



FTX Ramraider Brushed 1/10th XL Scale 4WD Electric Powered Ready-To-Run Off Road Vehicle

Congratulations on your purchase of the FTX 'Ramraider Brushed' electric off road vehicle.

This 1/10th scale model has been factory assembled and all electrics installed and set up to make it the easiest possible introduction to the sport of driving RC cars.

WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating.

Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury. This is NOT a toy and must be operated with caution and common sense.

Failure to operate this product in a safe and responsible manner could result in damage, injury or damage to other property.

This product is not intended for use by children without direct adult supervision. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, set-up or use, in order to operate correctly and avoid damage or serious injury.



Safety Precautions and Warnings

- You are responsible for operating this model such that it does not endanger yourself and others, or result in damage to the product or the property of others.
- This model is controlled by a radio which is possibly subject to interference which can cause momentary loss of control so it is advisable to always keep a safe distance to avoid collisions or injury.
- Age Recommendation: 14 years or over. This is not a toy. This product is not intended for use by children without direct adult supervision.

Carefully follow these directions and warnings, plus those of any additional equipment associated with the use of this model, chargers, ESC and motors, radio etc.

- Never operate your model with low transmitter batteries.
- Always operate your model in an open area away from cars, traffic or people.
- Never operate the model in the street or in populated areas.
- Always keep the vehicle in direct line of sight, you cannot control what you cannot see!
- Keep all chemicals, small parts and anything electrical out of the reach of children.
- Although splash-proof the car and electronics are not designed to be subjected to extended moisture exposure or submersion. To do so will result in permanent damage.
- Avoid injury from high speed rotating parts, gears and axles etc.
- Novices should seek advice from more experienced people to operate the model correctly and meet its performance potential.
- Exercise caution when using tools and sharp instruments.
- Do not put fingers or any objects inside rotating and moving parts.
- Take care when carrying out repairs or maintenance as some parts may be sharp.
- Do NOT touch equipment such as the motor, electronic speed control and battery, immediately after using your model because they can generate high temperatures.
- Always turn on your transmitter before you turn on the receiver in the car. Always turn off the receiver before turning your transmitter off.
- Keep the wheels of the model off the ground, and keep your hands away from the wheels when checking the operation of the radio equipment.
- Prolong motor life by preventing overheat conditions.
Undue motor wear can result from frequent turns, rapid change of direction forwards/backwards, continuous stop/starts, pushing/pulling objects, driving in deep sand and tall grass, or driving continuously up hill.

Contents:

FTX Ramraider Brushed Car
Transmitter: 2.4ghz Steerwheel
Charger: 2S/3S 800mA Balance Charger
Battery: 2500 7.4V 2S LiPo

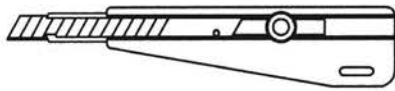


Pictured with optional wheelie bar - FTX10220

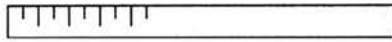


REQUIRED EQUIPMENT FOR OPERATION

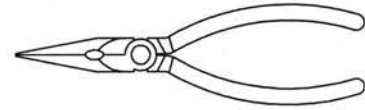
1. Tools required for building and maintenance:



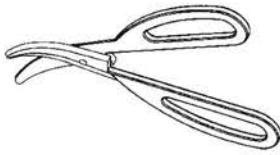
● Hobby knife



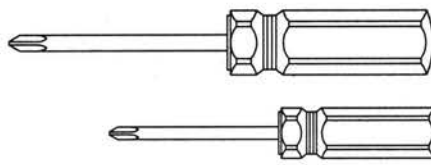
● Precision ruler



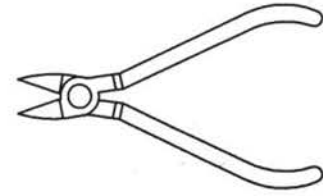
● Needle nose pliers



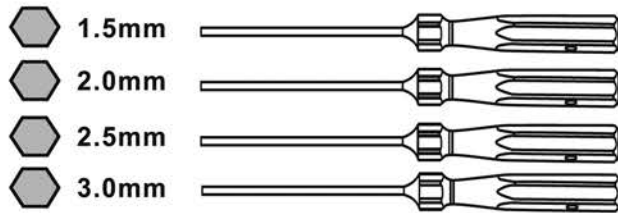
● Lexan scissors



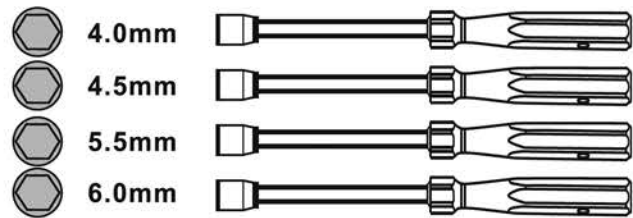
● Flat and Philips screwdriver



● Wire cutters



Hex. Screwdrivers

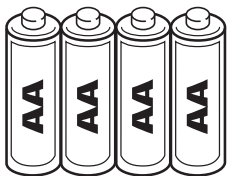


Socket Head Drivers

WARNING!

Do not use a power screw driver to install screws into nylon or plastic materials. The fast locking may heat up the screws being installed that may break the molded parts or strip the threads during installation.

2. Additional items needed for operation:



4 pcs AA Alkaline Batteries

IMPORTANT!

Check that all screws and nuts are tight before each use.



CHARGING/INSTALLING THE BATTERY

IMPORTANT! ALWAYS CHARGE IN A LIPO SACK OR TIN AWAY FROM FLAMMABLE MATERIALS (SUCH AS CARPET). ALWAYS MONITOR CHARGE STATUS INCASE YOU NEED TO STOP WITH IMMEDIATE EFFECT AND ALWAYS STORE YOUR MODEL WITH THE BATTERY UNPLUGGED AND REMOVED.

The included 900mAh mains LiPo balance charger will take up to 4 hours to re-charge the LiPo battery depending on how discharged it is. Before you start charging ensure that your LiPo battery is put inside the Voltz Vault safety LiPo sack.

(Lipo batteries can be dangerous and must be handled with care. Before commencing with charging ensure you familiarise yourself with our safety guidelines at within within the manual and on the base of the battery. Failure to do so could result in injury or damage. Lipo batteries require completely different charging and care than NiCd and NiMH batteries and must be used with a LiPo specific charger. Misuse can result in fire, personal injury and/or damage to property. The user assumes all liability and risk associated with the use of Lithium-Polymer (Li-Po) batteries. Immediately return the battery, unused, if you do not agree with these terms).

WARNING! NEVER LEAVE THE BATTERY UNATTENDED WHILE ON CHARGE.

- The supplied charger can charge either 2s or 3s (cell number) LiPo batteries. The supplied battery is a 3s. Ensure you plug it into the correct 3s balance port.
- When the charger is connected to the mains power the power LED will turn green. Once you connect your balance connector to the charger the the status LED is RED, and power is GREEN indicating that charging is in progress. Once the battery is fully charged the two LED's will turn green. If you experience the LED's blinking red then there is an error with either the battery or charger. When charging a completely discharged battery, the charger can become hot to touch.
- Always disconnect the charger from the mains supply and the battery pack when not in use.
- To install a charged battery into the



vehicle, remove the body clips and remove the bodyshell. Loosen the velcro straps, insert battery and then tighten the straps so that they securely hold the battery inside the battery box. Make sure the model is switched off before connecting the male and female connectors.

- Always store your model with the battery pack unplugged and removed. Always charge your battery away from the vehicle.

Notes on Battery use:

- Always allow the battery cool after use, before recharging.
- Always inspect the battery before charging.
- Any bare wires, split heat shrink or leakage is a sure sign of abuse.
- Never attempt to charge dead or damaged batteries.
- Do not disassemble the battery or cut the connector wires.
- If the battery connector, battery case or cable insulation get hot enough to melt or split there is most likely a serious problem with your model, driveline, battery wires or speed controller. Find and correct the problem before installing another charged battery pack. (please refer to our detailed LiPo handling notes below).

LIPO BATTERY - USER SAFETY AND HANDLING INSTRUCTIONS.

- Read all safety instructions before charging or using your batteries for the first time.
- Lipo batteries require completely different charging and care than NiCd and NiMH batteries.
- Misuse can result in fire, personal injury and/or damage to property. The buyer assumes all liability and risk associated with the use of Lithium-Polymer (Li-Po) batteries. Immediately return the battery, unused, if you do not agree with these terms.

General guidelines and warnings:

1. Use a Lithium Polymer specific chargers only! Do not use a NiCd or NiMH charger.
2. NEVER charge unattended. Always charge in safety sack or metal tin with lid and away from other flammable materials.
3. During the charge process watch for swollen or ballooning cells. If this happens immediately disconnect the charger and move the battery to a fire proof place for 15 minutes. Do not attempt to charge again.
4. A short circuit can cause a rapid discharge of high currents. Avoid short circuits, and be aware of short circuits on jewellery.
5. Any Lithium Polymer battery involved in a crash should be removed and observed in a fireproof space for 15 minutes before continuing to use or charge the battery.
6. If rewiring the battery pack, rewire the leads one at a time. Do not cut both leads. Do not short circuit on tools.
7. Do not expose battery packs to direct sunlight for extended periods.
8. Do not attempt to tamper with or open the LiPo Hardcase. The case is protection against possible battery swelling.

Before charging:

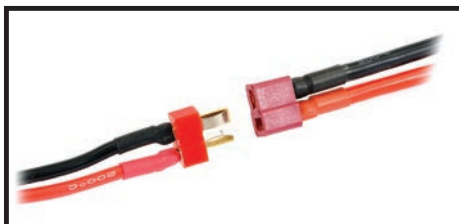
Visually inspect the pack checking for damaged leads, connectors, cracked heat shrink covering, swelling or other abnormalities. Do not charge if the pack is damaged.

Charging process:

1. NEVER charge unattended.
2. Charge away from flammable materials and inside a Lipo safe sack or metal tin with lid.
3. Allow battery to cool before charging.
4. Use the battery label for setting charger cell count and voltage.
5. Do not exceed 5C MAX charge rate. (Example, charge a 1000mAH pack at 5A MAX).

If disposing of a LiPo battery proceed as follows:

Submerge the battery into a container filled with about 10 litres of salt water (one cup of salt in 10L). Leave the battery submerged for 2 weeks, this will slowly and safely discharge the battery until the voltage has dropped to zero volts which eliminates the risk of any chemical reaction. It can then be disposed of in the general waste collection.





HOBBYWING BRUSHLESS SYSTEM SET-UP INSTRUCTIONS

ESC Operation

Thanks for purchasing our electronic speed controller(ESC). The power system for RC model can be very dangerous, please read this manual carefully. In that we have no control over the correct use, installation, application, or maintenance of our products, no liability shall be assumed nor accepted for any damages, losses or costs resulting from the use of the product.

FEATURES:

- Water-proof and dust-proof for all weather races.
- Small size with built-in capacitor module.
- Automatic throttle range calibration, easy to use.
- Multiple protections: Low voltage cut-off protection for Lipo or NiMH battery / Over-heat protection / Throttle signal loss protection.
- Easily programmed with the jumpers.

SPECIFICATION

* There are 2 kinds of WP-1040-BRUSHED-Crawler& Boat speed controllers, one has 1 output for 1 motor, and the other one has 2 outputs for 2 motors (2 motors work synchronously).
 ** The WP-860-DUAL BRUSHED has 2 outputs to drive 2 motors synchronously. When driving 2 motors, the Turns of the motors need to be increased.

Model		WP-1040-BRUSHED WP-1040-BRUSHED-Crawler & Boat *
Cont. / Burst Current		Forward: 40A / 180A Backward: 20A / 90A
Input		2-3S Lipo, 5-9 Cells NiMH
Cars Applicable		1:10 on-road, off-road Buggy, Truggy, SCT 1:10 Crawler, Tank & Boat
Motor Limit	2S Lipo or 5-6 cells NiMH	540 or 550 size motor ≥12T or RPM < 30000 @7.2V
	3S Lipo or 7-9 cells NiMH	540 or 550 size motor ≥18T or RPM < 20000 @7.2V
Resistance		Fwd: 0.002 Ohm, Bwd: 0.004 Ohm
Built-in BEC		2A/6V (Linear mode BEC)
Dimension & Weight		WP-1040-BRUSHED: 46.5*34*28.5, 65g WP-1040-BRUSHED-CRAWLER: 46.5*34*28.5, 70g

BEGIN TO USE

1. Connect the ESC, motor, receiver, battery and servo according to the following diagram: "+" and "-" wires of the ESC are connected to the battery pack.

Attention: The incorrect polarity will damage the ESC immediately.

The control cable of the ESC (trio wires with black, red and white color) is connected to the throttle channel of the receiver (Usually CH2). The "Motor +" and "Motor -" wires are connected to ESC without any order.

If the motor runs in the opposite direction, please swap these two wire connections.

2. Set the Transmitter

Please set the "D/R", "EPA" and "ATL" to 100% for throttle channel (for transmitter without LCD, please turn the knobs to the maximum value), and set the "TRIM" of the throttle channel to 0 (for transmitter without LCD, please turn the TRIM knob to its neutral position).

For FutabaTM and the similar transmitters, the direction of throttle channel shall be set to "REV", while other radio systems shall be set to "NOR".

The "Fail Save" function of the radio system is strongly recommended to be activated. Please make sure that the motor can be stopped when the "Fail Save" happens.

3. Throttle Range Setting (Throttle Range Calibration)

In order to make the ESC match the throttle range of different transmitters, the calibration of the ESC is necessary.

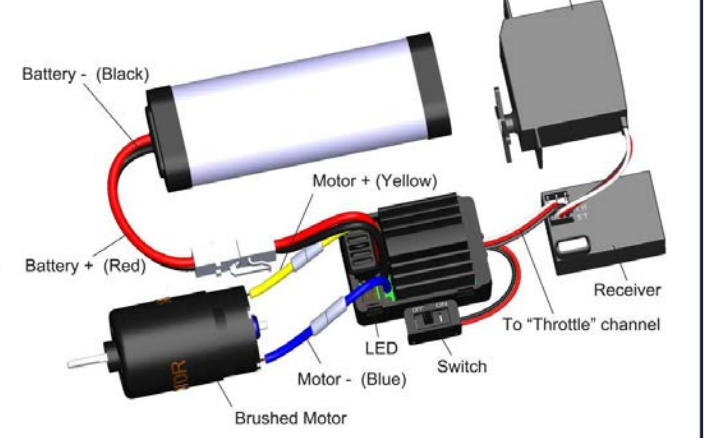
To calibrate the ESC, please turn on the transmitter, keep throttle stick at its neutral position, wait for 3 seconds to let the ESC execute self-test and automatic throttle calibration. When the ESC is ready to run, a long beep sound is emitted from the motor.

Note: Please calibrate the throttle range again when using a new transmitter or changing the settings of the neutral position of throttle channel, D/R, ATV, ATL or EPA parameters, otherwise the ESC may not work properly.

BEEP SOUND AND LED STATUS

The Meaning of Beep Sound	LED Status
<ul style="list-style-type: none"> • 1 short Beep: The battery is NiMH/NiCd • 2 short Beeps: The battery is 2S Lipo • 3 short Beeps: The battery is 3S Lipo • 4 short Beeps: The battery is 4S Lipo • 1 long Beep: Self-test and throttle calibration is OK, the ESC is ready to run 	<ul style="list-style-type: none"> • When the throttle stick is in neutral range, red LED is off • Forward, brake or reverse at partial throttle, red LED blinks • Forward, brake or reverse at full throttle, red LED is solid

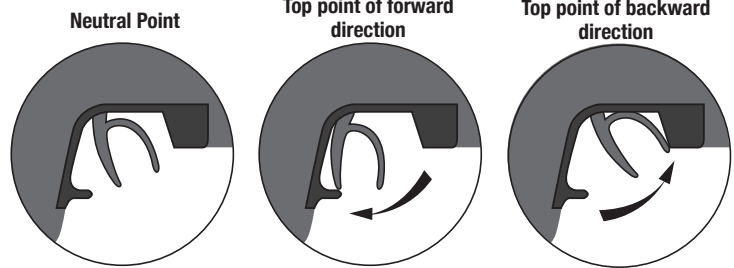
SPEED CONTROL CONNECTION DIAGRAM



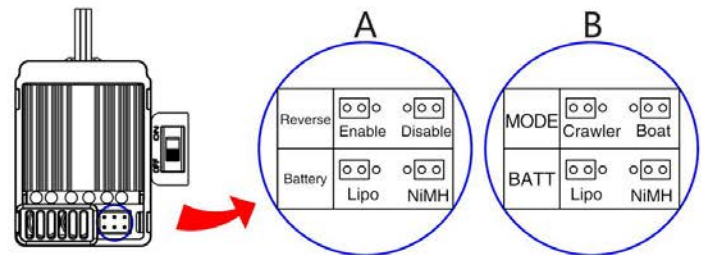
SET THE ESC

The ESC is programmed by the jumpers (Tweezers are recommended to plug and unplug the jumper).

THROTTLE STICK POSITION



PROTECTION FUNCTIONS



1. Low voltage Cut-off (LVC) protection: If the voltage of battery pack is lower than the threshold for 2 seconds, the ESC will enter the protection mode. When the car stops, the red LED blinks to indicate the low voltage cut-off protection has been activated.

Table A: LVC protection for WP-1060-BRUSHED, WP-1040-BRUSHED, WP-860-DUAL BRUSHED (F/B/R or F/B mode).

2S Lipo	3S Lipo	4S Lipo	5-9 cells NiMH
Output reduces 50% at 6.5V Output cuts off at 6.0V, cannot be recovered	Output reduces 50% at 9.75V Output cuts off at 9.0V, cannot be recovered	Output reduces 50% at 13V Output cuts off at 12V, cannot be recovered	Output reduces 50% at 4.5V Output cuts off at 4.0V, cannot be recovered



Table B: LVC protection for WP-1625-BRUSHED-Crawler, WP-1040-BRUSHED-Crawler&Boat, WP-860-DUAL BRUSHED (Crawler or Boat mode).

2S Lipo	3S Lipo	4S Lipo	5-9 cells NiMH
Output cuts off at 6.5V. If the throttle stick moves to neutral and then up again, the output can be recovered to 50%. If the voltage drops to 6.5V again, the above process repeats in circles.	Output cuts off at 9.75V. If the throttle stick moves to neutral and then up again, the output can be recovered to 50%. If the voltage drops to 9.75V again, the above process repeats in circles.	Output cuts off at 13V. If the throttle stick moves to neutral and then up again, the output can be recovered to 50%. If the voltage drops to 13V again, the above process repeats in circles.	Output cuts off at 4.5V. If the throttle stick moves to neutral and then up again, the output can be recovered to 50%. If the voltage drops to 4.5V again, the above process repeats in circles.

2. Over-heat protection: When the internal temperature of the ESC is higher than 100 °C or 212 Fahrenheit degree for 5 seconds, the ESC will reduce and cut off the output power. When the car stops, the red LED blinks to indicate the over-heat protection has been activated. If the ESC cools down to 80 Celsius degree (176 Fahrenheit degree) the output power is recovered to normal state.

3. Throttle signal loss protection: The ESC will cut off the output power if the throttle signal has been lost for 0.1 second. The "Fail Save" function of the radio system is strongly recommended to be activated.



THE DIFFERENCE BETWEEN "BRUSHED" AND "BRUSHED-CRAWLER & BOAT" ESC

- "Brushed" and "Brushed-Crawler & Boat" ESCs have different backward-running modes. "Brushed" ESC uses "Double-Click" method to make the car go backward. When you move the throttle stick from forward zone to backward zone for the first time, the ESC begins to brake the motor, the motor speeds down but still running, so the backward action is NOT happened at this moment. When the throttle stick 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 be activated. The "Double-Click" method prevents mistakenly reverse when the brake function is frequently used in steering. "Brushed-Crawler & Boat" ESC 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 common for the Rock Crawler and tank.
- The maximum reverse force (for backward running) is 50% for the general "Brushed" ESC, 100% for the "Crawler" mode of a "Brushed-Crawler & Boat" ESC, and 25% for the "Boat" mode of a "Brushed-Crawler & Boat" ESC.
- The Low Voltage Cut-off Protection modes are different (Please check the instructions in the section of "PROTECTION FUNCTIONS").

TROUBLE SHOOTING

Problem	Reaction	Solution
• After power on, motor can't work, no sound is emitted, and LED is off.	<ul style="list-style-type: none"> The ESC doesn't get its working voltage; Connections between battery pack and ESC are broken. Switch is damaged. 	<ul style="list-style-type: none"> Check the battery wires connection or replace the defective connectors. Replace the switch.
• After power on, motor can't work; red LED blinks.	<ul style="list-style-type: none"> Throttle signal is abnormal. Automatic throttle range calibration is failed. 	<ul style="list-style-type: none"> Check the throttle wire connection; make sure it is plugged into the throttle channel of the receiver. Set the "TRIM" of throttle channel to 0 or turn the knob to its neutral position.
• The car runs backward while giving throttle. (The motor runs in the opposite direction).	<ul style="list-style-type: none"> The wire connections between ESC and the motor need to be changed. 	<ul style="list-style-type: none"> Swap two wire connections between the ESC and the motor.
• The car can't go backward.	<ul style="list-style-type: none"> The jumper position is wrong. The neutral point of throttle channel is changed or drifted. 	<ul style="list-style-type: none"> Check the jumper and plug it to the correct position. Set the "TRIM" of throttle channel to 0 or turn the knob to its neutral position.
• The car can't go forward, but can go backward.	<ul style="list-style-type: none"> The direction of throttle channel is not correct. 	<ul style="list-style-type: none"> Reset the direction of throttle channel from original "NOR" to "REV", or from original "REV" to "NOR".
• The motor doesn't work, but the LED in the ESC works normally.	<ul style="list-style-type: none"> The connections between motor and ESC are broken. Motor is damaged. 	<ul style="list-style-type: none"> Check the connections and replace the defective connectors. Replace the motor.
• The motor suddenly stops running while in working state.	<ul style="list-style-type: none"> The throttle signal is lost. Low voltage cut-off protection or Over-heat cut-off protection has been activated. 	<ul style="list-style-type: none"> Check the transmitter and the receiver. Check the throttle wire connection. Replace the battery pack, or cool down the ESC.
• The car cannot get top speed and the red LED doesn't solid on at full throttle.	<ul style="list-style-type: none"> Some setting in the transmitter are incorrect. 	<ul style="list-style-type: none"> Check the settings. Set D/R, EPA, ATL to 100% or turn the knobs to maximum value. Set TRIM to 0 or turn the knob to its neutral position.
• Motor is cogging when accelerated quickly.	<ul style="list-style-type: none"> The battery has limited discharge ability. Motor RPM is too high, the gear ratio is too aggressive. Something wrong in the driving system of the car. 	<ul style="list-style-type: none"> Use battery with better discharge ability. Use motor with lower RPM, or use smaller pinion to get softer gear ratio. Check the driving system of the car.



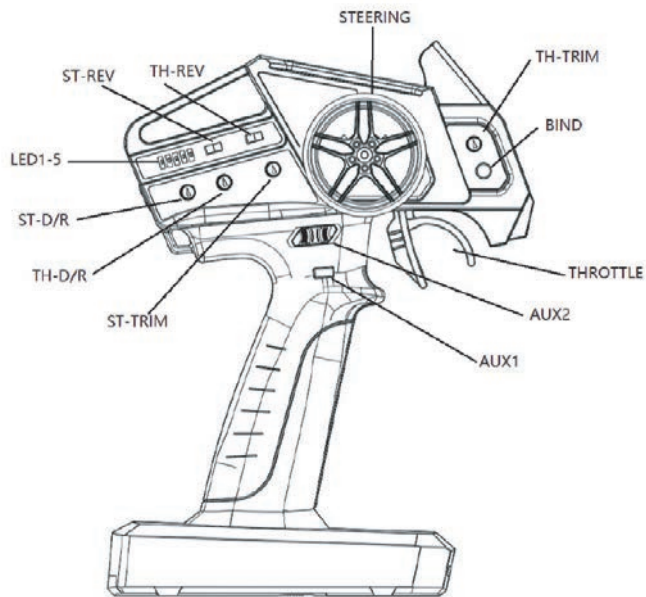
GETTING TO KNOW YOUR TRANSMITTER

EX4GT Transmitter Specifications

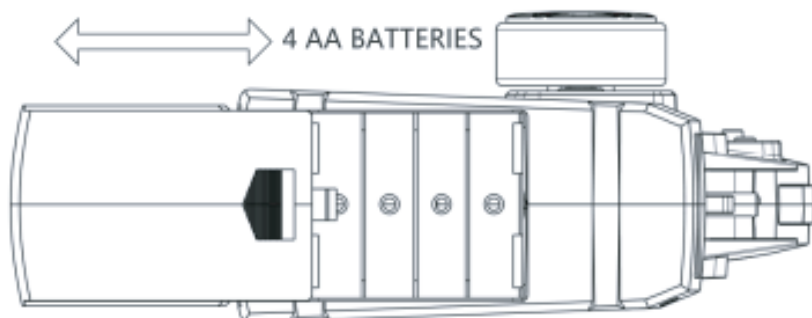
Channels: 2 proportional channels + 1 three-stage switch channel + 1 two-stage-switch channel
Voltage range: 4.2V-8.4V
Transmitter frequency: 2.4G (FHSS)
Modulation: GFSK
Transmit power: <20dBm
Range control distance: >120m
Power supply: 4 cell AA batteries
Adjust mode: Knob

EX4GT Receiver Specifications

Channel number: 4 channels (standard PWM output)
Voltage range: 4-6.5V
Waterproof level: IP67
Interface: Futaba, JR
Size: 33 X 22 X 13mm
Weight: 5g



Installing the transmitter batteries



EX4GT Transmitter Function

EX4GT is a 4 channel transmitter which features 4 channels for proportional steering, proportional throttle, AUX1 button channel and AUX2 3-stage switch channel.

The following functions can all be set:

- Throttle Trim (TH-TRIM)
- Steering Trim (ST-TRIM)
- Throttle Dual/Rate (TH-DR)
- Steering Dual/Rate (ST-DR)
- Throttle Reverse (TH-REV)
- Steering Reverse (ST-REV)
- Throttle Endpoint Adjustment (TH-EPA)
- Steering Endpoint Adjustment (ST-EPA)

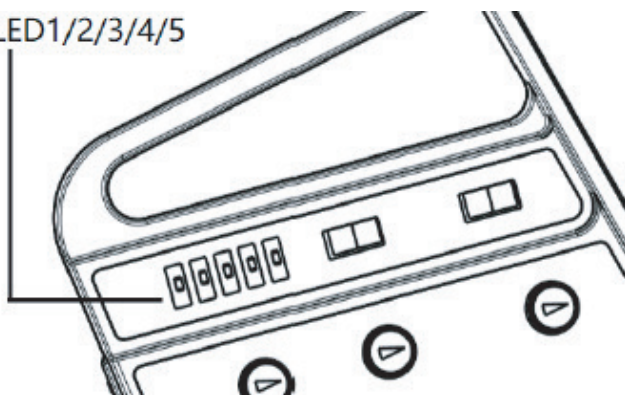
The transmitter has an LED power display and alarm function, and TRIM, DR, EPA adjustment status display function.

EX4GT receiver function has 4 channels Steering (ST), Throttle (TH), AUX1 and AUX2 along with a FAILSAFE function.



Power display

LED1/2/3/4/5



LED1/2/3/4/5 : 100% Power

LED1/2/3/4: 80% Power

LED1/2/3: 60% Power

LED1/2: 40% Power

LED1: 20% Power

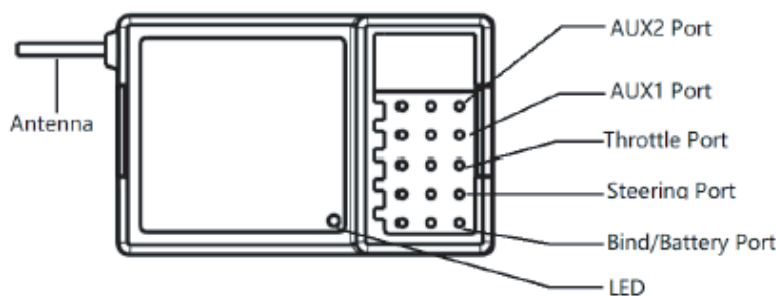
Low voltage alarm

LED1/2/3/4/5

- ->LED1/2/3/4->LED1/2/3->

LED1/2->LED1->LED1-5 FLASH, cycle loop

EX4GT Receiver



Binding:

STEP1: Plug in the binding wire, then power on. The LED of the receiver will flash rapidly, indicating that it has entered the binding mode and is waiting to bind.

STEP2: Press the BIND key of the transmitter, then power on the transmitter. The transmitter will enter the binding mode. LED 1-5 will cycle in turn.

STEP3: After binding is successful, the receiver LED will remain on. The transmitter exits the binding mode after 5 seconds and the LEDs display the battery level.

Receiver LED status:

1. When the receiver receives the correct signal the LED light is always on.
2. After the receiver is turned on, the LED will be off after 1 second, indicating that the receiver has not received a signal from the transmitter. Please check whether the transmitter is turned on, or whether it has been bound.
3. When the LED flashes rapidly, it indicates the receiver has entered the binding mode.
4. If the receiver displays a slow flashing LED it indicates that the receiver is in a disconnected state.

FAILSAFE:

The ST and TH channels of the receiver both have a FAILSAFE function. The FAILSAFE output of ST and TH can be set as follows:

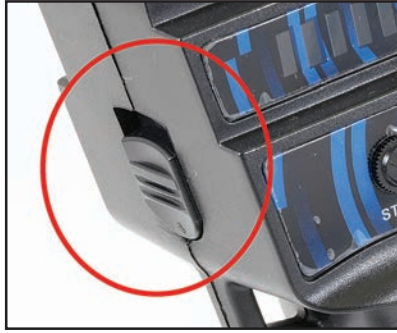
1. Turn on the transmitter and receiver and make a normal connection.
2. Adjust the transmitter's TH and ST to the position you require when connection is lost and you wish the FAILSAFE to become active.
3. Plug the binding wire into the bind port of the receiver. After the receiver LED flashes 2 times, unplug the binding wire to finish the FAILSAFE setting.



RUNNING YOUR CAR

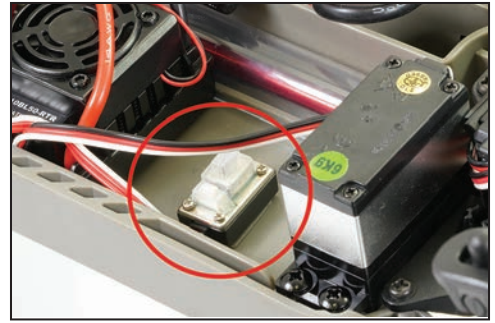
1. TURN ON THE RADIO CONTROLLER

Switch on the power switch on the radio controller. Your radio is bound with your car automatically.



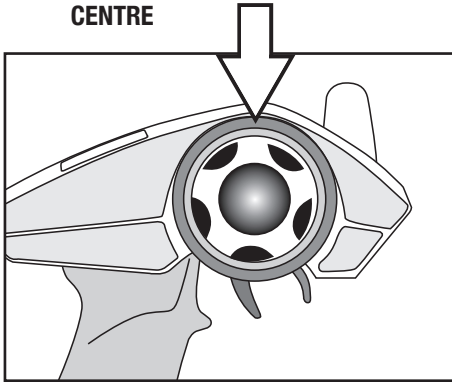
2. TURNING ON THE RECEIVER OF YOUR CAR

The ESC Receiver switch is located under the bodyshell of the model. Switch on the ESC/Receiver Switch as shown in the picture.



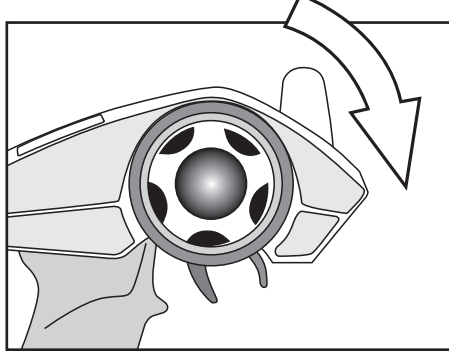
3. CHECK STEERING PERFORMANCE

CENTRE



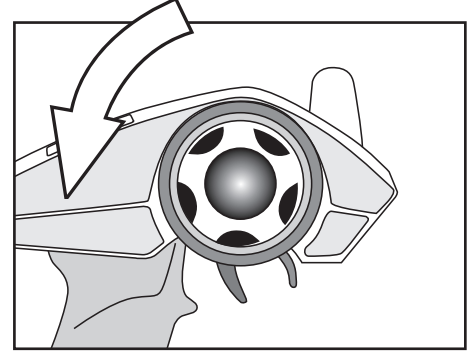
1. To keep the car running straight, keep the steering wheel centered.

TURN RIGHT

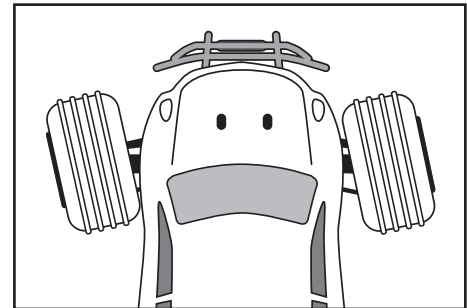
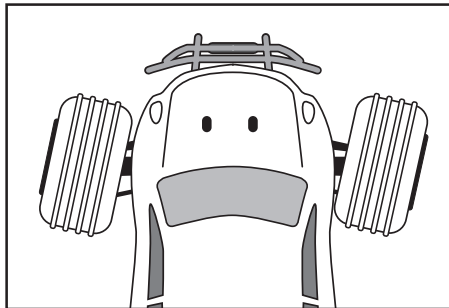
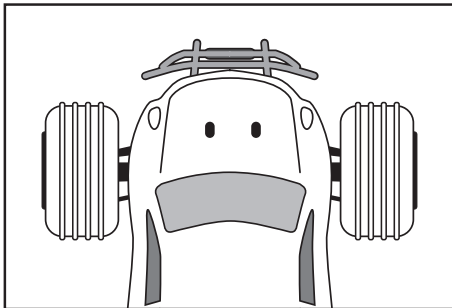


2. Turn the steering wheel to the right to allow the car to right.

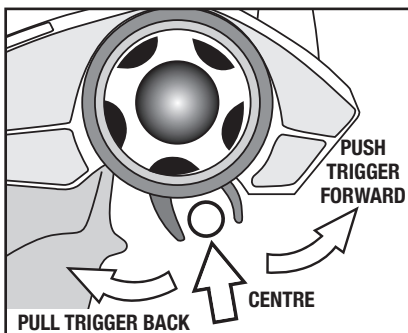
TURN LEFT



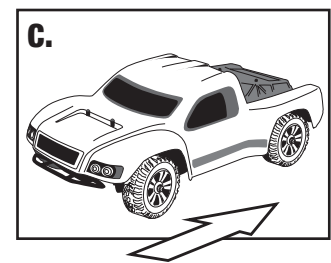
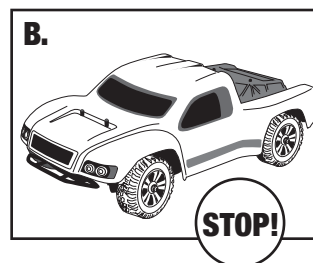
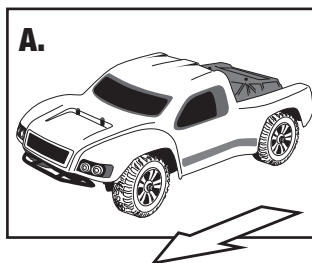
3. Turn the steering wheel to the left to allow the car to turn to the left.



4. CHECK TRIGGER RESPONSE



PLEASE NOTE: THE MODEL SWITCHES BETWEEN FORWARD AND REVERSE INSTANTLY FOR SLOW SPEED MANOEUVABILITY. EXCESSIVE USE OF THIS FEATURE CAN CAUSE TRANSMISSION AND ESC DAMAGE.



A. Pull the trigger back to accelerate, release it to decelerate.
B. To stop running your car, release the trigger to neutral.
C. Pushing the trigger forward activates reverse.



RUNNING YOUR CAR

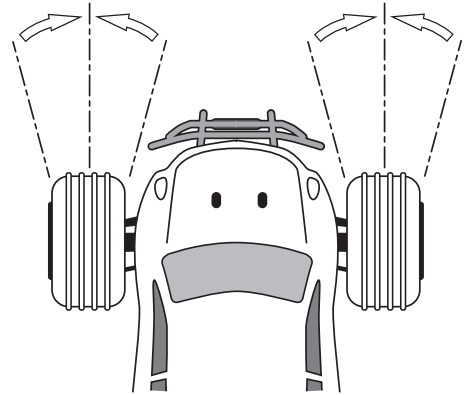
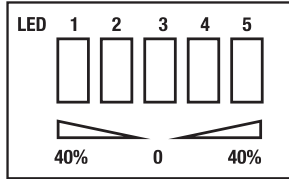
5. TUNING THE STEERING TRIM

STEERING TRIM KNOB:

The ST-TRIM knob is used to adjust the trim of the steering so that the wheel are centered and the vehicle tracks straight.

When you adjust the ST-TRIM, the LED will display the ST-TRIM value. After the adjustment is completed for 5 seconds, the LED will return to indicate the battery level.

STEERING



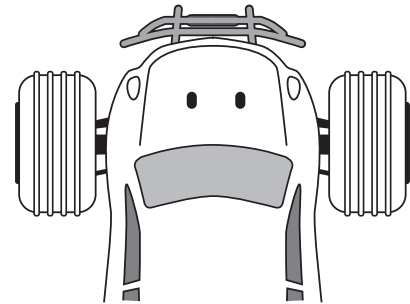
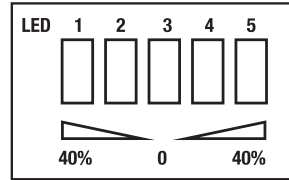
6. TUNING THE THROTTLE TRIM

THROTTLE TRIM KNOB:

The TH-TRIM knob is used to adjust the throttle trim when the throttle stick is at neutral position. It is typically used to adjust the brakes.

When you adjust the TH-TRIM, the LED will display the TH-TRIM value. After the adjustment is completed for 5 seconds, the LED will return to indicate the battery level.

THROTTLE TRIM



7. TO TUNE THE STEERING DUAL RATE CONTROL DIAL

STEERING D/R KNOB:

The dial marked ST-DR is for servo travel adjustment.

You should adjust this to give maximum steering without straining the servo.

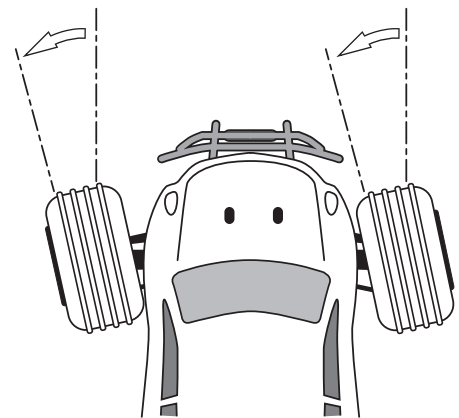
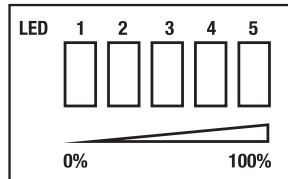
When rotated fully anticlockwise zero rate is applied.

Turn anti-clockwise to apply dual-rate percentage.

When adjusting the DR, the LED light bar will display the DR value.

After 5 seconds the LED light bar will return to display the battery level.

STEERING D/R



8. STEERING/THROTTLE REVERSE

This function is used to adjust each channels direction of movement in relation to it's input .The ST.REV/TH.REV switches are the reverse buttons for CH1 and CH2.

If the switch is up it indicates reverse, down indicates normal.





PLEASE NOTE:

Although the electronics are waterproof the rest of car can be subjected to damage if running in excessively wet or submerged conditions.

After Run.

Switch off the receiver power, switch off the transmitter and lower the aerial. Disconnect the battery and remove it from the vehicle, allow it to cool before recharging. If you have a second charged battery all ready to use, still allow the vehicle to cool slightly before continuing.

Regular maintenance.

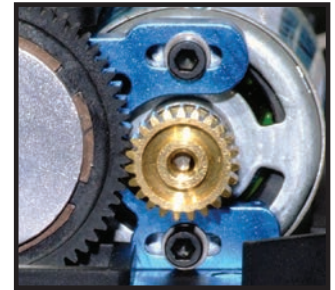
Frequently check the whole vehicle for loose or missing fixings. Use thread lock on any replacement screws into metal threads.

Frequently check rotating parts are free from grass, string etc. that might bind their motion and over stress the motor or speed controller. Remove the wheels occasionally and check behind the mounting hex for obstructions or anything that might have been wrapped around the axle and caused extra drag.

Check the gear mesh frequently and remove any stones or grit from gear teeth to prevent premature wear and damage.

If the motor moves, or is removed for maintenance/exchange, the gear mesh will need to be set. Simply slacken the motor retaining screws and adjust the motor until there is just discernable backlash between pinion and spur teeth. If the gear is too tight or too loose the gears will be noisy and could be damaged.

Shock absorbers will wear prematurely if used in dirty dusty conditions. Replace oil and seals as required to keep a smooth dampening action.



Trouble shooting guide.

<p>Short Runtime: Battery damaged/not charged Motor dirty or brushes worn Drivetrain binding</p>	<p>Sluggish Action: Motor dirty or brushes worn Bind in drive train Battery running low on power</p>	<p>Motor/ESC overheat: Over-gearred Binding transmission. Seized axle bearing. Motor binding</p>	<p>Motor spins but vehicle refuses to move: Gears damaged. Gears loose on shaft. Slipper clutch too loose. Drive shaft broken or missing.</p>	<p>Poor Range or fails to operate: Transmitter batteries low Vehicle Battery Low. Transmitter switched off Transmitter/receiver aerial not extended. ESC switched off or battery not connected. Loose connectors/wires. Water damage. Model electronics are not waterproof.</p>
---	---	---	--	--

Warranty

Due to the nature of this product and potential use FTX warrants it to be free of material and workmanship defects when new. FTX will at its sole discretion repair or replace defective components free of charge within 30 days from date of purchase. This warranty does not cover wear and tear, crash or impact damage, modifications, component water damage failure to perform maintenance or damage from improper use. Proof of purchase date will be required to action any warranty claims. In no case shall FTX's liability exceed the original cost of the purchased kit.

Instructions for disposal.

Environmental Protection Notes & WEEE

The crossed-out wheeled bin symbol shown here, which may be found on the product itself, in the operating instructions or on the packaging, is in accordance with the Waste Electrical and Electronic Equipment (WEEE) Directive. Individual markings indicate which materials can be recycled and re-used. You can make an important contribution to the protection of our common environment by re-using the product, recycling the basic materials or recycling redundant equipment in other ways.

When this product comes to the end of its useful life, you must not dispose of it in the ordinary domestic waste. Many electrical items that we throw away can be repaired or recycled. Recycling items helps to save natural resources and also reduces the environmental and health impacts that are linked with sending electrical goods to landfill. The correct method of disposal is to take it to your local collection point for recycling electrical and electronic equipment. You can go to recycle-more.co.uk for details of locations.

Alternatively FTX can offer our customers free take-back of their WEEE on a like-for-like basis when they buy a new Electrical or Electronic product from us. For example, if a customer bought a new radio system from us or a dealer, we would accept their old radio and prevent it going into a landfill site by disposing of it safely. Customers must return their old WEEE item to us within 28 days of purchasing their new item.

Remove batteries from your device and dispose of them at your local collection point for batteries. If you don't know the location of your nearest disposal centre, please enquire at your local council office.



CML Distribution, Saxon House, Saxon Business Park,
Hanbury Road, Bromsgrove, B60 4AD. WEE/GB4215VX

