

# LIPO BATTERY WARNING!!

The White Wolf is equipped with a rechargeable LiPo battery. Please pay attention to the following cautions for safe use:

## ALWAYS KEEP OUT OF REACH OF CHILDREN.

Lithium batteries are becoming very popular for powering radio controlled model aircraft. This has occurred because of their very high energy density in comparison to older battery technologies. With the high energy density comes an increased risk in their use. Lithium batteries are considered fairly safe if all of the safety precautions are followed. The principal risk is FIRE, which usually is a result of improper charging, over discharging, crash damage, piercing the outer protective pouch, or shorting the batteries. All vendors of these batteries warn their customers of this danger and recommend extreme caution in their use. In spite of this, some fires have occurred as a result of the use of Lithium Polymer batteries resulting in loss of models, automobiles, and other property. A lithium battery fire is very hot (several thousand degrees) and is an excellent initiator for ancillary (resulting) fires. Fire occurs due to contact between Lithium and oxygen in the air. It does not need any other source of ignition, or fuel to start, and burns explosively. These batteries must be used in a manner that prevents the possibility of ancillary fires.

## Failure to follow all instructions could cause permanent damage to the battery, charger or its surroundings, and may cause bodily harm!

Only use the supplied LiPo approved charger. NEVER use a NiCd / NiMH or any other type of charger!

Never leave the charger unattended during the charge process.

Always charge through the "charge" lead. NEVER charge through the "discharge" lead.

If the battery should become damaged, discard the battery.

Never attempt to use or charge a damaged battery.

Do not leave the charger unattended while charging. Disconnect the battery and remove input power from the charger immediately if either the battery or charger becomes hot or begins to smoke! However, it is normal for the charger to get warm during the charge process.

Disconnect the battery from the charger and carefully move the battery to a fireproof location if the battery begins to swell or smoke **as the battery could erupt into flames at any time!**

Never charge at currents greater than 1C.

Do not place the charger or any battery on a flammable surface or near a combustible material while in use.

Never allow the battery temperature to exceed 150° F (65° C).

Only use the included AC adapter to power the charger.

Do not attempt to use this charger with NiCd, NiMH, or any other types of battery packs.

Do not block the air intake holes. This could cause the charger to overheat.

Do not charge on carpet, cluttered workbenches, paper, plastic, vinyl, leather, or wood. Only charge on a fireproof surface.

Always disconnect the charger and the power supply from input power when not in use.

Never charge inside a full sized vehicle.

Never disassemble or modify pack wiring in any way or puncture cells.

Do not allow water, moisture or foreign objects into the charger.

Never trickle charge LiPo type batteries.

Do not short-circuit the supply, charge or discharge terminals or leads of any battery

Do not transport or store the battery together with metal objects such as necklaces, hairpins, etc. These items may cause a short-circuit resulting in a fire.

Do not dispose of the battery into fire or heat.

Do not use or leave the battery near a heat source, such as fire or a heater.

Do not allow the battery to freeze.

Do not strike the battery or throw it against any surface.

Do not immerse the battery into water. Keep the battery cool and dry.

If the controller uses rechargeable batteries, remove them before recharging.

Rechargeable batteries should be recharged only by an adult.

Do not power the controller by mixing different types of batteries, or old and new batteries.

Use only batteries of the same or equivalent type as those recommended.

Install batteries following the correct polarity.

Remove exhausted batteries from the controller.

Do not over-discharge the battery.

Do not connect the battery to an electrical outlet.

Do not directly solder the battery or pierce it with a nail or other sharp object.

Charge the battery every six months.

Turn off all equipment power switches after use.

## DISPOSAL OF LIPO BATTERIES

Unlike NiCd batteries, lithium-polymer batteries are environmentally friendly. For safety reasons, it's best that LiPo cells be fully discharged before disposal (however, if physically damaged it is NOT recommended to discharge LiPo cells before disposal - see below for details). The batteries must also be cool before proceeding with disposal instructions. To dispose of LiPo cells and packs:

1. If any LiPo cell in the pack has been physically damaged, resulting in a swollen cell or a split or tear in a cell's foil covering, do NOT discharge the battery. Proceed directly to step 5.
2. Place the LiPo battery in a fireproof container or bucket of sand.
3. Connect the battery to a LiPo discharger. Set the discharge cutoff voltage to the lowest possible value. Set the discharge current to a C/10 value, with "C" being the capacity rating of the pack. For example, the "1C" rating for a 1200mAh battery is 1.2A, and that battery's C/10 current value is (1.2A / 10) 0.12A or 120mA. Or, a simple resistive type of discharge load can be used, such as a power resistor or set of light bulbs as long as the discharge current doesn't exceed the C/10 value and cause an overheating condition. For LiPo packs rated at 7.4V and 11.1V, connect a 150 ohm resistor with a power rating of 2 watts (commonly found at Radio Shack) to the pack's positive and negative terminals to safely discharge the battery. It's also possible to discharge the battery by connecting it to an ESC/motor system and allowing the motor to run indefinitely until no power remains to further cause the system to function.
4. Discharge the battery until its voltage reaches 1.0V per cell or lower. For resistive load type discharges, discharge the battery for up to 24 hours.
5. Submerge the battery into bucket or tub of salt water. This container should have a lid, but it does not need to be airtight. Prepare a bucket or tub containing 3 to 5 gallons of cold water, and mix in 1/2 cup of salt per gallon of water. Drop the battery into the salt water. Allow the battery to remain in the tub of salt water for at least 2 weeks.
6. Remove the LiPo battery from the salt water and place it in the normal trash.