DLYFULL NT1000

DLYFULL NT1000 Rapid Battery Charger User Manual

Model: NT1000

1. Product Overview

The DLYFULL NT1000 is an advanced rapid charger designed for Ni-Cd and Ni-MH AA and AAA rechargeable batteries. It features four independent charging slots, allowing for individual control and monitoring of each battery. This charger offers multiple operating modes including Charge, Discharge, Refresh, and Test, providing comprehensive battery management capabilities.

The intuitive LCD display provides real-time information on charging status, current, and capacity. Its compact design makes it suitable for various applications, from household use to professional battery maintenance.

リフレッシュ機能付き急速充電器

Dlyfull®

NT1000

※電池は付属致しません。

Image: DLYFULL NT1000 Rapid Charger with Refresh Function, showing the charger with four AA batteries inserted and the display indicating various functions. Batteries are not included.

2. Safety Information

Please read all safety instructions carefully before using the DLYFULL NT1000 charger to ensure safe and optimal performance.

2.1 Battery Heat Generation

Charging and discharging operations naturally involve battery heat generation. Prolonged exposure to high temperatures can lead to battery performance degradation. It is highly recommended to use the DLYFULL NT1000 in a well-ventilated area to prevent excessive heat buildup.

2.2 Protection Circuit

The DLYFULL NT1000 is equipped with a built-in protection circuit and temperature sensor. If battery heat generation continues for an extended period, the protection circuit will temporarily stop the power supply. When activated, the

operation will pause, and the display will show '000' for all values, or the unit will enter a stopped state. Operation will resume automatically once the battery temperature drops to a safe level for charging/discharging.

Situations where batteries are prone to heat generation and protection circuit activation include prolonged rapid discharge or rapid charge. This is particularly likely when the CURRENT value is set to 350mA or 500mA in DISCHARGE or REFRESH modes. Please note that when the protection circuit activates, a temporary pause in operation occurs, which may affect time measurements, but this is not a product malfunction.

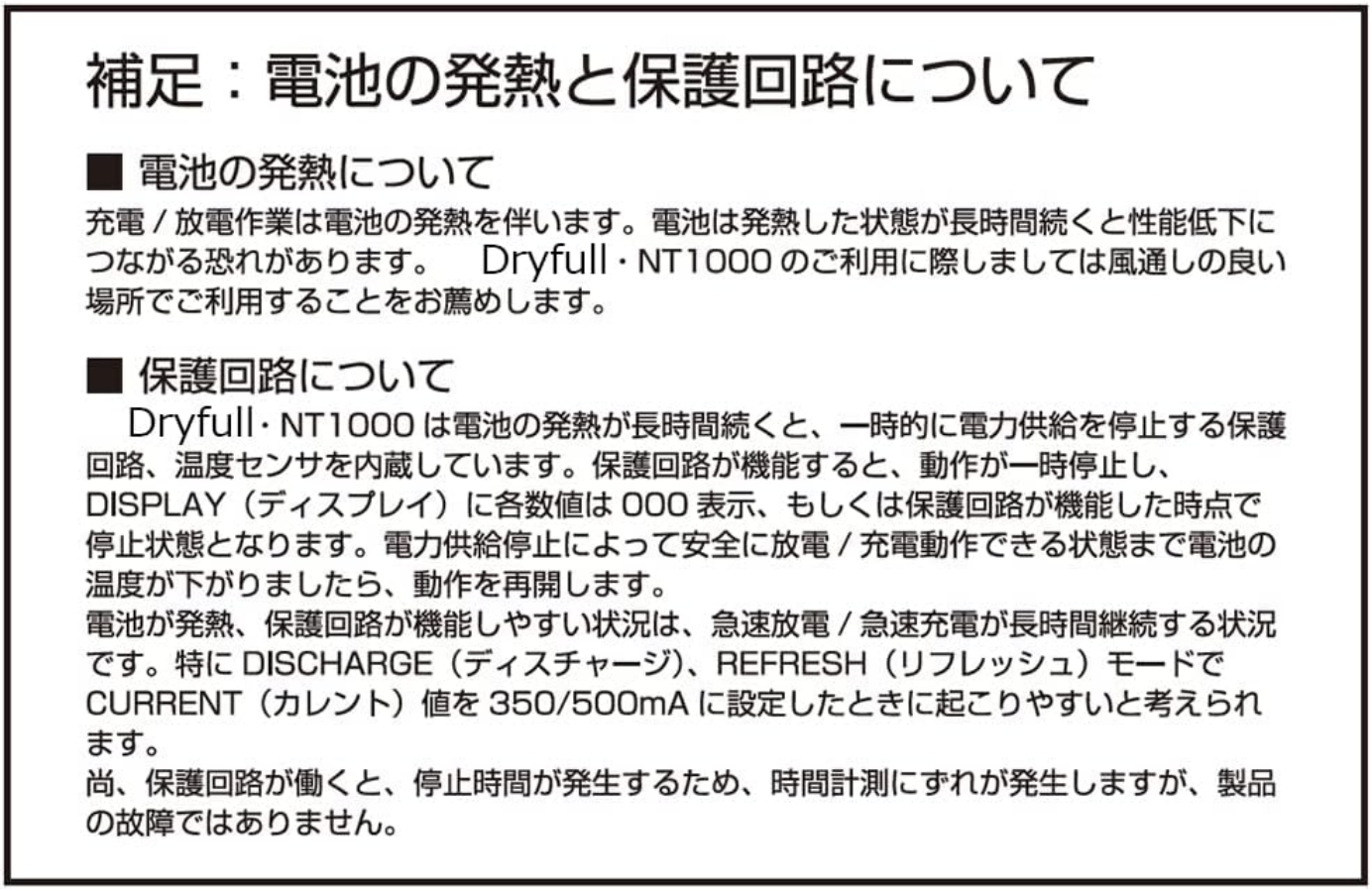

Image: Detailed explanation of battery heat generation and the built-in protection circuit of the DLYFULL NT1000 charger.

3. Setup

Follow these steps to set up your DLYFULL NT1000 charger:

1. **Connect Power:** Plug the DC 12V/1.5A power adapter into the 'IN: DC 12V' port on the back of the charger and then into a wall outlet.
2. **Insert Batteries:** Carefully insert Ni-Cd or Ni-MH AA or AAA rechargeable batteries into the charging slots. Ensure correct polarity (+/-). The charger can accommodate 1 to 4 batteries simultaneously, and each slot operates independently.
3. **Initial Display:** Upon inserting batteries, the charger's LCD display will illuminate, showing default settings or current battery status.

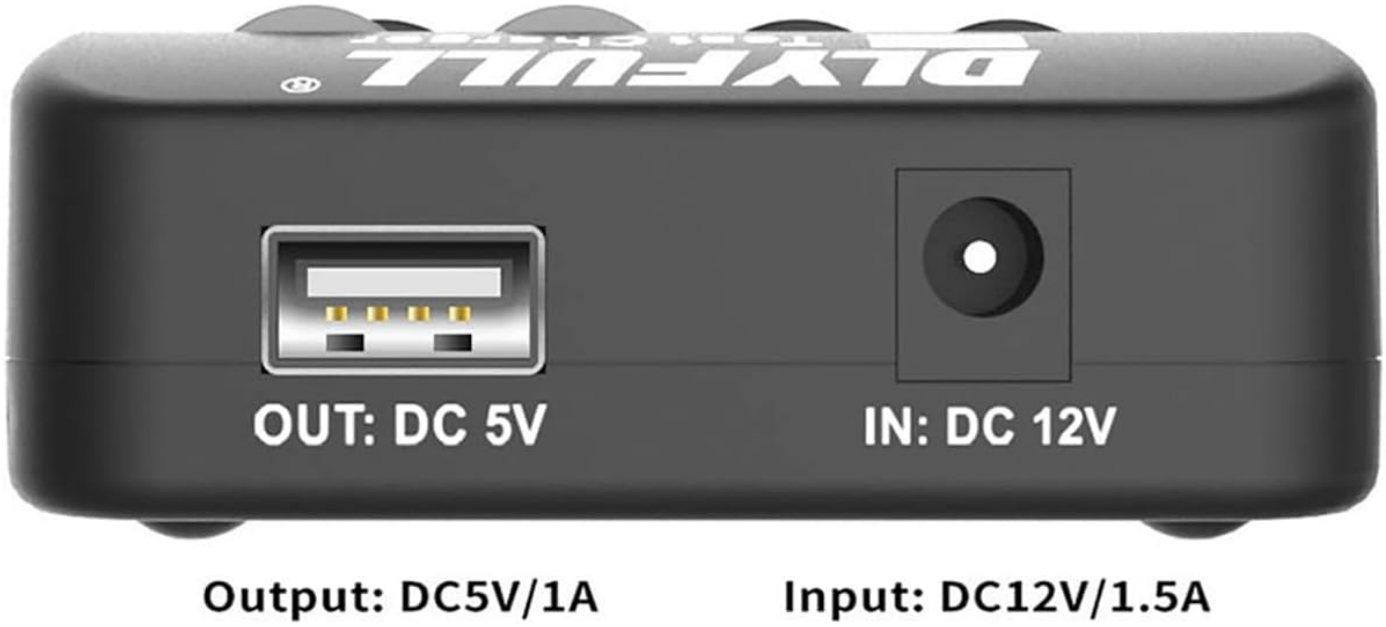

Image: Rear view of the DLYFULL NT1000 charger, highlighting the 'IN: DC 12V' power input port and the 'OUT: DC 5V' USB output port.

4. Operating Modes

The DLYFULL NT1000 offers four primary operating modes, each designed for specific battery management tasks. Use the **MODE** button to cycle through modes and the**CURRENT** button to adjust current settings.

Image: DLYFULL NT1000 charger displaying its various operating modes (Charge, Discharge, Refresh, Test) and emphasizing the ability to set each slot individually.

4.1 Charge Mode

This mode is for standard battery charging. It provides a slow and reliable charge, with options for rapid charging by selecting higher current values. It is convenient for trickle charging Ni-MH batteries due to their minimal memory effect.

- **Function:** Fully charges batteries.
- **Current Settings:** Selectable from 200mA, 350mA, 500mA, 700mA, 1000mA.

4.2 Discharge Mode

Discharges the battery before recharging, which helps eliminate the memory effect, especially beneficial for Ni-CD batteries. The charger will discharge the battery to a safe level (0.9V) and then automatically begin recharging.

- **Function:** Discharges battery to eliminate memory effect, then recharges.
- **Recharge Current:** Twice the current value set during discharge.

4.3 Refresh Mode

This mode repeatedly performs discharge and charge cycles to restore the original performance and capacity of batteries, particularly those that have not been used for a long time. Depending on the battery's condition, multiple cycles may be required, extending the completion time.

- **Function:** Restores battery performance and capacity through repeated discharge/charge cycles.

4.4 Test Mode

The Test mode checks the actual battery capacity. It charges the battery, then discharges it, and finally recharges it to calculate the actual capacity (mAh) and output value (mA). This helps identify if a battery's actual capacity is significantly lower than its rated capacity, indicating the end of its lifespan.

- **Function:** Measures actual battery capacity.
- **Duration:** This process can take several hours (e.g., approximately 5 hours for a 1900mAh AA battery).

電池の種類	電池容量	「CURRENT 設定」	おおよその充電時間
単三型 (AA)	2400mAh	200mA	14 時間
		500mA	6 時間
		700mA	3 時間 50 分
		1000mA	2 時間 50 分
単四型 (AAA)	800mAh	200mA	4 時間 40 分
		500mA	1 時間 50 分
		700mA	1 時間 20 分
		1000mA	55 分

Image: Detailed view of the DLYFULL NT1000's LCD display, showing the different modes (Charge, Discharge, Refresh, Test) and their corresponding current settings.

4.5 Button Functions

- **CURRENT Button:** Used to adjust the charging/discharging current for the selected slot.
- **DISPLAY Button:** Cycles through various information displayed on the LCD, such as voltage, current, capacity, and time.
- **MODE Button:** Selects the operating mode (Charge, Discharge, Refresh, Test) for the selected slot.

Image: Close-up of the DLYFULL NT1000's LCD display, showing detailed information for each battery slot, including current, mode, and status indicators.

5. Maintenance

Proper maintenance ensures the longevity and optimal performance of your DLYFULL NT1000 charger.

- **Cleaning:** Use a soft, dry cloth to clean the charger's exterior. Do not use abrasive cleaners or solvents. Ensure no liquids enter the charging slots or internal components.
- **Storage:** Store the charger in a cool, dry place away from direct sunlight and extreme temperatures. When not in use for extended periods, disconnect it from the power source.
- **Battery Contacts:** Periodically check the battery contacts in the slots for any debris or corrosion. Clean gently if necessary to ensure good electrical connection.

6. Troubleshooting

If you encounter issues with your DLYFULL NT1000 charger, refer to the following common problems and solutions:

- **Charger Not Powering On:**
  - Ensure the power adapter is securely connected to both the charger and a working wall outlet.
  - Verify that the power outlet is functional.
- **Batteries Not Charging/Discharging:**

- Check that batteries are inserted with correct polarity.
- Ensure the battery contacts are clean and free of debris.
- Confirm that a valid operating mode (Charge, Discharge, Refresh, Test) is selected for the respective slot.
- If the protection circuit has activated due to overheating, wait for the battery temperature to cool down.

- **Inaccurate Display Readings (e.g., '000' or dim display):**
  - This can occur if the protection circuit is active due to overheating. Allow the unit to cool.
  - Ensure the charger is on a stable, flat surface and not subjected to physical stress.

- **Excessive Battery Heat During Operation:**
  - Ensure the charger is placed in a well-ventilated area.
  - Consider using a lower charging/discharging current if heat is consistently high, especially in Discharge or Refresh modes.

7. Specifications

Feature	Specification
Brand	DLYFULL
Model	NT1000
Supported Battery Types	Ni-Cd, Ni-MH (AA, AAA)
Input Voltage	DC 12V / 1.5A
Output Voltage (USB)	DC 5V / 1A
Charging Current Options	200mA, 350mA, 500mA, 700mA, 1000mA
Product Dimensions (L x W x H)	12.9 cm x 7.5 cm x 3.1 cm (approx. 5.1 x 3.0 x 1.2 inches)
Package Size	17.6 x 14.9 x 5.2 cm
Weight	290 g

Image: DLYFULL NT1000 charger with dimensions indicated: 129mm length, 75mm width, and 31mm height.

8. Warranty and Support

For warranty information and customer support, please refer to the documentation included with your purchase or contact the seller/manufacturer directly. Keep your proof of purchase for any warranty claims.

For further assistance or inquiries, please visit the official DLYFULL website or contact their customer service department.