

# **LDB200**

Download and data processing  
software



..... **Table of contents**

<b>I – Introduction.....</b>	<b>4</b>
<b>II – Software installation.....</b>	<b>4</b>
<b>III – Driver installation.....</b>	<b>4</b>
<b>IV – Software presentation.....</b>	<b>5</b>
IV-1- Meaning and functions of the buttons on the toolbar.....	5
IV-2- Meaning and functions of the buttons in the menu bar.....	6
<b>V – DB 200 connection.....</b>	<b>7</b>
<b>VI – Open a file.....</b>	<b>8</b>
<b>VII – Software functions.....</b>	<b>9</b>
VII 1 – Overview of a .lpx and .leq file .....	9
VII 2 – Presentation of .ls1 and lpq files.....	13
VII 2-1 – .ls1 file.....	13
VII 2-2 – .lpq file.....	13
VII 3 – Use S1 + S2 calculator.....	14
VII 3-1 – Calculate the level of two sound sources.....	14
VII 3-2 – Calculate the level of one sound sources.....	14
VII 4 – Configuration of documents for data exporting or printing.....	14
VII 4-1 – Data exporting.....	15
VII 4-2 – Printing.....	18
VII 5 – Close file.....	18
VII 6 – Exit software.....	18

## I – Introduction

Provided with the sound level meter, LDB200 is a configuration, recovery dataprocessing software. Easy handling, it requires a small learning and allows an immediate dataprocessing.

### Main functions :

- Visualisation and results of measurement modes.
- Formatting and editing of measurement report.
- Data recovery and creation of text file.
- Zoom function for more precise study of a period.

## II – Software installation

1. Please take necessary rights. Otherwise, contact the administrator.
2. Insert the CD-ROM. The installation program starts automatically.

**Note :** *If setup does not start automatically, go to desktop or Windows Explorer and double-click on LDB200.*

3. Follow the instructions on the screen.

**Note:** *Depending on software installed on the computer (in particular NET Framework), the waiting time can be significant – Wait. For a few moment.*

4. Restart computer.

*It is strongly recommended that you restart the computer after installation. Remember to save and close all other programs in use before clicking Finish.*

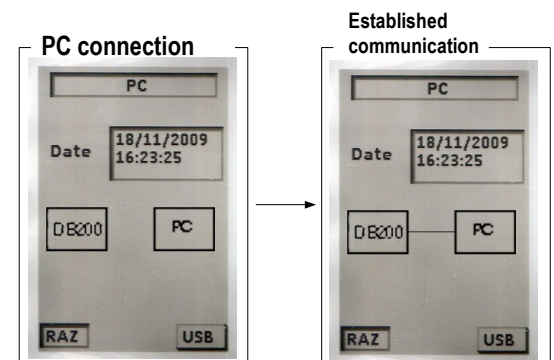
5. Software is now installed, LDB200 icon is displayed on the desktop.

## III – Installation du pilote

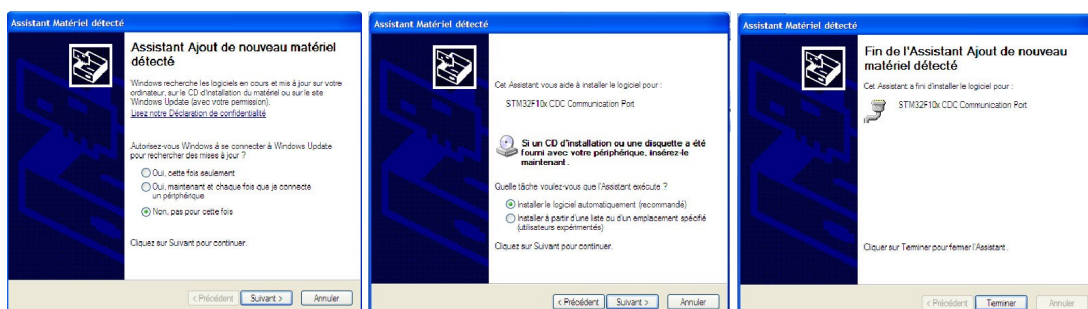
1. Connect the instrument to the computer through the provided USB cable.
2. Press “screen” key then go to “ PC “.
3. Press “ OK “ key.

The computer detects the **LDB200** software and proposes to install specific USB driver from « **Hardware Wizard** » of Windows.

4. Follow usual instructions on the screen to install a driver.



### Examples: Hardware Wizard



DL200 can now convey with DB200 instrument and receive files of measurement. See « **Established communication** » figure.

## IV – Software presentation

Open the software by double clicking on **LDB200** icon.  
The **LDB200** home window is open with its toolbar :



### IV 1 – Meaning and functions of the buttons in the toolbar



Open a file



Export data



Enter the name of the company



Save a graph



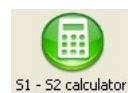
Connect an instrument



Add a general comment to the statement



Print a graph



Display calculator

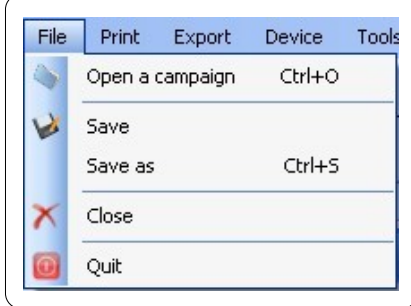
Only **Open a file**, **Connect an instrument** and **S1 + S2 calculator** buttons are active when opening the software.

## IV 2 – Meaning and function buttons on the menu bar

### Menu Bar



### File menu



- **Open** : allow to select the campaign saved on the computer, **.lps**, **.leq**, **.lpi**, **.ls1**, **.lpf** or **.lpq** format.
- **Save / Save as...** : allows to save the open file.
- **Close** : closes the current report.
- **Exit** : exit software.

### Print menu



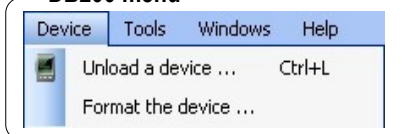
- **Report** : print a report according the user's configuration.

### Export menu



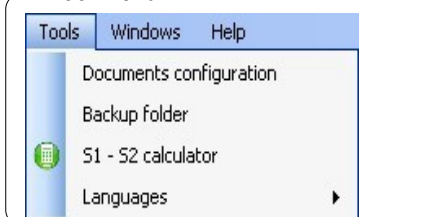
- **Values table** : export table values in **.txt** format.
- **Pdf report** : export the report in **.pdf** format.

### DB200 menu




- **Unload device**: allows to open the unload device window..
- **Format the device** : allows to erase all data of the device.

### Tool menu



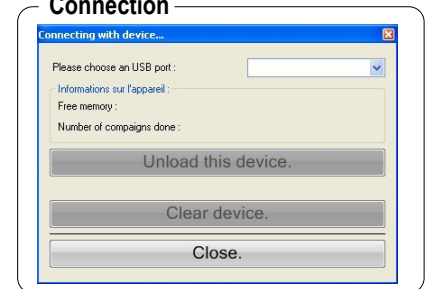
- **Documents configuration** : allows to fill in header and footer of documents that will be print or export.
- **Saving folder** : allows to modify location of saved documents
- **S1 + S2 calculator** : allows to sum or subtract levels expressed in decibels.
- **Languages** : allows to select the language of the user interface : English or French.

## V – Connect DB 200 instrument

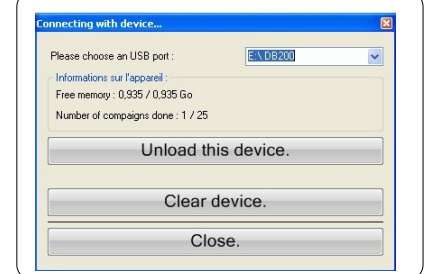
1. Connect the instrument to USB cable connected to the PC and click on  icon to launch a search for identification.
2. Connection window appears. See "**Connection**" screen.
3. Perform the connection selecting a USB port dropdown list.



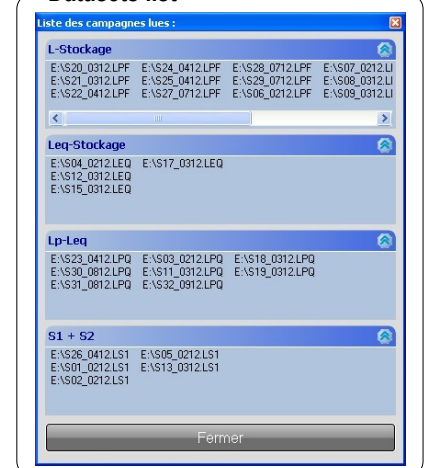
### Connection



### Established connection



### Datasets list



4. When the connection is done, the operator can :

- Transfer data of **LDB200** instrument by clicking on "**Unload this device**" button.
- Delete measurement datasets of the instrument by clicking on "**Clear device**".

The "**Established connection**" window also gives informations about the remaining memory and about the number of realized datasets

During downloading of the instrument, files are present for information in the directory as shown opposite :

Close the window or directly access to the file by double clicking on it.

5. Once registration is completed, the operator can :

- Erase the memory of the instrument.
- Disconnect the instrument.
- Close the window.

## VI – Open a file

Several possibilities allow files opening ::

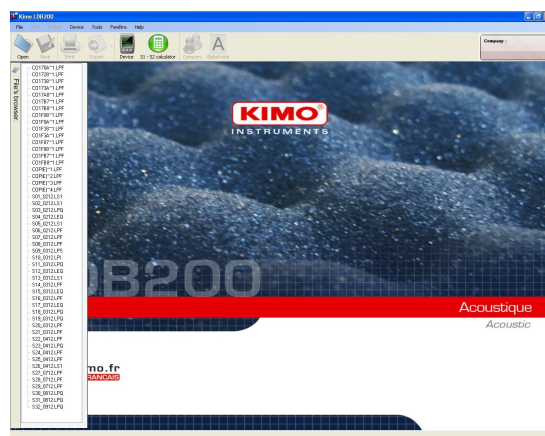
Directly, when transferring files from the DB200 instrument to the PC:

- Double-click on the file in question.



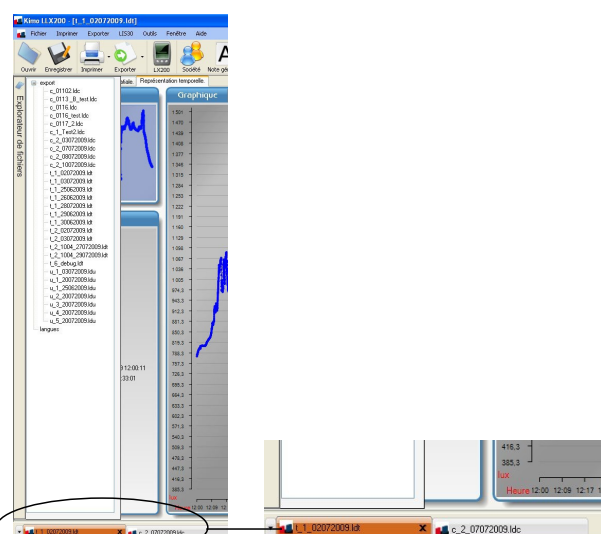
From the browser software that is accessible on the left side of the screen :

- Double-click on a file to open it.

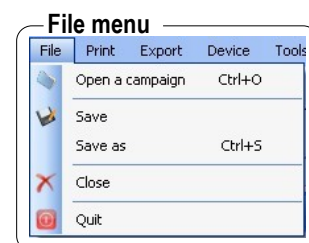


It's possible, from the explorer, to open multiple files. They are marked by tabs at the bottom of the screen.

The choice of displaying screen or closing file is done through these tabs.



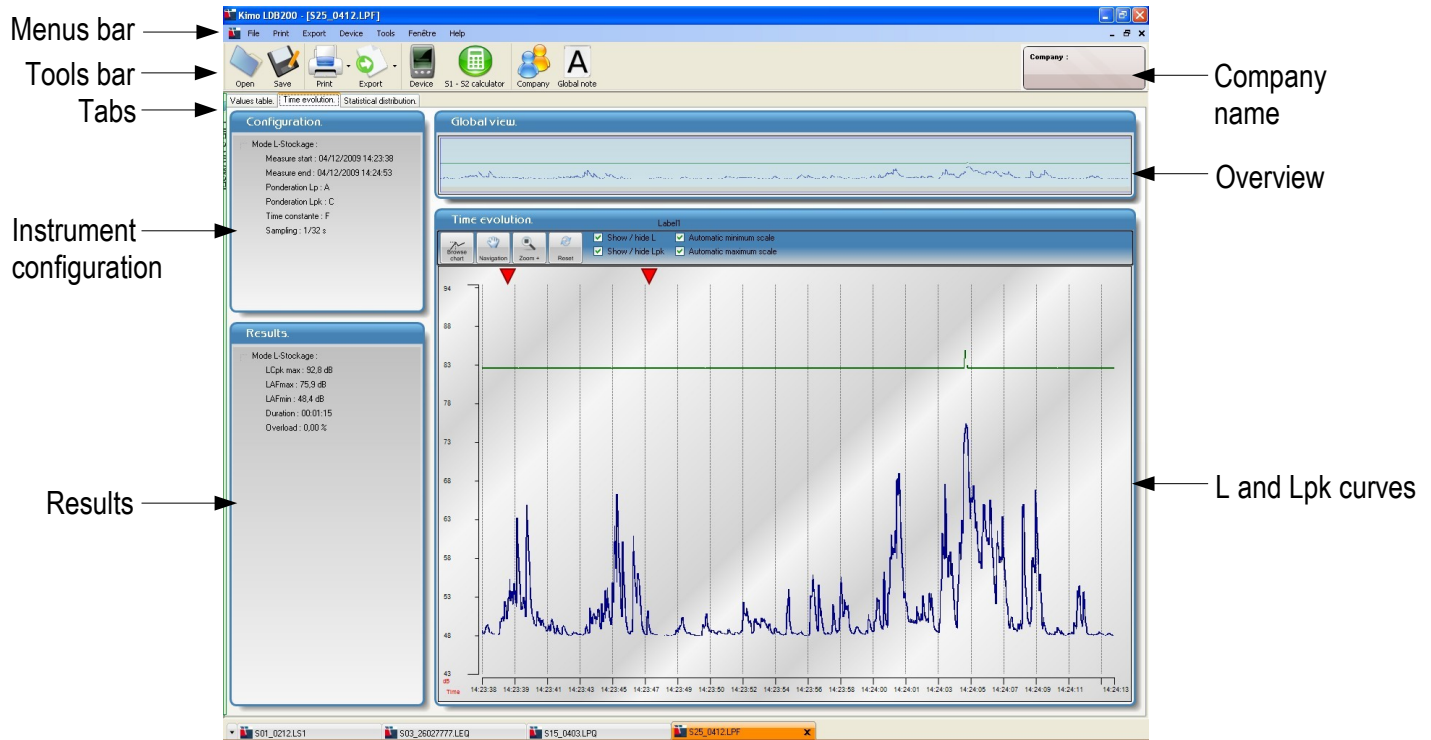
Finally, it is possible to open a file with the button "Open" or go to File> Open a campaign





## VII – Software operation

### VII 1 – Overview of .lpx and .leq files



.lpx files (with x = F, S or I) and .leq are presented in the same manner and include three tabs :

- "Values table" tab
- "Time evolution" tab
- "Statistical distribution" tab

Values table shows values that are recorded measurement dataset with for each value :

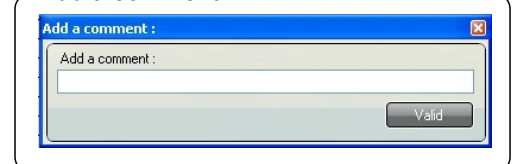
- Date and time
- L dB value or Leq dB value
- Lpk dB value
- Possible overload
- Possible comments

Date and time	Lpk dB	Lq dB	Overload	Comments
04/12/2009 14:23:38	49,9	---	---	---
04/12/2009 14:23:39	49,9	---	---	---
04/12/2009 14:23:40	49,9	---	---	---
04/12/2009 14:23:41	49,9	---	---	---
04/12/2009 14:23:42	49,9	---	---	---
04/12/2009 14:23:43	49,9	---	---	---
04/12/2009 14:23:44	49,9	---	---	---
04/12/2009 14:23:45	49,9	---	---	---
04/12/2009 14:23:46	49,9	---	---	---
04/12/2009 14:23:47	49,9	---	---	---
04/12/2009 14:23:48	49,9	---	---	---
04/12/2009 14:23:49	49,9	---	---	---
04/12/2009 14:23:50	49,9	---	---	---
04/12/2009 14:23:51	49,9	---	---	---
04/12/2009 14:23:52	49,9	---	---	---
04/12/2009 14:23:53	49,9	---	---	---
04/12/2009 14:23:54	49,9	---	---	---
04/12/2009 14:23:55	49,9	---	---	---
04/12/2009 14:23:56	49,9	---	---	---
04/12/2009 14:23:57	49,9	---	---	---
04/12/2009 14:23:58	49,9	---	---	---
04/12/2009 14:23:59	49,9	---	---	---
04/12/2009 14:24:00	49,9	---	---	---
04/12/2009 14:24:01	49,9	---	---	---
04/12/2009 14:24:02	49,9	---	---	---
04/12/2009 14:24:03	49,9	---	---	---
04/12/2009 14:24:04	49,9	---	---	---
04/12/2009 14:24:05	49,9	---	---	---
04/12/2009 14:24:06	49,9	---	---	---
04/12/2009 14:24:07	49,9	---	---	---
04/12/2009 14:24:08	49,9	---	---	---
04/12/2009 14:24:09	49,9	---	---	---
04/12/2009 14:24:10	49,9	---	---	---
04/12/2009 14:24:11	49,9	---	---	---
04/12/2009 14:24:12	49,9	---	---	---
04/12/2009 14:24:13	49,9	---	---	---

### • Add a comment

To add a comment, double-click on "Comment" line, write the comment in the window then click on "Validate".

### Add a comment



### • Overload indication

If during a measurement dataset a value is in overload situation the box Overload will be ticked.

### Overload

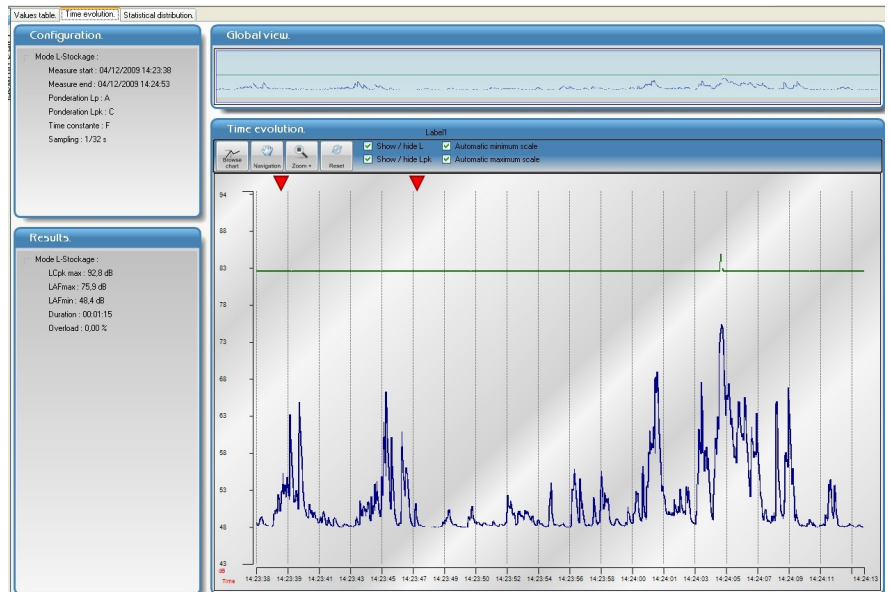
03/12/2009 09:03:38	56,7	59,6		
03/12/2009 09:03:38	64,8	80,7	✓	
03/12/2009 09:03:38	65,9	62,0		

"Time evolution" tab is divided into four parts :

- configuration
- results
- overview
- Time evolution

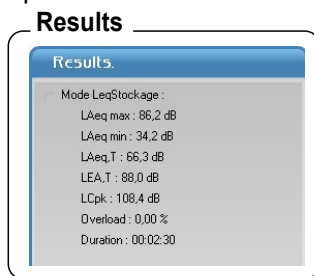
"Configuration" part gives information about :

- measurement mode
- date and time of the beginning and the end measurement dataset
- measurement duration
- type of weighting for **Lp** or **Leq** : A, C or Z
- type of weighting for **Lpk** : C or Z
- time constant for **Lp** : F, S or I
- sampling or integration time in seconds



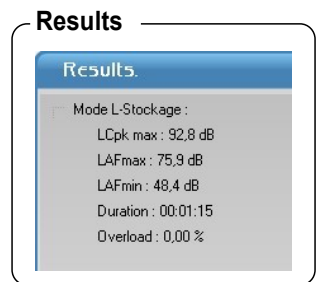
For **Leq-Storage** mode, "Results" part gives informations about :

- measurement mode
- maximum value for LAeq
- minimum value for LAeq
- LAeq,T value
- LEA,T value
- LCpk value
- overload percentage
- measurement duration

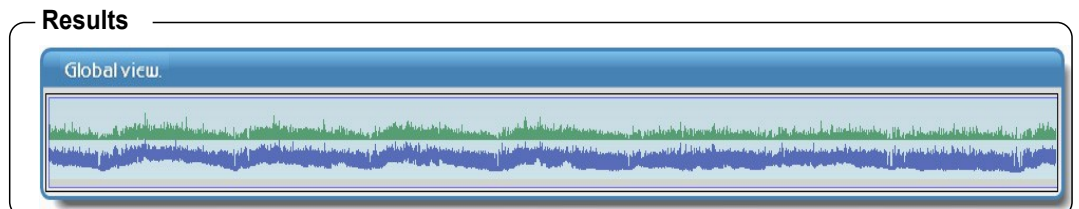


For **L-Storage** mode, "Results" part gives informations about :

- measurement mode
- maximum LCpk value
- maximum LAX value
- minimum LAX value
- measurement duration
- Overload percentage



The overview allows to have a view of the totality of the measurement dataset.

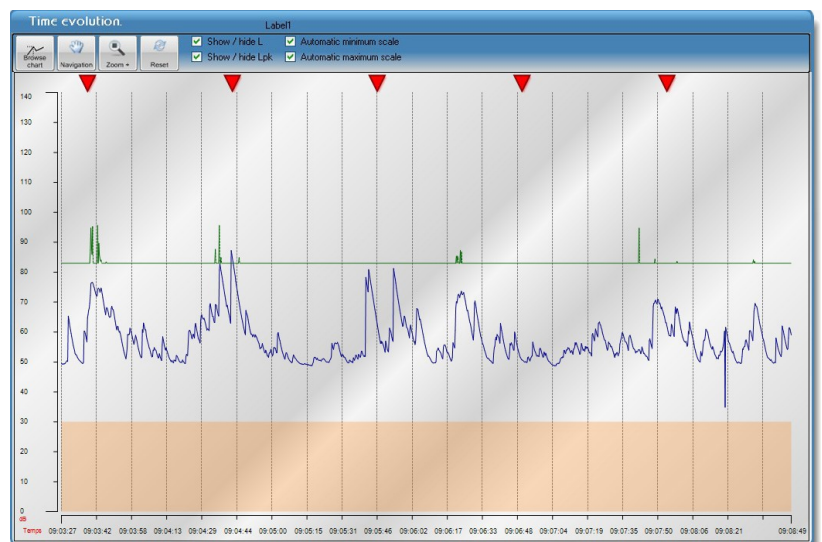


**Time evolution** : this part shows the graph of the measurement dataset. Several actions are possible :

- Allows to scroll through the chart and point out with precision the corresponding values
- Allows to navigate over the graph from zoom function.
- Allows to zoom on a part of the graph.
- Allows to reset the graph from zoom function.

Red arrows indicate overloads..

- Right click on the arrow to know the sound level reached in this overload.



### To move across the graph :

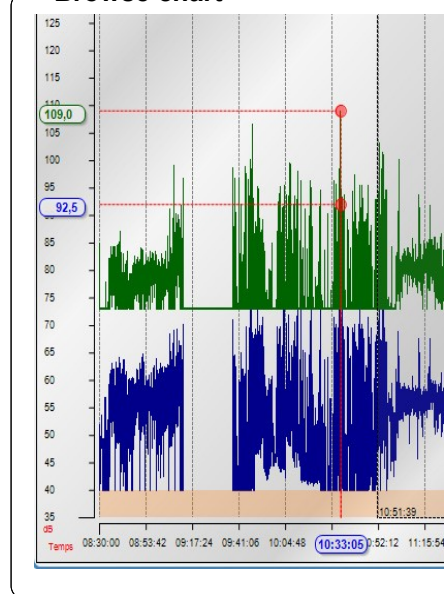
- Click on "Parcours" button.
- Click on the graph to the desired location.
- Stay clicked.

Values expressed in dB are at left of the graph, the plots give a good correspondance between the values of the 2 or 3 curves (LAeq-LCeq-LCpk)

- Browse the entire graph by clicking and dragging on the graph.

To leave this function, click on "**Browse chart**" button..

### Browse chart



### The software allows to display area very accurate of the graph :

For this, use the icon : Zoom +

- Click where you want the beginning of the zoom and stay clicked.

- Drag the mouse until the end of the period zoomed.
- Release the mouse button.

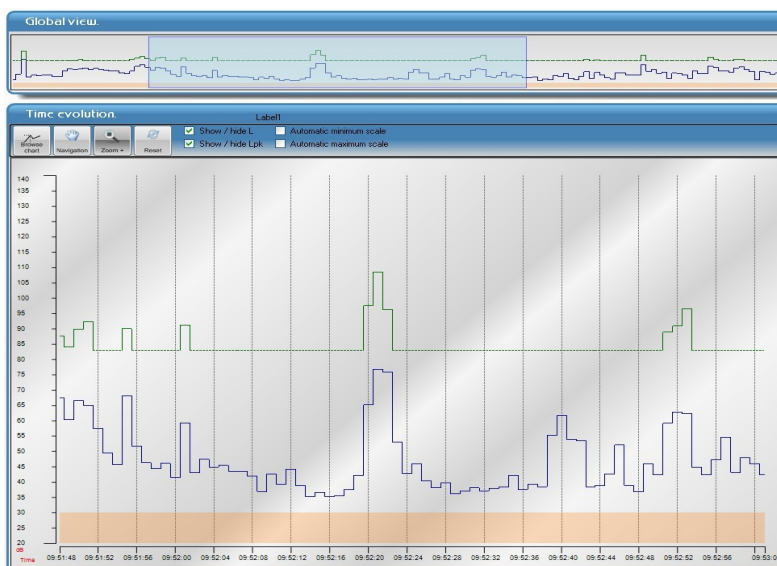
The blue area in the global view shows the graphic displayed.

- Move laterally the blue selection if necessary with hand icon.

The overview allows to always have a vision of the entire campaign.

- Click on "**Reset**" icon to cancel zoom function and back to global graph.

Results of the selection appear in the part "**Results**".



### Results

**Results.**

Mode Leq\$stockage :

- LAeq max : 86,2 dB
- LAeq min : 34,2 dB
- LAeq,T : 66,3 dB
- LEA,T : 88,0 dB
- LCpk : 108,4 dB
- Overload : 0,00 %
- Duration : 00:02:30

Selection :

- Measure start : 26/02/2010 09:51:48
- Measure end : 26/02/2010 09:53:01
- LAeq max : 76,8 dB
- LAeq min : 35,2 dB
- LAeq,T : 62,1 dB
- LEA,T : 80,8 dB
- LCpk max : 108,4 dB
- Overload : 0,00 %
- Duration : 00:01:14

It's possible to choose to display L curve and/or Lpk curve..

- Tick the box corresponding to the curve to display it.

**Curve display**

- Show / hide L
- Show / hide Lpk

It's also possible to choose to modify the scale and activate the **automatic minimum scale** or the automatic maximum scale.

- Tick the box corresponding to the scale to display it

**Scale display**

- Automatic minimum scale
- Automatic maximum scale

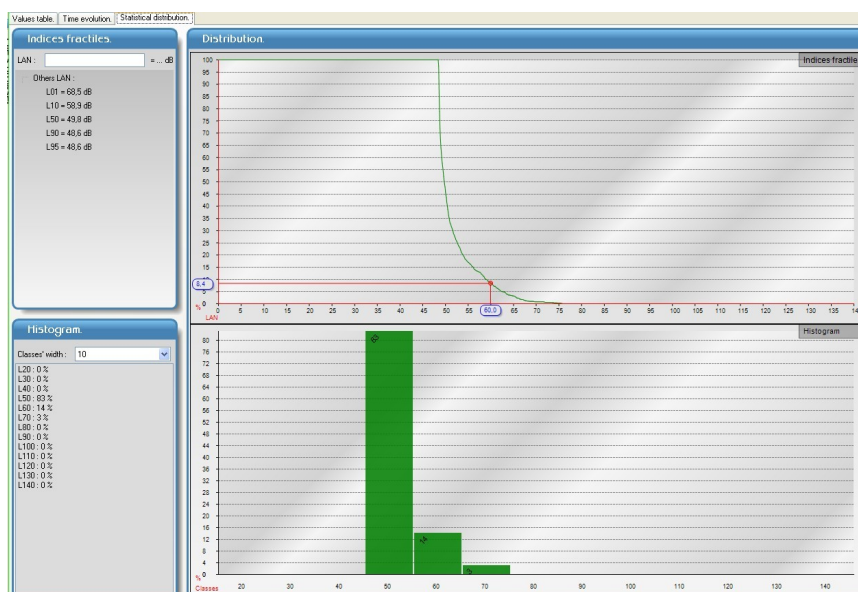
The "**Statistic distribution**" » tab is divided into three parts :

- Statistics distribution
- The histogram
- The distribution

When sound level is not stable, it can be characterized by statistical indices or **statistic distribution**. These are statistically calculated from time evolution of the sound level measured in situ. These levels correspond to level of A-weighted acoustic pressure which is exceeded for N% of the considered time interval.

**LDB200** software gives sound level for L01, L10, L50, L90 and L95.

It is also possible to get the sound level for N % by writing the desired percentage in the text box situated near LAN.



**Statistic distribution**

Text box →

Statistic distribution →

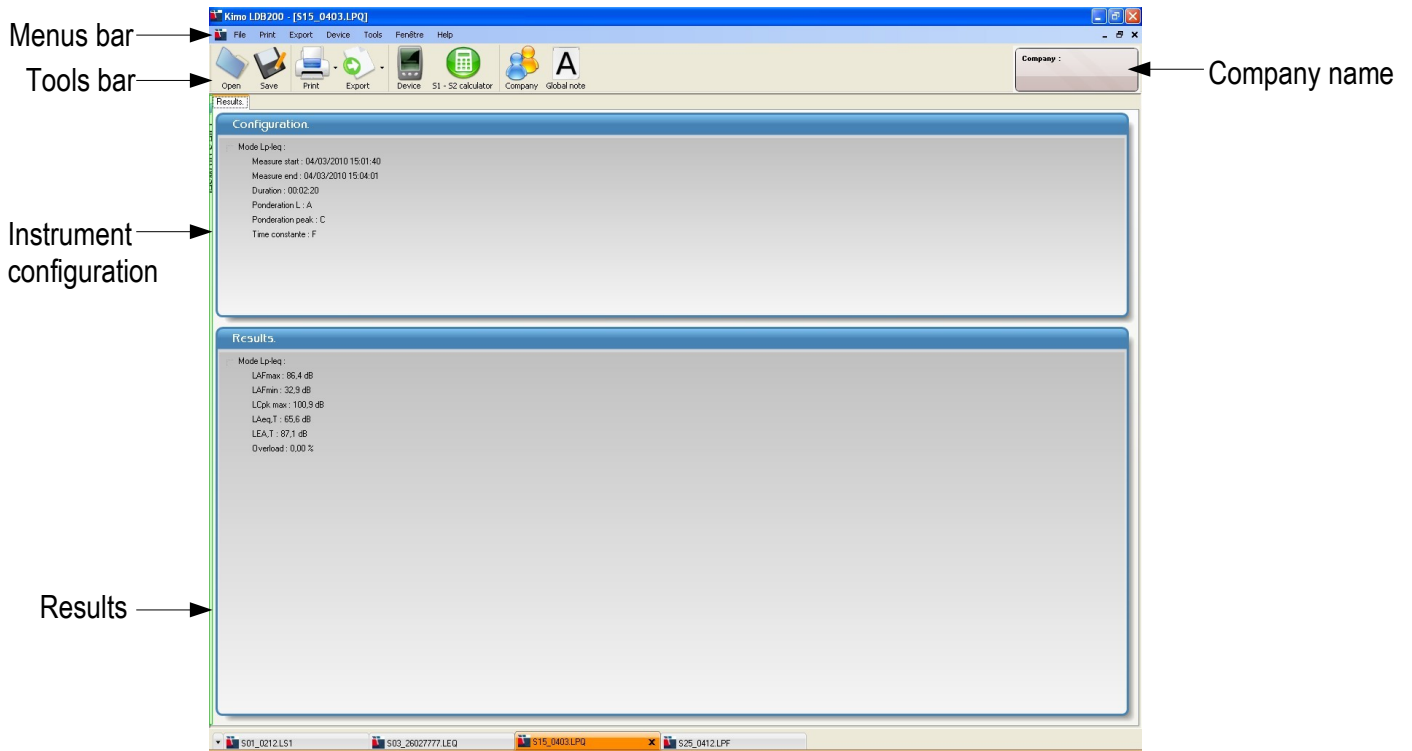
In the "**Distribution**" part of statistics distribution, the mouse cursor automatically moves to a point on the curve and displays in abscissa the sound pressure level exceeded and in ordinate the corresponding statistic distribution expressed as a percentage.

The **histogram** represents, on the duration of the measurement dataset, the percentage where sound pressure reached a class width of dB (4 widths of different classes are available : L5, L10, L15 et L20).

Example : 48% of the measured values have sound level range from 46 to 55 dB.

**Histogram**

## VII 2 – Presentation of .ls1 and lpq files



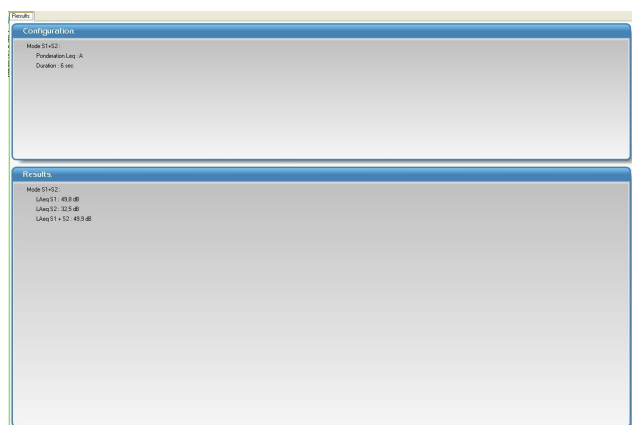
### VII2-1 .ls1 file

.ls1 files has only one tab and mentions the configuration of the sound level meter during measurement dataset :

- Measurement mode
- Leq weighting type : A, C or Z
- Measurement duration

It also presents the obtained results :

- LAeq S1
- LAeq S2
- LAeq S1+S2



### VII2-2 .lpq file

.lpq files has only one tab and mentions the configuration of the sound level meter during measurement dataset :

- Date and time of beginning and end of the measurement dataset
- Measurement duration
- Weighting type for Lp and Leq : A, C or Z
- Weighting type for Lpk : C or Z
- Type de time constant for Lp : F, S or I

It also shows obtained results (example):

- LCFmax
- LCFmin
- LFPk max
- LCEq, T
- LCE, T
- Overload



## VII 2 – Use S1 + S2 calculator

The S1 + S2 calculator is accessible at the software launching. It allows to determine the level of a sound source from two or to calculate the level of two sound sources.

### VII2-1 Calculate the level of two sound sources

To calculate two sound sources :

- Enter S1 level
- Enter S2 level
- Click on "**Calculate**" button.

The screenshot shows a window titled "S1 - S2 calculator" with three input fields labeled "Level S1", "Level S2", and "S1 + S2", each followed by "dB". Below the fields are two buttons: "Compute" and "Close".

### VII2-2 Calculate the sound level of one source

To calculate a sound source (S1 or S2) :

- Enter S1 or S2 level
- Enter S1 + S2 level
- Click on "**Calculate**" button.

The screenshot shows the same "S1 - S2 calculator" window. The input fields now contain values: "Level S1" is 64 dB, "Level S2" is 66 dB, and "S1 + S2" is 68,1 dB. The "Compute" and "Close" buttons are still present.

## VII 3 – Configuration OF documents for exporting or printing

LDB200 software allows to export or print results obtained as a dataset report. Before doing these exportations or printing, some adjustments have to be done :

On this dataset report, it is possible to fill in :

- Your contact informations in the "**Document configuration**" frame.
- Contact informations of the client in the "**Society**" frame.

Here is the procedure :

- Click on "**Tool**" then "**Document configuration**", the following window opens :
- Fill in the fields.

The screenshot shows a window titled "Documents configuration". It has a "Header" section with "Company name" and "Address" fields. Below that are "Down page" and "Up page" fields. At the bottom are "Cancel" and "Valid" buttons.

- Click on "**Company**" button, the following window opens :
- Fill in the fields.

The screenshot shows a window titled "Company". It has "Name / Company name" and "Address" fields. Below that is a large "Observations" text area. At the bottom are "Cancel" and "Valid" buttons.

It is possible to insert a general comment :

- click on "**Global note**" and fill in the general comment frame.


The screenshot shows a window titled "Global note". It has a text area labeled "Global note on this campaign:". At the bottom right is a "Valid" button.

## VII 4-1 – Exportation

The exportation concerns :


- Table of values **.txt** file, easily readable by a spreadsheet
- A measurement report in **.pdf** format of all or a part of elements that constitute the treatment of the original file.

### Export the table of values :



- Click on the arrow of the exportation button  and select **"Table of values"** mode.
- Validate and save the file in the directory **"Export"**.
- View the report to control it.



### Export the measurement report in pdf format :

- Click on the arrow of the exportation button  and select **"PDF report"** mode.
- Choose the desired configuration in the frame **"Report configuration"**.
- Validate and save the file in the directory **"Export"**.
- View the report to control it.



 One click on the  icon directly concerns the exportation of report in pdf format.

## Report example

**Page 1** : general information supplied when configuring or to complete manually (date and calibration certificate number of the sound level meter).

This page also presents the graph about the original measurement or to the selection made with the zoom function.

**Following pages** : list of reported values with comments, if validate when configuring the report.

Description of the different parts of the report, first page.

Informations on the company/organization in which measurement have been made appear in the exportation or printing document

**Header**

**Company:** KIMO  
LDB200  
26/10/2010

**Campaign report**

**Device:**  
DB200 n° : 2450  
Microphone AME10 n° : 155  
NF EN 61672 classe 2  
Verification date : 01/01/0001  
Certificat date :  
Certificat number :

**Configuration:**  
Mode : Leq - Stockage  
Measure start : 26/02/2010 09:51:22  
Measure end : 26/02/2010 09:53:51  
Duration : 00:02:29  
Ponderation Leq : A  
Ponderation Lpk : C  
Integration time : 1 s

**Overview**

**Graph of the time evolution**

**General results of the measurement dataset**

**Selection results:**  
Measure start : 26/02/2010 09:51:48  
Measure end : 26/02/2010 09:53:01  
Duration : 00:01:14  
LAeq max : 78,8 dB  
LAeq min : 35,2 dB  
LAeq,T : 62,1 dB  
LEA,T : 80,8 dB  
LCpk max : 108,4 dB  
% Overload : 0,00

**Statistical distribution**

C20 = 0 %  
C80 = 0 %  
C40 = 55 %  
C50 = 28 %  
C60 = 12 %  
C70 = 5 %  
C80 = 8 %  
C90 = 0 %  
C100 = 0 %  
C110 = 0 %  
C120 = 0 %  
C130 = 0 %  
C140 = 0 %

**Histogram**

**Observations:**

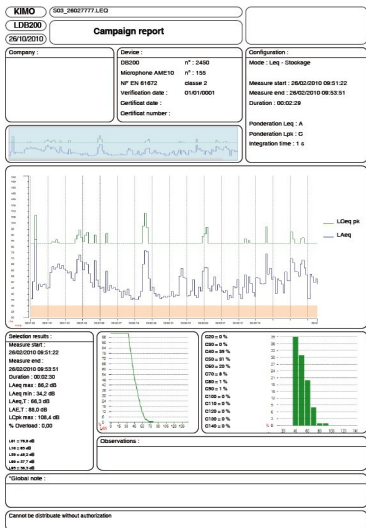
**Observations : ex : measurement conditions**

**Footer**

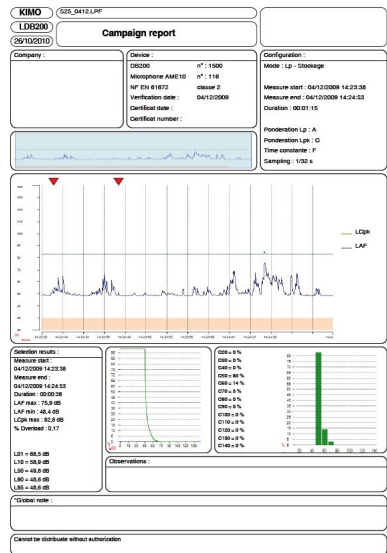
Cannot be distribute without authorization



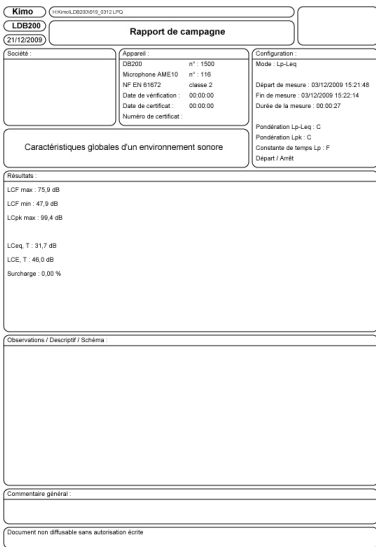
• Dataset report of the **LDB200** instrument, **Leq-Stockage** mode :



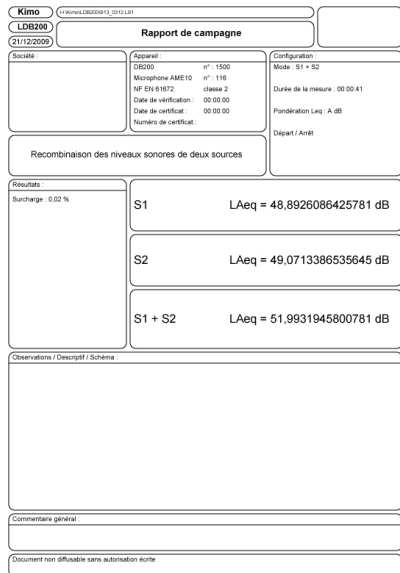
• Dataset report of the **LDB200** instrument, **Lp-Stockage** mode :



• Dataset report of the **LDB200** instrument, **Lp-Leq** mode :



• **S1+S2** report :



**Page 1** : This report includes only one page and presents the overall characteristics of a sound environment. The comments / descriptions are to be integrated manually.


**Page 1** : The report of the S1 + S2 calculator only includes one page and takes the measurements of the S1 sound source , S2 sound source and result of the two sound sources. he comments / descriptions are to be integrated manually.

## VII 4-2 – Printing

Printing concerns :

- measurement report of all or a part of elements that constitute the treatment of the original file.


### Print the report :

- Click on the **"Printing"** button. 
- Tick the box **"Values"** (if necessary) to include values in the printing and the box **"With comments"** to include comments.
- Click on **"Validate"**.

*Printing window opens.*

- Select the printer then click on **"Print"**.

*The "Aperçu avant impression" window opens.*

- launch printing by clicking on the icon **"Printer"** of the overview. 

### Report configuration



## VII 5 – Close file

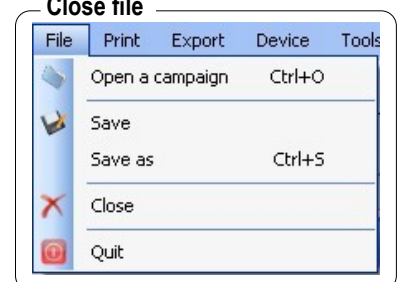
To close the file :

- Click on **File**.
- Click on **Close**.



When file is closed, software back to the home page.

### Close file

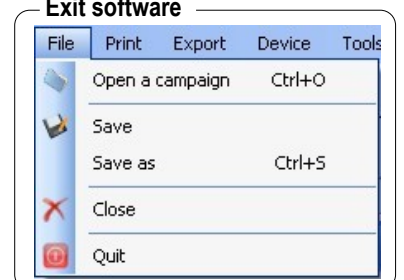


## VII 6 – Exit software

To exit software :

- Click on **File**.
- Click on **Exit**.

### Exit software





**[www.kimo.fr](http://www.kimo.fr)**

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