



Operating Instructions



Balance charger for 2 to 3 LiPo and LiFe batteries

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Welcome to use CHARGER 350B-- A Smart balance charger is designed specially for 2 to 3 LiPo and LiFe cells in series. Please read the instructions before using the balance charger.

Special Features

■ **Built-in balancer for LiPo and liFe cells**

350B has an individual cell balancer inside, so it can charge and balance the battery pack simultaneously.

■ **High power and high performance circuit**

CY-350B employs the high efficiency circuit. As a result it can charge 3 series of lipo batteries with maximal current of 3. 0A.

■ **Perfect safety design**

Battery temperature limit

The battery temperature will rise by its internal chemical reaction. The charging process will be stopped forcibly when the temperature reach 60°C.

Charging time limit

The charging time can be restrained to prevent from any possible defect. When the charging time reach 10 hours, the charging process will be terminated.

Input power monitor

To protect the car battery using as input power from being damaged the input voltage always monitored. If it drops the 10.0V the charging process will be ended automatically.

At the same time, when you use the AC adaptor or transformer as input power, if the input voltage is more than 18V the charging process will be terminated to protect the CY-350B from being damaged.

■ **Light and fashion AL alloy case**

High-quality aluminum case is light and durable and very efficient to cool out the internal heat.

■ **Protection function**

- Reverse polarity and short circuit protection(input and output)
- Over charge and Over current protection
- For the battery voltage is less than 2V/cell (for LiFe) or 3V/cell (for LiPo), the CY-350B do not charge to prevent from happen safety accident.

■ **6 LEDs indicate charging current**

■ **3 LEDs display each cell in balancing**

■ **1 LED indicate the charging status**

■ **With Special Connector Conversion Board(CCB-7KT) and conversion wire(CEHP-7) to fit all kinds of battery connectors**

Specifications

- Applied battery type: LiPo battery and **LiFe battery (such as A123)**
- LiPo battery count: 2~3 cells
- Input voltage: DC 10-18V, 4A
- Charge current: 0.3~3A
- Balancing current: 200mA
- Dimensions: 108*64*23mm
- Weight: 150g

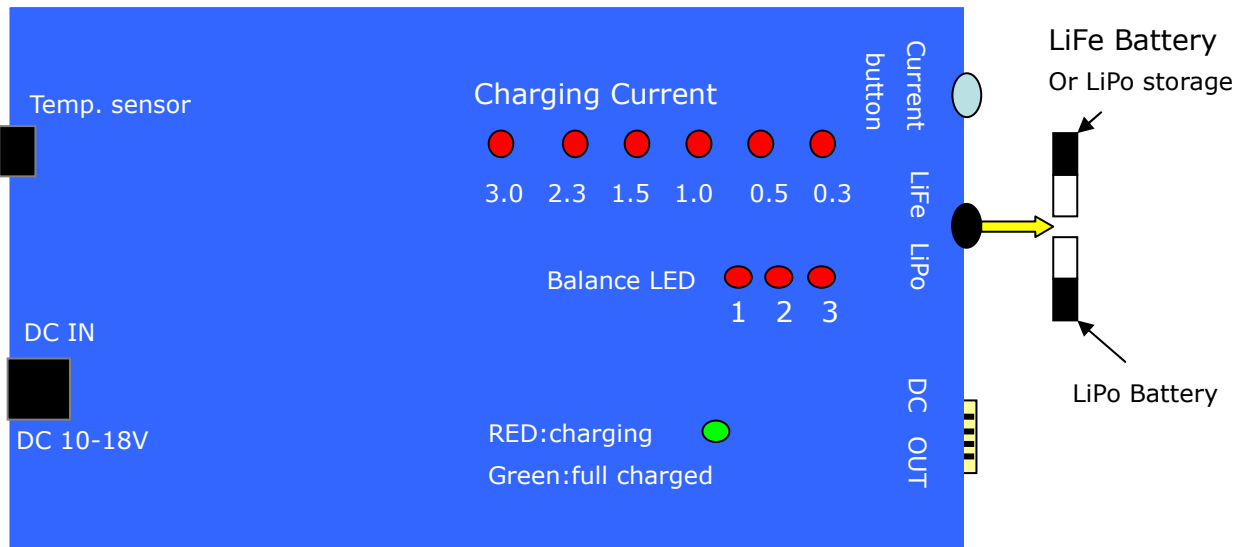
Operating instructions

1. Connect the DC power or AC Adapter (12V 4A) to the 630B. Charging Current LED will be on and off, the LED (0.3A) keeps on. The charging status is red and green and then off. The beeper will sound. The unit finished initializing.
2. Choose the battery type by moving the switch in the right of the 630B
3. Connect the 2 - 3S battery pack to the 350B through the Connector Conversion Board (CCB-7KT) and conversion wire (CEHP-7). The Balance LED flash, and the quantity of flashed LED indicates the battery count. If the quantity is 3, the battery pack voltage is 11.1V (3S). If the battery pack is un-balanced, the corresponding LED will blink, start to balance.
4. Press the **CURRENT BUTTON** to adjust the charging current, the corresponding LED is on. During the charge, do not press the **CURRENT BUTTON**, if need change the current, please disconnect the input power, and choose the current again.
5. Charging indicator should be **RED**, the unit start to charge.
6. When the charging indicator is GREEN, and all balance LEDs are off, the battery pack is fully charged and balanced. When the battery is fully charged, the beeper will sound 10 times.
7. **When charge is finished, if you wan to charge another battery with the same battery type (LiPo or LiFe), please unplug the full battery, and then connect the new battery.**

But if the new battery is different battery type with the full battery, such as, the new battery is LiFe battery, and the full battery is LiPo battery. Please follow the below steps to operate:

- a) **Unplug the full battery**
- b) **Move the switch of battery type to right position.**
- c) **Connect the new battery to the unit.**

While charging, the built-in balancer will monitor the voltage of each cell of the battery pack and control the charging current feeding to each cell to balance the voltage.



There is a **current button** on the right of the 350B, press the button to choose the charging current, 6 types of current is be used for the different capacity, we suggest the charging current is no more than 1C, if the battery capacity is 1000mAh, the charging current is lower than 1000mA.

And another switch is used to choose the battery type, lithium polymer or Li-ion battery and LiFe battery such as A123 cell can be charged.

For the lipo battery or li-ion battery, the full charged voltage is 4.2V, and for the LiFe battery, the voltage is 3.7V.

If you need charge the lipo battery to be stored, please choose LiFe battery mode. This is a very useful feature.

When you plug the temperature sensor into the jack on the left of the 350B, the battery temperature will be monitored. If the temperature is over 60°C, the charging circuit will be terminated forcibly to protect the battery.

When you start a charge process, the integral safety timer automatically starts running at the same time. This is programmed to prevent overcharge the battery if it proves to be faulty or if the termination circuit can not detect the battery full charged. The charging is 10 hours maximal.

Warning and Protection




- **During charge, Do not unplug the battery pack from the 350B, If you want to stop charging, please disconnect the DC POWER or adapter firstly, and then unplug the battery pack.**
- **Do not move the switch to change the battery type while charge.**
- During charge, any cell voltage is lower than 2V/cell for LiFe battery and 3V/cell for LiPo

battery, 350B will alarm and stop charging, the charging indicator blinks and the beeper sounds.

- When any cell voltage is over 4.3V or 3.7V, the charging indicator is Green, the 350B do not charge. The balance LEDs blink till the battery pack resumes the balance status. if the battery is balanced, all balance LEDs are off.

- Reverse polarity connection on input or output, the 350B will not work.

Accessories

Input power leads	
	
CCB-7KT: Connector Conversion Board	CEHP-7: Conversion Wire
	

Warnings and safety information

- Never leave the charger unattended when it is connected to its power supply. If any malfunction is observed immediately terminated charging and refer to the operation instructions.
- Keep away the unit from dust , damp, rain, heat direct sunshine and vibration. Do not drop it.
- The charger and the battery to be charged should be set up on a head-resistant, non-inflammable and non-conductive surface. Never place them on a car seat, carpet or similar.
- Keep all the inflammable volatile materials well away from operating area.
- Be sure to understand the information of the battery to be charged accurately. If the battery count is set up incorrectly the battery can severely be damaged, even cause a fire or an explosion by over-charged.
- Do not connect more than one battery pack to the charger output lead at any time.
- Do not attempt to charge the following types of battery:
 - Lead acid battery or VRLA
 - NIMH/NICd battery pack.
 - Any other types of battery except for li-ion and lithium polymer battery.
 - Battery pack, which consists of different types of cell (including different manufacturers).
 - Non-rechargeable batteries (Explosion hazard).
 - Faulty or damaged battery.
 - Batteries with unconfirmed charging current

Those warnings and safety notes are particularly important. Please follow the instructions for a maximum safety; otherwise the charger and the battery can be damaged violently. And also it can cause a fire to injure a human body or to lose the property.

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 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.

Balance Charging Connection Diagram

CCB-7KT is a Connector Conversion Board, it is designed specially for 350B, and is for Kokam, TP, Flight power, Graupner and Dualsky etc. lipo battery pack;

