

Common Noise Dosimeter Terms

Criterion Level - expressed in decibels (dB), it is the maximum allowable accumulated noise level that results in 100% dose. Regional noise standards specify criterion level.

Dose - expressed in percent, it is the % of the maximum exposure that has accumulated in the run time. 100% is the maximum allowable exposure. 100% dose occurs for an average sound level equal to the criterion level for an 8 hour period.

Exchange Rate (Doubling Rate) - the decibel level that would double or halve the sound exposure. For instance with a 3dB exchange rate the sound exposure doubles with every 3dB increase, and the sound exposure is halved every 3dB decrease. Regional noise standards specify the exchange rate.

Lavg - stands for "level average" and is the average sound level measured over the run time.

Leq - stands for "level equivalent" and is the average sound level measured over the run time but is calculated with a 3dB exchange rate and no threshold.

Max Level - the highest weighted sound level that occurred, also allowing for the response time that the meter is set to. If the meter is set for A weighting with Slow response then the Max level is the highest A weighted sound that occurred applying the Slow response time.

Peak Level - the highest instantaneous and unweighted level that occurred during the run time. The peak level can apply the A, C or Z weighting. The Fast, Slow or Impulse response time is not applied. Regional noise standards typically specify a peak level limit and weighting, if any.

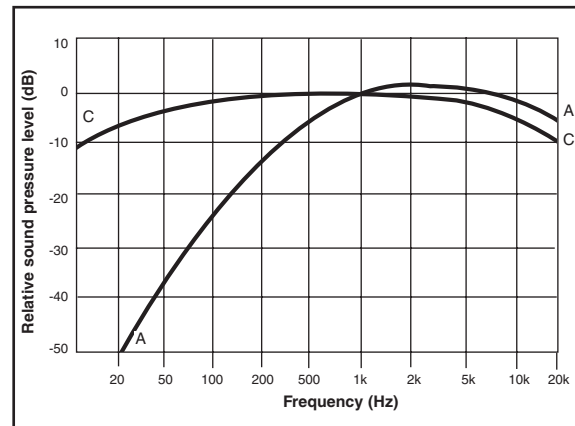
Response Time (Fast, Slow, Impulse) - how quickly the circuitry responds to changing noise levels. These are ANSI/IEC defined response times. Most occupational noise standards require slow response time.

Threshold Level (Cut Off) - noise levels below the threshold are integrated as zero decibels. This will affect Lavg, Leq, TWA, and Dose values. Most regional noise standards specify the threshold level, if any.

TWA (Time Weighted Average) - takes the noise exposure accumulated in the run time and applies an eight hour time period. If the meter was in run for 5 minutes, the TWA takes that 5 minutes of noise input and averages it into an 8 hour run time. The TWA in this case would be much lower than the Lavg.

Weighting (A, C, Z) - frequency filters that cover the frequency range of human hearing. A weighting greatly attenuates high and low frequency noise to mimic how the human ear hears noise. C weighting also attenuates high and low frequency noises, but not nearly as much as A weighting. Z weighting does not apply any attenuation, or weighting, to any frequency. Most regional noise standards require A weighted measurements.

"A" and "C" Weighting Curves



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Pre-defined Setups

Six of the nine dosimeter setups are factory-defined, and five of those six cannot be changed by a user. These factory assignments conform to standards established for noise dosimetry in the United States and the European Union.

Quest strongly recommends that you check your regulations before taking important data. Regulations change from time to time and you must be sure that your settings are positively correct.

OSHA HC (Hearing Conservation):

"A" Weighting 80dB Threshold 5dB Exchange Rate
90dB Criterion Level Slow Response

OSHA PEL (Permissible Exposure Level):

"A" Weighting 90dB Threshold 5dB Exchange Rate
90dB Criterion Level Slow Response

MSHA HC (Hearing Conservation):

"A" Weighting 80dB Threshold 5dB Exchange Rate
90dB Criterion Level Slow Response

MSHA EC (Permissible Exposure Level):

"A" Weighting 90dB Threshold 5dB Exchange Rate
90dB Criterion Level Slow Response

ACGIH:

"A" Weighting 40dB Threshold 3dB Exchange Rate
85dB Criterion Level Slow Response

200310EC (EU Directive)

"A" Weighting 40dB Threshold 3dB Exchange Rate
85dB Criterion Level Slow Response

NoisePro® Series Noise Dosimeter Quick Start Pocket Guide



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Quick Start Pocket Guide

Turn On:

1. Turn on unit by pressing and releasing On/Off/ESC key. The display will initialize and sequence to the "START" screen.
2. If "LOBAT" is in display, put a fresh batteries in the unit.

Reset:

3. Press and hold RESET softkey, the display counts down from 5 then shows "Sessions DELETED" for NoisePro-DLX or "Studies DELETED" for the NoisePro-DL & NoisePro. NOTE: Resetting unit erases all previously stored data from memory.

Calibrate:

4. Turn on calibrator and check LOBAT indicator. Replace batteries if needed.
5. Insert unit's microphone into calibrator using appropriate adapter.
6. Press and release CAL softkey, the "CAL" screen appears. With CALIBRATE highlighted, press ↵ key. The "cal\PRE-CALIBRATION" screen appears with "XXX.X dB? SPL". XXX.X should be the output level of the calibrator. Use ▲ and ▼ keys to change the level to match the calibrator output. Press ↵ key to store the calibration. Unit will perform self-calibration and return to "CAL" screen.

7. Press and release the On/Off/ESC key to return to "START" screen.

Begin Study:

8. Clip microphone to the top of the shoulder away from the neck. Clip meter onto individual's belt on the side opposite the microphone. It is a good idea to try to run the microphone cable underneath clothing to prevent it from catching on anything.
9. Begin study by pressing RUN/PAUSE key. The run icon "▶" will appear in the lower right corner of the display.

End Study:

10. Press **RUN/PAUSE** key to stop study. The pause icon "||" will appear in the lower right corner of the display.

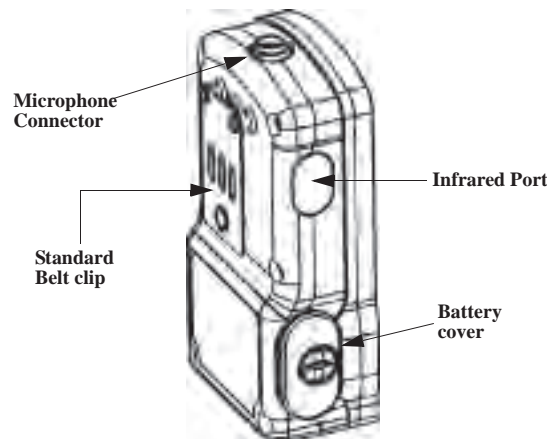
Review Data:

11. From the "START" screen, highlight "VIEW CURRENT STUDY" and press the ↵ key. ▲ and ▼ keys scroll through LEVEL, AVG and DOSE information. ◀ and ▶ keys scroll to the other dosimeter information. (Example: NoisePro-DLX dosimeters 1,2,3 and 4; NoisePro & NoisePro-DL dosimeters 1 and 2).

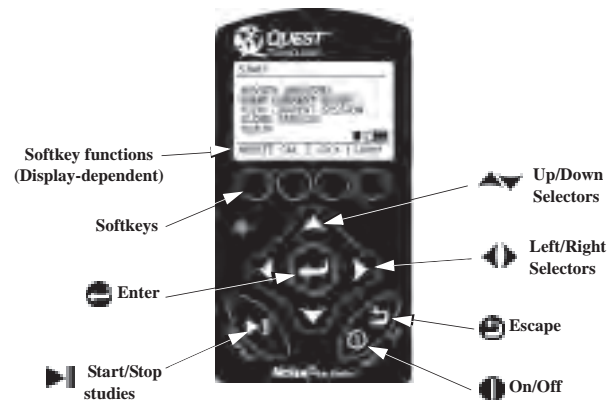
Download:

12. Data can be downloaded to QuestSuite® Professional (See Chapter 8 of the NoisePro user manual for details).

NoisePro® Series Case



NoisePro® Series Controls



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