



## Operating Instructions

# CHARGER B6

Smart Balancer for 2 to 6 liPo batteries



### Chargery Power Co., Ltd.

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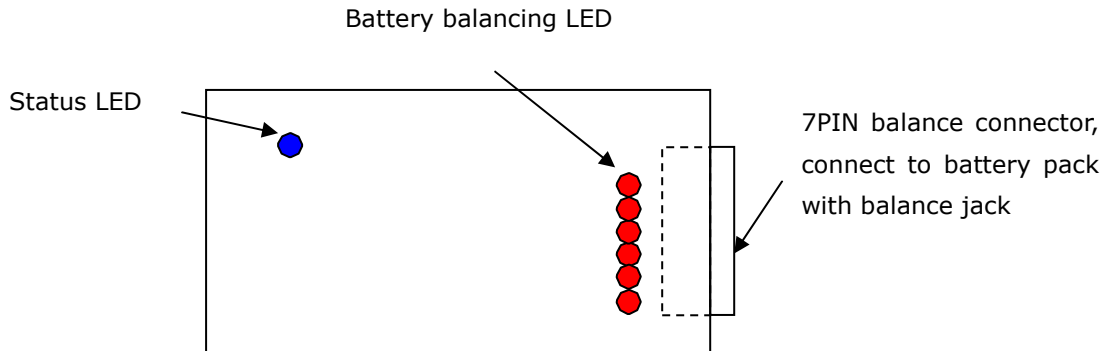
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**CY- B6** is designed specially for 2 to 6 LiPo cells in series, it can detect and balance each cell in a pack while the battery pack is charged. It is important to read the instructions before using the balancer.

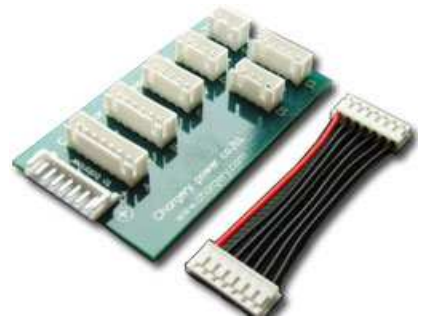


There is one balance connector on the right of CY – B6. For CY – B6. You should assure the connection in accordance with CONNECTION DIAGRAM.

The Chargery LiPo Smart Balancer is an extremely versatile device. It can balance any lithium 2S to 6S battery pack which has a balance connector and nominal voltage of 3.7V per cell.

#### Features:

- Stand-Alone Balance
- **Balance 2\*3S or 3\*2S battery packs simultaneously, the 2 or 3 packs should be connected to the CCB firstly, and then connect CCB to B6.**
- 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 6 cells pack
- Audio alarm for over voltage
- Audio alarm for under voltage
- LED(s) display each cell in balancing
- **Reverse polarity protection on balance connector**
- With Special Connector Conversion Board(CCB) to fit all kinds of battery connectors



#### Use CY-B6 to detect and balance (Stand-Alone Mode):

1. Connect Li-Poly Battery Pack to the CCB-7N-EH/XH
2. Connect B6 to the plug F on the CCB-7 through the special wire with 7pin 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**

While balancing, you can charge the battery, but we suggest you use the professional lipo charger such as the C650 to charge. And the charge rate should no more than 0.2C when the balancing red LED on the balancer flash.

During the charge, the balancer continues to detect and balance each cell, when the difference of any cell voltage is more than 20mV. The warnings and actions are as below:

- **Over or under charge warning (Any cells voltage over 4.25V or under 3.0V):** the buzzer beeps continually and "BLUE LED" flash----- Stop charging immediately and disconnect the CY-B6 and your battery pack
- **Fully charged and balance finished alerts:** all LED is OFF ----- Disconnect CY-B6 and the battery pack
- **The difference of any cell voltage is over 0.20V 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.

**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 - 6S LiPo cells
- Balancing Current: 250mA
- Balance accuracy: <10mv
- Over Charge Protection : 4.25±0.05 V/cell
- Low voltage alarm: 3.0±0.05V / cell
- Output balance connector: Wire to board connector, JST EHR male
- Compact size: 72 x 42 x 13.5mm.
- Case type: Aluminum Alloy
- Weight:50g

## Accessories

<b>Conversion Wire( CEHP-7)</b>	<b>CCB-7N-XH</b> For 3*2S, 2*3S, 4S, 5S, 6S Align batteries pack	<b>CCB-7N-EH</b> For 3*2S, 2*3S, 4S, 5S, 6S Kokam batteries pack
		
<b>CCB-723</b> for 2*3S and 3*2S Kokam and Align batteries pack	<b>CCB-7TPQF</b> for 2S, 3S, 4S, 5S, 6S TP, Flightpwer and Polyquest, Hyperion batteries pack	<b>CCB-723TPQF</b> for 2*3S and 3*2S TP, Flightpower and Polyquest, Hyperion batteries pack
		

### 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 charger and battery pack to be free of defects in material and workmanship. This warranty



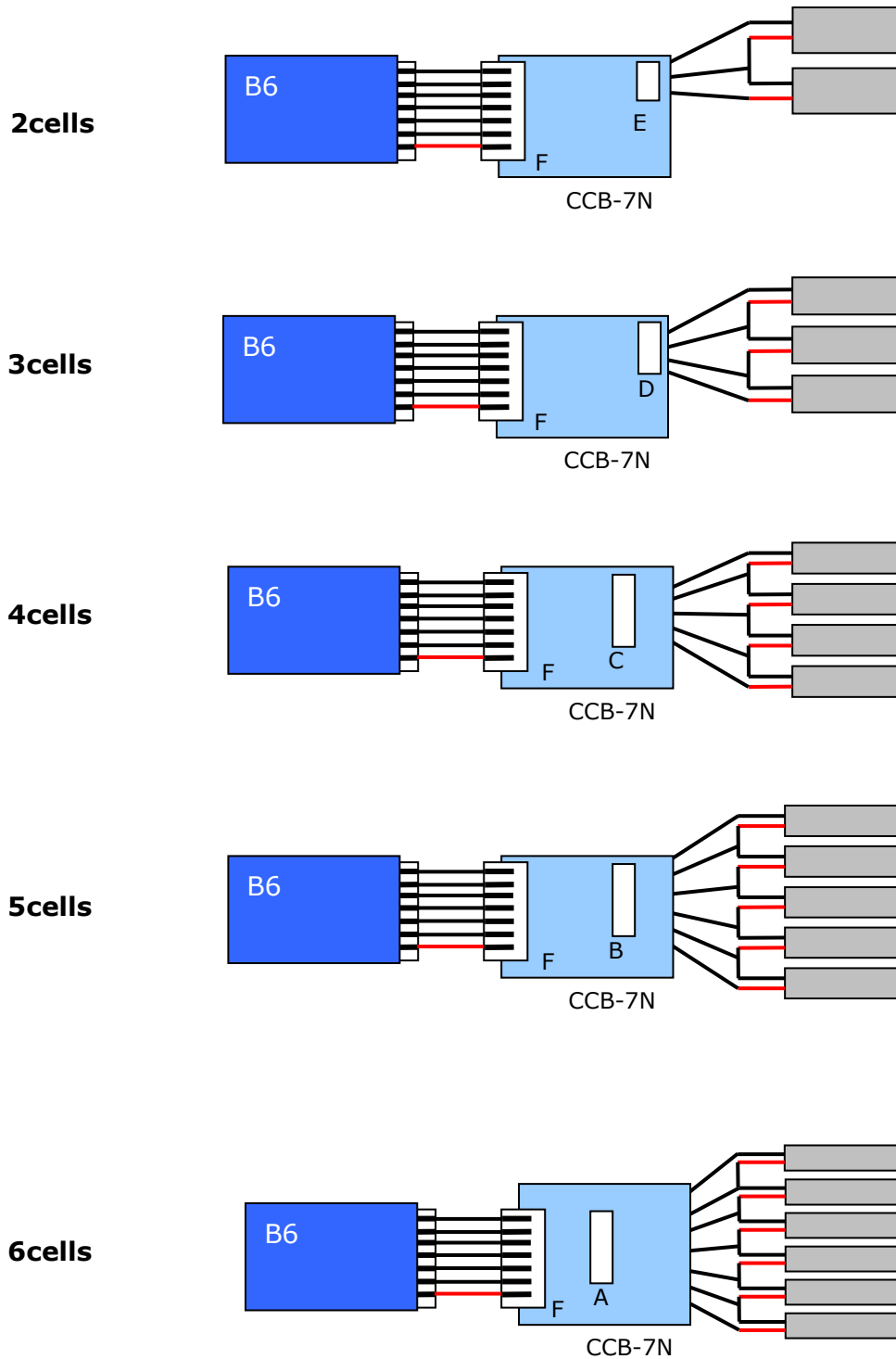
is effective for 12 months from date of purchase. If within the warranty period the customer is not satisfied with the products performance resulting from a manufacturing defect the accessory will be replaced or repaired. This warranty does not cover the damage due to wear, overloading, incompetent handling or using of incorrect accessories.



**Charging Expert for R/C Model**

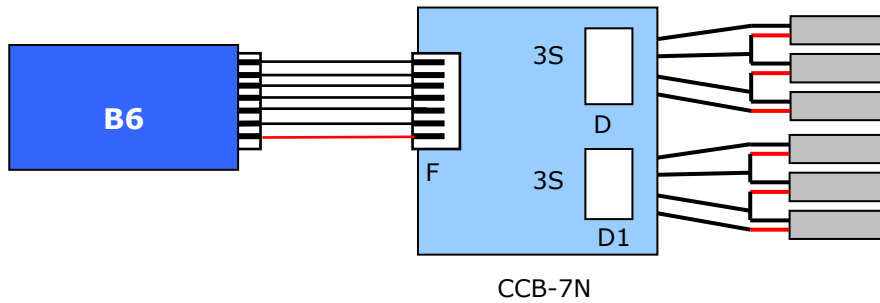
## B6 CONNECTION DIAGRAM

### Balance Alone (without input)

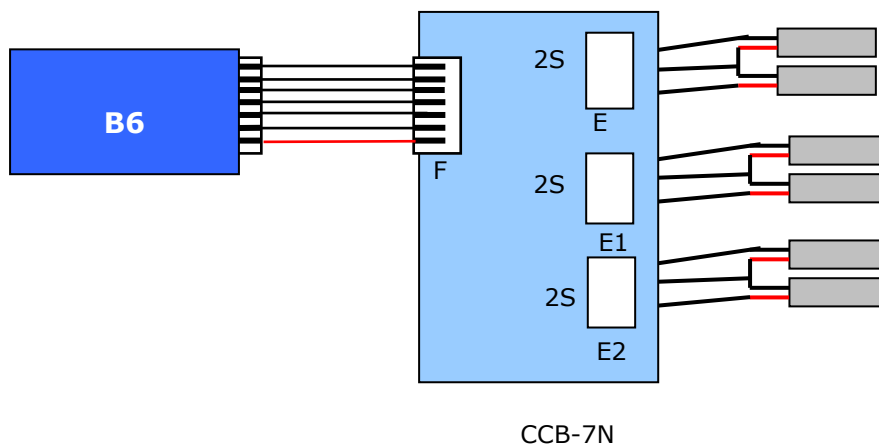


## B6 CONNECTION DIAGRAM

1. Balance two **3S** battery packs simultaneously



2. Balance three **2S** battery pack simultaneously



## B6 CONNECTION DIAGRAM

### Balance while Charge

