Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

allsun EM285

allsun Professional Automotive Circuit Tester

Model: EM285

Brand: allsun

1. Introduction

The allsun EM285 Professional Automotive Circuit Tester is a versatile electrical diagnostic tool designed to reduce diagnostic time in automotive electrical systems. This unit allows automotive technicians to conduct a positive or negative battery current to the tip by rocking the power switch forward or backward. It is short-circuit protected and can test for bad ground contacts instantly. It also allows you to follow and locate short circuits and test for continuity with the assistance of its auxiliary ground lead. The unit's long cable provides extended reach for testing.



Figure 1.1: allsun EM285 Professional Automotive Circuit Tester.



Figure 1.2: The allsun EM285 tester being used to diagnose a car's electrical system.

2. Safety Information

WARNING:

- Always wear eye protection when working around vehicles.
- Do not use the tester on AC voltage. This device is designed for DC 6-24V systems only.
- Do not use the tester on voltages exceeding 24V DC.
- Do not connect the tester to any component that could be damaged by direct battery voltage.
- Ensure proper ventilation when working in enclosed spaces.
- Keep the probe tip away from sharp objects or moving parts.
- The unit has built-in 8A overload protection. If the current exceeds 8A, the unit will automatically disconnect the current to prevent damage.

3. Package Contents

Upon opening the package, verify that all components are present and undamaged:

- allsun EM285 Automotive Circuit Tester Unit
- Auxiliary Ground Lead
- Battery Connection Clips (Red and Black)
- Instruction Manual



Figure 3.1: Typical package contents of the allsun EM285.

4. Product Overview

Familiarize yourself with the main components of the allsun EM285 tester:



Figure 4.1: Labeled components of the allsun EM285 tester.

- **Probe Tip:** Used to contact circuits and components.
- **LED Indicator:** Displays polarity (Red for positive, Green for negative) and continuity.
- **Power Switch:** Rocker switch to apply positive or negative battery voltage to the probe tip.
- **Auxiliary Ground Lead:** Provides an additional ground connection for certain tests.
- **Battery Connection Clips:** Red clip connects to positive (+) battery terminal, Black clip connects to negative (-) battery terminal.



Figure 4.2: Detail of the power switch and voltage range indicator.

5. Specifications

Feature	Specification
Operating Voltage	6-24 Volts DC
Overload Protection	8A (Built-in Circuit Breaker)
Cable Length	5 meters (16.4 feet)
Item Weight	Approximately 350 grams (12.3 ounces)
Dimensions (L x W x H)	10.79 x 2.09 x 1.65 inches
Material	Acrylonitrile Butadiene Styrene

6. Setup

Before using the circuit tester, ensure it is properly connected to the vehicle's battery:

1. Locate the vehicle's 12V or 24V battery.
2. Connect the **RED** battery connection clip to the **POSITIVE (+)** terminal of the vehicle's battery.

3. Connect the **BLACK** battery connection clip to the **NEGATIVE (-)** terminal of the vehicle's battery.
4. Once connected, the tester is powered on and ready for use.

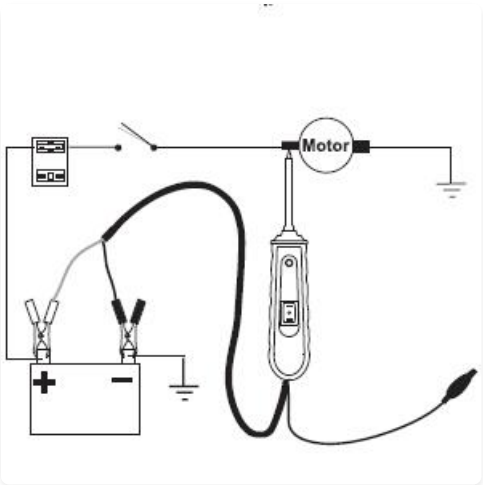


Figure 6.1: Correct connection of the tester to a vehicle battery.

7. Operation

The allsun EM285 offers several diagnostic functions:

7.1. Polarity Test

To quickly identify positive or negative circuits:

1. Touch the probe tip to the circuit or component you wish to test.
2. The LED indicator on the tester will illuminate:
    - **RED:** Indicates a positive (+) voltage.
    - **GREEN:** Indicates a negative (-) voltage or ground.
    - **OFF:** Indicates an open circuit or no voltage present.

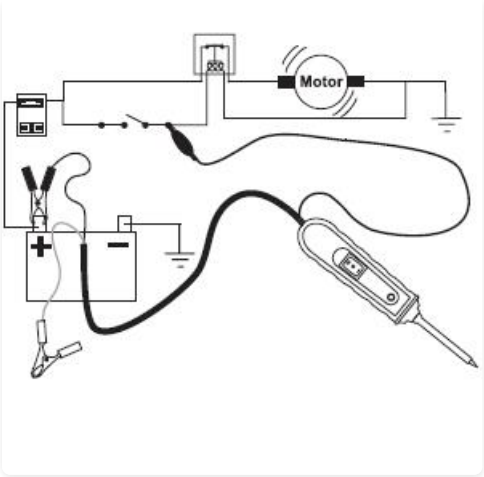


Figure 7.1: LED indicator behavior during polarity testing.

7.2. Continuity Test

To test for continuity in a circuit or component:

1. Ensure the tester is connected to the vehicle's battery.
2. Connect the auxiliary ground lead to a known good ground point.
3. Touch the probe tip to the component or wire you want to test for continuity.
4. If there is continuity, the LED indicator will illuminate GREEN, and the buzzer will sound.

7.3. Activating Components

The tester can safely activate components by supplying battery voltage or ground:

1. Connect the tester to the vehicle's battery.
2. Touch the probe tip to the positive terminal of the component you wish to activate (e.g., fuel pump, light, motor).
3. Rock the power switch forward (towards 'POSITIVE') to apply positive battery voltage to the component. The LED will turn RED.
4. Rock the power switch backward (towards 'NEGATIVE') to apply ground to the component. The LED will turn GREEN.
5. Observe the component's operation.

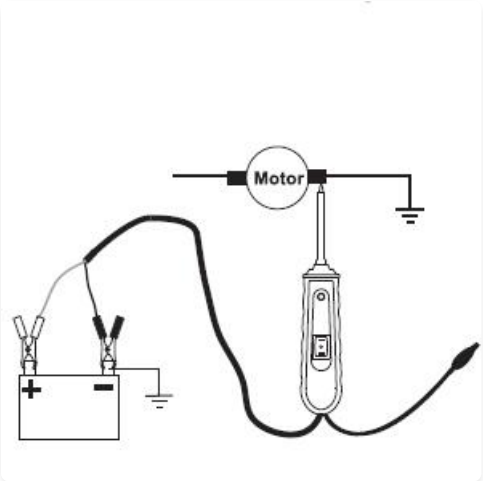


Figure 7.2: Activating a component (e.g., a bulb) using the tester.

7.4. Short Circuit Finding

To locate short circuits:

1. Connect the tester to the vehicle's battery.
2. Isolate the circuit suspected of having a short.
3. Apply voltage to the circuit using the tester's power switch.
4. Follow the circuit path. The buzzer alarm and LED indicators will help pinpoint the location of the short.

7.5. Testing for Bad Ground Contacts

To check for poor ground connections:

1. Connect the tester to the vehicle's battery.
2. Touch the probe tip to the suspected ground point.
3. If the LED illuminates GREEN and the buzzer sounds, the ground connection is good. If the LED is off or flickers, the ground connection may be faulty.



Figure 7.3: Overview of tester applications.

8. Maintenance

Proper maintenance ensures the longevity and accuracy of your allsun EM285 tester:

- **Cleaning:** Wipe the unit with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the tester in a dry, cool place away from direct sunlight and extreme temperatures.
- **Probe Tip:** The probe tip can be detached for cleaning or replacement if necessary. Ensure it is securely reattached before use.



Figure 8.1: The probe tip can be detached for maintenance.

9. Troubleshooting

If you encounter issues with your allsun EM285 tester, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Tester does not power on.	Incorrect battery connection; Vehicle battery is dead or low.	Ensure red clip is on positive (+), black clip on negative (-). Check vehicle battery voltage.
LED does not light up during polarity test.	Open circuit; No voltage present; Poor contact.	Verify the circuit is live. Ensure firm contact with the probe tip.

Problem	Possible Cause	Solution
Tester automatically shuts off during component activation.	Overload protection activated (current exceeded 8A).	Disconnect the tester, allow it to reset (a few seconds), and re-evaluate the circuit for shorts or excessive current draw before re-testing.
Inaccurate readings or intermittent operation.	Loose connections; Dirty probe tip or clips; Damaged cable.	Check all connections. Clean probe tip and clips. Inspect cable for damage.

10. Warranty and Support

For warranty information or technical support regarding your allsun EM285 Professional Automotive Circuit Tester, please contact allsun customer service through their official website or the retailer from whom you purchased the product. Keep your purchase receipt as proof of purchase.
allsun is committed to providing quality products and support. For further assistance, visit the allsun store on Amazon: allsun Store

© 2024 allsun. All rights reserved.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

https://manuals.plus/asin/B07RXBJGK5

More documents and user manuals: **https://manuals.plus/**