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› KINGBOLEN BM520 6V 12V 24V Car Battery Tester Instruction Manual

KINGBOLEN BM520

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Model: BM520

1. INTRODUCTION

The KINGBOLEN BM520 is a versatile digital battery tester designed for comprehensive analysis of 6V, 12V, and 24V automotive batteries. It provides detailed health reports for various battery types, including regular flooded, AGM flat plate, AGM spiral, GEL, and EFB batteries. This device supports a wide range of capacities from 100-2000 CCA or 2AH-200AH, making it suitable for cars, trucks, motorcycles, ATVs, SUVs, boats, and yachts. The 2.8-inch color screen ensures clear display of test results and battery status.



Image 1.1: The KINGBOLEN BM520 supports 6V, 12V, and 24V batteries, including regular-flooded, AGM spiral, AGM flat plate, EFB, and GEL types. It is compatible with various vehicles such as cars, golf carts, SUVs, trucks, motorcycles, boats, and ATVs.

2. SETUP AND CONNECTION

The BM520 battery tester does not require an internal battery for operation; it draws power directly from the vehicle's battery. Ensure the vehicle's engine is off before performing any tests.

2.1 Connecting the Tester

1. Identify the positive (+) and negative (-) terminals on the vehicle's battery.
2. Connect the red clamp of the BM520 to the positive (+) battery terminal.
3. Connect the black clamp of the BM520 to the negative (-) battery terminal.
4. The BM520 features a reversible access design, meaning it can function correctly even if the clamps are connected in reverse. This prevents damage to the tester or battery from incorrect polarity.
5. The device will display a reminder on the screen if the clip connection is loose. Ensure a secure connection for accurate results.

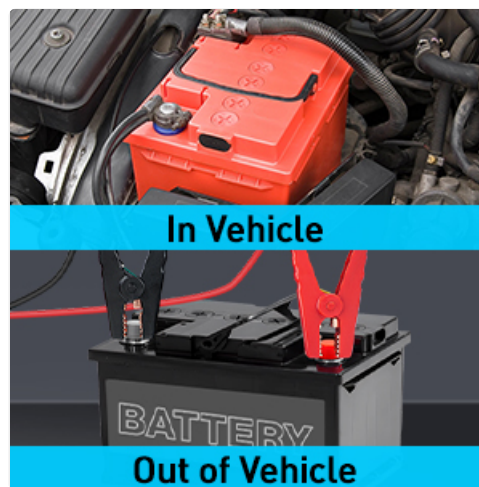


Image 2.1: The BM520 can be used to test batteries both while installed in the vehicle and when removed from the vehicle.

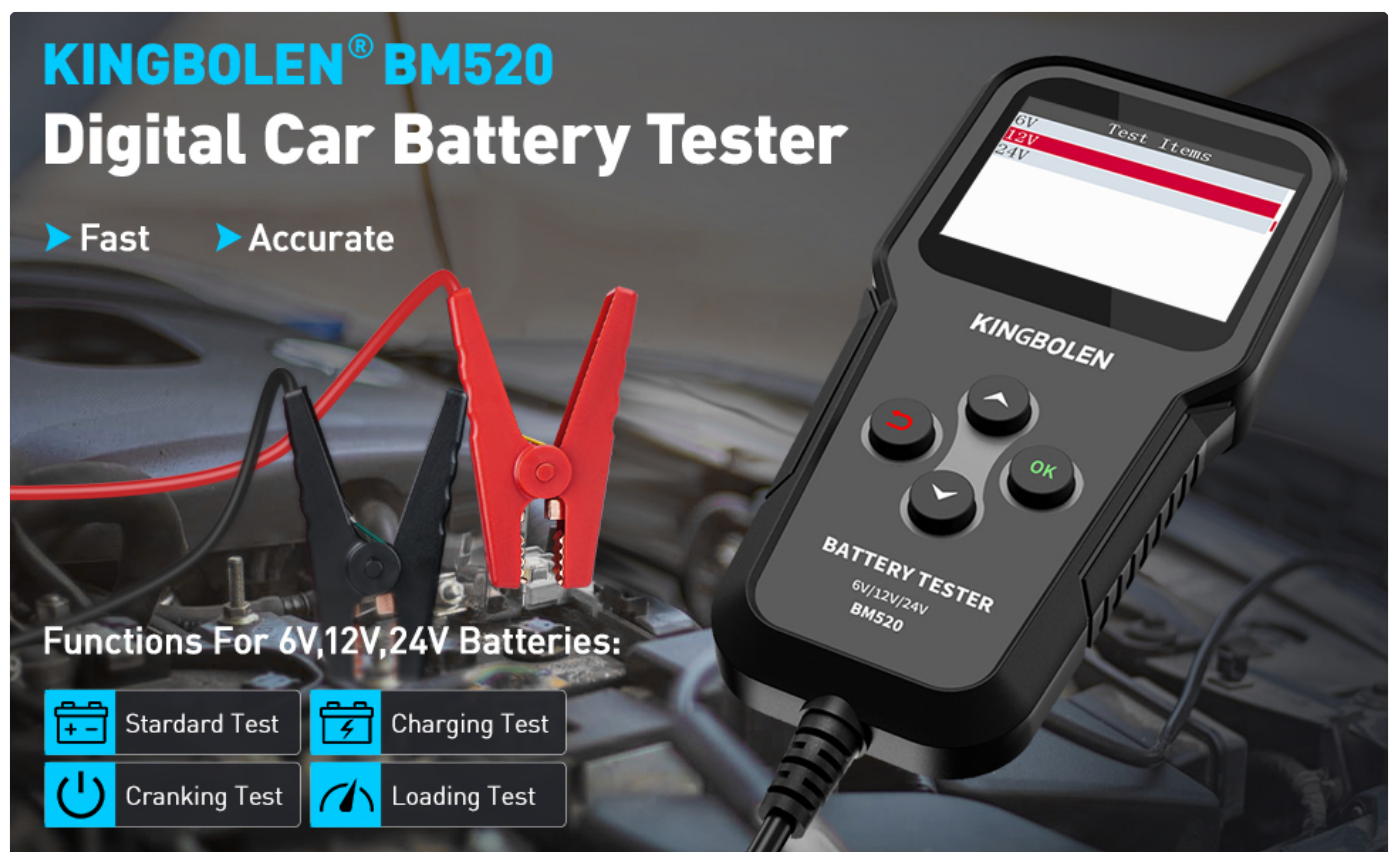


Image 2.2: The portable device with its screen and clamps is ready for various battery tests.

3. OPERATING INSTRUCTIONS

The BM520 offers multiple testing functions to assess the health and performance of your battery and charging system.

3.1 Battery Test

This function evaluates the overall health of the battery. You will need to input the battery's CCA (Cold Cranking Amps) rating for accurate results.

1. From the main menu, select 'Battery Test'.
2. Input the correct CCA value as specified on your battery.
3. The tester will display the battery's State of Health (SOH), State of Charge (SOC), internal resistance (R), existing battery capacity (CCA), and voltage (V).



Image 3.1: The digital display shows the battery's health, charge, resistance, capacity, and voltage for 6V, 12V, and 24V batteries.

3.2 Cranking Test

This test analyzes the actual cranking voltage and time to assess the starting system's performance.

1. Select 'Cranking Test' from the menu.
2. Follow the on-screen prompts to start the engine.
3. The tester will measure and display the cranking voltage and time.

UN OUTIL INDISPENSABLE POUR LES PROS ET LES BRICOLEURS

Compatible avec les batteries 6V/12V/24V 100-2000 CCA de plusieurs types essence ou diesel, y compris voiture, moto, camion, bateau et VTT.



Image 3.2: The cranking test analyzes the actual cranking voltage and cranking time to determine the overall state of the starting system.

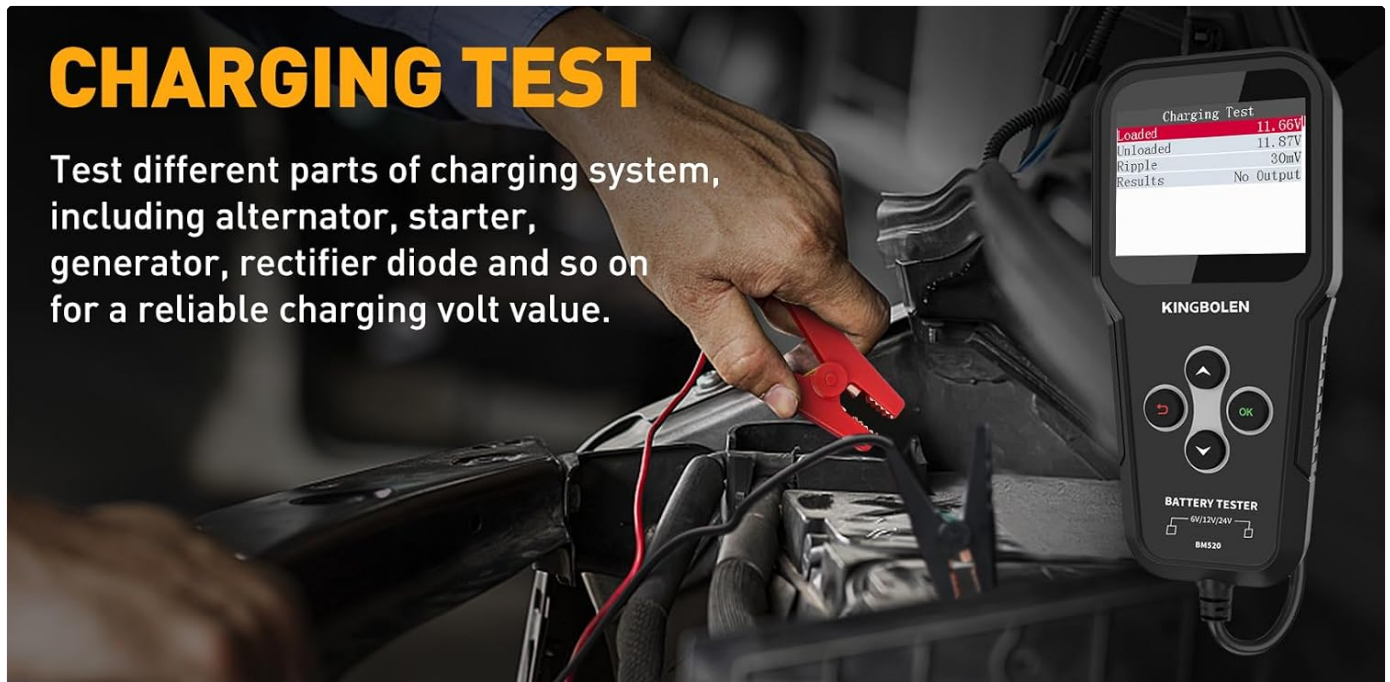
3.3 Charging Test

This function tests various components of the charging system, including the alternator, starter, generator, and rectifier diode, to ensure a reliable charging voltage.

1. Select 'Charging Test' from the menu.
2. Follow the on-screen instructions, which may involve starting the engine and activating various electrical loads.
3. The tester will provide a report on the charging system's performance.

CHARGING TEST

Test different parts of charging system, including alternator, starter, generator, rectifier diode and so on for a reliable charging volt value.



CRANKING TEST

Analyze the actual cranking voltage and the cranking time to help you quickly figure out the whole state of the starting system.

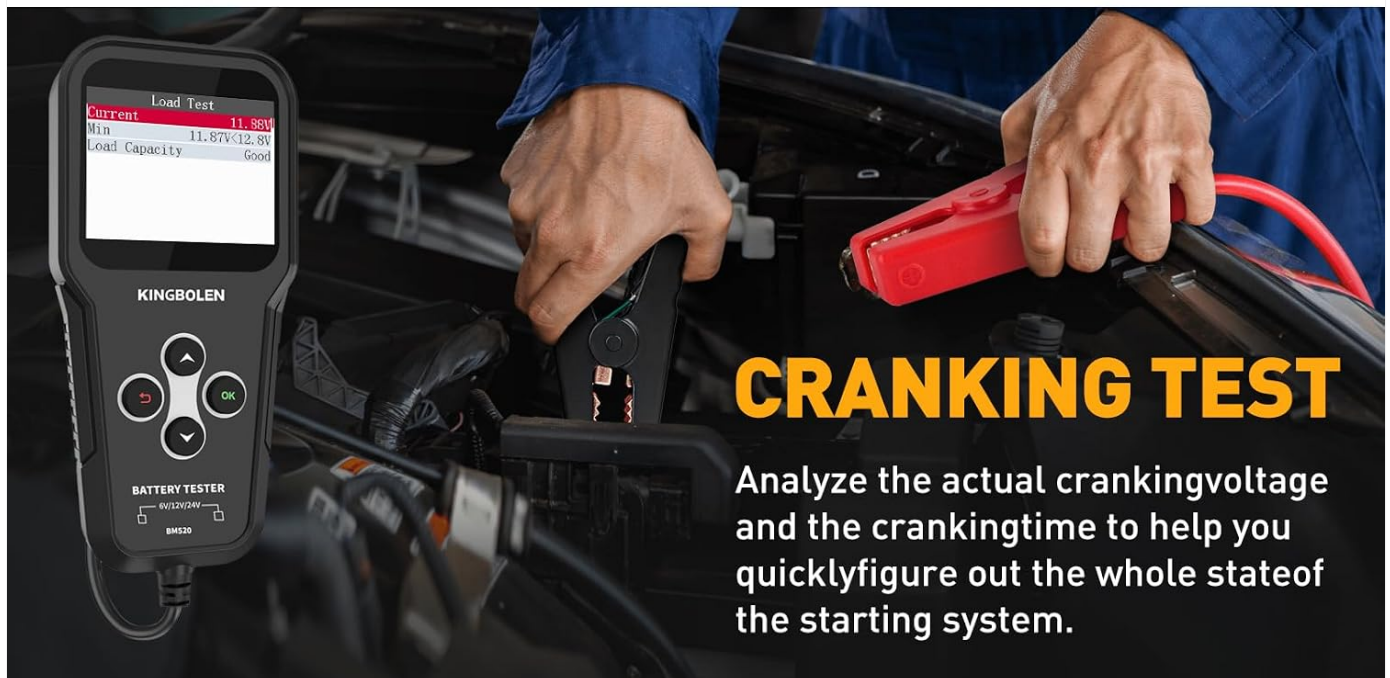


Image 3.3: The charging test evaluates components like the alternator, starter, generator, and rectifier diode for a reliable charging voltage.

3.4 Load Test

The load test assesses the battery's ability to maintain voltage under load conditions.

1. Select 'Load Test' from the menu.
2. Follow the prompts to apply a load (e.g., turn on headlights).
3. The tester will report on the battery's performance under load.

3.5 Multimeter and Waveform Test

The integrated multimeter function allows testing of voltage and resistance. The waveform test helps verify the stability and reasonableness of the battery's charge/discharge state.

- The BM520 can test voltage and resistance, providing a reference range.
- The waveform test monitors the real-time voltage waveform.
- The device supports recording and playback of up to 5 waveform records.



Image 3.4: The device displays multimeter functions and real-time voltage waveform data.

3.6 Screenshot Function

The BM520 includes a one-click screenshot function to capture and save important test data.

- To take a screenshot, press and hold the 'Up' and 'Down' buttons simultaneously for 5 seconds.
- The device can store up to 10 pictures.



Image 3.5: Pressing the 'Up' and 'Down' arrow buttons simultaneously captures a screenshot of the current display.

4. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your KINGBOLEN BM520 battery tester.

4.1 Cleaning

- Wipe the device with a soft, dry cloth.
- Do not use abrasive cleaners or solvents.

- Keep the clamps clean and free of corrosion for optimal conductivity.

4.2 Software Updates

The BM520 offers lifetime free software updates to ensure compatibility and improved functionality.

1. Connect the BM520 to your computer (Windows, Mac, Linux, or Android devices are supported) via a USB cable.
2. The device will appear as a removable disk drive.
3. Copy and paste the update file (downloaded from the official KINGBOLEN website) onto the removable disk drive to complete the update.
4. No special driver installation or update application is required.

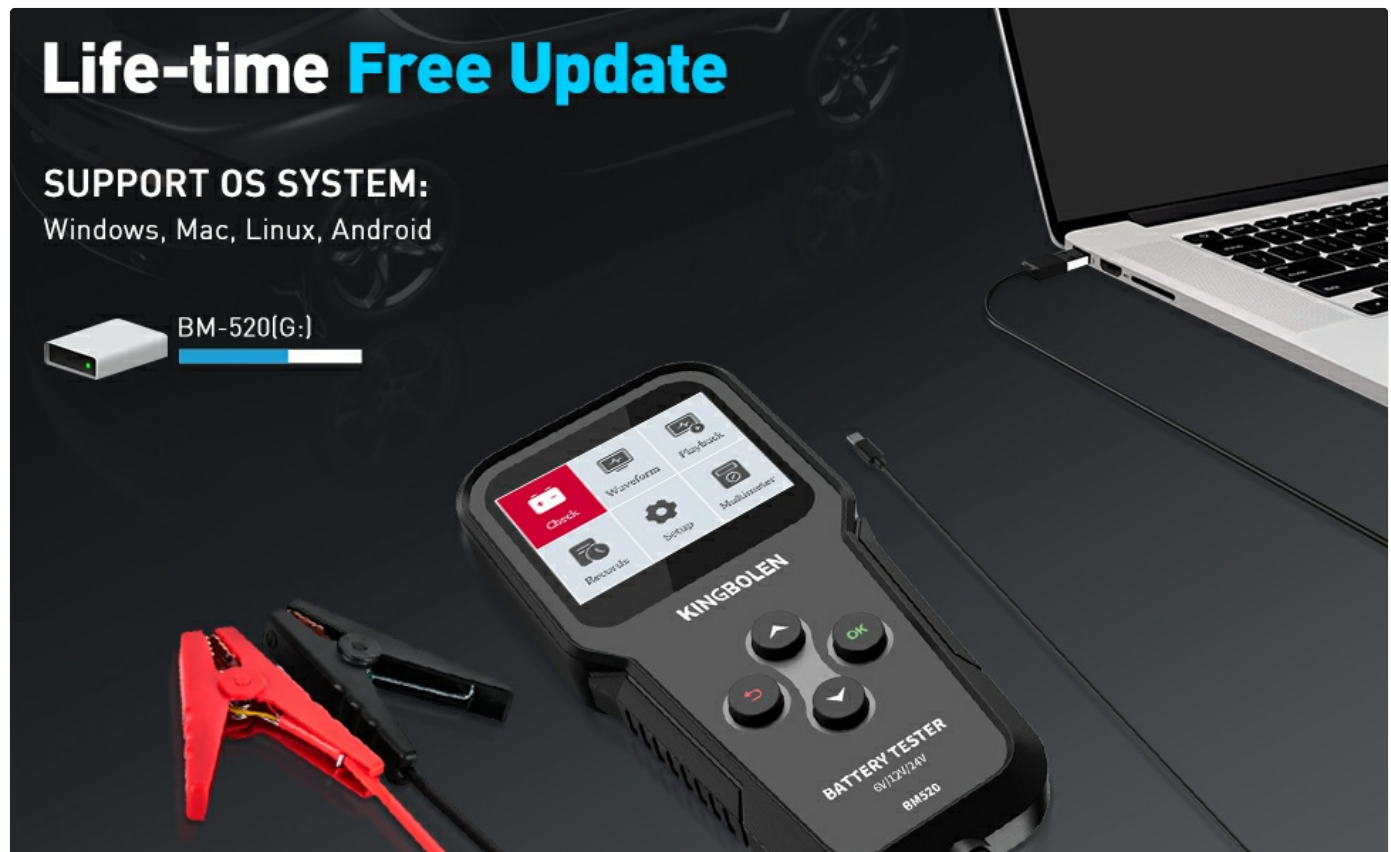


Image 4.1: The BM520 supports lifetime free updates and is compatible with Windows, Mac, Linux, and Android operating systems.

5. TROUBLESHOOTING

If you encounter issues with your BM520, refer to the following common problems and solutions.

- **Device not powering on:** Ensure the clamps are securely connected to the battery terminals. The device draws power from the battery. Check battery voltage; if it's too low (below 4.9V), the device may not power on.
- **Inaccurate test results:** Verify that the engine is off during the test. Ensure the battery type and CCA values are correctly entered. Check for loose clamp connections. Clean battery terminals and tester clamps if corroded.
- **Screen display issues:** The BM520 features a 2.8-inch HD color screen for clear results. If the display is unclear or distorted, try restarting the device by disconnecting and reconnecting the clamps.
- **Difficulty with software update:** Ensure the USB cable is properly connected to both the device and the computer. Verify that the update file is correctly placed on the removable disk drive. Try using a different USB port or computer if issues persist.

6. SPECIFICATIONS

Feature	Specification
Model	BM520 (KBL520)
Supported Battery Voltage	6V, 12V, 24V
Test Range (CCA)	100-2000 CCA
Test Range (AH)	2AH-200AH
Minimum Operating Voltage	4.9 Volts
Display	2.8-inch HD Color Screen
Supported Battery Types	Regular Flooded, AGM Flat Plate, AGM Spiral, GEL, EFB
Supported Standards	CCA, IEC, EN, DIN, CA, BCI, MCA, SAE, GB, JIS
Measurement Types	Voltmeter, Ohmmeter
Operating Temperature	Up to 65 Degrees Celsius
Software Update	Lifetime Free Update (Windows, Mac, Linux, Android)
Screenshot Storage	Up to 10 pictures
Waveform Record	Up to 5 records
Origin	China

			
PRODUCT	BM520	BM550	BM560
Test Range	6V/12V/24V	6V/12V/24V	6V/12V
CCA	100-2000CCA	100-2000 CCA	100-2000 CCA
AH	2AH-220AH	2AH-220AH	2AH-220AH
Screen	2.8 inch Color Screen	1.8inch High-definition Backlit Screen	1.8inch Color Screen
Language	"EN/FR/ES/IT/PT/RU/DE/PJ/JP/CN"	"EN/FR/ES/IT/PT/RU/DE/PL/JP/CN"	"EN/FR/ES/IT/PT/RU/DE/PL/JP/CN"
Basic Functions	Battery Analysis, Startup Test, Charging Test, Load Test	Voltage Test(V) Resistance Test(Ω)	Battery Analysis, Startup Test, Charging Test, Load Test
SOC/SOH	✓	✓	✓
Voltage Waveform Monitoring	✓	X	✓
Voltage Waveform Playback	✓	X	✓
Voltage Record	10	X	10
Test Record	✓	X	✓
Battery Multimeter	✓	X	X
Screenshots	✓	X	✓
Reverse Protection	✓	✓	✓
Reverse Polarity Test	✓	X	X
Theme Selection	✓	X	X
Applicable Battery Type	Regular Battery, AGM Flat Plate, AGM, GEL, EFB	Regular Battery, AGM Flat Plate, AGM, GEL, EFB	
Standard Test	CCA, IEC, EN, DIN, CA, BCI, MCA, SAE, GB, JIS	CCA, IEC, EN, DIN, CA, BCI, MCA, SAE, GB, JIS	
Free Upgrade	Life-time	Life-time	Life-time
Packing	Color Box	Skin Packing & Paper	Color Box

Image 6.1: A comparison table highlighting the features of KINGBOLEN BM520, BM550, and BM560 models.

7. WARRANTY AND SUPPORT

For specific warranty information, please refer to the documentation included with your product or contact KINGBOLEN customer support directly. The device benefits from lifetime free software updates, ensuring continued performance and compatibility.

7.1 Customer Support

For technical assistance, troubleshooting, or inquiries regarding your KINGBOLEN BM520, please visit the official KINGBOLEN website or contact their customer service department. Contact details are typically found on the product packaging or the official website.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question

and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question