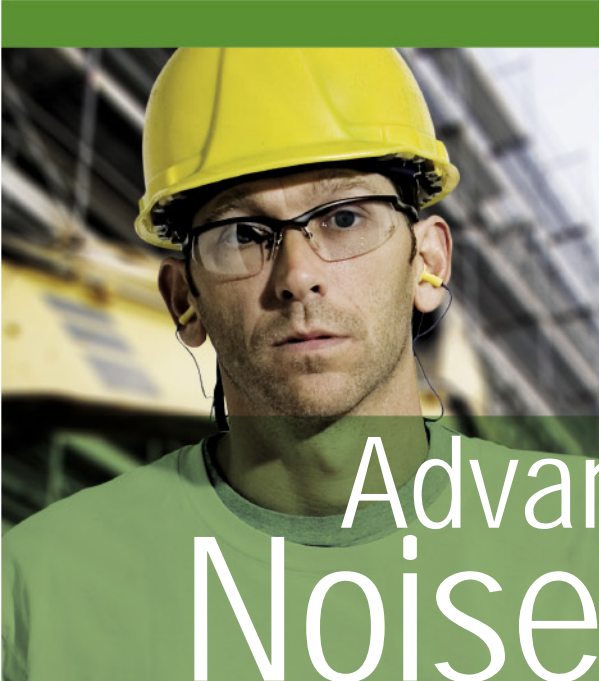


NoisePro™ Training Module



Advanced Personal Noise Monitoring

Reporting and Analysis



You will learn

- What –
is a NoisePro Noise Dosimeter?
- When and Why –
will I use the NoisePro ?
- How –
is the NoisePro operated?
- Where –
can I find out more?





NoisePro Series Overview

- The NoisePro is a series of noise dosimeters that includes the NoisePro, NoisePro DL, NoisePro DLX and NoisePro DLX-1.
- It's metal case and small size make it very versatile, easy to wear and rugged.
- It's large, menu driven, backlit display allows easy access to setup and measurement information.
- Data is stored in large internal non-volatile memory.

NoisePro Model Comparison



NoisePro – Basic model collects Overall / Summary Data for 2 simultaneous setup profiles.

NoisePro DL – Adds time history data logging of Average and Maximum (LAVG, SMAX and FMAX) at fixed 1 minute intervals.

NoisePro DLX – Adds 2 more (total 4) simultaneous setup profiles, user selectable time history storage intervals (1 sec to 1 hour), time history data logging adds Minimum, Ceiling and Peak (SMIN, FMIN, SCEIL, FCEIL and LPK).

NoisePro DLX-1 – Type/Class 1 version of NoisePro DLX, provides better accuracy.

All 4 models can be programmed via keypad or Quest software.

All 4 models collect results that can be downloaded to Quest software.

Product Feature Guide



NOISEPRO FEATURES:	NOISEPRO	NOISEPRO DL	NOISEPRO DLX	NOISEPRO DLX-1
ACCURACY				
Class/Type 2
Class/Type 1				.
TIME HISTORY RESOLUTION				
1 minute		.	.	.
1, 5, 10, 15, 30 seconds			.	.
1, 5, 10, 15, 30 minutes			.	.
1 hour			.	.
NUMBER OF DOSIMETERS PER RMS CHANNEL				
Two
Four			.	.
TIME HISTORY STATISTICS PER DOSIMETER				
Lavg/Leq, FastMax & SlowMax		.	.	.
FastMin, SlowMin, Fast Ceiling Count, Slow Ceiling Count, Lpeak			.	.
TIME HISTORY STATISTICS SELECTION				
Each Statistic can be turned on or off			.	.
DATA AVAILABLE VIA PC DOWNLOAD				
Same as via Display
Statistical Distribution			.	.
Time History		.	.	.
Recalculated Exposure Data
ALARM SET POINTS				
Overall TWA value of dosimeter #1
Any time history interval Lavg/Leq for dosimeter #1		.	.	.
AUTO-RUN ACTIVATORS				
(1) or (2) daily runs with choice of days of week
(1) One-time run
Up to (4) One-time runs			.	.
AUTO-STOP				
Any HH:MM:SS duration			.	.
DATA STORAGE				
Non-volatile memory retention with batteries removed
Minimum (40) hrs time history capacity with all data saved		.	.	.
Data from up to (5) other dosimeters in Series			.	.
DATA COMMUNICATIONS				
Infrared Serial Interface @ 115kbps
RS-232C		.	.	.
Remotely retrieve and view data from any unit in series			.	.



NoisePro Common Applications



As a Personal Noise Dosimeter:

A person wears the meter for a full work shift to determine their daily noise exposure.

As a Sound Level Meter:

A spot check or short term test to measure the noise levels of a particular area, machine or task. Using the optional boom microphone can facilitate using the NoisePro as a Sound Level Meter.

As an environmental monitor:

A moderately long term test generally 24 or 48 hours in duration. To access the overall noise levels at an outdoor location. This type of test is usually done with the NoisePro set to the LO range (40 to 110 dB), 3 dB exchange Rate and Threshold turned OFF.

NoisePro Quick Tour



Basic Steps to NoisePro Survey



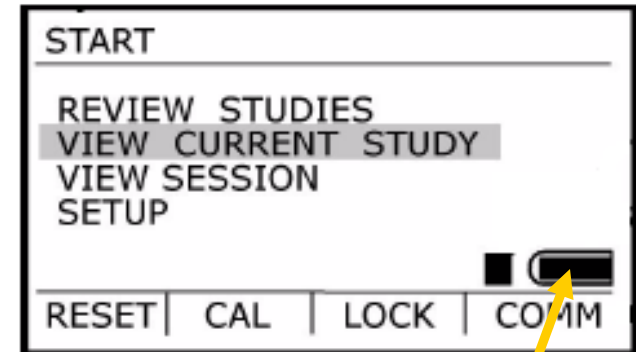
- 1) Turn the NoisePro on.
- 2) Confirm the battery is ok.
- 3) Clear any existing data.
- 4) Verify that the NoisePro is setup as desired.
- 5) Pre-Calibrate the NoisePro.
- 6) Press Run/Pause to start collecting data.
- 7) View the data as desired during the Run.
- 8) Press Run/Pause to stop the data collection.
- 9) Post-Calibrate the NoisePro.
- 10) Review / download results to Quest software.



Turn On, Check Battery, Clear Data



- 1) Turn the NoisePro on.
- 2) At the Start menu verify the battery is ok.
- 3) If the battery icon shows LOBAT install fresh batteries.
- 4) Press and hold RESET softkey to clear data.




Battery Icon,
replaced with LOBAT
when the battery is low.

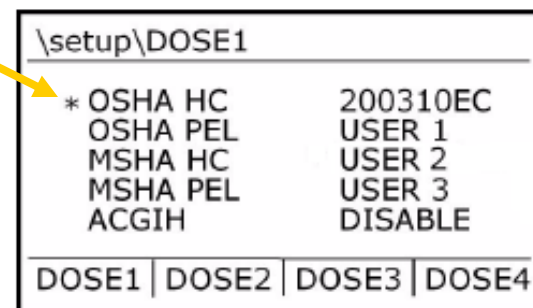
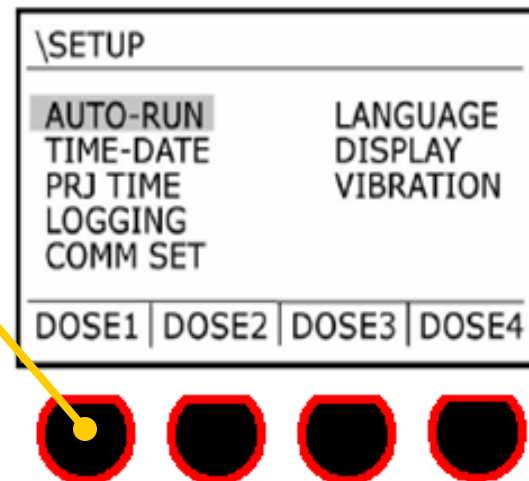
Press and hold RESET
softkey to clear data.

Display counts 5, 4, 3, 2, 1, 0,
Study/Session Deleted.




Verify Current Setup

- 1) From Start, go to the Setup menu.
- 2) Press the corresponding softkey for DOSIMETER (DOSE) 1, 2, 3 or 4. In this example we choose DOSE1. NP and NP-DL models have only two DOSE settings. NP-DLX and NP-DLX-1 have four DOSE settings.
- 3) A menu of 10 available setup parameters are listed. An asterisk denotes the current active setup for the selected DOSIMETER. In this example DOSE1 is current set for the OSHA HC setup.
- 4) Press  to view the selected setup.



Verify Current Setup Continued

- 5) The selected setup menu offers the options to:
 - View / Set Parameters
 - View/Set Range
 - View/Set Weighting
 - Save to DOSIMETER X
- 6) Use the ▲ ▼ keys to select the desired item. In this example PARAMETERS.
- 7) Press  to view Parameters.
- 8) Press the On/Off_ESC key to exit.
- 9) Repeat steps 6 and 7 to verify RANGE and WEIGHTING.
- 10) Repeat steps 2 thru 9 for DOSE 2, 3 and 4.

```

\setup\OSHA HC
-----
VIEW/SET PARAMETERS
VIEW/SET RANGE
VIEW/SET WEIGHTING
SAVE TO DOSIMETER 1
-----
DOSE1
    
```

```

... OSHA HC \PARAMETERS
-----
RESPONSE          SLOW
EXCHANGE RATE     5 dB
CRITERION LEVEL   90 dB
CRITERION TIME    8 hr
THRESHOLD         80 dB
UPPER LIMIT       115dB
    
```

```

\setup\OSHA HC\ RANGE
-----

RANGE   HI 70-140

HI Seleted for:
OSHA , MSHA , ACGIH
    
```

```

\setup\OSHA HC\ WEIGHTING
-----



RMS      = A
PEAK     = Z

Required for:
OSHA , MSHA , ACGIH
RMS     = A, PEAK   = Z
    
```

Logging Setup

NoisePro DLX and DLX-1 only



- 1) The models NoisePro DLX and DLX-1 specifically allow the user to select certain Logging items.
- 2) From the Start menu go to Setup and Logging.
- 3) Press  the \setup\LOGGING menu appears. There are eleven different values that can be logged in Time History memory.
- 4) For each of the eleven items you can select Y for YES or N for NO. Press  at each selection to toggle from Y to N or vice versa. The descriptor D indicates Disabled.
- 5) You can select a Time History Logging Interval, this represents how often the selected logging items are stored in time history memory. The available interval selections are 1, 5, 10, 15, 30 second, 1, 5, 10, 15, 30 or 60 minute.
- 6) After making the desired selections and choices press the On/Off_ESC key to exit.

```

\setup\LOGGING
AVG1= Y   SMAX= Y   LPK = Y
AVG2= Y   FMAX= Y   SCEIL= N
AVG3= N   SMIN= N   FCEIL= N
AVG4= D   FMIN= N
SCEIL= 115 dB   FCEIL= 140 dB
INTERVAL = 1 Min
  
```

Options:





Y = Yes, include in logging.

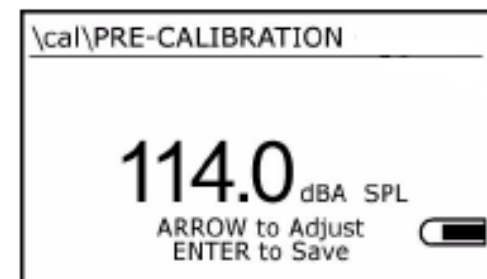
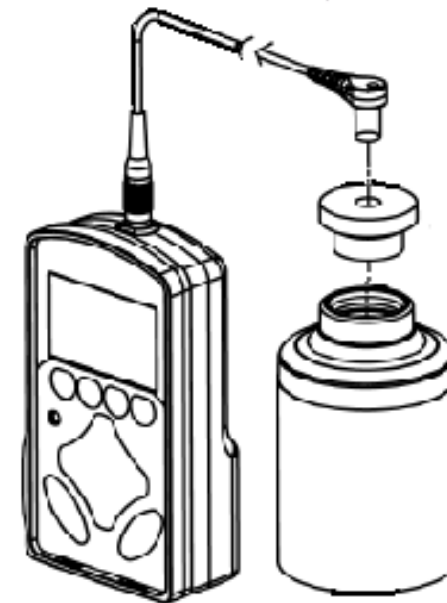
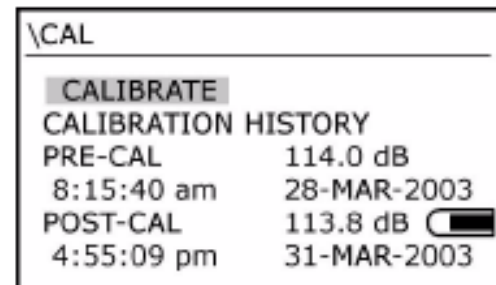
N = No, do not include in logging.

D = Disabled, item not available.

Pre-Calibration



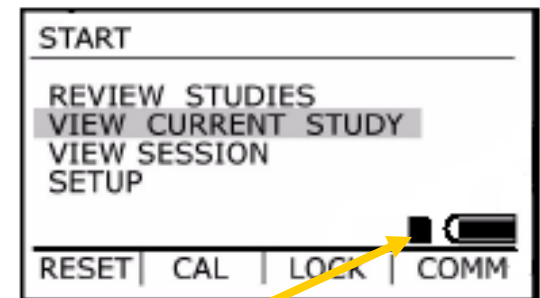
- 1) From the Start menu press the CAL softkey. The Cal screen appears with CALIBRATE highlighted.
 - 2) Turn the calibrator on, connect microphone to calibration adapter, connect calibration adapter to calibrator.
 - 3) Press  and the PRE-CALIBRATION screen appears.
- Note:** If the POST-CALIBRATION screen appears the data has not been cleared from the NoisePro.
- 4) If required, use the   arrow keys to adjust the displayed value to match the calibrator output.
 - 5) Press  to save (store) the PRE-CALIBRATION.
 - 6) Press the On/Off_ESC key to exit.



Collect Data

- 1) Clip microphone, with windscreen attached to the subject's shoulder.
- 2) Secure the NoisePro to the subject.
- 3) Press the Run/Pause key to begin data collection. The Status icon changes from Stop ■ to Run ►.
- 4) While the test is running you can view current data on the display of the NoisePro.
- 5) When the desired test has been concluded press the Run/Pause key to pause the test. The Status icon changes from Run ► to Pause ||.
- 6) Remove the microphone and NoisePro from the subject.



Tip: It's best not to handle the microphone while the NoisePro is collecting data (in the Run mode).

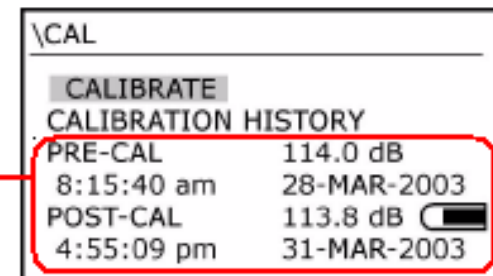
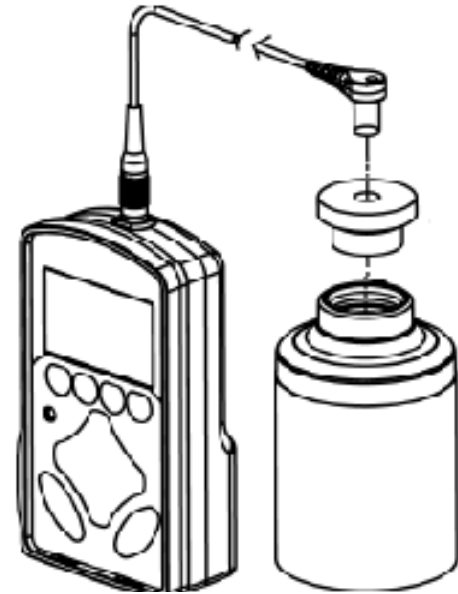


Status Icon =

- Stop
- Run
- || Pause

Post-Calibration

- 1) From the START menu press the CAL softkey.
- 2) The CAL menu appears with CALIBRATE highlighted.
- 3) Turn the calibrator on, connect microphone to calibration adapter, connect calibration adapter to calibrator.
- 4) Press  and the POST-CALIBRATION screen appears.
Note: In a POST-CALIBRATION you are not allowed to adjust the SPL value.
- 5) Press the  key to save (store) the POST-CALIBRATION value.
- 6) The CAL screen will show the most recent PRE and POST CALIBRATIONS that have been performed .



**Pre and Post Calibration Values
with Time and Date stamps**



View Data on NoisePro

- 1) From the Start menu select View Study or Session and press
- 2) Press the various softkeys for **LEVEL**, **AVG** or **DOSE**.
- 3) The following items are displayed:
LEVEL: SPL, PEAK, MAX, MIN
AVG: LAVG (LEQ), TWA, PTWA, SEL
DOSE: DOSE, PDOSE, EXP
RTIME: (RunTime) is also displayed.
- 4) In any menu use the keys to scroll to a different Dosimeter setups.

\STUDY\ACGIH \LEVEL		
SPL	114.0 dBC	SLOW
PEAK	132.0 dBA	
MAX	114.0 dBC	
MIN	114.0 dBC	
RTIME	00 : 01 : 05	
LEVEL	AVG	DOSE SUMRY

\STUDY\ACGIH \AVG		
LEQ	114.0 dBC	SLOW
TWA	132.0 dBA	
PTWA	114.0 dBC	
SEL	127.3 dBC	
RTIME	00 : 01 : 05	
LEVEL	AVG	DOSE SUMRY

\STUDY\ACGIH \DOSE		
DOSE	12.32%	SLOW
PDOSE	24.64%	
EXP	571.9 Pa2S	
RTIME	04 : 00 : 00	
LEVEL	AVG	DOSE SUMRY



Download Data to Quest Suite

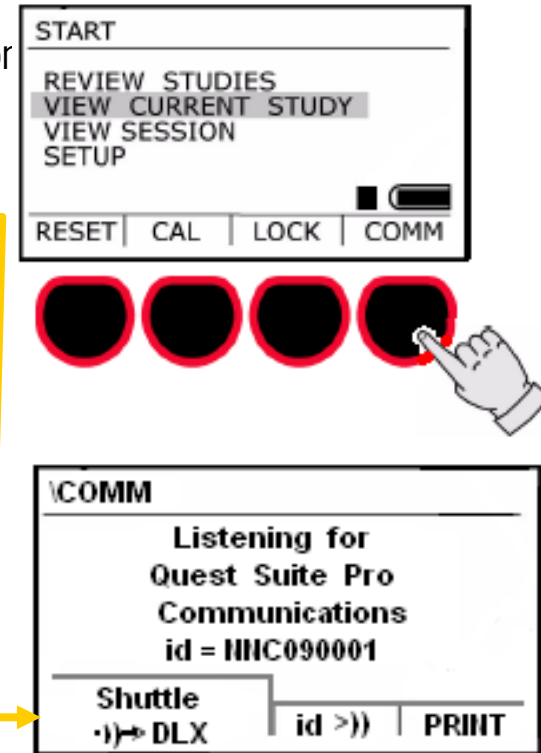


- 1) On the NoisePro, from the Start menu press the COMM softkey.
- 2) The COMM screen shows "Listening for QuestSuite Pro Communication serial number".
- 3) The softkey choices should be:
"Shuttle>>DLX", "id >))", and "PRINT".

Note: If **PRINT** is the only softkey choice the Noise Pro is set for **Serial** rather than **Infrared** in COMM SET SETUP menu. The NoisePro must be set for Infrared before you can download data.

- 4) Point the IR port on NoisePro toward the Quest IR reader connected to the computer's port .
- 4) Open QuestSuite software.
- 5) Proceed to download the data.
- 6) Refer to the Help file in Quest software for reviewing, creating and generating reports and graphs.

Note: Downloading data to QuestSuite does not automatically clear the data from the NoisePro.



Unit does not calibrate

- Verify calibrator is turned on and emitting a sound.
- Verify PRE-CAL value is adjusted to match the calibrator output, readjust if possible and try to calibrate again.

Note: A failed calibration may be caused by a bad microphone. Try swapping the suspect microphone with known good microphone and try to calibrate again.

Basic Troubleshooting

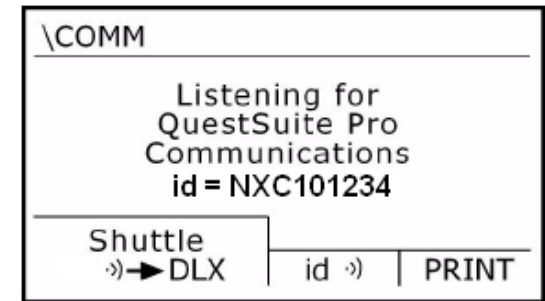


Unable to change Setup Parameter

- Verify data has been cleared. A USER setup can not be altered while data remains in memory.
- Verify setup being changed is one of the USER setups. The Pre-defined setups such as OSHA, MSHA, ACGIH or 200310EC can not be altered.
- Unable to set / change date and time on meter.
- Verify data has been cleared. The date and time can not be altered while data remains in memory.

Unit does not communicate with Quest software.

- Verify the NoisePro is in the \COMM screen.
- Verify the IR port on NoisePro is pointed toward the IR reader connected to pc.



Frequently Asked Questions



QUESTION: The NoisePro Dosimeter displays many different numbers. Which is the correct value to report ?

ANSWER: There is no one answer that is correct for every scenario. For personal noise dosimetry we recommend you monitor for a full work shift. Typically it may be the TWA or DOSE values that are of greatest concern.

Some compliance standards have both an action level and a limit level so you may need to compare the results from more than one dosimeter setting.

For example the Occupational Safety and Health Administration (OSHA) in the USA defines a Hearing Conservation (HC) level (also know as Action Level) of 85 dBA TWA and a Permissible Exposure Limit (PEL) of 90 dBA TWA.

Frequently Asked Questions



QUESTION: Why is the Lavg or TWA zero or a very low number even though the SPL shows values much greater than zero?

ANSWER: The Lavg and TWA are integrated / averaged results. The Threshold setting causes the samples below the Threshold to be treated as non-existing noise (effectively zero). The resulting Lavg or TWA will be presented as zero if every sample collected is below the Threshold.

Additionally because real noise typically fluctuates, if some of the sampled noise is below the Threshold and some of the sampled noise is above the Threshold the resulting Lavg or TWA may be a number between zero and the Threshold.

For more information on the NoisePro Series



- Product Brochure
- Product Manual
- Glossary of Terms
- Frequently Asked Questions