

NARDA AREA MONITORS



SAFETY IN ELECTROMAGNETIC FIELDS

MONITORING SAFETY

Communication and energy availability are at the base of world development and progress. In every Country, we see rapid development of complex infrastructures where wireless communications – mobile phones, services, radio, television, internet etc.– and power distribution networks are to the fore.

Consequently, in the territory there is a growing concentration of technologic installations based on the electromagnetic phenomena – antennas and power lines – that, if on the one hand are intended to satisfy the growing demands of individuals and of society, on the other must respond to precise safety requirements, as foreseen by national and international provisions, and with particular reference to

population or worker

exposure to the electromagnetic fields in said installations. However, in spite of respecting the technical provisions on safety, there is a tangible “risk perception” that, when not based on objective facts, but on an emotional or subjective basis, produces what can be even considerable opposition to the realization of infrastructures by movements and public and private organizations. Consequences may lead to expensive and time-consuming legal issues where costs are then born by the entire community.



NARDA AREA MONITORS: SAFETY IN ELECTROMAGNETIC FIELDS

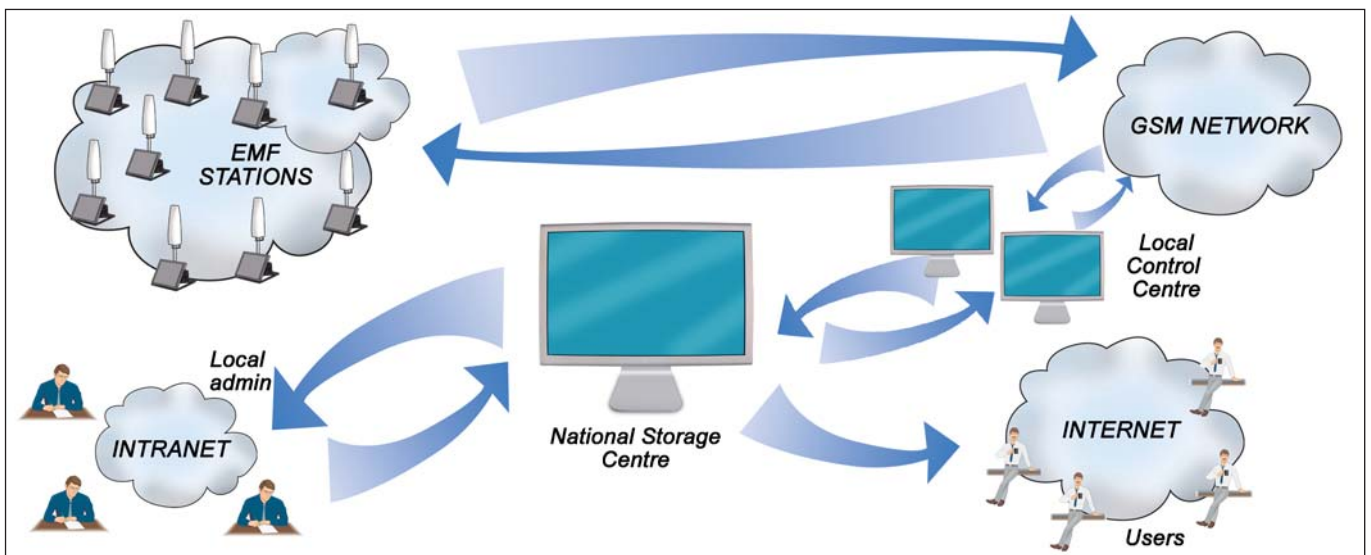
We can say that the institutional duties of the authorities in each Country include public health protection as well as assuring correct development and progress for society. If the issues mentioned exist, competent authorities can decide to start information campaigns to provide public opinion with accurate, valid data that public opinion itself is asking for. In the case of electromagnetic fields, it has been largely proven that correct monitoring, evaluation and publishing campaigns re exposition data can consistently reduce legal arguments and re-establish a climate of confidence

towards institutions that will then provide a further demonstration of transparency and care for the citizen.



FIGURES SPEAK BY THEMSELVES

The efficacy of monitoring networks, together with communication campaigns focused on electromagnetic fields, is recognized not only by the experts but mainly by citizens and service operators.







Links to monitoring sites

Italy

http://www.arpa.emr.it/pubblicazioni/cem/generale_54.asp

<http://www.monitoraggio.fub.it/areadati/areadati.php?regione=2&vai=Vai>

<http://www.osservatoriocampisalentina.it/dataView/dataView.php?comune=Carmiano>

Switzerland

http://rems.ti-solutions.ch/index.php?station_id=49

<http://www.e-smogmessung.ch/i4Def.aspx?tabindex=0&tabid=50>

UK

<http://www.oxford.gov.uk/environment/monitoring-radiation.cfm>

<http://www.portsmouth.gov.uk/living/3358.html>

<http://www.stroud.gov.uk/docs/cassiopea.asp>

Portugal

http://www.lx.it.pt/monit/index_en.htm

Egypt

<http://www.projecthorus.com> <<http://www.projecthorus.com/>>

South Africa

http://www.vodacom.co.za/about/base_station_safety/measure-ment_data.jsp

Greece

<http://pedion24.physics.auth.gr/info.php?lang=en>

MONITORING THE ELECTROMAGNETIC FIELDS

Like every other physical quantity referred to the environment, control of EMF requires specific sensors installed in the places where it is advisable to monitor, permanently or periodically, the EMF level. Examples are public places like schools, hospitals, streets and squares, private residences; areas near electric power lines and installations; work places.

The Narda EMF Area Monitors measure the EMF levels present in the installation site then store the data permanently and safely in their internal memory. This memory can be downloaded from a distance at any time through the GSM mobile phone network. SMS warnings can also be sent to preset numbers whenever field values exceed preset limits.

By using Narda EMF Area Monitors, efficient EMF monitoring systems meeting all requirements can be set up, from a local community to nationwide coverage.

CONTINUOUS INFORMATION

The purpose of the monitoring networks is also to publish data; this is done by the Authority in charge, either on Internet or through the creation of data-bases for successive investigation. Whatever the choice, the data provided by Narda EMF Area Monitors is accurate and reliable.

MEASUREMENTS WHERE NEEDED

It is often necessary to evaluate the EMF generated by installations situated in “work places”, not accessible to the public, to evaluate the impact on surroundings, with particular respect to the residential structures that may coexist with them: examples are power lines and public and private telecommunication installations, to show existing radiation before and after installation of new services.

The EMF Area Monitors are focused to combine all characteristics needed for: autonomy, outdoor operation, portability, robustness, low operating costs.

There are different approaches for distribution of EMF Area Monitors:

- Geometric, in arrays forming a grid over the place of interest, with an Area Monitor located at each cross-intersection;
- Based on measurement campaigns on “hot spots” to monitor a defined period of time;
- Referred to concern: an EMF Area Monitor is installed wherever people feel unsafe.





IDENTIFY AND CONTROL

Some Narda Area Monitor models not only allow logging of the total EMF value present in a determined site, but also enable us differentiate which frequency bands and services do really contribute to it.

For example, in a site with several antennas installed, you can differentiate each of the various mobile phone services (GSM, UMTS), the FM -TV broadcasts, as well as short, medium and long wave stations.

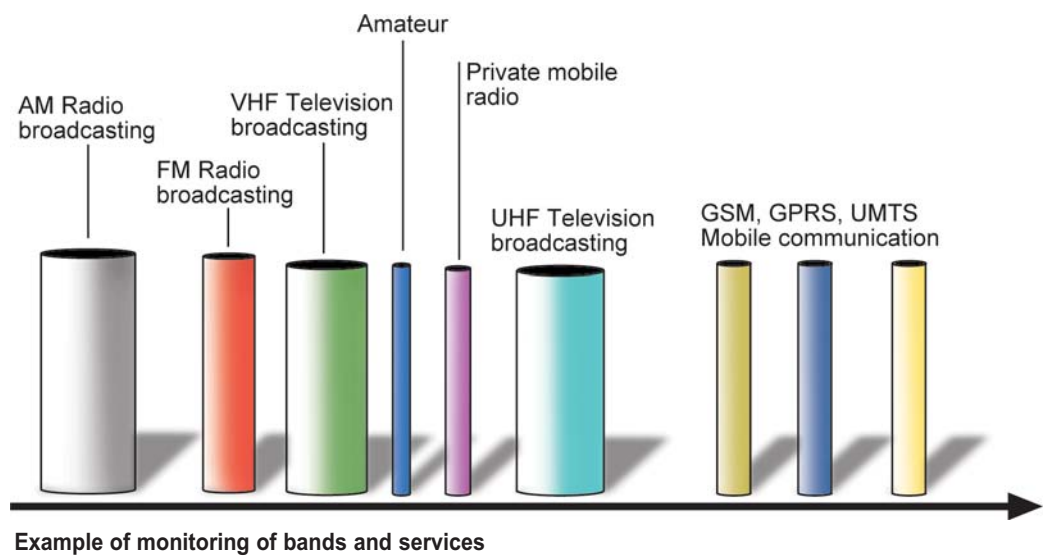
This way, besides simple evaluation of environmental impact, you can verify if specified emission values for each EMF source are respected long term.

Narda Area Monitors are definitely the most powerful measurement tool with which service companies, authorities and mobile providers can carry out longterm evaluation at client locations.

READY TO GO

Standard Narda PC software brings the Narda Area Monitors into service immediately. For those large system applications, customers have remote controls available to integrate measurements and controls of the Narda Area Monitors into their own platforms







AMS-8060: THE EASY WAY TO FINE DETAIL

The selective AMS-8060 Area Monitor represents the state-of-art for technical characteristics and operating possibilities. Equipped with solar panel back-up and connected to the control centre by GSM, it can be easily installed wherever required to monitor up to 20 different EMF sources; the latter's frequency bands can be programmed and modified directly from the control centre.



AMB-8057: MINIMUM ENCUMBRANCE, MAXIMUM AUTONOMY

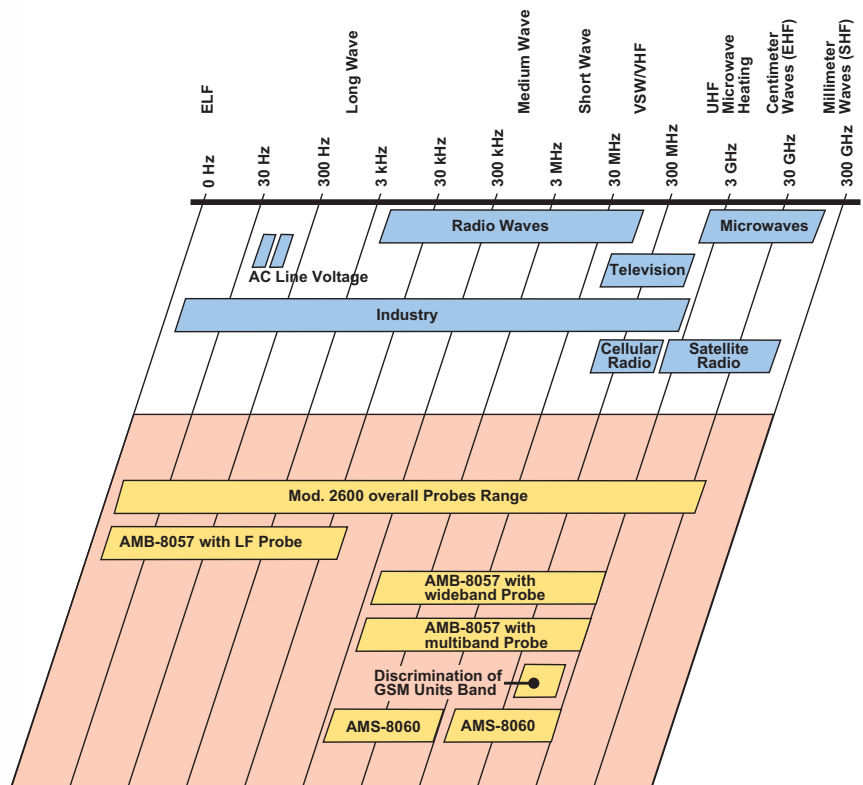
Size, weight and energy demand of the AMB-8057 Area Monitor are limited to the minimum possible, enabling it to be powered permanently by a solar panel or, alternatively, by a disposable battery where sunlight is not available (e.g. indoors).

Operation flexibility is assured by the available range of sensors: single-band, tri-band, four-band. The sensors can be replaced in the field. GSM connects it to the control centre.

COMPLETENESS AND FLEXIBILITY

A few basic models, equipped with a wide choice of sensors, can meet any EMF monitoring demand.

The following table gives the most common applications, divided by frequency band and type of field measurement. According to international standards and scientific studies, the EMF generated by a source must be evaluated in its electric or magnetic component, depending on frequency involved.



2600: THE MULTI-ROLE THAT FLIES HIGH

The 2600 Area Monitor is the model which offers the largest number of sensors: from very low frequencies of the mains up to microwaves; it is the ideal solution for those who plan to use the units time and again and in the most varied applications. Power supply is provided by a solar panel or, alternatively, by an external source. The sensors can be replaced in the field. GSM connects it to the control center.



ACCURACY BEHIND THE SCENES

Creating EMF measuring instruments has complex aspects meaning the manufacturer has to have great experience and very sophisticated laboratory instrumentation.

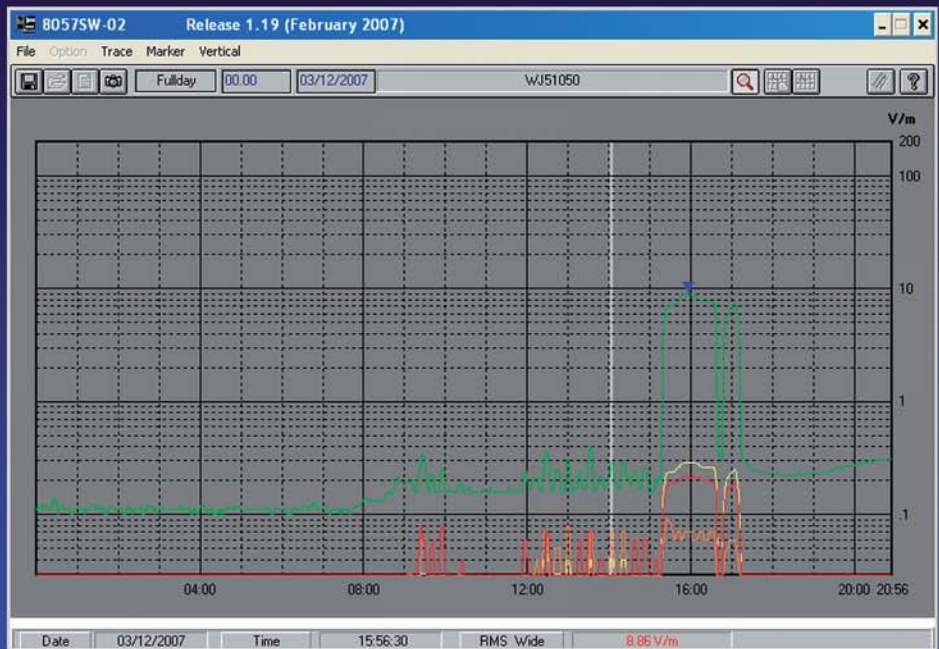
The measurement core consists in EMF sensors of the isotropic type, hence not influenced by the direction the signals come from. These sensors must combine all characteristics required for perfect in-field operations: sensitivity, accuracy, constant performances in time, mechanic and electric robustness.

Because EMF values can vary considerably in practical applications, Narda sensors are created to combine great sensitivity with extreme overloading capacity.

Narda Area Monitors are equipped with EMF sensors that are the cutting-edge of technology, result of several decades of experience in this field. Their characteristics are certified by the Narda Calibration Laboratory, whose metrologic traceability is recognized internationally .

Periodical control of calibration is simplified because the sensor check is sufficient for most Area Monitors. The sensor can be easily disconnected and reinstalled by the user itself .

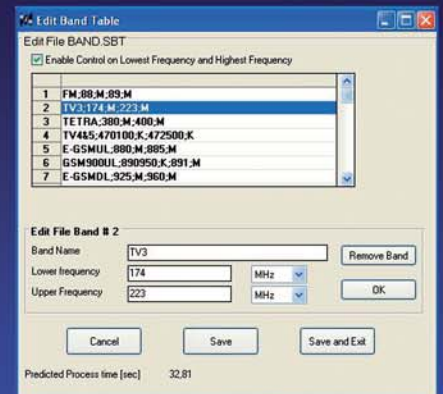




RECORDING WHAT YOU HAVE

Narda Area Monitors are supplied with a powerful PC utility, useful for managing your monitoring network easily and immediately:

- create and manage the settings of each unit
- connect to units manually or automatically
- download data to the PC
- check operating status of field units
- display graphs of the levels vs time
- export data to other applications
- handover measurement data to a database for representation in Internet





LOW-FREQUENCY TEST EQUIPMENT

Test equipment for electric and magnetic fields from DC up to several hundred kilohertz. For power utility companies, electric railroads, industry. Standard, compliant evaluation, e.g. conforming to the EN 50366 standard for domestic appliances.



BROADBAND HIGH-FREQUENCY TEST EQUIPMENT

NBM-500 - the new series that covers practically every application between 100 kHz and 60 GHz.



SELECTIVE HIGH-FREQUENCY TEST EQUIPMENT

SRM-3000 - the tester that selectively detects and measures every source in the range from 100 kHz to 3 GHz. With a sensitivity that can still detect individual telecommunications channels, even inside buildings.

EVERYTHING YOU NEED FOR SAFETY IN ELECTROMAGNETIC FIELDS

Narda Safety Test Solutions is a global leader in the development and production of measuring equipment for electric, magnetic, and electromagnetic fields. The fact that we own around 95% of all published patents for measuring such fields bears witness to this. Choosing a Narda instrument is choosing a product from a company renowned for innovation, that is specialized in EMF (measurements for safety in electromagnetic fields), and that is continually building upon its reputation in this sector.

THREE LOCATIONS - ONE GOAL

Our three sites are located at Hauppauge, Long Island (USA), Pfullingen (Germany), and Cisano (Italy). Our goal is to provide you, the user, with products tailored exactly to your needs, using the highest quality in cutting-edge technology.



PERSONAL MONITORS

Worn on the body, these devices give reliable warning of excessive radiation levels.



AREA MONITORING STATIONS

For permanent monitoring of the field strength situation. Frequency-selective or broadband. With data transfer via mobile phone.

WHAT WE OFFER

Our comprehensive range of products for human safety in electromagnetic fields (EMF) includes broadband measuring instruments, selective measurement equipment, monitoring stations, and personal radiation monitors. Under our PMM brand, we offer instruments for assessing the electromagnetic compatibility (EMC) of devices. As our customer, you can benefit from our program of services, including servicing, calibrating, and training.



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