XTAR VC4 PLUS

XTAR VC4 Plus Smart LCD Type-C Universal Battery Charger User Manual

Model: VC4 PLUS

1. INTRODUCTION

The XTAR VC4 Plus is an advanced four-bay universal battery charger designed for a wide range of rechargeable batteries. It features a smart LCD display, QC3.0 fast charging input, and multiple operating modes including charging, grading, and storing. This manual provides detailed instructions for safe and efficient use of your VC4 Plus charger.

Image 1.1: The XTAR VC4 Plus charger, including the main unit, USB-C cable, and power adapter.

2. SAFETY INFORMATION

Please read and understand all safety instructions before using the charger. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Use the charger only for rechargeable batteries specified in this manual.
- Do not charge non-rechargeable batteries.
- Do not disassemble, modify, or short-circuit the charger.
- Keep the charger away from water, moisture, and high temperatures.
- Ensure proper ventilation during charging.
- Supervise charging and remove batteries once fully charged.
- Keep out of reach of children.
- The charger is equipped with multiple protection features including over-current, over-voltage, over-charge, short-circuit, and over-heat protection.

Image 2.1: The XTAR VC4 Plus incorporates multiple safety protection mechanisms.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- XTAR VC4 Plus Battery Charger
- USB Type-C Cable
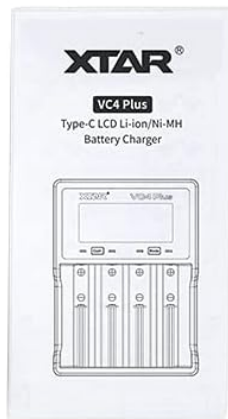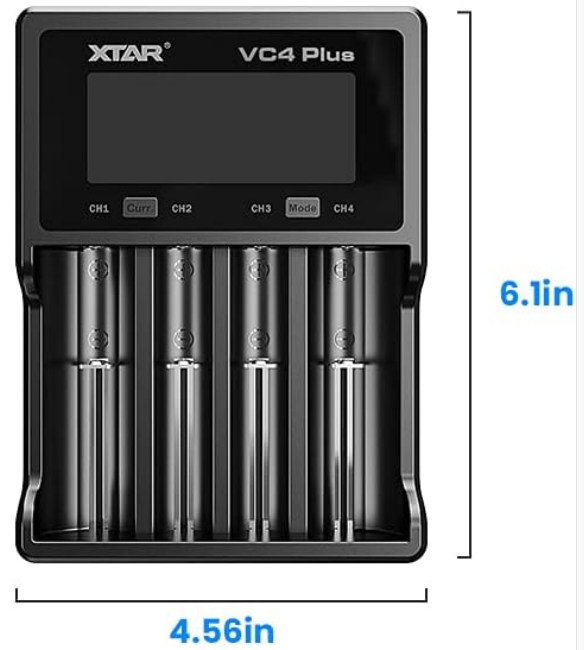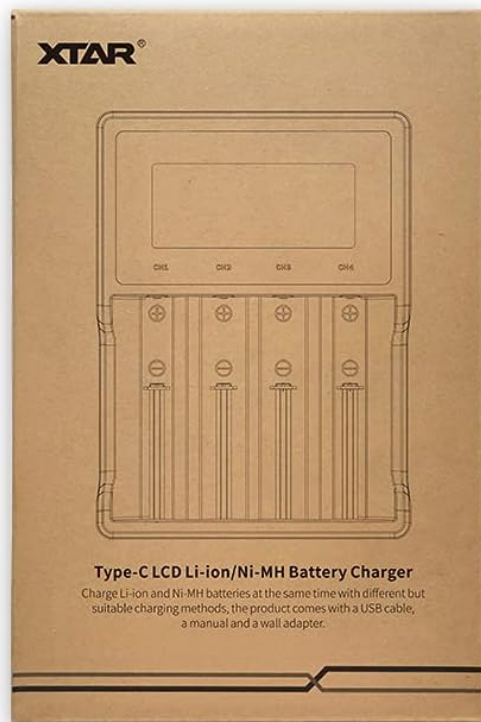- QC3.0 Power Adapter
- User Manual
- Storage Pouch

Image 3.1: Contents of the XTAR VC4 Plus package.

4. PRODUCT OVERVIEW

Familiarize yourself with the components of the XTAR VC4 Plus charger:

Image 4.1: Key components and features of the XTAR VC4 Plus charger.

- **Charging Bays (CH1-CH4):** Four independent slots for batteries.
- **LCD Display:** Shows real-time charging status, battery information, and selected mode.
- **'Curr' Button:** Selects the charging current for the active channel.
- **'Mode' Button:** Cycles through different operating modes (Charging, Grading, Storing).
- **Type-C Input Port:** For connecting the power adapter. Supports QC3.0 for faster input.
- **LED Indicators:** Provide quick visual status for each channel.

5. Setup

1. **Connect Power:** Insert the USB Type-C cable into the charger's Type-C input port and connect the other end to the QC3.0 power adapter. Plug the power adapter into a suitable wall outlet. The LCD display will illuminate.

2. **Initial Display:** Upon power-on, the charger will perform a self-test, and the LCD will show initial information.

6. Operating Instructions

6.1 Compatible Battery Types

The XTAR VC4 Plus supports a wide range of 3.6V/3.7V Li-ion/IMR/INR/ICR batteries and 1.2V Ni-MH/Ni-CD batteries. It can charge different types simultaneously.

- **Li-ion/IMR/INR/ICR (3.6V/3.7V):** 10440, 14500, 14650, 16340, 17335, 17500, 17670, 18350, 18490, 18500, 18650, 18700, 20700, 21700, 22650, 25500, 26650.
- **Ni-MH/Ni-CD (1.2V):** AAAA, AAA, AA, A, SC, C, D.
- *Note:* The charger can accommodate 4 protected 20700/21700 batteries simultaneously.

Image 6.1.1: The charger's compatibility with various Lithium-ion and Ni-MH/Ni-CD battery sizes.

6.2 Inserting Batteries

Carefully insert one or more rechargeable batteries into the charging bays, ensuring the correct polarity (+ and - ends match the markings in the bay). The charger will automatically detect the battery type and begin charging in the default mode.

6.3 Understanding the LCD Display

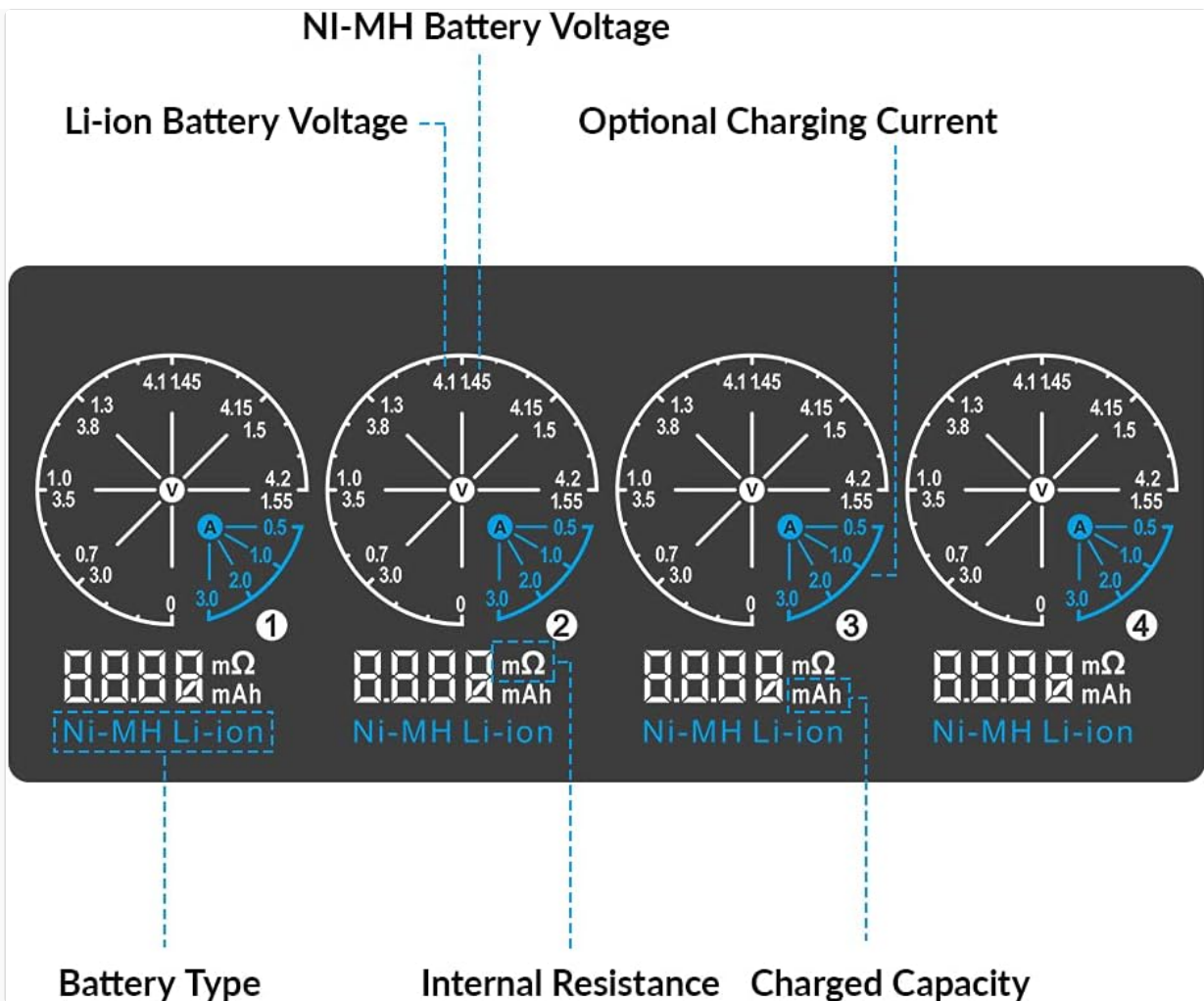The LCD provides detailed information for each channel:

Image 6.3.1: Explanation of the XTAR VC4 Plus LCD display elements.

- **Battery Type:** Displays 'Li-ion' or 'Ni-MH'.
- **Internal Resistance (mΩ):** Indicates the battery's internal resistance.
- **Charged Capacity (mAh/Wh):** Shows the amount of charge delivered to the battery.
- **Voltage (V):** Current voltage of the battery.
- **Current (A):** Current charging amperage.

6.4 Selecting Charging Current

The charger automatically selects an appropriate charging current. To manually adjust the current for a specific channel:

1. Insert the battery.

2. Press the 'Curr' button (CH1/CH2 or CH3/CH4) corresponding to the desired channel.

3. Repeatedly press the 'Curr' button to cycle through available current options (e.g., 0.5A, 1.0A, 2.0A, 3.0A). The selection will apply to the active channel.

4 Independent Charging Bays

Image 6.4.1: Press the 'Curr' button to adjust the charging current.

6.5 Operating Modes (Charging, Grading, Storing)

The VC4 Plus offers three main operating modes. To switch between modes:

1. Insert the battery.

2. Press the 'Mode' button (CH3/CH4) to cycle through the modes for the active channel.

3. For some modes, a long press of the 'Mode' button may be required to confirm selection or initiate a process.

Charging Mode :
charge rechargeable batteries

Grading Mode :
Examine the real capacity
of rechargeable batteries

Storing Mode :
Activate and motivate your
rechargeable batteries

6.5.1 Charging Mode

This is the default mode for recharging batteries. The charger will automatically detect the battery type and apply an appropriate charging current. The LCD will display real-time charging progress.

Image 6.5.1.1: The charger display indicating Charging Mode.

6.5.2 Grading Mode

Grading mode is used to determine the actual capacity of a battery. The charger will fully charge the battery, then discharge it to a safe level while measuring the discharged capacity, and finally recharge it. This process provides an accurate capacity reading.
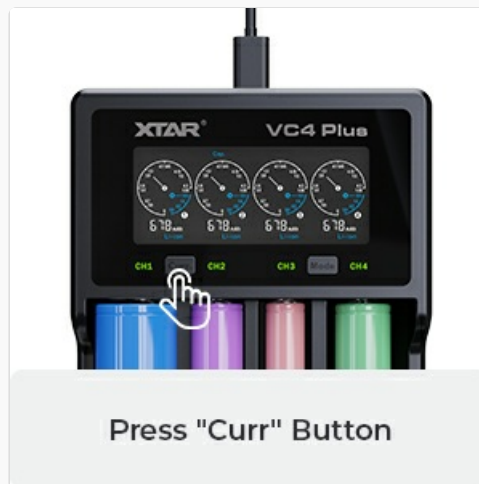

Image 6.5.2.1: The charger display indicating Grading Mode.

6.5.3 Storing Mode

Storing mode is designed to prepare batteries for long-term storage by charging or discharging them to an optimal voltage level (typically around 3.7V for Li-ion). This helps to prolong battery lifespan and maintain performance.
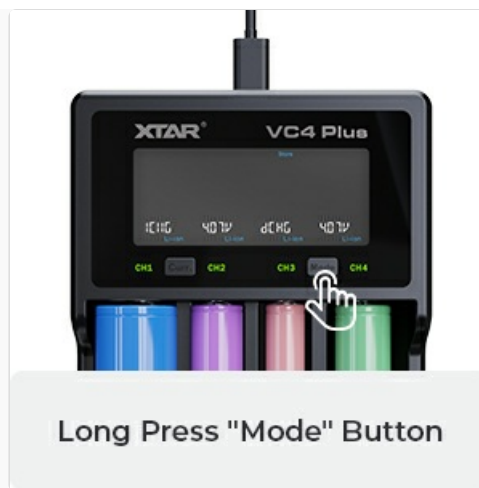
Long Press "Mode" Button

Image 6.5.3.1: The charger display indicating Storing Mode.

7. SPECIFICATIONS

Feature	Specification
Model Number	VC4 PLUS
Input Voltage	240 Volts (AC adapter)
Input Current	QC3.0 max 3A
Charging Bays	4 independent bays
Compatible Li-ion Batteries	3.6V/3.7V IMR/INR/ICR: 10440, 14500, 14650, 16340, 17335, 17500, 17670, 18350, 18490, 18500, 18650, 18700, 20700, 21700, 22650, 25500, 26650
Compatible Ni-MH/Ni-CD Batteries	1.2V: AAAA, AAA, AA, A, SC, C, D
Display	Smart LCD
Package Dimensions	8.58 x 5 x 1.61 inches
Item Weight	14.9 ounces
Manufacturer	XTAR

8. MAINTENANCE

- **Cleaning:** Disconnect the charger from power before cleaning. Use a soft, dry cloth to wipe the surface of the charger. Do not use abrasive cleaners or solvents.
- **Storage:** When not in use, store the charger in a cool, dry place away from direct sunlight and extreme temperatures.
- **Battery Contacts:** Periodically check the battery contacts for any debris or corrosion. Clean gently if necessary.

9. TROUBLESHOOTING

- **Charger not powering on:**

  - Ensure the USB Type-C cable is securely connected to both the charger and the power adapter.
  - Verify that the power adapter is properly plugged into a working wall outlet.
  - Try using a different USB Type-C cable or power adapter if available.

- **Battery not charging:**

  - Check that the battery is inserted with correct polarity.
  - Ensure the battery is a compatible rechargeable type.
  - Clean the battery contacts and charger contacts if they appear dirty.
  - The battery might be over-discharged or damaged. Try a different battery.

- **LCD display error:**

  - Remove the battery and reinsert it.
  - Disconnect and reconnect the power to reset the charger.

- **Slow charging:**

  - Ensure you are using the provided QC3.0 power adapter for optimal charging speed.
  - Check the selected charging current for the channel and adjust if necessary (refer to Section 6.4).
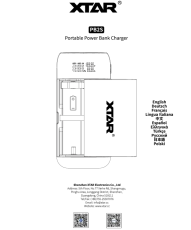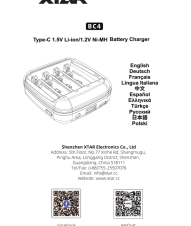
10. WARRANTY AND SUPPORT

XTAR products are manufactured to high-quality standards. For warranty information or technical support, please refer to the warranty card included in your package or visit the official XTAR website. Please retain your proof of purchase for warranty claims.

Related Documents - VC4 PLUS

	[XTAR SC1 Plus Battery Charger: Speedy Li-ion & Ni-MH Charging and Power Bank Functionality](#) The XTAR SC1 Plus is a versatile and speedy charger for Li-ion and Ni-MH batteries, also serving as a portable power bank. Featuring Type-C input, it supports various battery sizes including protected 26800 cells, and offers LED indicators for status, a 12-month warranty, and anti-fake verification.
	[XTAR C4-EVO Battery Charger User Guide](#) Comprehensive user guide for the XTAR C4-EVO battery charger, detailing its features, operation, and specifications for various battery types.

	[XTAR MC2 Portable Li-ion Battery Charger - User Manual & Specifications](#) Comprehensive guide to the XTAR MC2 portable Li-ion battery charger, covering features, technical specifications, operation, supported batteries, LED indicators, customer service, and safety notices.
	[XTAR MC2 Portable Li-ion Battery Charger User Manual](#) Comprehensive user manual for the XTAR MC2 portable two-slot Li-ion battery charger. Includes specifications, operation instructions, charging tips, customer service information, warranty details, and safety notices.
	[XTAR PB2S Portable Power Bank Charger - User Manual](#) Comprehensive user manual for the XTAR PB2S Portable Power Bank Charger, detailing its features, specifications, operation, warranty, and safety guidelines. Supports QC3.0 and PD3.0 charging.
	[XTAR BC4 Type-C Battery Charger User Manual](#) Comprehensive user guide for the XTAR BC4 Type-C battery charger, covering its features, specifications, operation for 1.5V Li-ion and 1.2V Ni-MH batteries, LED indicators, warranty information, and important safety warnings.