# 1:10TH SCALE NITRO ENGINE POWERED TROPHY TRUCK



# **INSTRUCTION BOOK AND COMPONENT LISTING**







**FTX ZORRO 1/10TH SCALE 4WD** 

READY-TO-RUN TROPHY TRUCK

### Congratulations on your purchase of the FTX 'FTX Zorro 1/10th Scale 4wd Ready-To-Run Trophy Truck'.

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.



- 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, fuel, starting equipment, engine, 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 the model includes waterproof servos and receiver, the model and engine are not suited to extensive running in wet weather conditions.
   Long term damage can occur to the model and particularly the engine if run in prolonged wet conditions.
- 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 engine heatsink head and exhaust pipe, 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 or engine set-up.

 Prolong engine life by following the engine set-up and guidelines outlined within the manual.

#### **Contents:**

- FTX Zorro RTR Nitro Trophy Truck
- Transmitter Etronix Pulse EX4P





### ITEMS NOT INCLUDED BUT REQUIRED EQUIPMENT FOR OPERATION



8 x AA batteries







**Fuel Bottle** 

**Nitro Fuel** 



### **RECOMMENDED TOOLS FOR COMPLETION**







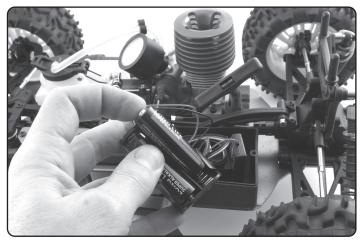
FAST691 Nitro Starter Set
The perfect set up pack includes glow starter and
charger, fuel bottle, screwdrivers and
cross wrenches.



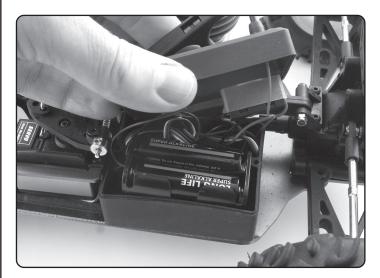
### **QUICK START GUIDE**



Step 1
Install 4 "AA" batteries into the transmitter as per the Etronix instruction booklet noting the proper direction of each cell.



**Step 2**Open the radio box and Install 4 "AA" batteries in the battery holder noting the proper direction of each cell.

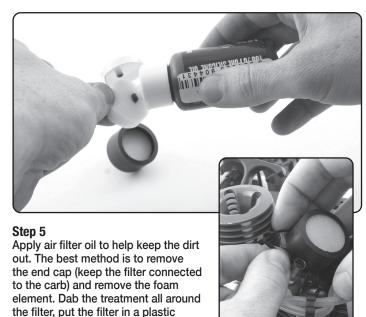


Step 3
Insert the antenna tube in the top of the radio box. Feed the receiver antenna through the tube until several inches extend out the top. Install the antenna tip. If you choose to cut the tube down to size, do so without the antenna installed.

### Step 4

Turn on the transmitter and then the receiver. Check to make sure that the servos are operating correctly and that the carburetor closes when the throttle trigger is released.

AT THIS POINT PLEASE FOLLOW THE SEPARATE ETRONIX RADIO INSTRUCTION BOOKLET FOR RADIO SET-UP. MAKE SURE THAT YOU SET THE FAILSAFE FEATURE ON THE TRANSMITTER.



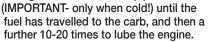
#### Step 6

Starting the Engine

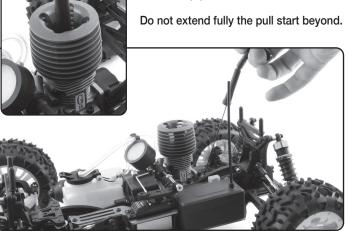
sandwich bag, and knead it until the filter issaturated, but not soaked.

You MUST read the engine running in guidelines and set-up on pages 9-12 before trying to start your engine. Below is a quick overview of the starting procedure once the engine is RUN-IN.

1. Before attempting to start the engine from cold,remove the glowplug with an 8mm nut driver prime the engine with fuel pull the pullstarter rapidly with your finger over the exhaust pipe outlet



Do not extend fully the pull start beyond. Keep the extension to around 20cm with short sharp pulls.

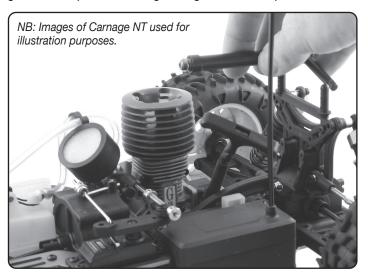




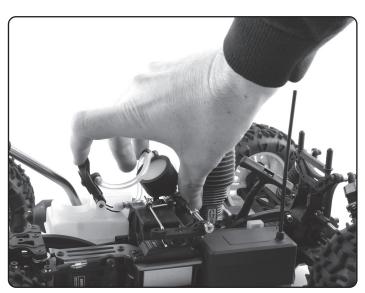


2. Then turn the car upside down and pull the pullstarter rapidly until all the excess fuel has emptied onto the floor through the glowplug hole. Make sure you do this outside safely. This process is really only necessary when the engine is cold or brand new and tight.

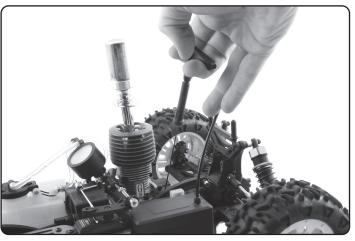
Refit the plug ensuring the copper gasket washer is also refitted. Wind it all the way in and then re-wind 1 to 1.5 turns. This allows gases to escape thus lowering the engines initial compression.



3. Start engine. Add fuel to the fuel tank using a suitable fuel bottle.



Use a glow plug heater to ignite the engine plug as illustrated and start to pull the the pull starter (be careful not to extend too far as mentioned previously). Ensure you have a small amount of carburetor open (around 2mm) to allow for air intake to help starting.



#### **IMPORTANT**

- make sure the car is secured or off the ground while attempting to start.

The engine will run "lumpily" or stop after a few seconds so try and keep it running by blipping the throttle. Tighten the glowplug while the engine is running if possible. If the engine has stalled restart with the plug tightened. The above procedure should always be followed from cold or if difficulty with starting is being experienced.



4. Stopping the engine. To stop the engine either use a stop tool to cover the exhaust outlet or use a flywheel stop tool.

**IMPORTANT** – Do not use fingers as the exhaust will be HOT and the flywheel ROTATING!

### **Warning! Flooding of the Engine**

The most common cause of engine and pullstarter damage is from the 'flooding' of the engine or a hydro-lock. More accurately this is too much fuel inside the engines crankcase causing the piston to lock. The piston rises to the top of the combustion chamber and instead of compressing a gas i.e. fuel/air mixture it has to try and compress a liquid, fuel only, which isn't possible. This puts massive strain on the piston, conrod and crankshaft as well as the starter. Invariably one component will fail, usually the conrod causing massive damage to the engines internals.

To avoid flooding the engine, always start the engine from cold using the methods mentioned above and if at any time the engine becomes difficult to turn over with the pullstarter, then remove the glowplug and empty all excess fuel out and start again. The pullstarter assembly can only be damaged by either over extension or a flooded engine. So if you break a pull start this is possible warning of a flooded engine.



# Force .18 Nitro Engine Information IMPORTANT - READ THIS BEFORE STARTING YOUR ENGINE!

#### For your safety - Your engine is not a toy!

- You will be working with highly flammable fuel, so keep it away from exposed flames or any thing which might ignite it. Read the safety
- info on the fuel container.
  Do not use fuels that were not designed for glow plug engines.
- Keep the fuel out of reach of children!
- Deadly carbon monoxide gas will be released, so do not operate the engine in an enclosed area where exposed flames or sparks can ignite it, or where it causes you to inhale it for prolonged periods.
- During operation, the engine may be dangerously hot to the touch
- Do not use the engine for purposes other than in model cars designed for them.
- Mount the engine securely.



### **Before Starting Your Engine**

### Oiling the filter

The air filter is essential for keeping dirt out of the engine. A foam filter must be oiled before running the engine. We recommend using Fastrax FAST63 Filter Oil treatment. Dab the treatment all around the filter, put the filter in a plastic bag and knead it until the filter is saturated, but not soaked. NEVER RUN YOUR VEHICLE WITHOUT THE AIR FILTER.

### **Adjustments**

Your engine has come factory set to allow for an easy start and rich running. DO NOT alter any of the settings until the running in period has been completed.

### **Putting fuel in the fuel tank**

Squeeze the fuel bottle, put the bottle's tube into your fuel container, and draw out some fuel. Lift up the lid on the fuel tank, and slowly squeeze the fuel bottle until the tank is full. Be careful here. If you overflow the tank it might get on your radio gear or on your brakes and you may create an unsafe driving situation. Always keep your fuel bottle closed when not in use.

### Understanding the engine terms "rich" and "lean"

Your carburettor has screws that regulate how much air and fuel enter the engine together, the air/fuel mixture. An air/fuel mixture that is too "rich" means there is too much fuel, and a mixture that is too "lean" means that there is not enough fuel for the given amount of air. When the mixture is too rich, performance will be sluggish (one symptom of this, is excessive amounts of smoke from the exhaust). There is also a potential to foul the glow plug when the mixture is too rich. When the mixture is too lean, there is not enough fuel to cool or lubricate the internal engine components, and damage to the engine and/or glow plug is almost certain.

### **CAUTION:**

If, while you are driving, the engine stalls because of an overheating condition, severe damage may have already occurred. Overheating is caused by the following conditions.

- Fuel mixture is set too lean
- · Air leak around carb
- Loss of muffler pressure (line falls off)
- Excessive nitro content in the fuel
- Incorrect oil content in the fuel
- No air filter
- Poor quality of fuel
- Contaminated fuel
- Excessive loads on the engine (locked drivetrain)
   Your engine will be short-lived if any of the above conditions are allowed to exist for any length of time. During the first few tanks watch closely for any signs of overheating. These will include:
- Steam or smoke coming from the engine surfaces
- Cleaning out and then lagging during high-speed acceleration, as if it is running out of fuel.

Popping or clattering sound when slowing down.
 Idle speed will surge or possibly diminish to the point of stalling.

### **To Test For Overheating**

It's important to check the head temperature during the operation of the engine. The best method for checking the head temperature is to use a head temperature gauge. There are several head temperature gauges available, and the temperature readings between these different brands of gauges vary. Due to this variance, the temperature readings will range between approximately 185 degrees and 225 degrees. About 185 degrees is the normal for the GO.18. If you don't have access to a head temperature gauge, you can use water to check the head temperature. Place a drop of water on top of the cylinder head. If it sizzles away immediately, shut down your engine. If it takes approximately 3-5 seconds for the water drop to boil away, then the engine is running within a normal temperature range.

### **Start Your Engines**

#### **Running-In**

The modern model car engine requires relatively little running in, due to the use of ABC piston and liner assembly. The engine should be run on a rich setting for approximately 6-8 tanks of fuel, with another 6-8 at a slightly less rich setting. Once this has been completed, the internal engine components should be properly seated and a normal setting can be used.

A good idea is to use a running in fuel as it is especially designed for breaking in new engines without damage.

The best methods of checking on the running setting of the engine, is to first check the smoke trail coming out of the exhaust with the car is running. A very rich setting would allow the car to pull away slowly or slugglish with a momentary hesitation and lots of smoke from a standing start. When the car is accelerating at full throttle, the engine will never "Clean Out". When an engine cleans out, the speed and the rpms will increase suddenly and dramatically, as if the engine has switched to second gear. Also, the amount of smoke that comes from the exhaust will decrease. Cleaning Out is a desirable characteristic once the engine is fully broken in.

As the engine reaches normal operating temperature, it will speed up and performance will increase. This occurs because the fuel mixture is becoming leaner with the increased temperature. You will need to richen the fuel mixture so that the engine continues to run as described above. When the first tank is almost gone, bring the car in and shut off the engine. Allow the engine to cool for 8 to 10 minutes before starting the engine up again. Add more fuel. Start it back up and run the second tank of fuel. Again allow the engine to cool before starting it up again.

The key to breaking in your engine is patience. During the break in period, your engine may appear to malfunction with problems such as stalling, inconsistent performance, and fouling out glow plugs. Don't give up.



These are just a few things you may go through during the break in period. Just keep it running, apply the throttle on and off as smoothly as you can. Sudden bursts or quick releases of the throttle can stall your engine. Soon after break in your patience will pay off with a well running engine. The performance level of the engine will be limited by the "rich' fuel mixture which you will use all during the break-in process. Once the engine is fully broken-in the mixture can be "leaned out," and speed and acceleration will increase. Because of the rich fuel mixture and the wearing of the new parts, deposits will form on the glow plug causing it to fail. Expect to replace the glow plug during the break in period, and definitely when the engine is fully broken in and the fuel mixture is leaned out.

# **Setting Engine for Normal Tuning High Speed**

As you approach the first 6-8 tanks running you can start to GRADUALLY adjust you engine for normal performance. PLEASE NOTE any adjustments need to be very small at 1/8th turn increments. You can then begin adjusting the fuel mixture to maximize performance for your driving needs. To lean turn the main fuel control needle in a clockwise direction. This will allow the car to pull away faster and more cleanly, without hesitation and increase the top speed. There should however still be a noticeable smoke trail.

If the main needle is screwed in too far thus allowing the engine to run too lean, it will seem to run strong at first, but will bog, hesitate, or stall when running at high speed. The engine will also rapidly overheat when the setting is too lean. This is because fuel includes lubrication, and that lubrication is inadequate when the setting is too lean. CHECK THE ENGINE TEMPERATURE OFTEN AS YOU LEAN THE MIXTURE. DO NOT LET THE ENGINE OVERHEAT.

You should always see smoke coming from the exhaust.

At the optimum setting, the engine will clean out; have a strong-sounding, high-pitched whine at full speed; and there will be a thin trail of whitish smoke coming from the exhaust. It is always better to set the engine a little rich rather than too lean.

If the engine stalls on acceleration, begins to bog or slow down at full throttle, or if there is a reduction in exhaust smoke, then the engine is running too lean. Immediately turn the high speed mixture screw counterclockwise 1/4 of a turn and operate the car at medium speeds for 1 to 2 minutes to allow the engine to cool.



**LOW SPEED** 

**ADJUSTMENT** 

### **Tuning Low Speed**

The low-speed mixture affects how the engine will perform in the low to mid range rpms. Turning the low-speed needle clockwise will lean the mixture. As with the high-speed mixture, leaning the low-speed mixture increases performance. Again, if the mixture here is set too lean, the engine may be starved for lubrication in the lowand midrpm ranges, thus causing overheating and excessive engine wear.

Perform the following test to determine if the low speed mixture is set correctly. With the engine warm and running, allow it to idle for approximately 15 seconds. Now quickly

apply throttle and note the performance. If the engine bogs, accelerates erratically, and a large puff of blue smokes emitted, then the low speed mixture is too rich. Turn the low-speed screw clockwise 1/8 of a turn. If the engine speeds up for a moment then bogs, hesitates, or stalls, then the low speed mixture is too lean. Turn the screw counterclockwise 1/8 of a turn. Adjust the mixture screws in 1/8 of a turn increments, wait 15 seconds, and retest after each change. Adjust for the best acceleration without the car stalling.

### **Care and Maintenance**

When you are finished racing for the day, drain the fuel tank. Afterwards, energize the glow plug with your glow plug starter and try to restart the engine

in order to burn off any fuel that may remain inside the engine. Repeat this procedure until the engine fails to fire. Try to eject residue while the engine is still warm. Finally, inject some corrosion inhibiting oil, and rotate the engine to distribute the oil to all the working parts. Do not, however, inject the oil into the carburetor, for it may cause the O-rings inside to deteriorate. When cleaning the exterior of the engine, use WD-40. Do not use gasoline or any solvents that might damage the silicone fuel tubing.

Cleaning the air filter. When the air filter starts to get dirty, do the following steps:

- Step 1. Clean the foam with fuel. Do this by pouring a little fuel in a small can and kneading the filter in the fuel. When it looks cleaner, then dispose of the fuel.
- Step 2. Dry the filter. Squeeze out the fuel with a paper towel until it's dry.
- Step 3. Fastrax Fast63 Filer Oil to help keep the dirt out.

  Dab the treatment all around the filter, put the filter in a plastic sandwich bag, and knead it until the filter is saturated, but not soaked.





# **Troubleshooting**Glow Plug Problems

The glow plug in your engine is an inexpensive consumable item which must be replaced periodically to maintain peak performance and starting ease. Most often, any starting problems or erratic performance can be traced back to the glow plug. The glow plug should also be checked if the engine's acceleration and top speed performance suddenly becomes flat. The only sure way to test for a faulty glow plug is simply install a new one to see if the problem goes away. Remove the plug from the cylinder head with a 8mm nut driver. Make sure there is no dirt or debris on top of the head which could fall into the engine. Do not loose the copper gasket which seals the glow plug. Touch the glow plug to the contacts of the glow plug starter. All of the coils should glow white. Sometimes the first few coils will not glow while the rest are bright, most likely indicating a bad plug. If the glow is dim orange, then the glow starter battery should be replaced or recharged.

At the high rpm that the engines operate only a top quality plug will cut the mustard. Therefore we recommend the use of the Fastrax Platinum No.4 glowplug (FAST760-4).

#### **Fuel Mixture**

The fuel mixture is the largest variable you have to control while operating your engine.

Fuel brand, ambient temperature, and humidity all effect how your mixture should be set. If the engine runs great one day but runs rich or lean the next day, it is probably the result of a change in the air quality and temperature. This should be expected and adjusted for.

Although there are many fuels on the market, very few are designed to perform and protect your engine at the likes of 35,000rpm that some of our engines can attain.

Keep between 16-20% nitromethene content for running and first use. The single most popular reason for engine failure or unreliability is poor or wrong fuel.





#### **Pull Starter Hints**

The pull starter as fitted to most of the entry level engines is, if treated correctly, the easiest and most cost effective method of starting an engine. As with every silver lining, there is a cloud. The pullstart system is similar to that of a lawnmower to look at, but that is where the similarity ends. The pullstarter is susceptible to breaking if the engine is flooded or not lubricated enough. To ensure this does not happen, a few simple rules should be followed.

- 1. Before attempting to start the engine from cold, remove the glowplug and then prime the engine with fuel. For cars with a primer button on the tank, press this until the fuel has travelled along the fuel pipe to the carburettor and then a further 10-20 presses. For cars without a primer on the tank, pull the pullstarter rapidly with your finger over the exhaust pipe outlet until the fuel has travelled to the carb, and then a further 10-20 times to lube the engine.
- 2. Then turn the car upside down and pull the pullstarter rapidly until all the excess fuel has emptied onto the floor through the glowplug hole. Refit the plug ensuring the copper gasket washer is also refitted. Wind it all the way in and then re-wind 1 to 1.5 turns. This allows gases to escape thus lowering the engines initial compression.
- 3. Start engine. The engine will run "lumpily" or stop after a few

seconds so try and keep it running by blipping the throttle. Tighten the glowplug while the engine is running if possible. If the engine has stalled restart with the plug tightened.

The above procedure hould always be followed from cold or if difficulty with starting is being experienced.

### **Flooding of the Engine**

The most common cause of engine and pullstarter damage is from the 'flooding" of the engine or a hydro-locked. More accurately this is too much fuel inside the engines crankcase causing the piston to lock. The piston rises to the top of the combustion chamber and instead of compressing a gas i.e. fuel/air mixture it has to try and compress a liquid, fuel only, which isn't possible. This puts massive strain on the piston, conrod and crankshaft as well as the starter. Invariably one component will fail, usually the conrod causing massive damage to the engines internals.

To avoid flooding the engine, always start the engine from cold using the methods mentioned above and if at any time the engine becomes difficult to turn over with the pullstarter, then remove the glowplug and empty all excess fuel out and start again. The pullstarter assembly can only be damaged by either over extension or a flooded engine. So if you break a pull start this is possible warning of a flooded engine.

Description	Problem	Soloution
Engine will not start	Out of fuel Improper or contaminated fuel Glow starter not charged Glow plug bad	Fill fuel tank Replace fuel Charge glow starter Replace glow plug, see "Glow Plug Problems"
	Engine flooded	See " flooding" section.
	Engine overheating	Allow engine to cool, richen fuel mixture, check airflow
	Carburetor incorrectly adjusted	Readjust carburetor
	Exhaust blocked	Clean exhaust system
	Air cleaner blocked	Clean air filter
Starter will not pull	Engine is flooded	Clear excess fuel, see "flooding" Section.
	Rope is jammed	Repair starter.
	Engine seized	Examine engine for damage.
Engine starts and then stalls	Idle speed set too low	Increase idle speed.
	Air bubbles in fuel line	Check for holes in the fuel line.
	Glow plug is fouled	Replace glow plug, see "Glow Plug Problem" section.
	Engine is overheated Insufficient fuel tank pressure	Allow engine to cool, richen fuel Mixture, check airflow Replace pressure hose- clear
	Blockage at exhaust header fitting	Check flow to and from the tank.
	High-speed fuel mixture is too rich	Set high-speed mixture to a leaner setting
Engine sluggish /	Leaking glow plug	Check glow plug gasket
poor performance	Fuel bad or contaminated	Replace fuel
	Carburetor dirty or blocked	Clean Carburetor
	Engine overheating Engine over geared for application	Stop the engine- find the cause Use a lower gear ratio
	Clutch slipping	Replace clutch shoes
	Bound up drive train	Find the bound item and repair
	Bound up drive train	I ind the bound item and repair
Engine overheats	High-speed fuel mixture is too lean	Richen high-speed mixture
	Cooling air is being blocked	Get air to the head
	Excessive nitro in the fuel	Use fuel with lower nitro
	Excessive load on the engine Low-speed mixture too lean	Check for bound up drive train Richen low-speed mixture
	Low-speed mixture too lean	nichen low-speed mixture
	High-speed mixture too lean	Richen high-speed mixture.
Engine hesitates or stumbles	Low-speed mixture too rich	Lean low-speed mixture.
	Engine overheated	Stop the engine and find the cause.
	Air bubbles in fuel line	Check for holes in fuel line.
	Glow plug fouled	Test or replace plug
Engine stalls instantly	Glow plug fouled	Replace glow plug.
when throttle is fully	Low-speed mixture too lean	Richen low-speed mixture.
opened from idle	High-speed mixture too rich	Lean high-speed mixture.
Engine stalls while	Fuel level is low	Add fuel
driving around turns	Idle speed set too low	Increase idle speed.



#### **Cooling Problems**

Engine overheating is most often caused by running the engine too lean or because the cooling air for the cylinder head is blocked. If the mixture is too lean, simply allow the engine to cool, richen the mixture and try it again. Bodies must have holes cut in them to allow for cooling air to circulate over the surface of the cylinder head. On most bodies, it is a good idea to cut part of the wind-shield out and part of the back window to allow for additional cooling.

### Factory Settings for Force .18

All new engines are assembled with what we will term 'factory settings'. These settings should allow almost all engines to be started up and allow for minimal adjustment for running in purposes.

Bearing this in mind, we are offering you the opportunity of re-adjusting to the 'factory settings' based on engines currently held in stock.

### **Main Needle Valve - High Speed Adjustment (HSA)**

Screw down until resistance is met, and no further movement is apparent. RE-OPEN 3 1/4 TURNS.

#### Throttle Adjustment Screw - Idle Adjustment (IA)

Gently shut off carburettor sliding body and slowly re-open by means of adiusting screw.

ADJUST SCREW UNTIL APPROX 1 or 1 1/4mm OF APERTURE APPEARS BETWEEN THE END OF THE THROTTLE BODY AND AIR INTAKE APERTURE.

#### Sub Throttle Needle Valve – Low Speed Adjustment (LSA)

With adjustment screw setting in place, close off the throttle body against the screw. Very gently screw in the needle valve until it closes off the supply fuel nozzle and is prevented from re-opening by the entry of the needle valve into the centre hole of the fuel nozzle (work with great care with this one - we are only looking for minimal frictional contact between both parts). RE-OPEN VALVE 2 1/2 TURNS.

### **Glossary of Carburettor Functions**

#### Main Needle Valve (High Speed)

The main needle mixture screw controls how much fuel enters the engine during mid- to high-speed operation. The screw is turned clockwise to lean (less fuel) and anti-clockwise to richen (more fuel)

#### Sub Throttle Valve (Low Speed)

This screw meters the fuel at low speeds. The low-speed mixture screw is located in the end of the carburetor, inside the throttle arm.

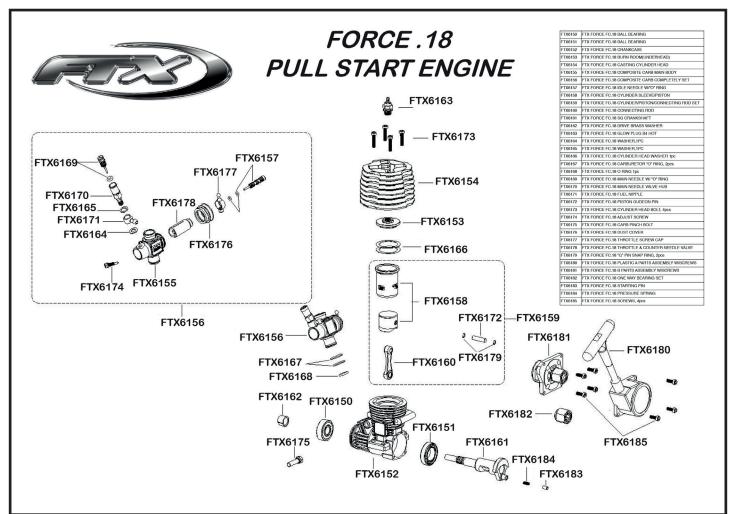
This screw controls how much fuel enters the engine at idle and low throttle. This adjustment will smooth the idle and improve the acceleration to mid speed. Make this adjustment with the throttle closed, after setting the idle. The screw is turned clockwise to lean (less fuel) and anti-clockwise to richen (more fuel)

#### Throttle Adjustment Screw

The throttle adjustment screw regulates the throttle opening to control the idle speed. The screw is turned clockwise for a higher idle speed and anti-clockwise for a lower idle speed.

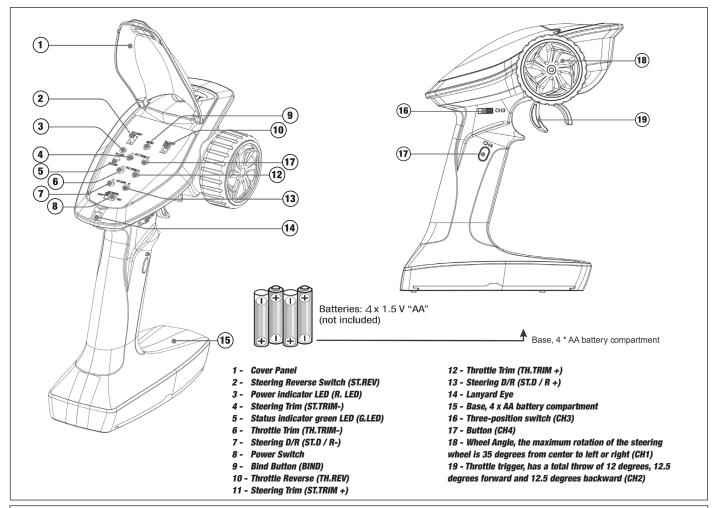






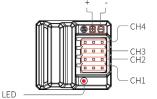


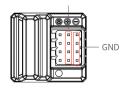
### **GETTING TO KNOW YOUR TRANSMITTER**



#### **Receiver Overview**

To ensure the best signal quality make sure that the receiver is mounted in such a way that the antenna is in the upright, vertical position.







#### **Battery installation**

- 1. Open the battery compartment cover.
- Insert 4 fully-charged AA batteries into the compartment. Make sure that the battery makes good contact with the battery compartment's contacts and that they are inserted with the correct polarity.
- 3. Replace battery compartment cover.

#### NOTE:

The transmitter features a low battery alarm: When the battery is lower than 4.2v, the G.LED on the panel will flash slowly.

### **Binding**

To ensure the best signal quality make sure that the receiver is mounted in such a way that the antenna is in the upright, vertical position.

The transmitter and receiver have already been bound at the factory.

- Turn on the transmitter while holding the bind button to enter bind mode. G.LED will start flashing quickly. Once in bind mode release the bind button.
- 2. The receiver will enter bind mode automatically when powered on.
- Once binding is successful the receiver's LED will flash slowly and the transmitter's LED will remain solid after being rebooted.

#### NOTE:

When binding, put the transmitter into bind mode first, then the receiver.

### **Stick Calibration**

This function is used to set the neutral position for throttle and steering.

Every transmitter is calibrated before leaving the factory, however if recalibration is required, please follow these steps:

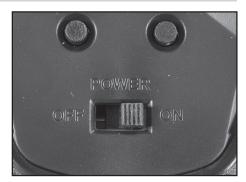
- Turn and hold the wheel as far clockwise as it will turn, push
  the throttle trigger all the way forward, then turn on the transmitter in calibration mode.
  - The R.LED and G.LED will flash twice.
- Calibrate steering: Turn the wheel completely clockwise, then completely counter-clockwise.
  - When calibration is complete the R.LED will turn off.
- Trigger calibration: Pull the trigger back then forward as far as it will go.
  - When calibration is complete the G.LED will turn off.
  - 4. Once calibration is complete press the bind key to save and



### **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.

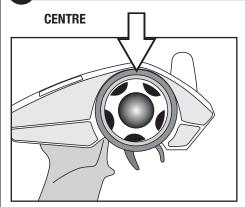


### 2. TURNING ON THE RECEIVER OF YOUR CAR

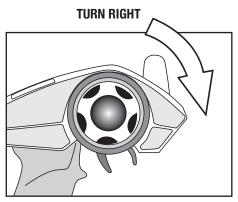
The switch is mounted inside the receiver box under a rubber cover.



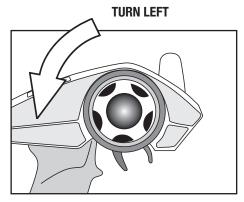
### 3. CHECK STEERING PERFORMANCE



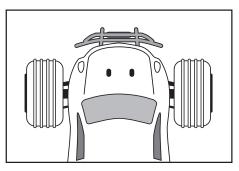
1. To keep the car running straight, keep the streering wheel centered.

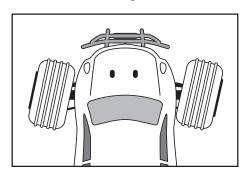


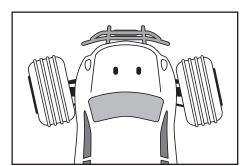
2. Turn the steering wheel to the right to allow the car to right.



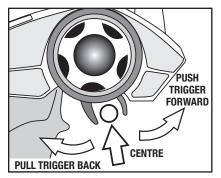
3. Turn the steering wheel to the left to allow the car to turn to the left.



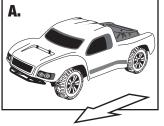


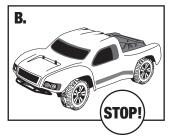


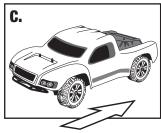
### 4. CHECK TRIGGER RESPONSE



PLEASE NOTE: THE MODEL SWITCHES BETWEEN FORWARD AND REVERSE INSTANTLY FOR SLOW SPEED MANEOUVABILITY. 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 brake.



### **RUNNING YOUR CAR**

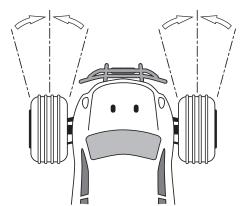
### 5. TUNING THE STEERING TRIM

#### STEERING TRIM BUTTONS

Gently pull the trigger to allow your car to run slowly. Meantime, tune the steering trim to allow the front wheels to be aligned by pressing the left or right buttons.



**STEERING** 



### 6. TUNING THE THROTTLE TRIM

#### THROTTLE TRIM BUTTONS

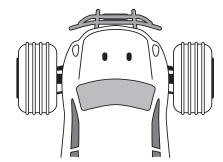
Throttle Trim is used to set the idle speed of the car, by pressing the left or right buttons.

#### **LED INDICATOR:**

- When using the trim keys the G.LED will flash slowly for short presses and quickly on long presses.
- When the adjustment value is at the midpoint, the G.LED will flash twice slowly.
- When the adjustment value is at the end of either + or , the trim adjustment is at its maximum and as such G.LED will not flash.



THROTTLE TRIM



### 7. TO TUNE THE STEERING DUAL RATE CONTROL DIAL

#### STEERING D/R KNOB:

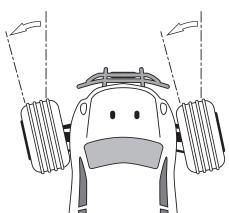
The buttons marked "ST/DR" is for servo travel adjustment. You should adjust this to give maximum steering without straining the servo.

Adjustment range: 0-120%(the default is 100%), the step is 5%.

ST.D / R + : increase servo travel. ST.D / R - : decrease servo travel.



STEERING D/R



### LED INDICATOR:

- When using the trim keys the G.LED will flash slowly on short presses and quickly on long presses.
- When the adjustment reaches the end point the G.LED will no longer flash.

### 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..







Le FTX Zorro NT, une voiture de truck à

l'échelle 1/10 prête à rouler

Merci d'avoir choisi le FTX Zorro NT.

Ce modèle est monté d'usine, l'électronique est pré installée et réglée pour permettre un démarrage et du plaisir le plus rapidement possible.

Cette maquette à l'échelle 1/10ème a été assemblé en usine et tout l'électricité installé et configuré pour en faire le introduction la plus simple possible au sport de conduire des voitures RC.



Attention: lisez l'intégralité du manuel pour exploiter au mieux la voiture et éviter des

dommages mécaniques ou corporels. Ce modèle n'est pas un jouet, il doit être manipulé avec précaution.

Utilisé dans de mauvaises conditions, ce modèle peut causer des dommages.

Ce modèle n'est pas fait pour être utilisé par un enfant sans la surveillance directe d'un adulte.

Il est essentiel de lire et de suivre les instructions et les recommandations de ce manuel pour entretenir et faire évoluer votre modèle dans de bonnes conditions.

#### Mesures de sécurité:

- Vous êtes responsable lors de l'évolution de ce modèle, veillez à ne pas vous mettre en danger, à mettre en danger le modèle ou la propriété d'autrui.
- Ce modèle radiocommandé peut être perturbé par d'autres sources d'onde radio, ce qui peut entrainer la perte momentanée du contrôle de la voiture.
- · Age recommandé: 14 ans, ceci n'est pas un jouet, ce produit n'est pas fait pour être utilisé par un enfant sans surveillance.

### **Suivez consciencieusement les instructions suivantes :**

- Ne jamais évoluer avec des batteries d'émission faibles
- Toujours évoluer dans une zone dégagée, loin de la circulation et de la foule
- Ne jamais évoluer dans une rue ou un endroit fréquenté
- Toujours garder le modèle dans son champ de vision
- · Gardez hors de portée des enfants tous les composants de petite taille, électriques ou chimiques
- Tenez le modèle hors de portée de l'eau (la rouille peut causer des dommages irréversibles au modèle)
- Faites attention aux pièces en rotations, axes, pignons etc.
- Les débutants doivent prendre conseil auprès de personnes plus expérimentées
- Faites attention lors de l'utilisation des outils
- Attention à ne pas mettre les doigts ou d'autres parties du corps en contact avec les pièces en rotation
- Faites attention lors du transport, de la maintenance ou de la réparation, certaines pièces peuvent être coupantes.
- NE JAMAIS toucher les composants tels que le moteur, le variateur ou les batteries après utilisation, ces pièces peuvent être chaudes
- Lorsque vous changez de fréquence d'émission assurez-vous que les quartz de fréquence sont bien positionnés (RX pour récepteur et TX pour l'émetteur)
- Toujours éteindre en premier la voiture avant l'émetteur
- Vérifiez le bon fonctionnement de la voiture les roues dans le vide (en prenant les précautions nécessaires)
- Prolongez la durée de vie du moteur en le préservant de la surchauffe (la durée de vie du moteur dépend aussi de la fréquence de roulage, des changements rapide de direction avant/arrière, des conditions de roulage difficiles poussière/boue des utilisations abusives tirer/pousser des objets)

### **Contents:**

FTX Zorro NT RTR Truck Transmitter: 2.4ghz Steerwheel





### ÉLÉMENTS NON INCLUS MAIS ÉQUIPEMENT NÉCESSAIRE AU FONCTIONNEMENT



4 piles AA Batterie







Une pipette d'essence



### **OUTILS RECOMMANDÉS POUR LA RÉALISATION**



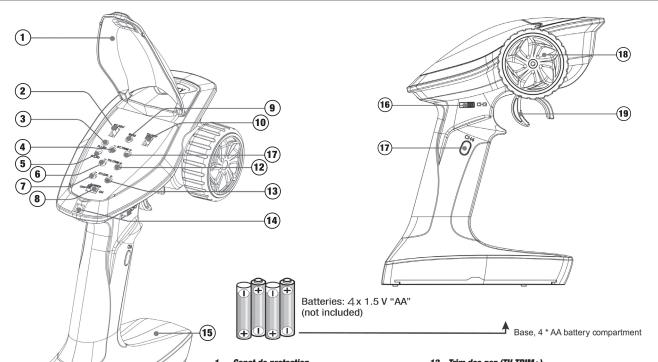




FAST692E chauffe bougie avec accu et chargeur, clé 8, 9, 10, 12, 17 mm, clé 4, 4.5, 5.5, 7mm, Tournevis cruciforme, Tournevis plat, Pipette



## **DÉCOUVERTE DE VOTRE TÉLÉCOMMANDE**

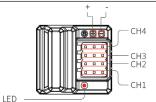


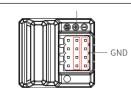
- Capot de protection
- Interrupteur d'inversion de la direction (ST.REV)
- LED d'indication de l'alimentation (R.LED)
- Trim de la direction (ST.TRIM-)
- LED verte d'indication du statuts (G.LED)
- Trim des gaz (TH.TRIM-)
- D/R de la direction (ST.D/R-)
- Interrupteur d'alimentation 8.
- Bouton de BIND (BIND) 9.
- Inversion des gaz (TH.REV) 10.
- 11. Trim de la direction (ST.TRIM+)

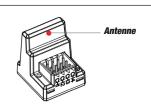
- 12. Trim des gaz (TH.TRIM+)
- 13. D/R de la direction (ST.D/R)
- 14. Point de fixation
- 15. Socle, compartiment des 4 piles AA
- 16. Interrupteur 3 positions (CH3)
- 17. Bouton (CH4)
- 18. Roue de direction, son degré de rotation maximale est de 35° du centre vers la gauche ou vers la droite (CH1)
- 19. Gâchette de direction, son degré de rotation est de 12 du centre vers l'avant ou vers l'arrière (CH2)

### Vue générale du récepteur

Afin d'assurer le meilleur signal possible, positionnez le récepteur de manière à ce que l'antenne soit positionnée vers le haut.







### Installation des piles

- Ouvrez le couvercle du compartiment des piles
- Insérez 4 piles AA entièrement chargées dans le compartiment tout en vérifiant bien les polarités et leur bon montage.
- 3. Remettez en place le couvercle

La télécommande possède une alarme en cas de faible tension : Lorsque les piles sont en dessous de 4.2V, la G.LEC sur tableau de bord va clignoter lentement.

#### Liaison du récepteur et de la télécommande (BIND)

Afin d'assurer le meilleur signal possible, positionnez le récepteur de manière à ce que l'antenne soit positionnée vers le haut.

La télécommande et le récepteur ont déjà été reliés en usine.

- Allumez la télécommande tout en maintenant le bouton BIND pour entrer dans le mode bind. La G.LED va clignoter rapidement. Une fois dans le mode bind, vous pouvez relâcher le bouton de bind.
- Le récepteur va automatiquement rentrer en mode bind lorsque vous allez l'allumer.
- Lorsque la liaison est effectuée, la LED du récepteur va clignoter lentement et la LED de la télécommande va rester allumer une fois redémarrée.

#### NOTE:

Lors de la liaison, mettez d'abord la télécommande en mode bind puis le récepteur

### Calibration des commandes

Cette fonction permet de déterminer la position neutre de la gâchette des gaz et du volant de direction.

Chaque télécommande est calibrée avant de partir de l'usine, cependant si vous avez besoin de la recalibrer, voici les étapes à suivre :

- Tournez au max le volant dans le sens des aiquilles d'une montre, poussez au max la gâchette des gaz vers l'avant et allumer la télécommande pour entrer dans le mode de calibration. Les LED R.LED et G.LED vont
- Calibration de la direction : Tournez au max le volant dans le sens des aiguilles d'une montre puis à fond dans le sens inverse aux aiguilles d'une montre.
- Lorsque cette calibration est terminée, la R.LED va s'éteindre. Calibration des gaz : Tirez au max la gâchette des gaz vers l'arrière puis à fond vers l'avant.
- Lorsque cette calibration est terminée, la G.LED va s'éteindre.
- Une fois la calibration effectuée, appuyer sur le bouton de bind pour sauvegarder et quitter.



### **GESTION DE VOTRE VOITURE**

### 1. METTRE LA RADIO SUR ON

Mettre le bouton d'allumage de la radio sur ON. Votre voiture est automatiquement appairer avec votre radio.

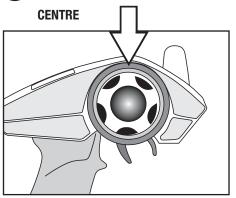


### 2. METTRE SUR ON INTERRUPTEUR

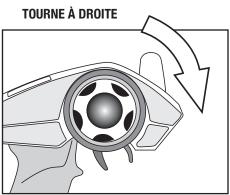
L'ensemble variateur/ recepteur se situe sur ON comme montré sur la photo.



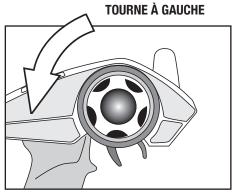
### 3. ASSURE UNE



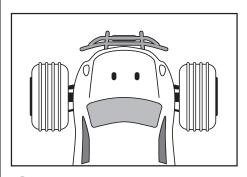
1. Pour que la voiture aille droite ne pas tourner le volant (le laisser au centre).

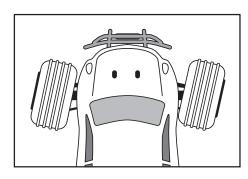


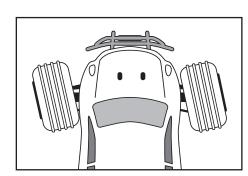
2. Tourner à droite pour permettre à votre d'aller à gauche.



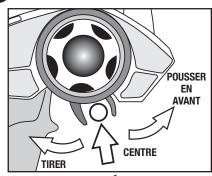
3. Tourner à gauche pour permettre à votre voiture d'aller à droite.



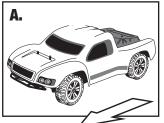


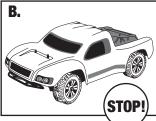


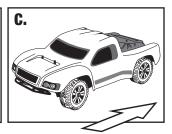
### 4. VÉRIFIER LA REEPONSE DE LA GACHETTE



S'IL VOUS PLAÎT NOTEZ : LE MODÈLE PASSE ENTRE LA MARCHE AVANT ET ARRIÈRE INSTANTANÉMENT POUR UNE MANŒUVRABILITÉ À FAIBLE VITESSE. UNE UTILISATION EXCESSIVE DE CETTE FONCTIONNALITÉ PEUT ET VA ENDOMMAGER LA TRANSMISSION ET L'ESC.







A. Tirer la gâchette en arrière pour accélérer? La lâcher pour décélérer et la pousser pour freiner.

B. Pour arrêter la voiture, lâchette jusqu'au neutre. C. Pousser la gâchette vers l'avant active la marche arrière.



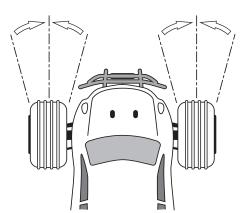
### **GESTION DE VOTRE VOITURE**

### 5. RÉGLAGE DU TRIM DE DIRECTION

Accélérez tout doucement afin de faire lentement avancer la voiture. Appuyez-en même sur les boutons droit et gauche pour régler l'orientation des roues afin que la voiture avance tout droit.



**STEERING** 



### 6. RÉGLAGE DU TRIM D'ACCÉLÉRATION

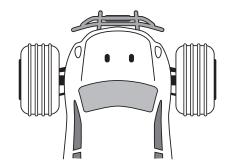
Le bouton de trim d'accélérateur est utilisé pour régler le régime de ralenti de la voiture.

#### **INDICATEUR LED:**

- Lorsque vous utilisez les boutons de réglage du trim, la LED clignote lentement pour un appui court et rapidement pour un appui long.
- Quand la valeur du trim est au milieu, la LED clignote 2 fois lentement
- Quand la valeur du trim est au maximum vers la droite ou vers la gauche, la LED ne clignote pas



**THROTTLE TRIM** 



### 7. RÉGLAGE DES BUTÉES DE DIRECTION

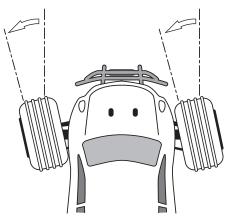
Le bouton noté « ST/DR » est utilisé pour régler les fins de course du servo de direction

Ajustable de 0 à 120% (100% par défaut), une pression du bouton change la valeur de 5%

ST.D / R + : Augmente la course de direction ST.D / R - : Réduit la course de direction



STEERING D/R



#### **INDICATEUR LED:**

- Lorsque vous utilisez les boutons de réglage du trim, la LED clignote lentement pour un appui court et rapidement pour un appui long.
- Quand la valeur du trim est au maximum la LED ne clignote pas.

### 8. INVERSE DU SENS DE ROTATION DE LA DIRECTION ET DE L'ACCÉLÉRATEUR

### Inversion de la direction:

Pour changer le sens de rotation de la direction, montez le bouton « ST R/N » pendant quelques secondes jusqu'à entendre un « BIP » sonore, relâchez ensuite le bouton.

#### Inversion de l'accélérateur:

Cette fonction permet de changer le sens de rotation de l'accélération.

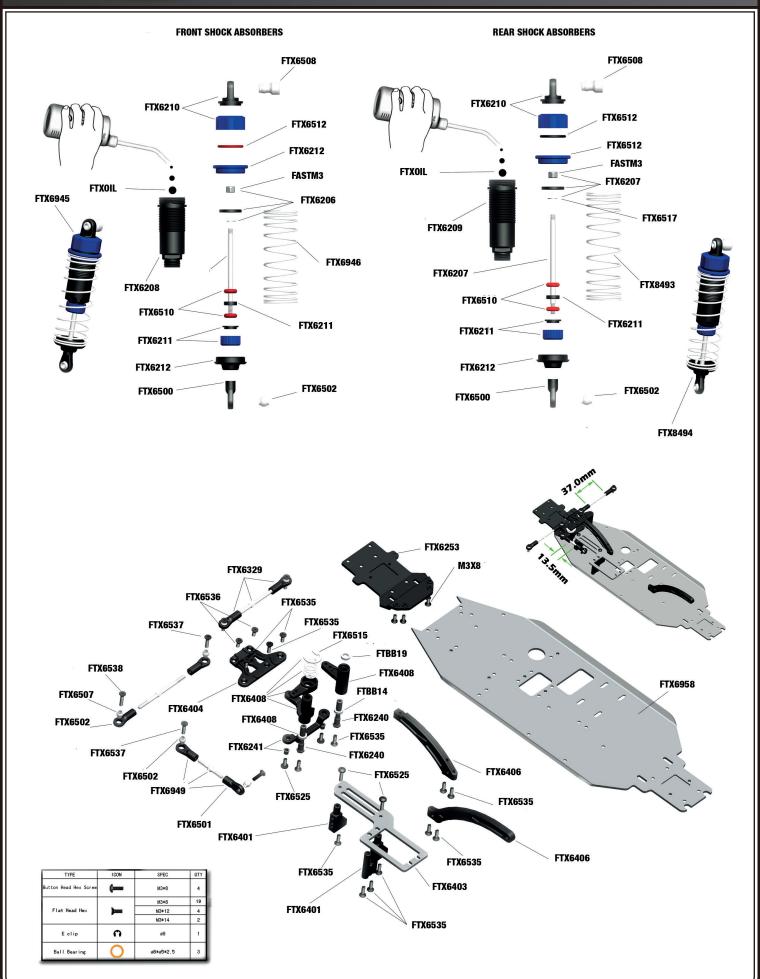
Si le bouton est en bas celle-ci est le sens normal tandis que si il est en haut, elle sera inversée.



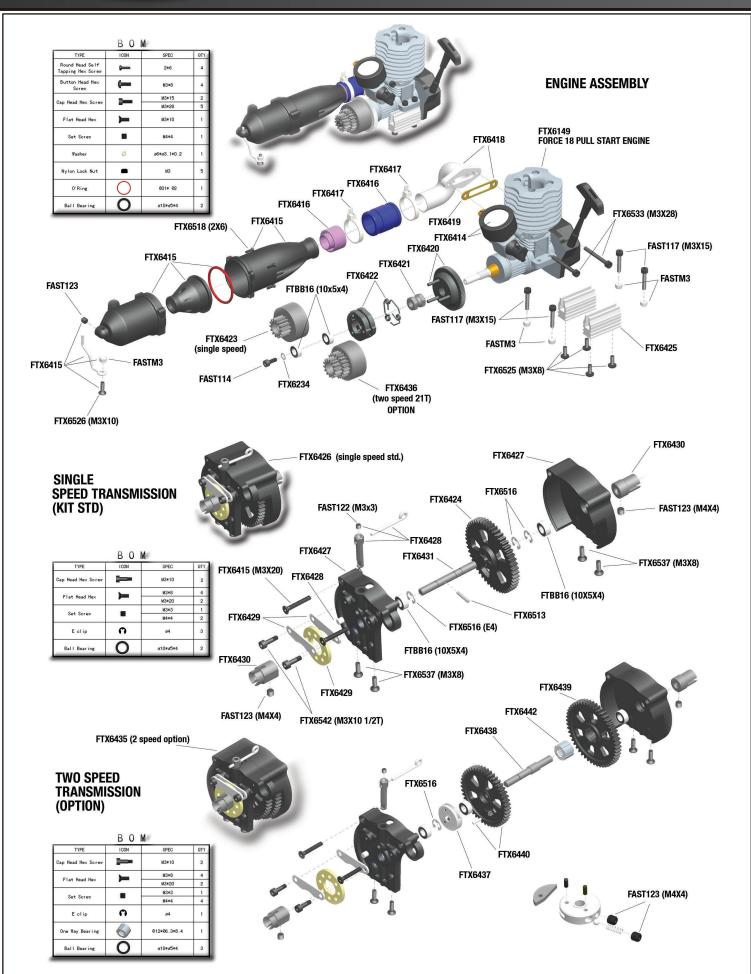




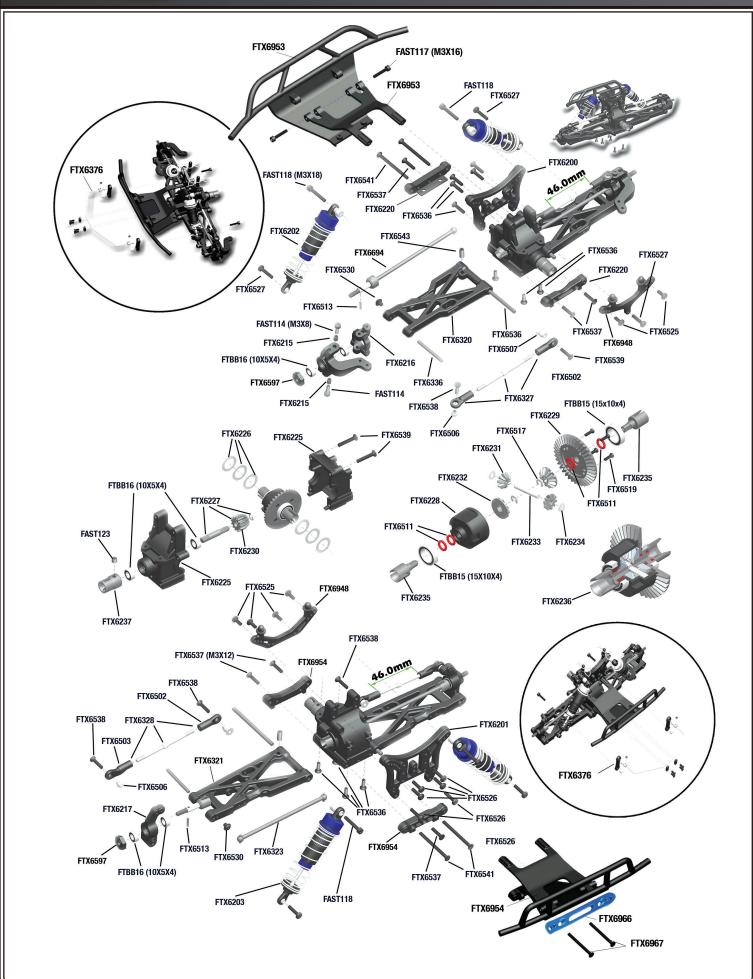
### **EXPLODED DIAGRAM PARTS LISTING**



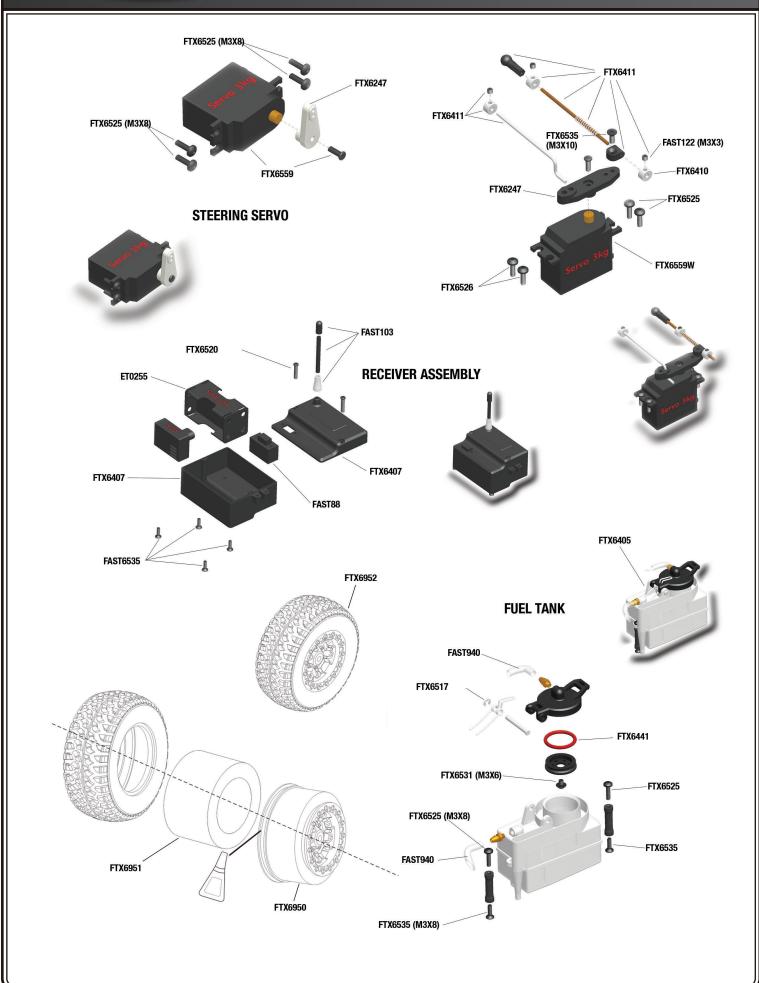




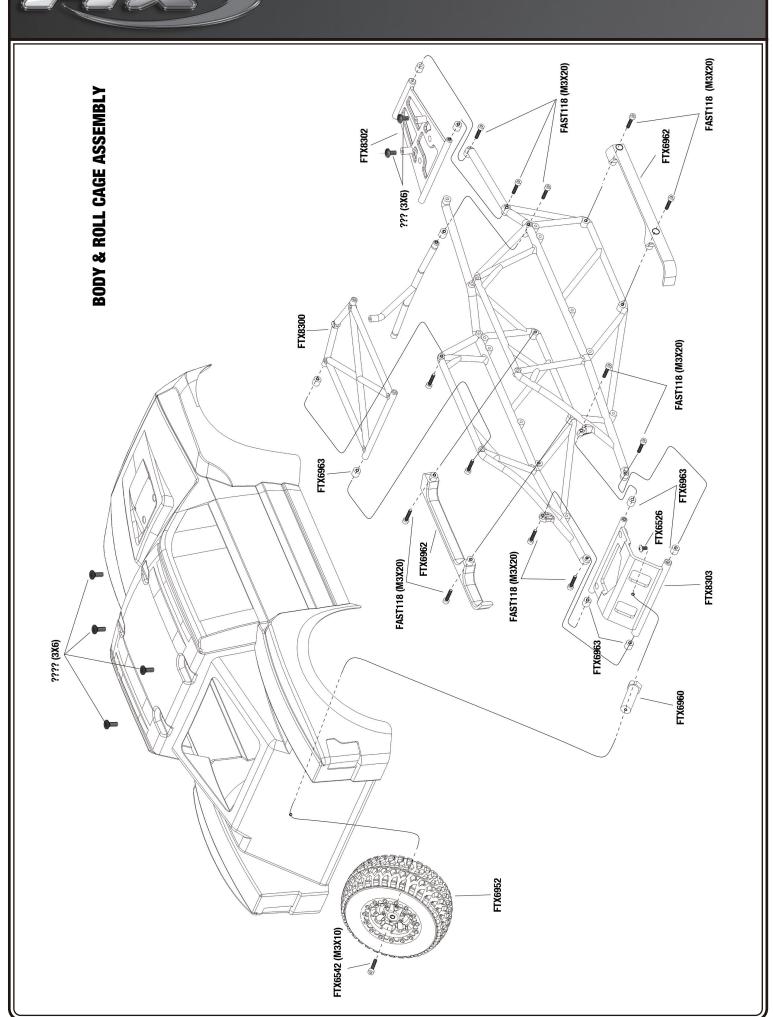














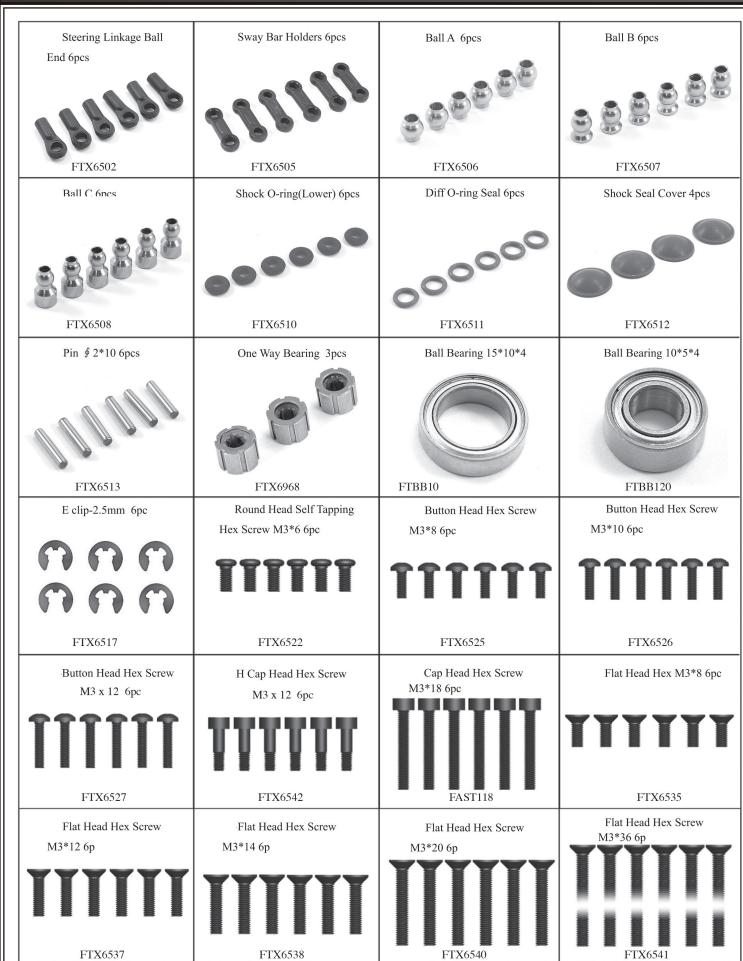
### **PARTS LISTING**





















FTX6234

Cap Head Hex Screw FC.18 engine 1pc Zip Tie 6pcs Button Head Hex Screw M3\*10 6pcs M3\*12 6pcs FAST115 FTX6527 FTX6417 FTX6149 3kg/cm Servo 1pcs Nylon Lock Nut M3 6pc Nylon Lock Nut-M4 6pc 2.4GHz Transmitter 1pc FTX6559W FASTM3 FTM4BKF ET1061 Set Screw M3\*3 6pc Button Head Hex Screw Cap Head Hex Screw M3x28 6pcs Set Screw M4\*4 6pc M4\*10 6pc FAST122 FAST123A FTX6543 Diff 16T Gear Washer Clear Body Printed Body - Blue Printed Body - Orange 6pcs FTX6226 FTX6964 FTX6965B FTX6965O Tuned Pipe & Tank O-ring seals Pin 11 x 2 (6pc) **Battery Case** 2.4ghz receiver ET1096 ET0255 ET0783 (switch) FTX6441 FTX6514 Washers 6pcs Round Head Self Tapping Hex Screw Round Head Self Tapping Hex Screw FTX6516 E-clip 4mm (6pc) 2 x 6 4pcs 3 x 15 8pcs

FTX6520

FTX6516

FTX6518







### **OPTIONAL EXTRAS PARTS LISTING**



FTM4BF – FASTRAX M4 BLUE FLANGED LOCKNUTS (4PCS)



FTX6368 — FTX ZORRO NT ALUM. KNUCKLE ARMS (2PCS)



FTX6349 — ZORRO NT ALUM. BALL BEARING STEERING



FTX6381 — ALUMINIUM TUNED PIPE



FTX6360 - ZORRO NT ALUM. STEERING ACKERMAN (1PC)



FTX6361 - FTX ZORRO NT AL. FRONT SUSP. HOLDERS (1SET)



FTX6362 — FTX ZORRO NT ALUM. REAR SUSP. HOLDERS 1SET



ET2069 — ETRONIX 15KG/0.16S DIGI WATERPROOF SERVO



FTX6376 – FTX ZORRO NT SWAY BAR – 2 SETS



FAST692 - FASTRAX NITRO START SET W/TOOLS AND GLOW START



FTX6351 — FTX ZORRO NT CARBON FRONT SHOCK TOWER



FTX6352 – FTX ZORRO NT CARBON REAR SHOCK TOWER



FTX6365W — FTX ZORRO NT ALUMINIUM WHEEL HUB (4PCS)



FTX6355 - FTX ZORRO NT ALUM. BODY POST (2PCS)



FTX6971 - FTX ZORRO NT ALUMINIUM FRONT SHOCK (2PCS)



FTX8495 — FTX ZORRO NT ALUM. REAR SHOCK (2PCS)



FTX6970 - ALUMINIUM REAR SUSPENSION HOLDER SET



FTX6367 — FTX ZORRO NT ALUM. STEERING ARMS (2PCS)



FTX6363 – FTX ZORRO NT ALUM REAR HUB CARRIER (2PCS)



FTX6359 — FTX ZORRO NT ALUM. REAR LOWER ARM (2PCS)



FTX6358 — FTX ZORRO NT ALUM. FRONT LOWER ARM (2PCS)



FTX6378 – ALUM. FRONT AND REAR CHASSIS BRACES



FTX6379 – CARBON FRONT TOP PLATE



FTX6380 – CARBON UPPER PLATE



FTX6382 – ALUM. CHASSIS BRACE MOUNT



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### **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.	Check to see if transmitter and car are on.     Replace batteries.
	3. Check if there are damaged parts.
B. The vehicle runs slow.	<ol> <li>Replace or charge the battery pack and/or the radio batteries.</li> <li>Make sure the vehicle is geared properly and the pinion and spur gear are over tightened.</li> <li>Clean all bushings or ball bearings.</li> <li>Check for stripped or dirty gears.</li> </ol>
C. The throttle works, but not the steering.	<ol> <li>Check if the servo feels jammed – try centering it by hand.</li> <li>Check the whole steering system.</li> </ol>
D. It steers, but throttle is uncontrollable.	<ol> <li>Check if there are damaged parts.</li> <li>Replace or charge the battery pack and/or the radio batteries</li> </ol>
E. The vehicle runs noisily.	<ol> <li>Check gear mesh between spur gear and pinion.</li> <li>Check for stripped and/or dirty gears.</li> <li>Clean and oil bushings or ball bearings.</li> </ol>







FTX is an exclusive brand of CML Distribution, Saxon House, Saxon Business Park, Hanbury Road, Bromsgrove, Worcestershire, B60 4AD England.
E-mail: info@ftx-rc.com