Main specifications

	Oper@ EX	Oper@ RF
• Acoustic channels	2	1
• Dynamic range	25-137 dBA class 1 30-137 dBA class 2	25-137 dBA class 1 30-137 dBA class 2
• Linearity domain	105 dBA	105 dBA
• Frequency weighting	A, B, C, Z in parallel	A, B, C, Z in parallel
• Time constant	S, F, I in parallel	S, F, I in parallel
• High-pass filters (jack selection)	0.3 Hz - 10 Hz	0.3 Hz - 10Hz
• Low-pass filters	2 kHz (manual selection)	2 kHz (manual selection)
• Descriptors	Lp, Lpk, Leq in parallel	Lp, Lpk, Leq in parallel
• Statistical indices	Yes	Yes
• Psycho-acoustics	PnL, PnLT, SIL, Loudness	PnL, PnLT, SIL, Loudness
• Frequency analysis	1/3 octave in Leq or LpS or LpF or LpI	1/3 octave in Leq or LpS or LpF or LpI
• Spectrum bandwidth	12.5 Hz -20 kHz	12.5 Hz - 20 kHz
• Spectrum dynamic range	90 dB	90 dB
• MPEG-3-II	Yes (1 channel to select)	No
• Trigger	On level / on event (spectrum, 100 ms, MPEG-3)	No
• Automatic recognition	Option	No
• Minimum elementary time	100 ms	500 ms
• Storage	Compact Flash 128 MB/Compact Flash 4 GB in option	No
• Data transfer	Scheduled periodic publication	Each second in real time
• Data and MPEG-3 streaming	Option	No
• Calibration	Actuator/Voltage insertion/Manual	Actuator/Voltage insertion/Manual
• TEDS	Yes	Yes
• Conditioning	0 V / IEPE	0 V / IEPE
• TTL input/output	4 Inputs : 0-5 V / 1 Output: 0-3, 3 V	Option (1)
• Continuous current supply	12 V rated (from 6Vdc to 30Vdc) max. cable length: 5 m	12 V rated (from 6Vdc to 30Vdc) max. cable length: 5 m
• Alternating current supply	110/230 V to 12 Vdc (non waterproof)	110/230 V to 12 Vdc (non waterproof)
• Operating lifetime	15-minute storage	8 hours
• Display	2 lines	No
• Keyboard	5 keys	1 key
• Status Leds	5	2
• On/Off	From keyboard	From keyboard
• Connectors/Communication	2 USB, 1 VGA, 1 Ethernet, 1 RS232C/USB, 1 xDSL/PSTN/ISDN/GSM/GPRS modem, 1 antenna, 1 GPS	Radio-modem and RF antenna

Rev.: May 2004

Design 5

Unique system designed for noise monitoring

Plug & Play
Upgradeable
Communicating
Fully automated

Specifications can be modified without prior notice.

01dB France [Head Office]
200, chemin des Ormeaux
F - 69578 Limonest Cedex
Tel. +33 4 72 52 48 00
Fax +33 4 72 52 47 47

01dB Asia Pacific
Tel. +60 3 563 22 633
Fax +60 3 563 18 633

01dB Brasil
Tel. +55 11 5089 6460
Fax +55 11 5089 6454

01dB Germany
Tel. +49 07552 / 938 570
Fax +49 07552 / 938 571

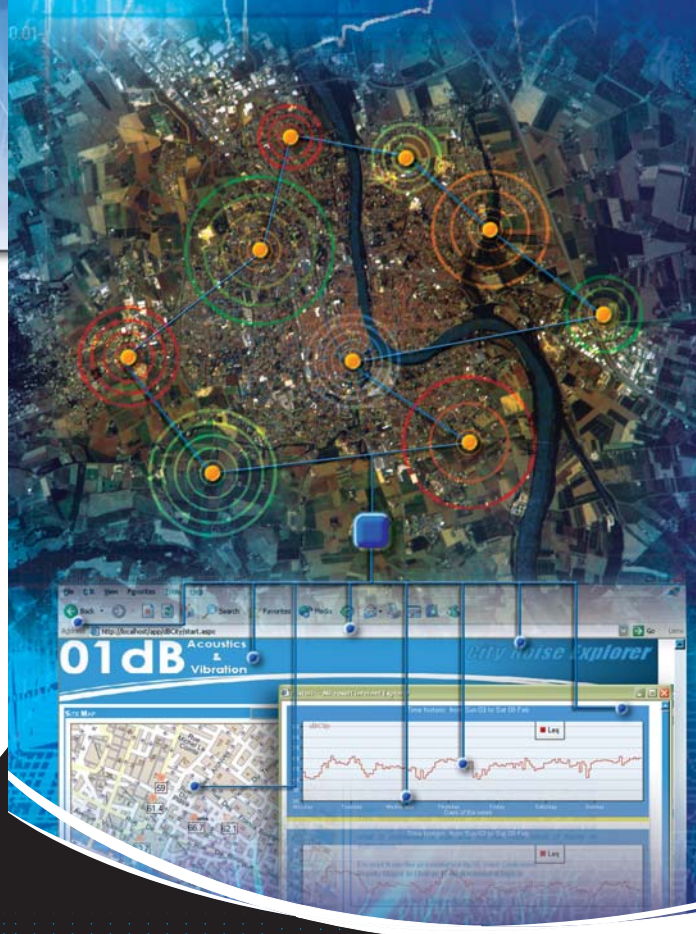
01dB Italy
Tel. +39 049 92 00 966
Fax +39 049 92 01 239

01dB USA
Tel. +1 248 592 2990
Fax +1 248 592 2991

Email : environment@01db.com

Long-term noise measurement and mapping system

Oper@



01dB acoustics & vibration METRAVIB technologies

01dB acoustics & vibration METRAVIB technologies

Oper@ a network for noise measurement

Oper@ consists of numerous noise measurement stations of undisputable precision (class 1 or 2), automatically connected to a central computer that manages, stores and displays data while presenting broad and various capacities: unlimited number of points, noise listening over the network, real-time communication, noise source recognition, alarms, etc.

Designed mainly to meet the requirements of the European directive, ***Oper@*** *is an advanced system that perfectly complements noise prediction tools and is also the ideal response to citizens' demand for information on environmental noise.*

Oper@ *will indeed prove relevant for urban planning: monitoring of black spots due to traffic, monitoring of quiet and noisy areas (industrial areas, live music venues, etc.), monitoring of urban construction sites, assistance in strategic choices for traffic planning (bus lanes, bicycle paths, street enlargement, diversions, etc.).*

Oper@ *is a fully upgradeable system that can assist you in preparing reports and distributing data over a customised Intranet/Internet site.*

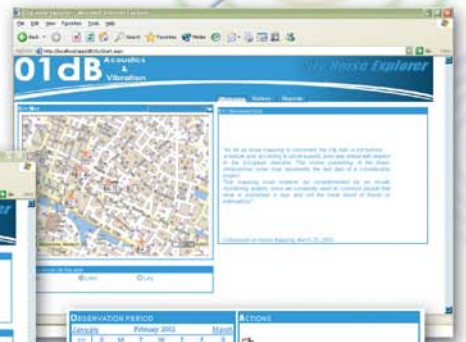
Oper@ *is an unrivalled system that relies on 01dB's experience in long-term measurement systems and provides its users with all management tools available on their network.*

Operating software

dBcity:

Based on the database of measurements performed at each point of the Oper@ network, **dBcity** generates results pertaining to noise pollution. Its primary task consists in describing all locations selected as measurement points over the study area using aerial or situation photographs (city, airport, factory or building site surroundings, etc.).

This information is displayed as a background map, including markers and labels for each Oper@ measurement station (OMS).



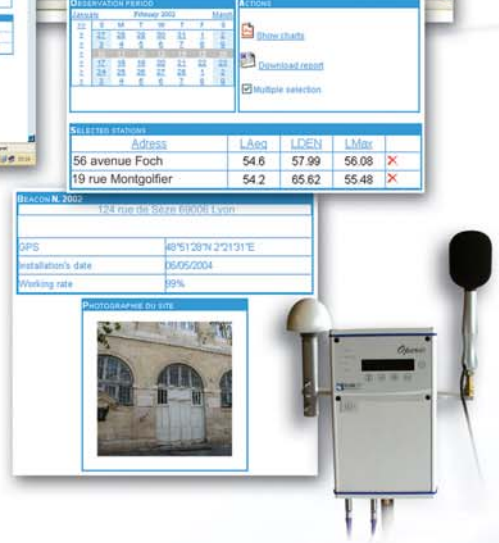
As for measurement results, **dBcity** allows for automatic editing of reports that are more or less detailed depending on the information level:

- display of Lden, Leq levels per day, week and month,
- display of the time history for the following indicators: Leq 15 minutes over 24 hours or 1 hour over 7 days, Lden over 1 month or 1 year.

Depending on the network configuration, these data can also be available in real time. Similarly, noise originating from a station can be listened to (depending on MPEG-3 streaming).

Statistical reports on noise, as well as information on air quality, are automatically edited on a user-defined periodic basis (daily, weekly, monthly, yearly) on any support: printout, e-mail, etc.

Based on Intranet/Internet technology, **dBcity** can be consulted over the company's network by everyone concerned by in environmental matters.



Expertise software

dBtr@it:

An expert tool, **dBtr@it** allows to zoom in on specific situations for a detailed analysis of noise sources. Their respective contribution with respect to the current regulations can thus be calculated. Various modules include Orders and Acts into the software so as to get direct comparison between measurements and limit values.

System management

dBdat@:

This software displays a calendar, which, for each point, lists noise measurements stored in a database. Data can be exported to **dBtr@it** for further analysis. Also, measurement data originating from portable systems like **Solo**, etc. can be imported into the database.

dB@dmin:

dB@dmin is a secured access (password) management software that allows for complete and remote control of operating OMS:

- Set-up of acquisition and storage functions on OMS,
- Scheduling of calibration and data transfer,
- Real-time monitoring of system operations,
- OMS localisation using built-in GPS and synchronised measurement dating,
- Editing of reports on OMS status and operating events.

Measurement

Noise is measured using compact instruments named OMS connected to an all-weather microphone unit that transfer measured noise levels in real time or in delayed mode. Designed for long-term outdoor use, they can be powered by the mains or with continuous voltage and are remotely driven by the aforementioned software programs. Type station **EX** is both a precision measuring instrument and a communication tool integrating a universal interface: Ethernet, xDSL, PSTN, ISDN, GSM, GPRS, ADSL modem and Wifi. It can also act as area server for a cluster of **RF** stations, the specificity of which is to operate by modem radio only. Using this wireless transmission mode, up to 10 RF stations can then be connected to an **EX** station to build up a sub-network, that can be easily displaced and used to monitor a given neighbourhood, control a building site, etc.