LECTRON PRO

Common Sense RC • www.CommonSenseRC.com
Toll-Free Phone: 866-405-8811 • International Callers: 818-718-1893 • Fax: 818-718-6742

BASIC LITHIUM IRON PHOSPHATE (LiFePO4) BATTERY INSTRUCTIONS

Dear customer,

If you are unclear about any of the information presented here, please contact us PRIOR to charging or discharging these batteries.

PLEASE NOTE - This is a LiFe (LiFePO4 - Lithium Iron Phosphate) battery, NOT A LITHIUM POLYMER (LIPO) BATTERY. This battery must be charged using LiFe specific voltage settings. Attempting to charge it using LiPo, NiMH, or NiCad settings will result in damage to the battery and potential fire.

IMPORTANT SAFETY INSTRUCTIONS AND WARNINGS

Read all safety instructions and warnings prior to using or charging this battery.

- By purchasing this battery, the buyer assumes all risks associated with lithium batteries. We assume no liability for failure to comply with these warnings and safety guidelines. If you do not agree with these terms and conditions, return the battery in new, unused condition to the place of purchase.
- Lithium Iron Phosphate batteries are volatile and can be very dangerous if mis-handled, stored, charged or discharged improperly. Failure to read and follow these instructions may result in fire, personal injury, damage to property, and will also void the warranty.

GENERAL GUIDELINES AND WARNINGS

1) **Charge only with a Lithium Iron Phosphate (LiFe) battery charger.**
2) **Use a balancing charger or cell balancer every time you charge your LiFe battery packs.** A LiFe battery is considered balanced if all the individual cells in the battery pack within 0.05V of each other. The balancing function maintains this during charging to ensure individual cells are not overcharged and damaged.
3) **Never charge Lithium Iron Phosphate batteries unattended.**
4) **Always charge in a fire-resistant container on a non-flammable surface (like concrete) at least five feet away from any flammable objects.**
5) **Do not charge battery to more than 3.6V per cell.**
6) **Do not discharge below 2.5V per cell under load (approximately 2.8V per cell resting voltage).** Make sure to activate the Low Voltage Cut-off (LVC) in your device before using a LiFe battery in it.
7) **Store battery at 40-50% charged (approximately 3.00V-3.10V per cell).** Storing LiFes fully charged or depleted will shorten battery life dramatically and void warranty.
8) **Store below 80° F and above 40° F (not in direct sunlight).** Never store or charge a battery pack inside your car in extreme temperatures (100° F and above), extreme temperatures could cause fire.
9) **Do not leave your battery plugged into any device (including a charger or vehicle) when the battery is not in use or charging.** This can lead to the battery being discharged below the minimum 2.5V per cell and permanently damage the battery.
10) **Do not expose the battery to moisture or submerge it in liquid.** This battery is not waterproof or water resistant. Exposure to moisture or liquid will damage electrical components and create a major risk of short circuit and fire hazard. If the battery is exposed to moisture or liquid at any point, it should no longer be used.

Please take some time and follow these steps in order to assure that you have the best possible experience with your Lectron Pro LiFe battery pack. Failure to follow these steps will void your warranty.

1) Read these instructions in their entirety before using this product.
2) Inspect the pack for any obvious damage to the wiring or cells. Contact us if the pack is damaged, even a little bit.
3) Check the voltage of each individual cell in your battery pack. Each cell should be around 3.3V (+/- 0.3V), and the cells should all be within 0.1V of each other. If the battery pack is not within these tolerances, please contact us.
4) If necessary, solder a connector to the output leads of the pack (see warnings below).
5) Charge the battery pack, using either a balancing charger or a series charger in conjunction with a balancer. **Set the charger to LiFe mode (3.3V/cell) NOT LiPo mode. Charging this battery in LiPo mode will damage the battery and could result in fire.** You must balance the battery every time you charge it. Even small imbalances can lead to overcharging of individual cells with a standard series charger, resulting in damage to the pack, and potential fire hazard. You must select a charge rate current that does not exceed 1C (one times the capacity of the battery) unless otherwise noted on the battery's label. A higher setting may cause damage to your battery pack and possible fire hazard. The following chart of examples is calculated at 1x capacity of pack. Generally speaking, charging at even lower rates will extend battery life.

800 mAh: Charge at or below 0.8 Amps
1500 mAh: Charge at or below 1.5 Amps
6000 mAh: Charge at or below 6.0 Amps

6) Check the cell voltages after charging. The cells should be in balance with each other (within 0.05V of all other cells in the pack), and no cell should exceed 3.6V. If any cell is above 3.6V, contact your charger's manufacturer, as the charger is not functioning properly and could cause a fire.

7) Unless you are using the battery pack in a pre-approved application (a stock vehicle we recommend the pack for), use a wattmeter to test the current draw in your application. Remember, this is an aftermarket pack, and unless you test it, you don't know if you're pulling too much current out of the pack. If you are planning to run the pack in more than one application, measure each of them.

8) Register your battery pack with Common Sense RC by using the Battery Registration tool on our website. It's found on the Product Instructions page at www.commonsenserc.com/page.php?page=warranty_form.html.

9) Make sure that your ESC is set up for a low-voltage-cutoff of 2.5V/cell or higher. Discharging the battery below 2.5V per cell can result in permanent damage to the battery and will void the warranty.

10) Go run the pack! Enjoy it, and if you like it, tell your friends!

11) Allow the battery to cool down, and look over the pack to make sure it hasn't been physically damaged, particularly if you've just crashed!

12) Charge and balance the pack.

13) Repeat steps 10-12 until you've had as much fun as you can stand.

14) If you won't be using the battery for more than a week or so, it should be stored at 40-50% charged (3.00V - 3.10V per cell).

LECTRON PRO BATTERY PACK LIMITED WARRANTY:

- This Lithium Iron Phosphate Battery Pack is guaranteed, under warranty, against defects in materials and workmanship for one year from the date of purchase.
- This warranty does not cover physical damage to the battery pack as the result of a crash, hard landing, improper mounting or any deformity caused by the user.
- This warranty does not cover internal damage to the battery pack due to overcharging, deep discharging, excessive discharge current, or improper storage.
- In order to be eligible for warranty exchange, the user must follow the initial setup instructions above, and the pack must be registered with Common Sense RC.
- As a courtesy to our customers, we will also exchange any physically damaged battery pack for a new one at 85% of the original purchase price.
- This warranty is non-transferable and applies only to the original purchaser of this battery pack. Any transfer of ownership will void the warranty.

LECTRON PRO LITHIUM IRON PHOSPHATE BATTERY SAFETY WARNINGS:

- Use caution to avoid puncture of the cells. Puncture of cells may cause fire.
- If at any time you witness a battery starting to balloon or swell up, discontinue the charging or discharging process immediately. Disconnect the battery and observe it in a safe place for approximately 15 minutes. Dispose of the pack following the instructions below. Continuing to use a battery that has begun to swell may result in fire.
- Do not attempt to solder connectors to Lithium Polymer batteries unless you have experience soldering wire leads on LiPo or LiFe batteries. To solder a connector, remove any protective insulation on the red wire and solder to the positive terminal of a connector, then re-insulate that terminal using shrinktube. Next, remove any protective insulation on the black wire and solder to the negative terminal of the connector, then re-insulate that terminal. Be careful not to let the uninsulated portions of the wire leads touch each other, as this will cause a short circuit and potential fire. If you accidentally cause the battery to short, place it in a safe open space and observe the battery for approximately 15 minutes. A battery may swell or even possibly catch fire after a short time.

  If, for any reason, you need to cut the terminal wires, cut each wire separately, ensuring the wires do not touch each other, or a short may occur, potentially causing a fire. Additionally, if a short occurs and contact is made with metal (such as rings on your hand), severe injuries may occur.
- You must check the pack voltage before each charging session. Do not attempt to charge any pack if the voltage of any cell is less than 2.5V.

  Example: Do not charge a 2-cell pack if below 5V
  Do not charge a 3-cell pack if below 7.5V
- Do not discharge battery to a level below 2.5V per cell under load. Deep discharge below 2.5V per cell can dramatically deteriorate battery performance and will likely cause the battery pack to become defective and unusable.
- Batteries that lose 20% of their capacity must be removed from service and disposed of properly. For example, a 2000mah battery that behaves as if it is only a 1600mah battery is unsuitable for service. Dispose of it using the instructions below.

LITHIUM IRON PHOSPHATE DISPOSAL INSTRUCTIONS

- To dispose of this battery please take it to your local electronic waste recycling center.

Common Sense RC • www.CommonSenseRC.com
Toll-Free Phone: 866-405-8811 • International Callers: 818-718-1893 • Fax: 818-718-6742