BLUESHOCKRACE

BSR B800

BATTERY USER MANUAL

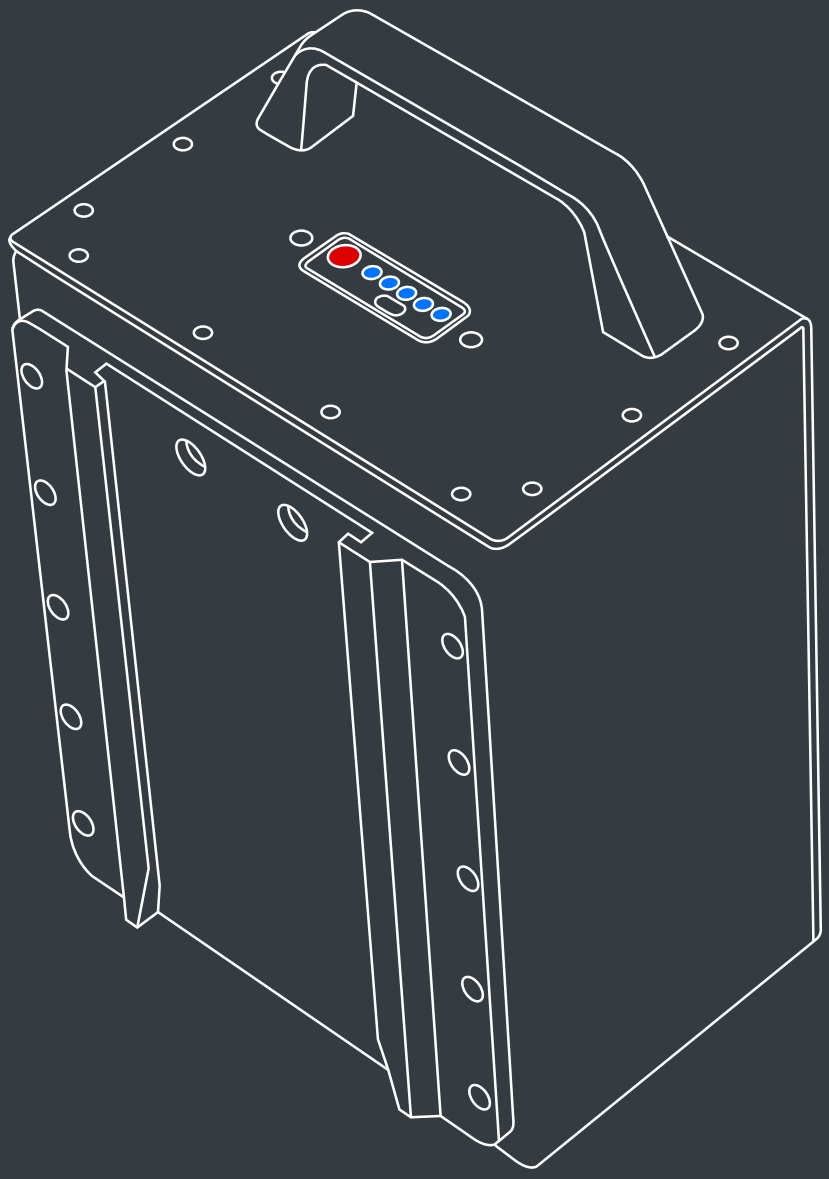

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Table of Contents

1. Introduction
- Purpose of the Manual
- Product Overview

2. Specifications
- Additional Features

3. Safety Instructions
- General Safety Precautions
- Handling and Storage
- Charging Safety
- Disposal and Recycling
- ⚠ Warning: Potential Risks

4. Before First Use
- Unboxing and Initial Inspection
- Charging Instructions
- Initial Test Procedures

5. State of Charge (SoC) Panel Instructions

6. Usage Tips and Best Practices
- Battery Rotation
- Recommended Charge Levels
- Temperature Management
- Storage Recommendations
- Battery Health Monitoring
- Practices to Avoid (Battery Degradation Warnings)
- Using Batteries in Bad Weather

7. Maintenance Tips
- Cleaning and Care
- Periodic Inspections
- Battery Storage for Long Periods

8. Troubleshooting
- 1. Battery Slider Not Sliding Smoothly
- 2. Rattling Sound Inside the Battery
- 3. State of Charge (SoC) Panel Not Displaying Information
- 4. Power Unit Not Turning On
- 5. Battery Lock Won't Close
- 6. Battery Doesn't Charge
- 7. Battery Charges Extremely Fast
- 8. Battery Quickly Discharges During Use

9. Blue Shock Race Warranty and Repair Policy
Manufacturer's Limited Warranty
Warranty Eligibility
Exclusions from Warranty
UNLIMITED 1-YEAR WARRANTY
Warranty Procedure
Battery Repair Service (Out-of-Warranty Repairs)
Warranty on Natural Wear Components

10. Shipping of Battery Products
General Requirements
Specific Transport Guidelines
1. General Classification Overview
2. Land Transport (ADR/49 CFR)
3. Air Transport (IATA DGR)
4. Sea Transport (IMDG Code)

10. Appendix I
Do's
Don'ts

1. Introduction

PURPOSE OF THE MANUAL

The purpose of this manual is to provide clear, concise instructions and guidelines for the safe and effective use, maintenance, and troubleshooting of the BSR B800 Battery. This manual is designed to help users maximize battery performance and longevity while ensuring safety throughout its life cycle.

Whether you're a first-time user or an experienced kart operator, this guide covers essential information, from initial setup and daily operation to regular maintenance and troubleshooting tips. Following these instructions will help prevent potential issues and extend the battery's service life.

PRODUCT OVERVIEW

This section provides an overview of the BSR B800 Battery's key features to help users quickly identify essential components.

Front View

- **State of Charge (SoC) Panel:** Displays the current charge level and temperature of the battery, allowing users to monitor both battery status and temperature at a glance.

Back View

- **Voltage Leads:** Positive and negative terminals for connecting the battery to the kart's power system.
- **Serial Number Label:** The unique identifier used for warranty registration, support inquiries, and tracking purposes.

Warning: The voltage leads are always live and must never be touched or connected without following proper procedures, as this could result in serious injury or damage.

2. Specifications

- **Battery Type**: Lithium-Ion (Li-ion)
- **Product Number**: 10-01-53001
- **Model**: B800
- **Capacity**: 17,5Ah
- **Nominal Voltage**: 48V
- **Ingress Protection**: IP64
- **Dimensions**:
  - **Height**: 130 mm
  - **Width**: 180 mm
  - **Length**: 282 mm (with handle), 240 mm (without handle)
- **Weight**: 7 kg (15.4 lbs)
- **Standard Operating Temperature**:
  - **Discharge**: 5°C to 60°C (41°F to 131°F)
  - **Charge**: 5°C to 55°C (41°F to 113°F)

ADDITIONAL FEATURES

- **Battery Management System (BMS)**: The battery is equipped with an integrated BMS that provides protection against overcharging, over-discharging, and short-circuiting.

- **Cell Balancing Function**: Automatically balances the cells during charging to ensure optimal performance and longevity.

- **Temperature Monitoring**: The State of Charge (SoC) panel also displays real-time temperature data for improved safety and monitoring.

3. Safety Instructions

To ensure safe operation and handling of your Battery, follow these safety guidelines carefully.

GENERAL SAFETY PRECAUTIONS

- **Do Not Disassemble:** Never attempt to open, disassemble, or modify the battery, as this can cause a short circuit, leakage, or fire.
- **Avoid Exposure to Water:** Keep the battery dry at all times. Exposure to water or excessive moisture may damage the battery and create a risk of electric shock or fire.
- **Prevent Unauthorized Access:** Store the battery in a secure location where only authorized personnel, such as kart track operators, can access it.

HANDLING AND STORAGE

- **Avoid Impact:** Do not drop, puncture, or subject the battery to strong impacts, as this may compromise its structural integrity and lead to leakage or fire.
- **Store in a Cool, Dry Place:** Keep the battery in a well-ventilated, dry area at moderate temperatures (5°C to 25°C / 41°F to 77°F) when not in use. Avoid extreme temperatures and direct sunlight.
- **Position Carefully:** Ensure the battery is securely positioned and away from any sharp or metallic objects that could puncture the casing.

CHARGING SAFETY

- **Use Compatible Chargers:** Only use chargers and/or charging stations provided by BSR. Using an incompatible charger may result in overcharging, overheating, or damage to the battery.
- **Monitor Charging:** Do not leave the battery unattended during charging, and avoid charging near flammable materials.
- **Charge in a Safe Area:** Charge the battery in a well-ventilated area, away from moisture, heat sources, and direct sunlight.

DISPOSAL AND RECYCLING

- **Dispose Responsibly:** Lithium-ion batteries must be disposed of according to local environmental regulations. Do not dispose of the battery in fire, household waste, or recycling bins.
- **Contact Local Recycling Programs:** For safe recycling, contact authorized battery disposal services or recycling programs in your area.
- **BSR offers a Buy-Back Program** under which customers can return used batteries for refurbishment or factory repair. This option can extend a battery's lifetime by restoring it to 100% functionality at approximately 60% of the cost of a new battery. This program is ideal for customers seeking a more sustainable option and is designed to maximize the value of existing batteries while maintaining optimal performance.

WARNING: POTENTIAL RISKS

Improper battery handling or use can result in severe consequences. BSR identifies these risks as critical and highlights them here:

- **Battery Leads Are Always Live:** As a reminder, the voltage leads on the back of the battery are always live and must never be touched or connected without following proper procedures to prevent electric shock or damage.
- **Fire Hazard:** Mishandling a battery, such as puncturing, short-circuiting, or exposing it to extreme heat, can lead to fires.
- **Explosion Risk:** Battery cells can expand and potentially explode if overcharged or charged with improper equipment.
- **Chemical Leakage:** Damaged batteries may leak harmful chemicals, which can be dangerous to both users and the environment.

4. Before First Use

To ensure optimal performance and safety, follow these steps carefully before using the Battery for the first time.

UNBOXING AND INITIAL INSPECTION

1. **Inspect the Packaging:** Carefully open the packaging and inspect the battery and any accessories provided (such as chargers or cables).
2. **Check for Damage:** Examine the battery for any visible signs of damage, such as cracks, dents, or loose connections. If any damage is present, do not use the battery and contact BSR support: support@blueshockrace.com immediately.

CHARGING INSTRUCTIONS

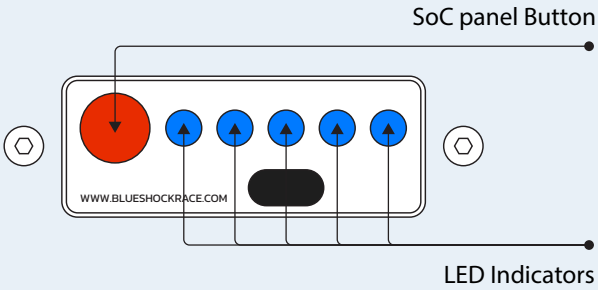
1. **Initial Charge:** Connect the battery to BSR C500 charger, referring to the charger manual for detailed instructions.
2. **Monitor Charging:** Charge the battery in a safe, well-ventilated area, away from moisture and heat sources. Monitor the charging process, and avoid leaving the battery unattended.
3. **Full Charge Requirement:** Ensure the battery is fully charged before first use to optimize performance and battery health.

INITIAL TEST PROCEDURES

1. **SoC and Temperature Check:** Check the State of Charge (SoC) panel to confirm that the battery is fully charged and operating within the safe temperature range.
2. **Test the Voltage Leads:** Inspect the voltage leads to ensure they are intact and securely positioned.
3. **Trial Run:** Install the battery into the kart according to guidelines (refer to the Kart/Unit manual) and perform a brief test to verify functionality before regular use.

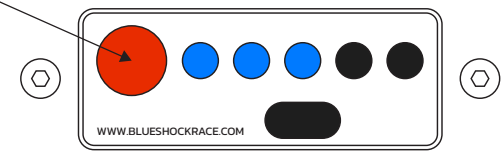
5. State of Charge (SoC) Panel Instructions

The SoC panel provides key information on battery charge level and temperature through an **LED display.**



CHECKING CHARGE LEVEL

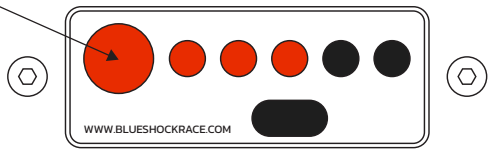
- **Press the button on the SoC panel once.** The blue LEDs will illuminate to indicate the battery's charge level, with each LED representing 20% of charge.



LEDs Lit	Battery Charge Level
LED •	0–20% charge
LEDs • •	20–40% charge
LEDs • • •	40–60% charge
LEDs • • • •	60–80% charge
LEDs • • • • •	80–100% charge

CHECKING TEMPERATURE

- **Press the button twice** to display the temperature using red LEDs.



LEDs Lit	Temp. Range (°C)	Temp. Range (°F)
LED •	Below 30°C	Below 86°F
LEDs • •	30–40°C	86–104°F
LEDs • • •	40–50°C	104–122°F
LEDs • • • •	50–60°C	122–140°F
LEDs • • • • •	Above 60°C	Above 140°F

Note: Operating at high temperatures (50°C/122°F and above) is not recommended, as it may reduce battery lifespan. If 5 red LEDs are displayed, allow the battery to cool down before use.

6. Usage Tips and Best Practices

To maximize the **performance, safety, and lifespan** of your BSR Battery, please follow these tips and guidelines.

BATTERY ROTATION

For balanced wear across all batteries, it's recommended to **rotate usage** between all available batteries rather than relying on a single battery. This helps distribute charge cycles evenly, extending the lifespan of each unit.

Warning: Warranty may be void if uneven wear caused by neglecting rotation results in premature failure of individual batteries.

RECOMMENDED CHARGE LEVELS

- **Minimum Charge:** Avoid letting the battery drop below 30% charge as shown on the power unit display. Regularly maintaining charge levels above this minimum will help maintain optimal performance and longevity.
- **Partial Charging for Longevity:** When possible, avoid fully charging the battery. Keeping the charge level within an optimal range (approximately 20–80%) helps reduce battery stress and supports long-term performance. Note: This recommendation applies to regular use and not to storage — please refer to the storage guidelines.

Warning: Consistently discharging the battery below 30% or using rapid full-power charging excessively may lead to irreversible damage, voiding the warranty.

TEMPERATURE MANAGEMENT

- **Operating Temperature Range:** Use the battery within the recommended range **of 5°C to 55°**C. Extreme temperatures can negatively affect battery performance and may lead to long-term damage.
- **Overheating Prevention:** Monitor battery temperature during operation, especially during high-demand scenarios. Excessive heat can damage battery cells and reduce lifespan. Consider pausing use if the battery becomes hot to the touch.

Warning: Exposing the battery to temperatures above 60°C may cause irreparable damage and void the warranty.

STORAGE RECOMMENDATIONS

For long-term storage, keep the battery at **70–80% charge** and store it in a cool, dry location. Avoid prolonged exposure to extreme temperatures, as this can degrade battery chemistry.

BATTERY HEALTH MONITORING

- **Regular Monitoring:** Check the SoC (State of Charge) panel frequently to monitor charge level and temperature status, especially following intensive use.
- **Avoid Deep Discharge:** Repeatedly draining the battery to critically low levels and delaying recharging can accelerate capacity loss and shorten lifespan.

PRACTICES TO AVOID (BATTERY DEGRADATION WARNINGS)

BSR advises against specific actions that accelerate battery wear.

- **Consistent Overcharging:** Charging the battery to full capacity consistently, especially without cooling periods, can stress cells.
- **Heavy Discharge:** Avoid repeated high-power demands that could overheat or strain the battery.
- **Improper Storage Conditions:** Storing the battery in extreme temperatures or without regular maintenance charging can lead to cell damage and chemical degradation.

Warning: Failure to avoid these actions may void the warranty.

USING BATTERIES IN BAD WEATHER

- **Tip:** BSR Batteries are designed for performance in various conditions, including outdoor use during rain or snow. However, certain precautions must be followed:
    - Use the battery only in weather-protected karts and ensure proper sealing of electrical connections.
    - After use in wet or snowy conditions, wipe the battery dry with a clean cloth and inspect for any dirt, moisture, or corrosion on the terminals.
    - Allow the battery to dry completely before recharging or storing it.

Storage Note: Batteries must **never** be left outside or exposed to prolonged wet conditions. Always store in a dry, temperature-controlled environment to prevent damage or voiding of the warranty.

Warning: Failure to clean or dry the battery after use in bad weather, or storing it outdoors, may lead to corrosion or electrical failure, which is not covered under warranty.

7. Maintenance Tips

To keep your Battery in optimal condition, follow these maintenance guidelines.

CLEANING AND CARE

- **Exterior Cleaning:** Gently wipe the battery with a dry, soft cloth to remove dust and dirt. Avoid using any liquids, especially on or near the State of Charge (SoC) panel, as moisture can damage electronic components.
- **Aluminum Sliders:** The battery and battery box use aluminum sliders to secure the battery in place on the kart. Apply a small amount of lubricant to these sliders occasionally to ensure smooth insertion and removal of the battery. Use a lubricant compatible with aluminum to avoid corrosion.

PERIODIC INSPECTIONS

- **Visual Inspection:** Regularly check the battery for any visible signs of wear or damage, such as cracks, bulging, or corrosion around the terminals.
- **Connection Points:** Inspect the voltage leads and connections to ensure they remain intact and securely fastened.
- **SoC Panel Functionality:** Test the SoC panel periodically to ensure it displays accurate charge and temperature levels.

BATTERY STORAGE FOR LONG PERIODS

- **Recommended Storage Charge:** For long-term storage, charge the battery to approximately 70-80%. This level provides a buffer against self-discharge, reducing the risk of falling below undervoltage even if the battery is stored for several months.
- **Storage Conditions:** Store the battery in a cool, dry place, ideally between 5°C and 25°C (41°F to 77°F), and away from direct sunlight, moisture, and extreme temperatures.
- **Periodic Check:** If the battery is stored for more than three months, check the charge level and recharge to around 70-80% if necessary to maintain this optimal level.

8. Troubleshooting

If you experience any issues with your battery, refer to the common problems and solutions below. For further assistance, contact us at **support@blueshockrace.com**. If the issue can't be resolved remotely, the battery may need to be returned to **Blue Shock Race** for repair.

COMMON PROBLEMS AND SOLUTIONS

1. Battery Slider Not Sliding Smoothly
   - **Cause:** Dirt, lack of lubrication, or misalignment in the slider rails.
   - **Solution:**
     - Perform a visual inspection of the slider. Clear away any dirt or debris that may obstruct movement.
     - Apply a light lubricant to the slider rails if they appear dry or corroded.
     - Ensure the battery is correctly aligned with the slider to prevent jamming.

2. Rattling Sound Inside the Battery
   - **Cause:** Loose internal components or a damaged casing.
   - **Solution:**
     - Stop using the battery immediately and perform a visual inspection.
     - Check if any screws or exterior components seem loose or damaged.
     - If rattling persists and no external issues are found, contact support: support@blueshockrace.com for further inspection.

3. State of Charge (SoC) Panel Not Displaying Information
   - **Cause:** Possible fault in the SoC panel or wiring.
   - **Solution:**
     - Inspect the SoC panel area for any visible damage.
     - Since the panel cannot be reset, if it remains unresponsive, contact support: support@blueshockrace.com for diagnostic assistance.

Note: The SoC panel is solely informational display and does not affect battery performance or function.

4. Power Unit Not Turning On
   - **Cause:** Faulty connection, depleted battery, or internal issue.
   - **Solution:**
     - Perform a visual inspection to ensure the battery's contact points are clean and undamaged.
     - Charge the battery fully and test it again. If the battery won't charge, follow the troubleshooting steps for charging issues.
     - If the power unit still won't turn on after a full charge and inspection, contact support: support@blueshockrace.com

5. Battery Lock Won't Close
    - **Cause:** Misalignment, obstruction, or a fault with the locking mechanism.
    - **Solution:**
        - Inspect the lock area for any obstructions or debris.
        - Ensure the battery is correctly aligned before attempting to close the lock.
        - If the lock still won't close securely, contact support: support@blueshockrace.com for additional troubleshooting.

6. Battery Doesn't Charge
    - **Cause:** Charger issue, depleted battery, or internal battery fault.
    - **Solution:**
        - Confirm that you're using the correct charging station or charger recommended by BSR.
        - Check the charger connection and ensure it's fully inserted.
        - Try a different BSR charging station if available. If the battery remains unresponsive, contact support: support@blueshockrace.com

7. Battery Charges Extremely Fast
    - **Cause:** Possible internal fault or degraded battery cells.
    - **Solution:**
        - Perform a visual inspection to rule out external damage.
        - Fully charge the battery, then perform a discharge test (using the battery for a session and monitoring performance).
        - If the battery discharges quickly after a short charge, contact support: support@blueshockrace.com to assess battery health.

8. Battery Quickly Discharges During Use
    - **Cause:** Worn battery cells, high discharge rate, or external temperature impacts.
    - **Solution:**
        - Perform a full charge and discharge test. Use the battery in a typical session and note if there's a significant drop in performance.
        - Check if the battery temperature is within normal operating limits; overheating can accelerate discharge.
        - If the battery no longer supports the full expected distance, it may need replacement or refurbishment. Consider using BSR's buyback program for a worn battery.

9. Blue Shock Race

Warranty and Repair Policy

MANUFACTURER'S LIMITED WARRANTY

Blue Shock Race (BSR) provides a one-year limited warranty on power units and related components, covering defects in materials and workmanship under normal use.

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 damage due to impact, falls, or other external forces.
2. **Alterations or Unauthorized Repairs:** The warranty is void if the product has been opened, modified, or repaired by anyone other than BSR or an authorized service provider.
3. **Tampering with Warranty Seals:** Removal or damage of warranty seals, serial numbers, or any identifier labels.
4. **Environmental Damage:** Damage caused by exposure to moisture, extreme temperatures, or environmental contaminants, such as soot, smoke, or dust.
5. **Improper Use or Accessories:** Use of non-standard power supplies, accessories, or spare parts that are not certified by BSR for use with the specified product.
6. **Power Issues:** Damage due to improper voltage or telecommunications networks not meeting specified standards.
7. **Lack of Required Maintenance:** Failure to conduct routine maintenance on products that require it (e.g., cleaning, calibration).
8. **Improper Use or Purpose:** Any use outside the intended purpose or in a manner inconsistent with provided instructions.

Please note: The battery temperature, charging, and usage recommendations provided in this manual must be strictly followed to maintain warranty coverage.

UNLIMITED 1-YEAR WARRANTY

After one year of operation, Blue Shock Race guarantees that the degradation of the battery will not exceed 30%. This unlimited warranty ensures that the battery maintains its performance within this threshold, providing customers with extended reliability and efficiency in their power units. To maintain the warranty, customers must follow the recommendations outlined in the manual and adhere to the usage tips provided.

WARRANTY PROCEDURE

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

BATTERY REPAIR SERVICE (OUT-OF-WARRANTY REPAIRS)

If a product does not qualify for warranty coverage, BSR offers a repair service for a fee. In such cases, the customer will be informed of repair options and associated costs. Repairs will proceed only with customer approval.

WARRANTY ON NATURAL WEAR COMPONENTS

The warranty does not cover parts subject to natural wear and tear, including chassis components.
For further assistance, please contact our service team at info@blueshockrace.com.

10. Shipping of Battery Products

GENERAL REQUIREMENTS

- **Shipping Compliance:**
  BSR batteries are classified as dangerous goods and must comply with relevant regulations for safe transportation. Ground, sea, and air transport each have specific requirements outlined below. For air shipping, prior coordination with BSR is mandatory due to additional restrictions.
- **Packaging and Marking:**
  - Use **UN-certified packaging** (e.g., 4G-rated boxes) to prevent damage during transit.
  - Clearly mark shipments with appropriate labels, such as the **Class 9 Hazard Label** and Lithium Battery Mark (including the relevant UN number and contact details).
  - Standalone batteries (UN3480) must be shipped at or below 30% **State of Charge (SoC)**.
- **Documentation:**
  - Include a **Material Safety Data Sheet (MSDS)** and **UN38.3 certification** for shipments containing lithium batteries.
  - Attach all required transport declarations, such as Dangerous Goods Transport Documents or Shipper's Declarations, depending on the mode of transport.
- **Inspection Upon Receipt:**
  - Customers must inspect shipments immediately upon delivery. Report any damage to the carrier and BSR within 24 hours to ensure eligibility for claims or support.

Please note: For deliveries that exceed 60 days in transit, it is required to charge the battery to a state of charge (SoC) within the range of 50% to 80% prior to shipment. This precaution is necessary to maintain the safety and optimal condition of the battery throughout the extended transit period.

SPECIFIC TRANSPORT GUIDELINES

1. GENERAL CLASSIFICATION OVERVIEW

TYPE	UN Number	Proper Shipping Name	Packing Instruction
UN	3480	Lithium-ion batteries (standalone)	PI 965
UN	3481	Lithium-ion batteries contained in equipment	PI 967

2. LAND TRANSPORT (ADR/49 CFR)

- **Applicable Regulations:**
  - **ADR (Europe):** European Agreement Concerning the International Carriage of Dangerous Goods by Road.
  - **49 CFR (USA):** Code of Federal Regulations Title 49 for road and rail.
- **Requirements:**
  - **Classification and Packaging:**
    - Adhere to ADR/49 CFR guidelines for Class 9 hazardous materials.
    - Batteries must meet **UN Manual of Tests and Criteria (UN38.3)** standards.
    - Use **UN-certified packaging** with appropriate cushioning.
  - **Labeling and Marking:**
    - Apply the **Class 9 Hazard Label** and **Lithium Battery Mark** with relevant UN numbers.
    - Include orientation arrows if necessary and indicate net battery weight.
  - **Documentation**:
    - Include a **Dangerous Goods Transport Document** or **Bill of Lading** with emergency contact information.
  - **Transport Restrictions:**
    - Standalone batteries (UN3480) may require special approval on certain routes.
    - Placards are required for large shipments.

3. AIR TRANSPORT (IATA DGR)

- **Applicable Regulation:**
  - **IATA Dangerous Goods Regulations (DGR):** Governs all air cargo transport.
- **Requirements:**
  - **Classification and Packaging:**
    - Follow IATA Packing Instructions (PI):
      - **UN3480 (PI 965):** Standalone batteries (cargo aircraft only).
      - **UN3481 (PI 967):** Batteries in equipment (cargo aircraft only).
    - Batteries must meet **UN38.3 testing** and be at or below 30% SoC.
    - Use **UN-approved packaging** with strong cushioning.
  - **Labeling and Marking:**
    - Apply **Cargo Aircraft Only Label** (as required).
    - Include Class 9 Hazard Label and Lithium Battery Mark.
  - **Documentation**:
    - A **Shipper's Declaration for Dangerous Goods (DG Declaration)** is mandatory, listing gross/net weights and shipment details.
  - **Transport Restrictions:**
    - UN3480 and UN3481 shipments are limited to cargo aircraft.

4. SEA TRANSPORT (IMDG CODE)

- **Applicable Regulation:**
  - **IMDG Code (International Maritime Dangerous Goods Code):** Required for international sea shipments.
- **Requirements:**
  - **Classification and Packaging:**
    - Use **UN-certified packaging** capable of withstanding maritime conditions.
    - Batteries must meet **UN38.3 standards**.
  - **Labeling and Marking:**
    - Include **Class 9 Hazard Label** and Lithium Battery Mark with contact details.
  - **Documentation:**
    - Provide a **Dangerous Goods Declaration (DGD)** and ensure manifest details match.
    - Attach a Material Safety Data Sheet (MSDS).
  - **Transport Restrictions:**
    - Some ports restrict handling of UN3480 shipments due to fire hazards.
    - Ensure segregation from flammable materials during storage and transport.

11. Appendix I

This Do's and Don'ts list can serve as a quick reference guide for safe and effective handling of BSR Batteries. For easy access, consider printing this list and placing it in a visible area near the charging station or in other battery management areas. Following these practices helps ensure battery longevity, safety, and reliable performance on the track.

DO'S

- **Use the BSR Charging Station:** Always charge with compatible BSR chargers, and follow the instructions in the charging station manual.
- **Rotate Batteries:** Alternate usage among all available batteries to ensure even wear and prolong the lifespan of each battery.
- **Monitor SoC Panel:** Regularly check the State of Charge (SoC) panel for charge levels and temperature status to prevent overheating and excessive discharge.
- **Store Securely:** Store the battery in a cool, dry place, and restrict access to authorized personnel to ensure safe handling.
- **Follow Recommended Charge Levels:** Keep the battery charge above 30% whenever possible for optimal health and performance.
- **Partial Charge When Feasible:** Charge the battery to only 50–80% capacity if full charge is not needed. This can help extend the battery's lifespan.
- **Maintain Optimal Temperature:** Use the battery within the temperature range of 5°C to 55°C for safe and efficient performance.

DON'TS

- **Don't Expose to Water:** While brief exposure during use in rain or snow is acceptable, ensure the battery is properly cleaned and dried afterward. Long-term exposure to moisture can cause damage, and failing to clean and dry the battery may void the warranty.
- **Don't Open or Modify:** Do not attempt to open, repair, or modify the battery. Such actions can lead to electrical failures, serious damage, or injury, and will result in an immediate voiding of the warranty.
- **Don't Overheat:** Avoid exposing the battery to temperatures above 55°C. If the temperature exceeds this limit, stop using the battery immediately. Repeated overheating can cause irreversible damage and may void the warranty if preventative measures are ignored.
- **Don't Drop or Puncture:** Handle the battery carefully to avoid physical impacts. Damage from dropping or puncturing the battery is not covered under warranty.

- **Don’t Leave Charging Unattended:** Always monitor the battery while it is charging and keep it away from flammable materials to prevent accidents. Neglecting this safety practice could lead to dangerous situations and void warranty coverage.
- **Don’t Store Without Maintenance:** Avoid leaving batteries unused or unmonitored for extended periods. Check and charge them regularly to prevent degradation. Failure to maintain the battery during storage could result in reduced performance or capacity, which may void the warranty.

11. Appendix II

RACE DAY PREPARATION & BATTERY MANAGEMENT

To achieve peak performance and ensure long-term reliability, proper preparation and handling of the B5500 battery are essential. While BSR technology is designed for high efficiency, performance is determined before you enter the track—once on the track, adjustments to battery or power unit conditions are no longer possible.

Training sessions should be used to develop a structured session plan and an optimized battery usage cycle suited to your kart model and race conditions, following the guidelines in this manual.

In 99% of cases where performance issues arise or benchmarks are not met, the root cause is improper planning, neglect of recommended processes, or failure to follow the correct procedures. These mistakes can have irreversible effects, limiting system performance and functionality.

MAXIMIZING EFFICIENCY – KEY PRINCIPLES

- **Plan ahead:** Effective energy management starts before the session, not during.
- **Follow structured cycles:** Develop a consistent charging and usage routine.
- **Optimize off-track time:** Every minute off-track should be dedicated to preparing the system for the next session.

POST-SESSION ROUTINE

Immediately after leaving the track, follow these steps to maintain performance and longevity:

1. **Plug In** – Begin charging the battery.
2. **Cool Down** – Allow the system to cool as much as possible.
3. **Clean & Inspect** – Clean the kart and check for any damage.

This cycle should be repeated after every session to keep the battery in optimal condition and ready for the next race.