Usoraszkt EBC-A40L

Usoraszkt EBC-A40L High Current Lithium Battery Tester User Manual

Model: EBC-A40L

1. Introduction

The Usoraszkt EBC-A40L is an intelligent device designed for precise measurement of battery performance. It accurately detects key parameters such as actual capacity and internal resistance during charge and discharge cycles, providing comprehensive insights into battery health and ensuring stable device operation. This manual provides essential information for the safe and effective use of your EBC-A40L battery tester.

2. Safety Information

To ensure safe operation and prevent damage to the device or injury, please observe the following safety guidelines:

- Always connect the battery tester to a stable AC110V power source.
- Ensure correct polarity when connecting batteries to the tester. Incorrect connections can cause damage.
- Do not exceed the specified voltage (0-5V) or current (0.1-40A) limits.
- The device is equipped with multiple protection mechanisms, including overvoltage and overcurrent protection. However, always monitor the testing process.
- Operate the device in a well-ventilated area to allow for proper heat dissipation from the cooling fan.
- Keep the device away from moisture, dust, and direct sunlight.
- Do not attempt to disassemble or modify the device. Refer all servicing to qualified personnel.

3. Package Contents

Verify that all items listed below are included in your package:

- 1 x Usoraszkt EBC-A40L Battery Tester
- 1 x Online Cable (for PC connection)
- 2 x Testing Cables (with alligator clips)

- 1 x Power Supply Cable
- Other required parts for use (e.g., connectors, terminals)

Image: The EBC-A40L battery tester shown alongside its various cables, connectors, and terminals included in the package.

4. Product Overview

The EBC-A40L battery tester features a robust design with a clear control panel for ease of use.

Image: A three-quarter view of the Usoraszkt EBC-A40L battery tester, highlighting its blue casing, front panel, and carrying handle.

4.1 Front Panel Controls and Indicators

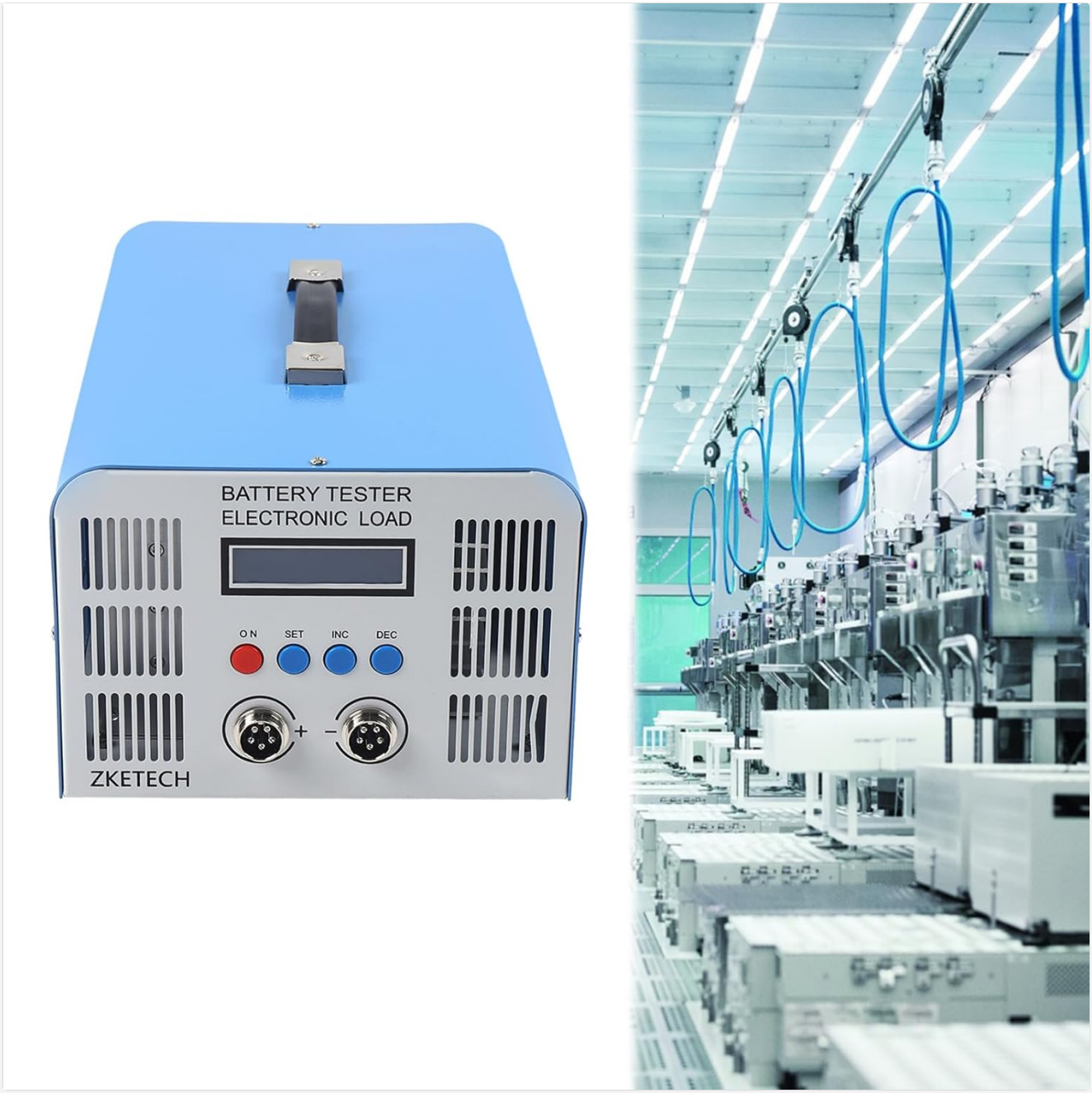


Image: Close-up of the EBC-A40L's front panel, displaying the LCD screen, 'ON', 'SET', 'INC', 'DEC' buttons, and the positive and negative battery connection ports.

- **LCD Display Screen:** Clearly shows current mode, voltage, current, capacity, and time.
- **Control Buttons:** 'ON' (power), 'SET' (menu/confirm), 'INC' (increase/navigate up), 'DEC' (decrease/navigate down) for direct device control.
- **Battery Connection Ports:** Dedicated ports for connecting the battery under test.

4.2 Other Features

- **Anti-slip Mats:** Located on the bottom to prevent sliding and ensure stability during operation.
- **Cooling Fan & Heat Dissipation Holes:** Integrated for efficient heat management, preventing overheating and extending product lifespan.
- **Carrying Handle:** For convenient portability.

5. Specifications

Detailed technical specifications for the EBC-A40L battery tester:

Image: The EBC-A40L battery tester with its dimensions labeled: 40cm (15.75in) length, 26cm (10.24in) width, and 25cm (9.84in) height.

Feature	Specification
Material	Iron
Color	Blue
Voltage Range	0-5V
Voltage Accuracy	0.2% ± 0.003V
Current Range	0.1-40A (Max Charging Current is 40A)
Current Accuracy	0.2% + 0.01A
Discharging Mode	CC (Constant Current) / CP (Constant Power)
Discharging Termination	Time / Cut-off Voltage / Manual

Feature	Specification
Discharging Power	200W Max
Charging Mode	CV (Constant Voltage)
Charging Termination	Cut-off Current / Manual
Capacity Measurement Resolution	Within 10Ah: 0.001Ah 10Ah-100Ah: 0.01Ah Above 100Ah: 0.1Ah
Power Supply	AC110V
Product Size	40 x 26 x 25 cm (15.75 x 10.24 x 9.84 in)
Net Weight	5.18 kg (11.42 lbs)

6. Setup

Follow these steps to set up your EBC-A40L battery tester:

6.1 Unpacking and Inspection

1. Carefully remove all components from the packaging.
2. Inspect the device and accessories for any signs of damage. If any damage is found, do not proceed with setup and contact customer support.
3. Place the tester on a stable, flat, and well-ventilated surface.

6.2 Power Connection

1. Connect the provided power supply cable to the power input port on the rear of the EBC-A40L.
2. Plug the other end of the power supply cable into a standard AC110V electrical outlet.

6.3 Battery Connection

1. Identify the positive (+) and negative (-) terminals on the battery you wish to test.
2. Using the provided testing cables, connect the red cable to the positive (+) battery terminal and the positive (+) port on the EBC-A40L.
3. Connect the black cable to the negative (-) battery terminal and the negative (-) port on the EBC-A40L.
4. Ensure all connections are secure and correct polarity is maintained to prevent damage.

6.4 Software Installation and PC Connection (Optional)

For advanced features, data analysis, and multiple test cycles, connect the EBC-A40L to a computer.

1. Download the official control software from the Usoraszkt website (refer to product packaging or manufacturer's website for download link).
2. Install the software on your computer following the on-screen instructions.
3. Connect the provided online cable (USB to serial adapter) to the corresponding port on the EBC-A40L and to a USB port on your computer.
4. Launch the software and establish a connection with the device.

7. Operating Instructions

The EBC-A40L offers both standalone and PC-controlled operation.

7.1 Basic Operation (Standalone)

Without PC connection, the device supports a single charge-discharge cycle.

1. After connecting the battery and power supply (as per Section 6), press the 'ON' button to power on the device.
2. Use the 'SET' button to cycle through different parameters or modes.
3. Use 'INC' and 'DEC' buttons to adjust values (e.g., target voltage, current).
4. Initiate a charge or discharge cycle according to the on-screen prompts.
5. The test will terminate based on the set conditions (time, cut-off voltage/current) or manually.

7.2 Advanced Operation (with PC Software)

Connecting to the computer software unlocks full functionality, including multiple cycles and data export.

1. Ensure the device is powered on and connected to the PC with the online cable, and the software is running.
2. Within the software interface, select the desired test parameters (e.g., charge current, discharge current, cut-off voltages, number of cycles).
3. The software supports rough testing of internal resistance, which can be initiated through the interface.
4. Start the test. The software will display real-time data and progress.
5. Upon completion, use the software's data export function to save test results for analysis and management.

7.3 Charging and Discharging Modes

- **Charging Mode:** Constant Voltage (CV).
- **Discharging Modes:** Constant Current (CC) or Constant Power (CP).

8. Maintenance

Regular maintenance ensures the longevity and accuracy of your EBC-A40L battery tester.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Do not use abrasive cleaners or solvents.
- **Ventilation:** Ensure the cooling fan and ventilation holes are free from dust and obstructions. Periodically clean them with compressed air if necessary.
- **Storage:** When not in use, store the device in a cool, dry place, away from extreme temperatures and humidity.
- **Cable Inspection:** Regularly check all cables for signs of wear or damage. Replace any damaged cables immediately.

9. Troubleshooting

If you encounter issues with your EBC-A40L, refer to the following common problems and solutions:

- **Device not powering on:**
    - Check if the power supply cable is securely connected to both the device and the power outlet.

    - Verify that the power outlet is functional.
- **No display on LCD:**
    - Ensure the device is powered on.
    - If powered on, try cycling the power. If the issue persists, contact support.
- **Incorrect readings or test failures:**
    - Check all battery connections for correct polarity and secure contact.
    - Ensure the battery voltage is within the tester's specified range (0-5V).
    - Verify that the test parameters (current, voltage limits) are correctly set for the battery type.
    - If using software, ensure it is the latest version and properly connected.
- **Software connection issues:**
    - Ensure the online cable is correctly connected to both the tester and the PC.
    - Check if the correct COM port is selected in the software settings.
    - Restart both the tester and the computer.
    - Reinstall the software and drivers if necessary.

For issues not covered here, please contact Usoraszkt customer support.

10. Application

The Usoraszkt EBC-A40L battery tester is versatile and suitable for a wide range of battery types and applications, including:

- Ternary Lithium Batteries
- Lithium Iron Phosphate Batteries
- Nickel-Hydrogen Batteries
- Nickel-Cadmium Batteries
- Sodium Ion Batteries
- General battery research and development
- Quality control in battery manufacturing
- Maintenance and testing of battery packs in various industries.

Image: The EBC-A40L tester surrounded by circular insets showing solar panels, indicating its use in renewable energy battery testing.

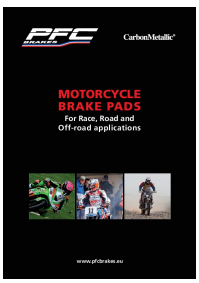
Image: The EBC-A40L tester with cargo ships in the background, suggesting its applicability for testing batteries used in marine or heavy industrial equipment.

Image: The EBC-A40L tester shown with medical imaging equipment in the background, illustrating its use for batteries in critical medical devices.

11. Warranty and Support

Usoraszkt stands behind the quality of its products. For warranty information, technical support, or service inquiries, please refer to the warranty card included with your product or visit the official Usoraszkt website. Our customer service team is available to assist you with any questions or concerns regarding your EBC-A40L battery tester.

Related Documents - EBC-A40L

	[ZKETECH EBC-A40L Battery Tester User Manual] User manual for the ZKETECH EBC-A40L Battery Tester, detailing its features, specifications, connection patterns, display and setting interfaces, and precautions.
	[ZKETECH EBC-A40L Battery Tester User Manual: Features, Specifications, and Operation] Comprehensive user manual for the ZKETECH EBC-A40L Battery Tester. Covers features, detailed specifications, connection methods, display interface, setting procedures for charging and discharging, and essential precautions.
	[ZKETECH EBC-B20H Battery Capacity Tester User Manual] User manual detailing the ZKETECH EBC-B20H Battery Capacity Tester, covering its features, specifications, operation, PC connectivity, and precautions for testing 12-72V battery packs.
	[Ebikes-Canada EBC-S Series User Manual: Assembly, Maintenance, and Troubleshooting] Comprehensive user manual for Ebikes-Canada EBC-S series electric bikes, covering assembly instructions, routine checks, battery charging, driving tips, maintenance, troubleshooting, and FAQs.
	[ZKETECH EBC-X Battery Tester User Manual V1.6.5] Comprehensive user manual for the ZKETECH EBC-X Battery Tester (Model V1.6.5). Details features, technical specifications, connection procedures, software installation and operation, advanced functions, and essential precautions for testing various battery types including Lead-Acid, Li-Fe, and Li-Ion.
	[PFC Motorcycle Brake Pads - Application Guide and Catalog] Comprehensive catalog of PFC motorcycle brake pads, listing applications by manufacturer, model, and year. Features detailed information on PFC's high-performance brake compounds and part numbers.