1/10TH SCALE READY-TO-RUN 4WD/4WS BRUSHED ELECTRIC MOTOR POWERED OFF ROAD CRAWLER

RAVINE

INSTRUCTION BOOK AND COMPONENT LISTING

4WD · SHAFT DRIVEN · BR · 99% RTR · 2.4 GHZ · 4WS · WATER PROOF

www.ftx-rc.com

FTX Ravine 1/10th Scale Ready-To-Run 4WD/4WS Electric Motor Powered Off Road Crawler

Congratulations on your purchase of the FTX 'Ravine' electric off road car.

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.

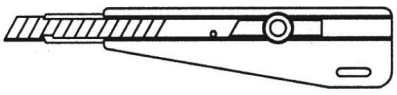
- Never operate your model with low transmitter batteries.
- Always operate your model in an open area away from cars, traffic or people.
- Never operate the model in the street or in populated areas.
- Always keep the vehicle in direct line of sight, you cannot control what you cannot see!
- Keep all 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:

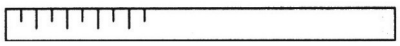
FTX Ravine Rock Crawler RTR Vehicle
Transmitter: 2.4ghz Steerwheel
Charger: 400mA USB Charger
Battery: 7.4V Li-Ion 1500mAh

REQUIRED EQUIPMENT FOR OPERATION

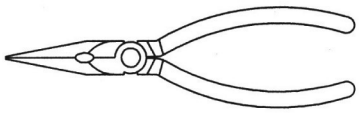
1. Tools required for building and maintenance:



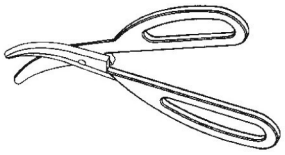
● Hobby knife



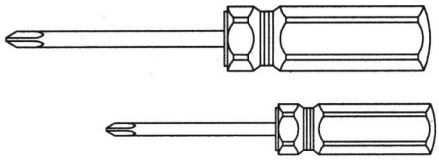
● Precision ruler



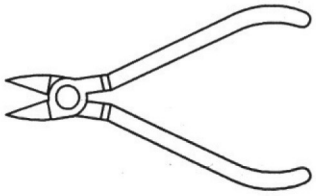
● Needle nose pliers



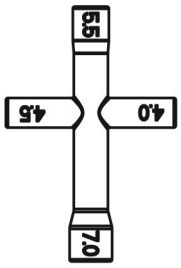
● Lexan scissors



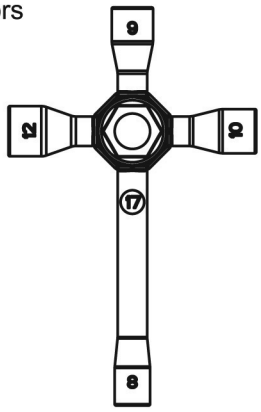
● Flat and Philips screwdriver



● Wire cutters

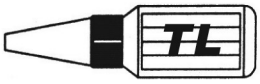


● Cross wrench

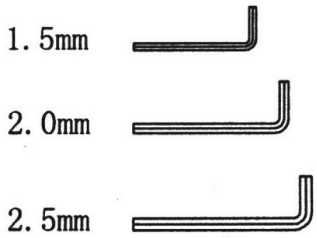


● Cross wrench

● CA glue&rubber cement



● Thread locking compound



● Hex wrench

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:

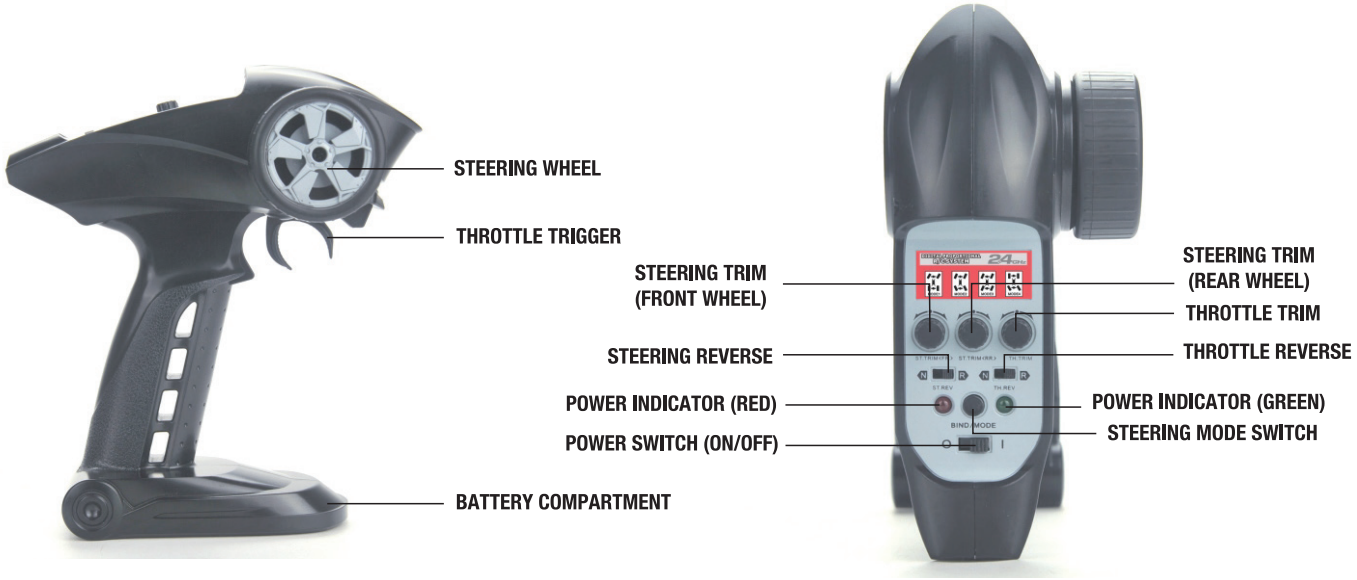
3 pcs AA Alkaline batteries for transmitter

IMPORTANT!

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

FAMILIARIZING YOURSELF WITH YOUR 2.4GHZ RADIO SYSTEM

Use the information in this section to familiarize yourself with the features of the 3-Channel 2.4Ghz transmitter and receiver included with your car. Please observe all warnings to ensure the safe operation of your radio control system.



STEERING WHEEL: Proportional steering operation (left/right). Turn the steering wheel to enable the care to turn to the left or to the right.

THROTTLE TRIGGER: Proportional throttle acceleration (forward and reverse). It controls the speed of your vehicle, both forward and in reverse. Pull it to accelerate, release it to stop , and push it to go reverse.

BATTERY COMPARTMENT: Houses three AA size battery to power the transmitter. (AA size batteries not included.)

STEERING TRIM (FRONT): Left Knob. Used to set the steering neutral point on front wheels. If the front wheels on the vehicle veer in one direction while the steering wheel is centered, turn this knob in the opposite direction until the vehicle drives straight.

STEERING TRIM (REAR): Middle Knob. Used to set the steering neutral point on rear wheels. If the rear wheels on the vehicle veer in one direction while the steering wheel is centered, turn this knob in the opposite direction until the vehicle drives straight.

THROTTLE TRIM: Right Knob. Used to set the throttle neutral point. If the vehicle moves forward or reverse while the throttle trigger is centered, turn this knob until the vehicle remains still.

STEERING REVERSE SWITCH: Used to change steering orientation. If the vehicle turns right when you steer left, flip this switch.

THROTTLE REVERSE SWITCH: Used to change throttle direction. If the vehicle goes backwards when you pull the trigger, flip this switch.

POWER INDICATORS (RED/GREEN): The lights indicate the current status of the transmitter batteries. When both power indicator lights are illuminated, the batteries have sufficient capacity to power the transmitter safely. If the green power indicator light begins to flash, the batteries are loosing power and should be replaced soon. If both power indicator lights begin to flash, the batteries have only limited capacity to power the transmitter. In this case, the batteries should be replaced as soon as is safely possible.

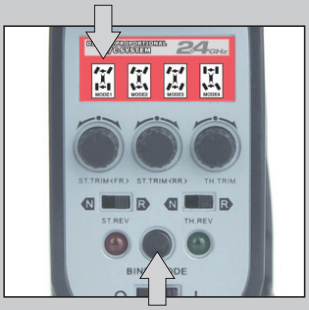
POWER SWITCH (ON/OFF): switching on or switching off the transmitter.

STEERING MODE SWITCH: changing steering modes.

STEERING MODE – 1

FRONT WHEEL STEERING

Light is solid on

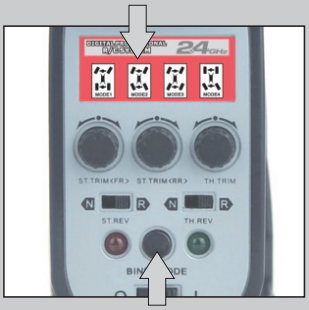


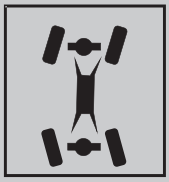
PRESS IT TO CHANGE THE STEERING MODE

STEERING MODE – 2

FRONT AND REAR WHEEL STEERING IN OPPOSITE STEERING DIRECTIONS

Light is solid on



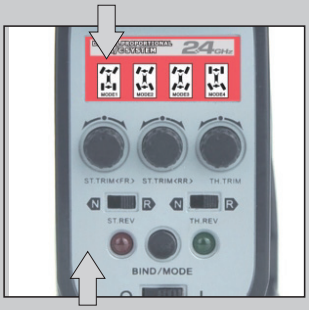


PRESS IT TO CHANGE THE STEERING MODE

STEERING MODE – 3

FRONT AND REAR WHEEL STEERING IN SAME STEERING DIRECTION

Light is solid on

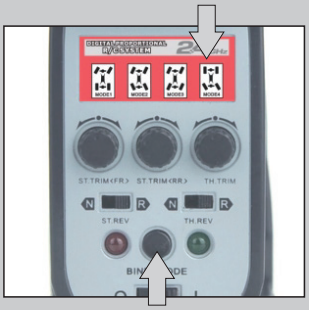


PRESS IT TO CHANGE THE STEERING MODE

STEERING MODE – 4

REAR WHEEL STEERING

Light is solid on



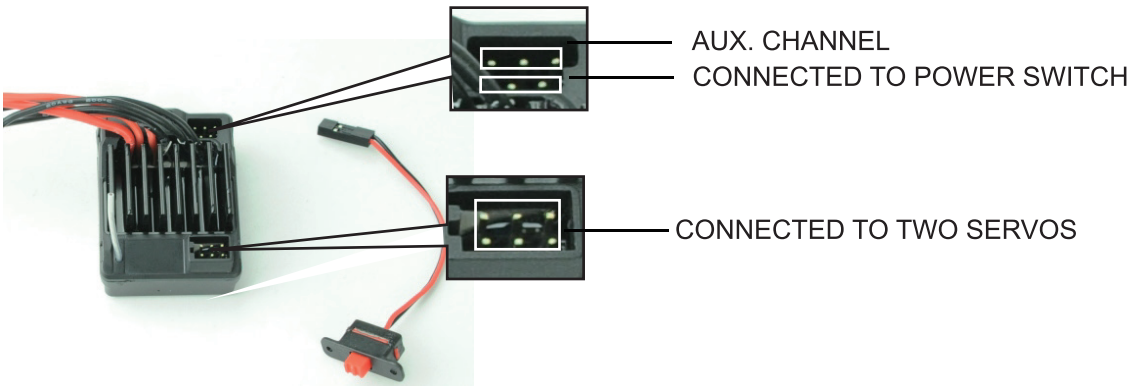
PRESS IT TO CHANGE THE STEERING MODE

The battery cover is located on bottom. Slide the battery cover, load three AA size batteries, and replace the battery cover.

Note:

1) Do not mix new and old batteries.
2) Use batteries of same type and brand.
3) Remove the batteries when not in use.
4) Never reverse the polarities.
5) Replace with new batteries when low battery power on transmitter is observed.

SPEED CONTROL/RECEIVER CONNECTION

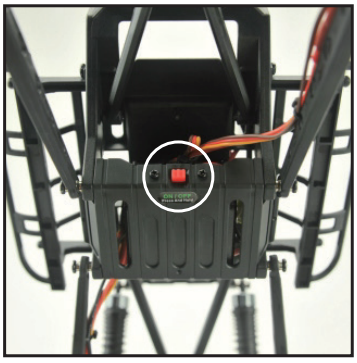


RUNNING YOUR CAR

1. TURNING ON THE SWITCH OF YOUR TRANSMITTER

Slide the power switch to switch on the transmitter.

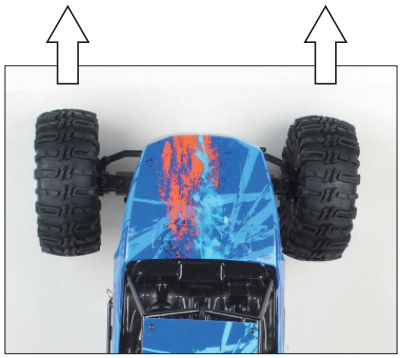
2. TURN ON THE SWITCH ON YOUR CAR



The Power button is located on the chassis. Press and hold the Power button for 2-3 seconds to switch on the car.

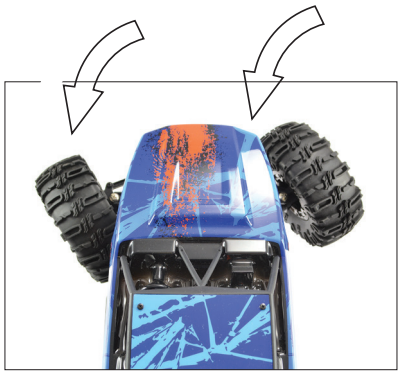
3. CHECK STEERING PERFORMANCE

CENTRE



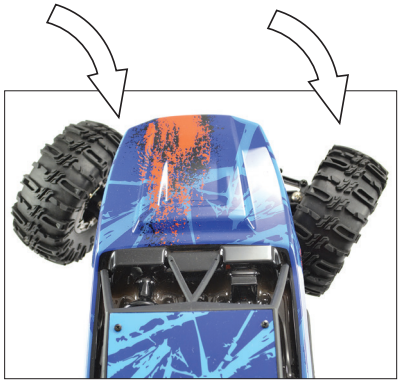
1. Centre the steering wheel to enable the vehicle to run straightly in line.

TURN RIGHT



2. Turn the steering wheel to the left, and the car turns left.

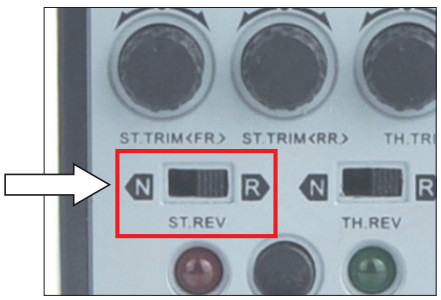
TURN LEFT



3. Turn the steering wheel to the right, and the car turns right.

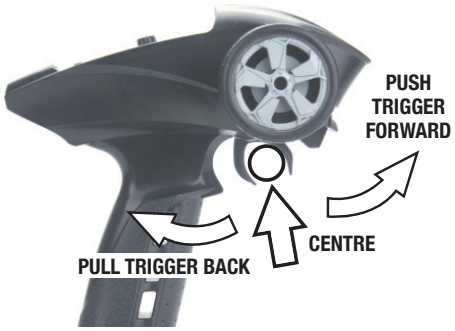
If the vehicle turns right when you steer left, flip “Steering Reverse” switch.

If the vehicle turns left when you steer right, flip “Steering Reverse” switch.



RUNNING YOUR CAR

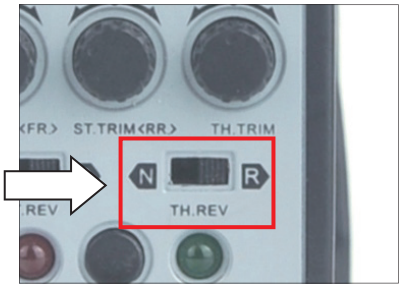
4. CHECK TRIGGER RESPONSE



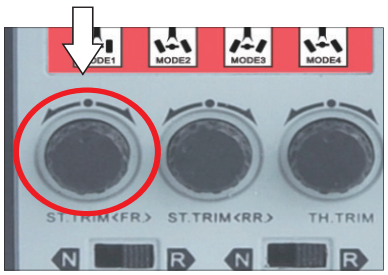
Pull it to accelerate, release it to stop, and push it to go reverse.

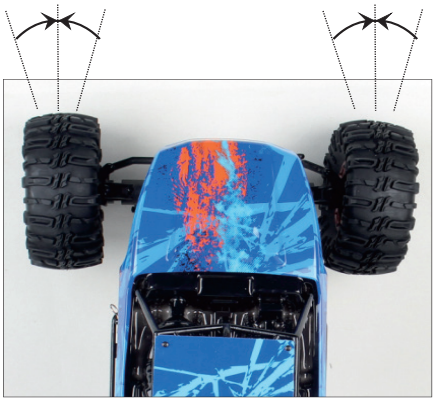
If the vehicle goes backwards when you pull the trigger, flip "Throttle Reverse" switch.

If the vehicle goes forwards when you push the trigger, flip "Throttle Reverse" switch.



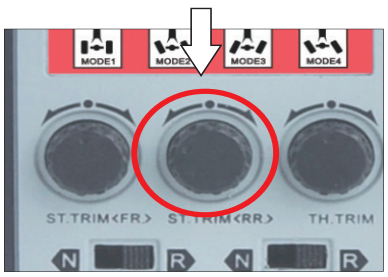
5. TUNING THE STEERING TRIM





STEERING TRIM KNOB

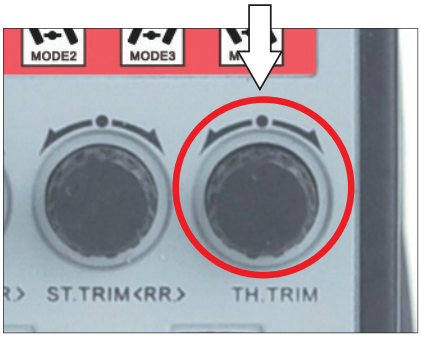
Gently pull the trigger to allow your car to run slowly. Meantime, tune the steering trim to allow the front wheels to be aligned.



STEERING TRIM (REAR):

Used to set the steering neutral point on rear wheels. If the rear wheels on the vehicle veer in one direction while the steering wheel is centered, turn this knob in the opposite direction until the vehicle drives straight.

6. TUNING THE THROTTLE TRIM



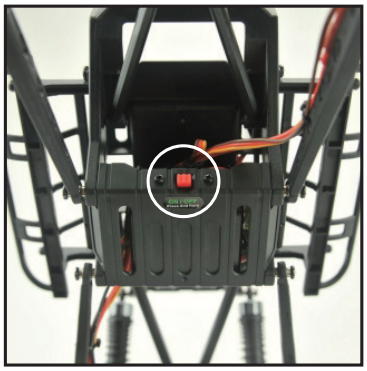
THROTTLE TRIM:

Used to set the throttle neutral point.

If the vehicle moves forward or reverse while the throttle trigger is centered, turn this knob until the vehicle remains still.

STOPPING YOUR CAR

1. TURNING THE CAR OFF



Press and hold the Power button for 2-3 seconds to switch off the car.

2. TURNING OFF THE TRANSMITTER

Slide the power switch to switch off the transmitter.

3. DISCONNECTING AND REMOVING THE BATTERY

Disconnect the battery pack and remove it from your car when not in use.

Fully charge the battery pack before storing it in a clean and dry place.

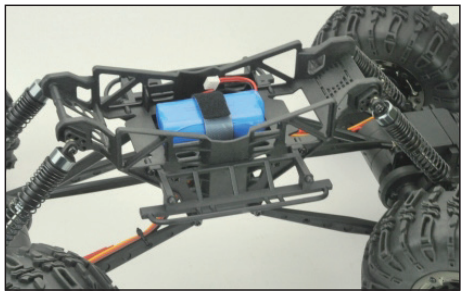
Do not expose the battery pack to any source of heat and humidity.

4. CHECKING YOU CAR BEFORE STORING IT

Check and clean the car before storing it.

1. **Check if the wheels are loose.**
2. **Verify that all connectors and wires are intact and there is nothing exposed. Disconnect all connectors when not in use.**
3. **Use soft cloth to wipe off dirt.**
4. **Store the car in a clean and dry place.**

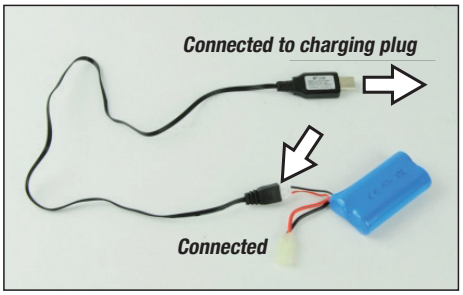
CHARGING THE BATTERY PACK



Be sure to always disconnect the battery pack and remove it from your car when not in use.

USB charger is exclusively supplied in the packaging.

1) Do NOT charge the battery pack when leaving it in the car.
2) Do NOT drain the battery pack where the car is unable to move. Stop once power drops.
3) Do NOT leave the battery pack uncharged for long periods as performance will drop.



Connect the battery pack with the USB charger(provided) and plug the USB charger onto the USB slot on the electrical appliance.

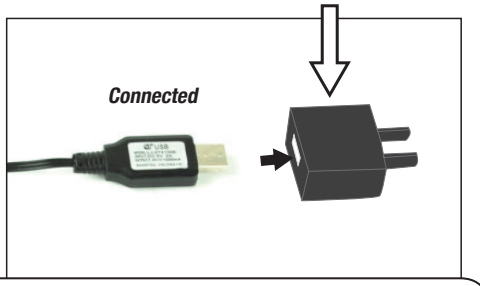
WHEN CHARGING: RED LED (CHARGING LED) FLASHES, AND GREEN LED (POWER LED) IS SOLID ON.

WHEN THE BATTERY PACK IS FULLY CHARGED, BOTH RED AND GREEN LED WILL BE ILLUMINATED.

Charging time is approx. 5 to 5.5 hours.

A Smart Phone charger adaptor (not included) (5V,1A) can be applied to charging the battery pack. This will shorten the charging time.
Under this condition, charging time is approx. 3.5 to 4 hours.

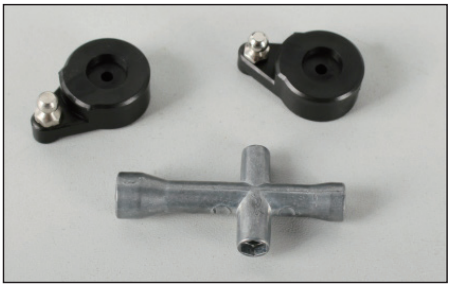
Smart Phone Charging Adaptor

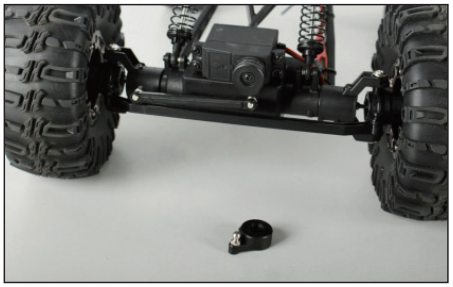


NOTES ON BATTERY USE:

- 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 gets hot enough to melt 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.
- NEVER charge the battery unattended incase of overcharging, you need to be able to monitor the battery during charging.
- Charge away from flammable objects and on a non-flammable surface incase the battery becomes too hot.

ACCESSORIES IN THE BOX





A. There are 2 pieces of additional servo arm and the small wrench in the box. The additional servo arms are optional parts, which differ in shape from the servo arms fitted to the vehicle.
B. A small wrench helps users to tight the wheels after a long use.

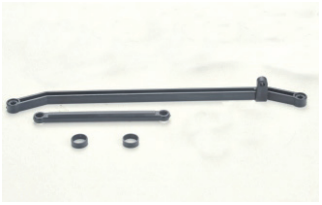
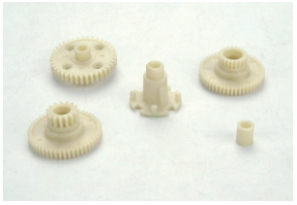
MAINTAINING YOUR CAR

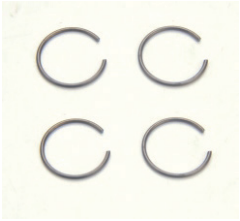
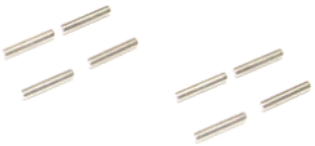
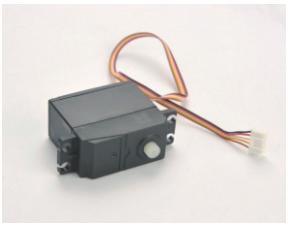
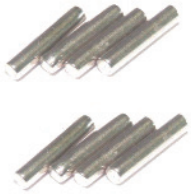
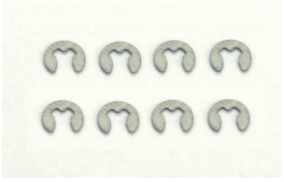
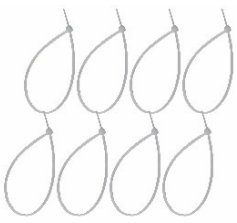
After running your car, the following procedures should be performed regularly and will help to maintain your car's performance.

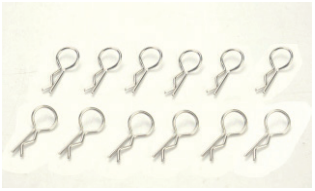
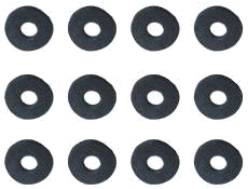
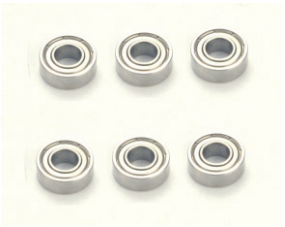
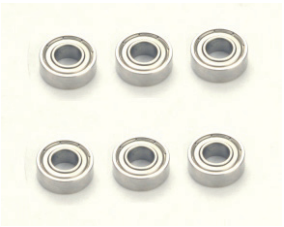
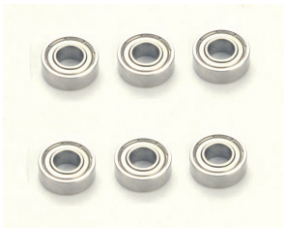
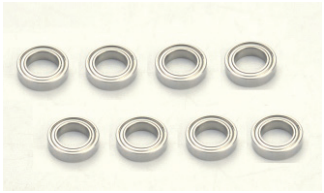
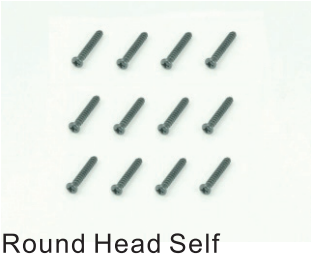
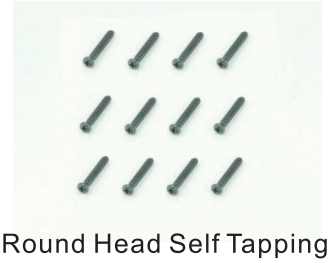
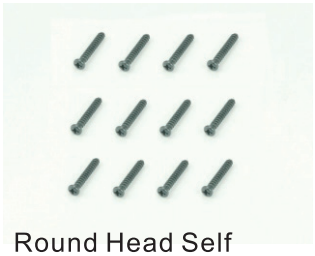
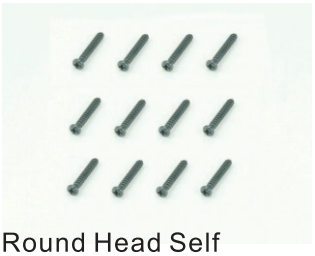
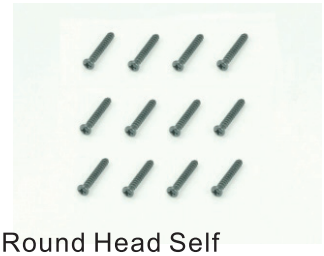
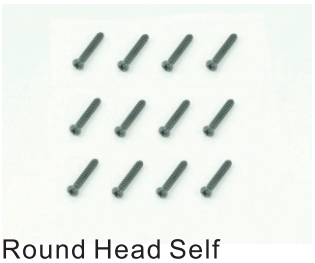
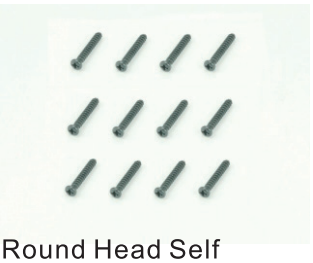
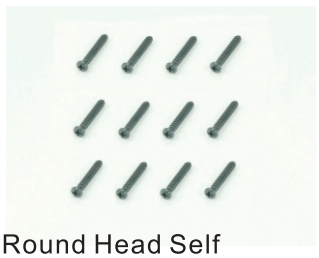
- **Inspect your car for any obvious damage.**
- **Check the gears for wear, debris or broken/slipping teeth.**
- **Check the wheels and tighten the wheel screws properly.**
- **Check for loose screws in the chassis.**
- **Check the wiring for frayed or damaged wires or connectors.**
- **Check the steering servo which will wear out over time and require replacement.**
- **Check all batteries.**
- **Keep the chassis clean and free of sand, dust and moisture.**
- **Remove and clean the motor if necessary. (Never attempt to re-assemble the motor, you will damage it and void the warranty).**
- **Clean the car body with a soft lint-free cloth.**
- **Remove all batteries when not in use.**

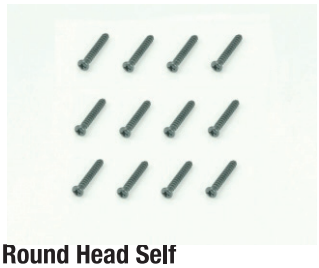
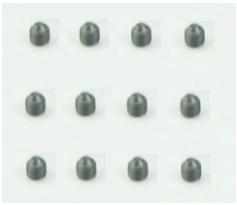
TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE
A. The vehicle does not work at all.	1. Check to see if transmitter and car are on. 2. Replace batteries. 3. Check if there are damaged parts.
B. The vehicle runs slow.	1. Replace or charge the battery pack and/or the radio batteries. 2. Make sure the vehicle is geared properly and the pinion and spur gear are tightened and not slipping.. 3. Clean all bushings or ball bearings. 4. Check for stripped or dirty gears.
C. The throttle works, but not the steering.	1. Check if the servo feels jammed – try centering it by hand. 2. Check the whole steering system.
D. It steers, but throttle is uncontrollable.	1. Check that speed control is set correctly and neutral point is correct. 2. Replace or charge the battery pack and/or the radio batteries
E. The vehicle runs noisily.	1. Check gear mesh between spur gear and pinion. 2. Check for stripped and/or dirty gears. 3. Clean and oil bushings or ball bearings.
F. The vehicle has different steering travel from left to right.	1. Check that steering trim is set to the centre point. 2. Check that the servo arm is set to the centre point
G. Not able to charge the batteries.	1. Check if either the charger or the batteries are damaged, or batteries are over-discharged.

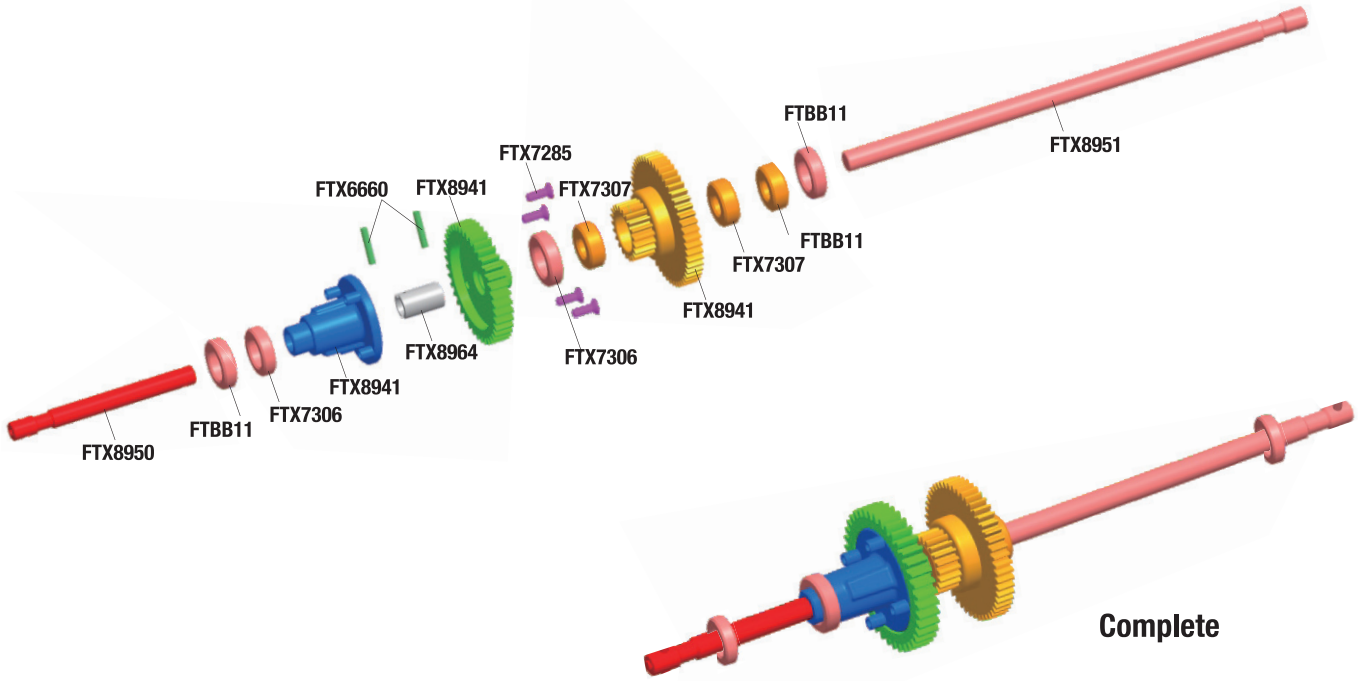
FTX8930	FTX8931	FTX8932	FTX8933
			
Main Chassis	Roll Cage	Upper Deck and Side Plates	Suspension Links
FTX8934	**FTX8935**	**FTX8936**	**FTX8937**
			
Wheel Bead Locks (PLATED)	Axle Housings+Motor Mounting Guard	Steering Links+Pads	Steering Hub Carriers
FTX8938	**FTX8939**	**FTX8940**	**FTX8941**
			
Steering Hubs	Wheel Shaft Outdrive Cups	Servo Arms and Savers	Gears Assembly
FTX8942	**FTX8943**	**FTX8944**	**FTX8945**
			
Tires w/Sponge Inserted	Wheel Rims	Wheels Complete (Plated Wheel Beadlock)	Driver Head
FTX8946	**FTX8947**	**FTX8948**	**FTX8949**
			
Aluminum Capped Oil Filled Shocks	Wheel Shafts	Axle Shaft Pins	Idle Gear Posts

FTX8950	FTX8951	FTX8952	FTX8953
			
Short Axle Shaft	Long Axle Shaft	Servo Saver Spring Ring	Gear Pinions (8T)
FTX8954	**FTX8955**	**FTX8956**	**FTX8957**
			
RC380 Motor (Front)	Wheel Shaft Pins φ2*8	3-Wire Servo (6KGS)	**RC380 Motor (Rear)**
FTX8958	**FTX8959**	**FTX8960**	**FTX8961BL**
			
ESC/Receiver(w/small Tamiya Plug)	Ball Stud.φ4.8*6.8	Ball Stud.φ4.8*7.8	Car Body (Blue)
FTX7737	**FTX8570**	**FTX6660**	**FTX8565**
			
Ball Stud.φ5.8	Wheel Hex.	Wheel Hex. Pin(2*10mm)	E-Clip (2mm)
FTX6659	**FTM4F**	**FTX8568**	**FTX8567**
			
Ball Stud. φ4.8*11.2	Flange Lock Nut M4	Zip Ties (Large)	Zip Ties (Small)

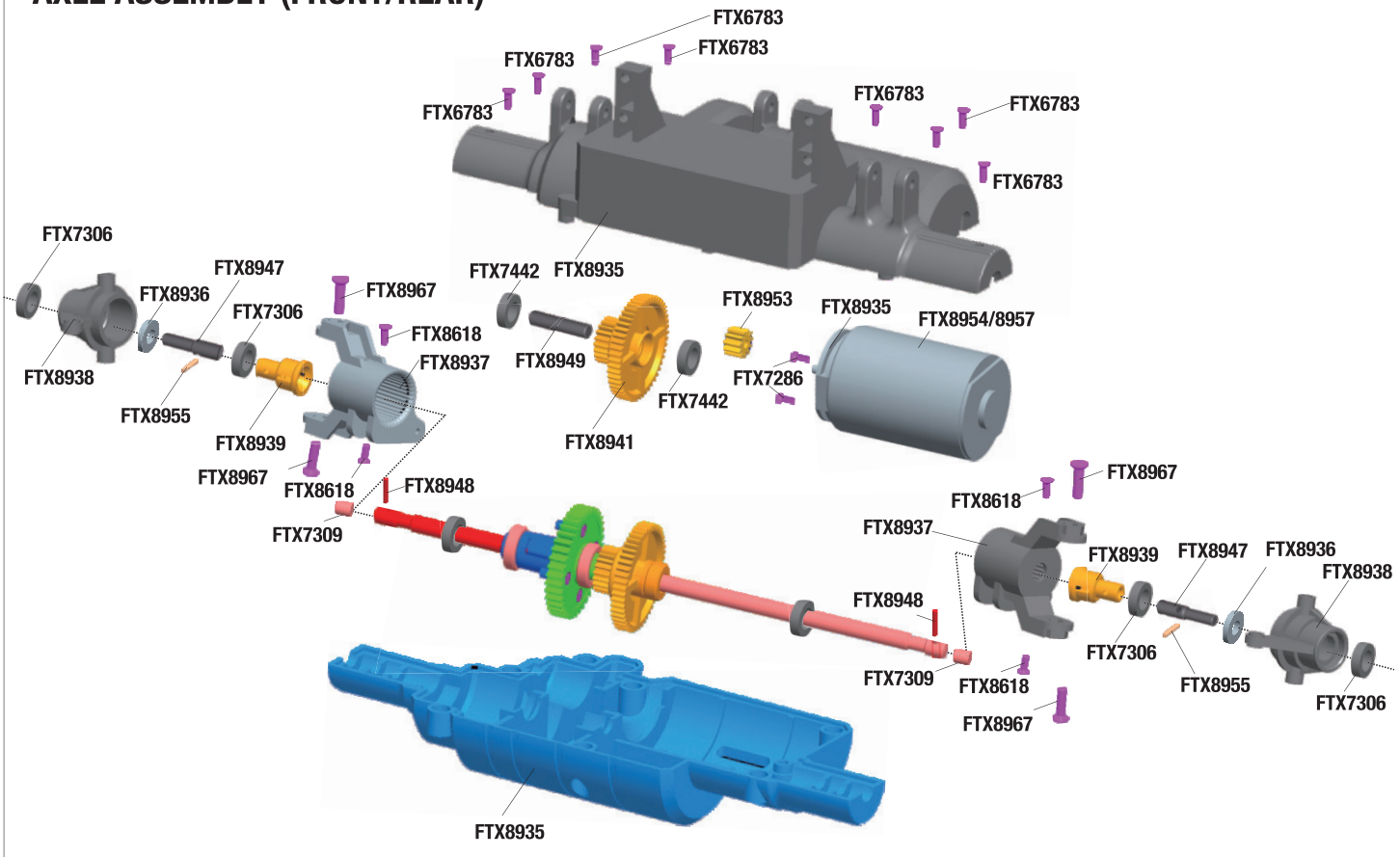
FAST212BK	FTX8566	FTX7442	FTBB11
			
Body Clip A/B- Large	Body Post Pads	Ball Bearing φ4*7*2	Ball Bearing φ5*11*4 (1PC)
FTX7307	**FTX7306**	**FTX6760**	**FTX6762**
			
Ball Bearing φ5*9*3	Ball Bearing φ7.95*13*3.5	Round Head Self Tapping Screw3*12mm	Round Head Self Tapping Screw 3*18mm
FTX6783	**FTX6768**	**FTX6769**	**FTX7287**
			
Round Head Self Tapping Screw 2.6*8mm	Round Head Self Tapping Screw 3*10mm	Cap Head Screw 2*8mm	Round Head Self Tapping Screw2.3*6mm
FTX6773	**FTX8618**	**FTX8587**	**FTX7286**
			
Round Head Self Tapping Screw3*15mm	Round Head Self Tapping Screw 2.6*6mm	Round Head Self Tapping Screw 2*6mm	Round Head Screw 2.5*6mm
FTX7285	**FTX7292**	**FTX7284**	**FTX7294**
			
Countersunk Head Self Tapping Screw 2*6mm	Round Head Self Tapping Screw 2.6*15mm	Flange Self Tapping Screw2.6*10mm	Flange Self Tapping Screw2.6*8mm

FTX7283	FTX7309	FTX8966	FTX8967
			
Round Head Self Tapping Screw 3x22mm	Set Screw 2.5*2.5mm	Step Screw 3x6.5 – 3.5x5	Step Screw 4x6.5 – 5x6.3
FTX8962	**FTX8963**	**FTX8964**	**FTX8961BK**
			
Li-ion Battery Pack (7.4V, 1500mAH) w/ small Tamiya Plugh	USB Charger	Spur Gear Spacer	Ravine Body (Black)
FTX8965			
			
Transmitter w/4 mode steering			

DRIVE SHAFT ASSEMBLY (FRONT/REAR)

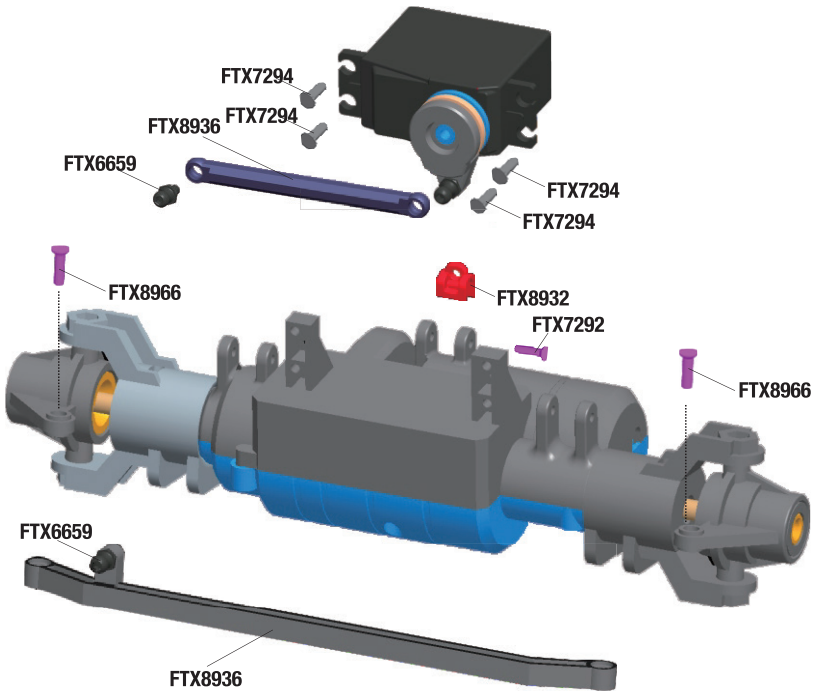


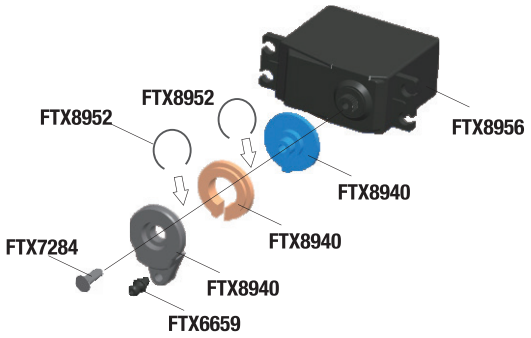
AXLE ASSEMBLY (FRONT/REAR)



EXPLODED PARTS DIAGRAM – 2

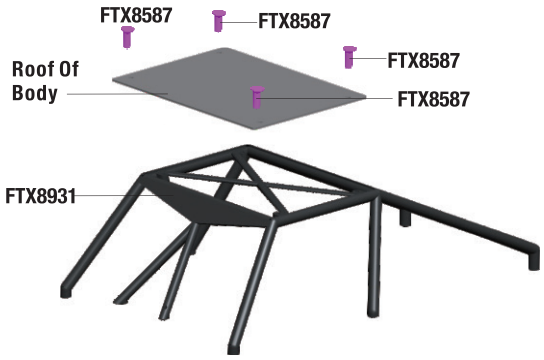
SERVO INSTALLATION (FRONT/REAR)

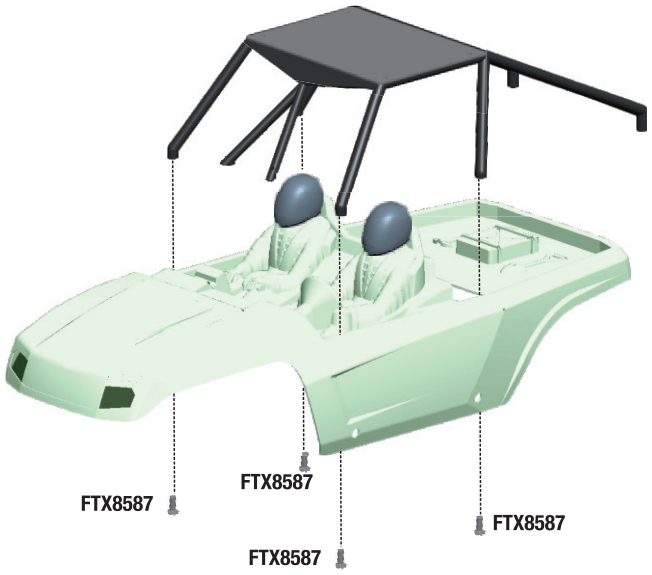


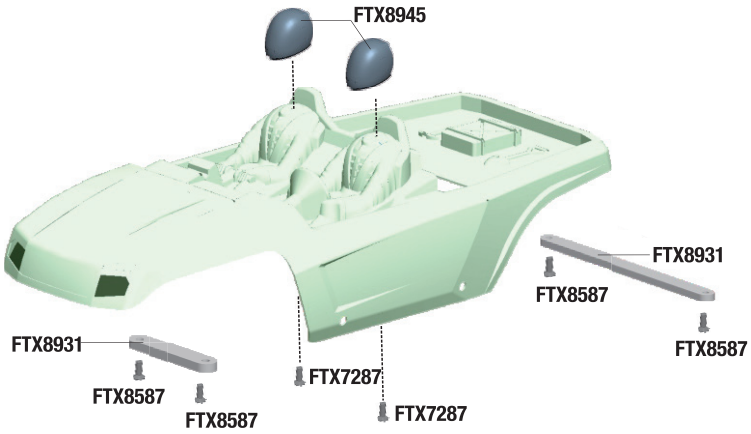


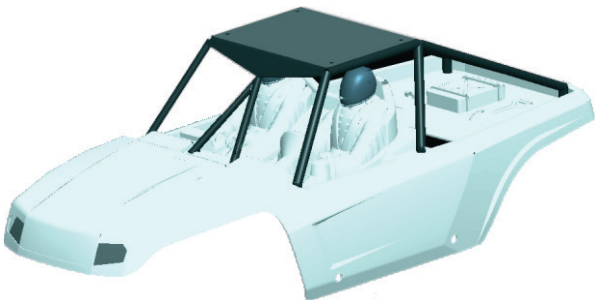
SERVO SAVER ASSEMBLY

ROLL CAGE AND BODY INSTALLATION



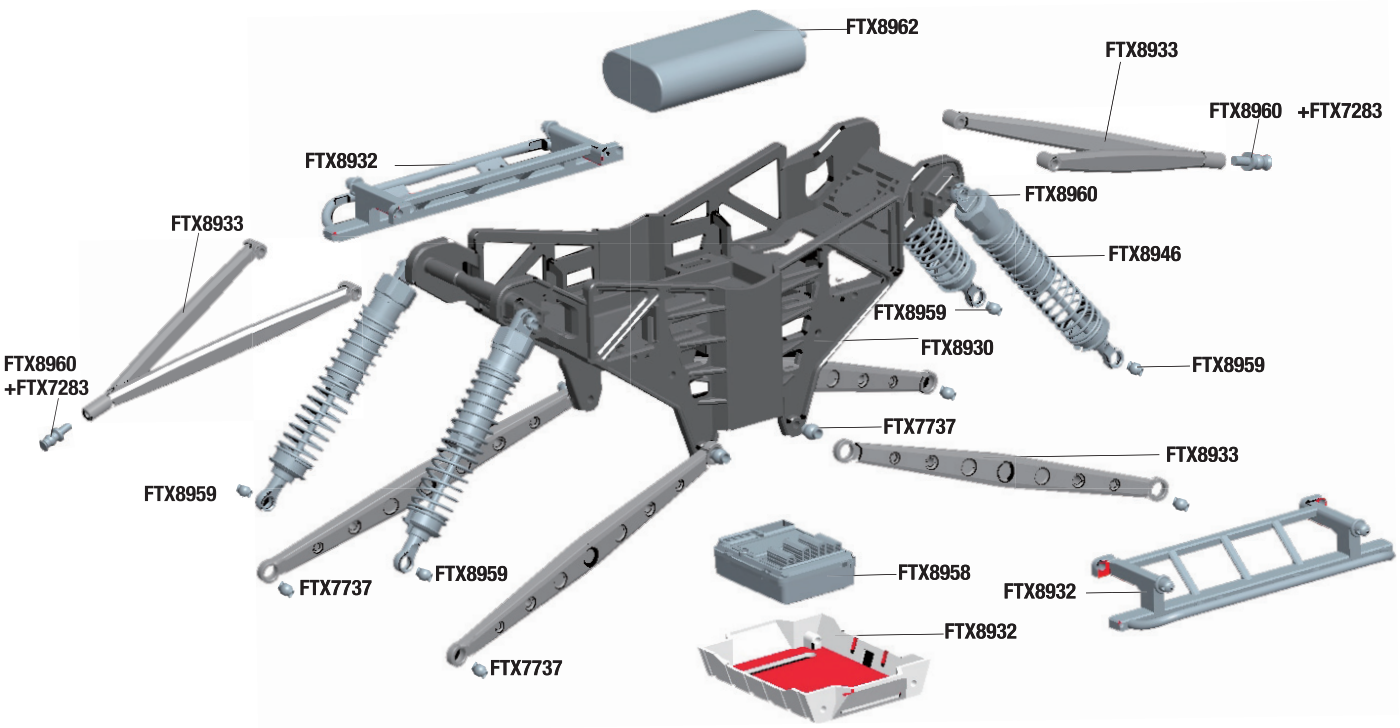


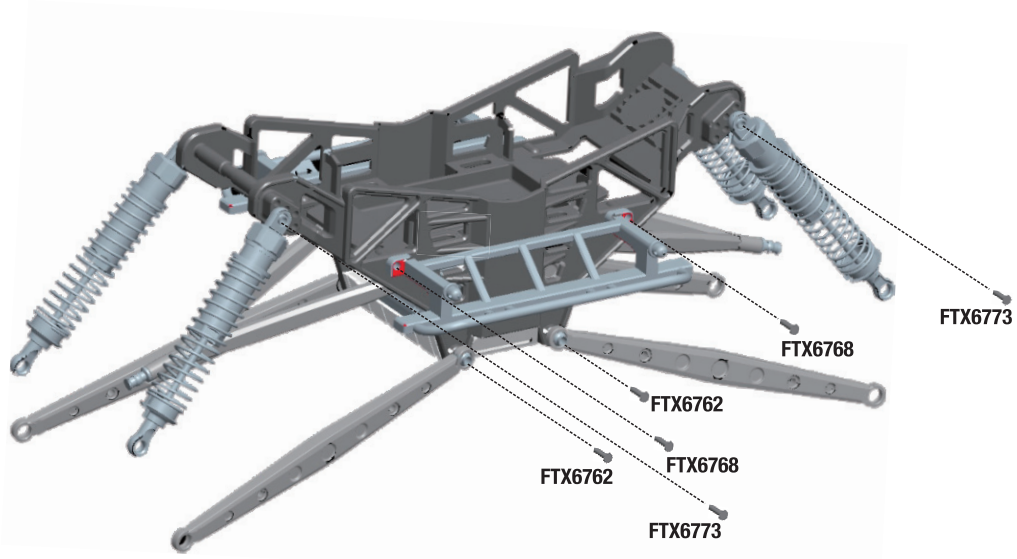


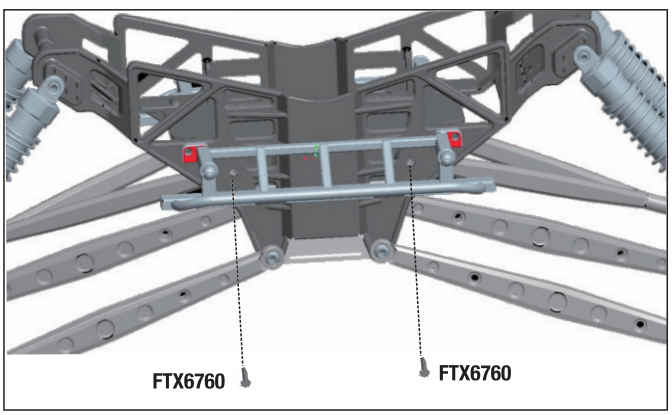


Complete

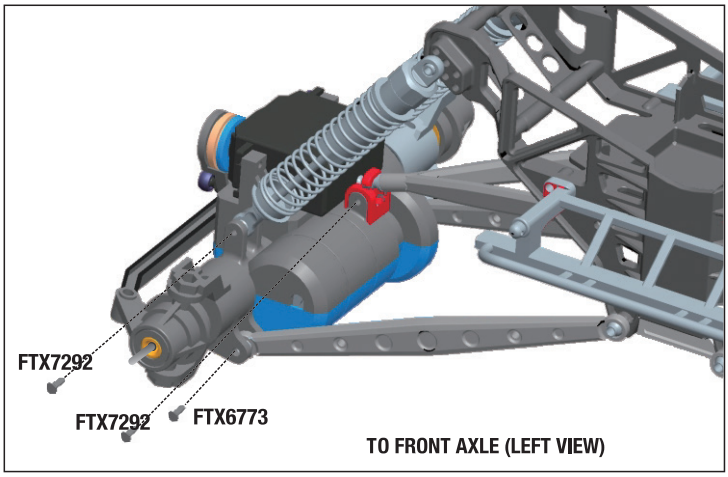
CENTRE UNIT ASSEMBLY



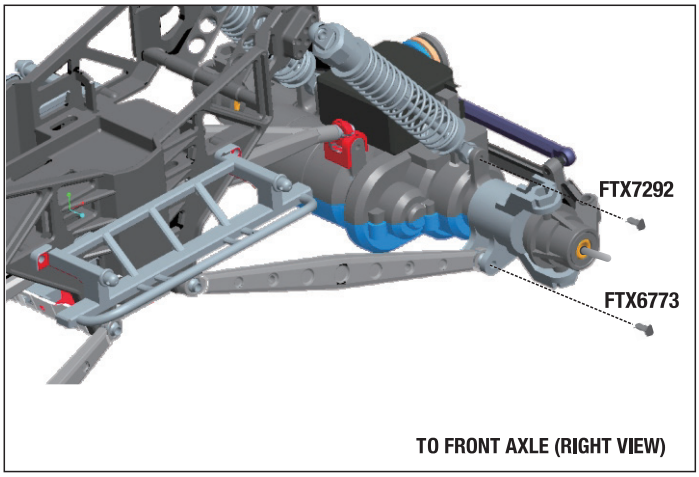




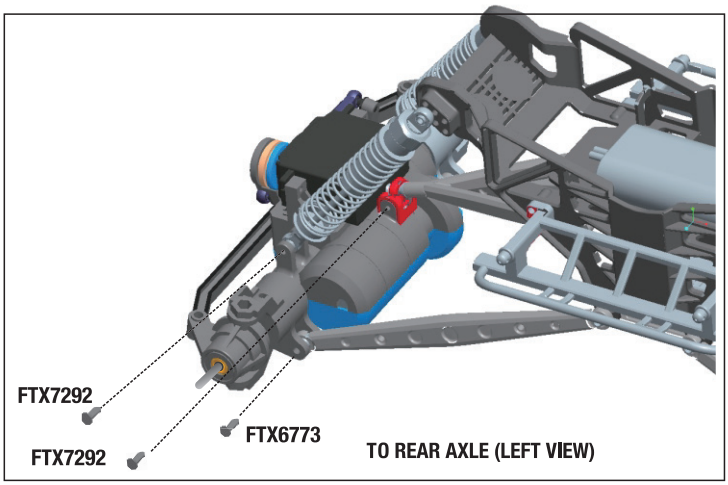
CONNECT CENTRE UNIT TO FRONT/REAR AXLE



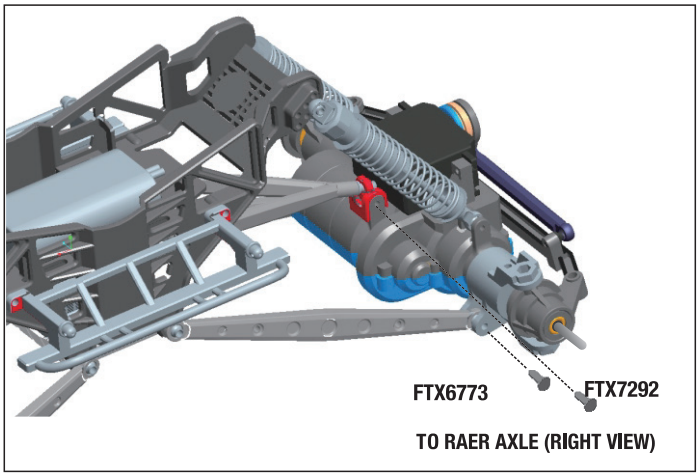
TO FRONT AXLE (LEFT VIEW)



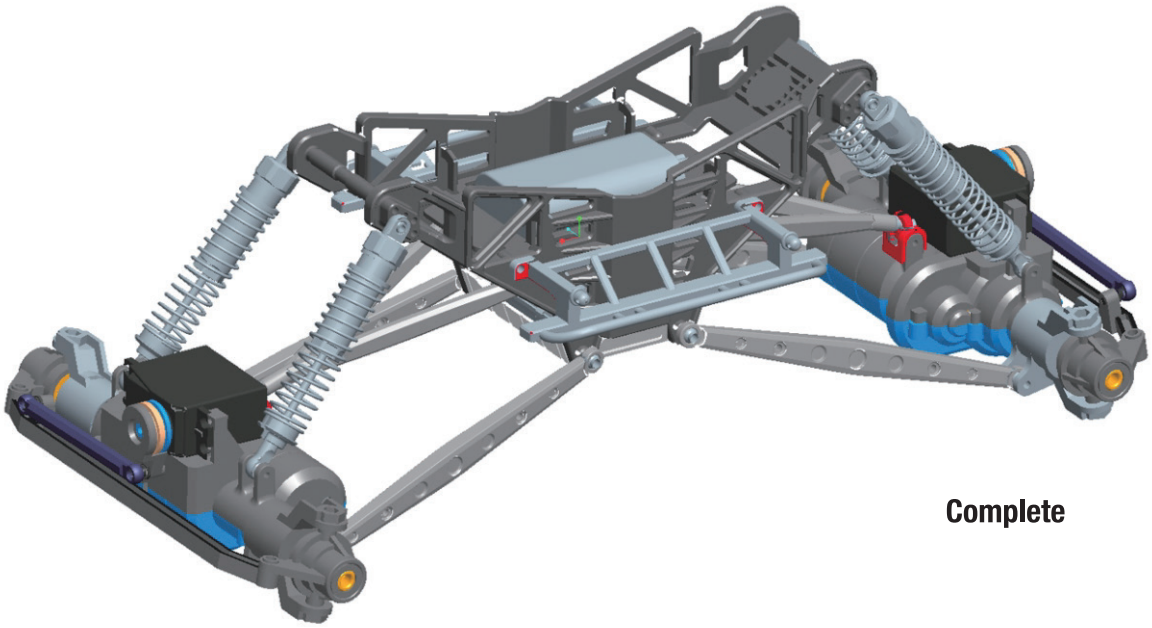
TO FRONT AXLE (RIGHT VIEW)



TO REAR AXLE (LEFT VIEW)

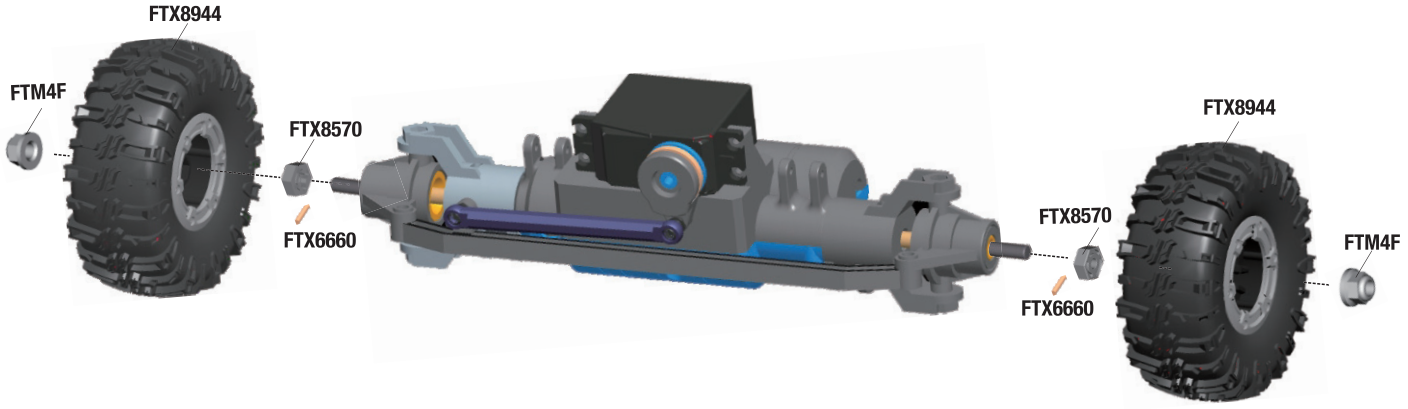


TO RAER AXLE (RIGHT VIEW)



Complete

INSTALLING WHEELS COMPLETE TO FRONT/REAR AXLE



RAVINE

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