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> MR CARTOOL Automotive Power Circuit Probe Tester B530 User Manual

## MR CARTOOL B530

# MR CARTOOL Automotive Power Circuit Probe Tester B530 User Manual

Model: B530 | Brand: MR CARTOOL

## 1. INTRODUCTION

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The MR CARTOOL B530 Automotive Power Circuit Probe Tester is a versatile diagnostic tool designed for testing electrical systems in 6-30V vehicles. It offers multiple functions including voltage, polarity, continuity, and resistance testing, as well as component activation and short circuit detection. This manual provides detailed instructions for proper setup, operation, and maintenance of your device.



Figure 1: MR CARTOOL B530 Power Circuit Probe Tester with included accessories.

## 2. SAFETY INFORMATION

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- Always wear appropriate eye protection.
- Ensure the vehicle's ignition is off before connecting or disconnecting the device, unless specific tests require power.
- Avoid contact with moving engine parts or hot surfaces.
- Do not use the tool if it appears damaged.
- The tool is short-circuit protected; its internal circuit breaker will trip if overloaded.
- Perform a quick self-test before each use to ensure proper tool functionality.

## 3. PRODUCT OVERVIEW AND COMPONENTS

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The MR CARTOOL B530 consists of the main probe unit, a 33ft extension cable, and battery hookup clips. Key features include an LCD display, power switch, mode button, and built-in headlamps.

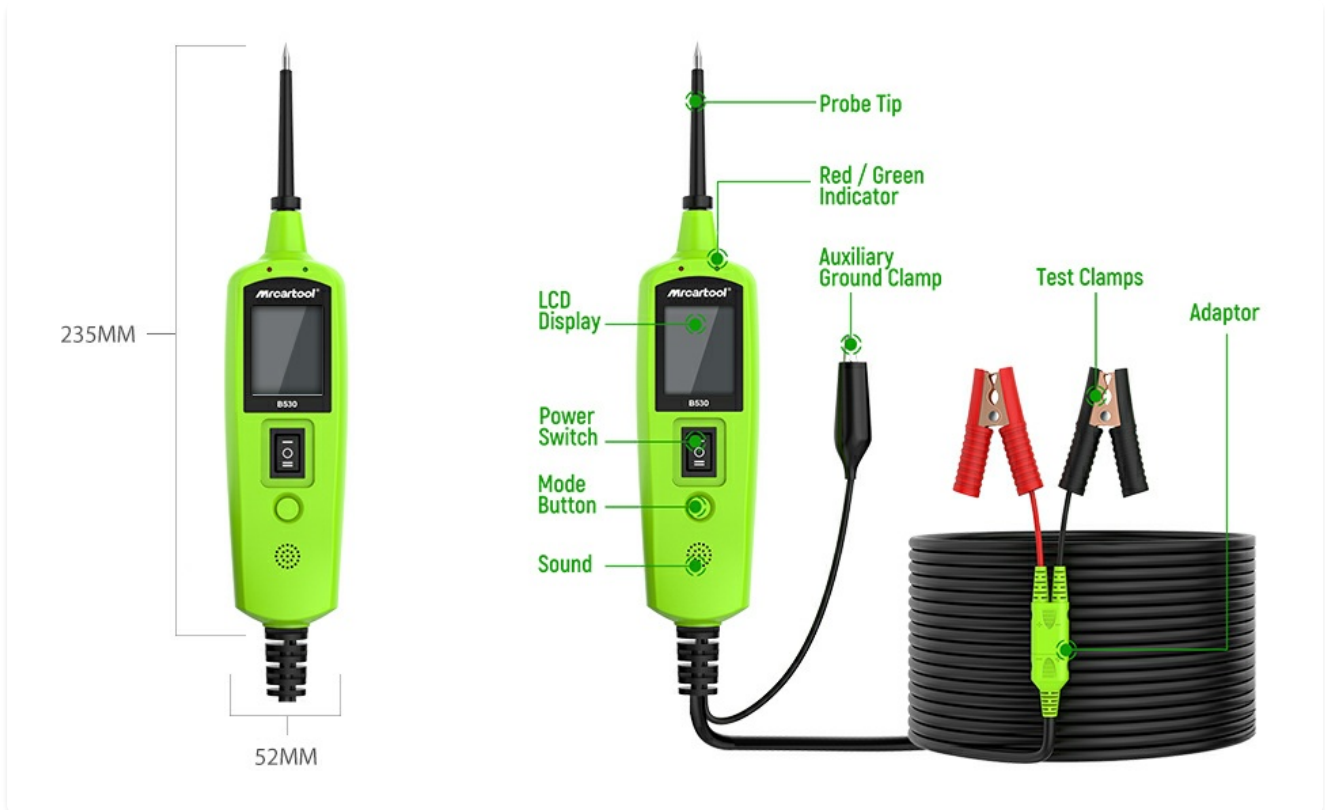


Figure 2: Detailed diagram of the B530 Power Circuit Probe Tester and its accessories.

### 3.1. Key Features

- **Probe Tip:** Contacts the circuit or component to be tested.
- **Headlights:** Illuminates the work area for improved visibility.
- **Red/Green Indicator:** Lights up red for positive voltage, green for negative voltage.
- **LCD Display:** Shows voltage, resistance, frequency, and other parameters.
- **Power Switch:** Activates positive or negative battery current to the probe tip.
- **Mode Button:** Cycles through different testing modes.

## 4. SETUP

### 4.1. Power Connection

The B530 circuit tester can be powered via the vehicle's battery or a cigarette lighter adapter. Connect the red battery clamp to the POSITIVE terminal of the vehicle's battery and the black clamp to the NEGATIVE terminal. Alternatively, use the provided cigarette lighter adapter.

# 2 TYPES OF POWER SUPPLY



Figure 3: Powering the B530 using either the car battery or a cigarette lighter.

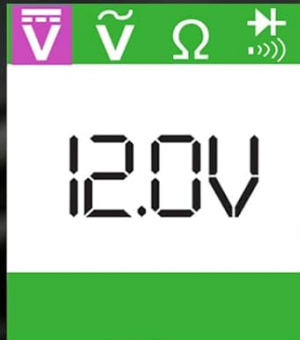
## 4.2. Probe Assembly

Insert the probe tip securely into the main unit. Ensure a firm connection. The device will sound a beep and the headlights will illuminate upon initial connection to a power source, indicating it is ready for use.

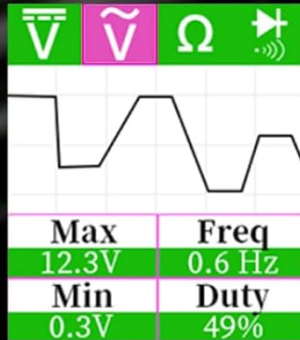
## 5. OPERATING MODES

The B530 features four primary operating modes, easily navigable via the mode button on the device. The upgraded navigation menu ensures clear readability.

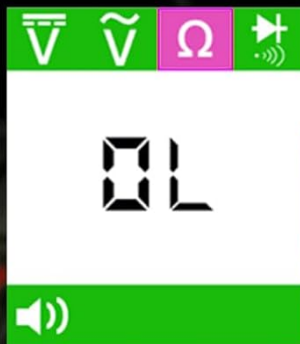
# 4 TEST MODES



DC Voltage Test



AC Voltage Test



Resistance Test



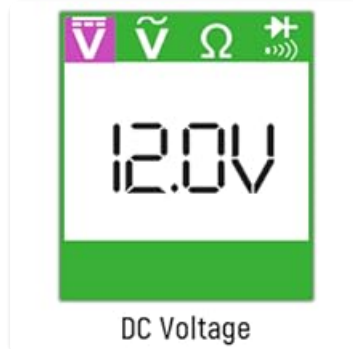
Diode Test



Figure 4: Overview of the four main test modes available on the B530.

## 5.1. DC Voltage Test

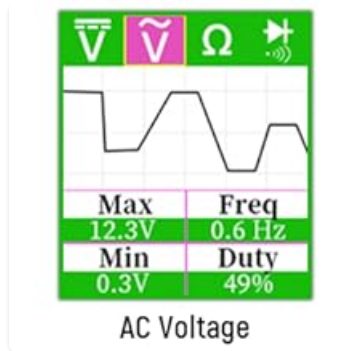
Measures direct current voltage. The display shows the voltage reading. The red/green indicator lights will show polarity.



DC Voltage Mode Display

## 5.2. AC Voltage Test

Measures alternating current voltage, frequency, and duty cycle. Useful for diagnosing signal circuits.



AC Voltage Mode Display

### 5.3. Resistance Test

Measures the resistance of a circuit or component. An 'OL' (Open Line) reading indicates an open circuit.



Resistance Mode Display

### 5.4. Diode Test

Tests the functionality of diodes. The display will show the forward voltage drop or 'OL' for an open circuit.



Diode Test Mode Display

## 6. OPERATING PROCEDURES

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The B530 can perform various diagnostic tasks. Always ensure proper connection and select the correct mode for your test.

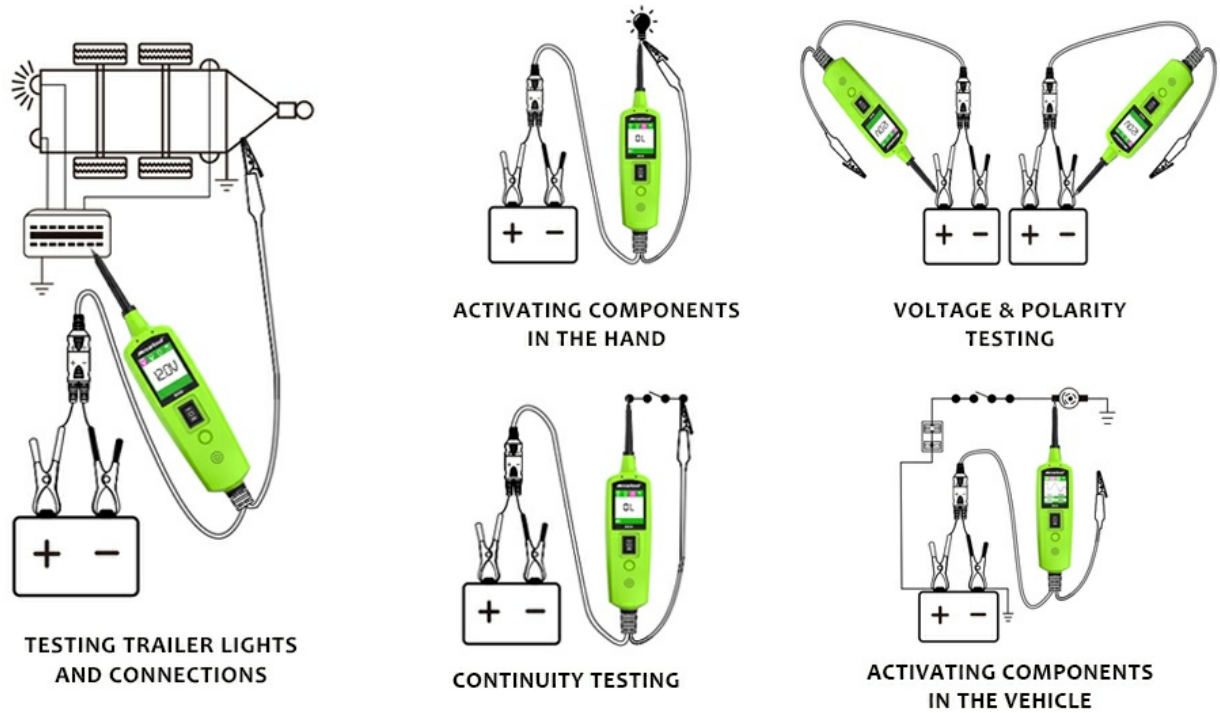


Figure 5: Visual representation of the B530's diverse testing capabilities.

### 6.1. Voltage and Polarity Testing

In DC Voltage mode, touch the probe tip to a circuit. The LCD will display the voltage, and the red/green indicator lights will show the polarity (red for positive, green for negative). A beep tone will sound for negative voltage.

### 6.2. Continuity Testing

In Resistance mode, touch the probe tip to both ends of a circuit or component. A reading other than 'OL' indicates continuity. The green indicator light turns on when continuity is detected. **Note:** Do not press the activation switch during continuity tests.

Your browser does not support the video tag.

Video 1: Demonstration of Quick Self-test, Positive and Negative Test, and Continuity Test using a similar circuit probe tester.

### 6.3. Activating Components

With the probe tip connected to a component, press the power switch forward to supply positive voltage or backward to supply negative voltage. This allows for testing components like cooling fans or relays directly. The tool is short-circuit protected, preventing overload.

### 6.4. Following & Locating Short Circuits

The B530 can help trace and locate short circuits without wasting fuses. The long 33ft cable allows extensive reach across the vehicle.

# 32.8FT EXTENSION CABLE

The B530 is equipped with 32.8FT extension cable that allows you to test along the entire length of the vehicle without constantly searching for suitable vehicle grounds.



Figure 6: The 33ft extension cable provides ample reach for testing.

Your browser does not support the video tag.

Video 2: Demonstration of locating short circuits and tracing wires using a similar V210 tool.

## 7. TROUBLESHOOTING

- **No Power:** Ensure battery clamps are securely connected to the correct terminals or the cigarette lighter adapter is fully inserted. Check the vehicle's power source.
- **Incorrect Readings:** Verify the correct operating mode is selected for the test being performed. Ensure the probe tip has good contact with the circuit.
- **Circuit Breaker Trips:** If the internal circuit breaker trips, it indicates an overload or short circuit. Allow the tool to cool, then press the reset button. Investigate the circuit for the cause of the overload.
- **No Sound:** Check the sound setting on the device. It may have been muted.

## 8. MAINTENANCE

- Keep the tool clean and dry. Wipe with a soft, damp cloth.
- Avoid exposure to extreme temperatures or direct sunlight.
- Store the tool and accessories in the provided carry case when not in use.
- Regularly inspect cables and connections for any signs of wear or damage.



Figure 7: The B530 comes with a durable carry case for convenient storage and transport.

## 9. SPECIFICATIONS

Feature	Specification
Model	B530

Operating Voltage	6-30V DC
Cable Length	33ft (10m)
Power Source	Vehicle Battery or Cigarette Lighter
Functions	Voltage, Polarity, Continuity, Resistance, Diode, Component Activation, Short Circuit Detection
Safety	Short-circuit protected (internal circuit breaker)
Display	LCD with upgraded navigation menu
Color	Green

## 10. APPLICATIONS

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The MR CARTOOL B530 is suitable for a wide range of vehicles and electrical systems, including:

- Cars
- Trucks
- Motorcycles
- Other 6-30V vehicle electrical systems




Figure 8: The B530 is designed for use across various vehicle types.

## 11. WARRANTY AND SUPPORT

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MR CARTOOL offers a **24-month free warranty** for the B530 Power Circuit Probe Tester. For any support or warranty claims, please contact MR CARTOOL customer service.

## 12. LANGUAGE OPTIONS

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The device supports 7 language options for user convenience:

- English
- Italian
- Spanish
- Portuguese
- French
- German
- Russian

# 7 LANGUAGE OPTIONS



English



Italian



Spanish



Portugal



French



Georgia



German



Figure 9: The B530 offers multiple language selections for global users.