

OK-03.0025 BATTERY TESTER WITH PRINTER TEST PROCEDURES/OPERATING INSTRUCTIONS

- Warning:**
please read the instructions carefully before the use of the battery testers.
1. Suggest operating environment temperature: 32°F(0°C) to 122°F(50°C).
 2. Keep good ventilation around the test battery surroundings.
 3. Do not expose the instrument to direct use when it rains or snowy days.
 4. Please wear protection and safety equipment.
 5. Do not place metal objects near or touch the battery, including watches and other items.
 6. Please do not smoke around the battery.
 7. When maintain battery, please join distilled water to battery and reach the safe height.
 8. When you take out the battery from car, make sure all the parts which had been closed.
 9. Do not use damaged batteries, and clean the battery terminals.
 10. If the battery acid run into eyes, please rinse eyes with water right away at least 10 minutes then go to the hospital.



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The system test results are as following:

- “CRANKING VOLTS NORMAL”**
The system cranking voltage is in a good range.
 - “CRANKING VOLTS NO DETECTED”**
The cranking voltage is not detected.
 - “CRANKING VOLTS LOW”**
The cranking voltage is below normal limits, troubleshoot the starter with manufacturers recommended procedure.
- “ALT. IDLE VOLTS NORMAL”**
The system is showing normal output from the alternator. No problem is detected.
 - “ALT. IDLE VOLTS LOW”**
The alternator is not providing sufficient current to the battery.
 - Check the belts to ensure the alternator is rotating with engine running. If the belts are slipping or broken, replace the belts and retest.
 - Check the connections from the alternator to the battery. If the connection is loose or heavily corroded, clean or replace the cable and retest. If the belts and connections are in good condition, replace the alternator.
 - “ALT. IDLE VOLTS HIGH”**
The voltage output from the alternator to the battery exceeds the normal limits of a functioning regulator.
 - Check to ensure there is no loose connection and the ground connection is normal. If there is no connection issue, replace the regulator. Since most alternators have the regulator built-in, this will require you to replace the alternator. The normal high limit of a typical automotive regulator is 14.7 volts +/- 0.05. Check manufacturer specifications for the correct limit, as it will vary by vehicle type and manufacturer.

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Features:

1. Test 6v and 12v batteries.
2. Test 12v /24v Starting/Charging system.
3. 3.2" LCD display, Adjustable brightness.
4. Integrated thermal printer with 58mm x 10m paper roll.
5. Multi-languages display: English, 中文, Français, Deutsch, Español, Português, Italiano, 한국어, 日文, русский.
6. Test battery type: AGM battery, VRLA/GEL battery, AMG start/stop battery, EFB start/stop battery, SLI battery
7. Multi-standards test: SAE, DIN, EN, IEC, CA, JIS.
8. Test range: 40~2000CCA(SAE)
9. Voltmeter: 1.5~30v.
10. Accuracy: voltage 0.1V, CCA 5%, IR 5%.
11. Measure battery internal resistor IR.
12. Operating temperature: 14-122 Degrees Fahrenheit
13. Data uploadable function.
14. Integrate thermal printer.
15. User-customized information can be printed



Test preparation:

1. Before you test a battery in a vehicle, turn off the ignition, all accessories and loads. Close all the vehicle doors and the trunk lid.
2. Make sure you have put 1.5V*6pcs internal batteries into the tester (If the LCD screen shows "POWER LOW", then the internal batteries need to be replaced).
3. Clamp the black load lead to the vehicle negative battery terminal (-). Clamp the red load lead to the vehicle positive battery terminal (+).

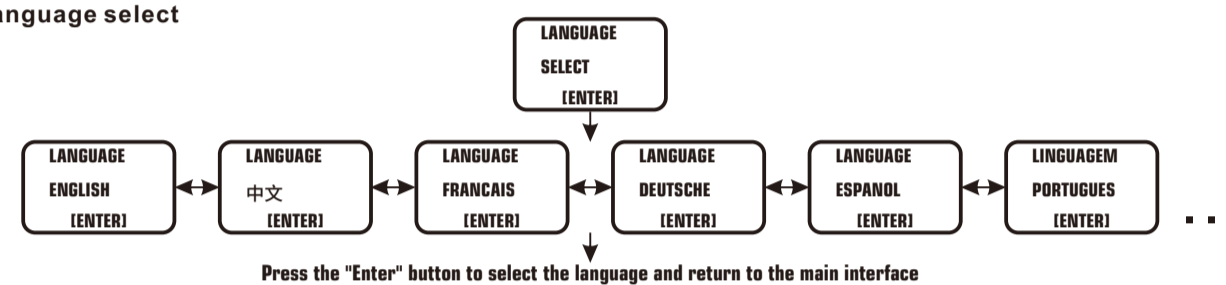
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- “ALT. LOAD VOLTS NORMAL”**
The system is showing normal output from the alternator. No problem detected.
- “ALT. LOAD VOLTS LOW”**
The alternator is not providing sufficient current for the systems electrical loads and the charging current for the battery.
 - Check the belts to ensure the alternator is rotating with the engine running. If the belts are slipping or broken, replace the belts and retest.
 - Check the connections from the alternator to the battery. If the connection is loose or heavily corroded, clean or replace the cable and retest. If the belts and connections are in good working condition, replace the alternator.
- “ALT. LOAD VOLTS HIGH”**
The voltage output from the alternator to the battery exceeds the normal limits of a functioning regulator.
 - Check to ensure there are no loose connections and that the ground connection is normal. If there are no connection issues, replace the regulator. Since most alternators have the regulator built-in, this will require you to replace the alternator.

3. Language select

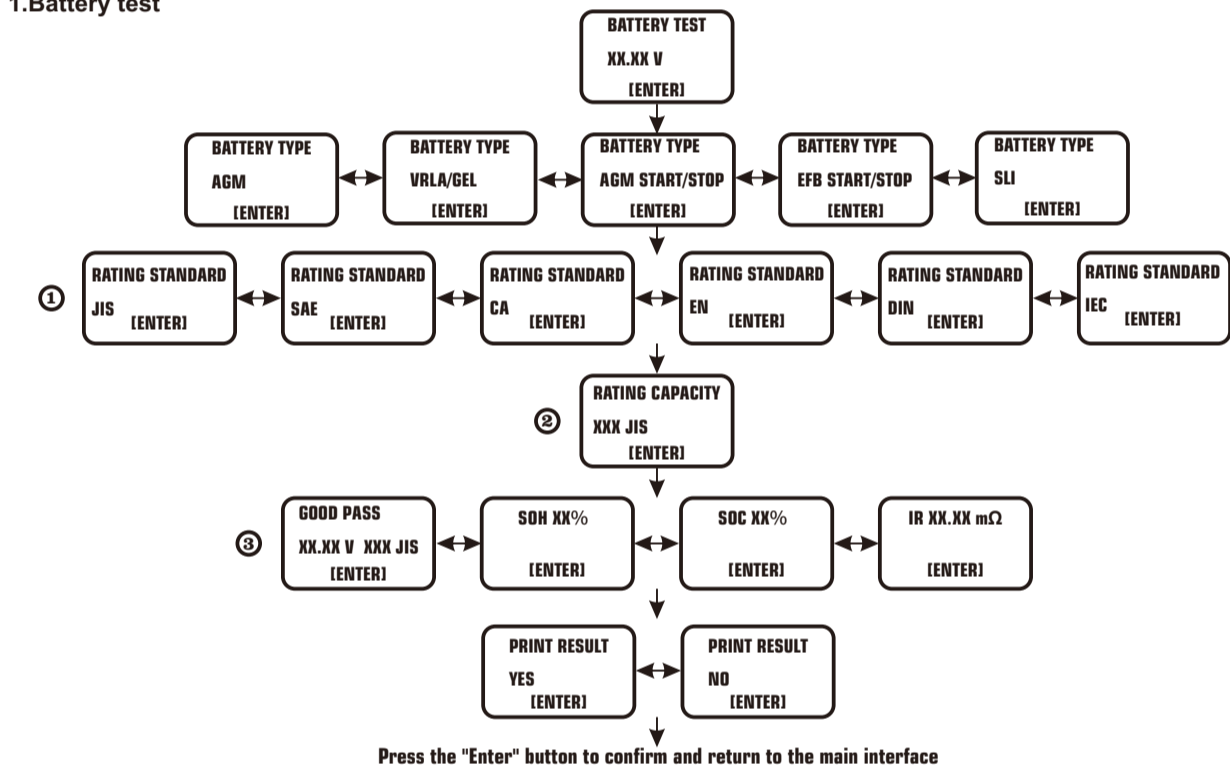


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1. Battery test

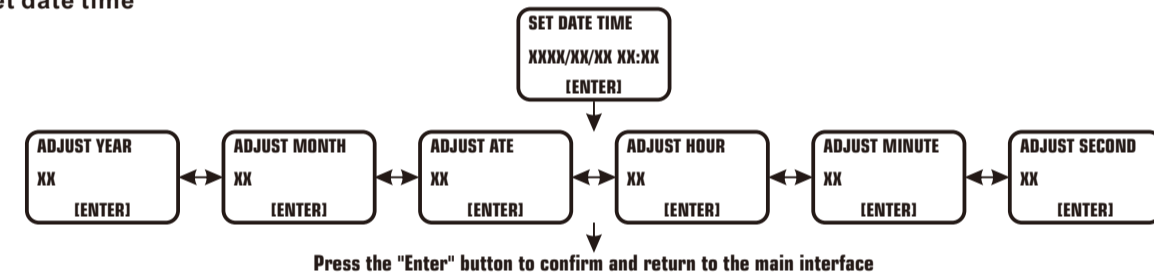


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4. LCD brightness adjust



5. Set date time



6. Battery test fast test mode



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- JIS:** Japanese Standard
- SAE:** United States Standard
- CA:** Normal starting current or maritime starting current
- EN:** European Standard
- DIN:** German Standard
- IEC:** International electrical science and technology association

- This tester's testing range:
JIS: 40~2000 CCA SAE: 40~2000 CCA
CA: 240~1400 CA(MCA) EN: 40~2100 CCA
DIN: 25~1300 CCA IEC: 30~1500 CCA

The value will rise or fall five units each time, JIS every time for a unit

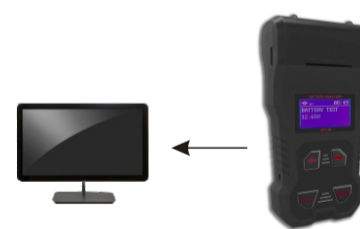
- SOH:** State of health
- SOC:** State of charge

The test results are as following:

- “GOOD PASS”**
The battery is good and capable of holding a charge.
- “GOOD RECHARGE”**
The battery is good but needs to be recharged.
- “RECHARGE RETEST”**
Battery is discharged, the battery condition cannot be determined until it is fully charged. Recharge and retest the battery.
- “BAD REPLACE”**
The battery will not hold a charge. It should be replaced immediately.
- “TEST ERROR”**
The tested battery is bigger than 2000 CCA. Or the clamps are not connected properly. Please fully charge the battery and retest after excluding both previous reasons. If reading is the same, the battery should be replaced immediately.

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7. Battery Tester Data Downloader



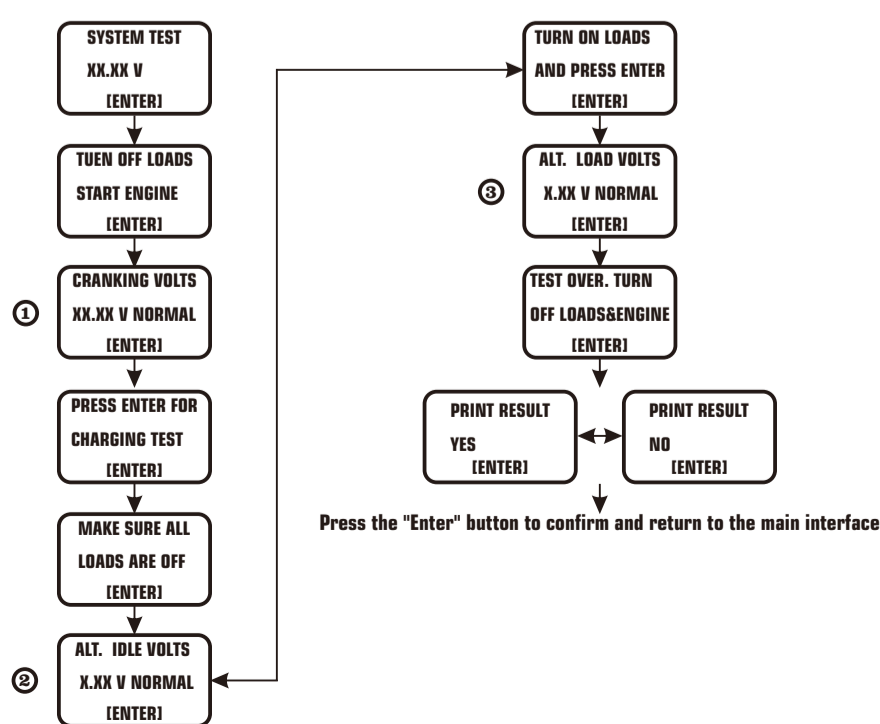
Connect the battery tester to the PC (Connect USB to the PC)

The software interface is shown as below:

Index	Battery Type	Standard	Capacity	Tested C...	Voltage	SOH	SOC	IR	Judgement	Test time
1	AGM Battery	SAE	500	392	12.604 V	78 %	70 %	6.75 mR	Good but Recharge	2019/09/25 10:43...
2	AGM Battery	SAE	370	391	12.598 V	100 %	70 %	6.78 mR	Good but Recharge	2019/09/25 10:44...
3	AGM Battery	SAE	370	392	12.594 V	100 %	70 %	6.77 mR	Good but Recharge	2019/09/25 10:44...
4	GEL Battery	SAE	370	489	12.590 V	100 %	70 %	6.77 mR	Good but Recharge	2019/09/25 10:44...
5	Regular liquid	SAE	370	487	12.588 V	100 %	90 %	6.80 mR	Good & Passed	2019/09/25 10:44...
6	Regular liquid	SAE	400	489	12.586 V	100 %	90 %	6.77 mR	Good & Passed	2019/09/25 10:45...
7	Regular liquid	SAE	400	490	12.582 V	100 %	90 %	6.76 mR	Good & Passed	2019/09/25 10:45...
8	Regular liquid	SAE	400	489	12.579 V	100 %	90 %	6.77 mR	Good & Passed	2019/09/25 10:45...
9	AGM Battery	SAE	400	320	12.622 V	80 %	72 %	8.08 mR	Good but Recharge	2019/10/30 14:33...

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2. System test



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- Connect: Once the PC is connected, click "connect", it displays "connected ok"
- Download: After that, click download to download data from the battery tester to the PC
- Sync Time: Calibrate the time of the battery detector
- Reset Counter: Clear test data
- Set User Information: Enter user information into the box, click, upload.
- Export to Excel: Save as excel

Display contents include: Index, Battery Type, Standard, Capacity, Tested CCA, Voltage, SOH, SOC, IR, Judgement, Test time

8. Package Includes

- 1 x paper roll
- 1 x instruction book
- 1 x USB cable
- 1 x Battery tester

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