





# Audemat MC6 All-in-One DAB/DAB+/FM Test & Measurement Device

# AUDEMAT MC6 is the most comprehensive and versatile measurement platform available for DAB+ and/or FM in the world today.

Its main function is to help broadcasters, operators, and regulation authorities ensure the best radio service is being offered to listeners while respecting all DAB+ and FM regulations. This all-in-one system offers both mobile RF coverage measurement and extensive modulation analysis in a single comprehensive system. Based on a fully digital technology, the Audemat MC6 offers exceptional test and measurement accuracy, as well as multiple receivers for DAB+ and/or FM.

Unique on the market, the Audemat MC6 offers an unmatched level of versatility and accuracy as well as a smart and practical design.

Fully portable and lightweight, it radically simplifies on-site commissioning and drive tests.



## Audemat MC6 benefits:



#### All-in-One Equipment

DAB+/FM drive tests, modulation analyzer, DAB+/FM commissioning.



#### High Measurement Accuracy & Reproducibility

Fully digital, high-accuracy measurement, user-customizable measurement reports, market-leading reproducibility, unmatched levels of precision with its completely mathematical signal demodulation.



#### **Time-Saving Built-In Tools**

Intuitive and responsive web interface, automatic measurement reports, simultaneous measurement, multiple DAB+ and FM receivers.

## **Perfectly Engineered For Broadcasters and Regulators**

#### **Broadcasters & Operators**

- Optimize the service to your listeners
  & customers
- Reduce costs for metering & commissioning

#### **Regulation Authorities**

- Optimize FM occupancy & deliver new frequencies
- Save time performing DAB+ and/or FM measurements
- Control DAB+ and FM signal without access to transmitter site

### Scalable Solution. Powerful Features.

#### DAB+/FM BAND SCANNER

- → Identify FM programs and DAB+ multiplexes
  - to launch a measurement
- --> Recognize unauthorized stations on the field

#### **DAB+** ANALYZER

- ---- Check the key parameters during DAB+ transmitter installations
- --> Ensure the highest broadcasting quality (MER, Constellation, SFN, TII...)
- ---> Analyze all DAB+ services

#### FM ANALYZER

- -> Check the key parameters during FM transmitter installations
- → Ensure a full compliance of the signals (frequency, deviation, MPX power, modulation, RDS...)
- ---> Compare your program with the competition

#### **AUTOMATIC** REPORTS

 → Generate highly accurate and complete measurement report following DAB+ or FM transmitter installations and on a regular basis

#### DAB+/FM DRIVE TESTER

- ---> Analyze your real coverage
- ---> Identify potential issues
- ----> Generate in-depth reports for FM or DAB+
- → Reduce the drive time and costs thanks to multiple DAB+ and FM receivers on-board



DAB Module



DAB Services



FM Module



## -GoldenEAR SOFTWARE

#### **Quality Reception Analysis**

GoldenEar is an algorithm providing a mathematical & objective quality rating of the DAB+ and FM signals received during a drive test.

Used by major broadcasters and regulators for decades, this technology complements the drive test feature, simplifying the analysis and reporting.



## A Wide Scope Of Services For Optimal Performance

To ensure you benefit from all the help, support, and information you need to make sure your system continues running at optimal performance and with all the latest upgrades, it is accompanied with a mandatory 3-year service agreement:

- ---> Factory calibration every 3 years
- ---> Software upgrade
- ---> Priority support
- ---> Free loan unit during repair



K We proudly introduce the Audemat MC6, a culmination of invaluable user feedback, our company's expertise, and numerous technological advancements. The result is a multi-receiver and multi-standard solution, housed within a more powerful, compact, robust, and highly scalable platform, surpassing its predecessors in every aspect.



**Gregory Mercier** Director of Product Marketing



#### DAB MODULE

| DAD WODOLE  |  |  |
|---|--|--|
| Band scanner DAB, DAB+, DMB/Band III, Mode I                              |  |  |
| Reception level   |  |  |
| Sync, CNR, SNR, MER   |  |  |
| Freq offset (internal reference)  |  |  |
| TII: Transmitter Identification Information                               |  |  |
| Transmitter SFN freq Peaks  |  |  |
| Shoulders measurement, Link Margin  |  |  |
| MSC errors, RS errors   |  |  |
| Constellation, MER and QPSK per carrier                                   |  |  |
| Mode, service mode  |  |  |
| Protection info   |  |  |
| CU and address  |  |  |
| Ensemble label  |  |  |
| Country, language   |  |  |
| Service list & ID   |  |  |
| Dynamic label, PTY  |  |  |
| Bitrate   |  |  |
| FIG Tables  |  |  |
| Audio Mode and Level (L+R)  |  |  |
| Audio and PAD bitrates  |  |  |
| Audio streaming with Slide Show, DLS Native format or MP3 (8 to 320 kbps) |  |  |
| FM MODULE   |  |  |
| Band scanner 87 - 108 MHz   |  |  |
| Reception level   |  |  |
| RF / MPX / Audio spectrum analyser  |  |  |
| RF / Pilot / RDS / AF Frequency meter                                     |  |  |
| MPX power meter   |  |  |
| Deviation meter   |  |  |
| RF, L & R, L+R, L-R Level measurement                                     |  |  |
| RDS Analyser  |  |  |
| REPORTS   |  |  |
| DAB Automatic Reports   |  |  |
| FM Automatic Reports  |  |  |
|   |  |  |

| DRIVE TESTS  |   |  |
|--|---|--|
| DAB Drive Test                                     | Up to 2 frequencies with ETI recording, or more wihout recording (round robin)        |  |
| FM Drive Test                                      | Up to 8 frequencies with audio recording, or more wihout recording (round robin)      |  |
| DAB+FM Drive Test                                  | Up to 8 FM + 1 DAB frequencies with recording, or more wihout recording (round robin) |  |
| INTERFACES   |   |  |
| RF   | 2 Inputs: N type, 50Ω   |  |
| Analog MPX (future use)                            | Input & output: BNC type, unbalanced, 10kΩ  |  |
| Digital MPX over AES or Digital Audio (future use) | 1 Digital input & output: XLR type, balanced  |  |
| Analog Audio (future use)                          | 2 Analog inputs & outputs: XLR type, balanced   |  |
| GPS input  | Input: SMA type   |  |
| AUX output (future use)                            | Output: BNC type, unbalanced  |  |
| Headphone output                                   | Jack 6.35mm female, Unbalanced (floating ground)                                      |  |
| Ethernet   | 2 RJ45 ports and WiFi   |  |
| Screen   | For IP configuration, device information and status                                   |  |
| μSD card slot                                      | For additional storage  |  |
| STANDARDS & RECOMMENDATIONS                        |   |  |
| DAB Radio Broadcasting Systems                     | EN 300 401 version: 2.1.1, TS 101 756   |  |
| Audio Encoding                                     | TS 102 563, TS 103 466  |  |
| Multimedia Object Transfer (MOT)                   | EN 301 234  |  |
| ETI Distribution interfaces                        | ETS 300 799, ITU -T G.703, ITU-T G.704  |  |
| Frequency deviation measurement                    | ITU-R SM.1268-5   |  |
| FM Broadcasting measurement                        | ITU BS412-9   |  |
| RDS  | IEC 62106   |  |
| PHYSICAL SPECIFICATIONS                            |   |  |
| Dimensions (W x L x H)                             | 33 x 27 x 9 cm - 13 x 10,6 x 4,5 in   |  |
| Weight   | < 4 kg / < 9 lbs  |  |
| Power Supply                                       | Dual DC inputs 12VDC. One 100-240 VAC adaptor   |  |
| Operating temperature                              | 0°C à 40°C / 32°F to 113°F  |  |
| Storage Temperature                                | -20°C à 70°C / -4°F to 158°F  |  |
| Humidity   | 10-95% non-condensing relative humidity   |  |

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.

### **Order** information

| REF              | DESCRIPTION                      |  |
|------------------|----------------------------------|--|
| TF01251          | AUDEMAT MC6                      |  |
| DAB Modules      |                                  |  |
| CD01050-DAB      | DAB Module                       |  |
| CD01045          | Drive Test DAB                   |  |
| CD01046          | Drive Test DAB Dual Receivers    |  |
| FM Modules       |                                  |  |
| CD01050-FM       | FM Module                        |  |
| CD01043          | Drive Test FM                    |  |
| CD01044          | Drive Test FM Multiple Receivers |  |
| Software Options |                                  |  |
| CD01042          | Measurement Reports              |  |
| CD01049          | GoldenEar                        |  |
| CD01047          | EDI and ETI inputs/outputs       |  |
| CD01048          | Reference clocks (10MHz, 1pps)   |  |
| Services         |                                  |  |
| SU-MC6           | Service contract                 |  |



## Delivery with flight case

Dimensions: (W x L x H) 820x560x320 mm - 32x22x12,5 in Weight: 20 kg / 44 lbs

- 1 External 200 V/12 V power supply
- 1 Cigarette lighter cable (Drive test modules)
- 1 Ethernet cable
- 1 Male/male BNC cable + 1 N/BNC adapter
- 1 FM and/or DAB Antenna (FM or DAB modules)
- 1 GPS antenna (Drive Test modules)

#### **Headquarters**

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