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**AUTOOL<sup>®</sup>**

**AUTOOL BT660 Battery System Tester**



## Specifications

- **Brand:** AUTOOL
- **Model:** BT860
- **Website:** [www.autooltech.com](http://www.autooltech.com)
- **Email:** [aftersale@autooltech.com](mailto:aftersale@autooltech.com)
- **Phone:** +86-755-2330 4822 / +86-400 032 0988
- **Location:** Hangcheng Jinchi Industrial Park, Bao'an, Shenzhen, China
- **Corporate Standard:** Q/OR 003-2023

Measuring voltage range	12V~24V	
Outer material	Acid-resistant ABS plastic	
	CCA	100~2000
	IEC	100~1400

Measurement standard and measurement range	BCI	100~2000
	EN	100~2000
	CA	100~2000
	DIN	100~1400
	MCA	100~2000
	SAE	100~2000
	JIS	26A17~245H52
	GB	100~1400(100~2000 CCA)
Temperature	-12~50°C	

## Product Introduction

### Overview:

The AUTOOL BT860 Battery System Tester is designed to provide accurate and reliable testing of battery systems.

### Product Features:

- Accurate battery testing
- Easy to use interface
- Durable construction
- Multiple testing functions

## Product Usage Instructions

### 1. Power On:

To power on the BT860, press and hold the power button for 3 seconds until the display lights up.

### 2. Battery Testing:

Connect the tester to the battery following the instructions provided. Select the

appropriate testing function on the interface and follow on-screen prompts.

### **3. Interpret Results:**

Once the testing is complete, interpret the results displayed on the screen. Refer to the user manual for details on different readings.

### **Maintenance Service:**

For maintenance and service inquiries, refer to the warranty and return & exchange service sections in the user manual.

## **SAFETY RULES**

### **General safety rules**

- Always keep this user manual with the machine.
- Before using this product, read all the operational instructions in this manual. Failure to follow them may result in electric shock and irritation to skin and eyes.
- Each user is responsible for installing and using the equipment according to this user manual. The supplier is not responsible for damage caused by improper use and operation.
- This equipment must only be operated by trained and qualified personnel. Do not operate it under the influence of drugs, alcohol, or medication.
- This machine is developed for specific applications. The supplier points out that any modification and/or use for any unintended purposes is strictly prohibited.
- The supplier assumes no express or implied warranties or liabilities for personal injury or property damage caused by improper use, misuse, or failure to follow safety instructions.
- This equipment is intended for use by professionals only. Improper use by non-professionals may result in injury or damage to the tools or workpieces.
- Keep out of reach of children.
- When operating, ensure nearby personnel or animals maintain a safe distance. Avoid working in rain, water, or damp environments. Keep the work area well-ventilated, dry, clean, and bright.

### **Handling**

Used/damaged equipment must not be disposed of in household waste but must be

disposed of in an environmentally friendly manner. Use designated electrical equipment collection points.

## **Electrical safety rules**

- Do not twist or severely bend the power cord, as this may damage the internal wiring. If the power cord shows signs of damage, do not use the electrical system tester.
- Damaged cables pose a risk of electric shock. Keep the power cord away from heat sources, oil, sharp edges, and moving parts. Damaged power cords must be replaced by the manufacturer, its technicians, or personnel with similar qualifications to prevent hazardous situations or injuries.

## **Equipment safety rules**

- Never leave the equipment unattended when it is powered on. Always disconnect the power cable and ensure the device is turned off when it is not being used for its intended purpose!
- When pressing the tool's power switch, the battery current and voltage may be directly conducted to the ground or certain circuits, potentially causing sparks. Therefore, do not use the tool near flammable materials, such as gasoline or its vapors.
- Do not attempt to repair the equipment yourself.
- Before connecting the device to power, check that the battery voltage matches the value specified on the nameplate. Mismatched voltage can cause serious hazards and damage the device.
- It is essential to protect the equipment from rainwater, moisture, mechanical damage, overload, and rough handling.

## **Application**

- Before use, check the power cord, connection cables for any damage. If any damage is found, do not operate the device.
- Use the equipment only in compliance with all safety instructions, technical documents, and vehicle manufacturer specifications.
- If replacement accessories are needed, use only brand-new and unopened products.

## **Personnel protection safety rules**

- Protective gear may be worn when using this product.
- Place chocks under the wheels and do not test the vehicle while it is unattended.
- Exercise caution around the distributor cap, ignition wires, and spark plugs when working near the ignition coil. These components generate high voltage when the engine is running and can be dangerous.
- Shift the transmission into 'Park' (automatic transmission) or 'Neutral' (manual transmission), and make sure to engage the handbrake.
- Do not connect or disconnect any test equipment while the ignition switch is on or the engine is running.
- Always ensure you have a stable footing to safely control equipment in case of emergencies.

Any other use is considered beyond the intended purpose of the equipment and is prohibited.

## **CAUTIONS**

### **Safety precautions**

Before using the instrument, please read this manual carefully for proper operation.

- The tester is suitable for both 12V and 24V vehicle batteries.
- The tester is suitable for operation at voltages ranging from 9V to 35V direct current (DC).
- If the battery is just fully charged, the voltage will be slightly higher than normal. Therefore, please turn on the headlights for 2-3 minutes and wait until the voltage drops back to normal. Then turn off the vehicle appliances and proceed the test.
- Before use, check that the test fixture insulation is intact, or that there are no exposed and broken wires. Do not use until the back cover is closed, otherwise there is a risk of electric shock.
- Do not use and store the instrument in high temperatures, high humidity, flammable, explosive and strong electromagnetic fields.
- Do not change the internal wiring of the instrument to avoid damage to the instrument and other safety hazards.

- Wear qualified eyewear when testing or repairing the car to prevent unknown objects from flying into your eyes when the engine is started.
- Please run and maintain the car in a well-ventilated environment to prevent inhalation of toxic gases.
- If the car's engine is running, do not place the instruments and accessories next to the engine or exhaust pipe as they may be damaged by high temperature.

## **PRODUCT INTRODUCTION**

### **Overview**

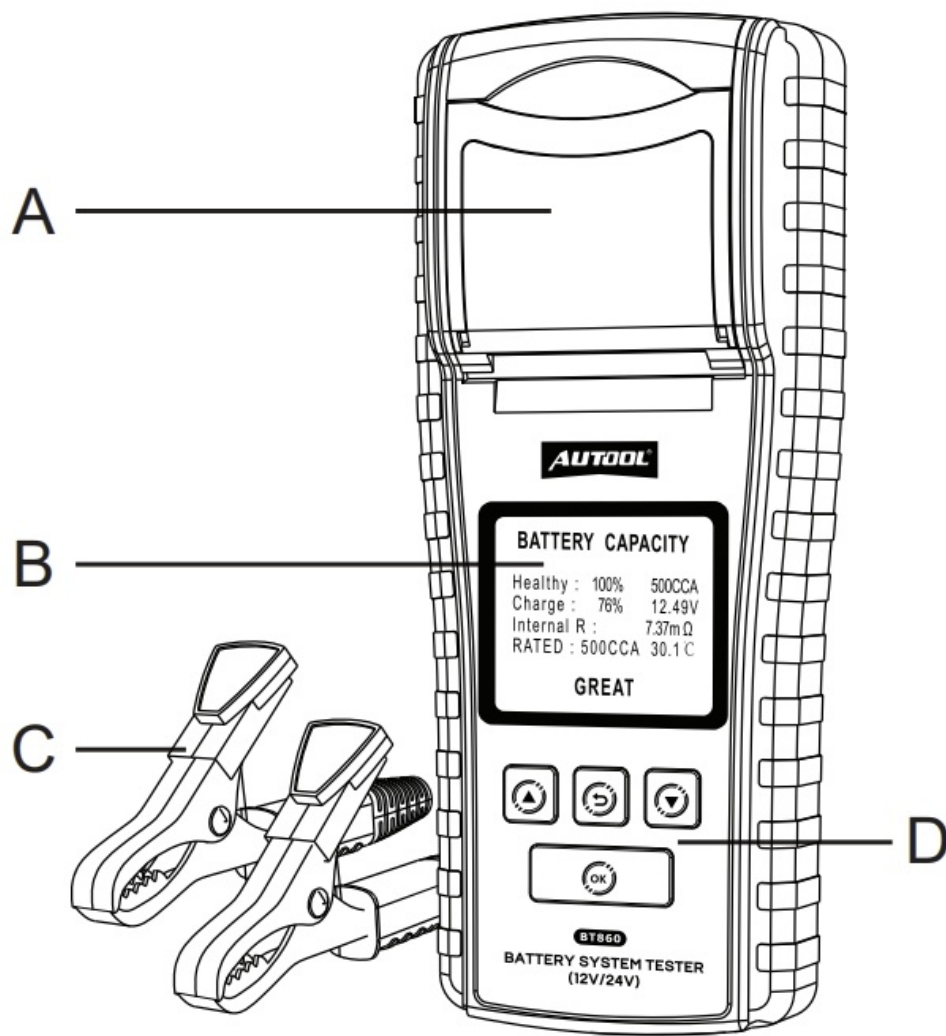
- This is an automotive battery tester with real time temperature monitoring, which is able to determine the exact degree of influence of temperature on the battery performance.
- The instrument adopts advanced conductivity testing technology, which can easily, quickly and accurately test the battery performance of cranking ability, cranking load, maximum load and charging system of the car battery. It is convenient for the maintenance personnel to quickly repair the car.

### **Product features**

- With real time temperature monitoring, this is able to determine the exact degree of influence of temperature on the battery performance;
- Anti-reverse connection and high voltage protection prevent the user from damaging the instrument in the event of mis-operation;
- Real-time time display and supports for 10 languages;
- With data storage, previously measured data can be reviewed at any time; 3.2-inch HD display;
- Test standards are in line with most battery standards in the world.

## **PRODUCT STRUCTURE**

### **Structure diagram**



<b>A</b>	Print tray	<b>B</b>	HD display screen
<b>C</b>	Test clamps	<b>D</b>	Operation buttons

## Introduction of operation buttons and test clamp functions

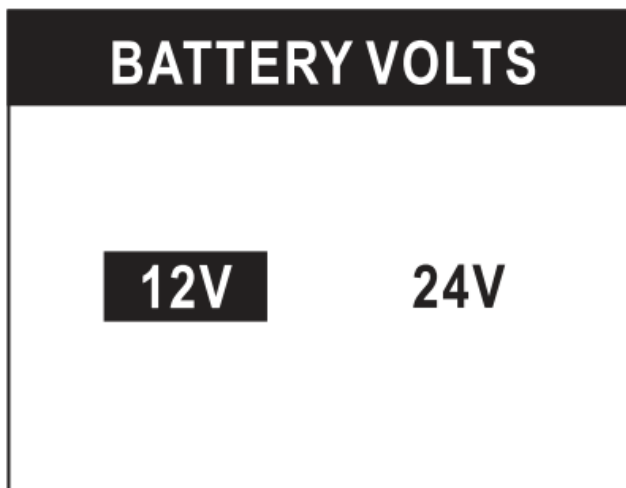
- **<▲> <▼>:**  
UP; DOWN; Page up and down buttons;
- **<Return>:**  
To cancel, undo, and the return key.
- **<OK>:**  
Confirm the selection, enter, test button.
- **Red test clamp:**  
Use to connect the positive pole.
- **Black test clamp:**  
Use to connect the negative pole.



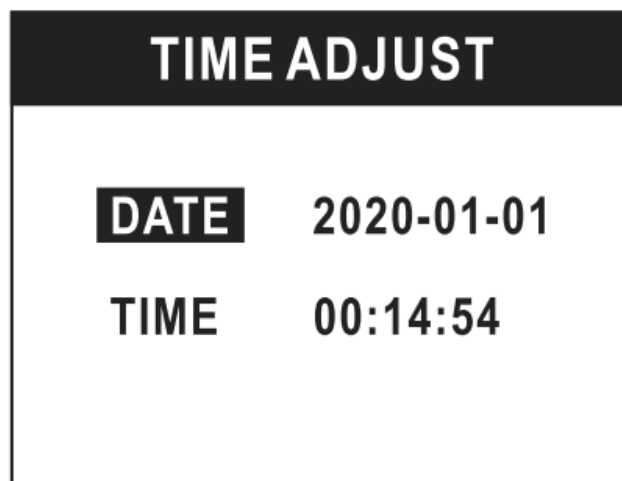
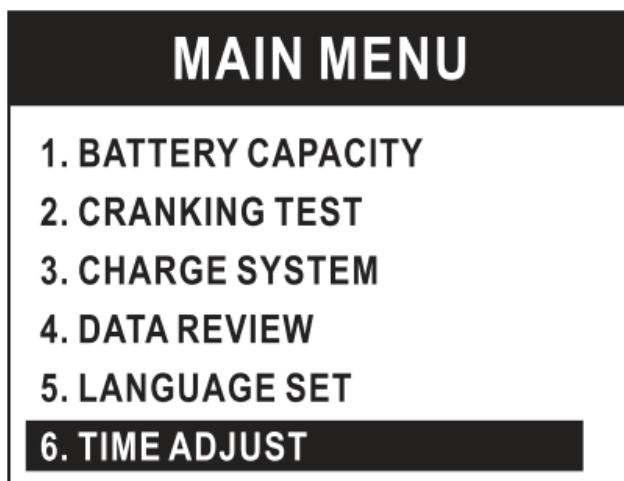
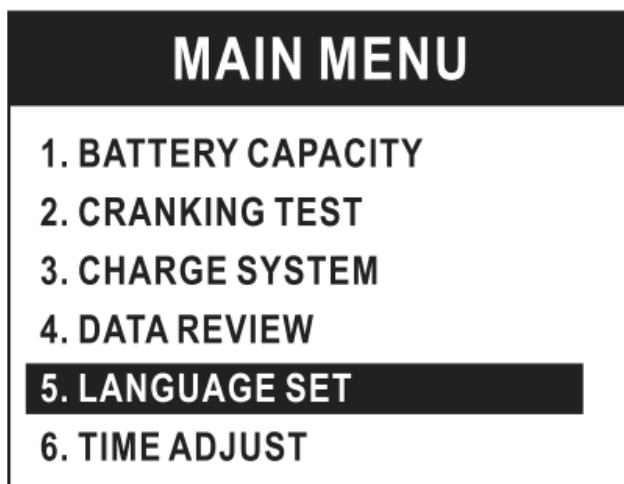
# OPERATIONS INSTRUCTION

## Function instructions

- The tester is powered only by the vehicle battery. Clamp the red and black clips of the tester to the positive (+) and negative (-) terminals of the battery safely and securely respectively. It is recommended to clip the red clamp first, then the black clamp, until the screen shows the following picture, the tester is in operation.



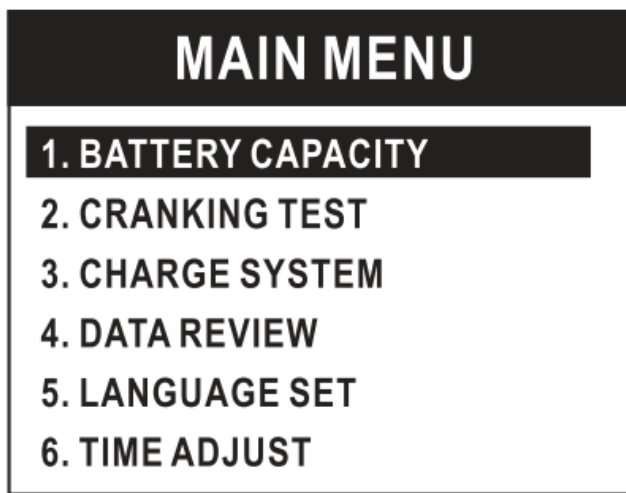
- If the tester indicates poor connection, recheck that if the clamp connection is completely secure. Then proceed to the test program to select the appropriate language and adjust the system time.



### **Battery capacity**

The tester will test the cranking capacity of the batteries and will determine the condition of the batteries based on the rated cranking capacity marked on each battery.

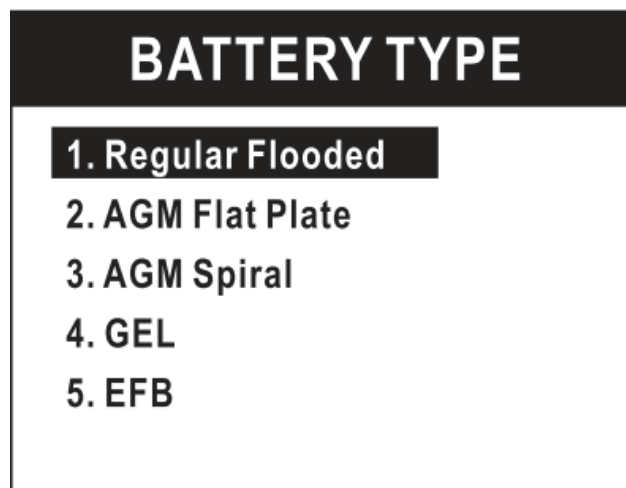
- Please make sure the engine and all electrical equipment on the vehicle is shut down before testing. If the battery is just fully charged, the voltage will be slightly higher than normal. There-fore, please turn on the headlights for 2-3 minutes and wait until the voltage drops back to normal. Then turn off the vehicle appliances and proceed the test.
- Select “Main Menu” in the item, press <▲> <▼> key to select “BATTERY CAPACITY” item, then press <OK> key to enter.

The image shows a digital display screen with a black header bar at the top containing the text "MAIN MENU" in white. Below the header, there is a list of six menu items: "1. BATTERY CAPACITY", "2. CRANKING TEST", "3. CHARGE SYSTEM", "4. DATA REVIEW", "5. LANGUAGE SET", and "6. TIME ADJUST". The first item, "1. BATTERY CAPACITY", is highlighted with a black background and white text.

**MAIN MENU**

- 1. BATTERY CAPACITY**
- 2. CRANKING TEST
- 3. CHARGE SYSTEM
- 4. DATA REVIEW
- 5. LANGUAGE SET
- 6. TIME ADJUST

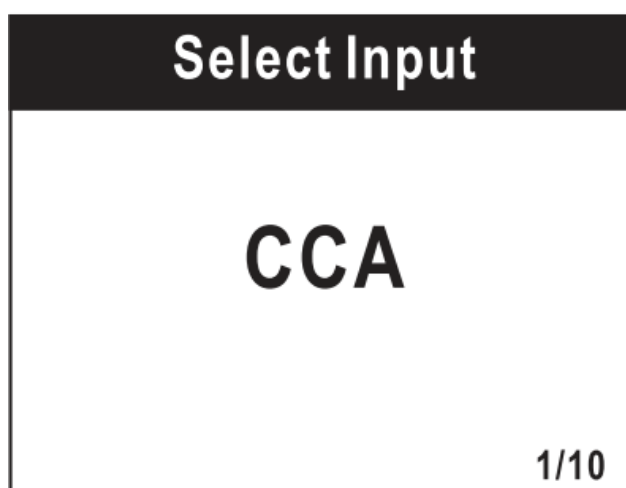
- According to your actual battery type, press the <▲> <▼> key to select the right “Battery Type”, and press the <OK> key to proceed to the next step.

The image shows a digital display screen with a black header bar at the top containing the text "BATTERY TYPE" in white. Below the header, there is a list of five battery types: "1. Regular Flooded", "2. AGM Flat Plate", "3. AGM Spiral", "4. GEL", and "5. EFB". The first item, "1. Regular Flooded", is highlighted with a black background and white text.

**BATTERY TYPE**

- 1. Regular Flooded**
- 2. AGM Flat Plate
- 3. AGM Spiral
- 4. GEL
- 5. EFB

- According to the standard type of cranking current marked on the battery body, press the <▲> <▼> key to “Select Input” the right rated starting type, and press the <OK> key to proceed to the next step.

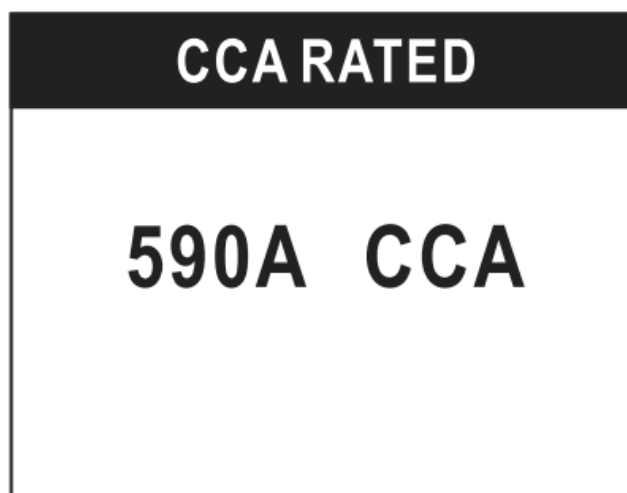
The image shows a digital display screen with a black header bar at the top containing the text "Select Input" in white. Below the header, the text "CCA" is displayed in large, bold, black letters. In the bottom right corner, the text "1/10" is displayed in a smaller font.

**Select Input**

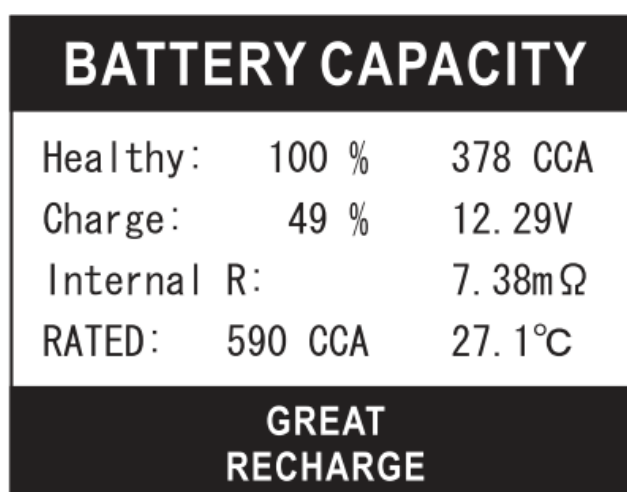
**CCA**

1/10

- According to the rated cranking current value marked on the battery body, press the <▲> <▼> key to adjust the standard value of “CCA RATED”, and press the <OK> key to enter the test.



- When the test is complete, the tester screen will display the following test results, like this.



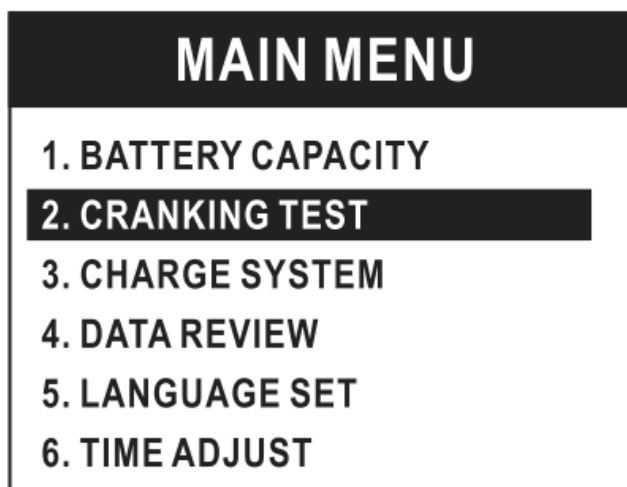
- Test results are automatically saved for review. At this time, you can also press <OK> to enter the “Print Report” interface to print the test results or press <Return> directly to the “Main Menu” interface.

Life span	Test result	Note
>80%	Good	Battery's in good condition.
>60%	Average	Battery's condition is acceptable.
>45%	Alert	Battery life is approaching and be careful.
>45%	Replace	The battery life has expired, please replace.

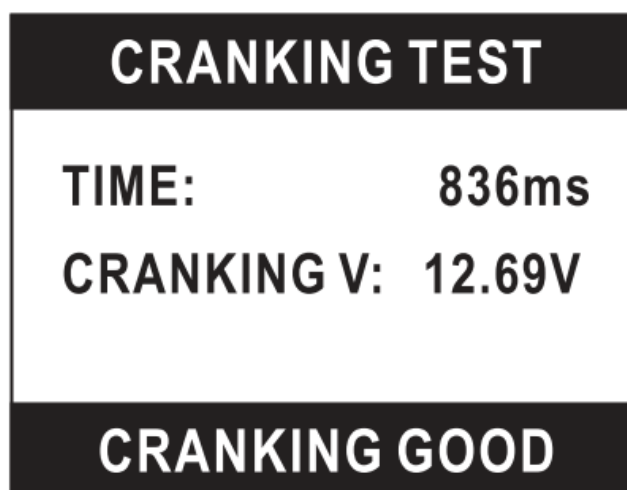
### Cranking test

The tester will measure the voltage and discharge speed during the cranking process to determine the starting condition of the car.

- Make sure that the engine and all electrical appliances on the vehicle are turned off before testing.
- Select “Main Menu”, press the <▲> <▼> keys to select the “CRANKING TEST” item, and press the <OK> key to enter.



- Follow the steps on the tester screen, along with the actual operation of the vehicle, to complete the testing process.



- Test results are automatically saved for review. At this time, you can also press <OK> to enter the “Print Report” interface to print the test results or press <Return> directly to the “Main Menu” interface.
- If the minimum voltage reading is greater than 9.6V (greater than 16V relative to a 24V system), the cranking system is good.
- If the minimum voltage reading is lower than 9.6V (lower than 16V relative to a 24V system), the cranking system is poor.

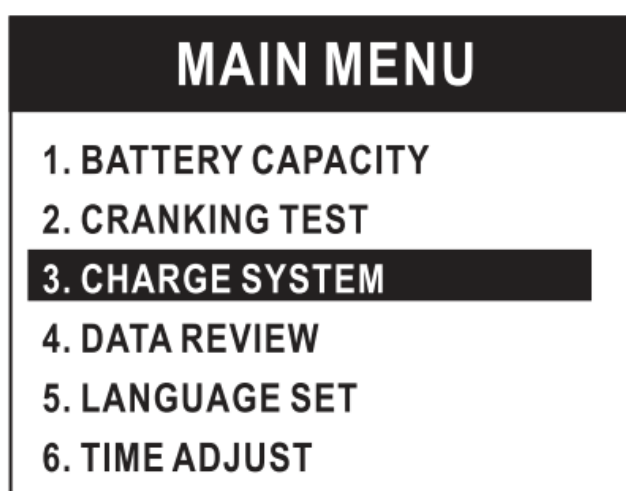
Data reference table (12V system)

Starting Voltage	Battery Discharge Performance	Starting Voltage
>10.7V	Good	Keep
10.2V~10.7V	Average	Need observation
9.6V~10.2V	Poor	Need to replace within days
<9.6V	Bad	Need to replace instantly

## Charge system

The tester will test the charging system under load as well as empty load to determine how well the car's charging system is.

- Make sure that the engine and all electrical appliances on the vehicle are turned off before testing.
- Select "Main Menu", press the <▲> <▼> keys to select the "CHARGING SYSTEM" item and press the <OK> key to enter.



- Follow the steps on the tester screen, along with the actual operation of the vehicle, to complete the testing process.

CHARGE SYSTEM	
RIPPLE:	13.01V
LOADED:	14.60V
UNLOADED:	650mV
CHARGE GOOD	

- Test results are automatically saved for review. At this time, you can also press <OK> to enter the “Print Report” interface to print the test results or press <Return> directly to the “Main Menu” interface.

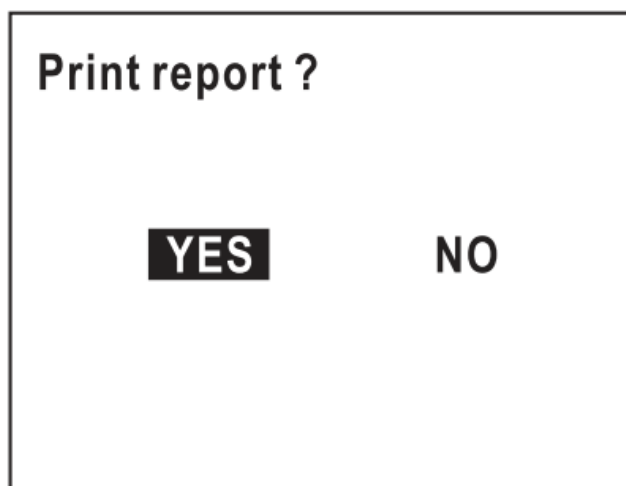
State	Battery Voltage	Engine performance
The headlights and air conditioner closed. (requires stepping on accelerator to detect)	>13.5	Normal
	13.2-13.5	Average
	13.0-13.2	Alert
	<13	Immediate factory inspection is required.
Turn on the headlights and air conditioner. (requires stepping on accelerator to detect)	13.4-14.6	Normal
	13.2-13.4	Average & Be careful
	<13.2	Immediate factory inspection is required.

### Data report print

The tester can print the test results so that the results can be recorded and viewed in the future.

- When each test item is finished and the test result is displayed, you can press <OK>

to enter the “Print Report” interface to print.



- The vehicle to which the report belongs needs to be set according to the Vehicle Identification Number (VIN) before the report can be printed.
- Press the <▲> <▼> key to enter the code, then press the <OK> to enter the next value until the last value is finished. Press the <OK> key and the tester will print the result.

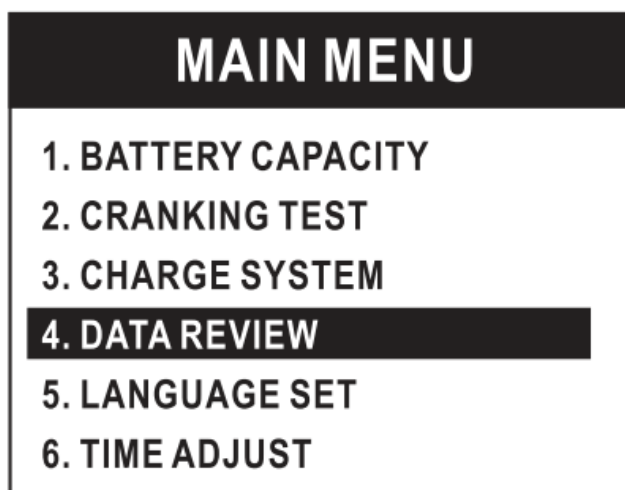


### **Data review**

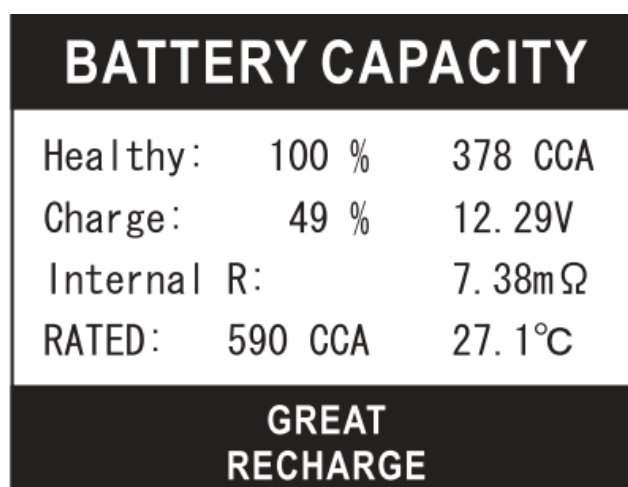
The tester automatically saves the last test record in each test item for later review.

- Select “Main Menu” in the item, press <▲> <▼> key to select “DATA REVIEW” item, then press <OK> key to enter.





- Press the <OK> button, you can cycle through the last test results of “BATTERY CAPACITY”, “CRANKING TEST” and “CHARGE SYSTEM”.



## MAINTENANCE SERVICE

Our products are made of long-lasting and durable materials, and we insist on perfect production process. Each product leaves the factory after 35 procedures and 12 times of testing and inspection work, which ensures that each product has excellent quality and performance.

**To maintain the performance and appearance of the product, it is recommended that the following product care guidelines be read carefully**

- Be careful not to rub the product against rough surfaces or wear the product, especially the sheet metal housing.
- Please regularly check the product parts that need to be tightened and connected. If found loose, please tighten it in time to ensure the safe operation of the equipment. The external and internal parts of the equipment in contact with various chemical media should be frequently treated with anti-corrosion treatment such as rust removal

and painting to improve the corrosion resistance of the equipment and extend its service life.

- Comply with the safe operating procedures and do not overload the equipment. The safety guards of the products are complete and reliable.
- Unsafe factors are to be eliminated in time. The circuit part should be checked thoroughly and the aging wires should be replaced in time.
- Adjust the clearance of various parts and replace worn (broken) parts. Avoid contact with corrosive liquids.
- When not in use, please store the product in a dry place. Do not store the product in hot, humid, or non-ventilated places.

## **WARRANTY**

From the date of receipt, we provide a three-year warranty for the main unit, and all the accessories included are covered by a one-year warranty.

### **Warranty access**

- The repair or replacement of products is determined by the actual breakdown situation of product.
- It is guaranteed that AUTOOL will use brand new component, accessory or device in terms of repair or replacement.
- If the product fails within 90 days after the customer receives it, the buyer should provide both video and picture, and we will bear the shipping cost and provide the accessories for the customer to replace it free of charge. While the product is received for more than 90 days, the customer will bear the appropriate cost and we will provide the parts to the customer for replacement free of charge. These conditions below shall not be in warranty range
- The product is not purchased through official or authorized channels.
- The product breakdown because the user does not follow product instructions to use or maintain the product.

We AUTOOL pride ourselves on superb design and excellent service. It would be our pleasure to provide you with any further support or services.

## Disclaimer

All information, illustrations, and specifications contained in this manual, AUTOOL reserves the right of modify this manual and the machine itself with no prior notice. The physical appearance and color may differ from what is shown in the manual, please refer to the actual product. Every effort has been made to make all descriptions in the book accurate, but inevitably there are still inaccuracies, if in doubt, please contact your dealer or AUTOOL after-service centre, we are not responsible for any consequences arising from misunderstandings.

## RETURN & EXCHANGE SERVICE

- If you are an AUTOOL user and are not satisfied with the AUTOOL products purchased from the online authorized shopping platform and offline authorized dealers, you can return the products within seven days from the date of receipt; or you may exchange it for another product of the same value within 30 days from the date of delivery.
- Returned and exchanged products must be in fully saleable condition with documentation of the relevant bill of sale, all relevant accessories and original packaging.
- AUTOOL will inspect the returned items to ensure that they are in good condition and eligible. Any item that does not pass inspection will be returned to you and you will not receive a refund for the item.
- You can exchange the product through the customer service center or AUTOOL authorized distributors; the policy of return and exchange is to return the product from where it was purchased. If there are difficulties or problems with your return or exchange, please contact AUTOOL Customer Service.

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<b>Facebook</b>	<a href="https://www.facebook.com/autool.vip">https://www.facebook.com/autool.vip</a>

YouTube	<a href="https://www.youtube.com/c/autooltech">https://www.youtube.com/c/autooltech</a>
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## EU DECLARATION OF CONFORMITY

We as the manufacturer declare that the designated product:

- **Car Battery Tester (BT860)**

Complies with the requirements of the:

- **EMC Directive 2014/30/EU**

RoHS Directive 2011/65/EU + 2015/863 + 2017/2102

- **Applied Standards:**

- EN IEC 61326-1:2021, EN IEC 61000-3-2:2019 + A1:2021, EN 61000-3-3:2013 + A1:2019 + A2:2021
- IEC 62321-3-1:2013, IEC 62321-5:2013, IEC 62321-4:2013+A1:2017, IEC 62321-7-1:2015, IEC 62321-7-2:2017, IEC 62321-1:2013, IEC 62321-6:2015, IEC 62321-8:2017
- Certificate No.: ZHT-230925028C, ZHT-230925030C
- Test Report No.: ZHT-230925028E, ZHT-230925030R

<b>Manufacturer</b>	Shenzhen AUTOOL Technology Co, Ltd.
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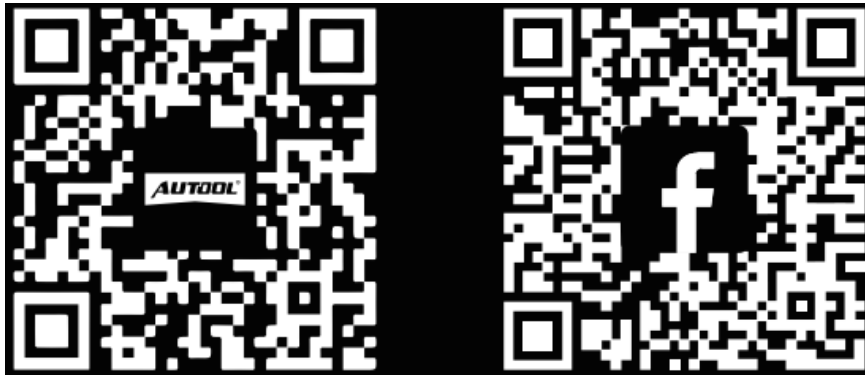
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## **SCAN THE QR CODE**



## AUTOOL TECHNOLOGY CO., LTD

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- Hangcheng Jinchi Industrial Park, Bao'an, Shenzhen, China
- **Corporate standard:** Q/OR 003-2023

## FAQ


**Q: How often should I calibrate the BT860?**

A: Calibration is recommended annually for accurate testing results.


**Q: Can the BT860 test different types of batteries?**

A: Yes, the BT860 is designed to test various types of batteries. Refer to the user manual for specific instructions.

## Documents / Resources

	<p><a href="#">AUTOOL BT660 Battery System Tester [pdf]</a> User Manual</p> <p>BT660, BT860, BT660 Battery System Tester, BT660, Battery System Tester, System Tester</p>
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## References

-  [Tool Tech](#)
-  [autooltech.com](http://autooltech.com)

- [User Manual](#)

🔑 AUTOOL, Battery System Tester, BT660, BT660 Battery System Tester, BT860, System

📁 AUTOOL    Tester

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Next Post—

**[AUTOOL HTS705 Dry Ice Blasting Machine User Manual](#)**

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