

TRMT8E

1/8th Scale Monster Truck

Instruction Manual

MAN-TRMT8E-2015.26.08-V5



RC CARS & TRUCKS



1:8
1:8 SCALE
OFF-ROAD


WATERPROOF
ELECTRONICS


BRUSHLESS
MOTOR


2.4 GHz
RADIO SYSTEM

4x4
4 WHEEL DRIVE





WARNING!

AGE WARNING!

- ▶ This radio controlled (RC) vehicle is not a toy! You must be 14 years of age or older to operate this vehicle. Adult supervision is required.

RISK OF RUNAWAY VEHICLE OR INJURY!

- ▶ Never turn on the vehicle or plug in the battery pack without first having the controller turned on.

RISK OF FIRE!

RISK OF EXPLOSION!

- ▶ There is a risk of fire and explosion when dealing with batteries. Rechargeable batteries may become hot and catch fire if left unattended or charged too quickly.
- ▶ Use extra caution when charging LiPO batteries. Use only LiPO specific chargers. Use a LiPO safe charging pouch when charging LiPOs. Charge away from flammable materials.
- ▶ Never charge at a rate higher than 1 C. (2000Mah pack= 2amps charge rate). Overcharging can lead to fire and explosion. Always store battery packs in a cool dry place.
- ▶ Never leave the battery plugged into the ESC when the vehicle is not in use.
- ▶ Never connect two batteries to one another.

RISK OF BURNS!

- ▶ The batteries, electronic speed controller (ESC), electric motor, and other areas of the vehicle can get hot. Burns can occur if touched after vehicle operation. Allow adequate time to cool before handling.

RISK OF ELECTRICAL SHOCK!

- ▶ Use caution when charging batteries. Do not touch positive and negative leads together.
- ▶ Do not lay battery on metal. Use only chargers specified for the battery type being charged.
- ▶ Keep batteries and chargers away from water.

RISK OF INJURY!

- ▶ Hobby grade RC vehicles can cause serious injury or death if not operated correctly.
- ▶ Never use vehicle in crowds. Never chase people or animals. Only drive in safe open areas.
- ▶ Keep body parts away from moving parts.

RISK OF DAMAGE!

- ▶ Never operate RC vehicles on public roads. Damage of vehicle and property can occur. Only operate on open private property.
- ▶ Never charge the battery pack while it is still plugged into the RC vehicle. Always unplug the battery pack from the electronic speed controller (ESC) and remove the battery from the RC vehicle before charging. Failure to do so will result in damage to the vehicle's electronics and void the electronics warranty.

RISK OF RUNAWAY VEHICLE OR INJURY AND DAMAGE!

- ▶ Only use new AA batteries in your radio transmitter. Replace transmitter batteries often to ensure full control of the vehicle.
- ▶ Do not mix old and new batteries. Do not mix alkaline batteries, standard (carbon-zinc) or rechargeable (nickel-cadmium) batteries.
- ▶ Perform a radio range check BEFORE running your RC vehicle to avoid a runaway vehicle.



Perform a radio range check:

- ▶ Install new AA batteries into the bottom of the transmitter.
- ▶ Turn on the transmitter.
- ▶ Turn on the ESC power switch, which is found in the vehicle.
- ▶ Check that the controls are working properly.
- ▶ Keep fingers away from potentially moving parts and hold the vehicle off the ground.
Note: Always turn on the transmitter first to prevent runaways.
- ▶ Check that the controls are working properly. The steering wheel should operate the steering and the trigger should operate the motor. Pulling the trigger right should make the vehicle go forward, pushing the trigger should apply the brake and reverse. You may need to adjust the throttle trim found on the transmitter to keep the wheels from spinning while the trigger is in the neutral position.
- ▶ Have a buddy hold the vehicle and walk 50 yards away. You and your buddy should decide on a routine beforehand, since it will be difficult to communicate with each other while testing.
An example would be:
 - ▶ Turn the steering wheel left and count to ten
 - ▶ Turn the steering wheel right and count to ten
 - ▶ Pull the trigger and count to ten
 - ▶ Push the brakes and count to ten.
- ▶ You will want to repeat these steps moving further out as you progress until you are beyond the maximum distance you plan to run the vehicle.
- ▶ If the radio performed without any glitches or twitching at maximum distance, you are ready.

Water Warning:

- ▶ After vehicle gets wet, please unplug the ESC from the battery to avoid putting users in danger. Also, rust proofing the bearings and metal parts is highly recommended.



- ▶ If you feel driving in water is necessary, please seal all holes in the tires and rims before performing this action to prevent the tire foam from absorbing water inside the tires.



Adjustable Pillow Balls

Adjustable Pillow Balls

Oil Filled Shocks

Battery Box

ON/OFF Switch

Motor

Oil Filled Shocks

LED Lights

ESC

LED Lights

Oil Filled Shocks

Receiver Box

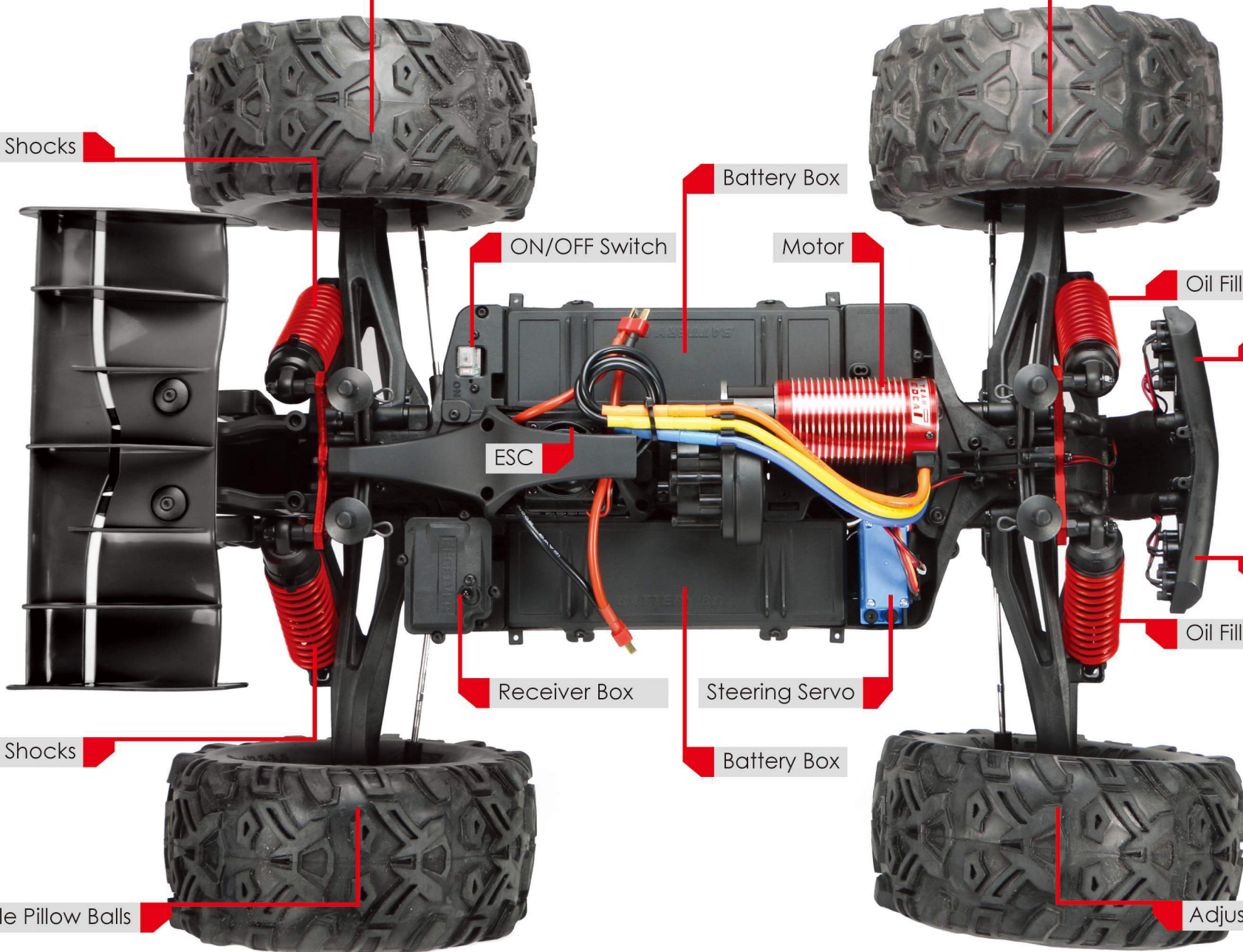
Steering Servo

Oil Filled Shocks

Battery Box

Adjustable Pillow Balls

Adjustable Pillow Balls





Thank you for choosing the Team Redcat TR-MT8E. The TR-MT8E is designed to be fun to drive and uses top quality parts for performance and durability. Before you start using your new RC kit, we suggest you read through the instruction manual first. Be sure to check all tips before you start. We hope you enjoy your new Team Redcat RC.

Features:

- ▶ Factory assembled
- ▶ Bright LED Lights included
- ▶ Reinforced Differentials
- ▶ Hardened Steel Driveshafts
- ▶ Stylish Body
- ▶ Large Wheels and Tires
- ▶ Rear Wing and Wheelie Bar
- ▶ High Quality Ball Bearings
- ▶ Super Strong, Long Travel Suspension
- ▶ Adjustable Turnbuckles
- ▶ Center Driveshaft Dust Cover

Specifications:

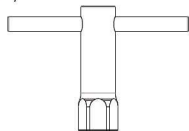
- ▶ 1/8 4WD EP Monster Truck (RTR)
- ▶ Ground Clearance: 88mm
- ▶ Weight: 4980g
- ▶ Length: 560mm
- ▶ Width: 440mm
- ▶ Wheelbase: 350mm
- ▶ Height : 260mm
- ▶ Wheel Track : 440mm
- ▶ High Torque 2500KV Brushless Motor
- ▶ Heavy Duty Waterproof 100A 4S ESC
- ▶ Savöx Heavy Duty Waterproof Servo
- ▶ 2.4GHz Radio System



Thank you for purchasing the TR-MT8E. To drive the vehicle, you will need to acquire the following items.

1 Included tools

- Cross Wrench (17mm)



- L Type Hex Wrench (2.5mm) #117031

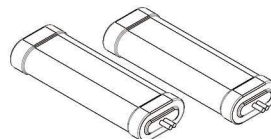


2 Required items

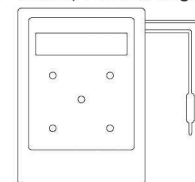
- AA Alkaline Or Rechargeable Batteries For Transmitter, 4pcs



- 2S 7.4v Rechargeable Lipo Battery Pack X 2



- Battery Pack charger

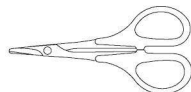


3 Helpful equipment

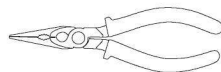
- Hobby Knife (Warning!! This knife cuts nylon parts and fingers with equal ease. Be careful.)



- Body Scissors (for body cutting) #116006



- Needle-nose Pliers



- Hex Wrench Metric Size 1.5mm #117057-1



- Hex Wrench Metric Size 2.0mm #117057-2



- Hex Wrench Metric Size 2.5mm #117057-3



- Hex Wrench Metric Size 3.0mm #117057-4

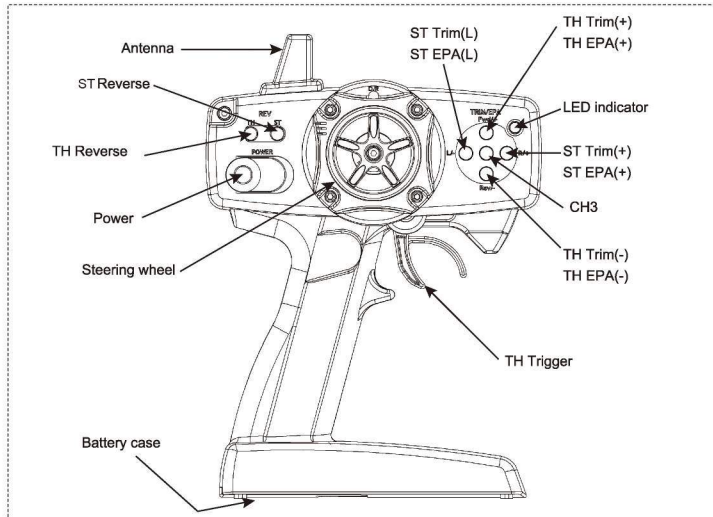


- Nut Driver 5.5mm (for 3mm nut) #117010



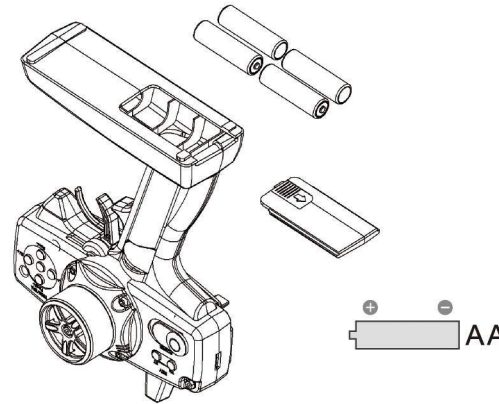
Instruction & Setup Manual

1 Transmitter Function



2 Operating Procedure

- 01**
- Install 4pcs AA batteries into the transmitter.
 - Do not mix old and new batteries. Do not mix alkaline batteries, standard (carbon-zinc) or rechargeable (nickel-cadmium) batteries.



- 02**
- Turn the steering wheel right to steer the front tires right.
 - Turn the steering wheel left to steer the front tires left.



3 Binding (connecting the receiver to transmitter)

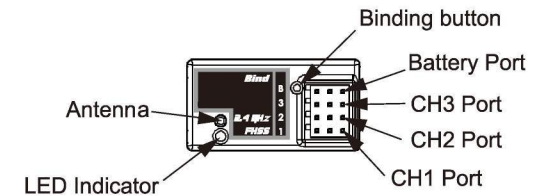
- 03**
- Pull the throttle trigger to move the vehicle forward.
 - Push the throttle trigger forward to brake and reverse the vehicle.



Binding the Receiver to the Transmitter

"Binding" is tuning the receiver to the frequencies used by the transmitter. Bind the receiver to the transmitter as follows:

1. With both transmitter and receiver turned off, place the units no more than 30 cm (1 ft) apart.
2. While holding down the receiver's BIND button, power on the ESC. The receiver's LED will start to flash steadily, indicating that the unit is in binding mode, a state that lasts up to 30 seconds.
3. Turn the transmitter on. It will immediately go into binding mode, a state that lasts one second.
4. When the receiver's LED shines steadily, binding is complete.



ESC Features

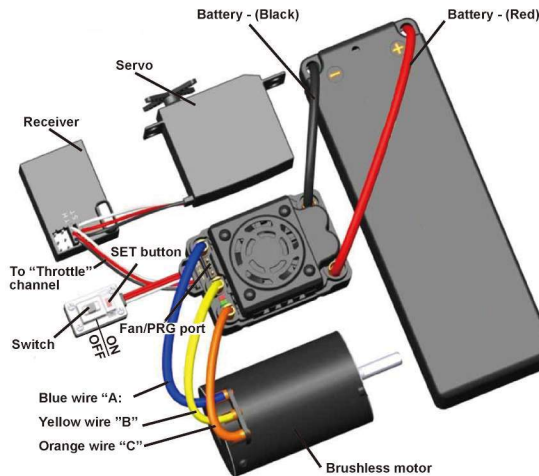
- ▶ Completely water-proof and dust-proof.
(Please remove the cooling fan when running car in water, and after running, please clean and then dry the ESC to avoid the oxidation of copper connectors)
- ▶ The built-in switching mode BEC has powerful output to supply all electronic equipment.
- ▶ Proportional ABS brake function with 5 steps of maximum brake force adjustment and 8 steps of drag-brake force adjustment. Also compatible with the mechanical disc-brake system.
- ▶ Multiple protection features: Low voltage cut-off protection / Over-heat protection / Throttle signal loss protection / Motor blocked protection
- ▶ Easily programmed with the SET button of the ESC.

ESC Specifications

Model	WP-S8A-RTR
Cont./Burst Current	100A/650A
Motor Supported	Sensorless brushless motors
Cars Applicable	1/8 SCT/Buggy/Truggy/Truck
Motor Limit	2S Lipo: KV≤6000 3S Lipo: KV≤4000 4S Lipo: KV≤2600
Resistance	0.0005 ohm
Battery	6-12 cells NiMH 2-4S Lipo
BEC Output	<i>Note1</i> 6V/3A Switch mode
Dimensions	59.5(L) x 48(W) x 42(H)
Weight (With Wires)	173g

NOTE 1: The cooling fans of ESC is supplied by the built-in BEC, so it is always working under 6V.

ESC Connections



Using your ESC

WARNING! For safety, please keep the wheels from contacting anything when switching on the ESC.

1. Connect The ESC, Motor, Receiver, Battery And Servo

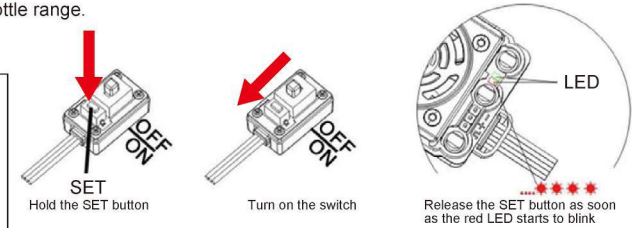
The #A, #B, #C wires of the ESC can be connected with the motor wires freely (without any sequence). If the motor runs in the opposite direction, please swap any two wire connections.

2. Throttle Range Setting (Throttle Range Calibration)

To make the ESC match the throttle range of the controller, you must calibrate it when you begin to use a new ESC or a new transmitter.

The following pictures show how to set the throttle range.

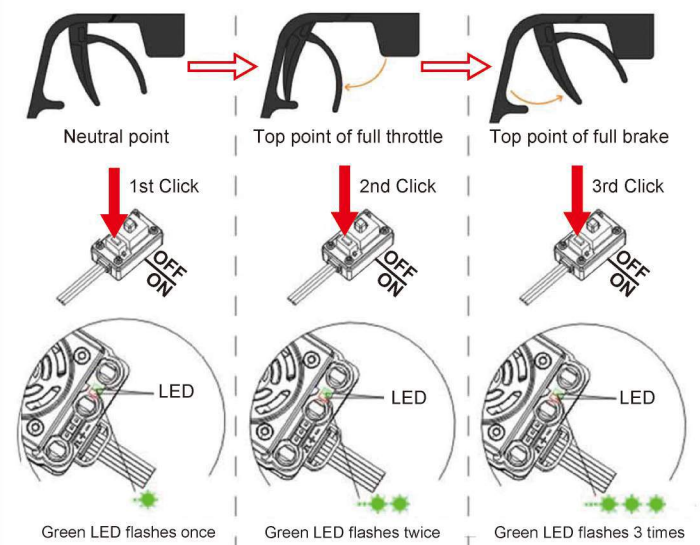
- Switch off the ESC, turn on the transmitter.
- Hold the "SET" key and then switch on the ESC. Release the "SET" key as soon as possible when the red LED begins to flash. (*Note2*)



Note2: If you don't release the "SET" key as soon as the red LED begins to flash, the ESC will enter the program mode, in such a case, please switch off the ESC and re-calibrate the throttle range again from step A to step 0.

- Set the 3 points according to the steps shown in the pictures on the right side.

- The neutral point**
While leaving the trigger in neutral position, click the SET key, the green LED flashes 1 time.
 - The end point of forward direction**
While holding the trigger in the full throttle position, click the SET key, the green LED flashes 2 times.
 - The end point of backward direction**
While holding the trigger in the full brake/reverse position, click the SET key, the green LED flashes 3 times.
- D) Throttle range is calibrated; motor can be started after 3 seconds.



3. Check LED Status In Normal Running

- ▶ Normally, if the throttle trigger is located in the neutral range, neither the red LED nor the green LED lights.
- ▶ The red LED lights when the car is running forward or backward and it will flash quickly when the car is braking.
- ▶ The green LED lights when the throttle trigger is moved to the full brake position.

Programmable Items List

(The *italics* text in the following form are the default settings)

Programmable Items	Programmable Value								
	1	2	3	4	5	6	7	8	9
1. Running Mode	Forward with Brake	<i>Forward / Reverse with Brake</i>	Forward and Reverse						
2. Drag Brake Force	0%	5%	10%	20%	40%	60%	80%	100%	
3. Low Voltage Cut-Off Threshold	Non-Protection	2.6V / Cell	2.8V / Cell	<i>3.0V / Cell</i>	3.2V / Cell	3.4V / Cell			
4. Start Mode(Punch)	Level 1	Level 2	Level 3	Level 4	<i>Level 5</i>	Level 6	Level 7	Level 8	Level 9
5. Max Brake Force	25%	<i>50%</i>	75%	100%	Disable				



1. Programmable Values

1.1. Running Mode: In "Forward with Brake" mode, the car can go forward and brake, but cannot go backward, this mode is suitable for competition; "Forward/ reverse with Brake" mode provides the backward function, which is suitable for daily driving.

Note: "Forward/Reverse with Brake" mode uses "Double-click" method to make the car go backward. When you move the throttle trigger from forward zone to backward zone for the first time (The 1st "click"), the ESC begins to brake the motor, the motor speeds down but it is still running, not completely stopped, so the backward action is NOT activated immediately. When the throttle trigger is moved to the backward zone again (The 2nd "click"), if the motor speed is slowed down to zero (i.e. stopped), the backward action will happen. The "Double-Click" method can prevent mistakenly reversing when the brake function is frequently used in steering. Be aware, while using reverse, the motor will go immediately forward when the trigger is pulled. It is recommended to allow the vehicle to come to a complete stop from reverse before applying forward throttle.

"Forward/Reverse" mode uses "Single-click" to make the car go backward. When you move the throttle stick from forward zone to backward zone, the car will go backward immediately. This mode is usually used for the Rock Crawler and not for any buggy, truggy, or truck.

1.2. Drag Brake Force: Set the amount of drag brake applied at neutral throttle to simulate the slight braking effect of a neutral brushed motor while coasting.

1.3. Low Voltage Cut-Off: The function prevents the lithium battery pack from over discharging. The ESC detects the battery's voltage at any time, if the voltage is lower than the threshold for 2 seconds, the output power will be cut off, and the red LED flashes in such a way: "tr-tr-, tr-tr-, tr-tr-".

1.4. Start Mode (Also called "Punch"): Select from "Level-1" to "Level-9" as you like. Level-1 has a very soft start effect, while level-9 has a very aggressive start effect. From Level-1 to Level-9, the start force is increased. Please note that if you choose "Level-7" to "Level-9" mode, you must use good quality battery with powerful discharge capability, otherwise these modes cannot get the burst start effect as you want. If the motor cannot run smoothly (that means the motor is cogging), it may be caused by the weak discharge rate of the battery, please choose a stronger battery or a softer gear ratio.

1.5. Maximum Brake Force: The ESC provides proportional brake function. Brake force is related to the position of the throttle trigger. Maximum brake force refers to the force when the throttle trigger is located at the end point of the backward zone. A very large brake force can shorten the brake time, but it may damage the drive train. The "Disable" option inhibits the inherent brake function of the speed controller. When this option is selected, the brake function is realized by a traditional mechanical disc-brake system driven by a servo (optional).

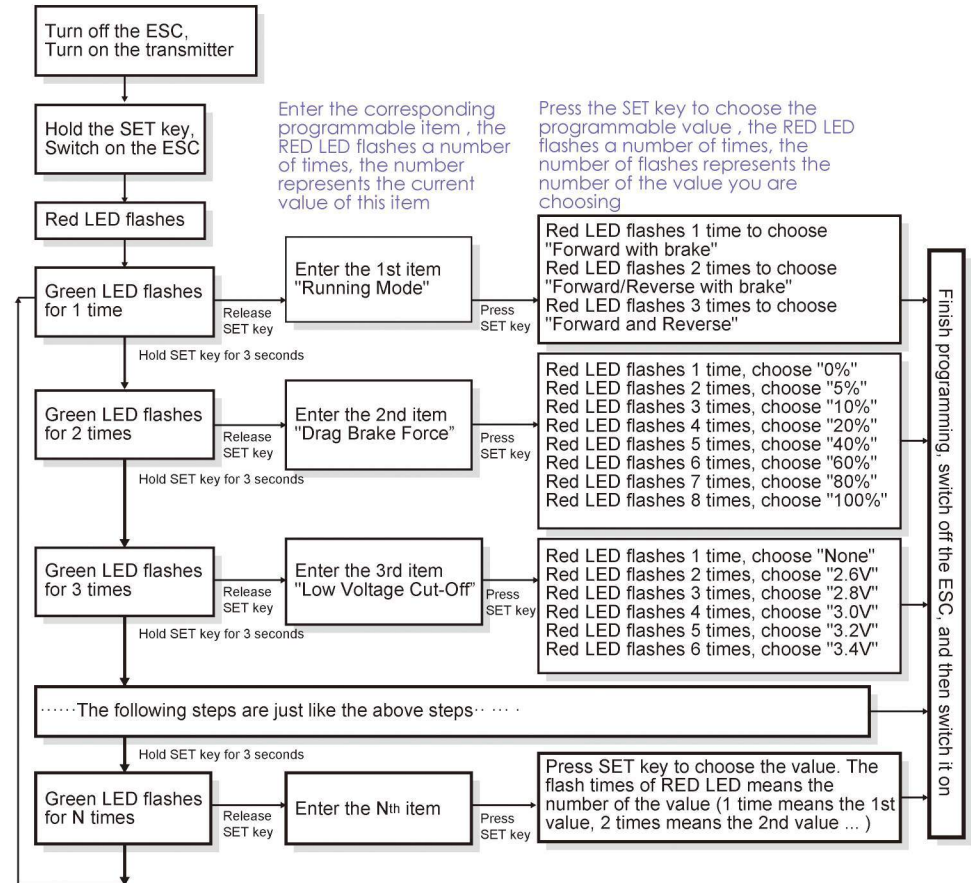
2. Reset All Items to Default Values

At any time when the throttle is located in neutral zone (except in the throttle calibration or parameters program process)

Trouble	Possible Reason	Solution
After power on, motor doesn't work, and the cooling fan doesn't work	The connections between battery pack and ESC are not correct	Check the power connections Replace the connectors
After power on, motor can't work, but emits "beep-beep-, beep-beep-" alert tone. (Every "beep-beep-" has a time interval of 1 second)	Input voltage is abnormal, too high or too low	Check the voltage of the battery pack
After power on, red LED always lights, the motor doesn't work	Throttle signal is abnormal	Plug the control wire into the throttle channel of the receiver correctly.
The motor runs in the opposite direction when it is accelerated	The wire connections between ESC and the motor are not correct	Swap any two wire connections between the ESC and the motor.
The motor suddenly stops running while in working state	The throttle signal is lost	Check the transmitter and the receiver Check the signal wire from the throttle channel of your receiver
	The ESC has entered the Low Voltage Protection Mode or Over-heat Protection Mode	Red LED flashing means Low Voltage. Green LED flashing means Over-heat
When accelerating quickly, the motor stops or trembles	1) The battery has a bad discharge performance 2) Gear ratio is too aggressive 3) The "Start Mode (Punch)" of the ESC is too aggressive	1) Use a better battery 2) Use lower KV motor or softer gear ratio 3) Set the "Start Mode (Punch)" to a softer value
When the throttle stick is in the neutral range, the red LED and the green LED flashes synchronously	Over current protection, motor demagnetization, or motor is over load	1) Reduce the load (Use softer gear ratio or reduce the input voltage) 2) Change the motor
Cannot connected with the LED Program Card or LCD Program Box	Mistakenly uses the Rx wire to connect to the program card/box.	Connect the program card/box to the special programming port of the ESC, don't use the Rx wire.

Hold the "SET" key for over 3 seconds, the red LED and green LED will flash at the same time, which means each programmable item has been reset to its default value.

Program the ESC:

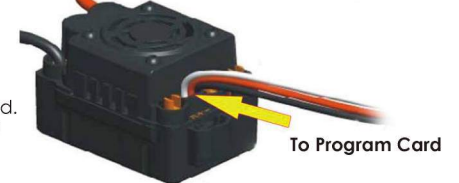


Note:

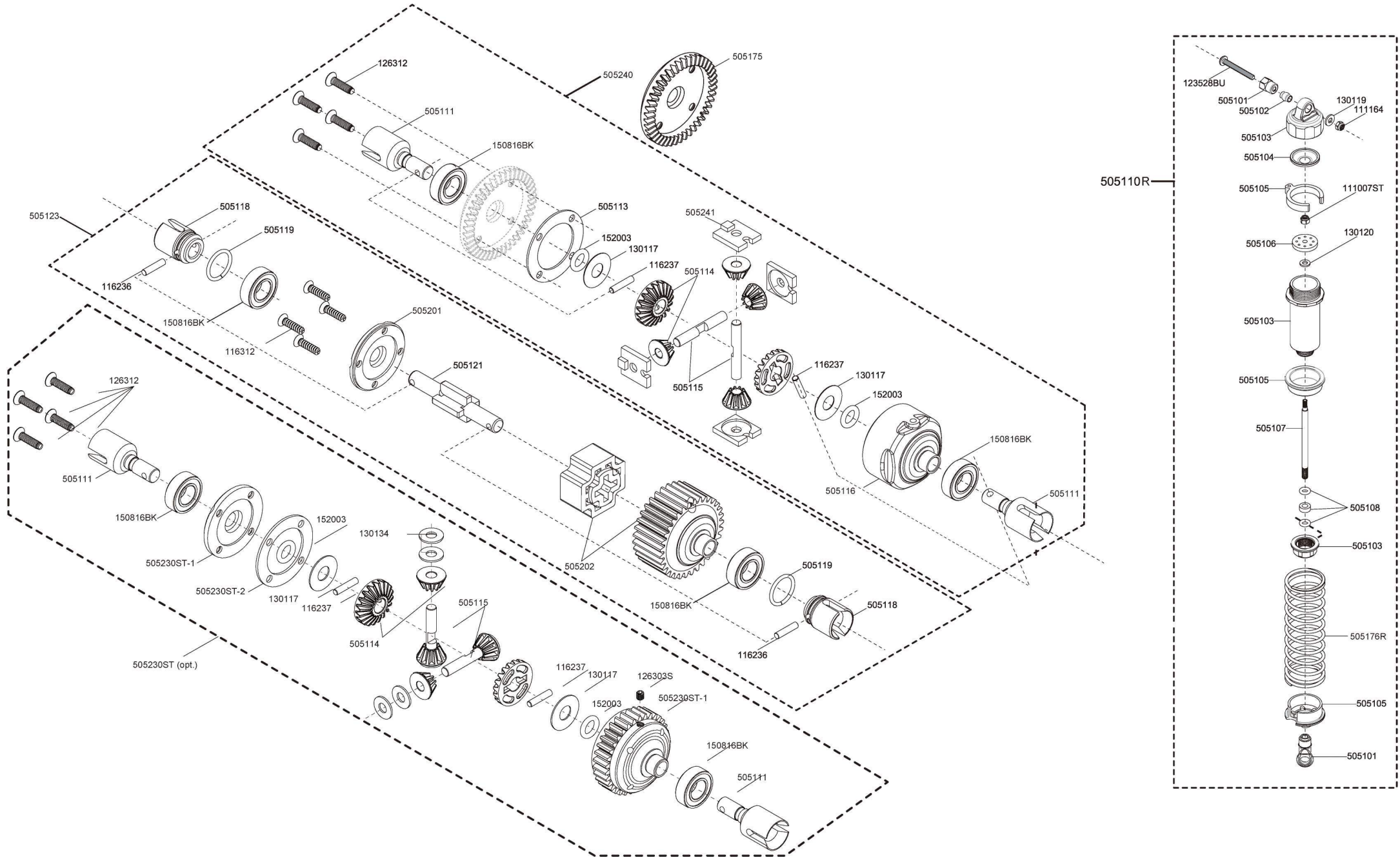
- In the program process, the motor will emit "Beep" tones while the LED, on the ESC, is flashing.
- ... A long constant flash (ESC) and long "Beep—" tone (motor) represents the number "5", add the following short beeps to "5" to get the whole number. Here are some examples:
 "A long solid flash" (& Motor sounds "B---") = the No. 5 item
 "A long solid flash + a short flash" (Motor sounds "B---,B") = the No. 6 item (5+1=6)
 "A long solid flash + 2 short flashes" (Motor sounds "B---,B,B") = the No. 7 item (5+2=7)
 "A long solid flash + 3 short flashes" (Motor sounds "B---,B,B,B") = the No. 8 item (5+3=8)
 "A long solid flash + 4 short flashes" (Motor sounds "B---,B,B,B,B") = the No. 9 item (5+4=9)

2. Program the ESC with the LED program box (Optional equipment)

Note3: The Rx wire of the ESC (for connecting receiver) CANNOT be used to connect with the LED Program Card. Only use the special port between the terminals ABC to connect to the Program Card.



Exploded view



Exploded view (chassis)

