TRIFIELD®

TriField Model TF2 EMF Meter

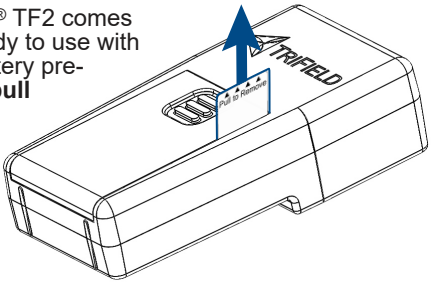
Quick Start Guide and FAQ

v1.9.5

www.trifield.com

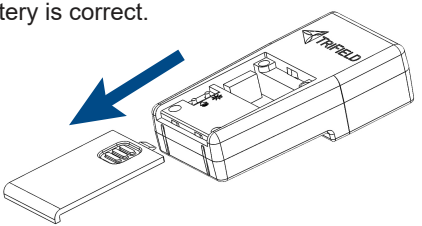
1. First Time Use and Battery Installation:

The Trifield Meter® TF2 comes complete and ready to use with 9-volt alkaline battery pre-installed. Simply **pull the plastic tab** shown here. The TF2 meter may now be used.



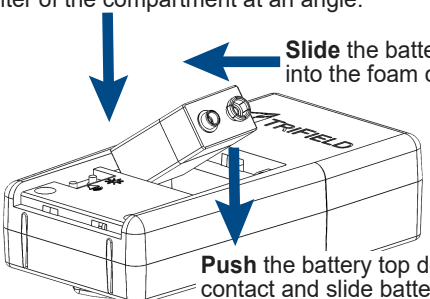
To replace the battery (when the battery icon in the upper right corner of the LCD display drops to zero bars).

Press and Slide the rear battery door downward. Note the battery polarity. If the battery is installed backwards, this will not harm the meter, but the meter will not work until the battery is correct.



Insert the bottom of the battery into the center of the compartment at an angle.

Slide the battery horizontally into the foam cushion.

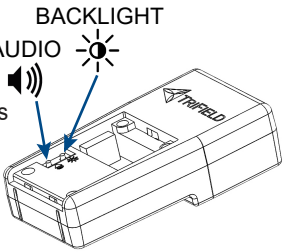


Push the battery top down to make contact and slide battery door upward again until the latch engages.

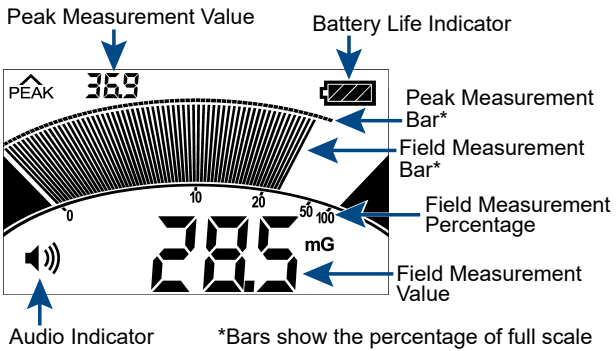
Typical battery life is 20 hours.

2. Audio and Light:

Audio and backlight buttons are located in the battery compartment. While the meter is on, you can press these green buttons to turn the backlight on or off and to turn the audio option on or off.



3. Reading the LCD Display:



*Bars show the percentage of full scale

4. Measuring Fields is simple ☺

For Magnetic (MAG) Fields (power lines, appliances, motors, and wiring in walls) turn the knob to **Standard MAG** or **Weighted MAG.** A typical home with low EMF will read less than 3.0 milligauss on Standard MAG and less than 5.0 milligauss on Weighted MAG. Covering the top of the meter will not affect magnetic readings.

For both Electric (ELEC) & Radio (RF) field measurement, hold the bottom half of the meter below this point. Do not block the top of the meter with your hand. Point the meter outward, away from your body. The reading may be higher when holding the meter than if it is set down. This is because the body concentrates the field. Therefore, hold the meter to get a true reading of your full exposure.

For Electric (ELEC) Fields, turn the knob to **Standard ELEC** or **Weighted ELEC**. Electric fields are high under power lines, and near wall outlets (mains), fluorescent lighting, light switches, power cords, and anything plugged into the wall, whether turned on or not. However, there should not be a high electric field reading on any metal surface of an appliance. A reading over 50V/m (volts per meter) on a refrigerator door or washing machine indicates the unit may not be grounded (earthed) properly. This is a shock hazard, if both the metal door and ground are touched at the same time.

On both Standard and Weighted ELEC, the center of a typical, electromagnetically quiet home or office space will show an electric field of less than 50V/m (volts per meter) on average over 24 hours.

For Radio/Microwave (RF) frequencies (cell phones, cell towers, WiFi routers, microwave ovens, and radio/tv stations), turn the knob to RF. Note that the brief pulses sent by transmitting cell phones and WiFi routers will be displayed in the PEAK measurement in the upper left corner of the LCD. A Radio quiet area will typically have less than 1.000 mW/m² (milliwatts per square meter) as a peak. The field measurement numbers should read less than 0.200 mW/m².

5. Frequently Asked Questions

Do I measure on Standard or Weighted or both?
Both. **Standard MAG or ELEC** measures the strength of the field regardless of frequency (40Hz-100kHz). **Weighted MAG or ELEC** emphasizes the higher frequencies above 60Hz. Higher frequencies will create more electric current inside the human body. For example, at 60Hz, the body is receiving field pulses 60 times per second, while at 120Hz, the body is receiving twice the number of pulses, or 120 times per second, though the field remains the same.

What is a 'safe' level?
Absolute safe levels for electromagnetic or radio frequency fields have not been established. However, according to our research, there have not been problems associated with staying below:

- *3mG Standard Magnetic or 5mG Weighted Magnetic*
- *50V/m Standard or Weighted Electric*
- *0.200 mW/m² RF (field measurement) or 1.000 mW/m² (peak measurement)*

**All above numbers are to be averaged over 24 hours.*

What is a 'safe' level? (con't)
Exposure Levels mentioned here are typical readings taken from homes and offices that are relatively low in total electromagnetic fields. Legal maximum exposure levels are MUCH higher than the levels described above. Some practitioners may recommend somewhat different levels.
The most useful measurements are done in locations where people spend a lot of time (near an electric alarm clock on a bedside table, for example). Measurements near a device or outlet (mains) are not important unless your head, chest, etc. are at that location for long periods.

When do I use Magnetic (MAG), Electric (ELEC) or Radio (RF)?
Typical magnetic fields are emitted by motors, appliances, wiring and power lines. Electric fields are emitted by power lines, lights, wall outlets, electrical switches, and ungrounded appliances. RF is found near transmitting cell phones and wifi routers, cell phone towers, microwave ovens, smart meters, wireless landline phones or walkie talkies, and radio/tv stations. Power company smart meters only pulse about once per minute. Watch for the peak number. In order to reduce exposure, avoid high-field areas or use shielding. Each type of field has simple, specific shielding techniques (to see our online guide @ www.trifield.com, click on support in the upper right, then click on shielding techniques).

What is the difference between the large numerals (field measurement) and the small numerals (peak measurement)?
The large numerals display the field measurement in real time and correspond to the field percentage indicator graph. The peak measurement captures the highest number and holds that number for 3 seconds or until a larger number is read and corresponds to the peak indicator graph. For reading magnetic or electric fields, the field measurement numbers work very well. For cell phones, cell towers, and wifi routers that emit in pulses, the peak measurement numbers are more useful.

Will this meter measure 5G cell phone signals?
Yes. This meter will measure current standard 4G (4th Generation) AND 5G (Fifth Generation) radio frequency band-widths from 600 MHz to 6GHz. Proposed (future) bandwidths from 24GHZ to 86GHz cannot be measured currently.

If the display reads MAG 1--.- or ELEC 1---- or RF 1-.---, what does this mean?
This indicates that measurement for that type of field is over-range, meaning fields above 100.0 on magnetic or 1,000 on electric or 20.000 on RF. This does not harm the meter.

What is the AlphaLab, Inc. warranty on the TF2 meter?
All AlphaLab, Inc. meters come with a one-year limited warranty from the date of purchase under normal use and service.

Our five-minute video covers the basics and answers most questions.

Scan to Watch Our Video

Or go to trifield.com and click Video in the upper right.

Want to talk to someone about what you are measuring?
Call Toll-Free (USA) 1-800-658-7030
(Or Call 1-801-487-9492)
WEEKDAYS 9AM-5PM MST
or email mail@trifield.com

The Trifield Meter® TF2 is Designed and Manufactured by:
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Phone: 801-487-9492 Email: mail@trifield.com