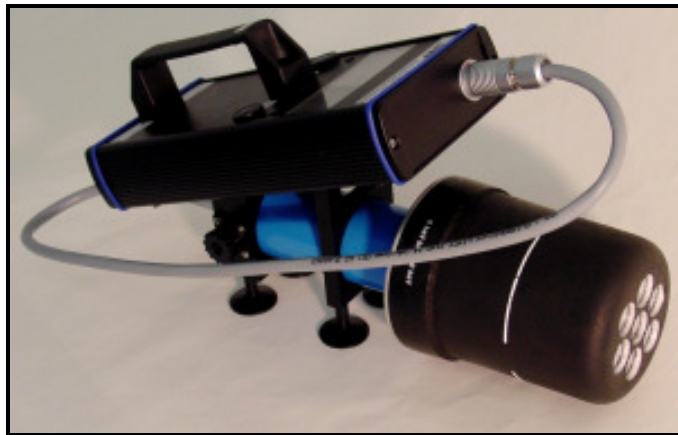# STEP - User manual

for

the PC software
'OrtsdosimeterSTEP.exe'
Software for data acquisition for the Survey Meter **OD-01**
(Version V1.3 en , release Feb 2011)

Content:

1. Installation

The software was developed to automatically receive, display, analyse and storage the readings of the Survey Meter **OD-01,** produced by STEP Sensortechnik und Elektronik Pockau GmbH.

System requirements:
- Microsoft- Win32- operating system (NT4.0, Windows 2000, Windows XP, Windows Vista, Windows7 or Windows8)
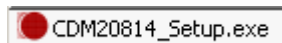- USB-connection.

Steps to install the software:

1. Installation USB- driver:

Attention: Install USB- driver <u>before</u> connecting device OD-01 on PC **!**

You will find the USB- driver on the CD 'OD-01' in the directory '*USB-driver'*.
The driver is an execution file, named:

CDM20814_Setup.exe

For installation please run the file *2 time* by double clicking. At the 2nd Run a DOS window will appear as follows:

```
C:\DOKUME~1\ADMINI~1.PCB\LOKALE~1\Temp\DPInst_Monx86.exe
32-bit OS detected
"C:\DOKUME~1\ADMINI~1.PCB\LOKALE~1\Temp\DPInstx86.exe"
Installing driver...................
```

After that, the driver is successful installed.

2. Connect OD-01 on PC

Before starting the program, please connect your OD-01 via the provided special cable between the OD-01 and an USB- Port on your PC / Laptop *and turn on* the device according the user manual of OD-01!

3. Copy from CD and start of software

Please *copy completely* the content of CD 'OD-01' on your hard drive into *C:*
The result must be the new folder: **C:\ OrtsdosimeterSTEP** with sub-folder *data* and *protocol* .

Now you can start the software   OrtsdosimeterSTEP V1.3.1 en.exe   by double clicking.

Note: The start of program directly from CD is also possible!

2. Start-up / Device connection / Program start

Before starting the program, please connect your OD-01 via the provided special cable between the OD-01 and an USB- Port on your PC / Laptop **and turn on** the device according the OD-01 user manual!

The program can be started by double-click on the file (also possible directly from the CD):

‚OrtsdosimeterOD01.exe'
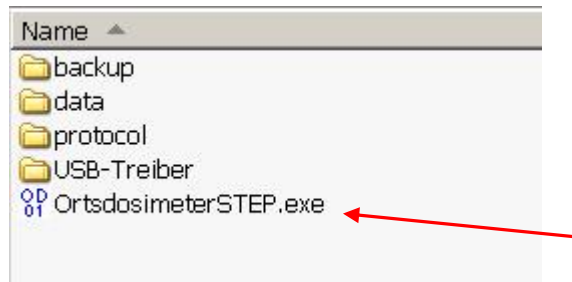
At program start, all available interfaces will be automatically checked regarding a connected OD-01. After successful detection of the corresponding interface with the connected device, the start-window pops up:
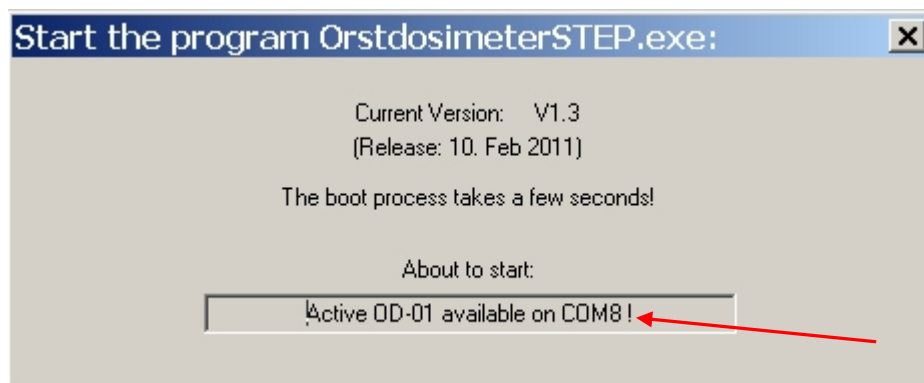
Afterwards, the program-window opens:
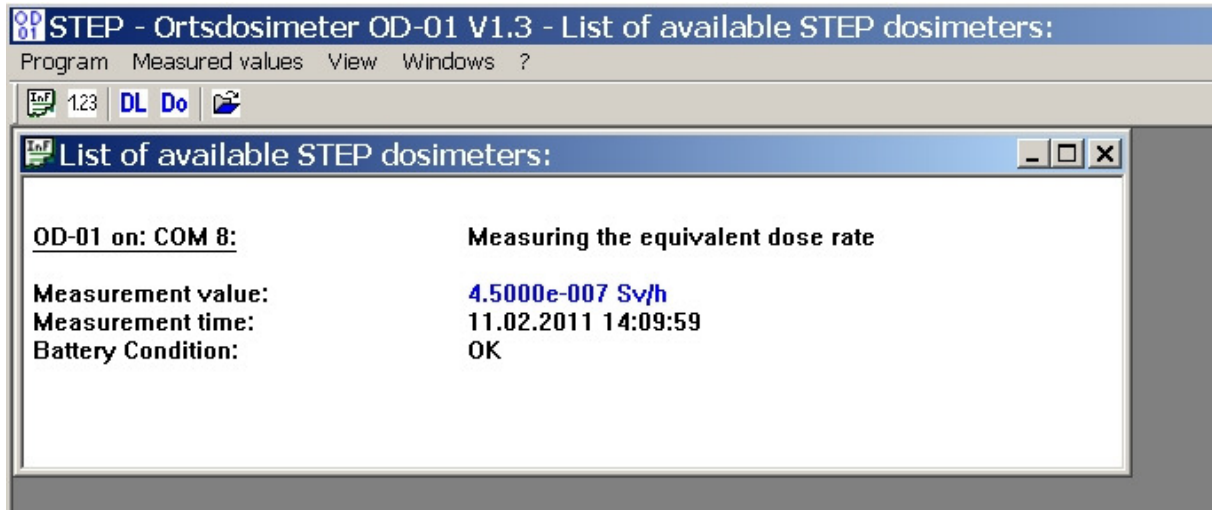
In this program-window, there is a list of the available dosimeter with entries regarding:

-      Detected interface
-      Current state of the device
-      Current measuring value
-      Time of the current reading
-      Condition of the internal battery

In addition, you can see in the status bar the current measured value, the measurement mode and the device state:
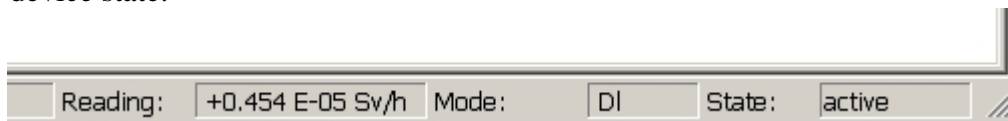
3. Real time collection of dose and dose rate reading

Once the software detected an active OD-01, the values of a measurement will be read. To display the readings in a diagram use the following software function:

3.1   Open diagram

You can open a diagram window by selecting the menu *Measured values* → *Diagram with dose rate vs. time*:
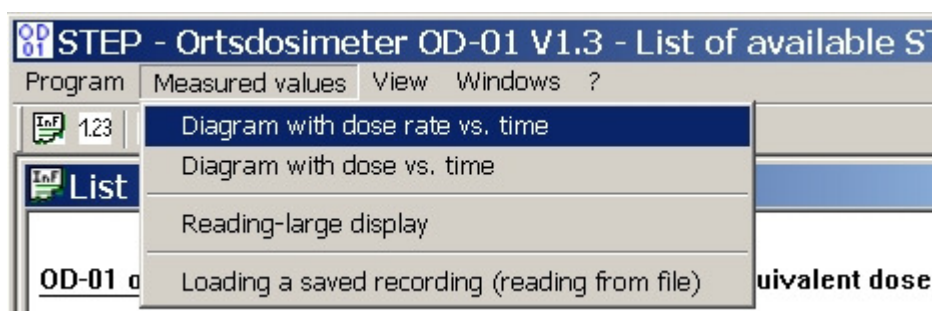
The following window opens:
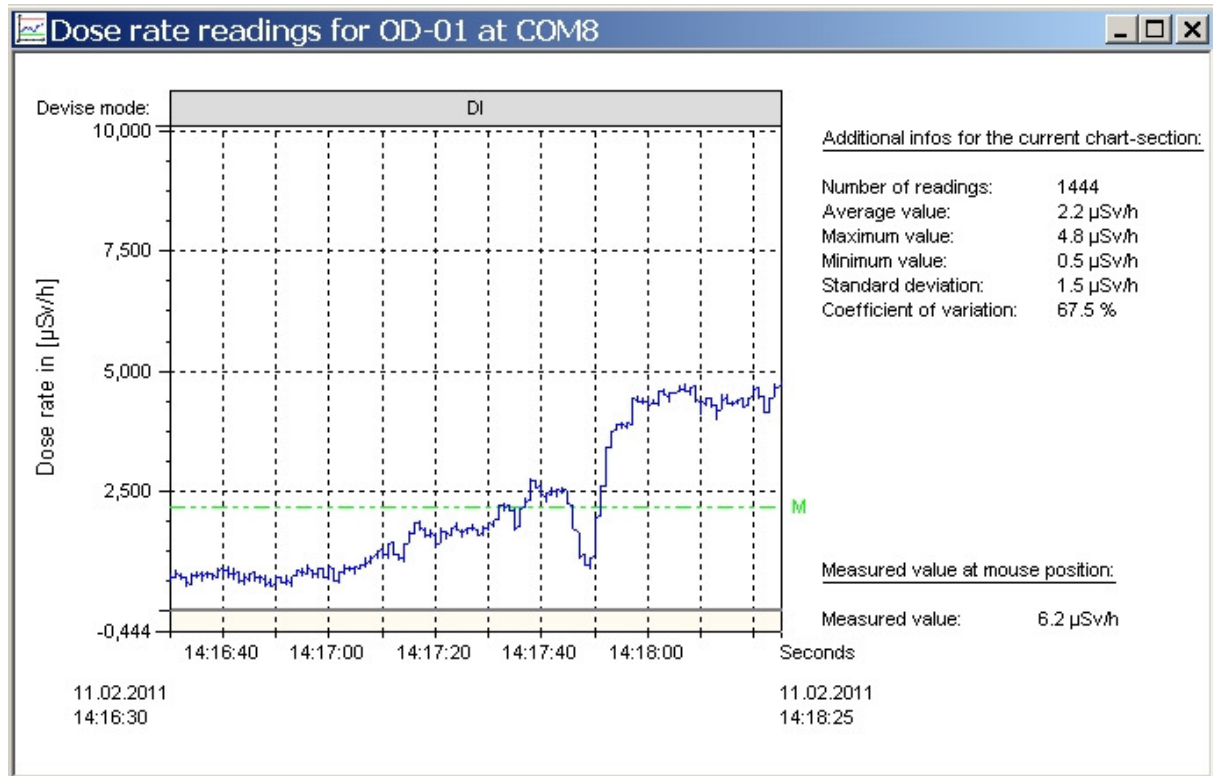
On the left hand side, the diagram with the corresponding values is depicted. On the right hand side, additional information are shown that correspond to the visible range of the diagram .

Note:
In case there are new readings, the time axis will be automatically updated after the window is opened.

Zoom- function:
Using the mouse, a selected area of diagram can be enlarged. Do this, position the mouse in the upper left corner of the new window, drag the mouse with the pressed left mouse button until the desired lower right end of the new window.
With the ESC- button you get back into the previous window.

Attention!
In the diagram ‚Dose rate vs. time', are shown underline exclusively dose rates value. If the device is in the mode ‚Dose', the dose readings **are not** displayed in the diagram ‚Dose rate vs. time'.
To show these values, please open the diagram ‚Dose vs. time'.

At the top of the diagram, the current measurement mode of the connected OD-01 is stated:

- Dl … Dose rate vs. time in µSv/h
- DL … Dose rate vs. time in mSv/h
- DO … Dose vs. time in µSv
- NL … Zero- adjustment (electic)
- ER … Error

-      ST   …   Start of OD-01

3.2   Context menu in window ‚Diagram'

Position the mouse in the diagram window, press the right mouse button and the context menu is opening:
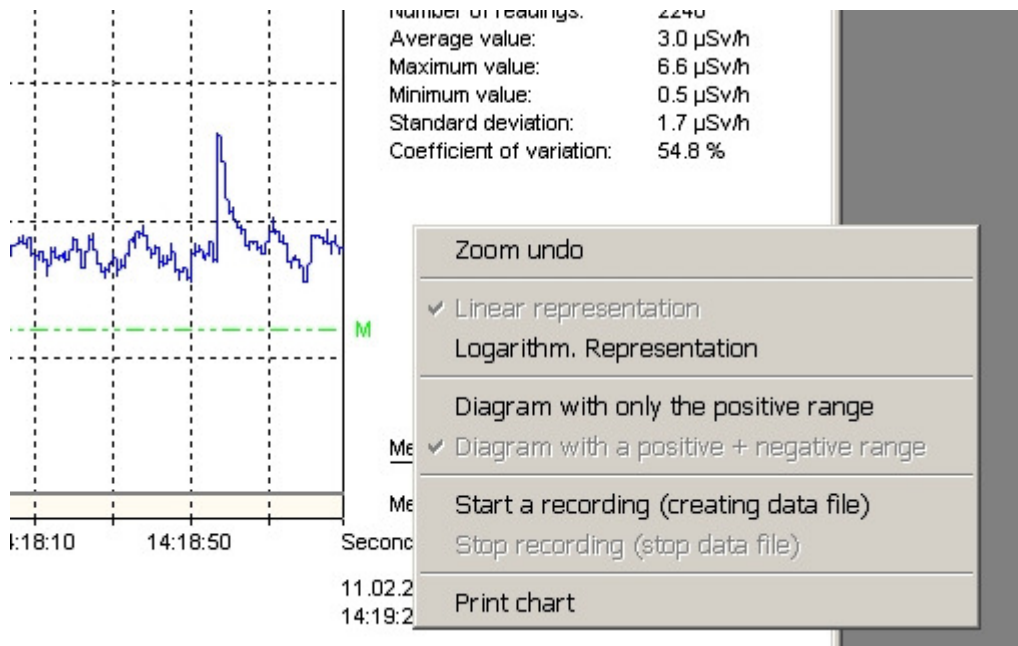
Among others, different types of displays or the below described functions can be activated over this context menu.

3.3   Printing of diagrams

Click on ‚Print diagram' to get a print-out (what you see is what you get) of the shown diagram.

3.4   Zoom into a diagram

To zoom into a diagram proceed as follows: Use the mouse cursor and navigate to a certain point in the diagram. Hold down the left mouse bottom and move the mouse cursor to another point downright. A successful enlargement is stated in the window's title bar. The procedure can be repeated up to the desired size of the diagram section.

Use the Escape-button or the context menu ‚Zoom undo' you get back to the previous window.

3.5   Start a record

To save the history of a measurement, go to the diagram menu and click on ,Start a record':
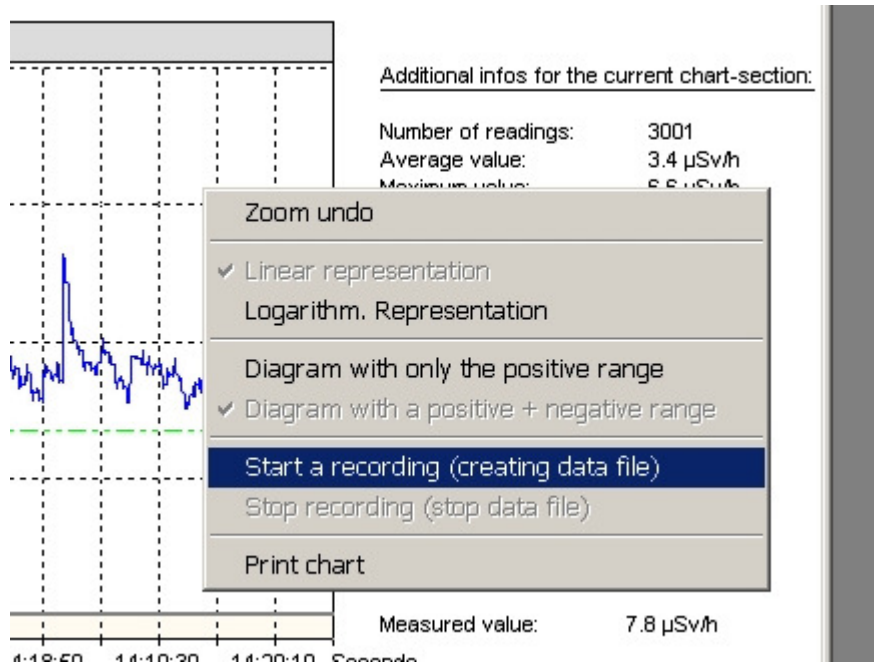
<u>Note:</u> The context- menu 'start a recording' is only active in the chart with current readings (not on the chart with stored records)

A new dialog box opens where the user can enter additional data regarding the current measurement

-       Name of the user
-       Place/location of the measurement
-       Other remarks

By selecting one of the three options under 'Precision of the data storage', you can determine how many values are stored for each time interval.
Please note the maximum recording time of 13 hours of storage of one reading per second!

Additional data for recording:

Beginning of the recording: 15.02.2011 14:46:13.od1

End of the recording:

Precision of the data storage:
- ☑ 1 measurement per second   (max. recording time: about 13 h)
- ☐ 1 measurement per minute   (max. recording time: about 30 days)
- ☐ 1 measurement per hour   (max. recording time: unlimited)

Name: Mr. Miller

Location: Nuclide lab

Notes: Radiation behind the wall

Saving to file:

Folder: C:\OrtsdosimeterSTEP\data\   [...]

File Name: OD-01 record from the 15.02.2011 144613   .od1

[Confirm]   [Cancel]

Click on ,*Confirm*' to start the record of the measurement, which is saved into a separate file.
On the right side is flashing the words 'Recording active!' during process of recording:

Dose rate readings for OD-01 at COM8 (Zoom: 0)

Devise mode: DI

Dose rate in [µSv/h]

4,000

2,000

-0,200

14:23:39   14:24:19   14:24:59   14:25:39   14:26:19   Seconds

11.02.2011   11.02.2011
14:23:19   14:26:58

Additional infos for the current chart-section:

Number of readings: 2698
Average value: 1.5 µSv/h
Maximum value: 5.0 µSv/h
Minimum value: 0.4 µSv/h
Standard deviation: 1.4 µSv/h
Coefficient of variation: 94.2 %

Recording active !

Measured value at mouse position:

Measured value:

3.6   Stop a record

To end the recoding, right-click on the diagram, open context- menu and chose ‚Stop recording':
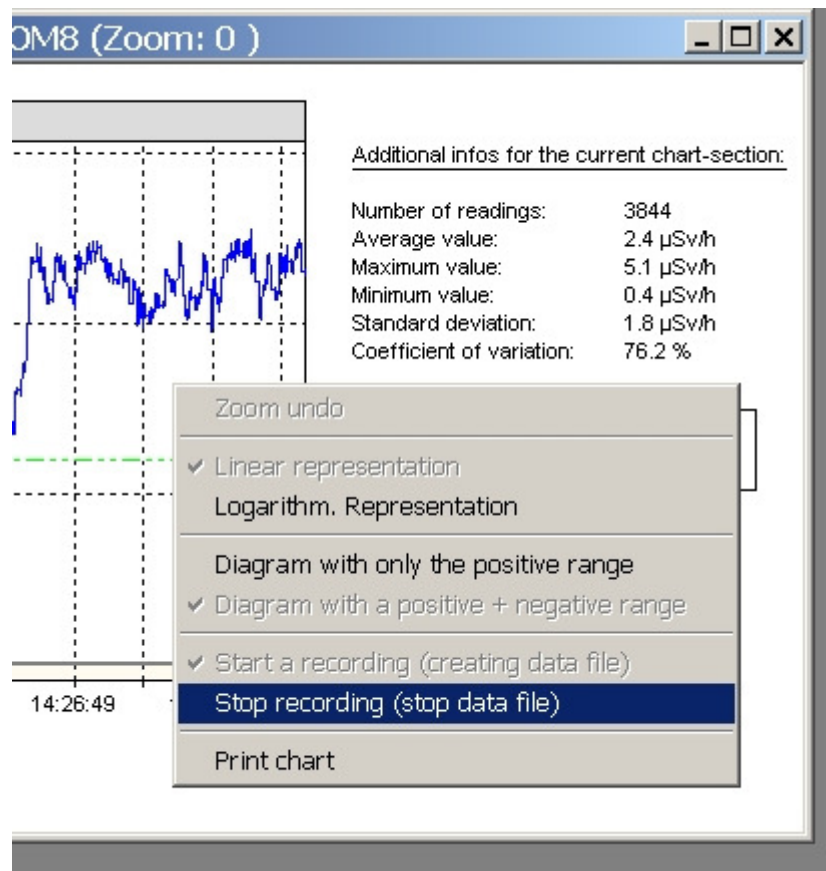
3.7   Open a saved record/reading file

To open a recorded measurement from the separate file chose menu: Measured values →
Loading a saved recording (reading from file)

The following dialog window appears:

Selection of a stored-OD-01 data file: ✕

Selected file folder: `C:\OrtsdosimeterSTEP\data\`   `...`

Selected OD-01 data file: `OD-01 record from the 11.02.2011 142334 .od1` ▼

File Contents (preview):

```
Users           : Mr. Miller
Measuring location : Nuclide labor
Start time        : 11.02.2011 14:23:34
End time          11.02.2011 14:28:30:34
Comment           : Radiation behind the wall
====================
11.02.2011 14:24:57      938      +0,0760E-05    Sv/h    DI
11.02.2011 14:24:58      406      +0,0830E-05    Sv/h    DI
11.02.2011 14:24:58      873      +0,0700E-05    Sv/h    DI
11.02.2011 14:24:59      372      +0,0670E-05    Sv/h    DI
11.02.2011 14:24:59      917      +0,0650E-05    Sv/h    DI
11.02.2011 14:25:00      307      +0,0620E-05    Sv/h    DI
11.02.2011 14:25:00      837      +0,0670E-05    Sv/h    DI
11.02.2011 14:25:01      320      +0,0720E-05    Sv/h    DI
11.02.2011 14:25:01      772      +0,0770E-05    Sv/h    DI
11.02.2011 14:25:02      240      +0,0720E-05    Sv/h    DI
11.02.2011 14:25:02      723      +0,0790E-05    Sv/h    DI
11.02.2011 14:25:03      221      +0,0730E-05    Sv/h    DI
11.02.2011 14:25:03      736      +0,0870E-05    Sv/h    DI
```

[Show file as dose vs. time]   [Cancel]   [Show file as doserate vs. time]

The lower part of the window consists of an excerpt of information on the reading-file.
Chose the corresponding file via the drop-down list box:

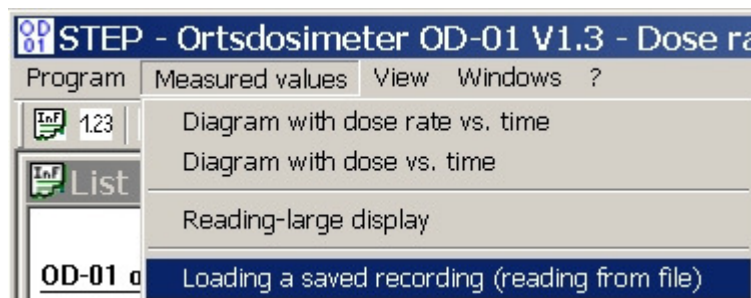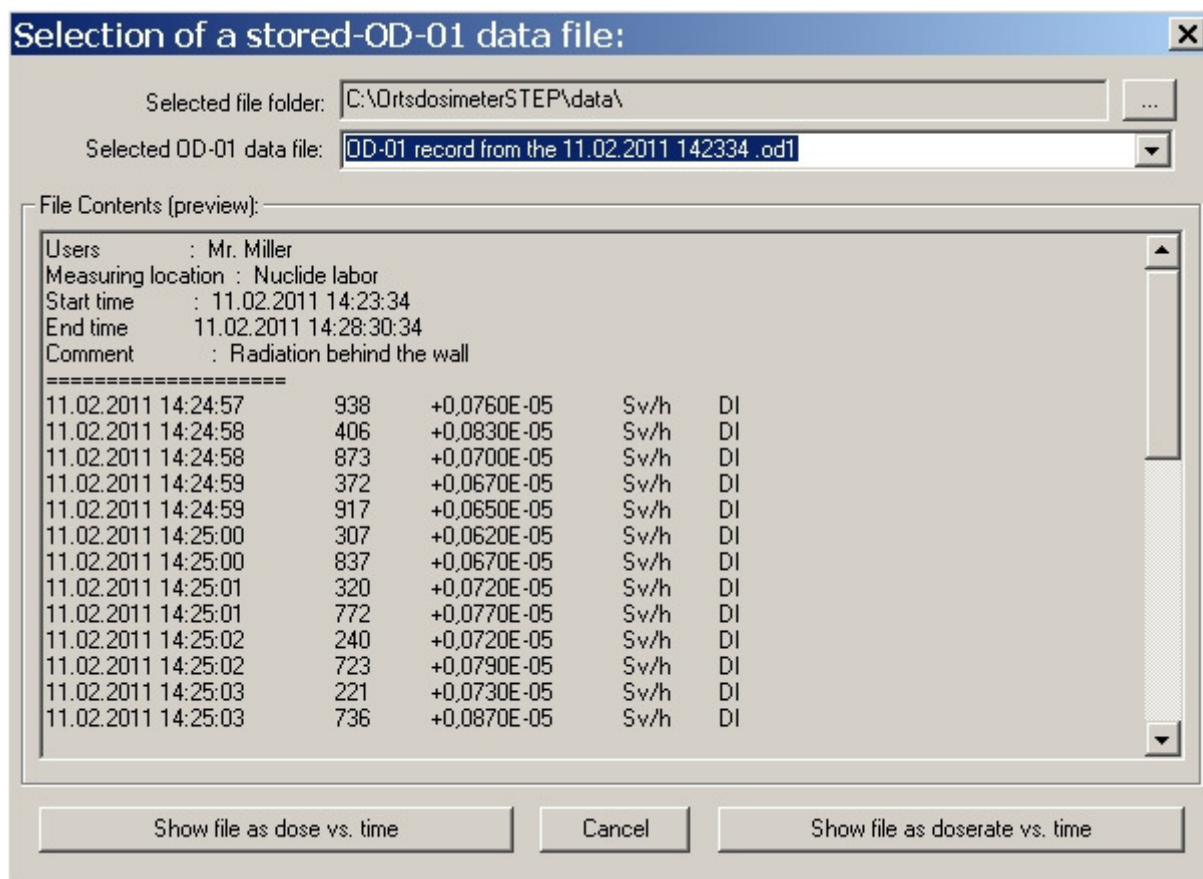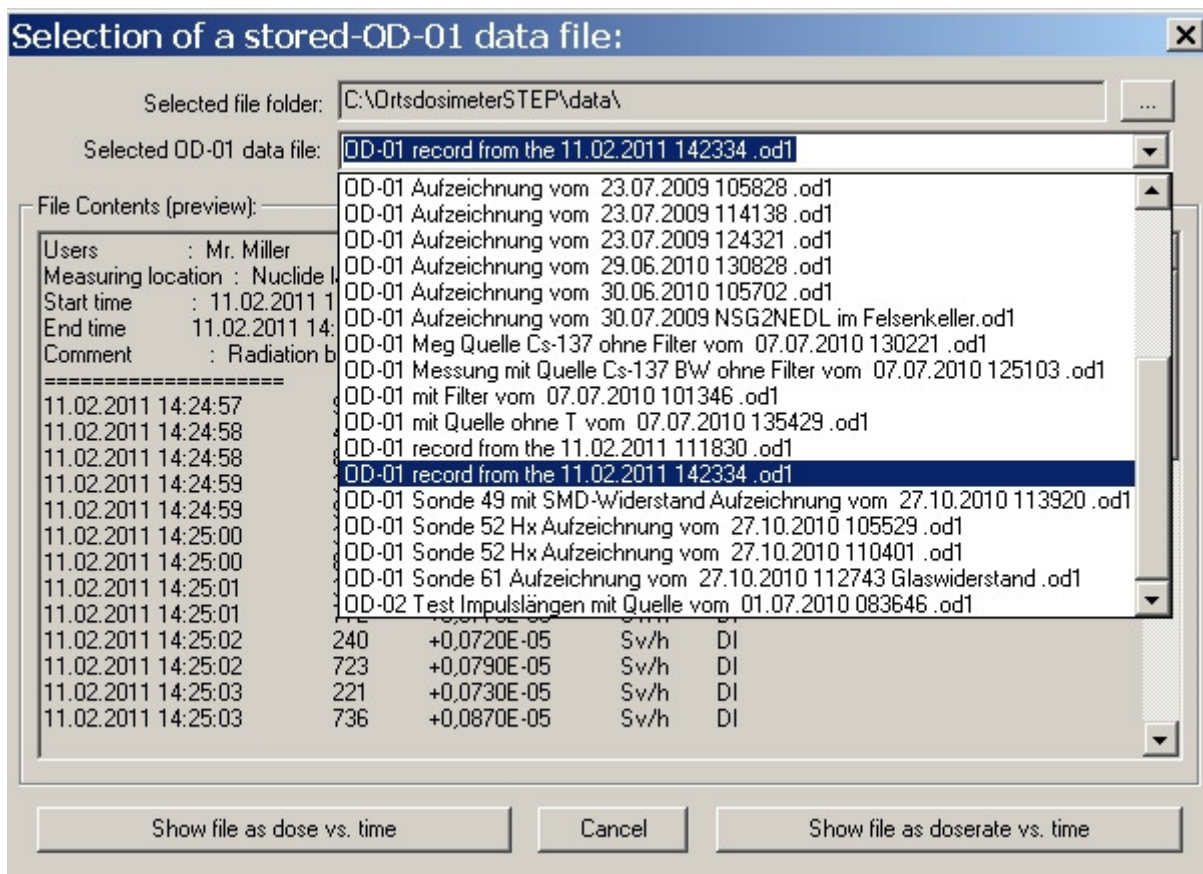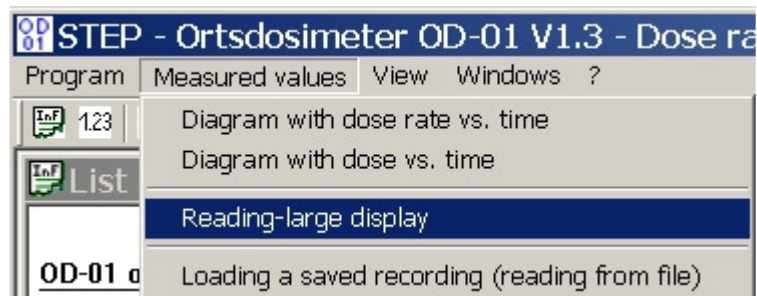**Selection of a stored-OD-01 data file:** ✕

Selected file folder: `C:\OrtsdosimeterSTEP\data\`   `...`

Selected OD-01 data file: `OD-01 record from the 11.02.2011 142334 .od1` ▼

File Contents (preview):

```
OD-01 Aufzeichnung vom  23.07.2009 105828 .od1
OD-01 Aufzeichnung vom  23.07.2009 114138 .od1
OD-01 Aufzeichnung vom  23.07.2009 124321 .od1
OD-01 Aufzeichnung vom  29.06.2010 130828 .od1
OD-01 Aufzeichnung vom  30.06.2010 105702 .od1
OD-01 Aufzeichnung vom  30.07.2009 NSG2NEDL im Felsenkeller.od1
OD-01 Meg Quelle Cs-137 ohne Filter vom  07.07.2010 130221 .od1
OD-01 Messung mit Quelle Cs-137 BW ohne Filter vom  07.07.2010 125103 .od1
OD-01 mit Filter vom  07.07.2010 101346 .od1
OD-01 mit Quelle ohne T vom  07.07.2010 135429 .od1
OD-01 record from the 11.02.2011 111830 .od1
OD-01 record from the 11.02.2011 142334 .od1
OD-01 Sonde 49 mit SMD-Widerstand Aufzeichnung vom  27.10.2010 113920 .od1
OD-01 Sonde 52 Hx Aufzeichnung vom  27.10.2010 105529 .od1
OD-01 Sonde 52 Hx Aufzeichnung vom  27.10.2010 110401 .od1
OD-01 Sonde 61 Aufzeichnung vom  27.10.2010 112743 Glaswiderstand .od1
OD-02 Test Impulslängen mit Quelle vom  01.07.2010 083646 .od1
```

```
Users           : Mr. Miller
Measuring location : Nuclide l
Start time        : 11.02.2011 1
End time          11.02.2011 14:
Comment           : Radiation b
====================
11.02.2011 14:24:57
11.02.2011 14:24:58
11.02.2011 14:24:58
11.02.2011 14:24:59
11.02.2011 14:24:59
11.02.2011 14:25:00
11.02.2011 14:25:00
11.02.2011 14:25:01
11.02.2011 14:25:01
11.02.2011 14:25:02      240      +0,0720E-05    Sv/h    DI
11.02.2011 14:25:02      723      +0,0790E-05    Sv/h    DI
11.02.2011 14:25:03      221      +0,0730E-05    Sv/h    DI
11.02.2011 14:25:03      736      +0,0870E-05    Sv/h    DI
```

[Show file as dose vs. time]   [Cancel]   [Show file as doserate vs. time]

To open the diagram 'Doserate vs. time' click the Button 'Show file as doserate vs. time'.
To open the diagram 'Dose vs. time' click the Button 'Show file as dose vs. time'.

4. Window with large measurement display

With the Icon [1.23] or the following menu:

a window can be displayed with an enlarged view of current measurement Value:

5. Tips

Switch to another mode while collecting readings.

While the collection of readings by the software, the user can chose another mode at the OD-01. The software recognises the switching and depending on the type of the switching a dialog box opens for some seconds:

Only after the corresponding waiting time, the readings will be displayed again.

Final note:

Error messages and other information to improve the PC software *‚OrtsdosimeterSTEP.exe‘* should be addressed to:

STEP Sensortechnik und Elektronik Pockau GmbH
Siedlungsstrasse 5 – 7
09509 Pockau
Germany

info@step-sensor.de