# **WARNING**

## **Lithium Ion Battery Safety Guidelines**

WARNING: ENSURE ALL PROCEDURES OUTLINED IN THIS BOOKLET ARE FOLLOWED CORRECTLY. IF NOT PROPERLY FOLLOWED, WILL CREATE A HIGH PROBABILITY OF PROPERTY DAMAGE, COLLATERAL DAMAGE, AND POTENTIALLY CAUSE THE BATTERY TO CATCH FIRE AND SERIOUS INJURY.

For the purposes of this document Li-ion, Li-Po, Li-Fe NiXX or any other Chemistry of batteries will be described as "Batteries."

### Handling and Storage

- Never alter, puncture or impact Batteries or related components.
- Do not directly connect the terminals with metal objects. This will short-circuit Batteries, resulting in heat and electrical discharge.
- Never store loose Batteries together, the Batteries' terminals may contact one another causing a short circuit.
- $\bullet$  Never expose Batteries to extreme temperatures or direct sunlight. The temperature range must be between 40-120° F (4-49° C).
- Always verify voltage of Batteries that have been out of service for greater than six (6) months.
- Always charge/store Batteries in a non-conductive, fireproof container or bag.
- For best practice store Li-Po batteries at 3.80 volts +/- .05 volts per cell.

### Before the First Charge

- Make a visual and physical inspection of Batteries for any damaged or loose leads or connectors, damaged packaging, or other irregularities which may cause a short circuit and eventual failure.
- Verify that the positive terminal of the Batteries is connected to the positive terminal of the charger. Confirm polarity with a voltmeter if
- Check the voltage of Batteries using a voltmeter to make sure Batteries have the voltage of the capacity listed on Batteries' label.
- $\bullet$  Use a voltmeter or LIPO voltage meter to determine that cell voltages are correct with each cell voltage to be within 3.70~3.85.
- Make sure you are using charge leads which are compatible with the battery connectors.

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- User should check the polarity of the battery cable and charger lead carefully before the connection to avoid any short circuit.
- Ensure the charger is in good condition. A poor-quality charger can be
- It is responsibility of the person charging to assure that the charger being use is working correctly.

#### Charging

Always refer to your charger's manual for correct procedures and safety Information. In addition to your chargers manual, the warnings and guidelines listed below must be followed to avoid possible property damage and injury.

- Always ensure you are using the correct charger for the specific battery type you are trying to charge. Example: If you are charging a Lipo battery, only use a charger designed for Lipo batteries. If the charger can support different battery types, ensure you select the correct type. Failure to do so may cause a fire, which may result in personal injury and property damage.
- Always charge batteries at a maximum rate of 1c (one (1) times the capacity unless specified by the manufacturer
- Always use a compatible balanced mode charger, specifically designed for the chemistry of battery you are using.
- Always charge Batteries in an open area away from flammable materials, liquids and surfaces.
- · Never charge Batteries inside of the model.
- $\bullet$  Never charge Batteries that are too hot to the touch (above 100° F). DO NOT handle Batteries until they are cool.
- Always set the charger to proper cell count and/or voltage listed on
- Always charge batteries at a rate of 1c (one (1) times the capacity unless specified by the manufacturer
- Always check the voltage of Batteries before each charge session in order to ensure they are at or above the minimum safe starting voltage. If starting voltage is below recommended levels then Batteries have been over discharged or have experienced a failure and should NOT be charged.
- Never overcharge Batteries beyond the capacity listed on Batteries

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# WARNING

If at any time Batteries become damaged, hot, or begin to swell, discontinue charging (or discharging) immediately. Quickly and safely disconnect the charger. Then place the Batteries in a safe, open area way from flammable materials in an approved Li-Po bag to observe. After one hour, remove the Batteries from service. DO NOT continue to handle, attempt to use, or ship the Batteries. Failure to follow these procedures can cause damage to Batteries, personal property or cause serious injury.

Damaged or swollen Batteries can be unstable and very hot. DO NOT touch Batteries until they have cooled. Dispose of Batteries in the manner required by your city, county, state or country. In the event of a fire, a Class D, dry chemicalfire extinguisher must be used.

## Discharging

- Never discharge Batteries at amperage rates higher than specified on Batteries' labels.
- Never allow the temperature of Batteries to exceed temperatures advised By the manufacturer.
- Never discharge Batteries to voltage below which they are rated by the manufacturer when measured under load (connected to the vehicle or a charger capable of discharge). Batteries discharged to a voltage lower than the lowest approved voltage may be damaged, resulting in loss of performance and potential fire when Batteries are charged.

## Additional Guidelines and Warnings

- In the event of a crash, always quickly and safely disconnect and remove Batteries from the model. Then follow the previously listed safety procedures.
- If the internal contents of Batteries come into contact with your skin, wash the affected area(s) with soap and water immediately. If it comes into contact with your eye(s), flush them with generous amounts of water for 15 minutes and seek immediate medical attention.

### **Battery Limited Warranty - NOTICE**

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Turnigy, Inc. For up to date product literature, visit www.turnigy.com

### **Warranty Period**

Exclusive Warranty- Turnigy, Inc. (Turnigy) warranties that the Products purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase by the Purchaser.

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## **Limited Warranty**

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

(a) This warranty is limited to the original Purchaser ("Purchaser") and is not transferable. REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER This warranty covers only those Products purchased from an authorized Turnigy dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for warranty claims

(b) Limitation- TURNIGY MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NONIFRINGEMENT, MERCHANTABLITY 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-Turnigy's sole obligation hereunder shall be that Turnigy will, at its option, replace any Product determined by Turnigy to be defective in the event of a defect, this is the Purchaser's exclusive remedy.

Replacement decisions are at the sole discretion of Turnigy. 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 improperinstallation, operation, maintenance or attempted repair by anyone.

TURNIGY DOES NOT INSPECT OR REPAIR BATTERIES, NEVER SHIP BATTERIES TO TURNIGY

## **Damage Limits**

TURNING SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSEE 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 Turnigy exceed the individual price of the Product on which liability is asserted. As Turnigy 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).

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