

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. PLEASE KEEP INSTRUCTIONS SAFE FOR FUTURE USE.**

## 1. SAFETY INSTRUCTIONS



**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 INSTRUCTIONS

- ✓ 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 ELECTRICIAN.*
- ✓ Ensure that the tester is in good condition before use. If in any doubt do not use the unit and contact a qualified 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.
- ✓ 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.

## 2. INTRODUCTION & SPECIFICATION

Fast and accurate assessment of battery condition – even with the battery partially discharged. No heat, no sparks and no misdiagnosis. Tests battery in accordance with rated output based on SAE, DIN, EN, IEC & CA (MCA) criteria and displays results on LCD screen. Handle battery faults on the trade counter, service reception or workshop with confidence. Rugged construction.

### Specification

Rated Battery Voltage .....	12V	Test Range .....	1.5-15V
Rated Systems .....	SAE, DIN, EN, IEC & CA (MCA).	Min. Power Requirement .....	1.5V
Test Range .....	200-1200CCA SAE	Note: CCA = Cold Cranking Amps	

## 3. OPERATION

- ☐ **WARNING!** Ensure that you read, understand and apply the safety and operational instructions before apply 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.
- 3.1. Preparation**
- ☐ **WARNING!** Ensure that the vehicle, or battery, is in a well ventilated area before starting to test.
- 3.1.1. Check battery casing for cracks or leakage. If damage is found **DO NOT** test and replace battery.
- 3.1.2. Clean battery terminals.
- 3.1.3. If possible, check electrolyte levels and top-up with distilled water as necessary.
- 3.1.4. Unless otherwise specified tests are carried out with **all** electrical items switched off. **Leaving any items on (boot light, interior light, etc.) can result in expensive misdiagnosis.**
- 3.1.5. Confirm that the 9V alkaline battery (supplied) is correctly fitted in the compartment in the rear of the tester. When the 9V battery becomes discharged the display will show IBTL (Internal Battery Low). When this happens install a new battery.
- 3.2. Battery test (12V only)**
- 3.2.1. Connect the red clamp to the positive (+) battery terminal and the black clamp to the negative (-) terminal. **The display will show the battery voltage.** If the connections are reversed the Check Clamp LED will illuminate.
- NOTE!** If HI / --- are displayed or the screen flickers, please refer to **troubleshooting**.
- 3.2.2. Press the **ENTER** button.

- 3.2.3. Press ▲▼ buttons to select the battery type **SLI** or **SEAL**:  
**SLI:** Standard SLI flooded batteries.  
**SEAL:** VRLA/GEL/AGM etc. sealed/MF batteries.
- 3.2.4 Press enter for the next step.
- 3.2.5 Press ▲▼ key to select the battery rating: **SAE, DIN, IEC, En** or **CA** (MCA).
- 3.2.6 Press enter for the next step.
- 3.2.7 Press ▲▼ key to input the battery capacity of CCA or CA(MCA) SAE.  
 200-1200 CCA DIN, 110-670 CCA IEC, 130-790 CCA EN, 185-1125 CCA CA(MCA), 240-1440 CA(MCA). Press **ENTER** to begin test.
- 3.2.8 Test the battery within 1 second.
- 3.2.9 If **CHA-** is displayed (is battery charged?) press **ENTER** and select ▲▼ key to choose **YES** or **NO**, then press **ENTER** for the next step.  
 (BT2101 will determine the tested battery status and if acceptable will not show step 3.2.9).
- 3.2.10. When the test is complete the display will show the actual voltage, then the actual CCA and then one of the following messages:  
**PASS** ..... Battery OK and ready for use. 'Pass' LED will be illuminated.  
**PASS & CHAR** ..... Battery OK but needs recharging. 'Pass' and 'Recharge' LEDs will be illuminated.  
**CHAR & TEST** ..... Recharge battery and then retest. 'Recharge' LED will be illuminated.  
**FAIL** ..... Battery will not hold charge - replace. 'Fail' LED will be illuminated.  
**BAD CELL** ..... Battery has faulty cell(s) - replace. 'Fail' LED will be illuminated.  
**ERR. (LOAD ERROR)** The tested battery is bigger than 1200CCA or 120AH. Or the clamps are not connected properly. Please fully charge the battery and retest after excluding both previous reasons. If the reading is the same, the battery should be replaced immediately.
- 3.2.11 Press **ENTER** button to return to start of test sequence or remove the clamps from the battery if no further tests required.

## 4. TROUBLESHOOTING

### TROUBLESHOOTING:

#### If the screen shows 'HI':

Voltage of the tested battery is over 15.00V & too high for 12V battery. BT2101 won't work under this situation. Please re-check if the tested battery is 12Volts.  
 Voltage of the tested battery is under 1.5 Volts. BT2101 won't work under this situation. Please recharge the battery & retest. If reading is the same, the battery should be replaced immediately.

#### If the screen shows blank:

The voltage of the tested battery is too low to serve the BT2101. Please recharge the battery and retest. If reading is the same, the battery should be replaced immediately. Or the clamps are connected to incorrect polarity. Please check & re-connect (red clamp to the positive (+) battery terminal and the black clamp to the negative (-) terminal).

#### The screen flickers or shows ---- :

The voltage is unstable. A just completely charged battery or other factors can cause the battery's voltage to be unstable, the LED display shows "----".  
 Please wait for 15-30 minutes to let the battery voltage stabilize & test the battery or eliminate the factors to test the battery.



**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.

**IMPORTANT:** No liability is accepted for incorrect use of this product.

**WARRANTY:** Guarantee is 12 months from purchase date, proof of which will be required for any claim.

**INFORMATION:** For a copy of our latest catalogue and promotions call us on 01284 757525 and leave your full name and address, including postcode.



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