

Astro “Blinky” Battery Balancer

p/n 106

- **This Battery Balancer is specially designed for Lithium Batteries.**
- **The balancer accepts one to six cell lithium battery packs.**
- **Now you can see if all cells are above 3.2 volts before charging.**
- **Now you can Balance your pack while you are charging.**
- **Now you can Balance your pack after you are finished charging.**
- **Now you can Discharge individual cells that are over charged.**
- **Now you will know that your batteries are balanced.**
- **Connector has 0.100 in pin spacing with 0.025 square pins and fits Apogee and other brands. Pins should be in order: red, black, black and black with no gaps or missing pins in the sequence.**

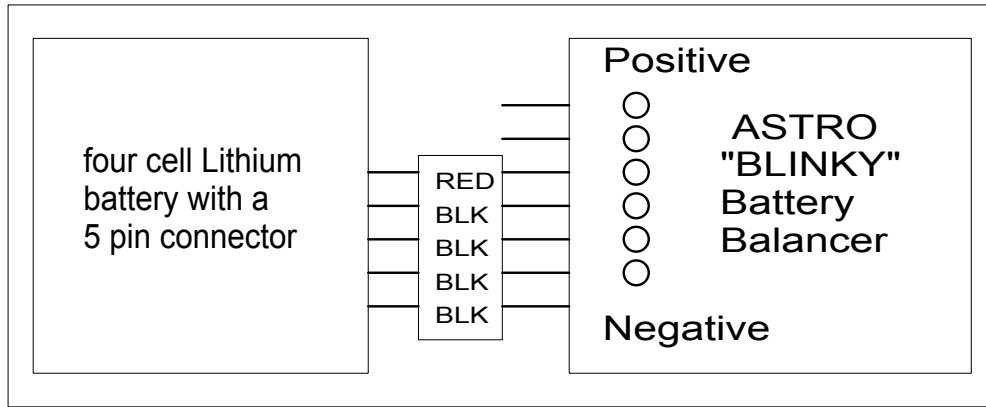
Using Your New Balancer

Low Voltage Check First connect the Balancer to the Lithium pack. Connect the most negative connection on the battery to the most negative pin on the balancer. If all cells are 3.2 volts or more all LED's will turn on and remain lit for 5 seconds. If you have a three cell pack the first three LED will turn on. If one cell is low and has less than 3.2 volts that LED will not turn on. This means that your battery pack has been discharged too far. **DO NOT CHARGE FAST!!** Set your charge rate between 0.1 amps and 0.2 amps and wait until the LED's begin to blink again. This indicates that at least one cell has reached 3.7 volts or more. Disconnect balancer and then reconnect for another Low Voltage Test. Repeat as needed until all LED's turn on for 5 seconds indicating that all cells have at least 3.2 volts. Then you can proceed to charge normally.

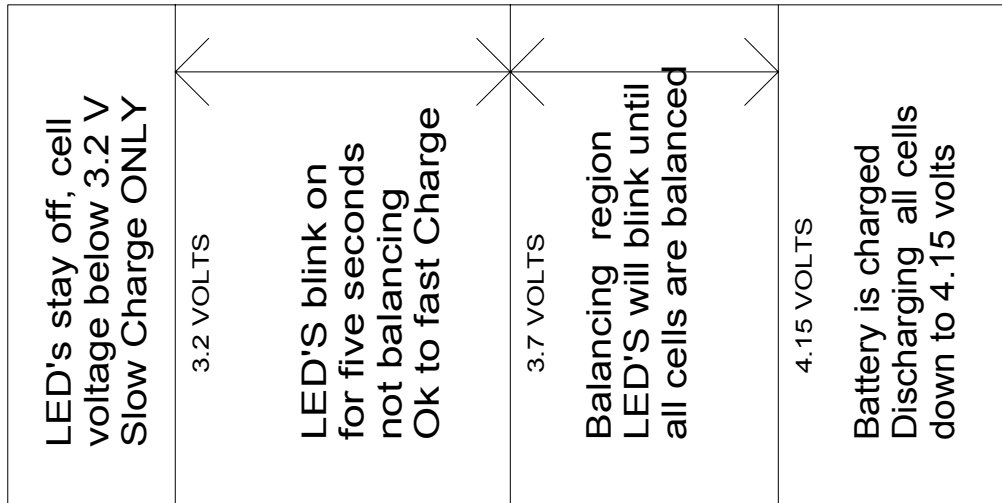
Balancing While Charging Connect the balancer and wait for the low voltage check. If all cells show 3.2 volts you can proceed with a normal charge sequence. The LED lamps will remain off until one cell reaches a voltage of 3.7 volts. Then balancing will begin. By the time the charge is complete the pack should be balanced. If the cells blink at random the pack is closely balanced. If a few LED's remain on all the time these cells have a higher voltage then the other cells and more balancing is needed. When the charge is almost complete all the LED's will turn on.

Balancing After Charging Connect the Balancer to the pack. The balancer will begin discharging every cell that has more than 4.15 volts. When all cells are 4.15 volts or less then the balancer will begin balancing to the lowest cell. When all Led's turn off or occasionally blink at random, then the pack is balanced.

BALANCING A 4 CELL LITHIUM BATTERY



BALANCER OPERATION



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