



BATTERY & ALTERNATOR TESTER WITH LCD SCREEN 12V

MODEL NO: **AK500.V2**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to instructions



Wear eye protection



Wear protective clothing



Wear protective gloves



Warning: explosive material



Warning: corrosive substance



Keep away from rain

1. SAFETY

DANGER! BE AWARE, LEAD-ACID BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS VERY IMPORTANT TO READ AND FOLLOW THESE INSTRUCTIONS CAREFULLY, EACH TIME YOU USE THE BATTERY TESTER.

Follow these instructions and those published by the battery and vehicle manufacturers, and the maker of any equipment you intend to use in the vicinity of the battery. Remember to review warning marks on all products and on engines.

1.1. PERSONAL PRECAUTIONS

- ✓ Ensure that there is another person within hearing range and close enough to come to your aid, should a problem arise when working near a lead-acid battery.
- ✓ Wear safety eye protection and protective clothing. Avoid touching eyes while working near battery.
- ✓ Have fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
- ✓ Wash immediately with soap and water if battery acid contacts skin or clothing. If acid enters eye, flush eye immediately with cool, clean running water for at least 15 minutes and seek immediate medical attention.
- ✓ Remove personal metallic items such as rings, bracelets, necklaces and watches. A lead-acid battery can produce a short-circuit current which is high enough to weld such items to the vehicle and cause severe burns.
- ✓ Ensure that hands, clothing (especially belts) are clear of fan blades and other moving or hot parts of engine. Remove ties and contain long hair.
- ✗ **DO NOT** smoke or allow a spark or flame in the vicinity of the battery or engine.

1.2. GENERAL SAFETY

- ✓ Familiarise yourself with the application, limitations and potential hazards of the tester. Also refer to the vehicle manufacturer's hand book. **IF IN ANY DOUBT CONSULT A QUALIFIED VEHICLE ELECTRICIAN.**
- ✓ Ensure that the tester is in good condition before use. If in any doubt do not use the unit and contact a qualified vehicle electrician.
- ✓ Only use recommended attachments and parts. To use unapproved items may be dangerous and will invalidate your warranty.
- ✓ Keep tools and other items away from the engine and ensure that you can see the battery and working parts of engine clearly.
- ✓ Determine the system voltage before using the tester.
- ✓ If the tester receives a sharp knock or blow the unit must be checked by a qualified service agent before using.
- ✓ If the battery terminals are corroded or dirty clean them before using the tester.
- 1.3. Replace worn-out components as needed. Always follow safety protocols when using the tester to prevent electrical hazards.
- ✓ Keep children and unauthorised persons away from the work area.
- ✗ **DO NOT** disassemble the tester for any reason. The tester must only be checked by qualified service personnel.
- ☐ **WARNING!** To prevent the risk of sparking, short circuit and possible explosion **DO NOT** drop metal tools in the battery area, or allow them to touch the battery terminals.
- ✗ **DO NOT** cross-connect tester to battery. Ensure positive (RED) clamp is to positive terminal and negative (BLACK) clamp is to negative terminal. If battery symbols cannot be distinguished, remember that the negative terminal is the one directly connected to the vehicle bodywork.
- ✗ **DO NOT** use the tester outdoors, or in damp, or wet locations and **DO NOT** use in the vicinity of flammable liquids or gases.
- ✓ Ensure there is effective ventilation to prevent a build-up of explosive gases.
- ✗ **DO NOT** use the tester for a task for which it is not designed.
- ✓ When not in use, store the tester carefully in a safe, dry, childproof location.
- ✗ **DO NOT** test a battery within a short period of time after charging or using electricity, otherwise the result will be inaccurate.

2. INTRODUCTION

Backlit LCD screen for verification of condition of battery and alternator output. Colour-coded LED light display for clear indication of status (Low, Mid, Full/Charge). Compact and lightweight design aids portability. Powered by 12V DC connection to vehicle, supplied with 250mm power cable. Includes testing clamps (450mm cable) for safe and easy operation. Suitable for 12V lead acid batteries, hardtop batteries, discharge batteries and maintenance-free batteries.

NOTE: This tester is used to test 12V lead-acid batteries and the charging system of vehicles.

3. SPECIFICATION

Model No	AK500.V2
Display	LCD screen and is backlit
Test Voltage Range	6 – 20V \pm accuracy $\pm 0.05\%$
Input Voltage:	6-25V
Nett Weight	0.15kg
Operating Temperature	-20-70°C (-4-158°F)
Storage Temperature	-30 °C ~ 80 °C (-22 °F ~ 176 °F)



4. OPERATION

- ❑ **WARNING!** Ensure that you read, understand and apply the safety and operational instructions before connecting the tester clamps to the battery. Only when you are sure that you understand the procedures is it safe to proceed with the testing process.
- ❑ **WARNING!** Ensure that the vehicle, or battery, is in a well ventilated area before starting to test.
- 4.1. Check battery casing for cracks or leakage. If damage is found **DO NOT** test and replace battery.
- 4.2. Clean battery terminals.
- 4.3. If possible, check electrolyte levels and top-up with distilled water as necessary.
- 4.4. **BATTERY TEST (12V LEAD ACID BATTERIES)**
 - 4.4.1. Confirm that all electrical items are switched off and that the transmission is in neutral or park and that the parking brake is applied. Connect the tester to the battery through alligator clips or cigarette lighter test line, and the battery voltage value will be shown on the screen.
- 4.5. **TEST WITH 12V POWER OUTLET**
 - 4.5.1. Insert the tester's 12 V plug into the car's 12 V socket.
- 4.6. **TEST WITH ALLIGATOR CLIPS**
 - 4.6.1. Connect the red alligator clip of the device to the positive pole (+) of the battery, and connect the black alligator clip to the negative pole (-) of the battery.
 - 4.6.2. Wait for the voltage to stabilise.
 - 4.6.3. Press the "Battery" button to enter the battery test function. At this time, the screen shows the voltage value and the test result.
 - 4.6.4. If the "LOW" light is on, it means that the battery power is very low and needs to be charged as soon as possible. Voltage: <11.8V.
 - 4.6.5. If the "MID" light is on, it means the battery power is lower and needs to be charged. Voltage: 11.8V ≤ MID <12.5V.
 - 4.6.6. If the "FULL" light is on, it means the battery is fully charged. Voltage: ≥12.5V.
- 4.7. **CHARGING SYSTEM TEST**
 - 4.7.1. Confirm that all electrical items are switched off and that the transmission is in neutral or park and that the parking brake is applied.
 - 4.7.2. Connect the tester to the battery through alligator clips or Insert the tester's 12 V plug into the car's 12 V socket..
 - 4.7.3. Start engine then increase the engine speed (RPM) to 2500 rpm or above, and turn off all electrical equipment, including headlights, air conditioning fans, glass heating, etc.
 - 4.7.4. Press the "Alternator" button to enter the charging system test function. At this time, the screen shows the charging voltage value and the test result.
 - 4.7.5. If the "OVER" light is on, it means that the Alternator output voltage is higher. Voltage: ≥15V.
 - 4.7.6. If the "LOW" light is on, it means that the Alternator output voltage is lower. Voltage: <13.5V.
 - 4.7.7. If the "CHARGE" light is on, it means the charging system is normal. Voltage: 13.5V ≤ CHARGE <15V.

5. MAINTENANCE

- 5.1. To ensure accuracy and longevity, routinely inspect the device for wear, corrosion, or damage. Keep connectors clean and free from dirt or moisture. Store the tester in a dry environment to prevent exposure to extreme temperatures or humidity.

6. END OF LIFE

Dispose of the unit and accessories in accordance with Local and National regulations.





ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.



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WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice. Please note that other versions of this product are available. If you require documentation for alternative versions, please email or call our technical team on technical@sealey.co.uk or 01284 757505.

Important: No Liability is accepted for incorrect use of this product.

Warranty: Guarantee is 12 months from purchase date, proof of which is required for any claim.

Jack Sealey Ltd t/a Sealey Group, Kempson Way, Suffolk Business Park, Bury St Edmunds, Suffolk, IP32 7AR UK

Jack Sealey (EU) Ltd t/a Sealey Group, Farney Street, Carrickmacross, Co. Monaghan, A81 PK68 Ireland

Tel: 01284 757500 • **Email:** sales@sealey.co.uk • **Web:** www.sealey.co.uk