



Anywhere. Anytime.



**OWNER'S MANUAL FOR
MINN KOTA PORTABLE
BATTERY CHARGERS
Model: MK110P, 210P**

Service Information:

Please call our service department at 1-800-227-6433 if you have any problems with your battery charger. A technical support representative will be happy to assist you.



Compliant with FCC
PART 15, Class B

1. SAFETY INFORMATION

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS!

This manual contains important safety and operating instructions applicable to the safe and efficient use of your Minn Kota battery charger.

The Minn Kota battery charger is a powerful electrical device. If incorrectly installed, configured or operated, the battery charger can damage batteries and / or electrical equipment. Please read thoroughly the instructions and safety information contained in this manual before operating the battery charger.

WARNING: RISK OF EXPLOSIVE GASES

WORKING IN THE VICINITY OF A LEAD ACID BATTERY IS DANGEROUS. BATTERIES CONTAIN SULFURIC ACID AND PRODUCE EXPLOSIVE GASES. A BATTERY EXPLOSION COULD RESULT IN LOSS OF EYESIGHT OR SERIOUS BURNS. FOR THIS REASON, IT IS OF UTMOST IMPORTANCE THAT YOU FOLLOW THE INSTRUCTIONS EACH TIME YOU USE THE CHARGER.

TO REDUCE THE RISK OF BATTERY EXPLOSION, FOLLOW THESE INSTRUCTIONS AND THOSE PUBLISHED BY THE BATTERY MANUFACTURER FOR ANY EQUIPMENT YOU INTEND TO USE IN THE VICINITY OF THE BATTERY. REVIEW CAUTIONARY MARKINGS ON THESE PRODUCTS AND ON ENGINE, MOTOR OR OTHER EQUIPMENT REQUIRING BATTERY USAGE.

Use of an attachment not recommended or sold by Johnson Outdoors Inc. may result in risk of fire, electric shock, or injury to persons or property.

The charger is not intended for use by young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the charger.

To reduce risk of damage to electric plug or cord, pull by the plug rather than the cord when disconnecting the battery charger.

An extension cord should not be used unless absolutely necessary. Use of the improper extension cord could result in a risk of fire or electric shock. If extension cord must be used, make sure:

- a) That pins of plug of the extension cord are the same number, size and shape of those of the plug on the battery charger;
- b) That extension cord is properly wired and in good electrical condition;
- c) That wire in extension cord is proper size as follows:

Minimum recommended AWG wire size for various length extension cords used with the Minn Kota battery charger:

Length of Cord in Feet	25	50	100
AWG Size	16	14	12

Do not operate the battery charger with a damaged cord or plug.

Do not operate the battery charger if it has received a sharp blow, been dropped or otherwise damaged in any way.

Do not disassemble the charger. Incorrect reassembly may result in a risk of electric shock or fire.

To reduce risk of electric shock, unplug the charger from outlet before attempting any maintenance or cleaning. Disconnecting the leads will not reduce this risk.

To reduce risk of shock or spark, never touch the battery clips together while the charger is plugged into an outlet or extension cord.

External connections to the battery charger shall comply with all local, state, and federal regulations.

2. PERSONAL PRECAUTIONS

Consider having someone close enough nearby to come to your aid when you work near a lead acid battery.

Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.

Wear complete eye protection and clothing protection. Avoid touching eyes while working near battery.

If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least 10 minutes and get medical attention immediately.

Never smoke or allow a spark or flame in vicinity of battery, engine, motor or other flammable or explosive equipment.

Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short circuit battery or other electrical part that may cause explosion.

Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a lead acid battery. A lead acid battery can produce a short circuit current high enough to weld such items, causing severe burns.

Use the Minn Kota battery charger for charging and maintaining FLOODED / WET CELL, MAINTENANCE FREE, AND AGM / STARVED ELECTROLYTE batteries only. It is not intended to supply power to low voltage electrical systems other than for charging and maintaining batteries. Do not use the charger for charging dry-cell batteries that are commonly used with home appliances. These batteries may burst and cause injury to persons and damage to property.

NEVER charge a frozen battery.

3. PREPARING TO CHARGE

- 1) If necessary to remove battery from boat or vehicle to charge or maintain, always remove grounded terminal from battery first (if applicable). Make sure all accessories in the boat or vehicle are off, so as not to cause an arc.
- 2) Be sure area around battery is well ventilated while battery is being charged or maintained.
- 3) Clean battery terminals. Be careful to keep corrosion from coming in contact with eyes.
- 4) Add distilled water in each cell until battery acid reaches level specified by battery manufacturer ONLY AFTER the battery has been charged. Adding water to a discharged battery may result in acid leaking out of the battery and causing injury to persons and damage to property. Do not overfill. Study all battery manufacturers' specific precautions; however, make sure to REPLACE ALL CELL CAPS after refilling so that water evaporation is avoided. Water will evaporate over time if cell caps are not replaced after refilling. For a battery without removable cell caps, such as valve regulated lead acid batteries, carefully follow manufacturer's recharging instructions.
NOTE: The battery fluid level should be checked every 30 days
- 5) Study all battery manufacturers' specific precautions while charging and recommended rates of charge.

4. DC AND AC CONNECTION PRECAUTIONS

DANGER – Never alter AC cord or plug provided – if it will not fit outlet, have proper outlet installed by a qualified electrician. Improper connection can result in a risk of an electric shock.

- 1) The Minn Kota charger will only charge 12 volt 6 cell lead acid batteries. Do not connect the output of the charger to any other voltage or type of battery.
- 2) The charger's DC output leads are designed to be temporarily connected to the battery.
- 3) Connect and disconnect DC output leads only after removing the AC plug from the electric outlet.
- 4) The charger output leads must be connected with the correct polarity for the charger to function. The RED lead must be connected to the POSITIVE terminal of the battery and the BLACK lead must be connected to the NEGATIVE terminal of the battery.

5. CHOOSING THE CHARGING LOCATION

Batteries from a boat must be removed and charged on land. This charger is not designed for wet conditions and is not water resistant. (An on-board charger can be used to charge a battery in the boat.)

The input (AC) power cord is 6 feet long and the output (DC) battery leads are also 6 feet long. Make sure that all the DC battery leads can reach the batteries and that the AC power cord can reach the power source. Do not splice any battery lead or power cord, as this voids the three year Limited Warranty.

Even though the Minn Kota charger is capable of operating in a high ambient temperature environment, a minimum of 6 inches of unobstructed area should be allowed on all sides of the unit for proper air circulation and cooling. Proper cooling and circulation will allow the charger to operate at peak efficiency.

WARNING – MAKE SURE THE CHARGER IS DISCONNECTED FROM AC POWER AND THE ON/OFF SWITCH IS IN THE OFF POSITION BEFORE CONNECTING THE BATTERY TO THE OUTPUT LEADS.

CAUTION - Before making any connections to batteries in a confined space, open the door or hatch of the compartment and allow it to air out for 15 minutes. This allows any gasses that have accumulated in the compartment to escape.

6. OPERATING INSTRUCTIONS

Make sure the DC output leads are connected properly to the batteries. Double check the polarities of the output leads. See diagram on page 5.

INDICATOR LIGHTS:

To begin charging, connect the charger to AC power. The following will be displayed on the charger:

- 1) A GREEN power light is lit to indicate AC power is applied.
- 2) A YELLOW light is lit for each bank to indicate the battery is charging.
- 3) A GREEN light is lit for each bank to indicate the battery is fully charged and in maintenance mode.
- 4) A RED light for each bank is lit if any of the following apply:
 - a) No battery is connected to an output cord.
 - b) The battery voltage is below 4.0 volts.
 - c) The battery is connected reverse polarity.

NOTE – A 12 volt battery with an open-circuit voltage below 4 volts has either been discharged to the point of internal damage, may be heavily sulfated, or may have internal shorted cells. Attempting to charge a battery in this state is dangerous. The battery should be replaced.

CAUTION – If a RED light is lit, disconnect the AC power from the charger immediately. Determine the reason based on the above information and take the necessary corrective action to remedy the situation. If you are unable to remedy the situation and need help, call the Minn Kota Service Department at 1-800-227-6433 and a technical support representative will be happy to assist you.

CAUTION – Generators with a modified square wave output can damage this MINN KOTA charger. Generators with a sine wave output can be used to power this charger.

7. MAINTENANCE / CLEANING / STORAGE INSTRUCTIONS

WARNING – TO REDUCE RISK OF ELECTRIC SHOCK, DO NOT PERFORM ANY SERVICING OTHER THAN THOSE CONTAINED IN THE OPERATING INSTRUCTIONS.

Check battery charger for dirt, oil, battery corrosion, etc. Use a water and baking soda solution for cleaning corrosion. Wipe clean using a dry cloth.

Check battery clips for dirt, oil, and battery corrosion; then disconnect from battery posts and clean as necessary with water and baking soda solution and dry with a clean cloth.

When the charger is not in use, coil the power cord to prevent damage.

If power cord or plug becomes damaged, you may contact the Minn Kota Service Repair Department for service repair information. Otherwise, dispose of the battery charger in compliance with local law. Damaged cords and plugs can cause electric shock or electrocution.

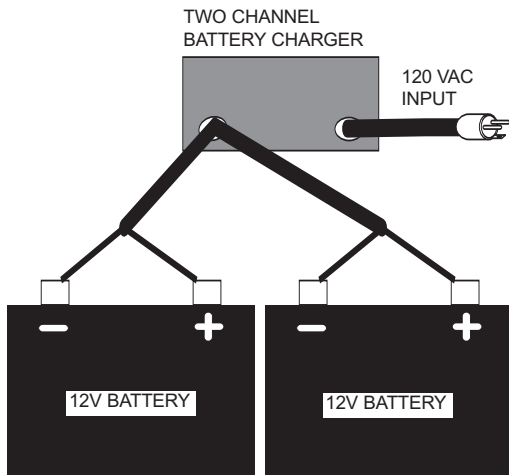
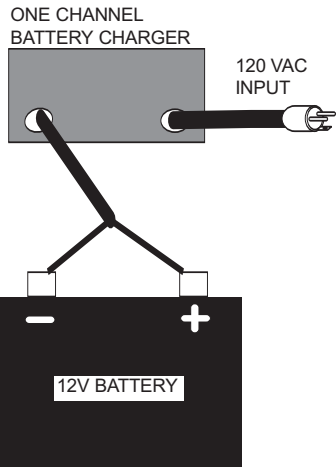
When storing the battery charger, store in a clean dry area.

NOTE – This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 Reorient or relocate the receiving antenna.
 Increase the separation between the equipment and receiver.
 Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 Consult the dealer or an experienced radio/TV technician for help.

CAUTION – Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Specifications:

Model	Part No.	System Volts	Banks	Output per Bank (amps)	Total Output (amps)	Input Cable	Output Cable	Size L x W x H	Weight (lbs)	Input Current (120VAC, 60Hz)
MK110P	1820110	12	1	10	10	18AWG - 6'	16AWG - 6'	7" x 9" x 7-3/4"	6.5	1.8A
MK210P	1822110	12 / 24	2	5	10	18AWG - 6'	16AWG - 6'	7" x 9" x 7-3/4"	6.7	1.8A



NOTE: If batteries are connected in series for 12/24 - 24V, the series connection wire should be left in place during charging.

LIMITED THREE YEAR WARRANTY:

Johnson Outdoors Marine Electronics, Inc. warrants to the original purchaser that the purchaser's entire Minn Kota® battery charger is free from defects in materials and workmanship appearing within three (3) years after the date of purchase. Johnson Outdoors Marine Electronics, Inc. will, at its option, either repair or replace, free of charge, any parts found to be defective during the term of this warranty. Such repair or replacement shall be the sole liability of Johnson Outdoors Marine Electronics, Inc. and the sole remedy of the purchaser for breach of this warranty.

This limited warranty does not apply to chargers used commercially, nor does it cover normal wear and tear, blemishes that do not affect the operation of the charger, or damage caused by accidents, abuse, alteration, modification, misuse or improper care or maintenance. The cost of normal maintenance or replacement of parts which are not defective are the responsibility of the purchaser.

To obtain warranty service in the U.S., the charger and proof of original purchase (including the date of purchase), must be sent to Minn Kota®'s factory service center at 121 Power Drive, Mankato, MN 56001. Any charges incurred for service calls, transportation or shipping/freight to/from the Minn Kota® Factory Service Center, labor to haul out, remove, re-install or re-rig products removed for warranty service, or any other similar items are the sole and exclusive responsibility of the purchaser. Warranty service can be arranged by contacting the factory at: 1.800.227.6433, 1.507.345.4623 or fax 1.800.527.4464.

Chargers purchased outside of the U.S. must be returned prepaid with proof of purchase to Johnson Outdoors Canada, 4180 Harvester Road, Burlington, Ontario Canada L7L 6B6, Phone 1.905.634.0023.

Note: Do not return your Minn Kota® charger or parts to your retailer. Your retailer is not authorized to repair or replace them.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THESE LIMITED WARRANTIES. IN NO EVENT SHALL ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, EXTEND BEYOND ONE YEAR FROM THE DATE OF PURCHASE. IN NO EVENT SHALL JOHNSON OUTDOORS MARINE ELECTRONICS, INC. BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and/or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

"WARNING: This product contains chemical(s) known to the state of California to cause cancer and/or reproductive toxicity."



Look for us on the web at <http://www.minnkotamotors.com>