Innovative Products of America 9101

Innovative Products of America #9101 Light Ranger MUTT Trailer Tester User Manual

Model: 9101

1. Introduction

The Innovative Products of America (IPA) #9101 Light Ranger MUTT is a portable, self-contained trailer tester designed to simulate a tow vehicle, allowing for comprehensive testing of trailer lighting and electric brake systems. This device simplifies troubleshooting and maintenance by enabling testing without the need to connect to a truck.
Key features include:

- Simulates turn signals, brake lights, and 12V power for thorough testing.
- Equipped with a standard 7-way spade connector and includes a 3-way adapter for 4-pin, 5-pin, and 6-pin trailer plugs.
- Features an auto-resetting breaker for circuit protection.
- Water-resistant construction for durability in various environments.
- Tests trailer-side electric brake function.
- Includes a 500mA battery charger.



Figure 1: The IPA #9101 Light Ranger MUTT Trailer Tester, showing the main unit, 7-way connector, 3-way adapter, and battery charger.

2. Setup

2.1 Battery Installation

The Light Ranger MUTT requires a 12V (Group 14) battery for operation (approximately 7.75" L × 5" W × 6.25" H). The battery is not included and must be purchased separately.

1. Open the lid of the Light Ranger MUTT unit.
2. Carefully place the 12V battery into the internal battery compartment.
3. Connect the red positive (+) cable from the unit to the positive terminal of the battery.
4. Connect the black negative (-) cable from the unit to the negative terminal of the battery.
5. Ensure all connections are secure. Close the lid.




ONLY USE
UNVENTED 12V DC BATTERY
CHARGE BATTERY WITH LID OPEN
TO AVOID POTENTIAL HAZARDS
MY-03/25
Ranger Rev.
E
LIGHT
RANGER
MADE IN
USA
BRAKE
LIGHTS
4 PIN
RIGHT TURN
LEFT
TURN
5 PIN
ELECTRIC BRAKE
TAIL
LIGHTS
IPA
6 PIN
12V/AUX
OFF
7 PIN
BACK-UP LIGHTS
Max. Load: 10A @ 12V DC ONLY
POWER
Internal 10A Auto-Resetting Thermal Breaker (30-Second Cooldown)
Power LED illuminated in OFF position indicates battery is detected on trailer.
LED will go out if breaker is tripped.
WARNING! Do not connect charger to 12V DC socket unless internal battery is installed.



Figure 2: Internal view of the Light Ranger MUTT, showing the battery compartment and pre-installed battery cables ready for connection.

2.2 Initial Charging

Before first use, ensure the installed battery is fully charged using the included 500mA battery charger. Connect the charger to the 12V DC socket on the side of the unit and plug it into a standard wall outlet. The power LED on the control panel will illuminate when a battery is detected and the unit is charging.

3. Operating Instructions

The Light Ranger MUTT features a control knob for selecting various test functions. The unit supports 7-way spade pin connections directly and 4-pin, 5-pin, and 6-pin connections using the included 3-way adapter.



Figure 3: Close-up of the Light Ranger MUTT control panel, illustrating the selector knob for various lighting and brake tests.

3.1 Connecting to a Trailer

1. Ensure the control knob is in the "OFF" position.

2. For 7-way spade pin trailers, directly connect the trailer's plug to the 7-way receptacle on the Light Ranger MUTT.
3. For 4-pin, 5-pin, or 6-pin trailers, attach the appropriate end of the 3-way adapter to the trailer's plug, then connect the 7-way end of the adapter to the Light Ranger MUTT's receptacle.



Figure 4: Diagram showing the 7-way flat (spade) pin, 6-way round pin, and 4/5 pin connections, highlighting the use of the 3-way adapter for non-7-way connections.

3.2 Performing Tests

Rotate the control knob to the desired test function. Observe the trailer lights and/or listen for brake activation to confirm functionality.

- **OFF:** Powers down the unit. The power LED will illuminate if a battery is detected.
- **TAIL LIGHTS:** Activates the trailer's tail lights.
- **LEFT TURN:** Activates the trailer's left turn signal.
- **BRAKE LIGHTS:** Activates the trailer's brake lights.
- **4 PIN RIGHT TURN:** Activates the right turn signal for 4-pin connections.

- **5 PIN ELECTRIC BRAKE:** Activates the electric brakes for 5-pin connections.
- **6 PIN 12V/AUX:** Provides 12V auxiliary power for 6-pin connections.
- **7 PIN BACK-UP LIGHTS:** Activates the trailer's back-up lights for 7-pin connections.

WARNING: Do not connect the charger to the 12V DC socket unless an internal battery is installed.



Figure 5: The Light Ranger MUTT in use, connected to a trailer's 7-way connector, demonstrating its portability and ease of use for testing.

4. Maintenance

4.1 Battery Charging

Regularly charge the internal 12V battery using the provided 500mA charger to ensure optimal performance. The charger connects to the 12V DC socket on the unit. A fully charged battery is essential for accurate testing and proper operation of all functions, especially electric brakes.

4.2 Cleaning and Storage

Clean the unit with a damp cloth as needed. Avoid using harsh chemicals. Store the Light Ranger MUTT in a dry place when not in use. Although water-resistant, prolonged exposure to extreme weather conditions should be avoided.

5. Troubleshooting

- **No Power/Unit Not Responding:**
  - Check if the internal 12V battery is properly installed and charged.
  - Ensure battery cables are securely connected to the battery terminals.
  - Verify the power LED illuminates when the control knob is in the "OFF" position, indicating battery detection.
- **Lights Not Activating:**
  - Confirm the trailer is correctly connected to the Light Ranger MUTT or adapter.
  - Check the trailer's wiring and bulbs for faults.
  - The unit has an internal 10A auto-resetting thermal breaker. If the LED goes out and the unit stops functioning, the breaker may have tripped due to an overload. Allow approximately 30 seconds for cooldown and reset.
- **Electric Brakes Not Activating:**
  - Ensure the control knob is set to "5 PIN ELECTRIC BRAKE".
  - Verify the trailer's electric brake system is functional and properly wired.
  - Confirm the internal battery has sufficient charge to power the brakes.

6. Specifications

Brand	Innovative Products of America
Model Number	9101
Power Source	Battery Powered (12V DC)
Output	10A @ 12V DC (Max Load)
Battery Required	Yes (Not Included) - 12V (Group 14)
Battery Dimensions (Approx.)	7.75" L × 5" W × 6.25" H
Overload Protection	Internal 10A Auto-Resetting Thermal Breaker (30-second cooldown)
Controls	Manual Control Knob
Material	Plastic (ABS)
Item Weight (empty)	1.85 pounds
Product Dimensions (L x W x H)	11.5 x 5 x 7 inches
Included Components	500mA Battery Charger, 3-Way Trailer Adapter
UPC	893509003067



Figure 6: Visual representation of key specifications for the Light Ranger MUTT.

7. Warranty and Support

7.1 Warranty Information

The Innovative Products of America #9101 Light Ranger MUTT Trailer Tester comes with a Limited 1-year Manufacturer's Warranty. Please refer to the warranty documentation included with your product for specific terms and conditions.

7.2 Customer Support

For technical assistance, troubleshooting, or warranty claims, please contact Innovative Products of America customer support. Visit the official Innovative Products of America Store for more information and contact details.

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