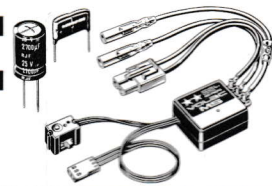


VOLAC MS

VARIABLE
FREQUENCY
SYSTEM



Volac MS ESC is a forward-only electronic speed controller (ESC) intended for R/C car racing. Carefully read and fully understand instructions prior to use. Also make sure to read and adhere to the safety precautions mentioned below. Breakage and accident due to improper use will void warranty.

★Compatible receiver : TAMIYA, KO, FUTABA and JR

※Specifications are subject to change without notice.

Variable frequency system

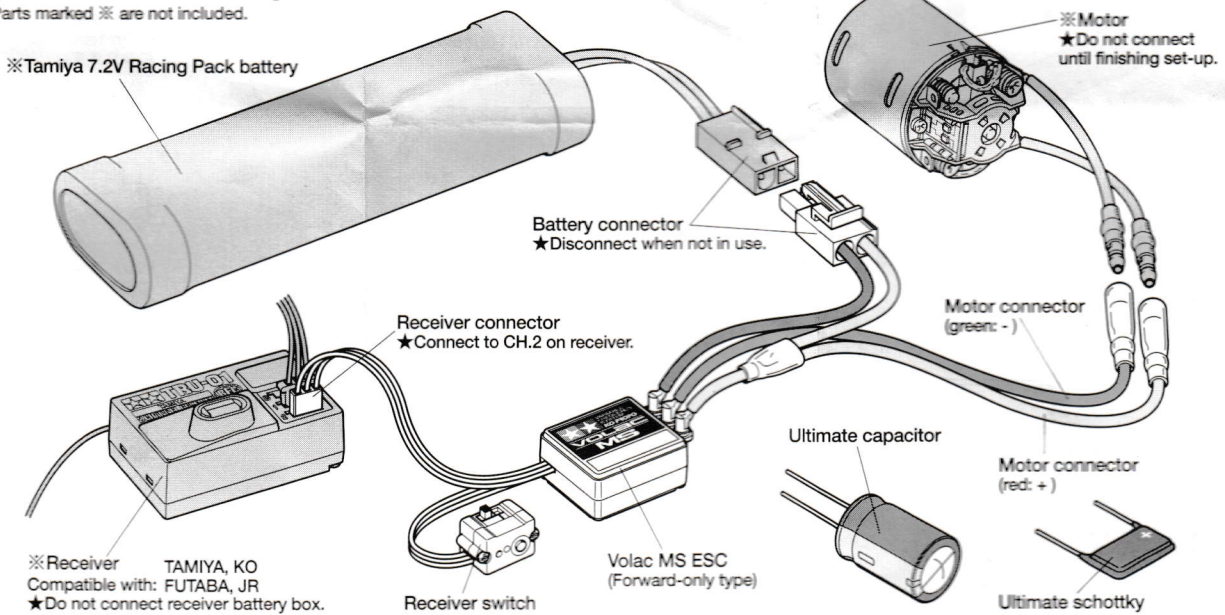
Allows you to adjust motor output to best suit your motor and running circuit (setting requires Multi Setting Adapter). Acceleration range is divided into 32 steps from stopping to maximum acceleration, with 64 different frequency settings (cycle of ON/OFF signal). Low frequency at low speeds gives high torque for plenty of punch, and high frequency at high speeds gives smooth acceleration.

Volac MS ESC (Forward-only type)

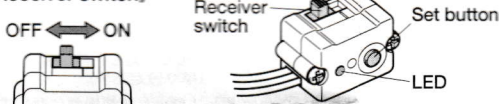
- Control system: PWM control, variable frequency
- Max. instantaneous current: 3120A (FET)
- Max. continuous current: 780A (FET)
- Power supply: 4.8-8.4V (with 4-7 cells)
- Applicable motor: standard motor for R/C cars
- Driving frequency: 0.9-12KHz (with 64 steps)
- Initial setting TAMIYA Original
- Output voltage for receiver: 6V (input 7.2V)
- Output current for receiver: 2A (max. instantaneous)
- Dimensions: 28.0 x 25.0 x 14.4mm (body)
- Weight: 18.8g (body)

《Part names and connections》

Parts marked ※ are not included.



《Receiver switch》



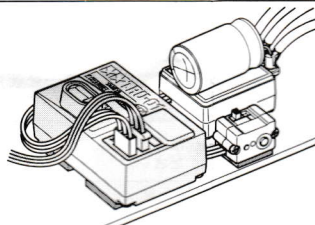
⚠ CAUTIONS

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

《Installation》

Devices circulating much current, such as ESC, motor, running battery and cables generate interference. Putting receiver and receiver antenna near these devices may result in loss of control. Place receiver and receiver antenna so that they do not contact with ESC, and the antenna does not cross ESC cables. Note that carbon and metal chassis are also affected by interference.

★Make sure to install receiver (especially crystal) and receiver antenna where interference does not occur.



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

★Chrome plating on ESC body is delicate. Be careful not to damage the surface when removing double-sided tape.

⚠ WARNING

- This product is an electronic speed controller for ground-used R/C models. Do not substitute for other use.
- Securely connect receiver to electronic speed controller and servo. Connector may be detached due to running vibration and result in out of control car.
- Make sure that no one else is using the same frequency in your running area. Using the same frequency at the same time can cause serious accidents.
- Stop operation at the first sign of lightning. Lightning may strike transmitter antenna.
- Do not operate R/C models in puddles or in rain. R/C devices may catch water and result in loss of control.
- Always remove running battery after use. Run away car or fire may occur if R/C model is left switched on.
- Keep transmitter, battery and R/C model away from small children to pre-

vent personal injury, burns, intoxication, and suffocation.

⚠ CAUTIONS

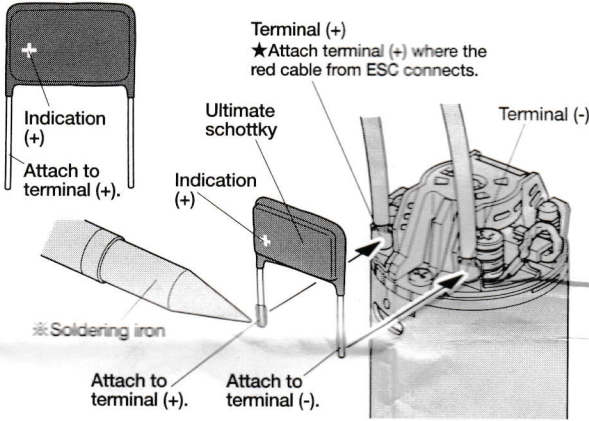
- Always connect battery and motor in correct polarity. Improper connection may damage R/C devices.
- Running motor with few turns at low frequency in low speed may damage electronic speed controller and the motor.
- Avoid continuous operation: battery connector may melt or be deformed by heat. Do not touch motor and electronic speed controller right after operation to prevent burning yourself.
- Do not short circuit cables to prevent damage to R/C devices and chassis.
- This product contains precision electronic devices. Shock, water and humidity may cause breakage.
- Do not disassemble and modify. Non-designated parts (capacitor, schottky, etc.) may damage R/C devices and motor.
- Do not operate R/C model in the street or crowded place.

★Always attach Ultimate schottky to motor, and attach Ultimate capacitor to ESC.

★Schottky and capacitor should be attached with solder. Take extra care when using soldering iron to prevent burning yourself or causing fire. Pay attention to polarity (+,-) when attaching. Opposite attachment may cause critical malfunction.

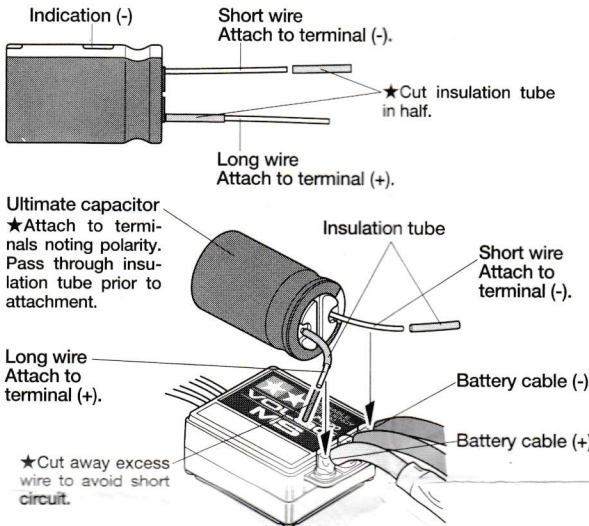
《Ultimate schottky》

★Attach Ultimate schottky to prevent interference from motor. Note polarity of schottky.



《Ultimate capacitor》

★Make sure to attach capacitor to ESC to prevent loss of control due to depression of current and voltage caused by sudden acceleration.



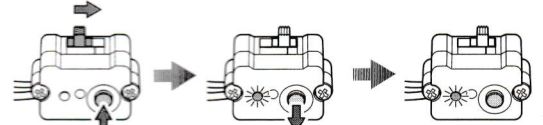
《Set-up》

★When setting-up, disconnect motor cables.

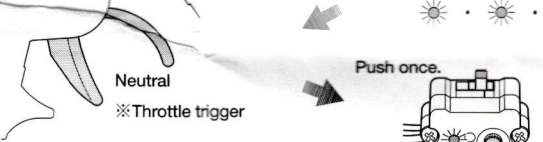
① Securely connect cables according to connection on page 3. Turn on transmitter first, then position throttle trim to neutral and reverse switches to normal.

★Turn all settings on throttle to initial settings and turn off all programmed settings such as ABS or acceleration function.

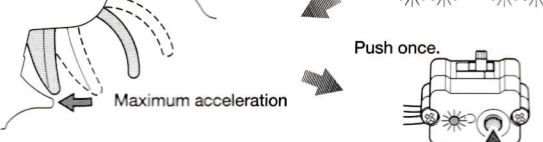
② Turn on receiver switch while holding down set button. Release set button when LED lights up. Then LED will start flashing.



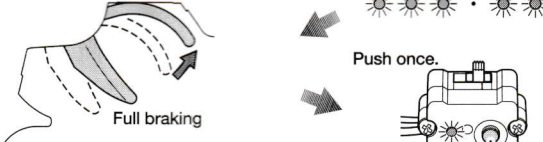
③ Push set button with throttle trigger in neutral.



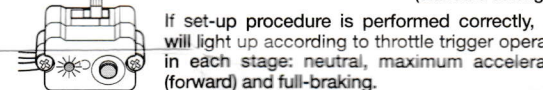
④ Pull throttle trigger to maximum acceleration and hold. Push set button once.



⑤ Push throttle trigger to full braking and hold. Push set button once.



⑥



《Frequency setting》

Using Multi Setting Adapter (sold separately), you can set motor output to suit your driving style. Refer to the instructions on Multi Setting Adapter for detailed information.

《Trouble shooting》

★Before sending your ESC in for repair, check it again using the below diagram.

PROBLEM	CAUSE	SOLUTION
Motor does not work. No brake control.	<ul style="list-style-type: none"> ★Set-up error. ★Damaged motor. ★Connection error. ★Damaged ESC. 	<ul style="list-style-type: none"> ●Perform set-up procedure again. ●Replace motor. ●Inspect cable and connection. ●Contact your local dealer/agent.
Disturbed control. No control.	<ul style="list-style-type: none"> ★Damaged schottky or capacitor. ★False position of ESC and/or receiver. 	<ul style="list-style-type: none"> ●Replace the schottky or capacitor with new one. Replace motor if it is causing interference. ●Change ESC or receiver position, or antenna cable layout.
Overheating on ESC. (Heat protection device is on.)	<ul style="list-style-type: none"> ★Cooling shortage. ★Damaged driving gear of chassis. ★Improper gear ratio. 	<ul style="list-style-type: none"> ●Create better ventilation by making holes on body shell, etc. ●Inspect rotating area of chassis. Reassemble if required. ●Set proper gear ratio.

IF ANY TROUBLES...

★In case of malfunction, consult your local agent/dealer.

www.tamiya.com

AFTER MARKET SERVICE CARD

When purchasing Tamiya replacement parts, please take or send this form to your local Tamiya dealer so that the parts required can be correctly identified and supplied. Please note that specifications, availability and price are subject to change without notice.

Parts code ITEM 45031
 7804062.....Ultimate Capacitor
 7804063.....Ultimate Schottky
 7804064.....Multi Setting Adapter w/Card

Produced by: KO PROPO

