NITECORE Intellicharger New i2 User Manual

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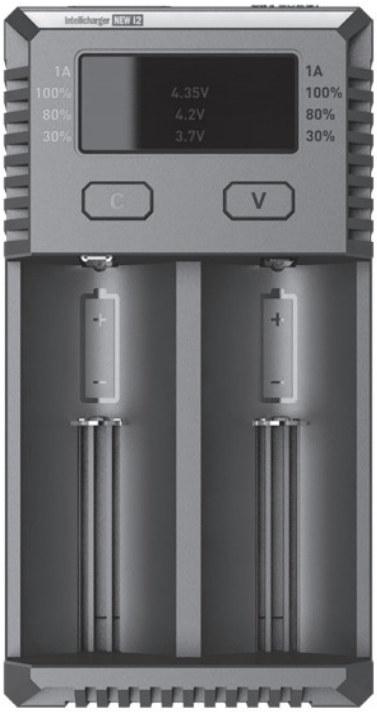
Intellicharger NEW i2

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 i2 charger
- Active Current Distribution (ACD) Technology
- Compatible with 1.2V, 3.N, 4.2V, 4.35V batteries
- Charging program optimized for IMR batteries
- Automatic current selection based on battery capacity
- Capable of charging two batteries
- Two charging slots charge and control independently
- 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
- Overtime charging protection
- Designed for optimal heat dissipation
- Made from fire-resistant, flame retardant PC material
- 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) 8W
DC 9~12V
Output voltage: 4.35V±1%/4.2V±1%/
3.7V±1%/1.48V±1%
Output current: 500mA×2/1000mA ×1
Compatible with: 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
Li-ion/IMR/LiFePO4:
Ni-MH(NiCd): AA,AAA,AAAA,C,D
Dimensions: 132mm×70mm×35mm
Weight: 126g (without batteries and power cord)

Operating Instructions

Connect to a power source: Connect the NEW i2 to an external power source (such as a car adaptor, power socket) via its charging cable. Install batteries: Put one or two batteries in each independently-controlled slot according to the polar mark on the charger.
Battery identification: Four LEDs go up over the slot a Lithium battery is inserted in; two lower LEDs go up over the slot a Ni-MH battery is inserted in. Charging begins in two seconds.
Other features: The New i2 has reverse polarity protection and anti-short circuiting protection incorporated.

Battery Activation and Inspection	Error Report
Batteries inserted with polar reversed Batteries short-circuited	Four LEDs on the screen blink to notify the user of an error.
The NEW i2 will charge normal batteries upon inspection.	

Smart charging: The NEW i2 can choose to charge currents based on intelligent detection about battery types and capacities. The manual charging current selection is also available. The NEW i2 is compatible with:

1. 3.7V Li-ion rechargeable batteries
2. 3.8V Li-ion rechargeable batteries
3. 1.2V Ni-MH/Ni-Cd rechargeable batteries
4. 3.2V LiFePO4 batteries

During charging, the three indicator LEDs indicate the batteries' status and charging percentages.

Charging Current Settings

Install the batteries into the NEW i2, and press the button over the battery's slot after automatic detection to enter Manual Settings mode. Press and hold the C button to enter Current Selection to manually select 1A or 500mA charging current when a large capacity battery (>1200mAh). When the appropriate current setting is highlighted, release the C button and press the button over the slot again to exit Manual Settings mode and begin charging.

Battery Types and Capacity		Default Current		Manual Setting to IA Available
		1 battery	2 batteries	
Lithium	>1200 mAh	IA	0.5A	Yes
	<1200 mAh	0.5A	0.5A	No
NI-MH		0.5A	0.5A	No

Active Current Distribution (ACD)

IA Set	Left slot	IA Set	Right slot
Yes	Charges at IA with priority	Yes	Holds while Left is charging; Charges at 500mA while Left is close to completion; Charges at IA while Left is complete.
Yes	Charges at IA with priority	No	Holds while Left is charging; Charges at 500mA while Left is close to completion; Charges at 500mA for the small capacity battery while Left is complete; Charges at IA for the large-capacity battery while Left is complete.
No	Holds while Right is charging; Charges at 500mA while Right is close to completion; Charges at 500mA for the small capacity battery while Right is complete; Charges at IA for the large-capacity battery while Right is complete.	Yes	Charges at IA with priority

Note:

1. When 1A charging current is selected, the LED next to the 1A mark goes on.
2. For small capacity batteries (<1200mAh, such as 10440, 16340), 500mAh charging current is automatically selected.
3. For Ni-MH batteries and 3.7V Li-ion batteries, the NEW i2 automatically selects proper charging modes. For LiFePO4 batteries, a manual setting is required.

Charging Voltage Settings

For LiFePO4 batteries:
Insert the batteries into the NEW i2's charging slots. After battery inspection, press the button over the battery's slot to enter Manual Settings mode. Press and hold the V button to enter Voltage Selection. Before the button is released, three settings of charging cut-off voltages will cycle every second (highlighted with an LED). When the desired setting is highlighted, release the V button, and press the button over the slot again to exit Manual Settings mode and begin charging. For 3.8V Li-ion batteries: Follow the above setting method.

Battery Activation
The NEW i2 is capable of activating depleted Li-ion batteries with a protective circuit. After battery installation, the NEW i2 will test and activate the battery before charging. A battery detected as damaged cannot be activated, and the three LEDs above its slot will go on to notify the user.

Lithium Battery Recovery
Upon insertion of a 0V IMR battery, all four LEDs over its slot will blink to indicate that it is not ready for charging. Press and hold both buttons until its power indicator blinks to enter the Recovery mode. Nitecore recommends abandoning this battery if it fails to be recovered after several attempts. NOTE: Do not conduct battery activation operation when batteries are inserted with reversed polarity. Doing so may cause fire or explosion of the batteries.

Overtime Charging Protection
The NEW i2 will separately calculate the charging time of each battery. When the overall charging time exceeds 20 hours, the NEW i2 will automatically stop charging and display a fully charged status. This is to prevent possible overheat or even explosion due to battery quality issues.

Precautions

1. The charger is restricted to charging Li-ion, IMR, LiFePO4, 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 back. 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 supervision. The operation, using, or cleaning of the charger may NOT be done by kids aged 8 years or younger.
7. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
8. Please make sure the correct program and settings are chosen and set. Incorrect program or setting may damage the charger, or cause fire or explosion.
9. Never attempt to charge primary cells such as Alkaline, Zinc-Carbon, Lithium, CR123A, CR2, or any other unsupported chemistry due to the risk of explosion and fire.
10. Do not charge a damaged IMR battery as doing so may lead to charger short-circuit or even explosion.
11. Never charge or discharge any battery having evidence of leakage, expansion/swelling, damaged outer wrapper or case, color-change or distortion.
12. Use the original adapter and cord for the power supply. To reduce the risk of damage to the power cord, always pull by the connector rather than the cord. Do not operate the charger if it appears damaged in any way.
13. 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
    temperature.
14. Please operate the charger in a well-ventilated area. Do not operate or store it in damp areas. Keep all the inflammable volatile substances away from the operating area.
15. Avoid mechanical vibration or shock as these may cause damage to the device.
16. Do not short-circuit slots or other parts of the device. Do not allow metal wires or other conductive material into the charger.
17. Do not touch hot surfaces. The rechargeable batteries or the device may become hot at full load or high power charging/discharging.
18. Do not overcharge or over-discharge batteries. Recharge drained batteries as soon as possible.

19. Remove all batteries and unplug the charging unit from the power source when not in use.
20. Opening, disassembling, modifying, tampering with the unit may invalidate its guarantee, check warranty terms.
21. 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**. All images, text, and statements specified herein in this user manual are for reference purposes only. Should any discrepancy occurs between this manual and information specified on **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 Li-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 Li-ion Batteries 4.35V 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 4.35V, otherwise, the charger will charge at 4.2V by default, and cannot provide adequate charging voltage.
   (3) 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 LiFePO4 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**
   (1) Do not short circuit the battery in any way. (2) 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. (3) We strongly recommend batteries with protective circuits. For batteries without protective circuits (such as IMR batteries), please stay alert for over-discharge and short circuits.
   (4) Do not discharge a battery with a discharging current larger than its maximum rated 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

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.
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.

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Documents / Resources

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References

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