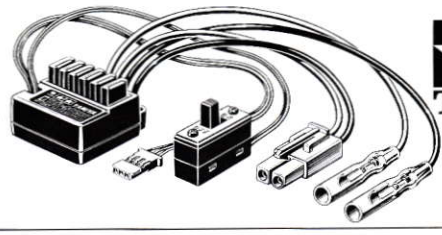
TEU-302BK
FET Speed Controller



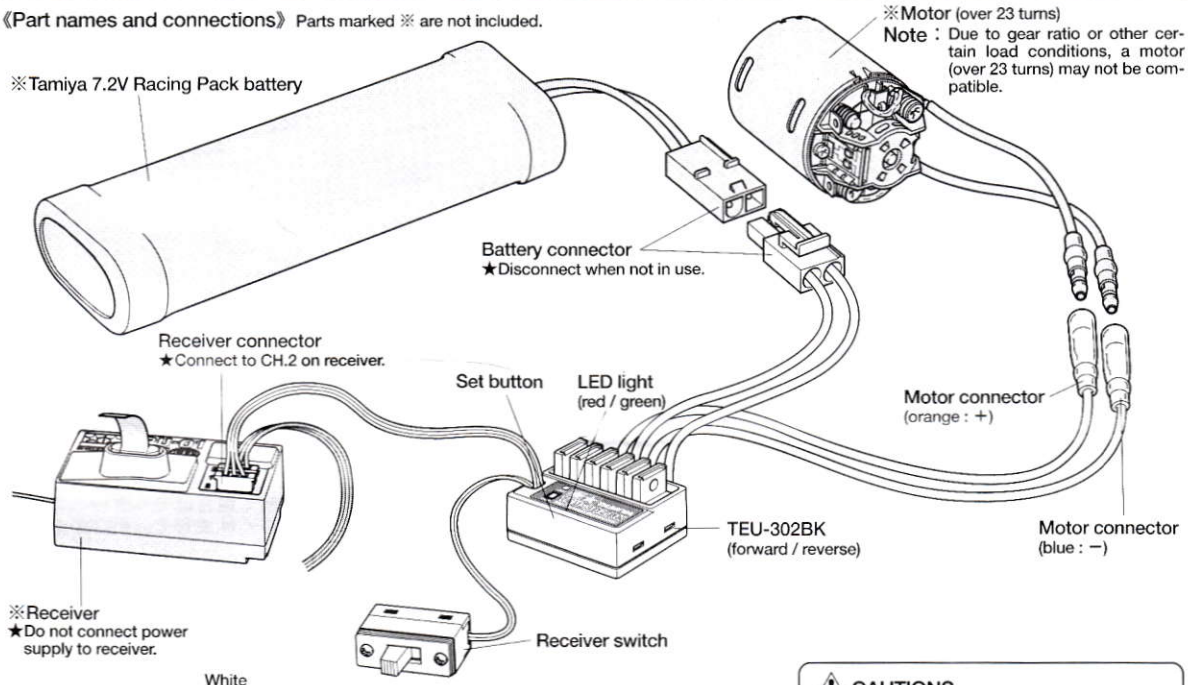
TAMIYA

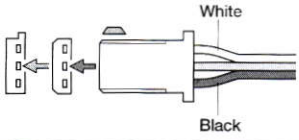
TEU-302BK is a forward / reverse running electronic speed controller featuring a high frequency wave drive system. Read this instruction manual carefully before operation. For safety pre-cautions, always follow the instructions provided. Improper operation may result in a serious accident.
★Never use electronic parts that prevent current flow, such as schottky diodes. They cause counter current when car is in reverse damaging the electronic speed controller. Remove any such parts if already installed.
★Disconnect motor cables during set-up.

Tamiya TEU-302BK (forward / reverse)
- ●Compatible receiver : TAMIYA, KO, FUTABA, JR, SANWA (Blue)
- ●Control system : High frequency wave drive system
- ●Max. continuous current (FET spec) : Forward 120A, Reverse 60A
- ●Power supply : 7.2~8.4V (with 6~7 cells)
- ●Compatible motor : Electric motor for R/C cars (over 23 turns)
- ●Driving frequency : 500Hz, 1kHz, 2kHz (with 3 steps)
- ●Output voltage for receiver : 6V (input 7.2V)
- ●Output current for receiver : 1A
- ●Dimensions : 33.5×27.2×14.3mm (except projections)
- ●Weight : 48g (body 43g)

※Specifications are subject to change without notice.

《Part names and connections》 Parts marked ※ are not included.

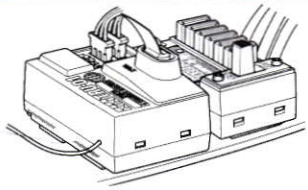




●When using a SANWA, JR or ACOMS receiver, cut tab of receiver connector. Note connector direction and carefully connect referring to the illustration.

⚠ CAUTIONS
- ○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.

《Installation》
●Putting receiver and receiver antenna near devices circulating large amounts of electrical current, such as TEU-302BK, motor, running battery or cables, will lead to interference causing loss of control. Receiver and receiver antenna must not touch TEU-302BK, and antenna must not cross over with cables from TEU-302BK. Carbon or metal chassis may also transfer interference.



★Attach TEU-302BK to chassis or mechanism deck with double-sided tape. Attach switch to easily accessible place.

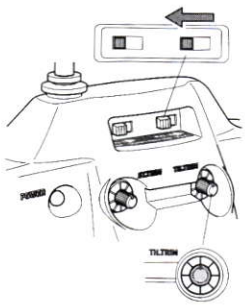
⚠ WARNING
- ●This product is an electronic speed controller for land based R/C models. Do not use for any other purpose.
- ●Securely connect electronic speed controller and servo to receiver. Cables can become disconnected due to strong vibrations during use, resulting in loss of control.
- ●Make sure no one else in the area is using the same frequency as yours. Frequency interference can cause serious accidents.
- ●Stop operation if lightening or thunder occurs, as lightening may strike the transmitter antenna.
- ●Do not operate your R/C model in puddles or in rain. Interior electronics may get wet resulting in loss of control.
- ●To prevent fire or an out of control car, always remove or disconnect batteries after use.
- ●Keep transmitter, battery and R/C model away from small children to prevent possibility of personal injury, burns, intoxication, suffocation, etc.

⚠ CAUTIONS
- ●Check polarity (+/-) of motor and battery before connecting. Incorrect connection could damage internal electronics.
- ●Using a low turn motor at low frequency may damage electronic speed controller and motor.
- ●Avoid continuous operation: battery connector may melt or become deformed by heat. To prevent burns, do not touch motor or electronic speed controller straight after use.
- ●Short circuits to cables will damage internal electronics and chassis.
- ●This product contains precision electronic parts that may be damaged by high impact, water or humidity.
- ●Do not disassemble or modify. Use designated parts only. Foreign parts may not be compatible causing damage to internal electronics.
- ●Never run R/C models on streets or crowded areas.

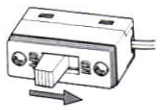
《Set-up》
★When programming settings, disconnect motor cables.

Neutral / Maximum acceleration / Maximum reversing (Full braking)

① Securely connect wiring according to illustration on page 1 (except motor). Turn on transmitter first, position throttle trim to neutral and reverse switch to normal.
★If your transmitter is capable of programmed settings such as ABS or acceleration function, turn off all settings.

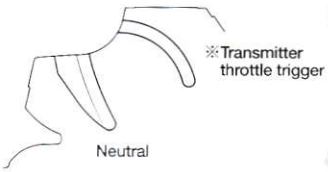


② Turn on receiver. When installing for the first time, LED light will flash red once.



③ Push set button once with throttle trigger in neutral.

LED flashes once.



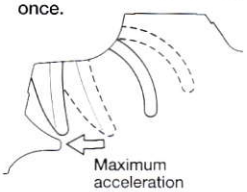
※Transmitter throttle trigger

Neutral

Push set button (for more than 0.5 sec.).

LED flashes red.

4 Pull throttle trigger to maximum acceleration and push set button once.

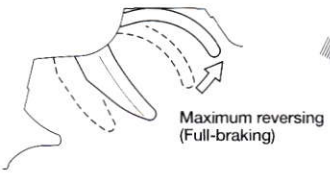


Maximum acceleration

Push once.

LED changes to a double flash.

5 Push throttle trigger to maximum reversing and push set button once.



Maximum reversing (Full-braking)

Push once.

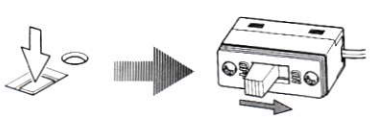
LED turns off.

6 Setting completed.
(Standard settings)

★Throttle positioning must be set in this sequence and can not be set individually.
★If power is turned off before completion, the new settings will be lost and old throttle positioning will remain.
★Until you correctly complete the step, you can not progress to the next one.
★You must set new throttle positioning when changing transmitters.

Turning reverse function off
★Allows you to enter races forbidding reverse running. Follow the instructions below to turn reverse function off (pushing throttle trigger will activate brakes only).
★Follow same sequence to turn reverse function on (switches between on / off setting each time done).

Turn on transmitter. Turn on receiver while holding down the set button, then release button immediately (within 3 sec.). Flashing LED quickly flashes red twice and turns off (only flashes once when turning reverse function on). Setting completed.

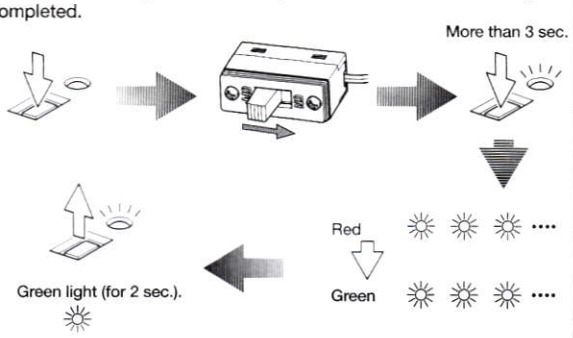


★Checking if reverse function is on or off.
When reverse function is on: LED will flash red once when turning on transmitter and then receiver.

When reverse function is off: LED will flash red twice when turning on transmitter and then receiver.

Default setting
★Cancels all changes and returns to original settings at time of purchase.

Turn on transmitter. Turn on receiver while holding down the set button. Keep holding down button until flashing red light turns green (app. 3 sec.). Release button.
LED light will be green for 2 sec., then turn off. Default setting is completed.



保証規定

この保証書により、表記の製品を下記の通り保証いたします。なお、この保証書は日本国内でのみ有効です。

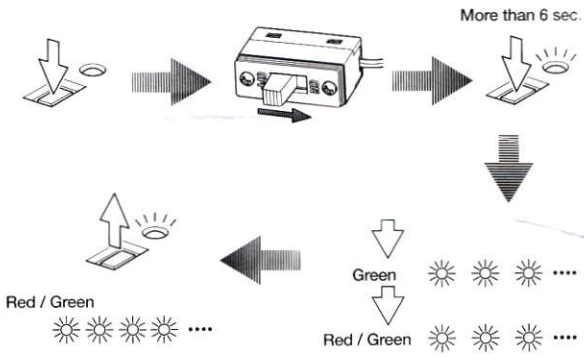
1)この保証書はタミヤTEU-302BKアンプを保証するものです。
2)お買上日から6ヶ月(180日)以内に、正しい使用状態で発生した故障は、無料修理いたします。修理を依頼される場合はその故障状況をできるだけ詳しく教えて下さい。修理箇所を早く確実に知ることができるので、修理期間が短くなります。(修理を依頼される場合は、必ずこの保証書を修理品に添えて、お買上店、または株式会社タミヤカスタマーサービス(静岡市恩田原3-7〒422-8610)にお送りください。お問い合せ電話番号054-283-0003)
3)次のような場合は、保証期間内でも有料修理となります。1使用上の誤りや操作の間違いによると認められる故障(電源の逆接続、出力コードのショートなどによる故障、水濡れ、衝突などによる故障や損傷)。2電気的、機械的な変更や改造、分解をした場合(コードの付け替え、メカの分解等)。3指定以外の電源を使用した場合。4お買上後の輸送や移動、落下などにともなう故障や損傷。5保管上の不備(高温、多湿、ナフタリンその他の薬品等の製品に損傷を与える場所での保管)や手入れの不備による故障や損傷。6火災その他災害による場合。7修理依頼の際に保証書が添えられていない場合。8保証書にお買上店印、お買上年月日、車種の記入が無い場合及びそれらの字句を書換えた場合。4)修理依頼の際の運賃等は、お客様にご負担願います。

●保証書の再発行はいたしません。 Effective only in Japan.

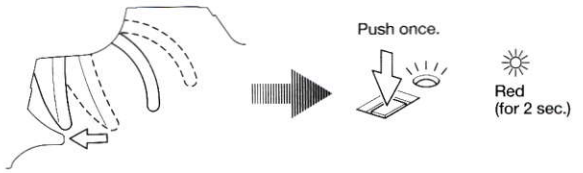
Adjusting torque-curve (driving frequency)

★Set torque to mild or quick setting when in low or medium speed in order to suit track conditions (set to normal at time of purchase).

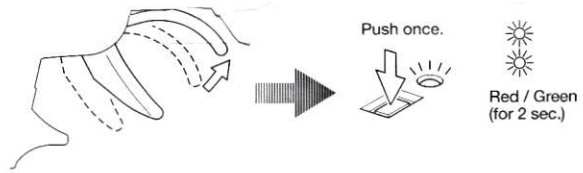
Turn on transmitter. Turn on receiver while holding down set button. Keep holding down button until flashing red light turns green (6 sec.), then flashes both red / green. Release button.



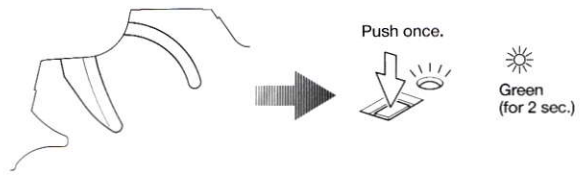
Mild setting: Pull throttle trigger to maximum acceleration. Push set button and LED turns red for 2 sec.



Quick setting: Push throttle trigger to maximum reversing. Push set button and LED turns red / green for 2 sec.

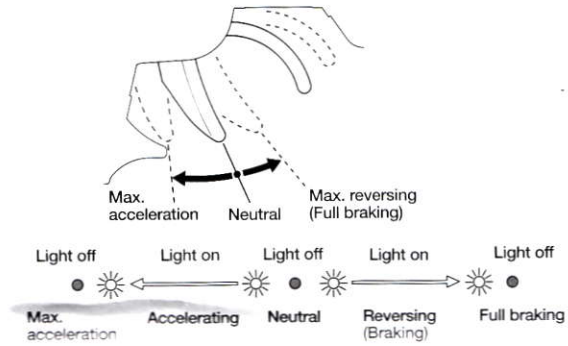


Normal setting: Push set button once with throttle trigger in neutral. LED turns green for 2 sec.

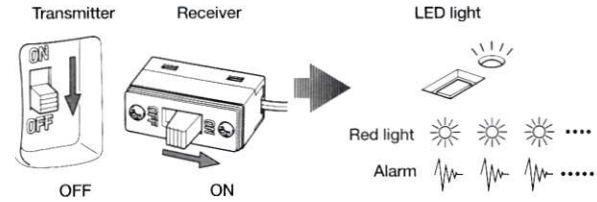


Throttle operation and LED light

●If settings are correct, LED will turn off when trigger is in neutral, turn on when accelerating / reversing, and turn off when at maximum acceleration / full braking.



●If receiver is turned on while transmitter is off, LED will flash. If motor is connected an alarm will also sound.



Tamiya TEU-302BK is equipped with three safety functions.

Reduced voltage protection circuit : When battery output is low, power to motor is reduced to maintain power to servo, preventing potential loss of control. When car begins to slow, replace or recharge battery.

Heat protection mechanism : If TEU-302BK starts to overheat due to long use, power to motor is reduced, causing car to slow. If further overheating occurs, power to motor is stopped, preventing any damage. After cooling, the heat protection mechanism will automatically reset.

Overcurrent protection mechanism : When motor short circuits, power to motor is automatically stopped. Overcurrent protection mechanism will not reset automatically. After fixing the car, restart the transmitter and receiver.

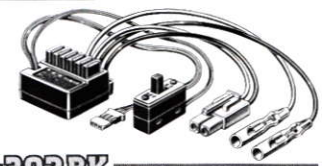
《CAUTION》

●Check polarity (+/−) of battery before connecting. Incorrect connection could damage internal electronics of TEU-302BK.
●Do not repeatedly accelerate and reverse as it may cause motor and TEU-302BK to overheat leading to malfunction.
●If TEU-302BK gets wet, immediately turn off, disconnect battery and allow to air dry.

《Trouble shooting》 ★Before sending your R/C model for repair, check it again using the chart below.

PROBLEM	CAUSE	SOLUTION
Motor does not work. No brake control.	★Setting error. ★Faulty motor. ★Connection error. ★Faulty TEU-302BK.	●Re-program settings from the beginning. Also check transmitter and receiver. ●Replace motor. ●Inspect cables and wiring. ●Contact your local dealer/agent.
Overheating of TEU-302BK (Heat protector is active)	★Insufficient cooling. ★Faulty chassis driving gear. ★Improper gear ratio.	●Create better ventilation by making holes on body shell, etc. ●Inspect rotating area of chassis. Reassemble if required. ●Set proper gear ratio.

★In case of a fault or malfunction, consult your local Tamiya agent / dealer.



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