

Universal Ni-MH Battery Charger

with External AC adaptor

Model : V-2299

Owner's Manual

Thank you for purchasing the Universal Ni-MH Battery Charger. Please read this manual carefully. It contains important operating instructions. This Battery Charger is designed to recharge AA, AAA, C, D and 9V Nickel Metal-Hydride (Ni-MH) batteries.

Warning :

- Recharge **only** Nickel-Metal-Hydride(Ni-MH) rechargeable batteries in this charger.
- Batteries may leak or explode causing personal injury if inserted improperly, disposed of in fire, mixed with other battery types, or short circuit.

Features :

- Powered by the supplied AC adaptor 100-240V
- Recharges 2 or 4 pieces of AAA/AA/C/D-sized or 1-2 pieces of 9V-block Ni-MH batteries at a time.
- Batteries life well protected by -dV detection and timer protection for AAA, AA, C & D size batteries.
- Automatic charging current selection for the different size of batteries.
- LED display for rapid charge / finished charge / bad cell
For AA, AAA, C & D size batteries:
Red 'Charge' LED on – rapid charge;
Green 'Ready' LED on – Cells are finished charge and ready for use
Flashing LED – Cells are not suitable for charging
For 9V batteries: Red LED on – Charging;
Green LED on – Charged is completed

Safety Features :

- Negative delta V cut-off detection (except for 9V-block)
- Safety timer to prevent overcharge
- Reverse-polarity protection
- Bad cell Detection

Charging Instructions

1. Insert 2 or 4 pieces of AA/AAA/C/D or 1-2 pieces of 9V rechargeable Ni-MH batteries into the battery compartment (**batteries must be charged in pairs**). The 9V-block can be charged individually. For charging only 2 pieces of AA/AAA/C/D batteries, insert the batteries to the left or right side of the charging terminal (Fig. 1) & (Fig.2)

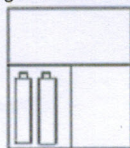


Fig. 1

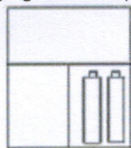


Fig. 2

2. Batteries must be charged in pairs with the same battery size & capacity.
3. Make the correct polarity (+ and -) when inserting the batteries; according to the symbol in the battery compartment,
4. Connect the supplied AC adaptor's barrel plug into the jack on the back of the charger. Plug the AC adaptor into the mains outlet.
Caution: The supplied AC adaptor supplies DC12V and delivers 1A output; and its plug fits into the charger's **DC input socket**. Using an adaptor which does not meet these specifications could damage your charger, adaptor and the batteries
5. For charging the AAA/AA/C/D/9V, the 'charge' LED will light on to indicate the proper charging. After charging is completed, the 'Ready' LED will turn on to indicate that the charge is completed and batteries are ready for use.
6. Once the charging is completed, remove the batteries and unplug the charger as soon as it is practical. Do not leave batteries in the charger for prolonged period of time in any circumstance. Unplug the charger when not in use.
7. Begin again at Step 1 to recharge the next set of batteries.

Bad Cell Detection (only available for AA, AAA, C and D sizes)

When the charging process begins, the charger will detect the health status of the cells in the battery compartment. If it finds that the battery is not suitable for charging (i.e. short circuit or alkaline cell detected), the red LED will flash and the charging process will terminate until the removal of the battery.

Specifications :

Input:	DC 12V 1A (use with an external AC adaptor)	
Size	Charge current:	Max. Timer
AAA	400 mA	3 hours
AA	850 mA	4 hours
C	850 mA	8 hours
D	850 mA	14 hours
9V	30 mA	8 hours
Detection Method	-ΔV auto cut-off for AAA, AA, C, D size batteries	
	Capacity	Charging time
Charging time	AAA 600-1000mAh	1.5-3 hours
	AA 800-2700mAh	1-4 hours
	C 1200-4500mAh	2-7 hours
	D 1200-9000mAh	2-14 hours
	9V 200mAh	8 hours

*The charge time will vary depending upon the brand, capacity and condition of batteries being charged.

IMPORTANT SAFETY INSTRUCTIONS:

1. **SAVE THESE INSTRUCTIONS, DANGER-TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS.**
2. For connection to a supply outside of North America, use an attachment plug adapter of the proper configuration for the power outlet.
3. Before charging, read instructions carefully.
4. This charger is intended for use with Nickel-Metal-Hydride rechargeable batteries only. Attempting to charge other types of batteries may cause personal injury and damage to the charger.
5. Do not expose charger to rain or moisture. For indoor use only.
6. Remove from electrical outlet when not in use.
7. Never use an extension cord or any attachment not recommended by manufacturer, this could result in risk of fire, electric shock or personal injury.
8. Do not operate the charger if it has been subjected to shock or damage. Take it to a qualified serviceman for repair.
9. Do not disassemble the charger. Incorrect reassembly may result in a risk of electric shock or fire.
10. Unplug the charger from outlet before attempting any maintenance or cleaning. Use a damp cloth to clean the surface, do not immerse into water.
11. Before disposing of your charger, remove the batteries from the unit.
12. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
13. Children shall not play with the appliance.
14. Cleaning and user maintenance shall not be made by children without supervision.

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, and (2) This device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-3(B) / NMB-3(B)

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.