

# **CSW Configuration Software for RDS-30**

## **User's Manual**

Ver.1.10



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# 1 INTRODUCTION

## 1.1 General Description

The CSW software is a configuration software for the RDS-30 Survey Meter. The communication with the RDS-30 takes place using IrDA (infrared light waves). There must be an IrDA port available in the PC for running the CSW software. If an internal IrDA port is not available in the PC, an external IrDA serial port or IrDA-USB adapter can be used.

The CSW software operates under the Microsoft Windows® environment. Before using this manual, you need to know the fundamentals of using Windows®. If you need to review Windows techniques, consult the documentation that comes with Microsoft Windows®.

The unregistered limited version of the CSW software is available free of charge at [www.rados.com](http://www.rados.com) or by email request to [info@rados.fi](mailto:info@rados.fi).

## 1.2 Installing the CSW Configuration Software

Windows® operating system must be installed before you can install the CSW Configuration SW. Before installing the CSW software, make sure you have the IrDA-link installed and operational in your PC.

CD Installation:

- Insert CSW Configuration SW set-up CD into the CD drive (**D:**).
- From **Start** menu choose **Run**.
- Type **D:\SETUP** and choose **OK**.
- Follow the instructions on the screen during the installation procedure.

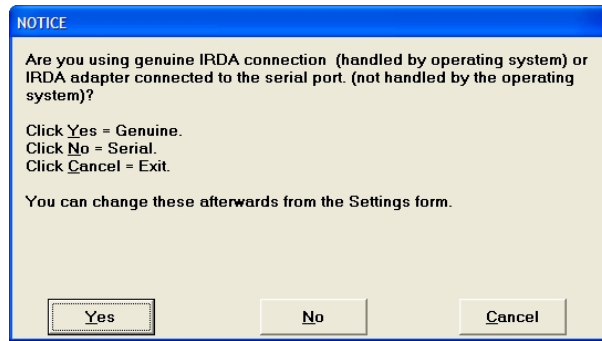
Installation with USP Hasp dongle:

- Insert the Hasp dongle into the USP port
- When/if Windows® shows "Found New Hardware Wizard", click cancel
- Run CSW setup as described above
- Start CWS-software (the light of the Hasp dongle should be always on)

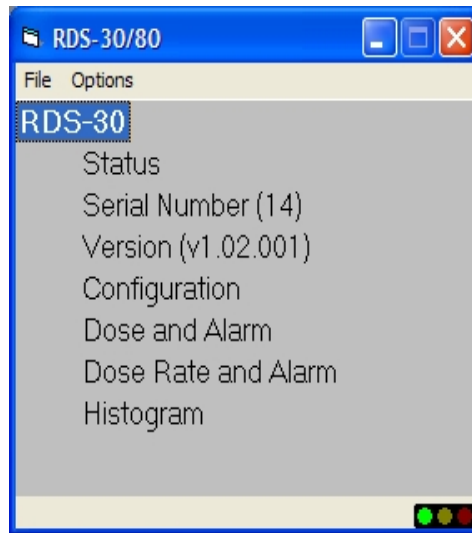
Note: If the installation of the Hasp dongle for some reason fails it can be installed from the installation CD directory "HASP\_driver\_setup/hdd32.exe". The Hasp dongle must be in the USB port when installation is done.

## 1.3 Starting the CSW software

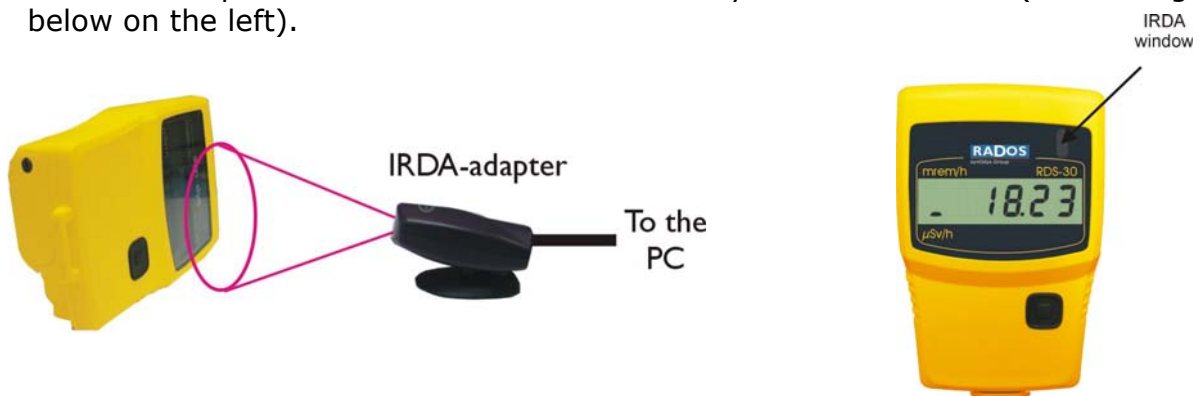
In order to run the CSW software, click the RDS CSW icon under RADOS directory in the Programs Menu. When starting the program for the first time, it will ask what kind of IrDA communication is used. If you have genuine IrDA handled by the operating system (like integrated IrDA of a Laptop PC) select YES. If you have an IrDA adapter connected to a serial port click NO.



Now the main window of the CSW software appears on the screen.



The IrDA window is in the front side of the RDS-30, behind the display window in the top right corner (see the figure below on the right). After initializing the communication of the RDS-30, place the IrDA window of the RDS-30 in front of the IrDA-adapter so that there is direct visibility between the two (see the figure below on the left).



The traffic lights in the right bottom corner of the main window show the communication status with RDS-30.

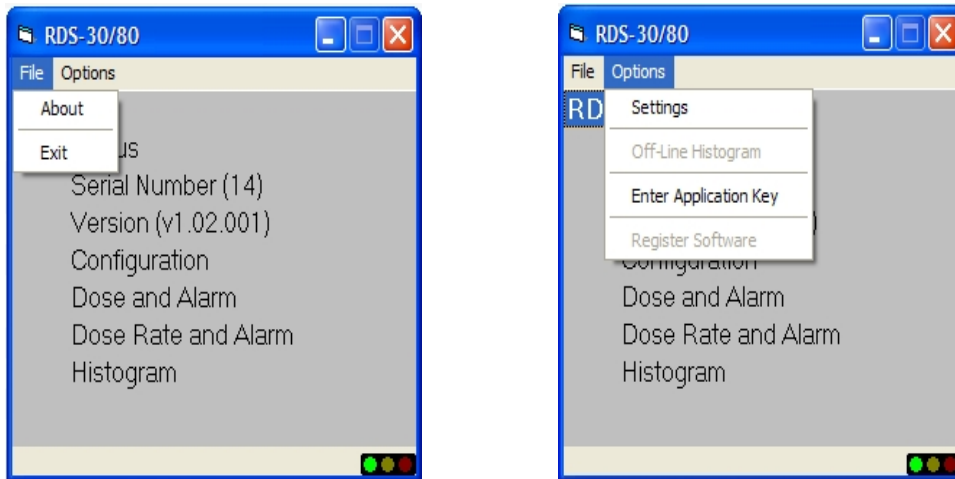
- |        |                              |
|--------|------------------------------|
| Green  | online                       |
| Yellow | waiting response from RDS-30 |
| Red    | offline                      |

## 2 Main window items

### 2.1 General

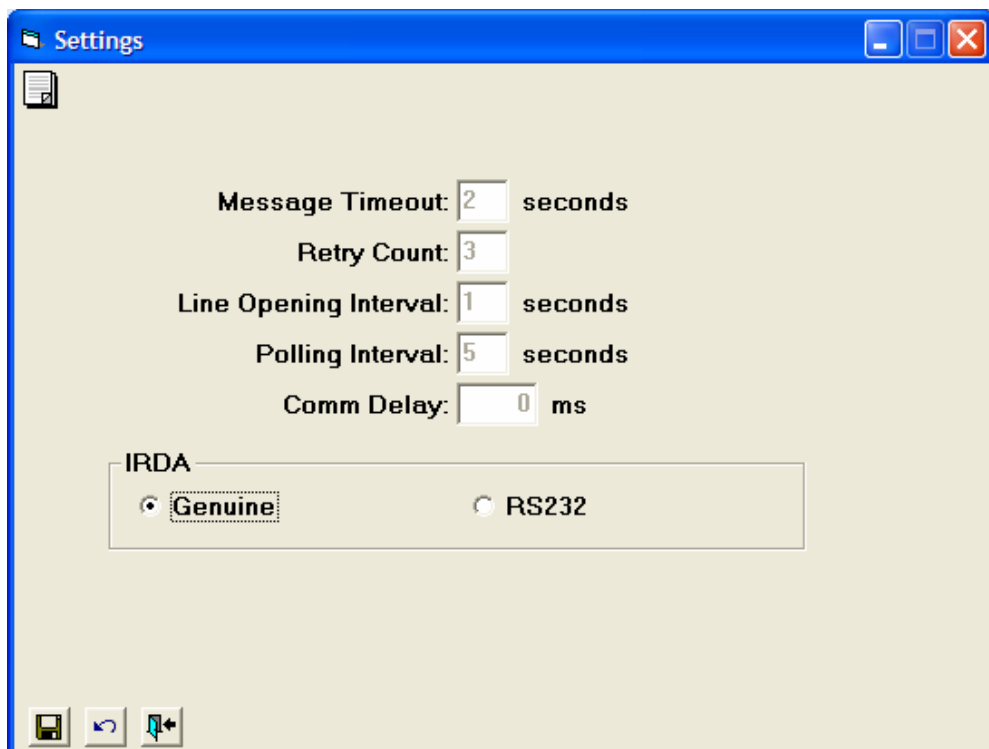
There are several items in the main window. By clicking a menu item a sub-window will appear. Some of the menu items do not have a sub-window but show directly the necessary information.

There are two menus in the menu bar of the main window, File and Options:



Clicking the About option in the File menu one can see the version of the CWS Software. Clicking Exit will end the CSW Software.

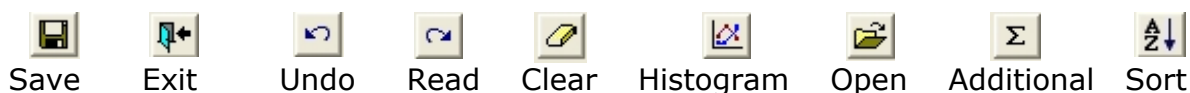
When clicking the Settings in the Option Menu the following window will appear:



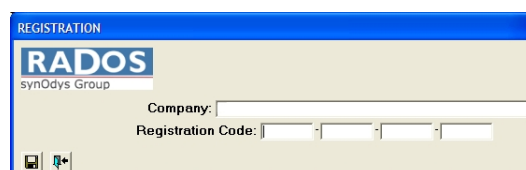
On the upper part of the window one see the current parameters of the communication with RDS-30. The parameter values are grey indicating that they cannot be changed by the user.

If the IrDA-port in your computer is connected to serial port (RS-232) select the RS232 button. Otherwise (with an internal or USB IrDA link) select the Genuine button.

The icons on bottom of this and any other window have the following meaning:



The CSW software requires registration in order to utilize all features described in this manual. Before the registration is possible, a MemoHasp dongle must be connected to the USB port of the computer. When the dongle is connected click the Register Software menu item and enter the Company (User) name and Registration Code provided with the dongle. If you do not have the Registration Code linked to your MemoHasp dongle, contact [info@rados.fi](mailto:info@rados.fi).

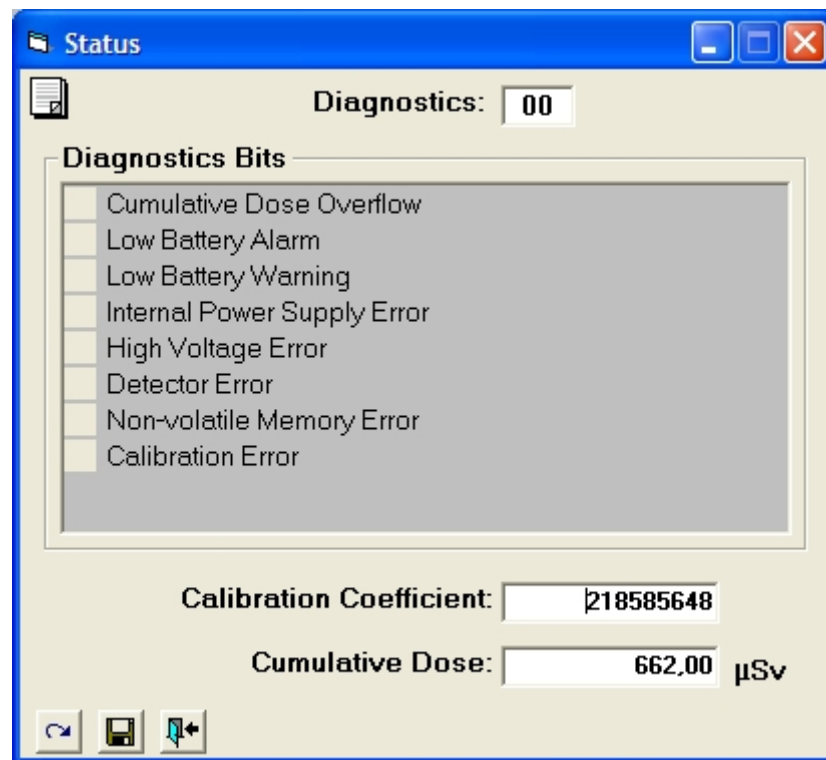


The Application Key is required to include the service features (like calibration) into CSW software. Please contact RADOS for details.

## 2.2 Menu Items

### 2.2.1 Status window

When the status window is activated it reads the status of self diagnostics results of the instrument. The Status window shows the possible errors detected in the instrument during the diagnostics. For diagnostics details see the RDS-30 User's Manual.



The status can be updated by pressing the read button.

The number in the Diagnostics box indicates the combination of possible various errors. Please forward this number to the service engineer in case of problems with the instrument.

The number in the Calibration Coefficient box is the current calibration factor of the instrument. This value can only be changed by recalibrating the instrument.

The Cumulative Dose value is the cumulative dose (in  $\mu\text{Sv}$ ) collected during the instrument life time.

### 2.2.2 Serial Number

The serial number item in the menu shows the serial number of the instrument in parenthesis.

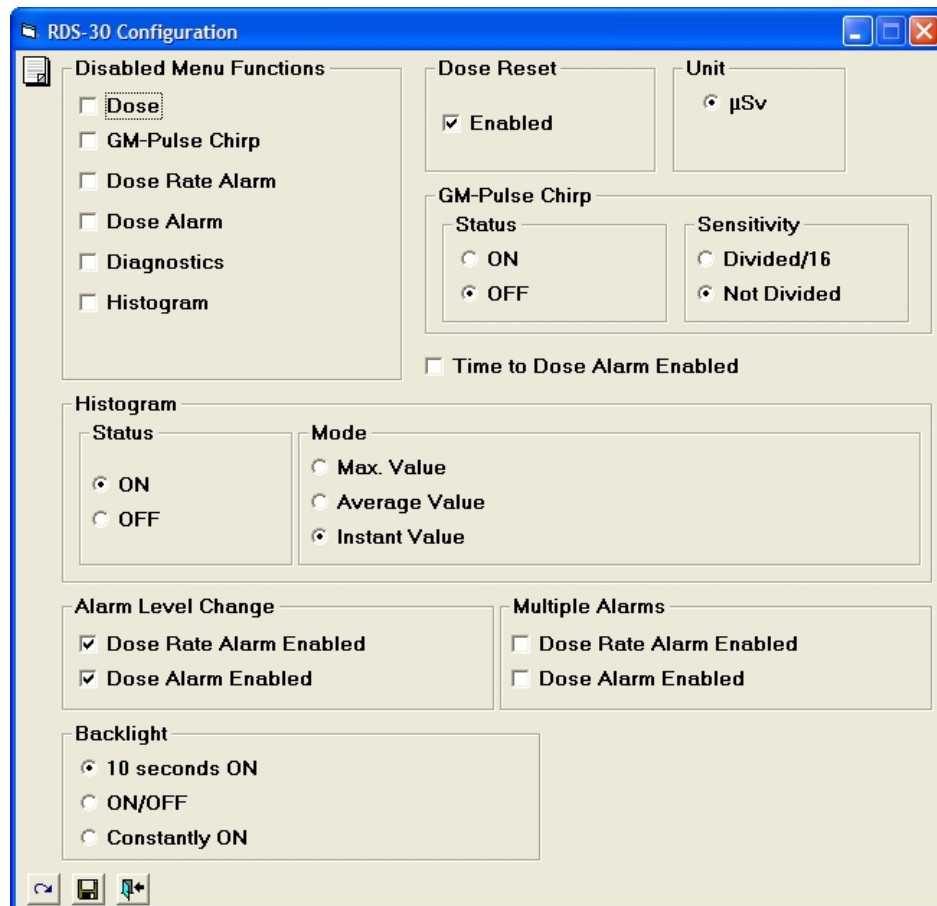
### 2.2.3 Version

The version number of the RDS-30 firmware is shown in parenthesis.

### 2.2.4 Configuration window

In the Configuration window one can change operational parameters of the RDS-30.





#### 2.2.4.1 Disabled Menu Functions

By activating/deactivating a checkbox in the Disabled Menu Functions one can control the behaviour of the menu of the RDS-30 (for details see the RDS-30 User's Manual).

In order to remove one or more items from the RDS-30 instrument menu activate the corresponding checkbox and press the save button to store the new configuration into the RDS-30.

#### 2.2.4.2 Histogram

The RDS-30 can store up to 480 dose rate values into the internal memory (histogram). When the Status is set OFF no values are stored. When the status is ON the dose rate values are stored. The storage interval can be selected in the Histogram menu. Depending on the Mode selection the Maximum Value or Average Value during the Interval period will be memorized. If Instant Value is selected the instant dose rate at the end of each interval period will be memorized.

#### 2.2.4.3 Alarm Level Change

It is possible to prevent the user from changing the Alarm Levels of the RDS-30. When the checkboxes are deactivated, the Dose Rate and Dose Alarm Level cannot be changed with the push button of the RDS-30.

#### 2.2.4.4 Backlight

The backlight behaviour can be adjusted in the Configuration Menu group box. Normally the backlight is lit when the push button of the RDS-30 is pressed shortly. Depending on the configuration the backlight is on for 10 seconds after the button is pressed shortly, or it switches on and off after each short press of the button, or it is constantly on.

#### 2.2.4.5 Dose Reset

When the Dose Reset checkbox is activated the user is allowed to reset the accumulated dose in the RDS-30.

#### 2.2.4.6 GM-pulse Chirp

The GM-pulses can be made audible by setting the GM-pulse Chirp Status ON. Each GM-pulse gives a chirp when the Sensitivity is set at Not Divided. When the Sensitivity is set at Divided/16, every sixteenth GP-pulse emits a chirp.

#### 2.2.4.7 Unit

The displayed unit is shown ( $\mu\text{Sv/h}$  or  $\text{mrem/h}$ ) in the Unit group box of the configuration window. *Note: the accumulated dose and alarm levels are also shown in the selected unit.*

#### 2.2.4.8 Time to Dose Alarm Enabled

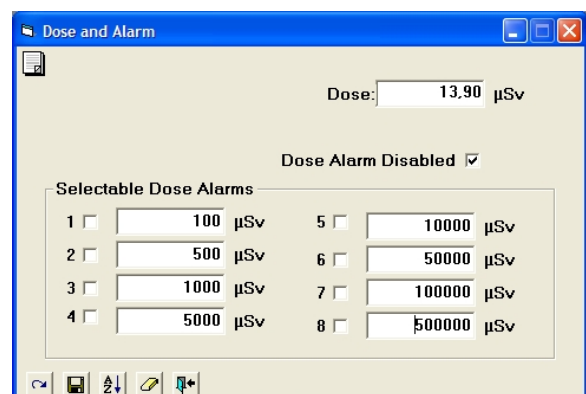
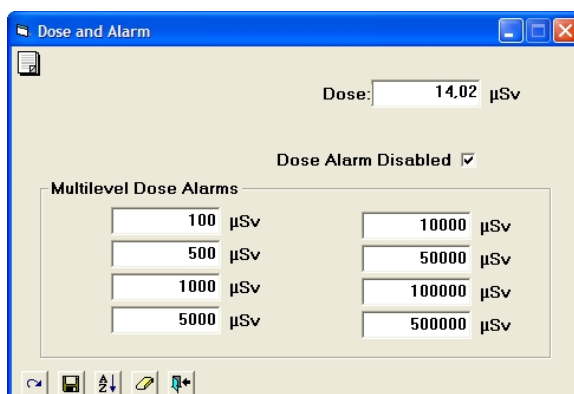
When the check box is selected the Time to Dose operation is enabled. When enabled the instrument shows the time needed to reach the valid dose alarm level at the current dose rate level. *Note: This feature is available only in RDS-30 firmware version 1.01.030 or higher.*

#### 2.2.4.9 Multiple Alarms

When the check box is selected the Multiple Dose Rate Alarm or Multiple Dose Alarm operation or both are enabled. In this case all alarm levels are active in the order of magnitude. Once the lowest is exceeded it can be quitted with push button and the next lowest level becomes active etc. *Note: This feature is available only in RDS-30 firmware version 1.01.030 or higher.*

### 2.2.5 Dose and Alarm window

In the Dose and Alarm window one can set and change the dose alarm levels. In the right upper corner of the window the current accumulated dose is displayed.



#### 2.2.5.1 Selectable Dose Alarms

By activating a checkbox next to a dose alarm value one can validate this alarm level. Activating the Dose Alarm Disabled checkbox will disable the dose alarm function. Pressing the save icon stores the new selected alarm values into the instrument. Deactivating the Dose Alarm Disabled checkbox will enable the alarm function and validate the lowest alarm level.

When the Multiple Dose Alarm is activated (the figure on the right) there are no check boxes shown as all dose alarm levels are active. By activating the Dose Alarm Disabled checkbox the multilevel dose alarm function and also the Time to Dose function are disabled.

One can also change the default dose alarm values by editing the values in the edit boxes (1 to 8).

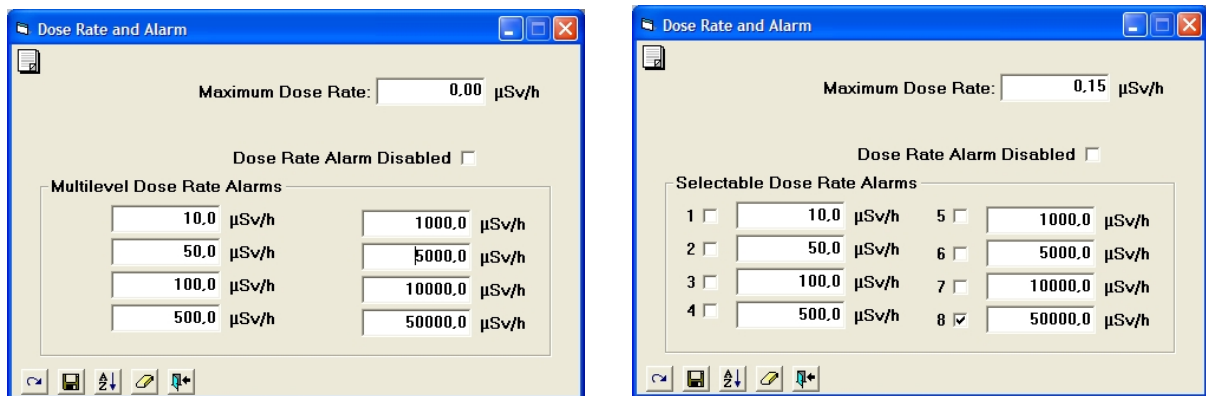
The accumulated dose can be cleared by pressing the clear icon. The CSW Software asks for confirmation of the dose reset before clearing the dose from the instrument memory.

The new setting values will be stored into the instrument's memory by pressing the save icon.

*NOTE: The Alarm level values should be in order of magnitude (from lowest to highest). Can be sorted by pressing the sort icon.*

## 2.2.6 Dose Rate and Alarm window

In the Dose Rate and Alarm window one can set and change the dose rate alarm levels. In the right upper corner of the window the maximum measured dose rate (since the instrument was turned on) is displayed.



### 2.2.6.1 Selectable Dose Rate Alarms

By activating a checkbox next to a dose rate alarm value one can validate this alarm level. Activating the Dose Rate Alarm Disabled checkbox will disable the dose rate alarm function. Deactivating the Dose Rate Alarm Disabled checkbox will enable the alarm function and validate the lowest alarm level.

When the Multiple Dose Rate Alarm is activated (the figure on the right) there are no check boxes shown as as all dose rate alarm levels are active. By activating the Dose Rate Alarm Disabled checkbox the multilevel dose rate alarm function is disabled.

One can also change the default dose rate alarm values by editing the values in the edit boxes (1 to 8). The new values will be stored into the instruments memory by pressing the save icon.

The maximum dose rate can be cleared by pressing the clear icon. The CSW Software asks for confirmation of the dose rate clear before clearing the dose rate from the instrument memory

The new setting values will be stored into the instruments memory by pressing the save icon.

*NOTE: The Alarm level values should be in order of magnitude (from lowest to highest). Can be stored by pressing the sort icon.*

### 2.2.7 Histogram window

In the Histogram window one can define the storage interval and download the histogram data from the instrument into the PC. The histogram, when activated, does not store the data when the instrument is switched off or is in the communication mode. Therefore it is strongly recommended not to switch off the instrument or to turn the IrDA communication on when making the histogram recording.

#### 2.2.7.1 Interval and Last Write/Clear

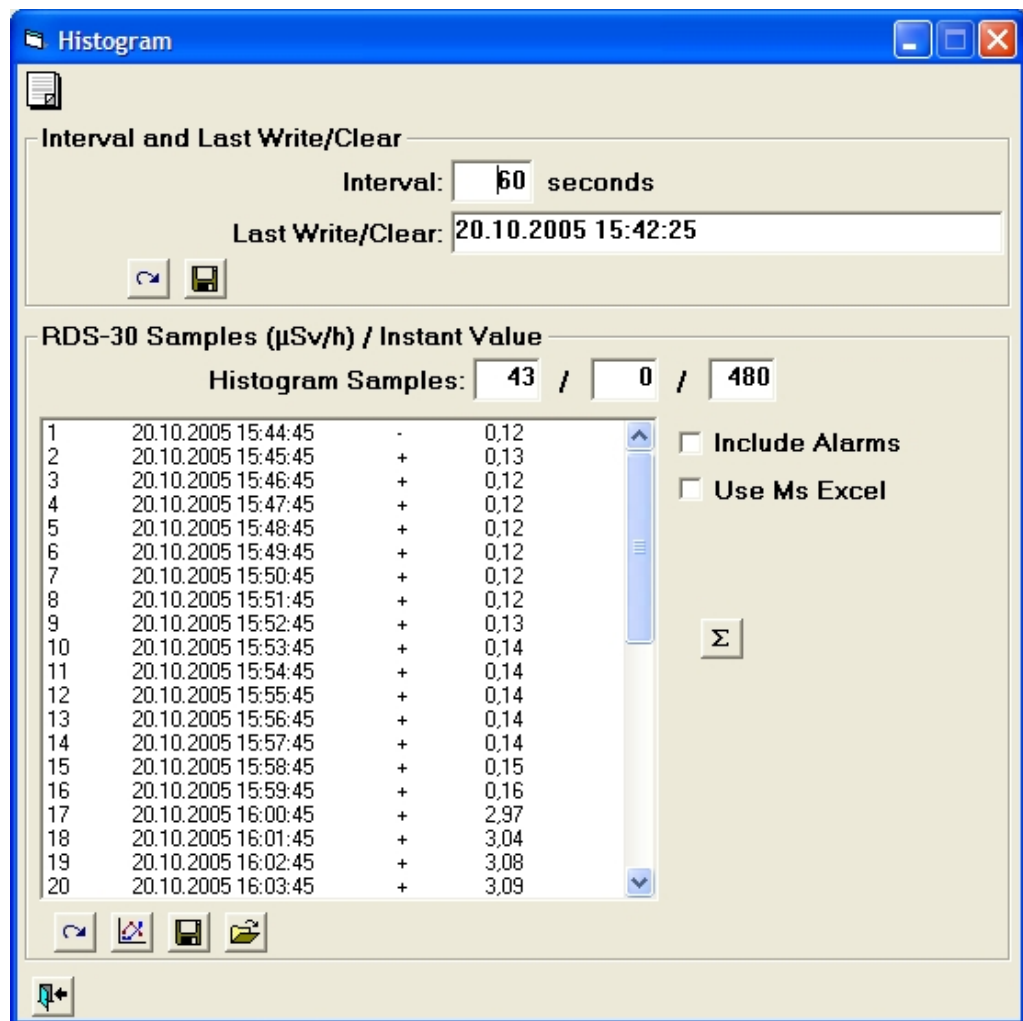
In this group box one can define the storage interval for the histogram. The interval is always given in seconds (e.g. set value for 10 minutes interval = 600). The interval can be changed by typing in the new value and clicking the save icon.

**Note that saving the new interval will always clear the histogram memory.** On the other hand the only way to clear the histogram memory is to save the interval. In order just to clear the histogram (and not change the interval) one should save existing interval value.

The Last Write/Clear box shows date and time when the interval was saved. To read the current values from the RDS-30 click the read icon.

#### 2.2.7.2 Samples

Download the histogram from the RDS-30 by pressing the read icon. The number of sample, recording time and date, +, - or \* sign and the dose rate value will be displayed in the list box.

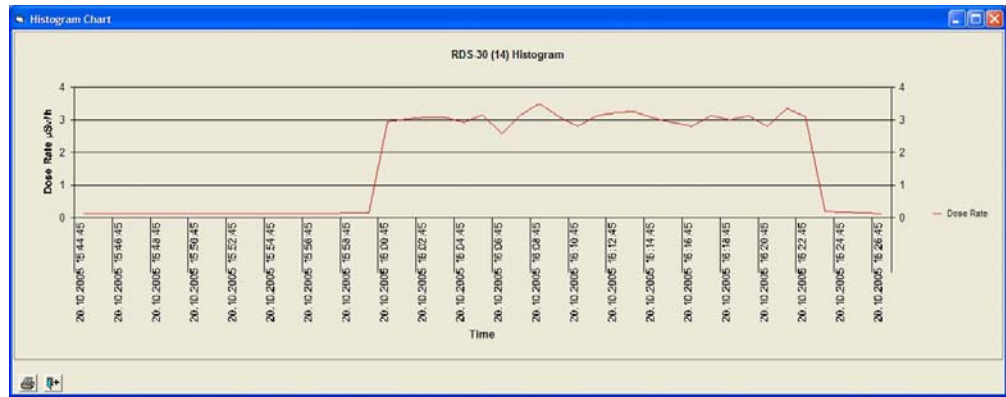


The samples memory in the RDS-30 is a ring memory of 480 samples. Once it is time to store the 481<sup>st</sup> sample, RDS-30 will replace the sample number one with it. Thus the histogram function will not stop storing the new samples when the memory is full but it will replace the oldest sample with the latest one. This means that there are always 480 latest samples in the histogram.

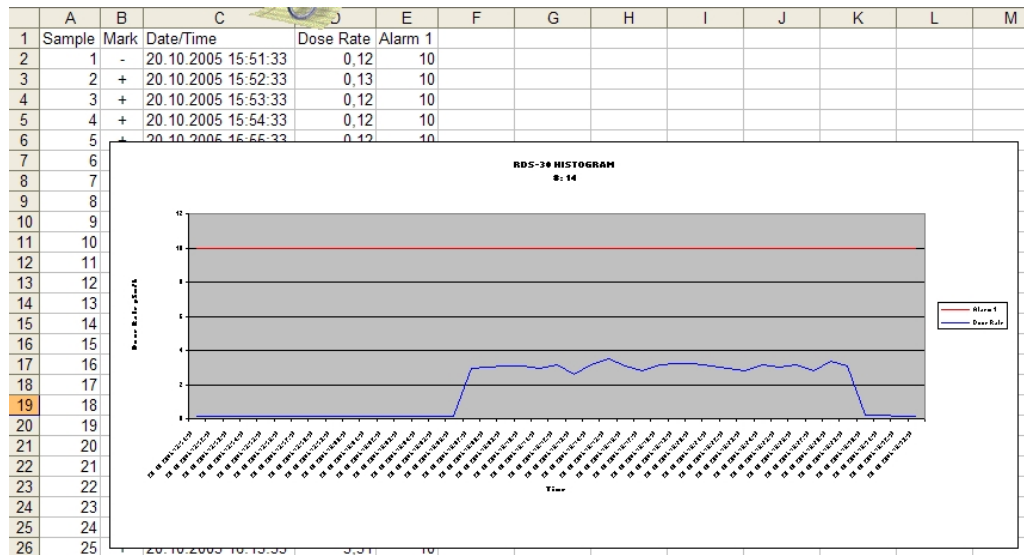
When the time stamp of a record in the histogram is reliable (i.e. the instrument was not switched off during the histogram recording) the + sign will be shown on the recording line. The - sign indicates that the even if the instrument had been switched off during the recording, the time stamp is still recoverable. The \* sign indicates that the time stamp is not reliable.

The Histogram Samples line shows first the number of samples in the memory, in the middle the number revolutions of the ring memory and then the capacity of the histogram memory (=480). For example, when the middle box (number of revolutions) has value two and the number of samples value 40, it means that the instrument has totally recorded 1000 (2x480+40) samples but only the latest 480 are in the memory.

The graph of the histogram can be displayed by clicking the histogram icon.

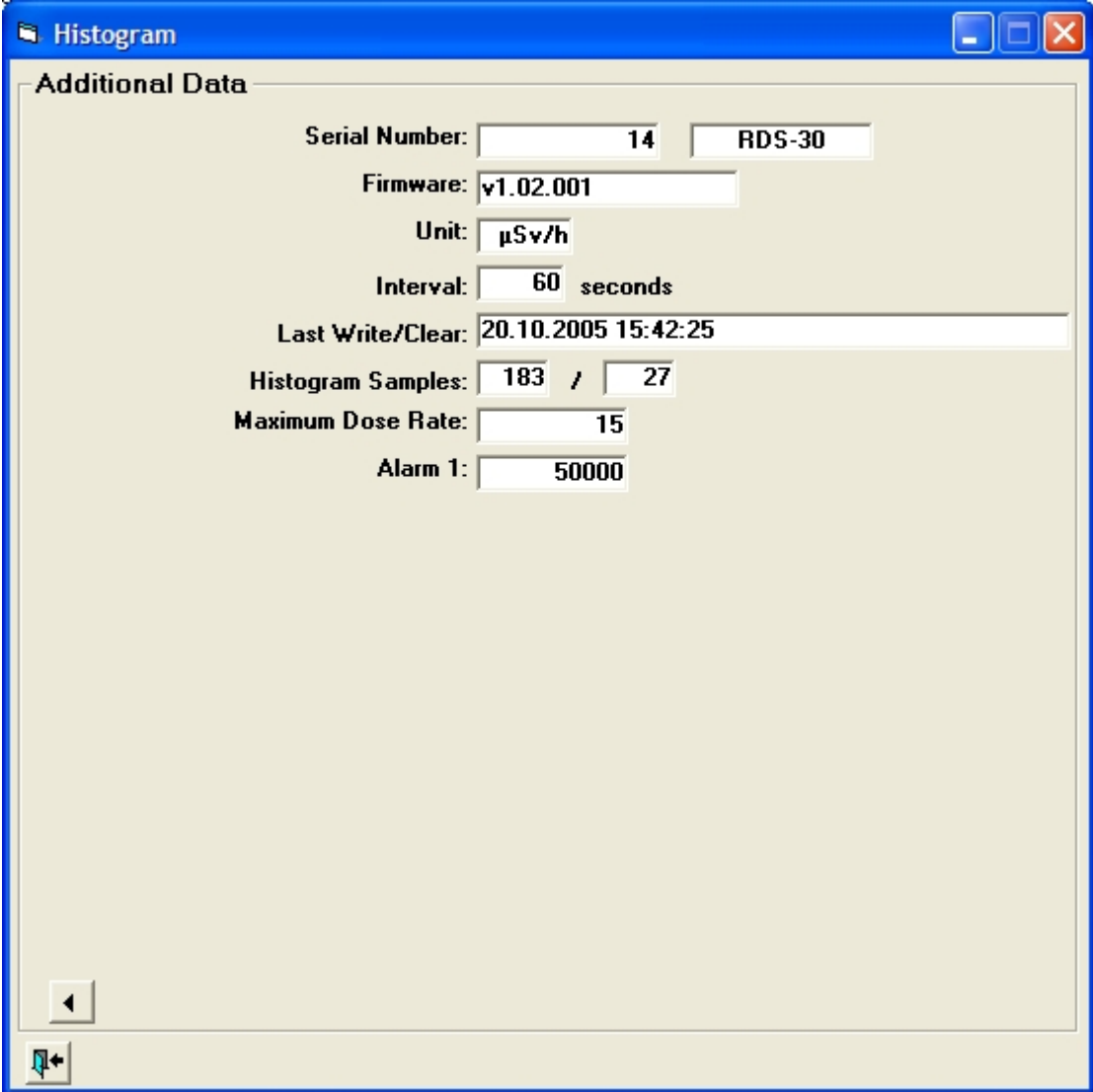


If the Use MS Excel<sup>®</sup> check box is activated (Note: MS Excel<sup>®</sup> must be installed in the PC) the histogram data will be imported into an Excel spreadsheet. When the Include Alarms check box is activated, the valid dose rate alarm level can be seen in the graph. To store the histogram use the Excel save function.



Clicking the save icon will store the histogram values into a text file. The text file can later be opened by any text editor or it can be imported into the CSW software by clicking the open icon.

Clicking the additional (Σ) -icon the additional data window will appear.



The screenshot shows a window titled "Histogram" with a tab labeled "Additional Data". The window contains several input fields for configuration parameters:

- Serial Number: 14 (text box) and RDS-30 (dropdown menu)
- Firmware: v1.02.001 (text box)
- Unit:  $\mu\text{Sv/h}$  (text box)
- Interval: 60 seconds (text box)
- Last Write/Clear: 20.10.2005 15:42:25 (text box)
- Histogram Samples: 183 / 27 (text box)
- Maximum Dose Rate: 15 (text box)
- Alarm 1: 50000 (text box)

Navigation buttons (back, forward, and a small icon) are visible at the bottom left of the window.

The data included is:

Serial Number:	Serial number of the instrument
Firmware:	Firmware version of the instrument
Unit:	Unit of the record in the histogram
Interval:	Storing interval of the histogram
Last Write/Clear:	Starting date and time of the histogram
Histogram samples:	Number of samples and ring memory revolutions
Max Dose Rate:	Maximum dose rate during the recording
Alarm 1:	The valid dose rate alarm level during recording

### 3 FEEDBACK FORM

We are continuously working hard to supply you with correct and easy-to-read technical documents. However, complex systems are difficult to document, explain and understand, and thus sometimes there may be mistakes or inadequacies in the documentation. To correct these errors we would like to hear your opinion about this document.

If you have noted mistakes, or if there are parts that are unclear, please let us know. Take a copy of this page, describe the problem and send the copy to us here in RADOS.

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<b>Description of the mistake or problem</b>	<b>Correction</b>	<b>Page no.</b>

#### Notes on the product

<b>Name of the product:</b> CSW Configuration Software		
<b>Version or model:</b> 1.1.0		
<b>Description of the mistake or problem</b>	<b>Correction</b>	

#### General Notes

Name: \_\_\_\_\_ Company: \_\_\_\_\_ Position: \_\_\_\_\_  
 \_\_\_\_\_ Address: \_\_\_\_\_ Telephone: \_\_\_\_\_  
 \_\_\_\_\_ Telefax: \_\_\_\_\_