

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](mailto:productsupport@horizonhobby.com), or call 877.504.0233 toll free to speak to a service technician.

#### Inspection or Repairs

If this Product needs to be inspected or repaired, please call for a Return Merchandise Authorization (RMA). 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. A Service Repair Request is available at [www.horizonhobby.com](http://www.horizonhobby.com) on the "Support" tab. If you do not have internet access, please include a letter with your complete name, street address, email address and phone number where you can be reached during business days, your RMA number, a list of the included items, method of payment for any non-warranty expenses and a brief summary of the problem. Your original sales receipt must also be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

#### 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 Hobby.

#### 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. Please advise us of your preferred method of payment. Horizon accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. If you choose to pay by credit card, please include your credit card number and expiration date. Any repair left unpaid or unclaimed after 90 days will be considered abandoned and will be disposed of accordingly. Please note: non-warranty repair is only available on electronics and model engines.

#### United States

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Service Center  
4105 Fieldstone Road  
Champaign, Illinois 61822  
USA

All other Products requiring warranty inspection or repair should be shipped to the following address:

Horizon Product Support  
4105 Fieldstone Road  
Champaign, Illinois 61822  
USA

Please call 877-504-0233 or e-mail us at [productsupport@horizonhobby.com](mailto:productsupport@horizonhobby.com) with any questions or concerns regarding this product or warranty.

#### United Kingdom

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Hobby UK  
Units 1-4 Ployters Rd  
Staple Tye  
Harlow, Essex  
CM18 7NS  
United Kingdom

Please call +44 (0) 1279 641 097 or e-mail us at [sales@horizonhobby.co.uk](mailto:sales@horizonhobby.co.uk) with any questions or concerns regarding this product or warranty.

#### Germany

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Technischer Service  
Hamburger Strasse 10  
25335 Elmshorn  
Germany

Please call +49 4121 46199 66 or e-mail us at [service@horizonhobby.de](mailto:service@horizonhobby.de) with any questions or concerns regarding this product or warranty.



#### 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.



Thank you for purchasing an E-flite Lithium Polymer (Li-Po) battery. E-flite Li-Po batteries offer an excellent blend of weight, power and performance. However, like all Li-Po batteries, they require proper handling and care for safe and maximum performance.

**Lithium Polymer batteries come partially charged and are significantly more volatile than the alkaline, Ni-Cd or Ni-MH batteries used in RC applications. Keep batteries out of reach of children, unless supervised by a responsible adult. All instructions and warnings must be followed exactly. MISHANDLING OF LI-PO BATTERIES CAN RESULT IN FIRE. For more information, please read the following instructions in their entirety before handling and using. By handling, charging or using this Li-Po battery, you assume all risks associated with lithium polymer batteries. If you do not agree with these conditions, return the battery in new, unused condition to the place of purchase immediately.**

#### Handling and Storage Guidelines

- 1) **Li-Po batteries should always be handled with extreme care.** Care should be taken to prevent them from being dinged, dented, punctured (especially by metallic objects such as screwdrivers or hobby knives) or otherwise damaged.
- 2) Care should be taken to ensure that the battery is never shorted. Even a brief short can cause permanent and catastrophic damage to the battery and can result in fire. A battery that has been shorted for even just a split second should be placed in an open area away from flammable materials and observed for at least 15 minutes. It should also be removed from service entirely. To help prevent shorts, it is best to store and transport the battery in a non-conductive (and preferably fire-proof) container and/or to cover the connectors with a non-conductive material.
- 3) When temporarily storing or transporting the battery, the temperature range should be from approximately 40–120 degrees Fahrenheit for the best results. Do not store the battery in a car or direct sunlight whenever possible. If stored in a hot car, the battery can be damaged or even catch fire if the temperature inside the car becomes too hot.
- 4) Store the battery at room temperature and approximately 1/2 charge for best results. A Li-Po cell is approximately 50% charged when it is at 3.8V.

The approximate 1/2 charge voltage for a 2S (7.4V nominal) battery is 7.6V    The approximate 1/2 charge voltage for a 5S (18.5V nominal) battery is 19.0V  
The approximate 1/2 charge voltage for a 3S (11.1V nominal) battery is 11.4V    The approximate 1/2 charge voltage for a 6S (22.2V nominal) battery is 22.8V  
The approximate 1/2 charge voltage for a 4S (14.8V nominal) battery is 15.2V

#### Before the First Charge

- 1) Make a visual and physical inspection of the battery. Look for any damaged or loose leads or connectors, broken shrink tubing or other irregularities which may cause a short circuit and eventual fire.
- 2) Check for proper polarity of the factory installed leads and connectors. Use a digital voltmeter to ensure that the polarities are correct.
- 3) Check the voltage of the battery using a digital voltmeter or the E-flite Power Meter (EFLA110). The voltage of the cells within the battery should be between 3.5V and 3.9V each.

The voltage of a new 2S (7.4V nominal) battery should be between 7.0V and 7.8V  
The voltage of a new 3S (11.1V nominal) battery should be between 10.5V and 11.7V  
The voltage of a new 4S (14.8V nominal) battery should be between 14.0V and 15.6V  
The voltage of a new 5S (18.5V nominal) battery should be between 17.5V and 19.5V  
The voltage of a new 6S (22.2V nominal) battery should be between 21.0V and 23.4V

- 4) In order to comply with shipping regulations and safety, the 6S 5000mAh battery is equipped with external series wire leads with gold bullet connectors that are shipped disconnected so the pack is considered as two 11.1V packs connected in series. You are required to connect the series wire leads before first use by connecting the two bullet connectors in order for this pack to properly operate as a 22.2V pack. Before shipping this pack for any reason in the future, you will need to disconnect the series leads first.

**If any damage or irregularities are found, the polarity of the wire leads or connectors are not correct, or the voltage of the battery is more or less than the ranges listed above, call 877.504.0233 toll-free to speak to a service technician. DO NOT continue to handle or attempt to use the battery without further instructions.**

#### Charging Guidelines and Warnings

- 1) **You MUST use a charger specifically designed to charge Li-Po batteries ONLY.** The charger must be capable of "constant current / constant voltage" charging. Failure to use the proper charger may result in a fire causing personal injury and/or property damage. **DO NOT use an Ni-Cd or Ni-MH charger at any time.**
- 2) The battery should always be charged in an open area away from, and not placed on, any flammable materials. The battery should never be charged inside of the model or a full-size vehicle. It is also suggested that an "ABC" type fire extinguisher be readily accessible in the charging area in case any issues resulting in fire are experienced.
- 3) **Never charge the battery unattended.** When charging the battery, you should always remain in constant observation to monitor the charging process and react to potential problems that may occur.

4) Do not charge batteries in series and/or parallel. Each battery should be charged individually.

5) After discharging, the battery must be cooled to ambient temperature before charging.

6) Be sure that the charger is set to the proper cell count and/or voltage listed on the label of the battery. As an additional precaution, confirm that the information listed on the label is correct.

7) Be sure that the charger is set to the proper charge rate. The charger should never be set to charge the battery at a rate greater than 1C (1 times the capacity of the battery in amp hours). Some examples are listed below.

430mAh batteries should be charged at or below 0.43 amps  
800mAh batteries should be charged at or below 0.80 amps  
1500mAh batteries should be charged at or below 1.5 amps  
1800mAh batteries should be charged at or below 1.8 amps

2100mAh batteries should be charged at or below 2.1 amps  
3200mAh batteries should be charged at or below 3.2 amps  
4000mAh batteries should be charged at or below 4.0 amps  
5000mAh batteries should be charged at or below 5.0 amps

8) You must check the voltage of the battery (using a digital voltmeter or E-flite Power Meter) before each charge session in order to ensure that it is at or above the minimum safe starting voltage. A battery that is below the minimum safe starting voltage has been overdischarged or has experienced a failure of one or more of the cells and should not be charged. The minimum safe starting voltage is approximately 3.1V per cell.

Do not charge a 2S (7.4V nominal) battery if it is below 6.2V  
Do not charge a 3S (11.1V nominal) battery if it is below 9.3V  
Do not charge a 4S (14.8V nominal) battery if it is below 12.4V

Do not charge a 5S (18.5V nominal) battery if it is below 15.5V  
Do not charge a 6S (22.2V nominal) battery if it is below 18.6V

9) It is not recommended to “top-off” a fully charged or near fully charged Li-Po battery. Attempting to do so may cause the charger to overcharge the battery, resulting in damage to the battery and possible fire. If the voltage of each cell within the battery is approximately 4.1V or higher, it is best to discharge the battery for at least a short time before attempting to charge it.

Do not charge a 2S (7.4V nominal) battery if it is at or above 8.2V  
Do not charge a 3S (11.1V nominal) battery if it is at or above 12.3V  
Do not charge a 4S (14.8V nominal) battery if it is at or above 16.4V

Do not charge a 5S (18.5V nominal) battery if it is at or above 20.5V  
Do not charge a 6S (22.2V nominal) battery if it is at or above 24.6V

10) Li-Po cells should NEVER be charged to more than 4.2V. Any cell that is charged to a voltage higher than 4.2V may be damaged and could catch fire.

Do not charge a 2S (7.4V nominal) battery to more than 8.4V  
Do not charge a 3S (11.1V nominal) battery to more than 12.6V  
Do not charge a 4S (14.8V nominal) battery to more than 16.8V

Do not charge a 5S (18.5V nominal) battery to more than 21.0V  
Do not charge a 6S (22.2V nominal) battery to more than 25.2V

11) Never apply a “trickle” charge to a Li-Po battery. Trickle charging at even the lowest possible rates will cause the cells within the battery to charge beyond 4.2V, resulting in cell damage and potential fire.

**If at any time during the charging (or discharging) process the battery begins to balloon or swell, discontinue charging (or discharging) immediately. Quickly and safely disconnect the battery, then place it in a safe, open area away from flammable materials to observe it for at least 15 minutes. Continuing to charge or discharge a battery that has begun to balloon or swell can result in a fire. A battery that has ballooned or swollen even a small amount must be removed from service completely.**

#### Discharge Guidelines and Warnings

1) E-flite Li-Po batteries should not be discharged at rates higher than specified on the battery label. Some examples are listed below.

Do not discharge a 20C 430mAh battery continuously at a rate higher than 8.6 amp  
Do not discharge a 20C 1800mAh battery continuously at a rate higher than 36.0 amps  
Do not discharge a 30C 3200mAh battery continuously at a rate higher than 96.0 amps  
Do not discharge a 30C 5000mAh battery continuously at a rate higher than 150.0 amps

2) Do not allow the temperature of the battery to exceed 160 degrees Fahrenheit during discharge. Adequate cooling for the battery is required, especially when discharging at or near maximum rates.

3) **Li-Po cells should NEVER be discharged to below 3.0V under load for best results.** Any cell that is discharged to a voltage lower than 3.0V under load may be damaged, resulting in loss of performance and potential fire when the cell is charged. You should always use an ESC with the proper low voltage cutoff setting (3.0V per cell) for the battery you are using. It is also recommended that any battery that has been overdischarged be removed from service completely.

Do not discharge a 2S (7.4V nominal) battery to below 6.0V under load  
Do not discharge a 3S (11.1V nominal) battery to below 9.0V under load  
Do not discharge a 4S (14.8V nominal) battery to below 12.0V under load

Do not discharge a 5S (18.5V nominal) battery to below 15.0V under load  
Do not discharge a 6S (22.2V nominal) battery to below 18.0V under load

#### Additional Guidelines and Warnings

1) Be sure to remove metallic objects, such as rings, watches and bracelets from your hands when handling Li-Po batteries. While shorts caused by these objects can cause damage to the battery and potential fire, they can also cause severe personal injury if they are not removed from your body.

2) It is never a good idea to place Li-Po batteries in your pocket or any other area where they may come into contact with foreign objects that could cause shorting, puncturing or other forms of damage.

3) In the unfortunate event that a model containing a Li-Po battery is crashed, you must quickly (and safely) disconnect and remove the battery from the model, then place it in a safe, open area away from flammable materials to observe it for at least 15 minutes. DO NOT place the crash damaged battery in a car or other location that is not fireproof. In some cases, crash (or otherwise) damaged batteries that do not react adversely after 15 minutes of observation may still catch fire when handled, up to many hours after the damage occurred. Extreme care must be taken when handling and/or transporting the crash damaged battery, and it is best to place the damaged battery inside of a fireproof container until it can be disposed of properly.

4) If, when handling a crash or otherwise damaged Li-Po battery, the electrolyte contained within the cells comes into contact with your skin, wash the affected area(s) with soap and water immediately. If the electrolyte comes into contact with your eye(s), flush them with generous amounts of water for 15 minutes and seek immediate medical attention.

5) If it is necessary for you to remove a Li-Po battery from service for any reason, please call 877.504.0233 toll-free to speak to a service technician for more information regarding how to properly handle, discharge and dispose of the battery.

#### Connector Types and Compatibility

1) E-flite Li-Po batteries are equipped with a 2-Pin JST (usually featuring a red color connector housing), or EC3/EC5 connectors on the main power leads (the two larger diameter red and black wire leads). These connectors are compatible with many chargers, ESCs and other devices, however, it is critical that you confirm proper polarity and connector compatibility before using these connectors with any other device. Damage caused to any battery or device due to improper polarity connection is not covered under warranty.

2) The above pre-installed connectors and wire gauge do have power limitations. E-flite has tested and matched the batteries with the connectors that best match the typical usage in radio control applications, even though the batteries have higher capabilities. If you plan to use the batteries in any application that the power usage will exceed connectors power ratings, you may need to replace them with higher rated connectors.

3) E-flite Li-Po batteries are also equipped with standard JST-XH series balancing connectors (usually featuring a white color connector housing) on the balancing leads (the multi-colored leads used for balancing and balance charging). These connectors are compatible with many balancing chargers, balancers and other devices, including most of those available from E-flite, however, it is critical that you confirm proper polarity and connector compatibility before using these connectors with any other device. Damage caused to any battery or device due to improper polarity connection is not covered under warranty.

**NOTE:** Although the battery may be equipped with up to seven balancing wire leads with various colors of insulation, the outermost red and black wire leads are the main positive and negative connections to the pack.

#### Warranty Period

Exclusive Warranty- Horizon Hobby, Inc., (Horizon) warrants that the Products purchased (the “Product”) will be free from defects in materials and workmanship at the date of purchase by the Purchaser.

#### Limited Warranty

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

(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 goods 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).

#### Safety Precautions

This is a sophisticated hobby Product and not a toy. 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. The Product 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 injury.

#### 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