

BatteryMINDer™

6 Volt Battery Charger/Maintainer/Conditioner

with PulseMode™ Circuit and AUTOFLOAT CONTROL™

Quick-Start Instructions for BatteryMINDer

Use ONLY after reading full Safety Instructions located inside.

1. Plug battery clip assembly (supplied) into mating plug at end of *BM* output cord OR attach Ring Terminal Assembly (supplied) to your battery's terminals (Red + Blue -)
2. Attach battery clips to posts or terminal clamps of battery (Red + Black -) (Green indicator will light when proper connection is made)
3. Plug *BM* into AC electrical outlet. (Red indicator lites up)
4. Allow 72 hours MAXIMUM (1 - 4 batteries) for Green indicator to blink (If Green indicator does not blink within 72 hours Press de-sulphation button) (blinking = full charge with battery in maintenance + desulphation mode) (blinking will continue indefinitely, until disconnected from battery)

Note: RED indicator will remain lit when plugged into live ac electrical outlet. It *should never go out*, unless outlet is switched off or *BM* has failed

IMPORTANT !

Read these special instructions before attempting to desulphate your battery.

HOW TO QUALIFY YOUR BATTERY

You have purchased the number #1 rated "Computer Chip" charger / maintainer / conditioner with both Auto-Float Control™ and the newest technological innovation Pulse Mode™ Circuitry. Although designed primarily for use with flooded electrolyte -maintenance type lead acid batteries, including marine deep cycle, it can be used effectively with ALL maintenance-free types as well. Please carefully follow these special instructions and the standard safety and operating instructions for both maximum safety and complete performance satisfaction.

Note: If your battery does not have a "resting"* voltage of **5.25 volts MINIMUM** it cannot be charged or de-sulphated. (*Resting voltage = Voltage in a battery that has not been charged or discharged within 8 hours MINIMUM).

It is extremely important that you determine the state of your battery's "Health" before attempting to re-charge and re-condition your battery. If any of your cells are shorted (no reading on the hydrometer tester) or the difference in charge level is greater than 0.50 SG between any 2 cells (= 2 ball difference using the hydrometer tester supplied), your battery cannot be properly re-charged / re-conditioned. Discard the battery in an appropriate, lawful manner.

Do not attempt to connect or charge ANY battery with the **BatteryMINDer** Charger / Maintainer / Conditioner before testing your battery in accordance with the following: Your battery must not be charged or dis-charged for a minimum of 10 hrs. Testing a battery which has not been at "rest" for 10 hrs. min. will result in inaccurate readings.

Maintenance / Maintenance Free lead acid batteries (with filler caps or manifold type covers)

CAREFULLY remove all 3 caps or both manifold type covers from your battery. Carefully check water / electrolyte level. If level is now or has ever been below top of plates, severe lead plate "Sulphation" has taken place. Significant re-charge / re-conditioning time (weeks to months) will be needed to re-store those plates to a condition were they can be expected to function normally. Refill each cell with Distilled Water Only to a level of 1/4" minimum over the top of the cell's plates. Recharge the battery using **BatteryMINDer** to ensure it is slowly and completely charged before determining its condition. If **Battery-MINDer** fails to "blink" within 72 hours, your battery may be to far gone to be re-conditioned. However, to be sure press the de-sulphation button to set the unit in the PulseMode. Allow battery to remain in this mode for a **minimum of 72 hrs.** before testing for "dead cells", using the special Hot / Cold calibrated Hydrometer Tester supplied. Here is what to do:

NOTE: Read Tester Instructions carefully for best most accurate readings.

Fill the Tester to a level sufficient to "float" all of the "balls". Note the number of balls which float in each of the 3 cells. If no balls float in a cell, you can consider the cell to be "shorted". Your battery is beyond the point of being properly re-charged or re-conditioned. Dispose of battery. If each cell "floats" 2 or more balls your battery can be re-conditioned. Simply leave **BatteryMINDer** connected to your battery at all times it is not in actual use, year-round. Your unit's special high frequency-current pulses will continue to bombard the crystallized sulfuric acid, which has become deposited on your battery's cell plates.

NOTE: You cannot over de-sulphate your battery.

Sealed, Maintenance Free, Gelled type lead acid batteries (without filler caps or manifold type covers)

If you cannot gain access to the interior of your battery due to its being sealed, you can still re-charge / re-condition your battery, but cannot test it properly before doing so. As a result you may be trying to "save" a battery that has gone beyond **BatteryMINDER's** or any other device's ability to bring it back. Before testing your battery you must let it "rest" for a minimum of 10 hrs. after fully charging it with your **BatteryMINDER**, i.e. do not use or charge the battery for a minimum of 10 hrs.

Charge your battery with your **Battery-MINDER** after reading REQUIRED SAFETY and OPERATING INSTRUCTIONS provided herein. If **Green** LED does not "blink" within the 72 hrs. maximum time period required, disconnect it and allow the battery to "rest" for a minimum of 10 hrs. Using a digital voltmeter and waiting the required 8 hrs. Minimum, check the "resting" (no load) voltage of your battery. If it does not show a reading of at least 6.2 volts your battery is probably at or near the end of its useful life and beyond the point of being successfully re-charged or re-conditioned. If it reads 6.3 volts or higher, your battery is "healthy" enough to be a candidate for re-conditioning.

Note: Green LED will continue blinking indefinitely until disconnected from battery.

Note: If your battery does not have a "resting"* voltage of 6.25 volts MINIMUM it cannot be properly charged or de-sulphated. Replace Battery
(*Resting voltage = Voltage in a battery that has not been charged or discharged within 10 hours MINIMUM)

After carefully reading ALL instructions, (both these and the standard operating and safety instructions), you have any questions or concerns, call Toll Free number 1-800 379-5579 and leave us a complete message explaining your problem or questions and the best time to reach you.
Thank you for purchasing our product and returning the warranty card enclosed.

Underwriters Laboratories (UL) REQUIRED SAFETY INSTRUCTIONS

1. Do not expose charger to rain or snow. It is designed to operate **ONLY INDOORS**
2. **USE** of any attachment not specifically recommended by the battery charger manufacturer for use with this exact model of charger may result in risk of fire and electric shock or injury to person.
3. An extension cord should not be used, unless absolutely necessary. Use of an improper extension cord could result in fire or electric shock. If extension cord must be used be sure:
 - a. Pins on plug of extension cord are the same number, size, & shape of plug on charger
 - b. Extension cord is properly wired and in good condition.
 - c. Wire size is large enough for AC ampere rating of charge as specified below: Length of cord, feet (meters) 25(7.6) 60(15.2) 100(30.5) 150(45.6) AWG Size 18
4. Do not use charger if it received a sharp blow, been dropped, or damaged in any way.
5. Charger contains no serviceable parts. If it fails for any reason, return to the address shown within for a free replacement under warranty.
6. To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning.
7. **WARNING - RISK OF EXPLOSIVE GASES. WHENEVER YOU WORK NEAR A LEAD ACID BATTERY IT 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 EXACTLY.

To reduce risk of battery explosion, follow these instructions and those published by the battery manufacturer and the manufacturer of any equipment you plan to use in the vicinity of the battery. Review cautionary markings on the products and the engine.

8. PERSONAL PRECAUTIONS when working with/near a lead acid battery.

- a. Someone should be in range of your voice or close enough to come to your aid when you work near a lead acid battery.
- b. Have fresh water and soap nearby in case battery acid contact skin, clothing, or eyes.
- c. Wear complete eye protection and clothing protection. Avoid touching eyes while working near battery.
- d. If battery acid does contact skin or clothing, wash immediately with soap and water. If acid entered the eye, immediately flood the eye with running water for at least 10 minutes and get help immediately.
- e. NEVER smoke or allow a spark of flame near battery or engine.
- f. Be extra cautious to reduce risk of dropping a metal tool or auto part onto battery. It might spark or short circuit battery or other electrical part that may cause an explosion.
- g. 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 the like to metal, causing a severe burn.
- h. Charger is designed to be used for recharging lead acid batteries

Never use it to power a low voltage electrical system, or for attempting to recharge dry cell batteries that are commonly used in house holds. These batteries may explode and cause injury to persons and damage property

NEVER CHARGE A FROZEN BATTERY OR ONE AT A TEMPERATURE ABOVE 123° F.

PREPARING TO CHARGE

- a. If necessary to remove battery from equipment to charge, always remove ground terminal first. Turn off all accessories in the vehicle, so as not to cause an arc.
- b. Be sure area around battery is well ventilated while battery is being charged. Gas vapors can be forcefully blown away by using a piece of non-metallic material as a fan.
- c. Clean battery terminals. Be careful to keep corrosion from contacting eyes.
- d. Add distilled water to each cell until battery acid reaches level specified by the manufacturer. This helps Purge excessive gas from cells. Do not overfill. For a battery with out cell caps, follow manufacturer's recharging instructions.
- e. Study all battery manufacturer's specific instructions such as removing cell caps while charging and recommended charge rates.
- f. Determine voltage of battery by referring to equipment owner's manual and make sure that charger output voltage is correct.

CHARGER LOCATION

- a. Make sure charger is as far away from battery as output cables permit.
- b. Never place charger directly above battery being charged; gases from battery will corrode and damage charger.
- c. Never allow battery acid to drip on charger when reading

- specific gravity or filling.
- d. Do not operate charger in a closed-in area or restrict ventilation in any way.
- e. Do not set battery on top of charger.

DC CONNECTION PRECAUTIONS

- a. Connect and disconnect DC output clips only after removing charger from outlet.
- b. Never allow clips to touch each other.
- c. Attach clips to battery posts and twist or rock back and forth several times to make good contact. This tends to keep clips from slipping off terminals and reduces risk of sparking.

FOLLOW THESE INSTRUCTIONS WHEN BATTERY IS INSTALLED IN EQUIPMENT (VEHICLE, PWC, BOAT, TRACTOR, ETC.) A SPARK NEAR BATTERY MAY CAUSE BATTERY TO EXPLODE. TO REDUCE RISK OF A SPARK NEAR BATTERY:

- d. Position DC output cord to reduce risk of damage by hood, door, covers, or moving engine parts.
- e. Stay clear of fan blades, belts, pulleys, and other parts that can cause injuries.
- f. Check polarity of battery posts. POSITIVE (POS, P, +) usually has a larger diameter than NEGATIVE (NEG, N, -) POST.
- g. Determine which post of battery is grounded (connected) to the chassis of equipment. If negative post is grounded see Item N. If positive post is grounded see item P. N. For negative grounded equipment, connect POSITIVE (RED) clip from charger to POSITIVE (POS, P, +) ungrounded post of battery. Connect NEGATIVE (BLACK) clip to vehicle chassis or engine block away from battery. Do not connect clip to carburetor, fuel lines, or metal body parts. P. For positive ground equipment, connect NEGATIVE (BLACK) clip from charger to NEGATIVE (NEG, N, -) UNGROUNDED POST OF BATTERY. Connect POSITIVE (RED) CLIP to chassis or engine block away from battery. Do not connect clip to carburetor, fuel lines, or sheet metal body parts. Connect to heavy gauge metal part of frame or engine.
- h. When disconnecting charger, disconnect charger from AC outlet, then remove clips from vehicle chassis, and battery posts.

Operating instructions for charge information.

FOLLOW THESE STEPS WHEN BATTERY IS OUTSIDE OF VEHICLE OR EQUIPMENT.

A SPARK NEAR THE BATTERY MAY CAUSE BATTERY EXPLOSION. TO REDUCE RISK OF A SPARK NEAR BATTERY:

- a. Check polarity of battery posts. POSITIVE (POS,P,+) usually has a large diameter than NEGATIVE (NEG, N, -) battery post.
- b. Attach at least a 24 inch long 6 gauge (AG) insulated battery cable to NEGATIVE (NEG -), BATTERY POST.
- c. Connect (RED) charger clip to (POS+) post of battery
- d. Position yourself and free end of cable as far away from battery as possible, then connect NEGATIVE (BLACK) charger clip to free end of cable.
- e. Do not face battery when making final connections
- f. When disconnecting charger, always do so in reverse sequence of connecting procedure and break first connection while as far away from battery as is practical.
- g. A marine (boat) battery must be removed and charged on shore. To charge it **on board** requires equipment specifically designed for marine use.

MAINTENANCE INSTRUCTIONS

DO NOT ATTEMPT TO REPAIR. UNIT IS NOT DESIGNED TO BE REPAIRED. ALL SERVICING SHOULD BE PERFORMED BY VDC Electronics, Inc. PERSONNEL.

GENERAL INFORMATION

It is possible to re-charge a "dead" or shorted cell battery using a high current i.e. 5 Amp + charger which "forces" the battery to accept a "temporary false charge". Don't be fooled by a voltmeter or quick load test. Only when a battery has been put back into service and a real life load has been put on it, will it become apparent that the bat-

tery is not "healthy" and fully re-charged. It will collapse under the load and perform much like a battery that was not fully charged in the first place. Buy a good quality replacement battery and take proper care by keeping your **BatteryMINDER** connected to your battery at all times - (this means all year round) it is not in use for 4 days or more. Remember your **BatteryMINDER** uses less than a dime's worth of electricity per month running 24 hrs. per day and it is warranted for five (5) years.

OPERATING INSTRUCTIONS:

DO NOT ATTEMPT TO OPERATE CHARGER BEFORE READING AND FULLY UNDERSTANDING ALL SAFETY INSTRUCTIONS AS OUTLINED PRIOR. CALL OUR TOLL FREE TELEPHONE NUMBER IF YOU HAVE ANY QUESTIONS WHATSOEVER.

1. **BatteryMINDER** is designed to fully charge your battery(s), but should be left connected to the battery at all times the battery is not in use. Failure to maintain the battery in a full charge condition at all times will cause the battery to sulphate, seriously limiting its life and performance. In addition, this ensures you will always have a fully charged battery. The amount of electricity it uses when the battery is fully charged is less than 10¢ month even when electricity costs as much as 14¢ /kWh. Compare this cost to needing to replace a battery after only one season of use due to sulphation caused by improper charging and/or storage.

2. After carefully reading and fully understanding the safety instructions, provided in these instructions, each time you wish to store your battery or whenever you will not be using it for a 4 days or more, simply attach **BatteryMINDER** as described in the safety instructions and let it do its job.

NOTE: It is normal for **BatteryMINDER** to feel warm to the touch during the charging cycle, especially with older and/or large batteries. Unit will begin to cool, when it nears the end of the charging mode and during the entire float maintenance + de-sulphation mode.

The Green LED de-sulphation + maintenance indicator will light when you have properly attached unit's clips to the battery posts ie: **Red** marked clip to (+) post and **Black** marked clip (-) post of battery. LED will begin to blink when battery has been fully charged and is now in the Auto-Float Maintenance + de-sulphation mode. The **Red** LED will come on when the unit is plugged into live 120 volt AC electrical outlet. It will remain on throughout the entire charging mode as well as during the float maintenance mode. **SHOULD THE Red indicator NOT REMAIN ON, CHECK TO BE SURE UNIT IS PLUGGED IN AND OUTLET IS STILL LIVE. If outlet is live and Red LED does not light, unit is NOT PROPERLY CHARGING or MAINTAINING battery correctly. Disconnect unit and return immediately to VDC Electronics for inspection / repair or replacement.**

NOTE: The Green LED indicator will light even when unit is not connected to a live outlet, as it is activated by the battery's own voltage. Do not leave **BatteryMINDER** connected to the battery without electrical power. The battery energy used to light the LED will cause the battery to discharge over time.

IMPORTANT: It is recommended to charge large capacity deeply discharged batteries with your standard charger before attaching **BatteryMINDER** to minimize the time it will take for **BatteryMINDER** to enter the Desulphation Maintenance mode. If the Green LED does not start blinking within 72 hours after unit has been attached to a fully charged battery the BATTERY MAY HAVE A SHORTED CELL OR IS TOO HIGHLY SULPHATED TO ACCEPT A PROPER CHARGE.

DE-SULPHATION BUTTON

If **BatteryMINDER** is unable to bring the battery up to a full charge voltage, it will not "blink" and will remain in the charge mode (solid

Green), rather than going into the "Auto-Float/PulseMode" (blinking Green). Your battery may not be able to be properly charged, or conditioned. However, by pressing the button the unit will go into the pulse mode / desulphation stage. You may then be able to save your battery. Leave your battery connected to **BatteryMINDER** for a minimum of 1 week before re-testing it.

Note: If your battery does not have a "resting"* voltage of **6.25 volts MINIMUM** it cannot be properly charged or de-sulphated. **Replace Battery** (*Resting voltage = Voltage in a battery that has not been charged or discharged within 10 hours MINIMUM)

IMPORTANT: **BatteryMINDER** will have **no electrical output unless** it is connected to a "healthy" battery. Testing it with a Volt or Amp meter, without the unit being connected across a good battery, will result in a false reading. If you experience any problems or are not sure of how to properly use/connect your **Battery-MINDER**,

please call our Toll-Free Technical Support line, 800-379-5579 number and leave us a detailed message explaining your problem.

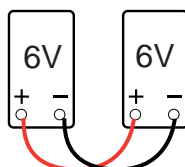
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Use your **BatteryMINDER** on your battery at ALL times (winter, summer, spring or fall) that your battery will not be used for 4 days or more. This will prevent new Sulphation from taking place and will lead to dramatically increased battery life and performance. DO NOT REMOVE BatteryMINDER from your battery unless you place the battery back in service.

FAILURE TO KEEP **BatteryMINDER** CONNECTED TO YOUR BATTERY AT ALL TIMES THE BATTERY IS NOT IN SERVICE WILL AFFECT PERFORMANCE CLAIMS.

CHARGING MULTIPLE BATTERIES

PARALLEL CONNECTION



Batteries of the **same type only** (engine starting, deep cycle, sealed, gelled, agm, maintenance-free) can be charged at the same time in parallel (+ to +, - to -).

Connect each 12v battery to one another using 18 – 20 gauge (lamp cord type) insulated wire, stripped at the points you wish it to be in electrical contact with the posts of each battery. VDC Electronics, Inc. does not provide any type of wire harness to accomplish this due to the many variations in size and terminal configuration.

Simply attaching **BatteryMINDER** to the + and – terminals of the **same** 6v battery. NOTE: If **BatteryMINDER** does not start blinking within 72 hours of the time you attached it to fully charged batteries (1 - 4) YOU MUST DISCONNECT ONE OR MORE OF THE BATTERIES UNTIL BatteryMINDER begins to blink, or press the de-sulphation button to begin de-sulphating batteries. Failure to do so will cause the unit to possibly burn out, voiding the warranty.

ONE (1) YEAR 100% UNCONDITIONAL MONEY BACK GUARANTEE:

BatteryMINDER is Guaranteed to perform as claimed or WE will refund your full purchase price, including all taxes, shipping or handling cost applicable to the purchase. Unit must be returned with Proof of Purchase directly to VDC Electronics, Inc., NOT TO THE DEALER FROM WHICH IT WAS PURCHASED.

5 YEAR LIMITED WARRANTY

(This limited warranty is not transferable) VDC Electronics, Inc. warrants this product for FIVE years from date of purchase at retail against defective material or workmanship. It will be repaired or replaced at no charge providing it is returned to VDC Electronics, Inc., freight prepaid together with proof of purchase. We make no warranty other than this limited warranty and expressly exclude any implied warranty including any warranty for consequential damages.

Return unit: to: VDC Electronics, Inc., 83 Cedar Lane, P.O. Box 5537, Englewood, NJ 07631-5537.

VDC ELECTRONICS, INC.

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