

# INSTRUCTION MANUAL

## BATTERY DISCHARGER & ANALYZER

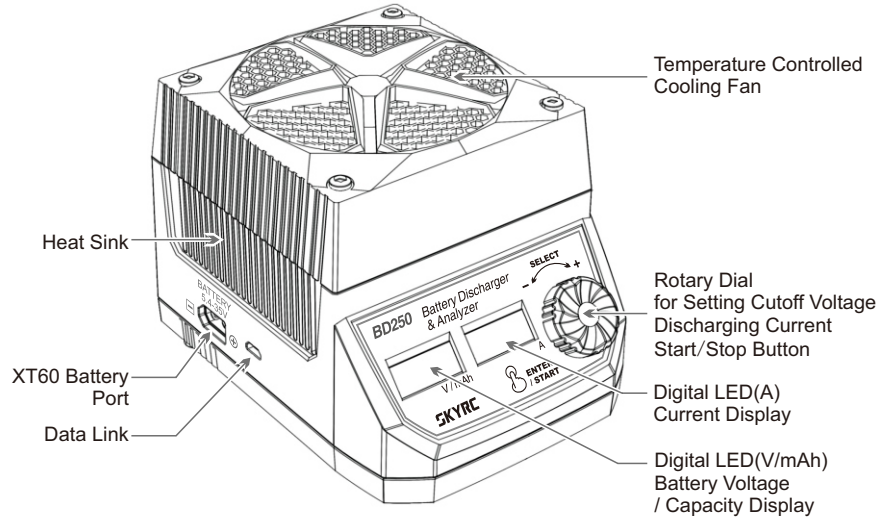
**SKYRC**  
SK-600133

### INTRODUCTION

Thank you for choosing the SkyRC Battery Discharger & Analyzer (BD250). The BD250 is a powerful discharging device that allows the user to discharge a battery at up to 35 amps or 250 watts and also measures and compares the performance of batteries. BD250 allows for the precise measurement of battery capacity and takes the guesswork out of choosing the best battery for your application.

The BD250 is much more than a simple battery discharger or a battery load tester. It will test virtually any type or size of battery, any chemistry or number of cells, up to 35 volts.

The BD250 is ruggedly built and uses XT60 connector for battery connection. It is small with a high performance cooling system. Digital LED indicates battery voltage, discharged capacity and discharge current.



### SPECIFICATION

Accepted Voltage Range: **5.40-35.00V**  
 Low Voltage Alert: **<5.2V**  
 High Voltage Alert: **>35V**  
 Max. Discharge Power: **250W**  
 Discharge Current Range: **0.01A-35.00A**  
 Current Consumption in Sleep Mode: **<100uA**  
 Capacity Display Accuracy: **±3%**

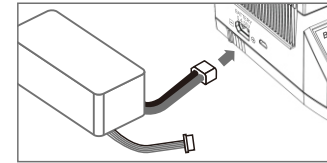
Current Display Accuracy: **0.01-10.00A ±60mA**  
**10.00-35.00A ±3%**  
 Voltage Display Accuracy: **5.4-10V ±80mV**  
**10-20V ±120mV**  
**20-35V ±160mV**  
 Dimension: **136.6x104.8x107mm**  
 Weight: **879g**

### FEATURES

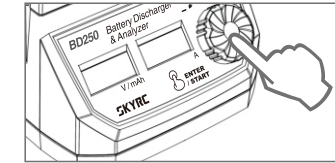
- It displays real time battery voltage, discharged capacity and discharge current.
- It can test battery capacity that helps select batteries with desired capacity.
- It saves time when user wishes to store their large capacity batteries.
- It helps activate the best performance of your batteries for competition.

### OPERATION

#### 1. Connect battery to BD250

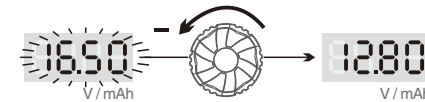


#### 2. Power ON

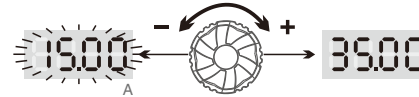


Press the dial once to power ON the discharger, the LED(V/mAh) will blink with beep sound.

#### 3. Select cut-off voltage and discharge current



The LED(V/mAh) shows the current battery voltage. By rotating the dial to change cut-off voltage, then press dial once to confirm.

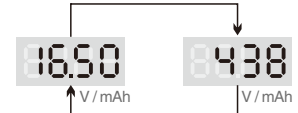


By rotating the dial to change discharge current.

#### 4. Start discharging process.

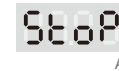
Press and hold dial for 2 seconds, the discharger will start with beep sound.

During the discharging process, the digital LED(V/mAh) will alternate the display of battery voltage and discharging capacity.



#### 5. Stop discharging process.

During the discharging process, Press the dial once to stop the discharging process, the digital LED(A) shows "Stop".



#### 6. Process finished.

When the discharging process has finished, the discharger will beep 5 times, and the LED(V/mAh) will show battery voltage and discharge capacity respectively.

#### NOTE:

After the discharge process completes, rotate the button to view the real-time battery voltage every 30 seconds for the first six minutes.

At certain intervals, the slower the voltage reduces during discharge, the better the battery performances.

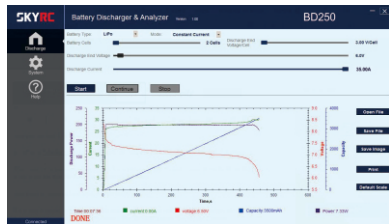
This feature can help to select good-performance battery for your race or flight.

## MAXIMUM DISCHARGE POWER CHART

Battery Type	No. of Cell	Min. Cut-off Voltage	Voltage	Min. Discharge Current (A) Discharging power: 250W	Max. Discharge Current (A) Discharging power: 250W
LiPo	2S	6.0	8.40	29.76	35.00
	3S	9.0	12.60	19.84	27.77
	4S	12.0	16.80	14.88	20.83
	5S	15.0	21.00	11.90	16.66
	6S	18.0	25.20	9.92	13.88
	7S	21.0	29.40	8.50	11.90
	8S	24.0	33.60	7.44	10.41
	LiHV	2S	6.2	8.70	28.73
3S		9.3	13.05	19.15	26.88
4S		12.4	17.40	14.36	20.16
5S		15.5	21.75	11.49	16.12
6S		18.6	26.10	9.57	13.44
7S		21.7	30.45	8.21	11.52
8S		24.8	34.80	7.18	10.08
NiMH		6S	5.4	9.00	27.77
	7S	6.3	10.50	23.80	35.00
	8S	7.2	12.00	20.83	34.72
	9S	8.1	13.50	18.51	30.86
	10S	9.0	15.00	16.66	27.77
	11S	9.9	16.50	15.15	25.25
	12S	10.8	18.00	13.88	23.14
	13S	11.7	19.50	12.82	21.36
	14S	12.6	21.00	11.90	19.84
	15S	13.5	22.50	11.11	18.51
	16S	14.4	24.00	10.41	17.36
	17S	15.3	25.50	9.80	16.33
	18S	16.2	27.00	9.25	15.43
	19S	17.1	28.50	8.77	14.61
20S	18.0	30.00	8.33	13.88	

## PC SOFTWARE

PC software supplied with the BD250 is easy to use, intuitive. There are two discharge mode: 1. Constant Power; 2. Constant Current. The software can automatically sense battery cell count and recommend a minimum safe discharge voltage. Discharge tests may be viewed in Amp Hours, Watt Hours or Minutes. Results can be graphed as Voltage vs. Amp hours, Watt hours, Minutes.



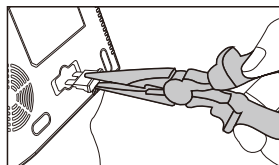
### NOTE:

With PC software connected, BD250 allows you to export the battery voltage value at 30 seconds intervals (for the first six minutes).

## HOW TO REPLACE THE FUSE

If the discharger can't be powered on, the fuse may be burnt.

You can replace the fuse by yourself and there is one piece of replacement in the package.



The specification is 40A/32V blade fuse.

## ERROR MESSAGE

When there is an error, digital LED will display the error code

**Hot** Over-temperature protection.

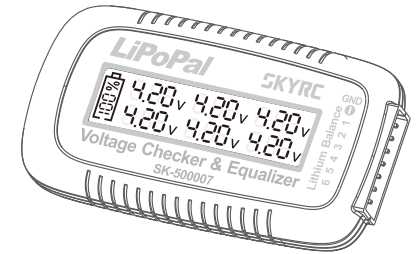
**ErrH** Input voltage is too high. This discharger accepts battery voltage from 5.4 to 35V, if battery voltage is higher than 35V, it will stop working and show error message.

**ErrL** Input voltage is too low. This discharger accepts battery voltage from 5.4 to 35V, if battery voltage is lower than 5.4V, it will stop working and show error message.

## OPTIONAL PARTS

LiPoPal (SK-500007)

The LiPoPal can check the voltage of each cell of a lithium battery pack and remaining capacity in percentage % during discharging process.



## SAFETY NOTE

**Improper usage may lead to fire, property damage and physical injury.**

- Never discharge a battery below its recommended cutoff voltage. Over-discharge may damage battery and cause FIRE or EXPLOSION.
- Never discharge a battery at a higher discharge rate than it is designed for.
- Never leave the discharger unattended when it is connected to battery. If any malfunction is found, TERMINATE THE PROCESS AT ONCE.
- Place the discharger and battery on a non-flammable surface, and keep away from inflammables.
- Never discharge swollen, leaky, or damaged batteries.
- Batteries shall be discharged within a room temperature range of 10-40°C.
- Disconnect the battery and discharger once discharging has finished.
- Recharge batteries immediately with an appropriate battery charger after discharge process is completed. Some battery types do not like to remain discharged for extended periods of time.

## 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.

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@skyrcc.cn



Manufactured by  
**SKYRC TECHNOLOGY CO., LTD.**  
www.skyrc.com 7504-1290-01