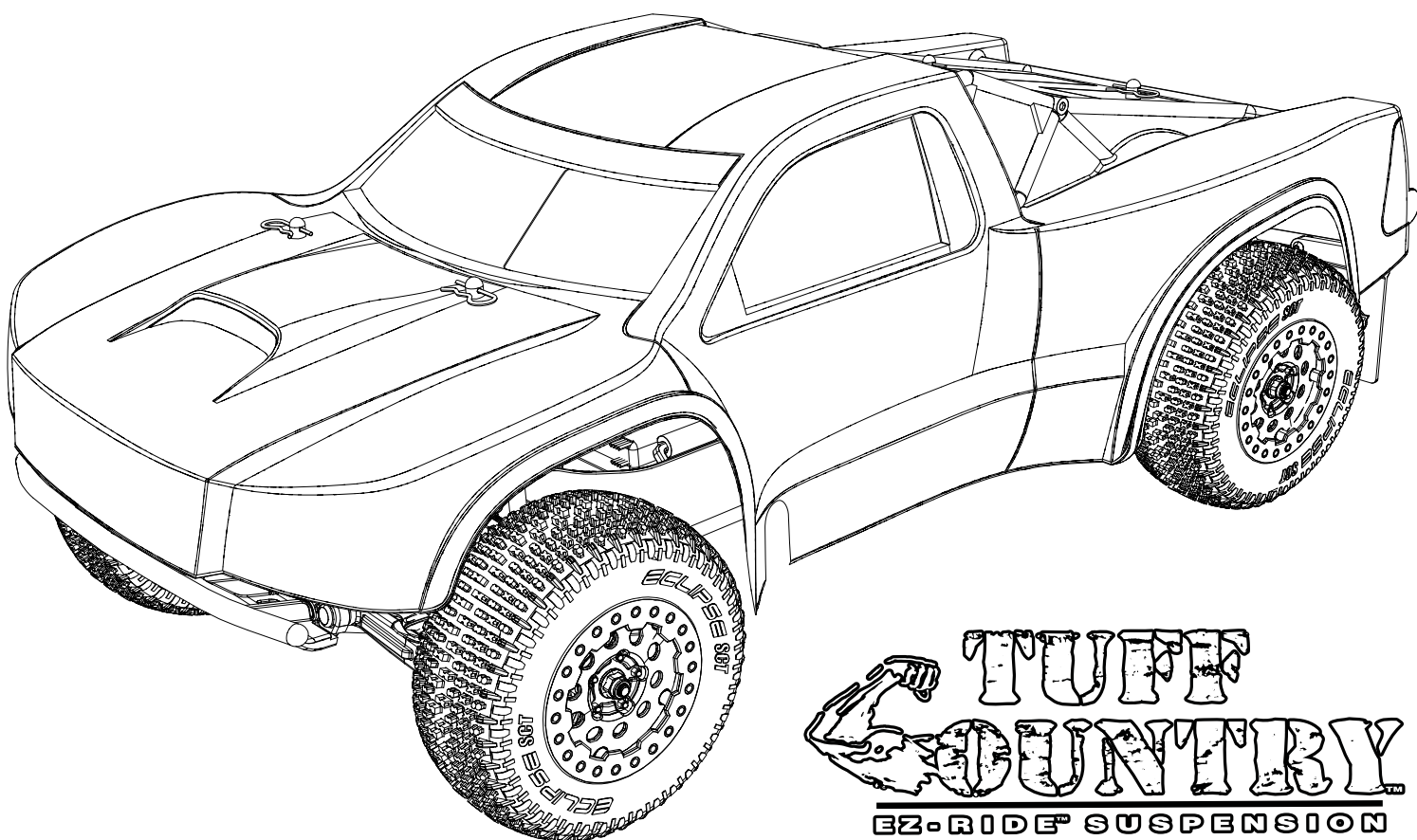


**RTR**  
READY-TO-RUN

# XX-SCT

BRUSHLESS



**TUFF**  
**COUNTRY**  
EZ-RIDE™ SUSPENSION

INSTRUCTION MANUAL  
BEDIENUNGSANLEITUNG  
MANUEL D'UTILISATION  
MANUALE DI ISTRUZIONI  
MANUAL DE INSTRUCCIONES



Before operating this vehicle, please read all printed materials thoroughly.  
Horizon Hobby is not responsible for inadvertent errors in this manual.

## NOTICE

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Horizon Hobby, Inc. For up-to-date product literature, visit [horizonhobby.com](http://horizonhobby.com) and click on the support tab for this product.

## MEANING OF SPECIAL LANGUAGE

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

**NOTICE:** Procedures, which if not properly followed, create a possibility of physical property damage AND a little or no possibility of injury.

**CAUTION:** Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.

**WARNING:** Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury.



**WARNING:** Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.

This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not use with incompatible components or alter this product in any way outside of the instructions provided by Horizon Hobby, Inc. This manual contains instructions for

safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.



### WARNING AGAINST COUNTERFEIT PRODUCTS

Always purchase from a Horizon Hobby, Inc. authorized dealer to ensure authentic high-quality Spektrum product. Horizon Hobby, Inc. disclaims all support and warranty with regards, but not limited to, compatibility and performance of counterfeit products or products claiming compatibility with DSM or Spektrum.

**Age Recommendation: Not for children under 14 years. This is not a toy.**

## SAFETY PRECAUTIONS AND WARNINGS

- Always keep a safe distance in all directions around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control.
- Always operate your model in open spaces away from full-size vehicles, traffic and people.
- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always keep all chemicals, small parts and anything electrical out of the reach of children.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- Never place any portion of the model in your mouth as it could cause serious injury or even death.
- Never operate your model with low transmitter batteries.

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## REGISTER YOUR LOSI PRODUCT ONLINE

Register your vehicle now and be the first to find out about the latest option parts, product updates and more. Click on the Support tab at [WWW.LOSI.COM](http://WWW.LOSI.COM) and follow the product registration link to stay connected.

## COMPONENTS

- 1/10-Scale Tuff Country XXX-SCT Brushless RTR
- Spektrum™ DX2L 2.4GHz DSM® Radio System
- Dynamite® Tazer™ Waterproof 45A Sensorless Brushless ESC
- Dynamite Tazer 3300Kv 4-Pole Brushless Motor
- 313WP High-Torque Waterproof Servo
- Dynamite Speedpack™ Silver 2S 7.4V 3000mAh 20C Li-Po Battery
- Dynamite 10W Li-Po AC Balance Charger
- 4 AA batteries (for transmitter)

## RECOMMENDED ACCESSORIES

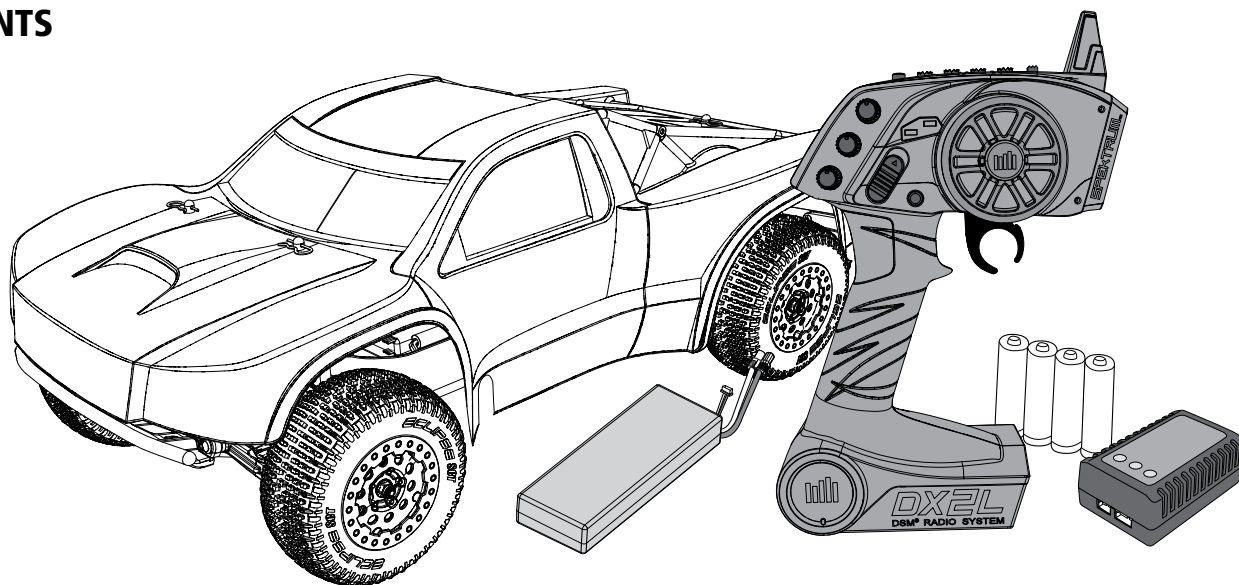
- Hobby grade knife
- Needle nose pliers
- Side cutting pliers
- Safety goggles
- Soldering iron
- Double-sided tape (LOSA4004)
- CA glue (LOSA7880 or LOSA7881)

## TOOLS INCLUDED

- 2-Way Wrench
- 4 L-Shaped Hex Wrenches
- Flat Turnbuckle Wrench

Use only Losi® tools or other high-quality tools. Use of inexpensive tools can cause damage to the small screws and parts used on this type of model.

## CONTENTS



## WATER-RESISTANT VEHICLE WITH WATERPROOF ELECTRONICS

Your new Horizon Hobby vehicle has been designed and built with a combination of waterproof and water-resistant components to allow you to operate the product in many “wet conditions”, including puddles, creeks, wet grass, snow and even rain.

While the entire vehicle is highly water-resistant, it is not completely waterproof and your vehicle should NOT be treated like a submarine. The various electronic components used in the vehicle, such as the Electronic Speed Control (ESC), servo(s) and receiver are waterproof, however, most of the mechanical components are water-resistant and should not be submerged.

Metal parts, including the bearings, hinge pins, screws and nuts, as well as the contacts in the electrical cables, will be susceptible to corrosion if additional maintenance is not performed after running in wet conditions. To maximize the long-term performance of your vehicle and to keep the warranty intact, the procedures described in the “Wet Conditions Maintenance” section below must be performed regularly if you choose to run in wet conditions. If you are not willing to perform the additional care and maintenance required, then you should not operate the vehicle in those conditions.



**CAUTION:** Failure to exercise caution while using this product and complying with the following precautions could result in product malfunction and/or void the warranty.

### GENERAL PRECAUTIONS

- Read through the wet conditions maintenance procedures and make sure that you have all the tools you will need to properly maintain your vehicle.
- Not all batteries can be used in wet conditions. Consult the battery manufacturer before use. Caution should be taken when using Li-Po batteries in wet conditions.
- Most transmitters are not water-resistant. Consult your transmitter’s manual or the manufacturer before operation.
- Never operate your transmitter or vehicle where lightning may be present.
- Do not operate your vehicle where it could come in contact with salt water (ocean water or water on salt-covered roads), contaminated or polluted water. Salt water is very conductive and highly corrosive, so use caution.
- Even minimal water contact can reduce the life of your motor if it has not been certified as water-resistant or waterproof. If the motor becomes excessively wet, apply very light throttle until the water is mostly removed from the motor. Running a wet motor at high speeds may rapidly damage the motor.

## QUICK START

Please read the entire manual to gain a full understanding of the Tuff Country XXX-SCT RTR vehicle, fine-tuning the setup and performing maintenance.

1. Read the safety precautions found in this manual.
2. Remove the battery from the vehicle and charge it. Refer to the included charging warnings and instructions for battery charging information.
3. Install the AA batteries in the transmitter. Only use alkaline or rechargeable batteries.
4. Install the fully charged battery in the vehicle.
5. Power ON the transmitter and then the vehicle. Always power the transmitter ON before the vehicle and power it OFF after the vehicle has been powered OFF.
6. Check the steering and throttle control directions. Verify that the servos are moving in the correct direction.
7. Drive your vehicle.
8. Perform any necessary maintenance.

- Driving in wet conditions can reduce the life of the motor. The additional resistance of operating in water causes excess strain. Alter the gear ratio by using a smaller pinion or larger spur gear. This will increase torque (and motor life) when running in mud, deeper puddles, or any wet conditions that will increase the load on the motor for an extended period of time.

### WET CONDITIONS MAINTENANCE

- Drain any water that has collected in the tires by spinning them at high speed. With the body removed, place the vehicle upside down and pull full throttle for a few short bursts until the water has been removed.



**CAUTION:** Always keep hands, fingers, tools and any loose or hanging objects away from rotating parts when performing the above drying technique.

- Remove the battery pack(s) and dry the contacts. If you have an air compressor or a can of compressed air, blow out any water that may be inside the recessed connector housing.
- Remove the tires/wheels from the vehicle and gently rinse the mud and dirt off with a garden hose. Avoid rinsing the bearings and transmission.

**NOTICE:** Never use a pressure washer to clean your vehicle.

- Use an air compressor or a can of compressed air to dry the vehicle and help remove any water that may have gotten into small crevices or corners.
- Spray the bearings, drive train, fasteners and other metal parts with WD-40® solvent or any other water-displacing light oil. Do not spray the motor.
- Let the vehicle air dry before you store it. Water (and oil) may continue to drip for a few hours.
- Increase the frequency of disassembly, inspection and lubrication of the following:
  - Front and rear axle hub assembly bearings.
  - All transmission cases, gears and differentials.
  - Motor—clean with an aerosol motor cleaner and re-oil the bushings with lightweight motor oil.



## CHARGING WARNINGS

**⚠ WARNING:** Failure to exercise caution while using this product and comply with the following warnings could result in product malfunction, electrical issues, excessive heat, FIRE, and ultimately injury and property damage.

- Never leave the charger and battery unattended during use.
- Never attempt to charge dead, damaged or wet battery packs.
- Never attempt to charge a battery pack containing different types of batteries.
- Never allow children under 14 years of age to charge battery packs.
- Never charge batteries in extremely hot or cold places or place in direct sunlight.
- Never charge a battery if the cable has been pinched or shorted.
- Never connect more than one battery pack to this charger at a time.

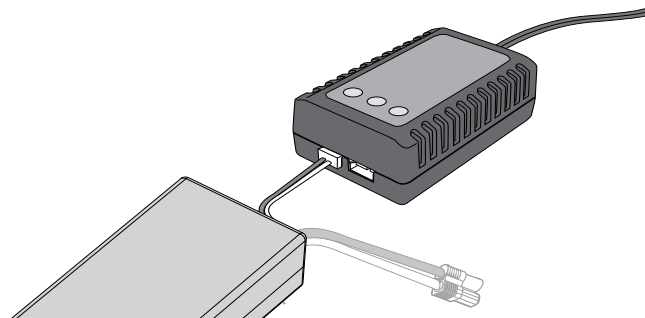
- Never connect the charger if the power cable has been pinched or shorted.
- Never attempt to dismantle the charger or use a damaged charger.
- Never reverse the positive and negative terminals.
- Always use only rechargeable batteries designed for use with this type of charger.
- Always inspect the battery before charging.
- Always keep the battery away from any material that could be affected by heat.
- Always monitor the charging area and have a fire extinguisher available at all times.
- Always end the charging process if the battery becomes hot to the touch or starts to change form (swell) during the charge process.
- Always disconnect the battery after charging, and let the charger cool between charges.
- Always charge in a well-ventilated area.
- Always terminate all processes and contact Horizon Hobby if the product malfunctions.

## CHARGING THE BATTERY

Charge only batteries that are cool to the touch and are not damaged. Inspect the battery to make sure it is not damaged e.g., swollen, bent, broken or punctured.

1. Connect the AC power cord to the power slot on the charger, then connect the other end of the power cord to an AC power source.
2. The three LEDs will turn green when the charger is connected to the AC power source.
3. Connect the balance connector of the battery to the proper charge port on the charger (the 3S charge port has 4 pins and the 2S charge port has 3 pins).
4. The three LEDs will turn red, indicating the battery is charging.
5. When the charging of one cell is complete, the corresponding LED turns green.
6. Once the battery is fully charged, all three LEDs will turn green.
7. Disconnect the balance connector from the charger.
8. Disconnect the AC power cord from the AC power source.

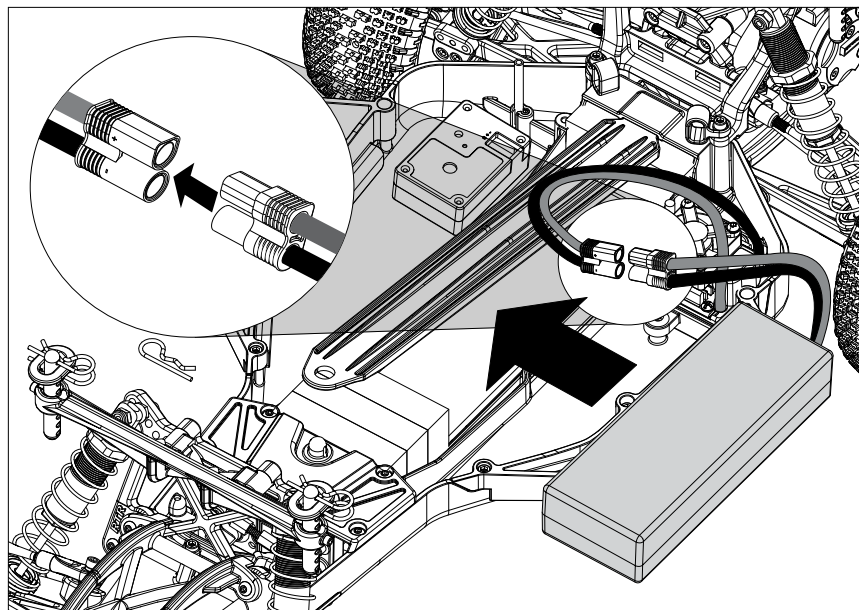
**⚠ CAUTION:** Always disconnect a Li-Po battery from the charger to avoid over-discharging the battery. Batteries discharged to a voltage lower than the lowest approved voltage may become damaged, resulting in loss of performance and potential fire when batteries are charged.



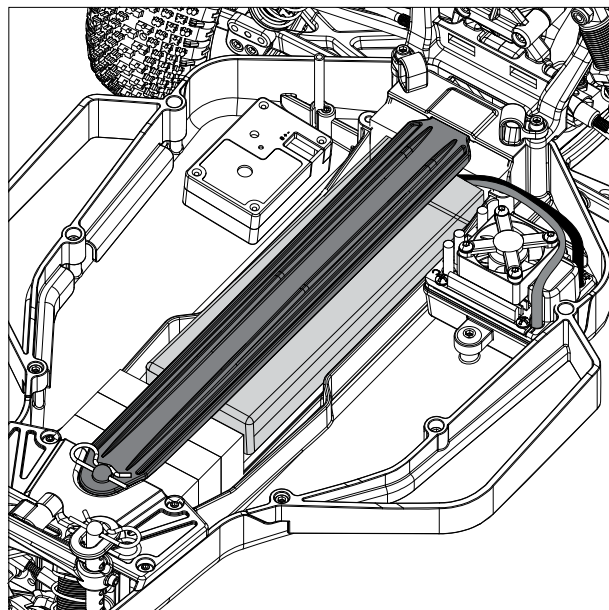
**⚠ CAUTION:** Never exceed the recommended charge rate of the battery pack.

**⚠ CAUTION:** If at any time batteries become damaged, hot, or begin to balloon or swell, discontinue charging (or discharging) immediately. Quickly and safely disconnect the charger. DO NOT continue to handle, attempt to use or ship the batteries. Failure to follow these procedures can cause damage to batteries, personal property or cause serious injury.

## REMOVING AND INSTALLING THE BATTERY

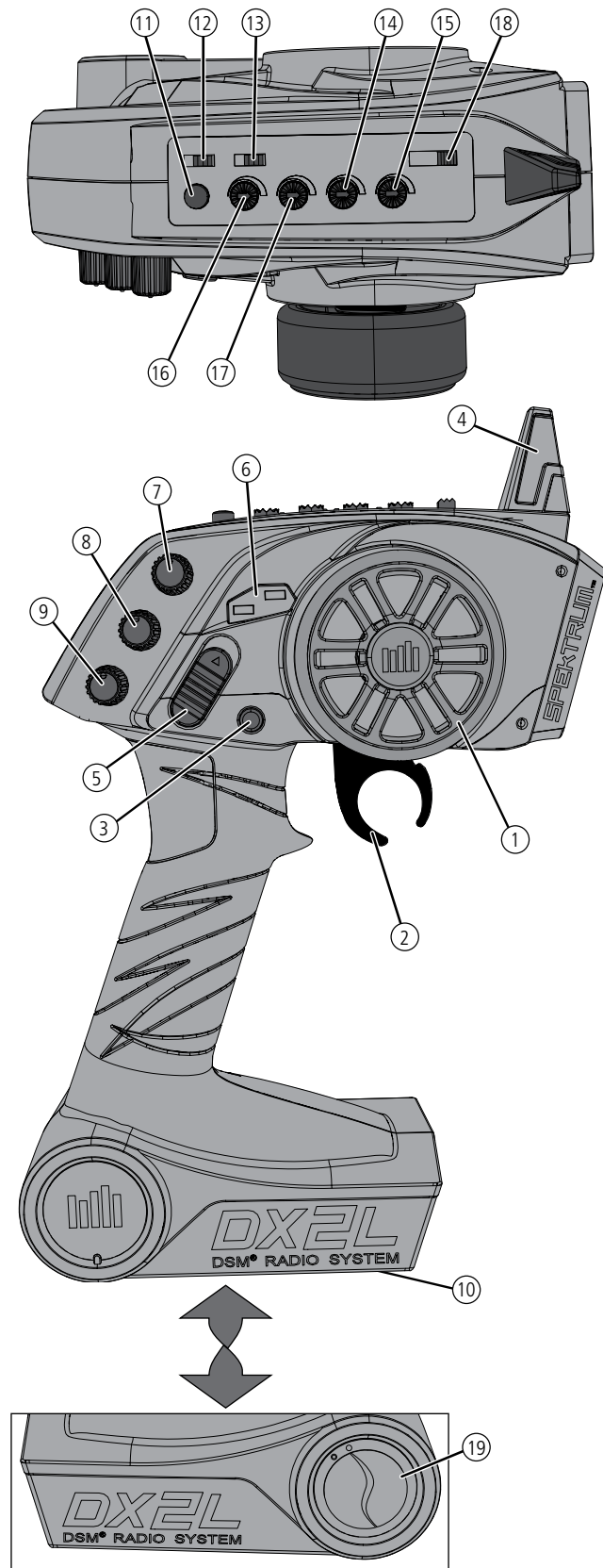


1. Remove the clip from the battery strap.
2. Lift the strap and pull forward.
3. Remove the battery from the vehicle.
4. Charge the battery.
5. Install the fully charged battery in the vehicle.
6. Ensure the ESC is powered OFF.
7. Connect the battery to the ESC.



8. Reinstall the battery strap and clip. The battery strap has a flat side and a ribbed side. The ribbed side should face the battery.
9. Power ON the transmitter, then the vehicle.

## SPEKTRUM DX2L RADIO SYSTEM



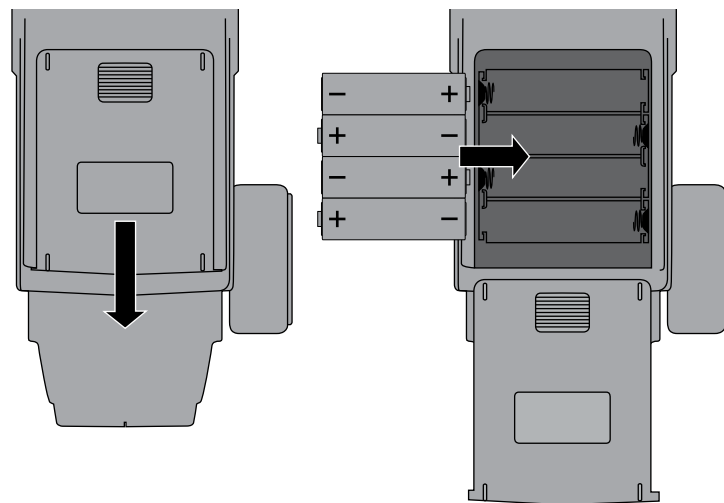
1. **Steering Wheel** Controls direction (left/right) of the model
2. **Throttle Trigger** Controls speed and direction (forward/brake/reverse) of the model
3. **R.O.S.S. Button** Used with vehicles featuring the R.O.S.S. Remote Start System
4. **Antenna** Transmits the signal to the model
5. **ON/OFF Switch** Turns the power ON/OFF for the transmitter
6. **Indicator Lights**
  - Solid green (right) light—indicates adequate battery power
  - Flashing green light—indicates the battery voltage is critically low. Replace batteries
  - Solid red (left) light—indicates good signal strength. When the red light fades, signal strength is weakening
7. **ST. Trim** Adjusts the “hands off” direction of the model
8. **TH. Trim** Adjusts the motor speed to stop at neutral
9. **Steering Dual Rate** Adjusts the amount the front wheels move when the steering wheel is turned left and right
10. **Battery Cover** Covers and holds the batteries that power the transmitter
11. **BIND Button** Puts the transmitter into Bind Mode
12. **ST. REV** Reverses the function of the steering when the wheel is turned left or right
13. **TH. REV** Reverses the function of the speed control when pulled back or pushed forward
14. **TH-F Forward Endpoint**—Adjusts the amount of full throttle
15. **TH-B Brake Endpoint**—Adjusts the amount of full brake
16. **ST-L Steering Left Endpoint**—Adjusts the amount of left steering travel
17. **ST-R Steering Right Endpoint**—Adjusts the amount of right steering travel
18. **Throttle Limiter** Limits the throttle to Low (50%), Medium (75%) or High (full throttle is equal to the high Throttle Travel position)
19. **Bind Plug Compartment**

### INSTALLING THE TRANSMITTER BATTERIES

1. Push in the battery cover a small amount to release the retaining tab, then remove the cover.
2. Install 4 AA batteries, taking care to align the battery polarity to the diagram in the transmitter's battery case.
3. Carefully reinstall the battery cover by aligning the tabs with the slots on the transmitter.



**CAUTION:** Do not remove the transmitter batteries while the model is powered on or while operating, as a loss of model control, damage or injury can result.



For more information on the transmitter, go to [www.horizonhobby.com](http://www.horizonhobby.com) and click on the support tab for the Spektrum DX2L to download the instruction manual.

## TRANSMITTER AND RECEIVER BINDING

Your Spektrum DX2L comes prebound to the vehicle.

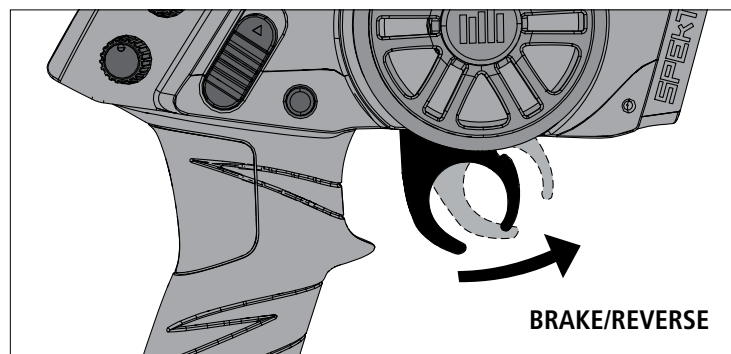
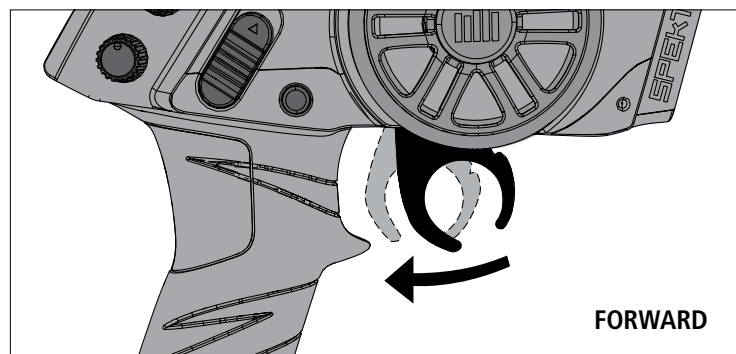
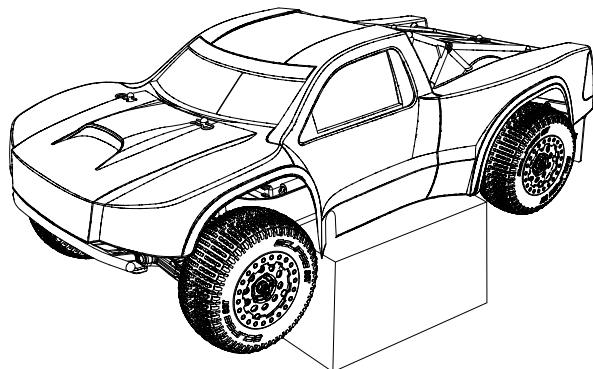
1. Make sure the transmitter and vehicle are both powered OFF.
2. Install a bind plug in the receiver battery/bind port. You do not need to remove any of the other plugs to re-bind.
3. With the bind plug installed, power ON the vehicle. The receiver LED will flash green.
4. With the steering and throttle in the desired preset failsafe positions (neutral), press and hold the bind button and power ON the transmitter. The transmitter's red LED will flash after 4 seconds when the transmitter is in bind mode. Release the bind button once the red LED flashes. Continue holding the failsafe positions until the binding process is complete.

5. When the receiver binds to the transmitter, the receiver LED will turn solid.
6. Power OFF the vehicle, then the transmitter.
7. Disconnect the battery from the ESC. Remove the bind plug from the receiver.
8. Safely store the bind plug in the bind plug compartment in the transmitter.
9. The receiver will keep the binding to the transmitter until another binding is done.

If you encounter problems, obey binding instructions and refer to the transmitter troubleshooting guide for other instructions. If needed, contact the appropriate Horizon Product Support office.

## CONTROL TEST

Perform a control test with the vehicle wheels off the ground. If the wheels rotate after the vehicle is powered ON, adjust the "TH. Trim" knob until they stop. To make the wheels move forward, pull the trigger. To reverse them, wait for the wheels to stop, then push the trigger. When moving forward, the wheels should maintain a straight line without any steering wheel input. If not, adjust the "ST. Trim" knob, so the wheels maintain a straight line without having to turn the steering wheel.



## BEFORE RUNNING YOUR VEHICLE

1. Break in the differential. While holding the chassis with only the left rear tire firmly on the ground, give the vehicle about 1/8 throttle for 30 seconds. The right rear tire should spin freely during this time. Do this with only the right rear tire firmly on the ground, allowing the left to spin freely. Repeat this 2–3 times.
2. Check for free suspension movement. All suspension arms and steering components should move freely. Any binds will cause the vehicle to handle poorly.
3. Set the ride height. Set the ride height of your truck with all components installed so that the bottom of the chassis is 29.5mm from the ground in the front and 29.0mm in the rear by adjusting the shock collars.
4. Set the camber. Adjusting the camber tie rod length changes the camber. Set the front tires to have 1 degree of negative camber at ride height. Set the rear tires to have 1.5 degrees of negative camber at ride height.
5. Set the front toe-in. Adjust the steering tie rods so that when the servo is centered on the transmitter, the front tires are both pointing straight.
6. Charge the battery.
7. Check the calibration of the ESC. If recalibration is required, follow the setup instructions.
8. Check the steering endpoints of the vehicle by turning the steering wheel with the front tires off the ground. When turning left, the left front tire should reach full steering throw as the steering wheel reaches the end of its motion (and vice-versa for turning right). If it does not, use the steering endpoint dials to adjust.

## DRIVING PRECAUTIONS

- Maintain sight of the vehicle at all times.
- Routinely inspect the vehicle for loose wheel hardware.
- Routinely inspect the steering assembly for any loose hardware. Driving the vehicle off-road can cause fasteners to loosen over time.
- Do not drive the vehicle in tall grass. Doing so can damage the vehicle or electronics.
- Stop driving the vehicle when you notice a lack of power. Driving the vehicle when the battery is discharged can cause the receiver to power off. If the receiver loses power, you will lose control of the vehicle. Damage due to an over-discharged Li-Po battery is not covered under warranty.



**CAUTION:** Do not discharge a Li-Po battery below 3V per cell. Batteries discharged to a voltage lower than the lowest approved voltage may become damaged, resulting in loss of performance and potential fire when batteries are charged.

- Do not apply forward or reverse throttle if the vehicle is stuck. Applying throttle in this instance can damage the motor or ESC.
- After driving the vehicle, allow the electronics to cool before driving the vehicle again.

## RUN TIME

The largest factor in run time is the capacity of the battery pack. A larger mAh rating increases the amount of run time experienced.

The condition of a battery pack is also an important factor in both run time and speed. The battery connectors may become hot during driving. Batteries will lose performance and capacity over time.

Driving the vehicle from a stop to full speed repeatedly will damage the batteries and electronics over time. Sudden acceleration will also lead to shorter run times.

### TO IMPROVE RUN TIMES

- Clean and oil the bearings often. If the bearings are dirty, they will increase friction and cause reduced performance.
- Keep your vehicle clean and maintained.
- Allow more airflow to the ESC and motor.
- Change the gearing to a lower ratio. A lower ratio decreases the operating temperature of the electronics. Use a smaller pinion gear or larger spur gear to lower the gear ratio.
- Use a battery pack with a higher mAh rating.

## TUNING, ADJUSTING & MAINTAINING YOUR VEHICLE

- Examine your vehicle on a regular basis.
- Use a brush to remove dirt and dust.
- Look for damage to the suspension arms and other molded parts.
- Re-glue the tires to the wheels, if necessary.
- Clean and oil all wheel bearings.
- Use suitable tools to tighten fasteners.
- Make sure the camber and steering linkages are not bent. Replace any bent linkages.
- Adjust the toe and camber settings, if necessary.
- Remove the shocks and inspect them for damage. Rebuild the shocks if oil is leaking.
- Inspect the electronics and batteries for exposed wires. Repair exposed wires with shrink-wrap, or replace the wire.
- Make sure the ESC and receiver are secure on the chassis. Replace the double-sided tape, if necessary.
- Power ON the transmitter. If the green LED is dim or off, replace the AA batteries in your transmitter.
- Check the spur gear and pinion gear for wear.

## SERVICE/REPAIR

If any problems other than those covered in this manual arise, please call the appropriate electronics service department. Refer to the Warranty and Service Information section for the appropriate department to contact.

### CLEANING

Performance can be hindered if dirt gets in any of the moving suspension parts. Use compressed air, a soft paintbrush or a toothbrush to remove dust or dirt. Avoid using solvents or chemicals, as they can actually wash dirt into the bearings or moving parts, as well as cause damage to the electronics.



# DYNAMITE TAZER WATERPROOF 45A SENSORLESS BRUSHLESS ESC (DYN4940)

## SPECIFICATIONS

Type	Sensorless Brushless/Waterproof
Constant/Peak	45A/290A
Resistance	0.0012 Ohm
Function	Forward Only with Brake Forward/Reverse with Brake
Operation	Proportional forward, proportional reverse with braking delay
Battery Type/Input Voltage	2- to 3-cell Li-Po/Li-Fe 4- to 9-cell Ni-MH/Ni-Cd
BEC Output	6V/3A
Overload Protection	Thermal
Dimensions (LxWxH)	1.89 x 1.39 x 1.39 in (48 x 35.2 x 35.2mm)
Weight	2.61 oz (74 g) with wires

## ESC LED STATUS

- No ESC LEDs will glow when there is no throttle input from the transmitter.
- The red ESC LED glows when there is any throttle input from the transmitter.

## AUDIBLE WARNING TONES

- Input voltage** The ESC checks the input voltage when it is powered ON. If a voltage problem is detected, the ESC continuously sounds 2 beeps with a 1 second pause (xx-xx-xx). Power OFF the ESC and ensure the connections are secure and that the battery power is not too low for safe operation.
- Radio connection** The ESC checks radio signal input when it is powered ON. If a problem is detected, the ESC continuously sounds 1 beep with a 2 second pause (x--x--x). Power OFF the ESC and ensure the radio system is operating correctly.

## ESC CALIBRATION PROCEDURE

Ensure proper ESC function by calibrating the ESC to your transmitter inputs.

- Power OFF the ESC.
- Ensure your transmitter is powered ON, the throttle is not reversed, the throttle trim is neutral and the throttle travel range is at 100%.
- Press the SET button while powering ON the ESC. Release the button as soon as the green LED starts to flash.
- Calibrate the throttle points by pressing the SET button once after each step.
  - Neutral (1 flash)—leave the throttle at rest, untouched
  - Full throttle (2 flashes)—pull the throttle fully back
  - Full brake/reverse (3 flashes)—push the throttle fully forward
- The motor vibrates for 3 seconds after the last step is completed.

## ESC FUNCTIONS AND MODES

The ESC includes programming options so you can adjust the way your vehicle performs. Refer to the included settings table to adjust the ESC for your driving conditions.

## ESC PROGRAMMING PROCEDURE

Programming is accomplished using the SET button on the ON/OFF switch.

- Connect a fully charged battery to the ESC.
- Power ON the ESC.
- Hold the SET button for 1 second until the green LED blinks, then release the SET button to enter programming mode.
- Press and release the SET button as needed to get to the desired menu option (the green LED will blink corresponding to the menu item number).
- When at the desired menu item, hold the SET button for 3 seconds until the red LED blinks.
- Press the SET button to move among the settings based on how many times the red LED blinks (Refer to the table for more information).
- Save the setting by holding the SET button for 3 seconds.
- Power OFF the ESC and repeat the instructions above to change other settings.

**Tip:** If desired, the ESC programming can be returned to default settings by powering ON the ESC and holding the SET button for 5 seconds.

The black-shaded setting is the factory default.

PROGRAMMABLE ITEMS	PROGRAMMABLE VALUE							
	1	2	3	4	5	6	7	8
1 Running Mode	Forward with Brake	Forward/Reverse with Brake						
2 Drag Brake Force	0%	5%	10%	15%	20%	25%	30%	40%
3 Low Voltage Cutoff	non-protection	2.6 V/Cell	2.8 V/Cell	3.0 V/Cell	3.2 V/Cell	3.4 V/Cell		
4 Start Mode (Punch)	Level 1	Level 2	Level 3	Level 4				
5 Max Brake Force	25%	50%	75%	100%				

**NOTICE:** Always disconnect the battery from the ESC when you have finished operating your vehicle. The ESC switch only controls power to the receiver and servos. The ESC will continue to draw current when connected to the battery, resulting in possible damage to the battery through over-discharge.

## DESCRIPTIONS

### 1. Running Mode

- Forward Only with Brake*  
Intended for competition use, this mode allows only forward and brake controls.
- Forward/Reverse with Brake*  
This mode is the basic all-around mode, allowing forward, reverse and brake controls. To engage reverse while moving forward, apply the brake until the vehicle has come to a complete stop, release brake, then apply the brake again. While braking or in reverse, engaging the throttle will result in the vehicle immediately accelerating forward.

### 2. Drag Brake Force

Adjusts the amount of brake automatically applied when the throttle is returned to the neutral position. This simulates the engine braking effect of a full-scale vehicle, allowing improved turn-in and your vehicle's general response to controls.

### 3. Low Voltage Cutoff

This function helps to prevent battery over-discharge. The ESC continuously monitors the battery's voltage. If the voltage falls below the voltage threshold for 2 seconds, the output power shuts off and the red LED flashes twice repeatedly.

The cutoff threshold calculation is based on individual Li-Po cell voltage. For Ni-MH batteries, if the voltage battery pack is higher than 9.0V, it will be treated as a 3-cell Li-Po battery pack; if it is lower than 9.0V, it will be treated as a 2-cell Li-Po battery pack. Example: for a 8.0V Ni-MH battery pack used with a 2.6V/cell threshold, it will be treated as a 2-cell Li-Po battery pack and the low-voltage cut-off threshold will be 5.2V (2.6x2=5.2).

### 4. Start Mode (Punch)

Sets the initial throttle punch when the car accelerates. Level 1 gives a very soft initial acceleration and level 4 gives a stronger initial acceleration.

### 5. Max Brake Force

Adjusts the maximum braking force. A higher value provides stronger braking, but can also cause the wheels to lock, resulting in loss of control of the car.



# DYNAMITE TAZER 3300KV 4-POLE BRUSHLESS MOTOR (DYN4942)

## PRECAUTIONS

- Never touch moving parts.
- Never disassemble while the batteries are installed.
- Always let parts cool before touching.

## ADJUSTING THE SLIPPER

Turn the 1/4" (3mm) adjustment nut clockwise (to the right) to reduce the slip or counterclockwise (to the left) to increase the slip.

## GEARING

Your vehicle has been equipped with the optimal gearing for the stock platform. It offers an ideal balance between speed, power and efficiency. Should you decide to customize your vehicle with optional batteries or motors, it may be necessary for you to change the pinion or spur gear.

Installing a pinion gear with less teeth or a spur gear with more teeth will provide greater torque but will reduce top speed. Likewise, a pinion gear with more teeth or a spur gear with fewer teeth will reduce torque and increase top speed. Care should be taken when installing larger pinion gears as this can "overgear" the vehicle, resulting in overheating of the motor and ESC. When testing different gearing options, pay close attention to the temperature of the motor and speed control to ensure you are operating within the temperature range of the components. The motor or ESC should never be so hot that it cannot be touched. If temperatures are too hot, a different gearing combination with a lower pinion gear and/or higher spur gear is suggested.

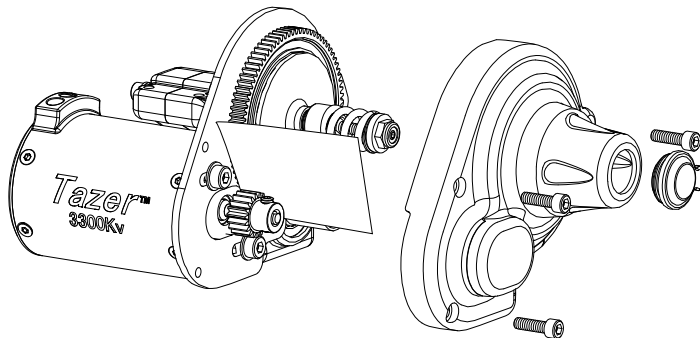
## CHANGING THE PINION GEAR/GEAR RATIO

1. Unscrew the gear cover screws and remove the gear cover.
2. Loosen the motor screws and slide the motor back.
3. Loosen the set screw and remove the installed pinion gear.
4. Place the new pinion on the end of the motor shaft so the set screw is located over the flat on the shaft.
5. Position it so the teeth line up with the spur gear and secure the pinion by tightening the set screw.
6. Set the gear mesh.
7. Reinstall the gear cover.

## SETTING THE GEAR MESH

The gear mesh has already been set at the factory. Setting it is only necessary when changing motors or gears.

Proper gear mesh (how gear teeth meet) is important to the performance of the vehicle. When the gear mesh is too loose, the spur gear could be damaged by the pinion gear of the motor. If the mesh is too tight, speed could be limited and the motor and ESC will overheat.



1. Unscrew the gear cover screws and remove the gear cover.
2. Loosen the motor screws and slide the motor back.
3. Put a small piece of paper between the pinion and spur gears.
4. Push the gears together while tightening the motor screws.
5. Remove the paper. Check the mesh at 3–5 different locations around the spur gear for a small amount of movement.
6. Reinstall the gear cover.

## TROUBLESHOOTING GUIDE

If after reading below you cannot resolve your problem, contact the appropriate Horizon product support center.

### STEERING SERVO OPERATES BUT THE MOTOR DOES NOT RUN

- Reprogram the ESC by following the programming instructions.
- Confirm the ESC is properly connected to the throttle channel on the receiver.
- Damaged motor: Test motor independently, repair or replace as needed.
- Vehicle battery voltage is low: Charge as needed.
- ESC overload protection is enabled: Check motor and connections.
- Transmission is damaged: Check transmission gears, spur gear and pinion gear for damage.

### STEERING AND MOTOR DO NOT FUNCTION

- Servo and ESC are not properly connected to the receiver: Check polarity of the connectors to the receiver.
- Transmitter batteries or vehicle battery pack discharged: Recharge or replace as needed.
- Transmitter and receiver have become unbound. Refer to the Transmitter and Receiver Binding section to re-bind.

### FULL SPEED NOT ATTAINABLE

- ESC programmed incorrectly: Reprogram the ESC.
- Check battery connectors for damage.
- Vehicle battery is weak: Recharge vehicle battery.

### VEHICLE WILL NOT REVERSE

- Confirm the throttle trim is at neutral.
- Confirm the ESC is not in Forward Only mode.
- ESC is not calibrated correctly: Reprogram the ESC.

### SPUR GEAR IS DAMAGED REPEATEDLY

- Improper gear mesh.
- Slipper clutch is not adjusted correctly.

### MOTOR STARTS RUNNING AS SOON AS THE BATTERY IS CONNECTED

- Always power ON the transmitter before powering ON the vehicle.
- ESC is damaged and needs to be replaced.
- Throttle trim is adjusted incorrectly.

### MOTOR SLOWS BUT WILL NOT STOP

- Throttle trim is adjusted incorrectly.
- ESC program does not match transmitter: Reprogram the ESC.

### REDUCED RADIO RANGE

- Electrical noise from the motor: Move the receiver away from ESC, motor and wiring.
- Transmitter batteries are weak: Replace AA batteries.

### TRANSMITTER DOES NOT POWER ON

- Confirm the AA batteries are installed correctly.
- Replace AA batteries in the transmitter.

## LIMITED WARRANTY

### WHAT THIS WARRANTY COVERS

Horizon Hobby, Inc. ("Horizon") warrants to the original purchaser that the product purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase.

### WHAT IS NOT COVERED

This warranty is not transferable and does not cover (i) cosmetic damage, (ii) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (iii) modification of or to any part of the Product, (iv) attempted service by anyone other than a Horizon Hobby authorized service center, (v) Product not purchased from an authorized Horizon dealer, or (vi) Product not compliant with applicable technical regulations.

OTHER THAN THE EXPRESS WARRANTY ABOVE, HORIZON MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

### PURCHASER'S REMEDY

Horizon's sole obligation and purchaser's sole and exclusive remedy shall be that Horizon will, at its option, either (i) service, or (ii) replace, any Product determined by Horizon to be defective. Horizon reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Horizon. Proof of purchase is required for all warranty claims. SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

### LIMITATION OF LIABILITY

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF HORIZON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the Product, purchaser is advised to return the Product immediately in new and unused condition to the place of purchase.

### LAW

These terms are governed by Illinois law (without regard to conflict of law principals). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Horizon reserves the right to change or modify this warranty at any time without notice.

## WARRANTY SERVICES

### QUESTIONS, ASSISTANCE, AND SERVICES

Your local hobby store and/or place of purchase cannot provide warranty support or service. Once assembly, setup or use of the Product has been started, you must contact your local distributor or Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please visit our website at [www.horizonhobby.com](http://www.horizonhobby.com), submit a Product Support Inquiry, or call the toll free telephone number referenced in the Warranty and Service Contact Information section to speak with a Product Support representative.

### INSPECTION OR SERVICES

If this Product needs to be inspected or serviced and is compliant in the country you live and use the Product in, please use the Horizon Online Service Request submission process found on our website or call Horizon to obtain a Return Merchandise Authorization (RMA) number. Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon is not responsible for merchandise until it arrives and is accepted at our facility. An Online Service Request is available at [http://www.horizonhobby.com/content/\\_service-center\\_render-service-center](http://www.horizonhobby.com/content/_service-center_render-service-center). If you do not have internet access, please contact Horizon Product Support to obtain a RMA number along with instructions for submitting your product for service. When calling Horizon, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. When sending product into Horizon, please include your RMA number, a list of the included items, and a brief summary of the problem. A copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

**NOTICE:** Do not ship LiPo batteries to Horizon. If you have any issue with a Li-Po battery, please contact the appropriate Horizon Product Support office.

## WARRANTY REQUIREMENTS

**For Warranty consideration, you must include your original sales receipt verifying the proof-of-purchase date.** Provided warranty conditions have been met, your Product will be serviced or replaced free of charge. Service or replacement decisions are at the sole discretion of Horizon.

## NON-WARRANTY SERVICE

**Should your service not be covered by warranty, service will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost.** By submitting the item for service you are agreeing to payment of the service without notification. Service estimates are available upon request. You must include this request with your item submitted for service. Non-warranty service estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Horizon accepts money orders and cashier's checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Horizon for service, you are agreeing to Horizon's Terms and Conditions found on our website [http://www.horizonhobby.com/content/\\_service-center\\_render-service-center](http://www.horizonhobby.com/content/_service-center_render-service-center).

**ATTENTION:** Horizon service is limited to Product compliant in the country of use and ownership. If received, a non-compliant Product will not be serviced. Further, the sender will be responsible for arranging return shipment of the un-serviced Product, through a carrier of the sender's choice and at the sender's expense. Horizon will hold non-compliant Product for a period of 60 days from notification, after which it will be discarded.

## FCC INFORMATION

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



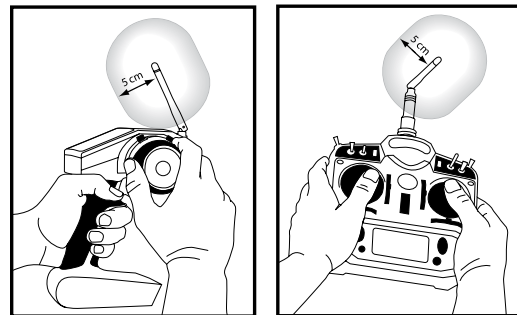
**CAUTION:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 2.400 GHz to 2.4835 GHz frequency range.

## ANTENNA SEPARATION DISTANCE

When operating your Spektrum transmitter, please be sure to maintain a separation distance of at least 5 cm between your body (excluding fingers, hands, wrists, ankles and feet) and the antenna to meet RF exposure safety requirements as determined by FCC regulations.

The following illustrations show the approximate 5 cm RF exposure area and typical hand placement when operating your Spektrum transmitter.



## IC INFORMATION

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

## WARRANTY AND SERVICE CONTACT INFORMATION

COUNTRY OF PURCHASE	HORIZON HOBBY	CONTACT INFORMATION	ADDRESS
United States of America	Horizon Service Center (Repairs and Repair Requests)	servicecenter.horizonhobby.com/RequestForm/	4105 Fieldstone Rd Champaign, Illinois, 61822 USA
	Horizon Product Support (Product Technical Assistance)	www.quickbase.com/db/bghj7ey8c?a=GenNewRecord 888-959-2305	
	Sales	sales@horizonhobby.com 888-959-2305	
United Kingdom	Service/Parts/Sales: Horizon Hobby Limited	sales@horizonhobby.co.uk +44 (0) 1279 641 097	Units 1–4 Ployters Rd Staple Tye Harlow, Essex CM18 7NS, United Kingdom
Germany	Horizon Technischer Service	service@horizonhobby.de +49 (0) 4121 2655 100	Christian-Junge-Straße 1 25337 Elmshorn, Germany
	Sales: Horizon Hobby GmbH		
France	Service/Parts/Sales: Horizon Hobby SAS	infofrance@horizonhobby.com +33 (0) 1 60 18 34 90	11 Rue Georges Charpak 77127 Lieusaint, France
China	Service/Parts/Sales: Horizon Hobby - China	info@horizonhobby.com.cn +86 (021) 5180 9868	Room 506, No. 97 Changshou Rd. Shanghai, China 200060

## COMPLIANCE INFORMATION FOR THE EUROPEAN UNION

AT	BE	BG	CZ	CY	DE	DK
ES	FI	FR	GR	HU	IE	IT
LT	LU	LV	MT	NL	PL	PT
RO	SE	SI	SK	UK		



### DECLARATION OF CONFORMITY

(in accordance with ISO/IEC 17050-1)

No. HH2013051601

Product(s): LOS 1/10 Tuff Country XXX-SCT BL RTR (includes Spektrum DX2L Transmitter with Spektrum SR200WP Receiver)

Item Number(s): LOSB0115I

Equipment class: 2

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC, EMC Directive 2004/108/EC and LVD Directive 2006/95/EC:

**EN 300-328 V1.7.1: 2006**

**EN301 489-1 V1.9.2: 2012**

**EN301 489-17 V2.1.1: 2009**

**EN60950-1:2006+A11:2009+A1:2010+A12: 2011**

**EN55022:2010 + AC:2011**

**EN55024:2010**

**EN61000-3-2:2006+A1:2009+A2:2009**

**EN61000-3-3:2008**

Signed for and on behalf of:

Horizon Hobby, Inc.

Champaign, IL USA

May 16, 2013

Steven A. Hall

Executive Vice President and Chief Operating Officer

International Operations and Risk Management

Horizon Hobby, Inc.



### INSTRUCTIONS FOR DISPOSAL OF WEEE BY USERS IN THE EUROPEAN UNION

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collections point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.