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. <u>An extension cord should not be used unless absolutely necessary</u>. 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 is 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



May, 2011 2rd Version

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.

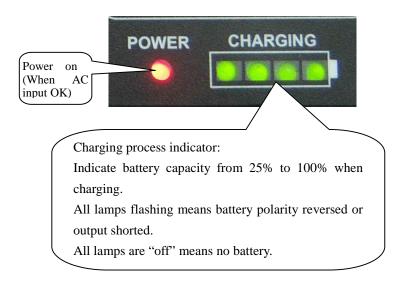
Further, G100 can display the charging process, indicate the battery capacity from 25% to 100% timely. This is helpful for user.

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

Specification for G100-XXN

sprementer of	Specification for Groo-2221				
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 °C /per minute or Temperature of battery pack>=50 °C or Timer out or Peak-voltage trigger				
Operate Temperature	-20°C~50°C				
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



How to use:

- 1. Connect the AC cord to the socket, The "power" lamp will light on solid.
- 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 f	or an empty	<i>i</i> 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