



## NITECORE Intellicharger NEW i4 User Manual

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NITECORE Intellicharger NEW i4 -ce

USER MANUAL



**IMPORTANT NOTICE CONCERNING WARRANTY SERVICE** Thank you for purchasing! Before using this charger, please find your verification code on the package box, and go to <http://charger.nitecore.com/validation> (or scan the QR code beside the verification code to visit on your mobile phone). Type in your verification code and personal information as required, and submit the page. After verification, Nitecore will send you a warranty service email. This email and your registration email address are essential to your possible warranty application. Before you complete the warranty service registration, you cannot enjoy our warranty service for your purchase.

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## Features

- Twice the charging speed of the i4 charger
- Active Current Distribution (ACD) Technology
- Compatible with 1.2V, 3.7V, 4.2V, 4.35V batteries
- Charging program optimized for IMR batteries
- Automatic current selection based on battery capacity
- Capable of charging four batteries simultaneously
- Terminating threshold for battery voltages and charging current can be set independently for each individual slot
- Automatic adoption between three charging modes (CC, CV, and dV/dt)
- Automatically detects battery power status and displays charging progress
- Automatically stops charging upon charging completion
- Reverse polarity protection and short circuit prevention
- Over-discharged battery activation
- Overcharging timeout protection
- Designed for optimal heat dissipation
- Made from fire-resistant, flame retardant PC materials
- Certified by RoHS, CE, FCC, and CEC
- Insured worldwide by Ping An Insurance (Group) Company of China, Ltd.

## Specifications

Input Voltage: AC 100-240V 50/60Hz 0.25A(max) IOW DC 9-12V 1A

Output voltage: 4.35V $\pm$ 1% / 4.2V $\pm$ 1% / 3.7V $\pm$ 1% / 1.48V $\pm$ 1%

Output current: 1500mA x 1 / 750mA x 2 / 500mA x 2 / 375mA x 4

Compatible with: Li-ion/IMR/LiFePO<sub>4</sub>:10340, 10350, 10440, 10500, 12340, 12500, 12650, 13450, 13500, 13650, 14350, 14430, 14500, 14650, 16500, 16340(RCR123), 16650, 17350, 17500, 17650, 17670, 18350, 18490, 18500, 18650, 22500, 22650, 25500, 26500, 26650 Flat-topped Batteries: 18700, 20700, 21700

Ni-MH(NiCd): AA,AAA,AAAA,C,D

Dimensions: 5.51"x3.73"x1.45" (140mmx94.8mmx37mm)

Weight: 7.12oz (202g, without batteries and power cord)

## NEW i4 User Manual

## Operating Instructions

**Power on:** Connect the NEW i4 to an external power source (such as vehicle adaptor, power socket) with its charging cord.

**Battery placement:** Put one battery in each independently controlled slot according to the polar mark on the charger.

**Battery identification:** All Four LEDs indicators will be lit when Lithium batteries are placed in, two lower LEDs will be lit when Ni-MH batteries are placed in. Charging begins in two seconds.

**Other features:** The New i4 has reverse polarity protection and anti-short circuiting protection incorporated.

**Smart charging:** The NEW i4 adopts the appropriate charging currents based on battery types and capacities. Whilst the option to adjust the current is also available. **The NEW 14 is compatible with:**

- 7V Li-ion rechargeable batteries
- 8V Li-ion rechargeable batteries
- 2V Ni-MH/Ni-Cd rechargeable batteries
- 2V LiFePO4 batteries

### Default Charging Parameters

In the context of this user manual, batteries of more than 1200mAh and equal or longer than 65mm in length will be defined as large capacity, batteries of less than 1200mAh and shorter than 65mm in length will be defined as small capacity. The default charging current allocation for the NEW i4 is shown in the table below:

Types and capacities		Default power allocation to each slot				Manual adjustment to current
		1 battery	2 batteries	3 batteries	4 batteries	
Lithium batteries	Large capacities	1.5A	0.75A	0.75A/0.75A Average current*1	0.375A	Yes
	Small capacities	0.5A	0.5A	0.5A/0.75A Average current*2	0.375A	No
NI-MH		0.5A	0.5A	0.5A/0.75A Average current*2	0.375A	No

\*1 When charging three batteries of large capacities, the battery in the second slot will be charged at 0.75A, whilst the other two batteries will be charged at 0.375A each.

\*2 When charging three batteries of small capacities, the battery in the second slot will be charged at 0.5A, whilst the other two batteries will be charged at 0.375A each.

### Settings

After battery placement, press the C button to select a slot or press the button repeatedly to select a specific slot from left to right order, when the desired slot is selected, holding down the C button allows for manual adjustment to charging current and holding down the V button allows for manual adjustment to voltage.

## **'Current setting**

This option allows the charging current to be set at 1.5A for batteries of large capacities. The red light on top will turn on when the charging current to set at 1.5A.

## **'Voltage setting**

This option allows the charging termination voltage to be set at 4.35V/4.2V/3.7V

**Note:** (2) Charging current allocation can be manually adjusted when more than one battery of large capacities are placed in the charger

## **Trickle Charge Mode**

The New i4 will charge batteries of small capacities at 0.5A.

## **Active Current Distribution (ACD)**

The ACD technology allows the NEW i4 to actively distribute all its power between all slots in an orderly manner, for instance:

When one or more batteries are set to be charged at an accelerated rate of 1.5A

1. The charger will charge the batteries that are set to be charged at 1.5A from left to right
2. When the first battery charging at 1.5A is almost fully charged and enters CV charging, the charger will divert a portion of its current to charge other batteries that are to be charged at the default setting, then proceed to charge the second battery that are set to be charged at 1.5A when the first one gets fully charged.
3. When all batteries that are set to charge at 1.5A are fully charged, the charger will begin to charge the other remaining batteries at its default

**Note:** When only one battery of large capacity is placed in the charger, the charger will charge it at 1.5A by default.

## **Battery Recovery Mode**

The NEW i4 has a revival function designed specifically to revive over-discharged IMR batteries, an over-discharged IMR battery is indicated by the four flashing LED indicators above the particular slot the battery is placed in, holding down both C and V buttons until the bottom indicator starts flashing to enable the battery recovery process. IMR batteries that have been severely over-discharged may not be recovered successfully.

Caution: Do NOT enter battery recovery mode when the battery is inserted backward, it may cause fire and explosion.

## **Overcharging Timeout Protection**

The NEW i4 monitors each slot individually and keeps records of the charging duration for each battery. The charger automatically terminates the charging process for any particular battery that has been in the charging process for 20 hours but is not fully charged, and the charging indicators will show full power status. This is designed to eliminate overcharge, overheating, and explosion concerns arising from battery duality issues.

## **Precautions**

1. The charger is restricted to charging Li-ion, IMR, LiFePO<sub>4</sub>, Ni-MH/Ni-Cd rechargeable batteries only. Never use the charger with other types of batteries as this could result in battery explosion, cracking, or leaking, causing property damage and/or personal injury.
2. The safe operating temperature for the charger is between -10-40°C, and the safe storage temperature is -20-60°C.
3. Please charge batteries in accordance with the specifications on the Do not charge a battery pack with the charger.
4. Observe polarity diagrams located on the charger. Always place the battery cells with a positive tip facing the top.
5. Do not leave a working charger unattended. If any malfunction is found, please terminate operation immediately, and turn to the user manual for instruction.
6. The charger is designed for adults. Use of the charger by kids under age must be under Operation, using or cleaning of the charger may NOT be done by kids aged 8 years or younger.
7. Please make sure the correct program and settings are chosen and Incorrect programs or settings may damage the charger, or cause fire or explosion.
8. Never attempt to charge primary cells such as Alkaline, Zinc-Carbon, Lithium, CR123A, CR2, or any other unsupported chemistry due to risk of explosion and
9. Do not charge a damaged IMR battery as doing so may lead to charger short-circuit or even explosion.
10. Never charge or discharge any battery having evidence of leakage, expansion/swelling, damaged outer wrapper or case, color-change or
11. Use the original adapter and cord for the power supply. To reduce the risk of damage to the power cord, always pull by connector rather than the cord. Do not operate the charger if it appears damaged in any
12. DO NOT store or use the product in an environment where the temperature is extremely high / low or changes rapidly, or in a confined area with a high
13. Please operate the charger in a well-ventilated area. Do not operate or store it in damp area. Keep all the inflammable volatile substances away from operating area.
14. Avoid mechanical vibration or shock as these may cause damage to the
15. Do not short-circuit slots or other parts of the device. Do not allow metal wires or other conductive material into the
16. Do not touch hot The rechargeable batteries or the device may become hot at full load or high power charging/discharging.
17. Do not overcharge or over discharge batteries. Recharge drained batteries as soon as possible.
18. Remove all batteries and unplug the charging unit from the power source when not in use.
19. Opening, disassembling, modifying, tampering with the unit may invalidate its guarantee, check warranty terms.
20. Do not misuse in any way! Use for intended purpose and function only.

## **Disclaimer**

This product is globally insured by Ping An Insurance (Group) Company of China, Ltd. Nitecore shall not be held responsible or liable for any loss, damage, or claim of any kind incurred as a result of the failure to obey the instructions provided in this user manual.

## **Warranty Details**

Our authorized dealers and distributors are responsible for warranty service. Should any problem covered under warranty occur, customers can contact their dealers or distributors in regards to their warranty claims, as long as the product was purchased from an authorized dealer or distributor? NITECORE's Warranty is provided only for products purchased from an authorized source. This applies to all NITECORE products. Any DOA / defective product can be exchanged for a replacement through a local distributor/dealer within 15 days of purchase. After 15 days, all defective /

malfunctioning NITECORE® products can be repaired free of charge for a period of 12 months (1 year) from the date of purchase. Beyond 12 months (1 year), a limited warranty applies, covering the cost of labor and maintenance, but not the cost of accessories or replacement parts.

The warranty is nullified if the product(s) is/are

1. broken down, reconstructed, and/or modified by unauthorized parties
2. damaged from wrong operations (i.e. reserve polarity installation, installation of non-rechargeable batteries), or
3. damaged by batteries leakage.

For the latest information on NITECORE® products and services, please contact a local NITECORE® distributor or send an email to [service@nitecore.com](mailto:service@nitecore.com). \* All images, text, and statements specified herein in this user manual is for reference purpose only. Should any discrepancy occurs between this manual and information specified on [www.nitecore.com](http://www.nitecore.com), information on our official website shall prevail. SYSMEX Innovations Co., Ltd. reserves the right to interpret and amend the content of this document at any time without prior notice.

## **Safety Instruction for Lithium-ion Batteries**

### **1. Charging Voltage**

Lithium-ion (Li-ion) batteries have strict requirements for voltage control. Charging Li-ion batteries with electric voltage beyond safety standards can lead to battery damage and explosion.

#### **(1) 4.2V Li-ion Batteries/ IMR Batteries**

4.2V Li-ion batteries are the most common rechargeable Lithium batteries. The skins of these batteries are often marked with 3.6V/3.7V signs. If our chargers judge that an inserted battery is a U-ion battery, the battery will be automatically charged in 4.2V standard charging mode. You do not need extra voltage settings for these types of batteries.

#### **(2) 4.35V U-ion Batteries**

4.3V Li-ion batteries are comparatively rare. It usually has a 3.7V mark on its skin. Normally its seller will inform its buyer that it needs to be

charged with 4.35V power. When charging this type of battery, please manually set the charging voltage to 4.3W, otherwise, the charger will charge at 4.2V by default, and cannot provide adequate charging voltage.

#### **(3) 7V LiFePO4 Batteries**

3.7V LiFePO4 batteries have LiFePO4 and/or 3.2V marks on the skin. Be careful with this type of battery. Without manual setting, our chargers will charge this type of battery with 4.2V voltage and will damage or even explode the battery with excessive charging voltage. You need to manually set the charging voltage to 3.7V for safe charging.

## 2. Charging Current

For all rechargeable Lithium batteries (including Li-ion, IMR, and UFePO4 batteries), we suggest not using current larger than 1C\* for charging. For small-capacity batteries, the charging current must be smaller than 1C.

\*C=Capacity of a battery. For example, 1C in a 2600mAh rechargeable Lithium battery is 2.6A. 1C in a 3400mAh rechargeable Lithium battery is 3.4A. Excessively large charging current will lead to a great amount of heat, and consequently battery damage and explosion.

**Warning:** Our chargers automatically judge and select charging current by the batteries' length. For some long but small capacity batteries (i.e. 12650, 13650, 14650, 16650), please manually set the appropriate charging current (smaller than 1C).


## 3. Precautions

- Do not short circuit the battery in any way.
- Do not use a 4.2V/4.3V Lithium battery when its voltage is lower than 2.8V, otherwise, it can be over-discharged, and/or prone to an explosion at the next charging.
- We strongly recommend batteries with protective For batteries without protective circuits (such as IMR batteries), please stay alert for over-discharge and short circuits.
- Do not discharge a battery with a discharging current

## 4. Long-term Storage

The best storage voltage for 4.2V/4.35V rechargeable Lithium batteries is 3.7V. Voltage too low or too high can damage your battery during storage. You can discharge a battery to 3.7V, or charge it to 3.7V in a charger before you keep it in long-term storage.

**The validation code and QR code on the package can be verified on the Nitecore web**

	<ol style="list-style-type: none"><li>1. The charger must be used with Nitecore's official cords. During charging, third-party cords can cause malfunction, overheat and even fire on the charger. Damages from using unofficial cords cannot be covered by an official warranty.</li><li>2. The NEW i2 is restricted to charging Li-ion, IMR, 3.7V LiFePO4, Ni-MH/Ni-Cd rechargeable batteries only. Never use the NEW i2 with other types of batteries as this could result in battery explosion, cracking or leaking, causing property damage, and/or personal injury.</li></ol>
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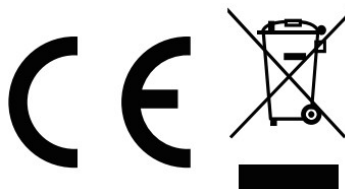
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## Documents / Resources

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