

# Glossary of terms and explanation of the key functions of the CR:261 Sound Level Meter and Software for vehicle noise testing.

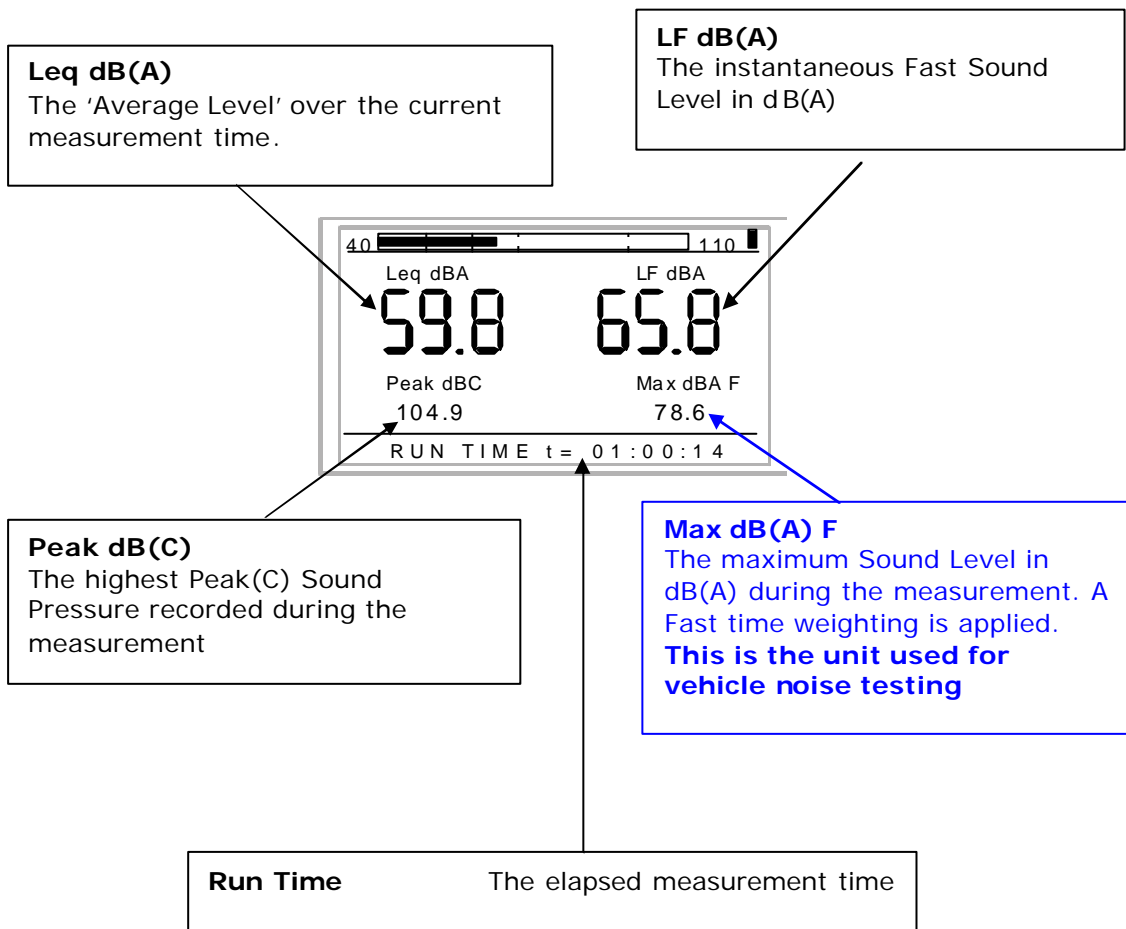
The CR:261 is a simple to use but accurate and compliant multi-application instrument which can be used for Industrial Noise Measurements, Environmental noise measurements and Vehicle Noise Testing. This document explains which parameters apply to Vehicle Noise Testing.

## Making Measurements

Once the instrument is switched on press the start button and the instrument will start a measurement. The parameters shown on the screen are as follows:

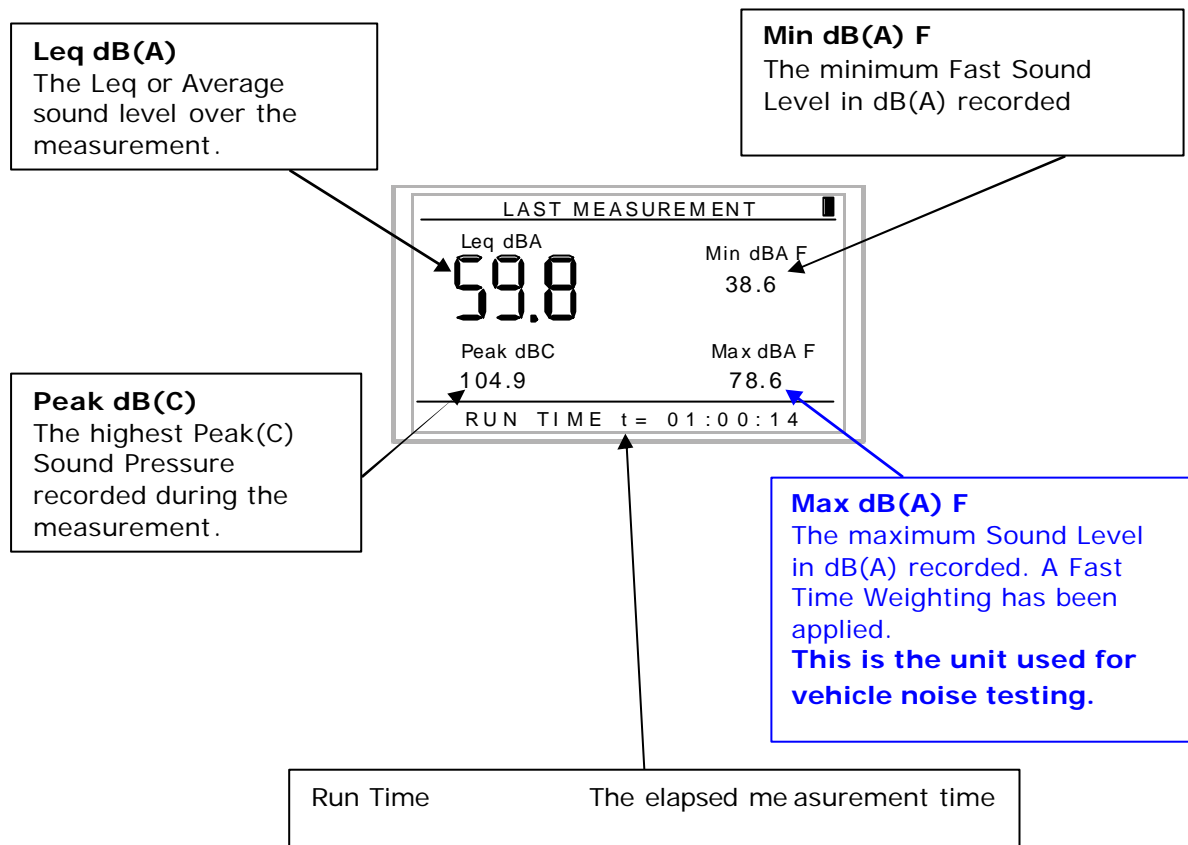
Please refer to the Glossary at the end of this document for explanations / definitions of each parameter.

## Main screen when the instrument is running (fig 1).



When the stop button is pressed the instrument will display the following information:

### Main screen when the instrument is stopped (fig 2).



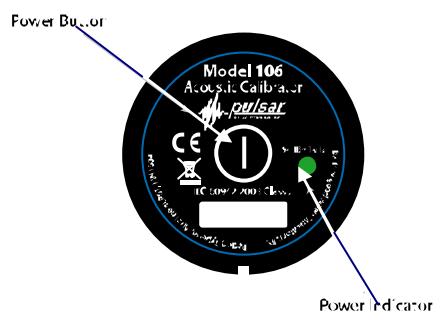
The Unit that we are interested in is the Max dBA F which represents the highest sound level recorded during the measurement. This has an 'A' frequency weighting applied along with a 'Fast' time weighting.

## Field Calibration of the CR:261

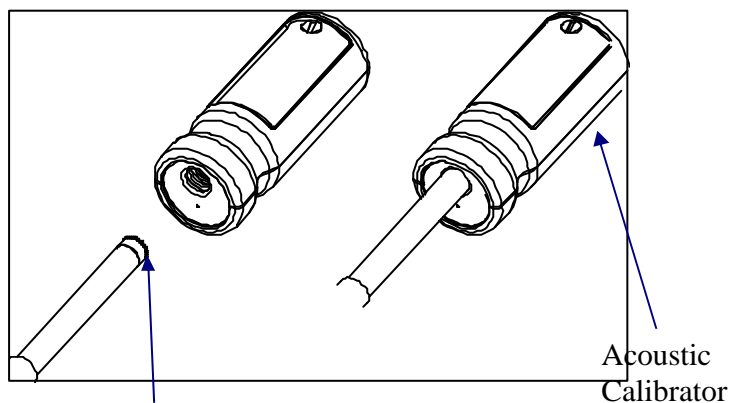
Prior to any measurement session the CR:261 should be calibrated to ensure your measurements are compliant to the necessary regulations.

Switch on the Acoustic calibrator as shown in fig 3. Gently push the microphone of the Sound Level Meter into the cavity at the end of the calibrator as shown in fig 4.

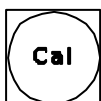
### End View of Acoustic Calibrator Fig 3



### Insertion of microphone from Sound Level Meter into Acoustic Calibrator fig 4

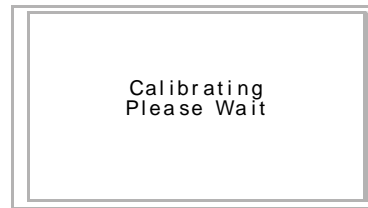


Microphone of sound  
level meter



Then press the CAL button to start the calibration procedure. The CR:261 then automatically sensitivity adjusts itself.

During the calibration, the instrument will display the calibration status.

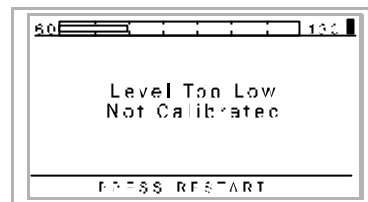


If the calibration is successful, the instrument will display the calibration level. Press the Start / Stop button to begin a new measurement or to return to the main screen.

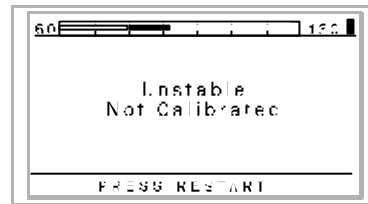


If the calibration is not successful, the instrument will display an error message. These are shown below.

The calibration level is below the set level. Check that the Calibrator is switched on and that it is connected correctly to the Sound Level Meter.



The calibration level is unstable. This maybe caused by high background noise levels. Move to a quieter location and retry the calibration.



## Software

The DeafDefier software supplied allows you to download and store your measurements. Once downloaded your measurements can all be stored in Folders.

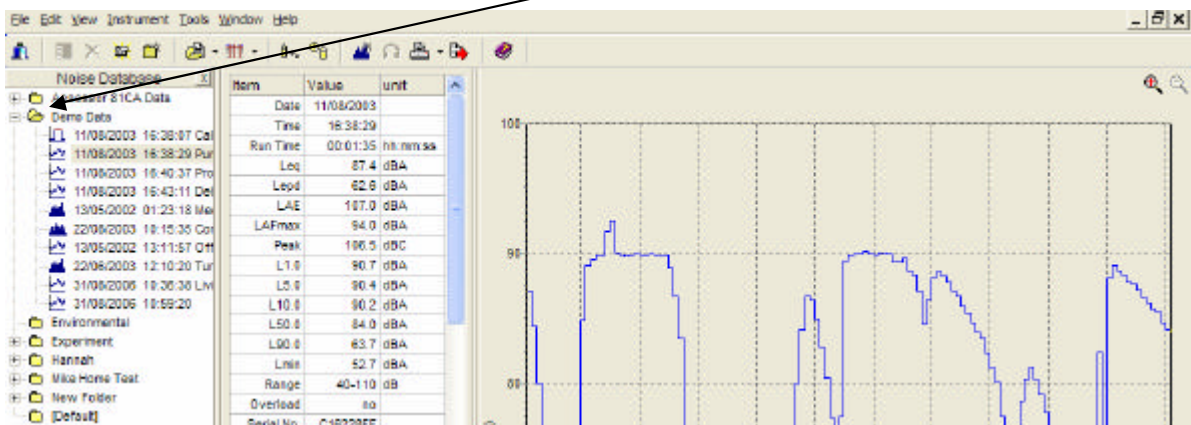
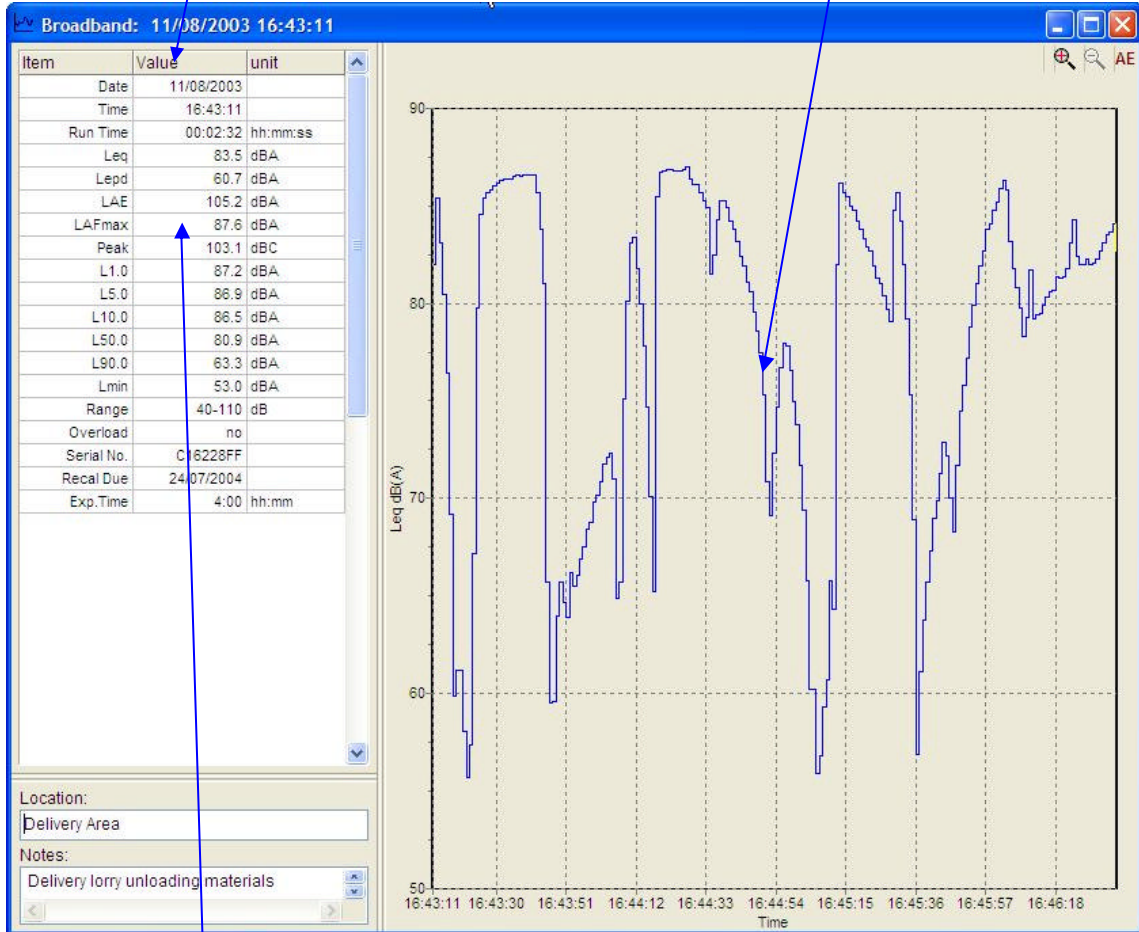


Table of results

Time history Graph of the measurement made.



**Max dB(A) F**

The maximum Sound Level in dB(A) recorded. A Fast Time Weighting has been applied.

**This is the unit used for vehicle noise testing.**

The screenshot shows the same software window as above, but with a red arrow pointing from the text box to the "LAFmax" row in the table of results.

Item	Value	unit
Date	11/08/2003	
Time	16:43:11	
Run Time	00:02:32	hh:mm:ss
Leq	83.5	dB(A)
Lepd	60.7	dB(A)
LAE	105.2	dB(A)
LAFmax	87.6	dB(A)
Peak	103.1	dB(C)
L1.0	87.2	dB(A)
L5.0	86.9	dB(A)
L10.0	86.5	dB(A)
L50.0	80.9	dB(A)