



Operating Instructions

Smart Balancer

For 2 to 8 LiPo batteries



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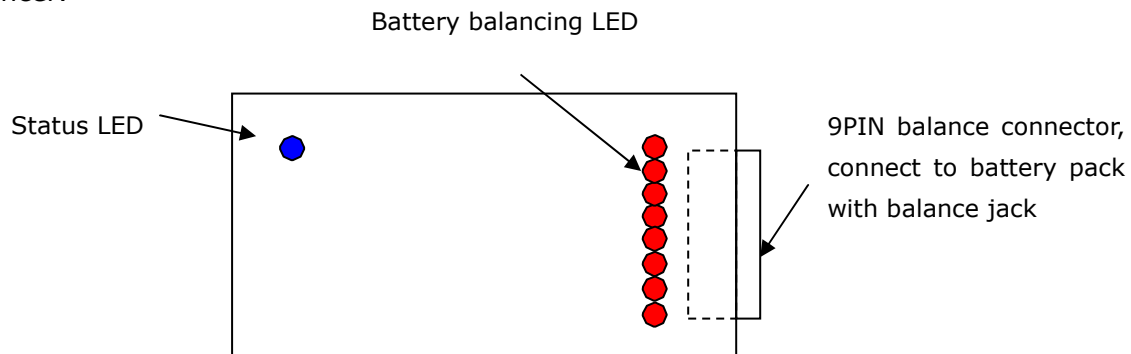
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CY- B8 is designed specially for 2 to 8 LiPo cells in series, it can detect and balance each cell in a pack while the battery pack is charged. It is important to read the instructions before using the balancer.



There is one balance connector in the right of CY – B8. To connect batteries with CY – B8, first choose right connector according to quantities of your cells in series, and you must assure the connection is in accordance with **CONNECTION DIAGRAM**.

The Chargery LiPo Smart Balancer is an extremely versatile device. It can balance any lithium 2S to 8S battery pack which has a balance connector and nominal voltage of 3.7V per cell.

Features:

- Stand-Alone Balance
- Balance 2 or 3 battery packs simultaneously
- Audio alarm while detecting the voltage of cell is over 4.25V during charge
- Automatically detect and indicate battery balance status for any 2 to 8 cells pack
- Audio alarm for over voltage
- Audio alarm for under voltage
- LED(s) display each cell in balancing
- With Special Connector Conversion Board(**CCB-9**) to fit all kinds of battery connectors

Use CY-B8 to detect and balance (without input):

1. Connect Li-Poly Battery Pack to the CCB-9 balancer connector
2. Connect B8 to the plug T on the CCB-9 through the special wire with 9pin connector
3. Wait 2-3 seconds until the balancer displays battery pack conditions as below:

A: The voltage difference of the cells in series is under 0.030V: blue status LED and red LED(s) is on for 1-2s, and then off. So you can charge the battery at the normal charge rate.

B: The voltage difference of the cells in series is 0.030 to 0.200V: blue status LED is off, the red LED(s) flash (on for 5s and off for 3s). These cells are balanced until the red LED(s) is off. At this moment, you can charge at the 0.2CA or don't charge until the balance is finished.

C: The voltage difference of the cells in series is over 0.2V: the buzzer will beep 3 times every 5s, at the same time the blue status LED is off, then the red LED(s) flash (on for

5s and off for 3s). The cells are balanced until the red LED(s) is off. At this moment you can charge at the 0.5A or less, the best choice is not to charge until the balance is finished.

Balance while charge

CY-B8 may detect and balance 2 to 8 cells in series independently. During the balancing, you can charge the battery, but we suggest the charge rate should no more than 0.2C. Another choice is to charge the battery after the balance is finished.

To charge and balance the battery, connect the special charger (such as CY- C650,C550 etc.) to the Power Lead of the battery, select charge rate according to battery capacity and limited voltage. During the charge, the balancer continues to detect and balance each cell when the difference of the voltage is more than 30mV. The warnings and actions are as below:

- **Over charge warning (Any cells voltage over 4.25V):** the buzzer beeps continually and "STATUS LED" flash----- Stop charging immediately and keep the connection between CY-B8 and your battery pack
- **Full charged and balance finished alerts:** all LED is OFF ----- Disconnect CY-B8 with the battery pack
- **The voltage difference is over 0.2V while charging:** the buzzer will beep 3 times every 5s, blue status LED is off, and the red LED(s) flash("on" for 5s and "off" for 3s.) ----- Please reduce charge rate to 0.5A and carefully monitor the balance status.

Audio alarm:

A: When any cell voltage in the cells is under 3.0V or is over 4.25V, the blue status LED flash, and the buzzer will beep uninterruptedly.

B: if any cell voltage is less than 1.0V, all LED is off, and the buzzer don't beep

Error Alarm and possible reasons:

Red LEDs flash	Corresponding cell is balancing and the difference of cell voltage is less than 200mV. Or any cell voltage is over 4.2V
Red LEDs flash and Buzzer beeps	Corresponding cell is balancing and the difference of cell voltage is over 200mV
Blue LED flash and Buzzer beeps	any cell voltage in a pack is under 3.0V or over 4.30V at any time

Main Specification:

- Battery Cells : 2S - 8S
- Balancing Current:250mA
- Over Charge Protection : 4.25±0.05 v/cell
- Output balance connector: Wire to board connector, JST EHR male
- Compact size: 100 x 64 x 23mm.
- Weight:100g

- Case type: Aluminum Alloy

Warnings:

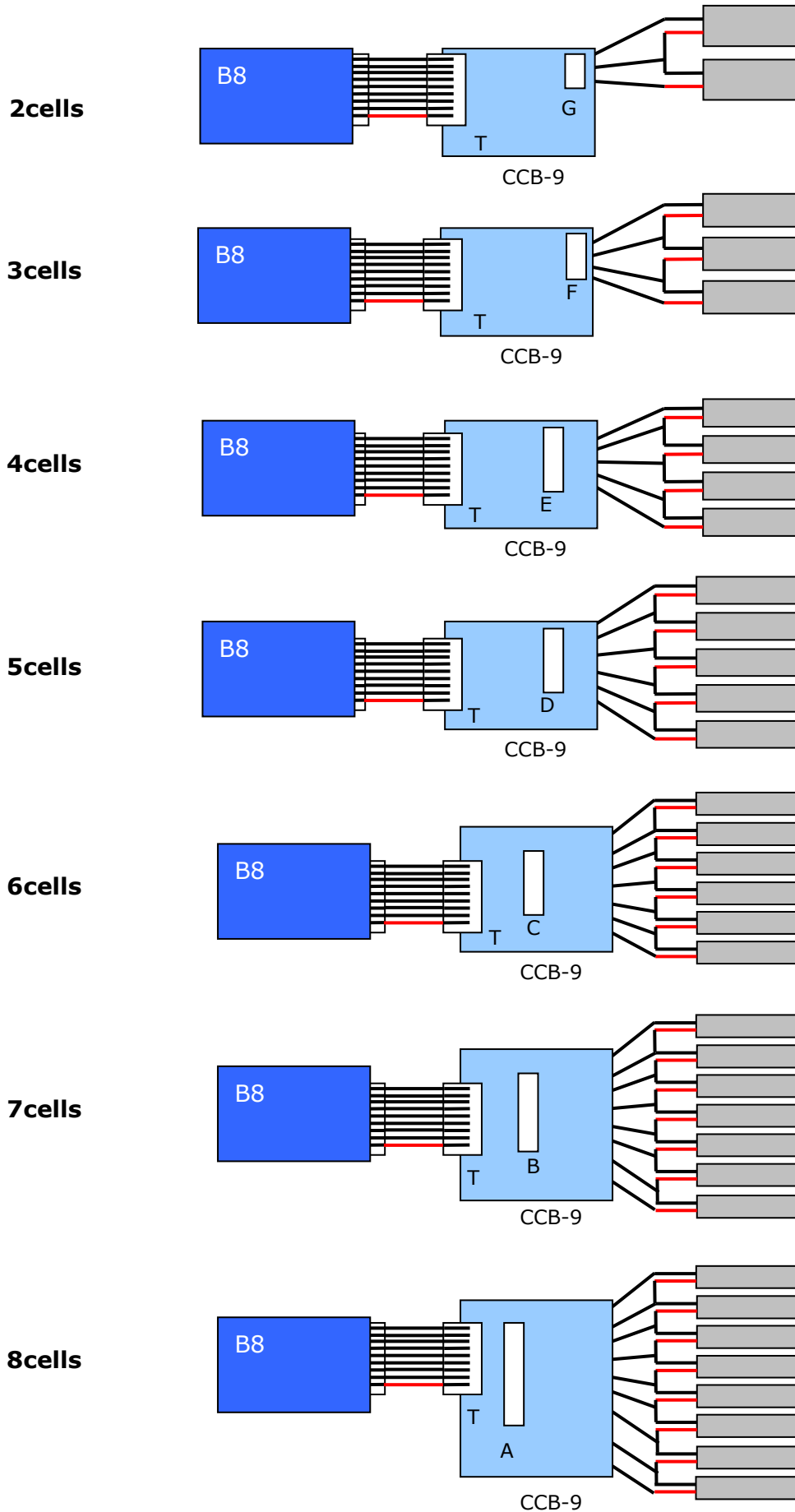
- Lithium polymer batteries can be a fire hazard if charged or discharged improperly.
- Never Charge/Discharge Lithium Batteries unattended
- Charge in an area free of flammable materials, on non-flammable brick, concrete, etc
- Keep Lithium batteries, Charger, and Balancer AWAY FROM CHILDREN and PETS!
- Never attempt to charge an impact-damaged (crashed) battery pack
- Packs which are chronically far out of balance may be damaged and should be discarded
- Do not use in direct sun light
- Do not use when ambient temperature is extremely high
- Use and store in a dry environment
- Un-plug balancer from the Li-poly pack when not in use

Warranty and Service

Chargery Power Co.,Ltd.as manufacture of R/C model power warrants its CHARGER Y charger and battery pack to be free of defects in material and workmanship. This warranty is effective for 18 months from date of purchase. If within the warranty period the customer is not satisfied with the products performance resulting from a manufacturing defect the accessory will be replaced or repaired. This warranty does not cover the damage due to wear, overloading, incompetent handling or using of incorrect accessories.

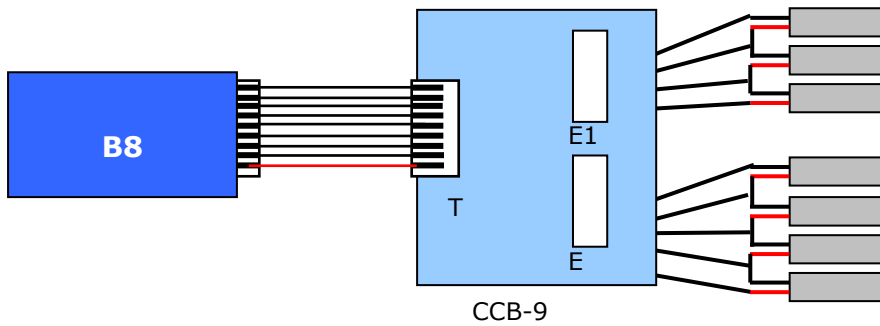
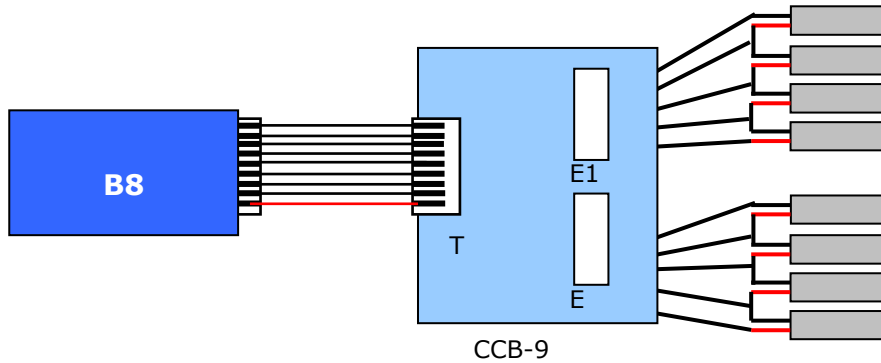


Charging Expert for R/C Model

B8 CONNECTION DIAGRAM --- Balance Alone (without input)

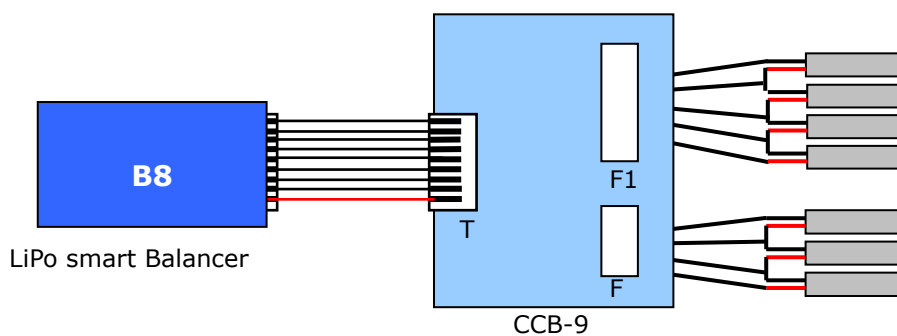
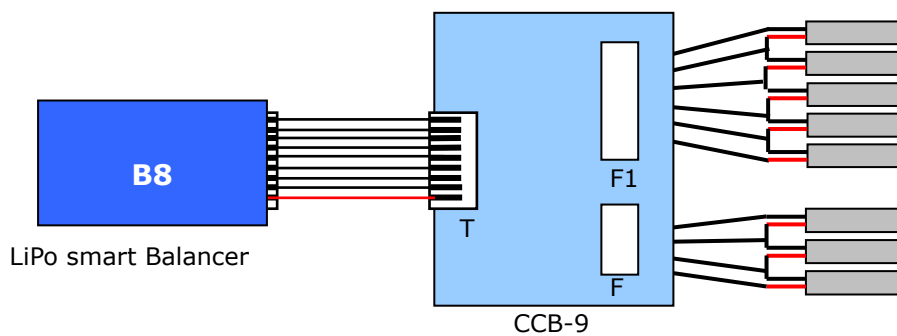
B8 CONNECTION DIAGRAM(2 OR 3 BATTERY PACKS)

1. Balance two 4S battery packs simultaneously



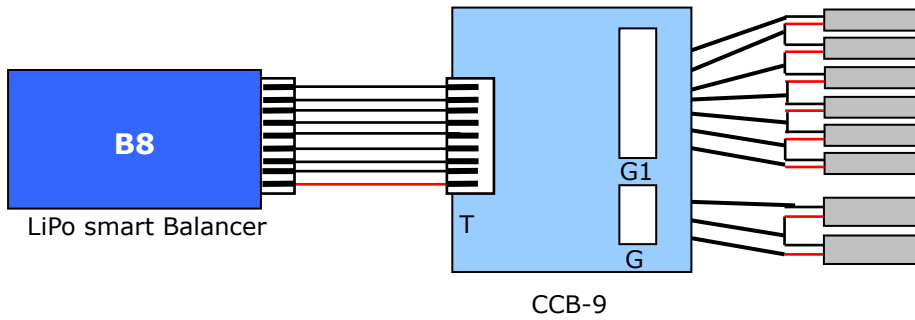
E and E1 on the CCB are also used to balance one 4S(E) and one 3S(E1) battery pack simultaneously.

2. Balance one 3S & one 5S battery packs simultaneously



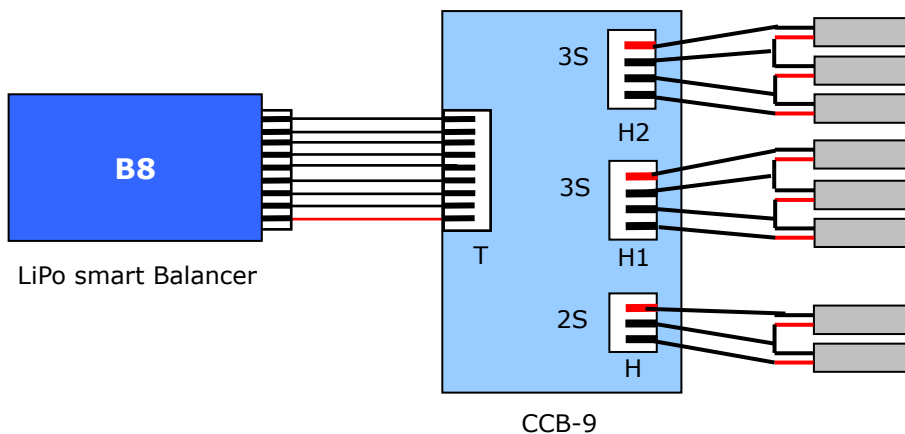
F and F1 on the CCB are also used to balance one 3S(F) and one 4S(F1) battery pack simultaneously.

3. Balance one 2S and one 6S battery pack simultaneously

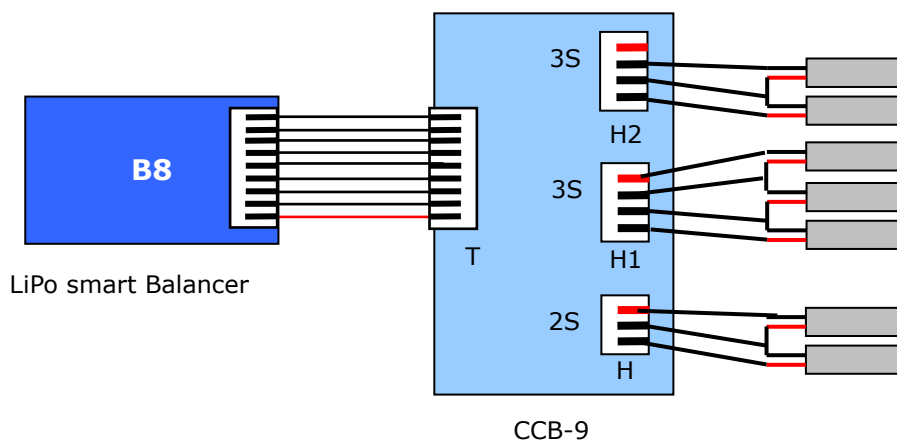


G and G1 on the CCB are also used to balance one 2S (G) and one 2S(G1) or one 2S(G) and one 3S(G1) or one 2S(G) and one 4S(G1) or one 2S(G) and one 5S(G1) battery pack simultaneously.

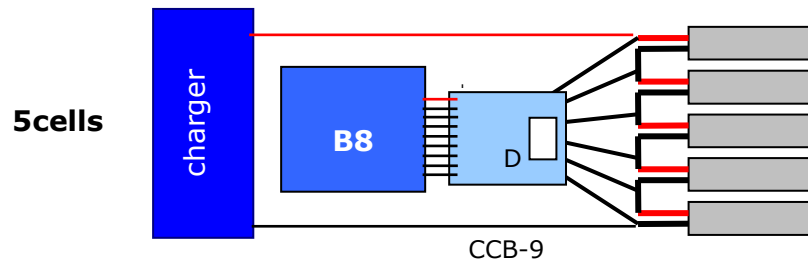
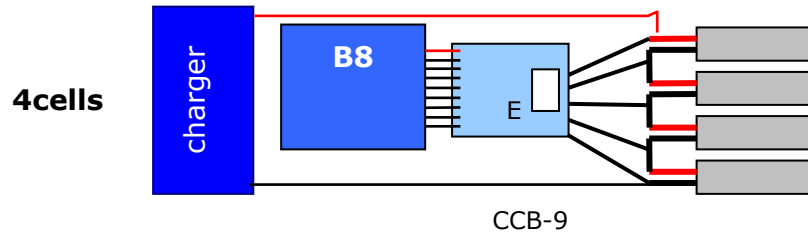
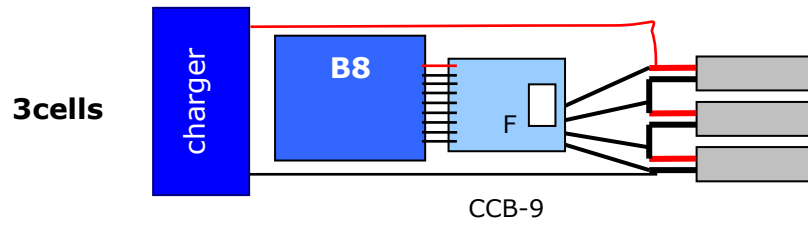
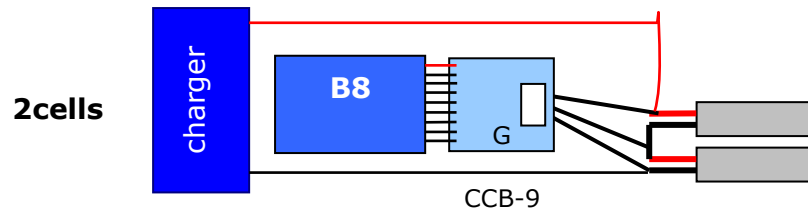
4. Balance three battery packs including one 2S and two 3S packs simultaneously



H, H1 and H2 on the CCB are also used to balance two 2S (H and H2) and one 3S(H1) battery pack simultaneously. The connection method is as below:



B8 CONNECTION DIAGRAM --- Balance While charge



B8 CONNECTION DIAGRAM --- Balance While charge

