



## **BATTERY TESTER**

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A battery diagnosis device for testing all types of 12V batteries

### **TEST PROCEDURES / OPERATING INSTRUCTIONS**

#### **IMPORTANT :**

1. For testing 12 volts batteries with capacity range (CCA: A-value on the battery):  
SAE : 200~1200 CCA  
DIN : 110~670 CCA  
IEC : 130~790 CCA  
EN : 185~1125 CCA  
CA(MCA) : 240~1440 CA(MCA)
2. Suggested operation range 0°C (32°F) to 50°C (122°F) in ambient temperature.

#### **WARNING :**

1. Working in the vicinity of a battery is dangerous. Batteries generate explosive gases during normal battery operation. For this reason, it is of utmost importance, if you have any doubt, that each time before using your tester, you read these instructions very carefully.
2. To reduce risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in the vicinity of the battery. Observe cautionary markings on these items.
3. Do not expose the tester to rain or snow.

## **PERSONAL SAFETY PRECAUTIONS :**

1. Someone should be close to you in order to come to your aid when you work near a battery.
2. Have plenty of fresh water and soap nearby in case battery acid comes into contact with your skin, clothing or eyes.
3. Wear safety glasses and protective clothing.
4. If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flush out your eye with running cold water for at least ten minutes and get medical attention immediately.
5. NEVER smoke or allow a spark or flame in vicinity of battery or machine.
6. Be extra cautious to reduce risk of dropping a metal tool onto the battery. It could spark or short-circuit the battery or other electrical parts and could cause an explosion.
7. Remove personal metal items such as rings, bracelets, necklaces and watches when working with a lead acid battery. It can produce a short circuit current high enough to weld a ring or the like to metal causing a severe burn.

## **PREPARING TO TEST:**

1. Be sure area around battery is well ventilated while battery is being tested.
2. Clean battery terminals. Be careful to keep corrosion from coming in contact with eyes.
3. Inspect the battery for cracked or broken case or cover. If the battery is damaged, do not use tester.
4. If the battery is not sealed maintenance free, add distilled water in each cell until battery acid reaches level specified by the manufacturer. This helps purge excessive gas from cells. Do not overfill.
5. If necessary to remove battery from vehicle to test, always remove ground terminal connection from battery first. Make sure all accessories in the vehicle are off to ensure you do not cause any arcing.



※ You should check whether any accessories have been left on and then charge and retest the battery. If accessories have not been left on, the battery is to be replaced

**Technical Data**

<b>Voltage</b>	12V
<b>Voltmeter</b>	7-15V
<b>Cold start current:</b>	<u>SAE:</u> 200~1200 CCA
	<u>DIN:</u> 110~670 CCA
	<u>IEC:</u> 130~790 CCA
	<u>EN:</u> 185~1125 CCA
	<u>CA(MCA):</u> 240~1440 CA(MCA)
<b>Dimensions (LxWxH):</b>	120 x 70 x 20mm
<b>Cable length:</b>	40cm
<b>Weight:</b>	250g
<b>Operating temperature:</b>	0°C (32°F) to 50°C (122°F) (ambient temperature)

**DECLARATION OF CONFORMITY**

We hereby confirm that the product:  
conforms with the following norms:  
EN 61000-6-3:2001 including CISPR 22:2003  
EN 61000-6-1:2001 including  
IEC 61000-4-2:1995+A1:1998+A2:2000  
IEC 61000-4-3:2002+A1:2002  
IEC 61000-4-8:1993+A1:2000  
Conform with regulation:  
89/336/EEC with 92/31/EEC+93/68/EEC

## OPERATION & USE :

### BATTERY TEST-

1. Before you test a battery in a vehicle, turn off the ignition and all consumers. Close all the vehicle doors and the trunk lid.
2. Make sure the battery terminals are clean. Wire brush them if necessary. Clamp the black charging load lead to the vehicle negative battery terminal. Clamp the red charging lead to the vehicle positive battery terminal.
3. LED display will light on and show the voltage of the battery **XX.XX** on the screen. Press "ENTER" to the next step.

**NOTE :** If you see **HI** / **Lo** / **----** / **Blank** appear on the screen or screen **flickers**, please refer to **TROUBLESHOOTING**.

4. Please press **▲\▼** key to select the battery type of

**SLI** or **SEAL** :

SLI : Standard SLI flooded batteries.

SEAL : VRLA/GEL/AGM etc sealed /MF batteries.

5. Press "ENTER" to the next step.
6. Please press **▲\▼** key to select the battery rating of **SAE** , **din** , **IEC** , **En** or **CA** (MCA).

7. Press "ENTER" to the next step.

8. Please press **▲\▼** key to input the cold test current in A.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 the test.

9. Test the battery within 1 second.
10. If the display shows **CHA-** (Is tested battery charged?). Please press "ENTER" & select **▲\▼** key to choose **yES** or **no** , then Press "ENTER" to the next step. (The tester will judge the tested

battery status & decide whether to execute Step 11 or not.)

11. Test the battery for a number of seconds. When the test is complete, the LED display shows the actual volt information an A (cold start current). One of following five results will be displayed on LED lamps:

	<p><b>Green LED illuminated</b></p> <p>The battery is good &amp; capable of holding a charge.</p> <p><span style="border: 1px solid black; padding: 2px;">XXXX</span> (CCA value) ⇔ <span style="border: 1px solid black; padding: 2px;">SAE</span></p>
 	<p><b>Green &amp; Yellow LED illuminated</b></p> <p>The battery is good but needs to be charged.</p> <p><span style="border: 1px solid black; padding: 2px;">XXXX</span> (CCA value) ⇔ <span style="border: 1px solid black; padding: 2px;">SAE</span></p>
 	<p><b>Yellow &amp; Red LED illuminated</b></p> <p>Battery is discharged. The battery condition cannot be determined until it is fully charged. Recharge &amp; retest the battery. If reading is the same, the battery should be replaced immediately.</p> <p><span style="border: 1px solid black; padding: 2px;">XXXX</span> (CCA value) ⇔ <span style="border: 1px solid black; padding: 2px;">SAE</span></p>
	<p><b>Red LED illuminated</b></p> <p>The battery cannot hold a charge or at least one cell has short circuited .It should be replaced immediately.</p> <p><span style="border: 1px solid black; padding: 2px;">XXXX</span> (CCA value) ⇔ <span style="border: 1px solid black; padding: 2px;">SAE</span></p>

<p><b>ERROR</b></p> 	<p><b>Err on the screen &amp; Second Red LED illuminated</b></p> <ul style="list-style-type: none"> <li>- The tested battery is greater than 1200A or the clamps are not connected properly. Please check if the clamps are connected properly and reconnect.</li> </ul>
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12. Press <<ENTER>> return to step 3 or remove the test clamps from the battery posts after completion of testing.
13. All selected data will be memorized after test, including battery type, battery A standard, capacity of A, etc.

## **TROUBLESHOOTING**

- If the screen shows **HI** :

Voltage of the tested battery is over 15.00V & too high for 12V battery. TESTER won't work under this situation. Please re-check if the tested battery is 12Volts.

- If the screen shows **Lo** :

Voltage of the tested battery is under 7 Volts. Testers 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 TESTER. Please recharge the battery retest. If reading is the same, the battery should be replaced immediately. Or the clamps are connected inversely. Please check & re-connect it.

- The screen flickers or shows **----** :

The voltage is unstable. Please recharge the battery and retest. If reading is the same, the battery should be replaced immediately.