

E·SYB

E4 CHARGER OPERATION MANUAL



For iOS & Android

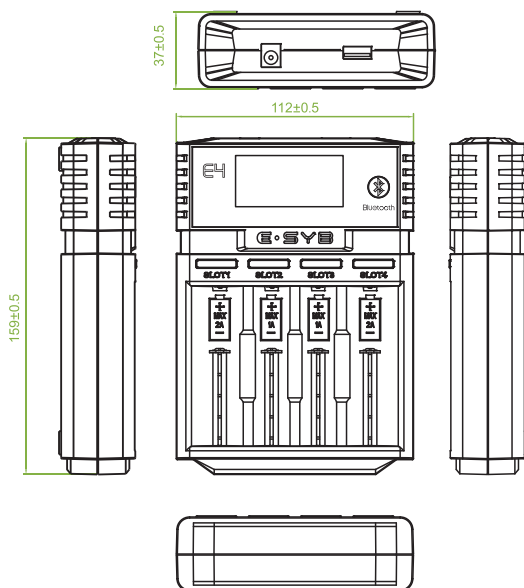
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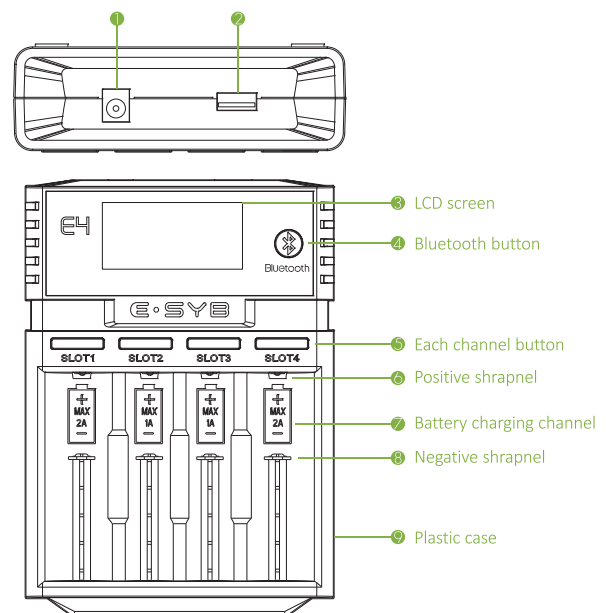
STRUCTURE DESCRIPTION

① Dimensions: 159*112*37mm



② Overview Of Structure

Adapter connection port USB output port



③ Product Weight:

Charger:235g Adapter:125g

FEATURES ▼

- Bluetooth/APP function
- LCD screen displays charging mode and battery status of all slots
- Two charging modes (CC, CV)
- Each of the four battery slots monitors and charges independently. Capable of charging 4 batteries of different types and different sizes simultaneously
- Support Li-ion, LiFePO₄, Ni-MH and Ni-Cd batteries
- Select different charging modes per different batteries.

It can detect battery voltage automatically and identify Li-ion, Ni-MH and Ni-Cd rechargeable batteries. For LiFePO₄ batteries need to set charging mode manually.

- As for Ni-MH and Ni-Cd battery, the charging current is 0.25A; And for Li-ion and LiFePO₄ battery, the current options could be 0.25A, 0.5A, 1A and 2A.
- It will stop charging automatically when completing charging.
- Activation function for Li-ion batteries with protection board
- USB output port. It can charge your phones and PCs when it's disconnected with the adapter.
- Overtime prevention
- Anti-reversing protection
- Short-circuit protection
- Over-current protection
- Over-voltage protection
- Made from durable PC/ABS (fire proofing/flame resistant)

Specifications

Input: AC 100—240V 50/60Hz 1A(max)

Output Voltage: 4.2V±1%, 3.6V±1%, 1.48V±1%

USB Output Voltage: 5.0V±5%

Output Current

Li-ion, LiFePO₄ batteries: 0.25A/0.5A/1A/2A

Ni-MH, Ni-Cd batteries: 0.25A

Compatible With

Ni-MH, Ni-Cd batteries: AAAA/AAA/AA/A/SC/C/D

Li-ion, LiFePO₄ batteries: 10440/14500/14650/16340/16650/17650/17670/18350/18490/18500/18650/22650/26500/26650 /

OPERATING INSTRUCTIONS ▼

Connect E4 to DC side of adapter and attach its AC side to power outlet, E4 will work and test itself. LCD will display our logo, E-SYB and our website, www.e-syb.com. Then it will display charging status after finishing self-test.

When you insert Li-ion or LiFePO₄ batteries, E4 will identify both of them as Li-ion battery with default charging mode, 0.5A. You can short press the button to switch the charge current of corresponding channel. The switch sequence is 0.5A, 1A, 2A (only slot 1 and slot4), 0.25A. Plus, you can long press the button to adjust the battery type to Li-ion or LiFePO₄. The LCD screen will display the battery type and current mode selected. It will be regarded as default charging mode if without switch operation and it will begin to charge per the current mode after 10 seconds. So you must switch it under the proper placement of the battery within 10 seconds. or you need to reset the battery and re-switch.

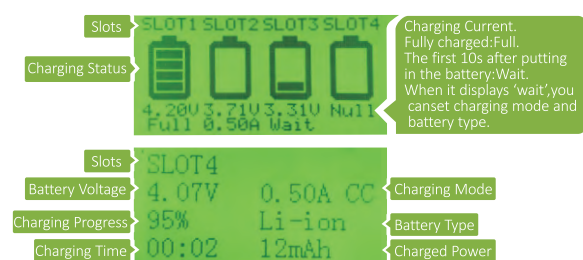
The charging current will be continuous DC when it's 0.25A, 0.5A or 1.0A. Plus, when the charging current is 2A, it will be pulse DC, which will change within the range from 1.6A to 2.0A.

When placed in Ni-MH or Ni-Cd batteries, the charger will automatically recognize both of them as a Ni-MH battery, whose charging current is 0.25A. Long press the button to adjust the battery type to Ni-MH or Ni-Cd. The LCD screen will display the battery type and current mode selected. When Ni-MH or Ni-Cd battery is being charging, the charging current is fixed at 0.25A that can't be changed manually.

Differences of 4 types of batteries are as follows:

| Battery Type | Charging Voltage | Charging Current | Recognition Type |
|-----------------------------|------------------|---------------------------------|---------------------------------------|
| Li-ion battery | 4.2V | 0.25A/0.5A/1A/2A (Default 0.5A) | Li-ion battery |
| LiFePO ₄ battery | 3.6V | 0.25A/0.5A/1A/2A (Default 0.5A) | Li-ion battery (Need switch manually) |
| Ni-MH battery | 1.48V | 0.25A | Ni-MH battery |
| Ni-Cd battery | 1.48V | 0.25A | Ni-MH battery (Need switch manually) |

The battery icons of the corresponding channels on the LCD screen flash according to the current charging progress, showing the voltage and current of the each channel. Short press the corresponding channel button, you will see the specific information as follows:



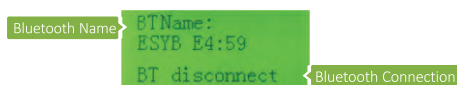
- Battery Voltage: Voltage of the battery on the current channel
- Charging Mode: Selected charging current and charging mode, CC, CV, Full
- Charging Progress: Calculate according to the current voltage
- Battery Type: Selected rechargeable battery type
- Charging Time: Charging time of the battery hh: mm
- Charging Power: Calculate charging power according to the current and charging, for reference only

When the battery is fully charged, LCD screen will display the battery full power icon on the corresponding channel, please take out the fully charged battery in time.

BLUETOOTH FUNCTIONS ▼

Short press the Bluetooth button; it will display the current status of the Bluetooth connection

Under conditions of accessibility, Bluetooth communication range is up to 10m. After pressing the Bluetooth button, LCD screen display which reads as follows:



USB OUTPUT FUNCTION ▼

When the E4 is not connected with the adapter, put the fully-charged battery into E4 directly. Then E4 will transfer to USB output mode. Meanwhile, the back light of LCD screen will stop and display "USB 5V Discharge mode".

The USB output function will be closed when you install only 1 battery or low-voltage batteries. Also, the screen will display "USB 5V Discharge mode Voltage low".

When the batteries' voltage is low while the load current is larger, LCD screen will flash because of low current to remind the user of changing or charging battery.

Overtime Prevention

The E4 is equipped with an advanced "overtime" safety function. It will individually monitor the charging time of each battery slot. When the slot of E4 works over 18 hours under 0.25A current, or over 15 hours under 0.5A, or runs over 10 hours under 1A or over 5 hours under 2A, it will automatically shut down the channel's charging function and indicate full status to reduce the danger caused by charging the poor-quality battery.

Activation Function

Li-ion batteries with protection board can protect itself when it runs into short circuit, and the voltage is 0V. You can insert these batteries into the charger; and the charger will activate the batteries and begin to charge them.

Short-circuit Protection

The E4 also has an advanced safety function of "short circuit protection". Each of the channels charges independently. When you insert batteries incorrectly, it will result in short circuit of positive and negative electrode; but E4 won't output current so as to avoid danger.

Warning: Do not insert the batteries incorrectly. Although the E4 has self-protection function, the short circuit will cause damage to the batteries.

Over-current Protection

The E4 monitors the charging current during the charging progress. When an accident causes the current exceed the normal current, the charger will reduce the charging voltage to minish current even to turn off the charging function to avoid danger.

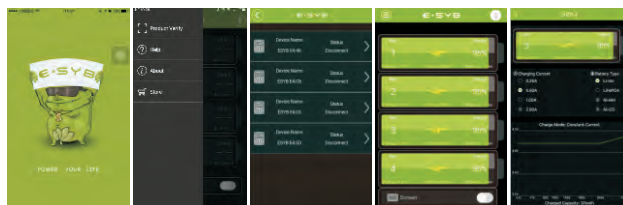
Over-voltage Protection

The E4 will detect the voltage of the battery inserted and select the appropriate mode depending on the charging voltage level. When the battery voltage exceeds 4.3V, the charger will automatically turn off the charging functions.




APP FUNCTION

Installation Environment: Android 4.3 or ,iOS 7.0 or higher version

Operation Interface:



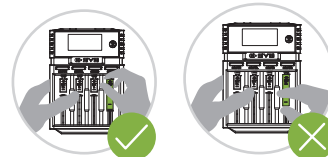
Operating methods:

- Install and open ESYB APP to enter the main interface (1).
- Click  to enter Menu, and select related operations (2).
- Click  to enter Bluetooth connection interface (3); select the corresponding Bluetooth choice on app, and then connect.
- Return to the main screen, which displays information of each channel (4).
- Click  to enter setting interface (5), you can set charging current, battery type and see the charging curve of the battery.
- You can switch charging current and battery type via APP.
- APP can display charging current, voltage, power, percentage and curve, etc. updated every 30s.

PRECAUTIONS

- When inserting the batteries to the slots, please ensure that the batteries have been connected correctly to positive and negative ends before charging.
- E4 is only compatible with Li-ion, LiFePO₄, Ni-MH and Ni-Cd batteries. Please do not insert any other kinds of batteries to avoid danger.
- To avoid damage to the battery, charging a battery less than 2500mAh under 2A is not recommended.
- Make sure the PVC drivepipe is intact before charging, or it will result in short circuit.
- To avoid accidents, please use the matched adapter to charge.
- The E4 should only be used indoors.
- Do not disassemble or modify the charger.
- Children under the age of 18 should be supervised by an adult when using the charger.
- Please use E4 under 0℃- 40℃.
- Do not use the charger near fire source, direct sunlight, heating equipment and thermal places.

How to put on and take off the battery



Warranty Service:

All ESYB chargers are warranted for quality. The end user can exchange the malfunctional ESYB charger for a corresponding replacement at a local authorized distributor/ dealer within the first 15 days. And the malfunctioning one can be sent to an authorized distributor/dealer for free repair before 12 months. Also, if a failure occurs after 12 months, the warranty covers labor costs and maintenance with the exclusion or accessories or replacement parts.

The warranty is nullified under the following situations.

- The product(s) is/are broken down, reconstructed and/or modified under unauthorized conditions.
- The product(s) is/are damaged through improper use.
- The product(s) is/are damaged by leakage of batteries.

For further details of ESYB's warranty service, please contact a regional agent.

FCC ID: 2AHIQ-E4

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning:

Changes or modifications not expressly approved by the party responsible for compliance could void the

user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against

harmful interference in a residential installation. This equipment generates, uses and can radiate radio

frequency energy and, if not installed and used in accordance with the instructions, may cause harmful

interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference

by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.