

QUICK START RF Monitor Gold

Subject:

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

This guide describes the hosting of the measurements data base on a Newsteo server.

Data base hosting

This document allows you to install a database on a Newsteo server. This manipulation is very simple and allows you to quickly test the Collector. Newsteo offers hosting for 1 month test. After this period, it is necessary to subscribe to a paid hosting with Newsteo.

Technical Assistance:

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

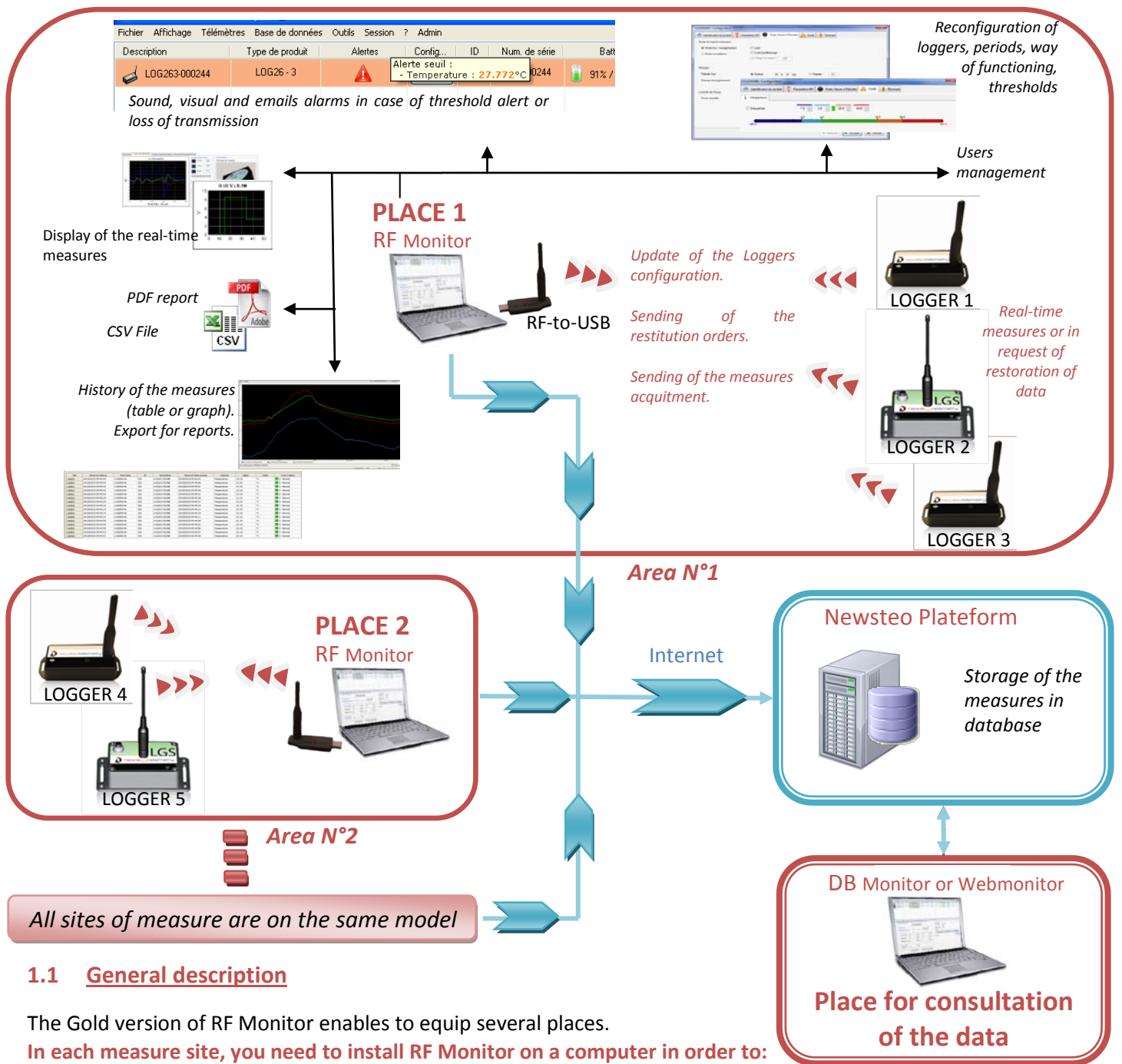
Kit content :



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1 Overview of a park RF Monitor Gold



1.1 General description

The Gold version of RF Monitor enables to equip several places.

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

- Manage the user rights on the software
- Configure periods of measure, thresholds, and alarms on the loggers
- Configure the way of functioning (See. Page 4)
- Display measures, generate CSV or PDF files
- Gather measures from loggers related to this site (via a RF-to-USB key)
- Fill the remote database (Newsteo platform)

It is possible to access the database using the DB Monitor software supplied. Consultation stations are not equipped with RF-to-USB key or loggers, they show only the data from the database. It is also possible to display the measurements via the web application WebMonitor.

Attention, the Webmonitor web application does manage different users' rights. Any user who connects gets all rights.

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 CSV files**, in the **database** or in a **PDF reports** (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 remote database, and gives 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: Data logger for measuring temperature, humidity and shock for the transport of goods (museums - paintings, aviation, transport measuring benches, refrigerated foods ...)

Operating principle:

- **Start : in ‘Live’ Mode**, the logger takes any action in the Live period set (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 selects '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 its measurements according to the 'record' period (10 minutes by default) and saves them systematically in its 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 remote database. Only one logger can record multiple campaigns in a row.

2 Installation of RF Monitor Gold

2.1 Installation of RF Monitor

2.1.1 Installation

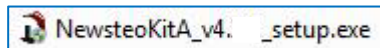
This **installation** concerns the **WORKSTATION N°1** located on the first area of measures. The following steps **have to be repeated for each new workstation** (Cf.1 *Overview of a park RF Monitor Gold*)

 **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).

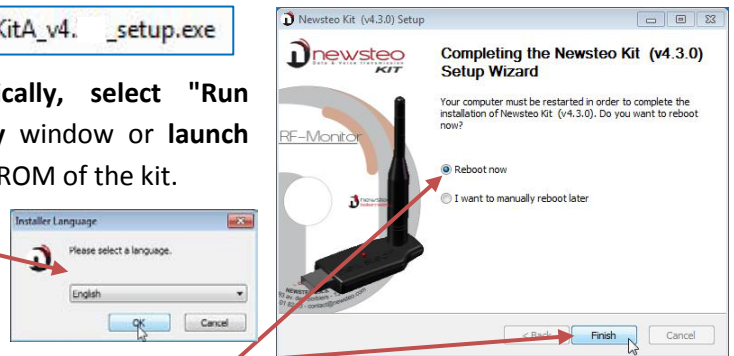
 **The level of tightness of the product is valid only if the probes and antennas are properly tightened (seals crushed).**

- 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.

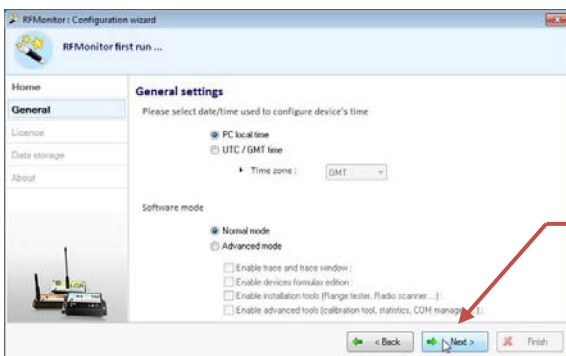
In the first window select a language then, for a quick installation, keep the default settings by validating the successive windows from setup program. By the end of installation, keep the option "Reboot now" and click "Finish".



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



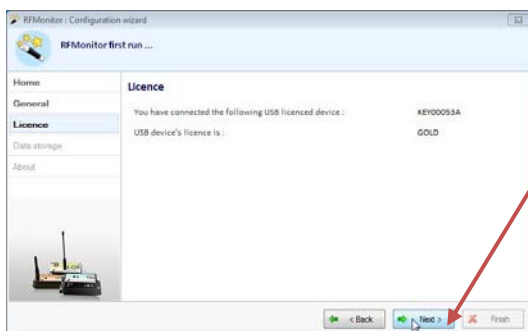
- In the window "Home" of the configuration wizard, choose the desired language and click "Next".



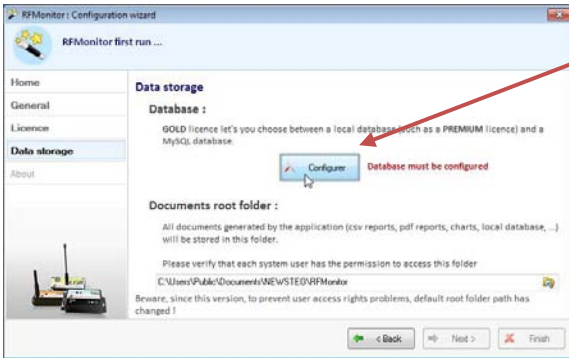
- In the window "General settings" of the Configuration wizard click "Next".

Remark: The configuration can be changed later in the program options of RF Monitor, once the installation is done.

- 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 "Configure".

Here you will configure the connection to a test database provided by Newsteo, allowing you to validate the correct operation of your system. Use the information provided on the label.



Select "Remote database" and fill as following:

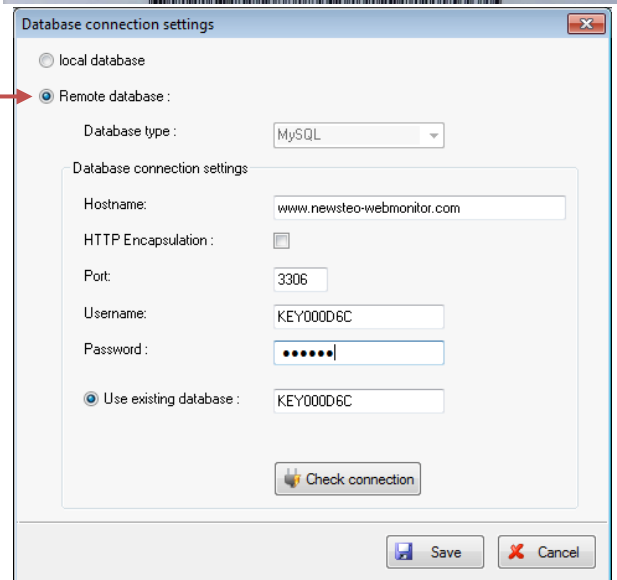
Hostname: www.newsteo-webmonitor.com

HTTP encapsulation: do not tick the case

Port : 3306

Username: KEYXXXXXX (the serial number of the key)

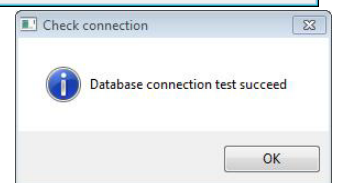
Password: ***** (type the password given the label)



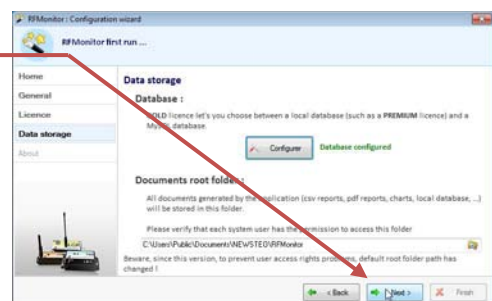
Select **Use existing database**: KEYXXXXXX (the serial number of the key)

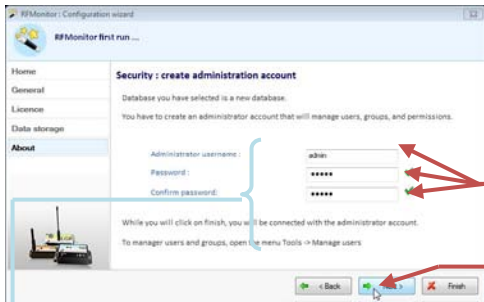
- Click on "Check connection" and then click "OK"
- Click on "Save"

Remark: If you do not get the message "Database connection test succeed", check your connection settings and the name of your database, then test the connection again.



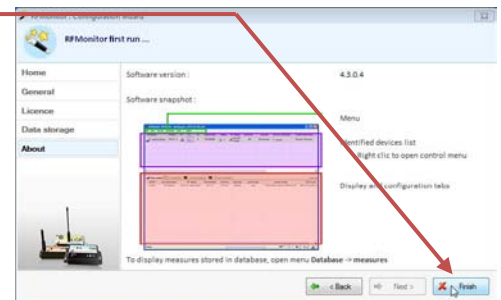
- Once returned to the window « Data storage » of the Configuration wizard click on « Next »



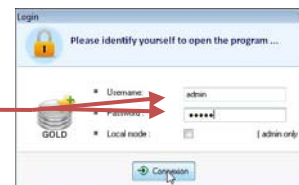


- If you access the database for the first time, enter an Administrator ID and associated password in the « About » window of the Configuration wizard (you will not have to do that again for the installation of the other workstations). Click « Next »

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



- In the window « Login », enter the user name and the password you chose just before.
- Click « Connection » to launch RF Monitor.

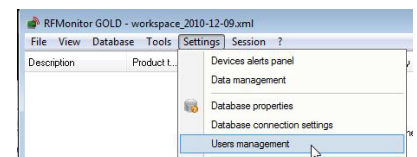


- The information about your key RF-to-USB is now displayed in the tab « Key control » of RF Monitor.

#CDM	Key serial number	RF settings	Key hardware	Key firmw...	Baud rate	License type	License number
COM3	KEY00053A	CHI EU8 10dBm 30mA	KEY121	v18.F.03	625000	Gold	3RV4H-Z1K-W1T4F-LRKA-6FT27

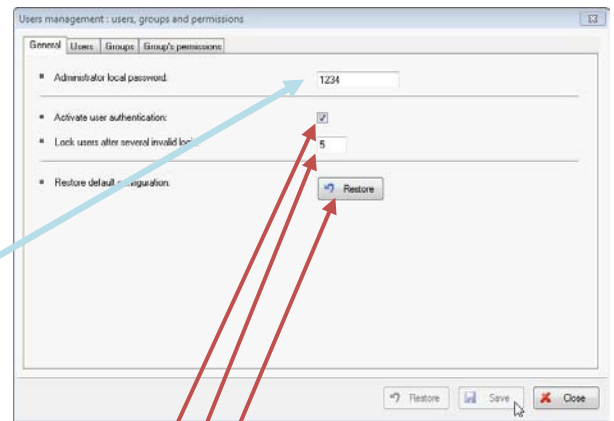
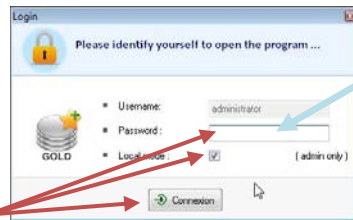
2.1.2 Users management

After launching RF Monitor, open the menu “Settings/Users management”.



In the « **General** » window, enter the password « **Administrator local password** » (default value 1234). This password allows the administrator to log in, in case of connection problem for users. In this case, it is needed when starting RF Monitor.

In this case, when starting RFMonitor, select “Local” Mode, enter the corresponding password and click « connection ».



By selecting « **Activate user authentication** », the user will have to **authenticate itself**, and enter his password (created in the tab « Users ») to **open RF Monitor**.

He will have a limited number of attempts. This number is defined in “**Lock users after several invalid login** ». Click on « **Restore** » to return to the default configuration.

Do not forget to click on « Save » to save your modifications

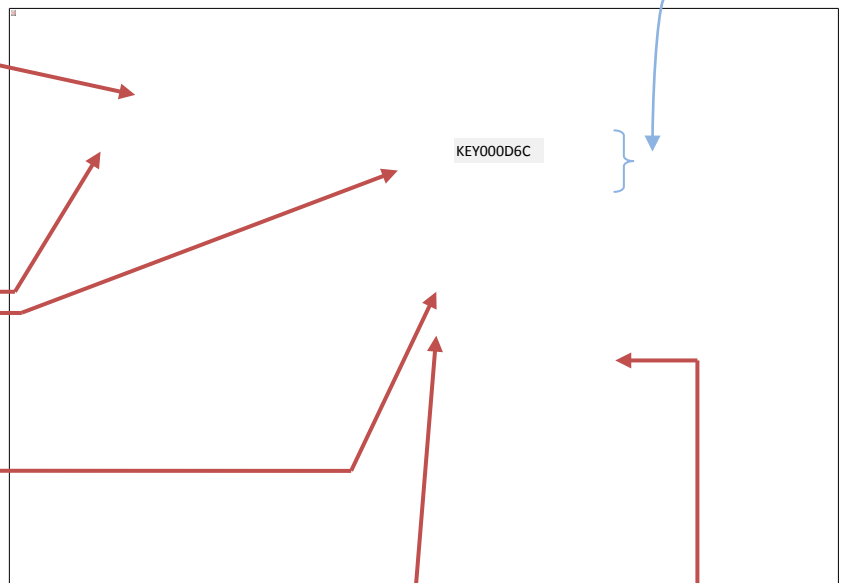


In the window « **Users** », it is possible to create a new user by clicking on the « **plus** » green.

In the window **Warning**, enter the user name, then click on « **OK** ».

The « **new user** » will be added to the list. It is then possible to assign a password. The fields *email address* and *phone number* are optional.

The box « User locked » is checked if the user typed several times a bad password. It is then possible to reactivate the user by unchecking the box.



The Webmonitor box allow or not the user to see the measures through the website www.newsteo-webmonitor.com. If the box is checked, the user can connect. Attention, consult the restrictions detailed in 2.3 *Measurements consultation via the web application Newsteo Webmonitor*.

The « **User group** » field allows the user to define which **group** the user belongs and what are its **rights** (see « Groups » and « Group’s Permissions » Windows next page).

To **delete a user**, select it, click the « Minus » red. Confirm in the « **Warning** » window.

Do not forget to click « Save » to save your modifications

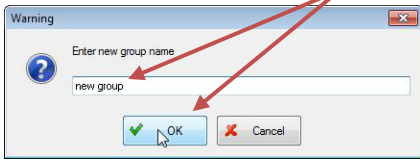
By default, 3 users have been created:

For safety reasons, it is necessary to change passwords assigned upon installation.

User	Password	Group
admin	admin	Administrators
manager	manager	Managers
user	user	users

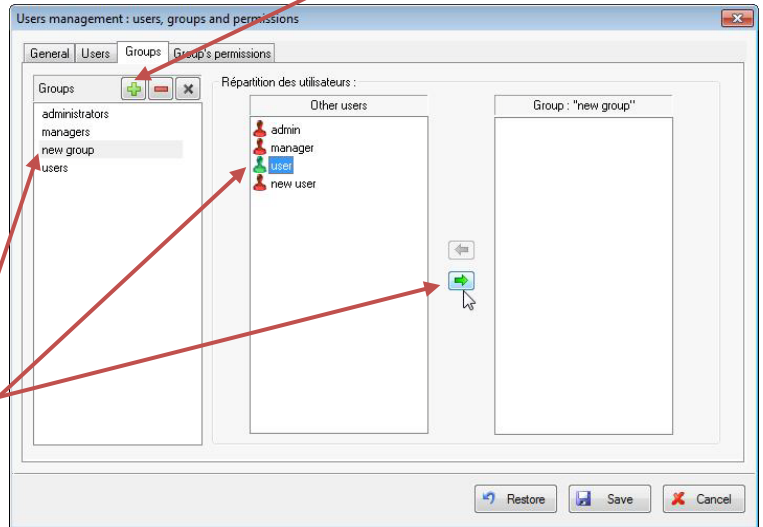
From the « **Groups** » window, you can create a **new group** by clicking on the "plus" green.

In the window **Warning**, enter the group name, then click on « **OK** ».



The « **new group** » will be added to the list.

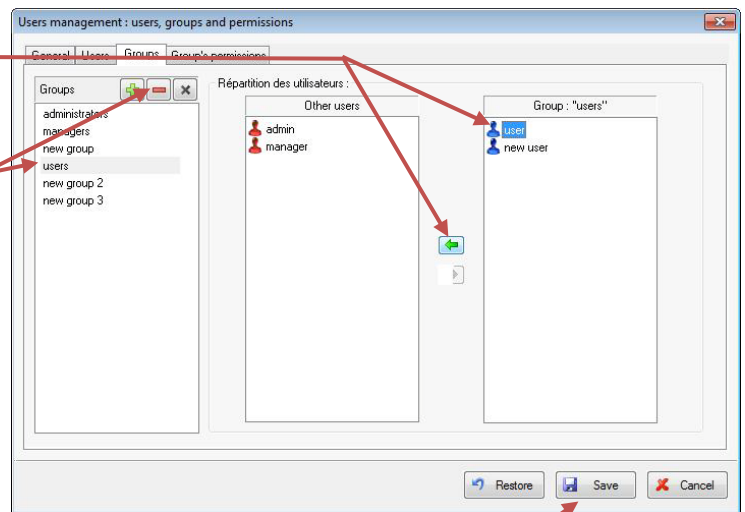
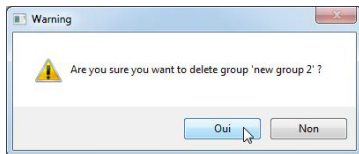
It is then possible to assign it users by selecting the desired users and clicking the green arrow.



To delete a user in a group, select it in the Group column and click the green arrow.

To delete a group, select it, click the « Minus » red.

Confirm in the « **Warning** » window .



Do not forget to click « **Save** » to save your modifications

In the window « *Group's permissions* », Assign the rights for the new group.

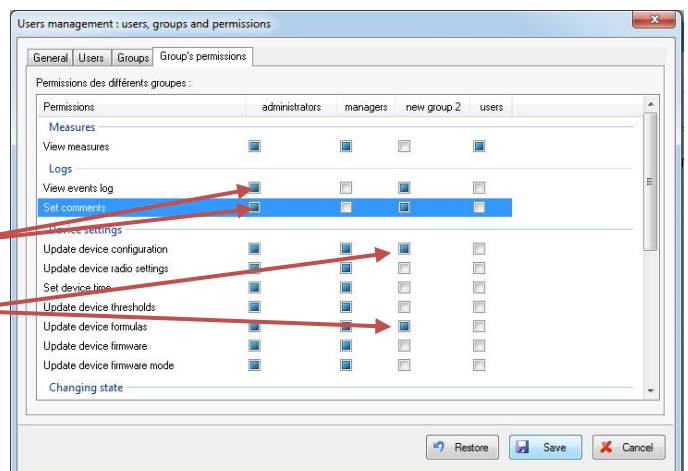
REMARK:

In the "Logs" part:

- To give the right "Set comment", the right "View event log " must be selected

In the "Device settings" part:

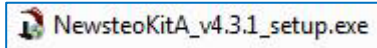
- The right "Update device configuration" must be selected to select other rights in the same part.



Do not forget to click « **Save** » to save your modifications

2.2 Installation of DB Monitor for data consultation workstations

- 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.

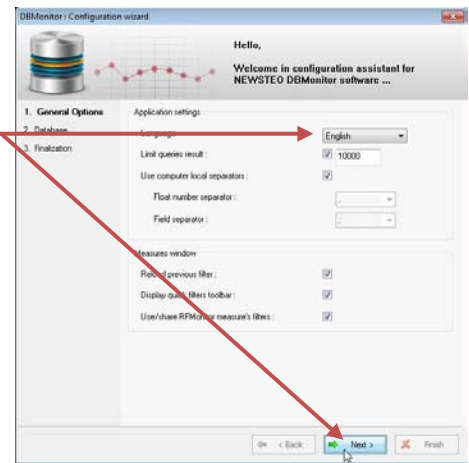
In the first window, select the language, then for a quick setup, keep the default settings by validating the successive windows from setup program. By the end of installation, keep the option "Reboot now" and click "Finish".



- Once the computer restarts, launch the 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, use the information provided on the label to fill the menu.



Select "Remote database" and fill as following:

Hostname: www.newsteo-webmonitor.com

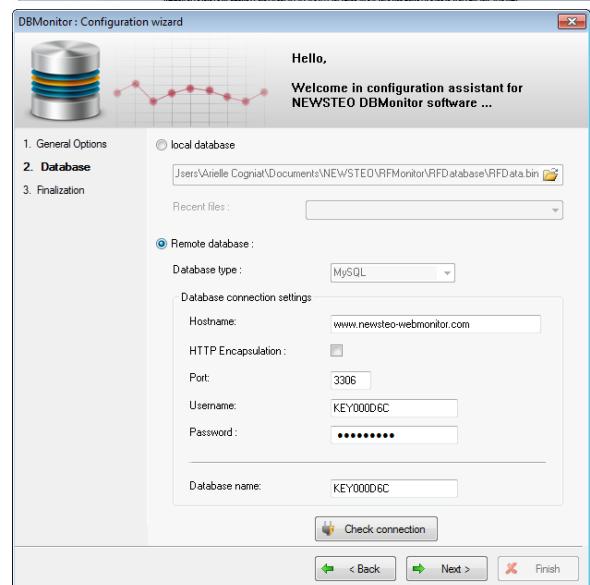
HTTP encapsulation: do not tick the case

Port : 3306

Username: KEYXXXXXX (the serial number of the key)

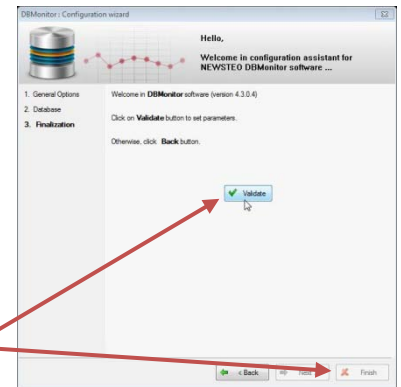
Password: ***** (type the password given the label)

Select Use existing database: KEYXXXXXX (the serial number of the key)



- Click on « **Check connection** » then **validate** the window « **Check connection** »

Remark: If you do not get the message "Test database connection was successful, check your connection settings and the name of your database and then test the connection again.



- Click on "**Next**"
- In the **Finalisation** window of the configuration wizard, click on "**Validate**" and then click on **Finish**.

2.3 Measurements consultation via the web application Newsteo Webmonitor

With hosting made on the Newsteo platform, it is possible to check the measurements recorded by the installation directly on the Internet.

- Open a web browser (preferably Chrome)
- Go to address www.newsteo-webmonitor.com
- You can access an interface in which you need to login.
 - ✓ Use the codes on the provided label,
 - ✓ Or a user ID that you created in step 2.1.2 *Users management*. In this case, the name of the database remains unchanged (in the example, KEY000D6C), Login is the name of the user created and the password is the one assigned to the user. The user will only be active if the Webmonitor box has been checked during user ID creation.



Attention: at this time, the users' rights are not managed via www.newsteo-webmonitor.com. Any user who connects gets all rights, including the right to change the configuration of loggers. If this is not suitable for the intended use of the software, disable WebMonitor access to each user (see 2.1.2 *Users management*). You will then use DBMonitor only for measurements displaying. Management of user rights will soon be added to WebMonitor.

3 Using the RF Monitor Gold



3.1 Starting 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.

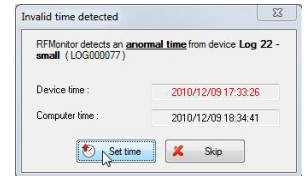
By default, the Logger is functioning in “Monitoring” Mode (Cf. 1.2 Operating Mode for loggers).

Description	Product L...	Alerts	Confi...	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 for the first row:

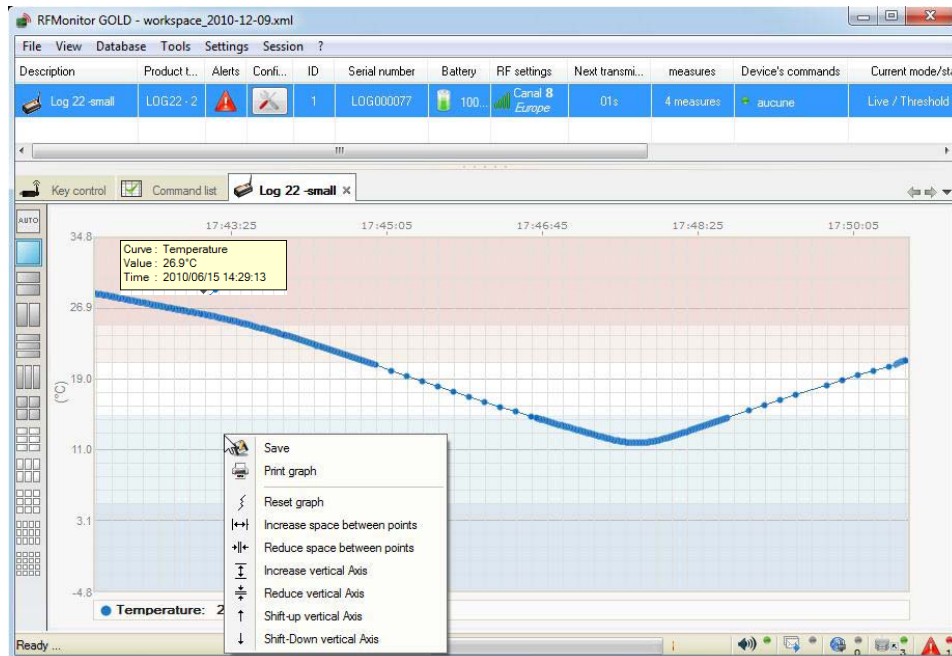
- Identification of the logger (points to Description)
- Alarm level (depend on threshold configured) (points to Alerts)
- Action menu (Configuration, start/stop record, ...) (points to Confi...)
- Battery level (points to Battery)
- Radio chanel (points to RF settings)
- Time remaining before the next transmission (points to Next transmi...)
- Current command (points to Device's commands)
- State of the logger (Live/record/Monitoring/hibernate) (points to Current mode/status)
- Last measure (points to measures)
- Firmware version (points to Firmware)

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.

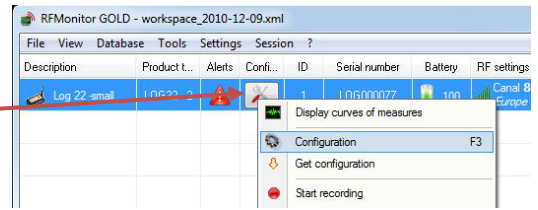
The colors designate the areas that match the alert thresholds set by the operator (Cf. 3.2.4 Alert Threshold).

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
- **Right-click on the line of your Logger**
Then click “Configuration”.



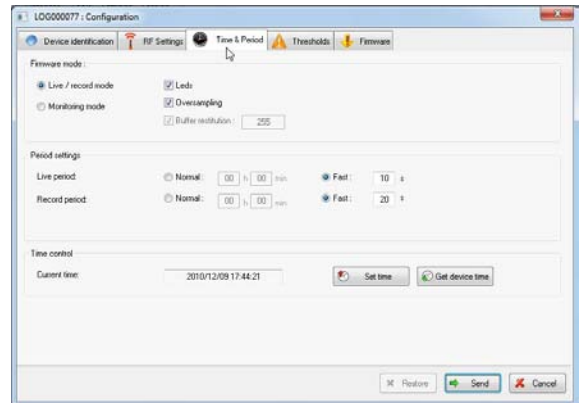
3.2.1 Change Period and/or Change Mode

Select the « **Time & Period** » tab.

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

In **Period settings**, set:

- 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:

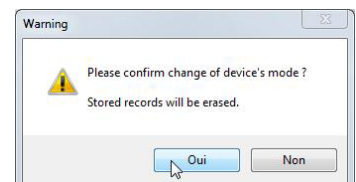
- **period 1 mn → 20 days of autonomy**
- **period 10 mn → 200 days of autonomy**
- **period 30 mn → 2 years of autonomy**

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 *Starting 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.



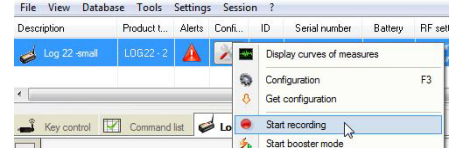
3.2.2 Monitoring Mode :

Cf. 3.1 Starting the Logger-Monitoring Mode page 12

3.2.3 Mode Live/Record

Once the « Live/record » Mode selected (Cf. 3.2.1. page 13), the logger is in « Live » mode

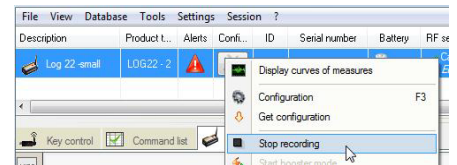
- **Double click on the line of the Logger concerned to obtain the curve measures** so as to control the operation of the Logger and set the thresholds for the measurement campaign to come (Cf. 3.2.4 Alert Threshold)
- **Right-click on the line of your Logger then click “Start recording”** to start the 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 « recording ».**

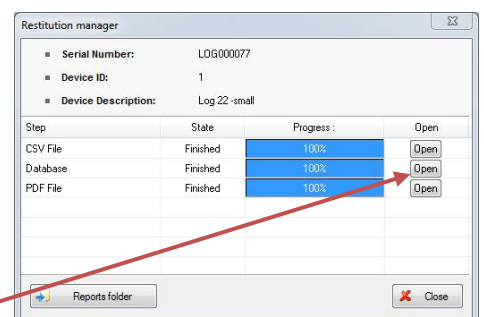
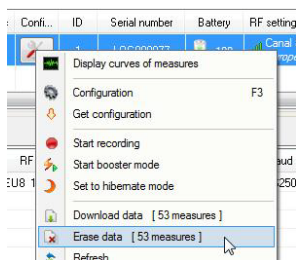
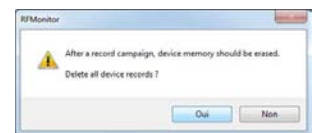
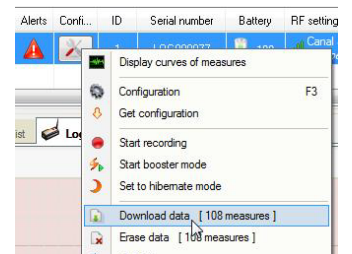


Wait a radio transmission or use the magnet on the logger so that the modification is taken in account by the logger. (The number of measurements in memory is displayed in the column "measures" of the line of Logger).

- **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.

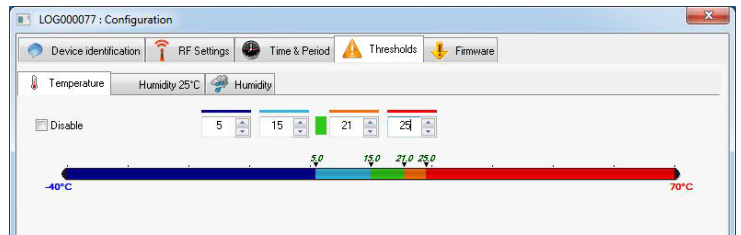
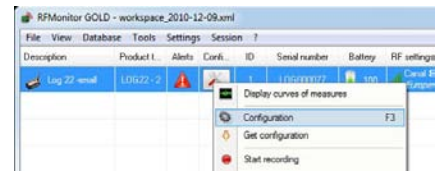
Remark : It is possible to delete data without having previously downloaded it with a **Right-click on the line of your Logger then a click on “Erase data”**



- **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 Starting the Logger-Monitoring Mode page 12)
- Click on **« send »** to validate modification, then click on **« close »**.



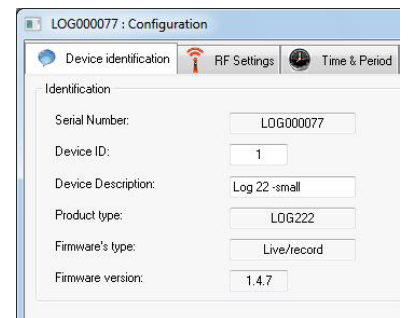
Wait a radio transmission or use the magnet on the logger so that the modification is taken in account by the logger.

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

By default, an audible alarm is also activated (Cf. 3.3 Alerts et 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



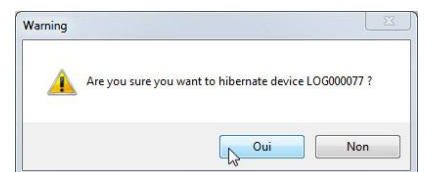
3.3 Alerts et Alarms

There are warnings about the overrun of threshold, 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 Disabling Logger

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

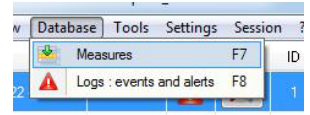
- Right-click on the line of your Logger then click **“Set to hibernate mode”**
- Wait a radio transmission or use the magnet on the logger.
- Validate the window that confirm the **« hibernating status »**.
- Check that the **« current mode/status »** is **« hibernating »** on the line of the Logger.



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

3.5 Features and options

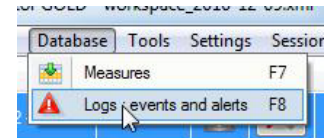
RF Monitor provides access to historical measurements received on a graph or in a table (Menu Database/Measures).



A management of filters allows displaying 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).