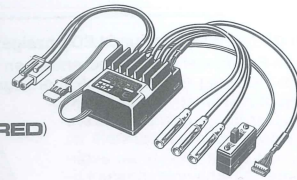


TBLE-02S

TAMIYA BRUSHLESS ELECTRONIC SPEED CONTROLLER 02 (SENSORED)



Thank you for purchasing the Tamiya Brushless ESC 02 (Sensored). This electronic speed controller is designated for use with the Tamiya Brushless Motor 01 (Sensored) series, and also Sport-Tuned Motors and brushed motors over 25 turns. Read carefully and fully understand instructions prior to use. Make sure to read the following safety precautions as breakage and accidents due to improper use will void your warranty.

※Using servos with a current exceeding 1.5A may cause damage to the ESC.

Specifications

ESC: Forward / Brake / Reverse

Max. Continuous Current: 60A

Input Voltage: 6.6-7.2V

Output: Forward - 100%

Reverse - 50%

Dimensions: 45x34x25mm

Weight: 50.8g

Compatible Motors: TBLM-01S series of Tamiya Brushless Motors (Sensored), Sport-Tuned Motor, motors over 25 turns

Receiver Output Voltage: 6V/1.5A

⚠ WARNING

Pay close attention to the following safety precautions as improper use can destroy the product and void your warranty or lead to property damage and personal injuries.

● This speed controller is intended for use with R/C models that operate on the ground. Do not use with other models.

● Connect receiver to ESC and servos securely. Connectors may become loose due to vibrations while running.

● Never operate any R/C model in electrical storms.

● Avoid running in rain or through surface water. Water in the receiver may cause loss of control.

● Disconnect and remove battery when car is not being used. If left connected the car may run out of control, causing damage or injury.

● Keep receiver, battery and model etc. out of reach of small children.

⚠ CAUTION

○ Make sure the polarity is correct when connecting a battery pack and motor to prevent damage to ESC and receiver.

○ Continuous running may loosen battery connection. Battery, motor and ESC become extremely hot during or after operation and can cause burns if touched.

○ Never short circuit battery or motor cables as it may damage the R/C unit.

○ This speed controller is not waterproof.

○ Do not disassemble or modify the ESC. This ESC is only for use with Tamiya batteries and motors. Use of other products may damage the R/C unit.

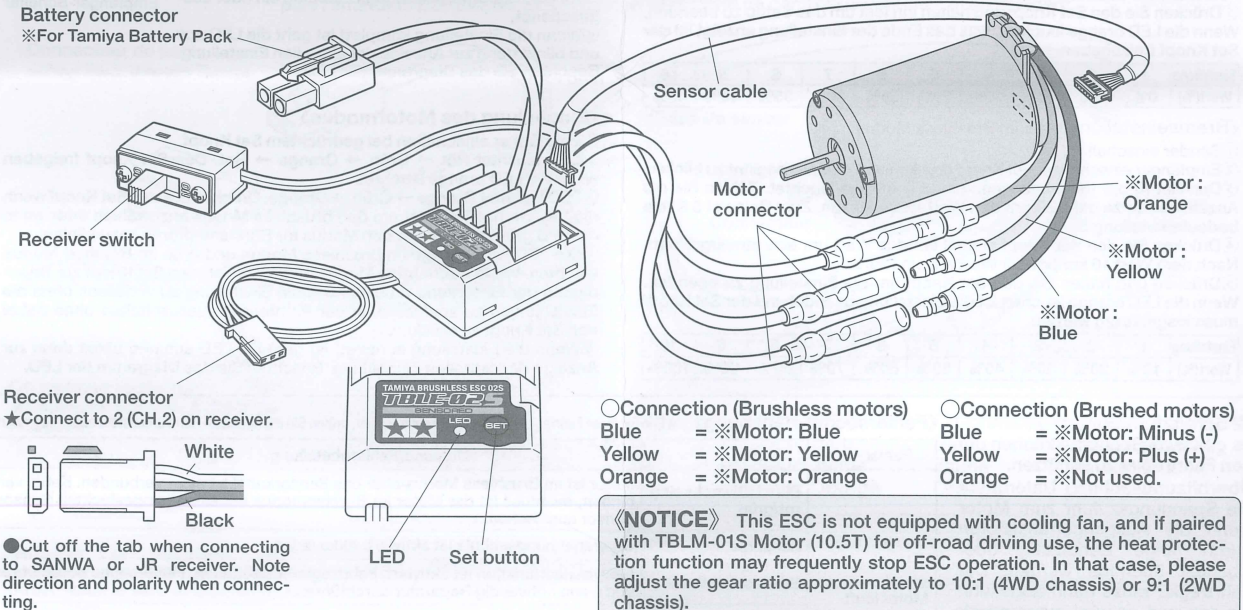
○ Never run an R/C model on roads or streets, or in crowded areas.

○ Never connect to a brushed motor when ESC is in brushless mode and vice versa, as this may damage the ESC.

○ Avoid strong shocks or impacts that may damage the ESC.

《Part names》

★ Always turn ON transmitter first, then receiver. Always turn OFF receiver first, then transmitter. Opposite order may lead to an out of control R/C car and an unexpected accident.



《NOTICE》 This ESC is not equipped with cooling fan, and if paired with TBLM-01S Motor (10.5T) for off-road driving use, the heat protection function may frequently stop ESC operation. In that case, please adjust the gear ratio approximately to 10:1 (4WD chassis) or 9:1 (2WD chassis).

《LED Flashing Pattern》 Setup confirmation

When the receiver is switched on, the LED will show the current settings with the number and length of its flashes to enable checking of reverse, low voltage protection and motor mode settings. As all 3 settings are shown by one LED, please refer to the diagrams.

Motor Setting	LED
Brushless Mode	Orange
Brushed Mode	Green

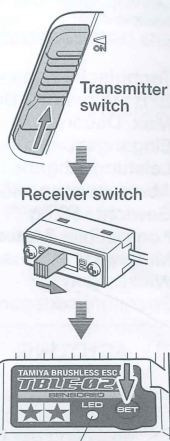
Reverse Function	Low Voltage Protection Setup	LED	Alarm
Enabled	ON	☀ Single flash	🔊
Disabled	ON	☀☀ Double flash	🔊🔊
Enabled	OFF	☀ Long single flash	🔊
Disabled	OFF	☀☀ Long double flash	🔊🔊

● If receiver is turned on while transmitter is off, LED will flash. If motor is connected an alarm will also sound. (Alarm will not sound if the Fail Safe Function of your transmitter is set to ON.)

● Please note that parts such as ESC, motor, battery, and wires emit noise due to large amounts of electric current. Putting the receiver and antenna near such devices may lead to interference causing loss of control. The receiver and antenna must not touch the ESC. The antenna must not cross over with cables from the ESC. Cables should be tied up. Carbon or metal chassis may also transfer interference.

《High Point Setup》(refer to 《Throttle Operation and LED Indicator》)

- With receiver power switch off, remove motor cables and ensure that no motor output is being transmitted to the model.
- Position throttle trim in neutral, and put throttle reverse switch into reverse position.
 - ★ If transmitter throttle range has been adjusted, reset to factory settings. Turn off any ABS or acceleration functions.
- Switch on transmitter.
- Switch on receiver.
- While holding down set button, check that LED flashes in the order Red → Green → Orange → Red.
- Release set button when LED lights up Red. LED will start to single flash Red.
- Apply full throttle and press set button once. If procedure has been performed correctly, LED will start to double flash.
- Apply full brake and press set button once. If procedure has been performed correctly, LED will turn off.
- When LED turns off, setup is complete.
 - ★ All settings are stored once setup is complete, and can not be stored separately.
 - ★ The settings will not be stored if the speed controller is turned off during setup, and previous settings will remain.
 - ★ Do not change transmitter settings after high point setup is complete. If transmitter settings are changed, perform high point setup again.
 - ★ Setup has to be done again if you change the transmitter.



LED is Red: High Point Setup
 LED is Green: Neutral Brake Setup
 LED is Orange: Brake Setup

《Neutral Brake Setup》Brushless Mode Only

- Switch on transmitter.
- Switch on receiver. Hold down set button and LED will flash in order.
- Release set button when LED lights up Green. Count the number of flashes of the LED to check the value. For example, 2 flashes means Setting 2.
- Press the set button once to increase the setting value by one, and it returns to Setting 1 after Setting 10.
- Push and hold set button to end setup. When LED lights up Orange to show setup is complete, release set button.

Setting	1	2	3	4	5	6	7	8	9	10
Output(%)	0%	5%	10%	15%	20%	25%	30%	35%	40%	45%

《Brake Setup》Brushless Mode Only

- Switch on transmitter.
- Switch on receiver. Hold down set button and LED will flash in order.
- Release set button when LED lights up Orange. Count the number of flashes of the LED to check the value. For example, 5 flashes means Setting 5.
- Press the set button once to increase the setting value by one, and it returns to Setting 1 after Setting 10.
- Push and hold set button to end setup. When LED lights up Orange to show setup is complete, release set button.

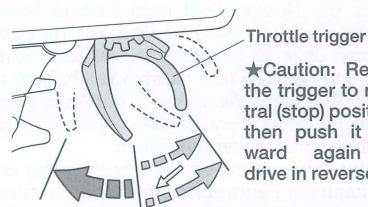
Setting	1	2	3	4	5	6	7	8	9	10
Output(%)	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

《Factory Settings》

Neutral Brake: Setting 2
 Brake Output: Setting 5
 Reverse Function: ON
 Low Voltage Protection: ON
 Motor: Brushless Mode

《Throttle Operation and LED Indicator》

LED remains off while throttle trigger is in neutral position, and turns on when trigger is moved forwards or backwards. When trigger reaches full throttle or full brake, LED turns off.



★ Caution: Return the trigger to neutral (stop) position, then push it forward again to drive in reverse.



《Reverse Setup》

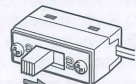
- Switch on receiver while holding down set button.
- LED flashes Red → Green → Orange → Red. Release set button when LED lights up Red.
- Each time setup is performed, reverse function is turned on/off.
- When setup is complete, LED turns off then flashes to show current settings. See 《LED Flashing Pattern》 diagram.



Set button

《Low Voltage Protection Setup》

- Switch on receiver while holding down set button.
- LED flashes Red → Green → Orange → Red. Release set button when LED lights up Green.
- Each time setup is performed, Low Voltage Protection function is turned on/off.
- When setup is complete, LED turns off then flashes to show current settings. See 《LED Flashing Pattern》 diagram.



Receiver switch

《Motor Mode Setup》

- Switch on receiver while holding down set button.
- LED flashes in the order Red → Green → Orange → Red. Release set button when LED lights up Orange.
- LED flashes Orange → Green → Orange. Press set button when LED is Orange to select Brushless Mode, or when LED is Green to select Brushed Mode.
- The LED will flash Orange in Brushless Mode and Green in Brushed Mode. If current mode is correct, press set button again to complete setup. To quit without storing settings, turn off receiver without pressing set button.
- When setup is complete, LED turns off then flashes to show current settings. See 《LED Flashing Pattern》 diagram.

《2 Protection Functions》

This item features 2 functions to protect ESC operation.

Overheat Protection: Stops power to the motor being cut off when FET overheats due to continued long running times or excessive load. Let the ESC cool down and it will automatically restart.

Overload Protection: If a current overload occurs, the motor will automatically shut down and will not restart automatically. Immediately switch off R/C units, check short circuits or motor damage, and fix problem. Then, restart R/C units.

《Troubleshooting》 ★ Before sending your speed controller in for repair, check it again using the diagram below.

Symptom	LED	Cause / Remedy
Motor does not work.	Flashes Red/ Green alternately	Motor is in Brushless mode but sensor cable is not connected. Connect cable. Alternatively, motor is in Brushed mode with sensor connected. Disconnect cable.
	Flashes Red	Low voltage protection function activated. Recharge the battery.
	Flashes Red quickly	Overload protection function activated. Turn off ESC, check for damage and repair if necessary.
	Flashes Red slowly	Heat protection activated. Let the ESC cool down and it will automatically restart. In case of frequent shutdowns, check gear ratio, ESC cooling, and drivetrain movement.
	Does not flash	Battery is not connected or recharged.
	Flashes Red or Orange	ESC has no signal input. Check transmitter switch, ESC/receiver connection, and frequency band or transmitter/receiver pairing.
Model moves opposite to transmitter input.	LED display is normal	Motor cables are not connected or motor is defective. Check motor connection or replace motor if needed.
	LED display is normal	High point setup error, or transmitter settings changed after high point setup. Perform high point setup procedure again.
	LED display is normal	Transmitter settings changed after high point setup. Perform setup procedures again if you changed transmitter. Also check if reverse function has been turned off.

Contact your local Tamiya dealer for any questions regarding this speed controller including parts, defects and repairs.

★ Send the product with detailed description of the malfunction to Tamiya Customer Service for repair request (Effective in Japan only).



! Safety Notice Regarding Tamiya TBLE-02S and TBLE-03S ESCs !

**Thank you for purchasing this Tamiya product.
Please read these instructions fully before use and follow at all times.**

★Regarding batteries



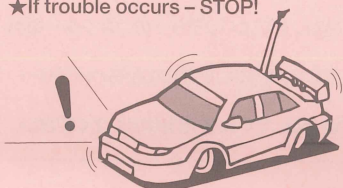
- Tamiya brand Electronic Speed Controllers (ESCs) are designed for use with Tamiya R/C car battery packs.
- Use of non-Tamiya battery packs (including Lithium-Polymer products) may risk damage, and is not recommended.
- When storing battery packs not in use, do so in accordance with the instructions supplied with them.
- Disconnect battery packs when a model is not in use.
- Remove battery packs from the model completely when finished using it.
- Do not cover battery packs with or leave near cloths, clothing or other materials as this can lead to a fire hazard.
- Charge battery packs with a compatible charger, in accordance with the instructions supplied with them.
- Ensure there are no flammable objects in the immediate vicinity when charging battery packs.

★Do not modify!



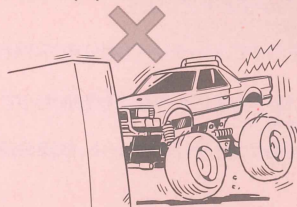
- Do not modify the ESC, connectors, power cable or motor cables. Do not change cables.
- Do not cut or shorten cables in any way.
- Do not disassemble the ESC or any of its components.
- If races or other events require modifications, always consult your local Tamiya dealer before carrying them out.

★If trouble occurs – STOP!



- Before connecting the battery pack, always check for incorrectly connected cables, loose connectors and any other potential problems with the model or driving area.
- If a model behaves erratically or unusually during use, immediately stop, disconnect the battery pack and turn it off.
- If the model is emitting extreme heat or smoke, immediately stop use. Taking care to avoid burns and personal injury, disconnect the battery pack and turn it off.
- If you notice any damage to or problems with connectors, cables, switch, etc., stop use immediately.

★Treat equipment with care!



- Tamiya brand ESCs are designed for use with Tamiya servos and R/C equipment.
- Use motors that comply with the specifications in the table at the bottom of this sheet.
- R/C equipment contains highly sensitive precision electronic components. Use water-proofing or cushioning materials to protect it as appropriate.
- Allow the motor, battery pack, ESC and other equipment to cool after each battery run.
- Impacts with obstacles, jumps and landings can damage sensitive electronic equipment. Always check both before and after use to ensure there is no damage.
- Do not use in rainfall, standing water or otherwise wet conditions, as this may cause damage to electronic components, short circuits and more.

NOTICE!

●Tamiya will not cover repair costs for damage caused by failure to follow the instructions above. Repair costs must be borne by the customer.

★Failure to use within the specifications below may lead to damage to FET or BEC, and short circuits.

	TBLE-02S	TBLE-03S
Battery pack	Tamiya 6.6-7.2V battery pack	
Brushless motor	Tamiya TBLM sensored motors	
Brushed motor	Tamiya Sport-Tuned motor; Tamiya motors over 25T	Tamiya motors up to 23T
Maximum continuous current	60A	120A
BEC	6V-1.5A (continuous) 2.5A (maximum)	



ESC Warnings (TBLE-02S TBLE-03S) (11056602)



Regarding warranty repair

● Thank you for purchasing this Tamiya product. Please read this information fully before use.

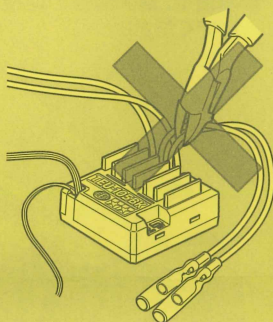
◇ Cases meeting the following criteria will be covered by manufacturer warranty, with repair costs covered:

● Malfunction or breakage occurs despite the product having been used in accordance with Tamiya's instructions and recommendations regarding auxiliary equipment and conditions of use.



CAUTION- For your safety, read and follow the instructions below.

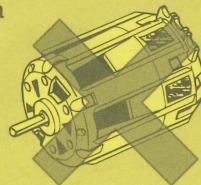
● Do not change cables or connectors, or modify, disassemble or tamper with electronics and mechanics.



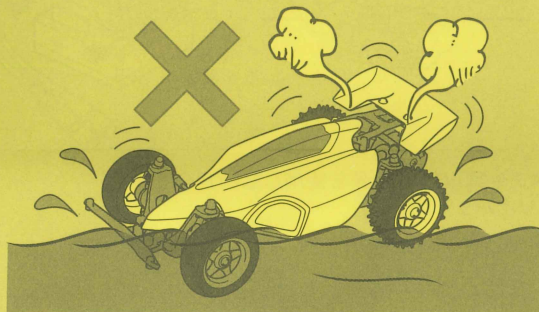
● Do not use with battery products (including Lithium-Polymer battery packs) not recommended by Tamiya.



● Do not use with non-Tamiya components (including motors).



● Do not submerge the product, nor reverse battery polarity or cause cables to short-circuit.



● Do not store in dangerous conditions, including high temperatures or humidity, in proximity to harmful substances, or in other unsafe locations.

● Always request repairs from your local Tamiya agent or authorized repair shop.

NOTICE!

● Tamiya will not cover repair costs for damage caused by failure to follow the instructions listed above. Repair costs must be borne by the customer.

● Tamiya will not cover repair costs when the component requiring replacement is adjudged to have accumulated wear and tear considered acceptable for replaceable parts such as gears, motors, tires, damper oil, etc.

● Tamiya will not cover repair costs for damage caused during transportation or delivery by a third party company, or in a fire, earthquake or other hazard outside of human control.

● Tamiya does not accept responsibility for any incidental or indirect damages claimed from use of our products.

● For questions or repair inquiries regarding products bought outside Japan, please contact the vendor from whom the item was purchased.



Guarantee Coverage Guide (11056601)