

# EME Guard

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



- Accurate measurement with triaxial isotropic probe
- Customization of alarm thresholds
- Data storage software
- Robust, all weather design

## 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

- 27 MHz to 40 GHz

### Related recommendations

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

*New EU Directive*

## System Configuration

### Software

- EME Guard Analysis

### Equipment

- Case
- Belt clip
- USB cable
- Battery charger

### Accessories

- Holster

### Services

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

■ Included  Optional

## **/** A user friendly and flexible instrument

The EME Guard Analysis software defines two user profiles:

- ❶ Administrator mode, gives additional rights to configure the device to requirements (threshold definition).
- ❷ User mode, enables download and visualization of measurements recorded in the embedded memory of the device.

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

> Only the Administrator is given right of access to device configuration and customize.

**STEP 1:** Define the reference threshold that will trigger the visual alarm. The 4 warning lights are activated as soon as exposure level attains 25%, 50%, 75% and 100% of the chosen reference threshold.

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

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.

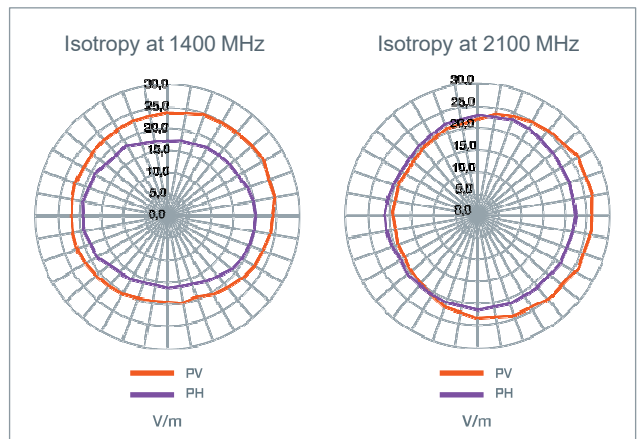
**STEP 4:** Start the device (ON/OFF button) and perform measurements.

**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 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 is functioning normally and that battery level is sufficient. In any case, if the battery level is too low, an orange warning light alerts the user immediately.

The case is metallic and ensures an IP55 Ingress Protection level, ideal for outdoor use.



### **TECHNICAL CHARACTERISTICS**

Frequency range	27 MHz – 40 GHz
Upper detection limit	200 V/m
Lower detection limit	5 V/m
Damage Level(CW):	> 4000 V/m (> 29 dB above standard)

### **MEASUREMENT UNCERTAINTY**

Axial isotropy	+/- 1 dB at 1400 MHz +/- 2 dB at 2100 MHz
Frequency response	27 MHz - 2.5 GHz : +/- 3 dB 2.5 GHz - 6 GHz : + 6/0 dB 6 GHz - 10 GHz : + 12/+ 6 dB 10 GHz - 20 GHz : + 10/0 dB 20 GHz - 40 GHz : + 8/- 3 dB

### **ALARM & CONFIGURATION**

Reference threshold	Configurable by the user 20, 40, 60, 80, 100 or 140 V/m
Alarm mode	Instantaneous or 6 min. mean
Visual alarm	4 LEDs 25%, 50%, 75% and 100% of the reference threshold
Audio alarm	Activated (from 5V/m to 137V/m) or de-activated
Vibrator	Activated (from 5V/m to 137V/m) or de-activated
Low battery indicator	Orange LED

### **MEASUREMENT CONFIGURATION**

Update period for display and alarms	1 sec
Measurement recording	Activated or de-activated
Recording capacity	30 000 measurements MAX
Recording period	1-255 sec
Duration of recording	<ul style="list-style-type: none"> <li>• min. 1 mn</li> <li>• max. Duration in mn = <math>\frac{30\,000 \text{ points} \times \text{recording period (sec)}}{60}</math></li> </ul>

### **CONDITIONS FOR USE**

Temperature, humidity	-10 to 50°C, 85% max. humidity
Power supply of battery charger	110 - 240 VAC, 50 - 60 Hz
Battery	Lithium-Ion
Battery life	> 100 hours
Type of link	USB

### **MECHANICAL CHARACTERISTICS**

Dimensions	172x60x35 mm (H,L,W) without belt clip
Weight	320 g
Protection	IP 55

### **HARDWARE REQUIREMENTS**

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





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