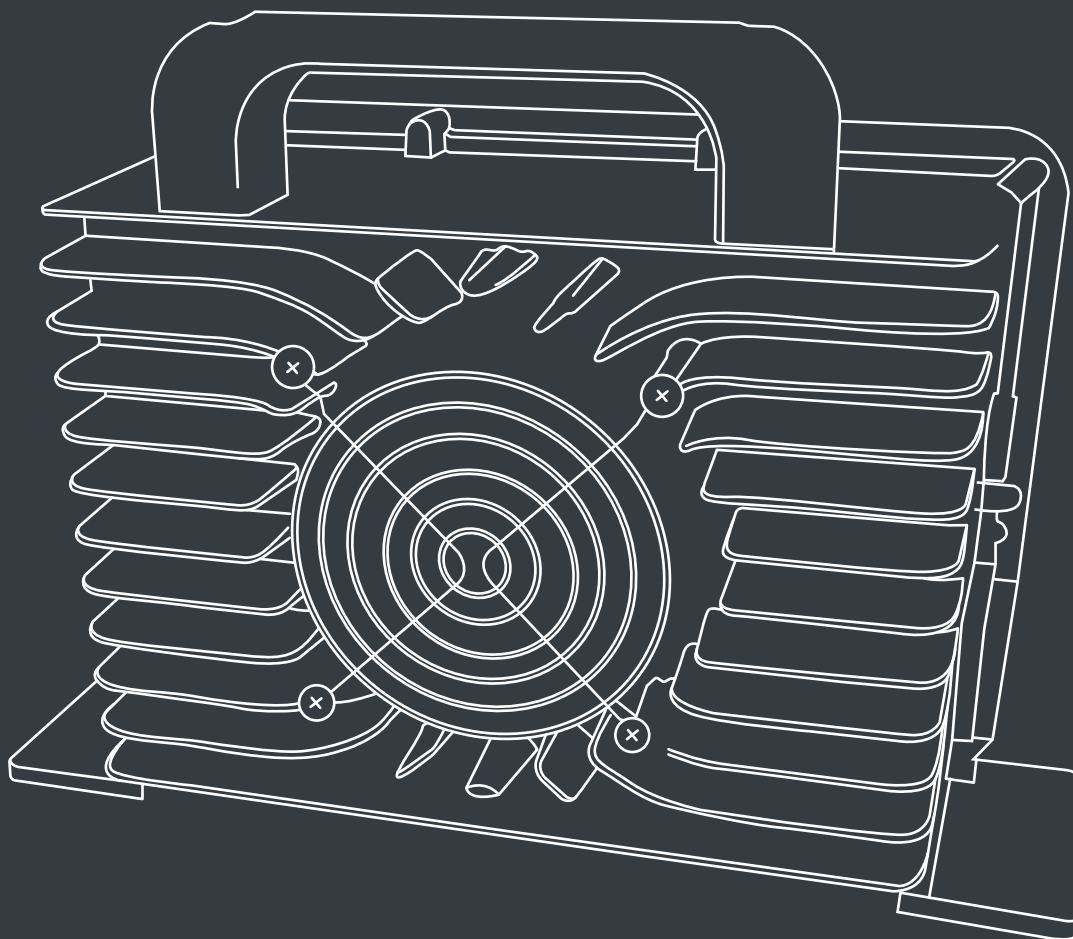




C2000

BSR CHARGER USER MANUAL



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1. Introduction

PURPOSE OF THE MANUAL

This manual provides comprehensive instructions for the safe and effective use of the **C2000 (X3)** battery charger. It is designed to help users understand the product's features, technical specifications, and proper operating procedures. The manual also includes safety guidelines, troubleshooting tips, and warranty information to ensure optimal performance and longevity of the chargers.

PRODUCT OVERVIEW

The **C2000 (X3)** is high-efficiency standalone battery charger designed for charging Blue Shock Race batteries.



C2000 (X3)

- Designed for the BSR B2500 battery, this charger provides 20A charging current, suitable for the B2500 model.

The charger is housed in a durable aluminum case with cooling ribs and features a fan on top for effective heat dissipation. It is also water-proof (IP67 rated), making it suitable for use in a variety of environments. The charger features an AC input range of 90–264VAC and a DC output equipped with an Jnicon M23 plug.

The C2000 series chargers are designed for both professional and personal use, delivering the performance and safety needed for high-power applications.

The C2000 charger is also compatible with the B5500 battery. Please note that charging will take longer compared to using the C3000 charger.

2. Specifications

C2000 (X3) CHARGER

- **Product Number:** 52-01-03003
- **Power:** 2.4kW
- **Input Voltage:** 90V–260VAC, 50–60Hz
- **DC Output:** 109.2V 20A
- **Charging Mode:** CC/CV (Constant Current / Constant Voltage)
- **Size:** 282 x 170 (196 w/ handle) x 90 mm
- **Net Weight:** 6.5 kg
- **Material:** Aluminium Case
- **Ingress Protection:** IP67

SAFETY FEATURES

- **Automatic Cut-Off:** Prevents overcharging by automatically stopping the charging process when the battery is fully charged.
- **Overheat Protection:** Shuts down the charger to prevent overheating, ensuring safe operation.
- **High Voltage Surge Protection:** Guards against voltage spikes from the power source.
- **Reverse Polarity Protection:** Prevents damage if the battery is connected incorrectly.
- **Short Circuit Protection:** Automatically disconnects power if a short circuit is detected.

3. Safety Instructions

GENERAL SAFETY PRECAUTIONS

- **Read Before Use:** Carefully read this manual before using the charger. Improper use may result in damage to the battery, charger, or personal injury.
- **Intended Use:** This charger is designed exclusively for charging BSR B2500 batteries. Do not use them for other battery types.
- **Ventilation:** Ensure adequate ventilation during charging to prevent overheating. Do not cover the charger or obstruct airflow.
- **Environment:** Use in a dry, well-ventilated area. Avoid exposure to rain, moisture, or extreme temperatures.
- **Supervision:** Do not leave the charger unattended while in use. Disconnect from power once charging is complete.

HANDLING AND STORAGE

- **Handling:** Avoid dropping or striking the charger. Rough handling can damage internal components.
- **Storage Conditions:** Store in a cool, dry place away from direct sunlight and flammable materials.
- **Disconnect When Not in Use:** Unplug the charger from the power source when not in use.
- **Cable Care:** Do not pull or bend the power cables excessively. Inspect regularly for damage.

ELECTRICAL SAFETY

- **Grounding:** Ensure the power outlet is properly grounded before connecting the charger.
- **AC Input Requirements:** Only use the charger with an AC power supply within the range of 90–264VAC, 40–60Hz.
- **Water and Electricity Warning:** Although the charger is IP67 waterproof, avoid submerging it or exposing it to heavy rain while in operation.
- **Connection Order:** Always connect the charger to the battery first, then plug it into the AC power supply. Disconnect in the reverse order.
- **Damaged Equipment:** Do not use the charger if any cables, connectors, or the housing appear damaged. Contact Blue Shock Race for repairs or replacements.

4. Before First Use

UNBOXING AND INITIAL INSPECTION

- **Inspect for Damage:** After unboxing, carefully inspect the charger for any visible damage, such as cracks, dents, or damaged cables.
- **Verify Labels:** Confirm that the product labels match the model purchased (X3 for B2500).
- **Contact Support:** If any damage is found or parts are missing, contact Blue Shock Race support: support@blueshockrace.com before using the charger.

SETUP AND INITIAL TEST PROCEDURES

- **Connect to Battery:** Attach the Jnicon M23 plug to the corresponding battery (B2500 for X3). Ensure a secure connection.
- **Connect to AC Power:** Plug the AC input into a properly grounded power outlet (90–264VAC).
- **Observe LED Indicators:** Confirm that the charge indicator lights activate, showing the charging status.
- **Charging Process:** Allow the charger to operate and observe that the battery begins charging without any issues.
- **Completion:** Once the charging is complete or you wish to stop charging, disconnect from the AC power first, then from the battery.

5. Charge Indicator Panel Instructions

The LED indicator on the side of the charger provides a quick, at-a-glance view of the battery's charge status:



Red Indicator Flashes (Once per Second):

Battery charge is below 80%. The charging process is ongoing.



Green Indicator Flashes (Once per Second):

Battery charge is between 80% and 100%. The battery is nearing full capacity.



Green Indicator Stays On: The battery is fully charged, and the charger has automatically stopped charging to prevent overcharging.

If the LED indicator does not behave as described, please refer to the Troubleshooting section for guidance.

6. Usage Tips and Notes

- **Optimal Charging Environment:**
 - Charge the battery in a well-ventilated area away from direct sunlight, heat sources, and moisture.
 - Ensure ambient temperature is within the recommended charging range (5°C to 55°C).
- **Proper Connection Sequence:**
 - Connect the Jnicon M23 plug to the battery before connecting the AC power plug to an outlet.
 - When disconnecting, unplug the AC power first, then the Jnicon M23 plug from the battery.
- **Charging Efficiency Tips:**
 - Allow the charger to cool down between charging sessions to maintain its lifespan.
 - For best battery longevity, avoid charging the battery immediately after heavy usage; allow it to cool first.
- **General Precautions:**
 - Do not cover the charger's ventilation ribs or obstruct the cooling fan during operation.
 - Avoid using extension cords, as they may impact the charger's performance or cause overheating.

7. Maintenance Tips

- **Cleaning and Care:**

- Always disconnect the charger from both the battery and the AC power before cleaning.
- Use a dry, soft cloth to wipe the exterior. Do not use water, solvents, or abrasive cleaners.
- Ensure the cooling ribs and fan are free of dust or debris to maintain optimal airflow.
- Store the charger in a clean, dry place when not in use.

- **Periodic Inspections:**

- Regularly inspect the Jnicon M23 plug and power cord for signs of wear or damage.
- Check the cooling fan to ensure it is functioning smoothly and without noise.
- Confirm that all indicator lights are operational during charging.
- If any damage or irregularities are noticed, stop using the charger and contact BSR support: support@blueshockrace.com for assistance.

8. Troubleshooting

If you encounter issues while using the charger, refer to the following troubleshooting tips:

COMMON PROBLEMS AND SOLUTIONS

1. Charger Not Turning On:

- Ensure the AC power cord is securely connected to a working power outlet.
- Verify that the AC input voltage is within the required range (90–264VAC).
- Check for any visible damage to the power cord or Jnicon M23 plug.
- If the charger still doesn't turn on, contact BSR support: support@blueshockrace.com for assistance.

2. Battery Not Charging:

- Confirm that the battery is properly connected to the charger using the Jnicon M23 plug.
- Check the LED indicator to determine the charging status.
- Inspect the battery for any signs of damage or low voltage protection activation.
- If the problem persists, try charging another compatible battery to rule out battery malfunction.

3. Charger Overheating or Fan Not Working:

- Ensure the cooling ribs and fan vents are clear of dust and debris.
- Confirm that the fan is operating smoothly and not obstructed.
- If overheating continues, stop using the charger and contact BSR support: support@blueshockrace.com

4. LED Blinks/Patterns (Error Codes):

- Hardware Failure or DC 12V Failure:
 - Pattern: Red, Green, Off, Off, Off, Off
- DC Bus Voltage Fault:
 - Pattern: Red, Green, Red, Green, Off, Off
- AC Low or High Protection:
 - Pattern: Red, Green, Red, Green, Red, Off
- Battery Not Connected or Battery Failure:
 - Pattern: Red, Green, Red, Green, Red, Green
- Battery/Charger Temperature Protection:
 - Pattern: Green, Red, Off, Off, Off, Off
- CPU Temperature or Transformer Temperature Protection:
 - Pattern: Green, Red, Green, Off, Off, Off
- Output Short Circuit Protection:
 - Pattern: Green, Red, Green, Red, Off, Off

9. Blue Shock Race

Warranty and Repair Policy

MANUFACTURER'S LIMITED WARRANTY

BSR offers a one-year limited warranty on all components of the C2000 (X3) chargers under normal use conditions. This warranty covers defects in materials and workmanship.

WARRANTY ELIGIBILITY

To qualify for warranty service, customers must provide:

- A valid proof of purchase showing the original date of purchase and the authorized retailer.

EXCLUSIONS FROM WARRANTY

The warranty is voided under any of the following conditions:

- 1. Mechanical Damage:** Evidence of physical damage, including impact, falls, or improper handling of the charger.
- 2. Alterations or Unauthorized Repairs:** Modifications or repairs performed by anyone other than BSR or an authorized service provider.
- 3. Tampering with Warranty Seals:** Removal or damage of warranty seals, serial numbers, or other identifiers.
- 4. Environmental Damage:** Exposure to moisture, extreme temperatures, or environmental contaminants such as dust, soot, or smoke.
- 5. Improper Electrical Setup:** Use of incorrect wiring, failure to ground the charger as required, or connection to power supplies not meeting specified standards. Improper
- 6. Use or Purpose:** Using the charger outside of its intended application or inconsistent with the instructions provided in this manual.
- 7. Lack of Required Maintenance:** Failure to perform necessary maintenance, such as cleaning ventilation fans as described in the manual.
- 8. Normal Wear and Tear:** This includes components subject to natural wear and tear, such as power cords, plugs, and cooling fans.
- 9. Unauthorized Disassembly:** Chargers that have been opened, disassembled, or tampered with by unauthorized personnel.



Please note: Adhering to operational requirements as outlined in this manual is critical to maintaining warranty coverage.

WARRANTY PROCEDURE

- 1. Customer Support:** Customers experiencing issues should first contact BSR support at support@blueshockrace.com. BSR will attempt to diagnose and resolve the issue remotely.
- 2. Return for Inspection:** If remote assistance cannot resolve the problem, customers may be required to return the unit to BSR for inspection.
- 3. Customer's Responsibility for Shipping:** Customers are responsible for shipping costs to BSR's service center. BSR covers return shipping for items under warranty.

REPAIR SERVICE (OUT-OF-WARRANTY REPAIRS)

For products not covered under warranty, BSR offers repair services for a fee. Customers will be provided with repair options and associated costs before proceeding. Repairs will only be conducted with customer approval.

WARRANTY ON NATURAL WEAR COMPONENTS

The warranty does not cover components subject to natural wear and tear, such as cooling fans, Jnicon M23 plug and power cords. For further assistance, please contact our service team at info@blueshockrace.com.

11. Appendix I

DO'S

- **Read the Manual:** Carefully read this manual before using the charger.
- **Inspect Before Use:** Check for visible damage, wear, or loose connections before each use.
- **Ensure Proper Ventilation:** Place the charger in a well-ventilated area to prevent overheating.
- **Connect Properly:** Always connect the charger to the battery before plugging into the AC power source.
- **Use Recommended Outlets:** Only connect to properly grounded AC outlets matching the input voltage range specified.
- **Store Safely:** Store the charger in a dry, cool place away from direct sunlight when not in use.
- **Clean Regularly:** Periodically clean the charger with a dry cloth to prevent dust accumulation.
- **Disconnect After Charging:** Unplug the charger from the AC source after charging is complete to avoid unnecessary power consumption.

DON'TS

- **Do Not Disassemble:** Opening the charger housing voids the warranty and can cause electric shock.
- **Do Not Expose to Water:** Keep the charger away from rain, liquids, and humid environments.
- **Do Not Block Ventilation:** Avoid covering ventilation openings or placing the charger on soft surfaces.
- **Do Not Use Damaged Cables:** Replace any frayed or damaged AC or DC cables before use.
- **Do Not Overcharge:** Avoid leaving the battery connected to the charger for extended periods after full charge.
- **Do Not Use with Incompatible Batteries:** Only charge batteries that match the specified output voltage and type.
- **Do Not Place Near Heat Sources:** Keep away from heaters, stoves, or other sources of high heat.
- **Do Not Operate in Flammable Environments:** Avoid using the charger near flammable gases or materials.