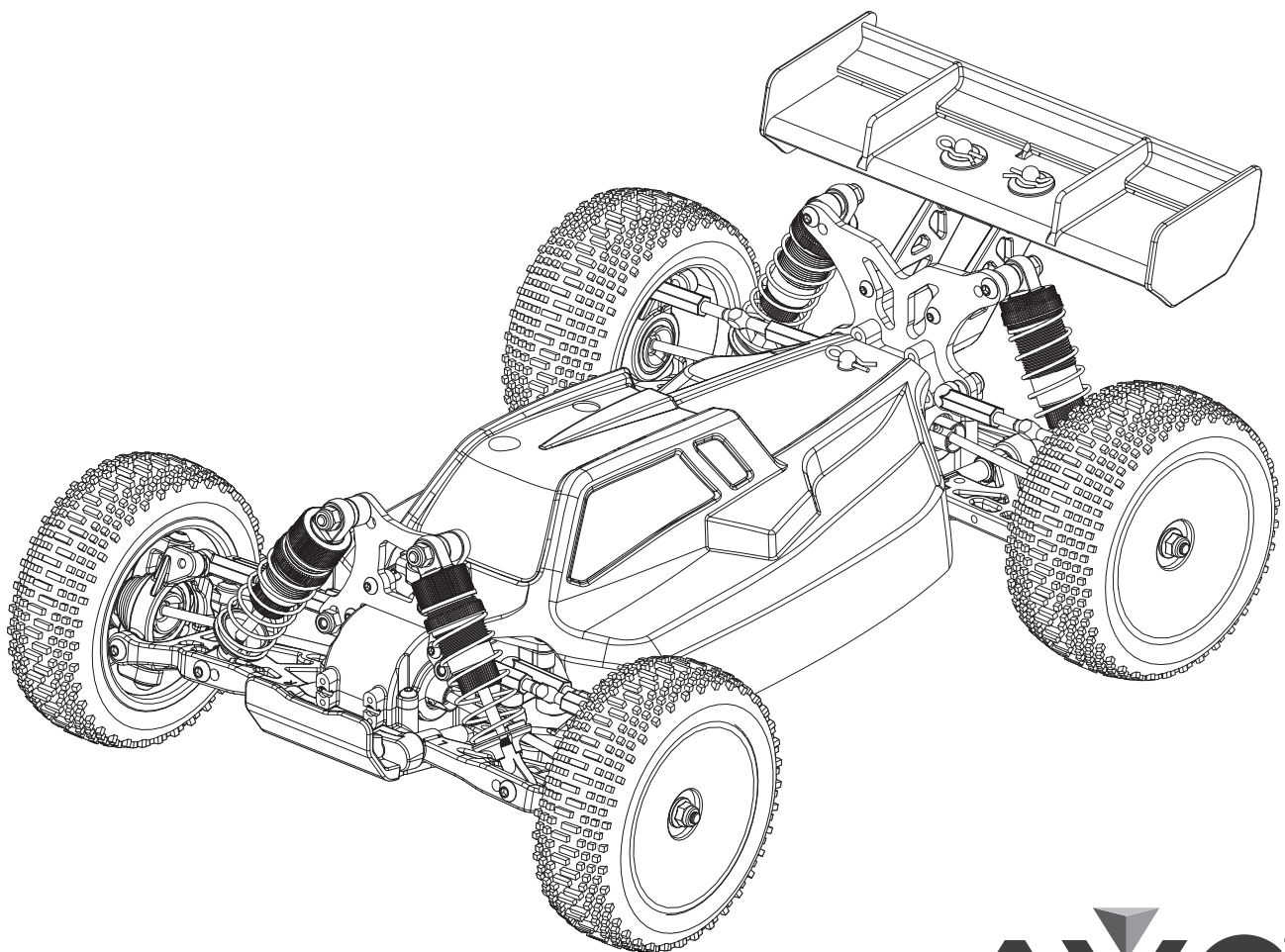


**RTR**  
READY-TO-RUN

# EIGHT™ MINI

**1/14-SCALE BRUSHLESS BUGGY**



**AVC**<sup>®</sup>  
ACTIVE VEHICLE CONTROL

**INSTRUCTION MANUAL  
BEDIENUNGSANLEITUNG  
MANUEL D'UTILISATION  
MANUALE DI ISTRUZIONI**



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, LLC. 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, LLC. 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 authorized dealer to ensure authentic high-quality Spektrum product. Horizon Hobby, LLC 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

- 1/14-Scale Mini 8IGHT™ RTR vehicle
- Spektrum™ DX2E 2.4GHz DSMR™ Radio System
- SRS4201 4-Channel DSMR Receiver with Active Vehicle Control™ (AVC®) technology
- Dynamite® Tazer™ Mini Brushless Waterproof ESC
- Dynamite Fuze™ Mini Brushless Motor, 4500Kv
- Spektrum S500 mini Sport Servo
- Dynamite 7.2V 1200mAh Ni-MH Battery Long with EC3™ Connector
- Losi® AC Wall Charger with EC3 Connector (110V)
- 4 AA batteries (for transmitter)

## RECOMMENDED ACCESSORIES

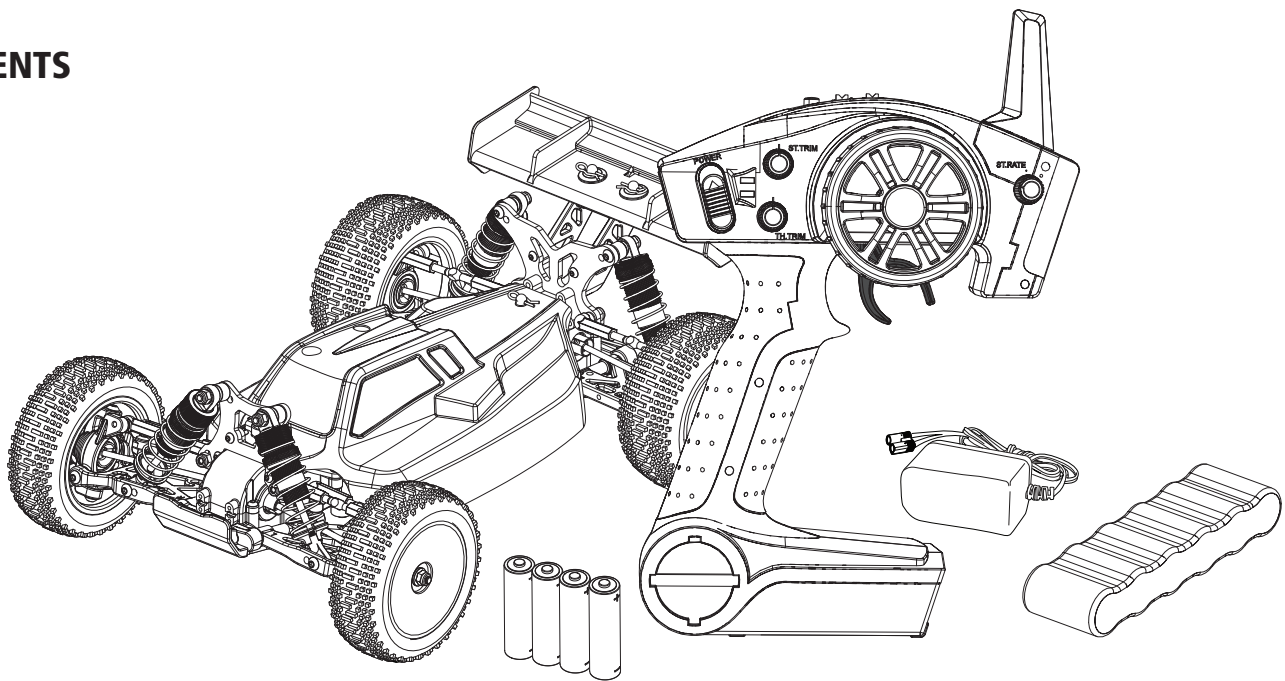
- Soft bristle brush for cleaning
- #0 or #1 Phillips screwdriver
- 2.0mm Hex L wrench
- Thread Lock

## TOOLS INCLUDED

- Turnbuckle Wrench
- 4-Way Wrench
- 1.5mm Hex "L" Wrench
- Slipper Adjustment Tool

Use only Dynamite 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 Mini 8IGHT RTR vehicle, fine-tuning the setup and performing maintenance.

1. Read the safety precautions found in this manual.
2. Charge the battery. 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 a 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 a 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 battery and charger unattended during use.**
- **Never charge batteries overnight.**
- Read all safety precautions and literature prior to use of this product.
- Never allow children under 14 years of age to charge battery packs.
- Never attempt to charge dead or damaged batteries.
- Never charge a battery if the cable has been pinched or shorted.
- Never allow batteries or charger to come into contact with moisture at any time.
- Never charge batteries in extremely hot or cold places (recommended between 50–80°F (10–26°C)) or place in direct sunlight.

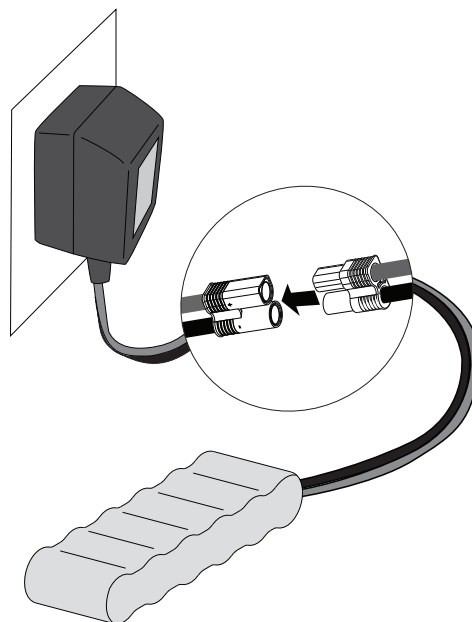
- Always use only Ni-MH rechargeable batteries. This charger cannot charge batteries such as "heavy duty", "alkaline", "mercury" or "lithium" battery.
- Always connect to the charger correctly.
- Always disconnect the battery and charger after charging and let them cool between charges.
- Always inspect the battery before charging.
- Always terminate all processes and contact Horizon Hobby if the product malfunctions.
- Always make sure you know the specifications of the battery to be charged or discharged to ensure it meets the requirements of this charger.
- Always constantly monitor the temperature of the battery pack while charging.
- Always end the charging process if the charger or battery becomes hot to the touch or starts to change form during the charge process.
- Always charge in a well ventilated area.

## 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.

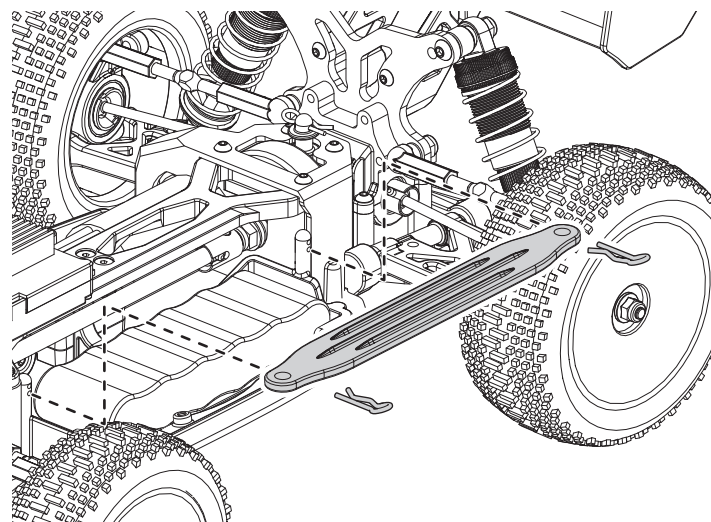
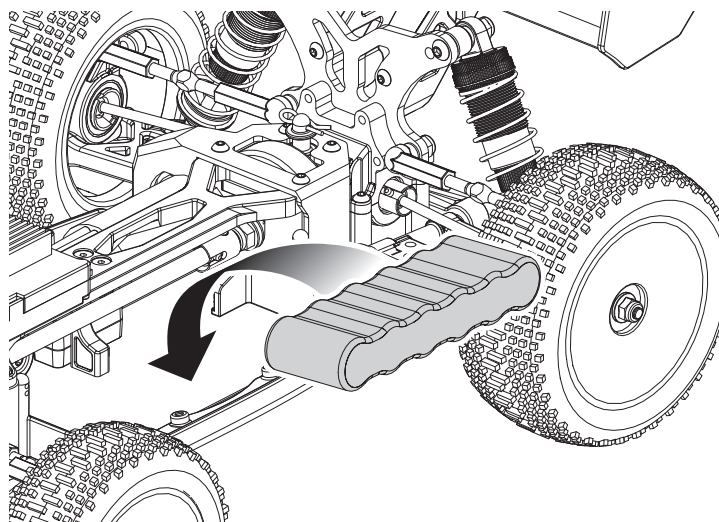
1. Connect the charger to an AC power source, noting proper polarity.
2. Connect the battery connector to the charger connector.
3. Let the battery charge for 3 hours.
4. Disconnect the battery from the charger.
5. Disconnect the charger from the AC power source.

**⚠ CAUTION:** If at any time during the charging process the battery becomes hot to the touch, disconnect the battery immediately and discontinue the charging process.

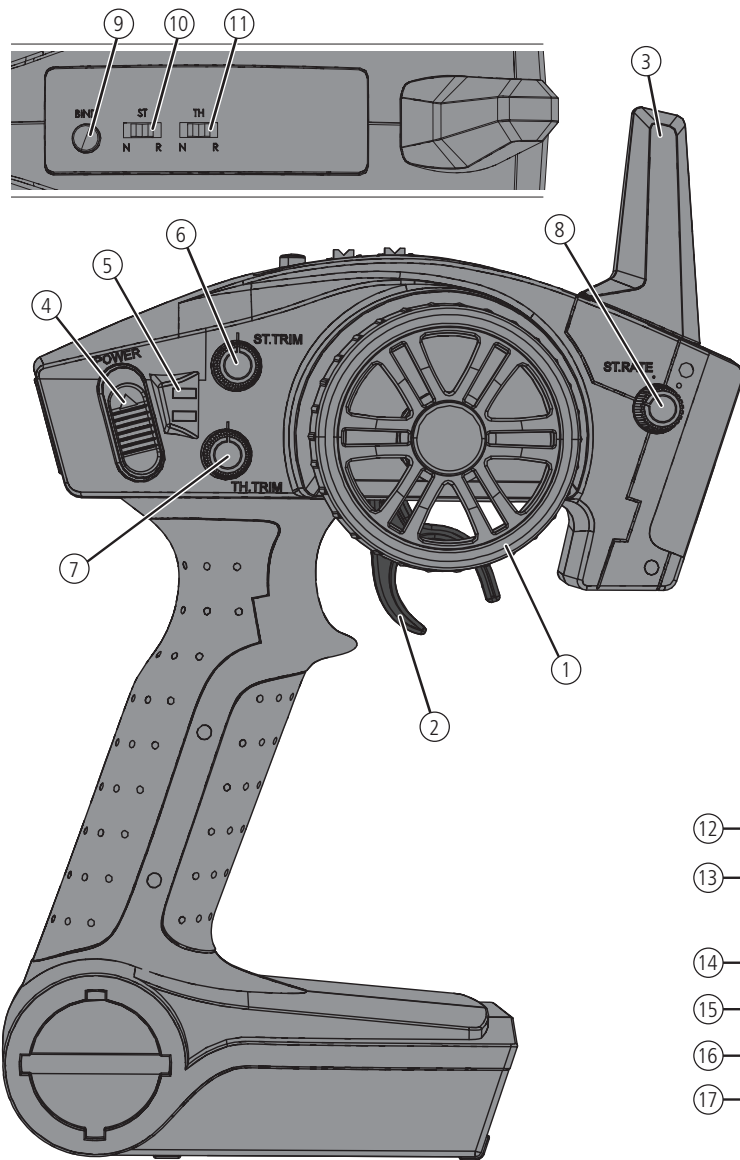


## INSTALLING THE BATTERY AND POWERING ON THE VEHICLE

1. Remove the body clips and remove the body.
2. Remove the body clips from the battery strap posts and remove the battery strap.
3. Install the fully charged battery in the vehicle.
4. Ensure the ESC is powered off.
5. Connect the battery to the ESC.
6. Reinstall the battery strap and body clips.
7. Center the **ST TRIM** and **TH TRIM** on the transmitter. Power on the transmitter.
8. Power on the ESC. The vehicle and receiver **MUST** remain motionless for at least 2 seconds.
9. Reinstall the body and body clips on the vehicle.



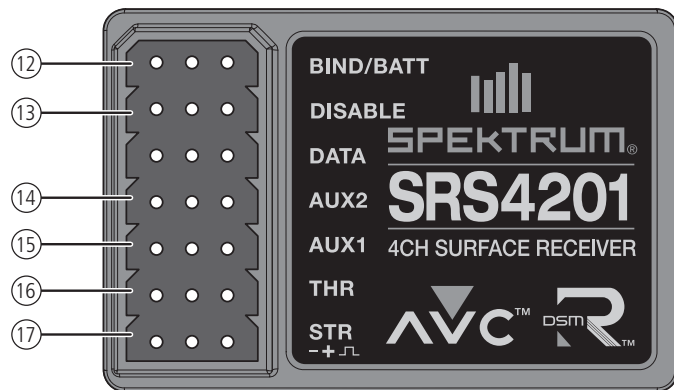
# SPEKTRUM DX2E RADIO SYSTEM



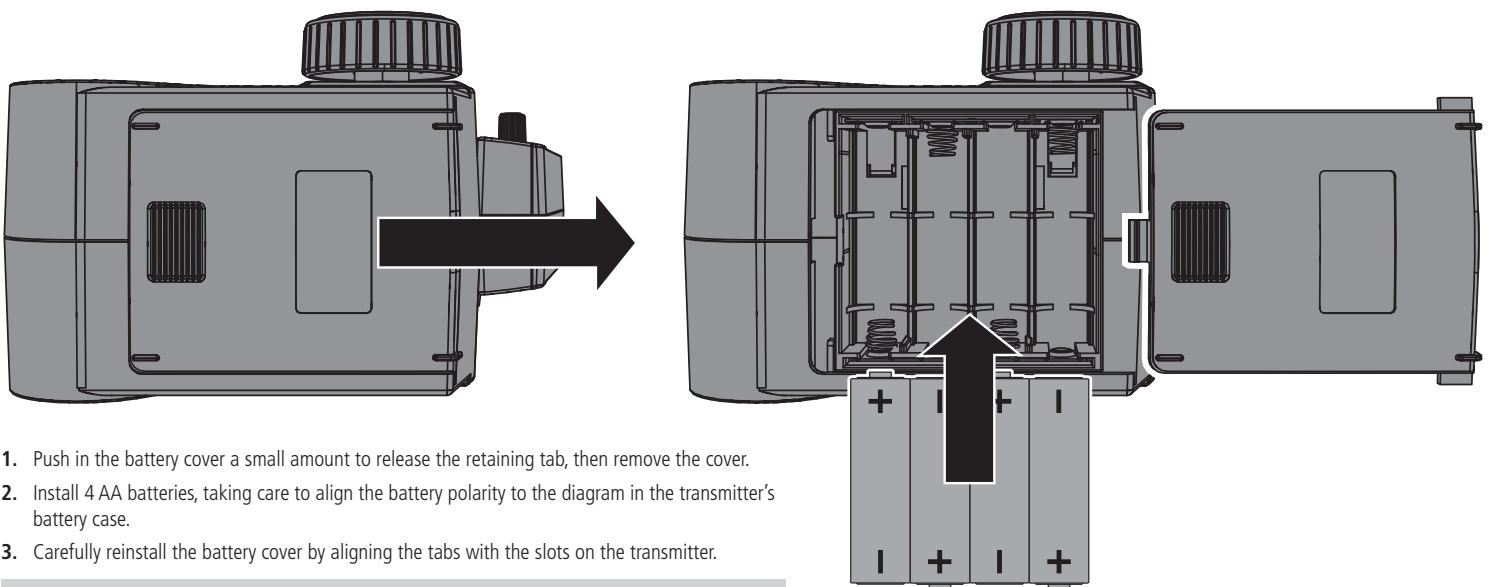
1. **Steering Wheel** Controls direction (left/right) of the model
2. **Throttle Trigger** Controls speed and direction (forward/brake/reverse) of the model
3. **Antenna** Transmits the signal to the model
4. **ON/OFF Switch** Turns the power ON/OFF for the transmitter
5. **Indicator Lights**
  - Solid green light—indicates adequate battery power
  - Flashing green light—indicates the battery voltage is critically low. Replace batteries
6. **ST Trim** Adjusts the total steering travel
7. **TH Trim** Adjusts the total throttle travel
8. **ST Rate** Adjusts the sensitivity of AVC
9. **BIND Button** Puts the transmitter into Bind Mode
10. **ST. REV** Reverses the function of the steering when the wheel is turned left or right
11. **TH. REV** Reverses the function of the speed control when pulled back or pushed forward

## SRS4201 AVC TECHNOLOGY RECEIVER

12. BIND/ Receiver Battery
13. DISABLE
14. AUX 2
15. AUX 1
16. Throttle
17. Steering



## 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 DX2E to download the instruction manual.

## SRS4201 STABILITY ASSIST RECEIVER

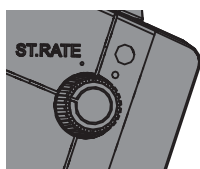
### AVC – ACTIVE VEHICLE CONTROL

The Spektrum SRS4201 receiver features Active Vehicle Control™ (AVC®) technology that responds similar to traction control in full-scale vehicles. In addition to traction control, AVC technology also increases steering stability during high-speed driving or while driving over rough terrain. As you increase the AVC sensitivity, the system increases steering stability and traction control, similar to reducing the amount of steering rate in a computer transmitter. Reducing the sensitivity value increases the amount of steering control from the transmitter. The SRS4201 receiver also enables you to quickly turn AVC on or off if you participate in organized racing.

**NOTICE:** You must use digital servos with the SRS4201 receiver. Using analog servos will reduce the performance of the system and may cause analog servos to overheat.

### AVC SENSITIVITY

The **ST RATE** dial adjusts the sensitivity or stability value in the receiver. If you increase the sensitivity, the AVC system becomes more sensitive to the vehicle drifting left or right. You would use maximum sensitivity during high-speed driving or drag racing, when you want the vehicle to stay in a straight line. As the sensitivity value increases, the amount of steering travel decreases.



Turn the **ST RATE** knob counter-clockwise to reduce the sensitivity.

Turn the **ST RATE** knob clockwise to increase the sensitivity.

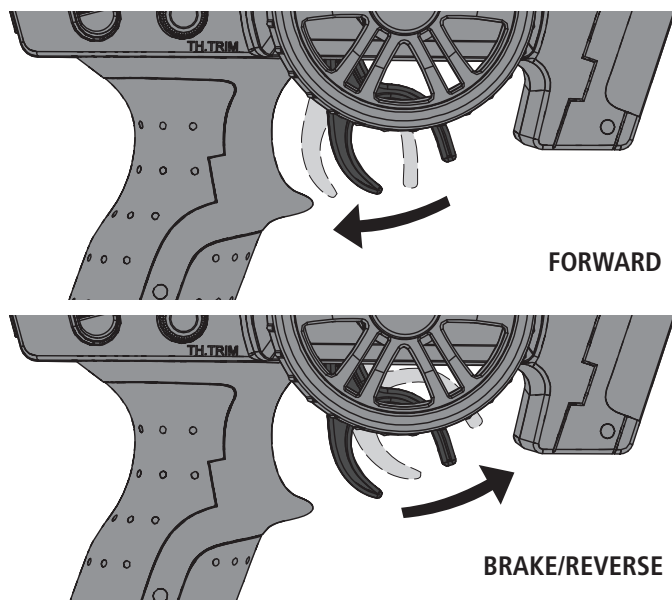
**IMPORTANT:** The **ST RATE** knob will only adjust the sensitivity when the transmitter is bound to a DSMR™ receiver. When the transmitter is bound to a DSM®, DSM2® or DSM Marine receiver, the **ST RATE** knob controls the steering dual rate.

### BINDING AND CALIBRATING THE RECEIVER

Your Spektrum DX2E transmitter comes prebound to the vehicle; however, if you need to rebind or calibrate the receiver, follow the instructions below.

Insert the Bind Plug in the **BIND** port on the receiver.

1. Connect a fully charged battery pack to the ESC.
2. Power on the ESC. The orange LED flashes, indicating the receiver is in bind mode.
3. Center the **ST TRIM** and **TH TRIM** dials on the transmitter.
4. Press and hold the **BIND** button while powering on the transmitter.
5. Release the **BIND** button when the orange LED slowly flashes. The transmitter and receiver are linked when the orange LED is solid.
6. Pull the transmitter trigger to Full Throttle.
7. Push the transmitter trigger to Full Brake, then return the trigger to center.
8. Turn the transmitter steering wheel to Full Right.
9. Turn the transmitter steering wheel to Full Left, then return the steering wheel to center. The orange LED flashes once.
10. Remove the Bind Plug, then power off the receiver to save the settings.
11. Power off the transmitter.



## 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 differentials. While holding the chassis with only the left side tires firmly on the ground, give the car about 1/8 throttle for 30 seconds. The right side tires should spin freely during this time. Repeat this with only the right side tires firmly on the ground, allowing the left side tires 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 car to handle poorly.
3. Charge the battery.
4. Check the calibration of the ESC. If recalibration is required, refer to the Tazer Mini Brushless ESC section.
5. Adjust the transmitter settings to your desired configuration.

## DRIVING PRECAUTIONS

- Maintain sight of the vehicle at all times.
- Inspect the vehicle for loose wheel hardware.
- 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. You may lose control of the vehicle.
- Do not apply the throttle in forward or reverse 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 to ambient temperature before using the next battery pack.

## 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

- Keep your vehicle clean and well maintained.
- Allow more airflow to the ESC and motor.
- Change the gearing to a lower ratio. A lower ratio lowers 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.

## TAZER MINI BRUSHLESS WATERPROOF ESC (DYN51425)

### ESC PROGRAMMING PROCEDURE

1. Power ON the transmitter and set the transmitter's throttle endpoint travel to maximum and the throttle trim to the center position.
2. Leave the throttle trigger at center, then power ON the ESC.
3. Press and hold the Battery Chemistry Button on the power switch for 3 seconds. The LED flashes the current battery chemistry (red = Ni-MH, green = Li-Po).
4. Continue holding the Battery Chemistry Button for another 6 seconds. The ESC changes battery chemistry and the LED flashes the new battery chemistry.
5. Power OFF the ESC. The ESC saves the setting until it is changed.

### TRANSMITTER/ESC ENDPOINT CALIBRATION

- a. Power OFF the ESC.
- b. Ensure your transmitter is powered ON, the throttle is not reversed, the throttle trim is neutral and the throttle travel range is at 100%. Disable any special functions such as ABS, etc.
- c. Press the SET button while powering on the ESC. Release the button as soon as the red LED starts to flash.
- d. Calibrate the throttle points by pressing the SET button once after each step.
  - Neutral point (1 flash) - leave the throttle at rest, untouched
  - Full throttle (2 flashes) - push the throttle fully forward
  - Full brakes/reverse (3 flashes) - push the throttle fully forward
- e. The ESC will beep 3 times to indicate programming is complete.

## FUZE MINI BRUSHLESS MOTOR, 4500KV

PINION	SPUR	BATTERY	GEARING	COMMENTS
16T	58T	Ni-MH	OK	This is the stock gearing. If you use a 2S–3S Li-Po, you will need to gear down, or you will overheat the motor.
14T (LOSB1863)	58T	2S Li-Po	OK	This gearing is optimal for a 2S Li-Po.
12T (LOSB1862)	58T	3S Li-Po	OK	This gearing is optimal for a 3S Li-Po.

### CHANGING THE PINION/GEAR RATIO

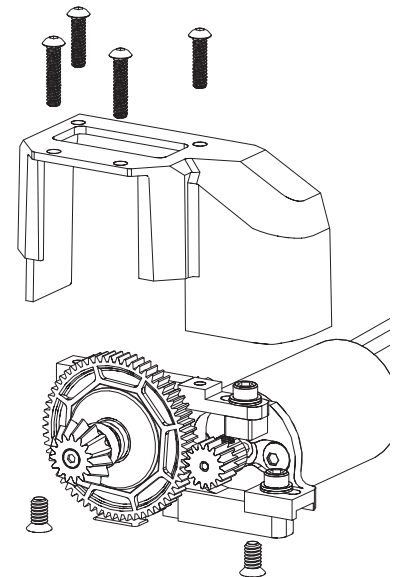
Your vehicle comes with the 16T pinion gear installed for the included 6C Ni-MH battery. If you want to use a 2S–3S Li-Po battery, refer to the Gearing Chart for the proper gearing.

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



## 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.
- 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 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 for wear.

## CHANGING THE TRAVEL ADJUST SETTINGS

1. Hold the trigger in the full brake position and steering wheel turned completely to the right while powering on the transmitter. The LED flashes rapidly, indicating the programming mode is active.
2. **Throttle End Point:** Continue holding full throttle. Turn the **TH TRIM** knob to adjust the full throttle end point.
3. **Brake End Point:** Hold the trigger in the full brake position. Turn the **TH TRIM** knob to adjust the full brake end point. Return the trigger to the center position.
4. **Left Steering End Point:** Hold the steering wheel in the full left position. Turn the **ST TRIM** knob to adjust the left end point.
5. **Right Steering End Point:** Hold the steering wheel in the full right position. Turn the **ST TRIM** knob to adjust the right end point. Return the steering wheel to the center position.
6. Power off the transmitter to save the travel adjust settings.

The minimum travel is 75%, and the maximum travel is 150%.

**IMPORTANT:** If the travel is changed on the DX2E, you must rebind and calibrate the SRS4201.

## SERVICE/REPAIR

### RADIO/SPEED CONTROL & MOTOR

If any problems other than those covered in the troubleshooting section arise, please call the appropriate electronics service department. They will be able to give the problem additional specific attention and provide instructions for the solution.

### MAINTENANCE

If any questions other than those covered in the troubleshooting or maintenance sections arise, please call the appropriate Horizon product support department.

### 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.

## DISABLING THE STABILITY ASSIST FUNCTION

If you participate in organized racing, you may be required to turn Stability Assist off. To turn Stability Assist off:

1. Insert a Bind Plug in the **BIND** port on the receiver.
2. Insert a second Bind Plug in the **DISABLE** port on the receiver.
3. Connect a fully charged battery pack to the ESC.
4. Power on the ESC. The orange LED flashes, indicating the receiver is in bind mode.
5. Center the **ST TRIM** and **TH TRIM** dials on the transmitter.
6. Press and hold the BIND button while powering on the transmitter.
7. Release the BIND button when the orange LED slowly flashes. The transmitter and receiver are linked when the orange LED is solid.
8. Pull the transmitter trigger to Full Throttle.
9. Push the transmitter trigger to Full Brake, then return the trigger to center.
10. Turn the transmitter steering wheel to Full Right.
11. Turn the transmitter steering wheel to Full Left, then return the steering wheel to center. The orange LED flashes once.
12. Remove the Bind Plugs, then power off the receiver to save the settings.
13. Power off the transmitter.

**IMPORTANT:** You must calibrate the receiver each time it is placed in bind mode.

To activate AVC, see the steps in "Calibrating the Receiver".

## TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTION
Vehicle does not operate	Battery not charged or plugged in	Charge battery/plug in
	ESC switch not "On"	Turn on ESC switch
	Transmitter not "On" or low battery	Turn on/replace batteries
Motor runs but rear wheels do not rotate	Pinion not meshing with spur gear	Follow instructions on setting gear mesh
	Pinion spinning on motor shaft	Tighten pinion gear setscrew on motor shaft flat spot
	Transmission gears stripped	Replace transmission gears
	Drive pin broken	Check and replace drive pin
Steering does not work	Servo plug not in receiver properly	Make sure the steering servo plug is connected to the receiver steering channel, noting proper polarity
	Servo gears or motor damaged	Replace or repair servo
Will not turn one direction	Servo gears damaged	Replace or repair servo
Motor does not run	Motor wire solder joint is damaged	Resolder the motor wire with the proper equipment
	Motor wire broken	Repair or replace as needed
	ESC damaged	Contact Horizon Hobby Product Support
ESC gets hot	Motor over-gear	Use smaller pinion or larger spur gear
	Driveline bound up	Check wheels and transmission for binding
Poor run time and/or sluggish acceleration	Battery pack not fully charged	Recharge battery
	Charger not allowing full charge	Try another charger
	Driveline bound up	Check wheels, transmission for binding
Poor range and/or glitching	Transmitter batteries low	Check and replace
	Vehicle battery low	Recharge battery
	Loose plugs or wires	Check all wire connections and plugs



PROBLEM	POSSIBLE CAUSE	SOLUTION
The front wheels oscillate	The steering gain is set too high	Turn down the steering gain
The front wheels turn the wrong way when the car slides/rotates	The steering channel was reversed after calibration	Rebind and calibrate
The throttle does not reduce when the car slides/rotates	The steering channel was reversed after calibration	Rebind and calibrate

## LIMITED WARRANTY

### What this Warranty Covers

Horizon Hobby, LLC ("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 Li-Po 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.**

## 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

## 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.



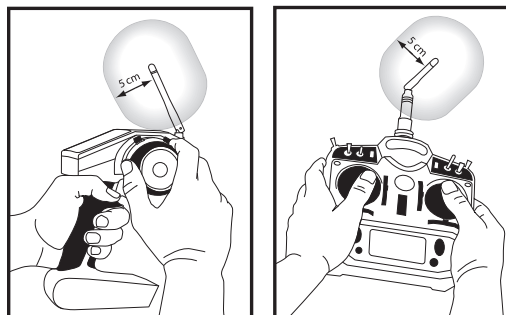
**CAUTION:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

## EU COMPLIANCE STATEMENT:

**CE** Horizon Hobby, LLC hereby declares that this product is in compliance with the essential requirements and other relevant provisions of the R&TTE, EMC, and LVD Directives.

A copy of the EU Declaration of Conformity is available online at:  
<http://www.horizonhobby.com/content/support-render-compliance>.



### 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 collection 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.



[WWW.LOSI.COM](http://WWW.LOSI.COM)

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