Thank you for purchasing the Ford F-150 SVT Raptor by Traxxas. This officially-licensed model captures the muscular looks and high-performance driving experience of the full-size 411-horsepower super-truck. Based on the award-winning Traxxas Slash, the Ford Raptor model features waterproof electronics for all-weather off-road adventure, rugged independent suspension with long-travel oil-filled shocks, and a powerful Titan 550 motor that delivers 30+ mph top speeds. Rubber-sealed ball bearings, heavy-duty steel transmission gears, and high-strength materials assure your Raptor model is “Built Ford Tough®” for exciting R/C performance run after run.

We know you’re excited about getting your new model on the road, but it’s very important that you take some time to read through the Owners Manual. This manual contains all the necessary set-up and operating procedures that allow you to unlock the performance and potential that Traxxas engineers designed into your model. **Even if you are an experienced R/C enthusiast, it’s important to read and follow the procedures in this manual.**

We want you to feel confident that you own one of the best-performing models in the market and that it is backed by a team of professionals who aim to provide the highest level of factory support possible. Traxxas models are about experiencing total performance and satisfaction, not just with your model, but also with the company that stands behind it. We truly want you to enjoy your new model!

Thank you again for going with Traxxas.
BEFORE YOU PROCEED

Carefully read and follow all instructions in this and any accompanying materials to prevent serious damage to your model. Failure to follow these instructions will be considered abuse and/or neglect.

Before running your model, look over this entire manual and examine the model carefully. If for some reason you decide it is not what you wanted, then do not continue any further. Your hobby dealer absolutely cannot accept a model for return or exchange after it has been run.

WARNINGS, HELPFUL HINTS, & CROSS-REFERENCES

Throughout this manual, you’ll notice warnings and helpful hints identified by the icons below. Be sure to read them!

- An important warning about personal safety or avoiding damage to your model and related components.
- Special advice from Traxxas to make things easier and more fun.
- Refers you to a page with a related topic.

SUPPORT

If you have any questions about your model or its operation, call the Traxxas Technical Support line toll-free at: 1-888-TRAXXAS (1-888-872-9927)*

Technical support is available Monday through Friday from 8:30am to 9:00pm central time. Technical assistance is also available at Traxxas.com. You may also e-mail customer support with your question at support@Traxxas.com. Join thousands of registered members in our online community at Traxxas.com.

Traxxas offers a full-service, on-site repair facility to handle any of your Traxxas service needs. Maintenance and replacement parts may be purchased directly from Traxxas by phone or online at BuyTraxxas.com. You can save time, along with shipping and handling costs, by purchasing replacement parts from your local dealer.

Do not hesitate to contact us with any of your product support needs. We want you to be thoroughly satisfied with your new model!

SAFETY PRECAUTIONS

All of us at Traxxas want you to safely enjoy your new model. Operate your model sensibly and with care, and it will be exciting, safe, and fun for you and those around you. Failure to operate your model in a safe and responsible manner may result in property damage and serious injury. The precautions outlined in this manual should be strictly followed to help ensure safe operation. You alone must see that the instructions are followed and the precautions are adhered to.

IMPORTANT POINTS TO REMEMBER

- Your model is not intended for use on public roads or congested areas where its operation can conflict with or disrupt pedestrian or vehicular traffic.
- Never, under any circumstances, operate the model in crowds of people. Your model is very fast and could cause injury if allowed to collide with anyone.
- Because your model is controlled by radio, it is subject to radio interference from many sources that are beyond your control. Since radio interference can cause momentary losses of radio control, always allow a safety margin in all directions around the model in order to prevent collisions.
- The motor, battery, and speed control can become hot during use. Be careful to avoid getting burned.
- Don’t operate your model at night, or anytime your line of sight to the model may be obstructed or impaired in any way.
- Most importantly, use good common sense at all times.

SPEED CONTROL

Your XL-5 is an extremely powerful electronic device capable of delivering high current. Please closely follow these precautions to prevent damage to the speed control or other components.

- 15-Turn Motor Limit: The XL-5 has a 15-turn modified motor limit for 540 size motors and a 12-turn modified motor limit for 550 size motors with 0° timing when the motor is properly geared. If the motor or speed control is overheating, try a smaller pinion gear. Do not attempt to use a more powerful motor (fewer turns) than the above mentioned motor limits or you could experience frequent thermal shutdown.
- Insulate the Wires: Always insulate exposed wiring with heat shrink tubing to prevent short circuits.
- Water and Electronics Do Not Mix: The XL-5 speed control is waterproof for use in mud, snow, puddles, and other wet conditions. Make certain the other components of your model are waterproof or have sufficient water resistance before driving in wet conditions.
- Transmitter on First: Switch on your transmitter first before switching on the speed control to prevent runaways and erratic performance.
- Use Neutrally Timed Motors: For reverse use, the motors must have 0° timing. Modified motors (with adjustable end bells) timed to 0° or

* Toll-free support is available to U.S. residents only.
SAFETY PRECAUTIONS

This model is not intended for use by children under 14 years of age without the supervision of a responsible and knowledgeable adult.

All instructions and precautions outlined in this manual should be strictly followed to ensure safe operation of your model.

1

Skill Level

No previous experience with radio controlled models is required. Models require a minimum of setup, maintenance, or support equipment.

BATTERIES AND BATTERY CHARGING

The XL-5 speed control uses rechargeable batteries that must be handled with care for safety and long battery life. Make sure to read and follow all instructions and precautions that were provided with your battery packs and your charger. It is your responsibility to charge and care for your battery backs properly. In addition to your battery and charger instructions, here are some more tips to keep in mind.

- Never leave batteries to charge unattended.
- Remove the batteries from the model while charging.
- Allow the battery packs to cool off between runs (before charging).
- Always unplug the battery from the electronic speed control when the model is not in use and when it is being stored or transported.
- Do not use battery packs that have been damaged in any way.
- Do not use battery packs that have damaged wiring, exposed wiring, or a damaged connector.
- Children should have responsible adult supervision when charging and handling batteries.

Recycling Your Traxxas Power Cell NiMH Battery

Traxxas strongly encourages you to recycle your Power Cell battery when it has reached the end of its useful life. Do not throw your battery in the trash. All Power Cell battery packs display the RBRC (Rechargeable Battery Recycling Corporation) icon, indicating they are recyclable. To find a recycling center near you, ask your local hobby dealer or visit www.call2recycle.org.

LiPo Batteries

Warning: Lithium Polymer (LiPo) batteries require special care and handling procedures for long life and safe operation. LiPo batteries are intended only for advanced users that are educated on the risks associated with LiPo battery use. Traxxas does not recommend that anyone under the age of 16 use or handle LiPo battery packs without the supervision of a knowledgeable and responsible adult.

LiPo Batteries are equipped with built-in Low-Voltage Detection that alerts the driver when LiPo batteries have reached their minimum voltage (discharge) threshold. It is the driver’s responsibility to stop immediately to prevent the battery pack from being discharged below its safe minimum threshold.

LiPo batteries. Make sure you understand how to use your LiPo batteries. Be aware that Traxxas shall not be liable for any special, indirect, incidental, or consequential damages arising out of the installation and/or use of LiPo batteries in Traxxas products.

If you have questions about LiPo battery usage, please consult with your local hobby dealer or contact the battery manufacturer.

Traxxas strongly encourages you to recycle your Power Cell battery when it has reached the end of its useful life. Do not throw your battery in the trash. All Power Cell battery packs display the RBRC (Rechargeable Battery Recycling Corporation) icon, indicating they are recyclable. To find a recycling center near you, ask your local hobby dealer or visit www.call2recycle.org.

LiPo Batteries

Warning: Lithium Polymer (LiPo) batteries require special care and handling procedures for long life and safe operation. LiPo batteries are intended only for advanced users that are educated on the risks associated with LiPo battery use. Traxxas does not recommend that anyone under the age of 16 use or handle LiPo battery packs without the supervision of a knowledgeable and responsible adult.

The XL-5 speed control is able to use LiPo batteries with nominal voltage not to exceed 7.4 volts (2S packs). LiPo batteries have a minimum safe discharge voltage threshold that should not be exceeded. The XL-5 is equipped with built-in Low-Voltage Detection that alerts the driver when LiPo batteries have reached their minimum voltage (discharge) threshold. It is the driver’s responsibility to stop immediately to prevent the battery pack from being discharged below its safe minimum threshold.

Low-Voltage Detection on the speed control is just one part of a comprehensive plan for safe LiPo battery use. It is critical for you, the user, to follow all other instructions supplied by the battery manufacturer and the charger manufacturer for proper charging, use, and storage of LiPo batteries. Make sure you understand how to use your LiPo batteries. Be aware that Traxxas shall not be liable for any special, indirect, incidental, or consequential damages arising out of the installation and/or use of LiPo batteries in Traxxas products.

If you have questions about LiPo battery usage, please consult with your local hobby dealer or contact the battery manufacturer.

All Power Cell battery packs display the RBRC (Rechargeable Battery Recycling Corporation) icon, indicating they are recyclable. To find a recycling center near you, ask your local hobby dealer or visit www.call2recycle.org.

LiPo Batteries

Warning: Lithium Polymer (LiPo) batteries require special care and handling procedures for long life and safe operation. LiPo batteries are intended only for advanced users that are educated on the risks associated with LiPo battery use. Traxxas does not recommend that anyone under the age of 16 use or handle LiPo battery packs without the supervision of a knowledgeable and responsible adult.

The XL-5 speed control is able to use LiPo batteries with nominal voltage not to exceed 7.4 volts (2S packs). LiPo batteries have a minimum safe discharge voltage threshold that should not be exceeded. The XL-5 is equipped with built-in Low-Voltage Detection that alerts the driver when LiPo batteries have reached their minimum voltage (discharge) threshold. It is the driver’s responsibility to stop immediately to prevent the battery pack from being discharged below its safe minimum threshold.

Low-Voltage Detection on the speed control is just one part of a comprehensive plan for safe LiPo battery use. It is critical for you, the user, to follow all other instructions supplied by the battery manufacturer and the charger manufacturer for proper charging, use, and storage of LiPo batteries. Make sure you understand how to use your LiPo batteries. Be aware that Traxxas shall not be liable for any special, indirect, incidental, or consequential damages arising out of the installation and/or use of LiPo batteries in Traxxas products.

If you have questions about LiPo battery usage, please consult with your local hobby dealer or contact the battery manufacturer.

If you have questions about LiPo battery usage, please consult with your local hobby dealer or contact the battery manufacturer.

If you have questions about LiPo battery usage, please consult with your local hobby dealer or contact the battery manufacturer.

If you have questions about LiPo battery usage, please consult with your local hobby dealer or contact the battery manufacturer.

If you have questions about LiPo battery usage, please consult with your local hobby dealer or contact the battery manufacturer.
Your model comes with a set of specialty metric tools. You’ll need to purchase other items, available from your hobby dealer, to operate and maintain your model.

**SUPPLIED TOOLS AND EQUIPMENT**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5mm “L” wrench</td>
<td></td>
</tr>
<tr>
<td>2.0mm “L” wrench</td>
<td></td>
</tr>
<tr>
<td>1.5mm “L” wrench</td>
<td></td>
</tr>
<tr>
<td>Turnbuckle wrench</td>
<td></td>
</tr>
<tr>
<td>U-joint wrench</td>
<td></td>
</tr>
<tr>
<td>4-way wrench</td>
<td></td>
</tr>
<tr>
<td>Antenna nut wrench</td>
<td></td>
</tr>
<tr>
<td>2.5mm “L” wrench</td>
<td></td>
</tr>
<tr>
<td>Optional Pinion Gear</td>
<td>see page 21</td>
</tr>
<tr>
<td>Optional Spur Gear</td>
<td>see page 21</td>
</tr>
<tr>
<td>Aftermarket servo adapters</td>
<td></td>
</tr>
<tr>
<td>Pre-load spacers and shock pistons (on parts tree)</td>
<td>see page 20</td>
</tr>
<tr>
<td>Body clips and body washers</td>
<td></td>
</tr>
<tr>
<td>Battery hold-down pad (to reduce battery vibration, if necessary)</td>
<td></td>
</tr>
</tbody>
</table>

**REQUIRED EQUIPMENT** *(sold separately)*

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NiMH battery charger*</td>
<td></td>
</tr>
<tr>
<td>7-cell NiMH battery pack with Traxxas High-Current Connector*</td>
<td></td>
</tr>
<tr>
<td>4 AA alkaline batteries</td>
<td></td>
</tr>
</tbody>
</table>

*Battery and charger style are subject to change and may vary from images.
ANATOMY OF THE RAPTOR

- Turnbuckle (Rear Camber Link)
- Half Shaft
- Rear Body Mount
- Motor (Titan 12T)
- Transmission
- Pinion Gear
- Spur Gear
- Slipper Clutch
- Suspension Arm (Rear)
- Electronic Speed Control (XL-5)
- Antenna Mount
- Battery Hold-Down
- Receiver Box
- LED Light Pipe
- Front Body Mount
- Chassis
- Front Shock Tower
- Rear Shock Tower
- Traxxas High-Current Connector
- Rear Body Mount
- Battery Compartment
- Steering Servo
- Nerf Bar
- Steering Block
- Caster Block
- Suspension Arm (Front)
- Front Bumper
- Shock (Oil Damper)
- Turnbuckle (Front Camber Link)
- Turnbuckle (Toe Link)
The following guide is an overview of the procedures for getting your model running. Look for the Quick Start logo on the bottom corners of Quick Start pages.

<table>
<thead>
<tr>
<th>Step</th>
<th>Procedure</th>
<th>Page(s)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Read the safety precautions on pages 3-4</td>
<td></td>
<td>For your own safety, understand where carelessness and misuse could lead to personal injury.</td>
</tr>
<tr>
<td>2</td>
<td>Charge the battery pack • See page 11</td>
<td></td>
<td>Make sure the steering servo is working correctly.</td>
</tr>
<tr>
<td>3</td>
<td>Install batteries in the transmitter • See page 11</td>
<td></td>
<td>Fully charge the included battery pack. Charge your battery now so it will be ready when you finish the other setup procedures.</td>
</tr>
<tr>
<td>4</td>
<td>Install battery pack in the model • See page 12</td>
<td></td>
<td>Follow this procedure to make sure your radio system works properly at a distance and that there is no interference from outside sources.</td>
</tr>
<tr>
<td>5</td>
<td>Turn on the radio system • See page 13</td>
<td></td>
<td>Make a habit of turning the transmitter on first, and off last.</td>
</tr>
<tr>
<td>6</td>
<td>Check servo operation • See page 14</td>
<td></td>
<td>Apply other decals if desired.</td>
</tr>
<tr>
<td>7</td>
<td>Range test the radio system • See page 14</td>
<td></td>
<td>Driving tips and adjustments for your model.</td>
</tr>
<tr>
<td>8</td>
<td>Detail your model • See page 8</td>
<td></td>
<td>Follow these critical steps to maintain the performance of your model and keep it in excellent running condition.</td>
</tr>
<tr>
<td>9</td>
<td>Drive your model • See page 18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Maintaining your model • See page 22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Applying the Decals
The main decals for your model have been applied at the factory. The decals are printed on self-adhesive clear mylar and are die-cut for easy removal. Use a hobby knife to lift the corner of a decal and lift it from the backing.

To apply the decals, place one end down, hold the other end up, and gradually smooth the decal down with your finger as you go. This will prevent air bubbles. Placing both ends of the decal down and then trying to smooth it out will result in air pockets. Look at the photos on the box for typical decal placement.

INTRODUCTION
Your model includes the latest Traxxas TQi 2.4GHz transmitter with Traxxas Link™ Model Memory. The transmitter’s easy-to-use design provides instant driving fun for new R/C enthusiasts, and also offers a full compliment of pro-level tuning features for advanced users – or anyone interested in experimenting with the performance of their model. The steering and throttle channels feature adjustable Exponential, End Points, and Sub-Trims. Steering and braking Dual Rate are also available. Many of the next-level features are controlled by the Multi-Function knob, which can be programmed to control a variety functions. The detailed instructions (page 23) and Menu Tree (page 25) included in this manual will help you understand and operate the advanced functions of the new TQi radio system. For additional information and how-to videos, visit Traxxas.com.

RADIO AND POWER SYSTEM TERMINOLOGY
Please take a moment to familiarize yourself with these radio and power system terms. They will be used throughout this manual. A detailed explanation of the advanced terminology and features of your new radio system begins on page 23.

BEC (Battery Eliminator Circuit) - The BEC can either be in the receiver or in the ESC. This circuit allows the receiver and servos to be powered by the main battery pack in an electric model. This eliminates the need to carry a separate pack of 4 AA batteries to power the radio equipment.

Current - Current is a measure of power flow through the electronics, usually measured in amps. If you think of a wire as a garden hose, current is a measure of how much water is flowing through the hose.

ESC (Electronic Speed Control) - An electronic speed control is the electronic motor control inside the model. The XL-5 uses MOSFET power transistors to provide precise, digital proportional throttle control. Electronic speed controls use power more efficiently than mechanical speed controls so that the batteries run longer. An electronic speed control also has circuitry that prevents loss of steering and throttle control as the batteries lose their charge.

Frequency band - The radio frequency used by the transmitter to send signals to your model. This model operates on the 2.4GHz direct-sequence spread spectrum.

LiPo - Abbreviation for Lithium Polymer. Rechargeable LiPo battery packs are known for their special chemistry that allows extremely high energy density and current handling in a compact size. These are high performance batteries that require special care and handling. For advanced users only.

mAh – Abbreviation for milliamp hour. A measure of the capacity of the battery pack. The higher the number, the longer the battery will last between recharges.

Neutral position - The standing position that the servos seek when the transmitter controls are at the neutral setting.

NiCad - Abbreviation for nickel-cadmium. The original rechargeable hobby pack, NiCad batteries have very high current handling, high capacity, and can last up to 1000 charging cycles. Good charging procedures are required to reduce the possibility of developing a “memory” effect and shortened run times.

NiMH - Abbreviation for nickel-metal hydride. Rechargeable NiMH batteries offer high current handling, and much greater resistance to the “memory” effect. NiMH batteries generally allow higher capacity than NiCad batteries. They can last up to 500 charge cycles. A peak charger designed for NiMH batteries is required for optimal performance.

Receiver - The radio unit inside your model that receives signals from the transmitter and relays them to the servos.

Resistance - In an electrical sense, resistance is a measure of how an object resists or obstructs the flow of current through it. When flow is constricted, energy is converted to heat and is lost.

Servo - Small motor unit in your model that operates the steering mechanism.

Transmitter - The hand-held radio unit that sends throttle and steering instructions to your model.
**Trim** - The fine-tuning adjustment of the neutral position of the servos, made by adjusting the throttle and steering trim knobs on the face of the transmitter. Note: The Multi-Function knob must be programmed to serve as a throttle trim adjustment.

**Thermal Shutdown Protection** - Temperature sensing electronics are used in the ESC to detect overloading and overheating of the transistor circuitry. If excessive temperature is detected, the unit automatically shuts down to prevent damage to the electronics.

**2-channel radio system** - The TQ radio system, consisting of the receiver, the transmitter, and the servos. The system uses two channels: one to operate the throttle and one to operate the steering.

**2.4GHz Spread Spectrum** – This model is equipped with the latest R/C technology. Unlike AM and FM systems that require frequency crystals and are prone to frequency conflicts, the TQi system automatically selects and locks onto an open frequency, and offers superior resistance to interference and “glitching.”

**Voltage** - Voltage is a measure of the electrical potential difference between two points, such as between the positive battery terminal and ground. Using the analogy of the garden hose, while current is the quantity of water flow in the hose, voltage corresponds to the pressure that is forcing the water through the hose.

**550 and 540** - These numbers refer to the size of the motor. 550 motors have armatures that are 30% longer than 540 motors.

**IMPORTANT RADIO SYSTEM PRECAUTIONS**
- For maximum range, always point the front of transmitter toward the model.
- Do not kink the receiver’s antenna wire. Kinks in the antenna wire will reduce range.
- DO NOT CUT any part of the receiver’s antenna wire. Cutting the antenna will reduce range.
- Extend the antenna wire in the model as far as possible for maximum range. It is not necessary to extend the antenna wire out of the body, but wrapping or coiling the antenna wire should be avoided.
- Do not allow the antenna wire to extend outside the body without the protection of an antenna tube, or the antenna wire may get cut or damaged, reducing range. It is recommended to keep the wire inside the body (in the antenna tube) to prevent the chance of damage.
Your model is equipped with the newest TQi 2.4GHz transmitter with Traxxas Link™ Model Memory. The transmitter has two channels for controlling your throttle and steering. The receiver inside the model has 5 output channels. Your model is equipped with one servo and an electronic speed control.

**Transmitter and Receiver**

- Set Button
- Red/Green Status LED
- Menu Button
- Steering Trim
- Multi-Function Knob
- Throttle Trigger
- Power Switch
- Battery Compartment
- Link Button
- Sensor Expansion Port
- LED

**XL-5 Wiring Diagram**

- Antenna
- Receiver
- Motor (Titan® 12T)
- Traxxas High-Current Connector (Male)
- XL-5 Electronic Speed Control Channel 2
- V/T - Voltage/Temp Sensor Port
- RPM - RPM Sensor Port
- BATT/CH5 - Battery/Channel 5
- CH1 - Channel 1
- CH2 - Speed Control
- CH3 - Channel 3
- CH4 - Channel 4

**XL-5 Electronic Speed Control**

- Traxxas High-Current Connector (Male)
- To Motor
- Heat Sinks
- LED
- Set Button

**Note:** All accessory sensor ports are for use with TQi Docking Base (see Traxxas.com and included materials for more information).
INSTALLING TRANSMITTER BATTERIES
Your TQi transmitter uses 4 AA batteries. The battery compartment is located in the base of the transmitter.

1. Remove the battery compartment door by pressing the tab and sliding the door open.
2. Install the batteries in the correct orientation as indicated in the battery compartment.
3. Reinstall the battery door and snap it closed.
4. Turn on the transmitter and check the status indicator for a solid green light.

If the status LED flashes red, the transmitter batteries may be weak, discharged or possibly installed incorrectly. Replace with new or freshly charged batteries. The power indicator light does not indicate the charge level of the battery pack installed in the model. Refer to the Troubleshooting section on page 24 for more information on the transmitter Status LED codes.

CHARGING THE BATTERY PACK
The included charger can be used to charge the included battery pack. The battery pack should be removed from the vehicle before charging. Do not leave the battery unattended while charging. It is normal for the battery to become slightly warm as it nears full-charge, but the battery should never become hot. If the battery becomes hot, disconnect it from the charger immediately.

1. Plug the charger into the wall. The LED on the charger should glow green.
2. Connect the included battery pack to the charger output cord. The LED will glow red indicating the battery is charging.
3. The battery should charge for approximately 8 ½ hours. The LED will turn green when the battery is fully charged. Disconnect the battery from the charger after charging.

Using Other Chargers
Another convenient option for charging the included battery is an AC peak-detecting charger that plugs directly into an AC wall outlet, such as the TRX EZ-Peak™ (Part #2930). It contains special peak-detection circuitry that automatically shuts the charger off when the battery is fully charged.

For faster charging, the included battery may be charged at 4 amps. The TRX EZ-Peak™ is a 4 amp charger and will charge the included battery in about 45 minutes!

Caution: Never use a 15-minute timed charger to recharge your model’s battery packs. Overcharging may result, causing damage to the battery packs.

If the power indicator doesn’t light green, check the polarity of the batteries. Check rechargeable batteries for a full charge. If you see any other flashing signal from the LED, refer to the chart on page 24 to identify the code.

Use the Right Batteries
Your transmitter uses AA batteries. Use new alkaline batteries, or rechargeable batteries such as NiMH (Nickel Metal Hydride) batteries in your transmitter. Make sure rechargeable batteries are fully charged according to the manufacturer’s instructions.

If you use rechargeable batteries in your transmitter, be aware that when they begin to lose their charge, they lose power more quickly than regular alkaline batteries.

Caution: Discontinue running your model at the first sign of weak batteries (flashing red light) to avoid losing control.
The following Traxxas High Current Connector packages are available from your hobby dealer. When using adapters, be careful not to exceed the current rating of the Molex connector.

- Part #3060 Single Male/Female
- Part #3080 2-Pack Female
- Part #3070 2-Pack Male
- Part #3061 Male Charge Adapter
- Part #3062 Female Charge Adapter

**INSTALLING THE BATTERY PACK**

Install the battery pack with the battery wires facing the rear of the model. Insert the tabs of the battery hold-down into the slots in the rear hold-down retainer and then place the battery hold-down over the post. Secure the battery hold-down with body clip in the hole in the post. Do not connect the battery pack yet.

**Using Different Battery Configuration**

The battery hold-downs are capable of accommodating either side-by-side racing style packs or the more common stick packs. The battery compartments are configured for stick packs from the factory. The number on each side of the hold down indicates the battery height in millimeters that hold-down can accommodate. Note that one side is labeled “25” and other side is labeled “23”. The 25mm side is for use with typical stick type battery packs. If you are using side-by-side racing packs, simply flip the hold-down over to the 23mm side and use it on the opposite side of the chassis. Your model includes a foam block which should be installed in front of 6-cell batteries for a more secure fit.

**The Traxxas High Current Connector**

Your model is equipped with the Traxxas High Current Connector. Standard connectors restrict current flow and are not capable of delivering the power needed to maximize the output of the XL-5. The Traxxas connector’s gold-plated terminals with a large contact surfaces ensure positive current flow with the least amount of resistance. Secure, long-lasting, and easy to grip, the Traxxas connector is engineered to extract all the power your battery has to give.

**Using Other Batteries**

Your model is equipped with a state of the art, high-performance power system. It is designed to be able to flow large amounts power with the least amount of restriction. The benefits are drastically increased speed and acceleration. However, this places extra demands on the battery and electrical system connections. For best performance, your model requires the use of NiMH battery packs that have cells rated for high discharge and use high-quality, low-resistance assembly techniques, such as the included Traxxas Power Cell Battery Pack. Cheaply made battery packs do not retain their performance characteristics after repeated uses in high-powered electric applications. They will lose their punch and run time and may require frequent replacement. In addition, poor-quality, high-resistance cell connectors could fail, requiring disassembly and repair. The main goal is to reduce all sources of high resistance in the pack. This includes the connector, the wire, and the bars attaching the cells together. High pack resistance will create additional heat and rob you of the full power the cells are capable of producing. We recommend using Traxxas Power Cell batteries for best performance.

- 2923 Battery, Power Cell, 3000mAh (NiMH, 7-C flat, 8.4V)
- 2940 Battery, Series 3 Power Cell, 3300mAh (NiMH, 7-C flat, 8.4V)
- 2950 Battery, Series 4 Power Cell, 4200mAh (NiMH, 7-C flat, 8.4V)
RADIO SYSTEM RULES

• Always turn your TQi transmitter on first and off last. This procedure will help to prevent your model from receiving stray signals from another transmitter, or other source, and running out of control. Your model has electronic fail-safes to prevent this type of malfunction, but the first, best defense against a runaway model is to always turn the transmitter on first, and off last.

• In order for the transmitter and receiver to bind to one another, the receiver in the model must be turned on within 20 seconds of turning on the transmitter. The transmitter LED will flash fast red indicating a failure to link. If you miss it, simply turn off the transmitter and start over.

• Always turn on the transmitter before plugging in the battery.

• Always use new or freshly charged batteries for the radio system. Weak batteries will limit the radio signal between the receiver and the transmitter. Loss of the radio signal can cause you to lose control of your model.

RADIO SYSTEM BASIC ADJUSTMENTS

Throttle Neutral Adjustment
The throttle neutral adjustment is located on the transmitter face and controls the forward/reverse travel of the throttle trigger. Change the adjustment by pressing the button and sliding it to the desired position. There are two settings available:

50/50: Allows equal travel for both acceleration and reverse.
70/30: Allows more throttle travel (70%) and less reverse travel (30%).

Note: We strongly recommend to leave this control in its factory location until you become familiar with all the adjustments and capabilities of your model. To change the throttle neutral adjust position, turn the transmitter off before adjusting the neutral position. You will need to reprogram your electronic speed control to recognize the 70/30 setting. Turn to ESC Setup Programming on page 16 for instructions.

Steering Trim
The electronic steering trim located on the face of the transmitter adjusts the neutral (center) point of the steering channel.

Multi-Function Knob
The Multi-Function knob can be programmed to control a variety of functions. From the factory, the Multi-Function knob controls steering sensitivity, also known as exponential or “expo.” When the knob is turned counterclockwise all the way to the left (default position), expo is off and steering sensitivity will be linear (the most commonly used setting). Turning the knob clockwise will “add expo” and decrease the steering sensitivity in the initial range of steering wheel travel left or right from center. For more detail on steering exponential, refer to page 15.
**USING THE RADIO SYSTEM**

The TQi Radio System has been pre-adjusted at the factory. The adjustment should be checked before running the model, in case of movement during shipping. Here’s how:

1. Turn the transmitter switch on. The status LED on the transmitter should be solid green (not flashing).
2. **Elevate the model so that the rear tires are off the ground.** If you are holding the model, grip it firmly. Make sure your hands are clear of the moving parts of the model.
3. Plug the battery pack in the model into the speed control.
4. The on/off switch is integrated into the speed control. With the transmitter on, press the XL-5 set button for ½ second, until the LED shines red, then immediately release the button. This turns the model on (see page 16 for more on XL-5 setup and operation). To turn the XL-5 off, press the set button until the red LED turns off.

**Note:** If the LED shines green, Low-Voltage Detection is activated. This will cause erratic performance from the included NiMH battery pack.

The default factory setting is for Low-Voltage Detection to be disabled (LED shines red). Make sure to turn the Low-Voltage Detection on when using LiPo batteries. **Never use LiPo batteries while Low-Voltage Detection is turned off.** See page 16 for more information.

5. Turn the steering wheel on the transmitter back and forth and check for rapid operation of the steering servo. Also, check that the steering mechanism is not loose or binding. If the steering operates slowly, check for weak batteries.

6. When looking down at the model, the front wheels should be pointing straight ahead. If the wheels are turned slightly to the left or right, slowly adjust the steering trim control on the transmitter until they are pointing straight ahead.

7. Operate the throttle trigger to ensure that you have full forward and reverse operation, and that the motor stops when the throttle trigger is at neutral.

8. Once adjustments are made, turn off your model, followed by the hand held transmitter.

**Range-Testing the Radio System**

Before each running session with your model, you should range-test your radio system to ensure that it operates properly.

1. Turn on the radio system and check its operation as described in the previous section.
2. Have a friend hold the model. Make sure hands and clothing are clear of the wheels and other moving parts on the model.
3. Make sure your transmitter antenna is straight up, and then walk away from the model with the transmitter until you reach the farthest distance you plan to operate the model.
4. Operate the controls on the transmitter once again to be sure that the model responds correctly.
5. Do not attempt to operate the model if there is any problem with the radio system or any external interference with your radio signal at your location.

**Higher Speeds Require Greater Distance**

The faster you drive your model, the more quickly it will near the limit of radio range. At 60mph, a model can cover 88 feet every second! It’s a thrill, but use caution to keep your model in range. If you want to see your model achieve its maximum speed, it is best to position yourself in the middle of the truck’s running area, not the far end, so you drive the truck towards and past your position. In addition to maximizing the radio’s range, this technique will keep your model closer to you, making it easier to see and control.

Your model’s radio system is designed to operate reliably up to the approximate distance that it is no longer easy or comfortable to see and control the model. Most drivers will struggle to see and drive their model at distances farther than a football field (300+ feet). At greater distances, you could lose sight of your model and you may also exceed the radio system’s operating range which will cause the failsafe system to activate. For best visibility and control of your model keep your model within 200 feet regardless of the maximum range available.

**No matter how fast or far you drive your model, always leave adequate space between you, the model, and others. Never drive directly toward yourself or others.**

**TQi Binding Instructions**

For proper operation, the transmitter and receiver must be electronically ‘bound.’ This has been done for you at the factory. Should you ever need to re-bind the system or bind to another transmitter or receiver, follow these instructions. Note: the receiver must be connected to a 4.8-6.0v (nominal) power source for binding and the transmitter and receiver must be within 5 feet of each other.
1. Press and hold the transmitter’s SET button as you switch transmitter on. The transmitter’s LED will flash red slowly. Release the SET button.

2. Press and hold the receiver’s LINK button as you switch on the speed control (by pressing the EZ-Set button). Release the LINK button.

3. When the transmitter and receiver’s LEDs turn solid green, the system is bound and ready for use. Confirm that the steering and throttle operate properly before driving your model.

**Steering Sensitivity (Exponential)**

The Multi-Function knob on the TQi transmitter has been programmed to control Steering Sensitivity (also known as exponential). The standard setting for Steering Sensitivity is “normal (zero exponential),” with the dial full left in its range of travel. This setting provides linear servo response: the steering servo’s movement will correspond exactly with the input from the transmitter’s steering wheel. Turning the knob clockwise from the left will result in “negative exponential” and decrease steering sensitivity by making the servo less responsive near neutral, with increasing sensitivity as the servo nears the limits of its travel range. The farther you turn the knob, the more pronounced the change in steering servo movement will be. The term “exponential” comes from this effect; the servo’s travel changes exponentially relative to the input from the steering wheel. The exponential effect is indicated as a percentage—the greater the percentage, the greater the effect. The illustrations below show how this works.

**Normal Steering Sensitivity (0% exponential)**

In this illustration, the steering servo’s travel (and with it, the steering motion of the model’s front wheels) corresponds precisely with the steering wheel. The ranges are exaggerated for illustrative purposes.

**Decreased Steering Sensitivity (Negative Exponential)**

By turning the Multi-Function knob clockwise, the steering sensitivity of the model will be decreased. Note that a relatively large amount of steering wheel travel results in a smaller amount of servo travel. The farther you turn the knob, the more pronounced the effect becomes. Decreased steering sensitivity may be helpful when driving on low-traction surfaces, when driving at high speed, or on tracks that favor sweeping turns where gentle steering inputs are required. The ranges are exaggerated for illustrative purposes.

Experiment! Try varying degrees of exponential. It’s easy to go back to “zero” if you don’t like the effect. There’s no wrong way to adjust exponential. Any setting that makes you more comfortable with your model’s handling is the “right setting.”

**SETTING UP THE ANTENNA**

The receiver antenna has been set up and installed from the factory.

When reinstalling the antenna, first slide the antenna wire into bottom of antenna tube until white tip of antenna is at top of tube under the black cap. Insert the base of the tube into the antenna post. Take care not to crimp the antenna wire. Slide the crimp nut over the antenna tube and screw it onto the antenna post. Use the supplied tool to tighten the crimp nut on the post just until the antenna tube is securely in place. Do not over tighten or crush the antenna wire against the chassis. Do not bend or kink the antenna wire! See the side bar for more information. Do not shorten the antenna tube. The minimum height is 62mm.
ADJUSTING THE ELECTRONIC SPEED CONTROL

The XL-5 electronic speed control is equipped with built-in Low-Voltage Detection. The Low-Voltage Detection circuitry constantly monitors the battery voltage. When the battery voltage begins to reach the minimum recommended discharge voltage threshold for LiPo battery packs, the XL-5 will limit the power output to 50% throttle. When the battery voltage attempts to fall below the minimum threshold, the XL-5 will shut down all motor output. The LED on the speed control will slowly blink red, indicating a low-voltage shutdown. The XL-5 will stay in this mode until a fully charged battery is connected.

Your model includes a Power Cell NiMH battery. The XL-5 speed control’s Low-Voltage Detection has been disabled for best performance with this battery. The speed control’s LED will glow red when it is turned on, indicating Low-Voltage Detection is disabled. Be certain to activate Low-Voltage Detection if you install LiPo batteries in your model. Never use LiPo batteries while Low-Voltage Detection is disabled.

Verify that Low-Voltage Detection is DISABLED:
1. Turn on the transmitter (with the throttle at neutral).
2. Connect a fully charged battery pack to the XL-5.
3. Press and release the EZ-Set button (the LED will turn off) (A). After ten seconds, the motor will beep twice and the LED will shine GREEN. Release the button (B).
4. Low-Voltage Detection is now ACTIVATED.

To activate Low-Voltage Detection (LiPo setting):
1. Make sure the LED on the XL-5 is on and RED.
2. Press and hold the EZ-Set button (the LED will turn off) (A). After ten seconds, the motor will beep twice and the LED will shine GREEN. Release the button (B).
3. Low-Voltage Detection is now ACTIVATED.

To disable Low-Voltage Detection (NiMH setting):
1. Turn on the transmitter (with the throttle at neutral).
2. Connect a fully charged battery pack to the XL-5.
3. Move the trigger forward to apply the brakes. Note that braking control is fully proportional. The LED will turn off until full braking power is reached. At full brakes, the LED will shine RED.

XL-5 Setup Programming (Calibrating your ESC and transmitter)
Read through all of the programming steps below before you begin. If you get lost during programming or receive unexpected results, simply unplug the battery, wait a few seconds, plug the battery pack in, and start over.

1. Disconnect one of the motor wires between the XL-5 and the motor. This is a precaution to prevent runaway when the speed control is turned on before it is programmed.
2. Connect a fully charged battery pack to the XL-5.
3. Press and hold the EZ-Set button (with the throttle at neutral).
4. When the LED blinks RED TWICE. Push the throttle trigger to the full reverse and hold it there (C).
5. Connect a fully charged battery pack to the XL-5.
6. Return the throttle trigger to neutral. The LED will shine RED.

Note that in steps 1-8 below, Low-Voltage Detection is DISABLED (factory default) and the LED shines red. If Low-Voltage Detection is ACTIVATED, the LED will shine green instead of red in steps 1-8 below. Never use LiPo batteries while Low-Voltage Detection is disabled.

XL-5 Operation
To operate the speed control and test the programming, reconnect the motor wires and place the vehicle on a stable block or stand so that all of the driven wheels are off the ground.

Transmitter Adjustments for the XL-5 ESC
Before attempting to program your XL-5 ESC, it is important to make sure that your transmitter is properly adjusted (set back to the factory defaults). Otherwise, you may not get the best performance from your speed control.

The transmitter should be adjusted as follows:
1. Turn transmitter off.
2. Hold both MENU and SET.
3. Turn transmitter on.
4. Release MENU and SET. The transmitter LED will blink red.
5. Press SET to clear settings. The LED will turn solid green and the transmitter is restored to default.
avoid slamming the speed control from reverse to forward. On high-traction surfaces, this could result in transmission or driveline damage.

7. To turn the XL-5 off, press and hold the EZ-Set button for 1½ seconds or until the red LED turns off.

8. The XL-5 is equipped with thermal shutdown protection to guard against overheating caused by excessive current flow. If the operating temperature exceeds safe limits, the XL-5 will automatically shut down. The LED on the face of the XL-5 will rapidly blink red, even if the throttle trigger is moved back and forth. Once the temperature returns to a safe level, the XL-5 will once again function normally.

**XL-5 Profile Selection**

The speed control is factory set to Sport Mode (100% forward, brakes, and reverse). To disable reverse (Race Mode) or to allow 50% power (Patent Pending Training Mode), follow these steps. The speed control should be connected to the receiver and the transmitter adjusted as described previously. The profiles are selected by entering the programming mode.

**Profile Description**

Profile #1 (Sport Mode): 100% Forward, 100% Brakes, 100% Reverse

Profile #2 (Race Mode): 100% Forward, 100% Brakes, No Reverse

Profile #3 (Training Mode): 50% Forward, 100% Brakes, 50% Reverse

**Selecting Sport Mode** (Profile #1: 100% Forward, 100% Brakes, 100% Reverse)

1. Connect a fully charged battery pack to the XL-5 and turn on your transmitter.
2. With the XL-5 off, press and hold the EZ-Set button until the LED turns solid green, then solid red and then begins blinking red (indicating the Profile numbers).
3. When the LED blinks RED ONCE, release the EZ-Set button.
4. The LED will blink and then turn solid green (Low-Voltage Detection ACTIVE) or red (Low-Voltage Detection DISABLED). The model is ready to drive.

**Selecting Race Mode** (Profile #2: 100% Forward, 100% Brakes, No Reverse)

1. Connect a fully charged battery pack to the XL-5 and turn on your transmitter.
2. With the XL-5 off, press and hold the EZ-Set button until the LED turns solid green, then solid red and then begins blinking red (indicating the Profile numbers).
3. When the LED blinks RED TWICE, release the EZ-Set button.
4. The LED will blink and then turn solid green (Low-Voltage Detection ACTIVE) or red (Low-Voltage Detection DISABLED). The model is ready to drive.

**Selecting Training Mode** (Profile #3: 50% Forward, 100% Brakes, 50% Reverse)

1. Connect a fully charged battery pack to the XL-5 and turn on your transmitter.
2. With the XL-5 off, press and hold the EZ-Set button until the LED turns solid green, then solid red and then begins blinking red (indicating the Profile numbers).
3. When the LED blinks RED THREE TIMES, release the EZ-Set button.
4. The LED will blink and then turn solid green (Low-Voltage Detection ACTIVE) or red (Low-Voltage Detection DISABLED). The model is ready to drive.

**Note:** If you missed the mode you wanted, keep the EZ-Set button pressed down and the blink cycle will repeat until the button is released and a Mode is selected.

**LED Codes and Protection Modes**

- **Solid Green:** XL-5 power-on light. Low-Voltage Detection is ACTIVATED (LiPo setting).
- **Solid Red:** XL-5 power-on light. Low-Voltage Detection is DISABLED (NiMH setting). Never use LiPo batteries while Low-Voltage Detection is disabled.
- **Fast Blinking Red:** The XL-5 is equipped with thermal shutdown protection to guard against overheating caused by excessive current flow. If the operating temperature exceeds safe limits, the XL-5 will automatically shut down. Let the XL-5 cool. Make sure your model is properly geared for the conditions.
- **Slow Blinking Red (when Low-Voltage Detection is activated):** The XL-5 has entered Low-Voltage Protection. When the battery voltage begins to reach the minimum recommended discharge voltage threshold for LiPo battery packs, the XL-5 will limit the power output to 50% throttle. When the battery voltage attempts to fall below the minimum threshold, the XL-5 will shut down all motor output. The LED on the speed control will slowly blink red, indicating a low-voltage shutdown. The XL-5 will stay in this mode until a fully charged battery is connected.
- **Fast Blinking Green:** The XL-5’s LED will blink fast green if Throttle Neutral Protection is activated, or if the speed control is not receiving a signal. Make certain the speed control is properly plugged into the receiver and the transmitter is switched on. If this does not restore normal operation, then the XL-5 is indicating the transmitter’s Throttle Trim is incorrectly set. Reset the throttle trim to the “0” position. See sidebar for more on Throttle Neutral Protection.

**Tip For Fast Mode Changes**

The XL-5 is set to Profile 1 (Sport Mode) as the default. To quickly change to Profile 3 (Training Mode), with the transmitter on, press and hold the EZ-Set button until the light blinks red three times and then release. For full power, quickly change back to Profile 1 (Sport Mode) by pressing and holding the EZ-Set button until the light blinks red one time and then releasing.

**Throttle Neutral Protection**

The XL-5 speed control features Throttle Neutral Protection. If the transmitter’s throttle trim setting is changed while the speed control is switched off, Throttle Neutral Protection prevents the speed control from activating the motor until the throttle trim is corrected. Throttle Neutral Protection also prevents the model from suddenly accelerating if the speed control is switched on while the transmitter’s trigger is being held. When the trigger is returned to neutral, the XL-5 will operate properly.
Now it’s time to have some fun! This section contains instructions on driving and making adjustments to your model. **Before you go on, here are some important precautions to keep in mind.**

- Allow the model to cool for a few minutes between runs. This is particularly important when using high capacity (2400mAh and above) battery packs that allow extended periods of running. Monitoring temperatures will extend the lives of the batteries and motor.
- Do not continue to operate the model with low batteries or you could lose control of it. Indications of low battery power include slow operation and sluggish servos (slow to return to center). Stop immediately at the first sign of weak batteries. When the batteries in the transmitter become weak, the red power light will begin to flash. Stop immediately and install new batteries.
- Do not drive the model at night, on public streets, or in large crowds of people.
- If the model becomes stuck against an object, do not continue to run the motor. Remove the obstruction before continuing. Do not push or pull objects with the model.
- Because the model is controlled by radio, it is subject to radio interference from many sources beyond your control. Since radio interference can cause momentary losses of control, allow a safety margin of space in all directions around the model in order to prevent collisions.
- Use good, common sense whenever you are driving your model. Intentionally driving in an abusive and rough manner will only result in poor performance and broken parts. Take care of your model so that you can enjoy it for a long time to come.
- When using the supplied optional pinions for top speed running, limit your driving to paved surfaces only. Running in grass and off-road could cause excessive loads on the electrical system in the model.
- The Titan 12T motor will benefit from a short break in period to ensure optimum performance and longer motor life. For the first battery pack, use the stock installed pinion gear and drive smoothly on a flat, paved surface. Accelerate smoothly (avoiding full throttle starts), with most of the driving being done at higher speeds. This will help insure that the motor provides the best performance and longest life.

### About Run Time

A large factor affecting run time is the type and condition of your batteries. The milliamp hour (mAh) rating of the batteries determines how long their “fuel tank” is. A 3000 mAh battery pack will theoretically run twice as long as a 1500 mAh sport pack. Because of the wide variation in the types of batteries that are available and the methods with which they can be charged, it’s impossible to give exact run times for the model.

Another major factor which affects run time is how the model is driven. Run times may decrease when the model is driven repetitively from a stop to top-speed and with repetitive hard acceleration.

### Tips for Increasing Run Time

- Use batteries with the highest mAh rating you can purchase.
- Read and follow all maintenance and care instructions provided by the manufacturer of your batteries.

- Use a high-quality peak-detecting charger.
- Vary your speed. The Titan12T is a fan cooled motor, therefore moderate to top-speed running helps reduce motor temperatures.
- Lower your gear ratio. Installing a smaller pinion gear will lower your gear ratio, causing less power draw from the motor.
- Maintain your model. Do not allow dirt or damaged parts to cause binding in the drivetrain. Keep the motor clean and the motor bushings lightly lubricated.

### mAh Ratings and Power Output

The mAh rating of the battery can effect your top speed performance. The higher capacity battery packs experience less voltage drop under heavy load than low mAh rated packs. The higher voltage potential allows increased speed until the battery begins to become discharged.

### Running in Wet Conditions

Your new Traxxas model is designed with water-resistant features to protect the electronics in the model (receiver, servos, electronic speed control). This gives you the freedom to have fun driving your model through puddles, wet grass, snow, and through other wet conditions. Though highly water resistant, the model should not be treated as though it is submersible or totally, 100% waterproof. Water resistance applies only to the installed electronic components. Running in wet conditions requires additional care and maintenance for the mechanical and electrical components to prevent corrosion of metal parts and maintain their proper function.

### Precautions

- Without proper care, some parts of your model can be seriously damaged due to contact with water. Know that additional maintenance procedures will be required after running in wet conditions in order to maintain the performance of your model. Do not run your model in wet conditions if you are not willing to accept the additional care and maintenance responsibilities.
- Not all batteries can be used in wet environments. Consult your battery manufacturer to see if their batteries can be used in wet conditions.
- The Traxxas TQi transmitter is not water resistant. Do not subject it to wet conditions required after running in wet conditions in order to maintain the performance of your model. Do not run your model in wet conditions if you are not willing to accept the additional care and maintenance responsibilities.
- Do not operate your model during a rain storm or other inclement weather where lightning may be present.
- Do NOT allow your model to come in contact with salt water (ocean water), brackish water (between fresh water and ocean water), or other contaminated water. Salt water is highly conductive and highly corrosive. Use caution if you plan to run your model on or near a beach.
- Even casual water contact can reduce the life of your motor. Special care must be taken to modify your gearing and/or your driving style in wet conditions to extend the life of the motor (details follow).

### Before Running Your Vehicle in Wet Conditions

1. Consult the section “After Running Your Vehicle in Wet Conditions” before proceeding. Make sure you understand the additional maintenance required with wet running.
2. The wheels have small holes molded in to allow air to enter and exit the tire during normal running. Water will enter these holes and get trapped inside the tires if holes are not cut in the tires. Cut two small holes (3mm or 1/8” diameter) in each tire. Each hole should be near the tire centerline, 180 degrees apart.

3. Confirm that the receiver box O-ring and cover are installed correctly and secure. Make sure the screws are tight and the blue O-ring is not visible protruding from the edge of the cover.

4. Confirm that your batteries can be used in wet conditions.

5. Use lower gearing (smaller pinion gears, as low as 12T or spur gear as large as 90T) when running in mud, deep puddles, snow, or other similar situations that will restrict the tires and put much higher loads on the motor.

Motor Precautions
• Titan motor life can be greatly reduced in mud and water. If the motor gets excessively wet or submerged, use very light throttle (run the motor slowly) until the excess water can run out. Applying full throttle to a motor full of water can cause rapid motor failure. Your driving habits will determine motor life with a wet motor. Do not submerge the motor under water.
• Do not gear the motor by temperature when running in wet conditions. The motor will be cooled by water contact and will not give an accurate indication of appropriate gearing.
• Use special care when operating your model in muddy conditions. Stop operating your model if it appears to be straining due to the tackiness of the mud, or build-up of mud on the chassis. Do not allow mud to collect on the motor or pack around the motor.

After Running Your Vehicle in Wet Conditions
1. Drain the tires by spinning the tires at high speed to “sling” the water out. One way to do this is to make several high-speed passes on a flat, dry surface, if possible.
2. Remove the batteries.
3. Rinse excess dirt and mud off the truck with low-pressure water, such as from a garden hose. Do NOT use pressure washer or other high-pressure water. Avoid directing water into the bearings, transmission, etc.
4. Blow off the truck with compressed air (optional, but recommended). Wear safety glasses when using compressed air.
5. Remove the wheels from the truck.
6. Spray all the bearings, drivetrain, and fasteners with WD-40® or similar water displacing light oil.
7. Let the truck stand or you may blow off with compressed air. Placing the truck in a warm sunny spot will aid drying. Trapped water and oil will continue to drip from the truck for a few hours. Place it on a towel or piece of cardboard to protect the surface underneath.
8. As a precautionary step, remove the sealed receiver box cover. While unlikely, humidity or tiny amounts of moisture or condensation may enter the receiver box during wet running. This can cause long-term problems with the sensitive electronics in the receiver. Removing the receiver box cover during storage allows the air inside to dry. This step can improve the long-term reliability of the receiver. It is not necessary to remove the receiver or unplug any of the wires.

9. Additional Maintenance: Increase your frequency of disassembly, inspection and lubrication of the following items: This is necessary after extended wet use or if the vehicle will not be used for an extended period of time (such as a week or longer). This additional maintenance is needed to prevent any trapped moisture from corroding internal steel components.
• Stub axle housing bearings: Remove, clean, and re-oil the bearings.
• Transmission: Remove, disassemble, clean, and re-grease the transmission components. Use a light coating of wheel bearing grease (from an auto parts store) on the metal gear teeth. Refer to your exploded view diagrams for help with disassembly and reassembly.
• Titan motor: Remove the motor, clean with aerosol motor cleaner, and re-oil the bushings with lightweight motor oil. Be sure to wear eye protection when using spray aerosol cleaners.

RECEIVER BOX: MAINTAINING A WATERTIGHT SEAL

Removing and Installing Radio Gear
The unique design of the receiver box allows the removal and installation of the receiver without losing the ability to maintain a watertight seal in the box. The patent-pending wire clamp feature gives you the ability to also install aftermarket radio systems and maintain the watertight features of the receiver box.

Removing the Receiver
1. To remove the cover, remove the two 3x8mm button-head cap screws.
2. To remove the receiver from the box simply lift it out and set to the side. The antenna wire is still inside the clamp area and cannot be removed yet.
3. Remove the wire clamp by removing the two 2.5x8mm cap screws.
4. Unplug the servo cables from the receiver and remove the receiver.

Receiver Installation
1. Always install the wires into the receiver box before installing the receiver.
2. Install the antenna wire and the servo cables into the receiver box.
3. Arrange the wires neatly using the wire guides in the receiver box (A). The excess wire will be bundled inside the receiver box. Label which wire is for which channel.
4. Apply small bead of silicone grease (Traxxas part #1647) to the wire clamp (B).
5. Install the wire clamp and tighten the two 2.5x8mm cap screws securely.
6. Install the receiver into the box and plug the wires into the receiver (C). Refer to page 10 for the wiring diagram.
7. Make sure the box light pipe is aligned with the receiver LED. Make sure the O-ring is properly seated into the groove in the receiver box so that the cover will not pinch it or damage it any way.
8. Install the cover and tighten the two 3x8mm button-head cap screws securely.
9. Inspect the cover to make sure that the O-ring seal is not visible.
Once you become familiar with driving your model, you might need to make adjustments for better driving performance.

**Adjusting the Toe-in**

Geometry and alignment specs play an important role in your model’s handling. Take the time to set them correctly. Set the steering trim on your transmitter to neutral. Now, adjust your servo and tie rods so that both wheels are pointing straight ahead and are parallel to each other (0-degrees toe-in). This will ensure the same amount of steering in both directions. For increased stability add one- to two-degrees of toe in to each front wheel. Use the turnbuckles to adjust the alignment.

**Adjusting the Camber**

The camber angle of both the front and rear wheels can be adjusted with the camber rods (upper turnbuckles). Use a square or right-angle triangle to set the camber accurately. The stock camber of the front wheels is -1 degree of camber. In the rear, the stock camber is -1.5 degrees. These adjustments should be set with the truck positioned at its normal ride height with a battery installed.

**Fine Tuning the Shocks**

The four shocks on the model greatly influence its handling. Whenever you rebuild your shocks, or make any changes to the pistons, springs or oil, always make changes to them in pairs (front or rear). Piston selection depends on the range of oil viscosities that you have available. For example, using a two-hole piston with a lightweight oil will, at one point, give you the same damping as a three-hole piston with heavier oil. We recommend using the two-hole pistons with a range of oil viscosities from 10W to 50W (available from your hobby shop). The thinner viscosity oils (30W or less) flow more smoothly and are more consistent, while thicker oils provide more damping. Use only 100% pure silicone shock oil to prolong seal life. The model’s ride height can be adjusted by adding or removing the clip-on, spring pre-load spacers. Adjust the ride height so that the suspension arms are slightly above being parallel to the ground. Observe how the model handles in turns. Proper set-up will add stability and help prevent spin outs. Experiment with different springs and shock oils to find what works best for your current track conditions.

**Shock Mounting Positions**

Big bumps and rough terrain require a softer suspension with the maximum possible suspension travel and ride height. Racing on a prepared track or on-road use requires a lower ride height and firmer, more progressive suspension settings. The more progressive suspension settings help reduce body roll (increased roll stiffness), dive during braking, and squat during acceleration.

The suspension of your model has been set up for off-road performance (position 1 on the front suspension arms and position 2 on the rear suspension arms). If you plan on driving on hard surfaces the following changes should be made:

1. Move the front shocks to the outermost (2) position on the suspension arms.
2. Move the rear shocks to the middle position (3) on the suspension arms.
3. Add a 4mm preload spacer to the front shock.
Adjusting the Slipper Clutch
The model is equipped with an adjustable slipper clutch which is built into the large spur gear. The purpose of the slipper clutch is to regulate the amount of power sent to the rear wheels to prevent tire spin. When it slips, the slipper clutch makes a high-pitch, whining noise. Remove the rubber slipper clutch plug on the transmission cover in order to adjust the slipper. Use the 4-way wrench to turn the adjusting nut clockwise to tighten and counter-clockwise to loosen. Place the model on a high-traction surface, such as carpet. Adjust the slipper so that you can hear it slip for approximately two feet from a standing, full throttle start. (Learn more about adjusting the slipper clutch in the sidebar.)

Motor and Gearing
There are two different types of aftermarket motors which can be purchased for your model, stock and modified. Stock motors all have the same wire thickness and number of turns around the armature as governed by sanctioned racing organizations. They are inexpensive, and widely available. Modified motors are more expensive, may feature ball bearings and come in a variety of wire thicknesses and number of turns of wire on the armature. The fewer number of turns of wire on the armature, the more powerful the motor will be. Keep in mind that the more powerful the motor, the less battery run time you will have.

One of the more significant advantages to your model’s transmission is the extremely wide range of available gear ratios. It can be geared low enough to run an extremely hot, modified motor. A modified motor should be geared lower (higher numerically) than a stock motor because it will reach its maximum power at higher RPM’s. A modified motor that is geared incorrectly can actually be slower than a correctly-gear, stock motor. Use the following formula to calculate the overall ratio for combinations not listed on the gear chart:

\[
\text{# Spur Gear Teeth} \times 2.72 = \text{Final Gear Ratio}
\]

\[
\text{# Pinion Gear Teeth}
\]

If you are worried that you might be over-gear, check the temperature of the battery pack and motor. If the battery is extremely hot, and/or the motor is too hot to touch, your model is probably over-gear. If you are not able to run your model for at least four minutes before the battery dies, then change to a lower gear ratio. This temperature test assumes that the model is close to factory stock weight and operates freely with no excessive friction, dragging, or binding, and the battery is fully charged and in good condition.

The model is equipped with a Titan 12T 550 motor. The gear combination that comes stock on each model provides good overall acceleration and top speed. If you want more top speed and less acceleration install the included high speed gearing (more teeth). If you want more acceleration and less top speed, use a smaller optional (not included) pinion gear. The included high speed gearing is intended for high-speed running on hard surfaces, and this gearing is not recommended for off-road or repetitive starting and stopping.

The Titan 12T is equipped with an integrated cooling fan that is effective during medium to high-speed operation. The gearbox is specially vented to cool the motor. Repetitive starting and stopping over short distances creates excess heat and will not allow the fan to cool the motor properly. For this type of driving, smaller pinion gears are recommended to reduce load on the motor.

Gearing Compatibility Chart
The chart to the right shows a full range of gear combinations. This does NOT imply that these gear combinations should be used. Over-gearing (bigger pinions, smaller spurs) can overheat and damage the motor and/or speed control. Items in black will fit 540 motor only (not Titan 12T).

Adjusting Gear Mesh
Incorrect gear mesh is the most common cause of stripped spur gears. Gear mesh should be checked and adjusted anytime a gear is replaced. To set the gear mesh, cut a narrow strip of notebook paper and run it into the gear mesh. Loosen the motor screws and slide the motor and pinion gear into the spur gear. Retighten the motor screws and then remove the strip of paper. You should be able to run a fresh strip of paper through the gears without binding them.

To achieve a good starting point for the slipper clutch, tighten the slipper clutch adjusting nut clockwise until the slipper clutch adjusting spring fully collapses (do not over-tighten), and then turn the slipper clutch nut counter-clockwise one full turn.

Do not run your model with the slipper clutch adjusting spring fully compressed. The minimum recommended slipper clutch setting is 1/2 turn counter-clockwise from fully compressed.
Centering Your Servo
If the trim controls on your transmitter seem off, you may need to re-center your servo. Additionally, whenever your servo has been removed for service or cleaning, it must be re-centered prior to installation in the model.

1. Disconnect the servo horn from the steering servo.
2. Connect the steering servo to channel 1 on the receiver. Connect the electronic speed control (ESC) to channel 2. The white wire on the servo lead is positioned towards the crystal.
3. Place fresh “AA” batteries in the transmitter and turn the transmitter power switch on.
4. Turn the throttle and steering trim adjustments on the transmitter to the center “0” position.
5. Disconnect motor wires. Connect a fresh battery pack to the speed control and turn on the ESC (see page 13). The servo will automatically jump to its center position. The servo horn may now be installed onto the servo output shaft.
6. Check servo operation by turning the steering wheel back and forth to ensure that the mechanism has been centered properly and you have equal throw in both directions. Repeat 1-6 if necessary.

MAINTAINING YOUR MODEL
Your model requires timely maintenance in order to stay in top running condition. The following procedures should be taken very seriously.

Inspect the vehicle for obvious damage or wear. Look for:
1. Cracked, bent, or damaged parts
2. Check the wheels and steering for binding.
3. Check the operation of the shock absorbers.
4. Check the wiring for any frayed wires or loose connections.
5. Check the mounting of the receiver and servo(s) and speed control.
6. Check the tightness of the wheel nuts with a wrench.
7. Check the operation of the radio system, especially the condition of the batteries.
8. Check for any loose screws in the chassis structure or suspension.
9. The steering servo saver will wear out over time. If the steering becomes loose, the servo saver should be replaced.
10. Inspect the gears for wear, broken teeth, or debris lodged between the teeth.
11. Check the tightness of the slipper clutch.

Other periodic maintenance:
- Slipper clutch pads (friction material): Under normal use, the friction material in the slipper clutch should wear very slowly. If the thickness of any one of the slipper clutch pads is 1.8mm or less, the friction disc should be replaced. Measure the pad thickness using calipers or measuring against the diameter of the 1.5 and 2.0mm hex wrenches provided with the model.
- Chassis: Keep the chassis clean of accumulated dirt and grime. Periodically inspect the chassis for damage
- Steering: Over time, you may notice increased looseness in the steering system. There are several components which will wear out from use: the servo saver (Traxxas part #3744), the bellcrank bushings (Traxxas part #2545), and the tie rod ends (Traxxas part #2742). Replace these components as needed to restore factory tolerances.
- Motor: Every 10-15 runs, remove, clean, and lubricate the motor. Use a product such as electric motor cleaning spray to flush dirt out of the motor. After cleaning, lubricate the bushings at each end of the motor with a drop of light-weight electric motor oil.
- Shocks: Keep the oil level in the shocks full. Use only 100% pure silicon shock oil to prolong the life of the seals. If you are experiencing leakage around the top of the shock, inspect the bladder in the top cap for signs of damage or distortion from overtightening. If the bottom of the shock is leaking, then it is time for a rebuild. The Traxxas rebuild kit for two shocks is part #2362.
- Suspension: Periodically inspect the model for signs of damage such as bent or dirty suspension pins, bent turnbuckles, loose screws, and any signs of stress or bending. Replace components as needed.
- Driveline: Inspect the driveline for signs of wear such as worn drive yokes, dirty axle half shafts, and any unusual noise or binding. If a U-joint pops apart then it is time to replace the part. Remove the gear cover and inspect the spur gear for wear and check the tightness of set screws in the pinion gears. Tighten, clean, or replace components as needed.

Storage
When you are through running the model for the day, blow it off with compressed air or use a soft bristled paint brush to dust-off the vehicle. Always disconnect and remove the battery from the model whenever the model is stored. If the model will be stored for a long time, then also remove the batteries from the transmitter.

Always wear eye protection when using compressed air or spray cleaners and lubricants.
Your Traxxas transmitter has a programmable Multi-Function knob that can be set to control various advanced transmitter functions (set to Steering Sensitivity by default, see page 15). Accessing the programming menu is done by using the menu and set buttons on the transmitter and observing signals from the LED. An explanation of the menu structure follows on page 25. Experiment with the settings and features to see if they can improve your driving experience.

### Throttle Sensitivity (Throttle Exponential)
The Multi-Function knob can be set to control Throttle Sensitivity. Throttle Sensitivity works the same way as Steering Sensitivity as described on page 15, but applies the effect to the throttle channel. Only forward throttle is affected; brake/reverse travel remains linear regardless of the Throttle Sensitivity setting.

### Steering Percentage (Dual Rate)
The Multi-Function knob can be set to control the amount (percentage) of servo travel applied to steering. Turning the Multi-Function knob fully clockwise will deliver maximum steering throw; turning the knob counter-clockwise reduces steering throw (note: turning the dial counter-clockwise to its stop will eliminate all servo travel). Be aware that the steering End Point settings define the servo’s maximum steering throw. If you set Steering Percentage to 100% (by turning the Multi-Function knob fully clockwise), the servo will travel all the way to its selected end point, but not past it. Many racers set Dual Rate so they have only as much steering throw as they need for the track’s tightest turn, thus making the model easier to drive throughout the rest of the course. Reducing steering throw can also be useful in making a model easier to control on high-traction surfaces, and limiting steering output for oval racing where large amounts of steering travel are not required.

### Braking Percentage
The Multi-Function knob may also be set to control the amount of brake travel applied by the servo in a nitro-powered model. Electric models do not have a servo-operated brake, but the Braking Percentage function still operates the same way in electric models. Turning the Multi-Function knob full clockwise will deliver maximum brake throw; turning the knob counter-clockwise reduces brake throw (Note: Turning the dial counter-clockwise to its stop will eliminate all brake action).

### Throttle Trim
Setting the Multi-Function knob to serve as throttle trim will allow you to adjust the throttle’s neutral position to prevent unwanted brake drag or throttle application when the transmitter trigger is at neutral. Note: Your transmitter is equipped with a Throttle Trim Seek mode to prevent accidental runaways. See the sidebar for more information.

### Steering and Throttle End Points
The TQi transmitter allows you to choose the limit of the servo’s travel range (or its “end point”) independently for left and right travel (on the steering channel) and throttle/brake travel (on the throttle channel). This allows you to fine-tune the servo settings to prevent binding caused by the servo moving steering or throttle linkages (in the case of a nitro model) farther than their mechanical limits. The end point adjustment settings you select will represent what you wish to be the servo’s maximum travel; the Steering Percentage or Braking Percentage functions will not override the End Point settings.

### Steering and Throttle Sub-Trim
The Sub-Trim function is used to precisely set the neutral point of the steering or throttle servo in the event that simply setting the trim knob to “zero” does not completely center the servo. When selected, Sub-Trim allows finer adjustment to the servo output shaft’s position for precise setting of the neutral point. Always set the Steering Trim knob to zero before making final adjustment (if required) using Sub-Trim. If Throttle Trim has been previously adjusted, the Throttle Trim will need to be reprogrammed to “zero” before making final adjustment using Sub-Trim.

### Setting Lock
Once you’ve adjusted all of these settings the way you like them, you may want to disable the Multi-Function knob so none of your settings can be changed. This is especially handy if you operate multiple vehicles with a single transmitter via Traxxas Link™ Model Memory.

### Multiple Settings and the Multi-Function Knob
It is important to note that settings made with the Multi-Function knob are “overlaid” on top of each other. For example, if you assign the Multi-Function to adjust Steering Percentage and set it for 50%, then reassign the knob to control Steering Sensitivity, the transmitter will “remember” the Steering Percentage setting. Adjustments you made to Steering Sensitivity will be applied to the 50% steering throw setting you selected previously. Likewise, setting the Multi-Function knob to “disabled” will prevent the knob from making further adjustments, but the last setting of the Multi-Function knob will still apply.

### RAPTOR

---

**Starting Over: Restoring Factory Defaults**
When programming your TQi transmitter, you may feel the need to start over with a clean slate. Follow these simple steps to restore the factory settings:

1. Turn transmitter off.
2. Hold both MENU and SET.
3. Turn transmitter on.
4. Release MENU and SET.
   - The transmitter LED will blink red.
5. Press SET to clear settings.
   - The LED will turn solid green and the transmitter is restored to default.

---

**Throttle Trim Seek Mode**
When the Multi-Function knob is set to throttle trim, the transmitter remembers the throttle trim setting. If the throttle trim knob is moved from the original setting while the transmitter is off, or while the transmitter was used to control another model, the transmitter ignores the actual position of the trim knob. This prevents the model from accidentally running away. The LED on the face of the transmitter will rapidly blink green and the throttle trim knob (Multi-Function knob) will not adjust the trim until it is moved back to its original position saved in memory. To restore throttle trim control, simply turn the Multi-Function knob either direction until the LED stops blinking.

---

**TRAXXAS LINK MODEL MEMORY**
Traxxas Link Model Memory is an exclusive, patent-pending feature of the TQi transmitter. Each receiver that is bound to a new transmitter is saved in memory along with all the settings that you have selected. When the transmitter and any bound receiver are switched off, the transmitter automatically recalls the settings for that receiver. There is no need to manually select your vehicle from a list of model memory entries.
Model Lock
The Traxxas Link Model Memory feature can store up to twenty models (receivers) in its memory. If you bind a twenty-first receiver, Traxxas Link Model Memory will delete the “oldest” receiver from its memory (in other words, the model you used the longest time ago will be deleted). Activating Model Lock will lock the receiver in memory so it cannot be deleted. You may also bind multiple TQi transmitters to the same model making it possible to pick up any transmitter and any previously bound model in your collection and simply turn them on and drive. With Traxxas Link Model Memory, there is no need remember which transmitter goes with which model and there is never a need to have to select any model from a list of model memory entries. The transmitter and receiver do it all for you automatically.

To activate Model Lock:
1. Switch on the transmitter and receiver you wish to lock.
2. Press and hold MENU. Release when the status LED blinks green.
3. Press MENU three times. The status LED will blink green four times repeatedly.
4. Press SET. The status LED will blink green in single-flash intervals.
5. Press SET once. The status LED will blink red once repeatedly.
6. Press MENU once, the LED will blink red twice repeatedly.
7. Press SET, the LED will blink rapidly green. The memory is now locked.

To delete a model:
At some point, you may wish to delete a model you no-longer drive from the memory.
1. Switch on the transmitter and receiver you wish to delete.
2. Press and hold MENU. Release when the status LED blinks green.
3. Press MENU three times. The status LED will blink green four times repeatedly.
4. Press SET once. The status LED will blink green once repeatedly.
5. Press MENU once. The status LED will blink red twice repeatedly.
6. Press SET. The memory is now selected to be deleted. Press SET to delete the model. Press and hold MENU to return to driving mode.

Note: To unlock a memory, press SET twice at step 5. The LED will blink rapidly green to indicate the model is unlocked. To unlock all models, press MENU twice at step 6 and then press SET.

### TRANSMITTER LED CODES

<table>
<thead>
<tr>
<th>LED Color / Pattern</th>
<th>Name</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>•</td>
<td>Solid green</td>
<td>Normal Driving Mode</td>
</tr>
<tr>
<td>•</td>
<td>Normal Driving Mode</td>
<td>• Solid green</td>
</tr>
<tr>
<td>•</td>
<td>Slow red (0.5 sec on / 0.5 sec off)</td>
<td>Binding</td>
</tr>
<tr>
<td>•</td>
<td>Fast green 8 times</td>
<td>Menu setting accepted (on SET)</td>
</tr>
<tr>
<td>•</td>
<td>Fast red 8 times</td>
<td>• Fast red 8 times</td>
</tr>
<tr>
<td>•</td>
<td>Flashing fast green (0.1 sec on / 0.15 sec off)</td>
<td>Throttle Trim Seek Mode</td>
</tr>
<tr>
<td>•</td>
<td>Flashing medium red (0.25 sec on / 0.25 sec off)</td>
<td>Low Battery Alarm</td>
</tr>
<tr>
<td>•</td>
<td>Flashing fast red (0.125 sec on / 0.125 sec off)</td>
<td>Link Failure / Error</td>
</tr>
</tbody>
</table>

### Programming Patterns

- Counts out number (green or red) then pauses: Current menu position | See Menu Tree for more information.
- Fast green 8 times: Menu setting accepted (on SET)
- Fast red 8 times: Menu SET invalid | User error such as trying to delete a locked model.

### RECEIVER LED CODES

<table>
<thead>
<tr>
<th>LED Color / Pattern</th>
<th>Name</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>•</td>
<td>Solid green</td>
<td>Normal Driving Mode</td>
</tr>
<tr>
<td>•</td>
<td>Slow red (0.5 sec on / 0.5 sec off)</td>
<td>Binding</td>
</tr>
<tr>
<td>•</td>
<td>Flashing fast red (0.125 sec on / 0.125 sec off)</td>
<td>Fail-Safe / Low-Voltage Detect</td>
</tr>
</tbody>
</table>
Transmitter

Restoring Factory Defaults:

1. Press and hold MENU for 3 seconds to enter the menu tree.
2. Press SET to move across the menu tree and select options.
3. Press MENU twice. The red LED will blink three times repeatedly to indicate Steering Percentage has been selected.
4. Press SET to select. The green LED will blink in single intervals to indicate the Multi-Function knob.
5. Press MENU again will return you to the top.
6. Press and hold MENU until the green LED lights up. It will blink single intervals.

Note: The transmitter is “live” during programming so you can test the settings real time without having to exit the menu tree.

Below is an example of how to access a function in the menu tree. In the example, the user is setting the Multi-Function knob to control STEERING DUAL RATE (%):

1. Switch the transmitter on
2. Press and hold MENU until the green LED lights up. It will blink single intervals.
3. Press MENU twice. The red LED will blink three times repeatedly to indicate Steering Percentage has been selected.
4. Press SET to select. The green LED will blink in single intervals to indicate the Multi-Function knob.
5. Press MENU again will return you to the top.
6. Press and hold MENU until the green LED lights up. It will blink single intervals.

To set the Multi-Function knob to control STEERING DUAL RATE (%):

1. Switch the transmitter on
2. Press and hold MENU until the green LED lights up. It will blink in single intervals.
3. Press SET. The red LED will blink in single intervals to indicate Steering Percentage has been selected.
4. Press MENU twice. The red LED will blink three times repeatedly to indicate Steering Percentage has been selected.
5. Press SET to select. The green LED will blink in single intervals to indicate the Multi-Function knob.
6. Press and hold MENU to return to driving mode.

ADVANCED TUNING GUIDE

Press MENU to move through options. Press SET to select an option.

1. Steering Sensitivity (Expo) One Blink Red
2. Throttle Sensitivity (Expo) Two Blinks Red
3. Steering % (Dual Rate) Three Blinks Red
4. Braking % Four Blinks Red
5. Throttle Trim Five Blinks Red
6. Knob Disabled Six Blinks Red

Press MENU to move through options. Press SET to select an option.

1. Servo Reversing One Blink Red
2. Sub Trim Two Blinks Red
3. End Points Three Blinks Red
4. Reset End Points Four Blinks Red

Press MENU to move through options. Press SET to select an option.

1. Electric One Blink Red
2. Nitro Two Blinks Red
3. Traxxas-Link Four Blinks Green

Press MENU to move through options. Press SET to select an option.

1. Unlock One Blink Red
2. Lock Two Blinks Red
3. Unlock All Three Blinks Red

Press MENU to move through options. Press SET to select an option.
<table>
<thead>
<tr>
<th>Feature</th>
<th>Function</th>
<th>LED Behavior</th>
<th>MENU Command</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set Multi-Function knob for STEERING SENSITIVITY (Expo)</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>Set Multi-Function knob for THROTTLE SENSITIVITY (Expo)</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>Set Multi-Function knob for STEERING DUAL RATE (%)</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>Set Multi-Function knob for BRAKING PERCENTAGE (%)</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>Set Multi-Function knob for THROTTLE TRIM</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>To LOCK the Multi-Function knob</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>To REVERSE the direction of STEERING servo</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>To set the SUB TRIM of the STEERING servo</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>To set the END POINTS of the STEERING servo</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>To reset the END POINTS of STEERING servo to defaults</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>To REVERSE the direction of THROTTLE servo</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>To set the SUB TRIM of the THROTTLE servo</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>To set the END POINTS of the THROTTLE servo</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
<tr>
<td>To reset the END POINTS of THROTTLE servo to defaults</td>
<td>- Press/hold MENU green LED blinks</td>
<td>- red LED blinks</td>
<td>x8</td>
<td>- Press/hold MENU returns to driving mode</td>
</tr>
</tbody>
</table>

**MENU TREE FORMULAS**

To select functions and make adjustments to the TQi transmitter without referencing the menu tree, turn your transmitter on, find the function in the left column you wish to adjust, and simply follow the corresponding steps.

Always turn your transmitter on first.
Programming Your TQi Transmitter With Your Apple iPhone or iPod Touch

The Traxxas Docking Base (Part #6510 - sold separately) for the TQi transmitter installs in minutes to transform your iPhone® or iPod touch® into a powerful tuning tool that allows you to replace the transmitter’s button/LED programming system with an intuitive, high-definition, full-color graphical user interface.

Traxxas Link

The powerful Traxxas Link app (available in the Apple App Store) gives you complete control over the operation and tuning of your Traxxas model with stunning visuals and absolute precision. Install Traxxas Link telemetry sensors on the model, and Traxxas Link displays real-time data such as speed, RPM, temperature, and battery voltage.

Intuitive iPhone and iPod touch interface

Traxxas Link makes it easy to learn, understand, and access powerful tuning options. Control Drive Effects settings such as steering and throttle sensitivity; steering percentage; braking strength; and throttle trim by simply touching and dragging the sliders on the screen.

Real-Time Telemetry

When you equip your model with sensors, the Traxxas Link dashboard comes to life showing you speed, battery voltage, RPM, and temperature. Set threshold warnings and log maximums, minimums, or averages. Use the recording function to document your dashboard view, with sound, so that you can keep your eyes on your driving and not miss a single apex.

Manage up to 30 Models with Traxxas Link

The TQi radio system automatically keeps track of what vehicles it has bound to and what settings were used for each—up to 30 models total! Traxxas Link provides a visual interface to name the models, customize their settings, attach profiles, and lock them into memory. Simply choose a model and any previously bound transmitter, power them up, and start having fun.

“Made for iPod” and “Made for iPhone” mean that an electronic accessory has been designed to connect specifically to iPod and iPhone, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod and iPhone may affect wireless performance.

iPhone and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries.