

# EME Guard *Plus*

A broadband personal meter to monitor and record EMF exposure near antennas



- New ruggedized design for all weather conditions
- Customization of audio alarm thresholds
- Data storage software
- Accurate measurement with triaxial isotropic probe
- Frequency band from 1 MHz - 40 GHz

## Main features

### User profile

- Anyone working close to emitting antennas (broadcast, base station, radars ...)
- Installation and maintenance staff, broadcast, PMR and mobile phone operators or regulatory bodies employees

### Measurement capabilities

- Continuously records the electromagnetic field level and alerts user to potential over-exposure

### Frequency bands

- 1 MHz to 40 GHz

### Related recommendations

- FCC 96-326
- ICNIRP 2020
- Safety Code 6 2015
- 2013/35/UE Directive
- Exposure thresholds are user-definable and can be adapted to any recommendation

## System Configuration

### Equipment

- EME Guard Analysis software
- User manual
- Quickstart guide
- USB cable
- USB power adapter
- Case
- Armband

### Services

- Calibration report
- Initial calibration
- Additional calibration
- Training
- Extended warranty

■ Included □ Optional

## A user friendly and flexible instrument

The EME Guard Analysis software defines three user profiles:

- 1 User mode, enables download and visualization of measurements recorded in the embedded memory of the device.
- 2 Administrator mode, gives additional rights to configure the device to requirements (threshold definition) and access to maintenance level.
- 3 Super administrator mode, gives additional rights to upgrade the firmware of the device.

The Administrator can customize the device according to the thresholds defined by his own guidelines.

→ Only the Administrator is granted the authority to configure and customize the device.

**STEP 1:** Define the reference threshold that will trigger the visual alarm. The 6 warning lights are activated as soon as exposure level attains 6%, 12%, 25%, 50%, 100% and 200% of the chosen reference threshold.

**STEP 2:** Define the thresholds that will trigger the audio and vibrating alarms:

**User adjustable Audio alarm:** possibility to set up 2 thresholds with 2 configurable tones (continuous or beep).

**Over a 6 minute mean:** the alarm is triggered as soon as the mean calculated over the preceding 6 minutes exceeds the predetermined threshold. This 6 minute calculation is the reference duration which conforms to the ICNIRP recommendations.

Or:

**Instantaneous:** as soon as a measurement exceeds the threshold, the alarms are triggered.



The measurement files are downloaded on the PC's hard disc as binary files, thus ensuring the safety of historical data.

**STEP 3:** Define the recording period.

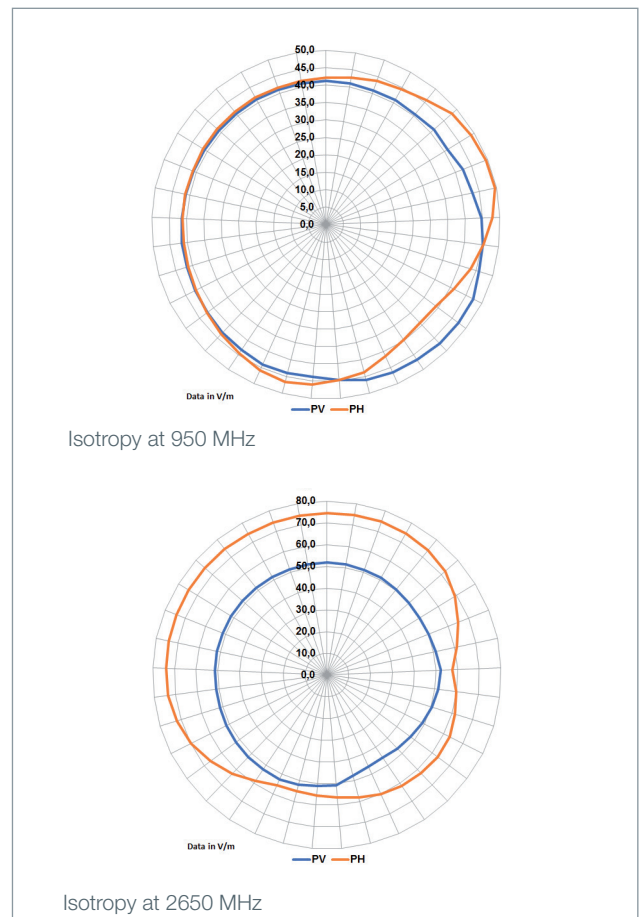
**STEP 4:** Start the device (ON/OFF button) and perform measurements.

**STEP 5:** Import the measurements in the form of secure files using a USB cable and display the results.



## High performance probe for accurate measurements

The EME Guard Plus is equipped with a triaxial probe which guarantees measurement isotropy. Each device comes with a calibration report. The performance of this sensor has been optimized to ensure maximum isotropy.



## A robust product

The device is equipped with an auto-test system which is launched when the device is switched on. This test ensures that the EME Guard *Plus* is functioning normally and that battery level is sufficient. In any case, if the battery level is too low, a yellow warning light alerts the user immediately.



### TECHNICAL CHARACTERISTICS

Frequency range	1 MHz – 40 GHz
Upper detection limit	350 V/m
Lower detection limit	5 V/m
Damage Level (CW)	> 1000 V/m

### MEASUREMENT UNCERTAINTY

Axial isotropy	+/- 1.5 dB (F < 3 GHz)
Frequency response	1 MHz – 6 GHz: +/- 4 dB 6 GHz – 15 GHz: +4 / +11 dB 15 GHz – 31 GHz: 0 / +4 dB 31 GHz – 40 GHz: -7 / 0 dB

### ALARM & CONFIGURATION

Reference threshold	Configurable by the user between 28 and 137 V/m
Alarm mode	Instantaneous or 6 min. mean
Visual alarm	6 LEDs 6%, 12%, 25%, 50%, 100% and 200% of the reference threshold
Audio alarm	Active (from 5 to 137 V/m) or de-activated 2 configurable alarm thresholds 2 types of configurable ringtone: continuous or beep
Vibrator	Activated (from 5 to 137 V/m) or de-activated
Low battery indicator	Yellow LED

### MEASUREMENT CONFIGURATION

Update period for display and alarms	1 sec
Measurement recording	Activated or de-activated
Recording capacity	Up to 493000 measurements
Recording period	1-255 sec
Duration of recording	<ul style="list-style-type: none"> <li>• min. 1 mn</li> <li>• max. <math>\frac{493000 \times \text{Recording period (s)}}{60}</math> minutes</li> </ul>

### CONDITIONS FOR USE

Temperature, humidity	-20°C to +55°C, 85% max. humidity Load mode: 0°C to +40°C
Battery	Rechargeable Lithium-Polymer battery 3.7 V 6000 mAh
Battery life	Non-recording mode : > 3 months (8 hours/day) Recording mode : > 300 hours (1 second recording period)
Type of link	USB (micro USB connector) - External communication - Battery charging

### MECHANICAL CHARACTERISTICS

Dimensions	Dimensions 172.62 x 59 x 35.5 mm (H, L, W)
Weight	275 g
Mechanical interface	Insert for tripod mounting

### HARDWARE REQUIREMENTS

Processor	PC Pentium 500 MHz or equivalent
Cable link	USB
Operating system	WIN7 / WIN8 / WIN10
Memory	256 MB RAM
Free space on hard disk	100 MB

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