compatible Car Type</b>	1/28, 1/32 mini cars
<b>Motor KV Compatible</b>	1S Lipo : KV≤12000 2S Lipo : KV≤8000 (130 motor recomended)
<b>Battery Cells</b>	1-2S Lipo , 3-6 Cells NiMH
<b>BEC Output</b>	5V/ 1A
<b>Size/Weight</b>	25.15mm*21.73mm*7.9mm (including fan) /5g
<b>Resetting socket</b>	Independent Socket (white ZH-3Y male)

## 04 Usage of the ESC

Warning: In order to prevent sudden accident, we strongly suggest putting the car wheels in the air while open the power switch!



### I. ESC Connecting instruction

1 : ESC Power switch    2 : Motor connecting cable ; If the motor rotating direction is incorrect after the ESC switched on, change the connection of two motor cables. 3 : Receiver cable    4 : Power connecting socket, connecting to battery    5 : Reset socket for connecting program card. 6 : Set Button for setting throttle.

II. After all system connected, power on the transmitter and then the ESC, the motor will emit two short sound and one long sound and that means the RC car is ready for running.

### Set the throttle

If you have made any adjustment on the transmitter throttle neutral, ATV, EPA settings and that may be not compatible with the ESC neutral setting, then you need to reset the throttle, otherwise that may lead to no response or malfunction of the ESC.

(1) Switch on the transmitter, adjust "D/R", "EPA", "ATL" etc to 100% ( adjust them to the max position if your transmitter has no LCD screen), adjust the throttle trimmer to 0 ( adjust them to the neutral center position if your transmitter has no LCD screen). FUTABA and other similar radio need to be set throttle to REV, while other brand radios need to set throttle to NOR. Please switch off ABS function on the transmitter.

☑ Make sure the ESC is powered off, press down SET button and hold on, press ON/OFF, then the red LED will shining immediately, then release the buttons immediately. If you have not released the buttons within 3 seconds, the ESC will get into the resetting mode and you need to back to step (1) again.

☑ Now you need to set three setting: throttle neutral, forward max position and reverse max position.

- ① Throttle trigger keeps in the neutral position , press SET button , red light put out, green light blinks 1 time, motor beeps 1 time. That means the neutral position is recorded.
- ② Push the throttle trigger to the forward max position, press SET button , green light blinks 2 times, motor beeps 2 times. That means the forward max position is recorded.
- ③ Push the throttle trigger to the reverse max position, press SET button , green light blinks 3 times, motor beeps 3 times. That means the reverse max position is recorded.

☐ After the adjustment on throttle is finished, the motor will work 3 seconds later.

**05 Program Card Setting ( Black highlighted ones are default settings )**

Mode	Option1	Option2	Option3	Option4	Option5	Option6	Option7	Option8	Option9
1. Running Mode	Forward w/brake	<i>Forward, reverse and brake</i>	Forward, reverse						
3.Low voltage cutoff	No cutoff	2.6V/Cell	2.8V/Cell	<b>3.0V/Cell</b>	3.2V/Cell	3.4V/Cell			
3. Overheat cutoff	<i>Enable</i>	Disable							
4.Throttle Neutral range	6%	<b>9%</b>	12%						
5. Starting Mode	Level 1	Level 2	Level 3	Level 4	<b>Level 5</b>	Level 6	Level 7	Level 8	Level 9
6. Max Forward	50%	62.5%	75%	87.5%	<b>100%</b>				
7. Max Reverse	<b>25%</b>	50%	75%	100%					
8.Max Drag Brake	<b>12.5%</b>	25%	37.5%	50%	100%				
9. Drag Brake	<b>0%</b>	2%	3%	5%	6%	8%	10%	100%	
10. Initial Brake	<b>=Drag brake</b>	0 %	15%	25%					
11. Punch	<i>0.00degree</i>	3.75degree	7.50degree	<b>11.25degree</b>	15.00degree	18.75degree	22.5degree	26.25degree	

**06 Reset instruction :****Usage of the program card for resetting**

The program card is in small size coming a simple and easy reading surface.

When reset the data, user needs an extra cable with a JR male connector on side and a ZH-3Y female connector. Connect the ZH-3Y female connector with the male connector on the ESC, and plug the other JR male connector into the socket(marking with "-+S") of the program card, then switch on the ESC power, the ESC parameter settings will be shown after a few seconds. Use the buttons "ITEM" or "VALUE" to change the settings and press OK for saving the new settings.

**07 Restore Factory Initial Settings****Use the program card to restore the initial setting :**

Connect the program card to the ESC and switch on ESC power, then press "RESET" and "OK", then the ESC will restore its factory initial settings.