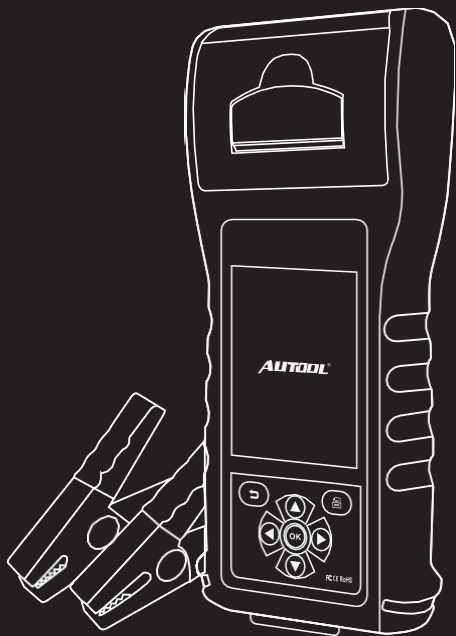


AUTOOL BT 760

Battery System Tester

User Manual



Trademark

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1.Attention

- Non- technical person shall not change, disassemble or repair the product, otherwise all losses caused by this shall be bared by the user himself.
- Please do not scratch, bend, twist or stretch the wires. Do not place the wires in high temperature. Do not press hard or decompose the accessories.
- Please do not place nails, pins, and other small debris on the charging port, in order to avoid damaging the charging connector.
- Do not place the product in unstable place such as high altitude area, slope, or shelf.
- This product is powered by electricity and should not be used as a toy for children.
- To avoid short circuit, do not immerse the product in water or other liquid.
- Please try to use the power supply and power cord supplied by manufacturer as standard.
- Please do not expose this product to strong light or high temperature when it's not at use.

1. Product Summary

1.1 Product Profile

Autool BT760 battery tester adopts the world's most advanced conductance testing technology, it is designed with built-in printer. BT760 can quickly and accurately measure the actual cold starting current of the starting batteries of automobiles and motorcycles, the health condition of the batteries, and it can quickly detect common failures of the starting systems and charging systems of cars and motorcycles, which is convenient for the rapid maintenance of cars and motorcycles

1. BT760 can do tests on automotive and motor batteries such as battery test, cranking test, charging test and maximum load test.
2. Test all automotive cranking lead acid battery, including ordinary lead acid battery, AGM flat plate battery, AGM spiral battery, and Gel battery, etc.
3. Directly detect bad cell battery.
4. Polarity reverse connection protection, reverse connection will not damage the tester or

affect the vehicle and battery.

5. Directly test the battery with power shortage, no need to fully charge it before testing.

6. Testing standards include currently the world's majority of battery standards, CCA, JIS, DIN, IEC, EN, SAE, GB.

7. Support multiple languages, customer can select different language package, which including English, Russian, Spanish, French, German, etc. Other customized language version are also provided.

2. Product Function

Battery test is mainly targeted to analyze the battery healthy status to calculate the actual cold cranking capability of the battery and the aging extent, which provide reliable analysis evidence for the test and maintenance of the battery. It notifies the user to replace battery in advance when the battery getting aged.

Cranking test is mainly to test and analyze the starting motor. Through testing the actual required cranking current and cranking voltage of the starting motor, it can find out whether the starting motor works fine. There are several reasons why the starting motor is abnormal: lubricating system fault causing the starting loaded torque increasing or rotor friction of the starting motor causing the increasing friction of the starting motor itself.

Charging test is to check and analyze the charging system, including generator, rectifier, rectifier diode, etc., thus to find out whether the output voltage of the generator is normal, the rectifier diode works fine and the charging current is normal. Suppose one of the above mentioned parts is not in normal situation, it will lead to over charge or incomplete charge of the battery, thus the battery will be quickly damaged and also greatly shorten the using life of other loaded electrical appliance.

Load test is the test of battery pack, DC power supply, UPS backup battery maintenance and capacity detection.

Additional functions include: language setting, voltmeter and screen brightness adjustment.

3. Technical Parameters

1. Cold Cranking Amps Measure Range:

CCA (USA): 20-3000;

IEC (International): 20-2500;

EN (Europe): 20-3000;

DIN (Germany): 20-2500;

JIS (Japan): 26A17-N200Z ;

Other Species.

2. Voltage Measure Range: 6v~ 30v DC.

3. Current Measure Range: 4 AH~ 240AH.

4. Working temperature: -20°C~ 50°C

5. Shell material: Acid resistant ABS material

4. Working Steps

It is applicable for automotive manufacturers, automotive maintenance and repair workshops, automotive battery factories, automotive battery distributors, and educational organizations, etc.

4.1 Pre-test

4.1.1 Connect Tester

Shake the clamps back and forth to make sure they are well connected. Tester requires the two clamps well connected with the battery poles, otherwise, the test can not go on. The red to the positive and the black to the negative, then the tester display will show the starting interface.

* When the measured battery voltage is lower than 6.0V, the normal test cannot be performed. Press OK to continue.

4.1.2 Key Description

- Up / Down /Left /Right /Key(2,7,4,6)

Select upwards or downwards via white UP and DOWN keys.

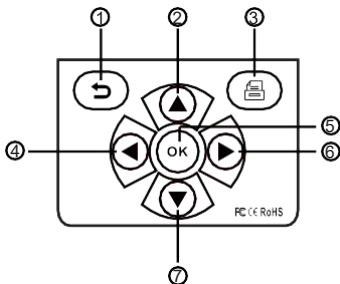
- Return key(1)

Return to previous menu via return key.

- OK key(5)

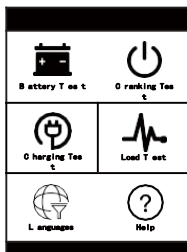
Confirm the selection via green OK key

- Print key(3)



4.2 Start Tester

According to the tester's prompt, press the up and down keys to select in sequence: ① Battery system test ② Starting system test ③ Charging system test ④ Load test ⑤ Language setting ⑥ Help



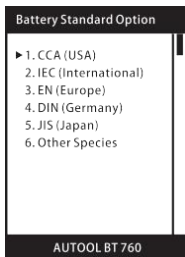
4.3 Select Language

Press UP/DOWN key to select the Language, include English, French, German, Spanish, etc.

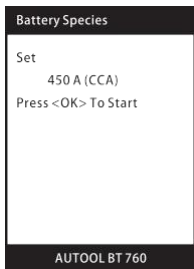


4.4 Battery Test

1) After entering battery test program, tester will show the battery types for you to choose.

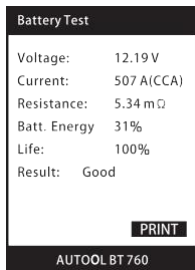


2)After choosing right battery type, the tester will display the following content.



3) Press OK key to Start Testing.

Regarding internal resistance, for the same battery, the smaller the internal resistance, the better the health status (except for short circuit). The internal resistance value can be used as a reference for the state judgment standard of a certain range of battery performance.



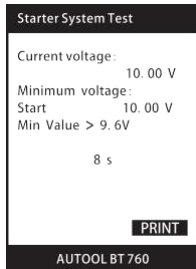
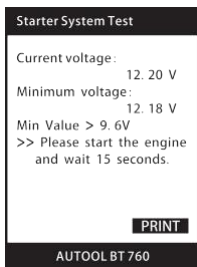
Note:

- When the battery voltage is lower than the normal test voltage, the test value cannot correctly determine the battery usage status, and the test result will display "Charge Retest". At this time, you need to charge the battery before testing.
- When the battery voltage is too high or the vehicle is running, the test cannot be performed normally, it will prompt "The voltage is too high, please stop the fire! Turn on the headlights for 3 minutes before measuring".
- For batteries that are deeply in deficit (such as when the vehicle is not in use for a long time and the battery is not charged in time; the lights and car doors are forgotten to be closed, causing the battery to fail due to severe battery failure and cannot start the vehicle, etc.), the actual detection process may also prompt "Please replace the battery". Such a

battery, please consult the battery manufacturer first, and perform the test after charging and restoring according to the charging method provided by the manufacturer.

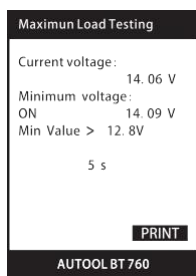
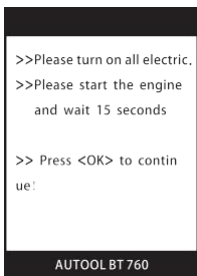
4.5 Starter System Test

After the battery test is completed, press the up and down keys to select the starter system test, and press the OK key to enter the test state.



4.6 Charging Test

In the main menu, press the up and down keys to select the charging system test. Press the OK key to enter the test. At this time, start the engine. After waiting for stable operation, press the OK key to display the test status.



Note: Please do not shut down the engine during the test. Other electrical equipment should be turned off. If any electrical appliances in the car are switched on or off during the test, it can affect the accuracy of the test results.

* Under different engine operating conditions, the battery voltage will be different. Under normal conditions, the charging voltage will not be lower than the minimum value of 13.3V,

and it should not be higher than 15.0V at high speeds.

* Charging voltage is too low:

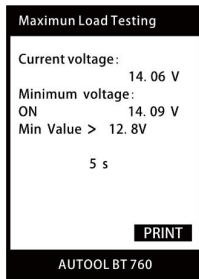
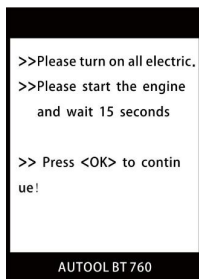
- The charging voltage of the charging system is insufficient.
- Please check the generator drive belt for slippage or disconnection, and check whether the line connection between the generator and the battery is normal.
- If the transmission belt and line are well connected, please follow the suggestions of automobile and motorcycle manufacturers to eliminate the generator fault.

* Charging voltage is too high:

- The generator output voltage is too high.
- Since most car generators use built-in regulators, you need to replace the generator assembly (some older cars use external regulators, please replace the regulators directly).
- The usual high voltage limit for automotive regulators is 14.7V. Excessive charging voltage can overcharge the battery, which shortens the battery life and causes it to malfunction.

4.7 Maximum Load Test

In the main menu, press the up and down keys to select the load test, and press the OK key to enter the test, notice:



Start the engine at this time, wait for the operation to stabilize, and then press OK to display the test status.

When all electrical appliances are turned on, under normal circumstances, the power supply capacity of the generator is sufficient, and the charging voltage will be greater than 12.8V. If it is lower than this voltage value, the reason may be that the generator output current is insufficient, the generating power is reduced, or the appliance Excessive load or leakage occurs; if the electric appliances on the car are artificially increased, the voltage will also decrease.

5. Printing Data

5.1 battery test printing

After the battery system test is completed, there is a "print" item in the lower right corner of the screen. At this time, press the shortcut key of "select Print function", the printer of the tester will start to work, and the test result data of the battery system will be displayed on the print paper.

5.2 start test result, charge test result and maximum load test result printing, all of which are printed in the same way as battery test result printing.

Note: if you want to print four data items on the printing paper at the same time, please do not tear off the printing paper until the four data items are printed.

6. Warranty

There are 3 years' warranty for AUTOOL product main unit and 1 year warranty for the accessories since the day the customers have received the product parcel.

Warranty Access

- 1.Repair or replace the equipment will be done according to the specific fault conditions;
- 2.We guarantee that all replacement parts, accessories or equipment are brand new;
- 3.When there is a product breakdown that can not be solved within 90 days, customer should provide video and pictures as proof, we will bear the freight cost and provide customer the accessories in need to replace. After receiving the product for more than 90 days, the customer shall bear the freight cost, we will provide the accessory for free to replace.

Warranty not Covered in Conditions Listed Below

1. Product is bought through non-official AUTOOL purchase channel.
2. Product failure is caused by incorrect use of the product, use for other wrong purpose or human factors.

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