



Audemat FM/DAB Probe

QoS Monitoring. Measurements. Analysis.

The Audemat FM/DAB Probe is a complete radio monitoring solution to perform advanced signal analysis, on-site and of broadcast coverage area.

Designed to be installed in **SFN, MFN or DAB** networks (Single or Multiple Frequency Networks), the Audemat DAB/FM Probe is feature-packed with a user-friendly web interface, alarm notification by email or SNMP traps, and is equipped with telemetry board (via ScriptEasy) and audio output connectors.

The advanced software tools provide a deep signal and content analysis with impulse response representation, TII, audio streaming, ETI recording, visual slide-shows, DLS and services display to enable users to hear and see in real-time the same content as their audience of listeners. The powerful and innovative platform can monitor up to 50 channels sequentially and **up to 2 channels continuously**, to ensure that your FM network complies with both legislation and expectations.



MONITORING



ANALYSIS



STREAMING



RECORDING



TELEMETRY

Benefits



Monitoring Expertise

Audemat FM/DAB Probe is the result of the company's 25 years of expertise developing analog and digital signal monitoring solutions for radio & TV. The Audemat range is recognized worldwide for its level of quality, accuracy, and reliability.



Time & Operational Cost Saving

Users benefit from standard tools to remotely control the quality of their DAB and FM broadcast as well as the good operating conditions of their facility.



Comprehensive & Scalable Platform

Designed to meet market needs after extensive customer feedback, Audemat FM/DAB Probe is a feature-rich hardware platform that is ready for optimal performance of monitoring, measurement, and analysis. Highly scalable, it can be enhanced with new software versions or options through a simple, remote upgrade.



Engineered for:

Service Operator

- ➔ Ensure the quality and the continuity of the RF signals
- ➔ Immediately notify a problem on the broadcasting network.
- ➔ Remotely control the facility and do the first troubleshooting

Regulation authorities

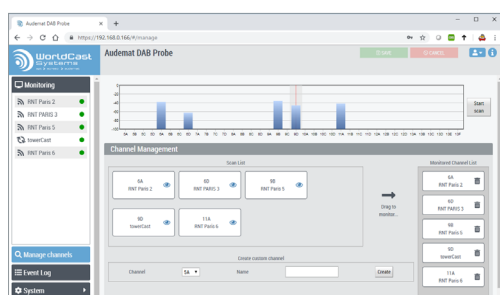
- ➔ Ensure the conformity with the broadcasting rules
- ➔ Analyze the causes of possible disturbances
- ➔ Give a history of the situation over several weeks.

MUX operator & Content Providers

- ➔ Monitor the quality of the broadcast services
- ➔ Confirm the programs are ON-AIR 100% of the time
- ➔ Verify the Ensemble content
- ➔ Check the audio presence and level
- ➔ Verify the PAD/Audio association

Detect BROADCAST CHANNELS

A quick FM/DAB band scan is available to visualize the DAB and FM spectrum. It also can be used to facilitate the monitoring configuration.



DAB Scan

Qualify THE DAB RECEPTION QUALITY

The advanced measurements and relevant parameter values are represented graphically. Trends can be consulted over 3 rolling months.



DAB RF Measurements

Monitor AN SFN NETWORK

To detect any failure or variation, the transmitter peaks (up to 5) are evaluated by time / levels and the decoding of the TIL makes it possible to identify the transmitters.

Alarm notification & USER MANAGEMENT

Several user accounts can be created with personal access levels and rights. Depending on the user access level and rights configuration, an alarm notification can be sent to 1 or several users, by E-mail or SNMP, to the network management system(s).

Analyze the CONTENT

In addition to decoding of the FIG tables, the details of each service are clearly displayed including the real audio and PAD bitrates.

Stream the service / ON-AIR VERIFICATION

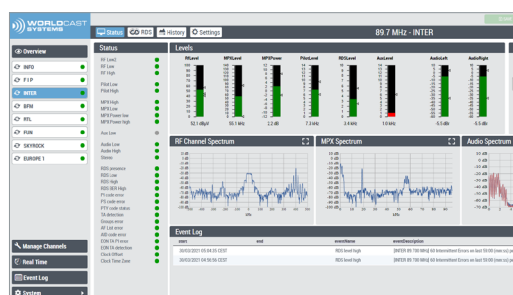
Following an alarm, on-air FM or DAB verification is possible. Users can remotely stream the audio, in compressed or in native format, and visual the associated DSL and slideshow.



Audio Streaming

Qualify THE FM RECEPTION QUALITY

The advanced measurements and relevant parameter value are represented graphically. Trends can be consulted over 3 rolling months.



Measurements

Consult the TRENDS

The unit stores the RF measurements over 3 sliding months in the µSD card provided in standard. The graphical representation allows the identification of trends. The 10000 last events including the alarms can also be consulted and filters are possible to find out relevant information.

This data can be exported in CSV file format.

On-site FACILITY MANAGEMENT

Using the physical inputs/outputs or SNMP commands, it is possible to monitor and control almost all the devices or sensors to combine the information and verify the status of the entire transmitter site.



KYBIO Media is a centralized, vendor-agnostic M&C software for media and broadcast, serving markets such as IPTV, radio, TV, cable, and satellite. KYBIO simplifies the monitoring of even the most complex IP infrastructures and helps you ensure operational continuity across your end-to-end value chain from media acquisition, production, and distribution.

Thanks to its unique combination of monitoring, OSS, and control modules you benefit from improved uptime and performance of your equipment, efficient workflows, and powerful analytics. With its advanced auto-pilot configuration engine, KYBIO is fast and simple to deploy and can be run on-premises, in the cloud or in a hybrid environment.

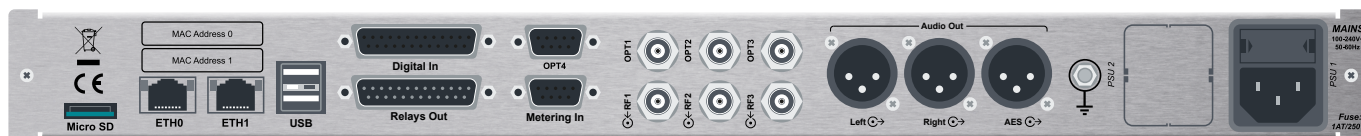
-  **Unified web interface & mobile-ready**
-  **Vendor-agnostic monitoring**
-  **Auto-discovery & network scanning**
-  **Dynamic maps & displays**
-  **Real-time monitoring & history tracking**
-  **Alarm & notification management**
-  **Ticket management for incident & tracking**
-  **Analytics & reporting engine**



On-Site Facility Management & Advanced Telemetry

ScriptEasy is a revolutionary facility control software for connected devices, enabling the automatic correction of any critical errors that may occur. Across its intuitive web interface, ScriptEasy includes management of the GPIO, serial communications, SNMP, logic operators, live user inputs, timers, and more. This enables

the “scripting” of site operations for evaluating multiple parameters and automatically engaging back up systems, while simultaneously alerting relevant technical personnel. **Integrated in the Audemat FM Probe, ScriptEasy is the core technology used for the product’s telemetry input-outputs.**



Rear panel

Acquisition

- Continuous monitoring up to 1 DAB and 2 FM channels
- Sequential monitoring up to 50 DAB and 50 FM channels

DAB Parameters

- Band III; DAB, DAB+ and DMB (Mode I)
- RF level; synchronization; CNR, SNR and MER; frequency offset
- TII transmitter identification; SFN transmitter frequency peaks; spectrum shoulders and link margin
- MSC and RS errors; constellation, MER and QPSK per carrier
- Ensemble label; country and language; service and component lists and IDs
- Service mode, protection information and CU address; dynamic label, PTY, bitrate and FIG tables
- Audio mode and left/right levels; audio and PAD bitrates; Slideshow and DLS

FM Parameters

- Scan monitoring: 87.5–108 MHz
- RF, MPX, stereo pilot, left and right audio, AUX and RDS levels
- MPX power; stereo and RDS presence; RDS error rate
- RF, MPX and audio spectra
- RDS data: PI, PS, TA, PTY, AID, AF list (Method A), RDS clock and groups, EON TA and EON TA PI

EDI Information

- FEC, transport addressing, src/dest ID
- FIC presence, STAT, ATST Flag
- UTC0 offset for FCT=0
- EDI Date for FCT=0 / TSTA for FCT=0
- Sub-channel Stream Characterization
- Multiplex Network Signaling Channel

ETI Information

- Status Field (STAT)
- Number of Streams (NST)
- Frame Length (FL)
- TIST for FCT=0
- Sub-channel Stream Characterization
- Multiplex Network Signaling Channel

MAIN characteristics

Dimensions (l x h x d)	483(19") x 42 (1U) x 180mm
Weight	2.35 kg
Main power supply	100-240VAC / 50-60 Hz
Power consumption	25 VA
Temperature	
Working temperatures	0°C - +50°C
Storage	-30°C - +80°C
Humidity	10-95%
	Non-condensing RH

Interfaces (standard delivery)

RF inputs	1 to 3 depending on version - BNC type
Audio outputs	
Analog	2 - XLR type / Left + Right
Digital	1 - XLR type / AES
Headphone	Professional Jack 6.35mm on front panel
µSD card slot	1 - For measurement history storage
Telemetry	Including ScriptEasy Software
Relays	8 - SPDT 1A-30V
Digital inputs	16 - Internal or external power supply (5-25VDC)
Metering inputs	4 - 0-50V (4 ranges-ADC: 10 bits)
Screen	1 - For IP configuration, device information and status
LED indicators	4 - for alarm status and CPU operation
LAN ports	2 - RJ45 ports Base-T 10/100/1000M
Power Connector	1 - IEC type
Inputs: GPS antenna, ETI NI (G703), 1PPS	Optional board. Factory mount. BNC connectors.

Order information

REF	DESCRIPTION
TF01086-FM	AUDEMAT DAB/FM PROBE Standard version including ScriptEasy
Software options	
CD01014	Optional EDI input
CD00064-10	ScriptEasy extension to manage 10 additional SNMP devices (1 license included, 1 other can be added)
Hardware options	
CD01012	1PPS and GPS antenna input
CD01013	ETI input/output

Technical specifications are subject to change without prior notice - On project, WorldCast Systems may offer distinct specifications. Spécifications on the offer prevail those in this document.

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