6-24V AUTO PROBE PLUS

MODEL NO: **PPX.V4**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.

Refer to instructions

Wear eye protection

1. SAFETY

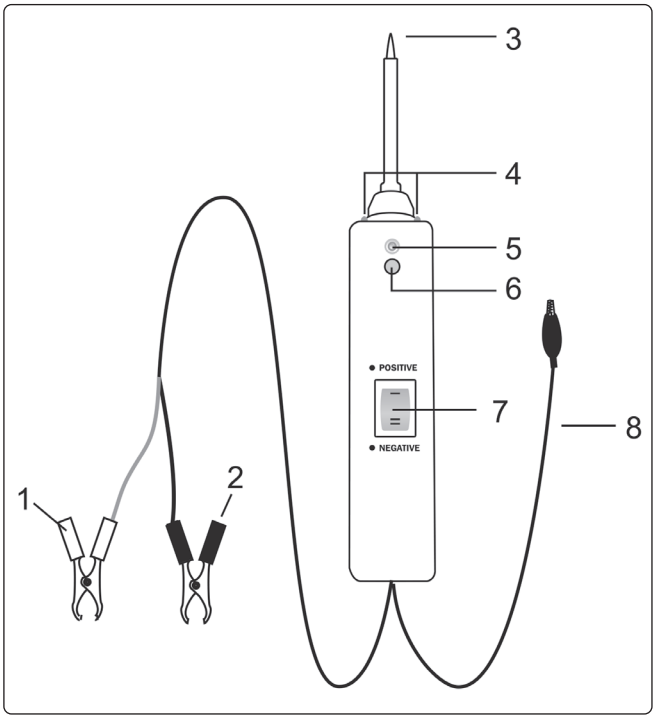
- × **DO NOT** use the unit around explosive gas, vapor, or dust.
- × When the rock switch is pressed (or rocked), battery current is conducted directly to the tip which may cause sparks when contacting ground or certain circuits.
- × The unit is not to be used with 110/220-volt domestic mains supply, it is only for use with DC 6 - 24V systems.
- × **DO NOT** use on AC voltage.
- ✓ After working on a vehicle, correctly restore all the connections which were disconnected.
- ✓ Always follow the instructions and procedures indicated in the manufacturer's service manual before attempting to disconnect any part or subsystem of the electrical circuit.
- ✓ Use caution when using the unit to perform measurement. Never touch any dangerous part of the vehicle, for safety.
- × **DO NOT** touch any live conductor with hand or skin.
- × **DO NOT** use probe if it is damaged.
- ✓ Some components of vehicle work on lower voltage, they can not withstand the voltage applied by the unit. To avoid damage to these components, don't use the unit to apply voltage to them directly or indirectly.
- ✓ Before driving vehicle, always make sure that the vehicle is safe and reliable.
- × **DO NOT** use the unit if the vehicle is being driven.

2. INTRODUCTION

6-24V Auto Probe with an integral work light to aid use in dark engine bays plus an audible circuit tester for when the LED on the probe cannot be seen.

3. FEATURES

1 Red battery clip
2 Black battery clip
3 Probe
4 Work lights
5 'Touch contact' to turn on the lights
6 Test indicator
7 Rock switch
It includes a front part " - ", and a rear part "= ".
When pressed the front part" - ", the probe is connected to the red battery clip directly.
When you press the rear part"=", the probe is connected to the black battery clip directly.
8 Auxiliary ground lead



4. OPERATION

4.1. **CONNECTION**
4.1.1. Unroll the unit's cable. Clamp the red battery clip to the positive terminal of the vehicle's battery.
4.1.2. Clamp the black battery clip to the negative terminal of the vehicle's battery.
4.1.3. The unit starts self-test, the built-in buzzer sounds, the test indicator's green light, red light and the work lights light in turn.
4.1.4. Several seconds later, the self-test finishes.
Note: The buzzer sounds continuously and then sounds intermittently.

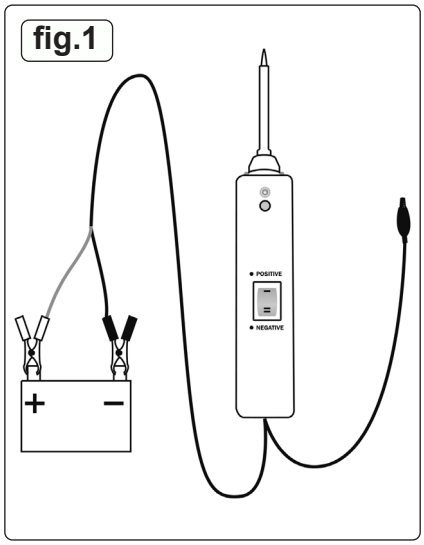
4.2. **TESTING THE UNIT AND THE CONNECTIONS FIG.1**

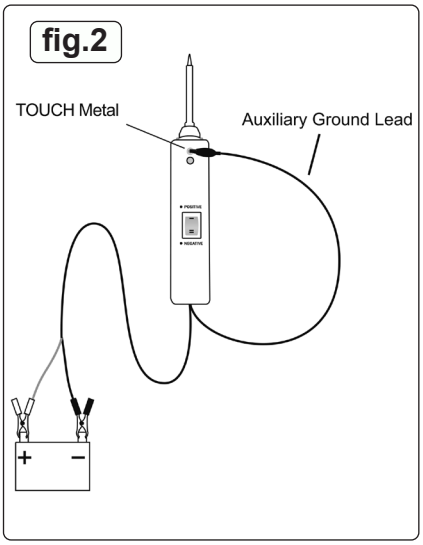
4.2.1. Press the front part (" - ") of the rock switch, the test indicator should light RED.

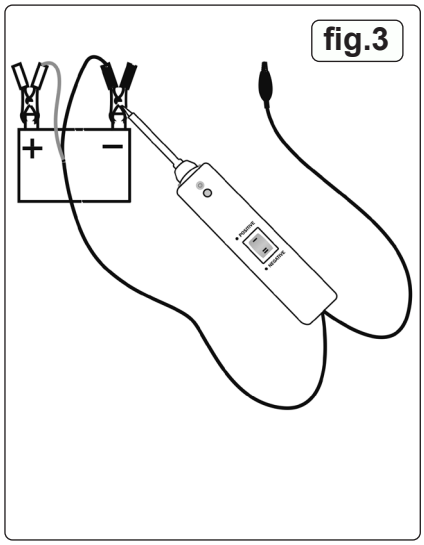
4.2.2. Press the rear part ("= "), the test indicator should light GREEN.

4.2.3. The unit is now ready for use.

4.2.4. If the test indicator did not light, the cause may be that the battery clip connections are not good or the unit is damaged.





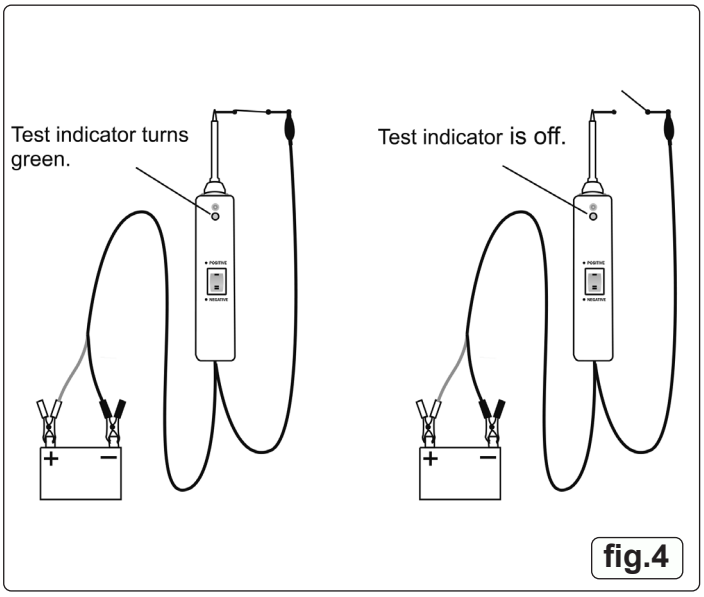


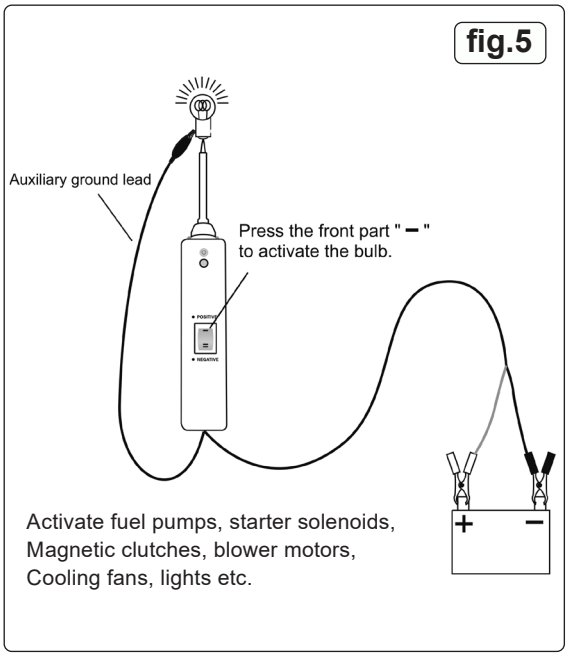
4.3. **WORKLIGHTS FIG.2**

4.3.1. To turn on/ off worklights, connect the clip of the auxiliary ground lead to the TOUCH contact and keep them in contact with each other for about 0.5 second and then remove the clip from the TOUCH contact.

4.4. **POLARITY TEST FIG.3**

Contacting the probe's tip to a positive (+) circuit will light the test indicator RED. Contacting the probe's tip to a negative(-) circuit will light the test indicator GREEN. Contacting the probe's tip to an open circuit does not turn on the test indicator.





4.5. **CONTINUITY TEST FIG.4**

Note: **DO NOT** press the rock switch.

4.5.1. By using the probe tip together with the auxiliary ground lead, continuity can be tested on wires and components which are disconnected from the vehicle's electrical system.

4.5.2. When continuity is present, the test indicator will light GREEN.

4.6. **ACTIVATING COMPONENTS OUT OF THE VEHICLE'S ELECTRICAL SYSTEM FIG.5**

4.6.1. By using the probe tip together with the auxiliary ground lead, components can be activated, thereby testing their function.

4.6.2. Connect the auxiliary ground lead's clip to the negative terminal of the component to be tested. Contact the probe to the positive terminal of the component, the test indicator should light GREEN indicating continuity through the component.

4.6.3. Whilst watching the green test indicator, quickly press and release the rock switch's front part (" - "). If the green test indicator changed instantly from GREEN to RED, you may proceed with further activation. If the green test indicator went off at that instant, the unit has been overloaded. This could happen for the following reasons:

a. The contact of the tip is a direct ground or negative voltage.

b. The component is short-circuited.

c. The component is a high amperage component (i.e. starter motor).

4.7. **TESTING TRAILER LAMPS AND CONNECTIONS FIG.6**

4.7.1. Connect the unit to a good battery.

4.7.2. Clip the clip of the auxiliary ground lead to the trailer ground.

4.7.3. Probe the contacts at the jack while pressing the rock switch's front part (" - ").

4.7.4. This lets you check the operation and orientation of the trailer lamps.

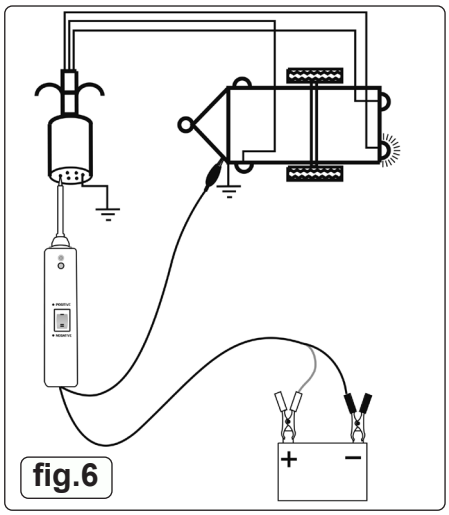
4.8. **ACTIVATING ELECTRICAL COMPONENTS**

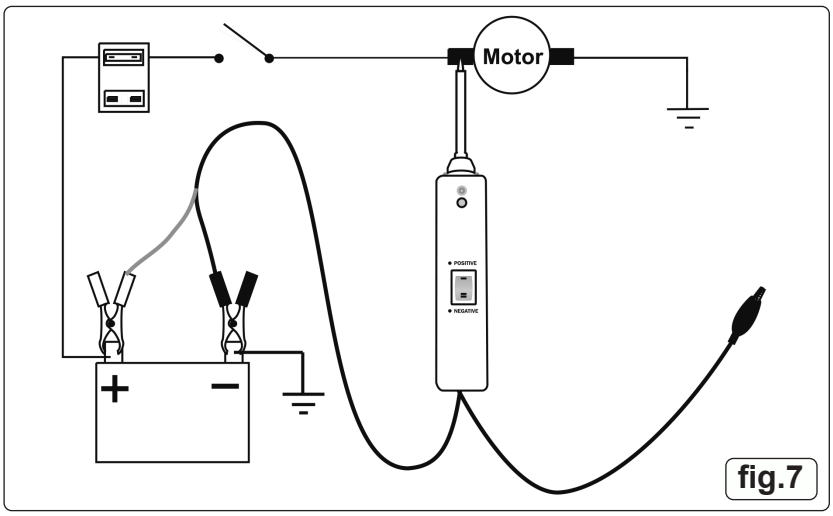
4.8.1. **Activating components with positive(+) voltage fig.7**

Contact the probe tip to the positive terminal of the component, the test indicator should light GREEN.
Whilst monitoring the green indicator, quickly press and release the rock switch's front part (" - "). If the green indicator changed instantly from GREEN to RED, proceed with further activation. If the green indicator went off at that instant, the unit has been overloaded. This could happen for the following reasons:

1. The tip's contact is a direct ground.
2. The component is short-circuited.
3. The component is a high current component (i.e. starter motor).

❑ **WARNING:** Haphazardly applying voltage to certain circuits can cause damage to a vehicle's electronic components. Therefore, it is strongly advised to use the correct schematic and diagnosing procedure while performing test.



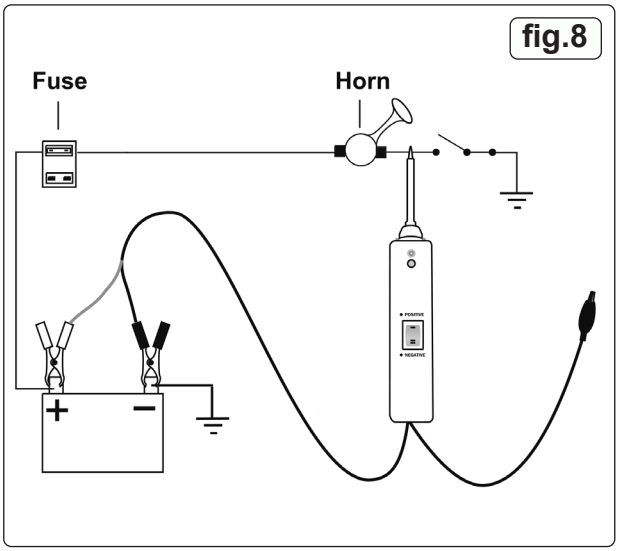


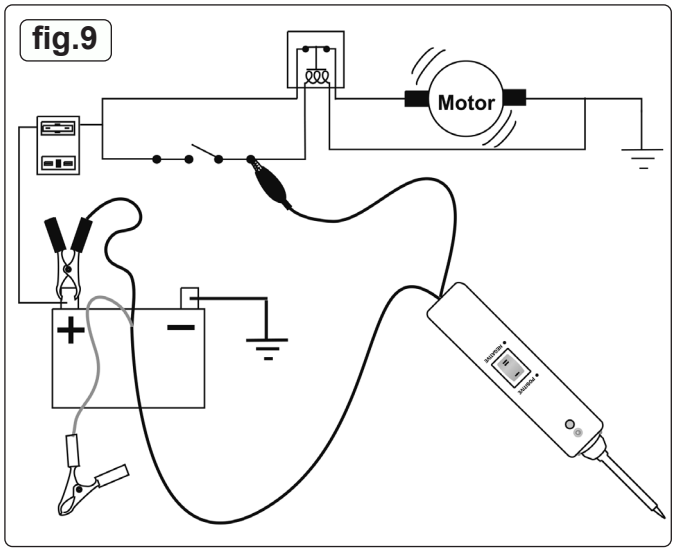
4.8.2. **Activating electrical components with negative (-) voltage fig.8**

Contact the probe tip to the negative terminal of the component, the test indicator should light RED.
Whilst monitoring the red test indicator, quickly press and release the rock switch's rear part ("= "). If the red test indicator changed instantly from RED to GREEN, proceed with further activation. If the test indicator went off at that instant, the unit has been overloaded. This could have happened for the following reasons:

1. The tip's contact is a direct positive voltage.
2. The component is short-circuited.
3. The component is a high amperage component (i.e. starter motor).

❑ **WARNING:** With this function a vehicle's fuse can be blown or tripped if grounding the contact in series with it.





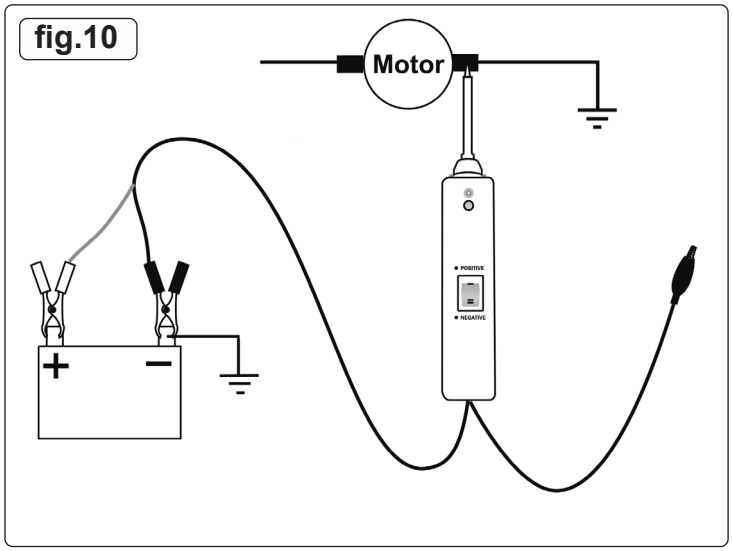
4.9. **JUMPER LEAD FEATURE FIG.9**

4.9.1. The black battery clip and the auxiliary ground lead are connected directly through the unit. By leaving the red battery clip disconnected from the vehicle's battery, the unit can be used as a long jumper lead.

4.9.2. Be careful to avoid short circuit and overloading when using this jumper function. In this configuration, the leads are not protected by the unit's built-in circuit breaker.

4.10. CHECKING FOR BAD GROUND CONTACTS FIG.10

4.10.1. Probe the suspected ground wire or contact with the probe tip.
4.10.2. Observe the green test indicator. Press the rock switch's front part (" - ") then release.
4.10.3. If the test indicator changed from GREEN to RED, this is not a true ground.
4.10.4. If the test indicator turned off when you pressed the rock switch's front part (" - ") , this circuit is likely a direct ground.
4.10.5. Keep in mind that high current components such as starter motors will also cause the test indicator to turn off in this check.



4.11. FOLLOWING AND LOCATING SHORT CIRCUITS

4.11.1. In most cases a short circuit causes a fuse blowing or a circuit breaker tripping. Here is the best place to begin the search.
4.11.2. Remove the blown fuse from the fuse box. Connect the probe tip to each of both contacts in the fuse box and press the rock switch's front part (" - ").
4.11.3. The side which causes the test indicator to turn off when you press the rock switch's front part (" - ") is the shorted circuit.
4.11.4. Note this wire's identification code or color. Follow the wire as far as you can along the wiring harness, for instance if you are following a short in the brake light circuit you may know that the wire must pass though the wiring harness at the door sill.
4.11.5. Locate the color-coded wire in the harness and expose it. Probe through the insulation of the wire with the probe tip and press the rock switch's front part (" - ") to energize the wire.
4.11.6. If the test indicator turns off, this wire is verifed to be the shorted wire. Cut the wire and energize each end with the probe tip. The wire which causes the test indictor to turn off will lead you to the shorted area.
4.11.7. Follow the wire in the shorted direction and repeat this procedure until you find the exact position of the short.
4.12. The unit is equipped with a built-in circuit breaker for overload protection. After the circuit breaker trips, it will be reset automatically.

ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice. Please note that other versions of this product are available. If you require documentation for alternative versions, please email or call our technical team on technical@sealey.co.uk or 01284 757505.
Important: No Liability is accepted for incorrect use of this product.
Warranty: Guarantee is 12 months from purchase date, proof of which is required for any claim.

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Sealey Group, Kempson Way, Suffolk Business Park, Bury St Edmunds, Suffolk. IP32 7AR
01284 757500 01284 703534 sales@sealey.co.uk www.sealey.co.uk