



## BATTERY MANAGER IV

Thank you for selecting this quality GRIOT'S product. Our **BATTERY MANAGER IV** uses state-of-the-art technology to maintain vehicle batteries at optimum charge and help revive sulphated batteries that are not performing optimally. Please read and understand all instructions before using the **BATTERY MANAGER IV**. Enjoy the best!

### BATTERY MANAGER IV FEATURES

- **Simple Touch Button Control Panel**  
Allows quick and easy set-up for each specific charging routine.
- **4-Stage Charging Process**  
The charger uses a proprietary 4-Stage charging process designed to optimally charge and maintain batteries. The charging process includes a soft start mode to properly charge deeply discharged batteries and is beneficial for the long-term health of your batteries. The final stage in the charging routine is a Maintenance Mode that allows the charger to be connected indefinitely to a battery and maintain a proper charge level.
- **Multiple Battery Compatibility**  
The charger will properly charge a wide variety of battery types, including Conventional, Maintenance Free, AGM, Gel Cell and Deep Cycle batteries.
- **Reverse Polarity Protection**  
Guards against reverse connections. Warning LED will light on control panel, the unit will emit an audible alarm and power will not be sent to output cables if a reverse connection is sensed.
- **Multiple Output Options**  
The charger comes complete with both DC output clips and ring terminals to allow a greater range of use and improved convenience. Purchase additional ring terminals for each of your vehicles to speed up charging set-up time and reduce hassle.
- **Smart Clamp Technology**  
The charger will send power to the output leads only when a proper battery connection is made.
- **Battery Fault Protection**  
Guards against shorted or otherwise compromised batteries. Situations that cause the fault condition include connecting to a battery with a voltage less than 3V, connecting to a battery with a voltage above 15V in 12V mode (7.5V in 6V mode), connecting to a battery with a shorted cell or a short-circuited battery or if the charger diagnoses an incorrect voltage selection.
- **Fully Enclosed Design**  
The charger utilizes a fully enclosed, IP65-compliant design, preventing dirt, dust and grime from entering the interior of the charger.

### PREPARING TO CHARGE BATTERY

1. If it is necessary to remove battery from vehicle to charge, always remove grounded terminal from battery first. Make sure all accessories in the vehicle are off, so as not to cause an arc.
2. Be sure area around battery is well ventilated while battery is being charged. Gas can be forcefully blown away by using a piece of cardboard or other non-metallic material as a fan.
3. Clean battery terminals with a mixture of baking soda and hot water. 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 manufacturer. This helps purge excessive gas from cells. Do not overfill. For batteries without cell caps, follow manufacturer's recharging instructions.
5. Study all battery manufacturer's specific precautions such as removing or not removing cell caps while charging and recommended rates of charge.
6. Determine voltage of battery by referring to vehicle owner's manual and make sure that output voltage.

### CHARGING A BATTERY THAT IS INSTALLED IN A VEHICLE

**CAUTION:** A marine (boat) battery must be removed and charged on shore. To charge it on board requires equipment specially designed for marine use.

**CAUTION:** A spark near the battery may cause it to explode. To reduce risk of spark near battery:

1. Position AC and DC cords to reduce risk of damage by hood, door, or moving engine part.
2. Stay clear of fan blades, belts, pulleys, and other parts that can cause injury to persons.
3. Check polarity of battery posts. POSITIVE (POS, P, +) battery post usually has larger diameter than NEGATIVE (NEG, N, -) post.
4. Determine which post of battery is grounded (connected) to the chassis.
5. a) For NEGATIVE GROUNDED vehicle, connect POSITIVE (Red) clip from the battery charger to the POSITIVE (POS, P,+) ungrounded post of the battery.  
b) For POSITIVE GROUNDED vehicle, connect the NEGATIVE (Black) clip from the battery charger to the NEGATIVE (NEG, N, -) ungrounded post of the battery. (This arrangement is usually found in pre-1970 foreign vehicles or pre-1970 farm tractors. This is a rare occurrence.)
6. Connect the remaining battery charger clip to the vehicle chassis or engine block, as far away from the battery as possible. Do not connect the clip to carburetor, fuel lines, or sheet metal body parts. Connect to a heavy gauge metal part of the frame or engine block.
7. When disconnecting charger; disconnect AC cord, remove clip from vehicle ground and then remove clip from battery terminal.
8. If power is lost the settings will have to be re-set if power is not restored within 15 minutes.
9. Refer to the Operating Instructions for information on setting selector switches.

### LOCATING THE BATTERY MANAGER

1. Locate the charger as far away from the battery as DC cables permit.
2. Never place the charger directly above the battery being charged; gases from the battery will corrode and damage the charger.
3. Never allow battery acid to drip on the charger when reading specific gravity or filling the battery.
4. Do not operate the charger in a closed area or restrict ventilation in any way.
5. Do not set a battery on top of the charger.
6. Locate the charger at least 18" above the floor.
7. Do not place the charger where rain, snow, or other moisture could drip on it.

**CAUTION:** 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.

### BATTERY MANAGER CONNECTION PRECAUTIONS

1. **CAUTION:** Connect and disconnect DC output clips only while the charger is disconnected from an AC outlet. Never allow clips to touch each other.
2. When hooking up charger, attach one clip to battery and the other to a point away from battery.
3. Always make battery connections prior to plugging charger into AC outlet. When making each connection, twist or rock clip back and forth several times to make a good connection and to reduce the risk of a clip slipping off and creating a spark. Do not twist or rock clip on the battery after the second clip connection is made.

### CHARGING A BATTERY OUTSIDE OF THE VEHICLE

**CAUTION:** A spark near the battery may cause battery explosion. To reduce risk of a spark near battery:

1. Check polarity of battery posts. POSITIVE (POS, P,+) battery post usually has a larger diameter than NEGATIVE (NEG, N,-) post.
2. Attach at least a 24" long, #6 gauge (AWG) insulated battery cable to NEGATIVE (Neg, N, -) battery post.
3. Connect POSITIVE (RED) charger clip to POSITIVE (POS, P, +) post of battery.
4. Position yourself and the free end of the cable (installed in step #2) as FAR away from the battery as possible. FACING AWAY FROM THE BATTERY, connect the NEGATIVE (Black) charger clip to the free end of the cable.

- When disconnecting charger, always do so in reverse sequence of connecting procedure and break first connection while as far away from battery as practical.

## OPERATING INSTRUCTIONS

Upon making a proper battery connection, plug the AC power cord into an AC receptacle. All unit LEDs will light momentarily, then only the LEDs corresponding to power ON and the default charging settings (12V, AGM) should stay lit. The charger is now in Standby Mode. If the Reverse Polarity Indicator LED (indicated by two arrows pointing towards each other) illuminates along with and audible "beep", disconnect from AC power supply immediately and determine the cause of the alarm. See "Battery Manager IV Features" for a list of conditions that might cause this alarm.

- Choose a battery voltage charge setting. The default setting is the 12V mode, which will apply to most charging applications. To charge in 6V mode, push the voltage button until the "6V" LED is illuminated.
- Choose a battery type setting. The default setting is AGM (corresponding to AGM and Gel Cell style batteries). To charge Standard and Maintenance Free flooded acid batteries, push battery type button until the "STD" LED is lit.
- Press the "START" button and the "ON" LED and "Charging" LED (indicated by an empty battery) will illuminate. The charger will automatically commence and complete the charging process. Note: If the Battery Fault LED illuminates (indicated by a slash diagonally through a circle), disconnect immediately, disconnect from AC power immediately and determine the cause of the alarm. See "Battery Manager IV Features" for a list of conditions that might cause this warning.
- When the charging process is complete, the "CHARGE COMPLETE" LED (indicated by a full battery) will illuminate. This indicates that the initial charging cycle is complete and the charger is now in Maintenance Mode, and will resume charging as needed to keep your battery in optimal condition.
- When you are finished with the charging process, disconnect AC power cord from AC outlet, then disconnect DC leads from vehicle ground and battery in the reverse sequence of the connection procedure.

## IMPORTANT SAFETY INSTRUCTIONS - READ THESE PRIOR TO CONNECTING BATTERY MANAGER IV

- Do not expose charger to rain or snow.
- Use of an attachment not recommended or sold by GRIOT'S GARAGE may result in a risk of fire, electric shock, or injury to persons.
- To reduce risk of damage to electric plug and cord, pull by plug rather than cord when disconnecting charger.
- An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and electric shock. If extension cord must be used, make sure:
  - That pins on plug of extension cord are the same number, size, and shape as those of plug on charger.
  - That extension cord is properly wired and in good electrical condition.
  - That the wire size is large enough for the length of cord as specified below.

<b>LENGTH OF CORD IN FEET:</b>	<b>25</b>	<b>50</b>	<b>100</b>	<b>150</b>
<b>AWG SIZE OF CORD:</b>	<b>18</b>	<b>18</b>	<b>16</b>	<b>14</b>

- Do not operate charger with damaged cord or plug.
- Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way; call GRIOT'S GARAGE Customer Service at 800-345-5789.
- Do not disassemble charger; incorrect reassembly may result in a risk of electric shock or fire.
- Monitor battery charger daily when using it to maintain battery for extended periods.
- WARNING - RISK OF EXPLOSIVE GASES.**
  - Working in vicinity of a lead-acid battery is dangerous. Batteries generate explosive gases during normal battery operation. For this reason, it is of utmost importance that each time before using your charger, you read this manual and follow the instructions.
  - To reduce risk of battery explosion, follow these instructions and those published by the battery manufacturer and the manufacturer of any equipment you intend to use in the vicinity of the battery. Review cautionary markings on these products and in the engine compartment.

## PERSONAL PRECAUTIONS

1. Someone should be within range of your voice or close enough to come to your aid when you work near a lead-acid battery.
2. Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
3. Wear complete eye protection and clothing protection. Avoid touching eyes while working near battery.
4. 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.
5. NEVER smoke, allow sparks or flame near batteries or the engine bay.
6. 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.
7. 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 a ring or other jewelry to metal, causing a severe burn.
8. Use charger for charging vehicle type batteries only. It is not intended to supply power to a low voltage electrical system other than in a starter-motor application. Do not use battery 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.
9. NEVER charge a frozen battery.

## CHARGER CARE & MAINTENANCE

**CAUTION:** Make sure charger is unplugged from electrical outlet before performing any maintenance. A minimum amount of care can keep your battery charger working and looking good for years.

1. Clean the clamps after each use. Wipe off any battery fluid that may have come in contact with the clamps to prevent corrosion. Battery fluid may be neutralized with a solution of water and baking soda.
2. Once a year, apply some grease to the exposed wires on the ends of the cables where the clamp is connected to prevent corrosion.
3. If needed, the case may be wiped clean with a soft cloth. There are no user-serviceable parts inside. For information concerning use, applications, or service, call GRIOT'S GARAGE Customer Service at 800-345-5789

## DISCLAIMER

GRIOT'S GARAGE is not responsible for any misuse of the **BATTERY MANAGER IV** for any injury or damage incurred to any person or object related to the **BATTERY MANAGER IV**.

## ANSWERS TO YOUR QUESTIONS

To order another **BATTERY MANAGER IV**, or for a complete selection of quality GRIOT'S GARAGE products, please write or call us toll-free at 800-345-5789. Or visit us at [www.griotsgarage.com](http://www.griotsgarage.com). Reorder item number 92217.

*Have fun in your garage!®*

GRIOT'S GARAGE, INC.  
3333 SOUTH 38<sup>TH</sup> STREET  
TACOMA, WA 98409  
**800-345-5789**  
**[www.griotsgarage.com](http://www.griotsgarage.com)**