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.

NITECORE ®
The New Benchmark in Intelligent Chargers

UM20 User Manual
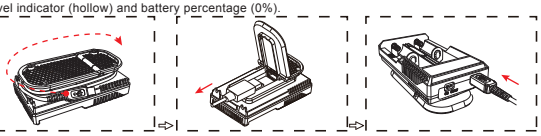### USB Management and Charging System

Features

• USB powered Li-ion battery charger
• High definition LCD displays real time charging status
• Features USB output charging
• Integrated intelligent power management system
• Intelligently detects input power
• Intelligently distributes charging power
• Priority Mode offers either battery or USB charging
• Enables data transfer via USB
• Intelligently selects charging current based on battery capacity
• Features rear USB cable winder and grooves to accommodate 2.5mm/3.0mm USB cables
• Constructed from fire retardant materials
• Features reverse polarity protection
• Designed for optimal heat dissipation
• Certified by RoHS, CE, FCC and CEC
• Insured worldwide by Ping An Insurance (Group) Company of China, Ltd.
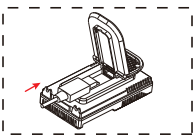
Specifications

Input voltage: Micro USB DC 5V
Output voltage: 4.2V ±1% / 5V
Output current: 1000mA / 500mA
Input current: ≥500mA
Compatible with:
Li-ion / IMR: 18650, 18490, 18350, 17670, 17500, 16340(RCR123), 14500, 10440
Dimensions: 3.94"×2.20"×1.38" (100mm× 56mm×35mm)
Weight: 2.72oz (77.2 gram)(without batteries or power cord)

Standard Function

1. Connecting: Unwind the USB cable, lift the rear panel and draw out the cable as instructed. Plug one end of the included USB cable to the UM20's input port and the other end to a power supply (adapter, PC or other standard USB output port). Upon powering up, the UM20's LCD will display the power level indicator (hollow) and battery percentage (0%).

2. Inserting Batteries: Insert batteries as instructed. Incorrectly inserted batteries will prevent the UM20 from functioning.
3. Battery Test: After battery installation, the UM20 will run a quick battery test before charging. If a problem is detected (for example the batteries are installed backwards), the UM20 will stop charging and display "EE" on the LCD to notify the user.
4. Charging: During the charging process, charging current will adjust automatically based on the detected battery type, power level and internal battery resistance. For example, when charging batteries of smaller capacities such as 14500 and 16340, charging current will automatically be set to 500mA, ensuring safe use and preserving battery longevity.
5. Charging Progress: The UM20 will indicate battery status and charging progress. When batteries are fully charged, 5 power level indicator bars and "100%" will illuminate steadily on the LCD display.

Advanced Functions

USB Output Charging

1. As illustrated, lift the rear panel and plug an USB cable to the charging port underneath.
2. Connect the other terminal of the USB cable with an external device that needs to be powered / recharged. (⚡) will start flashing on the LCD to indicate the UM20 is connected with a USB cable. After the device is fully charged, the (⚡) icon stops flashing and remains on constantly.

Priority Mode

1. When there is a power deficit for the UM20 to charge both batteries and USB device simultaneously, the UM20 will prioritize the charging of the batteries or the device following the user's preference. When the top switch is set to BATTERY, battery priority mode will be activated. In this mode, the UM20 will charge the batteries first. When batteries are fully charged or removed, the UM20 will then charge / power the USB device automatically.
2. When the top switch is set to USB, USB priority mode will be activated. In this mode, the UM20 will charge / power the USB device first. When the USB device is fully charged or disconnected, the UM20 will charge the batteries automatically.
3. When charging 2 batteries simultaneously, output has to be at least 1000mA or above, when output drops below 1000mA, the charger will charge 1 battery at a time.
NOTE: A small electrical current will keep passing through to the external device connected to maintain the device in its full power state when it is charged.

Battery Activation

The UM20 is capable of activating over discharged protected Li-ion batteries. After battery installation, the UM20 will test and activate the batteries before charging. Batteries detected as damaged cannot be activated by the UM20 and "EE" will be displayed on the LCD to indicate an error.

NOTE: Nitecore does not recommend charging zero volt (0V) (over discharged) unprotected Li-ion batteries with the UM20 and doing so can result in battery leakage fire, or explosion.

Precautions

1. Nitecore recommends using only quality USB adapters with the UM20. Using poor quality adaptors may result in the LCD displaying "EE" to indicate an error.
2. The charger is restricted to charging Li-ion, IMR 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.
3. The safe operation temperature for the charger is between -10 to 40°C, and the safe storage temperature is -20 to 60°C.
4. Do not use the charger to charge other unspecified batteries as they may leak or burst, causing personal injury and damage.
5. Observe polarity diagrams located on the charger. Always place the battery cells with positive tip facing the top.
6. Never leave the charger unattended when it is connected to power. If any malfunction is found, terminate the process at once and refer to the operation manual.
7. The charger is for use of adults above 18 years old. Children under this age must be supervised by an adult when using the charger.
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 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. Do not expose the device to direct sunlight, heating devices, open flames; avoid extreme high or extreme low ambient temperatures and sudden temperature changes.
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 device.
15. Do not short-circuit slots or other parts of the device. Do not allow metal wires or other conductive material into the charger.
16. Do not touch hot surfaces. 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 occurs, 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 the 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. reverse 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 this user manual are for reference purpose only. Should any discrepancy occurs between this manual and information specified on www.nitecore.com, information on our official website shall prevail. Sysmax Industry Co., Ltd. reserves the rights to interpret and amend the content of this document at any time without prior notice.

Validation code and QR code on package can be verified on Nitecore website.

CE

2016100

Thanks for purchasing NITECORE!