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› VMAXTANKS BC1204 12V 3.3 Amp 4-Stage Automatic Smart Battery Charger and Maintainer User Manual

VMAXTANKS BC1204

VMAXTANKS BC1204 Smart Battery Charger and Maintainer User Manual

Model: BC1204

Brand: VMAXTANKS

PRODUCT OVERVIEW

The VMAXTANKS BC1204 is a 12V 3.3 Amp 4-Stage Automatic Smart Battery Charger and Maintainer designed for AGM, GEL, MF, Wet, and SLA 12 Volt batteries ranging from 7Ah to 80Ah. This microprocessor-controlled charger utilizes advanced technology to efficiently charge, maintain, and restore various 12V battery types, ensuring optimal performance and longevity.

Key features include:

- 12 Volt 3.3A output suitable for a wide range of 12V batteries (7Ah-80Ah).
- 4-Stage Microprocessor Controlled charging process for optimal battery health.
- LED indicator lights to display charging status and current battery level.
- IP65 Water Resistance and Dust Protection for durability.
- Automatic operation for ease of use: plug in and forget.
- Functions as a charger, maintainer, and can help restore certain battery conditions.



Image: The VMAXTANKS BC1204 Smart Battery Charger, showing its compact design, LED indicators, and attached battery clamps.

SETUP INSTRUCTIONS

- Safety First:** Ensure the charger and battery are in a well-ventilated area, away from flammable materials. Do not charge a frozen or damaged battery.
- Identify Battery Terminals:** Locate the positive (+) and negative (-) terminals on your 12V battery.
- Connect Charger to Battery:**
 - Connect the **red** positive (+) clamp of the charger to the **positive** (+) terminal of the battery.
 - Connect the **black** negative (-) clamp of the charger to the **negative** (-) terminal of the battery.
 - Ensure connections are secure and clean.
- Connect Charger to Power:** Plug the charger's AC power cord into a standard 120V AC electrical outlet.
- Initial Check:** The charger's LED indicators will illuminate, showing the battery's current charge status and initiating the charging process. If the polarity is reversed, the charger's lights will flash to indicate an error.

OPERATING THE CHARGER

The BC1204 operates automatically through a 4-stage charging process, optimized for various 12V battery types. Once connected, the charger intelligently assesses the battery's condition and proceeds through the stages:

1. Stage 1: Desulfation (18V Pulse)

The charger enters this stage if it detects battery sulfation or severe discharge. It uses an 18V pulse to break down sulfate crystals. Once the battery is rejuvenated, the charger automatically moves to the Bulk stage.

2. Stage 2: Bulk Charge

During this stage, the charger delivers its highest rated voltage and current suitable for the battery type. This continues until the battery reaches approximately 80% of its capacity.

3. Stage 3: Absorption

The output voltage is limited to 14.7V, and the current gradually declines as the battery charges towards its full capacity. This stage ensures the battery is fully charged without overheating.

4. Stage 4: Float (Maintenance)

Once the battery is fully charged, the charger transitions to the float stage. In this mode, it maintains the battery's charge through pulse charging, preventing overcharge and keeping the battery at optimal readiness. The charger can be left connected indefinitely in this stage.

LED Indicators:

The BC1204 features four LED lights that indicate the battery's capacity status during charging:

- **LED-1 (25%):** Indicates the battery is at 25% capacity or less.
- **LED-2 (50%):** Indicates the battery is at 50% capacity.
- **LED-3 (75%):** Indicates the battery is at 75% capacity.
- **LED-4 (100%):** Indicates the battery is fully charged.
- **Flashing Lights:** If the lights flash, it may indicate reversed polarity or a problem with the battery connection.

MAINTENANCE

The VMAXTANKS BC1204 is designed for minimal maintenance. To ensure its longevity and optimal performance:

- **Cleaning:** Periodically wipe the charger's casing with a dry, soft cloth to remove dust and dirt. Do not use harsh chemicals or abrasive cleaners.
- **Storage:** When not in use, store the charger in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Cable Inspection:** Regularly inspect the charging cables and clamps for any signs of damage, fraying, or corrosion. Replace if necessary.
- **Ventilation:** Ensure the charger has adequate ventilation during operation to prevent overheating.
- **Maintainer Function:** The charger's float stage automatically maintains the battery. For long-term storage of a battery, connect the charger and leave it in maintenance mode.

TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Charger not turning on / No LED lights	No power from outlet. Loose AC power connection. Charger malfunction.	Check the power outlet with another device. Ensure the AC power cord is securely plugged into the charger and outlet. Contact VMAXTANKS support if problem persists.
LED lights flashing	Reversed polarity (clamps connected incorrectly). Poor connection to battery terminals. Battery fault.	Disconnect from power, then reconnect clamps correctly (red to positive, black to negative). Ensure clamps are clean and securely attached to battery terminals. Have the battery tested by a professional.
Battery not charging or charging slowly	Battery is severely discharged or sulfated. Battery capacity is larger than recommended (80Ah). Battery fault.	Allow the charger more time; it may be in the desulfation stage. Ensure the battery capacity is within the 7Ah-80Ah range. Have the battery tested by a professional.
Charger gets warm during operation	Normal operation during bulk charging. Insufficient ventilation.	This is normal. The charger will cool down as the battery charges. Ensure the charger is in a well-ventilated area.

SPECIFICATIONS

Feature	Detail
Model Number	BC1204
Input Voltage	3.3 Volts (AC input is standard 120V, this refers to internal logic or a mislabeled spec)
Output Voltage	14.7 Volts (Max charging voltage)
Output Current	3.3 Amps
Battery Compatibility	12V AGM, GEL, MF, Wet, SLA batteries
Recommended Battery Capacity	7Ah - 80Ah
Charging Stages	4-Stage (Desulfation, Bulk, Absorption, Float)
Protection Rating	IP65 (Water Resistance and Dust Protection)
Color	Black, Red
Certification	UL Compliant

WARRANTY AND SUPPORT

For warranty information regarding the VMAXTANKS BC1204 Smart Battery Charger, please contact VMAXTANKS directly. Warranty terms and conditions may vary and are typically provided by the manufacturer.

For technical support, product inquiries, or assistance with troubleshooting beyond this manual, please visit the official VMAXTANKS website or contact their customer service department. Always refer to the manufacturer's official channels for the most accurate and up-to-date support information.

You can often find contact details or a support portal on the VMAXTANKS official website www.vmaxbatteries.com



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