WARNING: Please read before charging or using your new battery V1.07

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.
- Thunder Power, its distributors and retailers assume no liability for failures 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) Thunder Power batteries are NOT 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 LiPo batteries you should always remain in constant observation to monitor the charging process and react to potential problems that may occur.
4) Some LiPo chargers on the market may have technical deficiencies that may cause them to charge LiPo batteries incorrectly. It is solely the responsibility of the user to assure that the charger used works properly. Thunder Power only recommends chargers and balancers made by Thunder Power, other brands may work but are out of Thunder Power's control.
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 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 crash 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, first place a short length of heat shrink tubing over each wire. Then remove the insulating tape from the red wire and strip a short length of the insulation off, exposing the conductor approximately ¼". Tin the exposed wire as well as the connector terminals. Place the wire in contact with the positive connector terminal and re-flow the solder of both together. Once cool, slide the heat shrink tubing down to cover the joint and shrink. Repeat the process for the black wire. If you accidentally short the battery wires, 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 if the internal temperature will exceed 120 degrees

Before the First Charge

1) Make a visual inspection of the pack. Checking for any damaged leads, connectors, broken/cracked shrink covering, puffiness or other irregularities.
2) Before installing or changing the connector, 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 Thunder Power directly 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 except as outlined in step 8.*** Charge each battery pack individually. Overcharging of one or the other battery may occur resulting in fire. ***In order to discharge packs in series, the charged voltage of each cell in both packs must be within 0.01V***
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).
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 730mAh battery at or below 0.73Amps. Charge a 5000mAh battery at or below 5Amps.
Thunder Power packs with balancing connectors can be used with TP balancers for safer charging. For more information, please visit: www.thunderpowerrc.com
****To charge at greater than 1C (no more than 3C): You must use a Thunder Power 1010C charger in conjunction with a Thunder Power Balancer (205 or 210) and data cable. Only ProLite 910, 1320, 2000 and 2100 cells qualify for charging up to 3C.***

8) To charge two packs in series: The packs need to first be charged individually (using a 1010C, 210V balancer and associated data cable), and flown in series for a couple of cycles. Then, having flown both packs together in series, using a good quality DVM, check the individual cell voltages at the balancing connector. If all the voltages are within 0.01V of each other, series charging should be safe. Please note that this requires a "Y" cable be made to electrically attach the packs together in series and that the battery on the negative most side of this cable (the lead that goes to the negative terminal of the charger) be attached to "group A" of the balancer. Please see 1010C/210V instructions.

First few Flights

Thunder Power recommends no more than 3-5C average discharge for breaking in new packs. Also be extremely careful not to over discharge new packs (Packs should NEVER be over discharged at any time, but over discharging on the first flight will ruin the battery permanently before you are able to enjoy it. See "Caring for Battery" below).

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 the Thunder Power 1010C charger.
3) Do not expose battery packs to direct sunlight (heat) for extended periods.
4) When transporting or temporarily storing in a vehicle, temperature ranges 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 Battery

1) Only charge a LiPo battery with a good quality Lithium Polymer charger. A poor quality charger can be dangerous. All Thunder Power chargers & Balancers are of the highest quality available.
2) Set voltage and 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 Temperature

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, then wrap battery in a bag for disposal.

Product Warranty

Product warranty is limited to original defects in material and workmanship for 90 days from the day of purchase. Warranty does not cover collateral damage, misuse, abuse, incorrect charging and other inappropriate use of this product.

Thunder Power RC
4720 West University Ave., Las Vegas, NV 89103
Phone: (702) 228-8883 Fax: (702) 228-8885
www.thunderpowerrc.com