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# BC-500 BATTERY CHARGER

## Instruction Manual

**BEFORE USING OUR BATTERY CHARGER, PLEASE READ ALL INFORMATION CONTAINED IN THIS MANUAL. KEEP THIS MANUAL IN A SAFE PLACE AS YOU MAY NEED TO USE IT LATER.**

**Attention :**

**To all users of this device - please follow the safety and maintenance instructions in this manual. Read the caution markings on the charger, the manual, and the gift box.**



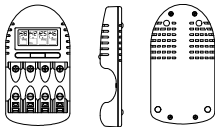
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## **INTRODUCTION:**

Congratulations on purchasing the BC-500 charging unit. This device provides quick and efficient charging of "AA" and "AAA" rechargeable NiMH or NiCd batteries. The BC-500 offers several charging functions as well as individual LCD displays for the charging compartments. The BC-500 charging unit is reliable, user-friendly and ideal for use in the home, office or while travelling. We hope you enjoy your new BC-500 charger.

## **The Charging unit**



## **CAUTION:**

- The charger is restricted to charging NiCd and NiMH

rechargeable batteries only. The charger will not charge ZnMn, NiZn or Li-ion batteries. Never use this device to charge other types of batteries, such as alkaline, lithium, carbon zinc battery or any other type of battery that is not specified.

- The charging unit shall only be used at normal indoor room conditions.
- Always follow the charging instructions for the rechargeable battery.
- Never use other kinds of power cables or AC wall adaptors apart from those originally supplied with the charging unit.
- The rechargeable battery(s) may become hot during charging. Take extra care when removing the battery after charging.
- Unplug the charging unit from the power source when it is not in use.

**FEATURES (Charging unit):**

- Roughly 500mA charging current.
- Individual LCD display for different compartments.
- Ability to charge both “AA” and “AAA” rechargeable batteries

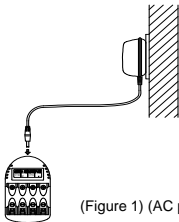
simultaneously.

- Minus delta voltage (-dV) detection for charge termination.
- Defective battery detection.
- Discharge mode (first discharging and then charging) to remove memory effect of rechargeable batteries.
- Test function to check the capacity of rechargeable batteries.
- The charging/discharge/test function can be launched independently and simultaneously for each rechargeable battery in the compartments.
- The LCD of the charger displays the operating status of the different modes.
- Trickle charging is available after the rechargeable battery is fully charged.

## **INVENTORY OF CONTENTS**

1. Charging unit.
2. AC wall adaptor.
3. Instruction Manual.
4. 2 x AA Rechargeable batteries
5. Car plug adapter.

## **START CHARGING BATTERIES**



After the AC wall adaptor or DC car power adaptor has been plugged into an appropriate power source (Figure 1), insert a rechargeable battery into the charging unit and plug the DC jack into the battery charger. After about 5 seconds the status will be displayed, along with the battery voltage (example, "1.38V") Then the "CHARGE" sign will be shown on the LCD.

(Figure 1) (AC power adaptor shown)

## OPERATING MODES OF THE CHARGING UNIT

The charging unit provides three operating modes:

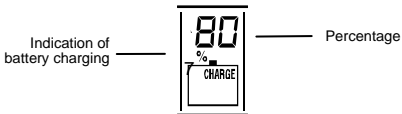
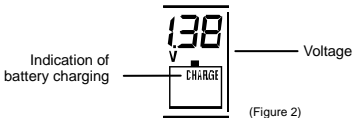
1. **(CHARGE)** – to charge up the rechargeable battery. Automatically switches to trickle charge after rechargeable battery is full.
2. **(DISCHARGE)** – to discharge the rechargeable battery then charge it for minimizing the memory effect.

3. **(TEST)** Check the rechargeable battery capacity in Ah.

### CHARGE MODE

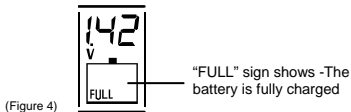
When in this mode, the unit charges the rechargeable battery(s). It will automatically switch to trickle charging after the rechargeable battery is fully charged.

During the charging process, the display will show the "CHARGE" sign on the LCD. It will also show alternate between the percentage (Figure 3) of the battery charged, and the voltage (Figure 2) of the battery.



(Figure 3)

Once the battery is full, the voltage will display the “FULL” sign (see Figure 4).



The trickle charging then starts providing around 5% of the charging current to keep the rechargeable batteries full.

The estimated charging time of the different battery sizes is tabulated in Table 1.

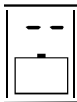


<b>Table 1. Charging Time with Two Types of Battery Size</b>			
Size of battery	Battery Capacity	Charging current (mA)	Estimated charging time
AA	2600mAh	around 500mA	~6 hrs
AAA	1000mAh		~2 hrs

**Notes:**

- The default charging current is around 500mA.
- The actual charging current of rechargeable batteries depends on their condition and is controlled by the charger. It is not user selectable.
- In the case that the power source terminates, the charger will reset. Once the power source is back to normal, the battery(s) will be treated as newly installed battery(s). For a proper reset, unplug the DC jack and wait 5 seconds before plugging it back into the charger.

- When the AC wall adaptor is first plugged into the power source, all the segments light up momentarily and then the version number of the charger (for example “48”) is displayed.
- If no batteries are in the unit, the “--” sign is displayed (see Figure 5).



“--” is displayed when no battery(s) are in the charging unit.

(Figure 5)

- IF ATTEMPTING TO RECHARGE ALKALINE OR CARBON BATTERIES, IT MAY CAUSE RUPTURE, EXPLOSION OR THE LEAKAGE OF HAZARDOUS LIQUIDS.
- During the charging process, the “CHARGE” sign is displayed if **any** rechargeable batteries are placed into the unit. It is the responsibility of the user to make sure that the batteries are either NiCd or NiMH type and **not alkaline or carbon batteries.**

- Carbon or Alkaline batteries may cause the charger to display the “DEFECT”. These types of batteries are NOT suitable for this charger.

### **DEFECT INDICATOR**

The “DEFECT” indicator will flash (Figure 6) for a while on the LCD while the charger detects the battery condition. If a defective battery condition is detected, the “DEFECT” sign will remain on until the defective battery(s) are removed.

**Warning:** This charger will not necessarily recognize all types of defective batteries. Owner discretion is required before attempting to charge batteries of any condition.

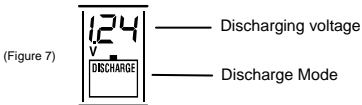


If “DEFECT” is displayed, a bad battery has been placed into the charging unit.

(Figure 6)

## DISCHARGE MODE

To select the Discharge Mode, press the MODE key for 3 seconds after the status of the batteries is displayed. Discharge mode will first discharge the battery, then charge it. When discharging, the "DISCHARGE" sign and battery voltage (Figure 7) will be shown on the LCD.



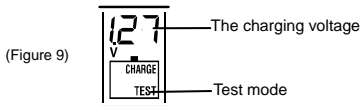
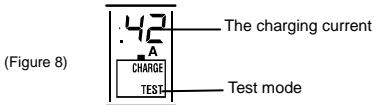
After fully discharging the battery(s), they will be re-charged again. The display of voltage and percentage will alternate on the LCD. Once the battery is full, the voltage will be displayed with the "FULL" sign. The charger will switch to trickle charge with around 5% of the charging current to keep the rechargeable batteries full.

## TEST MODE

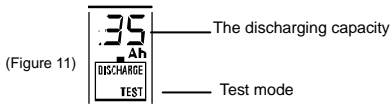
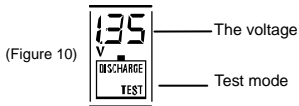
Press the MODE key for 5 seconds after the status of the batteries is displayed, and the Test mode can be selected. In Test mode the

rechargeable batteries will first be fully charged and then discharged to determine the battery(s) capacity(s). They are then fully charged again.

During the first charging cycle, the display of current (Figure 8) and voltage (Figure 9) will alternate on the LCD.

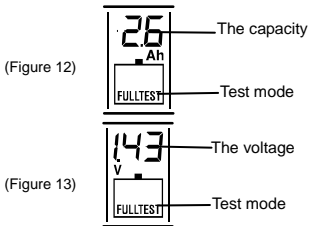


When in the discharging stage, the voltage (Figure 10) and discharging capacity (Figure 11) are displayed alternately.



During the second charging cycle, the voltage and the total capacity are displayed alternately.

When the rechargeable batteries are fully charged, the capacity (Ah) (Figure 12) and the voltage (V) (Figure 13) will be shown alternately with "FULLTEST" displayed on the LCD.



**Note:** When any one of the batteries is in the test mode, do not change the other battery(s). To test additional battery(s), you must remove and reinstall the testing batteries and then reset the mode.

## **TRICKLE CHARGING**

After the rechargeable battery is fully charged, the charger will give a small amount of current to the rechargeable batteries to maintain the fully charged level. This stage is automatically launched after the rechargeable batteries are fully charged and kept in the charging unit. The "FULL" or "FULLTEST" sign will be displayed on the LCD according to the mode user selected.

## **CARE AND MAINTENANCE:**

- Extreme temperatures, vibration and shock should be avoided as these may cause the damage to the unit.
- When cleaning the displays and casings, use a soft damp cloth only. Do not wet the exposed metal part of the charging unit. Do not use solvents or scouring agents as they may mark the LCD and casing.
- Do not spill water on the charging unit.
- Do not make any repair attempt to the units. Take it back to its original point of purchase for repair by a qualified engineer. Opening and tampering with the units may invalidate its warranty .
- Do not expose the unit to extreme and sudden temperature changes. This may damage the electronic parts of the unit.
- Do not leave unattended while powered, especially in a vehicle.



## **SPECIFICATIONS:**

- Input voltage for AC/DC adapter: 110V AC ~ 240V AC
- Input voltage for DC car adaptor: 12V DC
- Input voltage for Charger Unit: 12V DC (use supplied adaptors only)
- Charging current: Approximately 500mA (each battery)
- Max charging capacity (capacity of rechargeable batteries): 3000mAh
- Dimensions (L x H x W) - Charging unit: 2.60" x 4.87" x 0.88" (66 x 123.8 x 22.3 mm)

## **LIABILITY DISCLAIMER:**

- The manufacturer and supplier will not accept any responsibility on the improper or incorrect use that makes any consequence occur.
- Any performance of repairs or alternations by any person other than the original supplier will invalidate the warranty.
- This product is designed to be used only by people who have read and understood this instruction manual.
- The specifications of this product may be subject to change without any prior notice.
- This product is not a toy. Keep it away from children.
- User cannot reproduce any part of this manual without the written consent of the manufacturer.

## **ATTENTION – WARNINGS AND SAFETY INSTRUCTIONS!**

***Please carefully read the following important safety instructions:***

- As stated above, only use NiCd or NiMH rechargeable batteries.
- The unit is for indoor use only. Do not expose it to humidity. Do not place it in water or submit it to rain and/or snow. Do not store or use it near extreme heat. Keep batteries away from fire.
- Do not use any accessory not supplied with the charger. The user should never use any power cable or transformer other than those originally supplied with the charging unit.
- Disconnect the AC/DC adapter when the unit is not in use.
- Do not leave the charger unattended while powered, especially in a vehicle.
- Do not operate the charger if it has received a blow or has been subject to any damage.
- Do not use the battery charger any purposes other than the one originally intended by the manufacturer.
- Do not open or/and disassemble the charger. Such handling may result in the risk of electric shock or fire.
- User can reset the function of the product that is subject to the electrostatic discharge disturbance and surge. Please follow the instruction described in this manual to reset the function for normal operation.

## **WARRANTY**

La Crosse Technology ®, Ltd provides a 1-year limited warranty on this product against manufacturing defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased and used in North America and only to the original purchaser of this product. To receive warranty service, the purchaser must contact La Crosse Technology ®, Ltd for problem determination and service procedures. Warranty service can only be performed by a La Crosse Technology ®, Ltd authorized service center. The original dated bill of sale must be presented upon request as proof of purchase to La Crosse Technology ®, Ltd or La Crosse Technology ®, Ltd's authorized service center.

La Crosse Technology ®, Ltd will repair or replace this product, at our option and at no charge as stipulated herein, with new or reconditioned parts or products if found to be defective during the limited warranty period specified above. All replaced parts and products become the property of La Crosse Technology ®, Ltd and must be returned to La Crosse Technology ®, Ltd. Replacement parts and products assume the remaining original warranty, or ninety (90) days, whichever is longer. La Crosse Technology ®, Ltd will pay all expenses for labor and materials for all repairs covered by this warranty. If necessary repairs are not covered by this warranty, or if a product is examined which is not in need or repair, you will be charged for the repairs or examination. The owner must pay any shipping charges incurred in getting your La Crosse Technology ®, Ltd product to a La Crosse Technology ®, Ltd authorized service center. La Crosse Technology ®, Ltd will pay ground return shipping charges to the owner of the product to a USA address only.

Your La Crosse Technology ®, Ltd warranty covers all defects in material and workmanship with the following specified exceptions: (1) damage caused by accident, unreasonable use or neglect (including the lack of reasonable and necessary maintenance); (2) damage occurring during shipment (claims must be presented to the

carrier); (3) damage to, or deterioration of, any accessory or decorative surface; (4) damage resulting from failure to follow instructions contained in your owner's manual; (5) damage resulting from the performance of repairs or alterations by someone other than an authorized La Crosse Technology®, Ltd authorized service center; (6) units used for other than home use (7) applications and uses that this product was not intended or (8) the products inability to receive a signal due to any source of interference.. This warranty covers only actual defects within the product itself, and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.

LA CROSSE TECHNOLOGY®, LTD WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR MALFUNCTION OF THIS PRODUCT. THIS PRODUCT IS NOT TO BE USED FOR MEDICAL PURPOSES OR FOR PUBLIC INFORMATION. THIS PRODUCT IS NOT A TOY. KEEP OUT OF CHILDREN'S REACH.

This warranty gives you specific legal rights. You may also have other rights specific to your State. Some States do not allow the exclusion of consequential or incidental damages therefore the above exclusion of limitation may not apply to you.

For warranty work, technical support, or information contact:

La Crosse Technology®, Ltd  
2809 Losey Blvd. South  
La Crosse, WI 54601  
Phone: 608.782.1610  
Fax: 608.796.1020

To contact Customer Support / Warranty Work by email :  
[www.lacrossetechnology.com/support/](http://www.lacrossetechnology.com/support/)

La Crosse Technology ® on the Web: [www.lacrossetechnology.com](http://www.lacrossetechnology.com)

## **FCC disclaimer**

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

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