

1.描述 (SCOPE) :

1.1 本规格书适用于 **MT4000**

1.2 此规格书适用于规定 MT4000 充电器电气、外观、机械特性以及外部环境 要求等方面的规格。

The Specification is applied to the charger MT4000, to stipulate the charger's electrical, appearance, mechanical characteristics and external environment requirements.

2.输入特性 (INPUT CHARACTERISTICS) :

2.1 输入电压 DC

Input Voltage DC

额定输入电压: DC12V/3.0A Max

Rated input voltage: DC12V/3.0A Max

3.输出特性 (OUTPUT CHARACTERISTICS) :

3.1 输出电压: DC 4.2V 300mA*4 500mA*4 700mA*4 1000mA*4

Output voltage: DC 4.2V 300mA*4 500mA*4 700mA*4 1000mA*4

3.2 输出电压: DC 1.48V 300mA*4 500mA*4 700mA*4 1000mA*4

Output voltage: DC 1.48V 300mA*4 500mA*4 700mA*4 1000mA*4

3.3 输出电压: USB 5V 1000mA

Output voltage: USB 5V 1000mA

3.4 内阻测试范围: 0~99mR

4. 产品特点 (Product Characteristics)

4.1 本产品采用微电脑控制、可对任意容量的镍氢/镍镉/锂电池任意组合进行快速充电及容量检测, 智能识别各类电池

Controlled by microcomputer, this charger can charge NI-MH, NI-CD, Li-Ion batteries in any combination in fast way, and intelligently identify different batteries

4.2 每路电池有独立 LCD 显示充电参数

Independent LCD display of different batteries

4.3 Charger 模式下, 四种充电电流调节 300mA/ 500mA/ 700mA/1000mA(公差±5%)

Charging mode: Charging current 300mA/ 500mA/ 700mA/1000mA(公差±5%)

4.4 test 模式(先将电池充满电再放电最后将电池充满电), 检测电池容量;

Test mode (charge - discharge - charge) test battery capacity

4.5 Charge 和 test 两种模式可以同时进行;

Charging mode and test mode can work at the same time

4.6 每一路电池都可以同时或独立设定充电或容量检测功能;

Each battery slot is controlled and monitored independently or simultaneously.

4.7 多种显示模式, 电流(mA) /容量(mAh)/电压(V)/时间(h)/内阻(mR);

A variety of display modes: Current(mA)/Capacity(mAh)/Voltage(V)/Time(h)/Internal Resistance(mR)

4.8 配有专用的电源适配器。

With a specialized adapter

4.9 Ni-MH/CD 电池低于 0.2V 不能充电, 液晶屏显示 null

When voltage of NI-MH/CD battery is lower than 0.2V, it can't be charged, and it shows "null" in LCD Display.

4.10 Ni-MH/CD 电池最高充电保护电压为 1.55V

The highest charging protection voltage is 1.55V.

4.11 Lilon 低于 2.2V 不能充电, 液晶屏显示 null

When the voltage of Li-ion battery are lower than 2.2V, LCD Display shows "null".

4.12 Lilon 电池最高充电保护电压为 4.25±0.05V

The highest protect voltage for Li-ion battery is 4.25±0.05V.

4.13 温度保护: 75±5°C

Protect temperature: 75±5°C

4.14 充电完成后显示: FULL

When finished charging, it shows "Full"

5.按键描述

5.1 充电器有三个功能按键和四个电池选择按键，使用简洁方便；

This charger has three function buttons and four selection buttons, which makes it very simple and convenient to use.

5.2 选择按键：

Selection buttons;

选择相应的电池槽，单独改变某节电池的模式

Select the corresponding battery slot and change the mode of the battery separately.

5.3 功能按键 Function buttons:

5.3.1 模式键 (MODE) Mode

第一次按 mode 键需要长按 2S，才可以在 charge/Test 两种模式中切换

It need to press the mode button for 2S the first time, and then change the charging or Test mode.

5.3.2. 显示键 (DISPLAY)

按一下显示键,可以查看电池充放电五种状态，电流(mA)/容量(mAh)/电压(V)/时间(h)/内阻(mR)

To press the display button and check the five status of battery during charging and discharging process, Current(mA)/Capacity(mAh)/Voltage(V)/Time(h)/Internal resistance(mR)

5.3.3 电流键 (CURRENT)

用于调节电池充电电流大小，300mA/ 500mA/ 700mA/1000mA;

To change the battery current, 300mA/ 500mA/ 700mA/1000mA

6、运行模式 Operation mode

6.1 Charge Mode (充电模式)

6.1.1 当充电器接通电源时，充电器 LCD 屏幕全屏显示 3s ,如果电池未放入将会显示 Null，如果放入是坏电池也将显示 "Null" .

When the charger is connected to power, the charger LCD will display with full screen for 3S , and it will display "Null" if no battery was put in or bad battery was put in.

6.1.2 当充电器放入电池，充电器首先显示电池的电压，3s 跳转显示电池的充电电流，开始充电电流默认为 300mA,8s 内用户可以选择 300mA/ 500mA/ 700mA/1000mA 充电电流，如果在 8 秒钟内,没有做出设定,那么系统自动以 300mA 电流进行充电，此时电流将无法再更改，若要改变，需重置电池；

When the battery were put into the charger, it will display the battery voltage, and change to display battery current 3s later, then begin to charge the battery in 300mA, users can select 300mA/ 500mA/ 700mA/1000mA charging current within 8S, if no selection, it will charge the battery in 300mA automatically, and at the moment the charging current can't be changed any more, unless the battery was reseted.

注意：用户需注意充电电池的最大充电电流，如果不需要快速充电，建议用 300mA 充电，这样是最安全并且对电池也最有利；

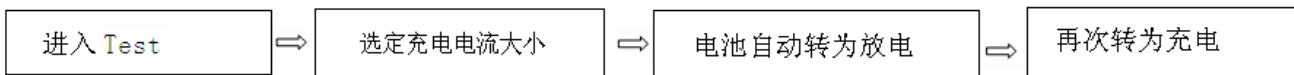
Attention: users must pay attention to the maximum charging current of battery, if fast charging is no need, it's better to charge the battery in 300mA, this is the most secure way and also it's favorable for the battery;

6.1.3 充电模式下,通过轻按 DISPLAY 键可以切换查看电流(mA)/容量(mAh)/电压(V)/时间(h)/内阻(mR)，5 种状态值，电池充饱之后，将显示 Full。

Under charging mode, you can press the display button to check the Current(mA)/Capacity(mAh)/Time(h)/Internal resistance(mR).

6.2 Test Mode（容量检测模式）

6.2.1 Test Mode 是先将电池充满电，再将电池放电并记录放电电量从而计算电池的容量，最后自动将电池充满电；



Test mode: Firstly charge the battery fully, and then discharge the battery and record the discharging power to calculate the battery capacity. Lastly charge the battery fully automatically.

6.2.2 进入 Test 电池放入充电器后，按 mode 键进入 Test 模式后；8s 内按 current 键选择充电电流 300mA/ 500mA/ 700mA/1000mA，一旦电流确认，不可再更改，

To put the battery into the charger, and press the mode button to enter the discharging mode, and then press the current button to select the charging current 300mA/ 500mA/ 700mA/1000mA within 8S. It can't be changed once the charging current is selected.

电池自动转为放电——当电池充满后，系统自动以 250mA 或 500mA 放电并自动记录电池放电电量，从而计算电池容量，当电池电压放到截止点时，容量检测结束。

When the battery is fully charged , the system will discharge the battery in 250mA or 500mA record the discharging power to calculate the battery capacity at the same time. When the battery voltage discharged at the cutoff point, the capacity testing is finished.

注明：在这种模式中第一步选择 **Charge** 电流为 **300mA/500mA** 时，电池充饱后放电电流为 **250mA**（公差±5%）；当第一步选择 **Charge** 电流为 **700mA/1000mA** 时，电池充饱后放电电流为 **500mA**（公差±5%）；

再次转为充电——当容量检测结束后，充电器会以之前选定的电流值再次为电池充电，直至电池充满，将显示 Full。

After the capacity testing finished, the charger will charge the battery again in the previous current till the battery is fully charged, it will display Full.

7.环境要求(ENVIRONMENTAL REQUIREMET):

7.1 工作温度:

0°C-60°C，满载，正常工作。

Operating temperature:

0°C-60°C, full load, normal working

7.2 储藏温度:-20°C to 85°C

带外壳

Storage temperature: -20°C to 85°C with packaging

7.3 工作湿度:

65±20% 满载，正常工作。

Operating humidity:

65±20% full load, normal working

7.4 振动(Vibration):

1.测试标准：国际电工电子委员会

Test standard: International Electrical Committee Standard

Operating: IEC 721-3-3 3M3 5~9Hz,A=1.5mm

加速度 (9~200Hz,Acceleration 5m/s²)

Acceleration (9~200Hz,Acceleration 5m/s²)

2.运输 (Transportation) :

充电器包装好装箱，在运输过程中应防止剧烈振动、冲击或挤压、防止日晒雨淋，适用汽车、火车、轮船、飞机等交通工具运输。

Every charger should be packed well to prevent severe vibration, impact or extrusion, bad weathered, suited for transportation such as cars, trains, ships, airway ect.

8.外形尺寸 (OUTLINE DIMENSION) :

8.1 尺寸: 158x 92.5 x34.5 mm (长*宽*高) (图片仅供参考,以实物为准.外壳颜色可订做)

Dimension: 158x 92.5 x34.5 mm(L*W*H)



8.2 重量: 460g

Weight: 460g

9.铭牌附图：按客户需求可以订做（具体参考订单要求）

OEM Brand: We can do OEM chargers according customers' requirements.

10.警告 Warning

1.1 在使用前，请认真参考说明书,注意充电电池的推荐充电电流,不要超过推荐电流值充电;

Please refer to instruction before using it and pay attention to the recommended charging current. Please don't charge the battery over the recommended charging current.

1.2 请勿使用其它电源适配器;

Please don't use other adapter.

1.3 充电器充放电时可能会发热,注意不要烫伤;

The charger may be heating during charging and discharging process, please beware of burns.

1.5 停止使用时,请拔掉电源;

Please unplug the power when the charger is not used.