

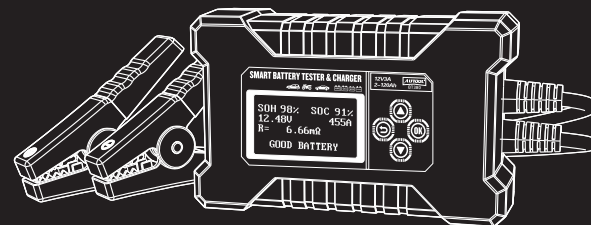
AUTOOL®

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AUTOOL BT380

Battery System Tester & Charger

User Manual



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- Non-technical person shall not change, disassemble or repair the product, otherwise all losses caused by this shall be borne 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 on-board charging adapter.
- 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.

Product Profile

BT380 Battery Tester adopts currently the world's most advanced conductance testing technology to easily, quickly and accurately measure the actual cold cranking amps capability of the vehicle starting battery, healthy state of the battery itself, and common fault of the vehicle starting system and charging system, which can help maintenance personnel to find the problem quickly and accurately, thus to achieve quick vehicle repair.

1. Test all automotive cranking lead acid battery, including ordinary lead acid battery, AGM flat plate battery, AGM spiral battery, and Gel battery, etc.
2. Directly detect bad cell battery.
3. Polarity reverse connection protection, reverse connection will not damage the tester or affect the vehicle and battery.
4. Directly test the battery with power shortage, no need to fully charge it before testing.
5. Testing standards include currently the world's majority of battery standards, CCA, JIS, DIN, IEC, EN, SAE, GB.
6. Support multi-languages, customer can select different language package, which includes: English, Russian, Spanish, French, German, etc. Other customized language version are also provided.

Product Function

Main functions of BT-360 battery tester include: battery charging, battery test, cranking test, charging test and other additional functions.

Battery charging is Can support 12V lead-acid battery fast charging.

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.

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

Technical Parameters

Cold Cranking Amps Measure Range:

Measure Standard	Measure Range	Measure Standard	Measure Range
CCA	100-2400	IEC	100-2200
JIS	26A17--245H52	EN	100-2400
DIN	100-2200	SAE	100-2400
GB	30-220Ah	MCA	100-2400
BCI	100-2400	CA	100-2400

Working Environment Requirement

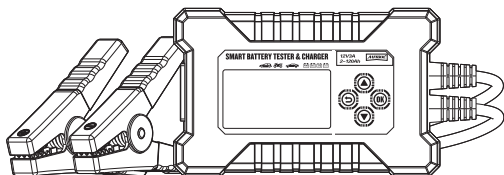
Working Environment Temp.: -20°C-50°C.

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

Tester Structure

BT 380 mainly consists of battery tester main unit and testing cables.

BT 380 Battery Tester main unit cover is made of ABS acid-resistant plastic.



Operation

Key Description

● Up / Down key

Select upwards or downwards via UP and DOWN keys.

● Return key

Return to previous menu via RETURN key.

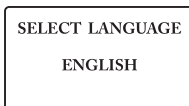
● OK key

Confirm the selection via OK key.



Select Language

Press UP/DOWN key to select the Language, Include English, Franch, germany, spanish,etc.



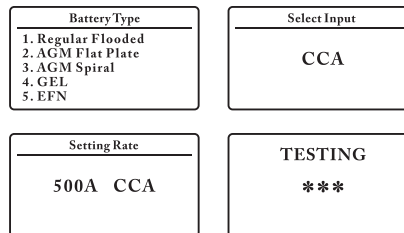
Battery Charging

After entering the battery charging program, the tester will display the tester's voltage, current, charging power, and charging time.

VOLTAGE:	12.5V
AMPERE:	0.0A
CHARGED:	90%
REMAIN:	1H

Battery Tester

After entering the battery test program, the tester will display the battery type and battery standard etc.



Battery Test Result

Battery test result includes 5 types as following:

1) Good Battery

SOH:96%	SOC:98%
12.64V	490A
Rating	500A
GOOD BATTERY	

The battery is without any problem, please be relaxed to use!

NOTE: SOH means State of Health; SOC means State of Charge

2) Good, Recharge

SOH:78%	SOC:30%
12.20V	440A
Rating	500A
GOOD, RECHARGE	

Good battery but low current, recharge before using.

3) Replace

SOH:46%	SOC:80%
12.68V	340A
Rating	500A
REPLACE	

The battery nearly or already reached the end of the using life, replace battery, otherwise, bigger danger will be followed.

4) Bad Cell, Replace

SOH:0%	SOC:20%
10.60V	0A
Rating	500A
BAD CELL, REPLACE	

Battery interior damaged, broken cell or short circuit, replace battery.

5) Charge, Retest

SOH:39%	SOC:20%
12.08V	310A
Rating	500A
CHARGE-RETEST	

Unstable battery shall be recharged and retested to avoid error. If same test result appears after recharge and retest, the battery is regarded as damaged, replace the battery.

Cranking Test

Tester prompts as following:

CRANKING TEST

START ENGINE

Starting the engine as prompted, tester will automatically complete the cranking test and display the result.

RPM DETECTED

Normally, cranking voltage value lower than 9.6V is regarded as abnormal and it is OK if it is higher than 9.6V.

Test result of the tester includes actual cranking voltage and actual cranking time.

TIMES	780ms
CRANKING	NORMAL
	10.13V

When cranking test is abnormal, battery test result will also be displayed at the same time.

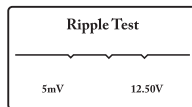
TIMES	1020ms
CRANKING	LOW
REPLACE	9.12V

This is for the convenience of the maintenance personnel to quickly know the whole state of the starting system according to the data.

After testing finished, do not shut down the engine, press OK key to enter Charging Test.

Charging Test

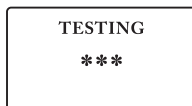
When enter the charging test, tester will prompt "Ripple Test" .



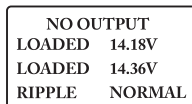
Tester will do the following tests in a sequence:

Operate accordingly to increase the engine rotating speed to 2500 turns or above, and keep for 5 seconds.

Tester starts the charging voltage test after increase rotation detected.



After the test finished, tester displays the effective charging volts, ripple test result and charging test result.



Check the connection between generator and battery, then retest.

After-sale Service

Warranty

- We offer repair service or replacement according to the specific type of the fault.
- We guarantee that all the parts, accessories and device for replacement are brand new.
- AUTOOL will bear the shipping cost and offer the corresponding accessories for replacement without charge if the customer sends us video and pictures of the product that fails within 90days after receipt.
- If the product has been received for more than 90 days, we will provide the spare parts for replacement without charge but the buyer is supposed to bear the other relevant costs.

The warranty is void if the product is

- Bought through non-official channel;
- Damaged because of improper use or maintenance, not following the user manual;

Declaration

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