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ISDT D1

ISDT D1 Smart Charger: RC Lipo Battery Charger/Discharger User Manual

Model: D1 | Brand: ISDT

1. INTRODUCTION

Thank you for choosing the ISDT D1 Smart Charger. This manual provides essential information for the safe and efficient operation of your charger. Please read it thoroughly before use and retain it for future reference. The ISDT D1 is a versatile dual-input (AC 100W / DC 250W) smart charger designed for various battery types, including LiFe, LiIon, LiPo, LiHv (1-6S), Pb (1-12S), and NiMH/Ni-Cd (1-16S).

2. PRODUCT FEATURES

- **Dual Input Mode:** Supports AC 100W and DC 250W power input for flexible charging options.
- **Independent Channel:** Features a single independent charging channel with a maximum current of 10A.
- **Efficient Cooling:** Equipped with a dual-fan high-efficiency heat dissipation system to maintain optimal performance.
- **Firmware Upgradable:** USB-C interface allows for easy firmware upgrades, ensuring the charger always has the latest features and performance optimizations.
- **2.4" Smart Display:** Full-color LCD touch panel displays real-time charging process information, including voltage, current, charging time, mode, battery type, internal resistance, and charged capacity.
- **Wide Battery Compatibility:** Supports LiFe, LiIon, LiPo 1-6S, LiHv 1-6S, Pb 1-12S, and NiMH/Ni-Cd 1-16S batteries with automatic battery type identification and intelligent charge algorithm matching.
- **Multiple Functions:** Includes fast charging, data storage, cycle charging, and an automatic stop function upon full charge.
- **Battery Destroy Mode:** scOS 2.0 features a battery destroy mode to safely discharge batteries to 0V for disposal.
- **Multi-Application:** Suitable for portable power, portable devices, and remote control vehicles.

3. PACKAGE CONTENTS

Upon opening the package, verify that all items are present and in good condition:

- ISDT D1 Smart Charger Unit

- User Guide
- Screen Protector
- AC Power Cable

Note: Additional cables or accessories may be sold separately.

4. PRODUCT OVERVIEW



Figure 1: Front view of the ISDT D1 Smart Charger, showing the display and control wheel.



Figure 2: Angled view of two ISDT D1 Smart Chargers, highlighting the compact design and display interface.



Figure 3: Rear view of the ISDT D1 Smart Charger, showing the AC and DC input ports, cooling fan, and balance port.



Figure 4: Side view of the ISDT D1 Smart Charger, illustrating the cooling vents and compact form factor.

4.1 AC/DC Dual Mode

The ISDT D1 charger supports both AC and DC power inputs. When using AC power (wall outlet), the maximum output is 100W. When connected to a DC power source (e.g., external power supply), the maximum output increases to 250W. A safety mechanism prevents simultaneous connection of both AC and DC inputs.

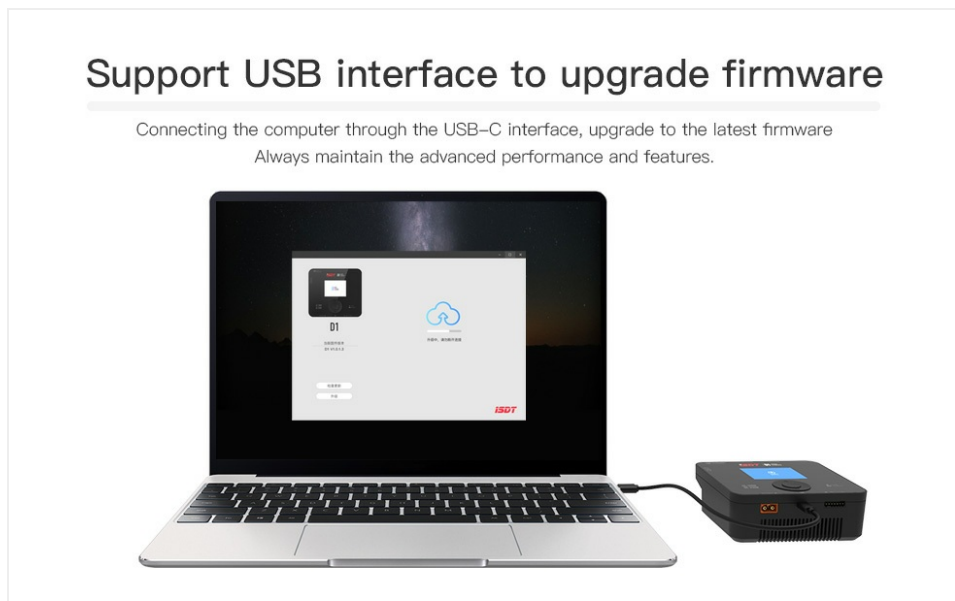


Figure 5: Diagram illustrating the AC/DC dual input capability of the ISDT D1 charger.

4.2 USB-C Firmware Upgrade

The charger features a USB-C port for connecting to a computer to update its firmware. This ensures your charger remains up-to-date with the latest features and performance enhancements.

Introducing the dark mode.

scOS 2.0 new dark mode feature, Suitable for low light scenario, System will adjust the interface in dark tone, Reduce light damage to user's eyes. While remaining the iconic and comfortable charging display style.



Figure 6: Image showing the ISDT D1 connected via USB-C to a laptop for firmware updates.

4.3 Dark Mode Feature

The scOS 2.0 operating system includes a dark mode feature, optimizing the display for low-light scenarios and reducing eye strain. This can be configured in the system settings.

Battery waste mode.

scOS 2.0 adds battery waste mode. Batteries that need to be scrapped, Put the voltage to 0V in a safe way.



Figure 7: The ISDT D1 display in dark mode, showing charging parameters.

4.4 Battery Waste Mode

For safe disposal of old or damaged batteries, the scOS 2.0 includes a battery waste mode that discharges the battery to 0V.

Specifications

Input voltage	AC 100–240V / DC 10–30V
Output voltage	DC 1~35V
Max. input current	DC 14A
Charging current	0.1~10A
Discharging current	0.1A~1.0A
Max. charging power	AC 100W / DC 250W
Max. discharging power	10W
Balance current	1.5A/Cell Max
Abnormal voltage alarm	Support
Incorrect cell count setting alarm	Support
Supported battery types and cell count	LiFe,LiIon,LiPo LiHv 1–6S ; Pb 1–12S ; NiMH/Cd 1–16S
Working temperature	0°C~40°C
Storage temperature	–20°C~60°C
Dimension	126×115×49 mm
Weight	About 460g

Figure 8: The ISDT D1 display showing the battery waste mode interface.

5. SETUP AND CONNECTIONS

1. Power Connection:

- For AC input, connect the provided AC power cable to the charger's AC port and then to a wall outlet.
- For DC input, connect your external DC power supply (e.g., a large battery or dedicated power source) to the charger's DC port using an appropriate cable (e.g., XT60). Ensure the input voltage is within the supported range (DC 10-30V).

2. Battery Connection:

- Connect your battery's main power lead to the XT60 output port on the charger.
- Connect your battery's balance lead to the appropriate balance port on the side of the charger (supports 1S-6S).

3. **Initial Power On:** The charger will power on automatically once connected to a power source. The display will show the main interface.

6. OPERATING INSTRUCTIONS

The ISDT D1 features an intuitive interface controlled by a scroll wheel and touch panel. The following steps outline basic operation:

6.1 Navigating the Interface

- **Scroll Wheel:** Rotate to navigate through menu options or adjust values.
- **Center Button:** Press to select an option or confirm a setting.
- **Main Screen:** Displays real-time battery voltage, current, capacity, and individual cell voltages.

6.2 Charging a Battery

1. Connect the battery to the charger as described in Section 5.
2. From the main screen, press the center button to enter the **Task Setting** menu.
3. Select **Task** and choose **Charge**.
4. Select **Chemistry** and choose the correct battery type (e.g., LiPo, LiHv, LiIon, Life, Pb, NiMH/Cd).

5. Select **Condition** to set the desired end-of-charge voltage (e.g., 4.20V for standard LiPo).
6. Select **Cells** and set the correct cell count for your battery (1S-6S).
7. Select **Current** and set the desired charging current (0.1A to 10.0A). It is generally recommended to charge at 1C (e.g., 5A for a 5000mAh battery).
8. Select **Start** to begin the charging process. The charger will display real-time charging data.

6.3 Discharging and Storage Modes

The ISDT D1 also supports discharging and storage functions. These modes operate at a maximum of 15W discharge power and 0.1-1.0A discharge current.

- **Discharge:** Reduces battery voltage to a specified level.
- **Storage:** Charges or discharges the battery to a safe voltage level for long-term storage, preserving battery health.
- **Destroy:** Safely discharges a battery to 0V for permanent disposal. Use with caution.

To access these modes, navigate to the **Task Setting** menu and select the desired task.

6.4 System Settings

To access system settings, press and hold the center button from the main screen. Here you can configure:

- **Lowest Input Voltage:** Set a minimum input voltage to prevent over-discharging of your external power source.
- **Max Input Power:** Adjust the maximum power draw from your input source.
- **Backlight:** Adjust screen brightness (Low, Middle, High).
- **Volume:** Adjust sound volume (Off, Low, Middle, High).
- **Completion Tone:** Choose between a single alert or repeating alert when a task is complete.
- **Language:** Select the display language.
- **Theme:** Switch between Bright and Dark display modes.
- **Self-test:** Initiates a self-diagnostic test of the charger.
- **Calibration:** Allows for fine-tuning of voltage readings for input, output, and individual cells using a trusted multimeter. Factory default calibration can be restored.

7. SAFETY INFORMATION

- Always operate the charger in a well-ventilated area, away from flammable materials.
- Never leave the charger unattended while in operation.
- Ensure correct battery type and cell count settings before starting any task. Incorrect settings can lead to battery damage or fire.
- Do not charge or discharge damaged or swollen batteries.
- Keep the charger away from moisture, dust, and direct sunlight.
- Use only original or approved accessories and cables.
- Children should be supervised to ensure that they do not play with the appliance.

8. SPECIFICATIONS

Specification	Value
Input Voltage	AC 100-240V / DC 10-30V
Output Voltage	DC 1-35V
Max. Input Current	DC 14A
Charging Current	0.1-10.0A
Discharging Current	0.1-1.0A
Max. Charging Power	AC 100W / DC 250W
Max. Discharging Power	10W
Balance Current	1.5A/Cell Max
Abnormal Voltage Alarm	Support
Incorrect Cell Count Setting Alarm	Support
Supported Battery Types & Cell Count	LiFe, Lilon, LiPo, LiHv 1-6S; Pb 1-12S; NiMH/Cd 1-16S
Working Temperature	0°C-40°C
Storage Temperature	-20°C-60°C
Dimensions	126x115x49 mm (4.96 x 4.53 x 1.93 inches)
Weight	Approx. 460g (1 pound)



Figure 9: Detailed specifications of the ISDT D1 Smart Charger.

9. TROUBLESHOOTING

- **Charger not powering on:** Ensure the AC or DC power cable is securely connected and the power source is active. Check input voltage.
- **Battery not charging/discharging:** Verify battery connections (main and balance leads). Ensure correct battery type, cell count, and current settings are selected in the Task Setting menu. Check for any error messages on the display.
- **Error messages:** Refer to the user guide for specific error code meanings and troubleshooting steps. Common errors

relate to incorrect battery settings, connection issues, or internal faults.

- **Overheating:** Ensure the charger's cooling vents are not obstructed and it is operating in a well-ventilated area. Reduce charging current if overheating persists.

10. OFFICIAL PRODUCT VIDEO REVIEW

Our browser does not support the video player.

Video 1: An official review of the ISDT D1 Dual Mode Smart Charger by Nova new energy, demonstrating its features, unboxing, and basic operation. This video provides a visual guide to understanding the charger's capabilities and user interface.

11. WARRANTY AND SUPPORT

The ISDT D1 Smart Charger comes with a standard manufacturer's warranty. For detailed warranty information, technical support, or service inquiries, please refer to the official ISDT website or contact your authorized dealer. Keep your purchase receipt as proof of purchase.