

QUICK START

RF Monitor Premium

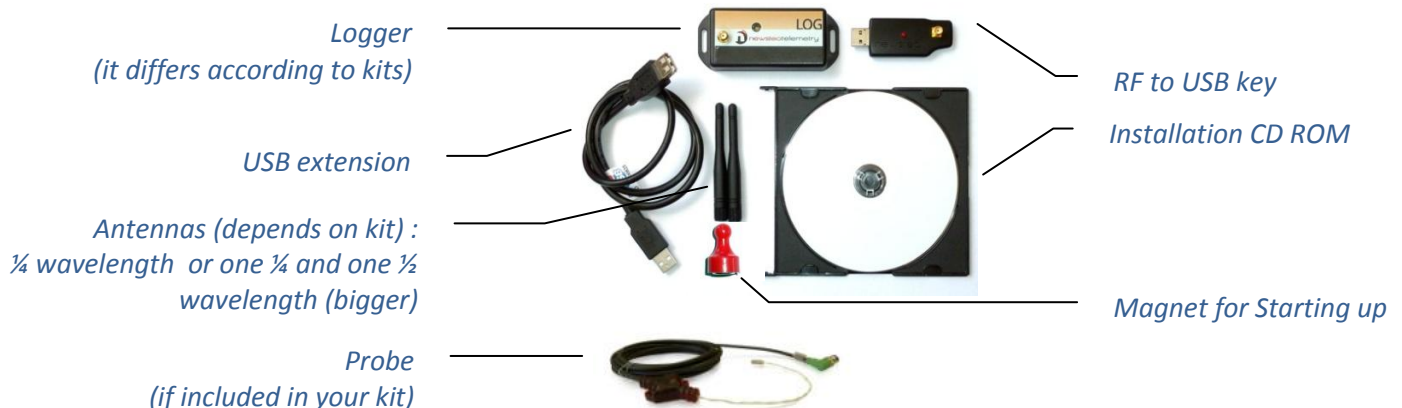
Subject:

NEWSTEO user guide for RF-Monitor software using Loggers (LOG, LGS, LGR) in “Monitoring” mode or “Live/Record” Mode

Technical Assistance:

For any question, remark or suggestion concerning this product, please contact your retailer.

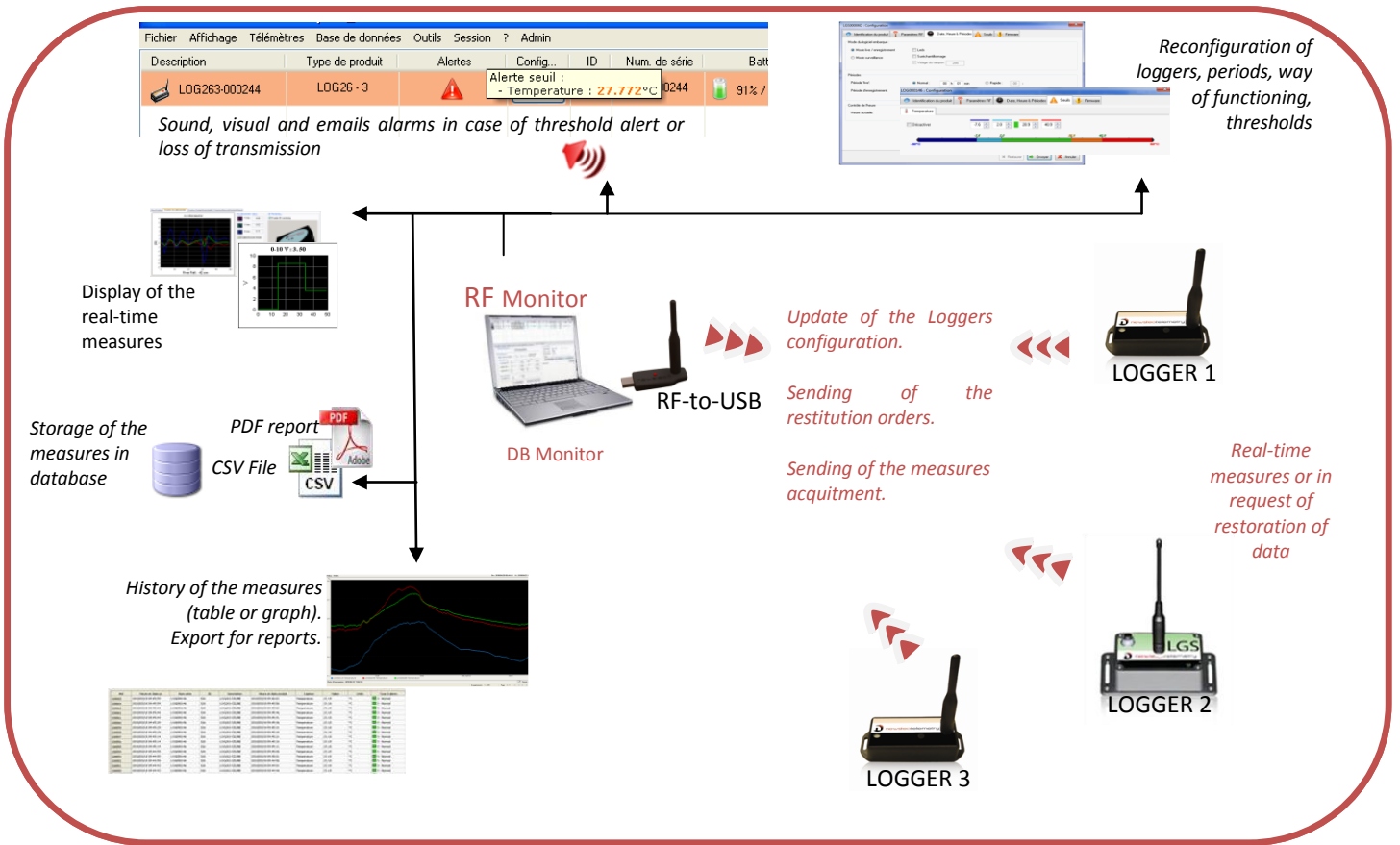
Kit content :



Degree of protection :

- LOG31, LOG36, LGR range, LGS range and LGW range: IP65
- Other LOG: IP54

1 Overview of a park RF Monitor



1.1 General description :

In your measure site, you need to install RF Monitor on a computer in order to:

- Configure periods of measure, thresholds, and alarms
- Configure the way of functioning (See. Page 4)
- Display measures, generate CSV or PDF files
- Gather measures from loggers (via a RF-to-USB key)
- Fill the database

It is possible to **open database** thanks to the supplied software **DB Monitor**.

Do never install neither the **NEWSTEO** software, nor the **RF-to-USB** keys,
Directly on the server of your company.

**Install on a dedicated computer which will be connected to your network. If it is not possible,
use the Ethernet collector NEWSTEO which will be also connected to your network.**



DO NEVER let the unused Logger in “LIVE” MODE
REMEMBER TO HIBERNATE YOUR LOGGER

→ Extremely rapid wear of the batteries in this mode (few days)

1.2 Operating Mode for loggers:

The logger is configured by default in **“Monitoring” mode**. It could be configured in **“Live/Record” mode** (see 3.2.3 Mode Live/Record).

Measures received by the software RF Monitor **can be stored in files CSV**, in the **database** or in a **PDF report** (For the Record Mode). By default, all way of storing data are activated. Whatever is the operating mode of the logger, the stored measures will be **time/date stamped**.

The choice of the mode will depend on the application type:

- **Monitoring Mode:** This concerns the applications of real-time **Monitoring** with the **control of the measures**, where all the **measurement history must be preserved**. Thanks to an embedded memory in each logger, the transmission of all data is guaranteed even in case of a cut off of transmission. The Monitoring Mode enables to **visualize measures and to trace alerts in real-time**.

Exemple of application: Supervision of temperature in a warehouse.

Operating principle:

- The logger takes measures in the configured period (10s default) and sends it to the PC, with acknowledgment of receipt.
 - If there is no acknowledgment of receipt for the measure by the RF-to-USB key (key not connected, PC power-off, RF-Monitor not running, communication problem...), the logger records the measure in its memory buffer (up to 32000 measures). Once communication is restored, the measures buffers are automatically sent by the logger to the PC.
 - RF Monitor displays the measure, records it in the database, and give alert if it is outside defined thresholds (audio, email, SMS, switching relay ...)
- **“Live/Record” Mode:** It is used for **measurement campaigns with consultation/treatment of data a-posteriori, without possibility of tracing the real-time alerts**. “Live” mode allows you to check the operation of the logger and “Record” mode corresponds to the registration campaign measures.

Exemple of application: Snitch for measuring temperature, humidity and shock for the transport of goods (museums - paintings, aviation, transport measuring benches, refrigerated foods ...)

Reminder: DO NEVER let the unused Logger in “LIVE” MODE – Remember to HIBERNATE your Logger


Operating principle:

- **Start : in ‘Live’ Mode**, the logger takes any action in the Live set period (10 sec default), and sends it to the PC. RF Monitor displays the measurements without recording them. The user can control the operation of the Logger. He can set alert thresholds and set the measurement period required for the measurement campaign to come.
- **The user then select ‘record’ mode** to start its measurement campaign.
During this recording campaign:
 - Every minute, the logger sends a presence signal to indicate its state, alerts and the number of measurements in memory.
 - The logger takes his measures according to the 'record' period (10 minutes by default) and saves them systematically in his memory.
- **At the end of the measurement campaign, the user stops the recording**, and the logger goes to 'Live' mode. From then on, the user can retrieve all the measures of the campaign on his PC by performing a single restitution.
- The measurements are then downloaded and stored in the database. Only one logger can record multiple campaigns in a row.

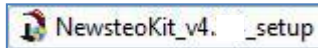
2 Installation of RF Monitor

 **DO NOT INSERT USB KEY BEFORE THE REQUEST.**

Screw the antennas, one on the Logger (small one: 1/4 wavelength or big one: 1/2 wavelength depends on kits) and the other one on the RF to USB key (small one: 1/4 d'onde). **Connect probes** (if the product joins it).

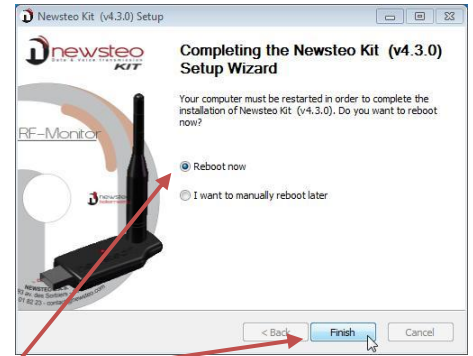
 **The level of tightness of the product is valid only if the probes and antennas are properly tightened (seals crushed).**

- Insert the CD ROM of the RF-kit.



If the installer does not start automatically, select "Run NewsteoKit_v4.x.x_setup.exe" in the AutoPlay window or launch Newsteo_Kit_v4.x.x_setup.exe file from the CD-ROM of the kit.

In the first window select a language then, for a quick installation, keep the default settings by validating the successive windows from setup program. By the end of installation, keep the option "Reboot now" and click "Finish".



- Once the computer restarts, launch the RF Monitor software by double-clicking the shortcut created on the desktop or from the Start Menu.



- In the window "Home" of the configuration wizard, choose the desired language and click "Next".



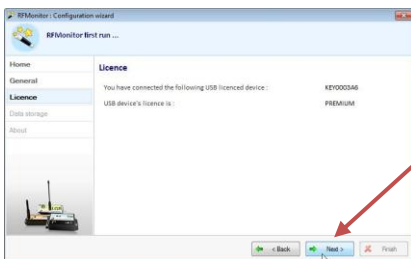
- In the window "Général" from the Configuration wizard click « Next ».

Remark : The configuration will be able to be changed later in the program options of RF Monitor, once the installation is complete (by a right-click on the line of the logger, then a click on configuration)

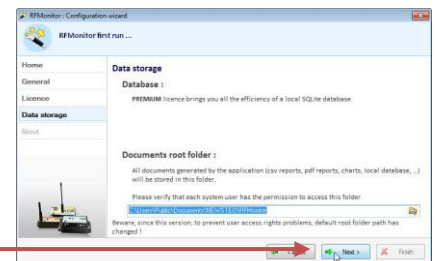
- At the request of the setup wizard, remove the label "Install the software before inserting!" and insert the RF-to-USB key preferably using the USB extension



- In the window "Licence" from the Configuration wizard click "Next".



- In the window "Data storage" of the Configuration wizard click on "Next".



- At the end of the wizard, click « Finish » to launch RF Monitor.

The information about your key RF-to-USB are now displayed in the tab « Key control » of RF Monitor.

#COM	Key serial number	RF settings	Key hardware	Key firmw...	Baud rate	License type	License number
COM3	KEY0003A6	Chl EU8 10dBm 30mA	KEY111	v18.F.03	625000	Premium	9AES-NMHWF-K3UQU-4T6BV-51DDZ

3 Using the RF Monitor



3.1 Start the Logger-Monitoring Mode

The Logger is delivered in hibernation state.

After starting RF Monitor, and after connecting the RF-to-USB key, activate your Logger passing the magnet over the area ILS or MAGNET.

The Logger will automatically appear in the list of the measuring device. If it is equipped with a LED, the led will flash briefly.

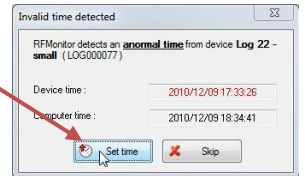
By default, the Logger is functioning in "Monitoring" Mode (Cf. 1.2 Operating Mode for loggers:).

Description	Product t...	Alerts	Conf...	ID	Serial number	Battery	RF settings	Next transmi...	measures	Device's commands	Current mode/status	Sensor: 1	Sensor: 2	Sensor: 3	Firmware
Log 22 -small	LOG22 - 2			1	LOG000077	94%	Canal 8 Europe	?	4 measures	aucune	Live / Threshold alert	25.08°C	37.51%	37.51%	1.4.7 Live/record

Callouts from the image:

- Identification of the logger
- Alarm level (depends on threshold configured)
- Battery level
- Action menu (Configuration, start/stop record...)
- Radio chanel
- Time remaining before the next transmission
- Current command
- State of the logger (Live/record/Monitoring/hibernate)
- Last measure
- Firmware version

If the clock differs between the logger and the PC, a window is opened to ask for a synchronization (synchronization recommended).



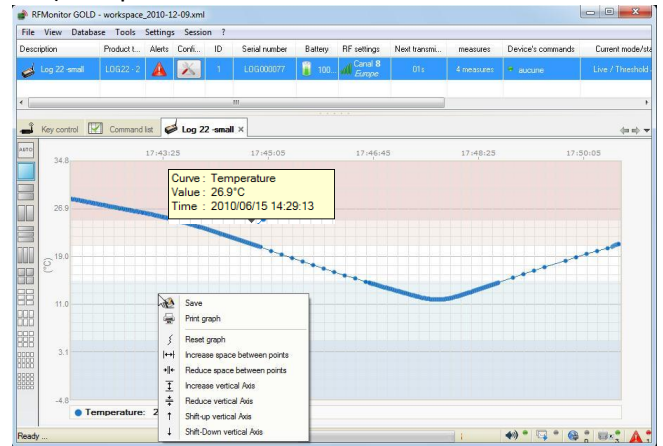
Double-click the line of the logger to display the real-time measurements for this Logger. By default, the logger sends a measurement every 10 seconds (This parameter can be changed Cf.3.2.1 Change Period and/or Change Mode).

On this graph:

By passing the mouse cursor on the point representing the measure, the exact value of the measurement is displayed and the date and time of the measurement.

Right-click on the graph to display the menu that allows you to adjust the scale of the curve for readability.

The colors designate the areas that match the alert thresholds set by the operator (Cf.3.2.4 Alert Threshold).



3.2 Configuration and mode change

The Logger works by default in "Monitoring" mode with a measurement period of 10 seconds.

For any configuration in this section:

- Begin by using either the "tools" icon on the line of your Logger or the right-click on the line of your Logger
- Then click "Configuration".

3.2.1 Change Period and/or Change Mode

Select the « Time & Period » tab.

In Firmware mode, select «live/Record Mode», or «Monitoring Mode »

In Period settings, set:

Configuration dialog details:

- Tools menu: Display curves of measures, Configuration (F3), Get configuration, Start recording
- Time & Period tab:
 - Firmware mode:
 - Live / record mode
 - Leds
 - Oversampling
 - Buffer resolution: 255
 - Period settings:
 - Live period: Normal (00:00) min, Fast: 10 s
 - Record period: Normal (00:00) min, Fast: 20 s
 - Time control:
 - Current time: 2010/12/09 17:44:21
 - Buttons: Set time, Get device time

- The 'live' period for the « **Monitoring** » mode :
 - By default, a measurement is transmitted every 10s from the Logger to RF-Monitor with a request for acknowledgment.
- The «Live » period and « record » period for the «**Live/Record**» mode :
 - By default in 'live' mode, a measure is transmitted every 10s from the Logger to RF-Monitor which allows the user to set alert thresholds and verify the operation of the Logger.
 - By default, in 'record' mode, every 10 minutes, the logger takes a measure and store in its memory. These measures will be restituted to RF Monitor on request and after a change for the 'live' mode (Cf.1.2 [Operating Mode for loggers](#)).

For your tests in 'record' mode, we recommend a shorter period of 1 minute for example.

Remark : **the higher the frequency is for the measurement, the faster the memory will be full.**

For information:

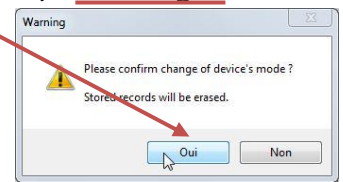
period 1 mn	→ 20 days	of autonomy
period 10 mn	→ 200 days	of autonomy
period 30 mn	→ 2 years	of autonomy

Therefore, during the setting up of the recording mode, selecting the "oversampling" is not recommended.

If "oversampling" mode is selected in the embedded software, whenever measures are outside the defined alert thresholds (Cf. [3.2.4 Alert Threshold](#)), the number of measurements automatically increases to 1 measurement per second in fast mode (less than 1 min) and 1 measurement per minute for an initial period in normal mode (more than 1 min). **This option allows you to refine surveillance when the product is on alert** (Cf : graph in [3.1 Start the Logger-Monitoring Mode](#)).

Click Submit and, before confirming the mode changing for the product and deleting data, do not forget:

- To download your actions if you were in « Live/Record » Mode
- Check that the transmission is not interrupted in order not to lose the measurements (Next Transmission « ? ») on the line of the concerned Logger) if you were in « Monitoring » Mode.



3.2.2 Monitoring Mode :

Cf. [3.1 Start the Logger-Monitoring Mode](#) page 6

3.2.3 Mode Live/Record



Once the « Live/record » Mode selected (Cf. [3.2.1](#). page 6), the logger is in « Live » mode

- **Double click on the line of the Logger** concerned to obtain **the curve measures** so as to control the operation of the Logger and set the thresholds for the measurement campaign to come (Cf.[3.2.4 Alert Threshold](#))
- **Right-click on the line of your Logger then click "Start recording" to start the record**
- **Validate the window that confirm the « recording ».**

Wait a radio transmission or use the magnet on the logger so that the Logger takes changes in account. The measurement campaign begins; now the logger records all its measures in its memory and sends a signal every minute to indicate its presence and its state, exceedances of alert and the number of measurements in memory. **Make sure you get your measurements on the curve of measures** (at the period chosen for the recording mode).

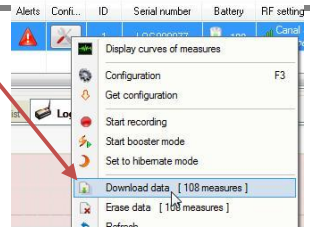
As part of tests related to learning the use of RF Monitor and Logger, you have to close RF monitor to simulate a remote location (outside the radio range), then restart RF Monitor and wait for the Logger detection.

- **Right-click on the line of your Logger then click "Stop recording"**
- **Validate the window that confirm the stop of the recording.**

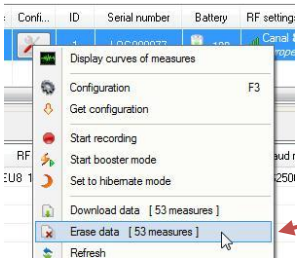
Wait a radio transmission or use the magnet on the logger so that the modification is taken in account by the logger. (The number of measurements in memory is displayed in the column "measures" of the line of Logger).



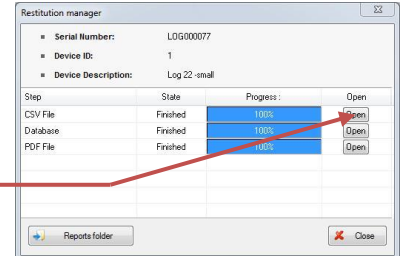
- **Right-click on the line of your Logger then click “Download data”** to recover the measures in the memory (maximum waiting 1min).
It is advisable to clear the logger memory and erase the data stored in the product after data retrieval.



Remark : It is possible to delete data without having previously downloaded it with a **right-click on the line of your Logger then a click on “Erase data”**



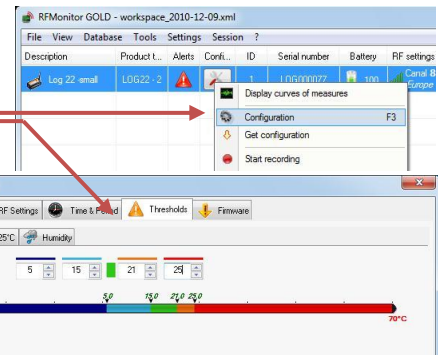
- **Click on « open »** corresponding to the file you wish to consult to check measures recovered.



3.2.4 Alert Threshold

- **Right-click on the line of your Logger then click “Configuration”.**
- **Select the « Threshold » window.**
- **Adjust the thresholds which define the levels of alerts you want for**

your Logger: the nominal area is green, light blue and orange correspond to the first alert level, dark blue and red correspond to the second alert level. These thresholds are visible on the graphs (with slightly different colors). (Cf. 3.1 Start the Logger-Monitoring Mode page 6)



- **Click on « send »** to validate modification, then click on « close ».

Wait a radio transmission or use the magnet on the logger so that the modification is taken in account by the logger.

Exceeding threshold always leads to a **visual alarm**.

By default, an audible alarm is also activated (Cf. 3.3 Alerts and Alarms)

3.2.5 Identification of the product

- **Right-click on the line of your Logger then click “Configuration”**
- **Select the « Device Identification » window**
- Enter a custom ID (*ID*, number between 0 and 999)
- Enter a description
- **Click on « send »** to validate modification



3.3 Alerts and Alarms

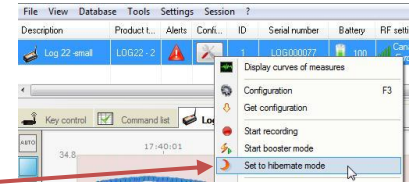
There are warnings about the overrun of threshold, a transmission loss, wrong date/time and low battery levels.

Alarms are always at minimum visual (red line for the logger, warning triangle ...). They **may also emit sounds** (configurable for each type of alert), **e-mail** or **alert relay** (with external equipment optional)

3.4 Disable the Logger

The logger must return in hibernate mode at the end of the measurements campaign to save batteries so that it can be stocked

- Right-click on the line of your Logger then click **“Set to hibernate mode”**
- Wait a radio transmission or use the magnet on the logger.
- Validate the window that confirm the « hibernating status».
- Check that the « current mode/status » is « hibernating » on the line of the Logger.



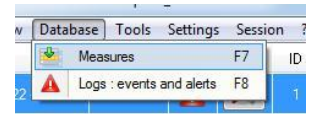
The logger can be activated again by passing the magnet over the area ILS or MAGNET.



REMEMBER TO HIBERNATE your Loggers to save batteries - DO NEVER let the unused Logger in “LIVE” MODE

3.5 Features and options

RF Monitor provides access to historical measurements received on a graph or in a table (Menu Database/Measures).

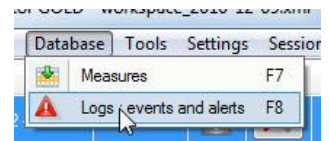


A management of filters allows to display the steps according to certain criteria:

- **Devices filter:** Devices to display depending on *ID, Serial Number, Device Description or Product Type*.
- **Sensors :** for selected products, choose the sensors or the types of measures to display (ex : *Temperature, 0/10V ...*)
- **Period:** it filters measures depending on the date / time.

To **optimize traceability**, the “Logs” window (Menu Database / Logs) gathers all alerts and events related to the loggers:

- **Alerts** (over threshold measures)
- **Application start up or shut down**
- **USB key connected or disconnected**



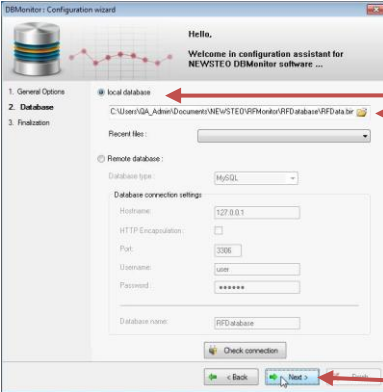
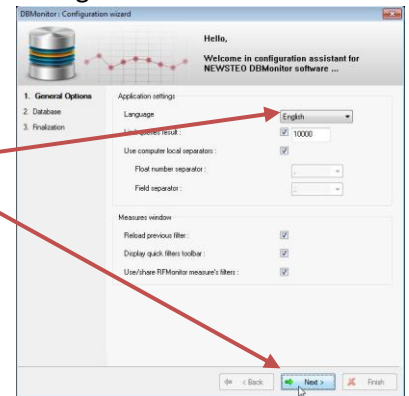
At each event, it is possible to enter a comment justifying the rise of warning or occurrence of the event (Ex: a warning temperature in the freezer, the high threshold set at -15 ° C, measurements obtained -14 C → enter the comment "Open door for cleaning for 5 min).

4 DB Monitor installation for data consultation

- Once RF Monitor was installed, launch the DB Monitor software by double-clicking the shortcut created on the desktop or from the Start Menu.

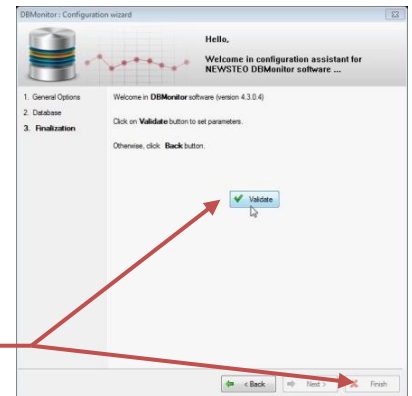


- In the **“General options”** window of the configuration wizard, choose the desired language and click **“Next”**.



- In the **Database** window, of the configuration wizard, choose **Local database**
- Enter the path for your local database
- Click on **“Next”**

- In the **Finalisation** window of the configuration wizard, click on **“Validate”**, then click on **Finish**.



5 Battery replacement

5.1 Battery model

LOG31, LOG36, LGR range, LGS range: XENO XL-060F with wires and fast connector (3.6 V, AA model)

Other LOG: XENO XL-050F (3.6 V, 1/2AA model)

Newsteo can provide set of batteries. Please reach us.

5.2 Casing openinning

For LOG31, LOG36, LGR range, LGS range

The housing is waterproof and equipped with a moisture-absorbing bag with a capacity of 1g.

Proceed to open and change the battery in a dry place and in a shortest time possible (less than 5 minutes) so as not to saturate the absorber.

It is not necessary to change the absorber except if you leave the case open more than 5 minutes.

The housing must be clean and free of dust. Clean it if necessary before opening.

Use a Phillips screwdriver PH2.

Unscrew the 4 screws on the top of the housing.

Carefully open the box, taking care not to loosen the joint. The case was closed with a grease seal which normally assures it will open correctly. However, in the case of use in a particularly aggressive or hot area, the joint may be glued to the joint plane. In this case, replace the seal in its groove.

As a precaution, the lubrication of the joint face with a silicone-based grease is recommended to ensure easy removal later.

For other LOG

Proceed to open and change the battery in a dry place.

The housing must be clean and free of dust. Clean it if necessary before opening.

Use a Phillips screwdriver PH2.

Unscrew the 2 screws on the back of the housing.

5.3 New battery Installation

Remove the old battery from its holder and put the new battery in place of the old.

Respect polarity shown highlighted on the product.

Check the restart of the product on RF Monitor or operating system.

5.4 Housing closing

Replace the screws and screw them to the stop and the two housing parts are joined without spaces.

Address of the manufacturer :

NEWSTEO S.A.S.
93 avenue des Sorbiers – ZE Athelia 4
13 600 La Ciotat – France