



## RadMan / RadMan XT RF Personal Monitors

- ◆ 1 MHz to 40 GHz
- ◆ Shaped Frequency Response Matched to Your Standard
- ◆ Multi-Function Tool – Personal Monitor, Leakage Detector, Simple Measurement Instrument
- ◆ Simultaneous E- and H-Field Measurement
- ◆ Data Logger Records Continuously (Radman XT)
- ◆ Four LED Level Indicators
- ◆ Isotropic Response when used Off the Body
- ◆ Optical Interface can be used “Real Time”
- ◆ Patented Design



### Description

All RadMan monitors share the same compact housing, dual electric (E) and magnetic (H) field detection, and wideband shaped frequency response. The “shaped” frequency response means that the monitor has frequency-selective sensitivity that matches your standard – all major standards are supported. The alarm criteria and the output information are incorporated in the “Percent of Standard.”

Narda Safety Test Solutions’ latest RF personal monitor is the Series ESM-30 RadMan XT. This “Extended Technology” monitor is very similar to the ESM-20 Series monitors that have been available since 1997 with one very important difference: the RadMan XT continuously records the field strength that it measures. Since the monitor has both electric and magnetic (E and H) field sensors, it records six different values for every data point: Maximum, Minimum, and Average values during the averaging period for both the E field and the H field. The time and date of each data point is also stored. This data may be retrieved at any time using the optional ESM-TS Interface Set which includes a fiber optic cable, adapter circuit, and software. The software permits the user to download the data that the monitor has collected, analyze the data, and set the monitor’s internal clock. The data logger is always on – it simply stores the newest data in place of the oldest data.

All RadMan monitors are multi-function tools. With the RF absorber cap off, the RadMan functions as a simple instrument with isotropic detection and four level indicator LEDs that provide an approximate indication of field strength. The RadMan can also be used as a simple area monitor. The fiber optic interface and available software can be used to continuously monitor the detected field strength levels from both the electric field and magnetic field sensors.



## RadMan Personal Monitors

### Applications

RadMan RF monitors are generally usable over their entire rated frequency range with one limitation:

Standard RadMan monitors are not recommended for use with radar signals. "Fast" RadMan monitors are available for applications where peak detection of radar signals is desired. See Detecting Peak Radar Signals on the next page.

There are two series of RadMan RF monitors. Within each series, the specifications are essentially identical except for the sensor "shaping." Each specific standard or guidance requires some differences in the sensor design and calibration. The specified frequency range of each model can vary depending on the difficulty in shaping the frequency response of the monitor to match the standard. The two RadMan series are:

#### RADMAN XT

This is the full-featured RadMan monitor. It operates over the maximum frequency range and contains both E and H field sensors. Monitors are generally shaped to match the higher level of two-tier standards, i.e., the "Controlled," "Occupational," or "RF Worker" limits. The data-logger can log more than 1,600 sets of data that can be used to analyze personnel exposures in order to improve operations. Or it can be used in the same way a Flight Data Recorder is used on board an aircraft – the logged data can be reviewed whenever there is a need to determine an individual's level of exposure.

#### RADMAN

This series is identical to the full-featured RadMan XT except they do not include the data-logging capability.

### Detecting Peak Radar Signals

Most RadMan XT and RadMan monitors use a one-second averaging time for their alarm criteria. "Fast" Radman models (see Model Selection Guide) have a 30-millisecond averaging period for the electric field sensor. These monitors detect the peaks of sharp, narrow radar pulses. The ICNIRP standard, for example, requires peak detection when the ratio of peak to average power is greater than 30 dB.

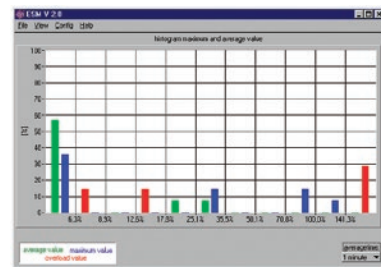
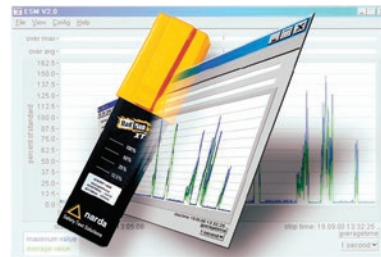
### RadMan PC Interface Set

Allows you to monitor both E and H fields in real time via fiber optic cable when monitor is used off the body. You can download and analyze logged data from RadMan XT monitors.

Interface Set ESM-TS includes:

- Windows® compatible User's Software
- Interface Module that connects directly to the COM port of your PC
- Fiber optic cable to connect module to RadMan

**ONE TRANSFER KIT PER LOCATION IS RECOMMENDED (P/N 2251/90.50)**





### Model Selection Guide

Select the model based on standard/guidance and the product series (RadMan XT or RadMan). The frequency rating is for the E-field sensor. The H-field sensor is rated 1 MHz to 1 GHz for most models. Exceptions are noted.

STANDARD / GUIDANCE	RADMAN XT	RADMAN
BGV B11, 2001, Exp. 1 Occupational	<b>2251/01 (2251/51 fast)</b> E-Field 1 MHz to 40 GHz H-Field 1 MHz to 1 GHz	<b>2250/51 (2250/01 fast)</b> E-Field 1 MHz to 40 GHz H-Field 1 MHz to 1 GHz
Canada Safety Code 6 (2009) Controlled	<b>2251/10</b> E-Field 1 MHz to 40 GHz H-Field 1 MHz to 1 GHz	<b>2250/60 (2250/10 fast)</b> E-Field 1 MHz to 40 GHz H-Field 1 MHz to 1 GHz
ENV 50166-2 Occupational	<b>2251/04</b> E-Field 1 MHz to 40 GHz H-Field 27 MHz to 1 GHz	<b>2250/54 (2250/04 fast)</b> E-Field 1 MHz to 40 GHz H-Field 27 MHz to 1 GHz
FCC 96-326 Occupational / Controlled	<b>2251/02</b> E-Field 3 MHz to 40 GHz H-Field 3 MHz to 1 GHz	<b>2250/52 (2250/02 fast)</b> E-Field 3 MHz to 40 GHz H-Field 3 MHz to 1 GHz
ICNIRP 1998 Occupational	<b>2251/06 (2251/56 fast)</b> E-Field 1 MHz to 40 GHz H-Field 27 MHz to 1 GHz	<b>2250/56 (2250/06 fast)</b> E-Field 1 MHz to 40 GHz H-Field 27 MHz to 1 GHz
Japan RCR-38 Controlled	<b>2251/03</b> E-Field 3 MHz to 40 GHz H-Field 3 MHz to 1 GHz	<b>2250/53 (2250/03 fast)</b> E-Field 3 MHz to 40 GHz H-Field 3 MHz to 1 GHz