



Adelaide | Brisbane | Gladstone | Mackay | Melbourne | Perth | Sydney

Distributed by: Air-Met Scientific Pty Ltd

Air-Met Sales/Service

P: 1800 000 744

F: 1800 000 774

E: sales@airmet.com.au

Air-Met Rental

P: 1300 137 067

E: hire@airmet.com.au

W: www.airmet.com.au

ABOUT US

Quest Technologies, a 3M company, is a world class manufacturer of rugged, reliable instrumentation and software systems that monitor and evaluate occupational and environmental health and safety hazards including noise, heat stress, indoor air quality and select toxic/combustible gases. The Quest brand of instrumentation is used by Safety and Industrial Hygiene Professionals to help comply with applicable occupational standards and regulations.

ABOUT 3M AND 3M'S OCCUPATIONAL HEALTH AND ENVIRONMENTAL SAFETY DIVISION

Quest Technologies was acquired by 3M Company in 2008, and is part of 3M OH&ES Division, a global leader in respiratory, hearing, eye, head and fall protection, visibility and protective clothing, and detection products. 3M captures the spark of new ideas and transforms them into thousands of ingenious products. Our culture of creative collaboration inspires a never-ending stream of powerful technologies that make life better. 3M is the innovation company that never stops inventing. With \$30 billion in sales, 3M employs about 84,000 people worldwide and has operations in more than 65 countries.



Occupational Health & Environmental Safety Division

Quest Technologies, a 3M company
ISO 9001 Registered Company
ISO 17025 Accredited Calibration Lab
1060 Corporate Center drive
Oconomowoc, WI 53066
Customer Service: 262-567-9157
Toll Free: 800-245-0779
www.3M.com/detection

3M, SoundPro and NoisePro
are registered trademarks
of 3M Company, used under
license in Canada. Please
recycle. Printed in USA.

© 2012 3M. All rights reserved.

70-0716-2517-5



Pocket Guide
for Occupational
and Environmental
Health Professionals



Table of Contents

DATA MANAGEMENT & ANALYSIS SOFTWARE

2. 3M™ Detection Management Software DMS

OCCUPATIONAL & ENVIRONMENTAL NOISE

3. 3M™ Sound Detector SD-200 Sound Level Meter
4. 3M™ Sound Examiner SE-400 Series Sound Level Meters
5. 3M™ SoundPro™ SE and DL Sound Level Meters
6. 3M™ Verifier Speech Intelligibility Instrument
7. 3M™ Noise Indicator NI-100
8. 3M™ The Edge Cable-Free Noise Dosimeters
9. 3M™ NoisePro™ Series of Noise Dosimeters
10. 3M™ QC-10 Sound Level Calibrator
11. 3M™ AcoustiCal AC-300 Calibrator

HEAT STRESS MONITORS

12. 3M™ QUESTemp° 32/34/36 Portable Wet Bulb Heat Stress Monitors
13. 3M™ QUESTemp° 44/46/48N Waterless Wet Bulb Heat Stress Monitors
14. 3M™ WIBGET™ WB-300 Heat Stress Monitor
15. 3M™ QUESTemp° II Personal Heat Stress Monitor

ENVIRONMENTAL MONITORING

16. 3M™ EVM Series Particulate Mass Concentration and Air Quality Monitors

CALIBRATION SERVICES

17. 3M™ Calibration, Service & Extended Warranty Programs

SPECIALTY PRODUCTS

18. Specialty Instruments for Unique Applications

Data Management & Analysis Software



3M™ Detection Management Software DMS

Detection Management Software DMS makes it easy to record, report, chart and analyze data collected for assessment of select occupational health hazards in the workplace. Designed for dosimetry, sound level measurements, heat stress assessments and environmental monitoring, this advanced software helps safety and occupational professionals.

KEY FEATURES

- Only one software application to learn
- Centrally organize and access exposure data
- Retrieve, download, share and save instrument data
- Generate insightful charts and reports
- Export and share recorded data
- Perform “What If” analysis and recalculate data based on selected time intervals
- Set up instruments and check for firmware updates
- English, Spanish, German, French, Italian, Portuguese, Korean and simplified Chinese display languages
- Excellent user support

Occupational & Environmental Noise



3M™ Sound Detector SD-200 Sound Level Meter

The Sound Detector SD-200 is a compact, lightweight sound level meter designed for measurement of workplace noise levels. Its intuitive design makes it easy for users to measure sound levels and determine the degree of hearing protection that may be required. Plus, it offers an integrating feature that computes the average sound pressure level allowing for more accurate assessment of intermittent sound levels.

KEY FEATURES

- Simple, user-friendly interface
- Green, yellow and/or red LEDs flash when preset noise levels are reached
- A rechargeable lithium polymer battery with up to 50 hours between charges
- Average sound pressure level delivers a steadier reading where noise levels are highly variable
- Class/Type 2 microphone
- Meets ANSI S1.4 1983 (R 2006), ANSI S1.43 1997 (R 2007), IEC 61672-1 (2002), IEC 61010-1 (2010) and CE standards
- Measures Sound Pressure Level (SPL), Average value (L_{EQ}/L_{AVG}), LED Alert, Maximum value (MAX), Minimum value (MIN), Run-Time, Overload (OL) and Under-Range (UR)

Occupational & Environmental Noise



3M™ Sound Examiner SE-400 Series Sound Level Meters

The Sound Examiner SE-400 series of sound meters are engineered to accurately measure noise levels in highly variable environments. They compute the average sound pressure level (L_{EQ}/L_{AVG}) over the run time, helping you to more accurately assess occupational and environmental noise levels. All models ship ready-to-use, no set-up necessary.

KEY FEATURES

- Measurement parameters include: SPL, LMAX, LMIN, Peak, L_{EQ}/L_{AVG} , Elapsed Time
- Variable, user-selectable data logging intervals and measurement parameters
- Export, report and share SE-400 data with the new 3M Detection Management Software DMS
- Water resistant and dust-proof design (IP65 rated) with an ergonomic soft grip and long battery life
- English, Spanish, German, French, Italian, Portuguese, Korean and simplified Chinese display languages
- 2 Mb memory capacity
- Transflective 128 x 128 pixel resolution display with LED backlighting
- Manual user adjustment with external calibrator
- Stored session summary data includes: L_{EQ}/L_{AVG} , max, min, peak, and user settings
- Easy-to-use SoundPatrol portable digital printing capability requires minimal training, so it can be easily deployed in the field

Occupational & Environmental Noise



3M™ SoundPro™ SE and DL Series Sound Level Meters and Real-Time Analyzers

The SoundPro SE/DL series provides advanced sound level monitoring and comprehensive data analysis. Available in Class 1 and Class 2 models, these instruments feature large screen displays that enable real-time frequency analysis, and data storing capabilities that make it easy to post-process and evaluate workplace noise levels.

KEY FEATURES

- Class/Type 1 and 2 models
- Fully compliant with EN/IEC 61672 and ANSI SLM standards
- 1/1 and 1/3 octave real-time filters
- 0 to 140 dB range (with peak range up to 143 dB)
- Frequency weightings A, C and Z (linear)
- Fast, slow and impulse response time constants
- Noise dose calculation with selectable thresholds
- User selectable exchange rates (3 dB, 4 dB, 5 dB, 6 dB)
- Luminescent keypad/backlit display
- USB communications for programming/data transfer
- Time history data logging
- Statistical distribution and exceedance level data reporting
- GPS coordinate logging if connected to certain GPS models
- Removable SD memory card for data storage and transfer
- Acoustic spectral curves, speech intelligibility and reverberation measurement options

Occupational & Environmental Noise



3M™ Verifier Speech Intelligibility Instrument

The Verifier is a special type of sound level meter offering speech intelligibility measurement to ensure that voice actuated fire alarms, mass communications and public address (PA) systems are clearly heard and understood in an emergency. The instrument's intuitive display and keypad allow users with varying levels of expertise to perform speech intelligibility testing.

KEY FEATURES

- Easy user set-up and operation
- Results given for speech intelligibility for public address systems in Speech Transmission Index-PA (STI-PA) and Common Intelligibility Scale (CIS) formats
- 15 second measurement intervals with post processing functionality
- Run-time clock shows duration of studies and sessions
- Eight selectable ranges of 50 dB to 140 dB
- Displays table of modulation indices
- GPS coordinate logging
- Measures in accordance with IEC 60268-16, NFPA 72 Annex E and DOD UFC-4-021-01

Occupational & Environmental Noise



3M™ Noise Indicator NI-100

The Noise Indicator NI-100 alerts users to potentially dangerous noise levels, helping identify areas where noise assessment may be needed to determine the need for hearing protection. Users clip the Noise Indicator to a shirt or jacket and its LED light delivers a clear indication when noise levels exceed a potentially hazardous threshold. The NI-100's small size and lightweight design make it ideal for workers in a variety of industries.

KEY FEATURES

- An affordable option for monitoring noise levels, with a durable, easy-to-use design
- Lightweight. Weighs only 0.6 oz (17 g)
- Rechargeable battery that operates for up to 200 hours between charges
- Unit will auto-power off after approximately 10 hours
- Flashing green LED indicates noise level is below 85 dBA
- Flashing red LED indicates noise level is above 85 dBA and hearing protection may be needed

Occupational & Environmental Noise



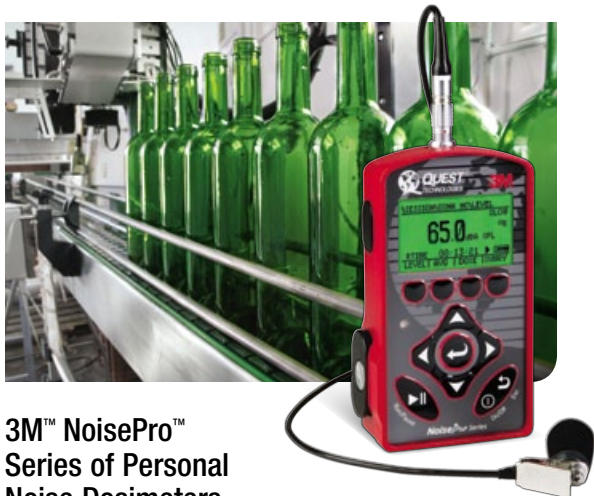
3M™ The Edge Cable-Free Noise Dosimeter

The Edge noise dosimeter offers a cable-free, compact frame for a lighter, more ergonomic way to monitor noise levels. This innovative dosimeter weighs only 3 ounces and features a thin, contoured shoulder mount. The Edge eg4 has dual dosimeters and data logging/time history. The Edge eg5 has intrinsic safety approvals and when used with the new Data Management Software DMS, users can activate a third independent dosimeter, allowing for simultaneous measurement against three industry standards.

KEY FEATURES

- Convenient and efficient cable-free design eliminates the microphone cable
- Thin, contoured shoulder mount
- 70 to 140 dB RMS range (with 143 dB peak range)
- Visual exposure monitor via multi-color LED
- Rechargeable lithium polymer battery for long life between charges
- Available with 1 or 5 Bay "EdgeDock" docking station
- Downloads to Detection Management Software DMS
- Two advanced models with data logging/time history measurements
- eg5 model features simultaneous C-weighted and A-weighted measurements
- eg5 model is certified intrinsically safe for use in potentially hazardous locations (CSA, MSHA, Simtars for IECex and SIRA for ATEX)

Occupational & Environmental Noise



3M™ NoisePro™ Series of Personal Noise Dosimeters

The NoisePro™ series of personal noise dosimeters helps Industrial Hygiene and Safety Professionals monitor noise exposure efficiently, and provides tools to empower worker self-management of noise exposure. The NoisePro's compact yet rugged IP-65 rated casing, intrinsic safety certifications and advanced features make it well-suited for a wide range of applications.

KEY FEATURES

- Certified intrinsically safe for use in potentially hazardous locations (UL, MSHA, and ATEX)
- Class/Type 1 or 2 accuracy
- 40 to 110 dB and 70 to 140 dB (two) RMS ranges
- Auto-configuration to common regulations
- Real-time compliance indicators
- High-speed infrared communications to PC
- Simultaneously test to multiple regulations
- Real-time clock and calendar
- Programmable scheduled monitoring sessions
- Optional vibrating alarm
- Optional boom microphone
- Time history and statistical distribution data
- Rugged IP-65 rated, industrial grade cast aluminum case

Occupational & Environmental Noise



3M™ QC-10 Sound Level Calibrator

The QC-10 sound level calibrator provides quick, precise field calibration checks of instruments with Class/Type 2 microphones. The calibrator generates a stable acoustic signal at a controlled frequency and amplitude to verify the accuracy of your meter in the field.

KEY FEATURES

- The QC-10 Type 2 calibrator has fixed 114 dB at 1000 Hz acoustical output
- Standard one inch coupler opening may be reduced by inserting available snap-in adapters for ½ inch and ¼ inch microphone sizes
- Long battery life
- Low battery indicator
- Complies with IEC 942 and ANSI S1.40

Occupational & Environmental Noise



3M™ AcoustiCal AC-300 Calibrator

The AcoustiCal AC-300 is a precision sound level calibrator for calibration of Class/Type 1 instruments. It generates two settings with either 250 Hz or 1000 Hz at a sound pressure level of 114 dB. The sound pressure level and combinations of frequency outputs conform to the requirements of the IEC standard 60942 (2003) for sound calibrators.

KEY FEATURES

- Calibrates precision Class/Type 1 sound level meters and noise dosimeters
- Produces two signals: 250 Hz or 1000 Hz at a sound pressure level of 114 dB
- Included in all 3M Quest instrumentation kits featuring Class/Type 1 microphones
- Long battery life
- Low battery indicator
- Conforms to the requirements of the IEC standard 60942 (2003) for sound calibrators
- Conforms to ANSI S1.40-1983 (R2006f): Specifications and verification procedures for sound level meters

Heat Stress



3M™ QUESTemp° 32/34/36 Area Heat Stress Monitors

The QUESTemp° 32/34/36 are designed to quickly and accurately evaluate potential heat stress environments. They deliver high performance monitoring through WBGT (Wet Bulb Globe Temperature) sensing technology and the calculation of a WBGT Index value.

KEY FEATURES

- Wet bulb, dry bulb, globe temperatures, % RH, WBGT in/out, heat index and HUMIDEX indices
- Head/body/torso sensor arrays
- English, Spanish, French, German and Italian languages
- Time history data logging with real-time clock
- QT36 offers on-board stay-time calculator based upon the ACGIH TLV Handbook, U.S. Navy PHEL charts and EPRI action limits
- Optional air velocity sensor for thermal comfort applications available with the QT36
- Readings in either Celsius or Fahrenheit
- Up to 150 hours operation from a single 9V alkaline battery
- Up to 300 hours operation from an optional rechargeable NiMH battery
- Compatible with Detection Management Software DMS for advanced analysis
- Certified intrinsically safe for use in hazardous locations

Heat Stress



3M™ QUESTemp® 44/46/48N Area Waterless Wet Bulb Heat Stress Monitors

The QUESTemp® 44/46/48N utilizes a Waterless Wet Bulb sensor designed for working environments where daily instrument upkeep is difficult. A high quality humidity sensor and proprietary algorithm perform the calculation of the WBGT values eliminating the hassle of daily wet bulb maintenance.

KEY FEATURES

- Globe temperature, dry bulb temperature, wet-bulb temperature (calculated), % RH, WBGT in/out, heat index and HUMIDEX indices (QT48N excludes heat index and HUMIDEX)
- Real-time clock helps to provide accurate reporting with time stamping
- QT46 and QT48N provide displayed stay-times based upon the ACGIH TLV handbook, U.S. Navy PHEL charts, U.S. Marine Flag system and EPRI action limits (QT48N excludes EPRI)
- English, Spanish, French, German and Italian display languages
- QUESTemp® 46 compatible with optional air velocity sensor
- Temperature readings in either Celsius or Fahrenheit
- Compatible with Detection Management Software DMS for advanced analysis
- QUESTemp® 48N features D-ring attachments and a heavy-duty lanyard for hands-free monitoring

Heat Stress



3M™ WIBGET™ WB-300 Heat Stress Monitor

The WIBGET Heat Stress Monitor WB-300 helps you to quickly and easily detect key environmental factors that can contribute to heat stress. The durable, yet lightweight heat stress monitor delivers high performance area monitoring using Wet Bulb Globe Temperature (WBGT) measurements for assessing environmental heat stress. The monitor's durable design readily withstands the rigors of the workplace, and its easy-to-use features and simple operation make the WIBGET WB-300 an ideal monitor to help you to establish your heat stress management program.

KEY FEATURES

- One-year warranty
- Direct reading of Wet Bulb, Dry Bulb, Vernon Globe equivalent, WBGTin, and WBGTout temperatures
- Displays to 1/10th degree, +/- 0.9 °F between 32 °F to 212 °F (+/-0.5 °C between 0 °C and 100 °C)
- At the push of a button, the WIBGET Heat Stress Monitor WB-300 calculates WBGT, helping you establish appropriate work/rest ratios
- Designed water resistant to a light rain or mist
- CE mark; compliance with EN 50014: 1997, and EN 50020: 2002 Environmental Safety Division

Heat Stress



3M™ QUESTemp II Personal Heat Stress Monitor

The QUESTemp[®] II personal heat stress monitor helps to provide an additional level of data by directly detecting the individual's physiological heat response. User-selected alarm trip points provide an audio alert to workers experiencing elevated core temperatures. This instrument is ideal for applications where people face a wide range of heat exposure. It allows safety directors to monitor personal heat stress levels and create heat stress measures that can minimize risk.

KEY FEATURES

- Incorporates the effects of protective clothing and personal physical condition
- Ear canal temperature sensor
- Audio alarms at the ear
- NRR rated foam earplug houses the micro temperature sensor
- Compact and lightweight
- Easy-to-learn operation
- Full minute-by-minute data logging

Environmental Monitoring



3M™ EVM Series Particulate Mass Concentration & Air Quality Monitoring

The EVM-7 measures both particulates and air quality, and provides a lower cost of ownership by combining three instruments into one. Its patented dial-in rotary impactors, intuitive user interface and advanced reporting make the EVM-7 an instrument of choice for Safety and Industrial Hygiene Professionals worldwide.

Additional models include the EVM-3, specializing in direct reading of particulate mass concentrations and the EVM-4, designed for indoor air quality studies.

KEY FEATURES

- Simultaneous measurement and logging of particulate mass concentrations, VOCs, toxic gas, CO₂, relative humidity, temperature and air velocity (with accessory)
- Dial-in impactors for selection of PM2.5, PM4, PM10 or TSP (within the instrument's measurement range) without disassembly
- Light-scattering photometer helps to provide real-time measurement of particulate concentrations
- Built-in sampling pump
- Simultaneous gravimetric sampling with a 25 or 37-mm filter cassette
- Choose from one of nine toxic electrochemical smart sensors
- English, French, German, Italian, Portuguese and Spanish display languages
- Displayed measurements of level, minimum, maximum, average, STEL and TWA
- Compatible with Detection Management Software DMS for advanced analysis

Calibration Services



3M™ Calibration, Service and Extended Warranty

3M Quest Technologies instruments are warranted to be free from defects in materials and workmanship for one year under normal conditions of use and service. For added peace of mind, consider enrolling in a 3M Detection Instrumentation Extended Warranty Program. These programs provide two years of full warranty coverage, including the cost of components* and microphones, as well as a Level II calibration.

KEY FEATURES

Annual Calibrations:

- Factory product warranty extension for additional 12 months
- Factory hardware and firmware updates automatically installed
- Assurance intrinsic safety approvals are not voided by unapproved repairs or modifications
- Calibration measurements for many products are traceable to a U.S.A. NIST laboratory

Extended Warranty Programs:

- Two years of warranty coverage
- Standard lead time of five to seven business days
- Free expedited shipping for orders within the United States
- Level II calibration performed by a certified technician at an ISO 17025 accredited 3M laboratory

*Excludes Interchangeable Smart Sensors and PID (ppb and ppm) Sensor for EVM.

Specialty Products



Specialty Instruments for Unique Applications

- **Audiometric Calibration Kits** include a variety of audiometric calibration instruments, produced to provide daily checks and periodic electronic calibration of audiometers used in hearing testing.
- **Weatherproof Outdoor Measurement Systems** are for unattended sound monitoring.