



**SPEKTRUM®**

**SMART** <sup>TM</sup>  
TECHNOLOGY

# **S150 AC Smart Charger (1 × 50W)**

**Instruction Manual  
Bedienungsanleitung  
Manuel d'utilisation  
Manuale di Istruzioni**



## 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) or [towerhobbies.com](http://towerhobbies.com) and click on the support or resources 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:

**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.

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

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

**NOTICE:** This appliance is not intended for use by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.



**DANGER:** To reduce the risk of fire or electric shock, carefully follow these instructions.

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## S150 Warnings and Safety Tips

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**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.

- Keep the charger away from dust, humidity, rain and high temperature. Avoid direct exposure to the sun and intense vibration.
- Only use the charger on heat-resistant, non-flammable surfaces. Do not use the charger on car seats, carpet or near other flammable objects.
- Do not block the heat vent on the sides of the charger to ensure proper cooling during use.
- Always read and understand battery specifications prior to charging. Charging parameters may differ for each battery. Incorrect charging parameters may result in damage to the charger or battery, which could result in a fire.

## General Charging Warnings

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- **NEVER LEAVE CHARGING BATTERIES UNATTENDED.**
- **NEVER CHARGE BATTERIES OVERNIGHT.**
- 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 battery leads have been pinched or shorted.
- Never plug in a charger if the power cable has been pinched or shorted.
- Never connect the charger to an automobile 12V battery while the vehicle is running.
- Never attempt to dismantle the charger or use a damaged charger.
- Never attach your charger to both an AC and a DC power source at the same time.
- Never connect the input jack (DC input) to AC power.
- Always use only rechargeable batteries designed for use with this type of charger.
- Always charge batteries in the correct program mode according to the battery type.
- Always inspect the battery before charging.
- Always charge batteries on a heat-resistant surface and clear of flammable materials.
- 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 connect the positive red leads (+) and negative black leads (-) correctly.
- 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.



**WARNING:** Never leave charger unattended, exceed maximum charge rate, charge with non-approved batteries or charge batteries in the wrong mode. Failure to comply may result in excessive heat, fire and serious injury.



**WARNING:** Always check charging parameters before initiating the charge process. Charging any battery with improper settings, including charging a battery in the wrong mode, can result in property damage and fire.



**CAUTION:** Always ensure the battery you are charging meets the specifications of this charger and that the charger settings are correct. Not doing so can result in excessive heat and other related product malfunctions, which can lead to user injury or property damage. Please contact Horizon Hobby or an authorized retailer with compatibility questions.

## Specifications

Charge Current	1.0–5.0A
Max. Charge Power (output)	50W
Supported Battery Types (cell count)	LiPo/LiHv/NiMH/LiFe (1–4S, 300mAh or larger)
	NiMH (1–12S)
Operating Temperature	0–40°C (32–104°F)

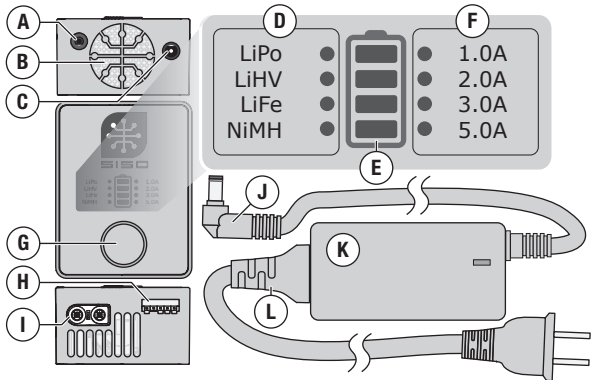
	Charger	AC to DC Power Supply
Input Connector	5.5mm x 2.5mm Barrel Connector (center pin positive)	IEC-320-C5 AC input, Standard IEC-320-C5 AC power cord included
Output Connector	iC3™ (EC3™ compatible)	5.5mm x 2.5mm Barrel Connector (center pin positive)
Input Voltage	19–24V DC	110–120V AC
Max. Output Voltage	17.4V (4.35 x 4 for LiHV)	20V
Max. Output Current	5A	3A

Standard Battery Parameters				
Battery Type	LiPo	LiFe	LiHV	NiMH
Nominal Voltage (per cell)	3.7V	3.3V	3.7V	1.2V
Max Charge Voltage (per cell)	4.2V	3.6V	4.35V	1.5V
Storage Voltage (per cell)	3.8V	3.3V	3.85V	n/a
Allowable Fast Charge Rate	≤1C	≤4C	≤1C	≤1C
Minimum Discharge Voltage (per cell)	3.0V	2.6V	3.1V	0.9V

# Layout

<b>A</b>	Update Port
<b>B</b>	Cooling Fan
<b>C</b>	DC Power Input
<b>D</b>	Battery Type
<b>E</b>	Charge Status
<b>F</b>	Charge Current

<b>G</b>	Selection Button
<b>H</b>	Battery Balance Connector
<b>I</b>	IC3 Battery Port
<b>J</b>	DC Power Connector
<b>K</b>	AC to DC Power Supply
<b>L</b>	AC Power Input Cable



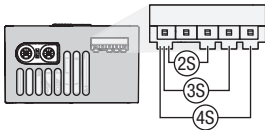


## Operating the Charger

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Charging requires the selection of two settings; battery type and charge current. SMART batteries will automatically load the correct battery type and will only allow current adjustments.

1. Connect the battery power connector and balance connector to the charger.  
Lithium battery balance connectors must be inserted with the connector shifted toward the center of the charger, as shown.
2. Quickly press and release the button to adjust the current.
3. Press and hold the button for several seconds to change the battery type. This function will not change the battery type when a SMART battery is connected.
4. Lithium batteries will begin charging automatically after 5 seconds. The charge rate can be changed during the charge with a quick press and release of the button. Charging will restart after 5 seconds.
5. NiMH batteries will begin charging after a manual double press of the button after mode and charge rate selections are made. The charge rate can be changed during the charge with a quick press and release of the button. To restart charging rapidly double click the button.



## LED Indicator

Power On/ Battery Not Connected	<ul style="list-style-type: none"><li>• Battery type indicator is illuminated white.</li><li>• Battery capacity indicator is off.</li><li>• Current indicator is illuminated white.</li></ul>
Battery Connected/ Charging Not Started	<ul style="list-style-type: none"><li>• Corresponding battery type indicator is illuminated white.</li><li>• Battery capacity indicator illuminates solid green to indicate battery capacity before charge.</li><li>• Corresponding current indicator is illuminated white.</li></ul>
Normal Charging	<ul style="list-style-type: none"><li>• Corresponding battery type indicator is illuminated white.</li><li>• Battery capacity indicator illuminates according to actual battery charge level. The top level flashes to indicate the charge is in process.</li><li>• Corresponding current indicator is illuminated white.</li></ul>
Charge Complete	<ul style="list-style-type: none"><li>• Battery type indicator is illuminated white.</li><li>• Battery capacity indicator is illuminated green.</li><li>• Current indicator is illuminated white.</li></ul>
Charge Fault	<ul style="list-style-type: none"><li>• Charger will repeat warning sound. Remove battery and power off the charger.</li></ul>



**WARNING:** Always check charging parameters before initiating the charge process. Charging any battery with improper settings, including charging a battery in the wrong mode, can result in property damage and fire.



**WARNING:** Always stop the LED charging cycle or remove power supplied to the charger if you notice any irregularities (like a swollen battery) during charging.

## Optional Parts

Part #	Description
SPMXCA100	Spektrum SMART USB Updater Cable
SPMXCA507	IC3 Battery to IC5 Device
SPMXCA310	IC3 Battery to JST Device
SPMXCA301	IC3 Device and Battery Connectors

## 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, or (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 [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.**

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# Warranty and Service Contact Information

## United States of America

Horizon Hobby	Contact Information	Address
Horizon Service Center (Repairs and Repair Requests)	servicecenter.horizonhobby.com/ RequestForm/	2904 Research Rd Champaign, Illinois, 61822 USA
Horizon Product Support (Product Technical Assistance)	productsupport@ horizonhobby.com ..... 877-504-0233	
Sales	websales@horizonhobby.com	
	800-338-4639	

## EU


Horizon Hobby	Contact Information	Address
Horizon Technischer Service	service@ horizonhobby.eu	Hanskampring 9 D 22885 Barsbüttel, Germany
Sales: Horizon Hobby GmbH	+49 (0) 4121 2655 100	

# FCC Information

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## Supplier's Declaration of Conformity

Spektrum S150 AC Mini Smart Charger SPMXC1070

 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.

**NOTE:** 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 into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Horizon Hobby, LLC

2904 Research Rd.,

Champaign, IL 61822

Email: [compliance@horizonhobby.com](mailto:compliance@horizonhobby.com)

Web: [HorizonHobby.com](http://HorizonHobby.com)

## IC Information

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CAN ICES-3 (B)/NMB-3(B)

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,
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

# Compliance Information for the European Union

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**EU Compliance Statement:** Horizon Hobby, LLC hereby declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC and LVD 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 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.





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**SMART** ™  
T E C H N O L O G Y

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Patents Pending

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