User Manual of DMCUser

Reference	Date	DMCUser version	Evolution
154835-EN	15/06/2012	V. 1.0.0	First edition

Purpose

The DMCUser application is an utility software for DMC/SOR dosimeter configuration:
- Dosimeter customization
- Batch process
- Data / Parameters management
- Incident analysis
- History

Operating Systems

The DMCUser application is available on following operating systems:
- Windows Seven
- Windows XP

Supported dosimeters

The DMCUser application is compliant with the following dosimeters:
- DMC 2000
- DMC 2000S
- DMC 2000X
- DMC 3000 G3
- DMC 3000 G2L
- DMC 2000 XB
- DMC 2000 GN
- SOR/313
- SOR/480
- SOR/R
- SOR/T

Supported readers

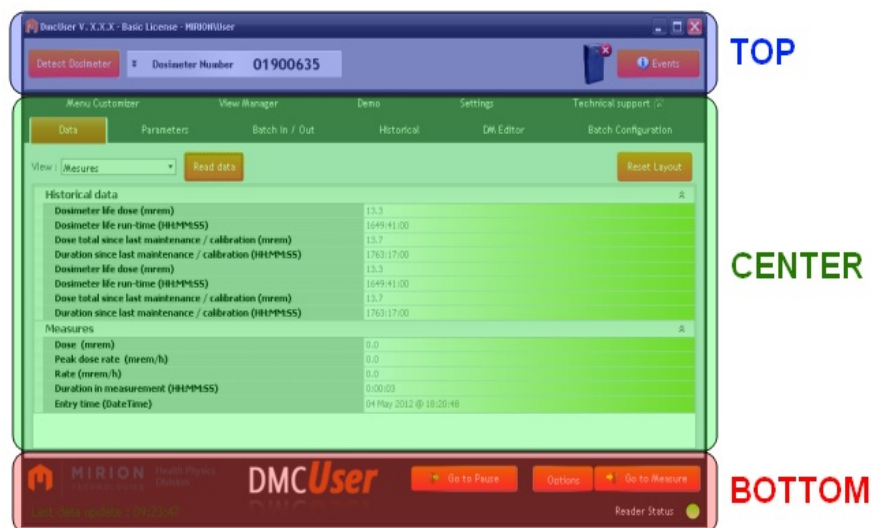The list of supported readers by the DMCUser application is:
- LDM 320W
- LDM 320D
- LDM 220-2D

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Principles

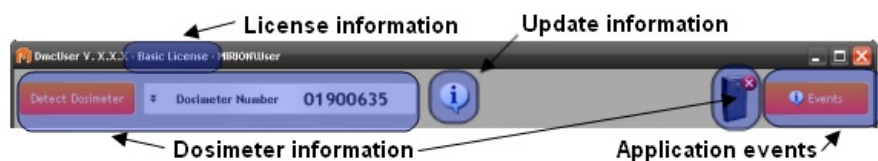The main window of the DMCUser application is divided into 3 parts:

· TOP
· CENTER
· BOTTOM

TOP

In the 'TOP' part:

- View the License information
- View the Dosimeter information
- Consult the application events
- Availability of software updates
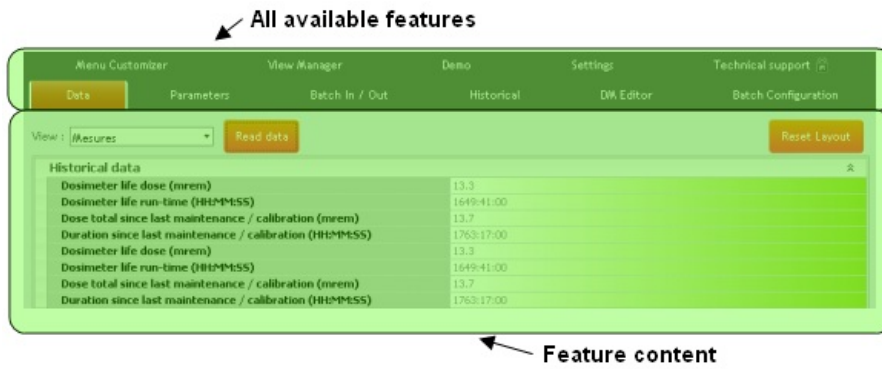
And the detail of the 'TOP' part is:

CENTER

In the 'CENTER' part, find all the available **features**:

- Data
- Parameters
- Batch I/O
- Historical
- DM Editor
- Batch Configuration
- Menu Customizer
- View Manager
- Demo
- Administration
- Settings
- Technical Support

Note: The features depend on the DMCUser edition.
To unlock the **BASIC** or **ENTERPRISE** edition, go to the ' Technical support' feature.

And the detail of the 'CENTER' part is:

BOTTOM

In the bottom part find:

- The messages displayed by the application
- The Go to Measure/Pause process
- The reader status (See 'Settings' feature)

And the detail of the 'BOTTOM' part is:

Connect a reader

To connect a reader see the 'Settings' feature.

Detect a dosimeter

To detect a dosimeter see the 'Detect dosimeter' part.

Grids

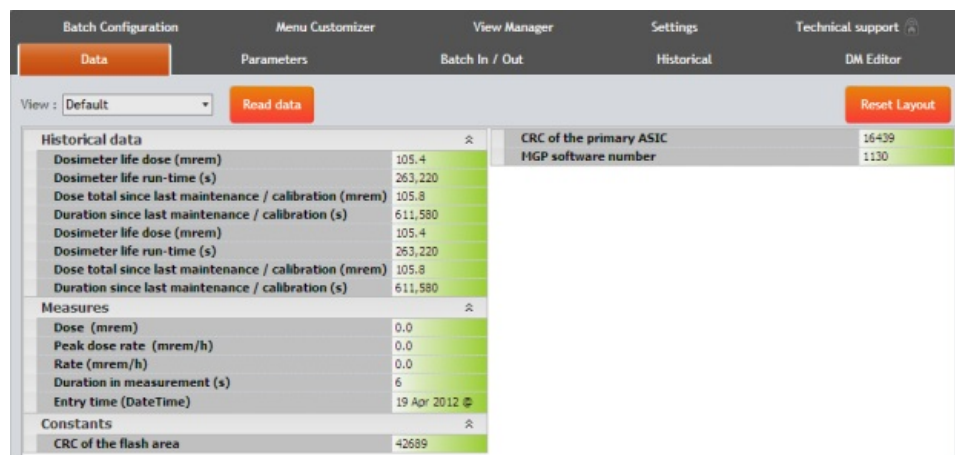Several data grids are used in the DMCUser application: see the 'Using Data Grids' part for their usage.

Close the application

Click on 'Exit' [X] to close the DMCUser application.
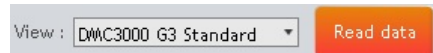
Data feature

The '**Data**' feature allows to read the Data contained into the dosimeter.

 See the '**Generalities**' chapter to consult the legend of the vertical grids.

Read Data

Select the data view in the '**View**' combo box and click on '**Read data**' to visualize the data:
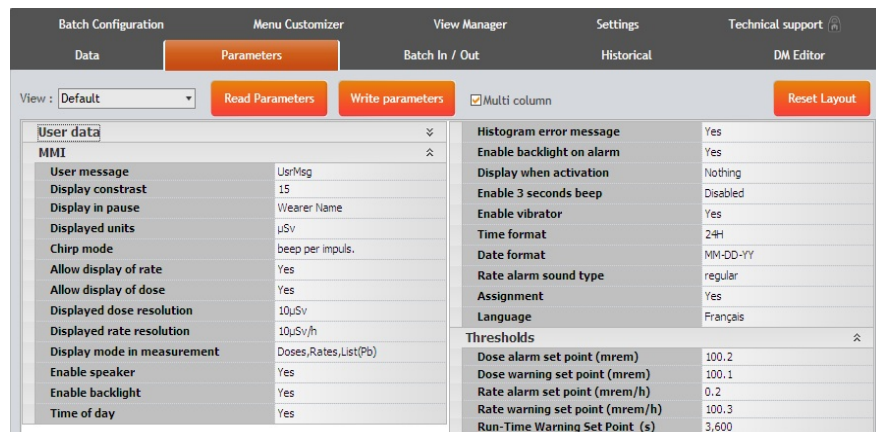

Note: The content of the grid can be different from a dosimeter type/version to an other. See the '**View Manager**' feature for the

management of data views.

Parameters feature

The '**Parameters**' feature allows to read/write the Parameters contained into Dosimeter.

See the 'Generalities' chapter to consult the legend of the vertical grids.

Read Parameters

Select the parameters view in the '**View**' combo box and click on '**Read Parameters**' to visualize the parameters:
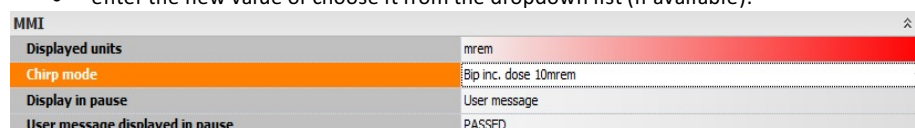
Note: See the 'View Manager' feature for the management of parameters views.

Modify a value
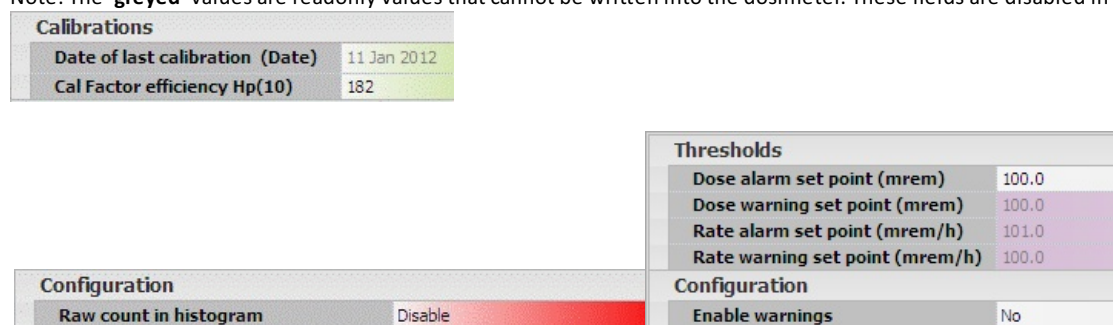
To modify a value:
- click on a parameter value
- enter the new value or choose it from the dropdown list (if available).

To write the new dosimeter parameter(s) value(s) onto the dosimeter, click on '**Write Parameters**'.

Note: The '**greyed**' values are readonly values that cannot be written into the dosimeter. These fields are disabled in the grid.

Thresholds	
Dose alarm set point (mrem)	100.0
Dose warning set point (mrem)	100.0
Rate alarm set point (mrem/h)	101.0
Rate warning set point (mrem/h)	100.0

Configuration		Constants	
Enable warnings	Yes	Cal factor efficiency multiplier Hp(10)	1.00

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Demo feature

The '**Demo**' feature allows to test the different dosimeter alarms.

Select preparation

On the left pane, select the dosimeter preparation to test.

Example:

Test

Once the preparation is selected, click on '**Start Test**' to start the test.
The dosimeter is put in **MEASUREMENT** mode and the **alarm** corresponding to the selected preparation is heard (buzzer, ring, ...)
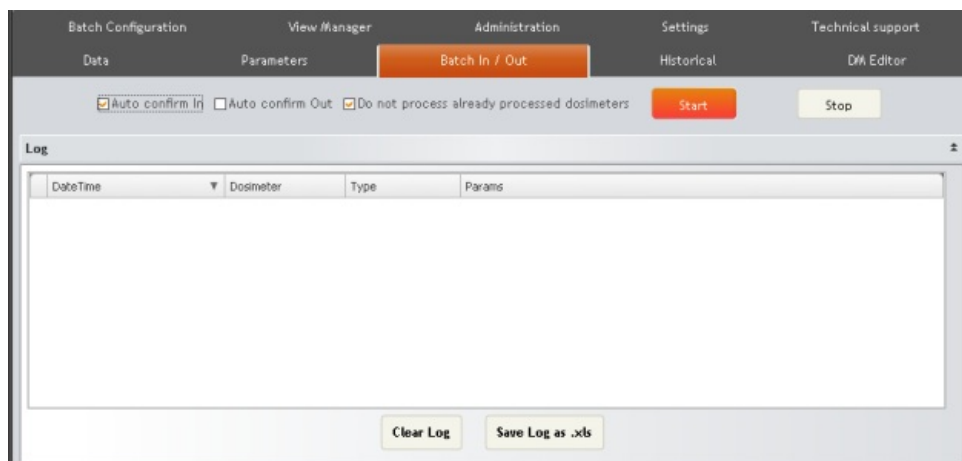
Click on '**Stop Test**' to stop the alarm test.

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Batch In / Out feature

The '**Batch In / Out**' feature allows to switchs the states (PAUSE, MEASUREMENT) of a set of dosimeters.

Dosimeter state

PAUSE mode:
When a dosimeter is in **PAUSE** mode, the 'Batch In / Out' process switchs its mode to the **MEASUREMENT** mode.
Except if the dosimeter has already been procecessed: see '**Do not process already processed dosimeters**'.

MEASUREMENT mode:
When a dosimeter is in **MEASUREMENT** mode, the 'Batch In / Out' process switchs its mode to the **PAUSE** mode.
Except if the dosimeter has already been procecessed: see '**Do not process already processed dosimeters**'.

Visual and hearing reporting

The whole process can be monitored by following the visual and hearing informations of the software.

Start the batch In /Out

Click on '**Start**' to begin the 'Batch In / Out' process.

1. The process waits for the user to present a dosimeter. The radar is displayed and "searching", and a tone called '**search echo**' is played regularly.
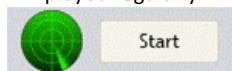
2. As soon as a one is detected a point representing the dosimeter is displayed on the radar and a specific tone called **"processing echo"** is heard.
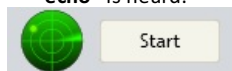
3. At the end of the dosimeter process, a tone called '**completed echo**' is heard,
4. A tone called '**bad echo**' is heard once the 'Batch In / Out' process is completed for this dosimeter.
5. Present now **another** dosimeter and repeat this process …

Note: The processed dosimeter can be in **PAUSE** or in **MEASUREMENT** mode.

'Autoconfirm In/Out' options

If neither '**Autoconfirm In**'nor '**Autoconfirm Out**' option is not checked:

- Before changing the dosimeter state in '**IN**' state (**MEASUREMENT** mode), the user can set the following parameters (dose, rate, …):

Note: The '**IN**' state can be skipped using the '**Skip**' button.
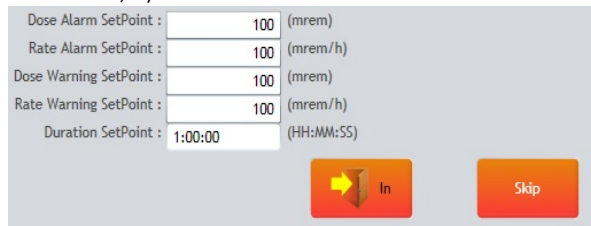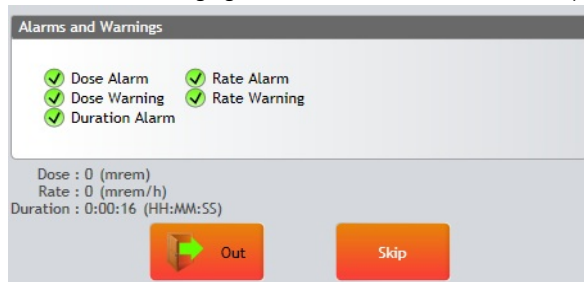
- Before changing the dosimeter state in '**OUT**' state (**PAUSE** mode), the following parameters are displayed:

Note: The '**OUT**' state can be skipped using the '**Skip**' button.

If the '**Autoconfirm In**' option is checked, the previous information for the '**IN**' state is not displayed.
The dosimeter will be put in RUN Mode
If the '**Autoconfirm Out**' option is checked, the previous information for the '**OUT**' state is not displayed.
The dosimeter will be put in PAUSE Mode

Note: The '**Autoconfirm In/Out**' option can be **activated / deactivated** during the 'batch in / out' process.

'Do not process already processed dosimeters' option

When the choice '**Do not process already processed dosimeters**' is checked, the 'batch In / Out' process cannot be applied to a dosimeter which has already been processed.
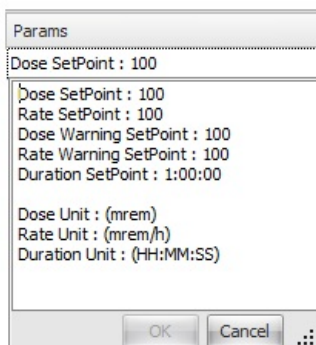The 'already processed dosimeters' list is **cleared** when the '**Clear** button is used.

Note: The '**Do not process already processed dosimeters**' option can be **activated / deactivated** during the 'batch in / out' process.
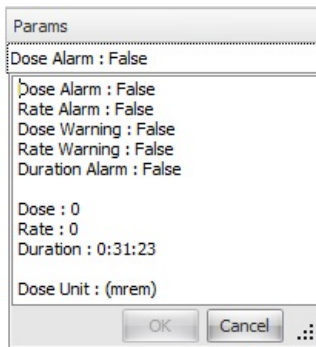
Log

After each change of state of a dosimeter, the result of the operation is available with a click in the '**Params**' column:

- For the '**IN**' state:

- For the '**OUT**' state:

```
Params
Dose Alarm : False
┌──────────────────────────────┐
│ Dose Alarm : False           │
│ Rate Alarm : False           │
│ Dose Warning : False         │
│ Rate Warning : False         │
│ Duration Alarm : False       │
│                              │
│ Dose : 0                     │
│ Rate : 0                     │
│ Duration : 0:31:23           │
│                              │
│ Dose Unit : (mrem)           │
│                              │
│     [ OK ]  [ Cancel ]   .:: │
└──────────────────────────────┘
```

Note: When the change of state failed, the **error** explanation is also available in the '**Params**' column.

Save log

Save all the logs displayed in an '**.XLS**' file using the '**Save as xls file**' button.

Stop the batch In / Out

Click on '**Stop**' to finish the '**Batch In / Out**' process.

Use the '**Clear**' button to erase all the logs displayed in the list.

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Historical feature

The '**Historical**' feature allows to display all the actions (events, measures, commands,...) done with the dosimeter.

Current
Click on '**Get current**' button to display the 'actual' dosimeter history.

Previous
To display the previous history, click on the '**Get previous**' button.
Click several times on the '**Get previous**' button to retrieve 'older' history.

Note: If the '**Append History**' choice is checked when loading a previous history, it will be added to the grid, inste...
of replacing the currently displayed one.

All
The '**Get all**' button displays **all** the history of the dosimeter.
Note: The '**Get all**' action can take a long time; stop it using the 'Cancel Get All' button on the waiting window:
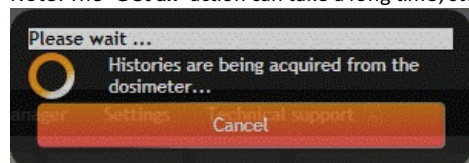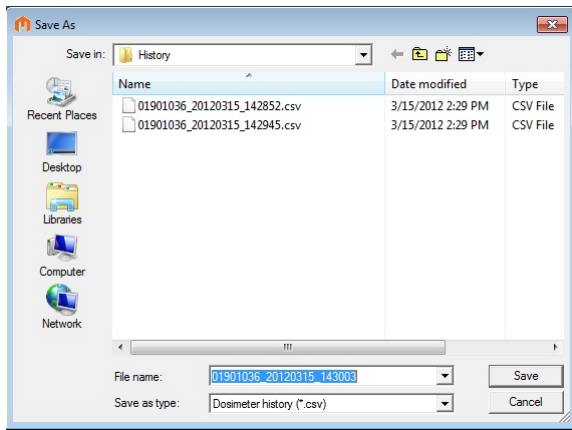

Save history

Current
Save the current history with the '**Save current (.csv)**' button.
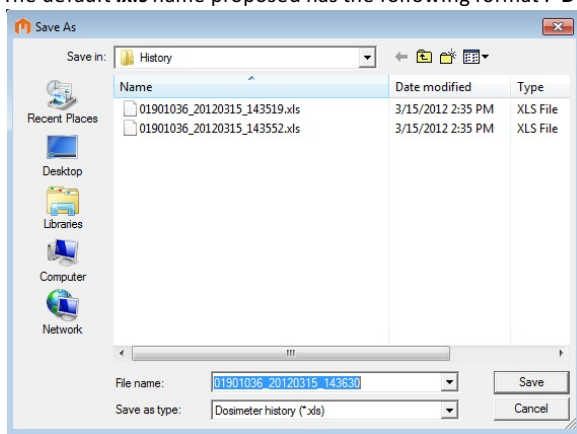
The default **.csv** name proposed has the following format : '**NumberDosimeter_Date_Time.csv**':

Displayed

To save all the dosimeter history displayed in the list, click on 'Save displayed (.xls)' button.

The default .xls name proposed has the following format : 'DosimeterNumber_Date_Time.xls':

Load history

Load a dosimeter saved history using the 'Load saved (.csv)' button.

Style

Use the button to maximize the 'History Number' groups present in the list:

Use the button to minimize the 'History Number' groups present in the list:

	Per Hist... ▲	Date Time	Record	Type	Origin	Primary Dose (mrem)
▽						
>	⊞ **History Number: 12**					
	⊞ History Number: 11					
	⊞ History Number: 10					
	⊞ History Number: 9					
	⊞ History Number: 8					
	⊞ History Number: 7					
	⊞ History Number: 6					

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DM Editor feature

The 'DM Editor' feature allows to create/modify dosimeter configuration files.
A configuration file (also called '**DM file content**') contains all or a set of parameters of a dosimeter.
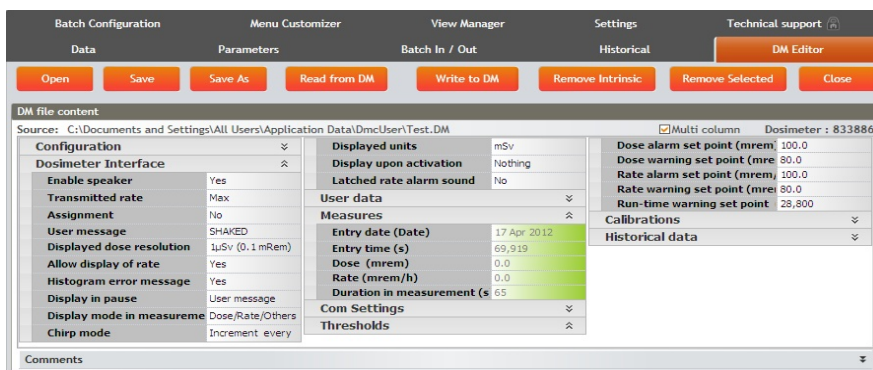
See the 'Generalities' chapter to consult the legend of the vertical grids.

Filling the grid

The grid content is the representation of what will compose the generated DM file.
It can be filled following two methods:

- Click on '**Read from DM** ' to download and fill the grid with all the parameters from the detected dosimeter.
- Click on '**Open**' and chose an existing DM file to read it and fill the grid with its content.

Modify DM content

To delete parameters from the view, select the parameters to delete and click on '**Remove Selected**'.
The <**CTRL**> button can also be used to do a multi selection:

Intrinsic parameters

Intrinsic parameters are strongly linked to one particular dosimeter, and cannot be written on another dosimeter. Then it can be usefu
to remove them from the view: use the '**Remove Intrinsic**' button, and every intrinsic parameter will disappear.

Modify parameter value

Click on a record, do modification and click on another record; the modified value becomes red:

Note: The '**greyed**' values are disabled, only the values written in '**bold**' can be modified:
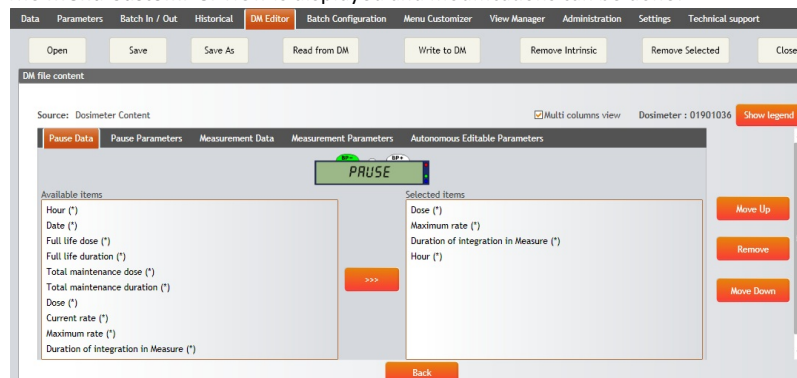

Menu Customizer

The **Menu Customizer** parameters are also imported in the 'DM file content'.

To access the **Menu Customizer**, click on corresponding '**…**' area:

The **Menu Customizer** view is displayed and modifications can be done:

Note: See the '[Menu Customizer](#)' feature.

To exit the '**Menu Customizer**' view, click the '**Back**' button:

Save DM content

Once the dosimeter configuration content is correct, save it using the '**Save as**' button:
A '**.DM**' file is created for a **G2/G2L** dosimeter
A '**.DM3**' file is created for a **G3** dosimeter
Note: Once the DM file content exists, the '**Save**' button can be used.

Write DM content

Use the '**Open**' button to open an existing 'DM file content' and click on '**Write to DM**' to apply this 'DM file content' to another dosimeter.
Note: The '**Open**' button is available when a dosimeter is detected and only corresponding configuration files type are proposed.

Close DM content

Click on 'Close' button [Close] to delete the current DM file content.

Thresholds	
Dose alarm set point (mrem)	100.0
Dose warning set point (mrem)	100.0
Rate alarm set point (mrem/h)	101.0
Rate warning set point (mrem/h)	100.0
Configuration	
Enable warnings	No

Configuration	
Raw count in histogram	Disable

| Thresholds	
Dose alarm set point (mrem)	100.0
Dose warning set point (mrem)	100.0
Rate alarm set point (mrem/h)	101.0
Rate warning set point (mrem/h)	100.0
Configuration	
Enable warnings	Yes

Constants	
Cal factor efficiency multiplier Hp(10)	1.00

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Batch Configuration feature

The '**Batch Configuration**' feature allows to apply the same configuration to a batch of dosimeters.
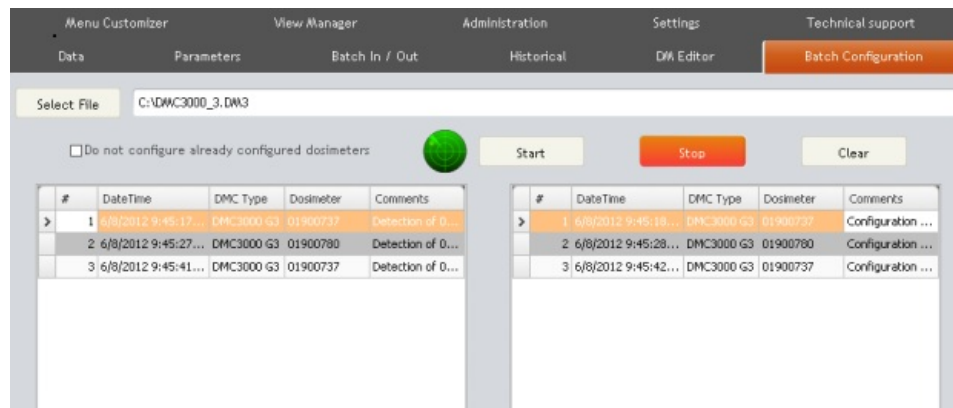
Select batch file

Click on '**Select File**' to choose the batch configuration file to download to dosimeter.

A batch configuration file with the extension '**.DM**' can be applied to a **G2/G2L** dosimeter.
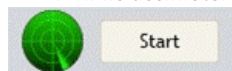A batch configuration file with the extension '**.DM3**' can be applied to a **G3** dosimeter.
Note: See the 'DM Editor' feature for the creation of the 'DM' files.
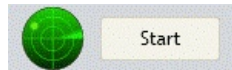
Start the batch configuration

Click on '**Start**' to begin the 'Batch Configuration' process.

1. If no dosimeter is detected, the radar is displayed without point:

And a tone called '**search echo**' is heard.

2. When a dosimeter is detected, the dosimeter is represented by a point on the radar:

And the dosimeter starts to be processed with a tone called '**processing echo**'.

3. At the end of the dosimeter process, a tone called '**completed echo**' is heard,
4. A tone called '**bad echo**' is heard once the 'Batch configuration' process is completed for this dosimeter.

5. Present now **another** dosimeter and repeat this process ...

Note: The processed dosimeter can be in **PAUSE** or in **MEASUREMENT** mode.

'Do not process already processed dosimeters' option

When the choice '**Do not process already processed dosimeters**' is checked, the 'batch Configuration' process cannot be applied to a dosimeter already processed.

The 'already processed dosimeters' list is **reset** when the '**Clear**' button is used.

Note: The '**Do not process already processed dosimeters**' option can be **activated / deactivated** during the 'batch configuration' process

Log

When the 'batch configuration' process is running, two lists are filled with logs:
- The '**left list**' contains the **detected** dosimeter(s) logs.
- The '**right list**' contains the **processed** dosimeter(s) logs.

The result of the batch configuration process is available in the '**right list**' with the mouse over the '**Comments**' column:

	#	DateTime	DMC Type	Dosimeter	Comments
>	1	4/10/2012 2:53:0...	DMC2000S	833886	Configuration ...
		Configuration of 833886 is completed using this file : C:\DMC2000XB.DM				

Save log

Save all the logs displayed in an '**.XLS**' file using the '**Save as xls file**' button.

Stop the batch configuration

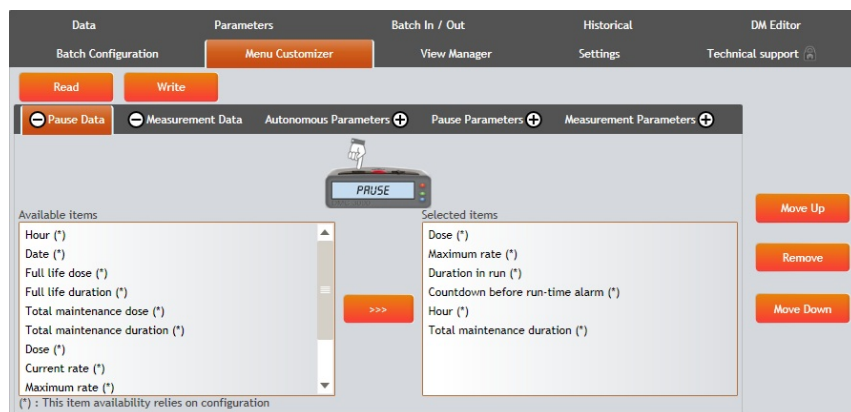Click on '**Stop**' to finish the '**Batch Configuration**' process.

Use the '**Clear**' button to erase all the logs displayed in the lists.

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Menu Customizer feature

The '**Menu Customizer**' feature allows to modify the Data/Parameters items displayed on dosimeter in **Pause**, **Measurement** and **Autonomous** states.
Note: This feature is only available for dosimeter **DMC 3000 G3**.

Read menu data
Click on '**Read**' to load the actual dosimeter menus in the '**Selected items**' list.

Select menu data
All the dosimeter menus can be customized selecting the corresponding tab:

- '**Pause data**'
These data are displayed when the dosimeter is in **Pause** state and available with the '**-**' button :

- '**Measurement data**'
These data are displayed when the dosimeter is in **Measurement** state and available with the '**-**' button :

- '**Autonomous Editable parameters**'
These parameters are displayed when the dosimeter is in **Autonomous** state and available with the '**+**' button :

Note: if the dosimeter is not in '**Autonomous**' mode, modify its parameter '**dosimeter mode**' and change it from '**Satellite**' to '**Autonomous**'.

- '**Pause parameters**'
These parameters are displayed when the dosimeter is in **Pause** state and available with the '**+**' button :

- '**Measurement parameters**'

These parameters are displayed when the dosimeter is in **Measurement** state and available with the '**+**' button :

Modify menu data

Select an item in the '**Available items**' list and add it to the '**Selected items**' list using the button.
Note: The drag & drop is also available.

In the '**Selected items'** list, select one item and use the '**Move Up**', '**Move Down**' or '**Remove**' buttons to customize the menu.

The position of the '**Selected items'** will determine the order of the items displayed on the dosimeter. Some items are followed by a '(*)' which means that the item may not be displayed, depending on one or more parameter of the dosimeter.
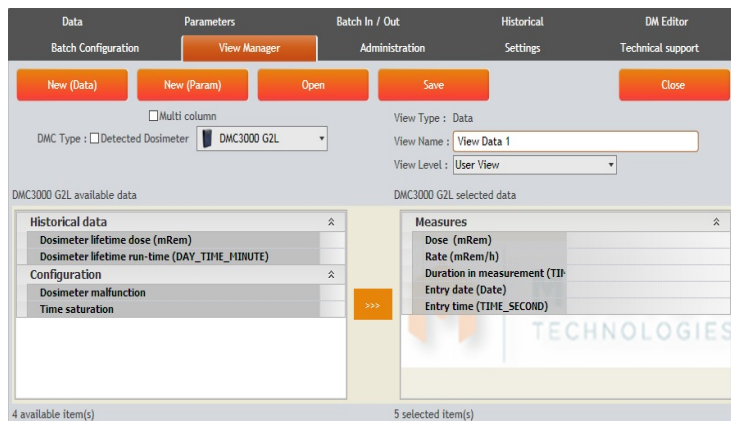
Save menu data
Once the menu is modified, select the '**Write**' button to save and apply the modifications.

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View Manager feature

The '**View Manager**' feature allows to create custom views with dosimeter Data and Parameters.
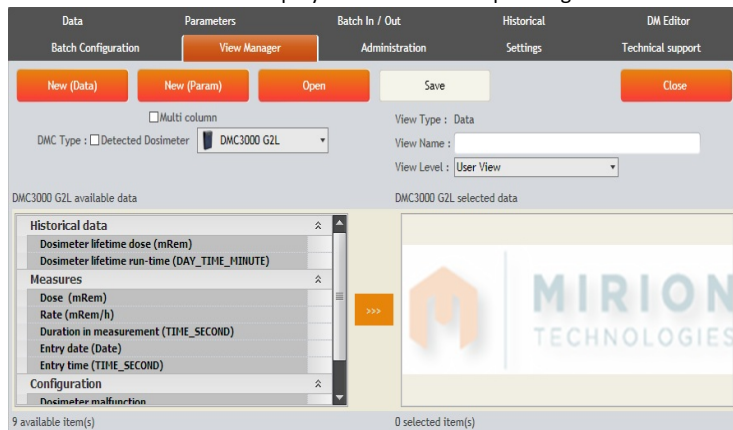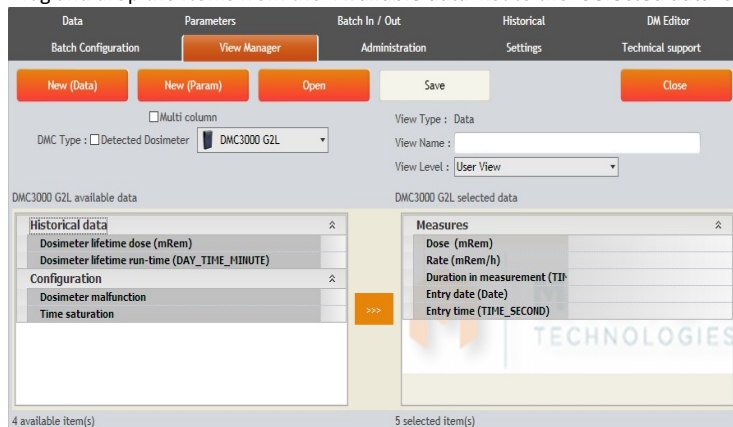
Data view

Create view

Click on '**New (Data)**' to create a new data view.
The '**Available data**' list is displayed with the corresponding data of the dosimeter and the '**Selected data**' list is empty:
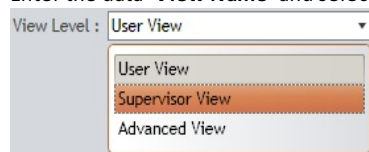
Drag and drop the items from the '**Available data**' list to the '**Selected data**' one:

Note: Drag & drop a node is also possible (<u>example:</u> "Measures" node)

Enter the data '**View Name**' and select the '**View Level**':

Note: See the '<u>Administration</u>' feature for more explanation on the '**View level**'.
The '**View Level**' is only available with the <u>Enterprise edition</u>.

Save view
Save the data view by clicking the '**Save View**' button.

The 'data view' file name has the following format:
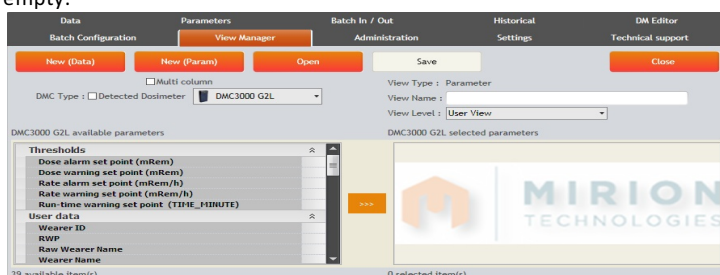   **<DetectedDosimeter>_ViewData <View Name>.xml**
        <u>Example:</u> 'DMC3000 OPL_ViewData All.xml'
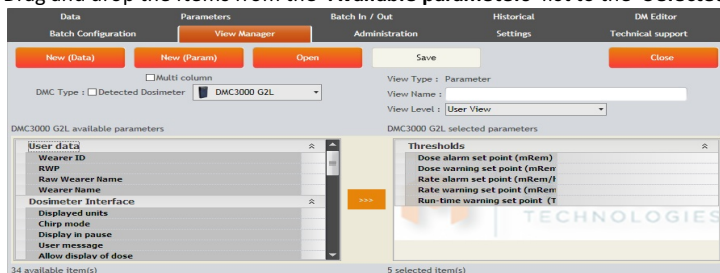
Parameters view

Create view
Click on '**New (Param)**' button to create a new parameters view.
The '**Available parameters**' list is displayed with the corresponding parameters of the dosimeter and the '**Selected parameters**' list is empty:
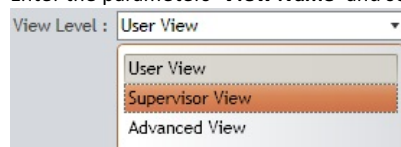

Drag and drop the items from the '**Available parameters**' list to the '**Selected parameters**' one:

Note: Drag & drop a node is also possible (<u>example:</u> 'Thresholds' node)

Enter the parameters '**View Name**' and select the '**View Level**':

Note: See the '<u>Administration</u>' feature for more explanation on the '**View level**'.
The '**View Level**' is only available with the <u>Enterprise edition</u>.

Save view
Save parameters view by clicking the '**Save View**' button.
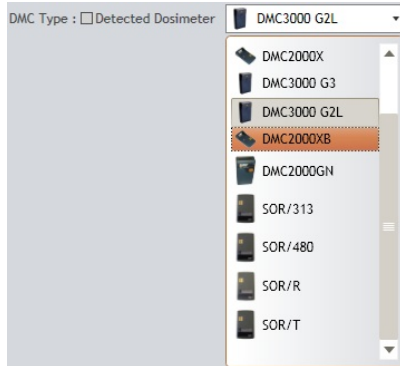
The parameters view file name has the following format:

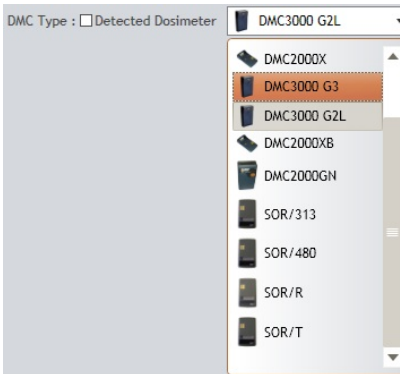**<DetectedDosimeter>_ViewParameter <View Name>.xml**
Example: 'DMC3000 OPL_ViewParameter All.xml'

Detected Dosimeter

When **no dosimeter** is detected, the option '**Detected Dosimeter**' is **disabled** and a dosimeter can be selected in the list:

When **a dosimeter is detected**, the option '**Detected Dosimeter**' is **enabled** and unchecked and the detected dosimeter is automatical selected in the list:

The option '**Detected Dosimeter**' can also be **checked** to automatically select the detected dosimeter:

The '**Available data**' list or '**Available parameters**' list is refreshed with the corresponding dosimeter Data or Parameters.

Open a view

To open an existing view, click the '**Open**' button and select a Data or Parameters view.

Close a view

To close the current Data or Parameters view, click the '**Close**' button.

Style

Check the ' **Multi columns view**' choice to display the list with multi column.

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Administration feature

The '**Administration**' feature allows to manage users (Add/Modify/Delete).
This feature allows also to customize users profile by giving them access to specific features(tabs).

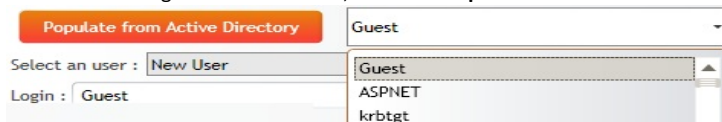The 'user' corresponds to the Windows account used on the machine where is started the DMCUser application.
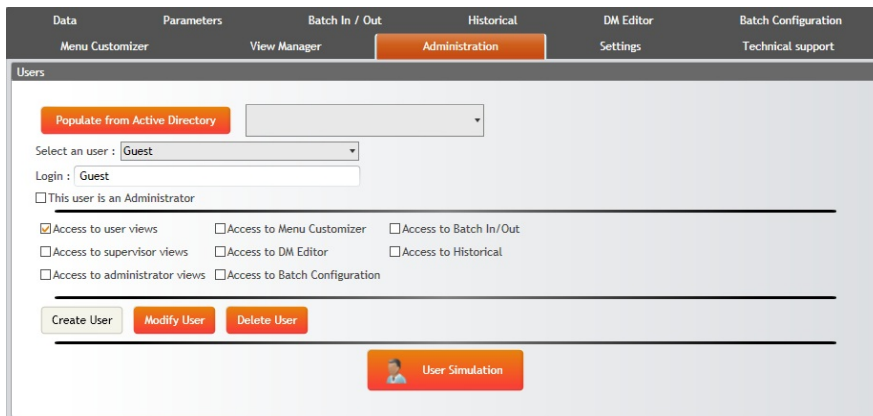
Create a user

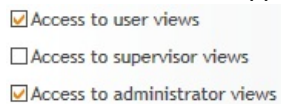To create a new user, select '**New User**' from the '**Select an user**' combo box and enter a '**Login**' name:

To use an existing Windows account, click the '**Populate from Active Directory**' button and select a user name:
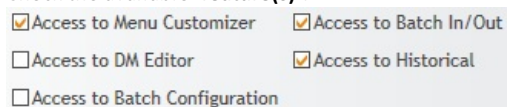

Accessibility

Configure the views and features available for this user.

Check the available '**view(s)**':

Check the available '**feature(s)**':

Use the box '**This user is an Administrator**' to give user the access to every views and every features of the application:

Once the user configuration is finished, click on '**Create User**' button.

Modify a user

To modify a user, select an existing user from the '**Select an user**' combo box.
And after modification, click the **'Modify User'** button to save it.

Delete a user

To delete a user, select an existing user from the '**Select an user**' combo box and use the '**Delete User**' button.

Simulation

To simulate a user and to verify its features access, select it in '**Select an user**' and click on '**User Simulation**' button:

Note: All users can be selected except '**New User**'

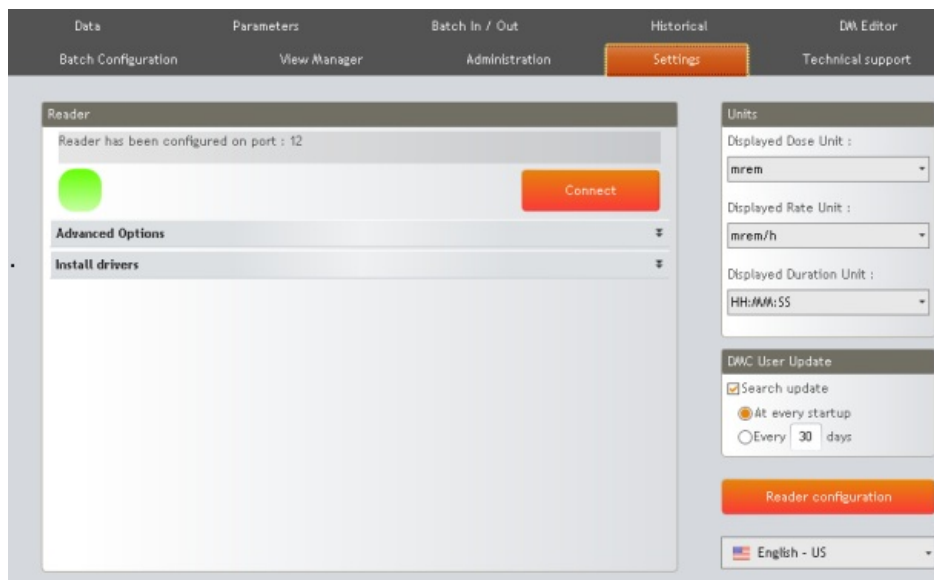The application is set with the available 'Views' and 'Features' of the user.

Click on the right upper button _____ to **exit** the simulation mode.

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Settings feature

The '**Settings**' feature allows to configure the global application settings:
- Reader configuration
- Dose and Rate units
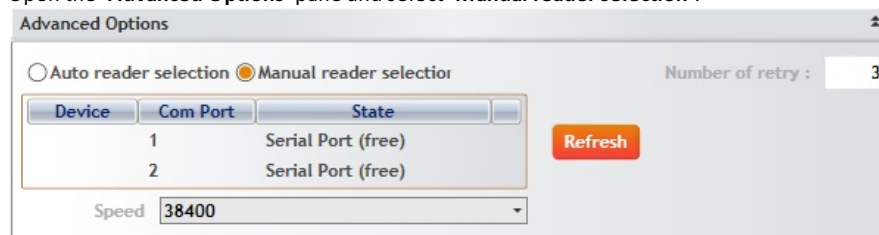- Duration unit

Connect a reader
There are three methods to connect a reader.

1.Auto reader selection
Connect the reader and click on '**Connect**' button.

2.Manual reader selection
Open the '**Advanced Options**' pane and select '**Manual reader selection**':

Click the '**Refresh**' button to check the devices connected to the machine.
Select into the list the device corresponding to the reader and click on '**Connect**' button.

Note: The number of connection can be set with the '**Number of retry**' field.

3.Install drivers
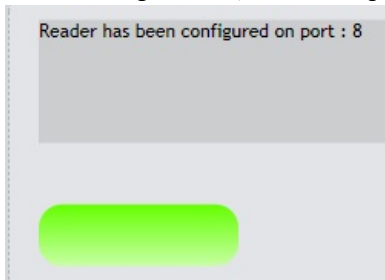Open the '**Install drivers**' pane and click on the image of the reader:

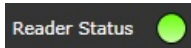Once the driver installation is done, click on '**Connect**' button.

Reader status

Connected

On the '**Settings**' feature, the status is green and a message indicates on which port the reader is connected:
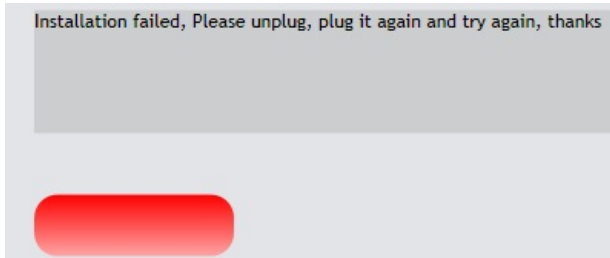

At the bottom of the main window, the '**Reader Status**' is set to 'green':
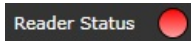

Not connected

On the '**Settings**' feature, the status is red and a message indicates what to do to solve the issue:

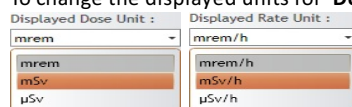At the bottom of the main window, the '**Reader Status**' is set to 'red':

## The list of supported readers

LDM 320W
LDM 320D
LDM 220-2D

Units

To change the displayed units for '**Dose**' and '**Rate**', click on the corresponding combo box and select the unit:

The choice is validated once the dose/rate unit is selected.
Note: '**Dose**' and '**Rate**' units are linked together, so modifying the dose unit modifies also the rate unit.
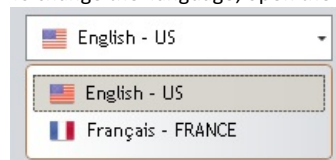
To change the displayed unit for '**Duration**', click on the corresponding combo box and select the unit:
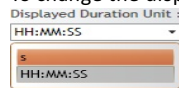
The choice is validated once the duration unit is selected.
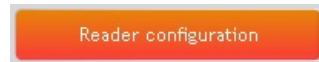
Language

To change the language, open the corresponding list and select the desired language :

The application will need to be restarted.

Reader Configuration

Some internal reader parameters can be changed. Click the "Reader Configuration" button.


A new window opens :

Click "Read" to acquire the current settings from the reader.

 - "Current mode" : can be "Normal" (default) or "Turnstile" if the reader is to be used with a turnstile.
 - "Limited range" : reduces or not (default) the reader range.
 - "Default number of retries" : Buil-in number of communication retries (default = 4).

Click "Write" to apply the changes onto the reader.

Click "Restore" to restore the default values of these parameters. A confirmation popup will appear :
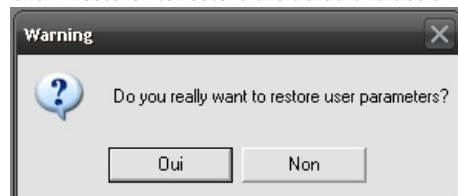

DMC User Update

 Note: The update process of DMC User need to reach an updater server on the Internet.
TCP port 9003 need to be allowed for outgoing connection.

If the '**Search Update**' option is enabled, you can specify whether an update of DMC User will be search at every start up of the software, or at start up every X days.

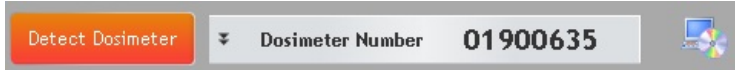If an Update is available you will see an informational icon on the upper part of the screen :
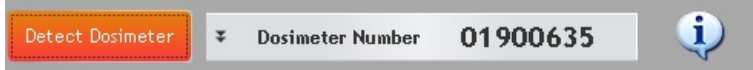
If you move the mouse over this icon, a tooltip indicating the new release version will appear.
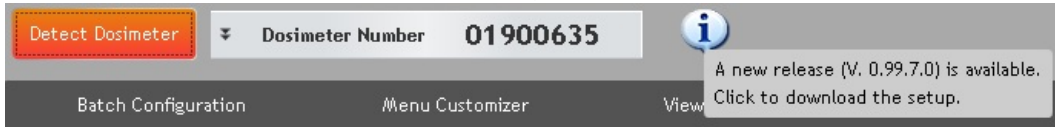
Click the informational icon to start the download of the new version. The download is done in background.
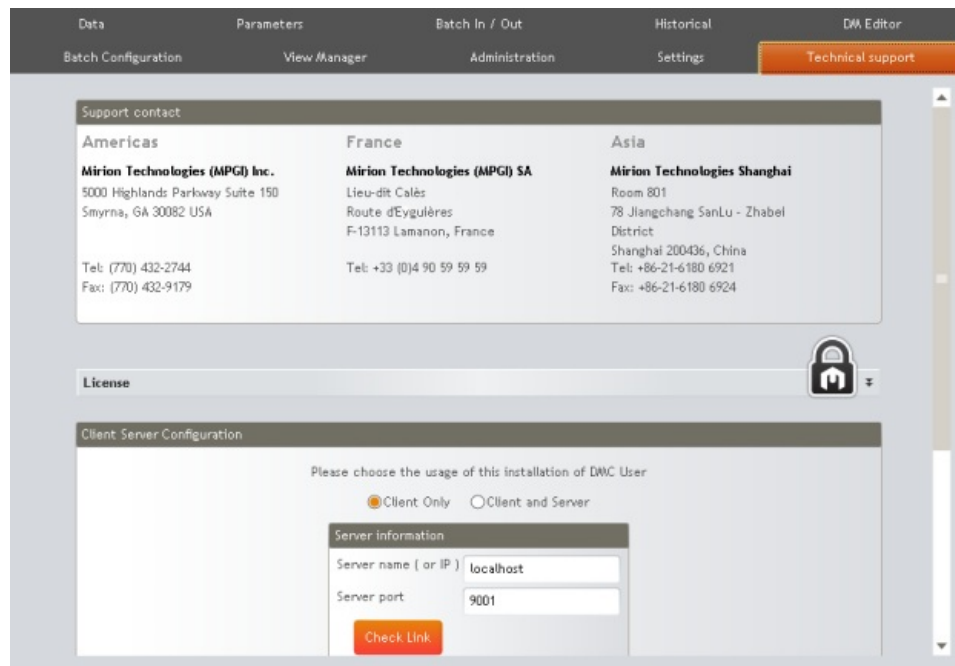
Once downloaded a setup icon will appear :

If you click on it, it will run the setup and install the latest version of DMC User.

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Technical Support feature

The '**Technical Support**' feature allows to manage the DMCUser license and to find information on Mirion Technologies support.

Licenses

Demo
The default edition is the **DEMO** one.
With the DEMO edition, following features are available:
- Data
- Parameters
- Demo
- Settings
- Technical Support

Two other editions are available:
- Basic
- Enterprise

Basic
The BASIC edition is a single post license.
With the BASIC edition, following features are available:
- The **DEMO** edition features +
- Batch I/O
- Historical
- DM Editor
- Batch Configuration
- Menu Customizer (for DMC3000 G3 only)
- View Manager

Enterprise

The ENTERPRISE edition is a 5 posts license.
With the ENTERPRISE edition, following features are available:
- The **BASIC** edition features +
- Administration

Unlock the BASIC license (single post)
- Contact the **MIRION Technologies** sale representative to obtain a BASIC license,
- Go to the '**Technical Support**' feature,
- Enter the license in the '**License**' pane,
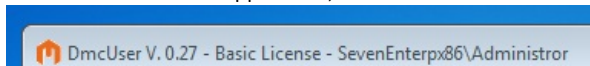- The '**Go**' button becomes clickable:
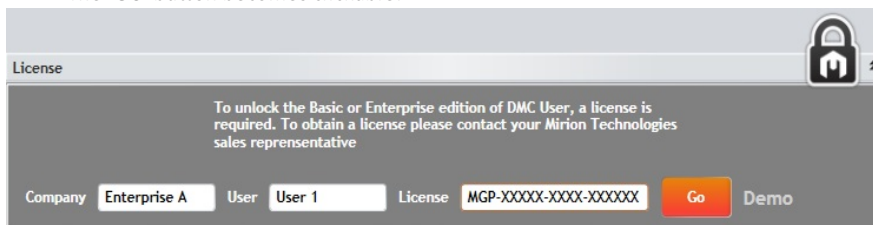
After clicking the '**Go**' button, the new license is displayed:

 and the application has to be restarted:

After the restart of the application, the **BASIC** edition is visible in the window title of the DMCUser application:

The 'Technical Support' feature has also changed:

Note: The different displays of the 'Technical Support' feature are:

- With the DEMO edition:

- With the BASIC edition:

- With the ENTERPRISE edition:

Unlock the ENTERPRISE license (client/server)
- Contact the **MIRION Technologies** sale representatives to obtain an ENTERPRISE license,
- Go to the '**Technical Support**' feature,
- Enter the license in the appropriate place,
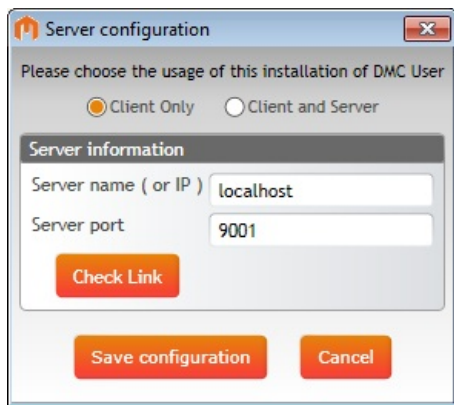- The '**Go**' button becomes clickable:
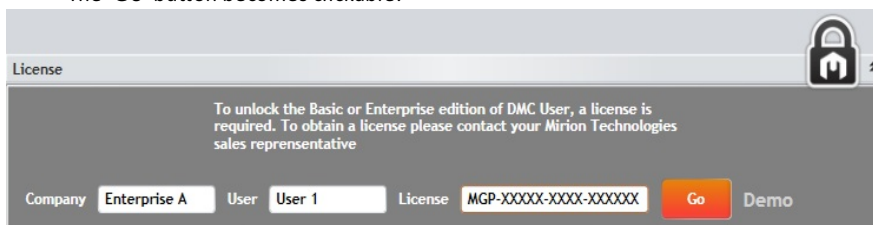
After clicking the '**Go**' button the new license is displayed:

 and the application has to be restarted:

At the same time, the server configuration window is displayed:

Configure a Client

To configure a **Client**, check the '**Client only**' option, enter the Server name (or IP address) and click on '**Check Link**' button to verify it.

Note: Enter 'localhost' for the '**Server name**' if there is only one instance of DMCUser (the Server is also the Client).
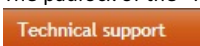
Configure a Server

To configure a **Server**, check the '**Client and Server**' option
Don't forget to click on '**Save configuration**' button before continuing.

After the restart of the application, the ENTERPRISE edition is visible in the window title of the DMCUser application:
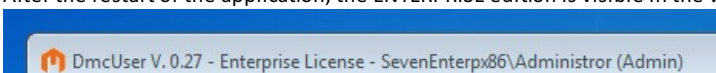
The padlock of the 'Technical Support' feature has also changed:

Support

Find the support contact information corresponding to the localization.

To create a 'maintenance' dump file from a dosimeter click on the '**Create maintenance file**' button   and sen
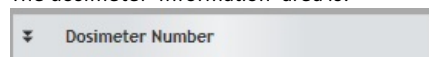it to our technical support for analysis.

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Detect a dosimeter

No dosimeter detected

Click on '**Detect Dosimeter**' button when no dosimeter is present in front of the reader.
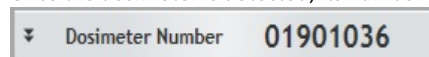The dosimeter 'information' area is:

and the message is:

Note: See also 'Messages and Events'.

A dosimeter detected

Present the dosimeter to the reader and click the '**Detect Dosimeter**' button.

Once the dosimeter is detected, its number is displayed:

and its '**picture**' is displayed:

Note: See also 'Messages and Events'.

Dosimeter information

Click on the dosimeter pane to have more information:
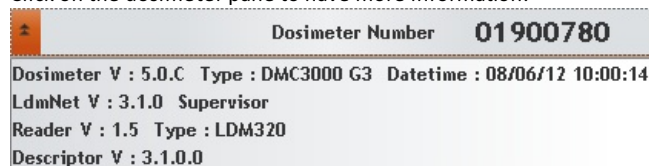
In this window, find, among others, the **Reader** and **Dosimeter** information.

Dosimeter in PAUSE mode

When the dosimeter is in PAUSE mode, the dosimeter is:

Note: See also 'Go to Measure Pause'

Dosimeter in MEASUREMENT mode

When the dosimeter is running, a border and a blinking icon is added to the dosimeter window:

Note: See also 'Go to Measure Pause'

Defaults and Alarms

 Click on the dosimeter picture to display the 'States' window with its defaults and alarms indicators:
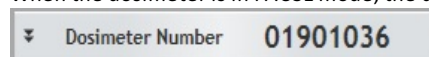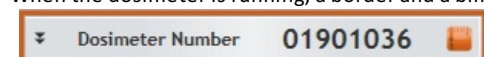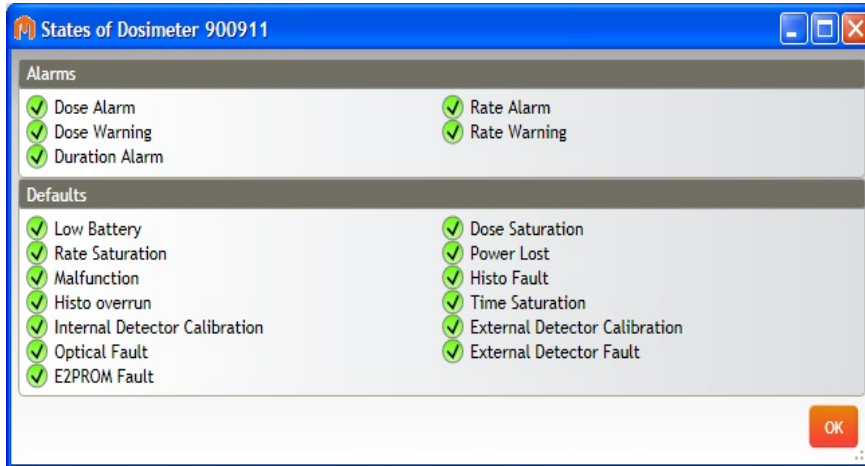

Dosimeter with Defaults and Alarms

When the dosimeter has **no defaults and alarms**, no icon is added to the dosimeter picture:

When the dosimeter has at least one **warning alarm**, a 'warning' icon is added to the dosimeter picture:

When the dosimeter has at least one **default error or one default alarm**, an 'error' icon is added to the dosimeter picture:

Legend

Defaults

- The indicator is green when there is no error.
  Example:
- The indicator is red if there is an error.
  Example:

Alarms

- Alarms
  - The indicator is green when there is no error.
    Example:
  - The indicator is red if there is an error.
    Example:
- Warning
  - The indicator is green when there is no error.
    Example:
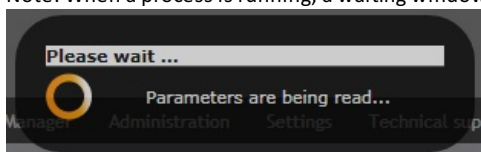 - The indicator is orange if there is an error.
    Example:

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Messages and Events

Messages

During the DMCUser utilization, the messages are displayed in the bottom of the window (left down corner).
These messages displayed indicate to the user if the action was successful or not.

Note: When a process is running, a waiting window with messages can also be displayed:

Information message

When the action is successful, an **information** message is displayed in green:
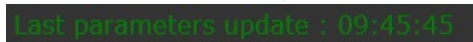
Warning message

If there is a **warning**, the message is displayed in orange:
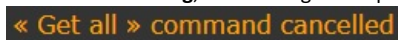
Error message

If the action failed, the **error** message is displayed in red:

Tooltip

For all the **items** present in '**vertical**' or '**horizontal**' lists, a **tooltip** is available passing the mouse cursor over the item.
Note: See also the 'Data Grids' part.

Events

All the messages displayed during the DMCUser utilization are also saved into the '**Events**' window.

Note: Pass the mouse cursor over the '**Events**' button to have information on stocked events:
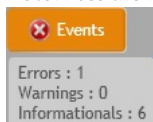
No event

When there is no event, the '**Events**' button is disabled:

Information event

If there are only successful events, an 'information' icon is added to the 'Events' button:

The information events are displayed in green:
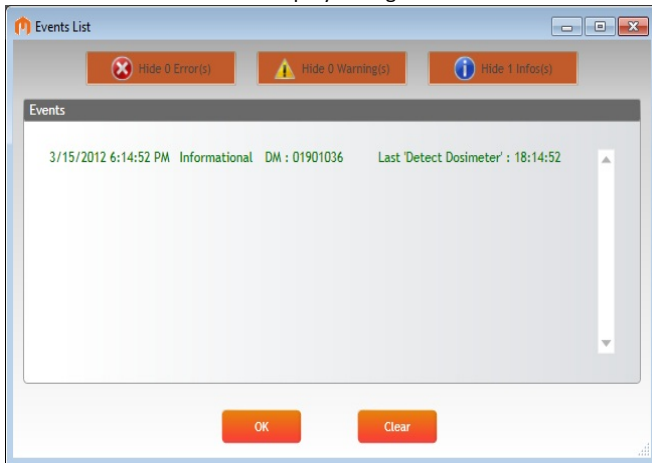
Warning event

If there is at least one warning event, a 'warning' icon is added to the 'Events' button:

The warning events are displayed in orange:
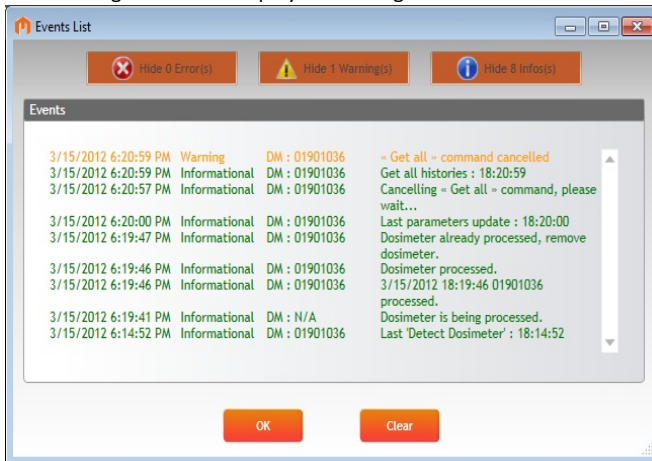
Error event

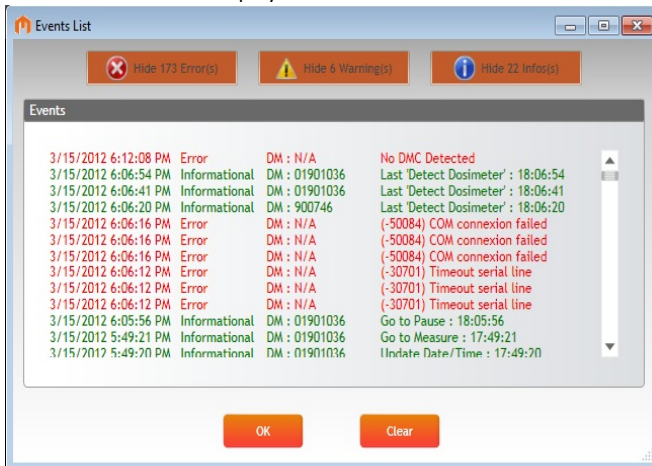If there is at least one failed event, an 'error' icon is added to the 'Events' button:

The errors events are displayed in red.:

Hide event message

In the '**Events List**' window, use a '**Hide X …**' button (Example: [Hide 8 Infos(s)]) to hide the corresponding events.

Click the '**Clear**' button to erase all the events from the '**Events List**'.
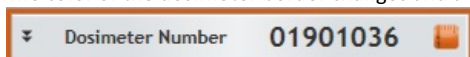
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Go to Measure / Pause

Go to Measure

Pass the dosimeter from the **PAUSE** mode to the **MEASUREMENT** mode.

Click on the 'Go to Measure' button: [Go to Measure].
The color of the dosimeter border changes and a blinking icon is added near the dosimeter number:

Note: See also 'Detect Dosimeter'

Go to Measure option

Different modes and options are available with the **MEASUREMENT** mode.
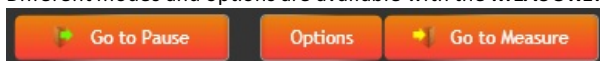
Click on the '**Options**' button to display the '**Measure Options**' window:
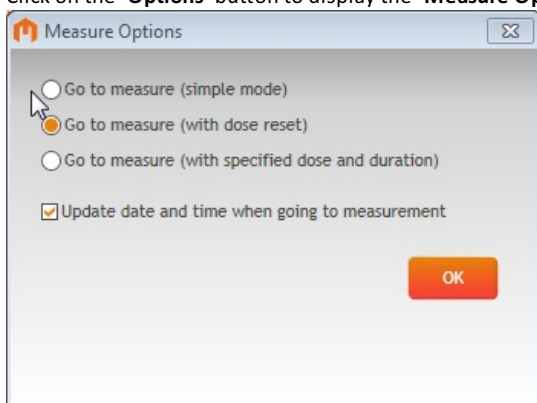
Modes

Three 'Go to measure' modes are available when the dosimeter goes to **MEASUREMENT** mode:
- '**Simple mode**': the 'dose' and 'duration' are kept from the **last use**
- '**With dose reset**': the 'dose' and 'duration' values are **reset**
- '**With specified dose and duration**': the 'dose' and 'duration' are set by **user**:
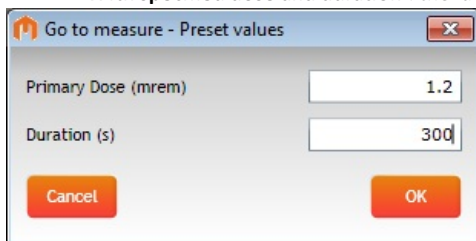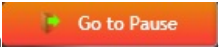
Option

One option is proposed:
- '**Update date and time when going to measurement**': the dosimeter is updated with the **current** date and time when going to measurement mode.

Go to Pause

Pass the dosimeter from the **MEASUREMENT** mode to the **PAUSE** mode.

Click on the '**Go to Pause**' button .

The color of the dosimeter border changes to grey and the blinking icon is removed:

Note: See also 'Detect Dosimeter'

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Use the Data grids

Two types of grids are used in the DMCUser application.

'Vertical' grid

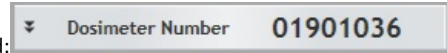| User data	≳
Task code	123
Wearer ID	393939494400000
⊞ **User data area**	000F000000000000000000000000000000000…
TLD / Badge	tld1234
RWP	RWP
User data area	000E000000000000000000000000000000000000…
MMI	≳
User displayed text	GO ARGOS
Display constrast	15
Display in pause	Custom message
Displayed units	µSv
Chirp mode	beep per impuls.
Allow display of rate	Yes
Allow display of dose	Yes
Displayed dose resolution	10µSv
Displayed rate resolution	10µSv/h
Display mode in measurement	Doses,Rates,List(Pb)
Enable speaker	Yes

'Horizontal' grid

History Number ▼

	Date Time ▼	Record	Type	Origin	Primary Dose (mrem)	Primary Rate (mrem/h)
➤	2012-03-16 14:24:24	Event		Sleep mode exit b...		
	2012-03-16 14:00:00	Command	Enter in stand ...			
	2012-03-16 13:49:13	Event		Sleep mode exit b...		
	2012-03-16 13:18:00	Command	Enter in stand ...			
	2012-03-16 13:08:45	Command	Enter pause m...	Wireless SPR mes...		
	2012-03-16 13:08:45	Measure			0	0

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Vertical grid

User data	
Task code	123
Wearer ID	393939494400000
⊞ **User data area**	000E000000000000000000000000000000000...
TLD / Badge	tld1234
RWP	RWP
User data area	000E000000000000000000000000000000000...

MMI	
User displayed text	GO ARGOS
Display constrast	15
Display in pause	Custom message
Displayed units	µSv
Chirp mode	beep per impuls.
Allow display of rate	Yes
Allow display of dose	Yes
Displayed dose resolution	10µSv
Displayed rate resolution	10µSv/h
Display mode in measurement	Doses,Rates,List(Pb)
Enable speaker	Yes

The 'vertical' grid can be customized:

- Minimize / Maximize group
- Columns width
- Row height

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Minimize / Maximize group

To minimize a group on a vertical grid, click on the [⌃] button.
The group is minimized:

Teletrans	⌄
Com Settings	⌄
Constants	⌄

To maximize a group on a vertical grid, click on the [⌄] button.
The group is maximized:

Teletrans		⌃
Enable telemetry	On	
Com Settings		⌄
Constants		⌄

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Column width

Change column width

To change the column width on a vertical grid, click on a column line and drag and drop to the left or right:

Note: if the vertical grid in displayed in 2 parts (like previous example), the drag and drop is only available on the left part.

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Change row height

To change the row height on a vertical grid, click on a vertical line and drag and drop up or down:

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Horizontal grid

History Number ▼					
Date Time ▼	Record	Type	Origin	Primary Dose (mrem)	Primary Rate (mrem/h)
⏚					
› 2012-03-16 14:24:24	Event		Sleep mode exit b…		
2012-03-16 14:00:00	Command	Enter in stand …			
2012-03-16 13:49:13	Event		Sleep mode exit b…		
2012-03-16 13:18:00	Command	Enter in stand …			
2012-03-16 13:08:45	Command	Enter pause m…	Wireless SPR mes…		
2012-03-16 13:08:45	Measure			0	0

The 'horizontal' grid can be customized:

- Sorting records
- Grouping records
- Filtering records
- Hide / Display columns

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Sort records

To sort records by a column's values, click the target column's header, until an Up or Down Arrow icon is displayed within the header. The Up and Down Arrows indicate ascending and descending sort orders respectively.

The "**Date Time**" column has been sorted in ascending order:

Date Time	▲	Record	Type
⊟ History Number: 1			
2012-03-16 12:08:33		Command	Enter run mode…
2012-03-16 12:08:34		Event	In run
2012-03-16 13:08:38		Event	Duration alarm
2012-03-16 13:08:45		Event	In pause
2012-03-16 13:08:45		Measure	
2012-03-16 13:08:45		Command	Enter pause m…
2012-03-16 13:18:00		Command	Enter in stand …
2012-03-16 13:49:13		Event	

The "**Date Time**" column has been sorted in descending order:
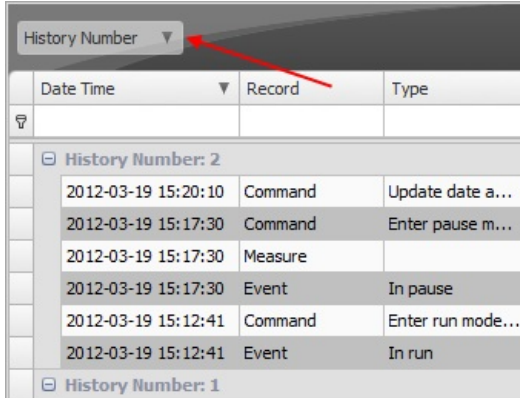
Date Time	▼	Record	Type
⊟ History Number: 1			
2012-03-16 13:49:13		Event	
2012-03-16 13:18:00		Command	Enter in stand …
2012-03-16 13:08:45		Command	Enter pause m…
2012-03-16 13:08:45		Measure	
2012-03-16 13:08:45		Event	In pause
2012-03-16 13:08:38		Event	Duration alarm
2012-03-16 12:08:34		Event	In run
2012-03-16 12:08:33		Command	Enter run mode…

To remove sorting by a column, click a column header while holding the CTRL key down. You can also select "Clear Sorting" from the column header context menu.
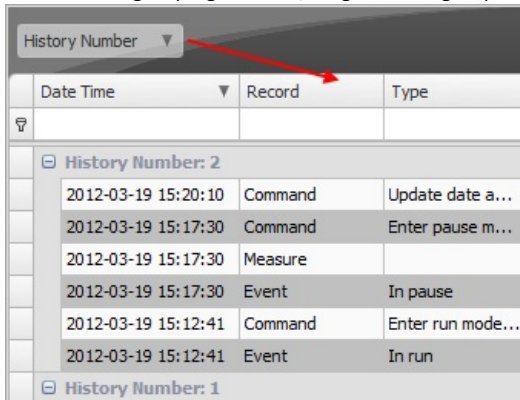
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Group records

To group records by a specific column, drag the column header from the column header line to the group panel:

To cancel the grouping function, drag back the grouped column header to the column header line:

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Filter records

To filter records by a column's values, type the desired filtering value in the corresponding cell of the filter line.

In the following example, only rows with a rank containing "Reset" are displayed:

	Date Time	Record	Type	Origin
		command		
	History Number: 2			
	2012-03-19 15:20:10	Command	Update date a…	Wireless SPR mes…
	2012-03-19 15:12:41	Command	Enter run mode…	Wireless SPR mes…
	2012-03-19 15:17:30	Command	Enter pause m…	Wireless SPR mes…
	History Number: 1			
	2012-03-19 15:20:11	Command	Enter run mode…	Wireless SPR mes…
	2012-03-19 15:20:13	Command	Enter pause m…	Wireless SPR mes…

To remove sorting by a column, empty the filtering cell of the filter line.
You can also select "Clear Filter" from the column header context menu or select the 'x' button at the bottom list:

× ☑ Starts with([Record], 'command')

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Hide / Display column

Hide a displayed column

To hide a displayed column from the grid, drag its header onto the cells area and drop it:
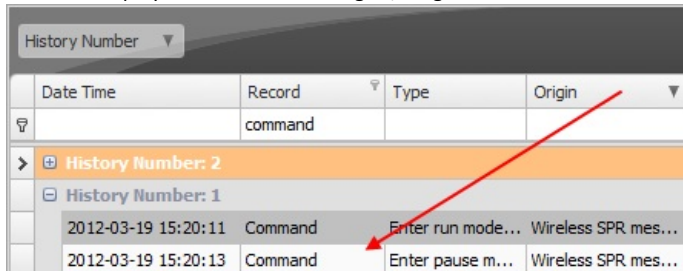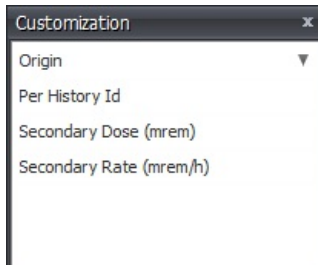

Display a hidden column

To display a hidden column onto the grid, right click on the header line and chose "Column Chooser" from the context menu:
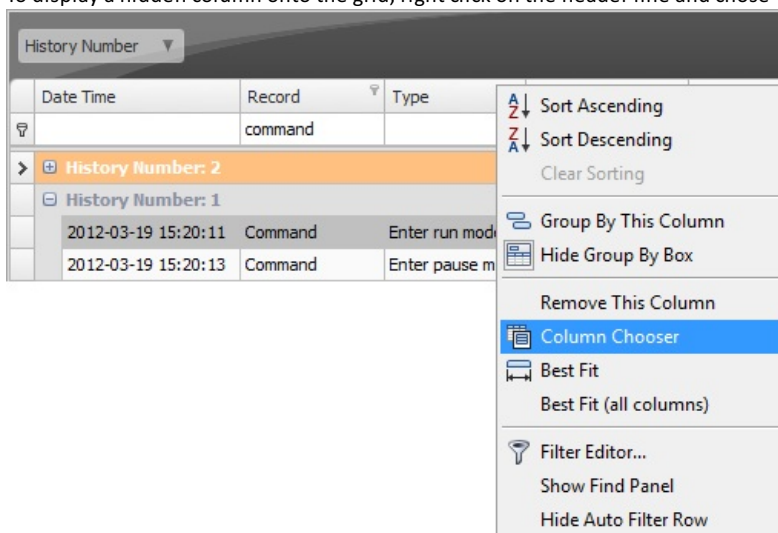
The Customization Form will be displayed, listing all hidden columns:

Drag the required column from the Customization Form onto the column header line and drop it where you want it to be:

	Customization	x
	Origin	▼
	Per History Id	
	Secondary Dose (mrem)	
	Secondary Rate (mrem/h)	

History Number ▼			
Date Time	Record	Type	Primary Dose (mrem)
	command		

⊞ **History Number: 2**

⊟ **History Number: 1**

| 2012-03-19 15:20:11 | Command | Enter run mode… | |
| 2012-03-19 15:20:13 | Command | Enter pause m… | |
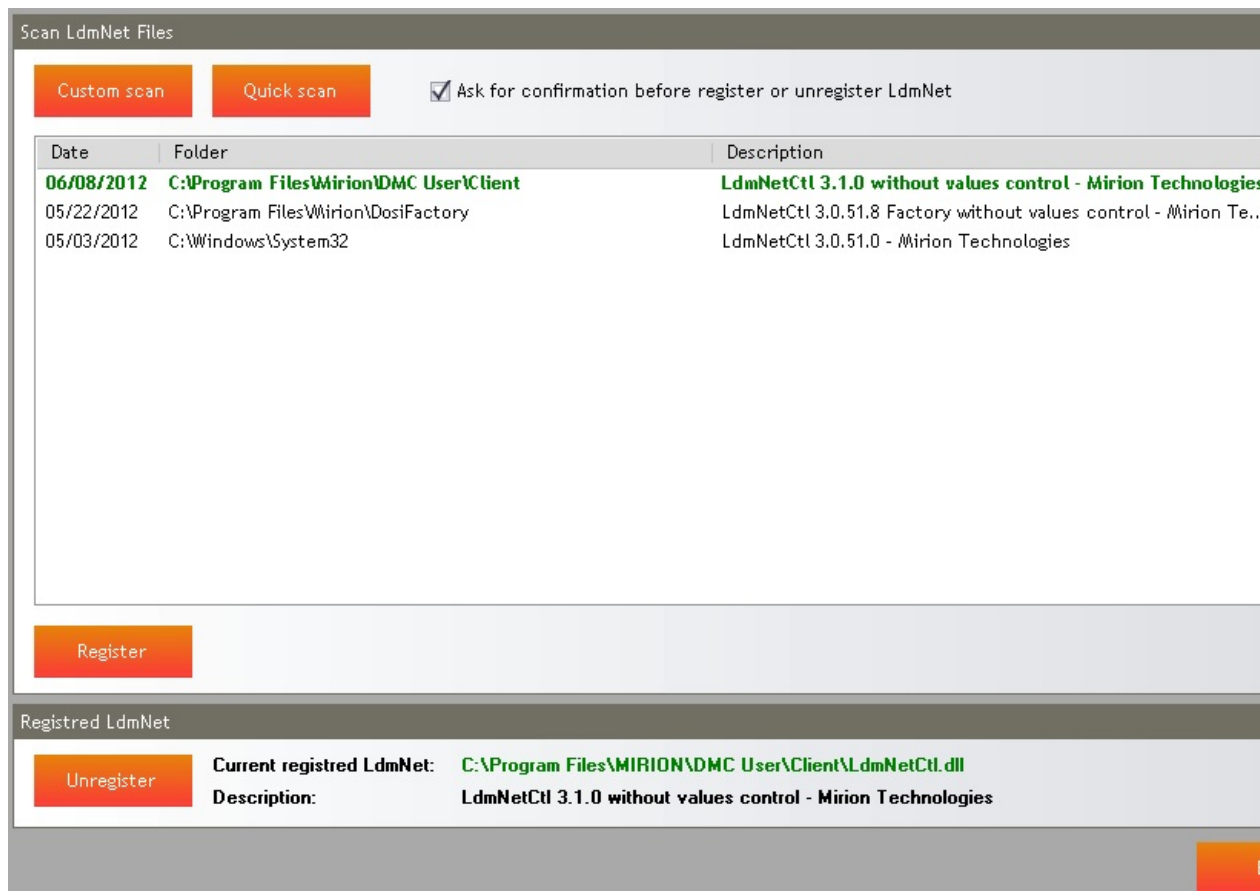
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LdmNetManager

The LdmNet library offers to Mirion softwares the ability to communicate with the dosimeter readers.
Each software may have to use a specific version of this library. Recent softwares automatically register their own LdmNet on startup b
oldest ones use the current registered LdmNet, which may have been replaced.

LdmNetManager is a tool from which the current version of LdmNet can be easily changed.

Current LdmNet

In the botton part of the screen, the "Registered LdmNet" shows the current registered version of the LdmNet.
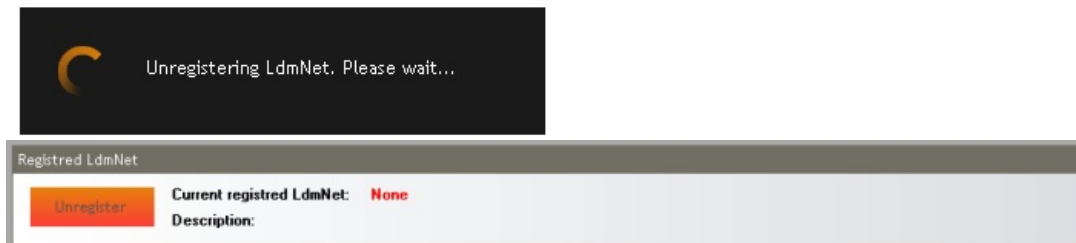

Unregistering the current LdmNet

Click the "Unregister" button to unregister the current LdmNet.

If the checkbox "Ask for confirmation before register or unregister LdmNet" has been checked, a confirmation popup will be displayed
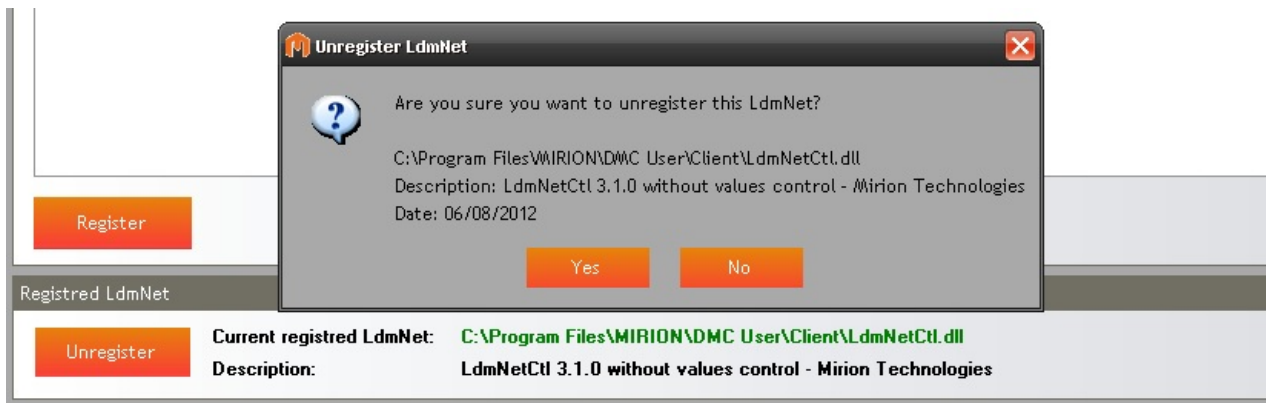
After confirmation, t he LdmNet is unregistered :



Scanning and finding available versions

The grid at the upper part of the screen shows the different version of LdmNet available on the computer.

Click the "Custom scan" button to search the files through a selection a sélection of drives of the system, this may take a very long time
A popup appears, choose the drives to scan and click "Scan".
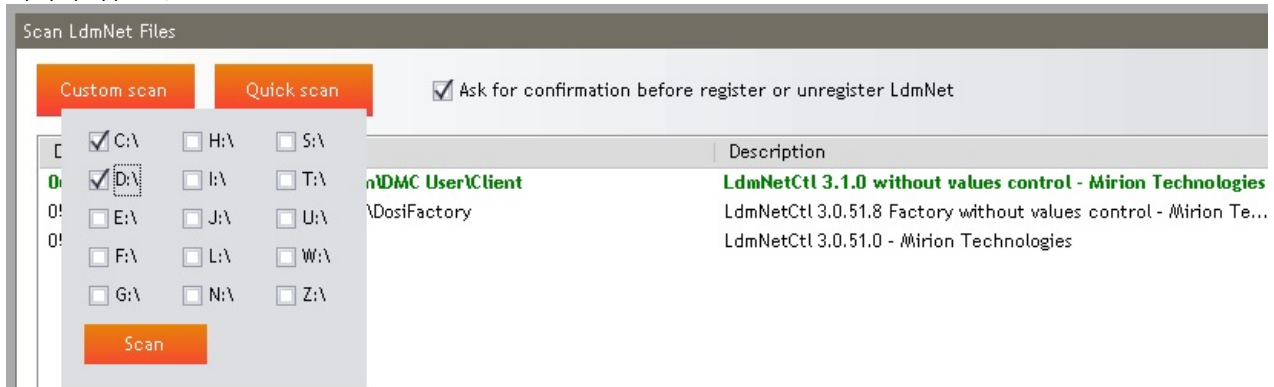
Click the "Quick scan" button to search the files on a pre-selection of directories :
 - Usual Mirion softwares installation folders,
 - Windows System32 directory.
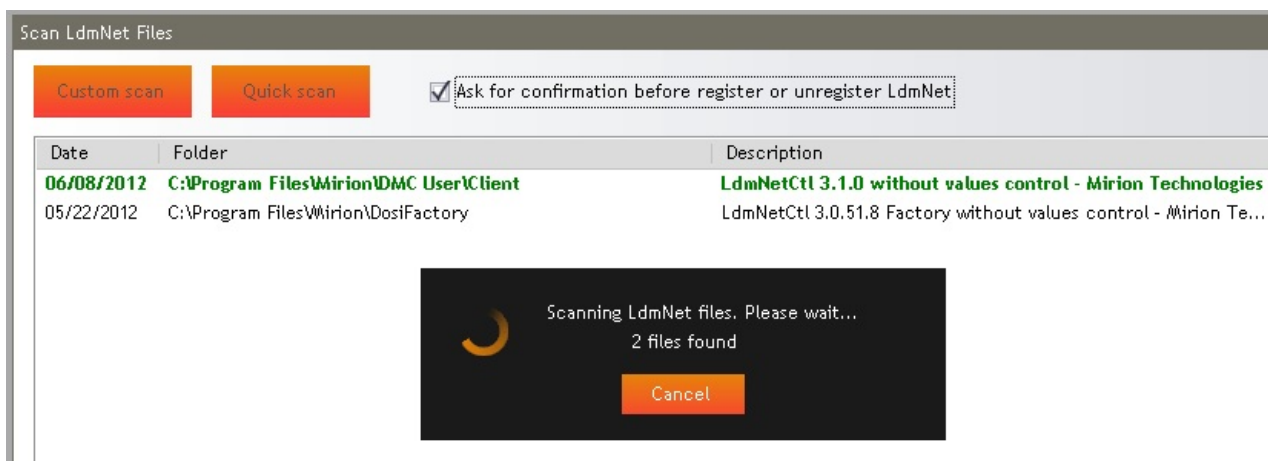
During the process, click "Cancel" to stop the scan.
The list of available LdmNet versions is displayed.

Registering another LdmNet

To register another version of LdmNet, choose one in the list of the available versions and click the "Register" button.

If the checkbox "Ask for confirmation before register or unregister LdmNet" has been checked, a confirmation popup will be displayed
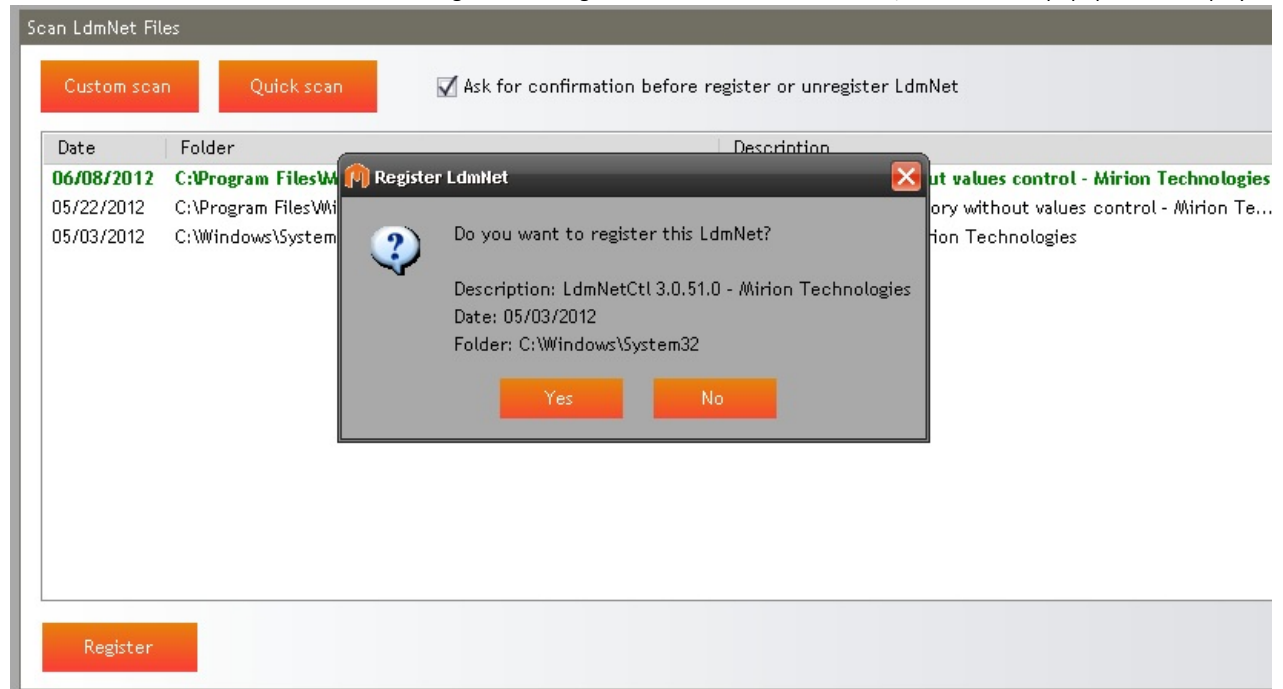
After confirmation, the chosen LdmNet is registered :

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