

## AMS2010



- **Handheld, lightweight leakage meter**
- **Frequency range from 5 MHz up to 200 MHz**
- **New method for leakage tagging – suitable for fully digital TV/DOCSIS networks**
- **Compatible with JDSU/Acterna taggers**
- **Vehicle docking station option**
- **User friendly interface**
- **Compatible with handheld signal generator AMS2011**
- **Fast GPS receiver**
- **High capacity battery**
- **Up to 5 years warranty**

The basic components of each leakage detection system are detectors and meters. The detector/meter for CATV networks is AMS2010 HFC. The device has been developed by people who have been, by themselves, detecting leakage sources in CATV networks for many years. A compromise has been reached among the meter dimensions, weight and measurement/detection accuracy. The meter has very good sensitivity. The unit is compatible with the EN 50083-8 standard as well as with the FCC standards related to the leakage control. It has been designed to be time and labor effective, with an economic price (versions can be tailored to customer's needs and requirements) and as a technologically sophisticated device for a quick detection of common and problematic leakage problems. The meter is portable and easy for handling.

The detector has two basic versions:

- AMS2010 HFC – the basic version with a standard battery
- AMS2010 HFC GPS GoogleEarth – with GPS functionality, high measurement accuracy and a high capacitance battery

The detector cooperates with the DS docking station and can be mounted in a vehicle.

The basic differences among AMS meters/detectors are as follows:

- AMS2010 detector does not have professional SAW filters
- AMS2010 GPS+GoogleEarth meter – saves the pedestrian/mobile patrol measurement results in a file compatible with GoogleEarth.

The AMS meters detect the tagged signals and work together with AM taggers (e.g. JDSU Acterna LT-1000 or KABELKOM AM<sup>2</sup>(TM)). The AM<sup>2</sup>(tm) technology (patent pending in USA and Europe) uses additional RF carriers modulated in amplitude (AM) for additional protection against erroneous detection of interferences which can act as a leak source. The main advantage of AM<sup>2</sup>(tm) is its compatibility with DVB, DOCSIS and EuroDOCSIS carriers. The carrier of the AM<sup>2</sup>(tm) tagger works in the DVB or EuroDOCSIS channel bandwidth, however, it does not interfere with digital transmission and allows for leakage detection.

The AMS tagger can work in the mode which can identify the part of the network (subnetwork) responsible for a detected leak source. In such a case AMS2010 HFC GPS measures various tagging frequencies and saves the results. It is possible to differentiate the subnetworks from which a leak originates, for example:

- trunk vs. building network
- building vs. customer (home) network
- detection of the leakage on a particular floor of a building (requires proper network architecture).

The greater number of tagging signals gives better detection accuracy and reduces the likelihood of detecting external interfering signals as leakage sources.

## SPECIFICATION

### GENERAL

Dimensions	190 mm x 93 mm x 60 mm ( d in. x f in. x g in.)
Weight	0.5-0.6 kg (depending on version)
Storage temp.	-40 ÷ +70 °C
Operating temp	0 ÷ +50 °C
Humidity	noncondensing <90%

### POWERING

Battery type	Li-Poly
Capacitance	3.5 Ah (standard) 7 Ah (option)
Battery life	3-8 hours of continuous work (depending on the battery option, operation mode and meter version)
Charging	via USB, 5V/490 mA (meter off), 5V/800 mA (meter on)

### ELECTRICAL

Input	BNC female 50 Ω
Sensitivity	better than 0.5 μV/m (typ. 0.3 μV/m)
E-field range	0.3 – 9999 μV/m (the version with an attenuator)
Frequency range	26 – 200 MHz
Uncertainty	±1 dB
GPS receiver	54 channels, 1575.42 MHz GPS “cold” start less than 36 s GPS “hot” start typically less than 1 seconds
GPS scan rate	5 scans/second

### COMMUNICATION

WLAN	(optional), automatically sends data (Google Earth files) after a Wi-Fi network has been detected
USB	1 serial connector

### STANDARD ACCESSORIES

27 MHz antenna
120 MHz antenna
5 V power supply/charger
A/B USB cable

### LEAKAGE DETECTION

- ◆ Unique leakage tagging technique for analog and/or digital networks (patent pending)
- ◆ Two configurable tagger frequencies
- ◆ Fast tagger detection
- ◆ Configurable measurement frequency separately for upstream (active method) and downstream
- ◆ 3 detection options:
  - Standard passive leakage detection in the downstream band with GPS receiver (mobile/pedestrian) with the tagger installed in the headend
  - Standard passive leakage detection in the upstream band with GPS receiver (the tagger in the headend or node) with the ingress receiver installed in the headend
  - Simultaneous leakage detection in the downstream and upstream

### SPECTRUM

- ◆ Simple spectrum analyzer
- ◆ 3 SPAN/RBW options:
  - SPAN 100 kHz/ RBW 1 kHz
  - SPAN 1 MHz/ RBW 10 kHz
  - SPAN 10 MHz/ RBW 100 kHz
- ◆ Zero Span option available in 2012

### WiFi

- ◆ WiFi scanner (B/G/N standards, built-in MIMO antennas)
- ◆ Cooperation with GPS receiver
- ◆ Detects all WiFi networks, saves the information about the detected network with GPS coordinates (does not save the grabbed data packages)

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