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

New EU Directive

- Exposure thresholds are user-definable and can be adapted to any recommendation

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.

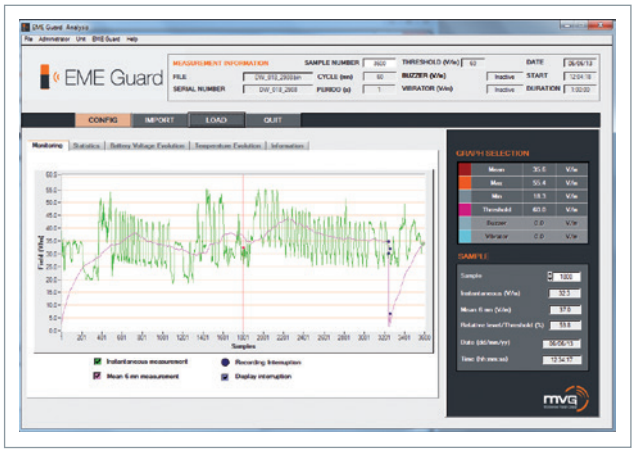
STEP 1: Define the reference threshold that will trigger the visual alarm. The 4 warning lights are activated as soon as exposure level attains 25%, 50%, 75% and 100% of the chosen reference threshold.

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.

Alarm front view

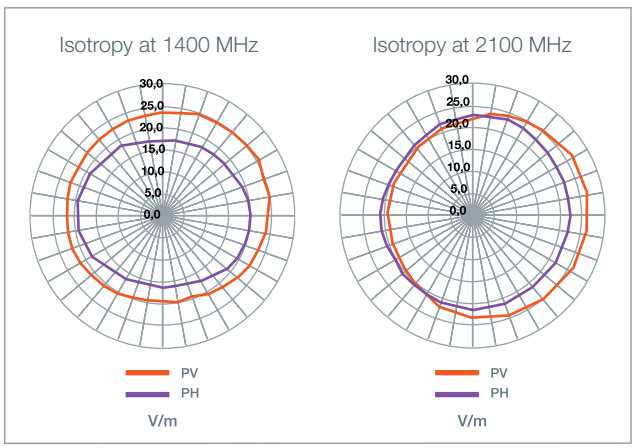
The measurement files are downloaded on the PC's hard disc as binary files, thus ensuring the safety of historical data.

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 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 5 V/m to 137 V/m) or de-activated
Vibrator	Activated (from 5 V/m to 137 V/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	
• min.	1 mn
• max.	Duration in mn = $\frac{\text{30 000 points X recording period (sec)}}{60}$

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	172 x 60 x 35 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

Worldwide Locations

The Microwave Vision Group is continuously investing in research and production facilities. We are also expanding our presence with new offices and technical support centers to ensure local support for our customers.

MICROWAVE VISION
Corporate Headquarters
47, boulevard Saint Michel
75 005 Paris, FRANCE
Tel: +33 (0)1 75 77 58 50
Fax: +33 (0)1 46 33 39 02

MICROWAVE VISION
Limited Hong Kong
Suite 702, 7th floor
Cyberport 1
100 Cyberport Road
Pok Fu Lam, HONG KONG
Tel: +852 2989 6128
Fax: +852 2989 6108

MICROWAVE VISION Italy
Via dei Castelli Romani, 59
00040 Pomezia (Rome),
ITALY
Tel: +39 06 89 99 53 11
Fax: +39 06 89 99 53 24

MICROWAVE VISION
Japan
#101 Confort Murashi-Nakahara, 2-10-32,
Shimokodanaka,
Nakahara-ku, Kawasaki-city
211-0041 Kanagawa, JAPAN
Tel: +81 44 948 9301
Fax: +81 44 766 2775

SATIMO
Corporate Headquarters
17, avenue de Norvège
91140 Villebon Sur Yvette,
FRANCE
Tel: +33 (0)1 69 29 02 47
Fax : +33 (0)1 69 29 02 27

SATIMO USA
2105 Barrett Park Dr.,
Suite 104
Kennesaw, GA 30144,
USA
Tel: +1 678 797 9172
Fax: +1 678 797 9173

MICROWAVE VISION
Sweden
P.O. Box 35
44121 Alingsas
Gothenburg
SWEDEN
Tel: +46 31 402430
Fax: +46 31 402430

SATIMO Bretagne
Technopole Brest Iroise, Z.I. du Vernis,
225 rue Pierre Rivoalon,
29200 Brest, FRANCE
Tel: +33 (0)2 98 05 13 34
Fax: +33 (0)2 98 05 53 87

ORBIT/FR Corporate
Headquarters
506 Prudential Road
Horsham, PA 19044, USA
Tel: +1 215 674 5100
Fax: +1 215 674 5108

ORBIT/FR Israel
1 Gesher Ha-Ets St.,
P.O. Box 12096, 3877701
Emek Hefer Industrial Park,
ISRAEL
Tel: +972 74 713 0130
Fax: +972 4 6247375

ORBIT/FR Germany
Johann-Sebastian-Bach-Str. 11
Vaterstetten 85591,
GERMANY
Tel: +49 (0)8106 99606 0
Fax: +49 (0)8106 99606 77

Advanced
Electromagnetics Inc
(AEMI)
9311 Stevens Rd,
Santee (San Diego),
CA 92071-2809, USA
Tel: +1 619 449 9492
Fax: +1 619 449 1553

Rainford EMC Systems
Haydock Lane, St. Helens,
Merseyside WA11 9TN,
UNITED KINGDOM
Tel: +44 (0)1942 296 190

mvg
Microwave Vision Group

Contact your local sales representative for more information
sales@microwavevision.com
www.microwavevision.com/rfsafety