USER GUIDE RF Monitor Tracker TRE

Purpose:

Installation guide and user guide of the software Premium RF-Monitor for Trackers TRE.

Technical help :

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

Kit content :

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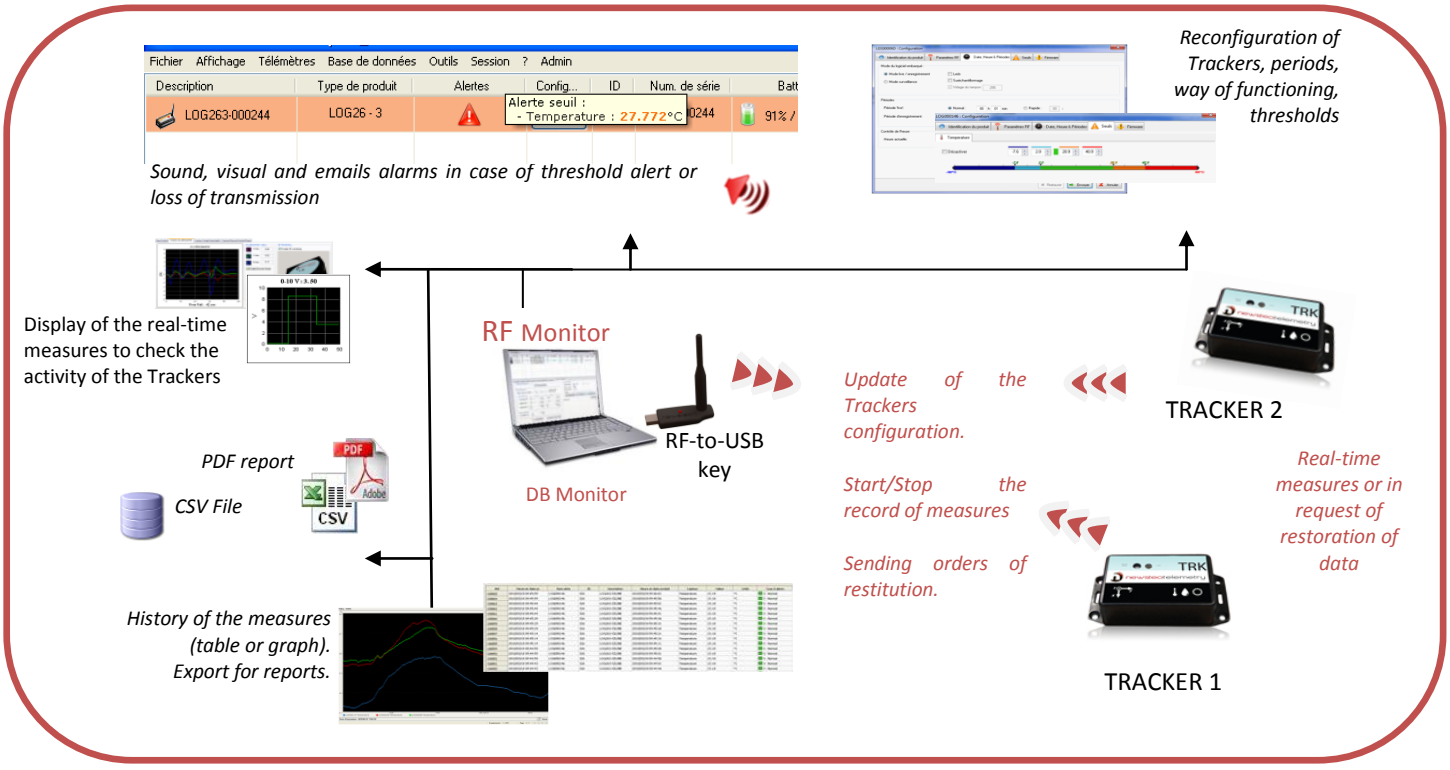
1 Overview of RF Monitor with Trackers



1.1 General description

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

- Configure periods of measure, thresholds, and alarms
- Display les measures, generate CSV or PDF files
- Collect measures of Trackers linked to this site (using a RF-to-USB key)
- Fill the database

It is possible to access the **database** with the software **DB Monitor**

Never install neither the software RF Monitor, nor the RF-to-USB key for radio reception, directly on the Server of your company.
Prefer a dedicated PC, which will be connected through your network, or the collector Ethernet NEWSTEO to come, also connected to your network.

DO NEVER let the unused Trackers in "LIVE" MODE
⚠ **REMEMBER to de-activate your unused Trackers by passing it into "Hibernate" Mode**

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

1.2 Operation of the Tracker

1.2.1 Generalities

Main features:

- Integrated sensors: **3 axis accelerometer + temperature sensor**
- Measurements time stamped then stored in the Tracker flash memory
- Measurements can be downloaded to a Personal Computer through radio link. The PC has to be equipped with a Newsteo radio bridge (standard RF-to-USB Key) and the RF Monitor software.

1.2.2 Measurements

Tracker TRE measures and time stamps the following parameters:

- Periodically :
  - Temperature: measure performed at a fixed frequency, defined by the user (see *§ 3.2.1.4 Configuration thresholds alerts*)
  - Attitude (inclination of the product on 3 axis): measure performed at a fixed frequency, defined by the user.
- As event occurs :
  - Shocks: when the acceleration threshold is exceeded on any axis, the event is recorded into the tracker memory.
  - Free fall: the product is able to calculate the height of a free fall, when a free fall is detected.

1.2.3 Operating modes

The logger is configured by default in "***Live/Record" mode.*** *It could be configured in "****Monitoring" mode*** usinf RF Monitor.
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:

- **"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.

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

Operating principal:

- **Start:** when the Tracker starts, it is automatically in **Record** mode. It starts the recording campaign.

During this recording campaign:

  - Every minute, the tracker sends a presence signal to indicate its state, alerts and the number of measurements in memory.
  - The tracker 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. A tracker can record multiple campaigns in a row. It is recommended to delete the measurements between each campaign.

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**.

Example of application: Supervision of temperature in a warehouse.

Operating principle:

- The tracker 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 tracker 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, recordes it in the database, and give alert if it is outside defined thresholds (audio, email, switching relay …)

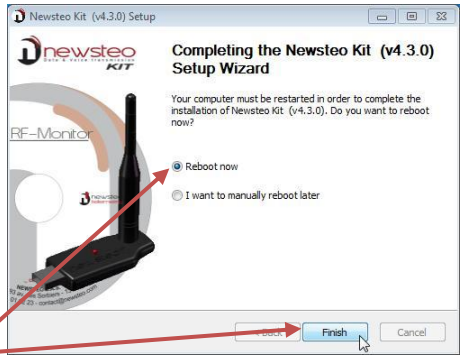
Which mode to choose? Generally, Live / Record mode, set by default on TRE, is perfect. However, if you want the measurements to be automatically downloaded to your PC (no need to launch a download order), or **if you use the Newsteo Collector** to recover Newsteo measures, it is necessary to configure your Tracker in Monitoring mode.

2 Installation of RF Monitor

DO NOT INSERT USB KEY BEFORE THE REQUEST.

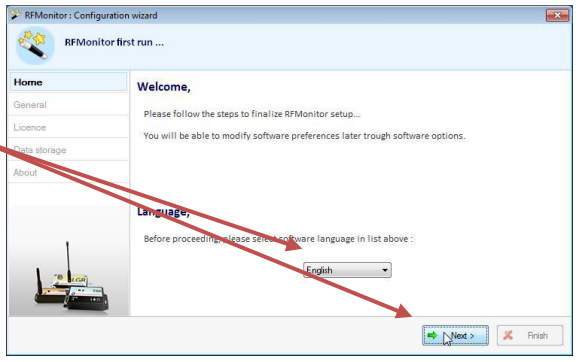
- Insert the CD ROM of the RF-kit. 

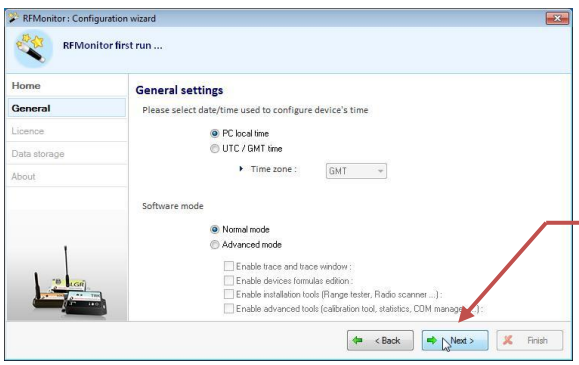
If the installer does not start automatically, select "Run NewsteoKit_v6.x.x_setup.exe" in the **AutoPlay** window or **launch Newsteo_Kit_v6.x.x_setup.**exe file from the CD-ROM of the kit.
In the first window select a language then, for a quick installation, **keep the default settings by validating 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".***

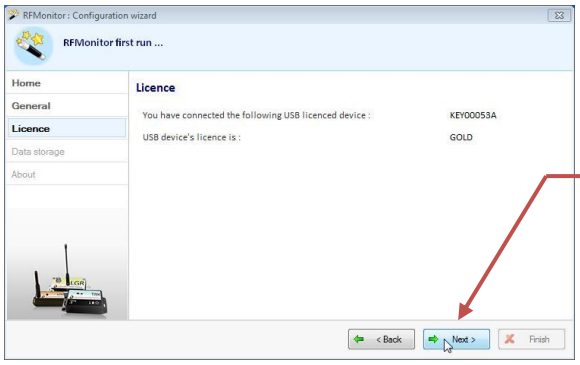




- In the window "***Général*** " from the Configuration wizard click « ***Next*** ».

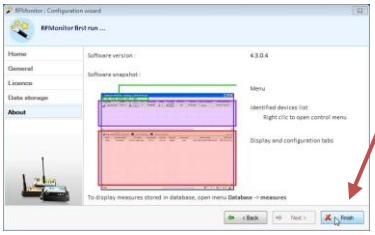
Remark : The configuration will be able to be changed later in the program options of RF Monitor, once the installation is complete (by a right-click on the line of the Tracker, then a click on configuration)

- **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.

Key control | Command list

#COM	Key serial number	RF settings	Key hardware	Key firmw...	Baud rate	License type	License number
COM3	KEY00053A	Chl EU8 10dBm 30mA	KEY121	v18.F.03	625000	Gold	3RV4-HXZ1K-W1T4F-LRKKA-6FT27

3 Use of the RF Monitor software

3.1 Start the Tracker and check its running

The RF Monitor software is active, the RF-to-USB key connected to USB. Upon delivery, the battery is already in the Tracker product. **Tracker is in hibernate mode (deep sleep).** To activate the Tracker, follow these steps:

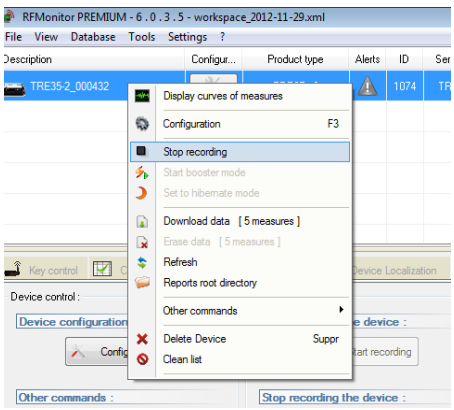
- Pass a magnet slowly at the magnet logo: the LED lights RED
- While the LED is still red, pass a second time slowly the magnet: the LED lights orange
- While the LED is still orange, pass a third time the magnet: the LED lights up green
- Then, the green LED flashes three times

The product is launched and begins recording. **If the LED does not flash 3 times green, the product is not activated.** Restart the procedure.

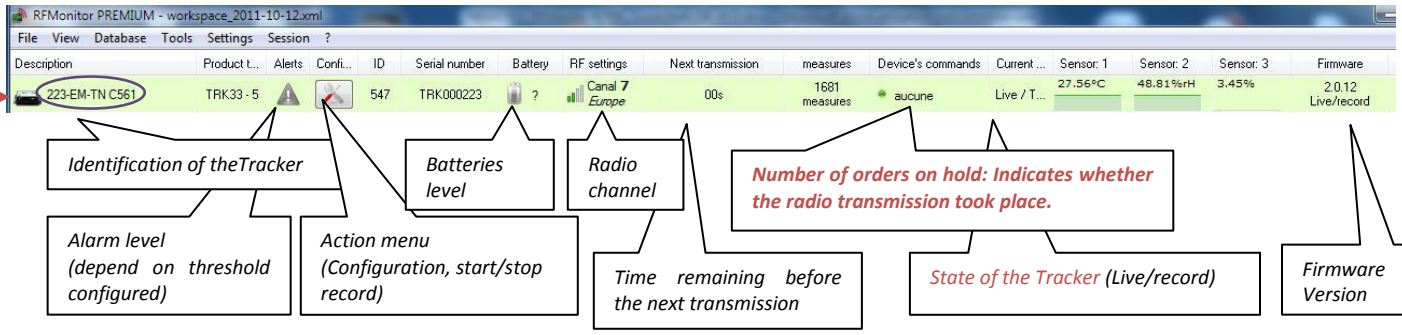
On RF Monitor:

➔ The Tracker will automatically appear in the list of the products. As the product is recording, it only communicates every minute. To facilitate the handling of the product and discover how the software works, we recommend stopping recording. The tracker will then communicate more frequently.

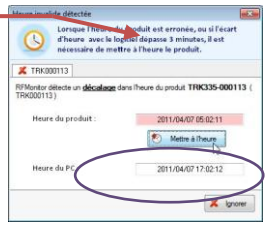
➔ To stop recording, right click on the product name and select *Stop Recording.*



➔ The Tracker is now live mode.



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



Double-click the line of the Tracker to display tabs corresponding to the real-time measurements for this Tracker

CAUTION: If you have several trackers, check the tabs that you work on corresponds to the good "Tracker" especially when using the Control Panel to launch a measurements campaign (Cf. 3.1.4 Control panel). Closing a tab associated with Tracker closes the four tabs associated to this Tracker.

3.1.1 Acceleration

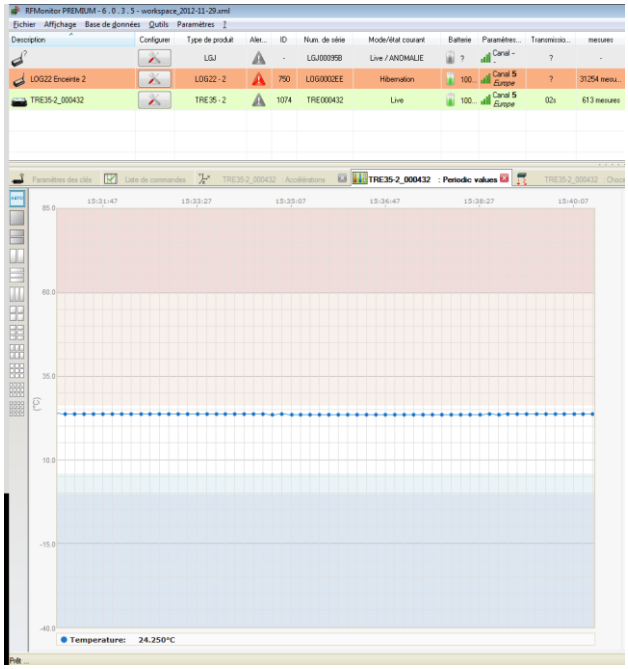
3D representation of the position of the Tracker

Acceleration curves of the Tracker along the axes x, y, z

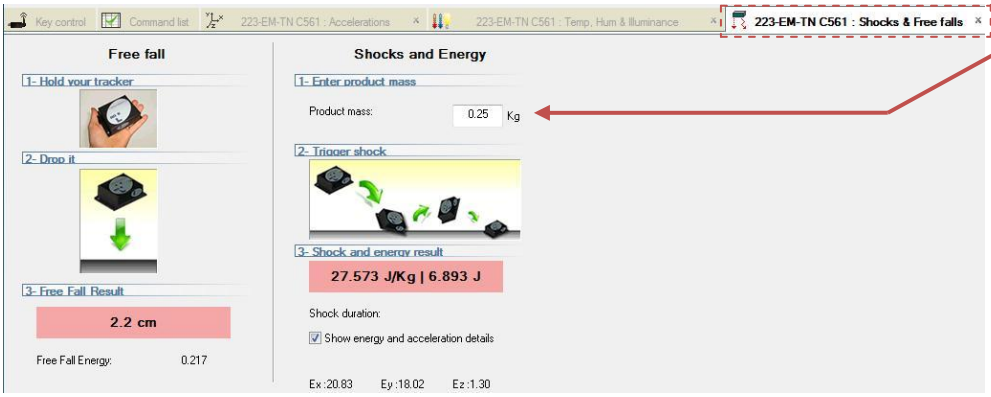
Current acceleration on each of 3 axes

3.1.2 Temperature

In this tab, curves are displayed with the minimum threshold (blue) and maximum (red) predefined in 3.2.1.4 Configuration thresholds alerts



3.1.3 Shocks and Free fall



Enter the mass of the Tracker or the mass of the product associated to the tracker

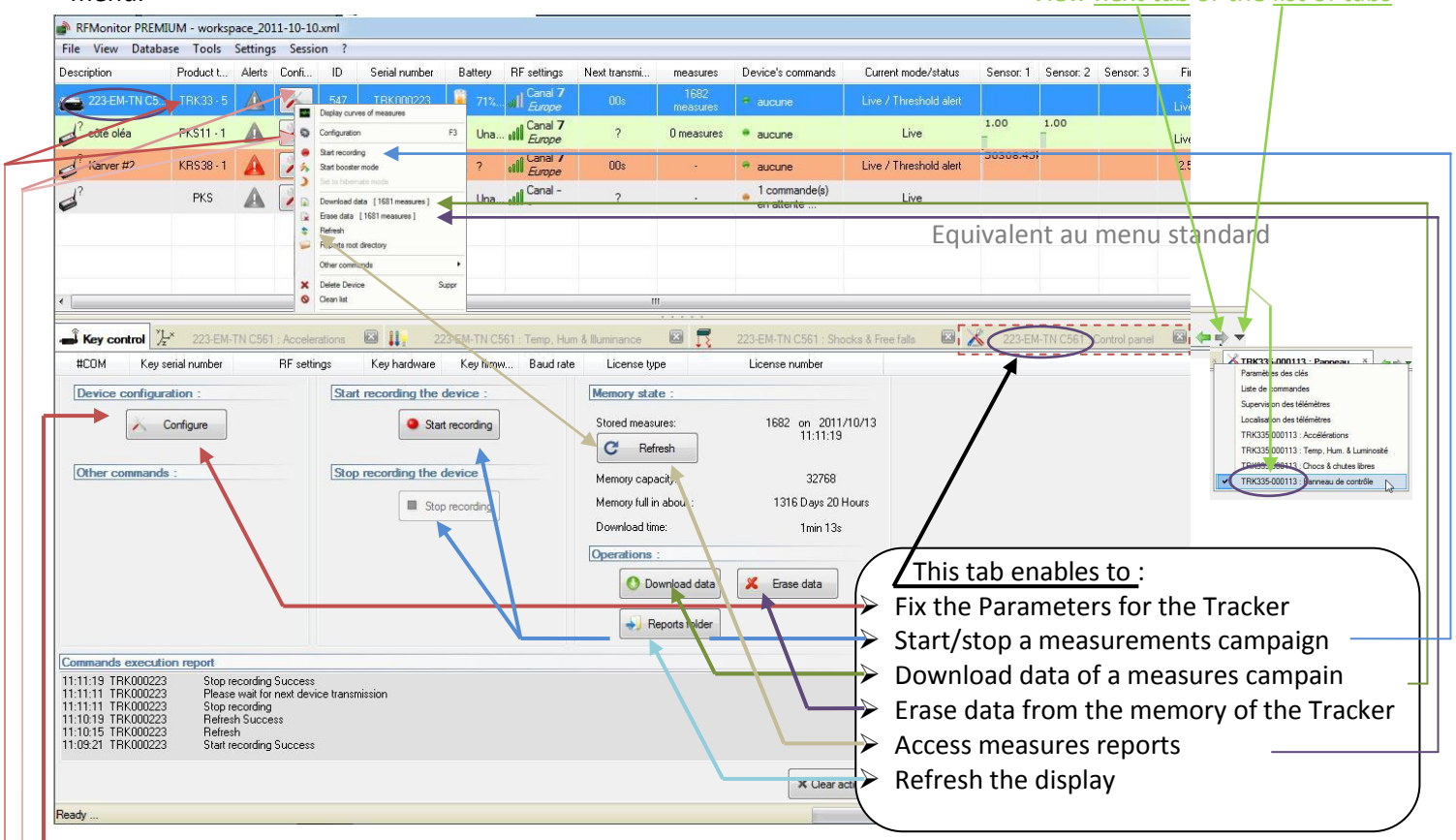
Drop the Tracker / Product

This tab displays the height and energy of free fall and the energy of the shock.

3.1.4 Control panel

The control panel has been developed specifically for the Tracker. All orders are yet available on the standard menu.

View next tab or the list of tabs

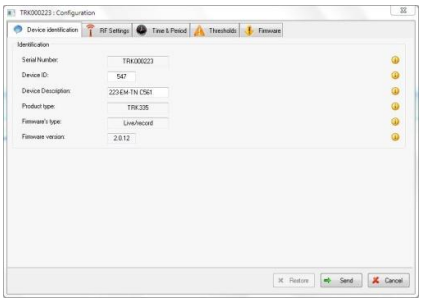


This tab enables to :

- Fix the Parameters for the Tracker
- Start/stop a measurements campaign
- Download data of a measures campain
- Erase data from the memory of the Tracker
- Access measures reports
- Refresh the display

For **configurations** to come (Cf: 3.2.1 Configuration of the Tracker), the **configuration window** of the Tracker can be accessed by:

- Clicking on **Configure** in tab [**Control Panel**]
- Clicking on the **icon "Tools"** on the line of the Tracker then on **Configuration**
- Right-clicking on the line of the Tracker then on **Configuration**



3.2 Configuration – Overview

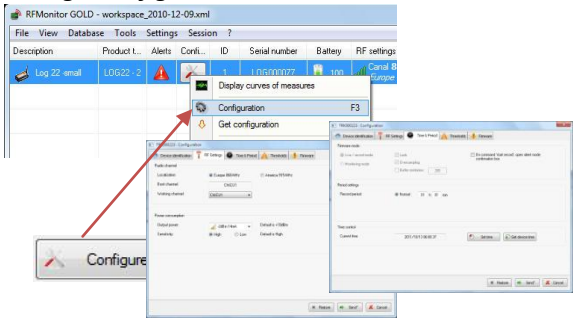
There are two parts in the configuration of the Tracker:

The Configuration of the Tracker

Access :

Settings/Configuration/RF Settings

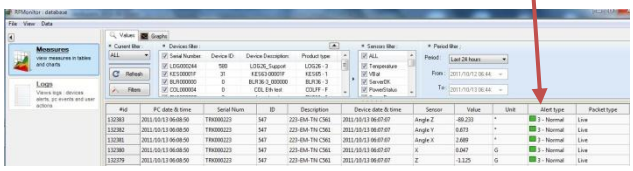
Settings/Configuration/Time &Period



(Cf : 3.1.4 Control panel)

This step enables:

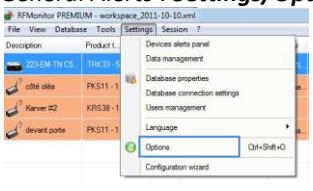
- To **fix the working channel**
- To **activate/deactivate the silent mode**
- To **define the alert levels** for the Tracker. The measures "off limits" recorded in the database will be noticed under "Alert Type"



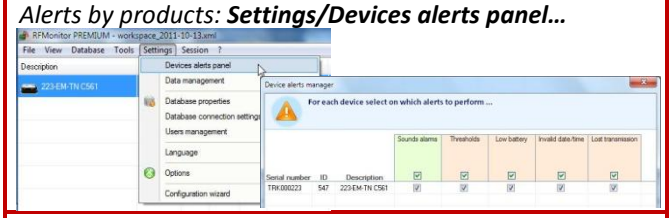
The configuration of RF Monitor

Access :

General Alerts : ***Settings/Options/Alerts***

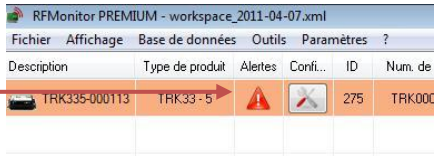


Alerts by products: ***Settings/Devices alerts panel…***



This step enables:

- To activate alerts…
- …which enables to display alerts in RF Monitor



- To enable sound alerts for the live mode
- Choose the type of alert (emails, audio, alarm relay ...)
- To Choose the type of alert for each product

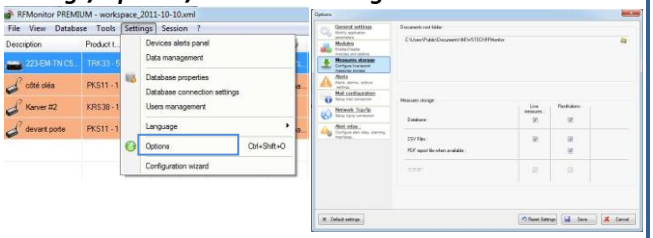
A L E R T S

D A T A

Access :

General Options for Data Storage:

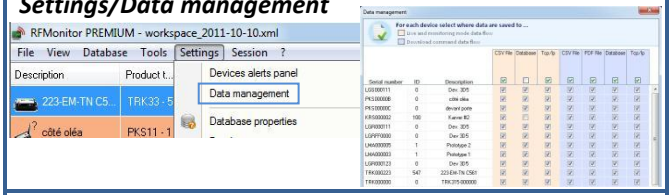
Settings/Options/Measures storage



This step allows you to select separately the format of the storage measures for Live and recording modes (Database, CSV. PDF ...)

Storage options by products:

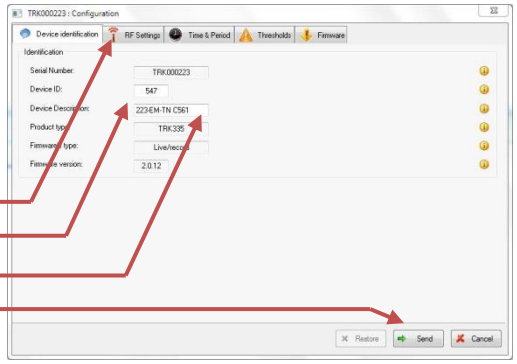
Settings/Data management



This step allows you to select separately the format of the storage measures by product

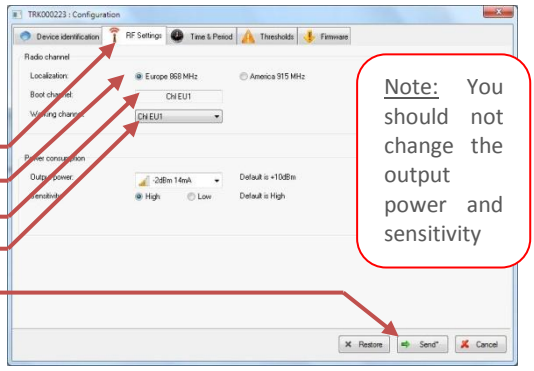
3.2.1 Configuration of the Tracker

3.2.1.1 Configuration Product Identification



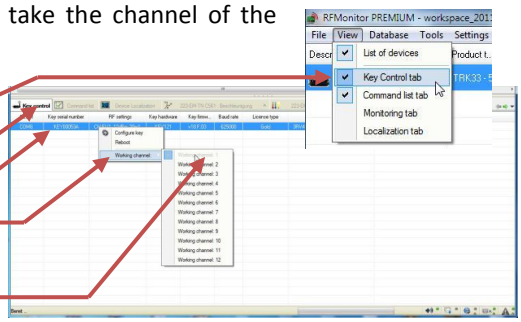
- Open configuration window (cf : 3.1.4 Control panel)
- Select tab [**Device Identification**]
- Enter a personalized Device identification (number from 0 to 999)
- Enter a description
- **Click on « Send »** to valide modifications
- **Wait for a radio transmission so that the modification is taken in account by the Tracker**. (Cf. 3.5 View tab).

3.2.1.2 Configuration Operating Channel



- Open configuration window (cf : 3.1.4 Control panel)
- Select tab [**RF Settings**]
- Check the Localization.
- **When starting**, the working channel of the **Tracker is channel 1**
- If needed, modify the working channel.
- **Click on « Send »** to valide modifications
- **Wait for a radio transmission so that the modification is taken in account by the Tracker** (Cf. 3.5 View tab).

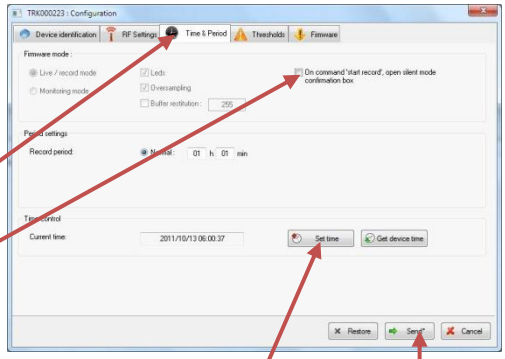
CAUTION: once the working channel has been modified, you must change the working channel of the key (the key and the Tracker must always be on the same channel to communicate; the key must take the channel of the Tracker). For this:



- Click on [**View/Key Control tab**]
- Select tab [**Key control**]
- **Right-click on the line of the key**
- Click on « **Working channel** »
- **Choose the working channel which corresponds to the one of the Tracker**.

Comment: At start-up (if you remove and then reinsert the battery), the channel will be channel 1 for the Tracker, it will be therefore required to change the working channel of the key for channel 1).

3.2.1.3 Configuration Time and Period



- Open configuration window (cf : 3.1.4 Control panel)
- Select tab [**Time & Period**]
- **If needed, activate the dialog box to access to silent mode** (Cf : 1.2 Operation of the Tracker)
- Define the measurement period for the recording campaign.

By default, for the recording, all 10 minutes the logger takes a measurement and stores it in memory. These measures will be returned to RF Monitor upon request and/or after a return to mode 'live' (Cf.1.2 Operation of the Tracker).

- If needed, set the time of the Tracker.
- **Click on « Send »** to valide modifications **and wait for a radio transmission so that the modification is taken in account by the logger**. (Cf. 3.5 View tab).

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

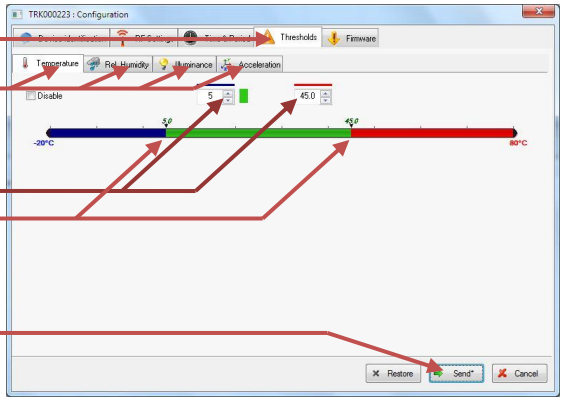
Remark : the higher the frequency is for the measurement, the faster the memory will be full.

For information: **period 1 min** fill the memory in **2 months,** with 20500 recorded shocks
period 15 min the memory in **2 years,** with 2900 recorded shocks

3.2.1.4 Configuration thresholds alerts

- Open configuration window (cf : 3.1.4 Control panel)
- Select tab [**Thresholds**]
- Select tab which corresponds to threshold you need to modify.
- **Set the thresholds that correspond to the desired level of alerts** for the Tracker :
  - **Either by entering numerical values**
  - **Either by moving the sliders**

The **nominal area is green**, dark blue and red correspond to the alert area.



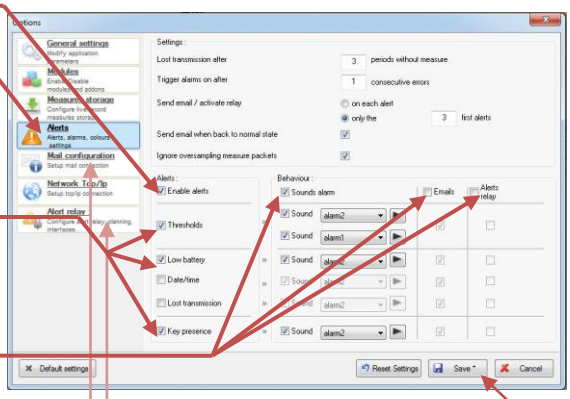
- **Click on « Send »** to valide modifications**.**
- **Wait for a radio transmission so that the modification is taken in account by the Tracker**. (Cf. 3.5 View tab)

These thresholds are visible on the graphs of the tabs [**Accelerations**] and [**Peridic values**] (Cf. 3.1.1 et 3.1.2)
→ To refresh the display of these thresholds on graphs, close and reopen the tabs.

3.2.2 RF Monitor Configuration

3.2.2.1 Alerts Configuration

- Select tab [**Settings/Options**]
- Click on [**Alerts**]
- Select « **Enable alerts** »
- Select the needed alerts in the corresponding column:



The alerts concern measures **under or above thresholds**, **transmission losses**, the **incorrect date/time**, **disconnection of the USB key** and the **battery levels**.

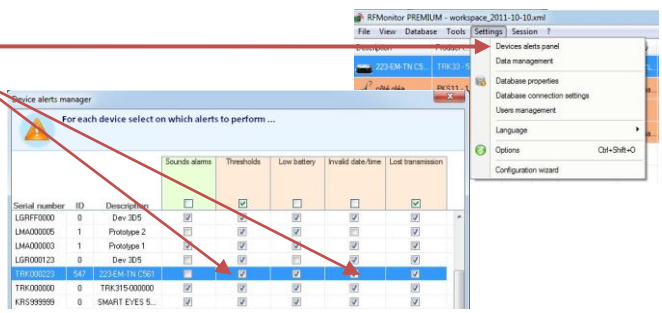
There are different types of **alert:** Sounds alarm, e-mail or alerts relay (with optional external equipment).

It is advisable to discard packets oversampling for alerts and to limit the number of email alerts in order to avoid a full inbox of e-mails

WARNING: if e-mail alerts or relay are enabled, it is necessary to check the configuration in the corresponding tabs.

- **Click on « Save »** to valide modifications
- **Wait for a radio transmission so that the modification is taken in account by the Tracker** (Cf. 3.5 View tab).

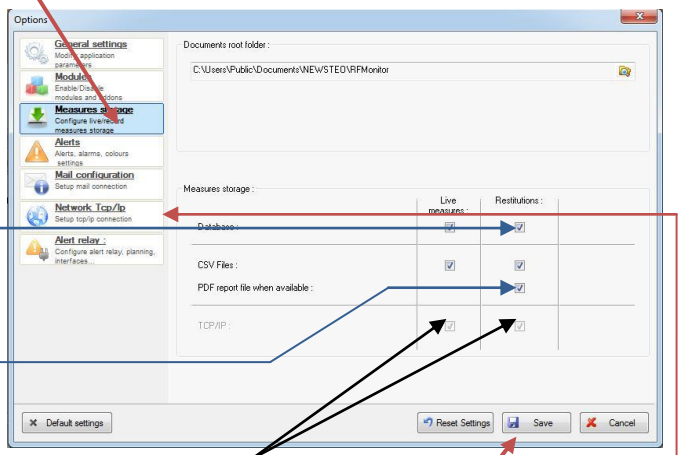
- Select tab [**Settings/Devices alerts panel**]
- **Select** needed **alerts** by **product**.
- **Click « OK »** to validate the modifications



3.2.2.2 Data Configuration – Measurements storage

- Select tab [**Settings/Options**]
- Click on [**Measures storage**]

- Select the storage format for the measures for the storage of data from the registration campaign.



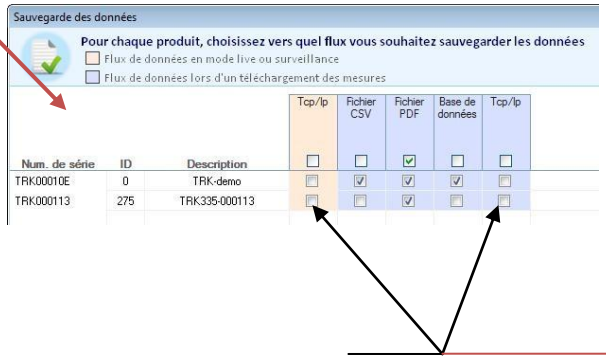
Data base : allows full exploitation of the measures (graphs or tables) with available filters (dates, products, sensors ...) and traceability of events (user action, product alerts ...)

CSV : Raw file data storage to develop its own application for the use of data.

PDF : A report generated for each measurement campaign

- It is **not advisable to store measurements of the Tracker in Live mode**. Indeed, this mode is a demonstration mode that fills the database or CSV file with a large number of unnecessary data. In addition, this storage slows down the computer.
- **Click on « Save»** to validate the modifications
- **Wait for a radio transmission so that the modification is taken in account by the Tracker** (Cf. 3.5 View tab).

- Select the tab [**Settings/Data management**]
- **Check the storage format of the measures** wanted **by product**.
  No storage for the Live Mode
  CSV files and storing in a database only for the TRK-Demo
  PDF files for both Trackers
  No option TCP/IP



- **Click on « OK »** to validate the modifications

WARNING:

The **TCP / IP is selected by default** in the "option"
To not use this option, you must unselect TCP / IP.
To use this option, you must select TCP / IP in the "Data management" window and do not forget to configure the server and / or TCP / IP Client
The use of TCP / IP is only for data storage and enables not in any way to send remote commands. This storage option is not recommended for the Tracker.

3.3 Measurement campaign

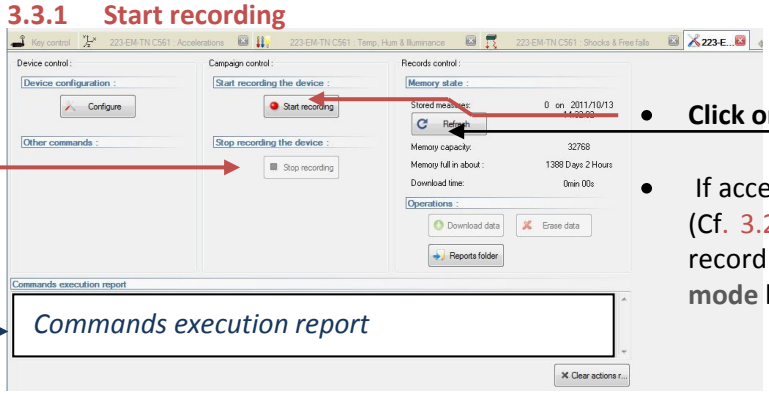
When starting, the Tracker is in Recording mode.

- Stop the recording (Cf : 3.1 Start the Tracker and check its running).
- Check the good functionning of the Tracker (Cf : 3.1 Start the Tracker and check its running).
- Set the period (Cf. : 3.2.1.3 Configuration Time and Period) and thresholds (Cf. : 3.2.1.4 Configuration thresholds alerts) for the measurement campaign.

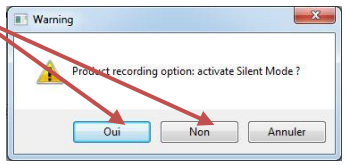
  Note: Once configured, it will not be necessary to configure the storage format for each measurement campaign (Cf. : 3.2.2.2 Data Configuration – Measurements)

- Open the Control Panel of the Tracker (Cf. : 3.1.4 Control panel)

3.3.1 Start recording



- **Click on "Start recording"**
- If access to the dialog box for "silent mode" was activated (Cf. 3.2.1.3 Configuration Time and Period), choose start record in **silent mode** by clicking « **Yes** » or in **normal mode** by clicking « **No**»



- **Validate the window that confirms the passage of the Tracker in recording mode by clicking "OK".**
  - ➔ In the *Commands execution report* you get the message « Start recording »
- **Wait for a radio transmission so that the modification is taken in account by the Tracker** (Cf. 3.5 View tab)
  - ➔ In the *Commands execution report* you get the message « Start recording success»

The measurement campaign starts, the Tracker records now all measures in memory and sends a signal of presence every minute to indicate its status, its alerts and overtaking the number of measurements in memory …

As part of the tests related to learning the use of RF Monitor with a Tracker, **stop RF monitor** for at least 3 minutes (if the measurement period is 1 min) to simulate a remote location of the product during the measures campaign (away from radio), **then restart RF Monitor (and reopen the Control panel)**

- ➔ The button « stop recording » is now active

3.3.2 During recording: the LED behavior

The LED blinks every minute and gives the status of the alert level:

- The product has never been on alert: blinks GREEN, one time
- The product is in alarm or has been in alarm since the last time the measurements have been downloaded on PC: blinks RED, one time

To avoid waiting 1 minute, the user can also sweep a magnet on the product to get an immediate status:

- The product has never been on alert: blinks GREEN, 5 times
- The product is in alarm : blinks RED, 5 times
- The product has been in alarm since the last time the measurements have been downloaded on PC, but is not in alarm anymore: blinks RED, 2 times

The status of the LED will be reset when the user will have downloaded the data.

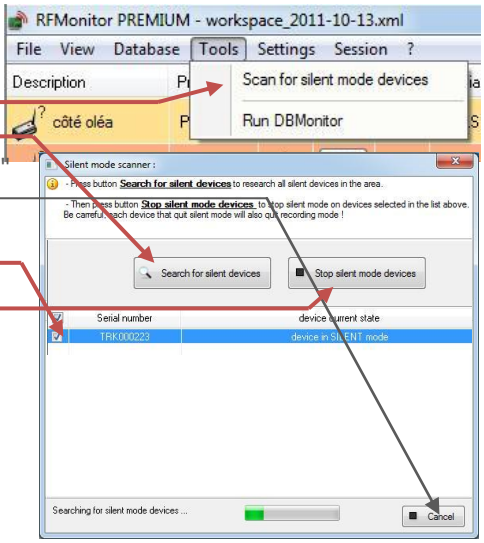
3.3.3 Stop recording

3.3.3.1 Standard Mode

- **Click on « Stop recording»**
- **Validate the window that confirms the stop of the recording « Yes ».**
  - ➔ In the *Commands execution report* you get the message « Stop recording »« Please wait for the next transmission »
- **Wait for a radio transmission so that the modification is taken in account by the Tracker** (Cf. 3.5 View tab)
  - ➔ In the *Commands execution report* you get the message «stop recording success »
  - ➔ The Tracker is now in mode « *Live* »

3.3.3.2 Silent Mode

- **Click** on [**Tools/Scan for silent mode devices**]
- **Click on « Search for silent devices »**
  Note : It is possible to interrupt the search before the end by clicking on "Cancel" if the desired product was found.

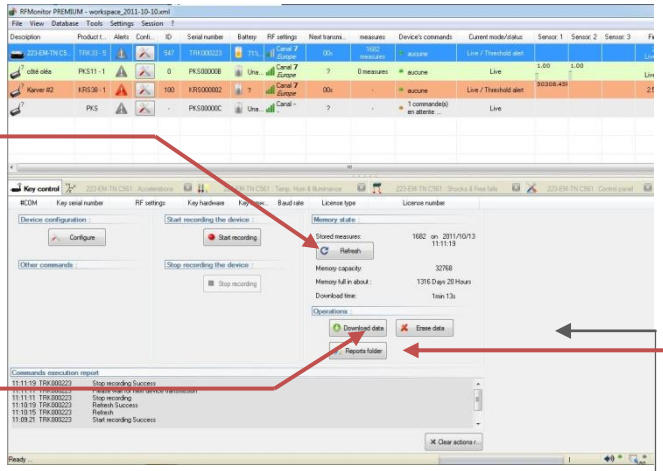


- **Choose the Trackers to remove from the silent mode**
- **Click on « Stop silent mode devices »**
  ➔ The Tracker is now in mode « *Live* »

- **Click on « Close »**

3.3.4 Download data

- **Click on « Refresh » in order to activate the « Download data » button**
  ➔ The « Download data » button becomes active.
  ➔ The number of measures in memory is displayed in the column « measures » of the line corresponding to the Tracker.

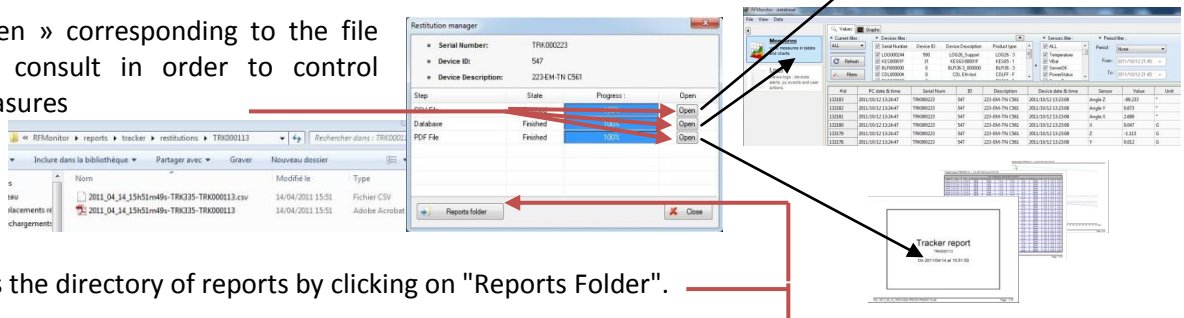


- **Click on « Download data»** to get measures in memory (maximum waiting 1min).

It is advisable to free the memory of the Tracker and erase the data stored in the product after data retrieval
Note : It is possible to erase data without having previously downloaded them by clicking on "Erase Data"

Note : If data are not deleted after the download, it will be possible to keep them or delete them at the launch of another measures campaign.

Click on « open » corresponding to the file you want to consult in order to control recovered measures

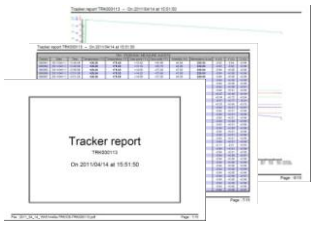


- You can access the directory of reports by clicking on "Reports Folder".

3.4 Measurements displaying on RF Monitor

Depending on the chosen storage options (cf. 3.2.2.2 Data Configuration – Measurements), the following reports are available :

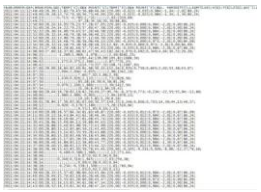
3.4.1 PDF report



A PDF report is generated for each download of measures. The name of this PDF report is explicit: it mentions the name of the Tracker, the date and time of creation. The PDF report consists of tables of measures, related graphics and logs of alerts.

WARNING, if the data are not erased at the end of downloading or before the launch of a new series of measurements, the data will be in several reports.

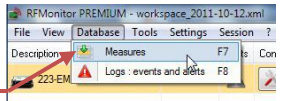
3.4.2 CSV file



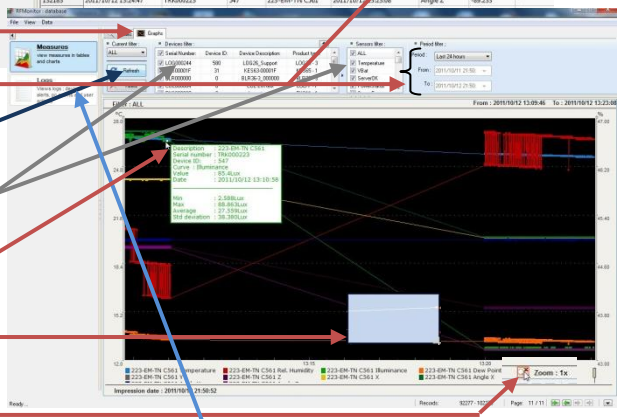
A CSV file is generated for each download of measures. The name of this CSV report is explicit: it mentions the name of the Tracker, the date and time of creation. It contains time-stamped line measures.

3.4.3 Database

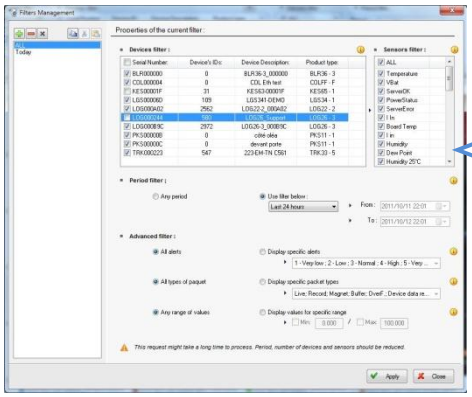
3.4.3.1 Measures - Graphs



- Click on [**Database/Measures**]
  - ➔ RF Monitor provides access to the history of measurements received in a graph or table.



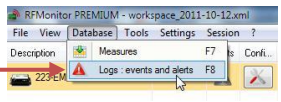
- Adapt the filter over the period
- Click on « **Refresh** »
- Use filters to view the measures by product or by sensor (temperature, humidity ...)
- By pointing the curve, we get the details of the measure(product, date ...)
- You can zoom in on the curve by selecting an area with the mouse
- To remove the zoom, close down the corresponding icon.



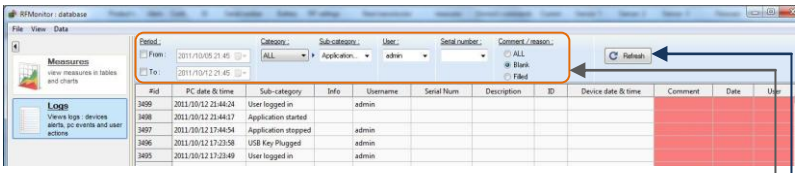
A Filtering on the type and level of alert is also possible by clicking on "Filters" and then by creating a new filter (by clicking the "+ green")

After each change of filter or to view the latest action, click on « Refresh »

3.4.3.2 Logs – Alerts and events



- Click on [**Database/Logs**]
  - ➔ The window *Logs* includes all the alerts and events related to Tracker :



- **Alerts** (measures out thresholds)
- **The Starting or the stop of the application**
- **USB key connected or disconnected …**

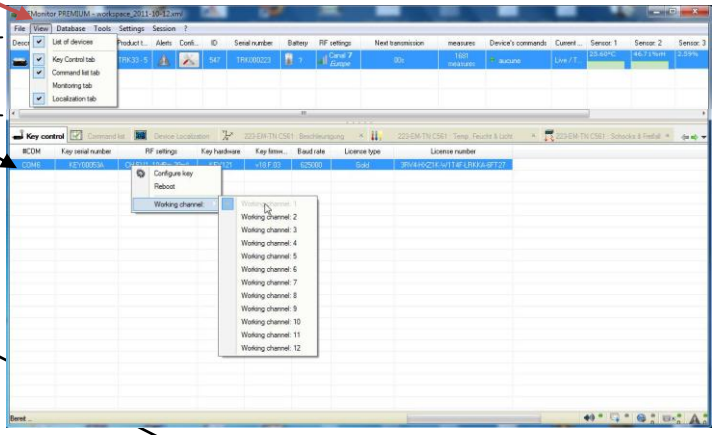
  - ➔ At each event, it is possible to enter a comment justifying the alarm or occurrence of the event (Ex: on a temperature freezer alarm with a threshold set at -15 ° C, if "-14 ° C" is measured, enter the comment "Door opened for 5 min for maintenance"*).*

- Like in the table "measures", it is possible to apply filters to highlight certain measures or certain events.

After each change of filter or to view the latest action, click on "Refresh."

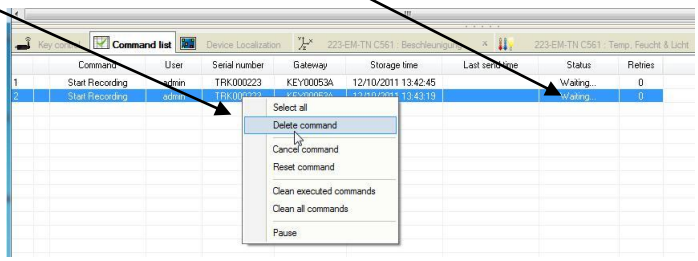
3.5 View tab

- Click on [**View**] then select suggested options :



- ➔ List of devices : it displays the window in which the products are listed
- ➔ Key control tab: Provides information on the USB key and enables to change the channel of the key with a "right-click" on the line key (Cf. 3.2.1.2 Configuration Operating Channel)

- ➔ Command list tab : This tab provides information on current orders (waiting) or ended (Finish) for a given product. A "right-click" on a line enables to access a menu "action" on the commands like "cancel", "delete" …

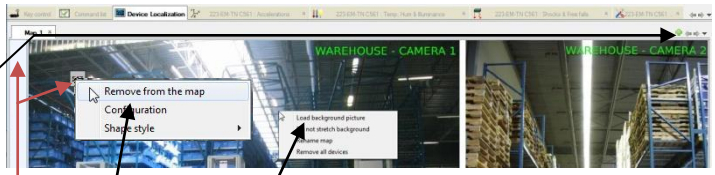


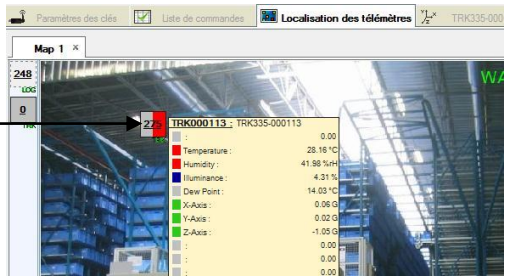
- ➔ Monitoring tab :

  It is normal to get no curve in this window because this view is only for the product family of Lxx and not for TRK.

➔ Localization tab: Memorize the location of the Tracker (to know in which truck corresponds to a TRK, for example)

- Create a map
- « Right click » on the map and then "Load a background picture" to customize your card with the photo of the truck corresponding to your TRK.
- Take one or several TRK listed in the left column and drop them on the map (hold the left click to move the Tracker)
- « Right click » on the Tracker to remove it from the map.
- By pointing a Tracker, details of the measured values appear.

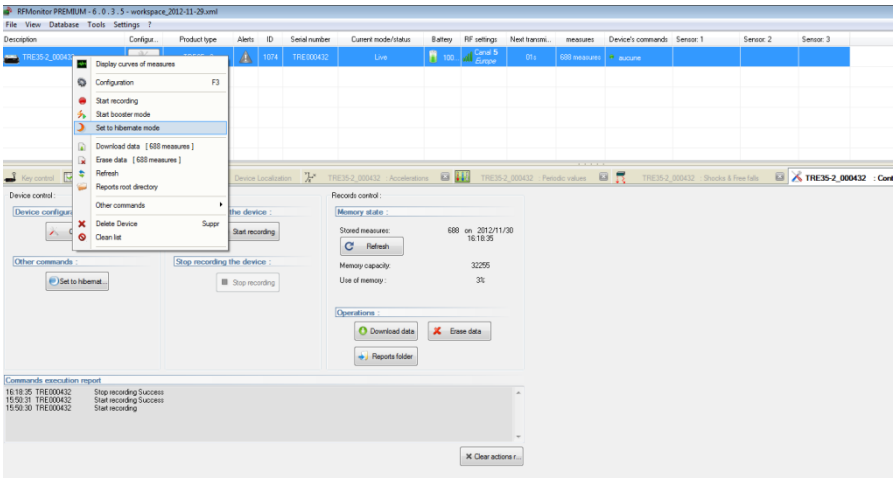




3.6 Deactivate the Tracker

The tracker must be disabled at the end of campaign or test measures to preserve its batteries during storage. For this, it is necessary to switch to hibernate.

Click the Setup button and click *Set to hibernate mode*.

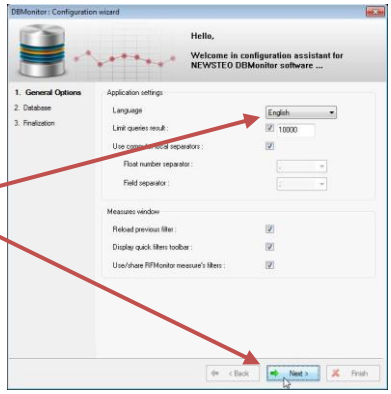


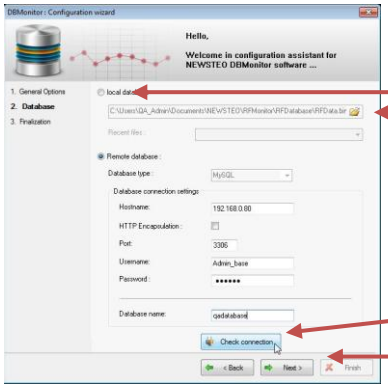
4 Installation of DB Monitor to consult data

DB Monitor is a software used to consult measurements (values and graphs) and the event list (alerts) of the database. This is the software which is called by RF Monitor.

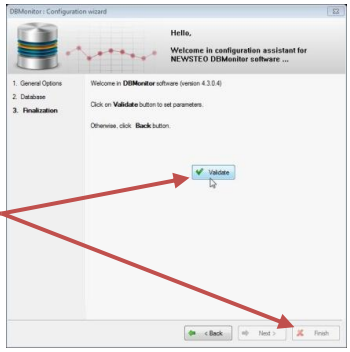
Once the computer restarts, launch the DB Monitor software by double-clicking the shortcut created on the desktop **or from the "Start Menu**".

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



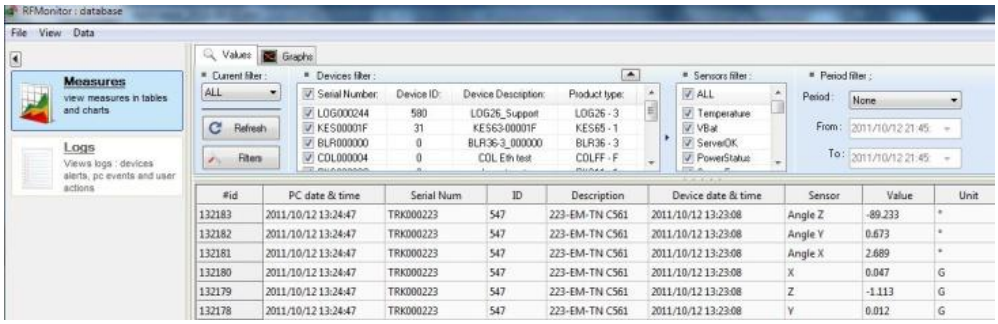


- In the ***Database*** window, of the configuration wizard, **choose *Local database* « Base de données locale ».**
- Enter the path of the local database
- Test the connection – Click OK to validate
- Click on « **Next** »



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

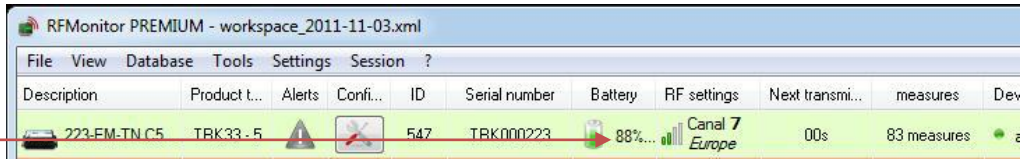
➔ We find again the operating window for the database.



5 Battery replacement

5.1 Control the batteries level

Batteries level



5.2 Battery model

You can then either use a Lithium Thionyl Size A with special connector (recommended for better battery life), or an alkaline battery, size AA / LR6 (autonomy and the operating temperature will be reduced).
Newsteo can provide set of batteries. Please reach us.

5.3 Casing opening / closing

Proceed in a dry place to open the casing and change the battery. 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 back of the housing.
Remove the old battery from its holder and replace it by the new battery. Respect polarity as indicated on the product. Check the restart of the product on the software "RF Monitor" or the operating system.

Close the casing. Place the 4 screws and tighten until it stops and until the two housing parts are joined without spaces.

6 ANNEX: technical data

General characteristics	
Operating temperature range	-40°C to 60°C with lithium batteries, Size A with connector -10°C to +60°C with alkaline, size AA / LR6 Recommended temperature range for maximizing product autonomy: +5°C to +35°C.
Autonomy	At 25°C: almost 2 years with the supplied battery (lithium thonyl) User replaceable battery
Flash memory	16 Mbits Flash meaning 129000 measure blocks (shocks takes 2 blocks) For example, it allows in a single measure campaign of 2 years: - 1 attitude and temperature measure every 15 minutes (70 080 records) - 29 000 shock records
Wireless communication	Operating on the ISM band This device is designed for European market (uses 868MHz band).
RF range	100 meters in free space
IP Level	IP54

Address of the manufacturer:

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