
OPERATOR'S MANUAL





LETTER FROM THE PRESIDENT OF IPA®

My name is Ian Vinci and I would like to thank you for your interest in our products. In today's world, we have all experienced the lack of service and consideration demonstrated by many companies after you buy their products. They say whatever they can to make the sale, and then it's like pulling teeth to get any service response out of them. I know this myself firsthand and because of this, I want to be sure that your experience with IPA® meets your expectations and that IPA® never disappoints you with our service or customer response.

To prove my commitment to you, if for any reason, you are not happy with one of our products, or more importantly, with the response from our customer service department, or any member of the IPA® team, I invite you to contact me directly via my email, president@ipatools.com or call me at 888-786-7899. Your satisfaction is more important to me than the sale itself. We will not be in business for long if we don't make you completely happy with our products and service. I want IPA® to be different and be known for its quality and service.

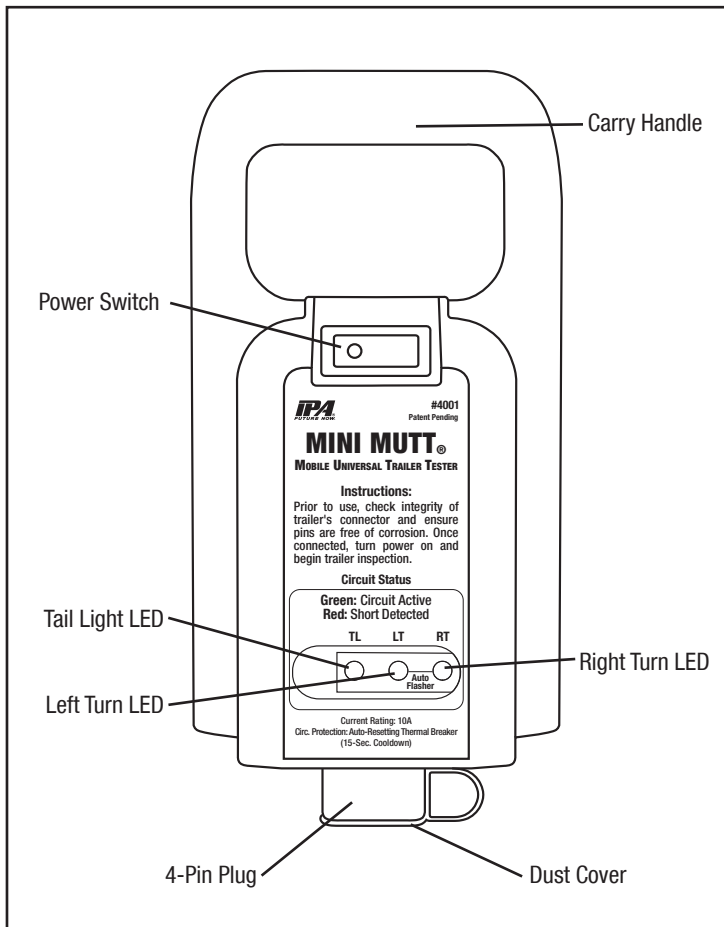
With that said, please take a look at our product line. You will see innovative first time products that were created to help you do your job faster and better than before. I would also like to invite you to critique our products. If you can think of a better way to make them or changes that will make them work better, please contact me directly and I will be sure to look into it. If you have an innovation and would like some feedback, give me a call.

From all of us at IPA®, we thank you for taking the time to review our product line and wish you and your family the very best of everything.

Ian Vinci
President
IPA®

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WHAT'S INCLUDED



INTRODUCTION

The **#4001-D20 MINI MUTT®** is a trailer tester designed to operate trailer lighting systems that feature the 4-pin flat trailer connection. The tester is designed to work with a 20V DC power supply and is compatible with DeWalt 20 Volt power-tool batteries. While various battery amp hours can be used, the tool is best suited for amp hours ranging from 1.5Ah to 9Ah. The MINI MUTT® is specifically engineered to speed up trailer testing and eliminate guesswork. The LEDs on the tester are there to confirm the output status of the tester. A visual inspection of the trailer's lights is required for every inspection.

CIRCUIT OPERATION

Once power is turned on to the tester, all circuits will be *Active*. There are no individual controls for any specific circuit. Each circuit has a dedicated 10-amp *auto-resetting* thermal breaker to protect the trailer, tool and tool battery from excessive current draw. **Thermal breakers typically reset in 15 to 20 seconds depending upon the air temperature around them.** Each circuit's functions are explained below:

Left and Right Turn Signals: The MINI MUTT® is designed to simulate a Flasher circuit and will simultaneously turn both circuits on and off, repeatedly. This feature will closely resemble a vehicle with the hazard signals on and is intended to speed up the inspection process. When the circuit is *Active* and power is present, the LED will flash GREEN. When the breaker is tripped, due to a short or overloaded circuit, the LED will flash RED. If the turn signal LEDs illuminate steady, this indicates a low battery. Otherwise, they will always flash.

Tail Lights: The MINI MUTT® will send constant power to the Tail Light circuit. When the circuit is *Active*, the LED will illuminate GREEN. When the breaker is tripped, the LED will illuminate RED.

Ground: The Ground circuit originates from the power-tool battery and continues out to the trailer. There is no LED for the Ground circuit. However, if any trailer lights illuminate, it can be assumed that a good ground connection has been established. If no trailer lights illuminate, from any circuits, a bad ground connection should be suspected.

OPERATIONAL INSTRUCTIONS

Prior to testing, always ensure the trailer connector is clean and free of corrosion. Bad connections are often the cause of erroneous testing results. In the event an entire circuit is failing to illuminate on a trailer, the user should always rule out a bad connection at the trailer plug first.

1. Confirm the tester's Power switch is in the OFF position.
2. Install a fully charged, 20-Volt DeWalt battery into tester.
3. Connect the 4-pin connector from the trailer directly into the 4-pin connector mounted on the tester.
4. Press the tester's Power switch to the ON position.
5. Each LED will illuminate GREEN indicating the circuit is *Active*. Observe if any of the lighting circuits illuminate RED. A RED LED indicates the power consumption was greater than 10 Amps and the thermal breaker tripped. (See troubleshooting chart on next page.)
 - Short circuits can create excessive wear on electrical components, especially batteries. To prevent unnecessary wear on battery/tool life **DO NOT** leave tester ON indefinitely.
6. If the LEDs remain GREEN, proceed to walk around the trailer to visual confirm each marker light is illuminated.
7. Once the test is complete, press the power switch to the OFF position, and disconnect the trailer plug.

TROUBLESHOOTING

Circuit	Symptom	Cause	Recommendation
All Circuits	LED not illuminated	Check battery connection	Turn Power switch off, replace/charge battery, visually inspect/clean battery connections. If problem continues, contact Tech Support at 845-679-4500
		Dead battery	
Left/ Right Turn	LED Flashes Green	Tester is simulating Flasher circuit	This is proper operation and normal.
	LED Flashes RED	Issue with wiring on trailer causing short or overload condition. Thermal breaker tripped and power removed from circuit.	Shut off power to tester to conserve battery life. Locate cause of short circuit or excessive load. Fix and retest.
	LED Steady GREEN	Steady LEDs on the directional circuits are caused by low battery voltage, which prevents the relay from flashing	Replace/charge battery
Tail Light	LED Illuminates RED	Issue with wiring on trailer causing short or overload condition. Thermal breaker tripped and power removed from circuit.	Shut off power to tester to conserve battery life. Locate cause of short circuit or excessive load. Fix and retest.

TROUBLESHOOTING

Circuit	Symptom	Cause	Recommendation
	Tester is Warm	Constant high amperage power draw or repeated short circuits.	The tester is vented and being warm to the touch is normal. However, if your tester is getting warm, this indicates excessive short circuit testing is likely occurring. DO NOT leave tester plugged into a short circuit. Refer to step 5 of Operational Instructions for proper use.
	Tester is HOT to the touch.	Short circuit inside tester housing.	Tester's housing and circuitry are designed to withstand short circuit testing. The tester should never be so hot that the plastic deforms or it cannot be held. Stop using and remove battery. Call IPA® Tech Support at 888-786-7899.
*Clean and apply dielectric grease to all trailer connections. Poor connectivity can cause erroneous results.			

For Tech Support, please call 888-786-7899.

LIMITED ONE-YEAR WARRANTY

#4001-D20 Mini MUTT®

Innovative Products of America® Incorporated has established a Limited One-Year Warranty Policy for the Mini MUTT®, not including any wearable parts, i.e. batteries (30 day warranty), battery clips, etc.

One-Year Limited Warranty/Return or Replace Policy: The product is covered for one year from the date of original user purchase under the stipulations of the Standard Warranty.

The product is warranted to be free from defects in workmanship or material. If there is a problem due to workmanship or material defect, Innovative Products of America® Incorporated will repair or replace the product within 24 working hours after it is received by the IPA® Repair Service Center. In the event it is determined that the product has been tampered with, or altered in any way, the warranty is void and all claims against the product will not be honored. The Warranty Repair/Return procedures require that the proof of purchase must be established (either by warranty registration or by point of purchase receipt/invoice) and the manufacturer makes every attempt to return ship the product within three business days from the receipt of the returned product, freight prepaid.

If it has been determined that the tool has been damaged due to misuse, Innovative Products of America® Incorporated will repair the tool at a cost we deem reasonable and these charges will be the responsibility of the user. We truly want you to be happy with our products, so if you have any questions, call us toll free at 888-786-7899.



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(OEM) ORIGINAL EQUIPMENT MANUFACTURER USA

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