

**WARNING: Please read before charging or using your new battery**

# **IMPORTANT SAFETY INSTRUCTIONS AND WARNINGS**

- You must read these safety instructions and warnings before using or charging your batteries.
- Lithium Polymer batteries are volatile. Failure to read and follow these instructions may result in fire, personal injury and damage to property if charged or used improperly.
- Ready RC and its distributors and retailers assume no liability for failure to comply with these warnings and safety guidelines.
- By purchasing this battery, the buyer assumes all risks associated with this product. If you do not agree with these conditions, please return the battery immediately before use.

## **General Guidelines and Warnings**

- 1) Voltz batteries are NOT fully charged as you receive them. They contain approximately 50% of a full charge.
- 2) Use Lithium Polymer specific chargers only. Do not use a NiCd or NiMh charger - Failure to do so may cause a fire, which may result in personal injury and property damage.
- 3) Never charge batteries unattended. When charging Lithium Polymer batteries, you should always remain in constant observation to monitor the charging process and react to potential problems that may occur.
- 4) Some Lithium Polymer chargers on the market may have technical deficiencies that may cause them to charge Lithium Polymer batteries incorrectly. It is solely the responsibility of the user to assure that the charger used works properly.
- 5) If at any time you witness a battery starting to balloon or swell up, discontinue the charging process immediately. Disconnect the battery and place it in a safe observation area for approximately 15 minutes. Continuing to charge a battery that has begun to swell will result in fire.
- 6) Battery observation should occur in a safe area outside of any building or vehicle and away from any combustible material. The middle of a cement driveway is a good example of a safe observation area.
- 7) **Shorts can cause fires!** If you accidentally short the wires, the battery **must** be placed in a safe area for observation for approximately 15 minutes. Additionally, be mindful of the burn danger that may occur due to a short across conductive jewelry (such as rings on your fingers).
- 8) Chemical reactions are not instantaneous; a battery that has been shorted may not ignite for 10 minutes.
- 9) All crashed batteries, even if not deformed, should be placed in a safe area for observation for at least 15 minutes.
- 10) If for any reason you need to cut the terminal wires, **cut each wire separately**, ensuring the wires do not become shorted across the cutting tool.
- 11) When soldering connectors, extra care must be taken to ensure that a short does not occur. If the battery is shorted, place the battery in a safe area and observe it for approximately 15 minutes.
- 12) Never store or charge a battery pack inside your car!

## **Before the First Charge**

- 1) Make a visual inspection of the pack. Check for any damaged leads, connectors, broken/cracked shrink covering, puffiness or other irregularities. This is absolutely important, as the quality guarantee on Voltz batteries expires one week after purchase.
- 2) Before using the battery, check the voltage of the pack using a digital voltmeter (not your charger). All new packs ship at approximately 3.80V to 3.9V per cell. For example: A 2S pack should read approximately 7.60V to 7.8V, a 3S pack should read approximately 11.40V to 11.7V.
- 3) If any damage to the pack or leads is found, or the voltage is significantly less for your pack than specified above, do not attempt to charge or fly the pack; contact your dealer as soon as possible.

## **Charging Process**

- 1) Never charge batteries unattended.
- 2) Charge in an isolated area, away from flammable materials.
- 3) Let the battery cool down to ambient temperature before charging.
- 4) Do not charge battery packs in series unless you are very experienced at doing so and understand the proper procedure. Failure to do this properly can result in battery damage or fire.
- 5) When selecting the cell count or voltage for charging purposes, select the cell count and voltage as it appears on the battery label. Selecting a cell count or voltage other than the one printed on the label may result in overcharging and fire. As a safety precaution, please confirm that the information printed on the battery is correct. *For example:* If a battery label indicates that it is a 3 cell battery (3S), its voltage should read between 11.4 and 11.7 volts. This battery must be charged as a 3 cell battery (peak of 12.6V).

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6) You must check the pack voltage after each flight before re-charging. Do not attempt to charge any pack if the unloaded individual cell voltages are less than 3.3V. *For example:* Do not charge a 2-cell pack if below 6.6V Do not charge a 3 cell pack if below 9.9V

7) **NORMAL CHARGING:** The charge rate should not exceed 1C (one times the capacity of the battery, unless otherwise noted\*). Higher setting may cause problems which can result in fire. *For example:* Charge a 1000mAh battery at or below 1.00Amps. Charge a 5000mAh battery at or below 5Amps. Voltz packs with balancing connectors can and should be used with Lithium Polymer balancers for safer charging.

\*To charge at greater than 1C (no more than 3C): You must use an intelligent charger with a balancer. The charger must be able to communicate with the balancer. The Hyperion 615 Duo, TP1010, and many Bantam chargers are capable of this. Please ensure that your charger and balancer work together if you intend to charge at high rates.

### **First few Flights**

Voltz batteries require a very small “break-in” period. The battery doesn’t have to be flown carefully or in any specific fashion. Fly as normal. After the first several flights, the power will increase as the batteries “wake up.” Also be extremely careful not to over discharge new packs. Never discharge more than 80% of the batteries capacity. Packs should NEVER be over discharged at any time, but over discharging on the first flight will damage the battery permanently before you are able to enjoy it.

### **Storage & Transportation**

- 1) Store batteries at room temperature between 40 and 70 degrees F for best results.
- 2) If storing longer than one week; batteries must be stored at 3.8V/cell to 3.9V/cell (approximately 50% charged) . This is easily accomplished using any decent charger that has a storage discharge function.
- 3) Do not expose battery packs to direct sunlight (heat) for extended periods.
- 4) When transporting or temporarily storing in a vehicle, temperature range s should be greater than 20 degrees F but no more than 150 degrees F.
- 5) Storing Lipo batteries at temperatures greater than 170 degrees F for extended periods of time (more than 2 hours) may cause damage to battery and possible fire.

### **Caring for Lithium Polymer Batteries**

- 1) Only charge a Lithium Polymer battery with a good quality Lithium Polymer charger. A poor quality charger can be dangerous.
- 2) Set voltage and charge current correctly. Failure to do so can cause fire.
- 3) Please check pack voltage after the first charge. *For example;* a 2 Cell battery should measure 8.4V (8.30 to 8.44), a 3 cell battery should measure 12.6V (12.45 to 12.66).
- 4) Do not discharge a battery to a level below 3V per cell under load. Discharging below 3V per cell can deteriorate battery performance. Be sure to set your ESC for the proper cut off voltage (6.0V cut off for 2S packs, 9.0V cut off for 3S packs, etc).
- 5) Use caution to avoid puncture of the battery. Puncturing a LiPo battery may cause a fire.

### **Operating Temperatures**

- Charge: 32 to 113 degrees F
- Discharge: 32 to 140 degrees F

- 1) Always allow a battery to cool down to ambient temperature before re-charging.
- 2) During discharge and handling of batteries, do not exceed 160 degrees F.

### **Battery Life**

Batteries that lose 20% of their capacity must be removed from service and disposed of properly. Discharge the battery to 3V/Cell, making sure output wires are insulated, and then wrap battery in a bag for disposal.

### **Product Warranty**

Product warranty is limited to original defects in material and workmanship for 7 days from the day of purchase. Warranty does not cover collateral damage, misuse, abuse, incorrect charging and other in appropriate use of this product.

### **Voltz Lithium Polymer Batteries**

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