

User Manual

DoseVision™

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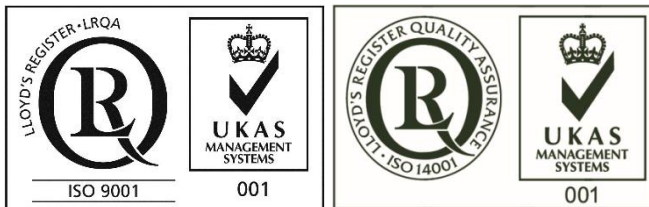
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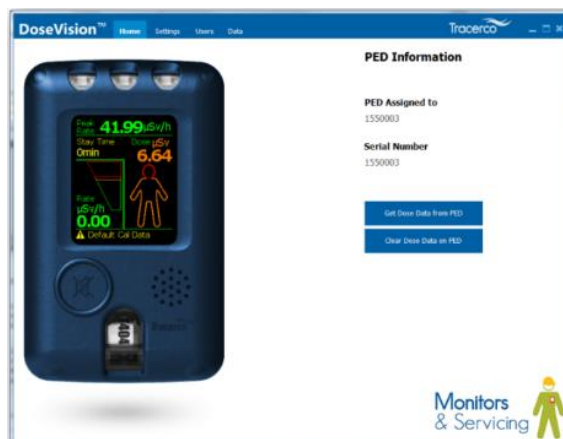
1 DoseVision™

1.1 Overview

DoseVision™ is a Windows application used to transfer dose history data from the Tracerco PEDs to a computer and view the data in graph form. DoseVision™ is also used to change settings, such as alarm settings, and assigning Tracerco PEDs to users. PEDs connect to computers using a dock or directly through micro USB connection.

Use DoseVision™ to perform the following tasks:

- View dose rate, dose and accumulated dose data
- Highlight peak dose rates
- Quick task data viewer
- Data export option and report generation
- Password protection option so that data and alarm levels can be maintained at administration level
- Simple management of PED users
- Easily upgrade of PED firmware.



1.2 Access security

Attention: DoseVision™ is usually installed on the computer of a nominated administrator.

Tracerco PEDs are supplied without password protection. For PEDs that are not password protected is in the dock, you can use DoseVision™ to set an administrator password. Note that passwords are associated with PEDs not users.

Subsequent connection of a PED with password protection does not require password entry as the password is cached on the computer. That is, the access security is effectively provided by the PC Windows login. However, if a PED is connected to a different computer, also running DoseVision™, the password is required to gain access to administrator level functions. However, user level functions are still freely accessible.

1.2.1 User access

User level access is restricted to the following functions:

- Transferring and viewing current data
- Viewing old data for the assigned user that is stored on the computer

- Changing the data storage folder
- Exporting data
- Changing the data logging mode
- Setting the time zone
- Changing the PED measurement units
- Enabling the handheld mode (PED+ and PED-ER+)
- Enabling the PED options.

1.2.2 Administrator access

Administrator level access to docked PEDs is acquired on any computer by entering the password. Administrators can view the password of docked. For example, when the user of a different computer requires administrator access and the password has been forgotten.

In the unlikely circumstances of the administrator computer losing a cached password, Tracerco can provide a pass code that allows the administrator to read the PED password.

1.3 Installation

The latest version of DoseVision™ can also be downloaded from the Tracerco website (www.tracerco.com/software).

Attention: PEDs must not be plugged in during installation.

The install program prompts for the following:

Destination location

Sets the folder with the DoseVision™ files. The default is C:\Program Files (x86)\DoseVision.

Desktop icon

Option to install a shortcut on the desktop.

1.4 System requirements

DoseVision™ runs on a Windows computer and has the following requirements:

Operating systems	Windows XP (32-bit), Windows Vista (32-bit), Windows 7 (32-bit and 64-bit), Windows 8 (32-bit and 64-bit)				
Screen resolution	800 x 600 (minimum)	Memory	2 GB (minimum)	Free disk space	5 GB (minimum)
Supporting software	Microsoft .NET Framework v4.0 (available for download free from Microsoft, if not already installed)				
Internet connection	Optional. Required for the map display of logged data (PED+ only)				

2 Getting Started

2.1 Configuring DoseVision™

Start DoseVision™ and then configure DoseVision™ on the **Settings** page as follows:

Select Data Folder

Sets the folder used for storing dose history data. To change the folder, click the **Select Data Folder** and select the folder.

Attention: By default, the data folder is under the application data `AppData` folder of the user that first run DoseVision™. If wider access is required for the dose history data, choose a folder with general access.

Language

Sets the language of DoseVision™.

2.2 Connecting a PED

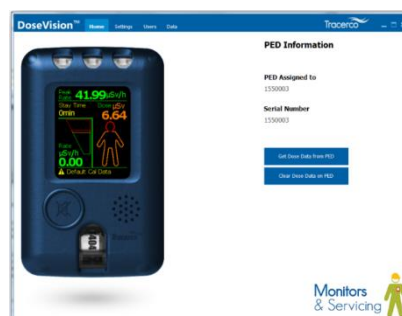
Attention: Only one PED can be connected to DoseVision™ any time. While connected to a computer, the PED does not measure or record dose data.

Connect a PED to the computer running DoseVision™ as follows:

1. For the PEDs except the PED-IS, connect the PED to the computer running DoseVision™ using a USB cable with a micro USB connection.
2. For the PED-IS, connect the dock to the computer running DoseVision™ using the USB cable. Then, fit the PED in the dock. Push down until the PED click into place as shown below.



3. On DoseVision™, ensure that the Home page changes from searching mode to displaying the last measured values on the PED readings screen as shown below.



2.3 Transferring data from a PED

Transfer data from a PED to obtain readings and to free memory as follows:

- To transfer data from a PED, click the **Get Dose Data** button on the home page. The transferred data is saved in the data folder and displayed on the **Data** tab.
- To clear data from a PED, click **Clear Dose Data**. If the data is cleared all unsaved data on the PED is saved to the user folder, the accumulated dose is set to zero, and all logs and tasks on the PED are cleared.

Attention: Administrators only can clear data from PEDs.

2.4 Getting administrator access to PEDs

Get administrator access to PEDs as follows:

- Administrator level access to a PED is acquired on any computer by clicking the **Get Administrator Access** button and entering the password.
- Administrators can view the password of PEDs by clicking the **Show Admin Password** button on the advanced tab. This requires administrator level access and may be used when the user of a different PC requires administrator access and the password has been forgotten.

In the unlikely circumstances of the administrator computer losing a cached password, Tracerco can provide a pass code that allows the administrator to read the PED password. Click on the **Get Forgotten Password** button and follow the instructions.

3 Setting Up PEDs

Set up PEDs on the **Settings** page of DoseVision™. After changing the settings, click the button **Apply**.

3.1 Alarm options

Set up the alarm options, as shown on the right, as follows:

2 or 4 dose alarms


Option for two or four alarms. If fewer alarms are required, set two or more alarms to the same level.

Alarm messages

PED+ and PED-ER+. Option to display pop-up messages when an alarm triggers.


Dose alarm levels

Two or four alarm levels. For four dose alarm levels for the yellow, amber, red and crimson. If, for example, three alarm levels are required, set the red and crimson alarms to the same value.

If the **Alarm messages** option is selected, click on the message icon  and enter the pop-up message for each alarm level.

Dose rate alarm levels


Amber and red dose rate alarm levels. If only a red alarm is required, set the amber and red alarms to the same value.


If the **Alarm messages** option is selected, click on the message icon  and enter the pop-up message for each alarm level.


Alarm Options


2 Dose Alarms
 4 Dose Alarms


Alarm Messages


Yellow Dose Alarm Level
 μSv 

Amber Dose Alarm Level
 μSv 

Red Dose Alarm Level
 mSv 

Crimson Dose Alarm Level
 mSv 

Amber Dose Rate Alarm Level
 $\mu\text{Sv/h}$ 

Red Dose Rate Alarm Level
 mSv/h 

3.2 Logging options

The **Logging Options**, shown on the right, define how data is recorded as follows:

Periodic logging

PEDs record the accumulated dose every minute. Tracerco recommends using intelligent logging in low dose rate areas as periodic logging would result in many data points without changes and, therefore, unnecessary memory usage. Use periodic logging only if PEDs are deployed in areas where the dose rate is consistently above the background level and rapid dose rate fluctuations are not anticipated.

Intelligent logging

PEDs record the accumulated dose for every 0.01 μSv (0.001 mrem) change in dose. In normal circumstances, the intelligent logging uses the memory the most efficiently. Intelligent logging is the default data logging mode.

Logging Options

Intelligent Logging
 Periodic logging (60 sec)
 Periodic logging (30 sec)
 Periodic logging (10 sec)
 Periodic logging (5 sec)

3.3 Handheld mode (PED+ and PED-ER+)

For the PED+ and PED-ER+, choose whether set the mode from the following options.

- Dose / handheld
- Dose
- Handheld.

Attention: The default option **Dose / Handheld** allows users to toggle between the dose and handheld mode using PED menu.

Mode

Dose / Handheld

Dose

Handheld

3.4 PED options

The **PED Options** define the options available to users as follows:

Allow Discrete Mode

If enabled, users can select the discrete mode on PEDs.

Allow Peak and Dose Rate Reset

If enabled, allows the option to reset the peak dose rate value and accumulated dose value to appear in the PED settings menu (not recommended for accurate dose logging).

Allow Log Reset

If enabled, allows the option to delete the currently logged data on the PED to appear in the PED settings menu (not recommended for accurate dose logging).

Allow screen select

If enabled, allows users to select the display mode.

Allow calibration reminder

If enabled, displays a calibration reminder. By default, enabled only on the PED-IS.

PED Options

Allow Discrete Mode

Allow Peak and Dose Reset

Allow Log Reset

Allow Screen Select

Allow Calibration Reminder

3.5 Units

Select the dose units for dose to **µSv** or **mrem** as shown below.

Dose Units

mRem

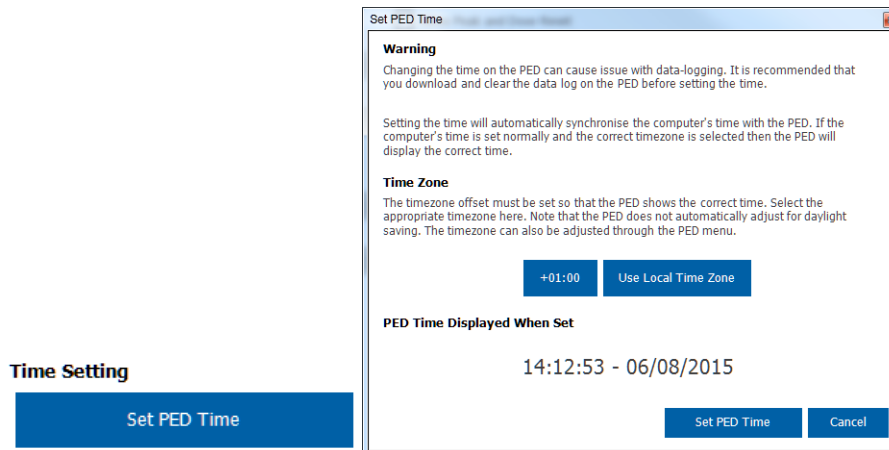
µSv

3.6 Time

The internal clock on the PEDs should match the time and date (in GMT) of the computer running DoseVision™.

Attention: Data is recorded relative to GMT.

To set the time, click the **Set PED Time** button to open the **Set PED Time** dialog box as shown below.



For the PED to display the correct time, the time zone must be selected by clicking the time zone offset button or the **Use Local Time Zone** button. **Use Local Time Zone** automatically uses the local time zone value set on the computer. The time zone takes daylight saving time into account if Windows is configured to automatically adjust for daylight savings. Before the time is set, the date and time are shown on the time setting window. If the time is correct, then click the **Set PED Time** button to set the clock within the PED and to configure the time zone.

Attention: If there are pending changes to be made to PED settings, then these must be applied or cancelled before the time on the PED can be set.

Optionally, users can set the time displayed on PEDs to suit the local time.

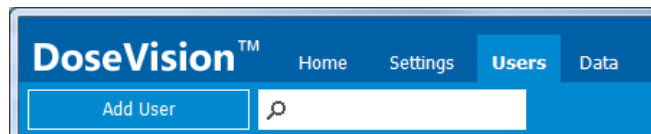
4 Managing Users

On the **Users** tab, you can add, edit and delete users, view data, and create reports.

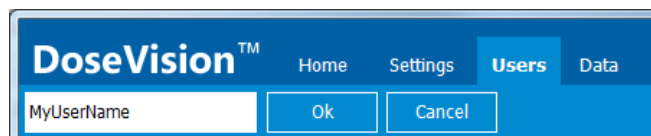
4.1 Adding and deleting users

Add a user as follows:

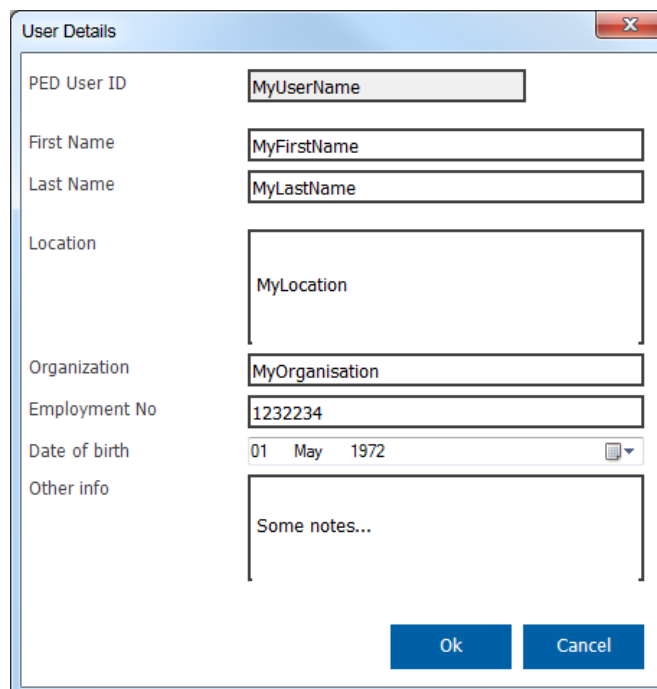
1. On the **Settings** tab, click the **Add User** button.



2. Enter the user name and then click **OK**.



3. In the **User Details** dialog box, enter information such as the first and last name, employment number, and data of birth.



To delete a user, select the user from the list in the **Users** tab and then click **Delete**.

Attention: Deleting a user results in all the data for the user being lost.

4.2 Assigning users to PEDs

To assign the PED to another user, select the user from the list and then click on the **Assign to PED** button.

4.3 Viewing user data

To view data from within the **Users** tab, select the user from the list and then click on the **Graph** button to open the **Data** tab with data for the user.

Click the **Options** button to set the following when viewing the user data as shown below.

Attention: PED+ and PED-ER+. If the PED user chose to record data with the task function then DoseVision™ provides a useful tool to select these specific data sets. Select Tasks and purple markers appear above the graph. Double-click the purple bar to show task data only.

The graph options are as follows:

Dose

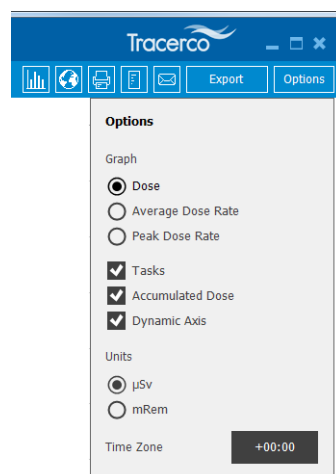
Shows the total accumulated dose (green line) over the data period selected. The orange histogram indicates accumulated dose for each minute, hour or day depending upon the resolution selected by zoom control

Average Dose Rate

Switches the view to a dose rate histogram showing the average dose rate for each interval on the horizontal axis. The minimum averaging period is 1 minute, followed by 1 hour then 1 day.

Peak Dose Rate

Allows the user to view non-averaged dose rate data at each resolution. In this case the peak for each period is shown in histogram form.

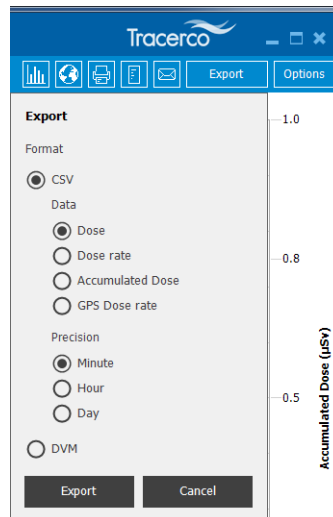


4.4 Generating reports for individual users

Generate a report for a user from the **Graph** page of the user data as follows:

1. Click the **Export** on the **Users** tab

2. Select to export the report in the CSV or DVM format. For the CSV format, and select the required options for the report data and precision.

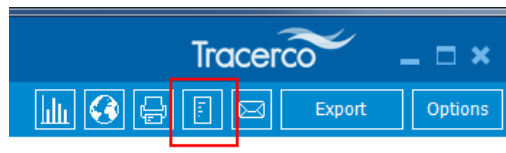


3. Click the **Export** button.

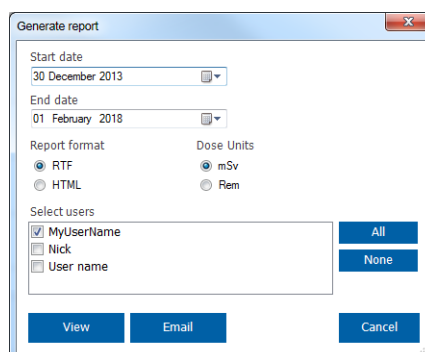
4.5 Generating reports on multiple users

Generate a report on multiple users as follows:

1. Click the report icon on the **Users** tab as shown below.



2. In the **Generate report** dialog box, select the users to include in the report, the dates to cover, format, and units. Then:
 - Click **View** to open the report in Word (RTF format) or in the browser (HTML format).
 - Click **Email** to create an email with the report attached or embedded in an HTML email.



4.6 Viewing location data (PED+ and PED-ER+)

The PED+ and PED-ER+ can log location data using the built-in GPS module. Location data can be shown on a map to review dose and dose rate data with respect to the location.

Attention: DoseVision™ requires a working connection to the internet to be able to display the location data on a map. If an internet connection cannot be found, the map cannot be displayed.

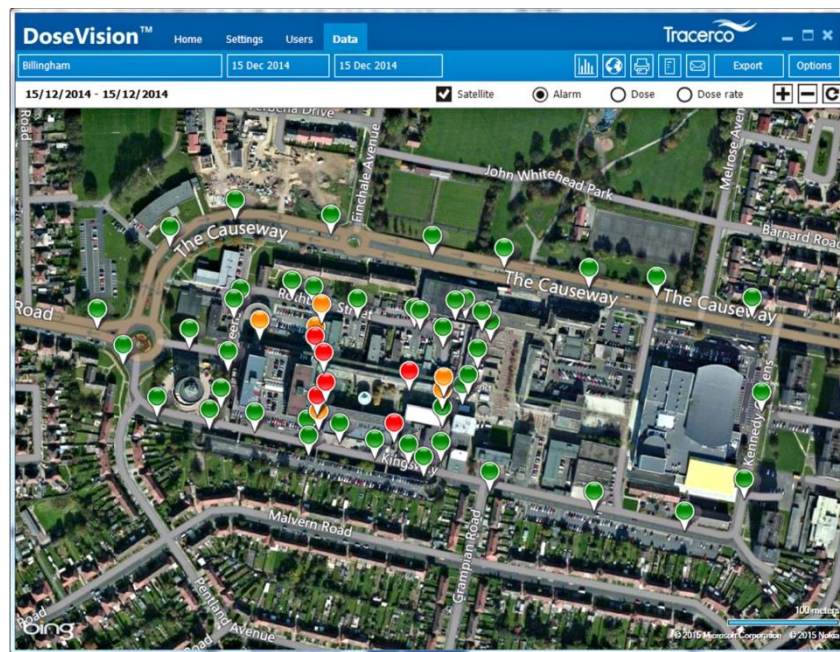
View the map as follows:

1. Select a user and show the data tab for that user.



2. View the map with logged data points shown. DoseVision™ automatically adjusts the map to attempt to show all the data for the period selected. However, with large numbers of data points navigation of the map may become slow. To ensure smoother operation, filter the data by date to show fewer points.

If no data has been logged for the period selected by the filter, then the map is not displayed and a message explains that there is no logged data.



3. Inspect each data point by hovering the mouse pointer over the map point. This shows a box that will include the date and time that the point was logged at as well as values that depend on which of the display modes is selected from the map options bar. The data points are as follows:



Each data point is shown coloured with the highest priority alarm colour of all of the alarms active at the point when the data was logged. The hover-over box for this mode will display both the dose and the dose rate logged at the location.



Each point is coloured according to the dose rate logged at the location. All of the points shown are colour-graded from lowest to highest dose rate with the lower dose rates being coloured grey and the higher dose rates being coloured pink. The hover-over box for this mode will display the dose rate logged at the location.



Each point is coloured according to the dose logged at the location. All of the points shown are colour-graded from lowest to highest dose with the lower dose being coloured grey and the higher dose being coloured blue. The hover-over box for this mode will display the dose logged at the location.

5 Firmware and Software Upgrades

5.1 Downloads

The latest version of the DoseVision™ software and PED Firmware can be downloaded from the Tracerco website (www.tracerco.com/software).

5.2 PED firmware upgrades

After downloading the required firmware file, use DoseVision™ to install the firmware on to the PED as follows:

1. Ensure that the PED is fitted in the dock and connected to DoseVision™.
2. On DoseVision™, click the **Upgrade Firmware** button in the **Settings** tab. Then, selecting the relevant *.tfw file.

Attention: Download the correct firmware. If an attempt is made to load the incorrect firmware into the device, a warning message is given. The filename of the firmware file indicates the target PEDs.

5.3 DoseVision™ software upgrades

To upgrade the DoseVision™, follow the instructions provided on the website.



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