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› TowerTop 2/10/25 Amp 12V Smart Car Battery Charger Instruction Manual

TowerTop TP108MB

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Model: TP108MB

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1. INTRODUCTION

The TowerTop 2/10/25 Amp 12V Smart Car Battery Charger is a fully automatic battery maintainer designed for optimal battery care. It features adjustable current settings, an 8-stage intelligent charging process, and multiple safety protections. This manual provides essential information for the safe and effective use of your battery charger.

2. SAFETY INFORMATION

Always read and understand all safety instructions before operating the charger. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Eye Protection:** Always wear eye protection when working with batteries.
- **Ventilation:** Ensure adequate ventilation when charging batteries to prevent accumulation of explosive gases.
- **Sparks & Flames:** Keep sparks, flames, and smoking materials away from batteries.
- **Reverse Polarity:** The charger includes reverse polarity protection, but always ensure correct connection (positive to positive, negative to negative) to prevent damage.
- **Children & Pets:** Keep the charger and batteries out of reach of children and pets.
- **Damaged Cables:** Do not operate the charger with damaged cords or clamps.
- **Indoor Use:** This charger is designed for indoor use. Do not expose to rain or excessive moisture.

3. PRODUCT FEATURES

3.1 Efficient & Fast Charging

The charger offers 4 adjustable current settings (2A/10A/25A/AUTO) for diverse needs. With a maximum charging current of 25A, a 100Ah battery can be fully charged in under 3.5 hours. It achieves an 85% charging efficiency, surpassing the industry average.



Image: TowerTop 25 Amp Smart Battery Charger highlighting its 85% efficiency compared to the industry average of 75%.

3.2 Fully Automatic Operation

This 12V battery charger automatically detects battery status and initiates charging within 30 seconds if the 'Start' button is not pressed. Upon full charge, it enters pulse repair mode, conserves energy by turning off the screen, and maintains a safe voltage for long-term storage. It also remembers your last settings for seamless operation after power interruptions.

LARGE HD LCD DISPLAY

Stay In Control Of Your Battery'S Charge Status Anytime

Desulfation Function&Repair Function

Independent pulse desulfation mode and repair mode support separate buttons for manual control

ENGINE START

Engine start delivers 100A current to start your vehicle in 100 seconds

Note: Non-portable jump starter, this feature requires a connection to AC 120V power for use



Image: TowerTop Smart Battery Charger's HD LCD display showing various automatic functions like desulfation, repair, and engine start.

3.3 Wide Battery Compatibility

Designed for 12V sealed lead-acid batteries found in cars, boats, RVs, power sports, and deep-cycle applications. Compatible battery types include STD, AGM, GEL, Wet, MF, EFB, and calcium batteries.

DO MORE WITH ONE CHARGER

TowerTop Battery Charger Save Your Money



Image: TowerTop Smart Battery Charger displayed alongside various 12V battery types like GEL, AGM, and STD, illustrating its broad compatibility.

3.4 HD LCD Screen & 8-Stage Intelligent Charging

Features an HD LCD screen for real-time monitoring of charging stages and parameters. The 8-stage smart

charging process (desulfurization, soft start, bulk charge, absorption, analysis, repair, float, and pulse maintenance) optimizes battery life and prevents overcharging or damage.

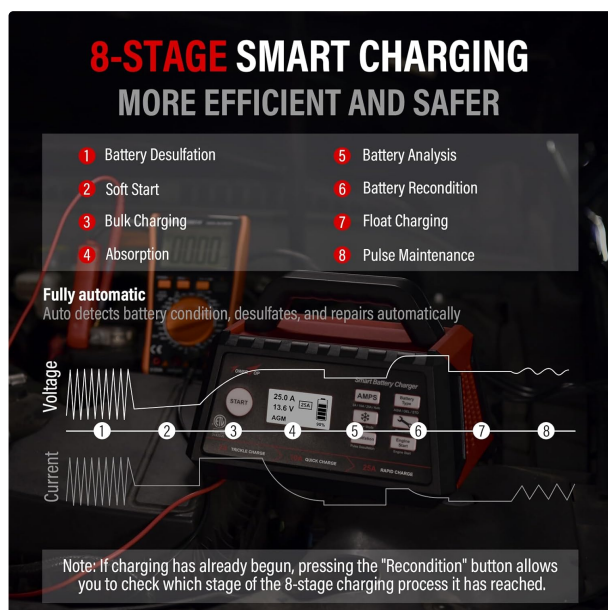


Image: Diagram illustrating the 8-stage intelligent charging process of the TowerTop Smart Battery Charger, from Battery Desulfation to Pulse Maintenance.

3.5 Battery Repair Function

Independent desulfurization and repair buttons allow manual restoration of lost battery performance. This function helps revive old or idle batteries and extends their lifespan. Note: This mode cannot repair completely drained batteries.



Image: TowerTop Smart Battery Charger showing its ability to repair dead batteries down to 1 volt, alongside features like Winter Mode and Battery Maintainer.

3.6 Engine Start & Winter Mode

The Engine Start feature provides 100A current to help activate your car battery and start your vehicle within 100 seconds. Winter Mode adds 0.2V to the base charging voltage, enhancing battery activity and ensuring thorough charging in low-temperature conditions.

3.7 Multi-Safety Protection & ETL Certification

The charger is equipped with multiple safety protections including spark-proof, reverse polarity, overcharge/discharge, overvoltage, overcurrent, overload, overheating, current backflow, and short circuit. An upgraded cooling system improves performance. ETL certification ensures safe usage.

4. SPECIFICATIONS

Feature	Detail
Model Number	TP108MB
Input Voltage	120V AC (for power cord)
Output Voltage	12 Volts
Charging Current	2A / 10A / 25A / AUTO
Engine Start Current	100A (for 100 seconds)
Compatible Battery Types	12V STD, AGM, GEL, Wet, MF, EFB, Calcium, Deep-Cycle
Charging Stages	8-Stage Intelligent Charging
Safety Protections	Spark-proof, Reverse Polarity, Overcharge/Discharge, Overvoltage, Overcurrent, Overload, Overheating, Current Backflow, Short Circuit
Dimensions	7.68 x 10.04 x 4.92 inches
Item Weight	5 pounds
Certifications	ETL Certified

5. SETUP

Before connecting the charger, ensure the area is well-ventilated and free from flammable materials. Turn off the vehicle's engine and any accessories.

1. Connect Battery Clamps:

- Connect the RED positive (+) clamp to the positive (+) battery terminal.
- Connect the BLACK negative (-) clamp to the negative (-) battery terminal.

2. **Connect to Power:** Plug the charger's AC power cord into a standard 120V AC electrical outlet.

3. **Initial Setup (First Use):** For the first use, the charger may automatically default to a specific mode (e.g., 12V & GEL). It is recommended to manually select your battery type and desired charging current. The charger will remember these settings for future use.

Automatic Charging

After connecting the clamps and plugging in the charger, it will automatically begin charging within 30 seconds. Alternatively, press the 'START' button for an immediate start.



Image: Visual guide for automatic charging, showing clamp connection, power plug-in, and automatic start.

Manual Charging

To manually select settings, connect the clamps and power. Then, use the 'Battery Type' button to choose your battery type and the 'AMPS' button to select the desired charging rate (2A/10A/25A/AUTO). Finally, press 'START' to begin.

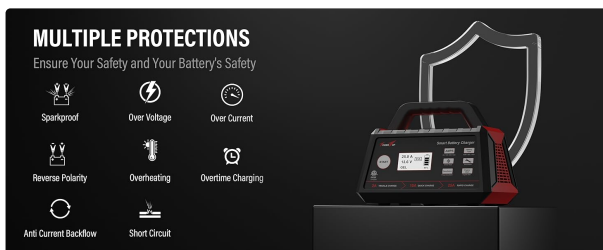


Image: Visual guide for manual charging, detailing button presses for battery type and amperage selection.

6. OPERATING INSTRUCTIONS

6.1 Charging Modes

- **2A (Trickle Charge):** Ideal for maintaining small batteries or for long-term storage.
- **10A (Quick Charge):** Suitable for faster charging of moderately discharged batteries.
- **25A (Rapid Charge):** For quickly charging deeply discharged batteries or larger capacity batteries.
- **AUTO:** The charger automatically selects the optimal current based on battery condition.

6.2 Special Functions

- **Battery Repair (Desulfation):** Press the 'Repair' button to initiate a desulfation cycle. This can help restore lost performance in old or idle batteries.
- **Engine Start:** For a quick boost to start your vehicle, select the 'Engine Start' mode. The charger will deliver 100A for 100 seconds. Ensure the charger is connected to a 120V AC power source for this function.
- **Winter Mode:** Activate this mode for charging in cold temperatures. It adjusts the charging voltage by +0.2V to ensure efficient charging in winter conditions.

6.3 Monitoring with HD LCD Screen

The HD LCD screen displays real-time information including charging stage, current, voltage, and battery status. This allows you to monitor the charging process effectively.



Image: Close-up of the HD LCD display on the TowerTop Smart Battery Charger, showing selected charging rate, voltage, and battery power percentage.

Official Product Videos

Smart Car Battery Charger Fully Automatic Battery Maintainer

Video: A detailed overview of the TowerTop Smart Car Battery Charger's fully automatic features and maintenance capabilities.

Smart car battery charger with different modes!

Video: Demonstrates the various charging modes and settings available on the TowerTop Smart Car Battery Charger.

7. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your TowerTop battery charger.

- **Cleaning:** Disconnect the charger from power and battery before cleaning. Use a dry cloth to wipe the casing. Do not use solvents or abrasive cleaners.
- **Storage:** Store the charger in a cool, dry place when not in use. Ensure cables are neatly coiled and clamps are clean.
- **Cable Inspection:** Regularly inspect the charging cables and clamps for any signs of damage, wear, or corrosion. Replace if necessary.
- **Cooling System:** Keep the cooling vents clear of dust and debris to ensure proper airflow and prevent overheating.

8. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Charger not turning on	No power supply or faulty connection	Check power outlet and charger connections. Ensure the power switch is ON.
Battery not charging	Incorrect clamp connection, battery too deeply discharged, or faulty battery	Verify positive/negative clamp connections. Try 'Repair' mode for deeply discharged batteries (not completely dead). Test battery health.
Error message on LCD	Safety protection activated (e.g., reverse polarity, overvoltage)	Refer to the specific error code on the screen and consult the manual for details. Disconnect and re-connect correctly.
Charger overheating	Blocked vents or prolonged high-current charging	Ensure cooling vents are clear. Reduce charging current if possible. Allow charger to cool down.

9. WARRANTY & SUPPORT

Your TowerTop Smart Car Battery Charger comes with a manufacturer's warranty. Please refer to the warranty card included in your product packaging for specific terms and conditions.

For technical support, troubleshooting assistance, or warranty claims, please contact TowerTop customer service through their official website or the contact information provided in your product documentation.

You may also find helpful resources and FAQs on the **TowerTop Store on Amazon**.