

Minn Kota MK-220PCL

Minn Kota Precision MK-220PCL On-Board Marine Battery Charger Instruction Manual

Model: MK-220PCL

1. PRODUCT OVERVIEW

The Minn Kota Precision MK-220PCL is an advanced on-board marine battery charger designed to provide efficient and reliable charging for various battery types. This 2-bank charger delivers 10 amps per bank, totaling 20 amps, ensuring your marine batteries are ready for extended use. It incorporates intelligent features such as independent battery type selection, automatic multi-stage charging, and temperature compensation for optimized performance.

Key Features

- **Versatile Battery Type Selection:** Each charging bank can be independently configured for 12V AGM, Flooded Lead Acid, Gel, or Lithium (LiFePO4) batteries, providing a safe and optimized charge for each battery's specific requirements.
- **Automatic Multi-Stage Charging with Digital Control:** A microprocessor-based design precisely controls voltage and current throughout the charging cycle, resulting in a faster, safer, and more accurate charge.
- **Automatic Temperature Compensation:** The charger adjusts its output based on ambient temperature fluctuations and low-line voltage conditions, ensuring consistent charging performance even with varying power outlet quality.
- **Battery Equalization and Maintenance:** Automatically cleans and protects flooded lead acid batteries with every charge. A push-button activation initiates a more rigorous cleaning cycle to extend battery life and maximize performance.
- **Waterproof Construction with LED Indicators:** Built with shock-resistant and vibration-resistant materials, this charger is designed to withstand harsh marine environments. LED lights provide clear indications of charge stage, maintenance mode status, error notifications, and full charge completion.





MINN KOTA®

PRECISION

MK 220PCL

ON-BOARD BATTERY CHARGER

2 Banks · 10 Amps per Bank · 20 Amps Total

*FOR LITHIUM BATTERIES:

- ● Blinking Green Light for Charging
- Solid Green Light for Fully Charged



DIGITAL
CONTROL



PRECISION
CHARGERS

CHARGE BATTERY TYPE

100%

75% ↔ AGM/HP AGM

50% ↔ FLOODED

25% ↔ LITHIUM*

BATTERY SELECTION



CHARGE BATTERY TYPE

100%

75% ↔ AGM/HP AGM

50% ↔ FLOODED

25% ↔ LITHIUM*

BATTERY SELECTION



Image 1.1: The Minn Kota Precision MK-220PCL charger, showing its compact design and integrated cables for battery and AC power connections.

2. INSTALLATION AND SETUP

Proper installation is crucial for the safe and effective operation of your Minn Kota Precision charger. Ensure the boat's power is disconnected before beginning installation.

Mounting the Charger

- **Location:** Choose a dry, well-ventilated location in your boat, away from fuel tanks and heat sources. The charger is waterproof, but protecting it from direct spray and submersion is recommended.
- **Orientation:** Mount the charger horizontally or vertically using the integrated mounting tabs. Ensure adequate space around the unit for air circulation.
- **Secure Fastening:** Use appropriate stainless steel fasteners (not included) to securely mount the charger to a solid surface. Avoid mounting in areas subject to excessive vibration.



Image 2.1: Angled view of the charger, highlighting the robust casing and mounting tabs for secure installation.

Connecting to Batteries

- **Battery Cables:** Each bank has dedicated positive (red) and negative (black) cables. Connect the red cable to the positive (+) terminal of a 12V battery and the black cable to the negative (-) terminal of the same battery.
- **Fuse Protection:** The battery cables include in-line fuse holders. Ensure these are properly connected and the fuses are intact before operation.
- **Bank Assignment:** Connect one set of cables to your cranking battery and the other set to your trolling motor battery or auxiliary battery.
- **Cable Routing:** Route all cables to prevent chafing, pinching, or contact with sharp edges. Secure cables with clamps or ties.

Power Connection

- **AC Input:** Plug the charger's AC power cord into a standard 120V AC wall outlet. Ensure the outlet is properly grounded.
- **Extension Cords:** If an extension cord is necessary, use a heavy-duty, outdoor-rated cord with a proper ground connection.

3. OPERATION

The Minn Kota Precision charger is designed for straightforward operation with intelligent charging capabilities.

Battery Type Selection

- **Independent Banks:** Each charging bank has its own battery type selection button. Press the 'Battery Selection' button for each bank to cycle through the available battery types: AGM, Flooded Lead Acid, Gel, or Lithium (LiFePO4).
- **Confirmation:** The corresponding LED indicator for the selected battery type will illuminate. Ensure the correct battery type is selected for each connected battery to prevent damage and ensure optimal charging.
- **Lithium Battery Wake-Up:** The charger can wake up lithium batteries from standby mode if they have a low voltage cutoff.

Charging Process and LED Indicators

Once connected to batteries and AC power, the charger will automatically begin the charging process. The LED indicators on the charger's front panel provide real-time status updates:

- **Blinking Green Light:** Indicates that the battery is currently charging. The blinking pattern may vary depending on the charge stage.
- **Solid Green Light:** Indicates that the battery is fully charged and the charger has entered maintenance mode to keep the battery topped off.
- **Error Notifications:** Other LED patterns or colors (refer to the full manual for specific codes) may indicate an error, such as a bad battery connection, short circuit, or internal fault.
- **Charge Stage Indicators:** LEDs also show the approximate charge level (25%, 50%, 75%, 100%) during the charging process.



Image 3.1: The charger's front panel, detailing the LED indicators for charge status and battery type selection buttons for each bank.

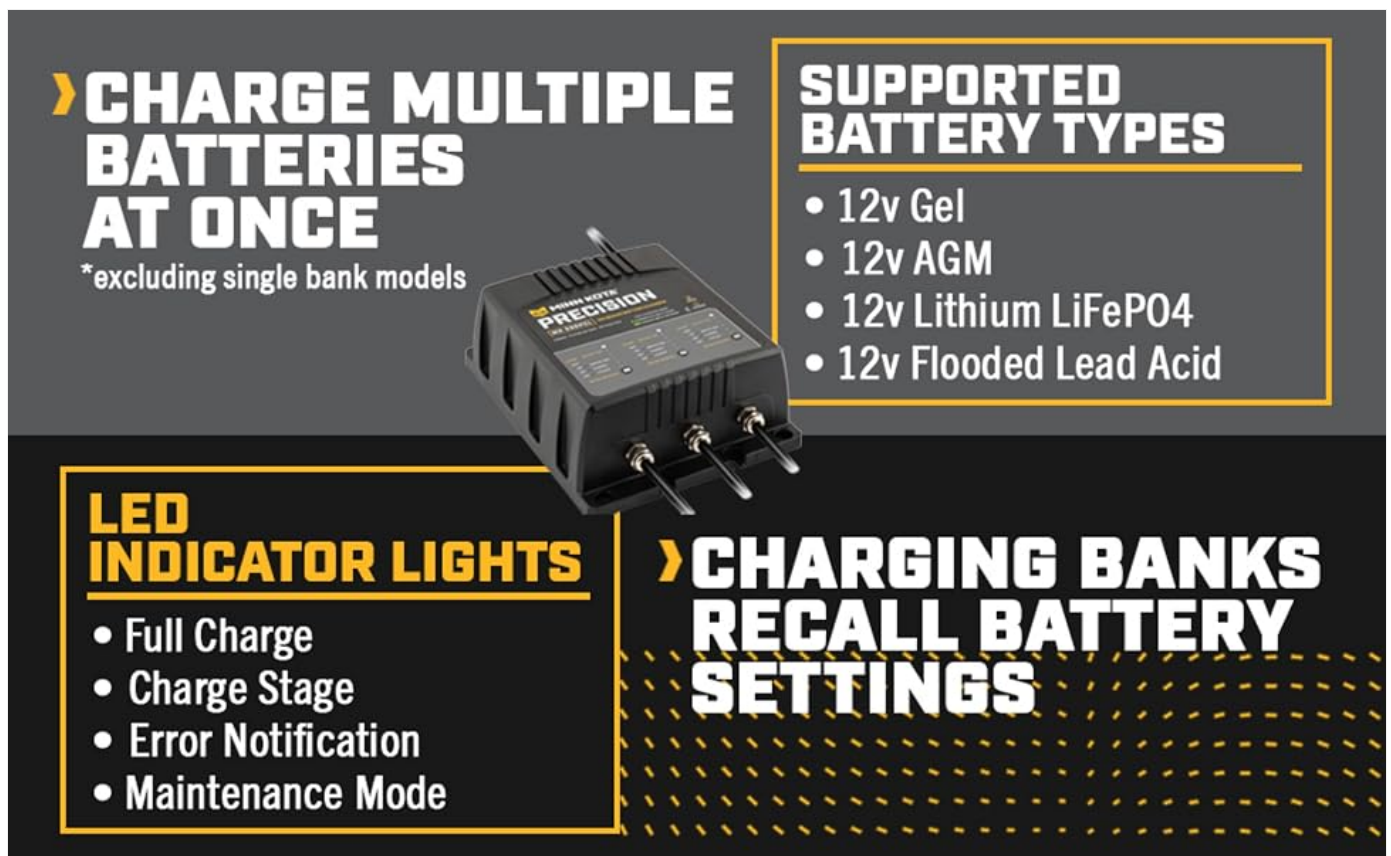


Image 3.2: Visual guide to supported battery types (12V Gel, AGM, Lithium LiFePO₄, Flooded Lead Acid) and LED indicator light functions for full charge, charge stage, error, and maintenance mode.

4. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Minn Kota Precision charger and connected batteries.

Battery Equalization

For flooded lead acid batteries, the charger automatically performs equalization during the charging cycle. This process helps to prevent stratification and extend battery life. For a more rigorous cleaning cycle, consult the full product manual for specific instructions on activating a manual equalization cycle.



Image 4.1: Visual representation of the battery equalization feature, which helps maintain flooded lead acid batteries.

General Care

- **Clean Connections:** Periodically inspect battery terminals and charger connections for corrosion. Clean with a wire brush and baking soda solution if necessary, then rinse with water and dry thoroughly.
- **Cable Inspection:** Check all cables for cuts, abrasions, or damage. Replace any damaged cables immediately.
- **Unit Cleaning:** Wipe the charger's exterior with a damp cloth to remove dirt or salt residue. Do not use harsh chemicals or abrasive cleaners.
- **Storage:** When not in use for extended periods, ensure the charger is disconnected from both AC power and batteries. Store in a cool, dry place.

5. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your Minn Kota Precision charger.

Problem	Possible Cause	Solution
Charger not turning on / No LEDs illuminated	No AC power; Faulty outlet; Blown fuse in AC plug.	Check AC power connection. Test outlet with another device. Inspect and replace AC plug fuse if applicable.
Battery not charging / Blinking error LED	Incorrect battery type selected; Poor battery connection; Severely discharged battery; Internal fault.	Verify correct battery type is selected for the bank. Check all battery cable connections for tightness and corrosion. Allow charger to attempt recovery on deeply discharged batteries. If error persists, contact customer support.
Charger gets warm during operation	Normal operation during charging.	This is normal. Ensure adequate ventilation around the charger. If it becomes excessively hot to touch, disconnect and contact support.
Battery equalization not working	Not a flooded lead acid battery; Manual activation required.	Equalization is only for flooded lead acid batteries. Refer to the full manual for instructions on manually initiating an equalization cycle if needed.

6. TECHNICAL SPECIFICATIONS

Detailed specifications for the Minn Kota Precision MK-220PCL On-Board Marine Battery Charger.

Specification	Detail
Model Number	1832201 (MK-220PCL)
Brand	Minn Kota
Input Voltage	120 Volts AC
Output Voltage	12 Volts DC
Number of Banks	2
Amperage per Bank	10 Amps

Specification	Detail
Total Amperage	20 Amps
Product Dimensions (D x W x H)	5.88" x 3.5" x 9.88"
Item Weight	8.7 Pounds
Battery Charge Time (typical)	4 Hours (depending on battery size and discharge level)
Construction	Waterproof, Shock-resistant, Vibration-resistant
Supported Battery Types	12V AGM, Flooded Lead Acid, Gel, Lithium (LiFePO4)

7. WARRANTY INFORMATION

The Minn Kota Precision MK-220PCL On-Board Marine Battery Charger is backed by a **3-year manufacturer's warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims. For full details regarding warranty terms, conditions, and limitations, refer to the official warranty statement included with your product or visit the Minn Kota website.

8. CUSTOMER SUPPORT

Should you require assistance with your Minn Kota Precision MK-220PCL charger, please contact Minn Kota customer support. Have your model number (MK-220PCL or 1832201) and serial number ready when contacting support to ensure efficient service.

- **Online Resources:** Visit the official Minn Kota website for FAQs, additional manuals, and support documentation.
- **Contact Information:** Refer to the contact section of the official Minn Kota website or your product packaging for the most current customer service phone numbers and email addresses.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question