

Safety and Warnings

This meter is safe under the following conditions:

- Indoor use ONLY
- 0% – 80% RH
- 5° to 40 °C (40° to 110 °F)
- 110 – 240 ±10% VAC

WARNING Using this meter in a manner not specified by the manufacturer or outside environmental limits may impair the safety protection provided by the equipment.

DANGER Exercise care when plugging and unplugging power cords. They carry potentially lethal voltages. Never touch or use this equipment in or around water or in conditions where water has condensed on or around the equipment's AC power cord. Do not use this equipment if the unit or cord is damaged.

DANGER There are no user-serviceable parts in this equipment. Opening the back cover will expose potentially lethal voltages. Refer all repairs and concerns to SATIC.

WARNING Use only UL-approved, 2-conductor, 18AWG, NEMA 1-15P to IEC 320-C7, 120 or 250 VAC power cord. Do not use other power cords!

Warranty

We offer a one-year limited warranty from the date of purchase under normal use and service on all SATIC monitors. If you have questions about the function of your meter, please call.

Questions?

Call **1-866-997-2842** or
email info@saticusa.com
WEEKDAYS 9am-5pm MST

The SATIC EMI Line Meter is
manufactured in the USA

For information on our other products visit www.saticsheld.com

Technical Specifications

operating voltage

85 to 300 VAC

operating frequencies

50 or 60 Hz

voltage reading

85 to 250 +/- 2 VAC

instrument line noise range

0-2999 mV peak-to-peak

instrument sensitivity range

5kHz - 25MHz

weighted instrument sensitivity range

10kHz - 10MHz

display

Large 2.3" (easy to read) Graphic
Backlit Display

audio feedback

Demodulated EMI noise

physical

4.7" x 3.1" x 1" (12 x 7.9 x 2.5 cm)



SATIC EMI LINE MONITOR

User Manual



POWERED BY SATIC TECHNOLOGY



Description

The SATIC EMI Line Monitor measures electromagnetic interference that is commonly referred to as "dirty electricity" on AC power lines.

Once plugged in, the monitor immediately displays total line interference, also referred to as line noise, rated in millivolts as measured from peak-to-peak, ranging from 0-2999mV.

The unit records peak mV while also displaying real-time mV numbers. The LCD display adds a second visual indicator in the form of a visual swoosh-shaped line diagram indicating peak interference before and after filtering as well as displaying voltage.

A speaker adds an audio indication proportionate to the real-time line interference.

Ideal AC power reverses polarity at a fixed frequency rated in hertz of either 50Hz or 60Hz depending on country.

Additional non-primary frequencies are common in the modern world and come from three primary sources. The grid accumulates interference and noise as the AC travels over the grid to your location. Secondly, the lighting and electronic devices in our own homes and offices also add distortion. Finally, AC power lines often act as antennas for the plethora of wireless communication transmitters in our modern technological world.

The SATIC EMI Line Monitor accurately reads and displays the amount of interference on that specific phase of power and branch circuit of that specific outlet.

It is well documented that excessive line noise, distortion and harmonics result in additional heat, which is damaging to sensitive equipment, electronics and the biological.

The SATIC EMI Line Monitor leads the industry as readings are weighted to frequencies proven most damaging to the biological world and provides an accurate indication of when filters are recommended and demonstrates filter effectiveness.

Easy to use! There are no switches or menus to navigate. Simply plug in and begin testing.

Setup

Hold the meter firmly in one hand and plug the smaller, female end (IEC-320-C7) of the supplied cord into the base of the meter.



Plug the larger, male end (NEMA 1—15P) of the cord into the outlet. An adapter plug may be needed outside of the United States.



Speaker

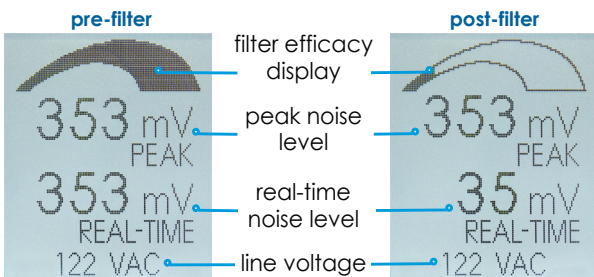
The speaker sound will build to its correct level over a three-second period. The meter will now automatically display the noise on the branch circuit being tested.

Reading the Color LCD Display

Filter efficacy display is a Satic-Swoosh shaped line diagram indicating the difference in interference levels before and after filtering.

Peak and real-time noise levels are displayed in millivolts ranging from 0-2999mV, measured peak-to-peak (RMS x 3.3) weighted from 10 kHz -10 MHz.

Line voltage is displayed in real-time.



Recording and Testing

SATIC recommends keeping a written, dated record of your EMI data. Data sheets included and available online.

Changing and inconsistent readings will be common. You may also see the noise change according to the time of day and throughout the week.

Unplug the meter when not actively measuring.

Expected noise levels and filtering EMI

Readings of 50mV and lower are desirable and considered low noise. EMI levels and readings greater than 50mV are categorized as "dirty electricity." Greater levels may cause interference and heat, damaging to sensitive electronics and electrical equipment. High levels of dirty electricity also result in electromagnetic pollution near devices and on AC power lines.

SATIC Pure Power & Power Perfect filters have been proven by rigorous 3rd-party validation to effectively reduce power line noise. Each is made in the USA using advanced electronic components to attenuate conducted radio frequencies, electromagnetic interference and harmonic distortion.