



**COMPETITION**

## BEDIENUNGSANLEITUNG - NOTICE D'UTILISATION - OPERATING INSTRUCTIONS



### 512.5300

-  12V MINI BATTERIETESTER UND LADESYSYSTEMTESTER MIT QR CODE
-  TESTEUR DE BATTERIE MINI 12V ET TESTEUR DE SYSTÈME DE CHARGE AVEC CODE QR
-  12V MINI BATTERY TESTER AND CHARGING SYSTEM TESTER WITH QR CODE
-  MINI COMPROBADOR DE BATERÍA DE 12 V Y COMPROBADOR DEL SISTEMA DE CARGA CON CÓDIGO QR
-  MINI TESTER BATTERIA 12V E TESTER DEL SISTEMA DI RICARICA CON CODICE QR
-  12V MINI BATTERIETESTER OG LADESYSYSTEMTESTER MED QR-KODE
-  MINI TESTER AKUMULATORA 12 V I TESTER UKŁADU ŁADOWANIA Z KODEM QR
-  12V MINI ACCUTESTER EN LAADSYSTEEMTESTER MET QR-CODE
-  МИНИ-ТЕСТЕР АККУМУЛЯТОРА 12 В И ТЕСТЕР СИСТЕМЫ ЗАРЯДКИ С QR-КОДОМ
-  QR جهاز اختبار بطارية 12 فولت صغير وجهاز اختبار نظام الشحن مع رمز

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## Introduction

Dear customer!

We are very pleased that you decided to purchase this product from kstools. Thank you for your confidence in us. You can find all the information you need in these operating instructions. Please read the instructions completely with care and observe the advice given. The operating instruction is part of the item and should be kept intact.

If you have any uncertainties or further questions, please contact:

[customerservice@competitiontools.com](mailto:customerservice@competitiontools.com)

## 1. Provisions for use

The manufacturer is not liable for personal injuries and material damages which result from improper use.



**Pay heed to the vehicle manufacturer's specifications!**

This Professional Battery Tester uses advanced testing technology to easily and quickly measure the starting capacity and condition of a vehicle's battery, as well as its starting and charging systems.

- Able to test & detect bad cells in all types of starting batteries including Lead Acid, AGM flat, AGM spiral, GEL, START&STOP and rechargeable Lithium Ion.
- Reverse Polarity protection ensures that, reverse connections will not damage the tester, the vehicle, or the battery.
- Battery less operation ensures that the tester is always ready for use.
- The tester is able to analyze battery in accordance with the majority of battery standards such as, CCA, BCI, CA, MCA, JIS, DIN, IEC, EN, SAE, GB.

## 2. Technical data

1. Display: large, 128\*64 backlit LCD
2. Operating Temperature: 0 to 50°C (32 to 122 F°)
3. Storage Temperature: -20 to 70°C (-4 to 158 F°)
4. Power: provided via vehicle battery (8-30V DC)
5. Dimensions: Length: 80 mm , Width: 80 mm, Height: 22 mm
6. Weight: 200g



### 3. Safety and usage instructions

Tools may in principle only be used for the purpose intended, under the conditions envisaged and within the limitations as to their use.

## 4. Operation

### 4.1 Tool Description

**Up / Down keys:** Navigate the menu by pressing the UP and DOWN keys.

**RETURN key:** Return to the previous menu by pressing the EXIT key.

**ENTER key:** Confirm the selection by pressing the ENTER key

### 4.2 Starting Current measurement range:

#### Lithium Ion Battery:

| Measure Standard | Measure Range |
|------------------|---------------|
| CCA              | 20-1000       |
| BCI              | 20-1000       |
| CA               | 20-1000       |
| MCA              | 20-1000       |
| JIS              | 26A17-150F51  |
| DIN              | 20-700        |
| IEC              | 20-700        |
| EN               | 20-1000       |
| SAE              | 20-1000       |
| GB               | 2-120         |

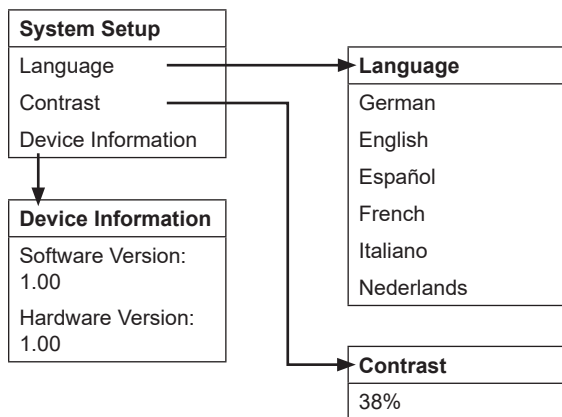
#### Regular Flooded, AGM Gel battery, START&STOP battery:

| Measure Standard | Measure Range |
|------------------|---------------|
| CCA              | 100-2000      |
| BCI              | 100-2000      |
| CA               | 100-2000      |
| MCA              | 100-2000      |
| JIS              | 26A17-245H52  |
| DIN              | 100-1400      |
| IEC              | 100-1400      |
| EN               | 100-2000      |
| SAE              | 100-2000      |
| GB               | 30-220        |

### 4.3 Product Setup

The following setup options are available:

- 1) **Language:** Selects desired language.
- 2) **Contrast adjustment:** Adjusts the contrast of the LCD display.
- 3) **Device information:** Displays the current version.



#### 4.4 Operations and Tests

Once connected to a battery the tester will display the battery voltage. The main menu can then be accessed by pressing any key.

|                                    |
|------------------------------------|
| <b>Voltmeter:</b><br><b>12.40V</b> |
|------------------------------------|

#### 4.5 Battery test

If a surface charge is detected, turn on the headlights until it is cleared. Once it has been cleared, turn the lights off as instructed and press ENTER.

##### Select Vehicle type

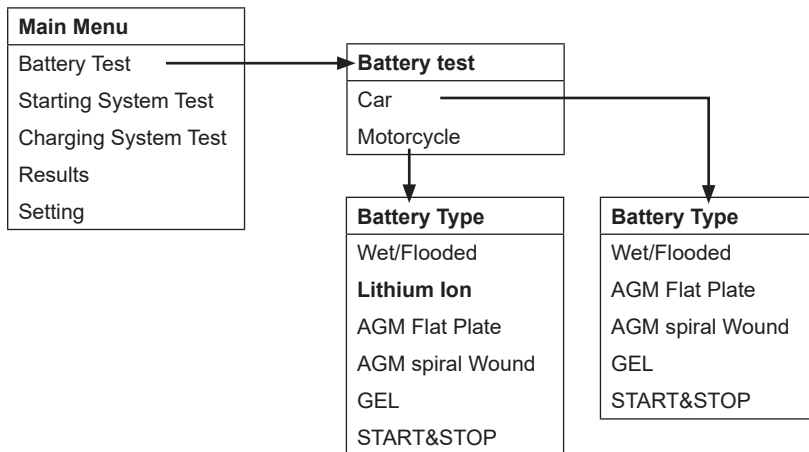
Choose between car and motorcycle battery testing. Once the Appropriate vehicle type is selected, press ENTER.

**Note:** LiFePo4 Lithium batteries are shown in the motorcycle battery menu.

##### Select Battery Type

Select the correct battery type according to what is indicated.

In the battery user manual or on the battery itself and press ENTER.



### Battery Testing Standards

The battery tester will perform its test according to the input rating and testing standard.

Use the UP/DOWN keys to select the testing standard and input the value indicated on the battery.  
E.g 540 (EN)

CCA: Cold Cranking Amps, specified by SAE&BCI, most frequently used value for starting battery at 0°F (-18°C).

BCI: Battery Council International standard

CA: Cranking Amps standard, effective starting current at 0°C

MCA: Marine Cranking Amps standard, effective starting current at 0°C.

JIS: Japan Industrial Standard, displayed on the battery as combination of the numbers and letters, e.g. 55D23,80D26.

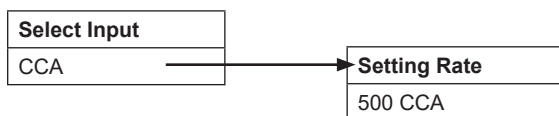
DIN: German Auto Industry Committee Standard

IEC: Internal Electro technical Commission Standard

EN: European Automobile Industry Association Standard

SAE: Society of Automotive Engineers Standard

GB: China National Standard



The battery test is completed in around 3 seconds.



## Battery Test Result

Please see below several examples of the results of the battery tests.

### 1) Good Battery

|                     |        |
|---------------------|--------|
| Health SOH: 96%     | 490CCA |
| Charge: 98%         | 12.64V |
| Internal R =        | 6.1mΩ  |
| Rated:              | 500A   |
| <b>GOOD BATTERY</b> |        |

### 2) Good, Recharge

|                       |        |
|-----------------------|--------|
| Health SOH: 78%       | 440CCA |
| Charge: 30%           | 12.20V |
| Internal R =          | 7.2mΩ  |
| Rated:                | 500A   |
| <b>GOOD, RECHARGE</b> |        |

### 3) Replace

|                 |        |
|-----------------|--------|
| Health SOH: 46% | 490CCA |
| Charge: 80%     | 12.68V |
| Internal R =    | 18.1mΩ |
| Rated:          | 500A   |
| <b>REPLACE</b>  |        |

### 4) Bad Cell, Replace

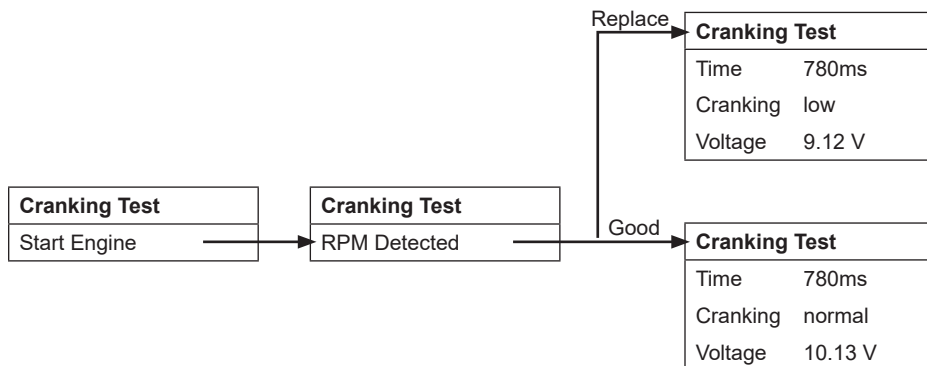
|                          |        |
|--------------------------|--------|
| Health SOH: 0%           | 0CCA   |
| Charge: 20%              | 10.64V |
| Internal R =             | 45.2mΩ |
| Rated:                   | 500A   |
| <b>BAD CELL, REPLACE</b> |        |

### 5) Charge, Retest

|                      |        |
|----------------------|--------|
| Health SOH: 39%      | 310CCA |
| Charge: 20%          | 12.08V |
| Internal R =         | 30.1mΩ |
| Rated:               | 500A   |
| <b>CHARGE-RETEST</b> |        |

## 4.6 Cranking Test

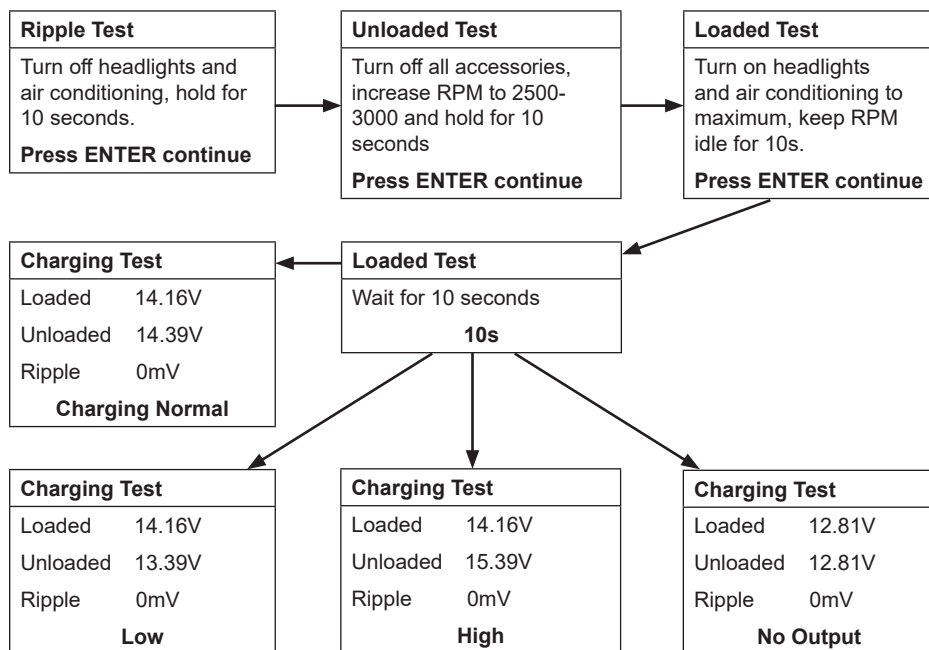
Tester prompts as following:





## 4.7 Charging System

Tester prompts as following:



## 4.8 Review Data

Choose the "Review Data" function to review your last test

|                     |        |
|---------------------|--------|
| Health SOH: 96%     | 490CCA |
| Charge: 98%         | 12.64V |
| Internal R =        | 6.1mΩ  |
| Rated:              | 500A   |
| <b>GOOD BATTERY</b> |        |

| <b>Cranking Test</b> |        |
|----------------------|--------|
| Time                 | 780ms  |
| Cranking             | Normal |
| Voltage              | 10.13V |

| <b>Charging Test</b>   |        |
|------------------------|--------|
| Loaded                 | 14.16V |
| Unloaded               | 14.39V |
| Ripple                 | 0mV    |
| <b>Charging Normal</b> |        |



Obtain the test report by scanning the QR code.

Show result on the phone.



The user can edit PLATE NUMBER, REPAIR SHOP, TESTER, TIME, save the test result in phone, and share them to social platform or repairmen.

|               |
|---------------|
| PLATE NUMBER: |
| REPAIR SHOP:  |
| TESTER:       |
| TIME:         |

## 5. Maintenance

Incorrect or defective replacement parts can lead to damage.

## 6. Checks

All tools are to be checked for damage.



## 7. Disposal

The tool is to be disposed of or recycled in accordance with the legislation of the respective country.

## 8. Guarantee

The KS Tools Werkzeuge und Maschinen GmbH guarantee applies for all tools that are used under normal usage conditions.

The following are excluded from the guarantee:

- **Consumables** e.g. any type of cutting tools, cutting inserts and disks, cutting and scraping tools, brooms, brushes, files, batteries, bits or bit sockets, rotor blades in pneumatic devices, isolators on heating coils, any type of fuses, carbon brushes, etc.
- **Faulty functioning** of parts that show usage-related or other natural wear and tear, as well as tool defects that can be traced back to usage-related or other natural wear and tear.
- **Defects** in the tool that can be traced back to a failure to observe the operating instructions, improper use, use under abnormal environmental conditions or unsuitable operating conditions, overloading or improper maintenance.  
Also defects in tools caused by the use of accessory parts or other parts that are not KS Tools original parts.
- Tools which have been modified or equipped with additions.
- Minor deviations from the intended quality that are however insignificant for the value and suitability for use of the tool.

The guarantee period is 12 months in cases of industrial or equal use.

The guarantee period starts on the date of purchase by the commercial end customer. The date of the original purchase receipt is decisive. For technical products with limited guarantee types A, B and C, the user must principally submit the purchase receipt in addition to the serial number of the device, if present.

The guarantee applies under consideration of the guarantee type for the duration specified in the price list valid on the day the product was purchased.

If no guarantee claim exists for the product (expiration of the guarantee time, guarantee exclusion for the reasons listed in Sec. 2) but the repair is still possible, this will only be carried out following approval of the cost estimate by the user.



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