

Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

[manuals.plus](#) /

› [TecMATE](#) /

› [TecMATE OptiMate1 DUO+ Automatic Battery Charger User Manual](#)

TecMATE TM-407av2

TecMATE OptiMate1 DUO+ Automatic Battery Charger User Manual

Model: TM-407av2

INTRODUCTION

This manual provides essential instructions for the safe and effective use of your TecMATE OptiMate1 DUO+ automatic battery charger. Please read this manual thoroughly before operating the device. The OptiMate1 DUO+ is designed to charge and maintain 6V and 12V lead-acid batteries (STD, AGM, GEL) and 12V lithium (LiFePO4) batteries, ensuring optimal battery performance and longevity.

The charger features automatic voltage detection and charging mode selection, simplifying the charging process. Its low power consumption makes it suitable for long-term connection, providing continuous battery diagnosis and maintenance.



SETUP INSTRUCTIONS

1. **Safety First:** Ensure the charger is disconnected from the AC power outlet before making any battery connections.
2. **Identify Battery Type:** Confirm your battery is either a 6V/12V lead-acid (STD, AGM, GEL) or a 12V lithium (LiFePO4) battery. The OptiMate1 DUO+ is compatible with capacities from 2Ah to 20Ah for motorcycles.
3. **Choose Connection Method:**
 - **SAE#1 Vehicle-Side Cable (Ring Terminals):** For permanent connection to the battery terminals. Connect the red ring terminal to the positive (+) battery post and the black ring terminal to the negative (-) battery post. Ensure a secure connection.
 - **SAE#4 Alligator Clip Cable:** For temporary connection. Connect the red alligator clip to the positive (+) battery post and the black alligator clip to the negative (-) battery post. Ensure clips are firmly attached and do not touch each other or any other metal parts.
4. **Connect to Charger:** Plug the chosen battery connection cable into the output port of the OptiMate1 DUO+ charger.
5. **Connect to AC Power:** Plug the charger's AC power cord into a suitable wall outlet. The charger will automatically begin the charging process.



Image 2: The OptiMate1 DUO+ charger showing the two types of battery connection cables included: ring terminals and alligator clips.

OPERATING INSTRUCTIONS

The OptiMate1 DUO+ is an automatic charger. Once connected to the battery and AC power, it will automatically detect the battery voltage (6V or 12V) and type (lead-acid or lithium) and initiate the appropriate charging program.

Charging Process Indicators:

- **Power LED:** Indicates the charger is connected to AC power.
- **Battery Type/Voltage LEDs:** Will illuminate to indicate the detected battery type (6V, 12V STD/AGM/GEL, or 12V LiFePO4).
- **Charge Status LEDs:** Progress through various stages (e.g., charging, fully charged, maintenance). Refer to the charger's label for specific LED indications.

The charger will automatically switch to a maintenance (float charge) mode once the battery is fully charged, preventing overcharging and ensuring the battery remains in optimal condition. This allows for safe long-term connection.

MAINTENANCE

The OptiMate1 DUO+ is designed to provide long-term battery maintenance.

- **Continuous Connection:** For vehicles stored for extended periods, leave the charger connected to the battery and AC power. The charger's float charge mode will monitor the battery and deliver small charges as needed to maintain full capacity.
- **Cleanliness:** Keep the charger and its cables clean and free from dirt or debris.
- **Cable Inspection:** Periodically inspect the cables and connectors for any signs of damage, wear, or corrosion. Replace damaged cables immediately.
- **Storage:** When not in use, store the charger in a dry, cool place, away from direct sunlight and extreme temperatures.

TROUBLESHOOTING

If the charger does not appear to be functioning correctly, refer to the following common issues:

Problem	Possible Cause	Solution
No LEDs illuminate when connected to AC power.	No AC power, faulty outlet, or damaged power cord.	Check AC power connection and outlet. Try a different outlet. Inspect power cord for damage.
Charger does not start charging.	Incorrect battery connection, battery voltage too low, or incompatible battery type.	Ensure correct polarity (+ to +, - to -) and secure connection. Verify battery voltage is within the charger's operating range. Confirm battery type is supported.
Charger remains in a low charge state for an extended period.	Battery is deeply discharged or damaged.	Allow more time for charging. If the issue persists, the battery may need professional inspection or replacement.

Problem	Possible Cause	Solution
Charger indicates an error.	Internal fault or severe battery issue.	Disconnect the charger from both AC and battery, wait a few minutes, then reconnect. If the error persists, contact customer support.

Note: The OptiMate1 DUO+ is not compatible with ROTAX lithium batteries. Charging such batteries will void the warranty.

PRODUCT SPECIFICATIONS

- **Model:** TM-407av2
- **Brand:** TecMATE
- **Output Current:** DC 0.6A
- **Compatible Battery Types:** 6V/12V Lead-Acid (STD, AGM, GEL), 12V Lithium (LiFePO4)
- **Compatible Battery Capacity:** 2Ah to 20Ah (Motorcycle applications)
- **Output Voltage:** 12 Volts (automatic detection for 6V/12V)
- **Dimensions (W x H x D):** 60mm x 98mm x 55mm (2.36 x 3.86 x 2.17 inches)
- **Weight:** 230g (0.51 lbs)
- **Ingress Protection:** IP50 (Dust protected)
- **Color:** Blue
- **Included Accessories:**
 - SAE#1 Vehicle-Side Cable (Ring Terminals)
 - SAE#4 Alligator Clip Cable

WARRANTY INFORMATION


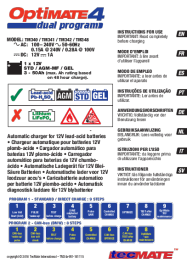

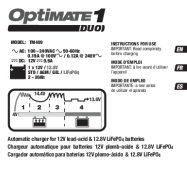
The TecMATE OptiMate1 DUO+ comes with a **3-Year Limited Warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims. The warranty does not cover damage caused by misuse, unauthorized modifications, or charging incompatible battery types (e.g., ROTAX lithium batteries).

SUPPORT AND CONTACT

For further information, detailed product guides, or technical assistance, please visit the official OptiMate website or contact TecMATE customer support.

Official Product Page: <http://www.optimate1.com/om1duo+>

Please have your model number (TM-407av2) and purchase details ready when contacting support.

	<p>OptiMATE 2 Automatic Maintenance Charger User Manual</p> <p>Comprehensive user manual for the OptiMATE 2 automatic battery charger (Models TM420/TM421). Includes safety instructions, charging procedures, LED indicators, maintenance, and warranty information for 12V lead-acid batteries.</p>
	<p>OptiMATE 7 12V 10A Automatic Battery Charger - User Manual</p> <p>Comprehensive user manual and safety instructions for the TecMate OptiMATE 7 automatic battery charger. Covers operation, maintenance, and safety precautions for 12V lead-acid batteries.</p>
	<p>OptiMATE 4 Dual Program Battery Charger User Manual</p> <p>Comprehensive user manual for the TecMate OptiMATE 4 Dual Program battery charger, detailing operation, safety instructions, and diagnostics for 12V lead-acid batteries. Supports STD, AGM, MF, and GEL types.</p>
	<p>TecMate OptiMATE 4 Automatic Battery Charger User Manual</p> <p>Comprehensive guide to using the TecMate OptiMATE 4 automatic diagnostic battery charger for 12V lead-acid batteries. Includes instructions, safety precautions, program details, and warranty information.</p>
	<p>OptiMate 1 DUO Automatic Battery Charger - Model TM409 User Manual</p> <p>Comprehensive user manual for the OptiMate 1 DUO (Model TM409), an automatic maintenance charger for 12V lead-acid and 12.8V LiFePO4 batteries (2Ah-20Ah). Covers safety, operation, charging stages, LED indicators, troubleshooting, and warranty.</p>

