ISDT N SERIES SMART CHARGER

N Series智能充电器使用说明

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扫码了解详尽内容

感谢您购买ISDT N系列智能充电器

N系列是一款能兼容多种类型AA/AAA尺寸柱状电池的智能充电器，各通道独立工作，可同时充不同种类及不同尺寸的电池。

为确保安全和良好的用户体验，在使用本产品之前，请阅读这些说明和警告。

1) 请勿使用非充电电池，及表面绝缘层已破损的电池。
2) 使用过程中确保充电器远离热源及潮湿环境，并注意通风散热。
3) 请勿让儿童操作充电器。
4) 正确设定电池充放电的参数，错误的设定可能导致意外。

1) Micro USB电源输入口（升级口）
2) 触控区域
3) LCD显示屏
4) 各通道工作状态指示灯
5) 电池插槽
6) DC电源输入口

N8产品规格

DC电源输入接口：Micro USB
输入电压范围：5 - 12V
输入功率：18W
支持电池数量：1 - 8节圆柱形电池
电池类型：Li-Ion，LiHv，Ni-MH，Ni-Cd，LiFePO4，Eneloop
充电电流范围：0.1A - 1.5A / 每插槽
放电电流范围：0.1A - 1.0A / 每插槽
显示：240x320 IPS LCD
工作温度：0℃ - 40℃
尺寸（长x宽x高）：188.5x79x28毫米
重量：283g

N16产品规格

DC电源输入接口：DC输入
输入电压范围：5 - 12V
输入功率：36W
支持电池数量：1 - 16节圆柱形电池
电池类型：Li-Ion，LiHv，Ni-MH，Ni-Cd，LiFePO4，Eneloop
充电电流范围：0.1A - 1.5A / 每插槽
放电电流范围：0.1A - 1.0A / 每插槽
显示：240x320 IPS LCD
工作温度：0℃ - 40℃
尺寸（长x宽x高）：308.4x79x28毫米
重量：450g

N24产品规格

DC电源输入接口：DC输入
输入电压范围：5 - 12V
输入功率：48W
支持电池数量：1 - 24节圆柱形电池
电池类型：Li-Ion，LiHv，Ni-MH，Ni-Cd，LiFePO4，Eneloop
充电电流范围：0.1A - 1.5A / 每插槽
放电电流范围：0.1A - 1.0A / 每插槽
显示：240x320 IPS LCD
工作温度：0℃ - 40℃
尺寸（长x宽x高）：428.2x79x28毫米
重量：810g

操作指引

在此充电器中，可以对8/16/24节同种类型的AAA或AA电池以任意组合方式进行充电，放电，分析，激活等操作。在充电模式并且电池类型为自动的情况下，支持NiMH电池和锂电池混充。

1) 当该充电器为N8时，将本产品配套的Micro USB线缆与USB电源适配器连接，N8即上电并进入工作状态。N8支持多种规格USB电源适配器，并能自动识别并匹配输入功率。当该充电器为N16/N24时，将本产品配套的电源适配器与充电器连接，N16/N24即上电并进入工作状态。
2) 插入电池之前，需对充电器进行任务及参数设定，长按触摸键○进入系统设置页面。

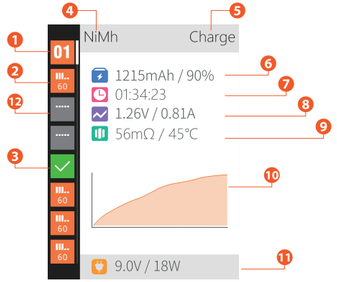
任务	充电，放电，分析，激活
电池类型	电池类型选择
扩容充电	开启/关闭
输入功率限制	限制功率(适用于N16/N24)
屏幕亮度	屏幕亮度调节，分为高/中/低三档
蜂鸣声	音量调节，分为高/中/低/关闭四档
语言	系统语言设置
系统自检	系统自检
关于	系统信息，固件版本号等
返回	返回

如何选择电池类型

通常在电池外皮上会有电池类型或额定电压字样，可对照下表确定电池类型。充电器依据检测到的电压自动判断电池类型，对于自动识别错误的电池类型，请手动修正。*NiZn，LiHv电池需要手动选择类型。

	NiCd/NiMH	NiZn	Li-Ion	LiHv	LiFePo4	Eneloop
额定电压(V)	1.20	1.50	3.70	3.80	3.30	1.20
满充电压(V)	1.65	1.90	4.20	4.35	3.65	1.65
存储电压(V)	不支持	不支持	3.70	3.80	3.20	不支持
放电电压(V)	0.90	1.20	3.10	3.30	2.90	0.90

3) 设定好各项参数之后，将电池安装可靠，蜂鸣器会响起提示声音，充电器会按照设定好的任务及参数对电池进行充/放电，显示屏将会显示充/放电状态，如下图。



界面释义

1) 当前选中通道号
2) 电池电量百分比
3) 充电完成
4) 电池类型
5) 当前工作状态
6) 电池已充/放电量及百分比
7) 工作时间
8) 当前电压及电流
9) 电池内阻及温度
10) 电池电压记录曲线
11) 输入电压及功率
12) 当前通道未插入电池

*在任务快速预览栏中，可以直观显示各插槽任务状态，
为充电，为放电，为分析，为激活。所有任务在完成后将会用√代替电池电量百分比，在使用过程中用户可以通过触摸按键□切换显示各通道任务详情。

待机模式

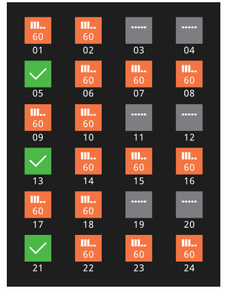
当充电器未安装电池或已安装电池全部已充满，五分钟内不对充电器进行操作，充电器会自动将显示屏背光设为最低，进入待机模式以节省电源消耗。在待机模式下，安装、移除电池或按动任意按键，将自动唤醒充电器。

扩容充电

当用户选择任务类型为充电，并且选择电池类型为NiMH/NiCd/Eneloop时，可以对任务设定界面的扩容充电选项进行设置。若打开此选项，充电器将自动对电池先放完电，再充电，以消除电池的记忆效应，恢复电池的存储容量。

通道状态总览

当该充电器为N16/N24时，在工作界面下用户轻按触摸键○进入通道状态总览界面，在该界面下，显示当前所有通道的工作状态，用户可以清晰明了的浏览当前所有通道的电池状态。如下图所示



固件升级

ISDT出品的所有产品均在追求极致体验的道路上步履不停，每一次功效的提高，算法的提升，视觉的优化，都是研发工程师日积月累的成果，将它们累积在固件更新包中，在ISDT官网，你可以下载到最新的固件升级程序。

N8智能充电器升级步骤如下：
1) 用Micro USB数据线将PC与N8连接好；
2) 开启固件更新程序，按软件指引将固件更新到N8；

N16/N24智能充电器升级步骤如下：
1) 用Micro USB数据线将PC与N16/N24连接好；
2) 为N16/N24连接电源开机
3) 开启固件更新程序，按软件指引将固件更新到N16/N24

包装内物品

请确认包装内包含下列物品：
1) N8/N16/N24智能充电器
2) Micro USB连接线（适用于N8）
3) 电源适配器（适用于N16/N24）

*本产品的所有图片，陈述及文字信息仅供参考，请以官网www.isdt.co实际信息为准。深圳艾斯特创新科技有限公司拥有对说明书内容的最终解释权和修改权。

ISDT® N SERIES
SMART CHARGER

N Series Smart Charger Instructions

www.isdt.co
Scan the QR code for details

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) Micro USB Upgrade Port (and Micro USB 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: Micro USB
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℃ - 40℃
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℃ - 40℃
Dimensions (L x W x H) : 308.4 x 79 x 28mm
Weight: 450g

Specification of N24

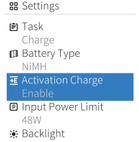
DC Power Input Port: DC input
Input Voltage: 5-12V
Input Power: 48W
Battery Slot Count: 1-24 single cylindrical cells
Battery Type: Li-Ion, LiHv, Ni-MH, Ni-Cd, LiFePO4, Eneloop
Charge Current Range: 0.1A - 1.5A/slot
Discharge Current Range: 0.1A - 1.0A/slot
Display: 240 x 320 IPS LCD
Operating Temperature: 0℃ - 40℃
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 Micro USB socket. Connect the auxiliary Micro 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.



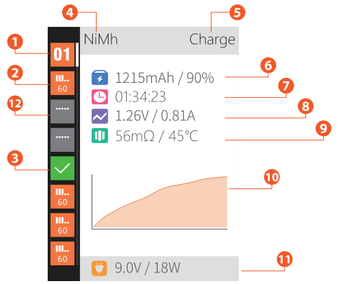
Task	Select task : Charge,Discharge, Analysis , Activation
Battery Type	Select battery type
Capacity Plus	On/Off
Input Power Limit	Power limit (applies to N16/N24)
BackLight	Three settings: High, Medium, Low
Buzzer	Four settings: High, Medium, Low , Off
Language	Default language setting
Self Check	System 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&current
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.
■ means charging, ■ means discharge, ■ means analyze, ■ 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

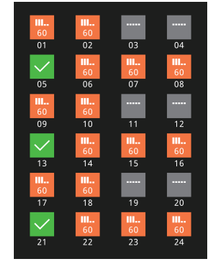
No batteries are inserted or when the batteries are fully charged, if the charger is not operated within five minutes, it will automatically set the display backlight to the minimum brightness level and the charger will enter standby mode to reduce power consumption. In standby mode, inserting or removing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