

# INSTRUCTION MANUAL

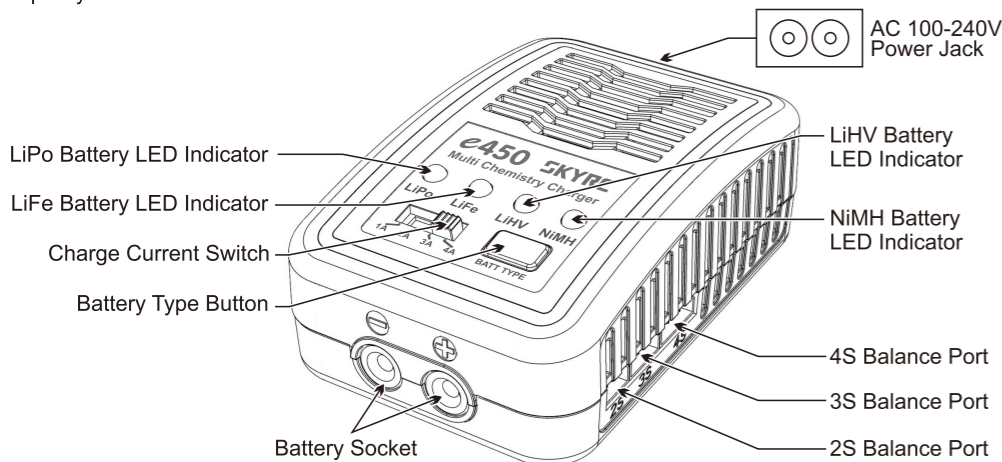
**e450 Multi Chemistry Charger SK-100122**

**SKYRC**

## INTRODUCTION

Thank you for your choice of the SKYRC e450, 100-240V AC balance charger. This unit is simple to use but its operation does require some knowledge on the part of the user. Please read this entire operating manual completely and attentively before using this product, as it covers a wide range of information on operating and safety.

SKYRC e450 Charger is an economic, high quality 100-240V AC balance charger, designed for charging LiPo, LiFe and LiHV batteries from 2-4 cells in balance mode. It can charge 6-8S NiMH batteries also. The circuit power is 50W and max charge current can reach to 4A. There are four kinds of charge current 1A/2A/3A/4A that can be selected. You could select the proper charge current according to battery capacity.

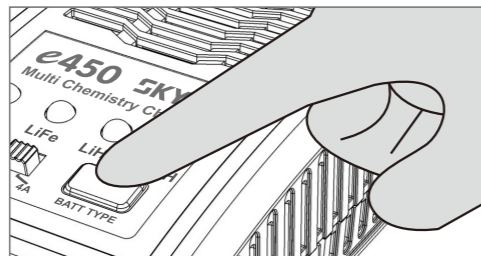


## OPERATION

SKYRC e450 comes with the built in power supply. You can connect the AC power cord to the AC socket (100-240V AC) directly.

Please refer to following steps to charge the battery,

- 1) Insert the AC power cord into the charger.
- 2) Insert the AC cord into a wall socket (100-240V). All LEDs will light for 1 second and the battery type LED will flash green and red which indicates the charger is ready to charge.
- 3) Select the battery type LiPo/LiFe/LiHV/NiMH by press "BATT TYPE" button.



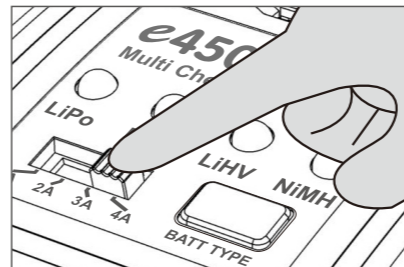
Select Battery Type

- 4) Select the proper charging current 1A/2A/3A/4A by the slide switch.

The charge current varies from 1A(1000mA) to 4A(4000mA). The recommended charge rate is 1C (battery capacity = charge current). 1C means: capacity value = charge current.

**Example:** LiPo cell of 2200mAh Capacity; 1C=2200mA (=2.2A) charge current. You can choose 2A current to charge the battery.

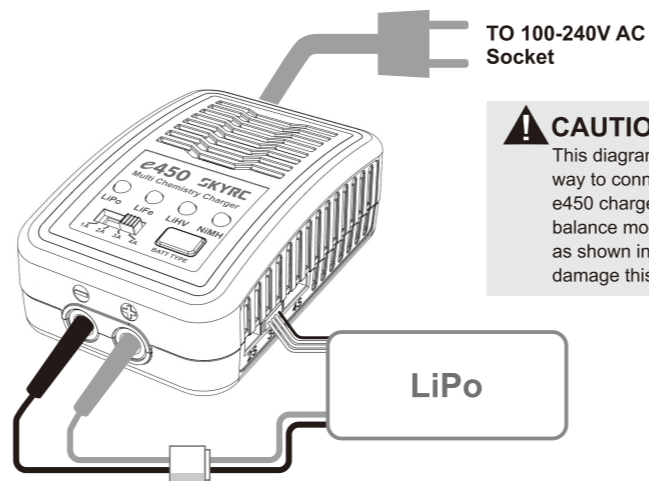
LiPo cell of 2800mAh Capacity; 1C=2800mA (=2.8A) charge current. You can choose 3A current to charge the battery.



Select Charging Current

- 5) **Charging LiPo/LiFe/LiHV Battery**

Connect the battery main charge lead to battery socket which is in the front side of the charger and battery balance wire to balance port which is in the right side of the charger. The charger starts charging. The charge status LED will glow to indicate charging is in progress.



CONNECTION DIAGRAM

### CAUTION:

This diagram shows the correct way to connect your battery to the e450 charger while charging in balance mode. Failure to connect as shown in this diagram will damage this charger.

### EXPLANATION OF LED STATUS

LED green and red blinking	The charger is ready to charge.
LED glows constant red	Battery capacity is less than 25% charged.
LED blinking red	Battery capacity is between 25% to 50% charged.
LED glows constant yellow.	Battery capacity is between 50% to 75% charged.
LED blinking green	Battery capacity is between 75% to 99% charged.
LED glows constant green	Battery is fully charged.

When the battery is fully charged, the charge status LED will glow constant green. Unplug the battery from the charger and the charge status LED will flash green which indicates the charger is ready to charge another battery.

- 6) **Charging NiMH Battery**

Connect the battery main charge lead to battery socket which is in the front side of the charger. Press and hold "BATT TYPE" button for 2 seconds to start charging. The charge status LED will glow to indicate charging is in progress.

When the battery is fully charged, the charge status LED will glow constant green. Unplug the battery from the charger and the charge status LED will flash green which indicates the charger is ready to charge another battery.

### WARNING:

Always make sure you are charging NiMH battery under NiMH mode. Charging *Lithium Battery* under NiMH mode can lead fire, personal injury or property damage.

## TROUBLESHOOTING

If there is an error, all four status LED of the charge will blinking.

LED Blinking Times	Problem	Solution
1 ● ● ● ●	Connection break or wrong connection	Check the connection between the charger and the battery.
2 ● ● ● ●	Polarity (+ and -) connections of battery are incorrect	Make sure the charge lead is connected properly to the charger and ensure it is wired correctly.
3 ● ● ● ●	Dead cell or imbalance between cells is too high	Safely dispose of damaged battery
4 ● ● ● ●	Over current protection	Decrease charge rate to safe level for the battery pack, or dispose of shorted battery

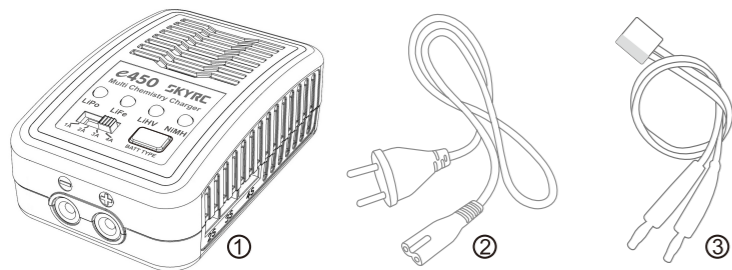
Once the error condition has been resolved, press "BATT TYPE" button to reset the charger. If the error can not be solved, please disconnect the power cord from the wall socket and unplug the battery from the charger.

## SPECIFICATION

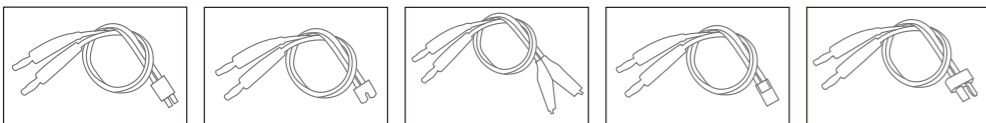
AC Input	100-240V
Battery Type	LiPo/LiFe/LiHV/NiMH
Cell Count	LiPo/LiFe/LiHV: 2-4S NiMH: 6-8S
Charge Current	1A/2A/3A/4A ± 10%
Cell Terminate Voltage	LiPo: 4.2V ± 0.02V / LiFe: 3.6V ± 0.02V LiHV: 4.35V ± 0.02V / NiMH: -ΔV
Circuit Power	50W
Current Drain for Balancing	300mA
Dimension	69.4x110.7x40.5mm
Weight	220g

## THE SET CONTAINS

- ① SkyRC e450 Charger
- ② AC Power Cord
- ③ XT60 Charging Cable



## RECOMMENDED ACCESSORIES



Tamiya charging cable  
5201-0030-01

EC3 charging cable  
5201-0034-01

Crocodile clip  
charging cable  
5201-0031-01

JST/BEC charging cable  
5201-0043-01

Dean charging cable  
5203-0016-01

## WARNING AND SAFETY NOTES

- This charger is not intended for use by persons (include children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similar qualified persons in order to avoid a hazard.
- This charger is suitable for charging rechargeable LiPo/LiFe batteries. Do not attempt to recharge non-rechargeable batteries. Charging other types of batteries may cause fire or explosion.
- Never leave the charger unattended when it is connected to its power supply.
- The allowable AC input voltage is 100-240V AC. Never connect it to any other voltage.
- Protect charger from dust, dirt and damp.
- Never place the charger and batteries connected to it on any form of flammable surface. Never operate the charger in the vicinity of inflammable material or gas.
- During charging, the battery must be placed in a well ventilated area . Never place the charger on a carpet or similar surface.
- Take great care to maintain correct battery polarity, and avoid shot-circuit. Read the battery manufacturer's instructions and adhere to them strictly.
- The charger must only be plugged into an earthed socket-outlet (for portable class 1 battery chargers for outdoor use)
- The connection to the supply mains is to be in accordance with the national wiring rules when battery chargers for installation in caravans and similar vehicles.

## CONFORMITY DECLARATION

This appliance can be used by children aged from 14 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.  
If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

⚠ Never leave the charger unattended when it is connected to its power socket. If any malfunction is found, TERMINATE THE PROCESS AT ONCE.

⚠ Keep the charger well away from dust, damp, rain, heat, direct sunshine and vibration. Never drop it.

⚠ Never charge batteries on wood, cloth, carpet or on any other flammable material.

⚠ During charging, the charger must be placed in a well ventilated area.

⚠ This charger is designed and built exclusively for Phantom3 Smart Battery. The allowable AC input voltage is 100-240V AC.

♻ This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustain able reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

The e450 satisfy all relevant and mandatory CE directives and FCC Part 15 Subpart B: 2016.

For EC directives:

The product has been tested to meet the following technical standards:

	Test Standards	Title	Result
CE-LVD	EN60335-2-29	Household and similar electrical appliances –. Safety –. Part 2-29: Particular requirements for battery chargers.	Conform
	EN 60335-1: 2012 +A11: 2014	Household and similar electrical appliances - Safety - Part 1: General requirements	Conform
CE-EMC	EN55014-1: 2006+ A1: 2009+A2: 2011	Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission	Conform
	EN55014-2: 1997+ A1: 2001+A2: 2008	Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 2: Immunity Product Family Standard	Conform
	EN61000-3-2: 2014	Electromagnetic compatibility (EMC) – Part 3-2: – Limits for harmonic current emissions (equipment input current up to and incelding 16 A per phase)	Conform
	EN61000-3-3: 2013	Electromagnetic compatibility (EMC) - Part 3-3: Limitation of voltage supply systems for equipment with rated current ≤ 16 A.	Conform
FCC-VOC	FCC Part 15B	Title 47 Telecommunication PART 15 - RADIO FREQUENCY DEVICES Subpart B - Unintentional Radiators	Conform

♻ This symbol means that you must dispose of electrical from the general household waste when it reaches the end of its useful life. Take your charger to your local waste collection point or recycling centre. This applies to all countries of the European Union, and to other European countries with a separate waste collection system.

## LIABILITY EXCLUSION

This charger is designed and approved exclusively for use with the types of battery stated in these Instruction Manual. SKYRC accepts no liability of any kind if the charger is used for any purpose other than that stated. We are unable to ensure that you follow the instructions supplied with the charger, and we have no control over the methods you employ for using, operating and maintaining the device. For this reason we are obliged to deny all liability for loss, damage or costs which are incurred due to the incompetent or incorrect use and operation of our products, or which are connected with such operation in any way. Unless otherwise prescribed by law, our obligation to pay compensation, regardless of the legal argument employed, is limited to the invoice value of those SKYRC products which were immediately and directly involved in the event in which the damage occurred.

## WARRANTY AND SERVICE

We guarantee this product to be free of manufacturing and assembly defects for a period of one year from the time of purchase. The warranty only applies to material or operational defects, which are present at the time of purchase. During that period, we will repair or replace free of service charge for products deemed defective due to those causes.

You will be required to produce proof of purchase (invoice or receipt). This warranty is not valid for any damage or subsequent damage arising as a result of misuse, modification or as a result of failure to observe the procedures outlined in this manual.

### Note:

1. The warranty service is valid in China only.
2. If you need warranty service overseas, please contact your dealer in the first instance, who is responsible for processing guarantee claims overseas. Due to high shipping cost, complicated custom clearance procedures to send back to China. Please understand SkyRC can't provide warranty service to overseas end user directly.
3. If you have any questions which are not mentioned in the manual, please feel free to send email to [info@skyrccn](mailto:info@skyrccn)



Manufactured by  
SKYRC TECHNOLOGY CO., LTD.  
[www.skyrccn.com](http://www.skyrccn.com)