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› OVONIC X1 Pro Dual RC LiPo Battery Balance Charger User Manual

OVONIC X1 Pro

OVONIC X1 Pro Dual RC LiPo Battery Balance Charger

User Manual

1. INTRODUCTION

The OVONIC X1 Pro is a high-performance dual-channel balance charger designed for various battery types, including LiPo, LiHV, LiFe, Li-Ion, NiMH, and NiCd. It features both AC and DC input capabilities, offering up to 300W AC and 700W DC charging power with a maximum 16A current. This smart charger incorporates advanced synchronous rectification technology for high conversion efficiency and includes multiple safety features to ensure reliable operation. Key features include:

- AC 300W / DC 700W 16A Smart Fast Charging
- Synchronous Rectification Technology for 98% conversion efficiency
- Support for LiPo/Li-Ion/LiFe/LiHv (1S-6S) and NiMH (1S-16S) batteries
- Multiple operating modes: Charge, Discharge, Storage, Balance, ExtDischarge, Digital Power, SyncCharge
- Integrated safety protections: Overvoltage, Overtemperature, Overcurrent, Short Circuit, Reverse Polarity

2. SAFETY INFORMATION

Always operate the charger in a well-ventilated area, away from flammable materials. Do not leave charging batteries unattended. Ensure correct battery type and cell count settings before initiating any charging or discharging process. Incorrect settings can lead to battery damage or fire.

The OVONIC X1 Pro includes the following safety features:

- **Temperature Reading:** Monitors port temperature and shuts down on overheating.
- **Parameter Correction:** Automatically detects and corrects incorrect cell count settings.
- **Safety Timer:** Allows setting a time limit for charging operations.
- **Capacity (mAh) Cut-Off:** Stops charging once a set capacity limit is reached.
- **Voltage Check:** Provides quick and convenient voltage readings.
- **Auto Power Off:** Automatically powers off when the battery is fully charged to prevent overcharging.
- **Resistance Detection:** Accurately measures battery internal resistance.
- **Overvoltage Protection:** Prevents charging at excessive voltages.
- **Overcurrent Protection:** Safeguards against excessive current draw.
- **Short Circuit Protection:** Protects against short circuits.

- **Reverse Polarity Protection:** Prevents damage from incorrect battery connection.

 Temperature Reading Monitor the port temperature, and shut down on overheating.	 Parameter Correction When you set the wrong number of cells, the charger will automatically detect and start charging with the correct number of battery cells.	 Sync Charging Model Provide a maximum current of 23A, adjustable current value: 0.1-23A.	 Safety Timer Turn off the charger automatically according to the schedule you set.
 Capacity Cut-off It is a safety function. After setting the capacity(mAh), the charger will charge according to your target capacity(mAh) and timed automatically shut down.	 Voltage Check X1 Pro can quickly and conveniently read the voltage of each cell, saving the cost of buying a voltage checker.	 Auto Power Off When the battery is fully charged, the Ovonic X1 Pro will automatically power off to reduce fire risks.	 Resistance detection Accurately measure battery resistance.

Image: Overview of the 8 advanced safety features integrated into the OVONIC X1 Pro charger.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package. If any items are missing or damaged, please contact customer support.

- 1 x OVONIC X1 Pro Balance Charger
- 1 x AC Input Cable
- 1 x USB-A to USB-A Cable
- 2 x XT60-Deans Adapter
- 2 x XT60-EC3 Adapter
- 2 x XT60-EC5 Adapter
- 1 x User Manual
- 1 x Packaging Box



Dual Smart Balance Charger X1



Packaging Box X1



XT60-EC5 Adapter X2



XT60-T Plug Adapter X2



XT60-EC3 Adapter X2



USB A to USB A Cable X1



AC Input Cable X1



User Manual X1

Image: The OVONIC X1 Pro charger displayed with all its included accessories, such as cables and adapters.

4. PRODUCT OVERVIEW

Familiarize yourself with the charger's components and interface for optimal use.

AC300W DC700W

FASTER CHARGING

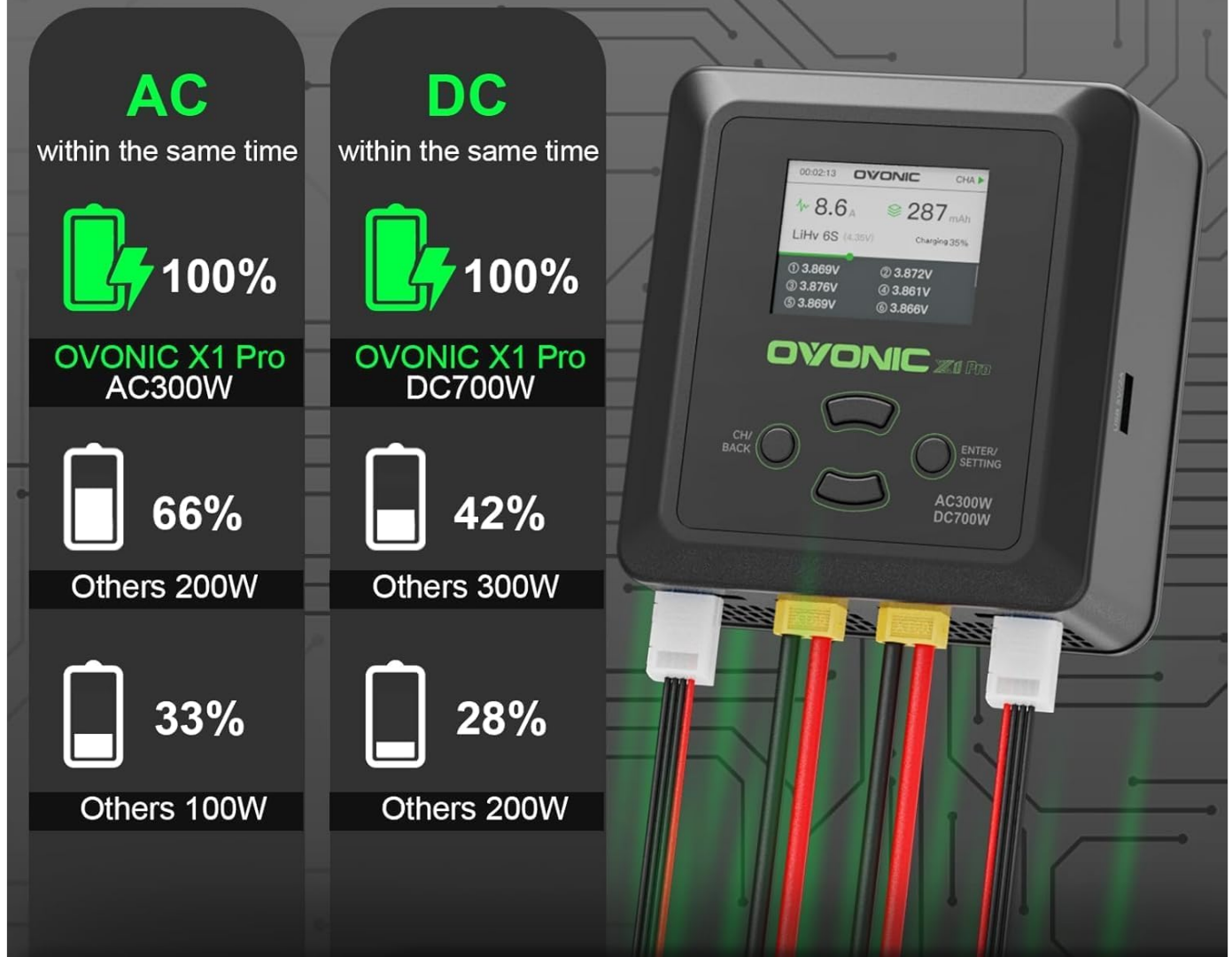


Image: Front view of the OVONIC X1 Pro charger, highlighting its display screen and control buttons.

The charger features a clear display screen for monitoring charging parameters and navigation buttons for menu selection and settings adjustment.

5. SETUP

5.1 Power Connection

1. **AC Power:** Connect the provided AC input cable to the AC input port on the charger and then to a wall outlet.
2. **DC Power:** For DC input, connect a suitable DC power source (e.g., a car battery or external DC power supply) to the DC input port on the charger. Ensure the DC source voltage is within the specified range.

5.2 Battery Connection

Connect your battery to one of the charging ports (Output A or Output B) using the appropriate adapter. Ensure the

balance lead is also connected to the corresponding balance port for balanced charging. Always double-check polarity before connecting.

6. OPERATING INSTRUCTIONS

The OVONIC X1 Pro offers various modes and settings for different battery types and charging needs. Use the navigation buttons (Up, Down, Enter/Setting, Back) to navigate the menu and adjust parameters.

6.1 Basic Navigation

- **Up/Down Buttons:** Scroll through menu options or adjust values.
- **Enter/Setting Button:** Select an option or confirm a setting.
- **Back Button:** Return to the previous menu or exit a setting.

6.2 Charging Modes

Select the appropriate mode based on your battery type and desired operation:

- **Charge:** Standard charging mode.
- **Balance Charge:** Recommended for LiPo/LiHV/LiFe/Li-Ion batteries to ensure cell voltage equalization.
- **Discharge:** Discharges the battery to a set voltage.
- **Storage:** Charges or discharges the battery to a safe storage voltage.
- **ExtDischarge:** External discharge mode.
- **Digital Power:** Functions as a regulated DC power supply.
- **SyncCharge:** Allows simultaneous charging of two batteries, synchronizing their completion. This mode provides a maximum current of 23A, with an adjustable current value from 0.1-23A.



Image: Diagram illustrating the intelligent power distribution capabilities of the OVONIC X1 Pro in both AC and DC modes, including Sync Charging.



Image: Comparison demonstrating the faster charging capabilities of the OVONIC X1 Pro with AC 300W and DC 700W power outputs.

7. BATTERY COMPATIBILITY AND PARAMETERS

The OVONIC X1 Pro supports a wide range of battery types. Refer to the table below for specific parameters and compatibility.

Supported Battery Types and Parameters

Parameter	LiHv	LiPo	Li-Ion	LiFe	NiMH
Rated Voltage	3.8V	3.7V	3.6V	3.2V	1.2V
Full Charge Voltage	4.35V (Adjustable 4.1-4.4V)	4.2V (Adjustable 4.0-4.25V)	4.1V (Adjustable 3.9-4.15V)	3.65V (Adjustable 3.4-3.7V)	1.5V
Discharge Voltage	3.7V (Adjustable 3.6-4.15V)	3.6V (Adjustable 3.5-4.0V)	3.5V (Adjustable 3.4-3.9V)	3.2V (Adjustable 2.9-3.4V)	0.9V (Adjustable 0.3-1.3V)
Storage Voltage	3.85V (Adjustable 3.75-3.95V)	3.8V (Adjustable 3.7-3.9V)	3.7V (Adjustable 3.6-3.8V)	3.3V (Adjustable 3.2-3.4V)	NO
Balancing	3.8V (Adjustable 3.6-4.4V)	3.8V (Adjustable 3.5-4.25V)	3.8V (Adjustable 3.4-4.15V)	3.7V (Adjustable 3.5-4.0V)	NO
Exit Discharge	YES	YES	YES	YES	YES
Sync Charging	4.35V (Adjustable 4.1-4.4V)	4.2V (Adjustable 4.0-4.25V)	4.1V (Adjustable 3.9-4.15V)	3.65V (Adjustable 3.4-3.7V)	1.5V (Adjustable 1.3-1.5V)
Support Serial Numbers	1-6S	1-6S	1-6S	1-6S	Automatic Detection
Maximum Charging Current	16A	16A	16A	16A	16A
Digital Power	Target Voltage: 5-29V, Target Current: 0.1-16A				

8. MAINTENANCE

8.1 Cleaning

Regularly clean the charger's exterior with a soft, dry cloth. Do not use solvents or abrasive cleaners. Ensure ventilation openings are free from dust and debris to maintain proper airflow.

8.2 Storage

Store the charger in a cool, dry place away from direct sunlight and extreme temperatures. Disconnect all batteries and power sources before storing.

8.3 Firmware Updates

The charger supports firmware upgrades via the USB-A to USB-A cable. Check the official OVONIC website for the latest firmware versions and instructions. Keeping the firmware updated ensures optimal performance and access to new features.

9. TROUBLESHOOTING

If you encounter issues with your OVONIC X1 Pro charger, refer to the following common problems and solutions:

- **Charger not powering on:** Ensure the AC input cable is securely connected to both the charger and a working power outlet, or that the DC power source is correctly connected and providing sufficient voltage.
- **Error message on display:** Consult the charger's display for specific error codes or messages. Common errors relate to incorrect battery type selection, cell count mismatch, or connection issues. Refer to the safety features section for details on parameter correction and protection mechanisms.
- **Battery not charging:** Verify that the battery is properly connected to both the main charging port and the balance port (if applicable). Check that the selected charging mode and parameters match the battery specifications. Ensure the battery is not deeply discharged beyond its safe voltage limits.
- **Slow charging:** Confirm that the input power source (AC or DC) can provide adequate wattage. For faster charging, ensure the charging current is set appropriately for your battery's C-rating and capacity.
- **Charger overheating:** Ensure the charger is in a well-ventilated area and its vents are not obstructed. If overheating persists, reduce the charging current or discontinue use and contact support.

10. SPECIFICATIONS

Specification	Value
Brand	OVONIC
Product Dimensions	5"D x 4.7"W x 2.4"H
Input Voltage	AC 100-240V, DC 6.5-30V
Max Charge Power	AC 300W / DC 700W
Charge Current Range	0.1-16A x 2

Specification	Value
Max Discharge Power	15W x 2 (Main port 6W x 2, Balanced port 9W x 2)
Compatible Battery Types	LiPo/Li-Ion/LiFe/LiHv (1S-6S), NiMH/NiCd (1S-16S)
Balance Current	1000mA x 2
Connector Type	XT60
Number of Ports	2 (Dual Channel)

Cell Type	LiHv	LiPo	Li-Ion	LiFe	LiMH
Assignment Parameter					
Rated Voltage	3.8V	3.7V	3.6V	3.2V	1.2V
Full Charge Voltage	4.35V Adjustable range (4.1-4.4V)	4.2V Adjustable range (4.0-4.25V)	4.1V Adjustable range (3.9-4.15V)	3.65V Adjustable range (3.4-3.7V)	1.5V
Discharge Voltage	3.7V Adjustable range (3.6-4.15V)	3.6V Adjustable range (3.5-4.0V)	3.5V Adjustable range (3.4-3.9V)	3.2V Adjustable range (2.9-3.4V)	0.9V Adjustable range (0.3-1.3V)
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Balancing	3.8V Adjustable range (3.6-4.4V)	3.8V Adjustable range (3.5-4.25V)	3.8V Adjustable range (3.4-4.15V)	3.7V Adjustable range (2.9-3.7V)	NO
Exit Discharge	YES	YES	YES	YES	YES
Sync Charging	4.35V Adjustable range (4.1-4.4V)	4.2V Adjustable range (4.0-4.25V)	4.1V Adjustable range (3.9-4.15V)	3.65V Adjustable range (3.4-3.7V)	1.5V Adjustable range (1.3-1.5V)
Support Serial Numbers	1-6S	1-6S	1-6S	1-6S	Automatic Detection
Maximum Charging Current	16A	16A	16A	16A	16A
Digital Power	Target Voltage: 5-29V Target Current: 0.1-16A				

Image: Diagram illustrating the high conversion efficiency of the OVONIC X1 Pro, reaching up to 98% with synchronous rectification technology.

11. WARRANTY AND SUPPORT

The OVONIC X1 Pro Balance Charger comes with a manufacturer's warranty. For detailed warranty information, please refer to the warranty card included in your package or visit the official OVONIC website. For technical support, troubleshooting assistance, or inquiries about replacement parts, please contact OVONIC customer service through their official channels.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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