AMS-8060

Frequency selective monitoring and logging of environmental electromagnetic fields

⚠ **Up to 20 fully programmable frequency bands**

⚠ **Real built-in spectrum analyser for better performance and flexibility**

⚠ **Built-in tri-axial antenna**

⚠ **Broadband evaluation mode**

⚠ **Automatic & manual data download to PC base station by internal GSM modem**

⚠ **Dedicated acquisition software for data collection and analysis**

⚠ **Passes warnings and alarms on to PC and mobile phones**

⚠ **Standard GSM communication via modem and SMS**

Area Monitor AMS 8060 with Solar Panel

APPLICATIONS

The wide range of electrical and electronic equipment present everywhere and the large number of wireless applications – from mobile communications to radio frequency identification (RFID), from electronic article surveillance (EAS) to broadcast and data transfer - represent the base for the presence of "uncontrolled" electromagnetic environments

The effects of non-ionising radiation (i.e., e.m. fields) are a very important and sensitive issue at an international level.

Several international agencies and standardisation bodies are regulating the matter, and many countries have already implemented local regulations for the control of electromagnetic fields.

The Selective Area Monitor AMS-8060 is the most advanced solution available to meet the growing demand for monitoring the e.m.f. both remotely and selectively, to avoid the continuous surveillance of sites by technical personnel.

The Area Monitor AMS-8060 is weatherproof, lightweight and can easily be installed either outdoors or indoors, through use of its specifically designed pole and base.

The Selective Area Monitor is the most suitable solution to check the protection limits set by the local regulations and to pick out the frequency of the sources of electromagnetic fields.

GENERAL DESCRIPTION

The AMS-8060 Selective Area Monitor is a complete and flexible measuring system for monitoring high-frequency fields ranging from 75 MHz up to 3 GHz, by means of the built-in, tri-axial antenna.

The unit includes also a powerful data logger, a power supply with back-up battery, a GSM modem and antenna.

Its rugged construction allows its installation in the field, be it indoors or outdoors, while its compact size and limited weight allow the AMS-8060 to be easily relocated at any time.

Through user-friendly software the Selective Area Monitor can analyse up to 20 different portions (bands) of the spectrum, showing the EMF values of each band and the broadband value. All the measuring parameters can be easily set and modified in line with the different requirements of monitoring.

The measured data are logged in the AMS-8060 memory and can then be downloaded onto a PC, either remotely by GSM or locally by RS232. An automatic, continuous check system provide alarm signals should any abnormal situations occur.

THE AMS-8060 SW-02 SOFTWARE

A powerful, easy-to-use function programming and data analysis tool
The Selective Area Monitoring programming software is a powerful tool specifically designed to deploy all the potentialities of the AMS-8060 hardware. All parameters of the station can be controlled, monitored, modified and set by using the software, either via remote (GSM) or direct (serial cable) connection.
Setting functions are: the frequency bands (Service Table), the time schedule (Selective Mode Timing), the measurements reading and recording, the data download at pre-set times, preparation of reports, checking the battery and the alarm status. Other common functions such as zoom, marker and others are also available.
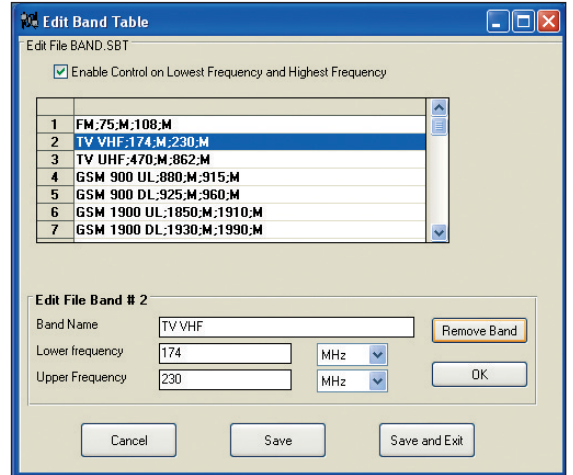
User-friendly Service table editing

Display of amplitude vs. time

TECHNICAL SPECIFICATIONS

AMS-8060 Selective Area Monitor	
Specifications	
Antenna type	Triaxial, electric field
Frequency range	75 MHz to 3 GHz
Dynamic range	0.01 to 300 V/m
Overload	600 V/m
Resolution	0.01 V/m
Sensitivity	0.01 V/m (depending on the band setting)
Sampling rate	Down to 200 ms (depending on the band setting)
Storing rate	5, 10, 15 and 30 seconds; 1, 2 and 6 minutes (depending on the band setting)
Unit	V/m
Stored values	AVG or RMS , Max value
Memory size	288 kByte
Programmable frequency bands	Up to 20
Max. logging before overwriting	50 days @ 6 min storing rate, 5 bands, no Max value
Average and Average time	Arithmetic or RMS; Average time from 10 sec. to 6 minutes
Communication	Internal Dual band GSM modem for SIM card (not included)
SIM card type	Must be allowed for data transmission to or from mobile phones
Download of measurement result from area monitor	Automatic and/or manual
Call	Automatic: the AMS-8060 calls the PC at scheduled times Manual: the PC operator calls the AMS-8060
Text file generation	Generation of a .TXT file for every data download
SMS	SMS to 10 mobile phones (daily report of max. EMF value, min. battery voltage)
Battery history	Automatic download from 8060 of the last 31 days of battery voltage and charge balance
Internal temperature	Reading by PC software, SMS query
GPS coordinates	Latitude, longitude, GMT
Clock	Internal real time clock
Interface	RS-232C with internal DB9 connector
Receiver Stand-by time	Programmable over 24 hours, with 30-minute steps
Power supply	Solar panel 16.8V 1.8A Backup sealed lead rechargeable battery, 12V, 32A/h External DC power supply 100…240 VAC to 24 VDC, 1.25A
Power consumption	100 mW with receiver OFF and GSM off 200 mW with receiver OFF and GSM stand-by 2 W with receiver OFF and GSM active 8 W with receiver ON and GSM off
Battery operating time	48 hours with Receiver ON
Operating temperature	-10 °C to 50 °C
Protection grade	IP54

Alarms	Field over limit, open case, overheating, low battery, receiver and antenna status.
Dimensions	Radome: 260 x 740 mm
Base	660 x 600 x 30
Battery pack	310 x 240 x 190
Solar panel	500 x 600 x 51
Pole	760 x 60 mm
Weight	Approx. 27kg (including battery pack and base)

AMB-8060-SW-02 PC Software (for Windows™ operating systems only)	
Functions and requirements	
Data download	Manual; Automatic by the AMS-8060 at scheduled times
Alarms	Two programmable thresholds (attention and alarm) with notice of trespassing from both ways (bottom-up and top-down)
Functions	Set-up of unlimited number of AMS-8060
	Calculation of AVG; RMS; Max
	Vertical and Horizontal Zoom
	Linear and Logarithmic graphs
	Displaying of antenna and receiver calibration date, SW and HW rel., serial number
	Battery voltage recording

ORDERING INFORMATION

AMS-8060 set	
Remote Station	
Selective field area monitor station including tri-axial antenna, solar panel and back-up battery	AMS-8060

Standard accessories supplied with AMS-8060:

- Support base and mast
- 2 cable ties
- Ballast bag
- Tools kit
- AC/DC power supply / battery charger
- RS-232 cable, 2 m
- Software diskette
- Operating manual
- Certificate of calibration