



N SERIES
SMART CHARGER



N Series Smart Charger Instructions



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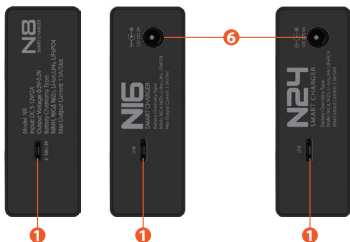
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Thank you for purchasing the ISDT N8/N16/N24 Smart Charger.

The Series N is an intelligent battery charger that is compatible with multiple types of AA/AAA size cylindrical batteries. Each channel works independently of each other which means that different types and different sizes of batteries can be charged at the same time.

For safety and for a better user experience, please read this user manual in detail and follow the instructions carefully before using your new charger.

- 1) Never attempt to charge a damaged battery or a non-rechargeable battery.
- 2) Keep the charger away from humidity and high temperature while it's working and ensure that the charger is not covered in any way which may prevent ventilation required for cooling.
- 3) Do not let young children operate the charger.
- 4) Make sure that the charging and discharging parameter settings are suitable for the batteries being charged as incorrect setting could lead to damage to the batteries and the charger or even fire .



- 1) USB Upgrade Port (and USB Type-C Power Input for N8)
- 2) Touch Key
- 3) LCD Display
- 4) Indicator Light
- 5) Battery Slot
- 6) DC Power Input Port

Specification of N8

DC Power Input Port: USB Type-C

Input Voltage: 5-12V

Input Power: 18W

Battery Slot Count: 1-8 single cylindrical cells

Battery Type: Li-Ion, LiHv, Ni-MH, Ni-Cd, LiFePO4, Eneloop

Charge Current Range: 0.1A - 1.5A/slot

Discharge Current Range: 0.1A - 1.0A/slot

Display: 240 x 320 IPS LCD

Operating Temperature: 0 °C - 40 °C

Dimensions (L x W x H) : 188.5 x 79 x 28mm

Weight: 283g

Specification of N16

DC Power Input Port: DC input

Input Voltage: 5-12V

Input Power: 36W

Battery Slot Count: 1-16 single cylindrical cells

Battery Type: Li-Ion, LiHv, Ni-MH, Ni-Cd, LiFePO4, Eneloop

Charge Current Range: 0.1A - 1.5A/slot

Discharge Current Range: 0.1A - 1.0A/slot

Display: 240 x 320 IPS LCD

Operating Temperature: 0 °C - 40 °C

Dimensions (L x W x H) : 308.4 x 79 x 28mm

Weight: 450g

Specification of N24

DC Power Input Port: DC input

Input Voltage: 5-12V

Input Power: 48W

Battery Slot Count: 1-24 single cylindrical cells

Battery Type: Li-Ion, LiHv, Ni-MH, Ni-Cd, LiFePO4, Eneloop

Charge Current Range: 0.1A - 1.5A/slot

Discharge Current Range: 0.1A - 1.0A/slot

Display: 240 x 320 IPS LCD

Operating Temperature: 0 °C - 40 °C

Dimensions (L x W x H) : 428.2 x 79 x 28mm


Weight: 810g

Operation Instructions

With the N Series of battery charger, 8 / 16 / 24 cells of AAA or AA batteries of the same chemistry can be charged, discharged, analyzed and activated increased in a variety of combinations. When charging with the battery type selected to be 'Auto', NiMH and Lithium batteries can be charged simultaneously.

1) If you are using the N8, the charger is powered via the USB socket. Connect the auxiliary USB cable with any USB power adapter and the N8 is turned on and ready for use. The N8 can be powered from a wide range of USB power adapters and it can automatically identify and adapt to the optimal charging power.

When the charger is N16 / N24, connect the power adapter supplied with the charger, the N16 / N24 is turned on and ready for use.

2) Before the battery is inserted, please long press the  touch key to enter the system setting interface to preset the task and parameters in the charger.

Settings

- Task
 - Charge
- Battery Type
 - NiMH
- Activation Charge
 - Enable
- Input Power Limit
 - 48W
- Backlight
 - Low
- Buzzer
 - Off
- Language
 - English
- Self Check
 - ...
- About
 - ...
- ← Back
 - ...

Task	Select task : Charge, Discharge, Analysis, Activation
Battery Type	Select battery type
Capacity Plus	On/Off
Input Power Limit	Power limit (applies to N16/N24)
Backlight	Three settings: High, Medium, Low
Buzzer	Four settings: High, Medium, Low , Off
Language	Default language setting
Self Check	System self-check
About	System software information
Back	Back

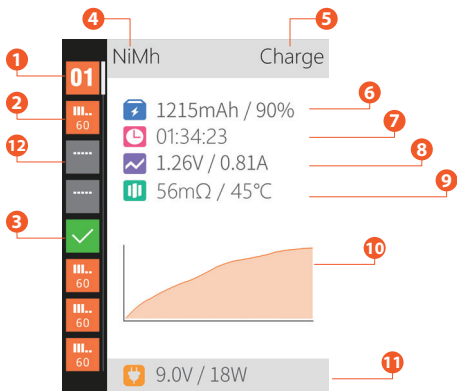
How To Determine The Battery Type

Usually, the battery chemistry type and the rated voltage are stated on the sleeve of the battery. The charger will attempt to automatically identify the battery type based on the built-in detection algorithm but please select the battery types manually if the charger chooses the wrong one.

* NiZn and LiHv batteries need to be selected manually.

	NiCd/NiMH	NiZn	Li-Ion	LiHv	LiFePo4	Eneloop
Rated Voltage(V)	1.20	1.50	3.70	3.80	3.30	1.20
Full Charge Voltage(V)	1.65	1.90	4.20	4.35	3.65	1.65
Storage Voltage(V)	X	X	3.70	3.80	3.20	X
Discharge Voltage(V)	0.90	1.20	3.10	3.30	2.90	0.90

3) After correctly setting the parameters and inserting a battery, the charger will beep and sound a prompt tone. Charge or discharge will start based on the setup parameters selected and the working status will be displayed on the screen as shown below:



Interface Definition

- | | |
|------------------------------------|--|
| 1) Current operating slot | 2) Battery percentage |
| 3) Charge completed | 4) Battery type |
| 5) Operation status | 6) Battery charge/discharge percentage |
| 7) Working time | 8) Voltage¤t |
| 9) Battery resistance &temperature | 10) Battery voltage recording curve |
| 11) Input voltage&power | 12) Slot without battery inserted |

*The taskbar shows the status of each task visually.

Orange means charging, Pink means discharge, Blue means analyze, Purple means activate. After any task is completed, the tick✓will be displayed on the screen instead of the battery percentage. Users can switch to display the task details of each channel by touching the button ○.

Standby Mode

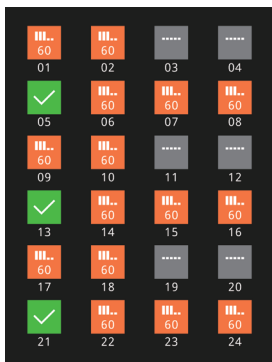
No batteries are inserted or when the batteries are fully charged, if the charger is not operated within five minutes, it will automatically set the display backlight to the minimum brightness level and the charger will enter standby mode to reduce power consumption. In standby mode, inserting or removing a battery or pressing any button will activate the charger automatically.

Capacity Plus Charge

When the user selects the battery type as NiMH/NiCd/Eneloop and the task as Charge, an additional charging option of the task setting interface can be set. If this mode is selected, the charger will automatically discharge the battery first and then automatically recharge to full capacity so as to eliminate the memory effect of the battery, and where possible, increase the capacity of the battery.

Overview Of Channel State

When the charger is N16 / N24, the user will press the touch key to enter the channel state overview under the working interface. Under this interface, the current working state of all channels will be displayed, and the user can clearly browse the current battery state of all channels as shown in the following figure:



Firmware Update

At ISDT we continually strive in the pursuit of perfection to all our products. Our R&D engineers concentrate their effort over days and months to the enhancement of the functions and control algorithms, as well as the visual optimization of the user interface. Continuous improvement of the performance is reflected in the firmware upgrade program.

Latest upgrade firmware can be downloaded from the ISDT official website.

The upgrade steps of N8 smart charger are as follows:

- 1) Connect PC and N8 with USB cable.
- 2) Start the firmware update program (downloaded from the ISDT website) to update the N8 firmware.

The upgrade steps of N16/N24 smart charger are as follows:

- 1) Connect PC and N16/N24 with USB cable.
- 2) Plug in the power supply to turn on the N16 / N24.
- 3) Start the firmware update program and update the N16/N24 firmware according to the software guidelines.

Packaged Items:

- 1) N8/N16/N24 smart charger
- 2) USB cable (applies to N8)
- 3) Power adapter (applies to N16/N24)

All pictures, statements and text information of this product are for reference only. Please refer to the actual information on the official website www.isdt.co. SHENZHEN ISD TECHNOLOGY CO.,LTD reserves the right for final explanation and modification of the specification.