SK-100199

Sky RC D100 Neo AC/DC Dual Balance Charger/Discharger

Model: SK-100199

1. Introduction

The Sky RC D100 Neo is an advanced AC/DC dual balance charger and discharger designed for a wide range of battery chemistries, including LiPo, LiFe, LiHV, Li-ion, NiMh, NiCd, and Pb batteries. It features two independent charging ports, allowing simultaneous charging of two batteries. With a vibrant color display and intuitive scroll wheel control, the D100 Neo offers precise and efficient battery management for RC enthusiasts.

2. Safety Precautions

- Always operate the charger in a well-ventilated area, away from flammable materials.
- Never leave the charger unattended during operation.
- Ensure correct battery type and cell count settings before charging. Incorrect settings can lead to battery damage or fire.
- Do not attempt to charge damaged or swollen batteries.
- Keep the charger away from moisture, dust, and direct sunlight.
- Use only the original power cables and connectors provided or approved by the manufacturer.
- This device is not intended for use by persons 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.

3. Package Contents

Verify that all items are present in the package:

- Sky RC D100 Neo AC/DC Dual Balance Charger/Discharger
- 3-Pin UK AC Plug with Lead
- Instruction Manual (this document)

4. Product Overview

Figure 4.1: Front View

This image displays the front of the Sky RC D100 Neo charger, highlighting its vibrant color display, dual charging ports (A and B), and the scroll wheel button for navigation and control. The screen shows real-time charging data such as voltage, current, capacity, and time for two independent channels.

Figure 4.2: Rear View

This image shows the rear panel of the Sky RC D100 Neo charger. Visible components include the AC 100-240V power input, the DC 10-30V input with an XT60 connector, and a cooling fan for thermal management during operation.

4.1. Key Components

- **Color Display:** High-resolution screen for displaying charging parameters and menu navigation.

- **Scroll Wheel Button:** Used for menu navigation, selection, and parameter adjustment.
- **Charging Ports (A & B):** Two independent ports for connecting batteries.
- **Balance Ports:** For connecting battery balance leads to ensure cell voltage equalization.
- **AC Input:** For connecting to mains power (100-240V AC).
- **DC Input:** For connecting to a DC power source (10-30V DC) via XT60 connector.
- **Cooling Fan:** Dissipates heat during operation to maintain optimal performance.

5. Setup

1. **Power Connection:**
    - For AC power, connect the provided 3-pin UK AC plug lead to the AC input port on the rear of the charger, then plug into a wall outlet.
    - For DC power, connect a suitable DC power supply (10-30V) to the XT60 DC input port on the rear.
2. **Initial Power On:** Once connected to power, the charger will power on and display the main menu.
3. **System Settings:** Navigate through the system settings using the scroll wheel to configure language, sound, and other preferences if desired.

6. Operating Instructions

The D100 Neo supports various battery types and charging modes. Always ensure the correct battery type and cell count are selected to prevent damage.

6.1. Connecting a Battery

1. Identify the correct charging port (A or B) you wish to use.
2. Connect the main power lead of your battery to the corresponding charging port (e.g., XT60, Deans, etc.).
3. For LiPo, LiFe, LiHV, and Li-ion batteries, also connect the balance lead of the battery to the appropriate balance port next to the main charging port. This is crucial for safe and balanced charging.

6.2. Selecting Battery Type and Mode

1. From the main screen, use the scroll wheel to select the desired charging port (A or B).
2. Press the scroll wheel to enter the menu for that port.
3. Select the battery chemistry (e.g., LiPo, NiMh, Pb) from the options.
4. Choose the desired operation mode:
    - **Balance Charge:** Recommended for LiPo/LiFe/LiHV/Li-ion batteries to equalize cell voltages.
    - **Charge:** Standard charging mode.
    - **Fast Charge:** Charges faster but may not fully balance cells.
    - **Storage:** Charges or discharges LiPo/LiFe/LiHV/Li-ion batteries to their optimal storage voltage.
    - **Discharge:** Discharges the battery to a set voltage.
5. Set the charging current (Amps) and cell count (for Lithium batteries) or voltage (for Pb batteries). Refer to your battery's specifications for recommended charging rates.
6. Confirm settings and start the process. The screen will display real-time charging data.

6.3. Monitoring and Completion

- Monitor the display for charging progress, current, voltage, and capacity.
- The charger will automatically stop when the process is complete and emit an audible alert.
- Disconnect the battery from the charger once charging is finished.

7. Maintenance

- Keep the charger clean and free from dust. Use a soft, dry cloth for cleaning.
- Ensure the cooling fan vents are not obstructed to allow proper airflow.
- Store the charger in a cool, dry place when not in use.
- Regularly inspect cables and connectors for any signs of wear or damage. Replace if necessary.

8. Troubleshooting

Problem	Possible Cause	Solution
Charger does not power on.	No power supply or faulty connection.	Check AC/DC power cable connections. Ensure power outlet is functional.
"Connection Break" error.	Battery not properly connected or faulty cable.	Ensure main and balance leads are securely connected. Try a different cable if available.
"Cell Count Error" or "Voltage Error".	Incorrect cell count set or battery voltage mismatch.	Verify the actual cell count of the battery and adjust settings accordingly. Check battery health.
Charger gets hot during operation.	Normal operation, or obstructed ventilation.	Ensure adequate ventilation around the charger. Check if cooling fan is operating. If excessively hot, reduce charging current.

9. Specifications

Feature	Detail
Model Number	SK-100199
AC Input Voltage	100-240V AC
DC Input Voltage	10-30V DC
AC Charge Power	100W
DC Charge Power	200W
Max Charge Current	10A per port
Balancer Current	1000mA per cell
Balance Accuracy	±0.02V
Battery Types Supported	LiPo/LiFe/LiHV/Li-ion (1-6S), NiMh/NiCd (4-15S), Pb (3S, 6S, 12S)
Display	Vibrant Color Display (76,800 pixels)

Feature	Detail
Control Interface	Scroll Wheel Button
Dimensions (L x W x H)	11 x 11 x 8 cm
Manufacturer	SKY RC
Country of Origin	China

10. Warranty and Support

For warranty information and technical support, please refer to the manufacturer's official website or contact your local distributor. Keep your proof of purchase for warranty claims.
Manufacturer: SKY RC