

CAUTION

1. **SAVE THIS INSTRUCTIONS-** This manual contains important safety and operating instructions for the G100-XXN battery charger.
Please read the caution of batteries or devices you want to charge firstly!
2. When charging, batteries can emit explosive gases, therefore it is essential to prevent flames and sparks. The charger is designed for charging specified NIMH/NICD batteries. Do not use for any other purpose.
3. Always provide good ventilation when charging.
4. Use of an attachment not recommended or sold by Green-Digital Power-tech may result in a risk of fire, electric shock or serious injury to persons.
5. To reduce risk of damage to electric plug and cord, pull by the plug rather than by the cord when disconnecting charger.
6. 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: a) Pins on plug of extension cord are the same number, size and shape as those of plug on charger; b) Extension cord is properly wired and in good electrical condition; and c) Wire size is large enough for ac ampere rating as specified in "technical data".
7. Do not operate charger with a damaged cord or plug-return the charger to the place where purchased.
8. Never operate the charger if it has received a sharp blow, been dropped or otherwise damaged in any way; take it to a qualified serviceman.
9. Do not disassemble the charger; take it to a qualified serviceman when service or repair is required. Incorrect reassembly may result in a risk of electrical shock or fire.
10. To reduce risk of electric shock, unplug charger from AC outlet before attempting any maintenance or cleaning. Turning off controls will not reduce the risk.

G100-XXN 24V~36V NIMH/NICD Battery Charger

User's Manual



Brief Introduction

G100-XXN is a main member of digital-chargers from Shenzhen ABT Electronics CO.,LTD . It represents today's new technology for 24V(20s) ~ 36V(30s) NIMH/NICD battery pack charging. G100-XXN programmed 3 auto stages (Ip-Im-It) charging process. It is designed for 20s(24V) ~ 30s(36V) 4~25Ah NIMH/NICD battery pack. Stage "Ip" is a pre-charge function for deep discharged battery pack, this is helpful for battery's cycle life. When the battery recovered by pre-charge small current, stage "Im" will give bulk current charging. This is the main charge stage, when the battery nearly charged full , -dV phenomenon will be detected by the MCU in charger (-dV value is 3~6mV/per cell about) . Then the battery will leave bulk stage and cut-off output or enter a defined trickle pulse charge stage "It" to maintain battery.

Further, G100 can display the charging process, indicate the battery capacity from 25% to 100% timely. This is helpful for user.

For more safety, G100 will inter protection mode when the battery polarity reversed our the output connectors shorted.

Specification for G100-XXN

Input Voltage	100-240VAC, 50-60Hz	
Input Current	1.6A	
Back current drain	<1mA	
Charge voltage limit	G100-24N	G100-36N
	32V+-1%	48V+-1%
Bulk charge current	2.8A+-5%	1.8A+-5%
Cutoff condition	-dV>=5mV/cell or dT/dt>=0.6℃/per minute or Temperature of battery pack>=50℃ or Timer out or Peak-voltage trigger	
Operate Temperature	-20℃~50℃	
Cooling	Natural convection. Do not cover the charger.	
Charge principle	Auto 3 stages: Ip-Im-It	
Battery type	NIMH/NICD 24V~36V(20S~30S)	
Battery capacity	3-25Ah	
Size	170X70X51mm	
Enclosure	IP54 (Dust protected, Water splashing resistance)	
Weight	400g	

Display Panel



Charging process indicator:

Indicate battery capacity from 25% to 100% when charging.

All lamps flashing means battery polarity reversed or output shorted.

All lamps are "off" means no battery.

How to use:

1. Connect the AC cord to the socket, The "power" lamp will light on solid.
2. Connect positive charger clip (red) to positive battery terminal, the black clip to negative. (You can use other dc plugs to connect battery), the "25%~100%" lamps will light on flowing. If the battery polarity reversed or output shorted, all lamps will flashing, please check the setup.
3. Depend on the charged capacity, 25%~100% lamps will lights up solid sequence, until the battery is fully charged. Then you can power off the charger and disconnect the battery or you can charge a new battery if you need.

The table shows the duration of 95% state charged for an empty battery.

Battery Cap. (Ah)	G100-24N hours	G100-36NS hours
3.6	1.5	2.5
8.0	3	5
13.0	5	8
22.0	8.5	13