VDIAGTOOL V200, V210

VDIAGTOOL V200 Automotive Circuit Tester & V210 Open & Short Finder User Manual

Comprehensive Guide for 12V-24V Vehicle Electrical Systems

1. Introduction

This manual provides detailed instructions for the VDIAGTOOL V200 Automotive Circuit Tester and the VDIAGTOOL V210 Automotive Electrical Open & Short Finder. These tools are designed to assist in diagnosing and troubleshooting electrical systems in 12V-24V vehicles. Please read this manual thoroughly before operation to ensure safe and effective use.



Image 1.1: The VDIAGTOOL V200 Automotive Circuit Tester and V210 Automotive Electrical Open & Short Finder kit, including the V200 probe, V210 receiver, V210 transmitter, and accessories.

2. Product Overview

The VDIAGTOOL kit includes two primary devices: the V200 Power Circuit Probe Tester and the V210 Automotive Electrical Open & Short Finder.

2.1 V200 Power Circuit Probe Tester

The V200 is a versatile diagnostic tool for 12V-24V vehicle electrical systems. It features a long extension cable and a clear display for various electrical tests.



Image 2.1: The VDIAGTOOL V200 Power Circuit Probe Tester, showing the main unit, 20ft extension cable, and battery clamps.

2.2 V210 Automotive Electrical Open & Short Finder

The V210 consists of a transmitter and a receiver, designed to locate open circuits, short circuits, and trace wires without damaging insulation.



Image 2.2: The VDIAGTOOL V210 Open & Short Finder, displaying the receiver, transmitter, and two 9V batteries.

3. Safety Information

Always observe the following safety precautions when using electrical testing equipment:

- Wear appropriate personal protective equipment, including safety glasses.
- Ensure the vehicle's ignition is off unless specific tests require it to be on.
- Do not connect the V200 or V210 to voltages exceeding their specified operating range (12V-24V).
- Avoid contact with hot engine components or moving parts.
- Keep the tools dry and clean. Do not use in wet conditions.
- If the tool appears damaged, do not use it.

4. Setup

4.1 V200 Power Circuit Probe Tester Setup

1. Connect the red clamp to the positive (+) terminal of the vehicle battery.

2. Connect the black clamp to the negative (-) terminal or a good chassis ground.
3. The V200 is now powered on and ready for use.

4.2 V210 Automotive Electrical Open & Short Finder Setup

1. **Transmitter:** Install two 9V batteries into the V210 transmitter.
2. Connect the red lead of the transmitter to the positive side of the circuit to be tested (e.g., fuse socket).
3. Connect the black lead of the transmitter to the negative side or a good ground.
4. **Receiver:** Turn on the V210 receiver. It will emit a tone.

5. Operating Instructions

5.1 V200 Power Circuit Probe Tester Operations

The V200 supports multiple testing functions for comprehensive electrical diagnostics.



Image 5.1: Overview of V200 features including DC/AC Voltage, Activate Components, Diode, Polarity Test, Continuity Test, Signal Circuit, Resistance, Test Trailer Lights, Short Circuits, and Ground Test.

- **Quick Self-Test:** Upon power-up, the V200 performs a self-test to ensure functionality.

- **AC/DC Voltage Test:** Measures DC voltage with 0.1V resolution and AC voltage, displaying Max & Min Voltage, frequency, and duty cycle.
- **Diode/Resistance Test:** Allows for testing diodes and measuring resistance in circuits.
- **Polarity Test:** Automatically identifies circuit polarity. A red light indicates a positive circuit, and a green light indicates a negative circuit.
- **Continuity, Bad Ground Check, Signal Circuit Test:** Used to verify circuit continuity, check for poor grounds, and test signal circuits.
- **Activate Components:** Safely activate components by applying power or ground through the probe.
- **Tone Design:** The unique tone feature assists in judging circuit voltage levels.

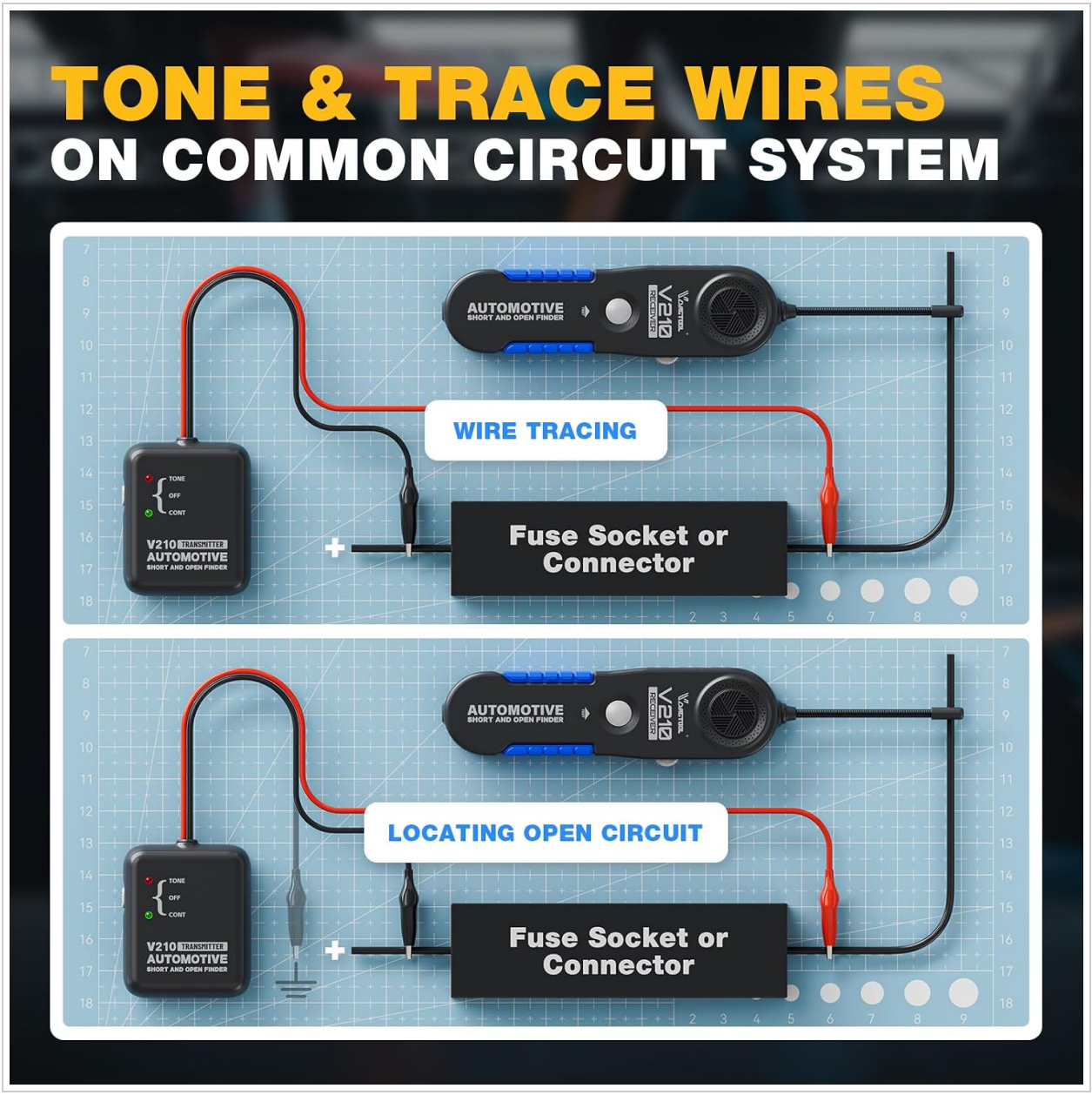


Image 5.2: The four working modes of the V200: DC Voltage, AC Voltage, Resistance, and Diode test, each with a distinct display.

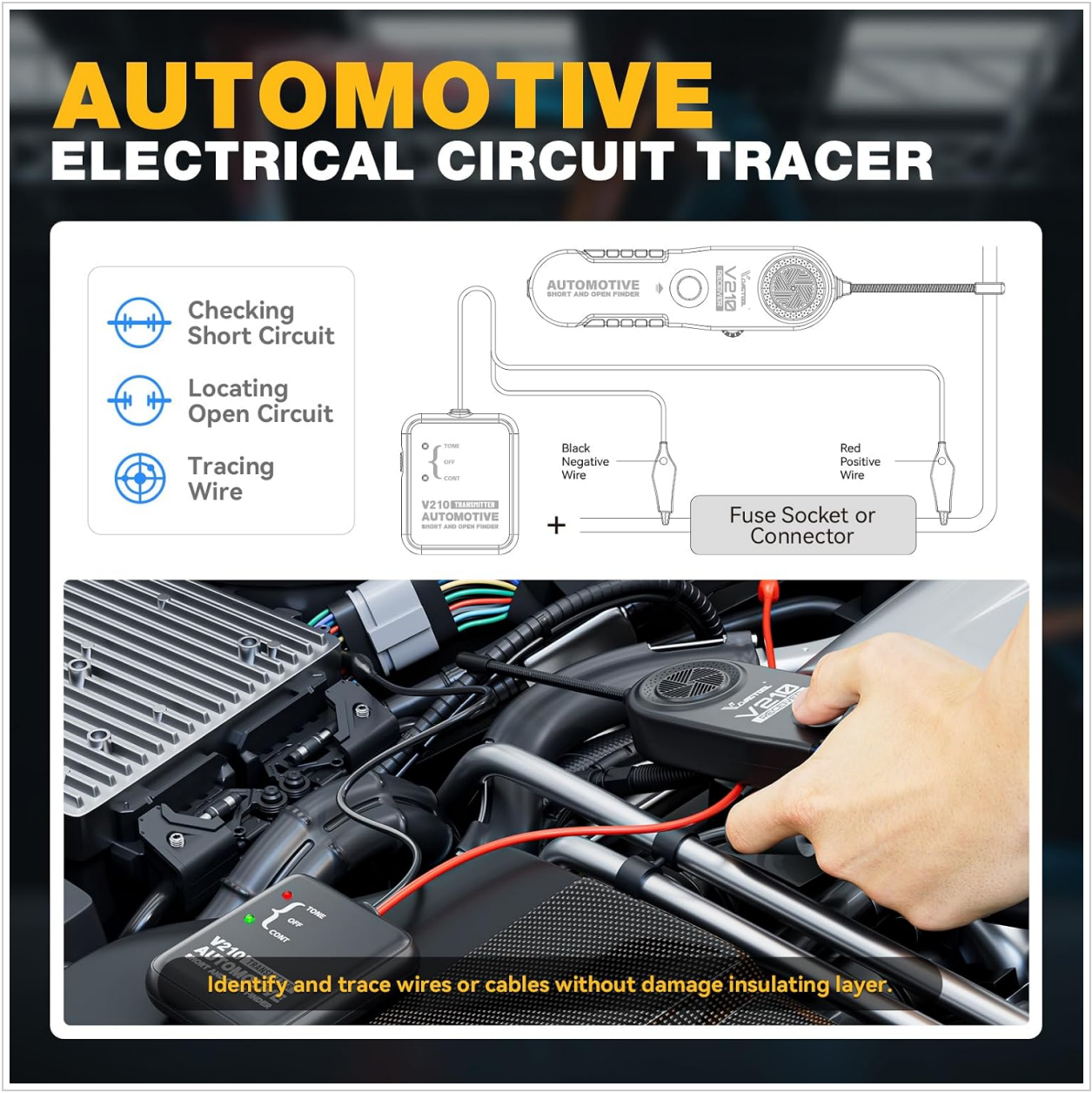


Image 5.3: The V200 automatically identifies circuit polarity. A red light indicates contact with a positive circuit, and a green light indicates contact with a negative circuit.

5.2 V210 Automotive Electrical Open & Short Finder Operations

The V210 is designed for efficient tracing and identification of circuit faults.

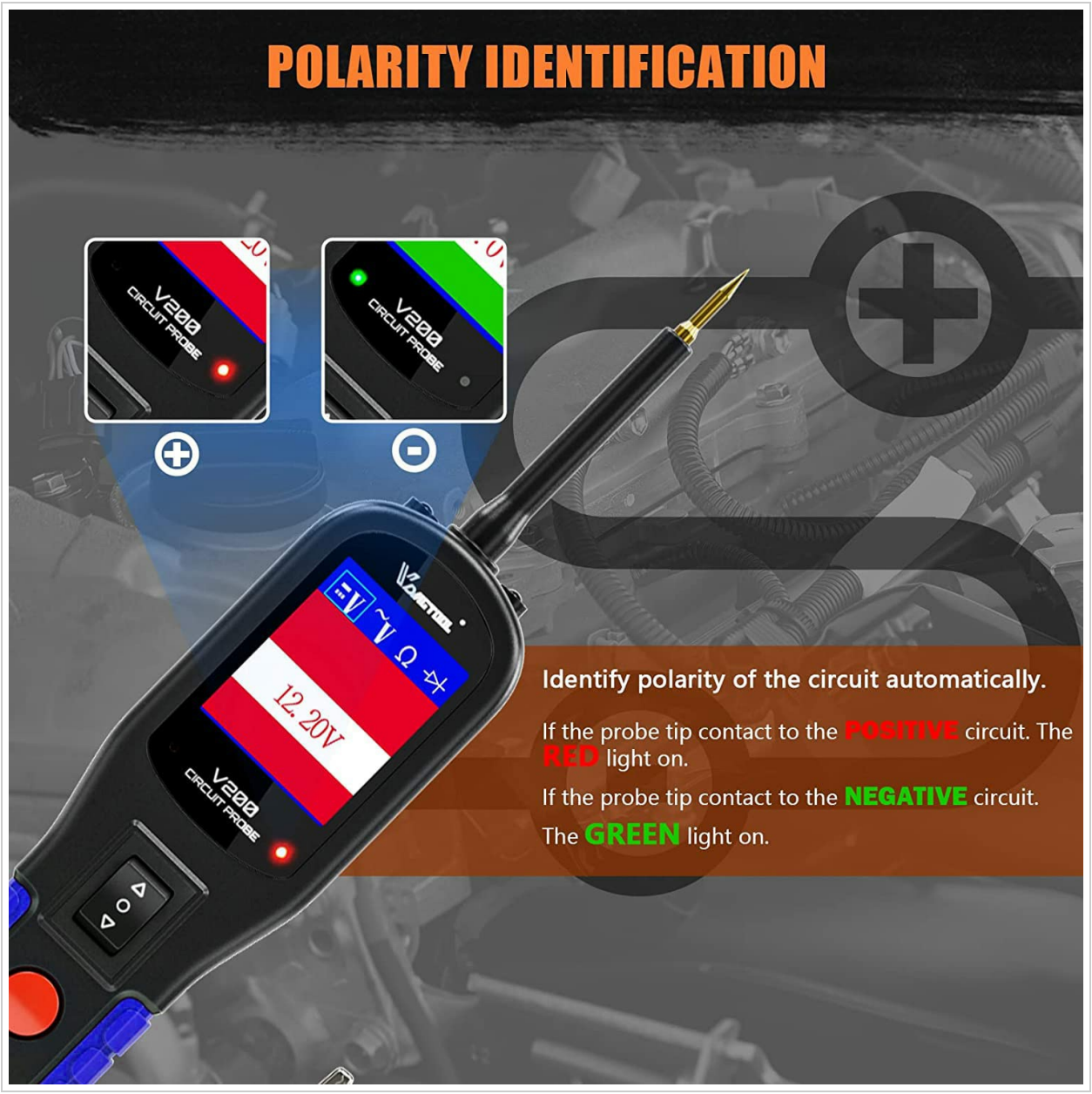


Image 5.4: The V210 in use, demonstrating its ability to locate short circuits, check open circuits quickly, and trace wires accurately in various automotive settings.

- **Locating Breaker Point:** The V210 transmitter sends a signal through the circuit. The receiver's built-in buzzer and LEDs (indicating open or short conditions) help pinpoint the exact location of a break or short.
- **Tracing Wires:** Move the receiver along the wire path. The tone change and signal strength indicator on the receiver will guide you in tracing the wire without damaging its insulation.
- **Identifying Open Connections and Current Leaks:** The V210 can detect changes in the circuit's electrical properties, allowing for the identification of open connections or points where current is leaking.



Image 5.5: A diagram illustrating how the V210 transmitter and receiver are used to check for short circuits, locate open circuits, and trace wires in an automotive electrical system, typically connected via a fuse socket or connector.



Image 5.6: Diagrams showing the V210 in action for wire tracing and locating open circuits. The transmitter is connected to a fuse socket, and the receiver is used to follow the signal along the wire or identify where the signal stops in an open circuit.

6. Maintenance

- **Cleaning:** Wipe the tools with a soft, dry cloth after each use. Do not use abrasive cleaners or solvents.
- **Storage:** Store the tools in their original case in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Battery Replacement (V210):** Replace the two 9V batteries in the V210 transmitter when the power indicator light dims or the unit fails to operate. Ensure correct polarity when installing new batteries.
- **Cable Inspection:** Regularly inspect all cables and connections for signs of wear, cuts, or damage. Replace if necessary.

7. Troubleshooting

- **V200 Not Powering On:** Ensure battery clamps are securely connected to the correct terminals (red to positive, black to negative) and the vehicle battery has sufficient charge.
- **V210 No Signal/Weak Signal:**

- Check if the 9V batteries in the transmitter are installed correctly and have sufficient charge.
- Ensure the transmitter is properly connected to the circuit under test.
- Adjust the probe position of the receiver to find a stronger signal. Signal strength can affect volume.
- Verify the receiver is turned on.

- **Inaccurate Readings:** Ensure proper connection to the circuit. Clean probe tips if necessary. Avoid testing in areas with strong electromagnetic interference.

8. Specifications

Feature	Description
Brand	VDIAGTOOL
Model Numbers	V200 (Circuit Tester), V210 (Open & Short Finder)
Power Source (V200)	Vehicle 12V-24V DC
Power Source (V210)	2 x 9V Batteries (for transmitter)
Min. Operating Voltage (V200)	0.1 Volts (DC)
Extension Cable Length (V200)	20ft + 20ft (total 40ft)
V200 Working Modes	DC Voltage, AC Voltage, Resistance, Diode
V210 Functions	Locating Short/Open Circuits, Tracing Wires
Color	Black

9. Warranty and Support

VDIAGTOOL provides the following support for this product:

- **Warranty:** 3 Years Warranty.
- **Technical Assistance:** Lifelong technical support.
- **Returns:** 60 Days No-Reason-Asked Return for refund.
- **Probe Replacement:** Free probe replacement.
- **Contact Support:** For any questions or assistance, please reach out tovdiagtool2@outlook.com.

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