

MENDA TECHNICAL BULLETIN TB-4011

Soldering Tip Voltage Tester Operation Instructions



Made in America



Figure 1. Soldering Tip Voltage Tester, Item No. 35110.

ESD Handbook TR20.20 section 4.3.3.2 Tools and Equipment checklist includes: "4. Are soldering irons tested for tip to common point ground potential to prevent EOS damage to components?"

"The working part of AC powered tools **should be** capable of providing a conductive path to ground. New powered hand tools such as soldering irons typically should have a tip to ground resistance of less than 1.0 ohm." (ANSI/ESD S20.20 Paragraph 6.2.6.1. AC Powered Tools)

"Most soldering irons should be hard grounded (i.e. <5 ohms) and ESDS should be grounded before coming into contact with the tips. This hard ground is needed because the vast majority of soldering irons have some form of temperature control, either by switching the iron on or off at limits, or by using high frequency effect. These control mechanisms can produce electric fields and thus require a low impedance path to ground to prevent high potentials from being accumulated which can damage ESDS (ESD sensitive items)." (EN 61340-5-2 Section 5.2.10)

Testing and Installation

The Soldering Tip Voltage Tester consists of the circuit board enclosed in a 2.4" x 2.3" x 1" high enclosure, 2 AAA batteries (included), an attached sensor plate, a grounding wire with banana plug, and a pair of Velcro® pieces.

Attach the grounding wire banana plug to electrical ground, such as a common ground point on the workbench or the center grounding screw of an AC power outlet socket, etc.

The Soldering Tip Voltage Tester's OK function may be tested by grounding the sensor plate causing the green LED to light.

Place the sensor plate under the soldering iron cleaning sponge or metallic type cleaner pad.

If using a sponge, dampen the sponge as you normally would. Place the sponge in the holder, being sure it makes good contact with the sensor plate.

Note: For sponges, best results are with a clean plastic sponge holder. If the sponge holder is metal, it must not ground the sensor plate. For metallic cleaner pads, if the container is conductive it must be isolated from any grounded surface by rubber feet or other insulators.

Find an appropriate location for the Soldering Tip Voltage Tester where the LED indicators are easily viewed and the sensor plate wire can be conveniently routed (be sure to avoid locations with excessive heat or solder splashes).

Attach the Velcro® pieces to hold the Soldering Tip Voltage Tester as desired.

Note: Keep in mind that with typical use the Soldering Tip Voltage Tester will need to have the 2 AAA batteries replaced every 1 to 2 years. This requires opening up the enclosure by removing the 2 screws, separating the enclosure halves, replacing the batteries, and then reassembling the enclosure.

Operation

Whenever the soldering iron tip contacts the cleaner or sponge (which is in contact with the sensor plate) one of the following conditions will occur:

Green light	Soldering Iron Tip grounded	OK
No lights	Soldering Iron Tip not grounded	Repair or replace Iron
	Sensor plate not installed or is not properly contacting the cleaner (sponge)	Correct the problem
	Soldering Tip Voltage Tester grounding wire not attached to a good ground.	Correct the problem
Red light	Soldering Tip Voltage Tester batteries need replacement (verify by testing as described above)	Correct the problem
	Soldering Iron Tip has greater than 1.25 Volts AC	Caution - do not use Iron on ESDsensitive hardware. Repair or replace Iron.

Limited Warranty

Menda expressly warrants that for a period of one (1) year from the date of purchase, Soldering Tip Voltage Tester will be free of defects in material (parts) and workmanship (labor). Within the warranty period, the product will be tested, repaired, or replaced at Menda's option, free of charge. Call our Customer Service Department at 909-627-2453 for a Return Material Authorization (RMA) and proper shipping instructions and address. Include a copy of your original packing slip, invoice, or other proof of purchase date. Any unit under warranty should be shipped prepaid to the Menda factory. Warranty repairs will take approximately two weeks.

Warranty Exclusions

THE FOREGOING EXPRESS WARRANTY IS MADE IN LIEU OF ALL OTHER PRODUCT WARRANTIES, EXPRESSED AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH ARE SPECIFICALLY DISCLAIMED. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean or repair products.

Limit of Liability

In no event will Menda or any seller be responsible or liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, users shall determine the suitability of the product for their intended use, and users assume all risk and liability whatsoever in connection therewith.

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