

OVONIC Mate2

OVONIC Mate2 LiPo Balance Charger Instruction Manual

Model: Mate2 | Brand: OVONIC

1. INTRODUCTION

This manual provides essential instructions for the safe and efficient operation of your OVONIC Mate2 LiPo Balance Charger. Please read this manual thoroughly before using the charger to ensure proper function and to prevent damage to the charger or batteries.

2. SAFETY INSTRUCTIONS

Failure to follow these safety instructions can result in fire, personal injury, or property damage.

- Always use the charger in a well-ventilated area, away from flammable materials.
- Never leave the charger unattended during operation.
- Ensure the charger is compatible with the battery type and cell count before connecting.
- Do not charge damaged, swollen, or leaking batteries.
- Keep the charger away from moisture, dust, and direct sunlight.
- Use only the original power cable and accessories provided with the charger.
- Disconnect the power supply immediately if any abnormal behavior is observed.
- Keep out of reach of children.
- The charger is designed for AC input only. Do not attempt to connect to a DC power source.



Figure 2.1: OVONIC Mate2 Charger highlighting safety protections and dimensions. This image illustrates the physical dimensions of the charger and icons representing its built-in safety features such as overtemperature, overcharge, overcurrent, short circuit, and reverse polarity protection.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- OVONIC Mate2 Balance Charger
- AC Input Cable
- 8-in-1 Adapter Cable (XT60 to EC5, EC3, XT30, Deans, TRX, TMY, Mini TMY, Futaba)
- LiPo Safe Bag
- User Manual



Mate 2 Balance Charger*1



Packaging Box*1



LiPo Bag*1



User Manual*1



AC Input Cable*1



8-in-1 Adapter Cable*1

Figure 3.1: All items included in the OVONIC Mate2 Charger package. This image displays the charger unit, AC power cable, 8-in-1 adapter cable, LiPo safe bag, and user manual.

4. PRODUCT OVERVIEW

The OVONIC Mate2 is a smart AC balance charger designed for various RC battery types. It features a high-definition digital display and intuitive controls for efficient and safe charging.

4.1 Key Features

- **High Power Output:** 200W charging power with 12A maximum current.

- **Multi-Battery Compatibility:** Supports LiPo, Li-ion, LiHV, LiFe (2-6S), and NiMH (4-15S) batteries.
- **High Conversion Efficiency:** Up to 98% conversion efficiency using synchronous rectification technology.
- **Smart Charging Modes:** Fast Charge, Balance Charging, Discharge, Storage Mode, and Digital Power.
- **Comprehensive Safety Protections:** Overtemperature, Overcharge, Overcurrent, Short Circuit, and Reverse Polarity Protection.
- **User-Friendly Interface:** Digital display for clear parameter monitoring and easier operation.

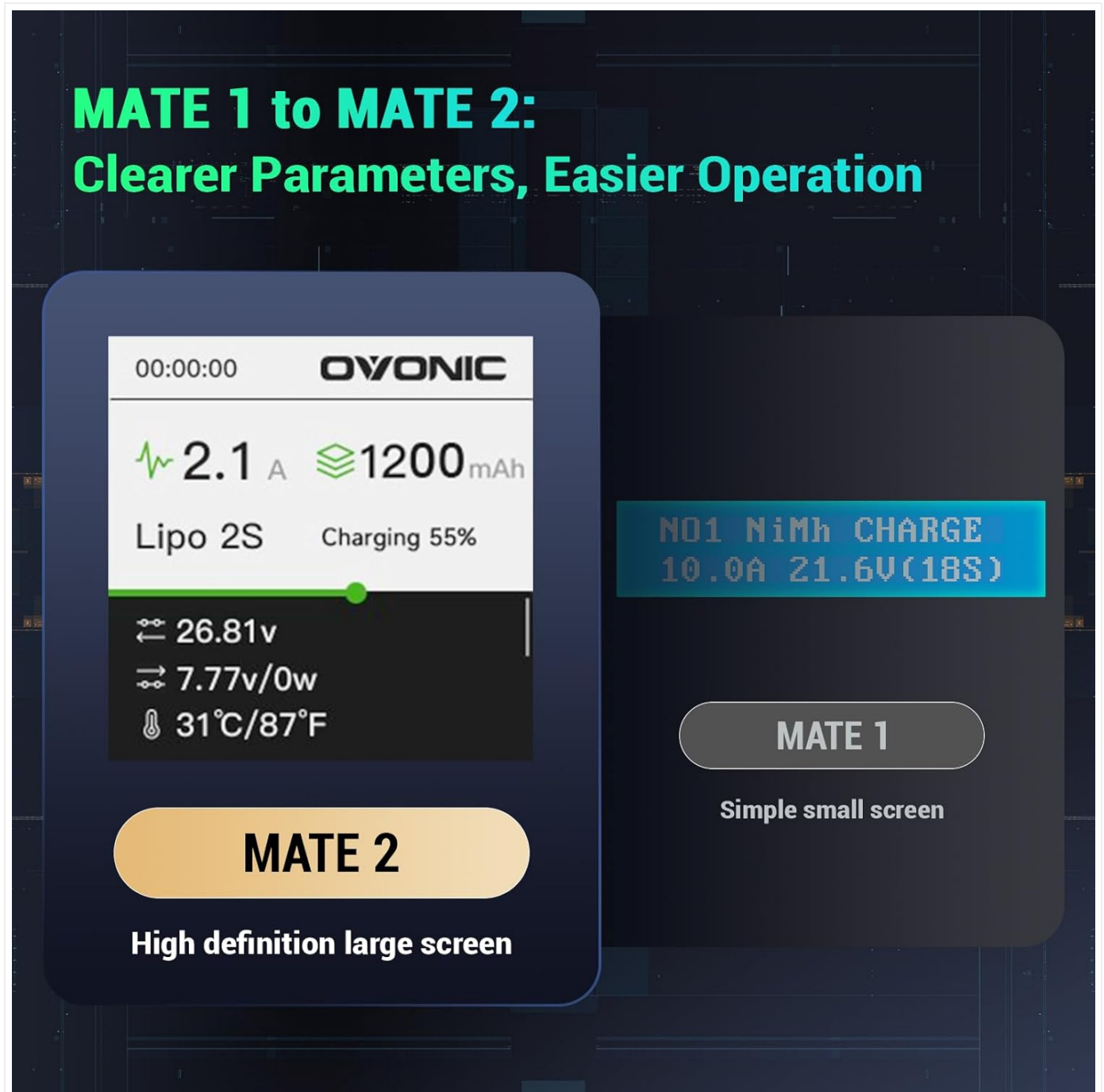


Figure 4.1: Comparison illustrating the clearer parameters and easier operation of the Mate2's high-definition large screen compared to the Mate1's simpler display.

4.2 Charger Components

Familiarize yourself with the main components of the charger:

- **Digital Display:** Shows charging status, battery parameters, and menu options.
- **Control Buttons:** Navigation and selection buttons for menu operation.
- **Main Output Port:** For connecting the 8-in-1 adapter cable to the battery.

- **Balance Port:** For connecting the battery's balance lead (essential for LiPo/Li-ion/LiHV/LiFe batteries).
- **AC Input Port:** For connecting the AC power cable.

5. SETUP

1. **Unpack the Charger:** Carefully remove all components from the packaging.
2. **Connect Power:** Plug the AC input cable into the charger's AC input port, then connect the other end to a suitable wall outlet (100-240V AC). The charger will power on and display the startup screen.
3. **Prepare Battery:** Ensure your battery is in good condition, free from damage, and at room temperature.
4. **Connect Adapter Cable:** Connect the XT60 end of the 8-in-1 adapter cable to the main output port of the charger.
5. **Connect Battery:**
 - For LiPo/Li-ion/LiHV/LiFe batteries: Connect the main discharge plug of your battery to the appropriate connector on the 8-in-1 adapter cable. Then, connect the battery's balance lead to the charger's balance port.
 - For NiMH batteries: Connect the main discharge plug of your battery to the appropriate connector on the 8-in-1 adapter cable. A balance connection is not required for NiMH.



Figure 5.1: The 8-in-1 adapter cable, showing its XT60 input and various output connectors including XT30, EC3, EC5, Deans, TMY, Mini TMY, Futaba, and TRX.

6. OPERATING INSTRUCTIONS

The OVONIC Mate2 charger offers several operating modes. Use the navigation buttons to select and confirm options on the digital display.

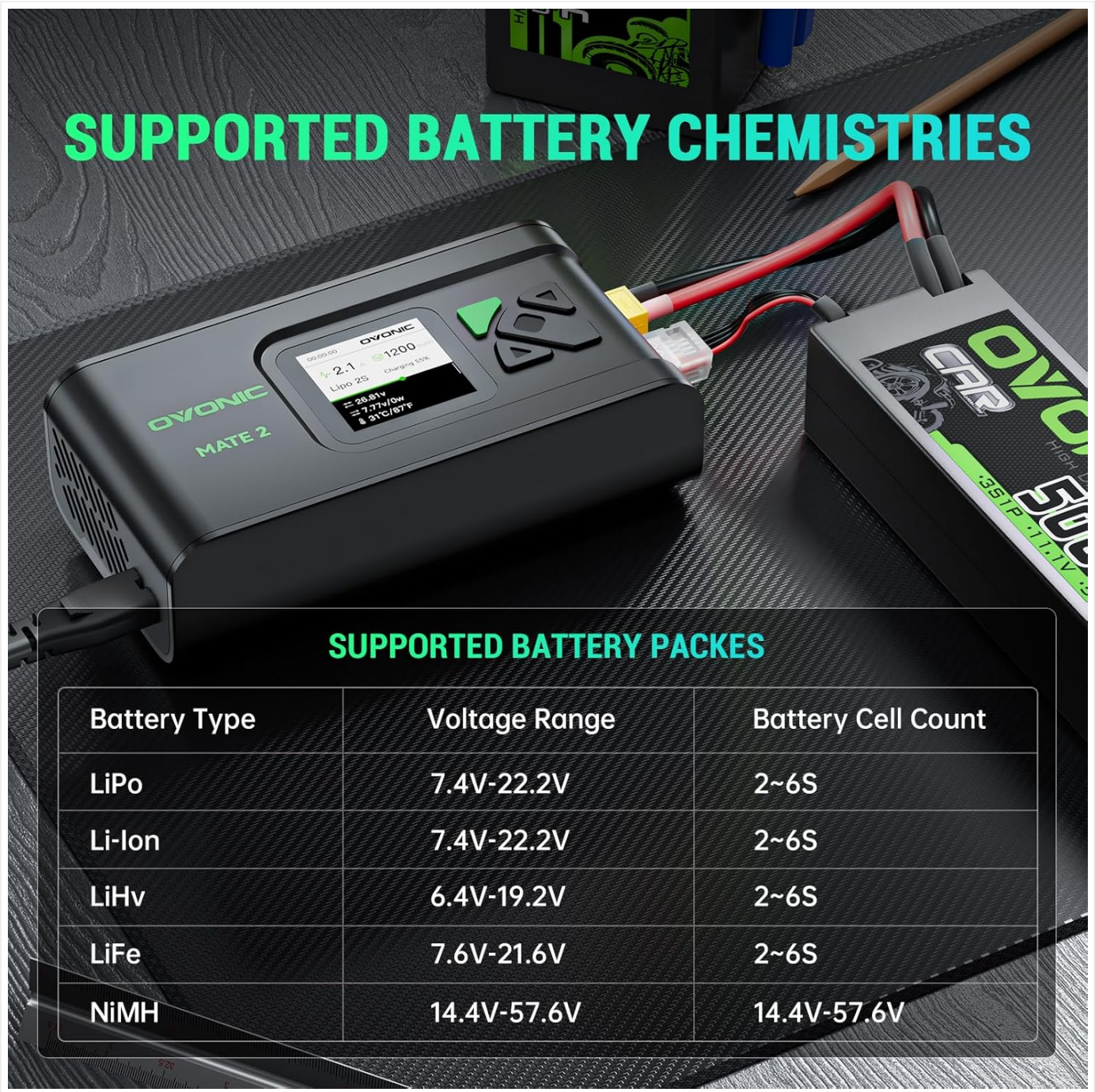
6.1 Supported Battery Types and Cell Counts

The charger supports the following battery chemistries and cell configurations:

Battery Type	Voltage Range	Battery Cell Count
LiPo	7.4V-22.2V	2-6S
Li-ion	7.4V-22.2V	2-6S
LiHV	6.4V-19.2V	2-6S
LiFe	7.6V-21.6V	2-6S
NiMH	14.4V-57.6V	4-15S

Table 6.1: Supported battery types, voltage ranges, and cell counts for the OVONIC Mate2 charger.

SUPPORTED BATTERY CHEMISTRIES



The image shows the OVONIC MATE 2 charger, a black rectangular device with a digital display and control buttons. It is connected to a battery pack via red and black cables. The display shows charging status for a LiPo 2S battery, including voltage (28.81V), current (7.77A/0W), and temperature (51C/87F). The battery pack is labeled 'OVONIC' and '5000mAh'.

SUPPORTED BATTERY PACKS

Battery Type	Voltage Range	Battery Cell Count
LiPo	7.4V-22.2V	2~6S
Li-Ion	7.4V-22.2V	2~6S
LiHv	6.4V-19.2V	2~6S
LiFe	7.6V-21.6V	2~6S
NiMH	14.4V-57.6V	14.4V-57.6V

Figure 6.1: The OVONIC Mate2 charger in operation, demonstrating its compatibility with various battery types as detailed in the accompanying table.

6.2 Basic Charging Procedure (LiPo/Li-ion/LiHV/LiFe)

1. **Power On:** Connect the charger to AC power.
2. **Connect Battery:** Connect the battery's main discharge plug and balance lead to the charger as described in the Setup section.
3. **Select Battery Type:** On the charger's display, navigate to select the correct battery type (e.g., LiPo, LiHV).
4. **Set Cell Count:** Confirm or adjust the cell count (e.g., 3S, 4S) to match your battery. This is crucial for safe operation.
5. **Set Charging Current:** Adjust the charging current (Amps) according to your battery's specifications. A common guideline is 1C (e.g., for a 5000mAh battery, set 5.0A).
6. **Select Mode:** Choose your desired charging mode (e.g., "Balance Charge" for LiPo batteries, which is highly recommended for longevity and safety).
7. **Start Charging:** Confirm the settings and start the charging process. The display will show real-time charging data.
8. **Monitor:** Periodically check the battery and charger during the charging cycle.
9. **Finish:** The charger will automatically stop when the battery is fully charged. Disconnect the battery from the charger.

6.3 Basic Charging Procedure (NiMH)

1. **Power On:** Connect the charger to AC power.
2. **Connect Battery:** Connect the battery's main discharge plug to the charger. Balance lead connection is not required for NiMH.
3. **Select Battery Type:** On the charger's display, navigate to select "NiMH".
4. **Set Charging Current:** Adjust the charging current (Amps) according to your battery's specifications.
5. **Start Charging:** Confirm the settings and start the charging process. The display will show real-time charging data.
6. **Monitor:** Periodically check the battery and charger during the charging cycle.
7. **Finish:** The charger will automatically stop when the battery is fully charged. Disconnect the battery from the charger.

6.4 Other Modes

- **Discharge Mode:** Used to safely discharge batteries to a lower voltage.
- **Storage Mode:** Charges or discharges LiPo/Li-ion/LiHV/LiFe batteries to their optimal storage voltage, prolonging battery life.
- **Digital Power Mode:** Allows the charger to function as a DC power supply for other devices (refer to the on-screen menu for specific voltage/current settings).

7. MAINTENANCE

- **Cleaning:** Clean the charger's exterior with a soft, dry cloth. Do not use solvents or abrasive cleaners.
- **Storage:** Store the charger in a cool, dry place, away from direct sunlight and moisture.
- **Cable Inspection:** Regularly inspect all cables and connectors for signs of wear or damage. Replace damaged cables immediately.
- **Firmware Updates:** Check the manufacturer's website for any available firmware updates to ensure optimal performance and compatibility.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Charger does not power on.	No power supply; faulty cable.	Check AC power connection; try a different outlet; inspect AC cable for damage.
Charging error message.	Incorrect battery type/cell count selected; poor connection; damaged battery.	Verify battery type and cell count settings; ensure all connections are secure; inspect battery for damage.
Battery not balancing correctly.	Balance lead not connected or faulty; damaged battery cells.	Ensure balance lead is securely connected; try a different balance lead if possible; if cells are severely unbalanced, the battery may be damaged.
Charger gets excessively hot.	Poor ventilation; charging at too high a current.	Ensure adequate airflow around the charger; reduce charging current.

9. SPECIFICATIONS

- **Input Voltage:** AC 100-240V
- **Charge Power:** 200W
- **Charge Current:** 0.1-12.0A
- **Discharge Power:** 10W
- **Discharge Current:** 0.1-2.0A
- **Balance Current:** 1.0A/Cell
- **Supported Battery Types:** LiPo/Li-ion/LiHV/LiFe (2-6S), NiMH (4-15S)
- **Dimensions:** 154 x 80 x 46 mm (6.1 x 3.15 x 1.81 inches)
- **Weight:** Approximately 0.72 kg (1.58 lbs)

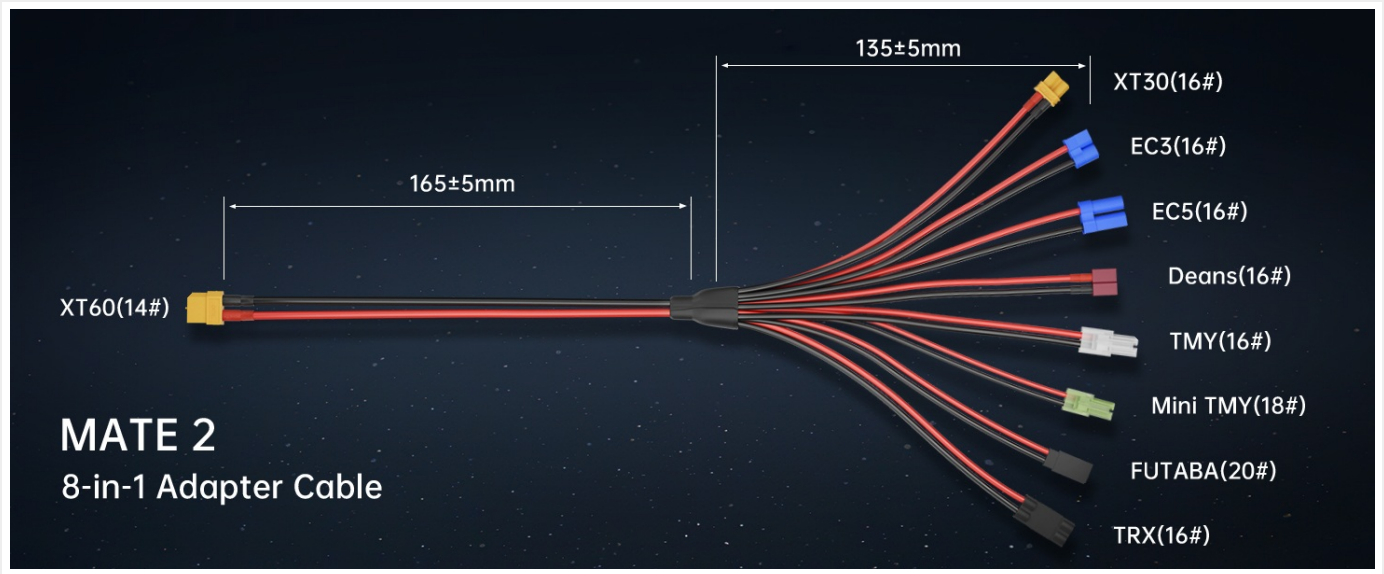


Figure 9.1: Detailed view of the OVONIC Mate2 charger, illustrating its internal structure, precise dimensions, and the various protection mechanisms integrated into its design.

10. WARRANTY AND SUPPORT

OVONIC provides a **2-Year Quality Warranty** for the Mate2 LiPo Balance Charger.

For any product problems or support inquiries, please contact OVONIC customer service:





- Access your Amazon "Your Orders" page.
- Locate your OVONIC Mate2 Charger order.
- Click the "Contact Seller" option.
- OVONIC customer service aims to respond within 24 hours.

Please retain your purchase receipt for warranty claims.



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Related Documents - Mate2

	<p>Ovonic X1 Dual Smart Balance Charger Instruction Manual</p> <p>This manual provides detailed instructions for the Ovonic X1 Dual Smart Balance Charger, covering product overview, operation, settings, and troubleshooting.</p>
	<p>OVONIC Mate I Smart Balance Charger: User Manual & Instructions</p> <p>Comprehensive user manual for the OVONIC Mate I Smart Balance Charger. Learn about safety precautions, product parameters, operating modes, settings, troubleshooting, and warranty information.</p>
	<p>Winner Wave Mate Wireless Display Adapter User Manual</p> <p>User manual for the Winner Wave Mate wireless display adapter, covering setup, pairing, mirroring, and OTA upgrades for HDMI and Type-C transmitters and receivers.</p>
	<p>SONOFF S-MATE2 User Manual</p> <p>User manual for the SONOFF S-MATE2, a battery-powered switch designed to connect standard rocker or pulse switches without requiring a neutral line. Includes instructions for operation, installation, device addition, smart scenes, and safety information.</p>

