Turnkey Instruments Ltd

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iDB® Class 1

Internet Noise Monitor

The Turnkey® internet **iDB**® Class 1 provides remote on-site multichannel Class 1 monitoring of noise with data logging and automatic alarms via email, text messaging, or a visual traffic light system. Alarm types and thresholds for noise are configured by the user and their thresholds can be set to depend on the time of day.

iDB connects to Turnkey's **AirQWeb** cloud server. This allows integrated monitoring and control of noise, vibration, dust, meteorology, and air quality on your site. Live and historic L_{eq}, L_{10}, L_{90}, L_{max}, LC_{peak} and other readings are available to view on your PC, smart-phone or tablet, anywhere, anytime. The reporting interval can be as fast as every minute.

All of the data that is recorded is safe and secure with multiple backup servers.

To portray the **iDB's** readings, Turnkey can also provide 3D site mapping with 3D imagery, live readings and site placements shown on Google® Earth. Also available on your PC or mobile device.

iDB has an internal NiMH rechargeable battery that allows continued operation and recording in the event of a site power outage. Measurements taken during power outages are automatically uploaded to **AirQWeb** when site power returns.

iDB's sound processing circuits are designed to give Class 1 performance over a 95dB dynamic range, so 30dB to 120dB SPL is covered in a single range. Uniquely, **iDB** measures both dB(A) and dB(C) frequency weightings simultaneously, with F or S time weightings. As well as L_{eq} over the reporting interval, **iDB** also reports statistical values such as L_{10}, L_{90} and L_{max} in both dB(A) and dB(C) simultaneously.

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Other statistical sound indicators over arbitrary periods can be calculated within **AirQWeb** from the uploaded readings.

The instantaneous (30 microsecond sample rate) C-weighted peak sound level LC_{peak} may also be recorded together with >125dB overload as a percent of the reporting interval time. An error flag is set if an overload occurs during the sampling period.

iDB can be provided with either a Class 1 (supplied with frequency response curve) or Class 2 microphone.

Unlike some other providers, access to Turnkey's **AirQWeb** is free and unlimited and, provided you have an active Statutory Calibration Scheme (SCS), you also get free and unlimited technical support from the team of people who designed the instrument and software. Turnkey designs its own instruments and writes its own software, so we are able to give you the very best technical support.

iDB is supplied complete with a Turnkey Power Portal. This integrates a universal input mains power supply, Turnkey WS3 web server, and 3G/4G access-point into a wall mountable, waterproof, IP68 enclosure. The Power Portal and **iDB** can be supplied in a Peli-case for easy storage and transportation. The **iDB** itself is sealed to IP65.

Product design and development at Turnkey Instruments Ltd is continuous and we reserve the right to make changes to the design and specification of this and other products without prior notice.

Please visit www.iVIBE.uk/iDB for more information

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General	
Power Portal Supply	12V DC
Battery	6 Volt, 150 mAH, Nickel Metal Hydride NiMh
Battery Life	Up to 2 hours in event of mains power failure
Weight	0.5 kg
Material	Heavy duty machined aluminium diecast box
Dimensions	100mm x 50mm x 35mm deep
Operating Temperature	-5 0C to 50 0C
Power Portal Interface	RS485, 38.4 kBaud
Protection	IP65
Internal Memory	4Mb flash
Reporting Interval	1 second to 12 hours
Clock	Crystal controlled real time clock with battery backup
Calibration Interval	12 months, Turnkey® SCS scheme eligible

Noise	
Microphone	Class 1 (with frequency response report) or Class 2
Microphone Interface	Constant current, 18V phantom power
Frequency Weighting	db(A) and db(C) simultaneously
Time Weighting	F or S
Dynamic Range	30 dB to 120 dB in single range
Measurements	L_{eq}, L_{10}, L_{90}, L_{max}, dB histograms
Measurement Interval	1 second to 12 hours
Design Standards	BS61672, IEC651, BS5228, BS4969

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