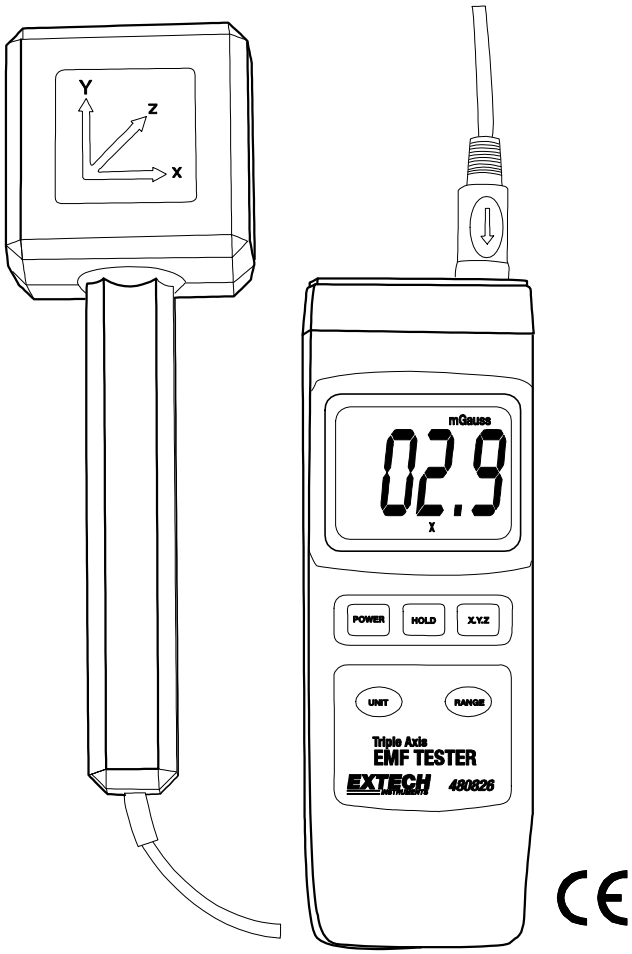
User Guide

EXTECH INSTRUMENTS
A FLIR COMPANY

Three Axis Electromagnetic Field (EMF) Meter

Model 480826



Introduction

Congratulations on your purchase of Extech's Model 480826 Electromagnetic Field (EMF) Meter. The Model 480826 is a battery powered meter that measures and displays EMF in Gauss and Tesla units with a frequency bandwidth of 30 to 300Hz. The 3 axis sensor allows for three component (xyz) measurement coverage. The Model 480826 is specifically designed to determine the magnitude of electromagnetic fields generated by power lines, computers electric appliances, televisions and many other similar devices. This meter is shipped fully tested and calibrated and, with proper use, will provide years of reliable service.

Meter Operation

1. Press the **POWER** button to turn the meter ON.
2. Press the **UNIT** button to select either µTesla or mGauss units.
3. If the approximate range of the measurement is known, select the suitable meter range using the **RANGE** button. For unknown measurements, start with the highest range and work down through the ranges until the optimum range is reached.
4. Hold the probe by its handle and move it slowly toward the object under test. If the LCD display is completely blank or if the low battery symbol appears on the LCD, check the 9V battery.
5. Notice that the field intensity reading increases as you move closer to a field.
6. Use the **XYZ** button to read the EMF measurement in the X, Y, or Z axis.
7. If the meter's display indicates a "1" on the left side of the LCD, an overload condition exists. This indicates that the measured radiation is higher than the capability of the currently selected range. Find the appropriate range using the **RANGE** button as described above.

Measurement Notes

Due to environmental electromagnetic interference the display may show small EMF values before testing. This is normal and due to the high sensitivity of the meter. Once a signal is detected by the sensor, the meter will display accurately.

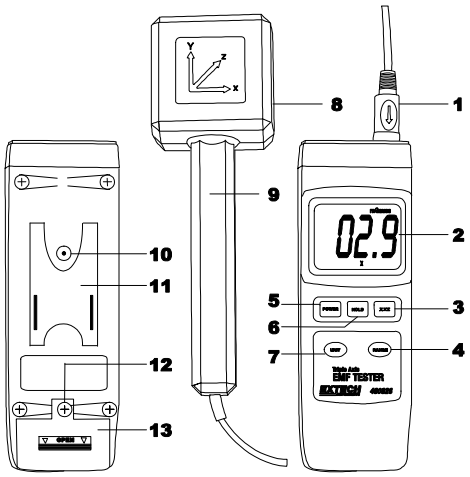
If the object under test is turned off in the middle of testing, the meter reading should fall close to zero unless a field from another source is detected.

Data Hold feature

To freeze a displayed reading, press the **HOLD** button. The DH display icon will switch on. To unlock the display and return to normal operation, press the **HOLD** button again. The DH indicator will switch off.

Meter Description

1. Sensor plug shown inserted in meter's sensor jack
2. LCD Display
3. XYZ axis select button
4. Manual Range button
5. Power button
6. Data Hold button
7. Unit select button
8. Sensor
9. Sensor grip handle
10. Tripod mount
11. Pull-out tilt stand
12. Battery compartment access screw
13. Battery compartment cover



Specifications

Display	3-1/2 digit (2000 count) LCD
Measurement rate	Approx. 0.4 seconds
Ranges and resolution	20µTesla (0.01) and 200mGauss (0.1) 200µTesla (0.1) and 2000mGauss (1) 2000µTesla (1) and 20,000mGauss (10) NOTE: 1 µTesla = 10 mGauss
Accuracy (stated for 50/60Hz)	± (4%FS + 3 digits) for 20µTesla and 200mGauss ranges
	± (5%FS + 3 digits) for 200µTesla and 2000mGauss ranges
	± (10%FS + 5 digits) 2000µTesla & 20,000mGauss ranges
Frequency bandwidth	30 to 300Hz
Over-range indication	"1___" is displayed
Operating Temperature/Humidity	Temperature: 0 to 50°C (32 to 122°F) RH: 90% max. from 0 to 35°C (32 to 95°F); 80% max. from 35 to 50°C (95 to 122°F)
Power source	9V Battery
Power consumption	Approx. 2.7mA DC
Dimensions	Meter: 195 x 68 x 30mm (7.6 x 2.6 x 1.2") Probe: 70 x 58 x 220mm (2.8 x 2.3 x 8.7")
Sensor Cable Length	1m (3 ft) approx.
Weight	460g (16.2 oz.) including probe and battery

EMF Exposure

The effect of EMF exposure is a modern day concern. At the time of this writing, to the best of our knowledge, no standards or recommendations exist regarding limits of EMF exposure. Exposure limits of 1 to 3mG have been suggested by several international bodies. Until evidence suggests that there is not a health risk associated with EMF exposure, common sense would dictate that a practice of minimal exposure be exercised.

Battery Replacement

When the low battery icon appears on the left corner of the LCD, the 9V battery has fallen to a critically low voltage level and should be replaced as soon as possible. The battery compartment cover is located at the bottom rear of the meter. Remove the Phillips head screw that secures the battery compartment and slide off the battery compartment cover. Replace the battery and secure the compartment cover before use.

You, as the end user, are legally bound (**Battery ordinance**) to return all used batteries and accumulators; **disposal in the household garbage is prohibited!**

You can hand over your used batteries / accumulators at collection points in your community or wherever batteries / accumulators are sold!

Disposal: Follow the valid legal stipulations in respect of the disposal of the device at the end of its lifecycle