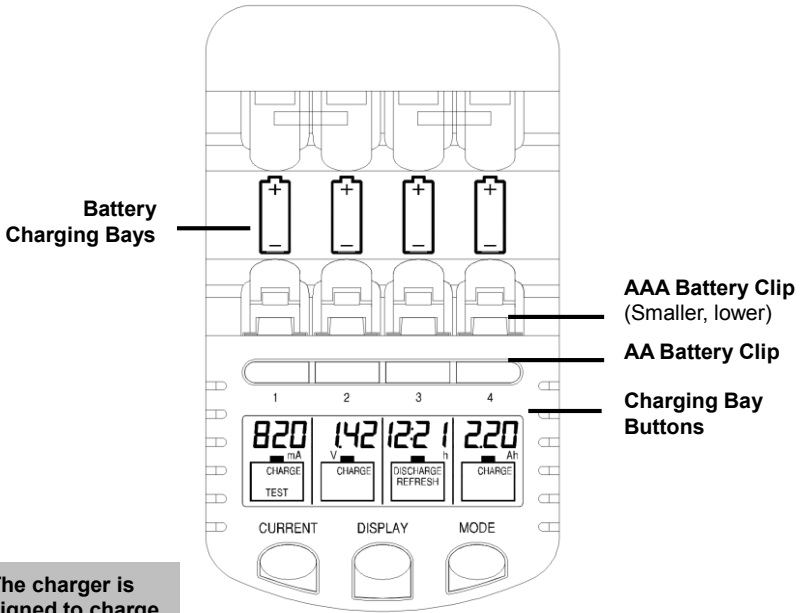
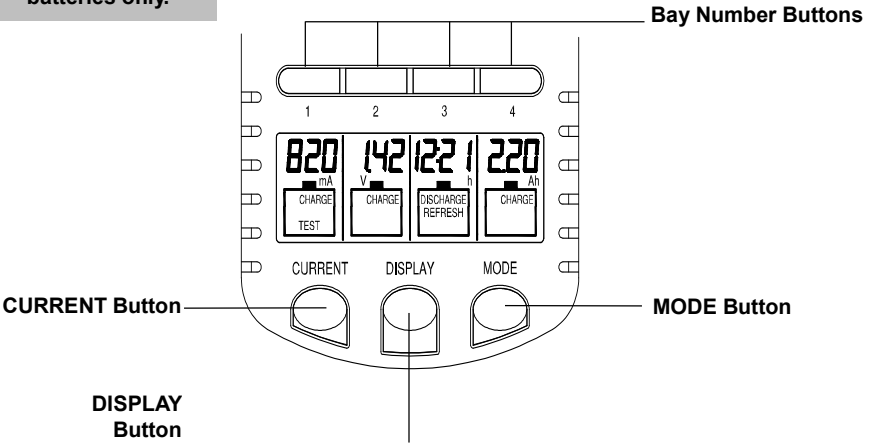


Alpha Power Battery Charger



The charger is designed to charge NiCd and NiMH rechargeable batteries only.

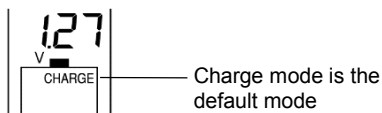


Get Started

Step 1: Plug the +3.0V 4A AC cord to an outlet then into the battery charger.

Step 2: Insert the battery/batteries to be charged within 8 seconds. "Charge" (default mode) and the battery voltage will show.

Step 3: Allow charger to sit for several hours to charge the batteries.



Change Operation Mode and/or Charging Current

1. Hold then press and release the **MODE** button within 8 seconds of inserting batteries to change modes. (Charge, Discharge, Refresh or Test can be selected).
2. Press the **CURRENT** button within 8 seconds of the last action to select the charging current. (200, 500, 700 or 1000 mA may be selected).

Note: 1500 & 1800 mA can only be selected if one or two batteries only are charged (bays 1 & 4 only).

3. After 8 seconds from last button press, the display will blink once and the batteries will start charging.

Note: The charging current can no longer be changed. You can reset the current by taking out all the batteries out and repeat the above steps

4. Press the **DISPLAY** button to view various display modes.

Stage in Charge mode	Various displays (toggled by pressing DISPLAY button)			
	Voltage (V)	Current (mA)	Time (hh:mm)	Capacity (mAh/ Ah)
During charging	Instantaneous battery voltage	Charging current	Charging time elapsed	Accumulated capacity
Full stage		Trickle charging current		

Note: Although the individual charging bays can be operated in different modes, the charging current of the second, third and fourth charge bays cannot be set higher than that of charging bay 1.

Operating Modes (Charge, Discharge, Refresh, Test)

Regardless of operation mode, the batteries will end up fully charged.

- **Charge:** Charge up the rechargeable battery (it will automatically switch to trickle charge after rechargeable battery is full).
- **Discharge:** Discharges the rechargeable battery then charges it one time to minimize any memory effect.
- **Refresh:** Batteries will be discharged and recharged up to 20 times or until the charger cannot *remove* additional charge. The battery will receive a final charge and has reached its capacity. For old rechargeable batteries or those have not been used for a long times, refreshing may bring the rechargeable battery back to the optimum condition.
- **Test:** Batteries are charged to full, then discharged to measure capacity, then recharged to full. Capacity is measured in Ah/mAh.

Note: In Discharge, Refresh and Test modes, the discharge current will be half of charging current selected.

Trickle Charging

- After the rechargeable battery is fully charged in any of the operating modes, the charger will give a small amount of current to the rechargeable batteries to maintain the fully charged level.
- Trickle charge is automatically launched when rechargeable batteries are fully charged and kept at the charging unit.
- The signal "Full" will be displayed on the LCD.

Charge four batteries with different modes at the same time

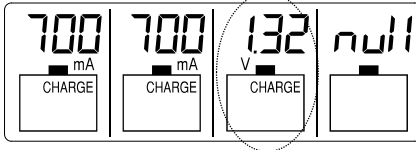
Example: Two batteries at charge mode, one at discharge mode and one at test mode.

1. Plug the AC power cord to the power source.
2. Insert the two batteries for charging in bays 1 & 2
3. "**Charge**" will be displayed in the LCD as Charge mode is the default mode.
4. Within 8 seconds:
 - Press the **CURRENT** button to select the charging current at 200, 500 or 700 mA.
 - After 8 seconds, the display will blink once to confirm and end changes.
5. Insert the third battery for "Test" in bay 3.
6. Within 8 seconds:
 - Press the **BAY 3** button. The No. 3 display will flash.
 - Press the **MODE** button to select the "**Test**" mode.

Note: Press the **BAY 3** button before pressing the **MODE** button; or the mode of all bays will be changed at the same time.

- Press the **CURRENT** button to select the charging current in the test mode: 200, 500 or 700 mA.

- After 8 seconds, the display will blink once to confirm and end changes. — The No. 3 display will flash after the bay button No. 3 is pressed

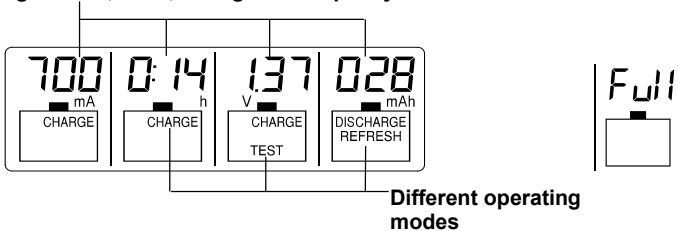


7. Insert the fourth battery for "Refresh" into bay 4.
 - Press the **BAY 4** button. The No. 4 display will flash:
 - Press the **MODE** button to select the "**Refresh**" mode.

Note: Press the **BAY 4** button before pressing the **MODE** button; or the mode of all bays will be changed at the same time.

- Press the **CURRENT** button to select the discharge current in the refresh mode: 100, 250 or 350 mA.
- After 8 seconds, the display will blink once to confirm and end changes.

Different display modes are exhibited:
Charging current, Time, Voltage and Capacity

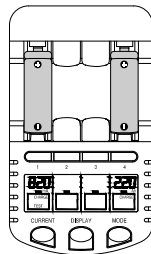


8. The "Full" sign will be displayed once the battery is fully charged from any operating mode.

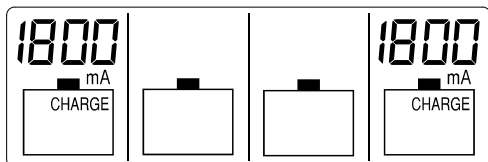
Charging 2 batteries at charging current of 1500 or 1800 mA

1. Plug the AC power cord to the power source.
2. Insert the two batteries within 8 seconds to compartments 1 & 4 only:

Charging current can be set at 1500 or 1800mA when only two batteries are charged in compartments 1 and 4.



3. "Charge" will be displayed in the LCD as Charge mode is the default mode.
 - Press the **CURRENT** button to select the charging current at 1500 or 1800 mA
 - After 8 seconds, the display will blink once to confirm and end changes.



This display will blink once and charging starts

Once charging has started, the current can no longer be changed. The user can then change the current only by taking out all the batteries out and repeating the above steps.

4. "Full" sign (or trickle charge current) will be displayed once the battery is fully charged.

Determine Current Battery Voltage

1. Insert the battery into the charger.
2. Press and release the **DISPLAY** button until V (voltage) and a number show in the display.

3. The number will be the current voltage of the battery.

Note: This is not the capacity of the battery but only the current voltage. To check capacity use the Test mode.

Determine Battery Capacity

The battery charger determines the capacity of a battery by counting the amount of power **removed** from a fully charged battery.

During the Test mode the rechargeable batteries will be:

- Charged fully
- Discharged to determine the battery capacity
- Charged fully again for use.
- The discharge capacity in (mAh) or (Ah) will be estimated and shown after the discharging ends.

Note: Once the discharge cycle is done, the discharge capacity reading will not change as the battery is fully charged again.

TEST MODE: Insert the battery for "Test" into the charge bay.

Within 8 seconds:

1. Press the **BAY** button. The corresponding will flash.
2. Press the **MODE** button to select the "Test" mode.
3. Press the **CURRENT** button to select the charging current in the test mode: 200, 500 or 700 mA.
4. After 8 seconds, the display will blink once to confirm and end changes.
5. The discharge capacity in (mAh) or (Ah) will be estimated and shown after the discharging ends.

TEST MODE Current

User-selected Charging current	200 mA	500 mA	700 mA
Thereafter Discharging current	100 mA	250 mA	350 mA

When to Discharge/Refresh Batteries

1. If you use a radio or camera for short times then recharge the batteries, it is best to use the Discharge/Refresh cycle occasionally to refresh the battery.

Note: Discharge current will be half of charging current selected.

2. Old rechargeable batteries that do not seem to be charging should be refreshed. The Discharge/Refresh cycle will discharge then charge the battery up to 20 times or until the charger cannot remove more capacity from the battery in discharge mode, it will charge the battery full, and complete the refresh cycle.

Note: Discharge works best after the batteries have been used under load at least 5-10 times.

DISCHARGE MODE Current

User-selected Discharging current	100 mA	250 mA	350 mA
Thereafter Charging current	200 mA	500 mA	700 mA

New Batteries do not show Full Capacity & Charger says FULL.

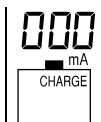
- Rechargeable batteries improve capacity over time.
- Charge batteries before their first use or after a long storage.
- Then, use the batteries in a device (under load), charge them, use them, charge them, 5-10 times before "refreshing" the batteries.

000 on the display

- If you are looking at Time Elapsed (h) and you just put batteries in, you will see 0.00.
- When an overheating condition occurs (usually due to too high of a charging current selected), the

charging will be stopped immediately and the display will show "000 mA".

- The charging process will only resume once the temperature of the rechargeable batteries drops to a safe level.
- If overheat conditions continue to occur, the rechargeable batteries shall be taken out to cool down and then charged at a lower current.



When the battery is overheated the charging ceases automatically. "000 mA" will be displayed.

Display Readings

Milliamp: "mA" is the charging current or speed of charge in that charge bay.

Milliamp hours: "mAh" is the capacity of the battery or the amount of charge added to a battery.

- If a 2600mAh capacity battery is already half full when you charge it you will not add 2600mAh of capacity to the battery.

Amp hours: "Ah" is the capacity of the battery or the amount of charge added to a battery.

- When the battery charger shows values above 1999mAh, it changes to Amp hours.
- When the mAh (Milliampere hour) reaches 2000 the display switches to Ah (Ampere hour) by moving the decimal point.
- One mAh is 1/1000 of an Ah.

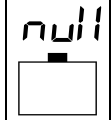
Time elapsed: "h". Shows the charging time.

Voltage: "V". Measures battery voltage.

NULL: Will show when:

- No battery is in the charging bay.

- The battery is below .9 volts and the charger thinks the battery is damaged so will not charge it.
- You may want to invest in a small charger/holder that will bring the battery back above .9v when attached for 20-30 seconds.
- The battery can then be charged in our charger.



FULL: Will show when the battery has completed its charging cycle. The FULL display may alternate with a trickle charge display.

Various displays in Charge Mode				
Stage in Charge mode	Various displays (toggled by pressing DISPLAY key)			
	Voltage (V)	Current (mA)	*Time (hh:mm)	Capacity (mAh/ Ah)
During charging	Instantaneous Battery voltage	Charging current	Charging time elapsed	Accumulated capacity
Full stage		Trickle charging current		

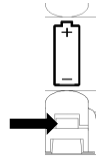
Various displays in Discharge Mode				
Stage in Discharge mode	Various displays (toggled by pressing DISPLAY key)			
	Voltage (V)	Current (mA)	*Time (hh:mm)	Capacity (mAh/ Ah)
During discharging	Instantaneous Battery voltage	Discharging current	Discharging time elapsed	Capacity during discharging
During charging		Charging current	Charging time elapsed	Accumulated capacity
Full stage	Trickle charging current			

Various displays in Refresh Mode				
Stage in Refresh mode	Various displays (toggled by pressing DISPLAY key)			
	Voltage (V)	Current (mA)	*Time (hh:mm)	Capacity (mAh/ Ah)
During discharging processes	Instantaneous Battery voltage	Discharging current	Discharging time elapsed	Capacity during discharging
During charging processes	Instantaneous Battery voltage	Charging current	Charging time elapsed	Capacity determined in last time discharging
Full stage	Instantaneous Battery voltage	Trickle charging current	Elapsed time of last discharging	Maximum battery capacity determined in discharging

Various displays in Test Mode				
Stage in Test mode	Various displays (toggled by pressing DISPLAY key)			
	Voltage (V)	Current (mA)	*Time (hh:mm)	Capacity (mAh/ Ah)
During charging	Instantaneous Battery voltage	Charging current	Charging time elapsed	"--- mAh"
During discharging		Discharging current	Discharging time elapsed	"--- mAh"
During 2nd charging		Charging current	2nd charging time elapsed	Capacity of the battery determined in discharging
Full stage		Trickle charging current	Discharging time elapsed	Capacity of the battery determined in discharging

Insert AAA batteries

- Look for a narrower silver curve, below the AA battery connection.
- Slide the negative end of the AAA battery back so that it is laying in this narrow curve and the press down on the positive end of the battery until it is flat in the charging bay.
- The battery will catch the clip that holds the AAA batteries.



Can I Charge or Test other types of batteries?

- The BC1000 is designed to be used with NiCd (Nickel Cadmium) or NiMH (Nickel Metal Hydride) batteries only.
- Charging other types of batteries may damage the charger or the batteries.

Note: Some brands of NiMH rechargeable batteries require a specific type of charger. Please look on the specific battery packaging for this information.

How long does it take to charge batteries?

Charging time varies depending on capacity, depletion of a battery and charging current selected.

Table 1. Charging Time with various charging current

Size of battery	Battery Capacity	Charging current selected (mA)	Estimated charging time
AA	2600 mAh	1800	~80 min
		1500	~100 min
		1000	~2 h 30 min
		700	~3 h 30 min
		500	~5 h
		200	~13 h
AAA	1000 mAh	700	~70 min
		500	~100 min
		200	~5 h

Cautions

1. The charger is restricted to **charging NiCd and NiMH rechargeable batteries only**. Never adapt this charger to other types of batteries such as alkaline, lithium, carbon zinc or other types that are not specified.
2. The charging unit shall only be used only at normal indoor room conditions.
3. Always follow the charging instructions for the rechargeable battery. Observe the recommended charging current of the rechargeable batteries.
4. Never use any power cable and transformer other than those originally supplied with the charging unit.
5. The rechargeable batteries may become hot during charging (especially when high charging current is chosen). Take extra care when taking out the batteries after charging.
6. Unplug the charging unit from the power source when not in use.

Care and Maintenance

- The manufacturer and supplier cannot accept any responsibility for any improper or incorrect use and any consequences occurred.
- Any performance of repairs or alternations by someone other than the original supplier will invalidate the warranty.
- This product is only designed to be used by people who have read and understood this instruction manual.
- The specifications of this product may change without prior notice.
- This product is not a toy. Keep out of the reach of children.
- Do not mix old and new batteries
- Do not mix Alkaline, Standard, Lithium or Rechargeable Batteries
- Always purchase the correct size and grade of battery most suitable for intended use.
- Replace all batteries of a set at the same time.

- Clean the battery contacts and also those of the device prior to battery installation.
- Ensure the batteries are installed with correct polarity (+and -).
- Remove batteries from equipment with is not to be used for an extended period of time.
- Remove used batteries promptly.
- **Only use rechargeable NiCd or NiMH batteries in this charger.**

Specifications

Input voltage for AC/DC adapter : 100-240 VAC

Output voltage for AC/DC adapter: +3.0V 4A

Charging current range : 200 mA - 700 mA

Max charging capacity

(capacity of rechargeable batteries): 3000 mAh

Dimensions (L x H x W) of Charging unit: 2.95" x 5.11" x 1.57"
(75 x 130 x 40 mm)

Warranty and Support

La Crosse Technology, Ltd. provides a 1-year limited time warranty (from date of purchase) on this product relating to manufacturing defects in materials & workmanship.

Before returning a product, please contact our friendly customer support with questions or visit our online help (manuals and FAQs):

Phone: 1-608-782-1610

Online Product Support: www.lacrossetechnology.com/support

Product Registration:

www.lacrossetechnology.com/support/register

View full warranty details online at:

www.lacrossetechnology.com/warranty_info.pdf

Warranty Address:

La Crosse Technology, Ltd
2830 S. 26th St.
La Crosse, WI 54601

