

# **EMF Meter**

840045

Instruction Manual

SPER  
SCIENTIFIC

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## INTRODUCTION

Your new meter measures electromagnetic emissions from power lines, computer monitors, television sets, video machinery and other electrical appliances. While the evidence of the carcinogenic effect of such electromagnetic emissions is still inconclusive, the USD EPA recommends “prudent avoidance” of excessive exposure over long periods of time.

**Sper Scientific** warrants this product against defects in materials and workmanship for a period of five (5) years from the date of purchase, and agrees to repair or replace any defective unit without charge. If your model has since been discontinued, an equivalent Sper Scientific product will be substituted if available. This warranty does not cover probes, batteries, or damage resulting from accident, misuse, or abuse of the product. In order to obtain warranty service, simply ship the unit postage prepaid to:

**SPER SCIENTIFIC LTD.**  
7720 East Redfield, Suite 7  
Scottsdale, AZ 85260  
Email: [info@sperscientific.com](mailto:info@sperscientific.com),  
Phone: (480) 948-4448

Be sure to include your name, address, phone number, and a detailed explanation of why you are returning the item. Mail your warranty card within 10 days or register on line at:  
[www.sperscientific.com](http://www.sperscientific.com).



## APPLICATION

This meter is designed to measure electromagnetic fields of extremely low frequency (**ELF**) between 30 to 300Hz. It is capable of measuring the electromagnetic field radiation intensity that is produced by electric transmission equipment, power lines, microwave ovens, air conditioners, refrigerators, computer monitors and video/audio devices to name a few.

The magnetic field measurement unit is Tesla (T), Gauss (G), milli-Gauss (mG) or micro-Tesla ( $\mu$ T).

## FEATURES

- micro-Tesla and milli-Gauss Measurement unit display .
- Data hold and maximum hold function.
- Low battery indicator

## BATTERY REPLACEMENT

1. Turn off the instrument.
2. Remove the battery cover.
3. Replace the battery.
4. Install the battery cover.

## NOTES & PRECAUTIONS

- Never touch the meter to electrical cables or other dangerous materials.
- To clean the EMF Meter use a soft dry cloth. Never use a wet cloth, solvents or water, etc.
- Operation Altitude: Up to 2000M.
- Operating Environment: Indoor use. This instrument has been designed for use in a pollution environment of degree 2.



**Caution:** this symbol indicates that equipment and its accessories are subject to a separate collection and correct disposal.





## SPECIFICATIONS

|  |  |
|--|--|
| <b>Display:</b>                              | 3.5 digits LCD, maximum reading 1999       |
| <b>Range:</b>                                | 200/2000 mG, 20/200 $\mu$ T.               |
| <b>Resolution:</b>                           | 0.1/1 mG or 0.01/0.1 $\mu$ T.              |
| <b>Frequency response:</b>                   | 30Hz to 300Hz.                             |
| <b>Sensor:</b>                               | Single Axis                                |
| <b>Accuracy:</b>                             | $\pm(2.5\% + 6 \text{ dgt})$ at 50Hz/60Hz. |
| <b>Over load:</b>                            | LCD display "OL".                          |
| <b>Sample rate:</b>                          | 2.5 times per second.                      |
| <b>Battery:</b>                              | 9V Battery                                 |
| <b>Battery life:</b>                         | Approximate 100 hours.                     |
| <b>Operating temperature &amp; humidity:</b> | 5°C to 40°C, below 80% RH.                 |
| <b>Storage temperature &amp; humidity:</b>   | -10° C to 60°C, below 70%. RH              |
| <b>Weight:</b>                               | 170g.                                      |
| <b>Dimensions:</b>                           | 130x56x38 mm.                              |
| <b>Accessories:</b>                          | User's manual, 9V battery, Carrying case   |

## PANEL DESCRIPTION






## MEASUREMENT PROCEDURES

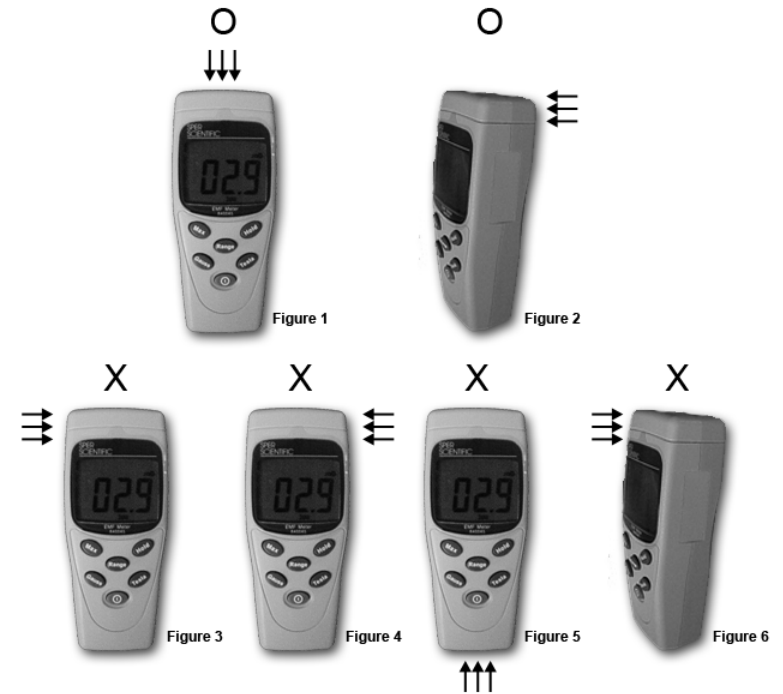
1. Press  to turn on the unit.
2. Select  for mG or  for  $\mu$ T.
3. Position the front (see Figure 1) of the meter to measure the electromagnetic waves. Change the measurement angle or position to obtain the highest reading value (see Figure 2 through Figure 6).
4. Read the measured value. The display of "OL" indicates an overload. Press  to select a higher range and repeat the measurement.

## MEASUREMENT PROCEDURES

*Note: Due to normal environmental magnetic fields, the meter may display a reading below 0.5mG prior to measuring. This is not a malfunction of the device.*

- To freeze the current reading displayed on the LCD, press . Press  again to resume active measurement.
- To retain the maximum value, press  and the reading value displayed on the LCD will continually update the maximum value.

## MEASUREMENT PROCEDURES



Arrow pointing direction indicates the direction of electromagnetic waves.

Figure 1 and 2 indicates the correct measurement direction for electromagnetic waves.

Figure 3, 4, 5 and 6 indicates the incorrect measurement direction for electromagnetic waves.