

SPEKTRUM®

SRS4220 INSTRUCTION MANUAL

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MANUEL D'UTILISATION SRS4220

MANUALE DI ISTRUZIONI SRS4220

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 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.

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



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 attempt disassembly, use with incompatible components or augment product in any way without the approval of 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, LLC 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 technology.

NOTICE: This product is only intended for use with unmanned, hobby-grade, remote-controlled vehicles and aircraft. Horizon Hobby disclaims all liability outside of the intended purpose and will not provide warranty service related thereto.

Warranty Registration

Visit www.spektrumrc.com/registration today to register your product.

WATERPROOF COMPONENT

Your new Spektrum™ receiver has been designed and built to allow you to operate your vehicle in many wet conditions, including puddles, creeks, wet grass, snow and even rain.

While waterproof, this component has not been designed to be immersed in water for long periods of time and should NOT be treated like a submarine. In addition, most metal parts, including any 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 receiver and to keep the warranty intact, it should only be used as described in the “Usage Conditions” section of this manual. Additionally, the procedures described in the “Wet Conditions Maintenance” section 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 your vehicle in those conditions.



CAUTION: Failure to exercise caution while using this product and comply 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 receiver.

Do not operate your receiver 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.

Usage Conditions

Your receiver will operate successfully in any of the following, individual-usage scenarios:

- 2 hours continuous operation in dew-covered (damp) grass or vegetation.
- 2 hours continuous operation in heavy fog (95% humidity, saturated air, condensing water).
- 1 hour continuous operation in light rain (< 0.10 in / 2.5mm per hour).
- 15 minutes continuous operation in heavy rain (> 0.30 in / 7.6mm per hour).
- 1 hour continuous operation in light sleet (< 0.10 in / 2.5mm per hour).
- 1 hour continuous operation in light snow (< 0.25 in / 6.35mm per hour).
- 45 minutes continuous operation in standing or running fresh water (the water level should always remain below the vehicle frame), or constant splashing water, without any immersion of waterproof component(s).

- 5 minutes continuous operation in standing or running fresh water (the water level should never rise higher than 0.5 in (about 10 mm) above the vehicle frame), constant splashing water, or frequent, intermittent immersion of waterproof component(s).
- 1 hour continuous operation in damp sand, dirt, mud or snow (the material level should always be below the vehicle frame), constant splatter without any immersion or coverage of waterproof component(s).

Furthermore, when appropriate maintenance procedures (as described below) are performed promptly following exposure, the receiver will remain best protected from corrosion or other long-term, water-related damage.

Wet Conditions Maintenance

- Gently rinse the mud and dirt off the vehicle with a garden hose.
- Remove the battery pack(s) and dry the contacts.
- If you have an air compressor or a can of compressed air available, blow off the receiver to help remove any water that may have gotten into small crevices or corners. Dry any water that may be inside a recessed connector housing.
- Let the receiver air dry before you store it. Water may continue to seep or evaporate out of tight areas for a few hours.

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

NOTICE: The receiver is waterproofed for use in wet conditions. Make sure the other components in your vehicle are waterproof or water-resistant before driving in wet conditions.

AVC – ACTIVE VEHICLE CONTROL

AVC® technology is the newest Spektrum™ RC innovation from Horizon Hobby. This Spektrum stabilization system adds a whole new level of control to your RC driving experience. AVC technology utilizes sensors to adjust steering and throttle output, providing you with a more stable and controlled driving experience.

NOTICE: You must use digital servos with the SRS4220 receiver. Using analog servos will reduce the performance of the system and may cause analog servos to overheat.

SRS4220 INSTRUCTION MANUAL

The Spektrum™ SRS4220 DSMR® Surface receiver is compatible with all Spektrum DSMR transmitters and is also backwards compatible with DSM2® transmitters. The SRS4220 receiver is NOT compatible with DSM® transmitters. For a complete list of compatible transmitters, see the SRS4220 product page on spektrumrc.com.

Specifications

Type: DSMR

Weight: 10.9 g (0.39 oz)

Dimensions (LxWxH):

1.43 x 0.96 x 0.51 in
(36.3 x 24.4 x 13.0mm)

Band: 2.4GHz

Voltage Range:
3.5–9.6V

Channels:

2, 4 with AVC disabled

Antenna

Bind/Battery Port

Disable Port

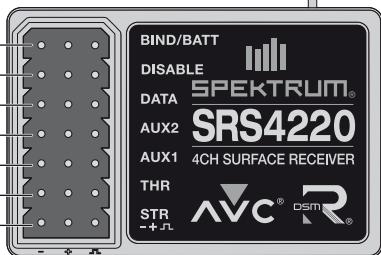
Data Port

Aux 2 Port

Aux 1 Port

Throttle Port

Steering Port



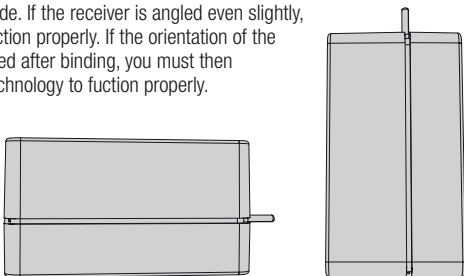
Aux channels

The Aux channels can operate as additional servo channels, or as a power supply for a personal transponder. If AVC is active, only two channels, Steering and Throttle, are operational. The Aux channels can be used to power a personal transponder or lights.

If AVC is disabled (see **DISABLING THE STABILITY ASSIST FUNCTION**), the Aux channels will operate as servo channels.

Receiver Connection and Installation

You must install the receiver in the vehicle before binding the transmitter and receiver. The receiver can be mounted flat with the label up or on its side. When you bind the receiver, the AVC system automatically detects the orientation of the receiver. The receiver must be mounted completely flat when in the label-up orientation or completely perpendicular when mounted on its side. If the receiver is angled even slightly, AVC may not function properly. If the orientation of the receiver is changed after binding, you must then rebind for AVC technology to function properly.



Install the Receiver in your vehicle using the included double-sided foam servo tape. Foam servo tape will hold the receiver in place and help isolate it from vibrations.

IMPORTANT: Do not use hook & loop material to install the SRS4220 receiver. Using hook & loop material will affect the performance of the AVC system.

Mount the antenna up and away from the vehicle in an antenna tube. The higher up the antenna is, the better signal it will receive.

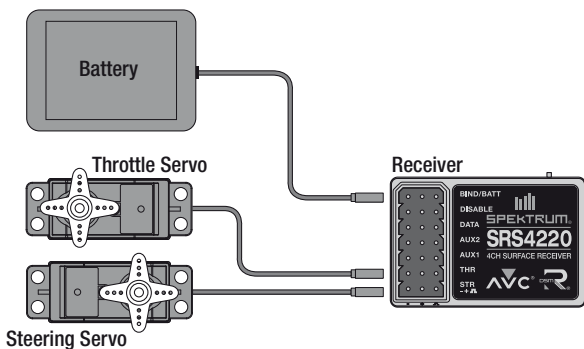
NOTICE: Do not cut or modify the antenna.

Failsafe

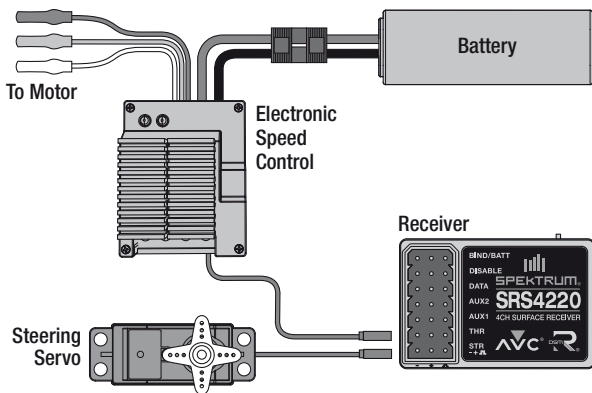
In the unlikely event that the radio link is lost during use, the receiver will drive the throttle channel to the neutral position. If the receiver is powered on prior to turning on the transmitter, the receiver will enter the failsafe mode, driving the throttle channel to the neutral position. When the transmitter is turned on, normal control is resumed.

IMPORTANT: Failsafe activates only in the event that signal is lost from the transmitter. Failsafe will NOT activate in the event that receiver battery power decreases below the recommended minimums or power to the receiver is lost.

Powering the receiver with a separate receiver pack



Powering the receiver with an ESC



IMPORTANT: If you adjust the steering and throttle trim on your transmitter, the receiver must be turned off and back on again in order to save the new trim settings. Otherwise, AVC will not function properly.

Binding Receiver to Transmitter

In order to operate, the receiver must be bound to the transmitter. Binding is the process of programming the receiver to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. When a receiver is bound to a transmitter/model memory, the receiver will only respond to that specific transmitter/model memory.

Binding and Calibrating the Receiver

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

IMPORTANT: The following sequence of steps must be followed in order for AVC technology to function properly.

1. Insert the Bind Plug in the BIND port on the receiver.
2. Power on the receiver. The orange LED flashes, indicating the receiver is in bind mode.
3. Center the ST TRIM and TH TRIM on the transmitter.
4. Put your transmitter in bind mode.
5. The bind process is complete when the orange LED on the receiver 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 once the calibration and binding process is complete.
11. Power off the transmitter.

IMPORTANT: You must rebind the transmitter and receiver if you:

- Change the servo reverse after binding
- Change the travel after binding
- Want to use the receiver with a different model memory

If you change the servo reversing or travel adjust after binding, AVC will not work properly.

Disabling the Stability Assist Function

If you participate in organized racing, you may be required to turn AVC technology off. To turn off AVC technology, insert a second Bind Plug in the Disable port before binding.

IMPORTANT: You must calibrate the receiver each time it is placed in bind mode. To activate AVC, see the steps in BINDING AND CALIBRATING THE RECEIVER.

2.4GHZ TROUBLESHOOTING GUIDE

| Problem | Possible Cause | Solution |
|--|--|--|
| The system will not connect | Your transmitter and receiver are too close together | Move transmitter 1 to 3 meters from receiver |
| | You are around metal objects | Move to an area with less metal objects |
| | The receiver is not bound to the active model memory | Check model selected and ensure you are bound to that model |
| | Your transmitter was accidentally put into bind mode and is no longer bound to your receiver | Rebind your transmitter and receiver |
| The receiver goes into fail-safe mode a short distance away from the transmitter | Check the receiver antenna to be sure it is not cut or damaged | Replace the receiver or contact Horizon Product Support |
| | | Make sure your receiver antenna is in an antenna tube and is above the vehicle |
| The receiver stops responding during operation | Inadequate battery voltage | Charge or replace the receiver batteries. Spektrum receivers require at least 3.5V to operate (We recommend using a 6V receiver pack). An inadequate power supply can allow voltage to momentarily drop below 3.5V and cause the receiver to brown out and reconnect |
| | Loose or damaged wires or connectors between battery and receiver | Check the wires and connection between the battery and receiver. Repair or replace wires and/or connectors |
| 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 throttle channel was reversed after calibration | Rebind and calibrate |

1-YEAR 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 for a period of 1 year from 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, (vi) Product not compliant with applicable technical regulations, or (vii) use that violates any applicable laws, rules, or 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 horizonhobby.com, submit an inquiry to productsupport@horizonhobby.com 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. 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.

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.

NOTICE: Do not ship LiPo batteries to Horizon. If you have any issue with a LiPo 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.

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.

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) | productsupport@ horizonhobby.com. 877-504-0233 | |
| | Sales | websales@horizon- hobby.com 800-338-4639 | |
| 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 | Christian-Junge- Straße 1 25337 Elmshorn, Germany |
| | Sales: Horizon Hobby GmbH | +49 (0) 4121 2655 100 | |
| France | Service/Parts/Sales: Horizon Hobby SAS | infofrance@horizon- hobby.com +33 (0) 1 60 18 34 90 | 11 Rue Georges Charpak 77127 Lieusaint, France |

FCC Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

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.

Notice: Modifications to this product will void the user's authority to operate this 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 2.400GHz to 2.4835GHz frequency range.

IC Information

This device complies with Industry Canada license-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 EU Compliance Statement: Horizon Hobby, LLC hereby declares that this product is in compliance with the essential requirements and other relevant provisions of the R&TTE Directive.

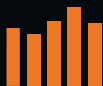
A copy of the EU Declaration of Conformity is available online at:
<http://www.horizonhobby.com/content/support-render-compliance>.



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.





SPEKTRUM®

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Created 5/16

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