X4 Touch
INSTRUCTION MANUAL

INDEX

WARNING

Physically inspect the wrapper of the each battery before placing into charger, if any damage to the wrapper, DO NOT insert into the charger as this can lead to a short circuit.

Children should be supervised to ensure they do not play with the charger.

Do not recharge non-rechargeable batteries!

During charging, the battery must be placed in a well-ventilated area!

Never leave the charger unattended when charging the battery.

INTRODUCTION

The Epoch Batteries X4 Touch is a universal intelligent touch screen charging and discharging tester compatible with almost all rechargeable batteries on the market, thus eliminating the need to own several chargers. The X4 Touch automatically detects 3.7V Li-ion, Ni-MH and Ni-CD batteries and through manual selection is also capable of charging LiFePO4 and 3.8V Li-ion batteries. Intelligent circuitry selects the optimal charging mode (CC, CV and dV/dt) for a given battery and each of the X4 Touch's four microcomputer-controlled charging slots then monitor and charge the battery independently. Furthermore, an integrated digital touch screen clearly displays all charging and discharging parameters and progress while an intelligent automatic power-off function terminates current when charging is completed.

FEATURES

- Microcomputer IC controls charging process
- CC/CV/Trickle charging, to make sure the battery is full charged and won't be over charged
- Four slots control independently by touch screen
- Mixed charging mode
- Color LCD instantly shows the charging process, battery voltage, current, time, capacity, charge curve, discharge curve and internal resistance
- Applicable batteries: Li-ion 3.7V, Li-ion 3.8V, LiFePO4, Ni-MH/CD cylindrical chargeable batteries (Diameter: below 32mm, height: 34-73mm)
- Input: AC100V-240V/ DC12V or DC12V 5A vehicle input
- Charging, Discharging, Capacity Test and Internal resistance
- Four types of charging current: 0.5A, 1.0A, 1.5A, 2.0A (According to different capacity); discharging current: 0.5A
- Reverse connection protection: When the battery is reversed, the

corresponding battery icon shows “Battery Error”.

- Short circuit protection: When the battery is short circuit, the corresponding battery icon shows “Battery Error”.
- Activate automatically for Li-ion batteries with protection board, which are instantaneous short circuit.
- Intelligent temperature control:

  The built-in cooling fan will be automatically open, when the internal temperature of the machine rises to 60 degrees (Celsius) according to two temperature sensors. When the temperature drops to 40 degrees (Celsius), it stops automatically to ensure that the charger has a good working condition. Avoids high capacity batteries from overheating during the charge and discharge process, causing spontaneous combustion or ignition.
- Certified by ROHS, CE and FCC

SPECIFICATIONS

Input: AC 100-240V 50/60Hz, DC 12V 5A

Charging Cut-off Voltage:

4.35V±0.02V / 4.2V±0.02V / 3.6V±0.02V / 1.43V±0.02V

Charging Current:

500mA±30mA*4 / 1000mA±50mA*4 / 1500mA±60mA*4 / 2000mA ±80mA*4

Discharge Cut-off Voltage: 2.85±0.02V / 2.75±0.02V / 2.0±0.02V / 0.90±0.02V

Discharging Current: 0.5A

Compatible with:

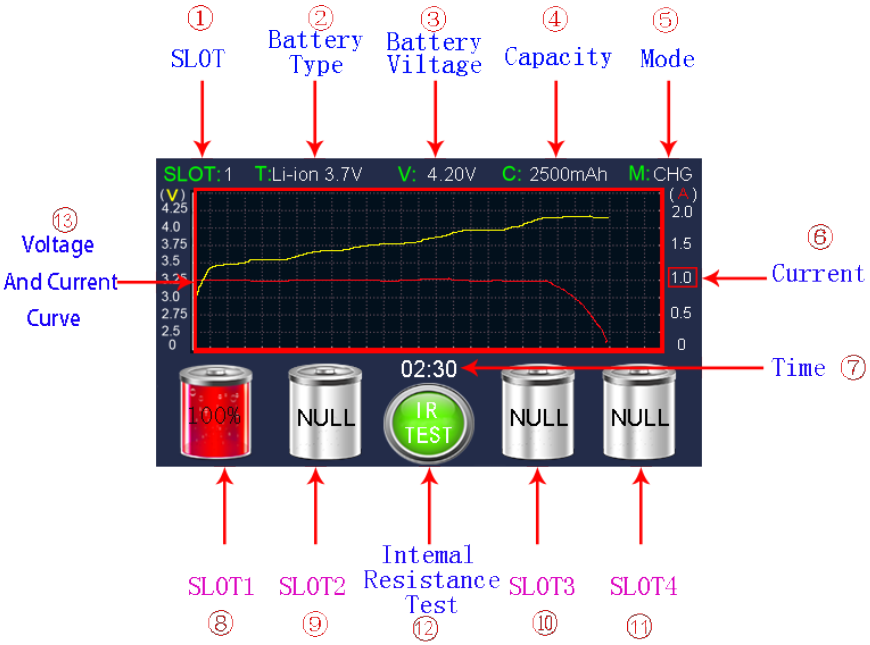
3.7V Li-ion / 3.8V Li-ion / LiFePO4: 32670, 26670, 26650, 22650, 21700, 20700, 18650, 18490, 17500, 18350, 14500, 10440, 16340(RCR123)

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

Dimensions: 177mm×133mm×56mm

Weight: 450g (Without adaptor and test pens)

MAIN INTERFACE SPECIFICATION



①Slot: Display the slot number when the battery is connected.

②Battery Type: Displaying the selected battery type (Li-ion 3.7V, Li-ion 3.8V, LiFePO4, Ni-MH/Cd)

③Battery Voltage: Displays the real-time battery voltage

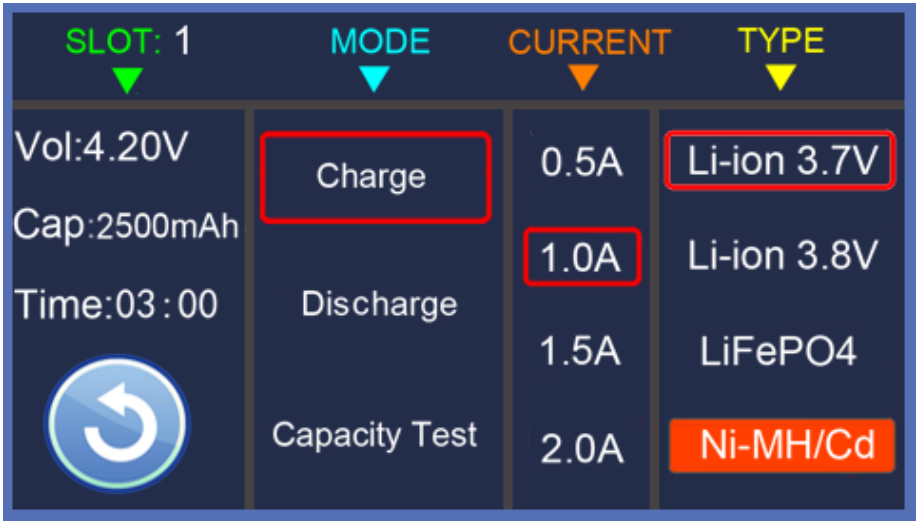
④Capacity: Displays the real-time capacity of the currently selected charge / discharge status

⑤Mode: Displays the selected status of the battery (Charge, Discharge, Capacity Test)

⑥Current: Displays the current of the selected battery

⑦Time: Shows the time from selecting the mode to completing the mode

⑧SLOT 1: Select the battery icon and it will turn red. When it is not selected, the battery icon is green. If no battery is detected, the icon shows NULL. When the slot is selected, click the icon again to enter the settings interface of the slot. As the following figure shows:

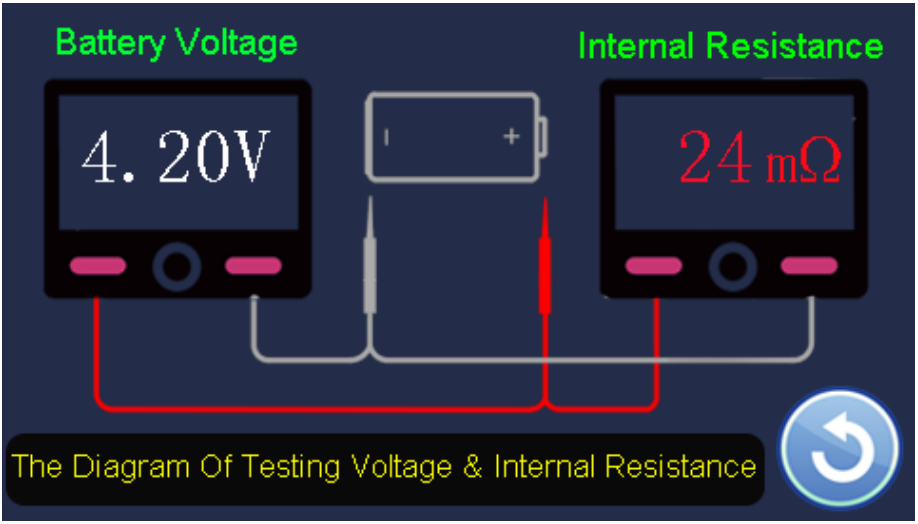


⑨SLOT 2: Selecting this icon, the battery icon will be red, and green when not selected. If no battery detected, the icon shows NULL.

⑩SLOT 3: Selecting this icon, the battery icon will be red, and green when not selected. If no battery detected, the icon shows NULL.

⑪SLOT 4: Selecting this icon, the battery icon will be red, and green when not selected. If no battery detected, the icon shows NULL.

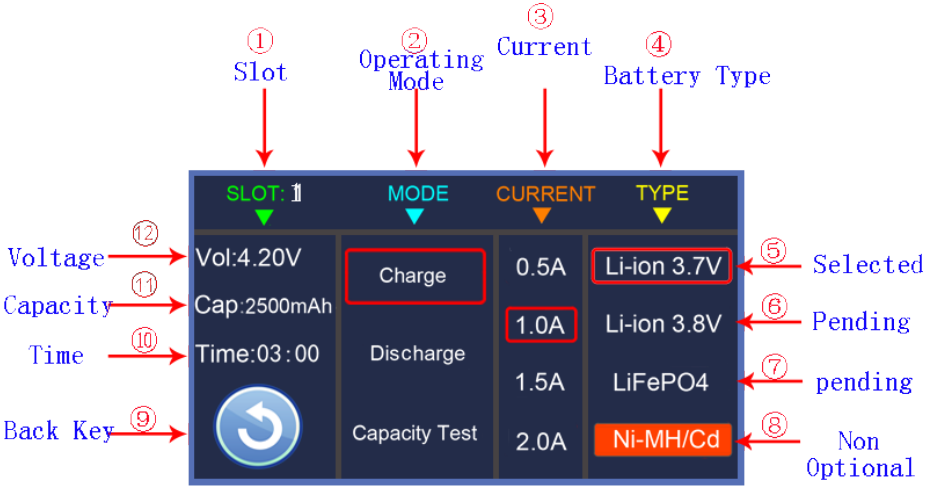
⑫Internal Resistance Test: Click the icon to enter the internal resistance test interface. As the following figure shows:



⑬Voltage And Current Curve: Display the curve of selected slot battery. The progress of the curve has an auto-scaling function. The yellow line is the voltage curve and the red line is the current curve.

SETTINGS INTERFACE SPECIFICATION

Access multiple batteries and click the battery icon to switch curves. The selected battery icon will turn red, and click the red battery icon again to enter the settings interface. As the following figure shows:



①Shot: Displays the current slot information (As pictured above SLOT: 1)

②Operating Mode: Three modes: Charge, Discharge and Capacity Test; the default mode is “Charge” (As pictured above Charge)

③Current: Four kinds of currents can be selected, 0.5A, 1A, 1.5A and 2.0A;Li-ion and LiFePO4’s default current is 1.0A; Ni-MH’s default current is 0.5A. (As pictured above 1.0A)

④Battery type: It will automatically identify Ni-MH and Li-ion batteries when the batteries are in. When Li-ion batteries are detected, the Li-ion

3.7V charging program is selected acquiescently; at this time Ni-MH/Cd option is red, which cannot be selected. Putting a 3.8V Li-ion battery or LiFePO4 battery needs to switch to the corresponding program Li-ion 3.8V or LiFePO4 manually. When Ni-MH/Cd battery detected, the other three options are red, which cannot be selected.

⑤Selected: The red border will appear when selected. (As pictured above 

)

⑥Pending State: As pictured above 

⑦Pending State: As pictured above 

⑧Non-optional State: This status is red when the function cannot be selected. (As pictured above 

)

⑨Back key: Clicking the button to return to the main interface (As pictured above 
)

⑩Time: Displays the operating time of the current slot (As pictured above 

)

⑪Capacity: Displays the capacity of the current slot in Charge, Discharge or Capacity Test mode (As pictured above 

)

⑫Voltage: Displays the real-time voltage of the current slot (As pictured above 

)

NOTE:

a. The selected icon will display a red border.

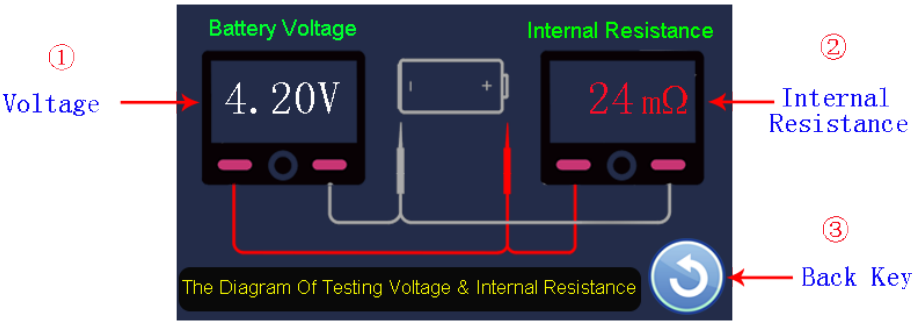
b. For Ni-MH batteries, cannot select the battery type; the other three battery type icons are red that is not optional, when the Ni-MH battery is identified.

c. Ni-MH batteries' charging current can only be selected when the battery

is just inserted; after selecting current, the current cannot be changed. So the other current icons turn red that is not optional.

d. The three kinds of MODE menu (Charge, Discharge and Capacity) can be switched at any state.

INTERNAL RESISTANCE TEST INTERFACE

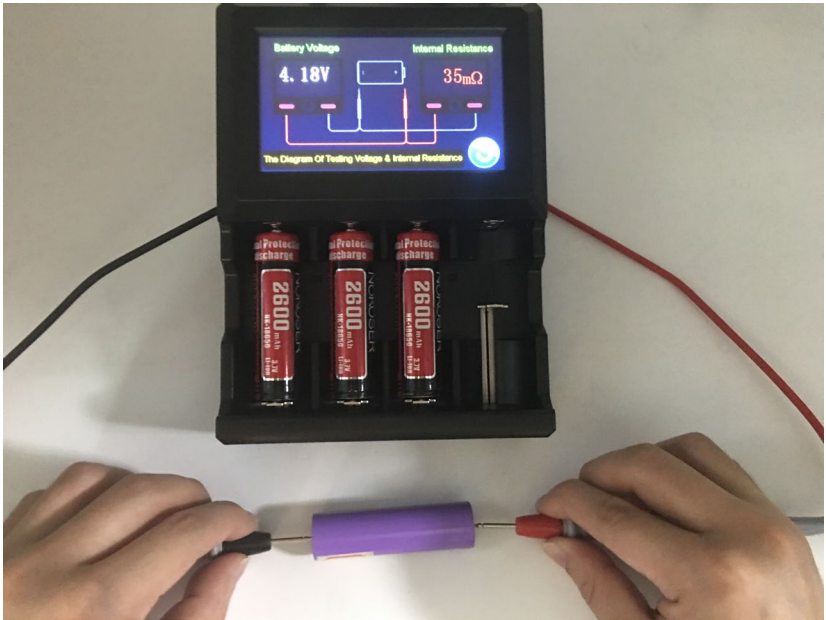


① Voltage: Displays the voltage of the battery being tested.

② Internal Resistance: Displaying the internal resistance of the battery being tested.

③ Back key: Clicking the button to return to the main interface

Test Method:



Access to the matching test pens, the red one is connected to the positive pole of the battery and the black one is connected to the negative pole of the battery. Hold and wait for 3 seconds, displays the actual voltage and internal resistance.

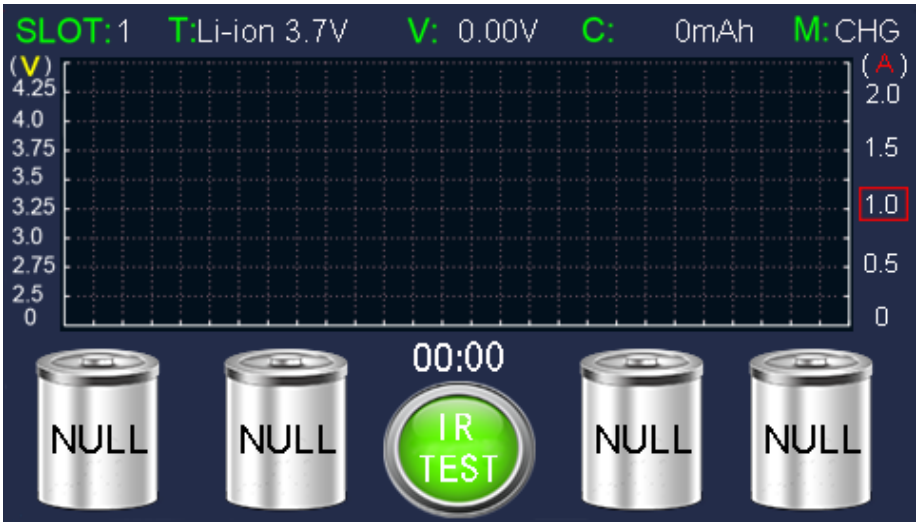
Note: *After the charger is connected to the power supply, please do not test what the battery is charging in the charger in the slot, to avoid damaging the internal resistance test circuit caused by generated peak voltage of the bad contact. It is recommended to test the battery resistance after removing the battery. Test voltage range: 4.5VMAX, test internal resistance range: 0~255mΩ.*

OPERATION METHOD

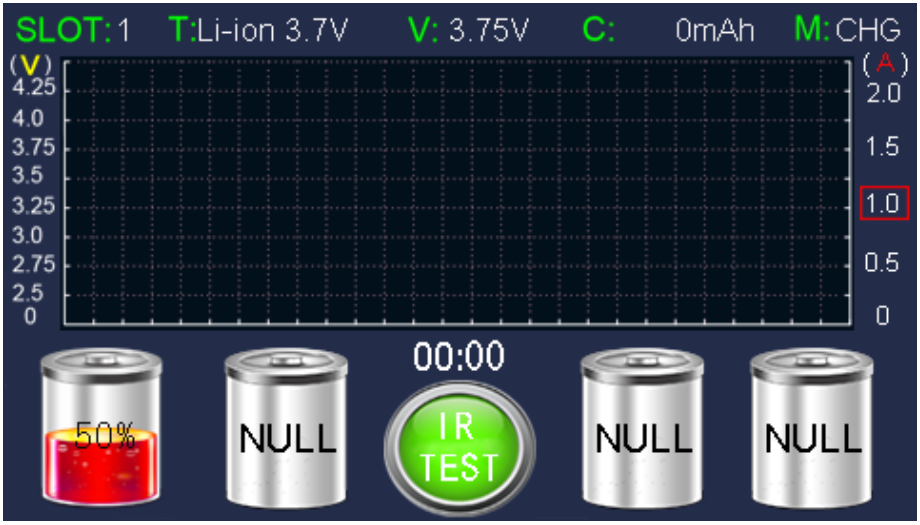
1) The AC side of the power adapter plugs into the outlet, and the output side plugs into the charger.

2) Connected to the power, the Epoch Batteries logo is displayed on the color screen.

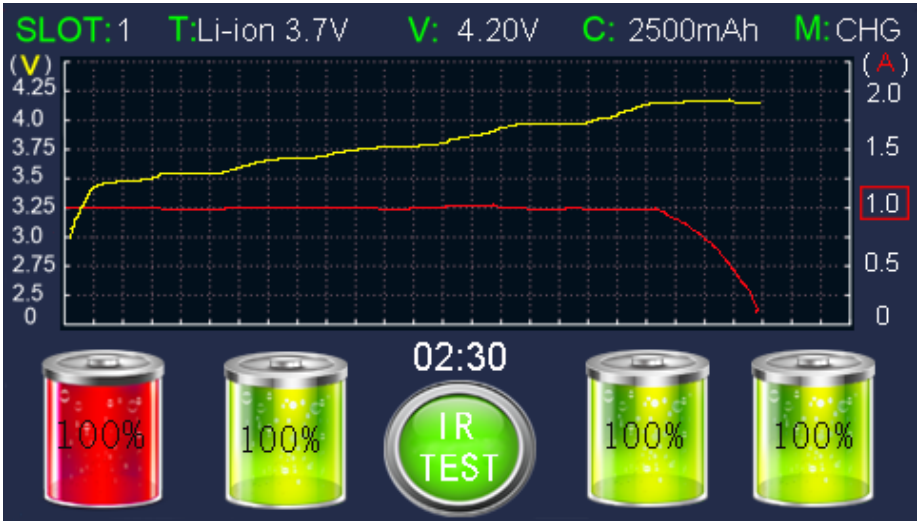
After booting, displays the following figure:



3) Access to the battery, if the users click the battery icon to enter the Settings Interface within 5 seconds, the charger will work as the setting parameters. Otherwise, it will automatically enter the default charging mode. As the following figure shows:

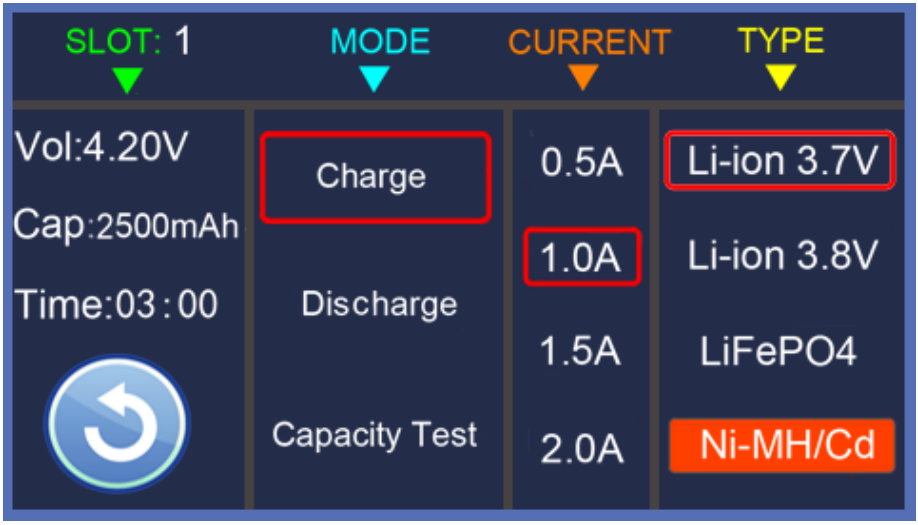


4) Switching Battery information



After putting multiple batteries, click the battery icon which one the users want to check; the battery icon turns red, and all the information at the top of the main interface is the information of the selected slot.

5) Change settings:



If users want to change the setting, there are two ways:

①When putting the battery, waiting for 8 seconds, click the battery icon. (Note: For Ni-MH batteries, charging current must be within 8 seconds. If there is no operation within 8 seconds, then charge in the default current and the current cannot be changed during charging.)

②During the charging process, select the battery icon which need to change settings and click the battery icon again to enter the setting interface.

BATTERY ACTIVATION

For every installed battery, the X4 Touch will activate the battery by charging it. Activate automatically for Li-ion batteries with protection board, which are instantaneous short circuit. For the unprotected batteries' voltage is above 0.2V, the activation methods are as follows:

A. Put the batteries in the X4 Touch. (During the process, it is normal that

Li-ion batteries will be detected as Ni-MH batteries.)

B. When the voltage is above 2.75V, remove and reinstall the batteries and charge again.

Note: *The X4 Touch is not recommended for use with over-discharged (zero volt) UNPROTECTED Li-ion batteries.*

PRECAUTIONS

1.The X4 Touch is compatible with batteries of varying sizes, therefore when charging certain batteries, manually adjust of the battery's position within the slot is recommended, as to ensure solid contact is made between both sides of the battery and the charging slot's metal contact points.

2.The X4 Touch is restricted to charging 3.7V Li-ion, 3.8V Li-ion, LiFePO4, Ni-MH/Ni-Cd rechargeable batteries only. Never use the X4 Touch with other types of batteries as this could result in battery explosion, cracking or leaking, causing property damage or personal injury.

3.The X4 Touch should only be used indoors and it cannot be used or stored in the water, high humidity, direct sunlight and low or high ambient temperatures.

4.Do not disassemble or modify the charger.

5.Children under the age of 18 should be supervised by an adult when using the X4 Touch.

6.The X4 Touch's safe operating temperature is between 0℃-40℃.

7.Please use the X4 Touch correctly according to this introduction manual to avoid product damage and personal injury. Any problem arising from improper use of the X4 Touch, our company will not bear any legal responsibility and economic disputes.

WARRANTY SERVICE

All Epoch Battery products enjoy a comprehensive after-sales warranty service. A malfunctioning Epoch Battery X4 Touch charger may be exchanged for a replacement by a local authorized distributor/dealer within the first 15 days of receipt by the end user. After 15 days and up to 12 months, the X4 Touch may be sent to an authorized distributor/dealer for repair.

The warranty is nullified in any of the following situations.
1.The product(s) is/are broken down, reconstructed and/or modified under unauthorized conditions.
2.The product(s) is/are damaged through improper use.
3.The product(s) is/are damaged by leakage of batteries.

For further details of Epoch Battery's warranty service, please contact a regional distributor/dealer.

Note: *The Epoch Batteries official website shall prevail in case of any product data changes.*

Website: https://www.epochbatteries.com/

Email: support@epochbatteries.com

Address: 600 Peachtree Street NE, Atlanta, GA 30308 USA