

## Tool Aid 28100

# Tool Aid S&G 28100 Computer Safe Automotive Logic Probe Instruction Manual

Model: 28100

## 1. INTRODUCTION

The Tool Aid S&G 28100 Computer Safe Automotive Logic Probe is a diagnostic tool designed for testing electrical circuits in modern vehicles. Its computer-safe design ensures minimal current draw, protecting sensitive electronic components such as sensors, microprocessors (ECM), air bags, electronic ignitions, and instrument clusters. This manual provides essential information for the safe and effective use of your logic probe.

## 2. SAFETY INFORMATION

Always observe the following safety precautions when using electrical testing equipment:

- Wear appropriate personal protective equipment, including safety glasses.
- Ensure the vehicle's ignition is off unless specific tests require it to be on.
- Avoid contact with moving engine parts or hot surfaces.
- Do not use the probe on circuits exceeding its specified voltage range (6, 12, and 24-volt systems).
- Keep the probe and its wires away from sharp objects or extreme heat.
- If the probe appears damaged, do not use it.

## 3. PRODUCT FEATURES

The Tool Aid S&G 28100 Logic Probe offers the following key features:

- **Computer Safe:** Current draw is less than 7 milliamps to protect all vehicle circuits.
- **Voltage Compatibility:** Operates on 6, 12, and 24-volt systems.
- **Dual Color LED:** Indicates circuit status; red for power (+) and green for ground (-).
- **Polarity Independent:** Leads can be attached regardless of polarity.
- **High Impedance:** Designed for sensitive electronic systems.
- **Durable Design:** Features 6 feet of tough dual wire and an insulated probe.

- **Versatile Use:** Locates power and ground circuits, and can be used as a standard, single-wire circuit tester.
- **Included Adapter:** Comes with a Protect-A-Terminal adapter to prevent damage to electrical connectors.
- **Broad Application:** Tests various vehicle circuitry including sensors, microprocessors (ECM), air bags, electronic ignitions, and instrument clusters.

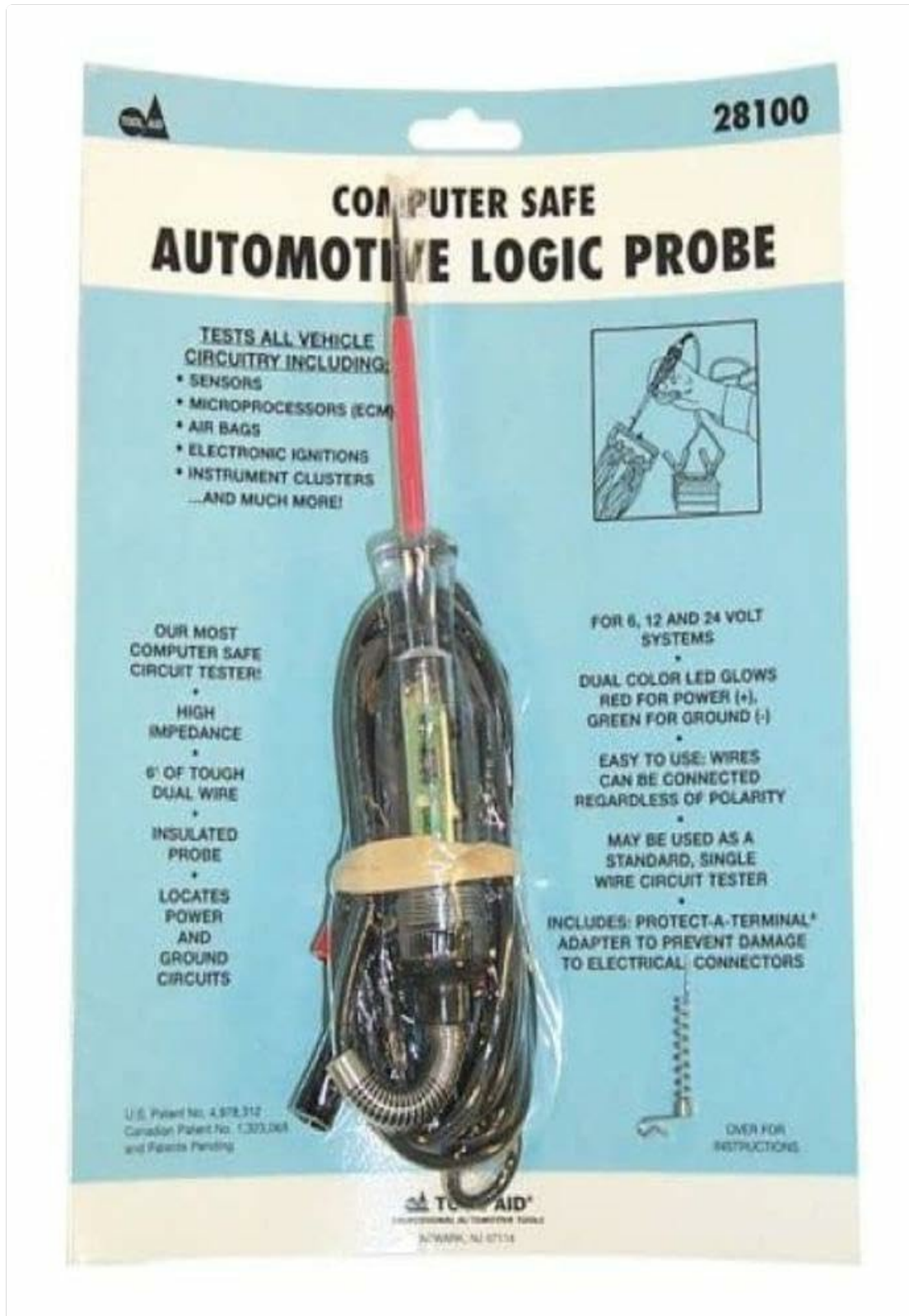


Image: Tool Aid S&G 28100 Computer Safe Automotive Logic Probe, showing the probe, dual wire, and battery clips, packaged with key features listed on the card.

## 4. PACKAGE CONTENTS

Verify that your package contains the following items:

- Tool Aid S&G 28100 Computer Safe Automotive Logic Probe
- Protect-A-Terminal Adapter

## 5. SETUP

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Before using the logic probe, connect it to a power source:

1. Identify a suitable 6, 12, or 24-volt DC power source, typically the vehicle's battery.
2. Connect the probe's battery clips to the power source. The probe is designed to work regardless of polarity, meaning you can connect either clip to the positive (+) or negative (-) terminal.
3. The dual-color LED on the probe will illuminate if connected to a live circuit, indicating its operational status.
4. If necessary, attach the Protect-A-Terminal adapter to the probe tip for testing delicate or small electrical connectors.

## 6. OPERATING INSTRUCTIONS

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Follow these steps to test circuits with your logic probe:

1. **Connect Power:** Ensure the logic probe is properly connected to a 6, 12, or 24-volt power source as described in the Setup section.
2. **Probe the Circuit:** Carefully touch the insulated probe tip to the circuit point you wish to test.
3. **Interpret LED Indication:**
  - If the LED glows **RED**, the circuit point has a positive (+) voltage (power).
  - If the LED glows **GREEN**, the circuit point is connected to ground (-) (negative).
  - If the LED does not illuminate, the circuit point is either open (no connection) or has no significant voltage/ground present.
4. **Testing Specific Components:** Use the probe to test various vehicle components such as sensors, ECM connections, air bag circuits, electronic ignitions, and instrument cluster wiring. Its low current draw makes it safe for these sensitive systems.
5. **Protect-A-Terminal Adapter:** For testing small or delicate terminals, use the included adapter to prevent accidental damage.

## 7. TROUBLESHOOTING

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If the logic probe does not function as expected, consider the following:

- **No LED Indication:**
  - Check the connection of the battery clips to the power source. Ensure they are securely attached and making good contact.
  - Verify that the power source itself is live and within the 6-24 volt range.
  - Ensure the circuit point being tested is indeed expected to have power or ground.
- **Incorrect LED Color:**
  - Re-verify the expected state of the circuit (power or ground). The probe's indication is accurate for the detected voltage/ground.
- **Intermittent Readings:**
  - Check for loose connections at the battery clips or the probe tip.
  - Ensure the probe tip is making solid contact with the test point.

## 8. MAINTENANCE

Proper care will extend the life of your logic probe:

- **Cleaning:** Wipe the probe and wires with a clean, dry cloth after each use. Do not use abrasive cleaners or solvents.
- **Storage:** Store the logic probe in a dry, cool place, away from direct sunlight and extreme temperatures. Keep the probe tip protected to prevent damage.
- **Inspection:** Periodically inspect the wires, insulation, and probe tip for any signs of wear or damage. Replace the unit if damage is observed.

## 9. SPECIFICATIONS

|                                |                                                      |
|--------------------------------|------------------------------------------------------|
| Brand                          | Tool Aid                                             |
| Model                          | 28100                                                |
| Power Source                   | Hand Powered (draws power from circuit being tested) |
| Voltage Compatibility          | 6, 12, and 24 Volt DC Systems                        |
| Current Draw                   | Less than 7 milliamps                                |
| Measurement Type               | Circuit Status (Power/Ground)                        |
| Item Weight                    | 8 ounces                                             |
| Product Dimensions (L x W x H) | 12 x 9.1 x 0.3 inches                                |

## 10. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact the retailer where the product was acquired. You may also visit the official Tool Aid website for further assistance.

### 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

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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**