

# LITHIUM POLYMER BATTERY SAFETY - IMPORTANT!

**L**ithium polymer batteries require extra care and attention both in use and during charging - when compared with nicad or nickel metal hydride batteries. The high 'energy density' of a Lithium polymer (Li-po) rechargeable battery means that it can supply remarkable power for use in radio control models but can be dangerous if mistreated.

We recommend you read the following information carefully before using your Li-po battery.

## Before Charging Li-po's

- Before charging your battery check for any damage e.g. check if the battery has expanded or swollen in size or if the battery cells have been punctured. If any of the above is true: **DO NOT CHARGE THE BATTERY!**
- Always double-check the settings (if feature is included) on your charger before you start to charge to ensure you have the correct settings selected. Using the wrong settings can damage your battery and in some cases can cause the cells to catch fire!

## Charging Li-po's

- Only use a charger designed to charge Lithium polymer batteries. Never use a nicad or other charger as this is very dangerous.
- Never attempt to charge at a rate faster than that recommended in the instructions. Check that the **battery** cell count matches the **charger** cell count switch (if feature is included).
- Never charge unattended. Never leave your battery whilst charging in case of overheating or fire risk.
- Charge on a safe surface or in a container (e.g. an old unused microwave oven). Charge **only** on non-flammable surfaces, e.g. concrete floor preferably outdoors, or in a pyrex cooking dish with the battery placed on a bed of sand, or in a fireplace. Never charge a battery placed inside a car!
- Switch off charger if battery gets too hot. If the battery becomes hot to the touch during charging, disconnect and switch off immediately. Never charge a hot battery. Wait until it cools down.
- Extinguish fires with sand. If something goes wrong and your battery catches fire, always have sand from a fire bucket at hand to douse the flames. Do NOT use water!

**WARNING** Do not short circuit!

Battery may explode.

**WARNING** If you crash!

Carefully inspect the battery for damage and dispose of properly if damaged. Always observe the battery carefully for at least 20 minutes after a crash. The pack may look fine but a perforation or damaged wire means the pack must be disposed of.

## Using Li-po's

- It is recommended that you use a Voltmeter to monitor the condition of the cells. If you are unsure about this, seek professional advice from your model shop or flying club.
- Never discharge Lithium polymer batteries to below 3 volts per cell and never charge at greater than 4.2 volts per cell. This is very important as damage will occur if you discharge below 3V or charge above 4.2V and the battery may not recover. If the voltage does drop below 3V per cell and you can get your battery to take a charge it may not give its full capacity and deterioration in performance will occur. This will invalidate all warranty claims.
- Use the correct ESC (electronic speed controller) with your Lithium polymer battery pack. This will help prevent your battery from dropping below 3 volts per cell and causing irreparable damage.
- Do not modify/change any part of the battery or lead. Do not remove its heat shrink protective covering. Removal or modification may damage the battery and will invalidate any warranty claim.
- Do not place this battery near fires or anything with high temperatures.
- Do not charge batteries while you are driving and do not store batteries in any type of motor vehicle.
- Do not let the battery get wet or become submerged in any type of liquid.
- Do not carry loose batteries in your pocket or bag as they could short-circuit against other items.
- If you do need to dispose of your Lithium polymer type battery, discharge it fully first. You can do this by the use of a light bulb, electric motor or suitable resistor.
- Keep battery packs away from children!
- If you should get electrolyte from the cells on your skin, wash thoroughly with soap and water. If in your eyes, rinse thoroughly with water. Seek medical assistance.
- Only use the recommended charger for Lithium polymer batteries. If you use the wrong charger this will damage the cells and the cells may catch fire!

Please consult your supplier if any of the foregoing is unclear or you require further information.

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