

## NEXPEAK NC202

# NEXPEAK NC202 10-Amp Battery Charger User Manual

Model: NC202

## 1. INTRODUCTION

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The NEXPEAK NC202 is a versatile 12V 10-Amp and 24V 5-Amp 8-stage smart battery charger and maintainer. It is designed to charge and repair various battery types including LiFePO4 and lead-acid batteries (AGM, GEL, SLA, Flooded) found in cars, trucks, SUVs, motorcycles, and lawnmowers. Featuring an extra-large LCD screen for clear status display and multiple safety protections, the NC202 ensures efficient and safe battery management.

This manual provides detailed instructions for the safe and effective operation, maintenance, and troubleshooting of your NEXPEAK NC202 battery charger.

## 2. SAFETY INFORMATION

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**WARNING: Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire, and/or serious injury.**

- Always read and understand all instructions before using the charger.
- Ensure proper ventilation during charging. Do not operate in an enclosed area or restrict ventilation in any way.
- Avoid charging frozen batteries. Allow the battery to thaw before attempting to charge.
- Do not expose the charger to rain or snow.
- Disconnect AC power before making or breaking connections to the battery.
- Wear eye protection and protective clothing when working with batteries, as they contain corrosive acids.
- Keep out of reach of children.
- The charger cannot activate or charge totally dead batteries (0V).
- The no-load output voltage of the NC202 battery charger will be 17.0-17.5V when not connected to a battery or loads. This is normal; the voltage will normalize after being connected to a battery.
- Remove the power plug from the socket when the charger is not in use.

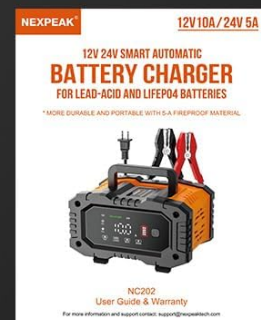
## 3. PACKAGE CONTENTS

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Upon opening the package, please verify that all items are present and in good condition:

- NEXPEAK NC202 10-Amp Battery Charger Unit

# WHAT'S IN THE BOX



The package includes the NEXPEAK NC202 10-Amp Battery Charger unit and a comprehensive User Guide & Warranty booklet.

## 4. PRODUCT OVERVIEW

The NEXPEAK NC202 features a robust design with a clear digital display and intuitive controls. It is built for durability and ease of use across various applications.



Front view of the NEXPEAK NC202 10-Amp Battery Charger, highlighting its compact design, integrated handle, and attached battery clamps.

## 4.1. Key Features

- **12V/10A & 24V/5A Output:** Provides efficient charging for various battery sizes.
- **8-Stage Smart Charging:** Optimized charging process for battery health and longevity.
- **Large LCD Display:** Clear visualization of charging status, voltage, current, temperature, and mode.
- **Multi-Battery Compatibility:** Supports LiFePO4, Lead-Acid (AGM, GEL, SLA, Flooded) batteries.
- **Temperature Compensation:** Automatic adjustment for optimal charging in hot or cold climates.
- **Pulse Repair Function:** Helps restore lost battery performance due to sulfation and acid stratification.
- **Comprehensive Protections:** Includes smart control, reverse polarity, overcurrent, overcharge, short circuit, and fireproof material.

## 4.2. Display and Controls

# EASY TO USE WITH VISIBLE CHARGING



**10ft Extra-long Cord**



**Brighter Screen**



**\*5A Fireproof Material**

**4 MODES  
SELECTION**



**Lead-acid/LifePO4**



**Pulse Repair**



**Winter Mode**



**Trickle Charge**

The extra-large LCD screen provides real-time information including charge voltage, current, internal temperature, and charge percentage. It also indicates summer or winter mode activation.

The large LCD screen displays critical charging information, allowing you to monitor the process effectively. A single button on the unit allows for mode selection.

## 5. SETUP

Follow these steps to set up your NEXPEAK NC202 battery charger:

1. **Ensure Safety:** Before connecting, ensure the charger is unplugged from the AC power outlet.
2. **Identify Battery Type:** Determine the type of battery you intend to charge (e.g., LiFePO4, Lead-Acid, AGM, GEL, SLA, Flooded).
3. **Connect Positive Clamp:** Connect the red (+) clamp of the charger to the positive (+) terminal of the battery.
4. **Connect Negative Clamp:** Connect the black (-) clamp of the charger to the negative (-) terminal of the battery. Ensure both connections are secure and free from corrosion.



5. **Plug into AC Outlet:** Once the clamps are securely connected to the battery, plug the charger's power cord into a suitable 110V AC power outlet.
6. **Select Charging Mode:** The charger will automatically detect the battery voltage. Use the mode button to select the appropriate charging mode for your battery type.

## 6. OPERATING INSTRUCTIONS

### 6.1. Charging Modes

The NEXPEAK NC202 offers four distinct charging modes to accommodate various battery types and conditions:



The charger offers four main modes: Car/Boat for standard lead-acid batteries, AGM/LiFePO4 for specific battery chemistries, Moto for motorcycle batteries, and Repair mode for desulfation and reconditioning.

- **CAR/BOAT Mode:** Suitable for standard 12V and 24V lead-acid batteries commonly found in cars, trucks, and marine vehicles.
- **AGM/LiFePO4 Mode:** Specifically designed for AGM (Absorbed Glass Mat) batteries and LiFePO4 (Lithium Iron

Phosphate) batteries, which require different charging algorithms.

- **MOTO Mode:** Optimized for smaller 12V and 24V batteries typically used in motorcycles, ATVs, and lawnmowers.
- **REPAIR Mode:** This mode utilizes pulse repair technology to desulfate and recondition old or sulfated batteries, aiming to restore their capacity and extend their lifespan. Note that this mode cannot revive completely dead batteries.

## 6.2. 8-Stage Smart Charging Process

The NC202 employs an advanced 8-stage charging process to ensure efficient, safe, and thorough battery charging:



The 8-stage charging process includes Battery Desulfation, Soft Start, Bulk Charging, Absorption, Battery Analysis, Battery Recondition, Float Charging, and Smart Monitoring.

1. **Battery Desulfation:** Uses high-frequency pulse current to break down lead sulfate crystals that form on battery plates, restoring capacity.
2. **Soft Start:** Gradually introduces current to the battery, protecting it from damage if it's deeply discharged.
3. **Bulk Charging:** Charges the battery at its maximum current until it reaches approximately 80% capacity.



4. **Absorption:** Charges the battery at a constant voltage, gradually reducing current as the battery approaches full charge.
5. **Battery Analysis:** Tests the battery's ability to hold a charge to determine its overall health.
6. **Battery Recondition:** Applies a higher voltage charge to equalize cells and further improve battery performance.
7. **Float Charging:** Maintains the battery at full charge by providing a small, constant voltage, preventing self-discharge.
8. **Smart Monitoring:** Continuously monitors the battery's condition and adjusts the charging process as needed.

### 6.3. Temperature Compensation

The charger features intelligent temperature compensation to optimize charging performance in varying environmental conditions:



The charger automatically adjusts charging parameters for optimal performance in varying climates, activating 'Summer Mode' above 82°F (28°C) and 'Winter Mode' below 50°F (10°C).

- **Summer Mode:** Automatically activates when the ambient temperature is above 82°F (28°C), adjusting the charging voltage to prevent overcharging in hot conditions.
- **Winter Mode:** Automatically activates when the ambient temperature is below 50°F (10°C), increasing the charging voltage slightly to ensure a full charge in cold conditions.

## 6.4. Pulse Repair Function

The pulse repair function is designed to restore the performance of sulfated or stratified batteries. It automatically detects these conditions and applies a specialized pulse current to break down the harmful deposits, improving the battery's ability to accept and hold a charge. This can lead to stronger engine starts and extended battery life. Please note that this function is not intended to revive batteries that are completely dead or have internal damage.

## 6.5. Product Application



The NEXPEAK NC202 is suitable for charging batteries in a wide range of vehicles including cars, trucks, motorcycles, boats, and lawnmowers.



## 7. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your NEXPEAK NC202 battery charger:

- **Cleaning:** Keep the charger clean and dry. Wipe the exterior with a soft, damp cloth. Do not use harsh chemicals or abrasive cleaners.
- **Storage:** Store the charger in a cool, dry place when not in use. Ensure the cables are neatly coiled and not kinked.
- **Inspection:** Regularly inspect the charging cables and battery clamps for any signs of damage, such as cuts, fraying, or corrosion. Replace if damaged.
- **No User Serviceable Parts:** Do not attempt to open or repair the unit yourself. Refer all servicing to qualified personnel.

## 8. TROUBLESHOOTING

If you encounter issues with your NEXPEAK NC202 charger, refer to the table below for common problems and their solutions:

Problem	Possible Cause	Solution
Charger not turning on or display is blank.	No AC power; Incorrect battery connection.	Check AC power outlet. Ensure battery clamps are securely connected to the correct battery terminals (red to positive, black to negative).
Charger not recognizing battery or not changing modes.	Battery is completely dead (0V); Mode button malfunction; Poor connection.	The charger cannot charge 0V batteries. Disconnect and reconnect the battery. Ensure the mode button is pressed firmly. If issues persist, contact customer support.
Charging process seems slow or incomplete.	Incorrect mode selected; Poor clamp contact; Battery requires reconditioning.	Verify the correct charging mode for your battery type. Ensure good contact between clamps and terminals. Consider using the 'REPAIR' mode if the battery is sulfated.
No-load output voltage is high (17.0-17.5V).	Normal operation when not connected to a battery.	This is expected behavior. The voltage will normalize once the charger is properly connected to a battery.

## 9. SPECIFICATIONS

Attribute	Detail
Model Number	NC202
Brand	NEXPEAK
Input Voltage	110 Volts AC
Output Voltage	12V / 24V DC (No-load: 17.0-17.5V)
Charging Current	12V 10-Amp, 24V 5-Amp
Battery Types Supported	12V & 24V LiFePO4, Lead-Acid (AGM, GEL, SLA, Flooded)

Attribute	Detail
Product Dimensions	8.46"D x 4.1"W x 7.1"H (approx. 7.6 x 6.5 x 4 inches)
Item Weight	2.29 pounds
Country of Origin	China



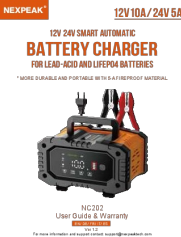
## 10. WARRANTY AND SUPPORT





NEXPEAK provides a standard warranty for the NC202 battery charger, ensuring a new replacement is available for any quality issues. For specific warranty terms, technical support, or any quality-related concerns, please refer to the contact information provided in the included User Guide & Warranty booklet or visit the official NEXPEAK website. Keep your purchase receipt for warranty claims.

Your browser does not support the video tag.

Official product video from NEXPEAK POWER demonstrating the 12V 24V Smart Battery Charger for Lead-acid and LiFePO4 Batteries. This video provides a visual overview of the charger's features and operation.

### Related Documents - NC202

	<p><a href="#">NEXPEAK NC175 1.75A Smart Battery Charger User Manual</a></p> <p>User manual for the NEXPEAK NC175 1.75A Smart Fully Automatic Battery Charger Maintainer, Trickle Charger, and Battery Desulfator for 6V and 12V lead-acid batteries used in cars, lawn mowers, motorcycles, boats, and marine applications.</p>
	<p><a href="#">NEXPEAK NC350 35Amp Automatic Smart 12V &amp; 24V Battery Charger Maintainer User Guide</a></p> <p>User guide and warranty for the NEXPEAK NC350 35Amp Automatic Smart Battery Charger Maintainer. Covers technical specifications, usage, safety, troubleshooting, and maintenance for 12V/24V lead-acid, lithium, and LiFePO4 batteries.</p>
	<p><a href="#">NEXPEAK NC202 Smart Automatic Battery Charger User Guide &amp; Warranty</a></p> <p>Comprehensive user guide and warranty information for the NEXPEAK NC202 Smart Automatic Battery Charger. Learn about safety, features, charging modes for 12V/24V Lead-Acid and LiFePO4 batteries, troubleshooting, and warranty details from NEXPEAK.</p>

<div><div>NEXPEAK®</div><div>12V &amp; 24V SMART AUTOMATIC LEAD-ACID BATTERY CHARGER</div><div></div><div>NC201 User Guide &amp; Warranty evidence</div></div>	<p><a href="#">NEXPEAK NC201 12V &amp; 24V Smart Automatic Lead-Acid Battery Charger User Guide</a></p> <p>Comprehensive user guide and warranty information for the NEXPEAK NC201, a 12V and 24V smart automatic lead-acid battery charger. Covers safety warnings, technical specifications, charging modes, connection instructions, screen definitions, temperature compensation, maintenance, troubleshooting, and warranty details.</p>
<div><div>NEXPEAK®</div><div>35Amp AUTOMATIC SMART 12V &amp; 24V BATTERY CHARGER MAINTAINER</div><div></div><div>NC350 User Guide &amp; Warranty evidence</div><div></div><div>For more information and support contact <a href="mailto:support@nexpeak.com">support@nexpeak.com</a></div></div>	<p><a href="#">NEXPEAK NC350: 35A Smart 12V/24V Battery Charger &amp; Maintainer User Guide</a></p> <p>Comprehensive user guide for the NEXPEAK NC350, a 35 Amp automatic smart battery charger and maintainer for 12V and 24V batteries. Learn about features, safety, and usage.</p>
<div><div>NEXPEAK®</div><div>12V &amp; 24V SMART AUTOMATIC LEAD-ACID BATTERY CHARGER</div><div></div><div>NC201 User Guide &amp; Warranty evidence</div></div>	<p><a href="#">NEXPEAK NC201 12V &amp; 24V Smart Automatic Lead-Acid Battery Charger User Guide</a></p> <p>User guide and warranty information for the NEXPEAK NC201 12V &amp; 24V Smart Automatic Lead-Acid Battery Charger. Includes safety warnings, technical specifications, operating instructions, and troubleshooting.</p>