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LATNEX HF-B8G

LATNEX HF-B8G High-Frequency EMF RF Meter User Manual

MODEL: HF-B8G | BRAND: LATNEX

1. Introduction

This manual provides detailed instructions for the safe and effective use of your LATNEX HF-B8G High-Frequency EMF RF Meter. The HF-B8G is a professional-grade device designed for measuring electromagnetic field (EMF) and radio frequency (RF) radiation across a wide spectrum, from 10 MHz to 8 GHz. It is ideal for detecting radiation from various sources including microwave leakage, smart meters, cellular towers, mobile phones, cordless phones, Wi-Fi, and Bluetooth devices. Please read this manual thoroughly before operating the device to ensure proper usage and to maximize its performance and longevity.

2. Safety Information

- **General Safety:** Always operate the device in accordance with the instructions provided. Do not attempt to modify or disassemble the meter, as this may void the warranty and pose safety risks.
- **Battery Safety:** Use only the specified 9V battery. Ensure correct polarity when installing. Remove the battery if the device will not be used for an extended period to prevent leakage. Do not expose batteries to excessive heat or dispose of them in fire.
- **Environmental Conditions:** Avoid using the meter in environments with extreme temperatures, high humidity, or corrosive gases. Keep the device away from strong magnetic fields to prevent interference with measurements.
- **Handling:** Handle the device with care. Avoid dropping or subjecting it to strong impacts.

3. Product Overview

3.1 Key Features

- Triple-axis EMF radiation measurement.
- Wide frequency range: 10 MHz to 8 GHz.
- Measurement units: mV/m, V/m, μ A/m, mA/m, μ W/m², mW/m², μ W/cm².
- Manual data memory (Max and AVG values).

- Adjustable alarm threshold with ON/OFF function.
- Digital clock and calendar function.
- Suitable for 5G network radiation measurement.

3.2 Components

The LATNEX HF-B8G meter consists of a main unit with a display and control buttons, and a detachable spherical sensor for tri-axis measurements.



Figure 1: LATNEX HF-B8G Meter with highlighted features.



Figure 2: Complete LATNEX HF-B8G kit with carrying case and manual.

4. Setup

4.1 Battery Installation

1. Locate the battery compartment cover on the back of the meter.
2. Slide or unscrew the cover to open.
3. Insert one 9V battery, ensuring the correct positive (+) and negative (-) terminals align with the markings inside the compartment.
4. Replace the battery compartment cover securely.

4.2 Initial Power-On

Press the power button (usually marked with an 'I' or power symbol) to turn on the device. The display will light up, and the meter will perform a self-test before entering measurement mode.

5. Operation

5.1 Basic Measurement

1. Turn on the meter using the power button.
2. Hold the meter with the spherical sensor pointed towards the area or source you wish to measure.
3. The display will show real-time radiation levels.

5.2 Unit Selection

Press the "UNIT" button to cycle through available measurement units: mV/m, V/m, $\mu\text{A/m}$, mA/m, $\mu\text{W/m}^2$, mW/m², $\mu\text{W/cm}^2$.

5.3 Max/AVG Hold Function

Press the "MAX/AVG" button to switch between instantaneous, maximum (MAX), and average (AVG) measurement display modes. This allows you to capture peak readings or observe average exposure over time.

5.4 Alarm Function

The meter features an adjustable alarm threshold. To set or activate the alarm:

1. Press the "SET" button to enter the alarm setting mode.
2. Use the navigation buttons (if available, or repeated presses of SET/UNIT) to adjust the alarm threshold value.
3. Confirm the setting. When the measured radiation exceeds this threshold, an audible alarm will sound.
4. Press the "ALARM ON/OFF" button to toggle the alarm function.

5.5 Tri-Axis Measurement

The spherical sensor is designed for isotropic (tri-axis) measurement, meaning it detects radiation from all directions (X, Y, and Z axes) simultaneously, providing a comprehensive reading regardless of the meter's orientation.

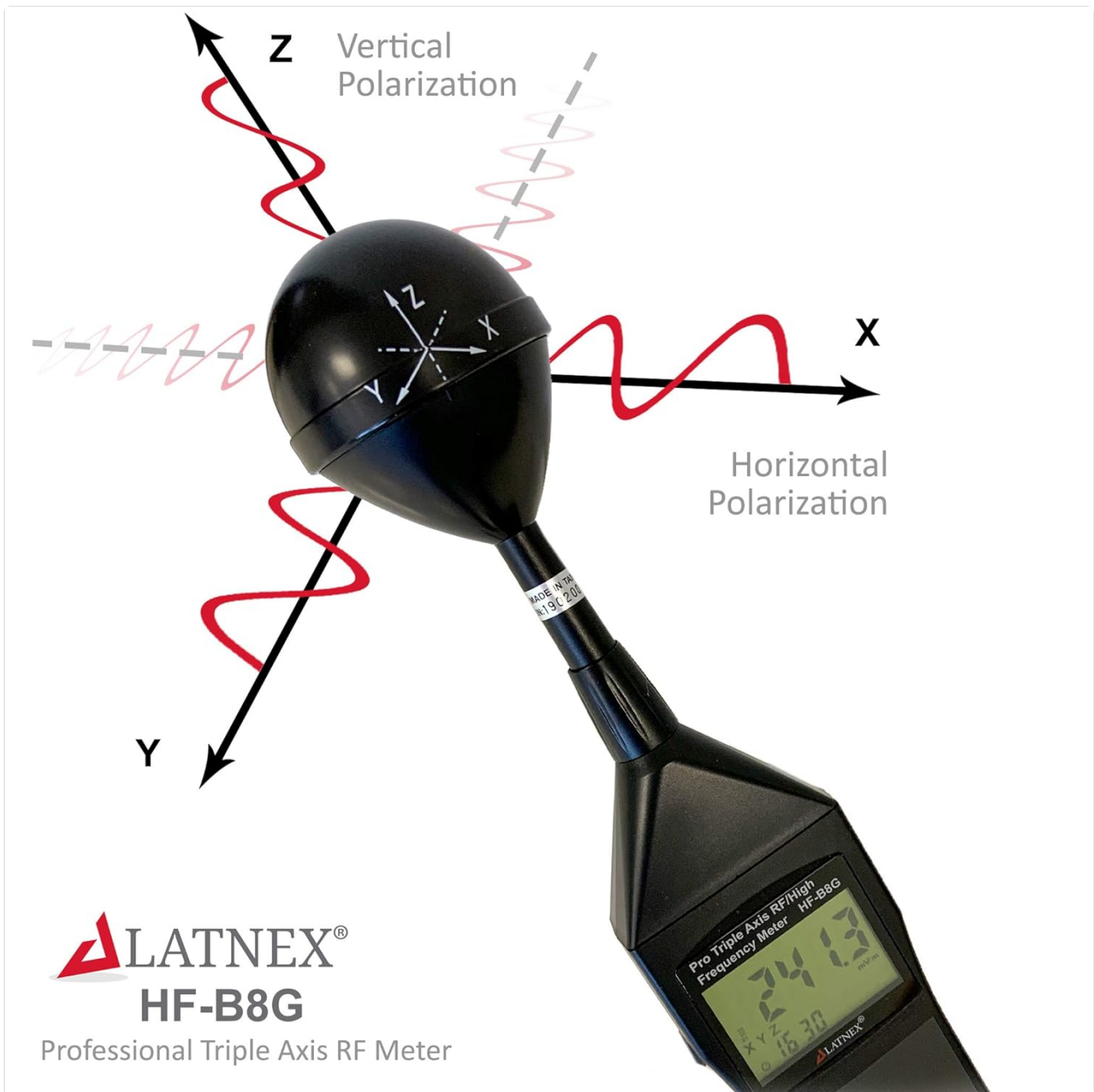


Figure 3: Tri-axis measurement principle.

6. Specifications

The following table details the technical specifications of the LATNEX HF-B8G meter:

9 Specifications

9.1 General specifications

- Display type: Liquid-crystal (LCD), 4-1/2 digits maximum reading 19999.
- Measurement method: Digital, Tri axis measurement.
- Directional characteristic: Isotropic, Tri axis.
- Measurement range selection: One continuous range.
- Display resolution: 0.1mV/m, 0.01V/m, 0.1μA/m, 0.1mA/m, 0.001μW/m², 0.01mW/m², 0.001μW/cm².
- Setting time: Typically 1.5s (0 to 90% measurement value).
- Sample rate: 1.5 times per second.
- Sample rate: 3 times per second.
- Audible alarm: Buzzer.
- Units: mV/m, V/m, μA/m, mA/m, μW/m², mW/m², μW/cm².
- Display value: Instantaneous measured value, maximum value, average value, or maximum average value.

Figure 4: Technical specifications from the user manual.

Feature	Specification
Display Type	Liquid-crystal (LCD), 4-1/2 digits, maximum reading 19999

Feature	Specification
Measurement Method	Digital, Tri-axis measurement
Directional Characteristic	Isotropic, Tri-axis
Measurement Range Selection	One continuous range
Frequency Range	10 MHz ~ 8 GHz
Display Resolution	0.1 mV/m, 0.01 V/m, 0.1 μ A/m, 0.1 mA/m, 0.001 μ W/m ² , 0.01 mW/m ² , 0.001 μ W/cm ²
Setting Time	Typically 1.5s (0 to 90% measurement value)
Sample Rate	1.5 times per second (Display), 3 times per second (Sensor)
Audible Alarm	Buzzer
Units	mV/m, V/m, μ A/m, mA/m, μ W/m ² , mW/m ² , μ W/cm ²
Display Value	Instantaneous measured value, maximum value, average value, or maximum average value
Power Source	1 x 9V battery (included)
Item Weight	400 g
Dimensions	37.2 x 23.1 x 11.4 cm
Certifications	CE, EN 61010-1

7. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the meter's exterior. Do not use abrasive cleaners or solvents.
- **Storage:** Store the device in a cool, dry place, away from direct sunlight and extreme temperatures. If storing for an extended period, remove the battery.
- **Battery Replacement:** Replace the 9V battery when the low battery indicator appears on the display. Follow the battery installation steps in Section 4.1.

8. Troubleshooting

Problem	Possible Cause	Solution
Device does not power on	Low or dead battery; incorrect battery installation	Replace the 9V battery; ensure correct polarity.
Inaccurate readings	Interference from other electronic devices; sensor obstruction; device malfunction	Move away from other electronics; ensure sensor is clear; contact support if issue persists.
Alarm not sounding	Alarm function is OFF; threshold set too high	Activate the alarm function; adjust the alarm threshold to a lower value.

Problem	Possible Cause	Solution
Display is blank or frozen	Software error; low battery	Turn off and restart the device; replace the battery.

9. Warranty and Support

Your LATNEX HF-B8G meter comes with a standard manufacturer's warranty. Please refer to the warranty card included in your product packaging for specific terms and conditions. For technical support, troubleshooting assistance, or warranty claims, please contact LATNEX customer service through the retailer where you purchased the product or visit the official LATNEX website for contact information.