

- Audio Processing
- RDS Encoding
- Radio All in One
- Signal Monitoring
- Test & Measurement



## NAVIGATOR DAB/DAB+/T-DMB

### OVERVIEW

Navigator DAB/DAB+/T-DMB is a metering unit featuring a professional receiver. With its GPS receiver, the unit is a “must-have” for mobile measurement campaigns in a vehicle (drive test) with or without a laptop PC connected. All the measurements are automatically logged and can be displayed on maps (Google Earth, MapPoint..) or overlaid on predicted coverage (LS Telcom, ATDI..). It can also be used for research and development and maintenance purposes.

### FEATURES

- Mobile measurement campaigns with GPS Positioning
- Touch Screen for use without attached PC
- Realtime RF and data structure analysis
- Scanning of DAB/DMB bands (band 3 and L-band)
- Audio decoding
- Map-based field strength display
- Enhanced data post processing
- Data export (Custom text file, Google Earth, MapPoint, LS Telcom...)

### BENEFITS

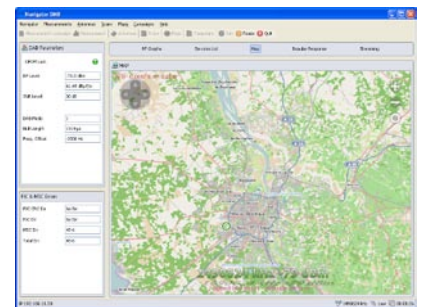
- All the tools and functions necessary for analysis, from the source signal to the coverage area
- Light weight hardware for easy transportation
- Band III and L-Band
- Easy post-processing with map-based display
- Automatic export (Google Earth, CSV file...)

### Mobile measurement campaigns, driving or on foot, with GPS Positioning

Navigator DAB/DAB+/T-DMB has been designed to perform mobile measurement campaigns for DAB, DAB+ and T-DMB networks. This handheld equipment can be used in a vehicle, or on foot (indoor or outdoor). The campaign can be dedicated to a single channel (frequency) or for multiple channels (sequential measurement).

### The main measurement functions are the following:

- Real time measurements and display of RF and data structure analysis.
- Automatic logging of measurement data with GPS position on the internal hard disk.
- Audio real-time decoding.
- Map-based display of the measurement data.
- In-depth post processing with filtering possibilities and automatic data export (Google Earth, LS Telcom...)



Map view of a measurement campaign

### Scanning of band 3 and L-band

The Navigator DAB/DAB+/T-DMB can perform a scan of the frequency band to automatically detect the available multiplex channels.

### APPLICATIONS

The Navigator DAB/DAB+/T-DMB can be used by:

- **Regulation authorities** who can perform outdoor coverage analysis as well as data and quality analysis to verify the signal complies with norms.
- **Broadcasters** who analyze their signal for research and development, for maintenance purposes or to compare it with regulation agencies.
- **Content providers** who can perform drive tests and quality analysis to check on their broadcaster.



# NAVIGATOR DAB/DAB+/T-DMB

## Data export

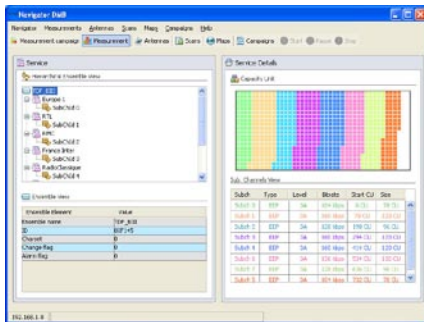
The recorded measurement data can be exported as a CSV file (Excel compatible), to map software (Google Earth, MapPoint...) or to radio spectrum planning software (like ATDI, LS Telecom...) in order to compare the predicted coverage with measured data obtained in a real world environment.



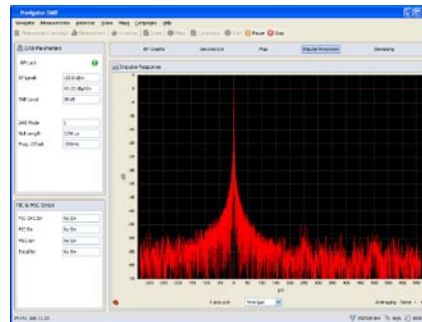
## Campaign analysis with GoldenEye

### Campaign representation

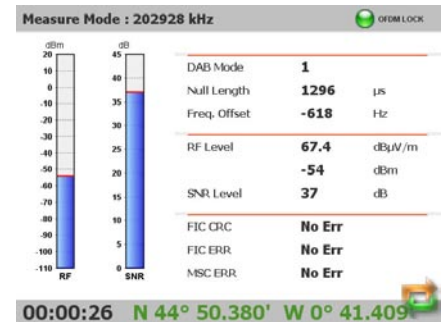
- During a campaign, all the measurements (with their GPS position, if available) are logged and stored on the internal hard drive. The campaign file containing all this data can then be downloaded onto a PC and opened with GoldenEye.
- GoldenEye creates a geographical representation of the campaign with a different color for each level value (or field strength). Clicking on a point, you get information such as the modulation parameters and the speed.
- In the “Superimposed” tab, GoldenEye plots level curves. If the campaign contains data from several multiplexes, the curves can be superimposed for easy comparison.
- All details of each measurement point can be found in the measurement table (GPS position, SNR, BER, ...)



Services and MSC repartition



Impulse response display



Measurement overview on the front panel

## MONITORED PARAMETERS

RF parameters	
RF level	
SNR	
BER	
FIC Error Rate	
MSC Error Rate	
Data structure	
List of services and components in tree-view	
Ensemble information	Name, Charset, ID, Alarm flag, Change flag
Service information	Name, Program / Data, Extended country code, Service ref., Conditional access ID, Service ID, Country ID, Local Flag, Program type
Components information	Transport mechanism, Protection Level, Conditional access flag, Start CU, Primary/Secondary flag, Bitrate, Sub channel Size, Data Service component type, Sub channel ID
MSC repartition	

## TECHNICAL SPECIFICATIONS

Hardware description	
Power Supply	Lithium-Ion battery pack (approx. 3 hours battery life) External 12 VDC
Weight	-5 kg
Communication	
Connectors	GPS receiver with antenna (external magnetic mount antenna)
RF inputs	75 Ω input impedance on BNC connector Band III (174 MHz - 240 MHz) and L-Band (1452 MHz - 1492 MHz) Sensitivity -90 dBm DAB Mode 1, 2, 3 and 4 DAB+ T-DMB

## ORDER INFORMATION

Standard version	
TF00264	Navigator DAB/DAB+/T-DMB
Option	
CD00053	Advanced RF: SFN monitoring and impulse response display

Ref: Navigator DAB/DMB - Datasheet 09/2010  
Technical specifications are subject to change without prior notice



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