

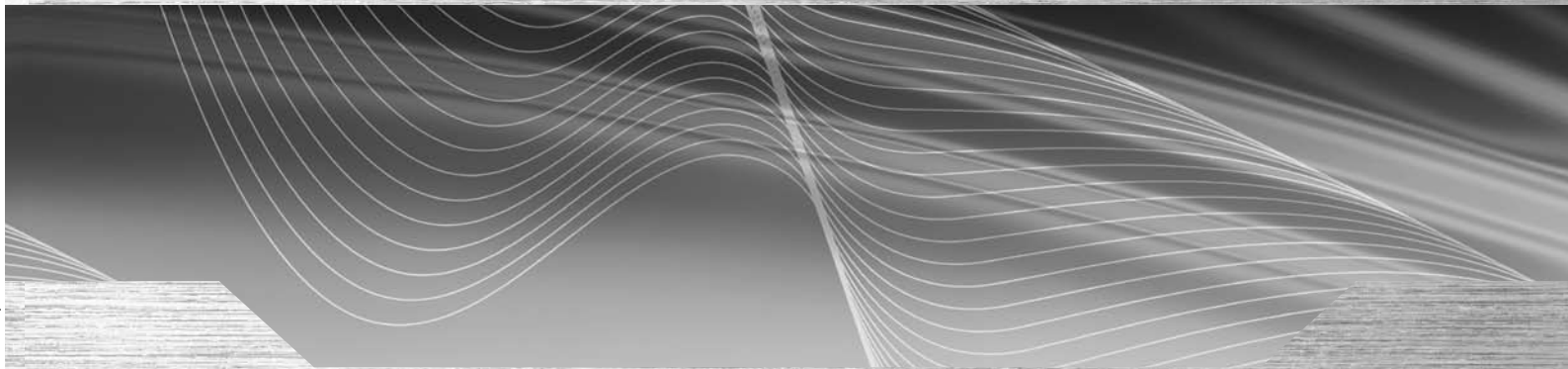
© 2010 DSM and DSM2 are trademarks or registered trademarks of Horizon Hobby, Inc.
The Spektrum trademark is used with permission of Bachmann Industries, Inc. Spektrum radios and accessories are exclusively available from Horizon Hobby, Inc.

27900
Printed 5-10



SPEKTRUM





■ VR6007-6.0 Volt 7.5-Amp Voltage Regulator User Guide





Applications

The VR6007 is designed for high-current draw applications, like giant-scale airplanes with multiple high-current draw servos. Spektrum's model VR6007 6-volt 7.5-amp regulator allows you to power your onboard radio system with either 2-cell lithium or 5- to 8-cell NiCd and NiMH receiver packs. A single VR6007 regulator provides 7.5-amps continuous current (11 amp peak) making it ideal for most high-current draw applications. For heavy-duty applications you can use two VR6007s to provide 15-amp continuous and up to 22-amp peak power. The VR6007 is ideal for use with Spektrum's AR9100 PowerSafe™ receiver and comes pre-wired with EC3™ connectors.

Features

- Fail-on soft switch prevents radio loss due to switch failure
- Pre-wired with EC3 connectors ready to install with AR9100 PowerSafe
- Heavy-duty 16-gauge power leads
- Cooling fan provides additional current handling capability
- Convenient mounting lugs
- Two can be used with the AR9100 PowerSafe for up to 15-amp continuous current
- Factory matched voltage output to draw evenly from dual battery systems

Note: When the battery is connected to the regulator, a low-current drain of less than 1mAh occurs even when the switch is turned off. If storing the system for any length of time, disconnect the battery(s) from the regulator to prevent over-discharge.

Note: It is normal for the regulator to become warm during heavy operation.

Specifications

Type - 7.5-amp linear voltage regulator
Voltage input - 6- to 10-volts (5- to 8-cell NiCd/ NiMH or 2-cell LiPo)
Output Voltage - 6.0-volts
Continuous current @ 8.4V - 7.5-amps
Peak current - 11-amps
Dimensions WxLxH - 40 x 30 x 30mm 1.57 x 1.18. x 1.18 in (less mounting tabs)
Weight - 50 g/1.8 oz

Note: Consult your servo manufacturer's specifications for maximum allowable voltage.



Battery Capacity

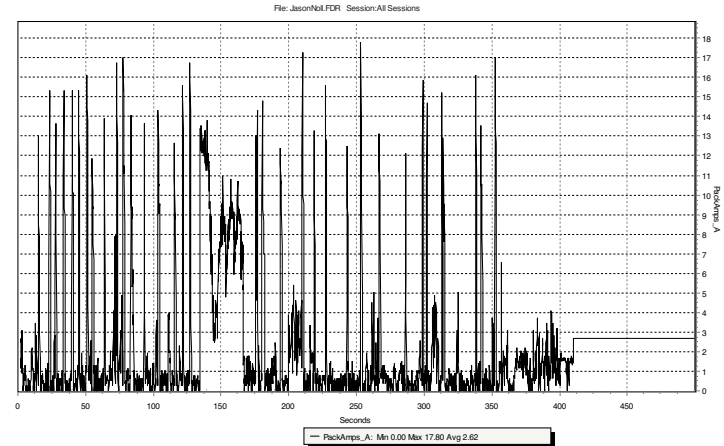
Batteries

Spektrum offers a line of 5-cell NiMH and 2-cell LiPo battery packs that are pre-wired with EC3 connectors ready to plug into your VR6007 regulator.

SPMB1350LP	LiPo Receiver Pack 1350mAh
SPMB2000LP	LiPo Receiver Pack 2000mAh
SPMB4000LP	LiPo Receiver Pack 4000mAh
SPMB6000LP	LiPo Receiver Pack 6000mAh
SPMB2150NM	2150mAh 6.0V NiMH Receiver Pack
SPMB2700NM	2700mAh 6.0V NiMH Receiver Pack
SPMB4500NM	4500mAh 6.0V NiMH Receiver Pack

Select a battery(s) that has more than adequate capacity to provide the necessary flight time. Our staff has been recording in-flight data to determine typical current consumption of aircraft in flight. Following are two graphs that illustrate the in-flight current draw of the radio system.

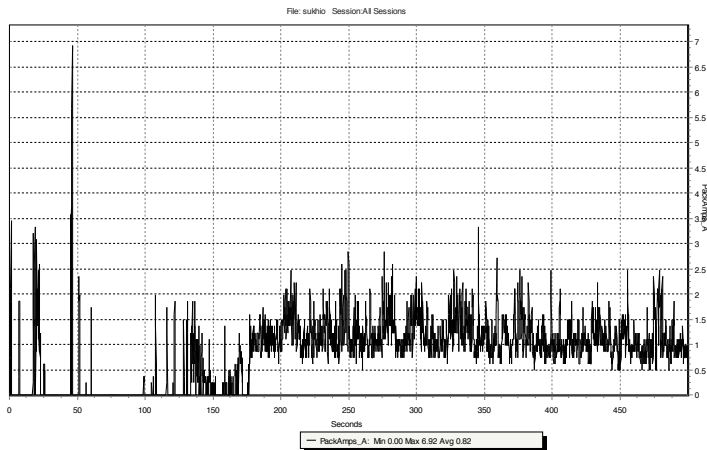
Note: Current draws may vary depending on your servos, installation and flying style.



Airplane: 40% YAK
Servos: 9-JR8711s 1-JR8317 (throttle)



Battery Capacity (cont.)



Airplane: 33% Sukhoi

Servos: 7-JR8611s 1-JR8317 (throttle)

In the preceding examples the average current was 2.62 amps, which calculates to 435mAh per 10 minutes (typical flight length). It's recommended that only 60% of the available capacity be used to ensure plenty of reserve battery capacity. In this example using two 4000mAh batteries (8000mAh total capacity) \times 60% = 4800mAh (available useable capacity) divided by the capacity used per 10 minute flight 435mAh would allow up to 11 flights of 10 minutes each.

Recommended Guidelines for Battery Capacity

- 40-45% Aerobatic aircraft w/ 9-12 high-current servos- 4000-8000mAh
- 33-35% Aerobatic aircraft w/ 7-10 high-current servos- 3000-6000mAh
- 25% Quarter-Scale aerobatic aircraft w/ 5-7 high-current servos- 2000-4000mAh
- Jets—BVM Super BANDIT, F86, Euro Sport, etc.- 3000-6000mAh
- Giant-scale jets—BVM Ultra Bandit- 4000-8000mAh
- Scale aircraft—The variety of scale aircraft and the accessories they use vary tremendously making it difficult to give capacity recommendations for these types of aircraft. Using the above aerobatic guidelines relative to the size and number of servos used provides a conservative capacity for your scale aircraft. As always, check battery charge condition before each use.



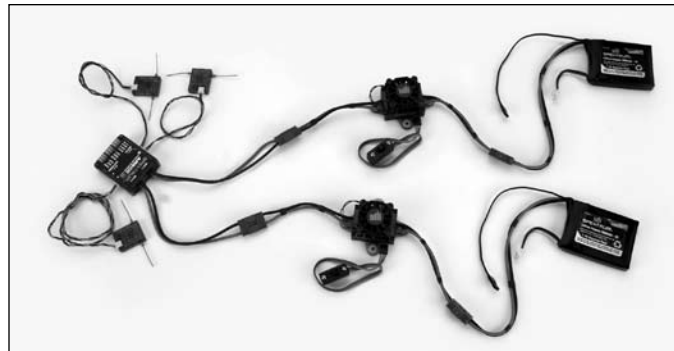


Installation

1. Mount the regulator(s) via the mounting tabs and grommets with self-tapping screws to a flat surface in your aircraft appropriately located between the battery and the receiver.
2. Plug the soft switch into the regulator as shown in the illustration and mount the switch to the side of the fuselage. Note: If using an AR9100 remove the switch that is plugged into the receiver. The switch plugged into the regulator will be used to turn the system on and off.
3. Plug the Battery into the regulator and plug the regulator into either of the AR9100 power input ports.

Note: If using a receiver other than a Spektrum AR9100, an optional EC3-to-dual servo lead output adapter is available (SPMYHEC36). Plug the EC3 adapter into the regulator's output and then plug the two servo leads into the battery port and any open auxiliary port in the receiver.

4. Turn on the system. The fan should operate and the receiver should turn on.





Optional Charge On/Off Adapter Lead

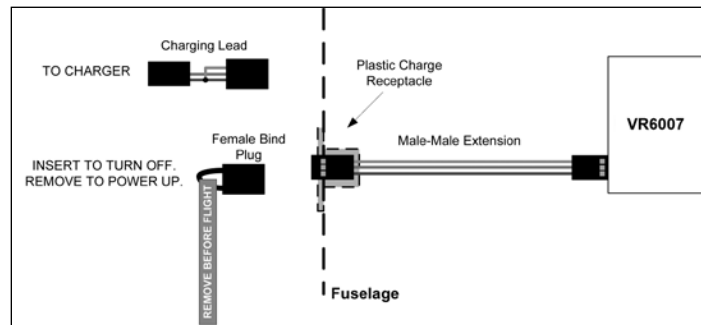
Included with the system is an optional charge, on/off adaptor lead. Some modelers may prefer to use this adapter lead instead of the included soft switch. When plugged into the regulator's switch port this adapter lead allows the following:

1. You can charge the battery through the adapter lead.

⚠ WARNING: Never overcharge a battery beyond the listed capacity on the battery label. Overcharging can result in fire, property damage and personal injury.

2. You can turn the system off by inserting the Bind plug. Removing the bind plug turns the system on.
3. You can monitor battery voltage through the adapter lead using a flight log or voltmeter. If the voltmeter is plugged directly into the male-male extension, the system is active and voltage under load (system operational) is displayed. If plugged into the charging lead, the at-rest battery voltage is displayed. Install the adapter lead as shown in the following diagram.

Note: A plastic housing is included that allows the lead to be mounted to the side of the fuselage.





Warranty and Repair Policy

Warranty Period

Exclusive Warranty- Horizon Hobby, Inc., (Horizon) warrants that the Products purchased (the "Product") will be free from defects in materials and workmanship for a period of 1 (one) year from the date of purchase by the Purchaser.

1 Year Limited Warranty

Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(a) This warranty is limited to the original Purchaser ("Purchaser") and is not transferable. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. This warranty covers only those Products purchased from an authorized Horizon dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for all warranty claims.

(b) Limitations- HORIZON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCT. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

(c) Purchaser Remedy- Horizon's sole obligation hereunder shall be that Horizon will, at its option, (i) repair or (ii) replace, any Product determined by Horizon to be defective. In the event of a defect, these are the Purchaser's exclusive remedies. Horizon reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Horizon. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the Product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than Horizon. Return of any Product by Purchaser must be approved in writing by Horizon before shipment.

Damage Limits

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. 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 this Product, you are advised to return this 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).

Warranty Services

Questions, Assistance, and Repairs

Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the Product has been started, you must contact 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 direct your email to productsupport@horizonhobby.com, or call 877.504.0233 toll free to speak to a Product Support representative. You may also find information on our website at www.horizonhobby.com.

Inspection or Repairs

If this Product needs to be inspected or repaired, please use the Horizon Online Repair 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





Warranty Services (cont.)

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 Repair Request is available at www.horizonhobby.com <http://www.horizonhobby.com> under the Repairs tab. 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 repair. 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 batteries to Horizon. If you have any issue with a battery, please contact the appropriate Horizon Product Support office.

Warranty Inspection and Repairs

To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be repaired or replaced free of charge. Repair or replacement decisions are at the sole discretion of Horizon.

Non-Warranty Repairs

Should your repair not be covered by warranty the repair 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 repair you are agreeing to payment of the repair without notification. Repair estimates are available upon request. You must include this request with your repair. Non-warranty repair 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 cashiers checks, as well as Visa, MasterCard,

American Express, and Discover cards. By submitting any item to Horizon for inspection or repair, you are agreeing to Horizon's Terms and Conditions found on our website under the Repairs tab.

Country of Purchase	Horizon Hobby	Address	Phone Number/ Email
United States	Horizon Service Center (Electronics and engines)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233 productsupport@horizonhobby.com
	Horizon Product Support (All other products)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233 productsupport@horizonhobby.com
United Kingdom	Horizon Hobby Limited	Units 1-4 Ployters Rd Slaple Tye Harlow, Essex CM18 7NS United Kingdom	+44 (0) 1279 641 097 sales@horizonhobby.co.uk
Germany	Horizon Technischer Service	Hamburger Str. 10 25335 Elmshorn Germany	+49 4121 46199 66 service@horizonhobby.de
France	Horizon Hobby SAS	14 Rue Gustave Eiffel Zone d'Activité du Réveil Matin 91230 Montgeron	+33 (0) 1 60 47 44 70





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 2.400GHz to 2.4835GHz frequency range.

The associated regulatory agencies of the following countries recognize the noted certifications for this product as authorized for sale and use:

Compliance Information for the European Union

Declaration of Conformity (in accordance with ISO/IEC 17050-1)

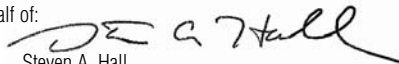
No. HH2010053004

Product(s): Spektrum VR6007 Voltage Regulator
Item Number(s): SPMVR6007

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European EMC Directive 2004/108/EC:

EN55022 Radio disturbance characteristics
EN55024 Immunity characteristics

Signed for and on behalf of:
Horizon Hobby, Inc.
Champaign, IL USA
May 30, 2010


Steven A. Hall
Vice President
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 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.





notes





notes

