Castle

GROUP

technical safety & environmental solutions

noise measurement solutions for the workplace and environment

www.pro-dxvocis.com

Pro.DX
VOCIS

the future of sound measurement

- Real-Time 1/1 and 1/3 Octaves
- All Digital Filters and Frequency Analysis (DSP)
- Weatherproof and Dust-proof
- Familiar 'Mobile Phone' Style of Operation
- User-Friendly Interface
- Alpha-Numeric Data Input
- Class 1 and 2 to IEC 61672:2002, Filters to BS EN ISO 61260:1996
- Up to 512MB of On-Board Memory
- DAT Compatible
- Fully Upgradeable and Future-Proof

Pro-DX vocis
GA131 real-time sound analyser

THE VOCIS AND EXPOSURE TO NOISE AT WORK

The Control of Noise at Work Regulations 2005 has set a new standard in the pursuit of protecting employees hearing. They have also changed the goalposts for potential civil claims on employers. To protect your employees from permanent disablement and to protect your company from potentially crippling claims and insurance premiums, it is essential to take reliable measurements of employee exposures and keep consistent records. It is also important to provide evidence for the correct selection of hearing protection. In one measurement, the Castle Vocis will record all the information you will need to comply with the law and defend those claims.

VOCIS IN THE ENVIRONMENT

With ever more pressure on our living environment and with changing laws and standards, noise is becoming an increasingly important environmental factor. The Vocis is designed to measure environmental parameters and has all the advanced data-logging features you would expect for such tasks. The additional weatherproof case system, with in-built batteries and interface processor and with our weatherproof microphone enclosure allows the Vocis to be used outdoors for prolonged periods (see picture on next page). A DAT recorder can also be included for live recordings at pre-determined times or trigger levels.

VOCIS FOR NOISE CONTROL

Once a problem has been identified, the solution may not be obvious. Once again, the Vocis can help with powerful 1/3 octave band measurements. This allows identification of problem frequencies and clues as to noise reduction possibilities. Octave band data for noise control materials can also be added to the hearing protection library to give instant performance against measured levels without even the need for a PC!

VOCIS FEATURES...

- REAL-TIME 1/1 AND 1/3 OCTAVES (GA131M)
- ALL DIGITAL FILTERS AND FREQUENCY ANALYSIS (DSP)
- WEATHERPROOF AND DUST-PROOF (EXCEPT MICROPHONE)
- FAMILIAR 'MOBILE PHONE' STYLE OF OPERATION
- USER-FRIENDLY INTERFACE
- ALPHA-NUMERIC DATA INPUT
- TYPE 1 AND 2 TO IEC 61672:2002, FILTERS TO BS EN ISO 61260:1995
- UP TO 512 MEGABYTES OF ON-BOARD MEMORY
- DAT COMPATIBLE
- RS232 INTERFACE FOR PC CONNECTION
- FULLY UPGRADEABLE AND FUTURE-PROOF

What are Real-Time Octave and 1/3 Octave Bands?

An octave on a piano is a range of notes covering 8 white keys, octave band measurements give the level in deciBels created by noise who's tone is in that range. Over the range of human hearing, there are 10 octave bands. One-third (1/3) octave bands take each octave band and split it into 3 parts. Real-time is simply measuring all the bands at once instead of one after another.

SOFTWARE SYNERGY...

To gain the most out of your measured data, Castle dBdataPRO software is the way to go. Post measurement analysis, presentation of graphical data and memory management of the Vocis can all be done using this package. The dBdataPRO system also allows data to be 'copied' and 'pasted' into any PC word processing or spreadsheet package enabling you to use and enhance your own standard report formats.

THE HUMAN TOUCH...

Irrespective of Technical performance, many instruments neglect the user as part of the working equation. The Castle Pro-DX Vocis is pleasing to the eye and ergonomically designed to fit the hand comfortably for ease of use. Its similarity to a mobile phone is no coincidence. It feels and operates using sequences we all know so well. Never has a technical instrument been so 'user friendly'.

FUTURE PROOF...

The built in software for these meters is designed to suit future upgrading for feature enhancements, legislative changes or instrument upgrades. Details are mailed to customers as soon as they become available. With the Castle Pro-DX meters, you will always be in step with the law and market requirements.

HEARING PROTECTION SELECTION...

The Vocis has an in-built database of hearing protection attenuation figures. These are given for many manufacturers' makes and numerous models and are regularly updated. Once a measurement has been taken (in octave bands) a selected hearing protector can be applied to the results to give the predicted level at the ear, providing on-site confidence and future evidence of the correct selection of PPE!

VOCIS SYSTEMS

There are seven system varieties, put together to fit almost any application and covering the entire range of Vocis models. The KV001 for example is a professional safety system and contains all the equipment and accessories needed for noise at work risk assessments. There are also weatherproof, outdoor systems and even a noisy neighbour kit! To find the right one for your application, contact us and talk to a real person or look on our website, where everything is set out in an easy to find way – you can even buy on line!

VOCIS VARIATIONS

The Castle Pro-DX Vocis is available in 4 main variations, two of which can be either Class 1 or Class 2.

- Pro-DX Vocis E (Environment)
  - GA131E - Class 1 Data-Logging Sound Level Meter with Leq & Ln's
  - GA231E - Class 2 Data-Logging Sound Level Meter with Leq & Ln's

- Pro-DX Vocis I (Industrial)
  - GA131I - Class 1 Real-Time 1/1 Octave, Data-Logging Sound Analyser
  - GA231I - Class 2 Real-Time 1/1 Octave, Data-Logging Sound Analyser

- Pro-DX Vocis M (Multi-Function)
  - GA131M - Class 1 Real-Time 1/1 and 1/3 Octave, Data-Logging Sound Analyser with Leq & Ln's

- Pro-DX Vocis C (Combined)
  - GA131C - Class 1 Real-Time 1/1, Data-Logging Sound Analyser with Leq & Ln's

information & ordering: **01723 584250/www.castlegroup.co.uk**

WHO ARE CASTLE?

Castle are a world renowned manufacturer of first class products for Noise, Vibration and Audiometry.

With a focus on innovation, quality and value engineering, we provide up to the minute products for busy professionals.

Our highly-trained staff will ensure that you are guided to the perfect product solution.

www.castlegroup.co.uk

CASTLE SERVICES

Castle training

Castle's Training Courses are recognised by leading industry bodies, provide in-depth knowledge and a high level of hands-on practical experience, giving participants 'Competent Person' status.

www.castle-training.com

Castle Rent

Castle has an extensive range of Noise and Vibration instrumentation available for rent. Cost effective short term rental for those who work to a tight budget. Long term rental offers financial benefits for frequent users.

www.castle-rent.com

Castle Consultancy

Castle consultants are available to help you, whatever the problem, for Noise & Vibration issues, The same ethos applies to a raft of other Safety, Health and Environmental issues including COSHH, Air Quality Monitoring, Display Screen Equipment and Manual Handling.

www.castle-consultancy.com

cassafe.com

We offer many essential products for Health, Safety & Environmental applications, from Anemometers for wind speed, to Personal Protective Equipment and everything in-between.

www.cassafe.com

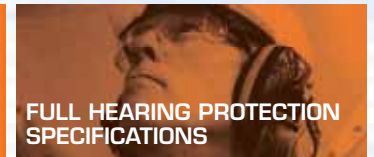# PRO-DX VOCIS (GA131)
TECHNICAL SPECIFICATION

RUGGED CONSTRUCTION

PC CONNECTION (RS232)

BACKLIT LCD DISPLAY

FULL HEARING PROTECTION SPECIFICATIONS

APPLICABLE STANDARDS
BS EN 61672-1:2002, BS EN ISO 61260:1996, IEC 60804:2000

MICROPHONE AND PREAMPLIFIER
For class 1: Type 1 Pre-Polarised 1/2" (12.7mm) Electret Condenser Microphone 50mV/Pa
For class 2: Type 2 Pre-Polarised 1/2" (12.7mm) Electret Condenser Microphone 50mV/Pa

DISPLAY
Back lit LCD panel (160x160 dots) • Sound Level Meter and analyser display • Numerical: Tabular results on-screen • Bar graph: 1/1 & 1/3 octaves + time-history • Real time clock: Day, Month, Year, Hour, Minute, Second.

LEVEL RANGE
Sound Level Meter (Linear Operating Range: 65 dB)
Six ranges in 10-dB steps: 15-90, 25-100, 35-110, 45-120, 55-130, 65-140 dB. Analyser mode (display range: 70 dB) Six ranges in 10-dB steps: 10-90, 20-100, 30-110, 40-120, 50-130, 60-140 dB.

NOISE FLOOR
Typical <18dB(A) rms.

FREQUENCY WEIGHTING
'A' and 'C' to BS EN 61672-1:2002 Class1, 'Z' to BS EN 61672-1:2002 Class 1.

FREQUENCY RANGE
12.5 Hz - 20 kHz (including microphone)
1 Hz - 20 kHz (electrical characteristics)

TIME WEIGHTING
Slow, Fast, Impulse, 10ms and Peak.

MEASUREMENT & REAL-TIME FREQUENCY ANALYSIS
Dual channel measurement from a single microphone; individual frequency weighting and time weighting settings are possible for A and B channels. 1/1 or 1/3 octave band real-time frequency analysis capability in channel A.

MEASUREMENT PARAMETERS
Variations (I, C, E & M) Lp (SPL), Leq, Lmax, Pmax (Lpeak), Ltm3. Ltm5, LAE, Lmin, **Variations I, C & M** DOSE %, projected DOSE %, user definable criterion (75,80,85 or 90), user definable exchange rate (3, 4 or 5), Lep'd (Lex), projected Lep'd, 1/1 Octave values in Lp, Leq, Lmax, Lmin. Hearing Protection figures in APL. NR (noise rating) - Future Feature **Variations C, E & M** 7 user-definable Ln values (pre-set to: L1, L5, L10, L50, L90 L95, L99) plus LAF for Noise act assessment. **Variation M only** Reverberation time - Future Feature (R60, 30 and 20).Power (SWL), FFT analysis. 1/3 Octave band values in Lp,Leq, Lmax, Lmin and Ln's.

LOG TIME INTERVALS
User definable in one second intervals for all parameters. Automatic cumulative Leq every 12 hours.

TRIGGER FUNCTION
Trigger source: External signal, internal dB value (rising or falling).

TIMER FUNCTION
A Program Log Timer to give multiple Start-Stop timings, Repeat timer and programming function to control multiple measurement tasks (date independent). Real Time Clock and Calendar, plus measurement duration and events.

MEMORY
Supplied with 128Mb memory upgradeable to 512MB.

SIGNAL OUTPUT
Serial interface RS232 4800 Baud; 8bit; no parity, bi-directional, 9 pin D-sub 'AC'.

NOISE BYTE - Future feature
Solid state recording for noise source indentification and post analysis. Recording time dependent on memory size (possible recording time > 20 hours). Separate memo function within noise-byte feature.

POWER REQUIREMENTS
12 volts DC (with mains adaptor), Batteries: Six x MN 1500 (size AA), Life: approximately 8 hours (alkaline batteries, continuous operation, 1/3 octave analysis).

SIZE AND WEIGHT
Dimensions: H:250mm (without microphone) x W:100mm (max) x D:50mm Weight: 870g approximately (including batteries).

ACCESSORIES
GA607 Dual Level Calibrator • GA505 Portable Graphic Printer: a high quality low cost wide paper printer which works directly with the meter. ZL1083-01 Printer Cable for use with GA505. dBdata4W Windows 95, 98, ME, NT 2000 and XP analysis software. • GA504 Sony TC-D8 DAT recording kit. • Multi-language manuals: English, French, German, Spanish and Italian. Multi-language firmware and software: English, French, German, Spanish and Italian.

Note: items marked 'Future Feature' will be available as upgrades in the near future.

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