

Community Noise Setup Guide for 3M Quest SoundPro Sound Level Meters

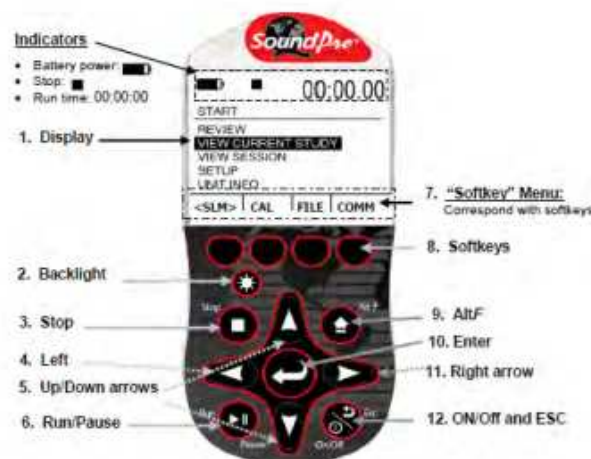
A community noise study uses the calculated average sound level over a 24 hour period to determine the sound exposure level. This guide will walk you through setting up the 3M Quest SoundPro with the required and optional parameters to perform the study and provide the data needed for reporting.

To accurately perform a community noise study, you'll need to set the following required parameters on your SoundPro:

1. **Time and Date:** For accurate tracking of noise sources, and to aide in nighttime adjustments, it's critical to have the right time stamp on your data.
2. **Exceedance Level (L1-L4):** The percentage of time the sound levels exceed the criterion level you set.
Example: If L1 was set to "L05" (5%), criterion level was set to 90dB, and the projected time was 10 hours, you will meet the L1 exceedance level if 30 minutes of the study shows sound levels greater than or equal to 90dB.
3. **Day/Night Average Sound Level (LDN):** Used to account for human sensitivity to nighttime noise. This setting adds 10dB to sound levels measured between 10 PM and 7 AM to account for noise that would normally be present during daytime hours.
4. **Community Noise Exposure Level (CNEL):** Automatically calculate the average of a 24 hour community noise study using the set exceedance levels and accounting for the difference between daytime and nighttime noise levels.
5. **Lc-A Measurement:** Lc-a calculates averages C- and A-weighted measurements during a study. It's a comparison of what humans can hear (A weighting) and a more flat-weighted sound level (C weighting).

Setting the Time and Date

1. Press the power button to turn on the instrument.
2. Press the [down] arrow key to highlight "setup", and press [Enter]
3. Use the arrow keys to highlight "Time-Date" and press [Enter]
4. With "Time" highlighted, press [Enter] to change the time (time displayed in 24 hour format i.e. 13:00:00 = 1:00 PM)
Using the [Up] and [Down] arrow keys:
 - a. Adjust the hour, and press [Enter]
 - b. Adjust the minute, and press [Enter]
 - c. Adjust the seconds (if you want), and press [Enter]
5. Press the [down] arrow to highlight "Date" and press [Enter]
Using the [Up] and [Down] arrow keys:
 - a. Adjust the year, and press [Enter]
 - b. Adjust the month, and press [Enter]
 - c. Adjust the day, and press [Enter]



6. Press [ESC] once to return to the setup menu.

Set the Exceedance Levels

1. From the setup menu, use the arrow keys to highlight "measures" and press [Enter].
2. With "L1" selected, press [Enter] to change the value, then use the [up and down] arrow keys to adjust the value. For community noise studies, set the exceedance level values as shown below.
 - **L1 = L01**
 - **L2 = L10**
 - **L3 = L50**
 - **L4 = L90**
3. When you have the value set for each field, press the [ESC] key to save and then use the [arrow] keys to move through each field. When finished setting the exceedance levels, press the [ESC] key once.



Set the LDN

1. Use the arrow keys to highlight "LDN" and press [Enter] to turn on if not already on.

Set the Community Noise Exposure Level (CNEL)

1. Press the [down] arrow key to highlight "CNEL" and press [Enter] to turn on if not already on.

Set the Lc-A Measurement Setting

1. Press the [ESC] key once, highlight "METER SET" and press [Enter].
2. Press the [rightmost] softkey to select meter 1 or 2.

Note: To activate LC-a measurement, the settings for both meters must be the same.
3. Press the [middle-left] softkey to change the response time to slow
4. Press the [middle-right] softkey to set one meter to "A" weighting then press the [rightmost] softkey to switch meters. With the other meter selected, press the [middle-right] softkey to set the other meter to "C" weighting

5. With either meter selected, highlight "THRESHOLD" and press [Enter]. If turned off, press [Enter] again then use the [up and down] arrow keys to change the value. If no threshold level is necessary, press [Enter] to set it to "OFF". After setting the threshold value, press the [ESC] key to continue.
6. Use the [arrow] keys to select exchange rate and press [Enter]. Use the [arrow] keys to adjust the value then press [ESC] to continue.
7. Repeat step 13 for criterion level, upper limit and projected time. After all parameters are set for the selected meter, press the [rightmost] softkey to switch to the other meter and repeat steps 9 – 13 to match the settings on the first meter.
8. When finished setting the Lc-a parameters, press the [ESC] key to exit to the setup menu
9. [Arrow] up to "Measures" and press [Enter]
10. Use the [arrow] keys to highlight Lc-a and press [Enter] to turn on



Set the TAKMX Interval

The **TAKMX** (Taktmaximal Interval) setting is a time-averaged measurement set to determine the highest sound level over a 3 or 5 second interval. This setting is not required for community noise studies, but may be useful in some cases.

Example: If, over a five-second period, a maximum sound level of 110 dB is measured, it assumes that the sound level for the entire five second period was 110 dB.

11. Highlight "TAKTMX" and press [Enter] to cycle through the options.
12. It can be set to a 3 second interval, a 5 second interval or turned off.
13. Use the [ESC] key to go back to the main screen.