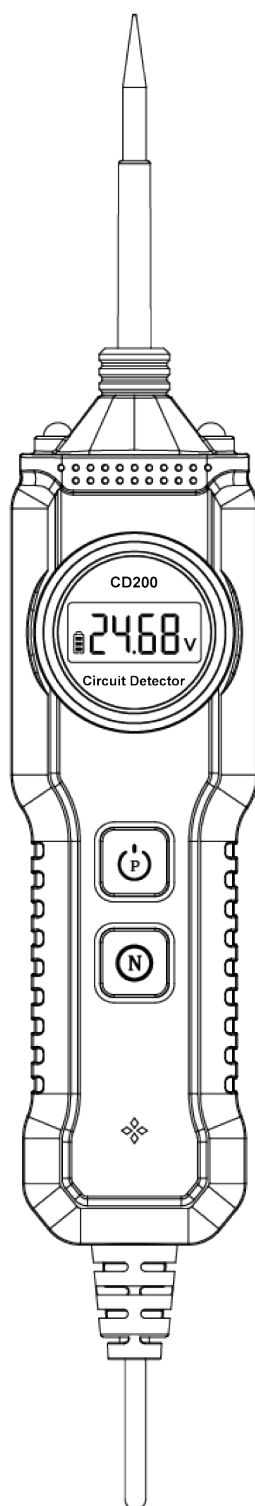


CD200

USER'S MANUAL



Vehicle circuit detector

Powerful function

- | | |
|---|--|
| 01 Voltage detection | 05 Component activation |
| 02 Resistance detection | 06 Continuity test |
| 03 Diode detection | 07 Grounding test |
| 04 Positive and negative pole detection | 08 Tracing and locating short circuits |

Tool Description

CD200 automotive electrical system activator for 5-40V automotive power circuit diagnosis, compact design, powerful, with reverse connection and overload protection, the tool probe can be used to test the conductivity and detection of circuit voltage, positive and negative detection, activation components and other functions, can quickly detect short circuits, broken wires or poor contact in the vehicle's electrical system components, which helps users to more quickly and accurately understand the vehicle.

Product specification parameter

- ◆ Supply voltage DC: 5-40V
- ◆ Operating current: 40mA
- ◆ Activation current: 0-8A
- ◆ Measuring voltage range: 0.1V-100V
- ◆ Measuring resistor range: 1Ω-220kΩ
- ◆ Operating temperature: 0-60°C (32°F~140°F)
- ◆ Storage temperature: -20°C-70°C (-4°F~158°F)
- ◆ Power Source 1: 12V or 24V powered by vehicle battery
- ◆ Power Source 2: 2 AAA batteries

CIRCUIT DETECTION

Test preparation

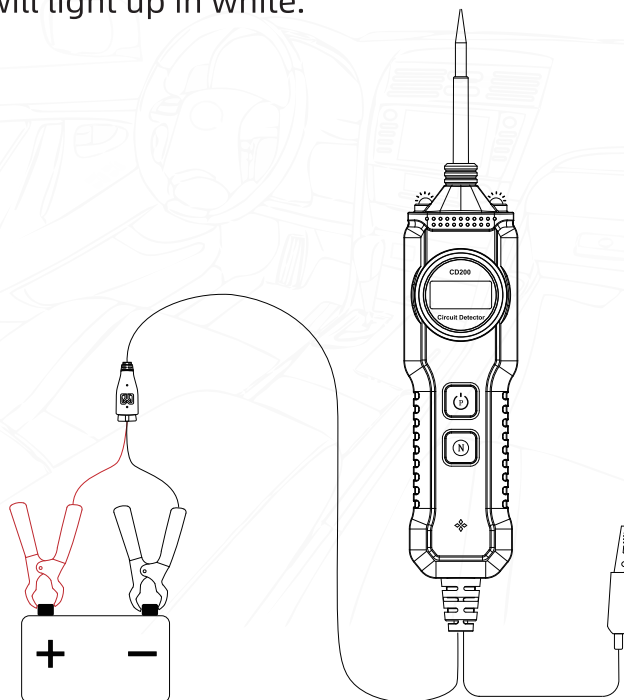
1. Before testing circuits or components:

- 1.1 Please confirm whether your equipment is in good condition by self-test.
- 1.2 Two power supply modes. Power source 1: 12V or 24V, powered by the vehicle battery;
Power source 2: 2 AAA batteries.
- 1.3 The red battery clamp to the positive terminal of the car battery, the black battery clamp to the negative terminal of the car battery.

The tool is above the button two measurements have positive and negative markings.

2. Start testing:

- 2.1 Press the (P) button will activate the probe with positive voltage, then the display will light up in red, followed by the LCD screen will show the battery voltage, release the button and the display will light up in white.



- 2.2 Then press the (N) button to activate the probe with negative voltage, the display lights up green and shows 0V on the LCD, while the buzzer will sound, release the button, the display lights up white and the sound stops.

- 2.3 If it passes the above tests, it means that the device is working properly and ready for use.

Potente

- | | |
|--|--|
| 01 Detección de tensión | 05 Activación de componentes |
| 02 Detección de Resistencia | 06 Prueba de continuidad |
| 03 Detección de diodos | 07 Prueba de puesta a tierra |
| 04 Detección de polos positivos y negativos | 08 Rastreo y localización de cortocircuitos |

Descripción de la herramienta

El activador del sistema eléctrico automotriz CD200 es adecuado para el diagnóstico de circuitos de alimentación automotriz de 5 - 40v, tiene un diseño compacto y una gran función, tiene funciones de conexión inversa y protección contra sobrecarga, y la sonda de herramienta se puede utilizar para probar la conductividad eléctrica y la detección del voltaje del circuito, la detección positiva y negativa, la Activación de componentes y otras funciones, puede detectar rápidamente cortocircuitos, desconexiones o contactos deficientes en los componentes del sistema eléctrico del vehículo, ayudando a los usuarios a comprender el vehículo de manera más rápida y precisa.

Especificaciones y parámetros del producto

- ◆ Tensión de alimentación de corriente continua: 5 - 40v
- ◆ Corriente de trabajo: 40ma
- ◆ Corriente activa: 0 - 8a
- ◆ Rango de tensión de medición: 0,1v - 100v
- ◆ Rango de resistencia de medición: 1 Omega - 220k Omega
- ◆ Temperatura de trabajo: 0 - 60 °C (32 ° F a 140 ° f)
- ◆ Temperatura de almacenamiento: - 20 °C - 70 °C (- 4 ° F a 158 ° f)
- ◆ Fuente de alimentación 1: 12v o 24v, alimentada por la batería del vehículo
- ◆ Fuente de alimentación 2: 2 baterías AAA

DETECCIÓN DE CIRCUITOS

Preparación del ensayo

1. antes de probar un circuito o componente:

1.1 Por favor, confirme si su equipo está en buenas condiciones a través de la autoinspección.

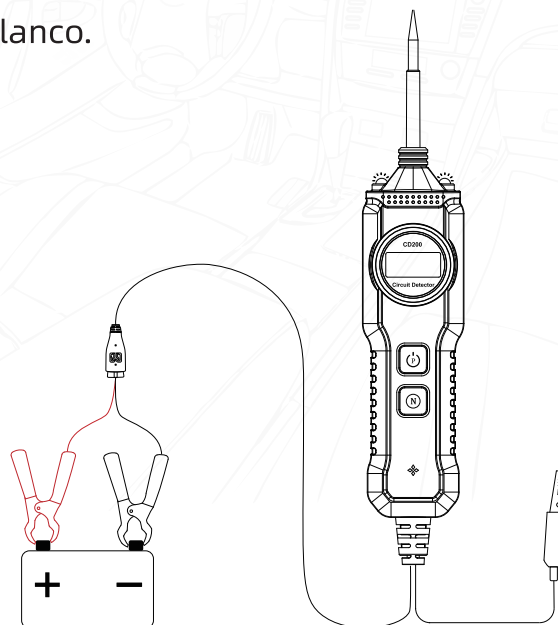
1.2 dos modos de suministro de energía. Fuente de alimentación 1: 12v o 24v, alimentada por la batería del vehículo; Fuente de alimentación 2: 2 baterías aaa.

1.3 El Clip de batería rojo está conectado al Polo positivo de la batería del automóvil, y el clip de batería negro está conectado al polo negativo de la batería del automóvil.

La herramienta se encuentra por encima del botón y las dos mediciones están marcadas positivamente y negativamente.

2. Comienza la prueba:

2.1 presionar el botón (p) activará la sonda con voltaje positivo, luego la pantalla se iluminará en rojo, luego la pantalla LCD mostrará el voltaje de la batería, soltará el botón y la pantalla se iluminará en blanco.



2.2 luego presione el botón (n), active la sonda con un voltaje negativo, el monitor se enciende en verde, el LCD muestra 0v, el zumbador sonará, suelte el botón, el monitor se ilumina en blanco y el sonido se detiene.

2.3 si se aprueba la prueba anterior, significa que el equipo funciona correctamente y está disponible.

Мощная функция.

- | | | | |
|----|---|----|--|
| 01 | Контроль напряжения | 05 | Активация компонентов |
| 02 | Обнаружение сопротивления | 06 | Тест на непрерывность |
| 03 | Обнаружение диодов | 07 | испытание на заземление |
| 04 | Обнаружение положительных и отрицательных полюсов | 08 | Короткое замыкание слежения и определения местоположения |

Инструменты

Активатор автомобильной электрической системы CD200 подходит для диагностики цепей электропитания 5 - 40В, компактная конструкция, мощная, с функциями обратного соединения и защиты от перегрузки, инструментальный зонд может использоваться для проверки электропроводности и обнаружения напряжения цепи, положительного и отрицательного обнаружения, активации компонентов и других функций, может быстро обнаруживать короткое замыкание, обрыв или плохой контакт в компонентах электрической системы транспортного средства, чтобы помочь пользователям быстрее и точнее понять транспортное средство.

Параметры спецификации продукции

- ◆ Напряжение источника постоянного тока: 5 - 40В
- ◆ Рабочий ток: 40 мА
- ◆ Активированный ток: 0 - 8А
- ◆ Диапазон измеренного напряжения: 0.1В - 100В
- ◆ Диапазон измеренного сопротивления: 1 Омега - 220кОм
- ◆ Рабочая температура: 0 - 60°C (32°F ~ 140°F)
- ◆ Температура хранения: 20°C - 70°C (- 4°F ~ 158°F)
- ◆ Источник питания 1: 12V или 24V, питается от батареи автомобиля
- ◆ Электричество 2: 2 батарейки AAA

ОБНАРУЖЕНИЕ СХЕМЫ

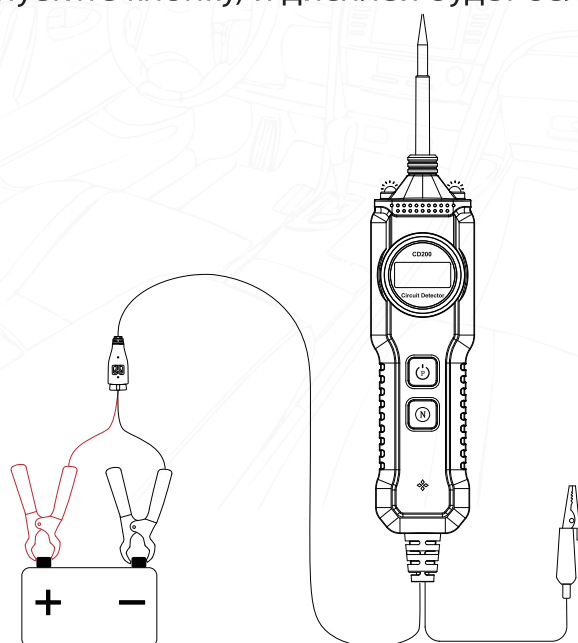
Подготовка к испытаниям

1. Перед тестированием схемы или компонента:

- 1.1 Проверьте себя, чтобы убедиться, что ваше устройство в хорошем состоянии.
 - 1.2 Два способа подачи электроэнергии. Источник питания 1: 12V или 24V, питается от батареи транспортного средства; Электричество 2: 2 узла батареи AAA.
 - 1.3 Красный зажим подключается к положительному полюсу автомобильной батареи, а черный - к отрицательному полюсу автомобильной батареи.
- Инструмент расположен над кнопкой, и два измерения имеют положительную и отрицательную метку.

2. Начать тестирование:

- 2.1 Нажмите кнопку (P), чтобы активировать зонд с положительным напряжением, а затем дисплей загорится красным, после чего жидкокристаллический экран покажет напряжение батареи, отпустите кнопку, и дисплей будет белым.



- 2.2 Затем нажмите кнопку (N) и активируйте зонд отрицательным напряжением, дисплей горит зеленым, на ЖК отображается 0V, будет звучать зуммер, отпустите кнопку, дисплей ярко - белый, звук останавливается.
- 2.3 Если вышеуказанные испытания прошли, это означает, что устройство работает нормально и может быть использовано.

Leistungsstarke Funktion

- | | |
|--|---|
| 01 Spannungserkennung | 05 Komponentenaktivierung |
| 02 Widerstandserkennung | 06 Kontinuitätsprüfung |
| 03 Diodenerkennung | 07 Erdungsprüfung |
| 04 Positive und negative Polerkennung | 08 Kurzschlüsse aufspüren und lokalisieren |

Werkzeugbeschreibung

CD200 Kfz-Elektrosystemaktivator für 5-40V Kfz-Stromkreisdiagnose, kompaktes Design, leistungstark, mit Rückverbindung und Überlastschutz, kann die Werkzeugsonde verwendet werden, um die Leitfähigkeit und Erkennung von Schaltungsspannung, positiver und negativer Erkennung, Aktivierungskomponenten und anderen Funktionen zu testen, kann Kurzschlüsse, gebrochene Drähte oder schlechten Kontakt in den elektrischen Systemkomponenten des Fahrzeugs schnell erkennen, was Benutzern hilft, das Fahrzeug schneller und genauer zu verstehen.

Spezifikationsparameter

- ◆ Versorgungsspannung DC: 5-40V
- ◆ Betriebsstrom: 40mA
- ◆ Aktivierungsstrom: 0-8A
- ◆ Messspannungsbereich: 0,1V-100V
- ◆ Messwiderstandsbereich: 1Ω-220kΩ
- ◆ Betriebstemperatur: 0-60°C (32°F~140°F)
- ◆ Lagertemperatur: -20°C-70°C(-4°F~158°F)
- ◆ Stromquelle 1: 12V oder 24V angetrieben durch Fahrzeugbatterie
- ◆ Stromversorgung 2: 2 AAA Batterien

SCHALTUNG- SERKENNUNG

Prüfvorbereitung

1. Bevor Schaltkreise oder Bauteile geprüft werden:

1.1 Bitte bestätigen Sie, ob Ihre Ausrüstung in gutem Zustand ist durch Selbsttest.

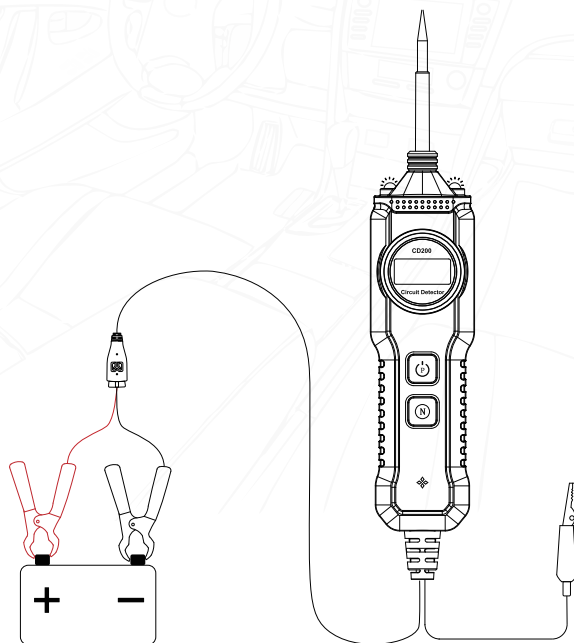
1.2 Zwei Stromversorgungsmodi. Stromquelle 1: 12V oder 24V, angetrieben durch die Fahrzeugbatterie; Energiequelle 2: 2 AAA Batterien.

1.3 Die rote Batterieklemme zum positiven Anschluss der Autobatterie, die schwarze Batterieklemme zum negativen Anschluss der Autobatterie.

Das Werkzeug befindet sich oberhalb der Schaltfläche zwei Messungen mit positiven und negativen Markierungen.

2. Testen starten:

2.1 Drücken Sie die Taste (P), um die Sonde mit positiver Spannung zu aktivieren, dann leuchtet das Display rot auf, gefolgt von dem LCD-Bildschirm zeigt die Batteriespannung an, lässt die Taste los und das Display leuchtet in Weiß auf.



2.2 Drücken Sie dann die Taste (N), um die Sonde mit negativer Spannung zu aktivieren, das Display leuchtet grün und zeigt 0V auf dem LCD an, während der Summer ertönt, die Taste loslässt, das Display leuchtet weiß auf und der Ton stoppt.

2.3 Wenn es die oben genannten Tests bestanden hat, bedeutet dies, dass das Gerät ordnungsgemäß funktioniert und einsatzbereit ist.

強力な機能

- | | |
|------------|--------------------|
| 01 電圧検出 | 05 コンポーネントのアクティブ化 |
| 02 抵抗検出 | 06 連続性テスト |
| 03 ダイオード検出 | 07 セッチしけん |
| 04 正負極検出 | 08 トラッキングと位置決めショート |

ツールの説明

CD200 自動車電気システムアクチュエータは5-40 V自動車電源回路の診断に適しており、設計がコンパクトで、機能が強く、逆接続と過負荷保護機能を有しており、ツールプローブは回路電圧の導電性と検出、正負検出、アクティベーションモジュールなどの機能をテストするために使用でき、車両電気システムモジュール中の短絡、断線または接触不良を迅速に検出でき、ユーザーが車両をより速く、より正確に理解するのを助ける。

製品仕様パラメータ

- ◆ 直流電源電圧: 5-40 V
- ◆ 動作電流: 40 mA
- ◆ 活性化電流: 0-8 A
- ◆ 測定電圧範囲: 0.1 V-100 V
- ◆ 測定抵抗範囲: 1Ω-220 kΩ
- ◆ 動作温度: 0-60°C (32°F ~ 140°F)
- ◆ 保管温度: -20°C-70°C (-4°F ~ 158°F)
- ◆ 電源1: 12 Vまたは24 V、車両のバッテリーから電力供給
- ◆ 電源2: AAAバッテリー2本

かいろけんしゅつ

試験準備

1.回路またはコンポーネントをテストする前に：

1.1 デバイスが正常な状態にあるかどうかをセルフテストで確認してください。

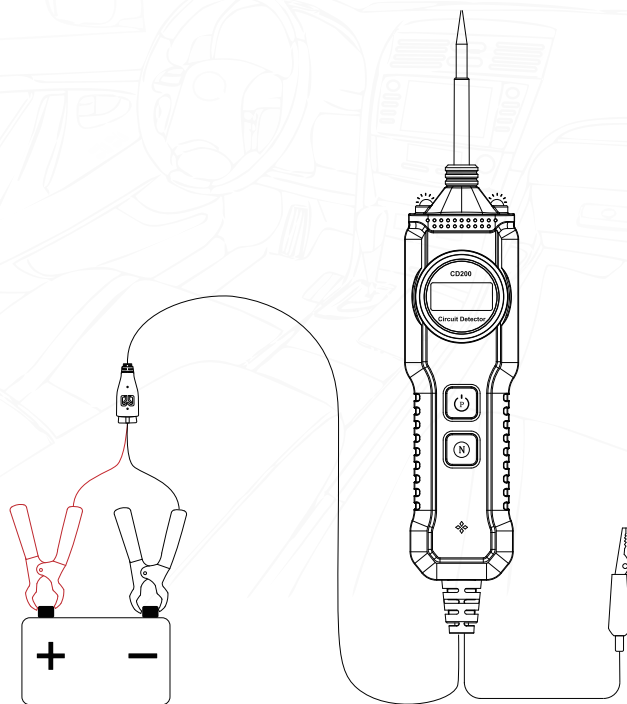
1.2 2種類の電力供給方式。電源は1：12 Vまたは24 Vで、車両の電池から電力を供給する。電源2：AAAバッテリー2本。

1.3 赤色電池クリップは自動車電池の正極に接続され、黑色電池クリップは自動車電池の負極に接続される。

ツールはボタンの上にあり、2つの測定値に正負のマークが付いています。

2.テストを開始：

2.1 (P) ボタンを押すと正電圧のプロブが活性化され、ディスプレイは赤色に点灯し、次に液晶ディスプレイは電池電圧を表示し、ボタンを離すと、ディスプレイは白色に点灯する。



2.2 それから (N) ボタンを押して、負電圧でプロブを活性化して、ディスプレイは緑色を点灯して、LCD上に0 Vを表示して、ブザーが鳴り、ボタンを放して、ディスプレイは白色を点灯して、音は停止する。

2.3 上記のテストに合格した場合、デバイスは正常に動作し、使用できることを意味する。

Funzione potente

- | | | | |
|----|---|----|---|
| 01 | Rilevamento della tensione | 05 | Attivazione dei componenti |
| 02 | Rilevamento della resistenza | 06 | Prova di continuità |
| 03 | Rilevamento diodi | 07 | Prova di messa a terra |
| 04 | Rilevazione di poli positivi e negativi | 08 | Tracciamento e localizzazione dei cortocircuiti |

Descrizione dello strumento

Attivatore del sistema elettrico automobilistico CD200 per la diagnosi del circuito di alimentazione automobilistico 5-40V, design compatto, potente, con connessione inversa e protezione da sovraccarico, la sonda utensile può essere utilizzata per testare la conducibilità e il rilevamento della tensione di circuito, rilevamento positivo e negativo, componenti di attivazione e altre funzioni, può rilevare rapidamente cortocircuiti, cavi rotti o contatto povero nei componenti del sistema elettrico del veicolo, che aiuta gli utenti a comprendere più rapidamente e accuratamente il veicolo.

Parametro delle specifiche del prodotto

- ◆ Tensione di alimentazione DC: 5-40V
- ◆ Corrente di funzionamento: 40mA
- ◆ Corrente di attivazione: 0-8A
- ◆ Campo di tensione di misura: 0.1V-100V
- ◆ Campo di misura della resistenza: 1Ω-220kΩ
- ◆ Temperatura di funzionamento: 0-60°C (32°F~140°F)
- ◆ Temperatura di stoccaggio: -20°C-70°C(-4°F~158°F)
- ◆ Fonte di alimentazione 1: 12V o 24V alimentato dalla batteria del veicolo
- ◆ Fonte di alimentazione 2: 2 batterie AAA

RILEVAMENTO DEL CIRCUITO

Preparazione della prova

1. Before testing circuits or components:

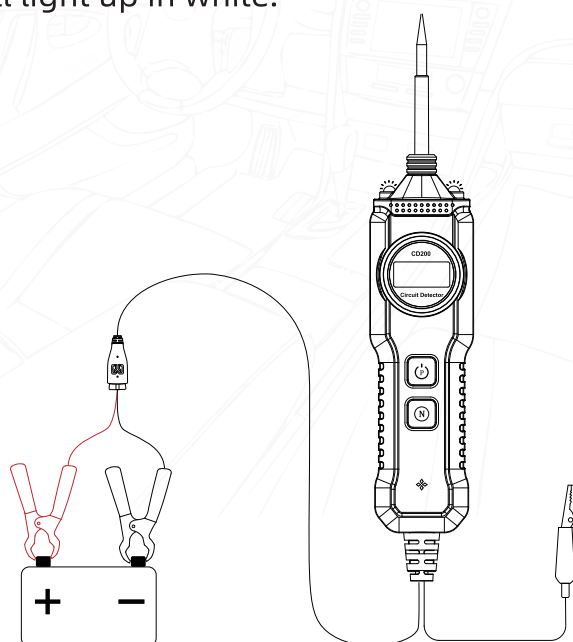
1.1 Si prega di confermare se la vostra attrezzatura è in buone condizioni tramite auto-test.

1.2 Due modalità di alimentazione. Fonte di alimentazione 1: 12V o 24V, alimentato dalla batteria del veicolo; Fonte di alimentazione 2: 2 batterie AAA.

1.3 Il morsetto rosso della batteria al terminale positivo della batteria dell'automobile, il morsetto nero della batteria al terminale negativo della batteria dell'automobile. Lo strumento è sopra il pulsante due misurazioni hanno segni positivi e negativi.

2. Inizia il test:

2.1 Press the (P) button will activate the probe with positive voltage, then the display will light up in red, followed by the LCD screen will show the battery voltage, release the button and the display will light up in white.



2.2 Then press the (N) button to activate the probe with negative voltage, the display lights up green and shows 0V on the LCD, while the buzzer will sound, release the button, the display lights up white and the sound stops.

2.3 If it passes the above tests, it means that the device is working properly and ready for use.

Puissant en fonction

- | | | | |
|----|--------------------------------|----|---|
| 01 | Détection de tension | 05 | Activation des composants |
| 02 | Détection de résistance | 06 | Test de continuité |
| 03 | Détection de diodes | 07 | Test de mise à la terre |
| 04 | Détection positive et négative | 08 | Suivi et localisation des courts - circuits |

Description des outils

L'activateur de système électrique de voiture de CD200 est approprié pour le diagnostic de circuit d'alimentation de voiture de 5 - 40v, la conception compacte, la fonction puissante, avec la connexion inverse et la fonction de protection de surcharge, la sonde d'outil peut être employée pour vérifier la conductivité et la détection de la tension de circuit électrique, la détection positive et négative, les composants d'activation et d'autres fonctions, peuvent rapidement détecter le court - circuit, la rupture de ligne ou le mauvais contact dans les composants de système électrique de véhicule, aident l'utilisateur à comprendre le véhicule plus rapidement et plus précisément.

Spécifications du produit paramètres

- ◆ Tension d'alimentation DC: 5 - 40v
- ◆ Courant de fonctionnement: 40Ma
- ◆ Courant d'activation: 0 - 8a
- ◆ Plage de tension de mesure: 0.1v-100v
- ◆ Plage de résistance de mesure: 1Ω - 220kΩ
- ◆ Température de fonctionnement: 0 - 60 °C (32 ° f ~ 140 ° f)
- ◆ Température de stockage: - 20 °C - 70 °C (- 4 ° f ~ 158 ° f)
- ◆ Alimentation 1: 12V ou 24V, alimenté par la batterie du véhicule
- ◆ Alimentation 2: 2 piles AAA

DÉTECTION DE CIRCUITS

Préparation des essais

1. Avant de tester un circuit ou un composant:

1.1 Veuillez confirmer que votre appareil est en bon état par auto - test.

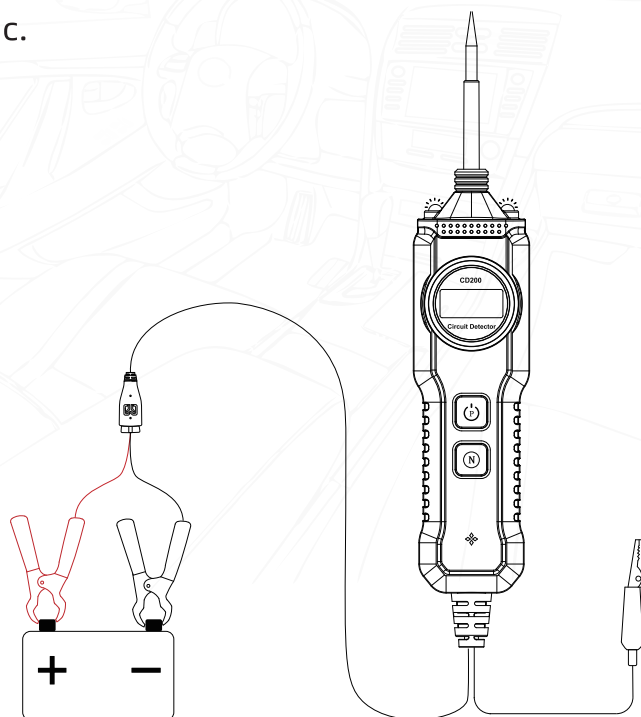
1.2 deux modes d'alimentation. Alimentation 1: 12V ou 24V, alimenté par la batterie du véhicule; Alimentation 2: 2 piles AAA.

1.3 Le clip de batterie rouge se connecte au pôle positif de la batterie de voiture et le clip de batterie noir se connecte au pôle négatif de la batterie de voiture.

L'outil est situé au - dessus du bouton et les deux mesures sont marquées plus ou moins.

2. Commencer le test:

2.1 appuyez sur le bouton (p) activera la sonde avec une tension positive, puis l'écran s'allume en rouge, puis l'écran LCD affiche la tension de la batterie, relâchez le bouton et l'écran s'allume en blanc.



2.2 appuyez ensuite sur le bouton (n), activez la sonde avec une tension négative, l'écran s'allume en vert, 0v sur l'écran LCD, le Buzzer sonnera, relâchez le bouton, l'écran s'allume en blanc, le son s'arrête.

2.3 Si vous passez le test ci - dessus, cela signifie que l'appareil fonctionne correctement et peut être utilisé.

강력한 성능

- | | |
|------------|------------------|
| 01 전압검사 | 05 어셈블리 활성화 |
| 02 저항 검사 | 06 연속성 테스트 |
| 03 다이오드 검사 | 07 접지 시험 |
| 04 양음극 체크 | 08 단락 추적 및 위치 지정 |

도구 설명

CD200 자동차 전기 시스템 활성화기는 5-40V 자동차 전원 회로 진단에 적용되며, 컴팩트하고 강력하며 역방향 연결 및 과부하 보호 기능을 갖추고 있으며, 공구 프로브는 회로 전압의 전도성 및 검측, 양수 검측, 활성화 부품 등의 기능을 테스트하는 데 사용될 수 있으며, 차량 전기 시스템 부품의 단락, 단선 또는 접촉 불량을 신속하게 검측할 수 있어 사용자가 차량을 더욱 빠르고 정확하게 이해할 수 있도록 도와준다.

제품 사양 매개 변수

- ◆ DC 전원 전압: 5-40V
- ◆ 작동 전류: 40mA
- ◆ 활성화 전류: 0-8A
- ◆ 측정 전압 범위: 0.1V-100V
- ◆ 측정 저항 범위: 1 Ω -220k Ω
- ◆ 작동 온도: 0~60°C(32°F~140°F)
- ◆ 보관온도: -20°C-70°C(-4°F~158°F)
- ◆ 차량 배터리로 작동하는 1: 12V 또는 24V 전원 공급 장치
- ◆ 전원 공급 장치 AAA 배터리 2: 2 개

회로 검사

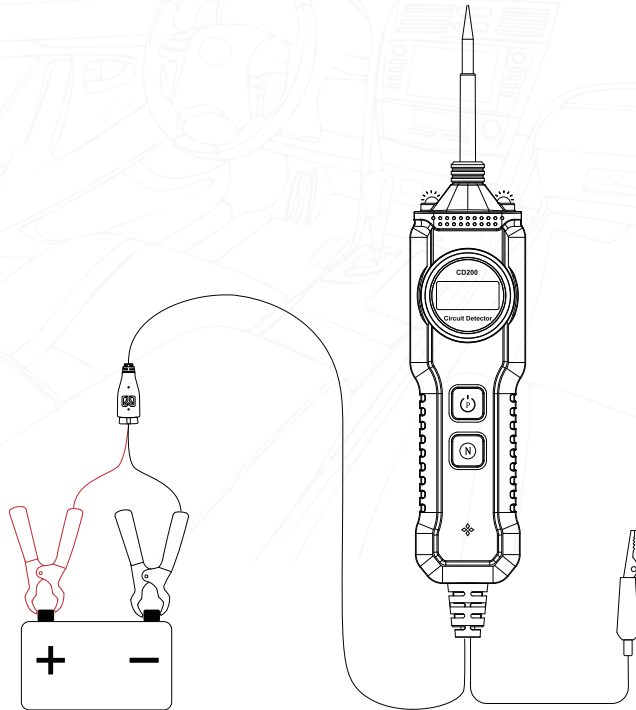
시험 준비

1. 회로 또는 어셈블리를 테스트하기 전에:

- 1.1 자체 검사를 통해 장치가 양호한지 확인하십시오.
 - 1.2 두 가지 전력 공급 방식. 차량 배터리로 전원을 공급하는 1: 12V 또는 24V 전원 공급 장치; 전원 공급 장치 AAA 배터리 2: 2 개
 - 1.3 빨간색 배터리 클립은 자동차 배터리의 양극에 연결되고 검은색 배터리 클립은 자동차 배터리의 음극에 연결된다.
- 도구는 두 측정 값에 양수 및 음수 표시가 있는 버튼 위에 있습니다.

2. 테스트 시작 :

- 2.1 (P) 버튼을 누르면 양전압이 있는 프로브가 활성화되고 디스플레이에 빨간색이 켜지며 LCD에 배터리 전압이 표시되고 버튼을 놓으면 디스플레이에 흰색이 표시됩니다.



- 2.2 그런 다음 (N) 버튼을 누르고 음전압으로 프로브를 활성화하면 모니터에 녹색이 켜지고 LCD에 0V가 표시되며 버저가 울리고 버튼을 놓으면 모니터에 흰색이 켜지고 소리가 멈춘다.

- 2.3 위의 테스트를 통과하면 장치가 정상적으로 작동하므로 사용할 수 있습니다.

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1 Safety Precautions and Warnings

To prevent personal injury or damage to vehicles and / or the scan tool, read this user's manual first carefully and observe the following safety precautions at a minimum

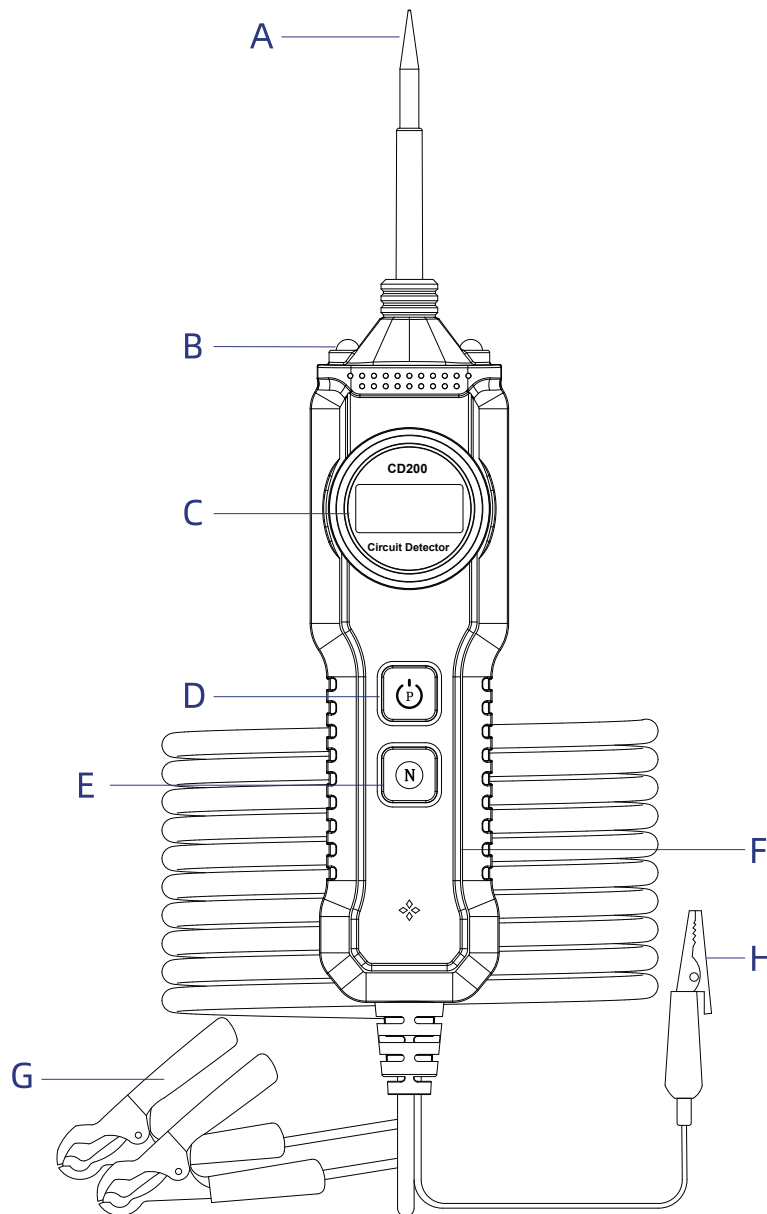
whenever working on a vehicle:

- Always perform automotive testing in a safe environment.
- Do not attempt to operate or observe the tool while driving a vehicle, Operating or observing the tool will cause driver distraction and could cause a fatal accident.
- Wear safety eye protection that meets ANSI standards.
- Keep clothing, hair, hands, tools, test equipment, etc. Away from all moving or hot engine parts.
- Operate the vehicle in a well-ventilated work area. Exhaust gases are poisonous.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while running tests.
- Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Put the transmission in P(for A/T) or N(M/T) and make sure the parking brake is engaged.
- Keep a fire extinguisher suitable for gasoline /chemical / electrical fires nearby.
- Don't connect or disconnect any test equipment while the ignition is ON or the engine is running.
- Keep the scan tool dry, clean free from oil/ water or grease. Use a mild detergent on a clean cloth to clean the outside of the scan tool when necessary.
- Our company is not responsible for any damage caused by unintentional or deliberate misuse of our products or tools.

2 Use a professional vehicle circuit detector

2.1 Tool Description

CD200 automotive electrical system activator for 5-40V automotive power circuit diagnosis, compact design, powerful, with reverse connection and overload protection, the tool probe can be used to test the conductivity and detection of circuit voltage, positive and negative detection, activation components and other functions, can quickly detect short circuits, broken wires or poor contact in the vehicle's electrical system components, which helps users to more quickly and accurately understand the vehicle. It is an efficient and advanced testing tool that can greatly improve the efficiency of the user.



Function: Voltage detection/Resistance detection/Diode detection/Positive and negative pole detection /Component activation/Continuity test/Grounding test/Tracing and locating short circuits.

A. **Probes**-Contact wiring or components for testing

B. **LED lights**-Provides lighting in dark areas or at night

C. **LCD Display**-For displaying test results

D. **Positive Button**-Used to activate and test the function of electrical components carried out by a positive battery current probe

When internal battery use only, used to power on or off the device

E. **Negative Button**-Used to test the function of electrical components carried out by a negative battery current probe

F. **Internal battery compartment**- Install the battery to power the device

G. **Battery Clamp**-Connecting a battery to power the device

H. **Grounding Clips**-Ground lead assisted test function

2.2 Specifications

1. Supply voltage DC: 6-40V
2. Operating current: 40mA
3. Activation current: 0-8A
4. Measuring voltage range: 0.1V-100V
5. Measuring resistor range: 1 Ω -220k Ω
6. Operating temperature: 0-60°C (32°F~140°F)
7. Storage temperature: -20°C-70°C (-4°F~158°F)
8. Power Source 1: 12V or 24V powered by vehicle battery
9. Power Source 2: 2 AAA batteries

2.3 Quick self-test

Before starting to test the circuit or components, please confirm whether your equipment is in good condition by self-test, this product is powered through the car battery, the red battery clamp to the positive terminal of the car battery, the black battery clamp to the negative terminal of the car battery, the tool is above the button two measurements have positive and negative markings. (Connecting party as shown in Figure 2)

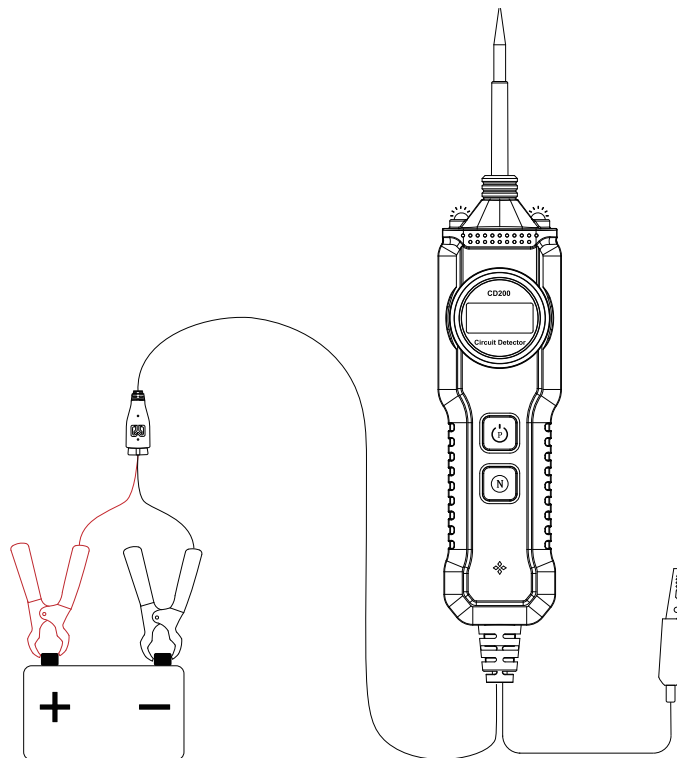


Figure 2

- Press the (P) button will activate the probe with positive voltage, then the display will light up in red, followed by the LCD screen will show the battery voltage, release the button and the display will light up in white.
- Then press the (N) button to activate the probe with negative voltage, the display lights up green and shows 0V on the LCD, while the buzzer will sound, release the button, the display lights up white and the sound stops.
- If it passes the above tests, it means that the device is working properly and ready for use.

3 Product use

3.1 External power supply

3.1.1 Voltage and positive/negative detection

When the device is connected to the car's power supply, the display lights up white and the screen will show 0v (Figure 3).

When the probe is touched to the positive circuit, the screen will show the

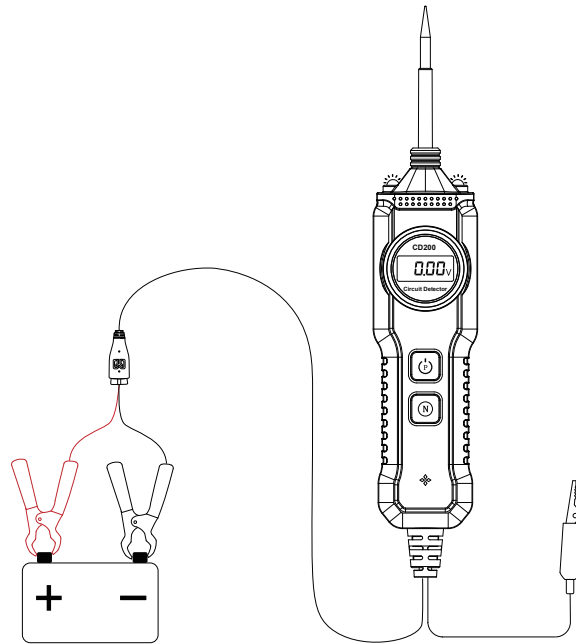


Figure 3

current circuit voltage, If the device power supply and the circuit being tested are separate, then the ground lead of the device needs to be connected to the

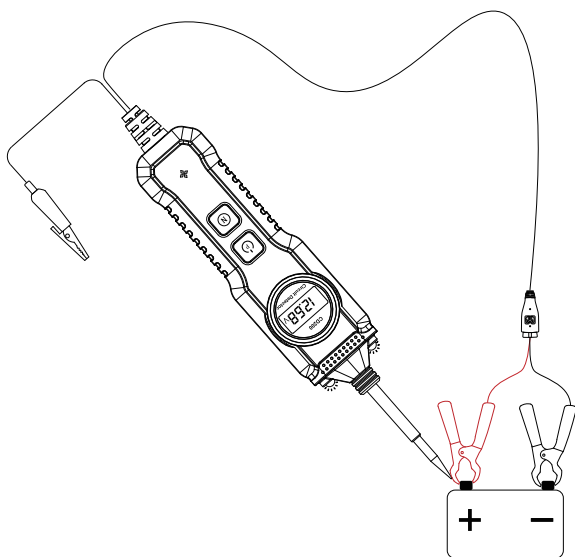


Figure 4

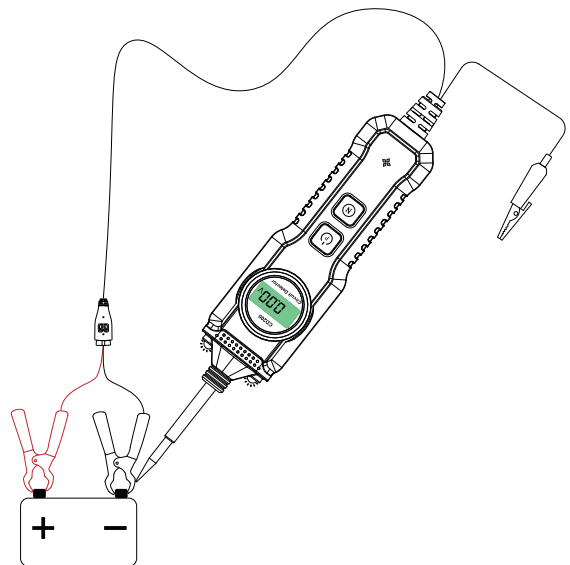


Figure 5

negative terminal of the circuit being tested (Figure 4)

If the probe touches the negative circuit, the display will light up green, the screen will show 0V, and the device will sound a beep (Figure 5).

3.1.2 Diode detection

Connect the ground lead to the negative terminal of the diode and the probe to the positive terminal of the secondary tube, when the icon-appears on the display and a voltage value is shown, the diode is good, if the display does not respond or the screen shows green and the device beeps, the diode is bad.(As shown in Figure 6)

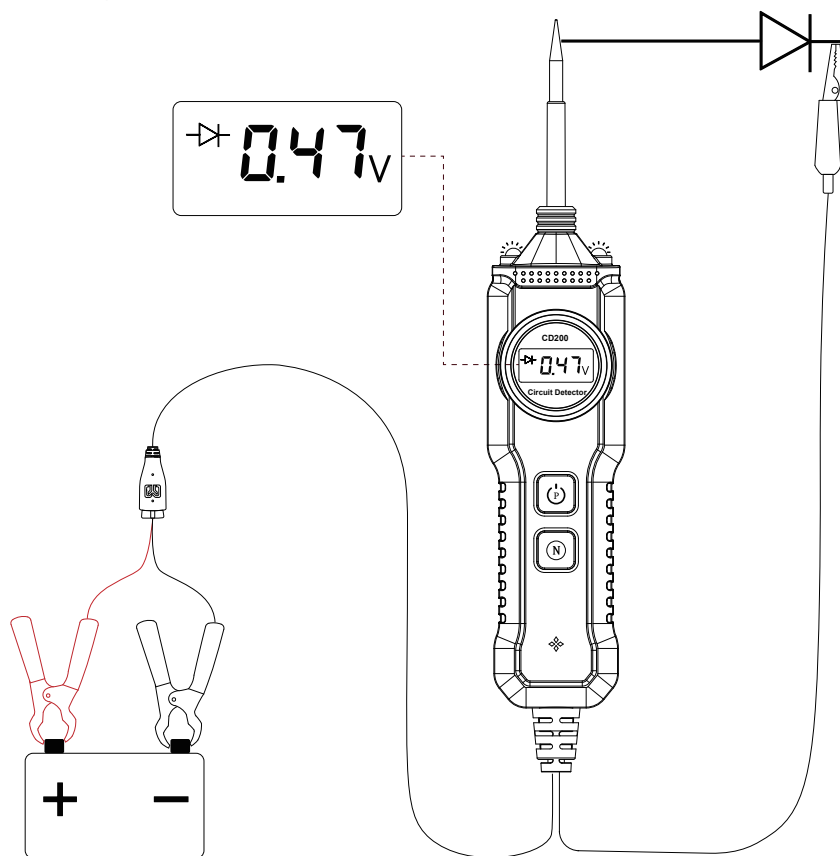


Figure 6

3.1.3 Component activation

The activation function can be used to activate components such as the starter fuel pump, solenoid, blower, cooling fan, headlights, etc.

Connect the grounding auxiliary clip to the negative terminal of the part. The probe contact to the positive terminal of the part, then press the positive

activation button **(P)**, the probe will output a positive voltage, the screen will light up red and display the current activation voltage, and the part will be activated at the same time (Figure 7).

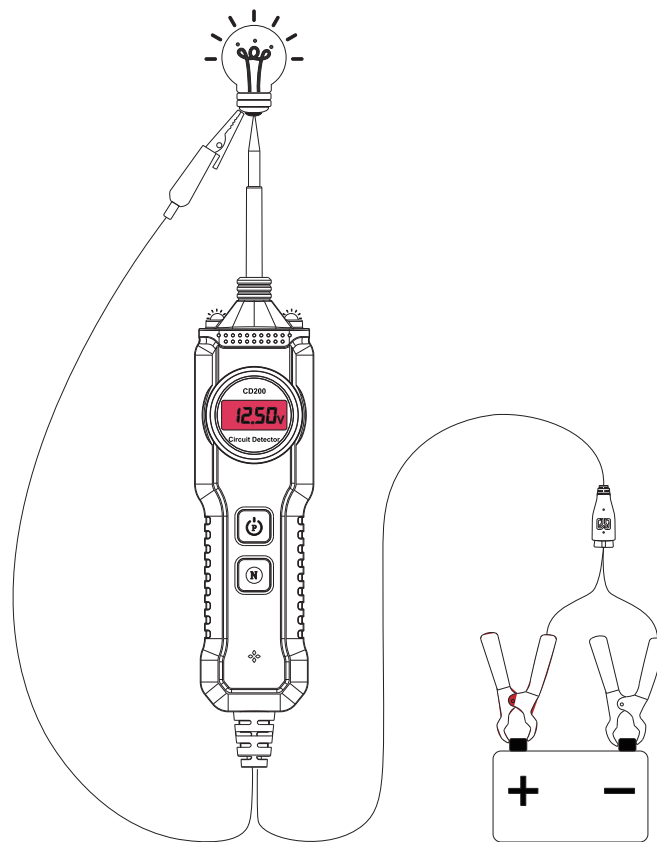


Figure 7

Probe can output positive and negative voltage, press the **(P)** button probe output positive voltage, press the **(N)** button probe will output negative voltage, activation output maximum current is 8A, more than 16A equipment will start trip protection function.

3.1.4 Continuity test

By using the probe tip and an auxiliary ground wire, continuity testing can be performed on wires and components that are disconnected from the vehicle's electrical system. When the continuity test is passed the display lights up green and the unit beeps (Figure 8).

(Note: Do not press the activation button during the continuity test.)

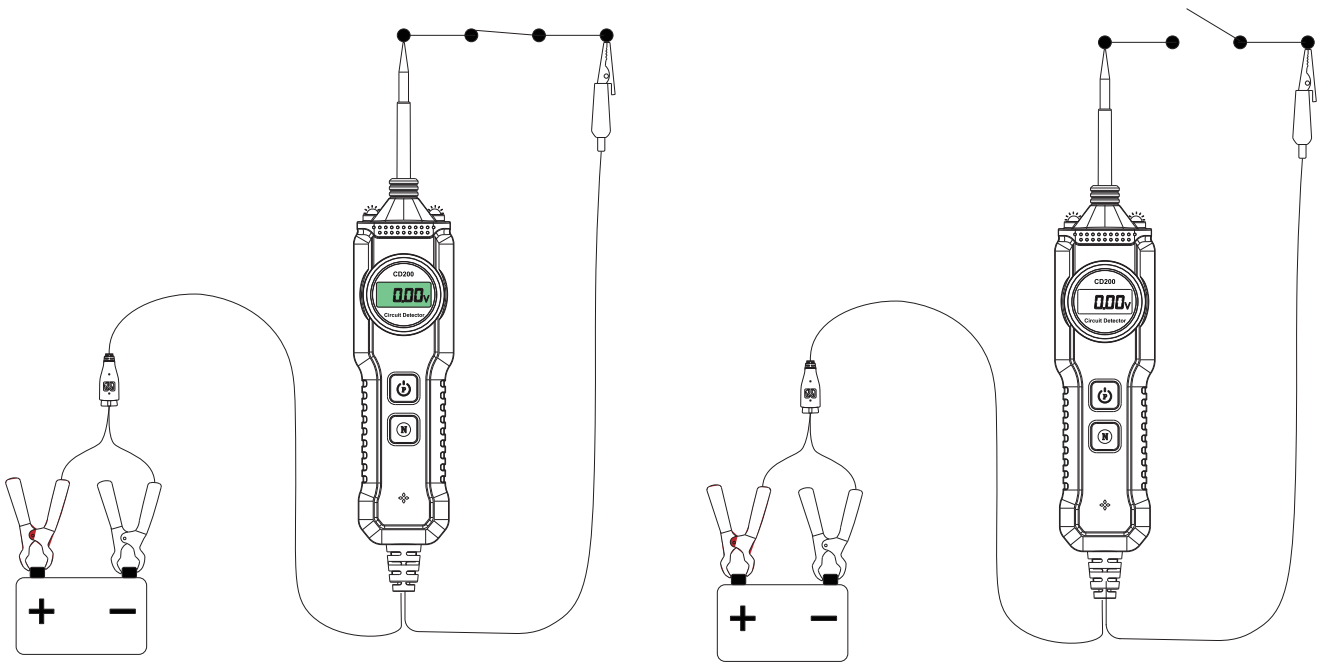


Figure 8

3.1.5 Grounding test

Use the probe to make contact with the negative terminal of the component. When the ground test is passed, the display will light up green and the device tone will sound (as shown in Figure 9).

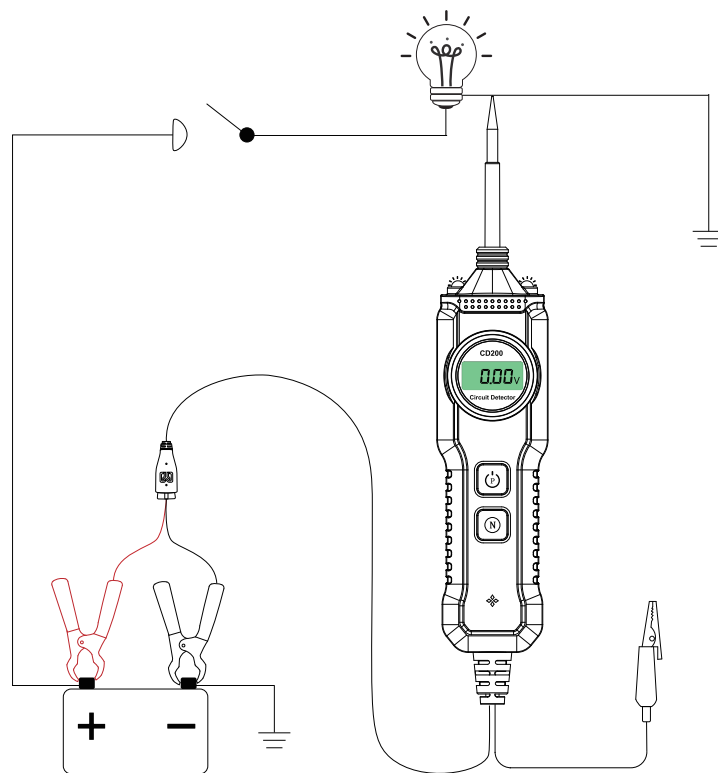


Figure 9

(Note: Do not press the activation button during ground detection.)

3.1.6 Testing trailer lights and connectors

Connect the device to the battery, clip the clip of the auxiliary ground wire to the trailer ground, connect the probe to the socket of the trailer connector, and press the **(P)** button to detect the function and direction of the trailer light (as in Figure 10).

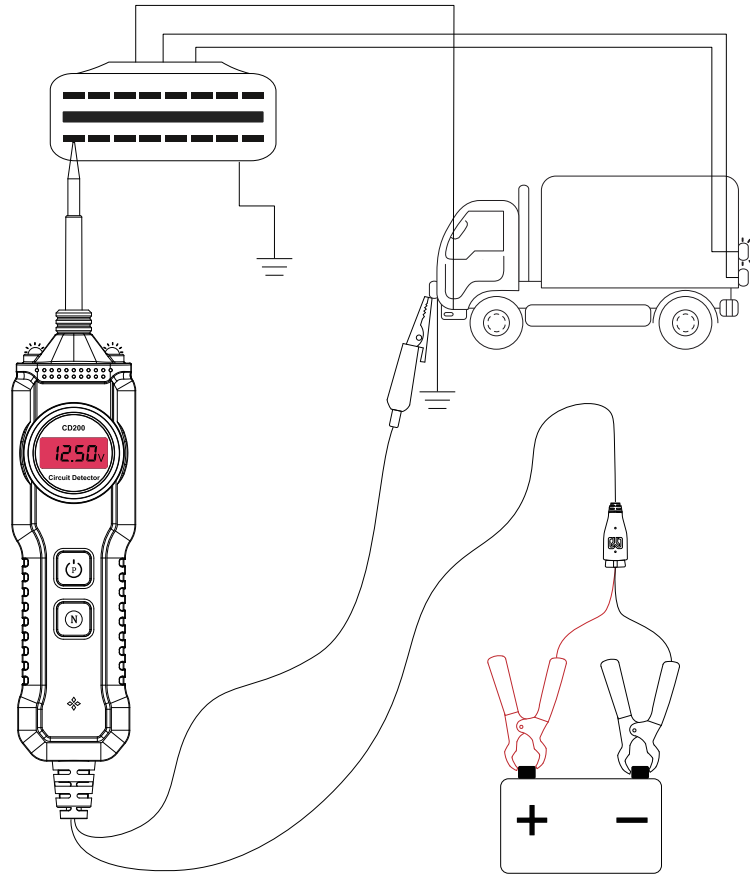


Figure 10

3.1.7 Jumper lead function

Black clip and auxiliary ground wire directly connected through the device, the red clip and vehicle battery disconnected, the device can be used as a long jumper lead (Figure 11), (note that when the device is used for jumper function, please pay attention to avoid short circuit and overload, jumper lead

function is not protected by the device circuit breaker).

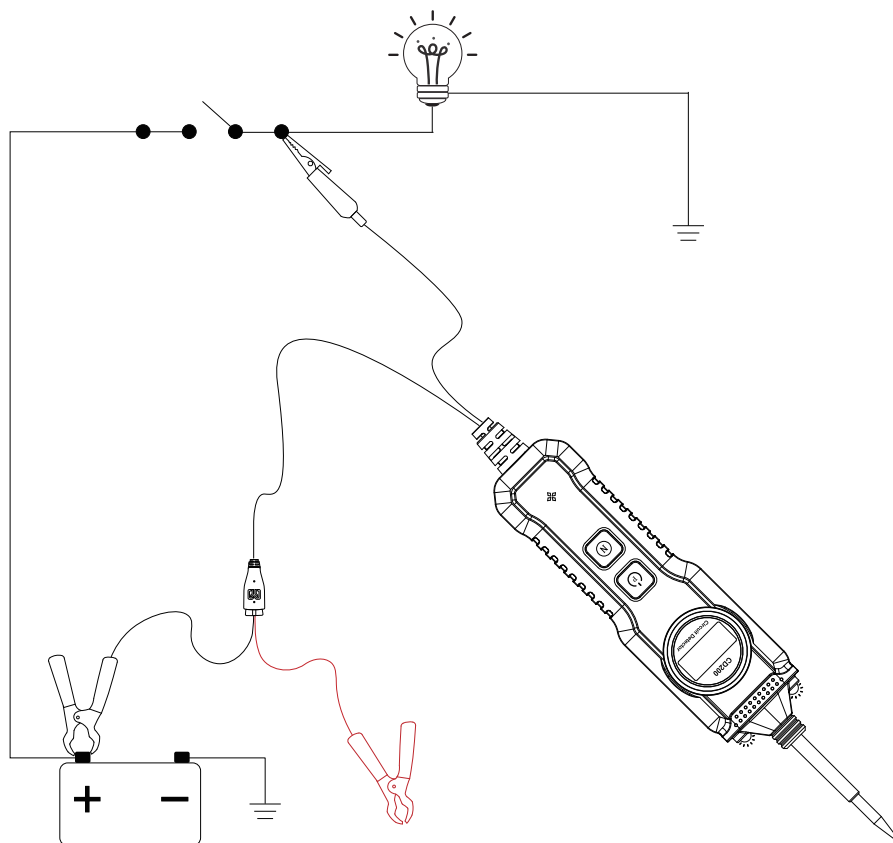


Figure 11

3.1.8 Tracing and locating short circuits

In most cases, a short circuit will manifest itself as a blown fuse or a tripped electrical protection device (such as a tripped circuit breaker).

To trace and locate a short circuit, remove the blown fuse from the fuse box; use a probe to touch each fuse contact; the line that lights up green and beeps on the equipment display is the shorted line, note the line number or color, and follow the wire as far as possible to trace the harness.

If you are tracing the brake light short circuit, first the harness must pass through the threshold of the wire, find the color or number of the wire and mark it. If the display lights up green and a tone sounds, you have verified that the wire is shorted. Follow the wire to the exact location. Repeat this procedure in the direction of the short circuit until you find the exact location of the short.

3.1.9 Resistance detection

Connect the ground lead to one end of the resistor and the probe to the other end, then the resistance icon and value is shown on the display. (Figure 12.)

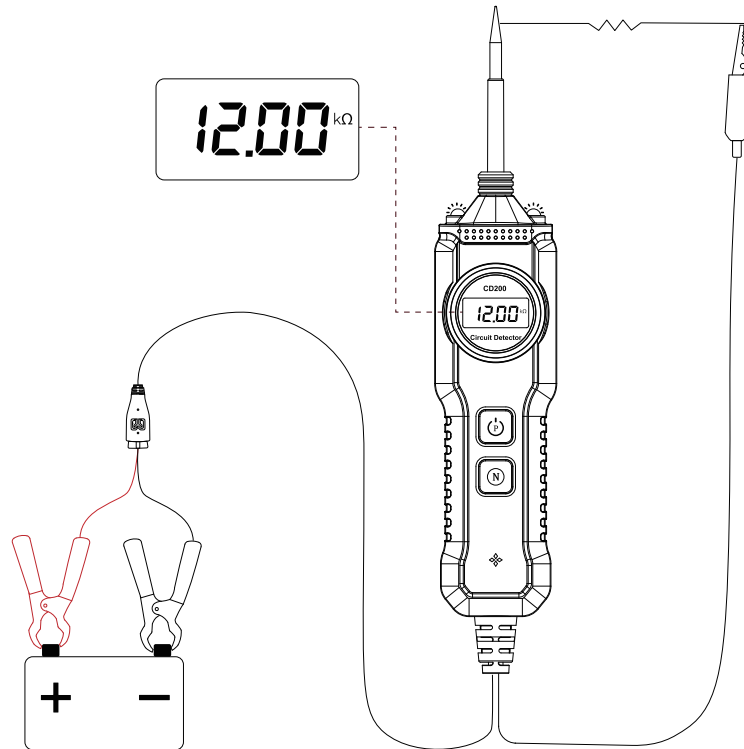


Figure 12

3.2 Battery power supply

3.2.1 Voltage and positive/negative detection

When the device is powered by a battery, the display screen lights up white and will show 0V (Figure 13).

When the probe is touched to the positive circuit, the screen will show the current circuit voltage. If the device power supply and the circuit being tested are separate, then the ground lead of the device needs to be connected to the negative terminal of the circuit being tested (Figure 14)

If the probe touches the negative circuit, the display will light up green, the screen will show 0V, and the device will sound a beep (Figure 15).

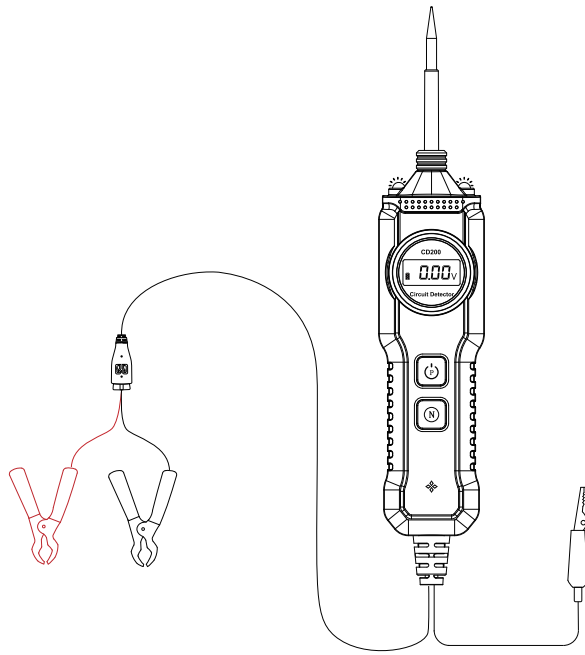


Figure 13

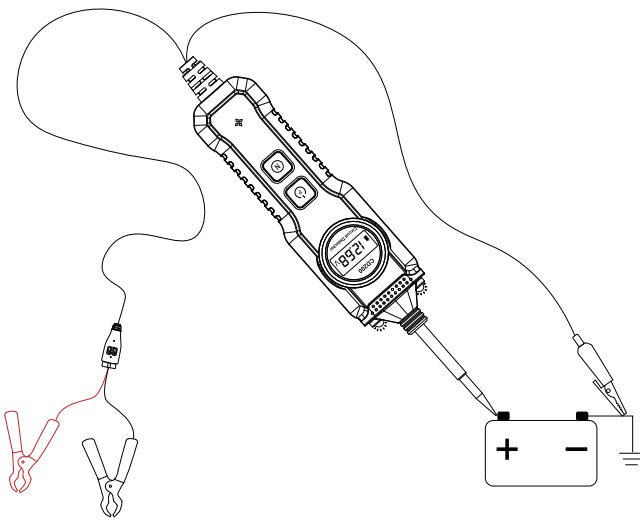


Figure 14

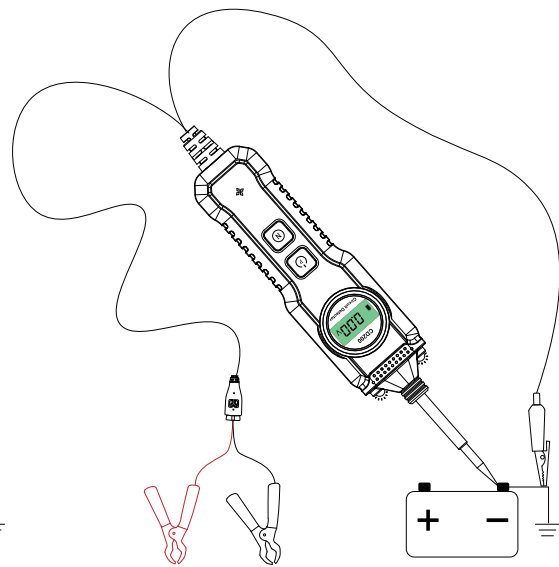


Figure 15

3.2.2 Diode detection

Connect the ground lead to the negative terminal of the diode and the probe to the positive terminal of the secondary tube, when the icon-appears on the display and a voltage value is shown, the diode is good, if the display does not respond or the screen shows green and the device beeps, the diode is bad (Figure 16).

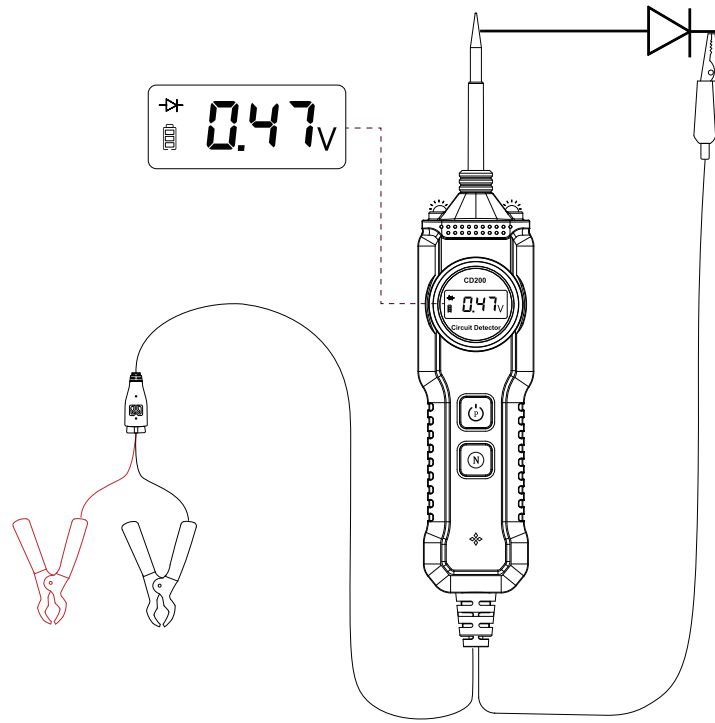


Figure 16

3.2.3 Continuity test

By using the probe tip and an auxiliary ground wire, continuity testing can be performed on wires and components that are disconnected from the vehicle's electrical system. When the continuity test is passed the display lights up green and the unit beeps (Figure 17).

(Note: Do not press the activation button during the continuity test.)

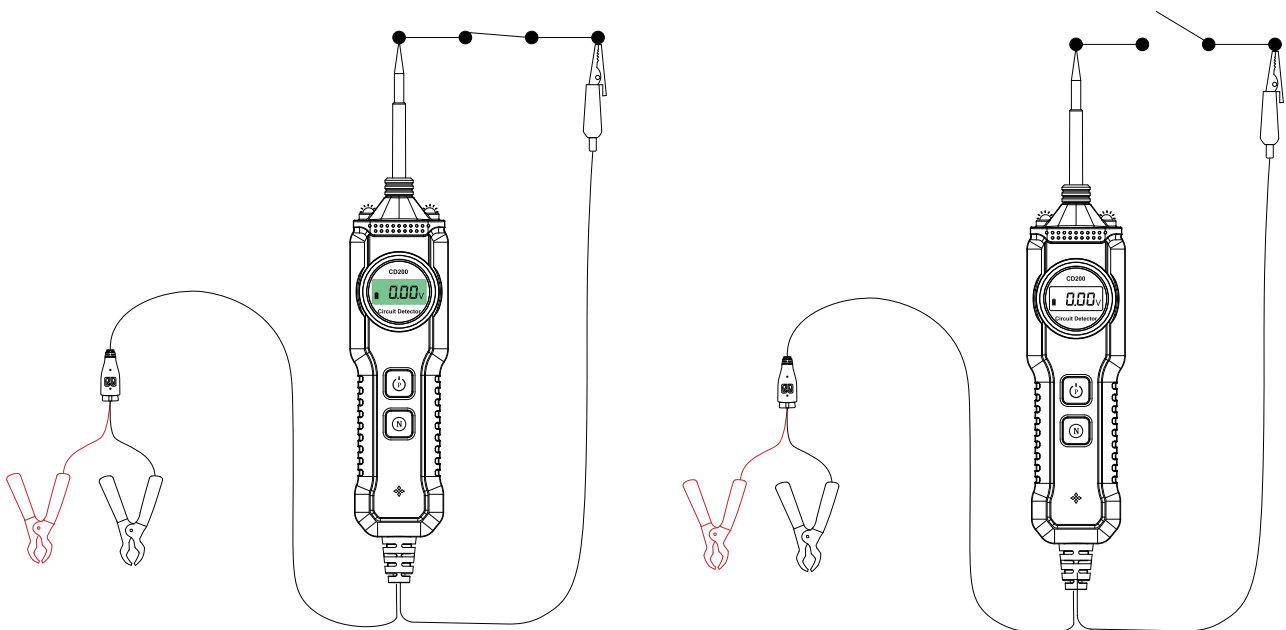


Figure 17

3.2.4 Grounding test

Use the probe to make contact with the negative terminal of the component. When the ground test is passed, the display will light up green and the device tone will sound (as shown in Figure 18). (Note: Do not press the activation button during ground detection.)

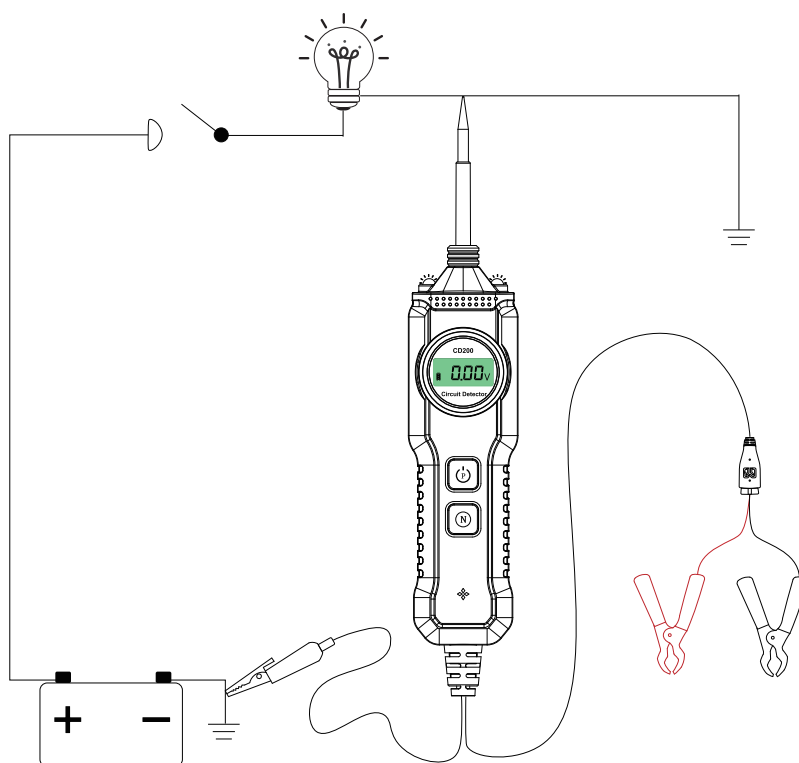


Figure 18

3.2.5 Jumper lead function

Black clip and auxiliary ground wire directly connected through the device, the red clip and vehicle battery disconnected, the device can be used as a long jumper lead (Figure 19), (note that when the device is used for jumper function, please pay attention to avoid short circuit and overload, jumper lead

function is not protected by the device circuit breaker).

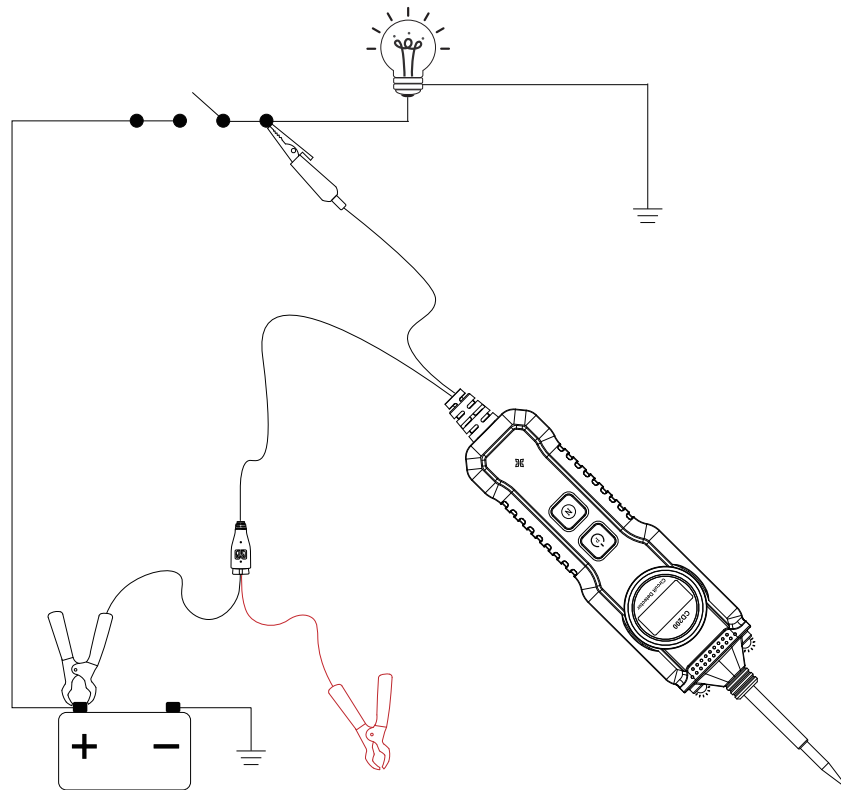


Figure 19

3.2.6 Tracing and locating short circuits

In most cases, a short circuit will manifest itself as a blown fuse or a tripped electrical protection device (such as a tripped circuit breaker).

To trace and locate a short circuit, remove the blown fuse from the fuse box; use a probe to touch each fuse contact; the line that lights internal up green and beeps on the equipment display is the shorted line, note the line number or color, and follow the wire as far as possible to trace the harness.

If you are tracing the brake light short circuit, first the harness must pass through the threshold of the wire, find the color or number of the wire and mark it. If the display lights up green and a tone sounds, you have verified that the wire is shorted. Follow the wire to the exact location. Repeat this procedure in the direction of the short circuit until you find the exact location

of the short.

3.2.7 Resistance detection

Connect the ground lead to one end of the resistor and the probe to the other end, then the resistance icon and value is shown on the display.

(Figure 20.)

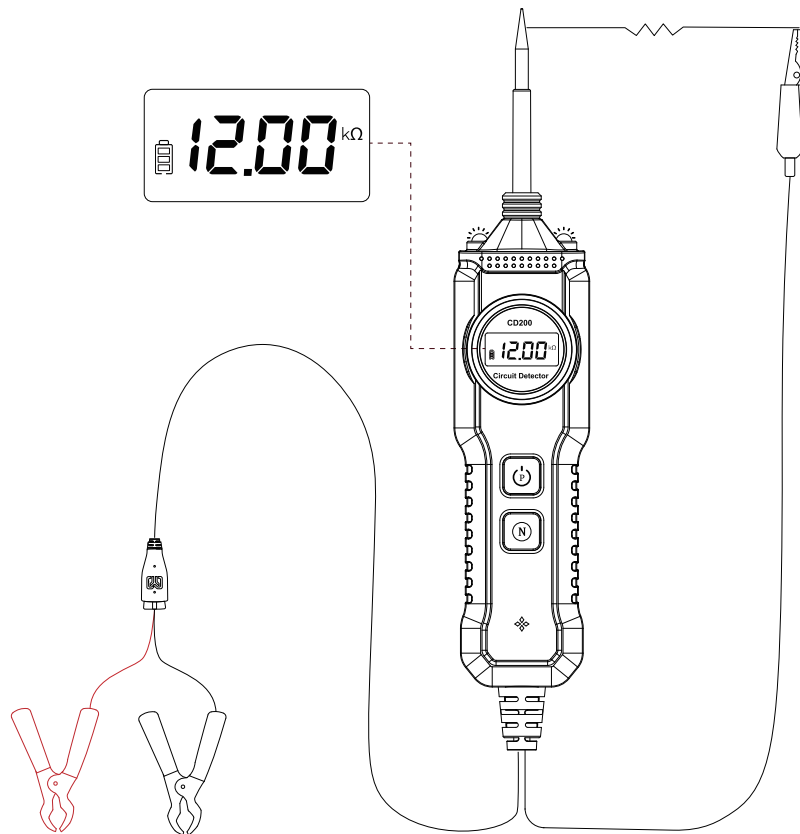


Figure 20

4 Warranty And Service

4.1 One year warranty

Yuming Technology promises to provide warranty service for 1 year from the date of original purchase, if this product is purchased from an official channel, which must meet the following conditions:

1. The warranty are limited to repairing or replacing new equipment, without additional cost, but need to mention for regular sales invoices or copies of invoices.
2. The warranty does not cover the unauthorized disassembly of this product due to flooding, lightning strikes, or outside repair shops not authorized by the company, The personnel have repaired it and considered damage caused by improper use.
3. Yuming Technology is not responsible for any damages caused by use, misuse or installation and testing. Some countries limitations on the duration of implied warranties are not allowed, so the above limitations may not apply to you.
4. All information in this manual is based on the latest and effective information at the time of publication, and there is no guarantee of its accuracy or completeness. Yuming Technology reserves the right to make changes at any time without notice.

4.2 Service Process

If you have any questions in the process of using this product, please contact your local authorized dealer directly, or visit our official website for consultation.

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