

***Qoltec***<sup>®</sup>



**INSTRUCTION MANUAL**

**PROFESSIONAL BATTERY TESTER**

**Model : 50686**

**EN**

## **INTRODUCTION**

Thank you for your trust and for choosing our Professional Battery Tester. We are confident that the product will meet your expectations. This manual will guide you through the installation and use of the device. If you have any questions after reading the manual, please contact the NTEC sp. z o.o. service department.

## **SAFETY INFORMATION**

1. Read this manual carefully before using the battery tester.
2. All safety messages below and throughout this manual are a reminder to the operator to take extra care when using the equipment.
3. Always follow the safety messages and test procedures provided by the vehicle manufacturer.

## **IMPORTANT SAFETY INSTRUCTIONS**

1. Keep the battery away from fire, sparks and hot objects.
2. Immediately stop using the unit and contact the supplier if smoke, odour or strange noises occur during the test.
3. Protect the unit from contact with engine oil, petrol, coolant and electrolyte.
4. If the cable is damaged, stop using the unit and send it in for repair.
5. After the test, remove the crocodile clips from the battery terminal to avoid damage.
6. Do not use alcohol to clean the unit, this may damage it.
7. Avoid contact between engine oil and the metal parts of the crocodiles.

## **PRODUCT INTRODUCTION**

The battery tester uses the world's most advanced conductivity testing technology to conveniently, quickly and accurately measure the starting current capacity and health of a vehicle's battery without damaging its performance. The unit has the ability to quickly detect common faults in a vehicle's starting and charging system.

## **DESCRIPTION OF FUNCTIONS**

- Testing of starting current capacity (CCA) and battery health.
- Rapid entry of battery Ah values for testing batteries in batches.

- Testing of vehicle starting and charging system.
- Recording of test results and review.
- Built-in short circuit and reverse connection protection.
- Supports English, German, Spanish, French, Polish, Italian and other languages.

## TECHNICAL SPECIFICATIONS

Cold Cranking Amps measurement range:

Measurement standard	Description	Measurement range
CCA	COLD CRANKING AMPS	100-2000
BCI	BATTERY COUNCIL INTERNATIONAL STANDARD	100-2000
CA	CRANKING AMPS STANDARD	100-2000
MCA	MARINE CRANKING AMPS STANDARD	100-2000
JIS	JAPAN INDUSTRIAL STANDARD	26A17-245H52
DIN	GERMAN AUTO INDUSTRY COMMITTEE STANDARD	100-1400
IEC	INTERNAL ELECTRO TECHNICAL COMMISSION STANDARD	100-1400
EN	EUROPEAN AUTOMOBILE INDUSTRY ASSOCIATION STANDARD	100-2000
SAE	SOCIETY OF AUTOMOTIVE ENGINEERS STANDARD	100-2000
GB	CHINA NATIONAL STANDARD	30-220AH

## TECHNICAL SPECIFICATIONS

- Input voltage range: 8V - 30V
- Tester operating temperature: -10°C to 60°C
- Storage temperature: -20°C to 70°C
- Dimensions: 122 x 78 x 22 mm

## PRODUCT DESCRIPTION

(1) LCD display

- (2) Enter button
- (3) Back button
- (4) Up button
- (5) Down button
- (6) Red and black crocodile clips

Figure 1

## **TESTER SETTINGS**

Illustration 2 and 3

1. From the main menu, select system settings and press the ENTER button.
2. In the system settings menu, use the ENTER button to select the language. Use the UP and DOWN buttons to select the desired language, then press the ENTER button to save your selection and return to the previous menu.
3. In the system settings menu, use the ENTER button to select the contrast. Use the UP and DOWN buttons to select the contrast value, then press the ENTER button to save the setting and return to the previous menu.
4. In the system settings menu, use the ENTER button to select Tool Information. Press Exit to return to the previous menu.

Figure 4 and 5

## **FAST TEST**

Figure 6

The QuickTest function allows you to quickly check the status of the battery, including voltage, CCA, electrical resistance, nominal capacity, charge value and health. After entering the AH value (nominal battery capacity), the results will appear within one second.

1. Select QUICK TEST, press ENTER.
2. Enter the battery capacity - XX AH (for 12V vehicles usually over 30AH).

3. Press ENTER and the test result will be displayed in one of the following forms.

Battery test results:

1. **GOOD BATTERY:** Battery in good condition. Figure 7
2. **GOOD, CHARGE:** The battery needs charging. Illustration 8
3. **REPLACE:** The battery is nearing the end of its life and should be replaced. Illustration 9
4. **DEFECTED CELL, REPLACE:** Internal damage, replace battery. Illustration 10
5. **Charge - test again:** The battery needs recharging and testing. If the result does not change, replace the battery. Illustration 11

Illustration 7

Illustration 8

Illustration 9

Illustration 10

Illustration 11

## **VEHICLE BATTERY TEST**

1. Select "Battery and vehicle" and press ENTER to enter the menu. The vehicle battery is connected to the vehicle's generator or electrical equipment.

Figure 12

2. Select "Battery test" and press ENTER. Figure 13
3. Battery type selection: After selecting the state of charge, the tester will ask you to select the type of battery (Regular Flooded, AGM Flat Plate, AGM Spiral, Gel, EFB). Select the type and press ENTER to confirm.

## **BATTERY SYSTEM STANDARDS AND PARAMETERS**

1. The battery tester will check each battery according to the selected standard and parameters.
2. Use the UP/DOWN buttons to select the standard and parameters according to the marking on the battery.

### Standards and parameters:

- **CCA:** Cold starting current according to SAE and BCI, most commonly used for starter batteries at -18°C.
- **BCI:** Battery Council International standard.
- **CA:** Cold starting current, effective current at 0°C.
- **MCA:** Marine starting current, effective current at 0°C.
- **JIS:** Japanese Industrial Standard, denoted by a combination of numbers and letters, e.g. 55D23, 80D26.
- **DIN:** Standard of the German automotive industry.
- **IEC:** Standard of the International Electrotechnical Commission.
- **EN:** Standard of the European Automotive Industry.
- **SAE:** Standard of the Society of Automotive Engineers.
- **GB:** Chinese National Standard.

Enter the appropriate test parameter and press ENTER.

The tester will start the test and the dynamic message "TESTING" will appear on the screen.

**Note:** The battery test result will be displayed in approximately 5 seconds.

### CRANKING TEST

1. Select "Cranking Test" and press the ENTER button to enter the menu.

Figure 13

2. Start the engine as instructed, the tester will automatically carry out the cranking test and display the result.
3. The test result includes the actual starting voltage and the starting time.
4. A starting voltage of less than 9.6V is usually considered incorrect.
5. The data allows service personnel to quickly check the condition of the starting system.
6. When the test is complete, do not switch off the motor. Press the ENTER button to proceed to the charging test.

Figure 14

## CHARGING TEST

1. Select "Charging Test" and press the ENTER button to enter the menu.  
**Note:** Do not switch off the engine during the test. Follow the on-screen instructions.
2. When the test is complete, the tester will display the charging voltages under load and no load, the ripple voltage and the result of the charging test.
3. **Note:** "NO OUTPUT" means that the charging system is not generating voltage. The vehicle will stop operating when the battery is depleted. Check the alternator or contact the service department.

## BATTERY TEST OUTSIDE THE VEHICLE

An "OUT-OF-VEHICLE" test means that the battery is not connected to the vehicle and its connection has been cut off. Select the option to test the battery outside the vehicle.

### Select battery type:

After selecting the state of charge, the tester will ask you to select the battery type: Regular Flooded, AGM Flat Plate, AGM Spiral, Gel or EFB. Use the UP/DOWN buttons to select the battery type, then press ENTER to confirm.

## BATTERY SYSTEM STANDARD AND PARAMETERS

The battery tester performs the test according to the selected standard and parameter.

Use the UP/DOWN buttons to select the appropriate standard and parameter marked on battery.

The tester will start the test and the dynamic message "TESTING" will appear on the screen.

**Note:** The test result will be displayed after approximately 5 seconds.

## BATTERY TEST RESULTS

1. **Good** battery: Battery in working order, ready for use.
2. **Good, charge:** Battery in good working order but needs charging before use.
3. **Replace:** Battery nearing the end of its life - replace to avoid risk.

4. **Damaged cell, replace:** Internal damage or short circuit - replace battery.
5. **Charge and test again:** Battery unstable, charge and test again. If the result does not change, the battery is defective and needs to be replaced.

## **VOLTMETER**

Select "Voltmeter" and press ENTER to enter the menu. The real-time voltage value is displayed.

Illustration15

## **REVIEW DATA**

Select the "Review Data" function to review the results of the last test.

Figure 16

## **SERVICE AND REPAIR**

Remember that improper repair can lead to serious damage to the unit and even pose a danger to the user. If you have problems with your appliance, if you have no experience or knowledge of how to repair your appliance, it is advisable to seek the assistance of a specialist or technical service. You may benefit from a warranty repair if the defect is due to a manufacturing problem. Warranty repair may include repair of the defective component, replacement of parts with new parts or replacement of the entire product if repair is not possible.

## **MAINTENANCE AND CLEANING**

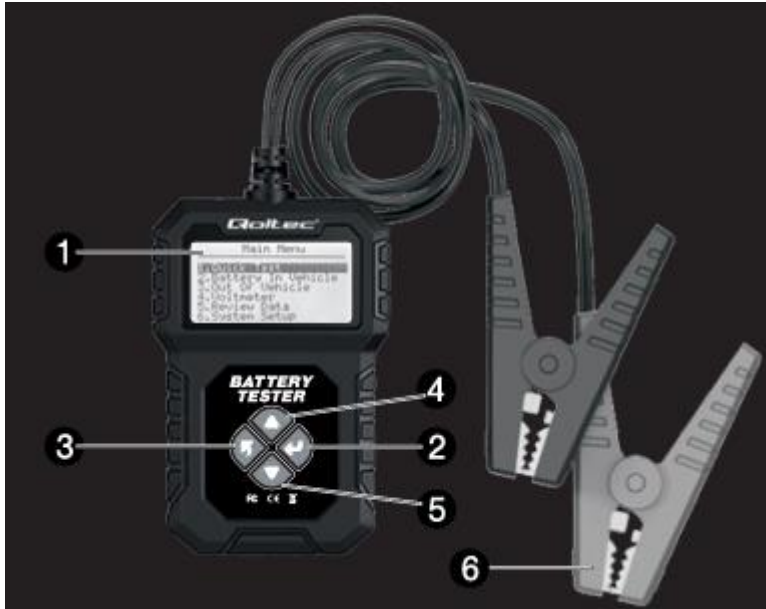
- 1) Turn off the power before cleaning.
- 2) Wipe the unit with a dry cloth. Do not use chemicals or water.

## **DISPOSAL**

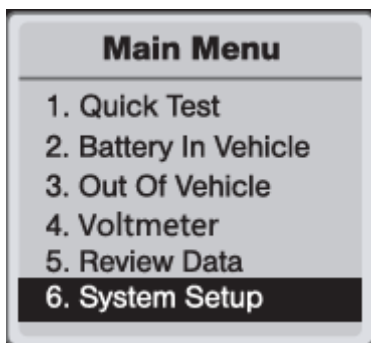
Avoid disposing of the appliance in ordinary waste containers to prevent environmental pollution. Return the device to suitable electronic waste collection points or electronic equipment recycling shops.

Attachement 1

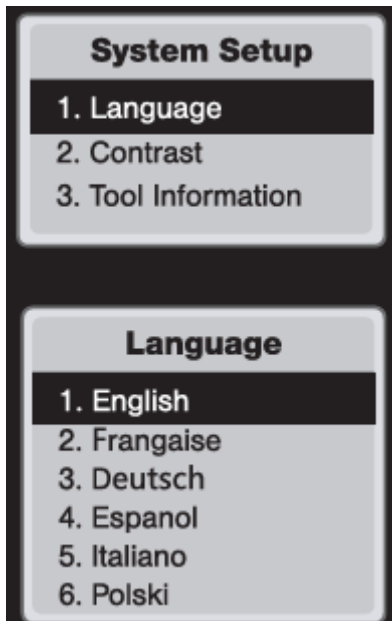
1



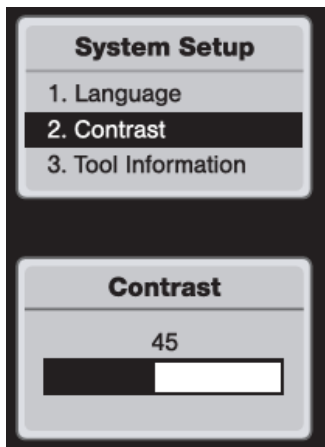
2



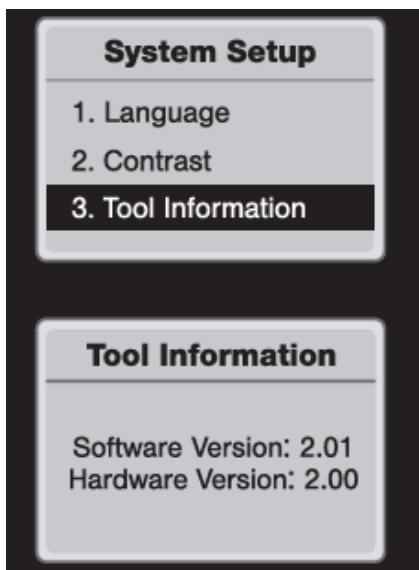
3



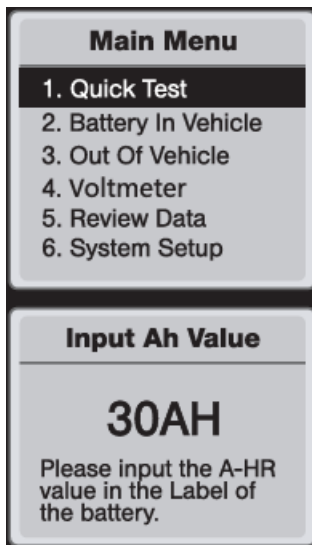
4



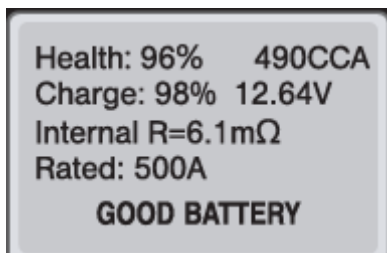
5



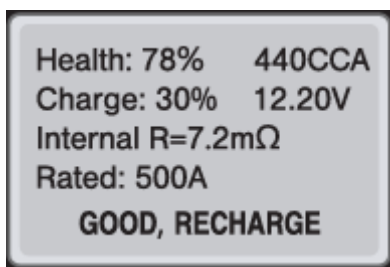
6



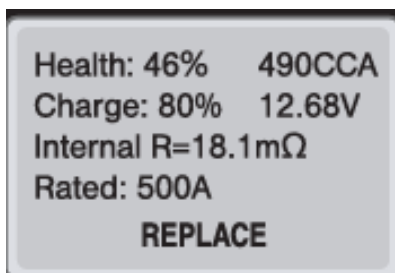
7



8



9



10

Health: 0%    0CCA  
Charge: 20%    10.64V  
Internal R=45.2mΩ  
Rated: 500A  
**BAD CELL, REPLACE**

11

Health: 39%    310CCA  
Charge: 20%    12.08V  
Internal R=30.01mΩ  
Rated: 500A  
**CHARGE-RETEST**

12

**Main Menu**

---

1. Quick Test
- 2. Battery In Vehicle**
3. Out Of Vehicle
4. Voltmeter
5. Review Data
6. System Setup

**Test in Vehicle**

---

- 1. Battery Test**
2. Cranking Test
3. Charging Test

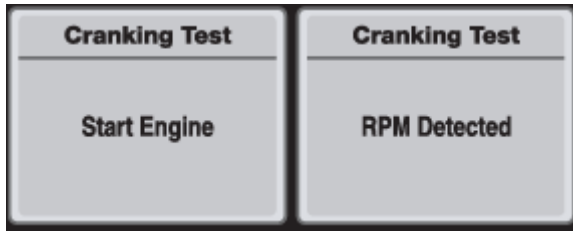
13

**Test in Vehicle**

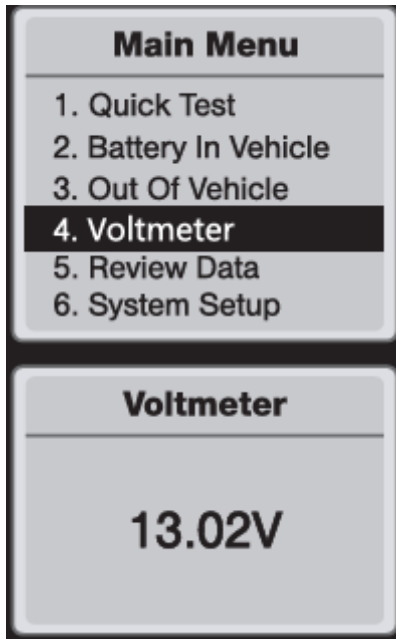
---

1. Battery Test
- 2. Cranking Test**
3. Charging Test

14



15



16

