

6-24 Volt Automotive Multi Tester Probe



Information

- For 6-24 Volt systems to test continuity, polarity of voltage, short circuits, electric motor, and more.
- Up and down indicated buttons allow for adjustable negative and positive current.
- Red and green lights indicate positive and negative currents.
- Short circuit protected as it automatically disconnects if the current exceeds 8A.
- 5m long cable makes for easy use and access.

Precautions

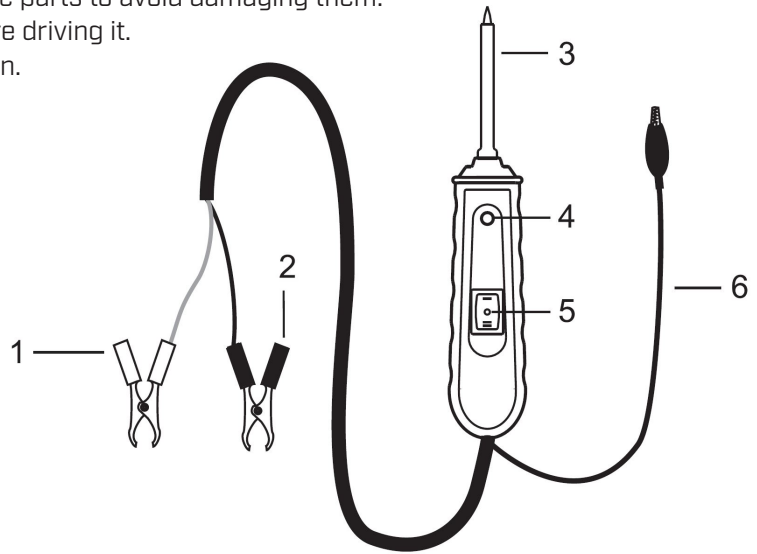
Always wear safety gear.
Working in a clean and safe environment.
This task should be carried out by trained personnel.
Make sure to consult manufacturers manual.
Do NOT use with air tools.

Information

WARNING:

- Do NOT use around explosive gas, vapor, or dust.
- When the power switch is in use the battery current goes to the tip which may result in sparks when in contact with ground or certain circuits.
- The tester is designed for 6-24V systems, do NOT use with 110V or 220V systems. Do NOT use on AC voltage.
- After checking the vehicle, ensure that you correctly restore all connections you have disconnected.
- Follow the procedures and instructions indicated in the vehicle's manual prior to disconnecting any parts or sub-system of the electrical circuit.
- Do NOT touch parts of the vehicle while the tester is in operation for safety. Do NOT touch any live conductors with hand or skin. Always use caution when using the unit.
- Keep in mind some parts of the vehicle only work with lower voltage and cannot withstand the voltage applied by the unit. Do NOT apply voltage to these parts to avoid damaging them.
- Make sure the vehicle is safe and reliable before driving it.
- Do NOT use the unit if the vehicle is being driven.
- Do NOT use if damaged.

	Description
1	Red Clip
2	Black Clip
3	Probe
4	LED Indicator
5	Power Switch [-] for Red Clip [=] for Black Clip
6	Auxiliary Ground Lead [connected to black clip]



Instructions

Self Test

Step 1

Connect the red clip to the positive terminal, and the black clip to the negative terminal of the battery.

Step 2

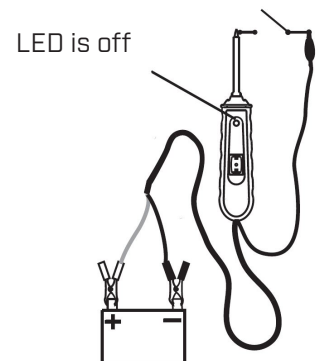
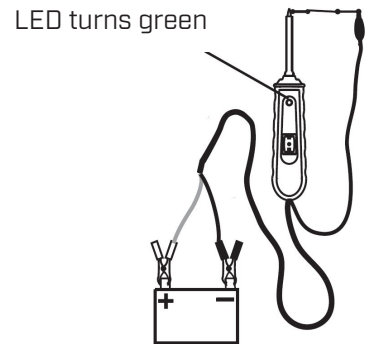
Press the upward button [-] of the switch. The light indicator should be red. Press the downward button [=] of the switch. The light indicator should be green.

Polarity Test

- A positive circuit will change the LED indicator to red when the probe is in contact.
- A negative circuit will change the LED indicator to green when the probe is in contact.
- An open circuit will result in the LED indicator turning off when the probe is in contact.

Continuity Test

- The probe tip [3] and auxiliary ground lead [6] can be used together to test continuity. The LED indicator will change to green when continuity is present. Do NOT press the power switch. Refer to the below illustration.



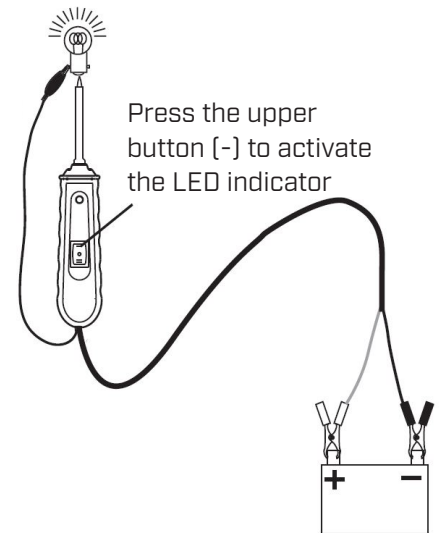
**Activating Components Out of the Vehicle's Electrical System
[Fuel pumps, starter solenoids, magnetic clutches, blower motors,
cooling fans, lights, etc.]**

Step 1

- Use the probe tip [3] with the auxiliary ground lead's clip [6].
- Connect the auxiliary ground lead's clip [6] to the negative terminal. The LED indicator should change to green to indicate continuity.

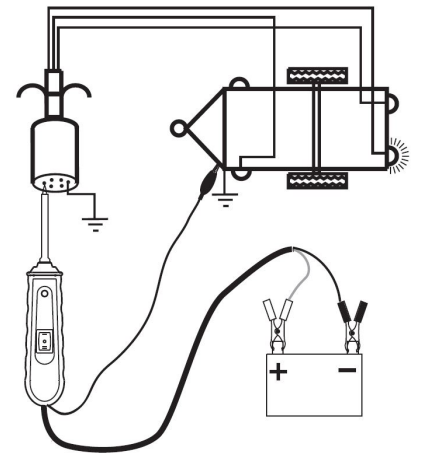
Step 2

- Keep an eye on the green LED indicator. Press and release the upward button [-] quickly. If the LED indicator quickly changes from green to red, proceed with further activation. If it does not, or if the unit sounds, it means the unit has been overloaded. This could be because:
 - The point of contact of the tip is a direct ground or negative voltage.
 - The component is short circuited.
 - The component is a high amperage component.



Testing Trailer Lamps and Connections

- Connect the unit to a good battery and clip the auxiliary ground lead [6] to the trailer ground.
- Probe the contacts at the jack while pressing the upward button [-] to check the function and orientation of trailer lamps.



Activating Electrical Components

Components with positive voltage

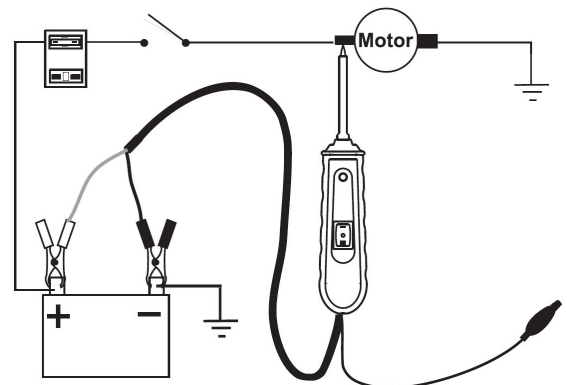
Warning: Haphazardly applying voltage to certain circuits may cause damage to the vehicle's electronic components. Use the correct schematic and diagnosing procedure while performing the test.

Step 1

- Contact the probe tip [3] to the positive terminal of the component. The LED indicator should change to green.

Step 2

- Keep an eye on the green LED indicator. Press and release the upward button [-] quickly. If the LED indicator quickly changes from green to red, proceed with further activation. If it does not, or if the unit sounds, it means the unit has been overloaded. This could be because:
 - The tip is in contact with direct ground.
 - The component is short circuited.
 - The component is a high current component.



Activating electrical components with negative voltage

Warning: This function can cause the vehicle's fuse to be blown or tripped if grounding the contact in series with it.

Step 1

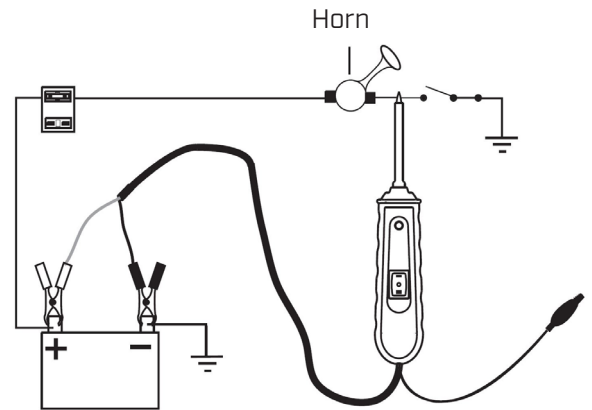
- Contact the probe tip (3) to the negative terminal of the component.
The LED indicator should change to red.

Step 2

- Keep an eye on the red LED indicator. Press and release the downward button [=] quickly. If the LED indicator quickly changes from red to green, proceed with further activation. If it does not, or if the unit sounds, it means the unit has been overloaded.

This could be because:

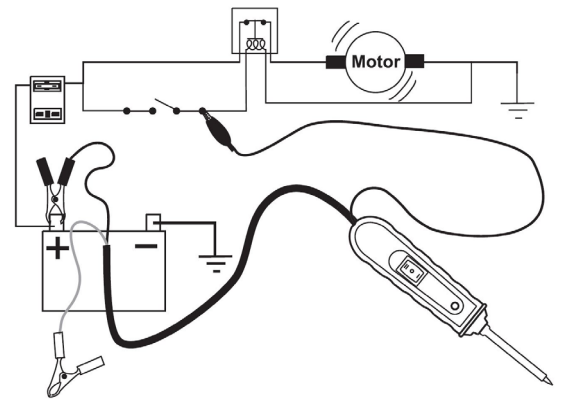
- The tip is in contact with direct positive voltage.
- The component is short circuited.
- The component is a high amperage component.



Jumper Lead Feature

- The black clip and the auxiliary ground lead are connected directly through the unit. Disconnect the red clip from the vehicle's battery. The unit can be used as a long jumper lead. Refer to illustration.

- Avoid short circuits and overloading when using this feature as the leads are not protected by the unit's circuit breaker during this operation.



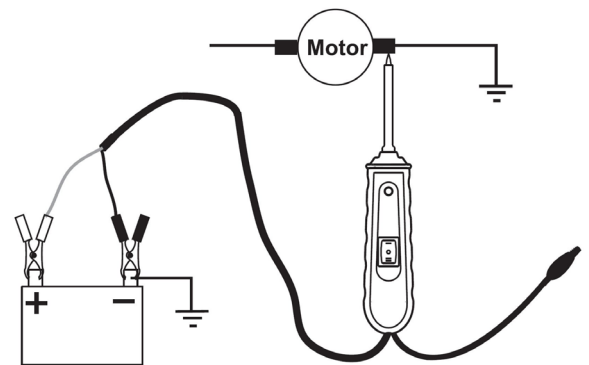
Checking for Bad Ground Contacts

Step 1

- Probe the ground wire or contact using the probe tip.
Keep an eye on the LED indicator.

Step 2

- Press the upwards button [-] and release. If the LED indicator changes from green to red, it means this is not a true ground. If the unit sounds, the circuit is more than likely a direct ground. Keep in mind high current components such as starter motors will cause the unit to sound.



Instructions

Following and Locating Short Circuits

Most of the time a short circuit causes a fuse to blow or a circuit breaker tripping.

Step 1

- Remove the blown fuse from the fuse box and connect the probe tip to each of both contacts in the fuse box. Press the upwards button [-]. The side that causes the LED indicator to switch off or causes the unit to sound is the one with a short circuit.

Step 2

- Make a note of this wire's code or colour. Follow the wire as far as you can along the wiring harness. Locate the colour coded wire in the harness and expose it.

Step 3

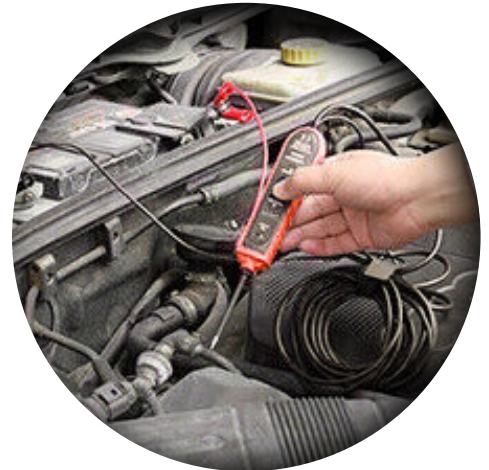
- Probe through the insulation of the wire using the probe tip.
- Press the upwards button [-] for the wire to energize.
- If the LED indicator switches off or the unit sounds, it means it has verified a shorted wire.

Step 4

- Cut the wire and energize each end using the probe tip.
- The wire that results in the LED indicator to switch off or the unit sounding will lead to the shorted area.
- Follow the wire in the shorted direction. Repeat the procedure until you find the position of the short.

NOTE:

- The circuit breaker of the unit trips when the unit sounds.
- When the circuit breaker trips it will automatically 3 to 5 seconds after.
- When the unit sounds, the circuit breaker trips. Whilst the unit remains in connection with the circuit under test, keep holding down the same part of the power switch. The circuit breaker will repeat the process of tripping and resetting automatically.



Warranty

If you are unsure on how to use the item please contact us. If it were to fail due to a manufacturing fault or poor workmanship we will repair or replace it. Please contact your local dealer in the event you need to send the item back. You can also make a repair/replacement request on our website and download & complete the form online. Normal wear and tear along with misuse will void any warranty. Consumables are not covered under warranty.

www.welzh.com

Limited **12 month** warranty



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