



V500 PRO

AUTO INTELLIGENT CIRCUIT TESTER BREAKER FINDER TOOL

USER MANUAL

WWW.VDIAGTOOL.COM



Safety Information

To ensure your safety and prevent damage to the device or vehicle, please carefully read and follow all instructions in this manual before use.

When operating the device, always verify proper testing procedures and strictly adhere to the instructions provided. As automotive electrical systems may vary, you must assess potential risks and ensure a safe testing environment.

Always observe all safety warnings, use appropriate tools, and disconnect power sources when necessary. Improper operation may result in personal injury, equipment damage, or voided warranty.

Safety Messages

Safety messages use standardized signal words to indicate hazard levels and prevent injuries or equipment damage:

DANGER

Will result in death or serious injury if ignored

Indicates an immediately life-threatening hazard.

WARNING

Could result in death or serious injury if ignored

Indicates a potentially dangerous situation.

Safety Instructions

This manual covers known safety hazards, but cannot anticipate all possible risks. You are responsible for ensuring safe operating conditions and procedures.

DANGER

- Always ventilate the service area when engine is running or use building exhaust removal system if available
- Carbon monoxide is odorless and deadly - can cause loss of consciousness or death

WARNINGS

- Always keep a fire extinguisher suitable for gasoline, chemical, and electrical fires nearby.
- Never operate or observe the tool while driving—distraction can lead to fatal accidents.

- Keep clothing, hair, hands, tools, and test equipment away from moving or hot engine parts.
- Perform automotive testing only in a safe, controlled environment.
- Ensure proper ventilation—exhaust gases are poisonous.
- Never connect or disconnect test equipment while the ignition is ON or the engine is running.
- Place wheel chocks in front of drive wheels and never leave the vehicle unattended during testing.
- Wear ANSI-approved safety eye protection at all times.
- Exercise extreme caution around ignition coils, distributor caps, spark plugs, and wires—high voltage is present when the engine is running.
- Before testing, ensure the transmission is in P (A/T) or Neutral (M/T) and the parking brake is engaged.
- Keep the scan tool clean and dry; avoid contact with oil, water, or grease. Clean only with a mild detergent and soft cloth.
- Do not modify, disassemble, or expose the tool to extreme temperatures or moisture.
- This tool is not a substitute for professional diagnostic equipment—use with caution.
- The manufacturer is not liable for damages caused by misuse, negligence, or unauthorized modifications.

Legal Information

Trademarks

VDIAGTOOL is a registered trademark of Shenzhen VDIAGTOOL Technology Co., Ltd in the United States and other jurisdictions. All other product names mentioned herein may be trademarks of their respective owners.

Copyright Information

© 2017 Shenzhen VDIAGTOOL Technology Co., Ltd. All rights reserved.

No reproduction, distribution, or transmission of this manual is permitted without express written authorization from VDIAGTOOL. This prohibition applies to all forms of copying including electronic, mechanical, photocopying, and recording.

Disclaimer & Liability Statement

Product Documentation Notice

All illustrations, specifications, and technical data in this manual are for reference only and subject to change without notice.

For the latest documentation, visit: <https://www.vdiagtool.com/support/downloads>

Limitation of Liability

VDIAGTOOL expressly disclaims all liability for:

- Any direct, indirect, incidental, or consequential damages
- Loss of profits or business interruption
- Product modifications or unauthorized use

This manual does not:

- Modify existing purchase/lease agreements
- Create additional liabilities for VDIAGTOOL
- Constitute additional product warranties

IMPORTANT:

Always consult this manual before operation, with special attention to all safety warnings. VDIAGTOOL reserves the right to modify product specifications at any time.

Product Support & Training Resources

Technical Support

- Official Website: www.vdiagtool.com
- Support Email: support@vdiagtool.com
- US Hotline: +1-213-355-7171
- Online Form: <https://www.vdiagtool.com/support/tech-support>

Training Videos

Free product operation videos:

1. Visit Training Center: <https://www.vdiagtool.com/support/training-center>
2. Select **Circuit Testers** category, then watch model-specific tutorials

Contents

1. Product Introduction.....	1
1.1 Product Overview.....	2
1.2 Technical Specifications.....	3
1.3 Keypad Introduction.....	4
2. Product Features.....	5
2.1 Smart Test.....	5
2.1.1 Voltage Test.....	5
2.1.2 Resistance Test.....	6
2.1.3 Positive/Negative Test.....	6
2.2 Resistance.....	6
2.3 Multimeter.....	6
2.4 Oscilloscope.....	8
2.5 0-5V Power Supply.....	9
2.6 Component Test.....	9
2.7 Relay.....	11
2.8 Injector.....	12
2.9 Locating Circuit Breaker Point, Open Connections, Broken Wires, Current Leaks.....	14
3. Setting.....	14
3.1 Language.....	14
3.2 Floodlight.....	14
3.3 Voice.....	14
3.4 Self Test.....	14
3.4.1 LCD Test.....	14
3.4.2 Key Test.....	14
3.4.3 Led Test.....	15
3.5 Display Mode.....	15
3.6 Update.....	15

3.7 About.....	17
4. Test Applications.....	17
4.1 Continuity Test.....	17
4.2 Signal Circuit Test (Oscilloscope Test).....	19
4.3 Activating Components in Your Hand.....	20
4.4 Activating Components in Vehicle.....	21
4.5 Activating Components w/Ground.....	23
4.6 Checking for Bad Ground Contacts.....	24
4.7 Following & Locating Short Circuits.....	25
4.8 Trailer Lights and Connection Test.....	25
5. Short Open Circuit Finder Knowledge.....	26
6. Locating Open Circuit.....	27
6.1 How to use the Breaker Finder.....	27
6.2 Setting Sensitivity Level.....	27
6.3 Breaker Finder Operation Guide.....	27
7. Warranty.....	29
8. Contact Us.....	29

1. Product Introduction

VDIAGTOOL V500 Pro Automotive Intelligent Electrical System Circuit Tester Breaker Finder Tool is the newest generation intelligent tool with 2.36 inch large size LCD screen display. It is dedicated to test all 9V-30V vehicle electrical systems.



The screen can be folded up to 90°, which allows you to see real-time data at different screen angles during testing.

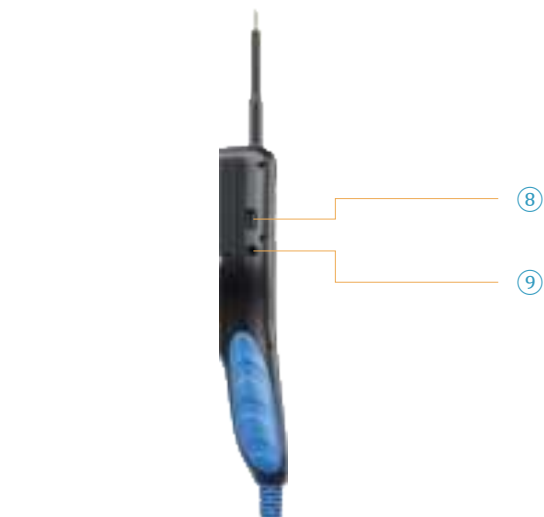
The V500 Pro is an upgraded version of V500, adding Short Open Circuit Finder.

- The Short Open Circuit Finder detects and alerts you immediately where a circuit is open.
- You can quickly and easily locate open circuits, open connections, broken wires, current leaks, and even trace wires.
- Additionally, you can find intermittent circuit problems by flexing wires or connectors and listening for a change in the receiver tone, allowing you to either perform general tracing or pinpoint the problem location.
- This professional Short Open Circuit Finder will work on all kinds of circuits with voltages between 6 and 42 volts DC, such as those found in automobiles, trucks, tractors, boats, RVs, etc, thanks to its wide working voltage range.

1.1 Product Overview



1. **Probe Tip:** Contact the circuit or component for testing
2. **Front LED Light:** Used for lighting in dark working areas
3. **LCD Screen:** Display test results and can be folded up to 90° allowing you to see real-time data at different angles
4. **Red/Green LED Indicator:** Positive and Negative indicator light
5. **Key Button Operation:** 6-Key Navigating for fast operation
6. **Red Positive Wire:** Used to deliver current
7. **Auxiliary Ground Lead:** Auxiliary clip of ground lead
8. **USB Port:** Update via USB connection to PC



9. **Relay Test Port:** Connect the relay test cable
10. **Speaker:** Buzzer for warning or remind
11. **Antenna:** Receive data
12. **Buzzer:** Sound prompt
13. **Sensitivity Controller:** Control sensitivity
14. **Test Button:** Press the test button to start testing
15. **Headphone Port:** Port for external headphone
16. **Fuse:** Protect the device from damage due to overload
17. **Tool Kit Working Mode Switch:** Switch working mode

1.2 Technical Specifications

Product Parameters:

V500 Pro Circuit Tester			
Display	LCD Display	Operating Voltage	9V - 30V DC
Voltage Measurement Range	0.1V - 100V	Resistance Measurement Range	0K Ω - 200K Ω
Operating Temperature	0°C - 50°C (-32°F - 122°F)	Storage Temperature	-20°C - 70°C (-4°F - 158°F)
Working Environment Temp	0°C - 50°C (-32°F - 122°F)	Power Source	By Connecting to Car Battery
V500 Pro Breaker Finder			
Operating Voltage	6V - 42V DC	Operating Temperature	0°C to 60°C (32°F to 140°F)
Storage Temperature	-40°C to 70°C (-40°F to 185°F)	Power Source	By a 9V Battery

Product Dimensions:

- Main line: OD 7.8mm, Length 6m
- Extension line: OD 4.5mm, Length 1m
- USB line: OD 3.5mm, Length 0.5m
- Clip line: OD 4.5mm, Length 0.4m
- Relay line: OD 4.0mm, Length 0.5m

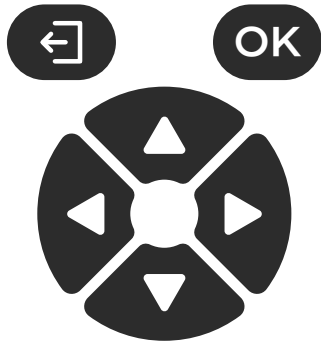
Accessories Included:

- V500 Pro Circuit Tester × 1
- V500 Pro Breaker Finder × 1
- Probe Tip × 1
- Fine Probe Tip × 1
- Relay Test Cable × 1
- Alligator Battery Clip × 1
- Probe Tip Extension Cable × 1
- Wire Piercing Probe × 2
- Banana to Banana Plug Test Lead × 2
- Fuse × 3
- Type-C Data Cable × 1
- User Manual × 1

Accessories Description:

- **Probe Tip:** Contact the circuit or component for testing
- **Fine Probe Tip:** Used to contact plugs or pins in the car's circuits
- **Probe Tip Extension Cable:** Extends the reach of the probe for testing in distant or confined spaces
- **Wire Piercing Probe:** Piercing wire insulation for electrical measurements without damaging the wire, providing a clearer understanding of the car's circuits
- **Banana to Banana Plug Test Lead:** An adapter and extension cable used to connect devices with banana plug connectors
- **Relay Test Cable:** Used to test the functionality of relays
- **Alligator Battery Clip:** Secures connections to battery terminals for testing

1.3 Keypad Introduction



ESC button: Returns to the previous screen. For other tests, press ESC button once to exit.

OK button: Confirm key

Up button: Navigation key or voltage output, numerical adjustment

Left button: Navigation key

Right button: Navigation key

Down button: Navigation key or voltage output, numerical adjustment

2. Product Features

VDIAGTOOL V500 Pro features the following functions: Smart Test, Multimeter, Oscilloscope, 0-5V Power Supply, Component Test, Relay, Injector and other additional functions.

2.1 Smart Test

This feature contains Voltage Test, Resistance Test, Positive/Negative Test. It is mainly used for quick test without switching between different test modes. It can automatically recognize the measured signal and display values of voltage or OHMs.

2.1.1 Voltage Test

When the probe clip (auxiliary ground lead) is connected to the ground wire, the probe will automatically enter into the voltage display mode when a voltage signal detected on the Probe Tip, it will display the test voltage.

As shown in the picture below, "VCC" means that the battery supply voltage is 12.14V, and "VDC" is the current test DC voltage value 12.11V.



2.1.2 Resistance Test

When the probe clip (auxiliary ground lead) is connected to an electrical circuit of resistance and the Probe Tip is connected to the other end of the resistance, the probe will automatically enter into the resistance display mode and display the resistance values.

2.1.3 Positive/Negative Test

When the probe detected voltage deviation of $\pm 0.8\text{v}$ from the power supply, the RED LED lights ON, meanwhile it displays the voltage values, and the speaker sounds regularly. When Probe detected the negative signal of the power supply, the GREEN LED lights ON, and the speaker sounds regularly.

2.2 Resistance

This feature is mainly used to measure the resistance value of electronic components. Please refer to 2.1.2 for more details.

2.3 Multimeter

It is also known as a volt-ohm-milliammeter, volt-ohmmeter or VOM.

This feature is a measuring instrument that can measure multiple electrical properties.



The bottom of the interface is the functional area, from left to right are: Voltage, Resistance, Diode, Current, Frequency and Polarity.

You can press the “Left” or “Right” button to select the test mode.

- (1) **Voltage (VDC)**: Connect the probe clip (auxiliary ground lead) to the negative pole, and connect the probe tip to the measured voltage.
- (2) **Resistance (OHM)**: Connect the probe clip (auxiliary ground lead) to one side of the Resistance being measured, and the probe tip to the other side.
- (3) **Diode (DIO)**: Connect the probe clip (auxiliary ground lead) to one side of the Diode being measured, and the probe tip to the other side. Meanwhile it will display the voltage and show Positive and Negative of Diode.
- (4) **Current (AMP)**: The probe is connected in series in the circuit under test, it will display the current value.
- (5) **Frequency (HZ)**: Display the frequency of the measured signal and duty cycle value.
- (6) **Polarity**: Display whether the current measured line is positive or negative.

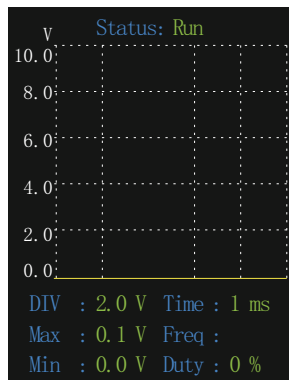
NOTE:

When testing the current, make sure the wires are in **series connection**, not in parallel connection. If they are in parallel connection, it will cause the device to trigger the overload protection and then restart. If you have any questions while using the product, feel free to contact us at support@vdiagtool.com.

2.4 Oscilloscope

This feature is an electronic test instrument that displays electrical signals graphically, usually as a Voltage (vertical or Y axis) versus Time (transverse or X axis).

This function can be displayed in vertical or transverse screen.



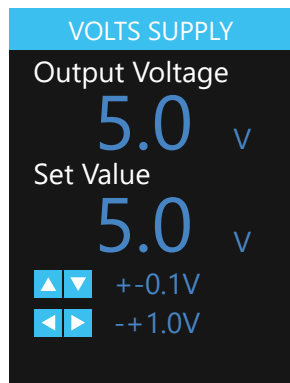
The Voltage on the Y axis shows 0.0V to 10.0V and the Time on the X axis shows 1ms to 500ms.

NOTE:

Press "OK" button to pause or run waveform refresh.

2.5 0-5V Power Supply

This feature is a type of power supply that provides a regulated and stable 0-5V DC (direct current) output voltage. This low-voltage power supply is commonly used to power electronic devices that require a 0-5V DC supply, including micro-controllers, sensors, LED lights, USB charging devices, and other low-power electronic components.



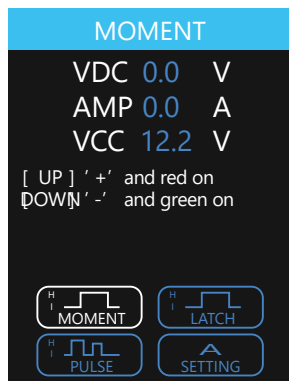
NOTE:

0-5V Power Supply is designed as an active mode, but this function is different from the Component Activation. It can adjust the voltage output under 5V and limit the current to 100mA. (This is safety to avoid burning out electric components.)

2.6 Component Test

This feature is to verify the input/output behavior of the test object. It ensures that the test object's functionality works correctly and completely as per the desired specification. This type of testing focuses on performing separate tests on each component.

While testing, it will show as below:



VDC: Detected Voltage

AMP: Detected Current

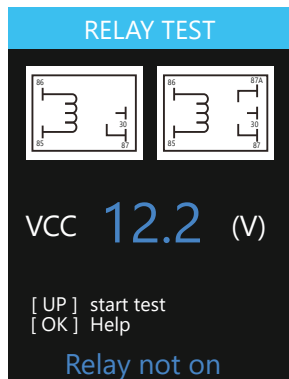
VCC: Power Supply Voltage

It has three activation mode:

- (1) **"MOMENT" Mode:** Press "Left" or "Right" button to select the activation mode. Press and hold the "UP" or "Down" button to perform the power supply, and release "UP" or "Down" button to stop.
- (2) **"LATCH" Mode:** Press the "UP" or "Down" button to perform the power supply, and press "UP" or "Down" button again to stop.
- (3) **"PULSE" Mode:** Press and hold the "UP" or "Down" button to perform the power supply, and release "UP" or "Down" button to stop.
- (4) **"SETTING" Circuit Breaker:** Press "UP" or "Down" button to adjust the overload current values from 1A - 18A.

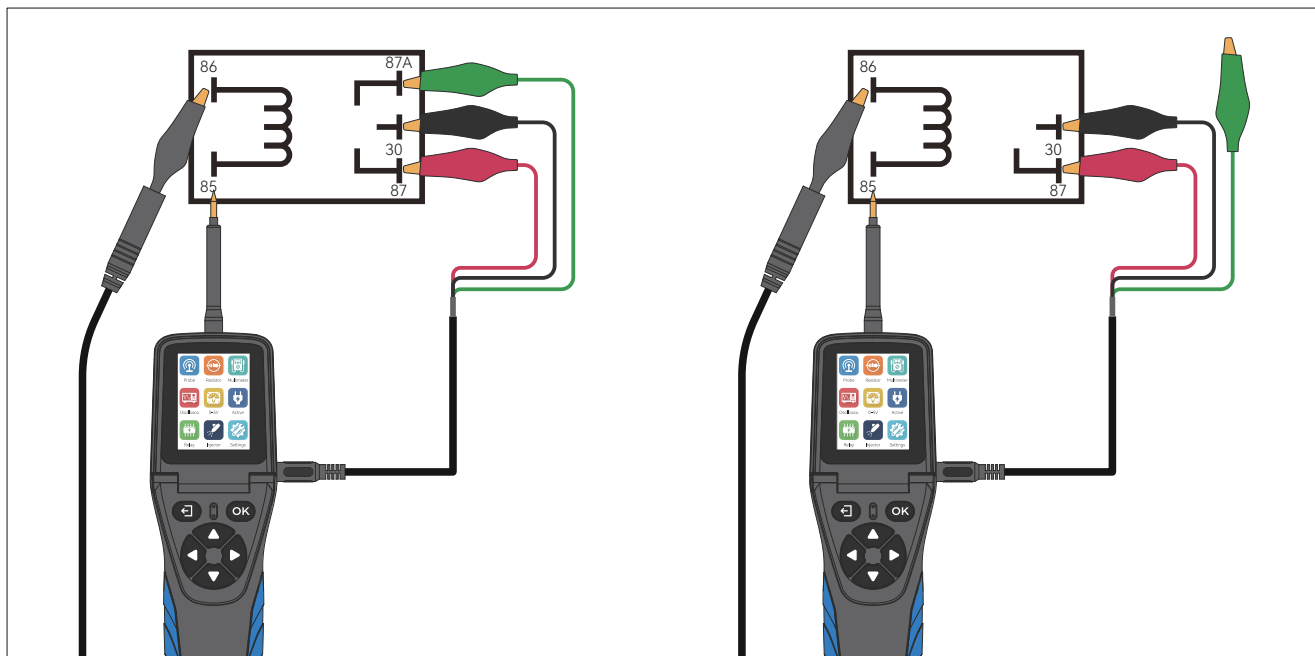
2.7 Relay

This feature includes the review of protective devices in a system. Protective devices and periodic reviews are very important above all for the safe operation of power supply networks. The protective relay test refers to the protective relay. The proper operation of a protective relay has to be monitored over its entire life or period of operation. When you select this function and the Relay is not connected, the interface will show as below:



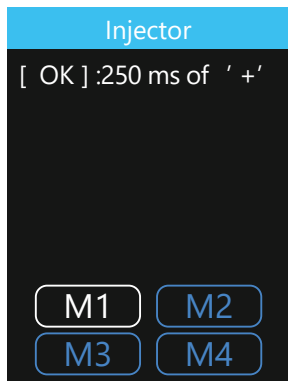
The "VCC" at the center of this interface displays the power supply voltage value . It shows 2 types of common automotive relay diagrams (4-terminal relay and 5-terminal relay). Press "UP" button to start test and press "OK" button to view the wiring connection diagram of these 2 different relays.

The below pictures are Relay wiring connection examples:



2.8 Injector

This feature uses probe tip to output different pulse signals to the injector and check the injector spraying status. This feature can help diagnose injector conditions.



There are 4 Signal Output Mode:

- (1) Select Mode 1 and press "OK" button, it will output 1 pulse with a positive pulse width of 250ms.
- (2) Select Mode 2 and press "OK" button, it will output 7ms positive, then 20ms negative, cycle 1.4s.
- (3) Select Mode 3 and press "OK" button, it will output 4ms positive, then 10ms negative, cycle 1.4s.
- (4) Select Mode 4 and press "OK" button, it will continuously output positive for 7ms, then negative for 20ms. Press "ESC" button to stop.

Here are the procedures of how to perform Injector Test:

- (1) Turn off the Vehicle's engine.
- (2) Connect the BLACK clip to the negative terminal of the battery and the RED clip to the positive terminal.
- (3) Unplug the connector from the fuel injector, connect the probe auxiliary ground lead to the negative side of the injector, and probe tip to the positive side.
- (4) After entering into the Injector Test function, select the test mode.
- (5) Press "OK" button to trigger the test.
- (6) Check the injector spraying status to diagnose the condition.

2.9 Locating Circuit Breaker Point, Open Connections, Broken Wires, Current Leaks

V500 Pro can easily locate the circuit breaker point, open connections, broken wires, current leaks with tone change, and even trace wire/cable without damaging the insulation. For more details, please refer to the content on [\(page 19\) 6. Locating Open Circuit](#).

3. Setting

3.1 Language

There are nine languages to choose from, they are English, Simplified Chinese, French, Spanish, German, Russian, Italian, Portuguese, Polish.

3.2 Floodlight

Here you can turn the headlight of your device on or off.

3.3 Voice

Here you can turn the sound of the device on or off.

3.4 Self Test

3.4.1 LCD Test

When entering this test, the screen will display different colors to check whether the screen can display normally and whether there are black spots.

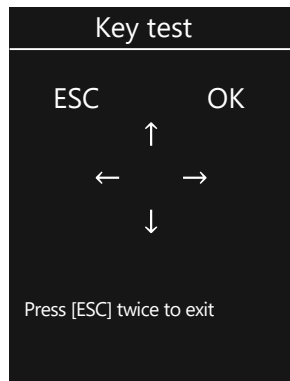
NOTE:

Pressing the ESC key will exit the test directly. It means the ESC key is working properly.

3.4.2 Key Test

When entering this test, the screen will display the buttons as shown below. Press the corresponding button and the

corresponding symbol on the screen will flash once.



3.4.3 Led Test

When entering this test, the Floodlight on the head of the device and the positive and negative LED lights at the button position will remain on, indicating that there is no problem with the device lights.

3.5 Display Mode

Here you can choose whether the device is in Light mode or Dark mode.

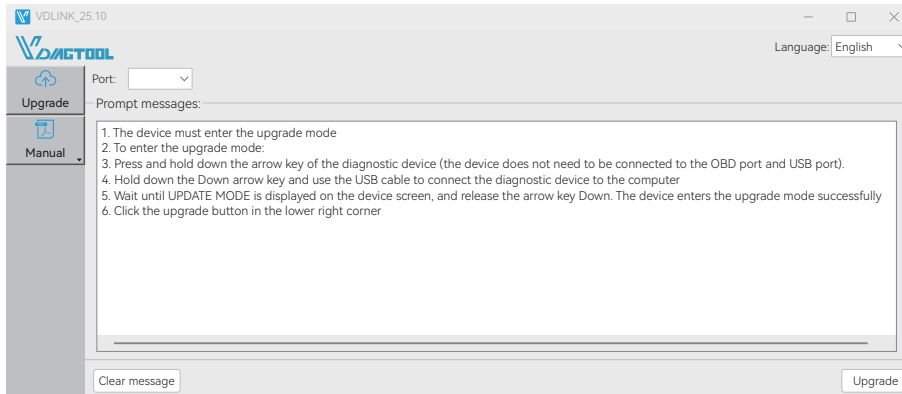
3.6 Update

When entering this menu, the screen will display as shown below.

Update

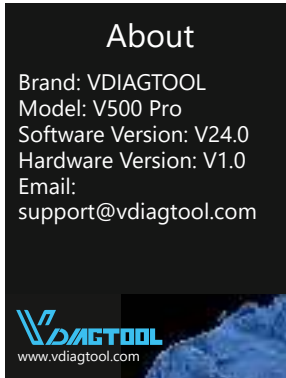
Hold down the key of [Down] and power on the device, then the device displays [usb mode], and you can use the computer software to upgrade the device

Hold down the key of Down and power on the device, then the device displays “USB mode”, and you can use the computer software to upgrade the device.



3.7 About

When entering this menu, the screen will display interface as shown below.



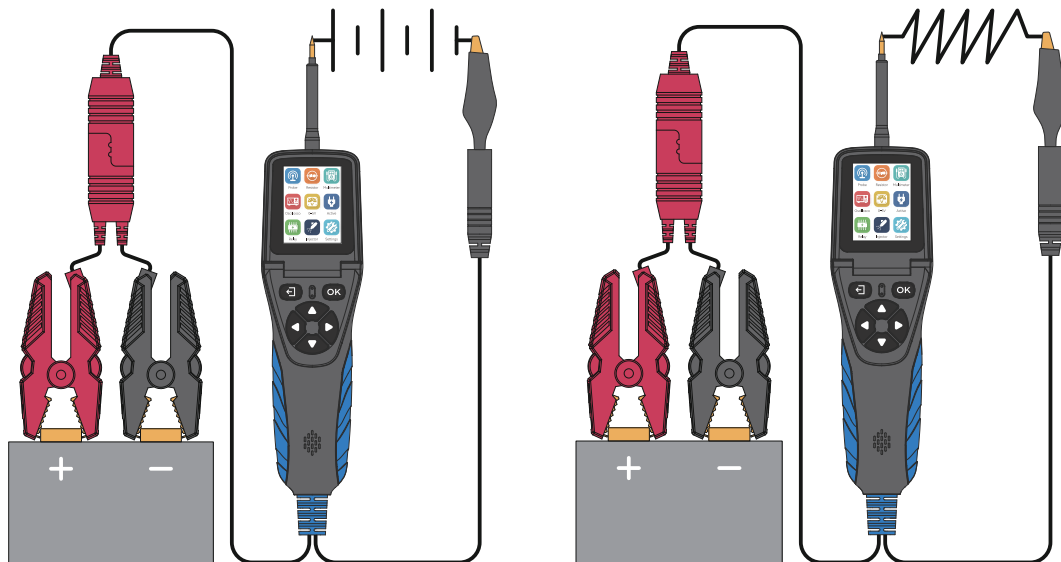
4. Test Applications

4.1 Continuity Test

A continuity test is a quick check to see if a circuit is open or closed. Only a closed, complete circuit has continuity. During a continuity test, a digital multimeter sends a small current through the circuit to measure resistance in the circuit.

When the device is in the "Multimeter", select the resistance test function, use the probe tip with chassis ground of the vehicle or auxiliary ground lead, continuity can be tested on wires and components attached or disconnected from the vehicles electrical system.

When the Probe is contacting a good ground, the LCD screen will display "0.0Ω" and the green LED indicator will also light up. If the sound enabled from setting, the buzzer will beep at the same time.



- In other cases, the LCD screen will only display the resistance value.
- If the resistance is greater than 200 K Ω , the LCD screen will display "0L". There is another way to verify the continuity of the connection to the ground or battery: while in Component Activation mode, you can supply power to the electrical system, if the circuit breaker trips, it means that this connections is a good connection with low resistance.

NOTE:

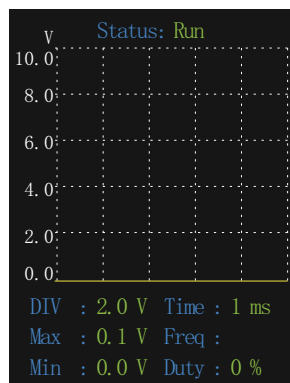
Do not perform any tests on any ECU module, SRS(airbag) system before the system is completely disabled or unplugged; You can use the probe tip to pierce the plastic insulation on a wire to run test.

4.2 Signal Circuit Test (Oscilloscope Test)

Once you extract a DTC from the vehicle and realize that troubleshooting begins with some kind of sensor circuit, there is a quick test you can perform to verify the code. Testing your sensor is easy while using this tool.

For example, you suspect there is a problem with your M.A.P. sensor circuit, then follow the procedure below to test this sensor:

- (1) Enter into Oscilloscope mode, use the probe tip with chassis ground or auxiliary ground lead.
- (2) Connect vacuum pump to M.A.P. sensor.
- (3) Touch the probe tip to the positive terminal of the M.A.P. sensor and observe the LCD screen. Generally it should be a Sine Waveform in good condition.
- (4) Apply vacuum pump. Release vacuum pump and observe the reading on the LCD screen.



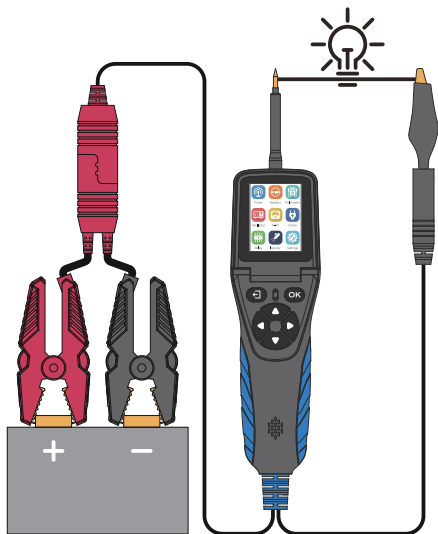
If the waveform reading is abnormal, there is a problem with this sensor.

4.3 Activating Components in Your Hand

While the circuit probe is in DC voltage mode, by using the probe tip in connection with the auxiliary ground lead, components can be activated right in your hand, thereby testing their functions.

For example: test a bulb's working condition.

- (1) Hook up the battery clip to power supply.
- (2) Enter into Active, select MOMENT mode function.
- (3) Connect the auxiliary ground lead to the negative terminal of the component being tested, connect the probe tip to the positive terminal of the component, press "up" button to trigger activation test.
- (4) The LCD screen will display the value of VDC, AMP, and VCC.



If the probe circuit breaker tripped, it means the probe is overloaded. This could happen for the following reasons:

- The contact you are probing is direct ground or negative voltage.
- The component you are testing is short-circuited.
- The component is a very high current component (i.e., starter motor).

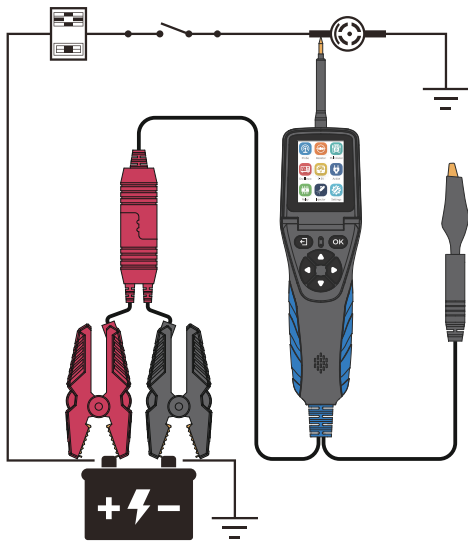
4.4 Activating Components in Vehicle

Importance:

- The activation mode is only designed for supply powers or ground, and cannot be used for any sensitive electronics equipment (such as ECU, sensor module), otherwise there is a risk of burning out components.
- Do not perform any tests on any ECU module, SRS(airbag) system before the system is completely disabled or unplugged.
- Supply power to electrical system will cause damage to the vehicle's sensitive electronic components, so we strongly recommend that you refer to the vehicle manufacturer's schematic diagram and diagnostic process.

Test Procedure:

- (1) Hook up the battery clip to power supply.
- (2) Enter into Active, select MOMENT mode function.
- (3) Connect the auxiliary ground lead to the negative terminal of the component being tested, connect the probe tip to the positive terminal of the component, press "UP" button to trigger activation test.
- (4) The LCD screen will display the value of VDC, AMP, and VCC.



If the probe restart for the circuit breaker tripped or the displayed message OVERLOADED on LCD screen, you can adjust the overload current value and repeat the above operation to further activation.

NOTE:

To avoid burning out the component, please refer to the specification and parameter of component and then set the OVERLOAD CURRENT VALUE.

If the probe circuit breaker tripped, it means the probe is overloaded. This could happen for the following reasons:

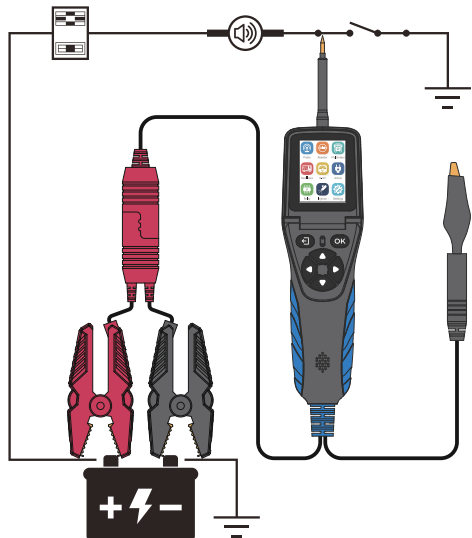
- The contact you are probing is direct ground or negative voltage.
- The component you are testing is short-circuited.

- The component is a very high current component (i.e., starter motor).

4.5 Activating Components w/Ground

Test Procedure:

- (1) Hook up the battery clip to power supply.
- (2) Enter into Active, select MOMENT mode function.
- (3) Connect the auxiliary ground lead to the negative terminal of the component being tested.
- (4) Connect the probe tip to the positive terminal of the component, press "DOWN" button to trigger activation test.
- (5) The LCD screen will display the value of VDC, AMP, and VCC.



NOTE:

To avoid burning out the component, please refer to the specification and parameter of component and then set the OVER-LOAD CURRENT VALUE.

If the probe circuit breaker tripped, it means the probe is overloaded. This could happen for the following reasons:

- The contact you are probing is direct ground or negative voltage.
- The component you are testing is short-circuited.
- The component is a very high current component (i.e., starter motor).

If you are contacting a protected circuit, the vehicle fuse can be burn-out or probe tripped if you apply ground to it.

4.6 Checking for Bad Ground Contacts

Probe the suspected ground wire or contact with the probe tip.

Test Procedure:

- (1) Enter into Active, select MOMENT mode function and set the overload current to 1A.
- (2) Connect probe tip to a suspected wire.
- (3) Press "OK" button to trigger power supply.

The RED led light will ON and LCD screen will display values of VDC, AMP and VCC, if the VDC value is almost the same as VCC and AMP value is minimum approach to 0A, it means this is not a true ground. Otherwise, if probe circuit breaker tripped or display OVERLOADED, it is more than likely a good ground.

Keep in mind that high current components, such as starter motors, will also trip the circuit breaker.

4.7 Following & Locating Short Circuits

In most cases a short circuit will appear by a fuse or a fusible link blowing or an electrical protection device tripping (i.e., a circuit breaker).

This is the best place to begin the search.

Test Procedure:

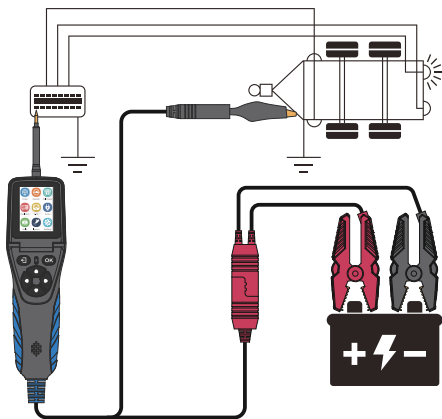
- (1) Remove the blown fuse from the fuse box.
- (2) Use the probe tip to activate and energize each of the fuse contacts.
- (3) The contact which trips the circuit breaker is the shorted circuit. Take note of this wire's identification code or color.
- (4) follow the wire as far as you can along the wiring harness.

Here is an example of this application:

- If you are following a short in the brake light circuit, you may know that the wire must pass through the wiring harness at the door sill. Locate the color-coded wire in the harness and expose it.
- While in Active interface, select MOMENT mode. Use the probe tip to contact the marked wire, press the “UP” button to trigger power supply.
- If the circuit breaker tripped, you have verified the shorted wire.
- Cut the wire and energize each end with the probe tip. The wire end which trips the circuit breaker again is the shorted circuit and it will lead you to the shorted area.
- Follow the wire in the shorted direction and repeat this process until the short is located.

4.8 Trailer Lights and Connection Test

When the probe is in the Multimeter or SMART test, connect the probe auxiliary ground lead to the trailer light, and insert the probe tip into the OBD socket to display the current voltage. With this method, you can check the function and direction of the connector and trailer lights. If you find the trailer light connection correctly, you can use the “Component Activation” function to test whether the trailer light is working or not working.



5. Short Open Circuit Finder Knowledge

Q: Is Short Open Circuit Finder computer and air bag safe?

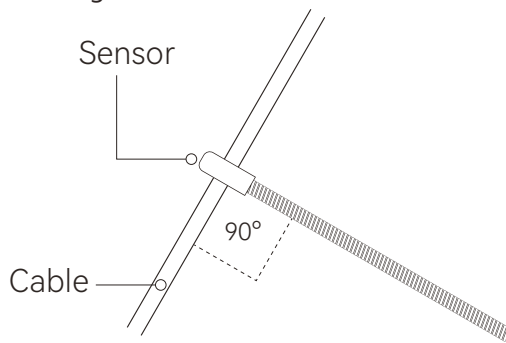
A: The Short Open Circuit Finder LED and LCD pull no more than 1 milliamp of current, therefore when using it as a test light or multimeter, it is computer and airbag safe. However, pressing the power switch is a different story. When you press the switch forward, you are conducting full battery current to the tip of the probe. There is a nice safety feature built into the tool. Simply connect the extra ground lead to the Short Open Circuit Finder and press the power switch forward until it trips the circuit breaker. This will prevent power from going to the tip but still allow you to use the tool as a multimeter. When you are away from computer components, simply press the reset button and you are ready to power up again.

6. Locating Open Circuit

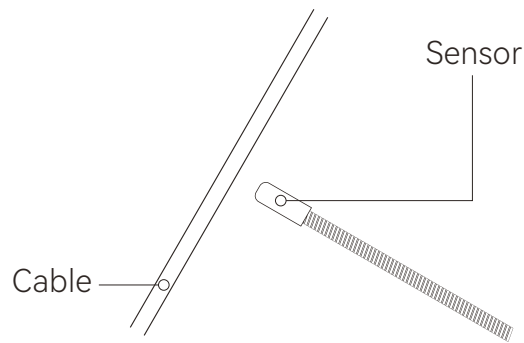
6.1 How to use the Breaker Finder

The probe of the breaker finder is built of coiled steel and may be bent as needed. In order to reach wires in congested or difficult areas. Depending on the circuit characteristic and sensitivity settings, the probe will pick up the signal from the wire in a range of positions.

However, for the best possible range, the Breaker Finder's probe tip (black cap) should be positioned perpendicular(at 90°) to the wire being traced and either above or below it.



CORRECT



INCORRECT

6.2 Setting Sensitivity Level

To increase sensitivity, turn the rotary switch of the circuit breaker finder clockwise. To decrease sensitivity, turn the rotary switch anticlockwise.

6.3 Breaker Finder Operation Guide

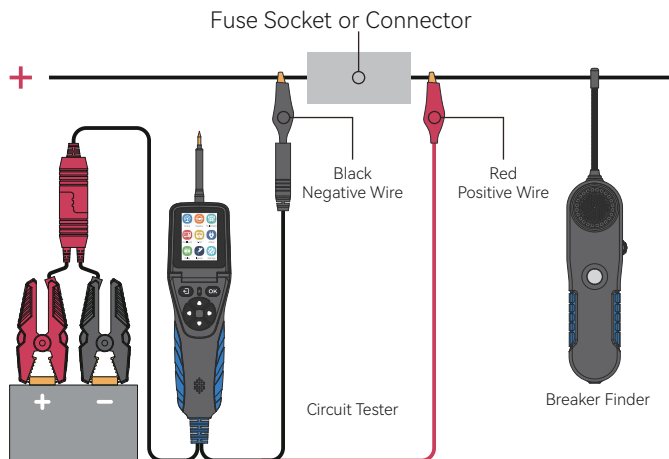
With the probe kit connected to power, select Mode II on the tool kit working mode switch button.

Switch on the Short Open Circuit Finder and set the rotary switch to the middle position. Press and hold the TEST button, and move the black probe tip along the wire you want to test. The finder detects the signal and sound the loudspeaker which means the unit is working correctly.

Connect the black test lead to the negative supply(ground) and red test lead to the positive supply(or a fuse socket, connector for more convenient connection). Switch on the finder probe and set its rotary switch to the middle position, press and hold the TEST button and slowly sweep the wire with the probe point above or below perpendicularly and as close as possible. Check at different points of the wire to narrow it down first or tracing the wire all along, moving towards the end with load.

Observe the tone signal. Where the tone signal stops, it's the location of the open, break or bad connection of the circuit. If it's difficult or impossible for the finder to pick up any tone signal, please try increase the sensitivity by turning the rotary switch of the finder clockwise and test again.

When you have finished locating open circuit, disconnect the test leads and let go of the TEST button.



Note:

When switching to Mode II and using Short open circuit finder to locate short circuits, open circuits, etc., you need to plug the banana plug of the Banana Plug to Alligator Clip into the auxiliary ground lead, and then clip the other end to the circuit to be tested.

Additionally, If the fuse on the Auxiliary ground lead is broken, the entire line will be damaged, so use with caution.

7. Warranty

Limited Three Years Warranty

VDIAGTOOL warrants the V500 Pro product against defects in materials and workmanship for thirty-six (36) months from the date of delivery to the original purchaser for commercial or business use. This warranty does not cover damage resulting from misuse, unauthorized modification, improper maintenance, or operation outside specified conditions. VDIAGTOOL's sole liability shall be limited to repair or replacement of defective components at its discretion. Consequential, incidental, or other damages are expressly excluded. Some jurisdictions may not permit certain limitations of liability.

8. Contact Us

Warranty & Support

Email: support@vdiagtool.com

Website: www.vdiagtool.com

For wholesale business or become our distributors:

Email: sales@vdiagtool.com

Invent with us, test products before they hit market, help us make better products for everyone:

Email: inventers@vdiagtool.com

Create social media content, post online and help our community:

Email: marketing@vdiagtool.com

Follow Us on Social Media



Facebook Page: Search for "vdiagtool"

Facebook User Group: Search for "VDIAGTOOL OFFICIAL User Group"

Instagram: Search for "vdiagtool_official"

TikTok: Search for "vdiagtool_us"

YouTube: Search for "Vdiagtool Official"