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:

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

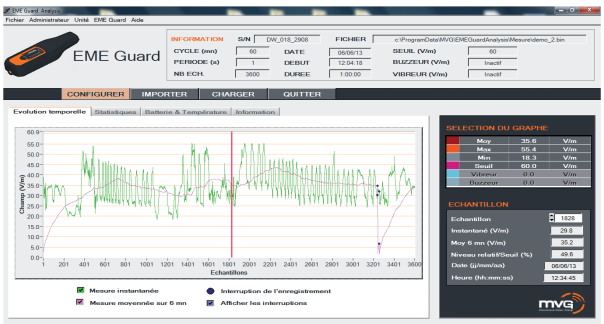
STEP 1: Define the reference threshold that will trigger the visual alarm. The 6 warning lights are activated as soon as exposure level attains 6%, 12%, 25%, 50%, 100% and 200% of the chosen reference threshold.

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.

Alarm front view

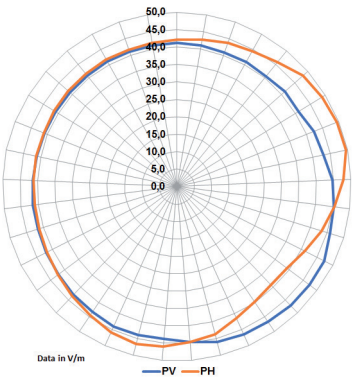
The measurement files are downloaded on the PC's hard disc as binary files, thus ensuring the safety of historical data.

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.

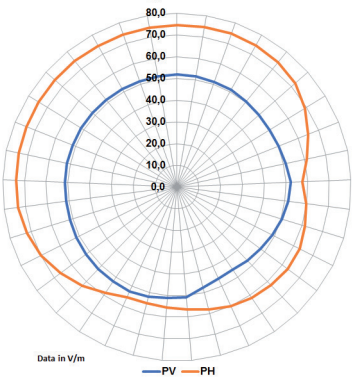


High performance probe for accurate measurements

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.



Isotropy at 950 MHz



Isotropy at 2650 MHz

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	
• min.	1 mn
• max.	$\frac{493000 \times \text{Recording period (s)}}{60}$ minutes

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

MVG - Testing Connectivity for a Wireless World

The Microwave Vision Group offers cutting-edge technologies for the visualisation of electromagnetic waves. Enhancing the speed and accuracy of wireless connectivity testing, as well as the performance and reliability of anechoic and EMC technologies, our systems are integral to meeting the testing challenges of a fully connected world.

WORLDWIDE GROUP, LOCAL SUPPORT

Our teams, in offices around the world, guide and support you from purchase, through design, to delivery and installation. Because we are local, we can assure speed and attention in project follow through. This includes customer support and maintenance once the system is in place. For the exact addresses and up-to-date contact information: **www.mvg-world.com/contacts**

Contact your local sales representative for more information

LBATECHNOLOGY®

3400 Tupper Dr. | Greenville, NC 27834 | 252-757-0279 | www.lbagroup.com

Domestic Orders:
Contact LBA Group
lbagrp@lbagroup.com

International Orders:
Contact LBA Group
sales@lbagroup.com