

Ultrasonic Detector *SDT 170 MD*
***DataManager* Software**
Instruction User Manual

V 2.0





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1 The user manual and the software

1.1 THE USER MANUAL

This *User manual* must be read carefully and completely prior to anyone using the equipment.

The *User manual* is designed as an educational guide and reference tool for anyone who wishes to use the *SDT 170 MD* equipment and the software *DataManager* for its intended purpose.

SDT produces this manual with the sole purpose of supplying simple and accurate information to the user. *SDT* shall not be held responsible for any misinterpretation of this manual. Despite our efforts to provide an accurate manual, it may contain technical errors beyond our control. If in doubt, contact your local *SDT* distributor for clarification.

While every effort was made to present a true and accurate text, modifications and/or improvements to the product described herein can be made at any time without corresponding changes being made to the manual.

This *User manual* and its content remain the inalienable property of *SDT*.

1.2 THE SOFTWARE

Neither the company *SDT International*, nor any related company, will in any circumstances be liable for any damages, including, without limitation, damages for loss of business, business interruption, loss of information, defect of the *DataManager software*, bodily harm, loss of time, financial or material loss or any other indirect or consequential loss arising out of the use, or inability to use this product, even when it has been warned of possible damages.



1.3 TRANSLATION

This manual has been translated from French.

In the event of conflict between the French version and any version translated into a foreign language, the French version takes precedence over any other language and must be referred to for any question concerning the relationship between the parties.

Any translation of this manual into any foreign language is done only for reasons of convenience and as reference.

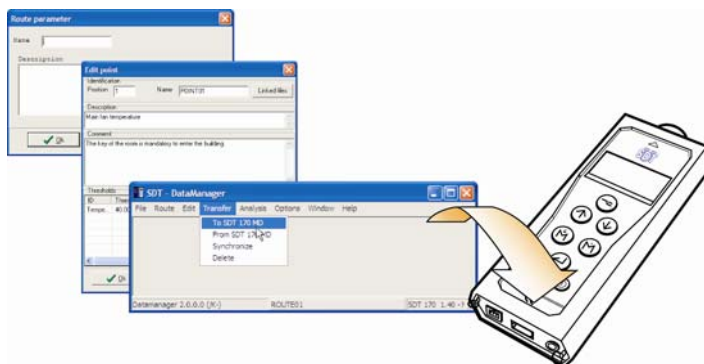
2 Introduction

DataManager is a software application operating in the PC environment. It is exclusively designed to work closely with an Ultrasonic Detector of type *SDT 170 MD*; a specific manual is devoted to the functionalities of *SDT 170 MD*.

Once installed, the *DataManager* application is used in the following manner.

Step 1: before taking measurements on the points of the site

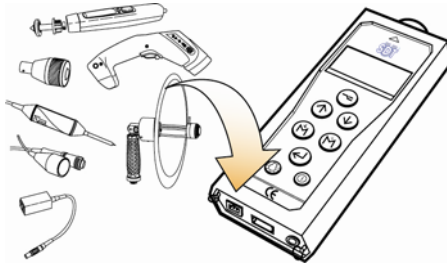
- Creation of routes for one or more *SDT 170 MD* (up to 128 routes can be transferred simultaneously in an *SDT 170 MD*).
- Definition of each point of measurement of the route (types of measurement, alarm thresholds, linked files - audio, image or other).
- Transfer of the PC routes to *SDT 170 MD*.



Creation of routes and points; transfer of information to be collected to *SDT 170 MD* of the operator.

Step 2: taking measurements on the points of the site

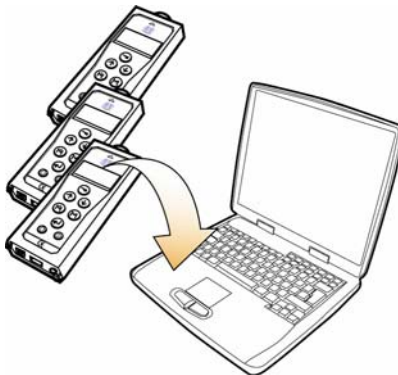
- Memorizing data measured by *SDT 170 MD* according to parameters defined in the preceding step with the *DataManager* application (the routes, points and measurements to be collected are displayed on the screen of *SDT 170 MD* of the operator).
Note: this functionality is specific to *SDT 170 MD* and not to the *DataManager* application.



Recording of measurements by the sensors connected to SDT 170 MD.

Step 3: after measurements are taken on the points of the site

- Transfer of the measured data of SDT 170 MD to the PC.



Transfer of measurements of SDT 170 MD to the DataManager application of the PC.

Step 4: analysis of measurements taken on the points of the site

- Visualization of data collected by SDT 170 MD in the form of tables, graphs or reports and possible editing.
- Consultation of alarms of threshold excesses detected for possible corrective actions.

Step 5: backup of data

- Possible data backup stored by the internal data base in the PC on an external storage medium (USB, backup on server, on external disc, etc.).

3 Quick familiarization

3.1 OBJECT OF THIS CHAPTER

DataManager application is software with many functionalities. These functionalities were developed to best fit with professionals' expectations. You will certainly use these functionalities to meet your new requirements and will be pleased to know that they are already available in the different menus.

Initially, you may want to quickly familiarize with the *DataManager* application and use its basic functions, reserving the study of advanced functions for a later phase.

This chapter helps you discover *DataManager* application by means of a step by step guide. After reading this chapter, you will be autonomous and will be able to proceed with the complete reading of the manual and discover the advanced functions of the *DataManager* application.

At the end of this chapter you will know how to:


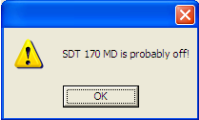


- Install the *DataManager* application on your PC.
- Create a route.
- Create the points of measurement of the route and define alarms.
- Transfer data from your PC to *SDT 170 MD* using serial connection (RS232) or USB.
- Recover data from *SDT 170 MD* and transfer them to your PC using serial connection (RS232) or USB.
- Consult measured data (values, alarms, graphs).



3.2 INSTALLING THE SOFTWARE ON THE PC



Follow the instructions of paragraph 4.2, on page 23.

3.3 LAUNCHING THE *DATAMANAGER* APPLICATION




Step	Screen	Explanatory note
1		Launch the <i>DataManager</i> application Select <i>Start/Programs/DataManager</i> and click on the <i>DataManager</i> icon. Note: during this step, the <i>SDT 170 MD</i> does not have to be connected. <small>PI00</small>
2		When the error message is displayed, click on <i>OK</i> without taking any notice of this message; <i>SDT 170 MD</i> is not yet connected at this stage. <small>PI01</small>
3		The application is displayed. <small>PI02</small>
4		Select the working language Select <i>Options/Language</i> . Select the appropriate choice in the displayed list and click on <i>OK</i> . <small>PI04</small>

The following procedure will define a route.

3.4 CREATING A ROUTE

Step	Screen	Explanatory note
1		In the menu bar, select <i>Route/New</i> .
2		<p>Enter the password (<i>SDT</i> by default). Click on OK.</p> <p>To modify the password, see § 13.3.2, page 93.</p>
3		<p>The <i>Route parameter</i> setting window opens.</p> <ul style="list-style-type: none"> - Name: Enter a route name (maximum 12 characters) describing the route. Do not use special characters such as space, underlined, etc). - Description: enter the route description or comment (maximum 255 characters) if necessary. - Author: enter the name of the author (your name) of this procedure if necessary. - Creation date: modify the date if necessary. - Click on OK to confirm the entered data. <p>The route is created. The route name is indicated at the bottom of the window.</p> <p>The following procedure will define the points of measurement of this route.</p>

3.5 CREATING THE POINTS OF A ROUTE

Step	Screen	Explanatory note
		Create the point of measurement
1		<p>Open the route whose points are to be created as follows:</p> <ul style="list-style-type: none"> - In the menu bar, select <i>Route/Open</i>. - Click on the route for which points are to be created (the route created in § 1.1 in this example). - Click on <i>OK</i>. <p><i>Logically, this step is not necessary since the route is already active as indicated at the bottom of the screen. However, it is a good practice to select the route to be used.</i></p> <p><i>Note: a route called "000" is already present. Do not delete it.</i></p>
2		<ul style="list-style-type: none"> - In the menu bar select <i>Edit/Points/Single editing</i>.
3		<ul style="list-style-type: none"> - Click the <i>Insert</i> button.
4		<p>Define the name of the point:</p> <ul style="list-style-type: none"> - Name: enter the name of the point (12 characters). - Description: enter the description of the point (maximum 50 characters) if necessary. - Comment: enter a comment relating to the point (maximum 255 characters) if necessary.

5



Define the alarm thresholds of the point

Click on the **Add** button.

6



Enter the threshold values:

- **Sensor type:** select from the drop-down list the sensor type of this point.
- **Thresholds method:** allow the *Danger/Alarm* option.
- **Threshold 1:** key in the first threshold (lower threshold).
- **Threshold 2:** key in the second threshold (higher threshold).

Click on **OK**.

7



The pre-set alarm thresholds are displayed in the *Thresholds* zone.

To add another threshold using another type of sensor present on this same point of measurement, restart the procedure from step 5. If no other threshold is to be defined, click on **OK**.

8



The point of measurement is visible in the *Route points* window.

9



To create a new point of measurement on the route, restart the steps from step 3 onwards.
 If no other point is to be created, click on *Close*.
 Note: to print this data, see item 7 on page 21.

PP12

10

The following procedure will transfer data to *SDT 170 MD*.

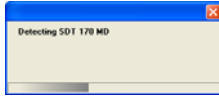
3.6 TRANSFERRING INFORMATION TO *SDT 170 MD*

Step	Screen	Explanatory note
Connect the PC to the <i>SDT 170 MD</i>		
1		Activate the <i>SDT 170 MD</i> by pressing on ①. The <i>SDT 170 MD</i> main menu is displayed.
2		Connect the <i>SDT 170 MD</i> to the PC. <i>Serial link (RS232)</i> Connect the delivered plug ended cord between the serial COM1 port of the PC and the connector of <i>SDT 170 MD</i> . See figure on page 24. <i>USB connection</i> If your PC is not equipped with a serial port (RS232), follow the procedure described on page 99 before continuing.

Transfer data to SDT 170 MD

3

In the menu bar select *Transfer/To SDT 170 MD*.



A window shows the progress.

In the event of connection problems see page 97.

PP13

4



In the window click on .

The *SDT 170 MD* displayer indicates *Remote control*.

PP14

5

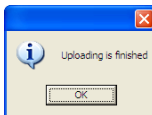


Select the route to be downloaded in *SDT 170 MD* in the left corner of the window.

Click the *To SDT 170 MD* button.

PP15

6



Click *OK* when the download is complete.

Click  to unlock the connection.

Close the window opened in step 5 by clicking on *Close*.

PP16

7

The *SDT 170 MD* connection with the PC can be disconnected.

The *SDT 170 MD* can now be used to take measurements on the route and at the points defined in paragraphs 3.4 and 3.5.


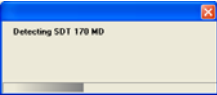



8

The *DataManager* application can be closed.



9

Once measurements on site are complete, the following procedure will transfer data collected by *SDT 170 MD* to the PC.



3.7 TRANSFERRING INFORMATION TO THE PC

Step	Screen	Explanatory note
Connect the PC to the SDT 170 MD		
1		<p>Activate the SDT 170 MD by pressing on .</p> <p>The SDT 170 MD main menu is displayed.</p>
2		<p>Connect the SDT 170 MD to the PC.</p> <p><i>Serial link (RS232)</i> Connect the delivered plug ended cord between the serial COM1 port of the PC and the SDT 170 MD connector. See figure on page 24.</p> <p><i>USB connection</i> If your PC is not equipped with a serial port (RS232), follow the procedure described on page 99 before continuing.</p>
3		<p>If necessary, launch the <i>DataManager</i> application (see § 3.3, on page 12).</p>
Transfer data to the PC		
4		<p>In the menu bar select <i>Transfer / To SDT 170 MD</i>.</p>
		<p>A window shows the progress.</p> <p>In the event of connection problems see page 97.</p>
5		<p>In the window click on .</p> <p>The SDT 170 MD displayer indicates <i>Remote control</i>.</p>
6		<p>Click on the <i>Start</i> button.</p>

3. Quick familiarisation

7		<p>Click OK when the download is complete.</p> <p>Click  to unlock the connection.</p> <p>Close the window opened at step 5 by clicking on Close.</p> <p><small>PP22</small></p>
8		<p>The <i>SDT 170 MD</i> connection with the PC can be disconnected.</p>
9		<p>The following procedure will use the <i>Analysis</i> menu of the <i>DataManager</i> application to visualize the data collected by <i>SDT 170 MD</i>.</p>

3.8 ANALYZING THE INFORMATION

Step	Screen	Explanatory note
		Select the route to be visualized
1		In the menu bar select <i>Routes/Open</i>.
2		<p>Enter the password (<i>SDT</i> by default).</p> <p>Click on OK.</p> <p><small>PP22</small></p>
3		<p>Select the route to be analyzed and click on OK.</p> <p><small>PP22</small></p>

Display the alarms

4



This function displays alarms as well as the values measured according to the criteria defined here.

In the menu bar select *Analyse/Alarms*.

- **Level:** choose the level to be displayed. *Both* display the set values of the first and the second threshold. *All* displays all the values.
- **Date:** select the period for which the values are to be displayed.
- **Sensor:** select the alarms display for all types of sensors (*All*) or only for one type of sensor selected in the drop-down list *Only one*.
- **Sort by:** select the sort criterion.
- **Linked files:** if necessary, click on one of the files linked to the point of measurement.

As of selection, the contents of the table are updated.

To view the measurement curves

5



This function displays the curves for the selected points on a maximum of 3 graphs. Each graph can display measurements of several points of the same type of sensor or 2 different sensors.

In the menu bar select *Analyse/Curves*.

- **Name of the point:** select the point to be displayed.
- **Sensor type:** select the sensor type to be displayed on this point (a point can have several sensors).
- **Date:** select the period for which the values are to be displayed.
- **Bar graph/Time graph:** a bar graph displays the graphs in the form of histograms. The time graph displays the data in the form of curves.
- **Work with:** select the graph on which the curve will be drawn.

Click on *Add* to display the graph.

When selected, the graph is updated.

Display the values

6



This function displays measurements for the selected point.

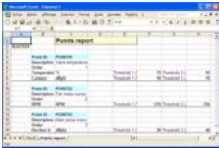
In the menu bar select **Analyse/Values**.

- **Name of the point:** select the point of the route whose measurements are to be displayed.
- **Date:** select the period for which the values are to be displayed.
- **Linked files:** if necessary, click on one of the files linked to the point of measurement.

When selected the contents of the table are updated.

Display the characteristics of a route

7



This function displays the characteristics of each point of the route, points entered as described in paragraph 3.5.

Caution: this function requires the *Excel* application on the PC.

Select *Analyse/Route* to display the data in an *Excel* window.

This data can then be printed.

You now have the major functionalities of the *DataManager* application.

We advise you to continue reading this manual to the end and discover other functions. The index at the end of the manual will help you quickly find the required information.



4 Installation

4.1 HARDWARE AND OPERATING SYSTEM REQUIREMENTS

DataManager will run on any PC that uses the *Windows 2000* or *Windows XP* operating system. The minimum hardware requirements to install *DataManager* are:

- *Windows 2000* or *Windows XP* with 256 Mo RAM.
- A CD-ROM Drive.
- At least 150Mb of free space on your hard drive.
- An available serial link (RS232) to connect the SDT 170 MD to your PC. The link will be done thanks to a RS232 cable delivered with the equipment.
Note: if the PC does not have an (RS232) serial link, use a USB/RS232 adapter (see page 99).

4.2 INSTALLING *DATAMANAGER*

Installation of the software is standard. Insert the CD-ROM into your drive and wait while your PC searches for the installation commands.



SETUP.EXE

Should the automatic install fail to initialize, start the "Setup.exe" program by double clicking the icon on the CD ROM.




DataManager

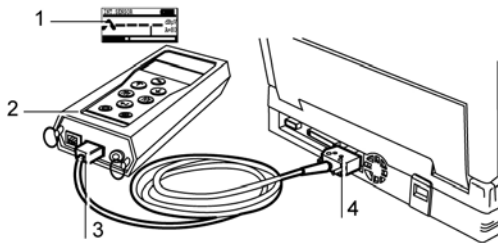
A folder named *DataManager* is created in the *Start / Program Files* menu.

The `setup.exe` contains the shortcut icons for the main file `Datamanager.exe` and the help file `Datamanager.hlp`.

4.3 LINKING (RS232) THE SERIAL PORT OF THE PC TO THE SDT 170 MD

Proceed as follows:

1. Push the On/Off button  (rep. 2) on the SDT 170 MD; the main screen is displayed (rep. 1).
2. Connect the connector (rep. 4) to the serial COM port COM1 of the PC.
3. Connect the connector (rep. 3) to the SDT 170 MD.



Connecting the cable between the SDT 170 MD and the PC.



If your PC does not have an (RS232) serial link, a USB/RS232C adapter will have to be used. Refer to page 100 for this connection procedure.

4.4 UNINSTALL DATAMANAGER

To delete the *DataManager* application, proceed as follows:

1. Select **Start/Parameters/Control panel/Add-delete programs**.
2. In the displayed list, search for the **SDT DataManager** line.
3. Right click on this line and click on **Modify/Delete** button.
4. When asked to delete, click **Yes to all**.
5. Once the deletion is complete, select the **Program Files** directory (generally on the C: drive).
 Save the contents of the **Data** directory if necessary. Then delete the **SDT DataManager** directory.
6. **DataManager** application is completely removed.

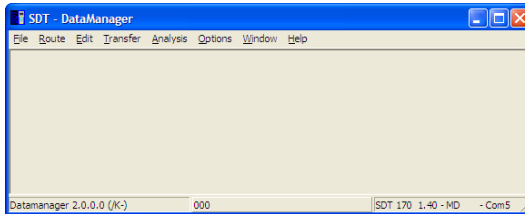
5 Launching *DataManager*



It is assumed that the *SDT 170 MD* has been correctly connected to the PC and switched on, as described in the previous chapter.

5.1 LAUNCHING THE PROGRAMM

Select the icon named *DataManager* in the *Start/Programs/DataManager* menu. Once the start-up screen is automatically closed, the following window is displayed. By default, the menus are in English.



The main screen of the application is displayed in English during the first use.

5.1.1 Error messages on launching the application

In the event of a connection or configuration fault, an error message will be displayed on launching the application.

Cause 1: no cable or *SDT 170 MD* not connected

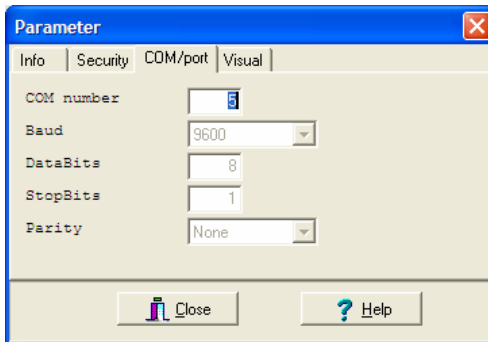
If the *SDT 170 MD* equipment could not be detected, one of the following messages is displayed:

- « Cable is not present or not correctly connected ».
- « SDT 170 MD is probably off ».
- « Port xx doesn't exist ».

Click on *OK* to erase the message. Before continuing, it is highly recommended to find out why this message was displayed (connection fault, defective cables, equipment off-line, run down battery, etc). Although it is possible to work with the software, the transfer between the PC and the equipment however will not be possible

A faulty connection can be due to the selection of a bad COM port. Proceed as follows:

- From the main screen, select *Options / Parameter*.
- Select the tab *COM/port* (next figure).
- Enter the correct COM port number used and click *Close*.



Selecting the COM port of the PC.

Selection of the COM port via file “DataManager.ini”

If the procedure described above does not work, use the following procedure:

1. In the work station open *Program files and Datamanager*.
2. Double click on *DataManager.ini* (file type: *Configuration file*).
3. Modify the *COM No=1* line with any other port number (for example 2). Save the modifications and close this file.
4. Relaunch *DataManager*.

Cause 2: Port x is already used by another application

This message is displayed when the COM port is already used by another application or equipment or if the port is already active during the attempt to relaunch the *DataManager* application.

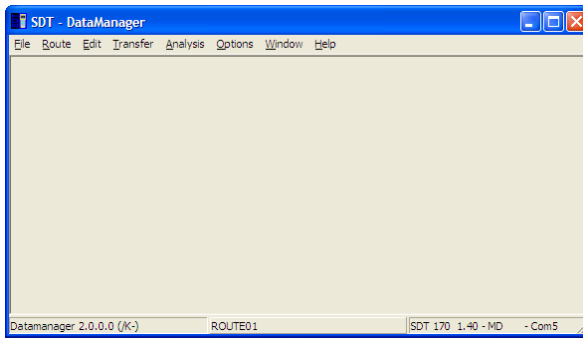
Close the message window displayed and work on the second window. However, communication with the *SDT 170 MD* will be possible only after selection of another communication port (*Options/Parameter, COM/Port tab*).

5.2 SELECT THE WORKING LANGUAGE

It may be necessary to select the working language of *DataManager*. Select *Options/Language*; click on the suitable option and then on *OK*. The menus are then displayed in the selected language.

5.3 THE MAIN SCREEN

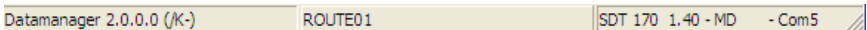
The main screen is displayed. The accessible menus are detailed in chapter 6. The type of unit connected can be determined by choosing the drop down menu *Options / Detection SDT 170 MD*.



The main screen of the application.

The main screen allows access to all the functions of the *DataManager* software. The displayed information is:

- Bottom left corner: the version number of this software.
- Bottom center: name of the route.
- Bottom right corner: *SDT 170 MD* type (if a *SDT 170 MD* is connected), the version number of this software, the route name and the COM port used or the message “No *SDT 170 MD*”.



The lower corner of the window displays the version of the application, name of the route (000 by default), the detector type (*SDT 170 MD*) and the COM port used.

DataManager opens the last route used during the preceding session. The name of the active route is displayed in the central lower corner of the main screen.

5.4 DISPLAYING THE INLINE HELP

Select the menu *Help* and *Contents* or click on the button *Help* in the corresponding window.

5.5 DISPLAYING THE *DATAMANAGER* VERSION

Select the menu *Help* and *About* to display the version number of the software.

5.6 PASSWORD

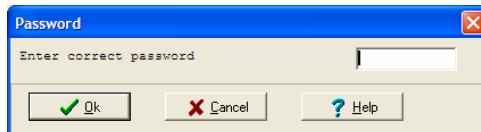
For any first entry, the password is required in:

- One of the sub-menus of the *Route* menu, except for the sub-menus *Open* and *Linked files*.
- The *Edit* menu.

Enter the password and click *OK*.

The default password is "SDT".

Refer to paragraph 13.3.2- *Parameter - Security Tab* to modify the default password.



The window asks for the password.

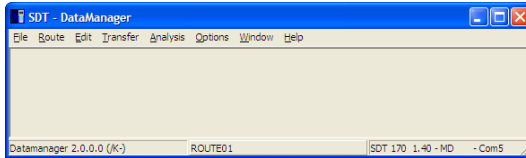
If, without entering a valid password, *Cancel* or *OK* is clicked, only searching of data will be possible. No modification will be possible.

5.7 EXITING THE PROGRAMM

In the *File* menu, Select *Exit*.

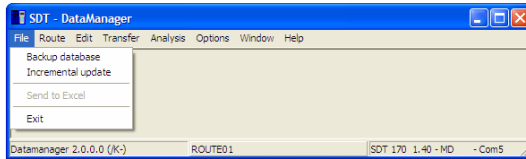
6 The menus

This chapter introduces the main functions of the software. Each menu is exhaustively described in the corresponding paragraph.



General view of all the menus.

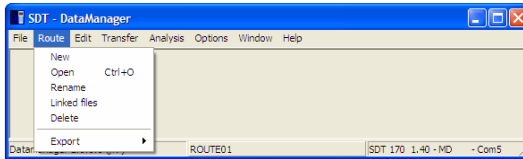
6.1 FILE



The File menu.

Item	Description	See §
Backup database	Transfer of all information of the data base (DDB) of the <i>DataManager</i> application to a compacted file of type ZIP.	11.6.1
Incremental update	Merging of data from a ZIP save of <i>DataManager</i> in the current data directory.	11.6
Send to Excel	Immediate transfer of data displayed in the screen exclusively to the <i>Excel</i> ® application, which must be installed on the PC.	-
Exit	Closing the application.	5.7

6.2 ROUTE

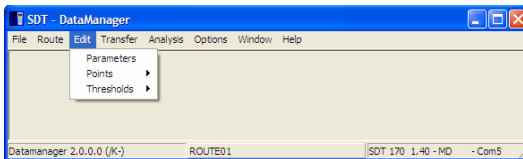


The Route menu.

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Item	Description	See §
New	Creation of a new route.	7.1
Open	Selection of a predefined route for viewing or modifying.	7.2
Rename	New name for an existing route.	7.3
Linked files	Selection of files (texts, images, audio, video, etc) linked to the current route.	7.5
Delete	Removal of an existing route.	7.4
Export	Export of the data in a predefined format (ASCII, MIMOSA, DBF).	7.7

6.3 EDIT



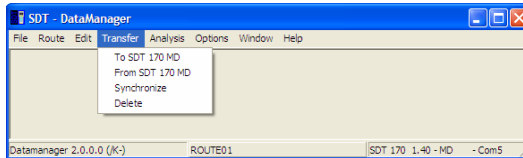
The Edit menu.

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Item	Description	See §
Parameter	Similar to the <i>Route/New</i> menu (modification of information of description, author and creation date of the active route) except for the modification of the route name.	7.1
Points	Single edit.	9.1
	Global edit from <i>Excel</i> .	10
Thresholds	Single edit.	9.2.1
	Global edit from <i>Excel</i> .	9.2.2

6.4 TRANSFER

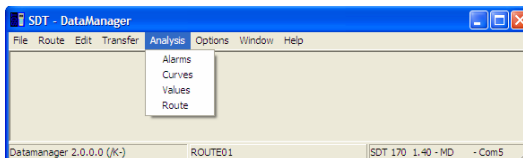
The sub-menus are accessible only if an *SDT 170 MD* is correctly connected to the PC.



The Transfer menu.

Item	Description	See §
To SDT170 MD	Data transfer from PC to the <i>SDT 170 MD</i> .	11.4
From SDT 170 MD	Data transfer from <i>SDT 170 MD</i> to PC.	11.5
Synchronize	Date/time synchronization of the <i>SDT 170 MD</i> with the PC.	11.3
Delete	Purging the entire memory of the <i>SDT 170 MD</i> .	11.2

6.5 ANALYSIS

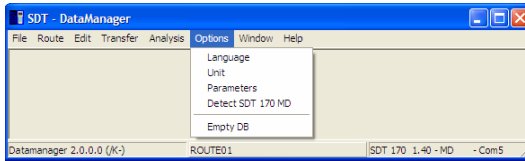


The Analysis menu.

Item	Description	See §
Alarms	Displaying alarms for the current route.	12.4
Curves	Displaying measurements in graphical format.	12.5
Values	Displaying measurements in spreadsheet format.	12.3
Route	Displaying current route information in an <i>Excel</i> window.	12.6



6.6 OPTIONS

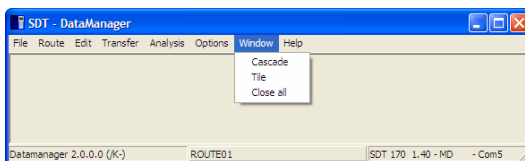


The Options menu.

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Item	Description	See §
Language	Selection of the language used in windows.	13.1
Unit	Selection of the measuring units of the metric or imperial system.	13.2
Parameters	Definition of four parameter groups of the <i>DataManager</i> application: name of the company (for editing purposes), password, localization of the data base, COM port used on the PC and icons used in the alarms tables.	13.3
Detect SDT 170 MD	Run a communication between the software and the <i>SDT 170 MD</i> .	13.4
Empty DB	Purge old data from the data base.	13.5

6.7 WINDOW

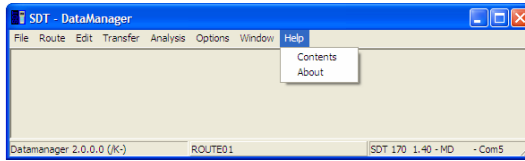


The Window menu.

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Item	Description
Cascade	Windows displayed one under the other, in cascade.
Tile	Windows displayed in mosaic form.
Close all	Closing of all the open windows.

6.8 HELP



The Help menu.

Item	Description
Contents	Displaying of on-line help.
About	Displaying the software version number.



7 Definition of the routes

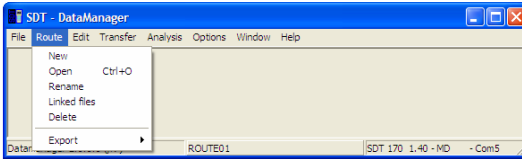
A new route enables definition of the points of measurement to be assigned to the route. `Route 000` is displayed by default when the *DataManager* application is launched.



DataManager automatically creates a *bulk route 000*. This route is intended to allow temporary storage of measurements for periodic checks on machines that are not part of a pre-defined route. **Do not delete this route.**

If a password is requested, see paragraph 5.6.

The *Route* menu groups functions relating to routes management.

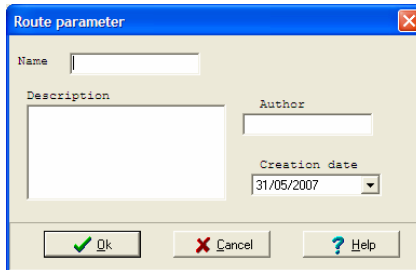


The *Route* menu groups functions relating to routes management.

7.1 CREATING A NEW ROUTE

To create a new route, proceed as follows:

1. Select the *Route* menu and click on *New*.
2. Enter information as follows:



The screen when creating a new route.

- **Name:** a name (maximum 12 characters) which describes the route.
Do not use special characters such as space, underlined, etc. Choose this name carefully, since it is the key word used by *DataManager* to ensure proper sorting of data.
- **Description:** description of the route or a comment up to 255 characters in length.
- **Author:** name of the author of this procedure (optional).
- **Creation date:** the date the route was created. The date is entered manually or selected in the pop-up calendar, clicking on the arrow ▼.



The completed window of a new route.

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3. Click **OK**.

The route is created if the same name does not already exist.

The route created is now available in the *Route/Open* menu (see paragraph 7.2).



An unlimited number of routes can be created by the *DataManager* application. However, a maximum of 128 routes can be transferred simultaneously to an *SDT 170 MD*.

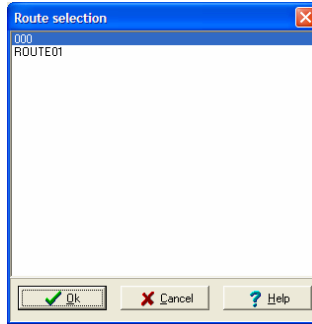
7.2 OPENING A ROUTE

Proceed as follows to open an already created route (see § 7.1):

1. **Select the *Route* menu and select *Open*.**
A window shows a list of available routes.
2. **Select the desired route.**
3. **Click **OK**.**

7. Definition of the routes

The name of the current route appears now in the lower central corner of the main window.



The screen when choosing an existing route.

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7.3 RENAMING A ROUTE

Proceed as follows to rename an already created route (see § 7.1):

1. **Select the *Route* menu and select *Rename*.**
A window shows a list of available routes.
2. **Select the desired route and click the *OK* icon.**
3. **Enter the new name (maximum 12 characters) and click on *OK*.**
A message warns that modifying the name of the route will create a new route in the database during the process of next transfer of data to the *SDT 170 MD*.
Click *OK*.

The new name is now available, provided *Cancel* was not clicked.

Note: before renaming a route, please transfer the data from *SDT 170 MD* to the PC (see paragraph 11.5) and purge the memory of *SDT 170 MD* (see paragraph 11.2) in order to avoid having two routes of different names having the same points.

7.4 DELETING A ROUTE

Proceed as follows to delete an already created route (see paragraph 7.1):

1. **Select the *Route* menu and select *Delete*.**
A window shows a list of available routes.



2. **Click OK.**
A message "Are you sure to delete..." is displayed.
3. **Confirm the deletion by selecting Yes or cancel the request with the No button.**
The route is deleted if Yes has been clicked.

7.5 LINKED FILES

7.5.1 Purpose of linked files

The *DataManager* application enables linking of files (audio, video, image, text, etc) to a route and/or a point, in order to provide additional information (localization, presence of danger alerts, particular instructions, etc) which will be displayed in the *Analysis* menu screen.

These files will be read by applications associated by default; the applications can be of any type accepted by the *Windows* environment, such as image (JPEG, BMP), audio, video, etc.

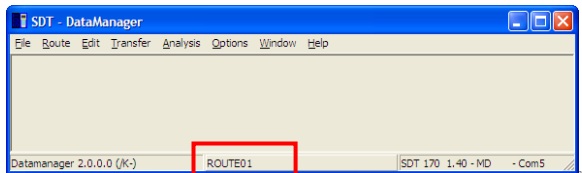
7.5.2 Creation of links

Links are created in 2 steps:

- **Step 1:** put the (audio, video, images) files in the *Linked Files* folder of the *DataManager* application.
- **Step 2:** manually connect the files of the *Linked Files* folder (created at step 1) to the route concerned.



The linked files will link to the route currently selected and displayed at the bottom of the window.

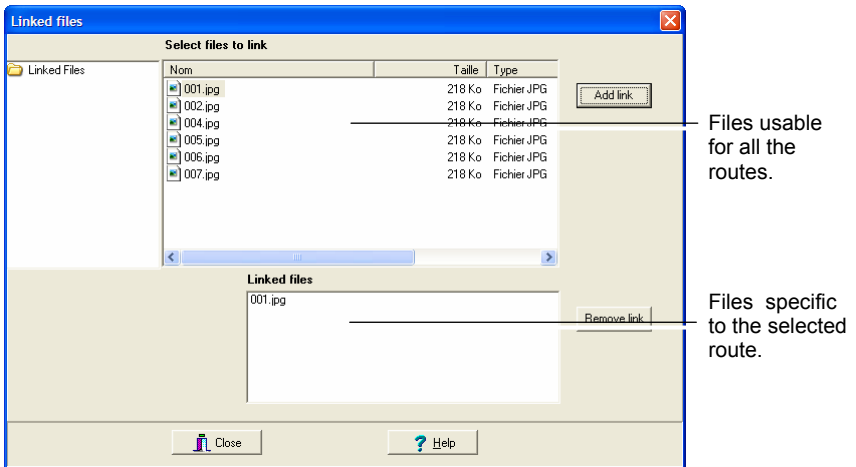


7. Definition of the routes

These two steps are carried out as follows:

1. In the Windows explorer, select `C: /Program Files/SDT DataManager/Linked Files`.
2. Drag the appropriate (audio, video, image) files in this folder.
3. Close these windows.
4. In the *DataManager* menu bar, select *Route/Open* (see paragraph 7.2) to select the route on which these files will be linked. Close this window.
5. In the *DataManager* menu bar, select *Route/Linked files*.
6. In the linked files window, select on the top corner files concerned by the route (multiple selections possible) and click on *Add link*. The files will be associated with the active route from now onwards.

To delete a link, select the files concerned in the lower corner and click on *Remove link*.



Activation of linking of a file "001.JPG" file (lower corner) is now linked to the active route. 240C

7.6 PRINTING A ROUTE

Refer to paragraph 12.2.

7.7 EXPORTING

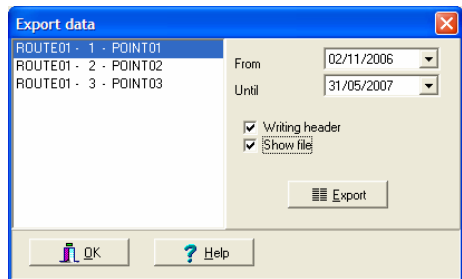
Data relating to each or several points can be exported into one of the three formats ASCII, Mimosa or DBF to have data which can be imported in a specific application.

- **Ascii:** the data is exported in a text file format, in a listing presentation (one line per measurement), with or without header (name of columns, with fields separated by tabs or without header (name of columns)).
- **Mimosa:** the data is exported in a text file format, one line per data, several lines per measurement.
- **DBF:** the data is exported in a format compatible with the data base files.

7.7.1 Exporting in ASCII format

Proceed as follows:

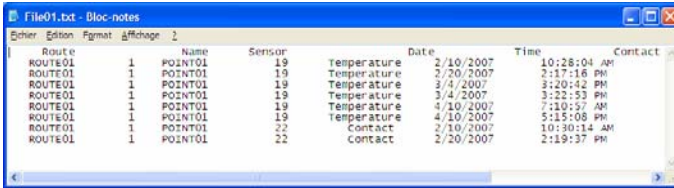
1. In the menu select *Route / Open* and select the route(s) to visualize (use the CTRL key) and click **OK**.
2. Select *Route / Export* and select the export format **ASCII**.
3. In the **Export data** window displayed, select the point(s) to be exported. Use *Caps* or *Ctrl* keys for multiple selections.



The selection screen for exporting to ASCII format.

4. Select the date limits to be exported (*From* and *To*).
5. Click **Writing header** to have the name of column exported (Name, Sensor, Date, Time, Value, etc.).
6. Click **Show file** to have the exported file display at the end of the procedure) with the application *Notepad*.
7. Click **Export** to export the file. In the new displayed window, enter the name of the exported file and select the directory.

8. Close the windows.

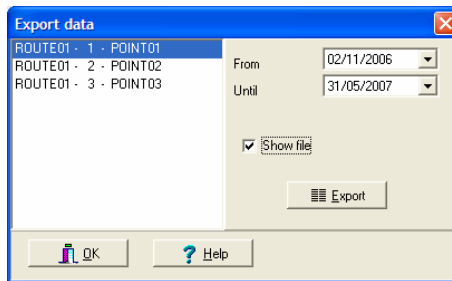


The resulting window of export to an ASCII format.

7.7.2 Exporting in Mimosa format

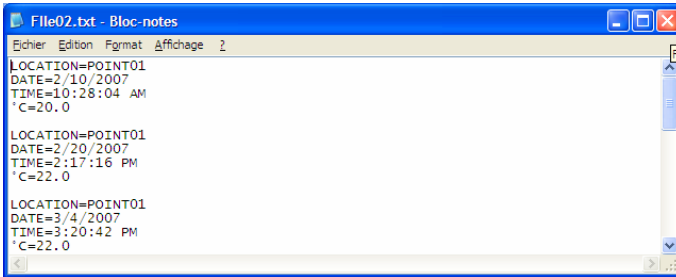
Proceed as follows:

1. In the menu select *Route / Open* select the route(s) to visualize (use the CTRL key) and click *OK*.
2. Select *Route / Export* and select the export format *Mimosa*.
3. In the *Export data* window displayed, select the point(s) to be exported. Use *Caps* or *Ctrl* keys for multiple selections.



The selection screen for exporting to Mimosa format.

4. Select the date limits to be exported (*From* and *To*).
5. Click *Show file* to have the exported file display at the end of the procedure (windows type *txt*) with the application *Notepad*.
6. Click *Export* to export the file. In the new displayed window, enter the name of the exported file and select the directory.
7. Close the windows.

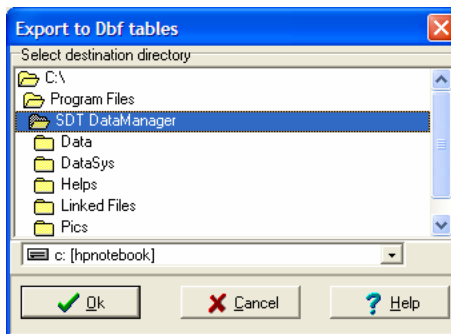


The resulting window of export to MIMOSA format. .

7.7.3 Exporting in DBF format

Proceed as follows:

1. In the menu select **Route / Open**, select the route to be visualized (using CTRL key) and click on **OK**.
2. Select **Route / Export** and select the export format **All data to DBF**.
3. Select the directory where the files will be created and click **OK**. Three files (points.dbf, routes.dbf and vals.dbf) will be created in the specified directory.



The window for DBF format export.

8 Definition of the points of a route

Each route is comprised of up to 1000 points (0 - 999). Each point can be defined and/or modified to suite the needs of the route. All 1000 points need not be used; however, they are there for future expansion of the route as required.

8.1 HOW TO PROCEED

The *SDT 170 MD* is a multi-functional measuring tool capable of storing data from several different sensors (i.e., the rotation speed measurement, temperature measurement, and ultrasonic measurement can be taken for one point).

Each type of measurement can be stored in the *SDT 170 MD* and transferred to the *DataManager* software.

Defining a route means establishing the points of the route, their relative position within the route, and the type of measurements to be assigned to each point.

The procedure of the parameter edition of the route will then consist of:

- Entering the procedure by selecting the *Parameters* menu.
- Entering the name of the point to be created.
- Selecting the type of measure (dB μ V, temperature, etc) and alarm thresholds.



Important: any modification or encoding of one, or several points within the *DataManager* software, must be transferred to the *SDT 170 MD* hardware prior to the next measuring campaign (see Chapter 11 – *Transferring the data*).

8.2 INDIVIDUAL OR GLOBAL MANAGEMENT

The present version of *DataManager* enables in addition the management of points in the following manner:

- **Individual**, by definition of the characteristics of a point (see chapter 9, page 45).
- **Global**, by definition of the characteristics of several points at the same time (see chapter 10, page 61).

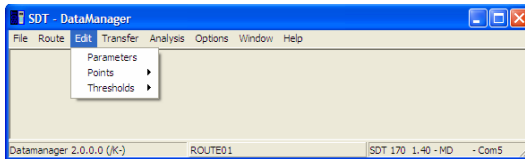


9 Individual management of points

This method makes it possible to define the characteristics of each point of measurement of a route individually.

Note: it is possible to define the characteristics of several points simultaneously (refer to chapter 10, page 61).

The *Edit* menu groups functions relating to management of the points of measurement and the alarm thresholds of a selected route.



The “Edit” menu groups functions relating to points and alarm thresholds.

9.1 MANAGING THE POINTS OF A ROUTE

Reminder: parameters of a route can be modified only if the route is open (see paragraph 6.2). Look up the status bar in the central lower corner of the screen to verify the name of the active route.

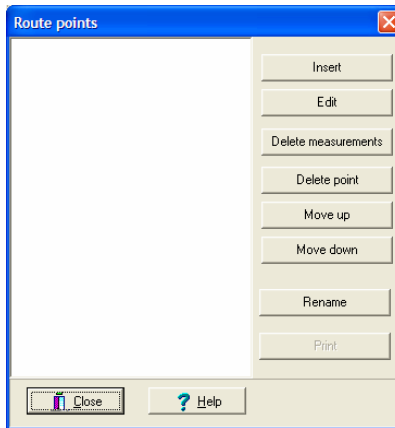
If a password is requested, see paragraph 5.6.



The active route is displayed in the lower central corner of the screen (here ROUTE01).

Proceed as follows:

1. **Select the *Edit* menu and click on *Points* and select *Single editing*.**
The *Route points* window is displayed. It presents all functions usable within the framework of management of points of measurement of a route.



The window allows modification or creation of points on the active route.

The available functions are:

Function	Purpose	See §
Insert	Add a new point.	9.1.1
Edit	Edit an existing point to read or to modify its parameters.	9.1.2
Delete measurements	Erase all historical measurements of the point.	9.1.3
Delete point	Erase the selected point and all its related historical measurements.	9.1.4
Move up	Move up the position of the selected point in the list.	9.1.5
Move down	Move down the position of the selected point in the list.	9.1.6
Rename	Rename the selected point.	9.1.7
Print	Accessible only after selection of a point through <i>Edit / Points</i> .	9.1.8

Important: see also paragraph 9.3 relating to the easy copy/past of data relating to points.

9.1.1 Inserting a new point



Before entering the various points of the route, it is advisable to define precisely the real order position of each measuring point, in order to simplify the collection of measurement.

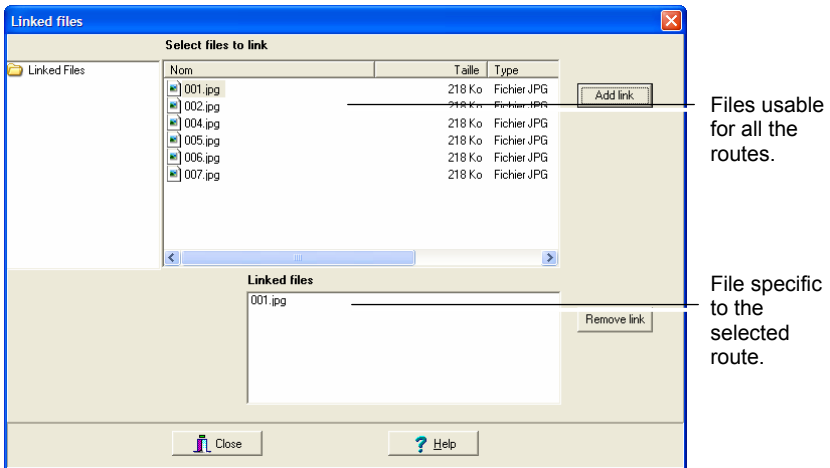
This function enables creation of a new point of measurement. Click on *Insert* (preceding paragraph). The following screen is displayed.

ID	Threshold 1	Threshold 2	Unit

Edition screen of a point.

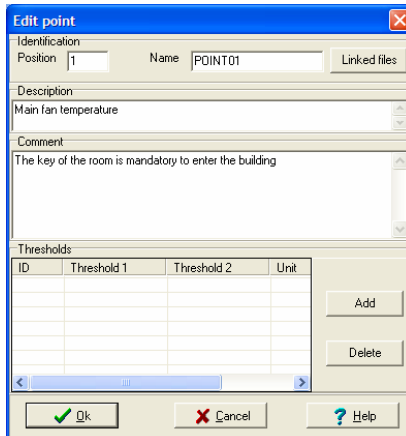
Enter the data as requested, by selecting with the mouse, the desired field to enable:

- 1. *Position* field: enter the position of the point.**
The *position* is the number or order in which the points are displayed on the screen of the *SDT 170 MD* while following the route.
- 2. *Name* field: enter the name of the point.**
A maximum 12 characters is allowed. This name can not be modified for an existing point.
- 3. *Linked files* button: to link files (image, video, audio) relating to this point.**
In the *Linked files* opened window, select the files to be linked to the point and click on *Add link*. Close the window.
Reminder: the linked files available in this window have been defined in paragraph 7.5.2, page 38.



Example of linked files screen. The file "001.jpg" is linked to the currently active point.

4. **Description** field: enter the description of the point.
A maximum of 50 characters is allowed.
5. **Comment** field: enter a comment concerning this point.
A maximum of 255 characters is allowed.

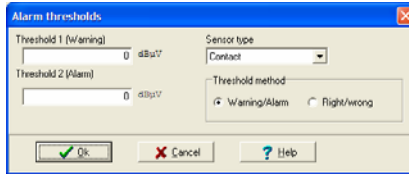


Example of definition of a point. The thresholds zone is described below.

9. Individual management of points

6. Click on the **Add** button to enter additional alarm data relating to the measurements.

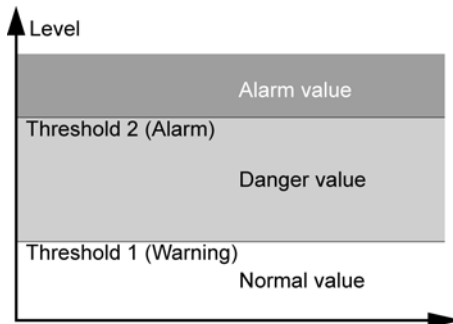
The screen is as follows.



The screen defining the type of measurement and alarm levels.

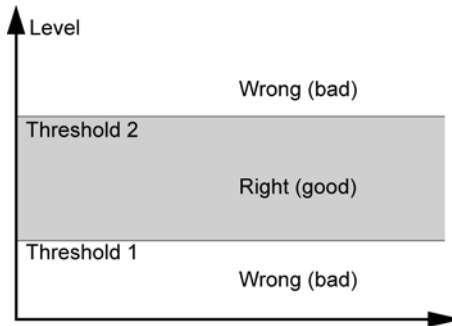
Four pieces of information are required.

- **Sensor type**: select the sensor type to be used for this point in the drop-down list.
- **Thresholds method**: defines the type of alarm release (*Danger/Alarm* at two levels or *Right/Wrong*).
 - *Warning/Alarm*: **Threshold 1 (Warning)** is set off when the measurement is equal to or higher than the value defined in the field *Threshold 1* and lower than the value defined in the field *Threshold 2*. **Threshold 2 (Alarm)** is set off when measurement is equal to or higher than the value defined in the field *Threshold 2*. The *Warning/Alarm* option corresponds to the normal use of the alarm thresholds.



Alarm levels in the *Warning/Alarm* thresholds method.

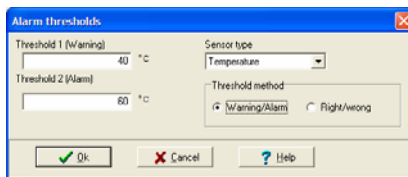
- *Right/Wrong*: an alarm is activated when measurement is equal to or outside the **Low** limit (*Threshold 1* field) and **High** limit (*Threshold 2* field). This option is generally used to carry out a fast validity check of a measurement which must be located between two predefined values (range of accepted values).



Alarm levels in the Right/Wrong method.

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- **Threshold 1**: enter the lower level of alarm; the unit will be automatically displayed, for example dB μ V, according to the selected sensor.
- **Threshold 2**: enter the higher level of alarm; the unit will be automatically displayed, for example dB μ V, according to the selected sensor.



Recall of the screen defining the type of measurement and the alarm thresholds.

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9. Individual management of points

7. Click **OK** to confirm.

The *Alarm thresholds* window is closed and the *Thresholds* zone of the *Editing a point* window is modified.

ID	Threshold 1	Threshold 2	Unit
Tempe...	40.00	60.00	°C

The “Thresholds” zone displays the information entered in the “Alarm thresholds” window. 2105

To delete one line of the threshold values click on the line to be deleted and then on the *Delete* button and *OK* when asked.

8. Click on the **OK** button to close the screen.

The *Route points* screen contains now the new point.

ID	Name
1	POINT01

This window is now fitted with the new point.

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9.1.2 Editing a point

This function allows modification of the characteristics of a point previously created (see paragraph 9.1.1). Proceed as follows:

1. **In the menu bar, select *Edit* and click *Points* and click *Points* and *Single edit*.**
The *Route points* screen is displayed.
2. **Select the point to be modified.**
3. **Click *Edit*.**
Modify the data (see paragraph 9.1.1).
4. **Click *OK*.**
The point works now with the new data.

9.1.3 Deleting the measurements

This function allows deletion of the measurements (selected data) of the point concerned. However, the linked files and the definition characteristics of the point will not be cleared.

1. **In the menu bar, select *Edit* and click *Points* and *Single edit*.**
The *Route points* screen is displayed.
2. **Select the point whose measurements are to be erased.**
3. **Click on *Delete measurements*.**
4. **Click *Yes to delete* or *No to cancel*.**
If *Yes* is clicked, the point measurements are deleted.

9.1.4 Deleting the point

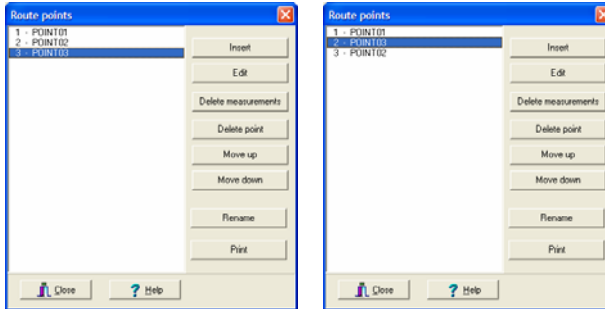
This function allows deletion of an already created point (see paragraph 9.1.1). Please note that deletion of a point deletes all the historical measurements and associated links. Proceed as follows:

1. **In the menu bar, select *Edit* et click on *Points* and *Single editing*.**
The *Route points* screen is displayed.
2. **Select the point to be deleted.**
3. **Click *Delete point*.**
4. **Click *Yes to delete* or *No to abort*.**
If *Yes* has been clicked, the point is now deleted from the list.

9. Individual management of points

9.1.5 Moving up a point

This function allows modifying the numbering of the point by increasing its order number at each click. The position of the point in the displayed list corresponds to the number or order in which the points will be displayed on the *SDT 170 MD* while following the route.



The point 3 (left screen) has been moved up after clicking on the Move up button (right screen).

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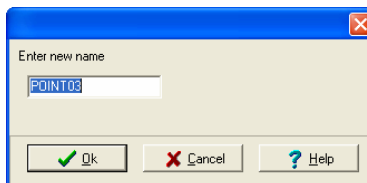
9.1.6 Moving down a point

The position of the point in the displayed list corresponds to the order number or order in which the points are displayed on the screen of the *SDT 170 MD* while following the route.

This function allows modifying the numbering of the points by decreasing its order number at each click. This function is similar to the previous paragraph.

9.1.7 Renaming a point

This function allows the modification of the name of a point through a window. Enter the new name and click on **OK**.










The modification window contains only one field, avoiding so the modification of other parameters.

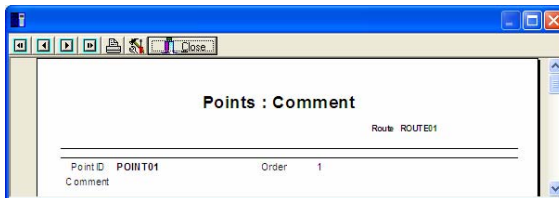
2010

9.1.8 Printing a point

This function prints data relating to the point of physical measurement. The *Print* button is accessible only after selection of a point in the list. Proceed as follows:

1. **In the menu bar, select *Edit / Points and Single edit*.**
The *Route points* screen is displayed.
2. **In the left list, select the point to be printed.**
3. **Click *Print*.**
The screen displays the main information.
4. **Use the button as follows.**
(See next page).

Icon	Description
	Displays first page.
	Displays previous page.
	Displays next page.
	Displays last page.
	Print.
	Define the printer parameters.
	Close the printing screen.



The window before printing.

9.2 MANAGING THE ALARM THRESHOLDS SEPARATELY

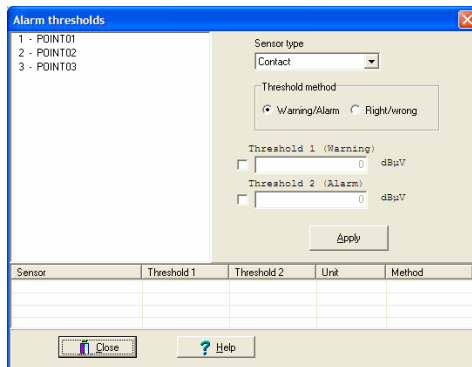
9.2.1 Modifying the alarm thresholds of only one point

This function is accessible by *Edit/Thresholds/Individual Editing*. It enables display of the different points of the route and the associated alarm thresholds. It has the same functionalities as the window displayed by the menu bar *Edit/Points/Individual Editing/Edit* (see page 49, step 6), but does not allow the deletion of an alarm.

Thus, the use of this window is mainly dedicated to a rapid browsing of alarm thresholds.

Proceed as follows to add or modify an alarm threshold.

1. **In the menu bar, select *Edit, Thresholds* and *Single edit*.**
The *Alarm thresholds* screen is displayed.



Example of an alarm thresholds screen.

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2. **Select the point(s) to be modified.**
If this point has one or more alarms, these are displayed in the lower corner of the window.
3. **Select the *Sensor type* in the drop-down list.**
4. **Select the *Thresholds method* to be used.**
The principle of the thresholds method is described in pages 49 and 50.
5. **Enter the new thresholds to be applied to the selected point by ticking on the check boxes before entering the numerical value.**
6. **Confirm by clicking on *Apply*.**
7. **Click on *Close*.**

9.2.2 Modifying the alarm thresholds of several points



This can be used only if the PC on which *DataManager* is launched has the Excel application.

This function, accessible by *Edit/ Thresholds/Global editing with Excel*, allows on the one hand, visualization of all the points of measurement of the active route and the associated alarm thresholds, and, on the other hand, the modification of values on several points of measurement, manually or from a macro *Excel* for example.

Caution: the alarm thresholds of a point or several points can be modified freely. However, it is not possible to add a point of measurement and its characteristics in this *Excel* window. Use beforehand, from the menu bar, the functions *Edit/Points/Single edit* and the button *Insert* (paragraph 9.1.1, on page 47) or *Edit/Points/Global edit with Excel* (chapter 10, on page 61).

Proceed as follows:

1. In the menu bar, select the route to be processed by *Route/Open*. Select the route to be edited and click on *OK*
2. In the menu bar, select *Edit / Threshold / Global edit from Excel*. The *Excel* application is automatically launched and the window displays the thresholds of the points of measurement defined in the route.

ROUTE ID	POINT ID	SENSOR TYPE	Threshold 1 (Warning / Low)	Threshold 2 (Alarm / High)	Warning/alarm method	Right/Wrong method
ROUTE01	POINT01	Temperature	40	60	-	-
ROUTE01	POINT02	RPM	800	1000	-	-
ROUTE01	POINT02	Contact	40	70	-	-

The points and the alarm thresholds are displayed in the Excel application.



Modification of the points (addition, deletion, modification) of the route in *Excel* is detailed in chapter 10, on page 61. **It is thus not possible to add, modify or delete points from this window.**

ROUTE ID: do not modify column (A). A new route cannot be created in this window; use the function *Route / New* of the *DataManager* application.

POINT ID: do not modify the name of the point in column (B). A new point cannot be created in this window; use the function *Edit/Points* of the *DataManager* application.

9. Individual management of points

SENSOR TYPE: enter here, if necessary, the new type of sensor.

Caution: the label must be identical to the list present in the *Alarm thresholds* window (see page 49, point 6). Strictly comply with the case of the label. The following table lists the usable descriptions.

Label	Description
Contact	Contact probe.
RPM	Tachometer (turns per minute).
Temperature	Standard temperature sensor.
Temp. IR	Infrared temperature sensor.
Decibel A	Sonometer.
FLow	Mass air flowmeter (air leak).
Parabolic	Parabolic sensor.
Open 10 mm	Open ultrasonic sensor of Ø 10 mm.
Open 16 mm	Open ultrasonic sensor of Ø 16 mm.
Closed 8 mm	Closed ultrasonic sensor of Ø 8 mm.
Closed 18 mm	Closed ultrasonic sensor of Ø 18 mm.
Int.Sensor	Ultrasonic sensor of the <i>SDT 170 MD</i> .
Ext.Sensor	External ultrasonic sensor.

Threshold 1: modify, if necessary, the alarm threshold 1 value.

Threshold 2: modify, if necessary, the alarm threshold 2 value.

Warning/Alarm method: insert, if necessary, the “star” (*) sign or leave the box blank

- *: the *Warning/Alarm* method will be used (see page 49).
- blank: the *Warning/Alarm* method will not be used.

Right/Wrong method: insert, if necessary, the “star” sign (*) or leave the box blank

- *: the *Right/Wrong* method will be used (see page 49).
- blank: the *Right/Wrong* method will not be used.

3. Once the values are modified, close the *Excel* application **IMPERATIVELY**.

IMPORTANT: DO NOT PROCEED to save the *Excel* window by the *File/Save* or *File/Save as* menu; the modifications would not be taken into account by *DataManager*.

4. Click on **Yes** when the window displays *Do you want to update the data base with the Excel data?*
5. On the menu bar *Edit/Thresholds/Single editing*, by selecting the point, it is possible to visualize the modifications made in step 1.

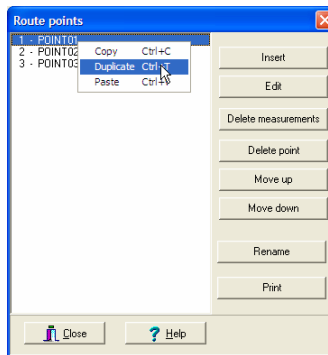
9.3 COPYING AND PASTING DATA

To simplify the entering of data relating to one or several points, a copy/past function is useful. It permits copying data between points of a same route or between two different routes.

9.3.1 Copying and pasting data in a same route

Proceed as follows:

1. Select *Edit/Points/Single edit*. In the *Route points* window select the line to be copied with the left button and then right click on this same line.
2. Select *Duplicate* (and not *Copy*) in the pop-up menu.

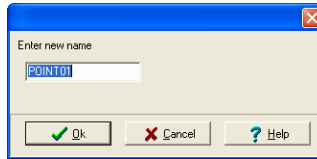


The pop-up menu is displayed.

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9. Individual management of points

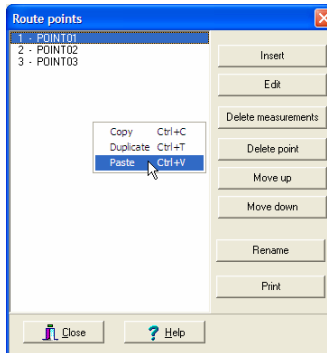
3. In the new window automatically displayed, enter the name of the new point (not yet created at this stage) which will receive the data of the original point and click **OK**.



The name of the point to be copied is defined in this dialog box.

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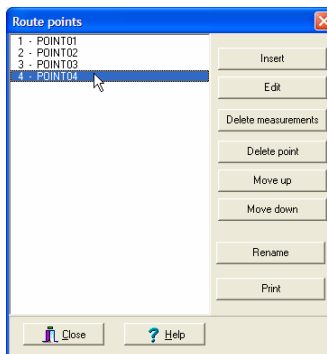
4. In the **Route points** window, click right button and, select **Paste** in the pop-up menu.



The selection of the **Paste** function.

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5. The new point is added to the list with its new position number.



The new point is added to the list.

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9.3.2 Copying and pasting data between two different routes

The way is similar to the previous paragraph. Proceed as follows:

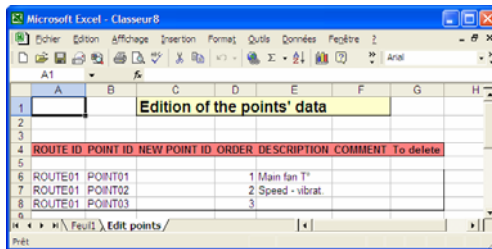
1. In the *Route points* window, right click on the line to be copied (or on different lines by using the *Ctrl* key).
2. In the displayed pop-up menu, select *Copy* (and not *Duplicate*).
3. Close the window.
4. Open a new route, selecting from the menu bar :
 - either *Route/New* (enter the description of the new route) and *OK*.
 - either *Route/Open*, select the route and click *OK*.
5. Select *Edit / Points / Single edit*.
6. In the *Route points* window, click right and select *Past*.

The point or the points copied in step 2 are added. If necessary, the point numbering is automatically modified.

10 Global management of points

This method allows creation, update or deletion of points of the active route from an *Excel* application. *Excel* must imperatively be installed on the PC supporting the *DataManager* application.

The advantage of this method is that all the data of the points of the route are visible on the spreadsheet and modification is done by copy-paste or by a macro designed by the user according to his requirements.



The list of points is directly visible in the Excel application.

Reminder: it is possible to individually define the characteristics of each point of measurement (refer to chapter 9, page 45).

10.1 OPERATING PROCEDURE

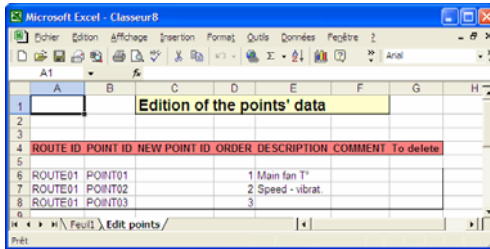


This can be used only if *Excel* is installed on the PC on which *DataManager* is launched.

10.1.1 Displaying points in *Excel*

Proceed as follows:

1. In the menu bar select **Route/Open**. Select the route to be edited and click on **OK**.
2. In the menu bar select **Edit / Points / Global edit from Excel**.
The *Excel* application is automatically launched and the window displays the current points of measurement defined on the route.



The points are displayed in the Excel application.



The modification of the alarm thresholds in *Excel* is detailed in paragraph 9.2.2, page 56.

10.1.2 Managing the list of the points in *Excel*

Proceed as follows to modify, delete or add points.

Modifying one or more points

1. In the *Excel* window displayed, modify the desired values in the corresponding cells.

ROUTE ID: do not modify column (A). A new route cannot be created in this manner; use the function *Route/New* of the *DataManager* application.

POINT ID: do not modify the name of the point in column (B). To modify the name of the point, define the new name of the point in column "C" called *New Point ID*.

NEW POINT ID: enter in the column "C":

- The new name of the point for an already existing point;
- Or the name of the new point to be created.

ORDER: modify, if necessary, the order number of the point (order of display of the points of measurement on the *SDT 170 MD*).

DESCRIPTION: modify, if necessary, the description of the point of measurement.

COMMENT: modify, if necessary, the comment relating to the point.

To delete:

- * (star): the complete line will be deleted in the data base. This point will no longer exist. In this case, it is advised to modify the order numbers of column (D).

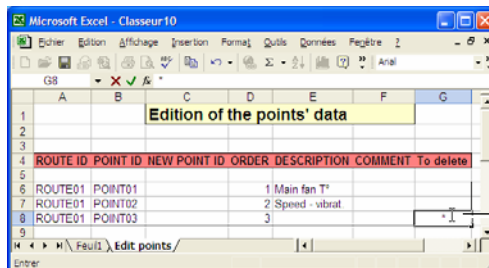
10. Global management of points

- blank: the line will not be deleted in the data base. It will be replaced by the possible modifications made in this line or saved if no modification has been made.

2. Once the values are modified, close the *Excel* application **IMPERATIVELY**.
IMPORTANT: **DO NOT PROCEED** to save the *Excel* window by the *File/Save* or *File/Save as* menu; the modifications would not be taken into account by *DataManager*.
3. Click on **Yes** when the window displays *Do you want to update the database with Excel data?*
4. By selecting the point and clicking on *Edit* in the menu bar *Edit/Points/Single edit*, it is possible to view modifications made in step 1.

To delete one or more points

1. In the *Excel* window displayed, click in the column (G) "*Delete*" the line corresponding to the point to be deleted.
Do NOT delete the line directly by *Edit/Delete* from the *Excel* menu; the deletion would not be taken into account.
2. In the column (G) of the point to be deleted, enter the value "*" (star).
For deletion, it is advised to modify the order numbers of the column (D).



Write * (star) in the cell of the line of the point to be deleted.

Writing of the "*" (star) value in column (G) of the line corresponding to the point to be deleted.

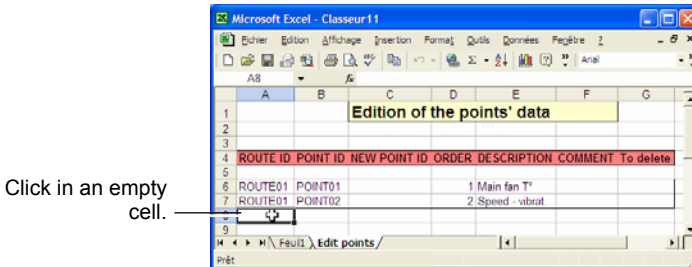
3. Once the values are modified, close the *Excel* application **IMPERATIVELY**.
IMPORTANT: **DO NOT PROCEED** to save the *Excel* window by the *File/Save* or *File/Save as* menu; the modifications would not be taken into account by *DataManager*.
4. Click on **Yes** when the window displays *Do you want to update the data base with the Excel data?*

- By selecting from the menu bar *Edit/Points/Single edit*, deletion of points done in step 2 can be viewed.

Adding one or more points

- In the *Excel* window displayed, click in a blank cell under the last occupied line.

In the example below, the click was carried out in the cell (A8).



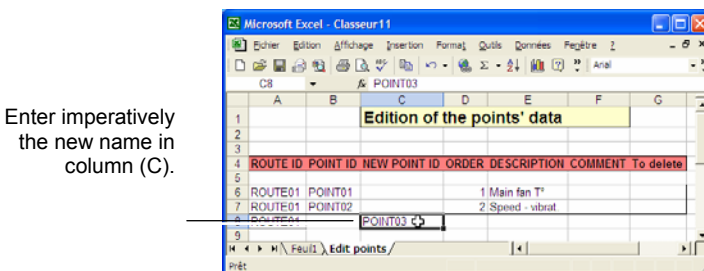
Click in a blank cell to begin the addition of a new point.

- Enter successively the following data:

ROUTE ID: enter imperatively the same name as that present in this column. A new route cannot be created in this manner.

POINT ID: strictly leave this cell blank.

NEW POINT ID: enter in the column (C) the name of the point to be added (see figure below).



Entry of the new name in column (C). Column (B) remains obligatorily blank.

ORDER: enter the order number of the point (order of display of the points of measurement on the *SDT 170 MD*).

DESCRIPTION: enter, if necessary, the description of the point of measurement.

COMMENT: enter, if necessary, the comment relating to the point.

10. Global management of points

To delete: leave the cell blank; the line will be added in the data base.

3. **Once the values are modified, close the *Excel* application IMPERATIVELY.**

IMPORTANT: **DO NOT PROCEED** to save the *Excel* window by the *File/Save* or *File/Save as* menu; the modifications would NOT be taken into account by *DataManager*.

4. **Click on Yes when the window displays *Do you want to update the Database with Excel data?***
5. **By selecting from the menu bar *Edit/Points/Single edit*, addition of points done in step 2 can be viewed.**



11 Transferring the data

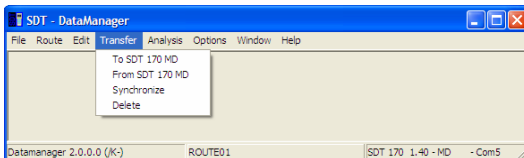
Once a route has been created within the *DataManager* software (refer to Chapter 8 – *Definition of the points of a route*), it must be transferred to the *SDT 170 MD* to be used.

If a route, point, or position is modified within the *DataManager* software, the new route must be transferred to the *SDT 170 MD* to be used.



1. Before any modification in the *DataManager* application, it is imperative to transfer measurements from the *SDT 170 MD* to the PC.
2. After any modification in the *DataManager* application, it is imperative to transfer the route data from the PC to the *SDT 170 MD* before any new measurement.

The communication procedures (transfer, removal, synchronization) are managed by the *Transfer* menu.



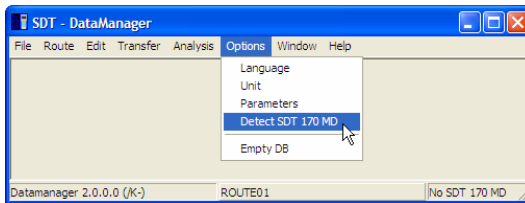
The “*Transfer*” menu groups the major communication functions.

11.1 CHECKING OF CONNECTION

Note: *the SDT 170 MD* must be connected to the PC.

- By a serial link (RS232) (see paragraph 4.3, page24).
- Or by a USB link (see 15, page 99).

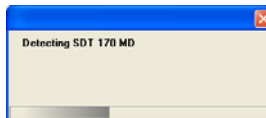
Before transferring from or to the *SDT 170 MD*, check that the detector is correctly connected to the PC by selecting from the *Options / Detect SDT 170 MD* menu bar.



This function allows the detection of the SDT 170 MD.

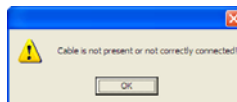
If the SDT 170 MD :

- is correctly recognized (correct connection, detector set on), the progress menu bar displays detection and the *DataManager* application can communicate with the SDT 170 MD.



The progress bar.

- is not recognized (cable not connected, detector off), an error message announces the defect. Refer to chapter 14, page 97, for details.



Example of error message.

11.2 PURGE THE MEMORY OF THE SDT 170 MD

The *DataManager* application can completely purge the memory of the SDT 170 MD. This is done in the instance of an error (for example an error by the user) during the monitoring procedure.

Proceed as follows:


- Connect the SDT 170 MD to PC (serial or USB port) and press ①.
- Check the PC-SDT 170 MD connection, in accordance with § 11.1.
- In the menu bar, select *Transfer* and *Delete*.
- The message Are you sure you want to delete all? is displayed.

5. Click:

- No to abandon the procedure.
- Yes to erase. *The SDT 170 MD displays Remote control until the end of the purge procedure. The DataManager application confirms that the memory is purged. Click the OK button to restore the unit to normal running mode.*

11.3 PC - SDT 170 MD TIME STAMPING SYNCHRONIZATION

This function allows the time stamping synchronization of the *SDT 170 MD* with the PC. Proceed as follows:

1. Connect the *SDT 170 MD* to PC (serial or USB port) and press on .
2. Check PC-SDT 170 MD connection, in accordance with § 11.1.
3. In the menu bar, select *Transfer and Synchronise*.

11.4 TRANSFERRING THE ROUTES TO THE SDT 170 MD

The application *DataManager* is capable of managing an unlimited number of routes. Any 128 of those routes can be transferred to the *SDT 170 MD*, along with historical data for a defined time period. The transfer operation includes three steps:


- Transfer of all existing data of the *SDT 170 MD* to the *DataManager*.
- Preparation the routes to be transferred to the *SDT 170 MD*.
- Effective transfer of the routes to the *SDT 170 MD*.

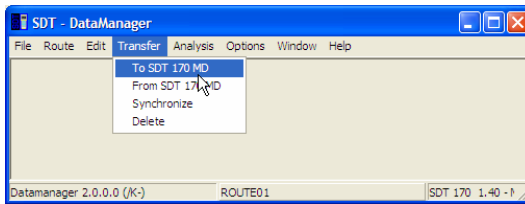
Note: the *SDT 170 MD* must be connected to the PC.

- By a serial connection (RS232); see paragraph 4.3, page 24.
- Or by a USB connection; see chapter 15, page 99.

Warning: this function transfers firstly all the routes and their data from the *SDT 170 MD* to the *DataManager* software.

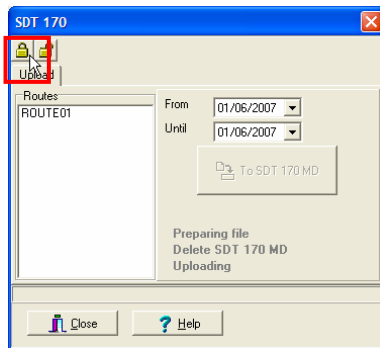
Proceed as follows:

1. Connect the *SDT 170 MD* to PC (serial or USB port) and press on .
2. Check the PC - *SDT 170 MD* connection in accordance with § 11.1.
3. In the menu bar, select *Transfer / To SDT 170 MD*.
The display is as follows.




Selecting the sub-menu "To SDT 170 MD".

4. Click on the  icon to set the **SDT 170 MD** in *Remote control* mode.



Selection of the route to be transferred to the SDT 170 MD.

5. **Select the routes to be transferred to the SDT 170 MD (maximum 128 routes).**
To select more than one route, hold the *Ctrl* key down while clicking on the routes to be transferred.
6. **In the fields *From* and *Until*, select the corresponding date.**
7. **Click on *To SDT 170 MD* button.**
The **SDT 170 MD** automatically indicates *Remote control* for the duration of the transfer. *Uploading is finished* is displayed in the message box of the PC when the transfer is complete. Click *OK*.
8. **When data is transferred, set the SDT 170 MD in normal mode by clicking on the  icon or on the *Close* button.**
Remote control is cleared on the **SDT 170 MD** screen. The route data have been transferred from the PC to the **SDT 170 MD**. This one can be used for measurement memorization.

11.5 TRANSFERRING DATA FROM THE *SDT 170 MD* TO *DATAMANAGER*


Once the measurements done, they are to be transferred to the PC for analyzing. Data transfer from the *SDT 170 MD* unit to the PC is a simple procedure which includes three steps:

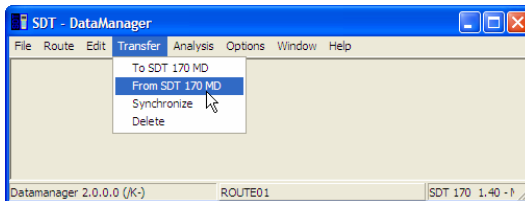
- Synchronization of the *SDT 170 MD* with the *DataManager*.
- Transfer of all existing data of the *SDT 170 MD* to the *DataManager*.
- Updating of the database.

Note: *the SDT 170 MD* must be connected to the PC.

- By a serial link (RS232); see paragraph 4.3, page 24.
- Or by a USB link; see chapter 15, page 99.

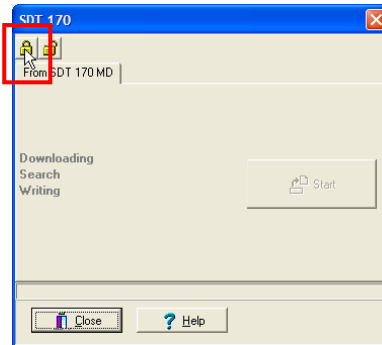
Proceed as follows:

1. **Connect the *SDT 170 MD* to the PC (serial or USB port) and press on .**
2. **Check the PC-*SDT 170 MD* connection, in accordance with 11.1.**
3. **In the menu bar, select *Transfer / From SDT 170 MD*.**
The display is as follows.




Selecting the sub-menu "*From SDT 170 MD*".

4. Click on the icon  to set the *SDT 170 MD* in *Remote control* mode.



The screen for a data transfer from the *SDT 170 MD* to the PC.

5. Click on **Start** button to transfer data from the *SDT 170 MD* to the PC. The transfer of all the routes and their associated points, together with any new data that was saved to the *SDT 170 MD*, are moved to *DataManager*. At the end of the transfer the program displays *Download finished*. Click **OK**.
6. When data is transferred, set the *SDT 170 MD* in normal mode by clicking on the  icon or on the **Close** button.
- Remote control* is cleared on the *SDT 170 MD* screen. The data are now on the hard disk of the computer. To display, select the route in *Route/Open* and view the data in *Analysis*.

11.6 BACKUP/ RESTORE THE DATA

11.6.1 Backup the database

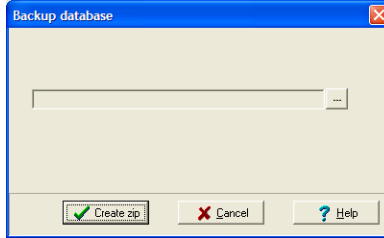
Two methods are available to backup the data of the database (BDD):

- Via the application, menu *File / Backup database*.
- Manually, via *Windows Explorer*.

Via the menu

Proceed as follows:

1. In the menu bar, select *File / Backup database*.



Selection of the destination folder to be saved in.

2. In the window, click on to select the destination folder and the name of the backup file.
3. Click *Create zip* to complete the backup.

Through *Windows Explorer*

In *Windows explorer* open the *DataManager* (C: /Program files/SDT DataManager) folder and save the file called *Data* on any media (CD, DVD, USB, network, etc).

11.6.2 Restoration of the data base

To restore the data of the data base (BDD) two methods are available:

- By the application, menu *File / Incremental update*.
- Manually, through *Windows Explorer*.

Through the menu

Proceed as indicated in paragraph 11.6.3.

Through *Windows Explorer*

In *Windows Explorer* open the C: /Program files/SDT DataManager folder and paste the unzipped folder *Data*. Please note that this “paste” function erases the currently present data.

Note: the *Data* directory can be pasted in any location, insofar as the data path is specified in *Options/Parameter* menu, *Info* tab, *Route* field.

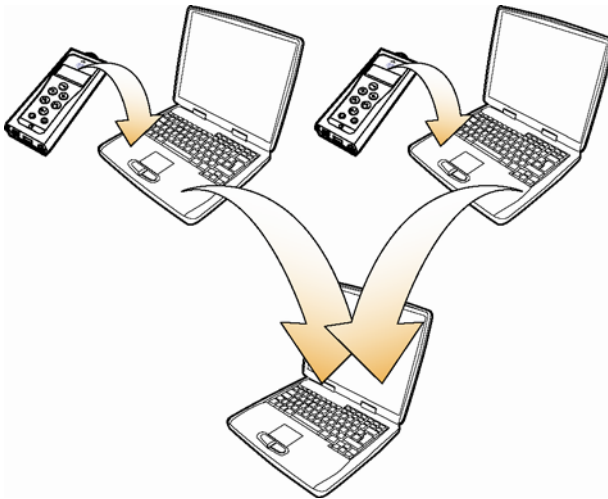
11.6.3 Incremental update of the database

Merging of the database currently used by the *DataManager* application with another compacted database (ZIP extension) obtained by an earlier backup operation (see paragraph 11.6.1).

The resulting database is the one currently used by the *DataManager* application to which data from the compacted base will be added. Only data not existing in the base currently used by the application is transferred.

Example of use of incremental update

Repatriation of data from several PCs storing data from different *SDT 170 MD* data to a single PC.



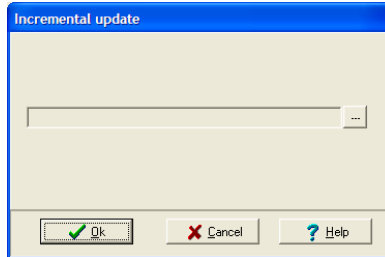
Repatriation of data coming from several PC to a single PC.

0603


Operating method

Proceed as follows for an incremental update of the database:

1. **Select *File / Incremental update*.**



Selection of the backup repatriation folder.

2. In the window, click on  to select the (ZIP extension) backup to be merged. Click **OK** to close the window.
3. Click **OK** to launch the incremental update.



The complete purging of the database is done by a specific sub-menu. See paragraph 13.5, page 96.

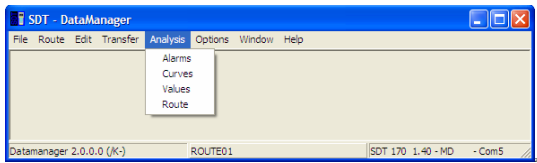


12 Processing and displaying data

It is assumed that the measurement values have been transferred from the *SDT 170 MD* to the hard disk of the PC as described in paragraph 11.5, page 71.

During this step the *SDT 170 MD* need not be connected to the PC. These functions simply look up the databases stored on the hard disk of the PC.

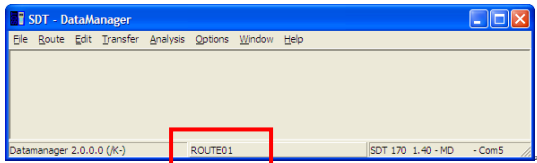
The display procedures are managed by the *Analysis* menu.



The “Analysis” menu groups the measurements analysis procedures.

12.1 SELECTING THE ROUTE TO DISPLAY

1. In the menu bar, select the *Route* menu and click *Open*.
2. Select the route to be viewed and click *OK*.
The active route is displayed at the bottom of the window.



The active route is displayed at the bottom of the window.

12.2 EDITING THE ROUTE REPORT



Microsoft Excel must imperatively be installed on the computer to use the any printing possibilities. Other else, the export possibilities (ASCII, Mimosa or DBF) of the Route/Export menu must be used.

Historical data stored in the *DataManager* software can be displayed as a screen report and printed if necessary. This display a list of all the points included in the current route along with their description, rank number and threshold values. Proceed as follows:

1. In the menu bar, select the **Analysis** menu and click on **Routes**.
Excel is opened and appears after a few delays as in the next figure.
2. If necessary, edit from *Excel* the routes on the printer.

Points report							
1	ROUTE01						
4	Point ID	POINT01					
5	Description	Main fan T ²					
6	Order	1					
7	Temperatur	°C		Threshold 1 (↑)	40	Threshold 2 (↓)	60
9	Point ID	POINT02					
10	Description	Speed - vibrat.					
11	Order	2					
12	RPM	RPM		Threshold 1 (↑)	800	Threshold 2 (↓)	1000
13	Contact	dBjV		Threshold 1 (↑)	40	Threshold 2 (↓)	70
15	Point ID	POINT03					
16	Description						
17	Order	3					
18	Flow	SCCM		Threshold 1 (↑)	50	Threshold 2 (↓)	100

Excel is automatically launched and displays data.



Modification of the displayed data does not have any impact on the database; modification is not taken into account while closing Excel.

12.3 DISPLAYING THE VALUES



The Microsoft Excel application must imperatively be present on the PC for editing purposes. If not, export possibilities (ASCII, Mimosa or DBF) of the Route/Export menu will have to be used.

This function is used for displaying data transferred from *SDT 170 MD* to the *DataManager* application. This history can then be analyzed point by point, for a defined period, for the selected route, as indicated in paragraph 12.1. Proceed as follows:

1. In the menu, select **Analysis** and click **Values**.
The *Historical values* window is displayed.

Date	Time	Value	Unit	Sensor	Contact type	MFL Type
5/5/2007	9:10:34 AM	30	SCCM	Flow		
5/10/2007	9:05:34 AM	21	SCCM	Flow		
5/31/2007	9:04:10 AM	21	SCCM	Flow		X

Example of the *Historical values* window.

2. In the *Point name* dropdown box, select the point of the current route to be analyzed.
3. In the *From* and *Until* dropdown boxes, select the time period for the data to be viewed.
The measurements, along with the time and date they were taken, are automatically displayed in the table.

The *Contact type* column is only used for measurements recorded with the contact probe. It advises the operator of the frequency setting of the contact probe for that particular measurement.

Column *MFL Type* is only visible and is used for measurements done with a mass flow sensor. It advises the operator on the sensor type used.

Important: the colon right to *Contact type* may exist or not. A line with an **X** indicates that this value has been manually added (see § 12.3.2 – *Adding a measurement*).

5/31/2007	9:04:10 AM	21	SCCM	Flow		X
-----------	------------	----	------	------	--	---

Example of a line with "X" at the right end of the line, indicating a manual entry.

4. With the application *Excel*, it is possible to print the window thanks to the menu *File / Send to Excel*.

12.3.1 Erasing a measurement

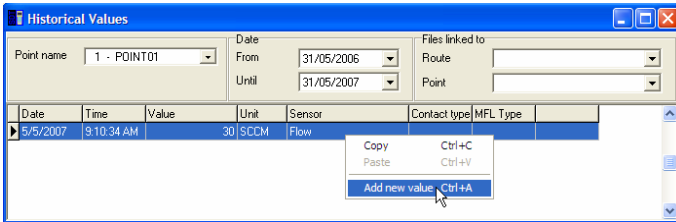
This function is used to erase data from within the *Historical values* window (previous figure). This is useful, for example, when a value is obviously erroneous. Proceed as follows:

1. In the *Historical values* window select the cell or the line to be erased with the mouse.
2. Press the *Delete* key on the keyboard.
DataManager will ask to confirm the operation with the message “Are you sure to delete?”. Select the appropriate response to conclude the task.

12.3.2 Adding a measurement

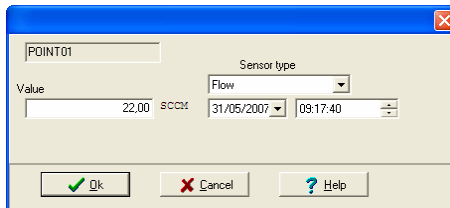
This function is used to add data within the *Historical values* window when, for example, a measurement has been forgotten. Proceed as follows:

1. In the *Historical values* window, right click on a line and select *Add a new value*.



A right click on the table displays a pop-up menu.

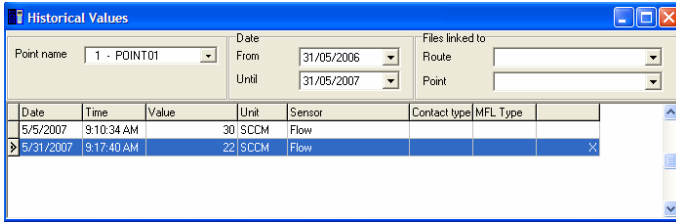
2. Enter data to be added in the displayed window.



The window when entering manually a new measurement.

3. Click **OK**.

The data is added in the table in chronological order.



The new data are added to table (dark line).



Note the presence of a cross “X” at the right end of a line when data have been added manually.

4. Close the window once the operation is finished.

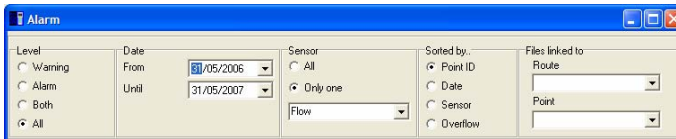
12.4 DISPLAYING ALARMS

This function mainly displays, for the route selected as indicated in paragraph 12.1, and for all the points of this route, alarms (in the form of icons), the values of threshold excesses, measurements with time-stamping as well as the units. Proceed as follows:

1. In the menu, select **Analysis and Alarms**.

The *Alarm* window appears as in the next figure. The values displayed depend on the parameters chosen by the operator.

2. Select the sort options for display.



The sorting options for display of alarms can be selected in the upper corner of the window...

Level: four possibilities are offered.

- **Warning**: display the values which are over the first threshold level.
- **Alarm**: display the values which are over the second threshold level.
- **Both**: display the values which are over the first and the second threshold levels.
- **All**: display all values.

Date: displays the alarms selected between the dates *From* and *Until*.

Sensor: display the alarms:

- for all types of sensors (choice *All*).
- or only for the type of sensor selected in the dropdown box (choice *Only one*).

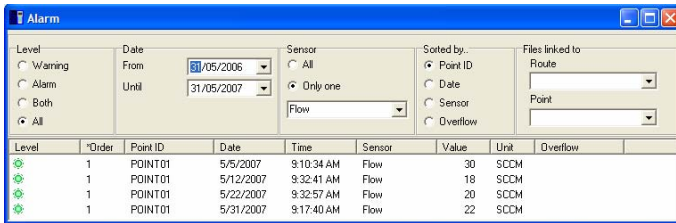
Sorted by: sorts the table by point (number of points by ascending order), by date, by sensor or overrun (value of measurement higher than the value of the threshold defined).

Files linked to:

- Route: files linked to the route.
- Point: files linked to the point.

To display a linked file, click on ▼ and, in the drop-down list, click on the file to be viewed.

Displayed information is immediately modified in the table of the results according to the options selected.



The alarms window.

The columns specify the following information:

- **Level**: icon specifying the measurement alarm level.
 - Green: normal measure.
 - Yellow: warning.
 - Red: alarm.

Reminder: the icons can be defined by the user (see paragraph *Visual* on page 95).
- **Order**: order number of measurement, "1" being the first measurement taken.
- **Point**: name of the point (see paragraph 9.1.1, page 47, for the principle of definition of the name of a point).
- **Date / Time**: time-stamping (date and time) of measuring the concerned point.
- **Sensor**: type of sensor used for measurement.
- **Value**: recorded value.

12. Processing and displaying data

- **Unit:** unit of value of the preceding column.
- **Overflow:** value of measurement higher than the value of the threshold defined.

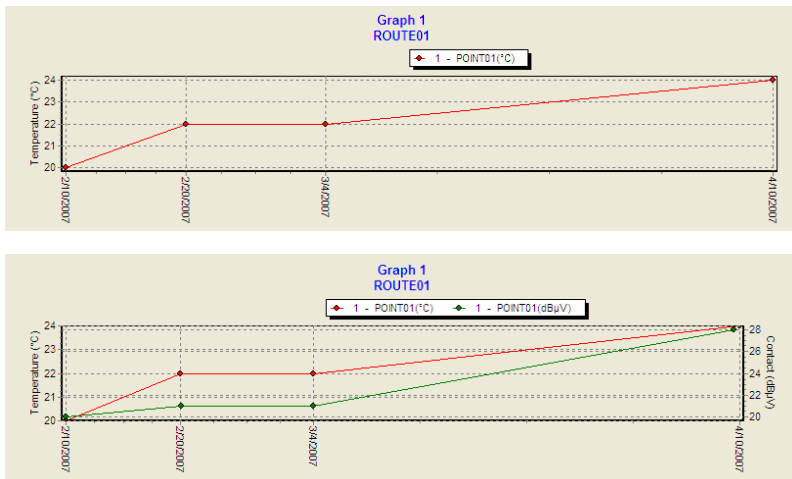


The asterisk present at the left of the column name recalls the sort criterion used. It is also possible to sort the table criterion-wise by clicking on the heading of the column regarded as sort key.

3. In the present *Excel* application, it is possible to print the window by the menu *File/Send to Excel*.

12.5 DISPLAYING GRAPHICS

This function displays data of the active route, for the selected points on a maximum of 3 graphs. Each graph can display measurements of several points of the same type of sensor or 2 different sensors.



Display of several points of the same type of sensor (high) or 2 different sensors (low).

526-528

Proceed as follows:

1. In the menu, select **Analysis** and click on **Curves**.
The window *Graphic representation* is displayed.

2. Select the parameters.



The sort options for display of the curves can be selected on the upper corner of the window.

Point name: select the point of measurement to be displayed. Several points of measurement can be simultaneously displayed by using the *Add* button.

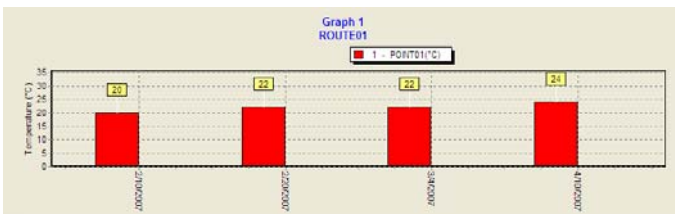
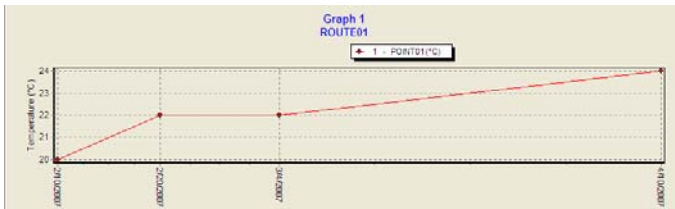
Sensor type: type of sensor to be displayed. Up to 2 sensors can be displayed together using the *Add* button. One sensor will be displayed on the left Y axis and the second on the right Y axis.

Files linked to: click on the button ▼ to display the drop-down list of the files linked to the route and/or to the point and click on the selected file to launch the application for opening it.

Date: displays the graph between the two selected dates (*From to* and *Until*).

Note: if 2 sensors are displayed on the same graph, sole one can be sent to Excel (click right button). In this case, click "Clear all" and click "Add" to add the sole curve to be sent to Excel.

Graph bar / Time graph: displays the data with curves or histograms.



Displaying in the form of graph bar (below) or time graph (above).

12. Processing and displaying data

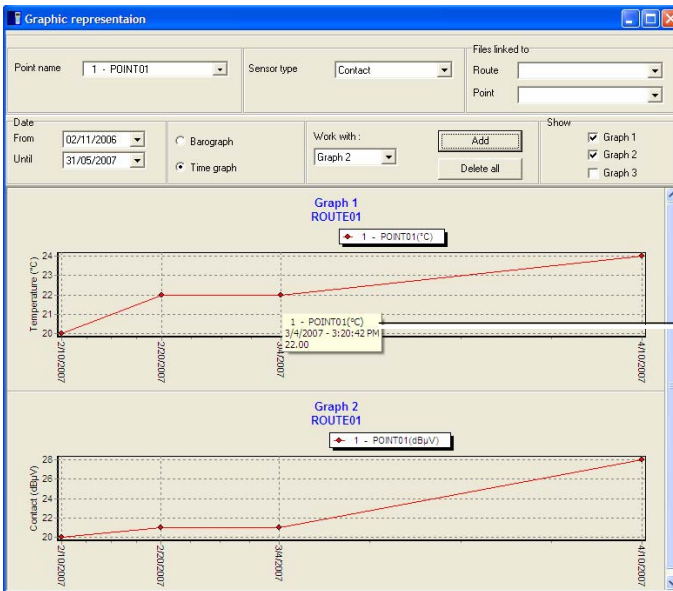
Work with: selects the graph, among the 3, which will receive data to be displayed when the *Add* button is clicked.

Add: displays measurements of the point in the selected graph in the *Work with* box.

Delete all: erases the entire graph.

Show: displays (activated check box) or hides (absent check box) the corresponding graph.

The graph then displays the selected data. Pointing the cursor on a point displays the data of the point (see the illustration below).



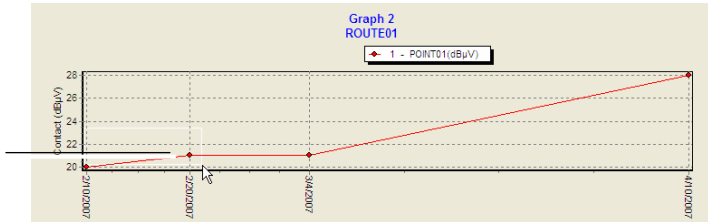
Display of data relating to the point over which the cursor is.

Example of a curve screen.

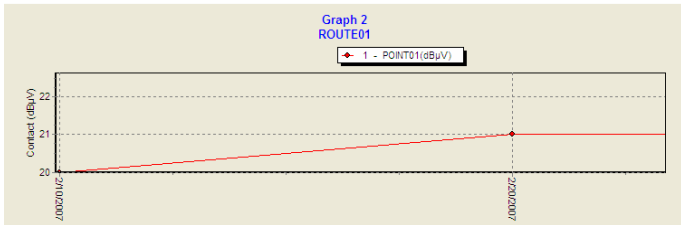
555

Note: holding the left button down and dragging the mouse selects a rectangle for zooming into a specific time period. Click right button *View all* to display the whole graph again.

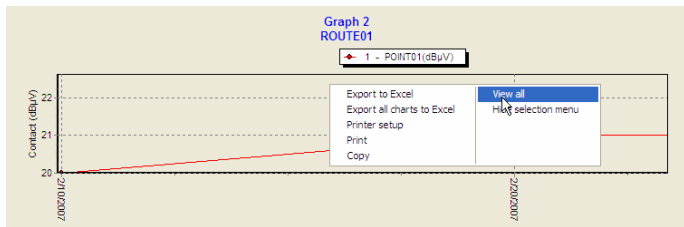
Encircle the area to be enlarged



The area is enlarged.



Returning to the normal size by right clicking.

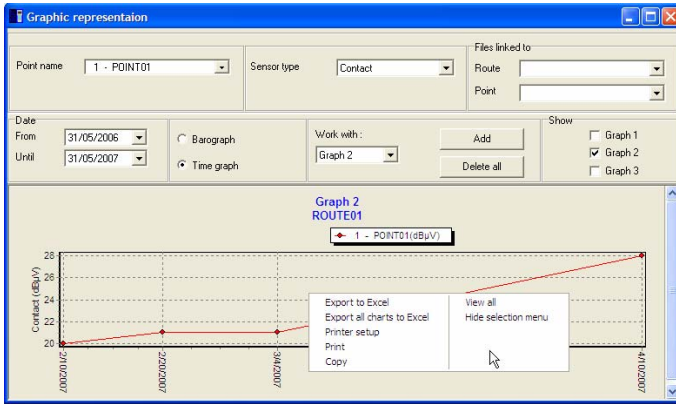


The zoom function is activated (top) by encircling the area to be enlarged. The result is the central illustration. To return to normal view, right click and select “Full view” (bottom). 538 - 539 - 555

3. Right-click the mouse to display the floating menu which provides the following functions:

- **Export to excel:** opens the *Excel* application and automatically imports data there in graph and table format; the table being behind the graph. Caution: data can be imported only with one axis Y active. This function is active only if a graph is displayed.
- **Export all charts to Excel:** open *Excel* application and automatically imports all data there in graph and table format; the table being behind the graph. Caution: data can be imported only with one axis Y active. This function is active only if a graph is displayed.
- **Printer setup:** open the *Windows* “Printing Configuration” window.

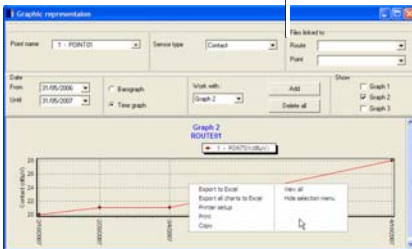
12. Processing and displaying data



A right click displays additional options.

- **Print**: to start printing of the graph. Before printing, maximize the graphics by clicking the icon in the top right corner. This function is active only if a graph is displayed.
- **Copy**: copies in the *Windows* clipboard, the graph selected in BMP format. This function is active only if a graph is displayed.
- **View all**: to display the complete graph (optimization of the axis).
- **Hide selection menu**: displays or hides, the upper corner of the window *Graphical representation*, i.e. the parameters selection area.

The menus are displayed

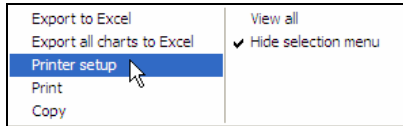


The menus are hidden



By activating the function "Hide the selection menu", the menus are hidden (right image).

4. If necessary, print the window by right clicking and selection of *Printer set up*.



The “Printer setup” function is accessible by a right click.

12.6 DISPLAYING INFORMATION OF A ROUTE



This function requires *Excel* application on the PC.

This function displays the characteristics of each of the points forming the route, entered in paragraphs 7.1, page 35 and 9.1.1, page 47.

Proceed as follows:

1. **If the search relates to the current route, go directly to step 2.**
If a route other than that displayed must be viewed, select in the menu bar *Route/Open*, click on the route to be displayed and on *OK*.
2. **In the menu bar, select *Analysis and Route*.**
The Excel application is launched.
3. **Search in the displayed data for information relating to the points for the route selected in step 1.**

The screenshot shows a Microsoft Excel spreadsheet titled 'Classneur15'. The spreadsheet contains a table with the following data:

	A	B	C	D	E	F	G	H
1								
2			Points report					
3		ROUTE01						
4		Point ID	POINT01					
5		Description	Main fan 1*					
6		Order	1					
7		Temperatur °C			Threshold 1 (°)	40	Threshold 2 (°)	60
8								
9		Point ID	POINT02					
10		Description	Speed - vibrat.					
11		Order	2					
12		RPM	RPM		Threshold 1 (°)	800	Threshold 2 (°)	1000
13		Contact	dBqV		Threshold 1 (°)	40	Threshold 2 (°)	70
14								
15		Point ID	POINT03					
16		Description						
17		Order	3					
18		Flow	SCCM		Threshold 1 (°)	50	Threshold 2 (°)	100
19								

Example of display of route information.

This data can be directly printed by *Excel* application.

12. Processing and displaying data

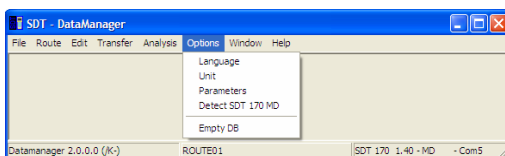


Any modification of these values is not memorized once the *Excel* application is closed. To modify values with *Excel*, use the functions (*Edit / Points / Global edit from Excel* (see page 61) or *Edit / Thresholds / Global edit from Excel* (see page 56)).



13 The *Options* menu

Is gathers various sub-menus allowing the configuration of the program.

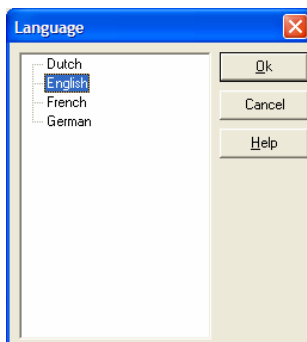


Functions of the “Options” menu

13.1 MENU LANGUAGE

DataManager is a multi-lingual program. You may choose from up to ten different languages. Proceed as follows:

1. **In the menu, select *Options* and click on *Language*.**
The *Language* window appears as in the next figure.
2. **Select the language and click *OK*.**
The windows are immediately displaying the labels into the chosen language. The customer’s labels are, of course, not translated.

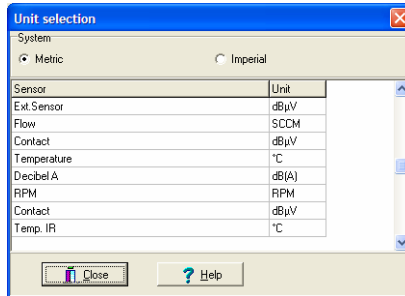


The screen allowing the selection of the working language.

13.2 MENU *UNITS*

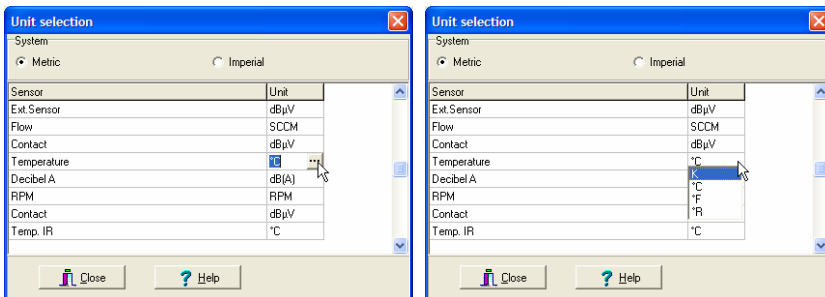
This window enables selection between the measuring units of the metric or imperial system.

1. In the menu, select **Options** and click on **Unit**.
The *Unit selection* window appears as in the next figure.



The window enabling selection of units in metric or imperial system.

2. Select the type of units (**Metric** or **Imperial**) in which the data will be displayed.
The table lists the units for each type of measurement but they cannot be edited except for temperature. For selecting the type of units, double click in the unit box in order to successively display the button and select the unit in the drop-down list.



For the temperature, click in the cell and then on the button and select the unit.

3. Click **Close**.


13.3 MENU PARAMETERS

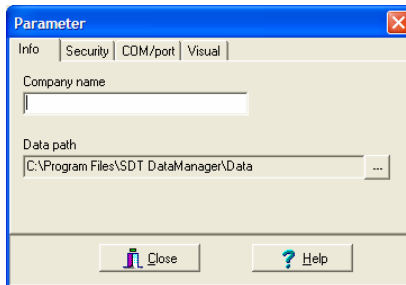
1. In the menu, select the *Options* and click on *Parameters*.
The *Parameter* window appears.
2. Select one of the four tabs.
Refer to paragraphs below for the description of each of the tabs.

13.3.1 Info

This tab defines the company name which will appear on all the reports and graphs as well as the database path of the *DataManager* application.

Company name: every report and graph displays the company name shown in the *Parameter / Info* window. To change the company name label, modify that field.

Data path: display the location of the data memorized by *DataManager*. To modify this location, click on the  button and select the right folder.

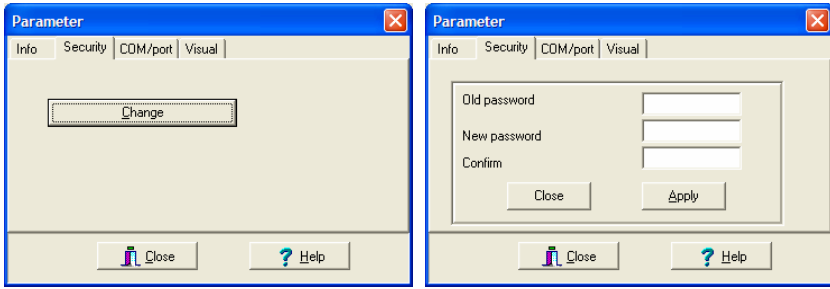


The tab which defines the name of the firm printed on the reports and graphs and the localization of the data memorized by the software.

13.3.2 Security

When *DataManager* is first installed, a factory set security password is already encrypted *SDT*. This password can be modified after installation by selecting this tab.

Click *Change*. Enter the old password in the *Old password* field and enter the new password in the *New password* field. Confirm by entering the new password once again in the *Confirm* field. Click *Apply* to use the new password.



The tab allowing the definition of the password.

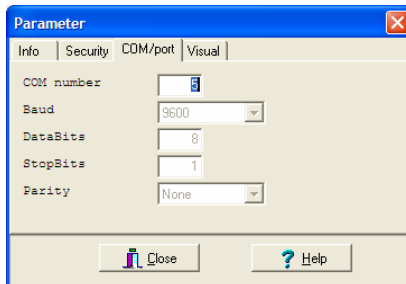
638-002

Users who know the password have 100% access to the software. Users who do not know the password will be able to view the data, but not modify it.

13.3.3 Com/Port

This tab allows the selection of the communication port on the PC in use for the *SDT 170 MD*.

Enter the COM port number of the PC to be used. The other displayed data can not be modified.

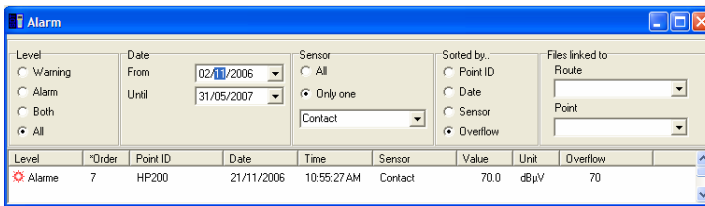
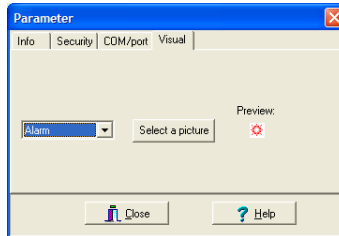


The tab allowing the definition of the communication port.

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13.3.4 Visual

This window defines icons which will be displayed in the window *Analysis/Alarm*.



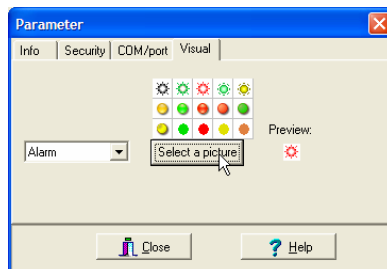
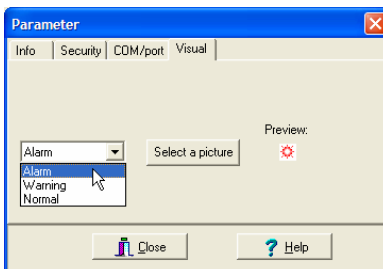
Example of the selection of icon and its application in the *Analysis / Alarm* window.

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Proceed as follows:

1. In the drop-down list, select the **Alarm**, **Warning** or **Normal** threshold for which the icon will be defined.

Reminder: *Warning* corresponds to the first alarm threshold and *Alarm* to the second threshold (highest).



Choice of icon.

639452

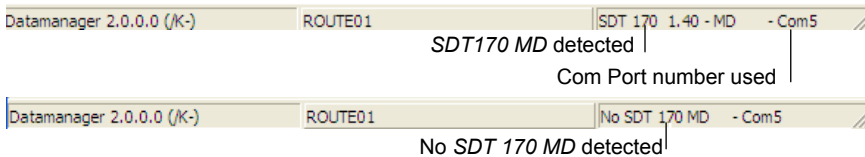
2. Click on the **Select a picture** button and on the desired icon.
3. If necessary, proceed as indicated in points 1 and 2 for the other thresholds.
4. Click **Close** to confirm the choices.



13.4 DETECT *SDT 170 MD*

This tab allows confirming the correct connection between the *SDT 170 MD* device and the PC. When this function is selected, the status bar at lower side of the screen displays the name of the current route (here *ROUTE01*), the type of data logger (here *SDT 170 1.40 - MD*) and COM Port number (here *Com5*).

If no *SDT 170 MD* is detected a message *No SDT 170 MD* will appear.



Information for a correct (top) or incorrect (bottom) connection between the PC and the SDT 170 MD.

648-646

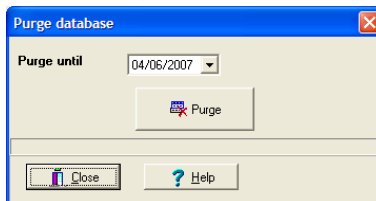
13.5 EMPTY DB

This tab allows to erase or to purge old data from the current route present on the hard disk.

Once the maximum date of erasure is defined, click *Erase*. *The DataManager* application will erase historical measurements for the oldest data found in the route, up to the date indicated in the field *Purge until*.



Warning: once the *Purge* button is pushed, the measurements will definitely be erased and can only be retrieved by means of restoring from a back-up disk.



The windows allowing the erasing of the old data from the current route.

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A message asks for confirmation before final erasing of the database; click on *Yes* to erase the database or on *No* to abandon the erase procedure. Once accomplished, a window displays *Data base erased*.

14 Error messages

14.1 MAJOR CAUSES OF FAULTY CONNECTION

14.1.1 Reason 1

By default, *DataManager* is configured to use the COM1 port. If this on is already used by an equipment (mouse, etc.), an error message is displayed.

Method using the *DataManager* application

Modify the port number through the *Options/ Parameters / Port COM* (see paragraph 13.3.3).

Method not using the *DataManager* application

The COM Port number can also be modified directly by the *ini* file of the *DataManager* application. Proceed as follows:

1. In the work station, open *Program files* folders and *SDT DataManager*.
2. Double-click on the file labeled *DataManager.ini* (type of file: Configuration settings).
3. Modify the line *Com No=1* in any other port number (for example 2). Close this file with saving the changes.
4. Reopen *DataManager*.

14.1.2 Reason 2

If the message "COM port 1 does not exist" is displayed, select the correct port that was used to connect the *SDT 170 MD* (see paragraph 4.3). This message is also displayed if the program is run twice. "COM port 1 is already open by a device".




14.2 OTHER CAUSES OF ERROR

14.2.1 Absent or badly connected cable

Connection between the PC and the *SDT 170 MD* is absent or incorrect. Check the cable, the correct positioning of the connectors. Click *OK*, close the application before starting it again or select the *Options/Detect SDT 170 MD* menu. If the problem is not solved, execute the steps indicated in paragraph 14.1.

14.2.2 The *SDT 170 MD* is not connected

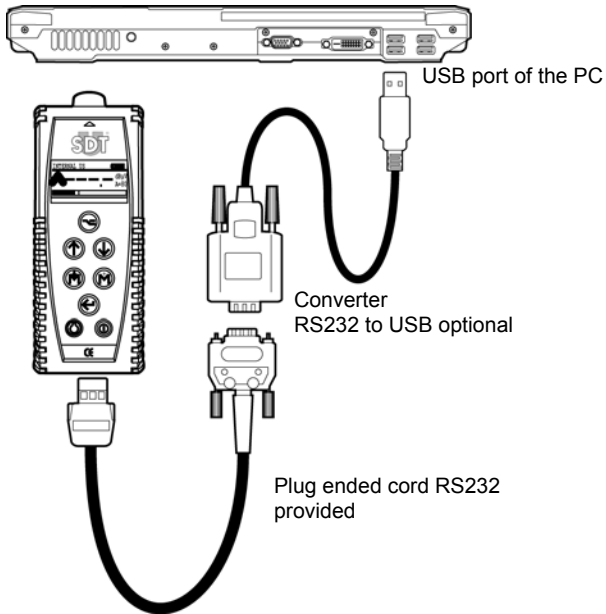
SDT 170 MD is not activated. Push the on/off button  of *SDT 170 MD*. Click *OK*, close the application before starting it again or selecting the *Options / Detect SDT 170 MD* menu.

15 USB-RS232 Converter

When the PC on which the SDT 170 MD will be connected does not have (RS232) serial port, the communication will be done through a USB port.

15.1 CONFIGURATION





Once the unit is complete, the system will appear as follows:




Elements in a connection between the SDT 170 MD and the PC by USB cable and converter.

2000

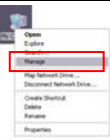
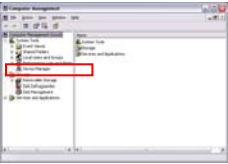
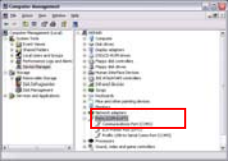
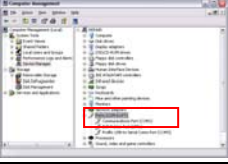
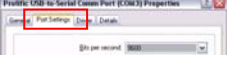
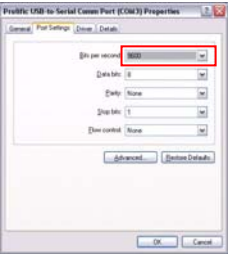
15.2 INSTALLATION OF THE SOFTWARE

Step	Illustration	Action
1.		Check that the cable connecting the PC to the USB-RS232 converter is disconnected before launching the installation procedure of the application.
2.		On the PC, decompact <i>Driver.zip</i> USB application. This application can be downloaded on the following ftp site: ftp://sdt.be/pub/SDT170%20Software/USB
3.	 USB DRIVER.exe	Double click on the <i>USB DRIVER.exe</i> icon to launch the application.
4.		Click on <i>Next</i> to launch the installation procedure.
5.		Click on <i>Finish</i> to finish the installation procedure.
6.		Restart the PC if the prompt is displayed.

15.3 CHECKING THE PRESENCE OF THE USB-RS232 DRIVER

Step	Screen	Action
1		Depending on the type of display on the <i>Start</i> menu, use one of the following two methods: - <i>Standard Start menu</i> : right-click on the <i>My computer</i> icon on the desktop. - <i>Start menu</i> : select <i>Start / My computer</i> .

15. USB-RS232 Converter



-
- 2  In both cases, right-click and select *Manage*.
-
- 3  Click on *Device manager*.
-
- 4  Click on the + sign in *Ports (Com and LPT)*.
-
- 5  Double-click on the icon for the installed *USB* converter.
-
- 6  In the window displayed, click on the *Port settings* tab.
-
- 7  Define the parameters as follows (by clicking on the drop-down list located on the right of each field):
Bits per second: 9600.
Data bits: 8.
Parity: none.
Stop bits: 1.
Flow control: none.
-
- 8 Click on the *OK* button to record the data, close the window and return to the welcome screen (step 2 in this paragraph).
-

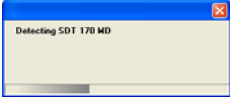



NB: if, after a further communication test, no communication is possible between the *SDT 170 MTT* and the PC, you must modify the PC's communication port. Proceed as follows:

9	Carry out steps 1 to 7 described above.
10	In the window displayed (illustration opposite), click on the <i>Advanced</i> button.
11	In the window displayed (illustration opposite) select another COM port.
12	Click on the <i>OK</i> button to record the data, close the window and return to the welcome screen (step 2 in this paragraph).
13	Carry out a new transmission test. If the test is still not conclusive, redo steps 9 to 12 above until the right COM port has been found.

15.4 CHECKING OF PC- *SDT 170 MD* CONNECTION

Step	Illustration	Action
1.		<p>Push the on/off button  of the <i>SDT 170 MD</i> to start the apparatus.</p> <p>Check that the PC cable to the USB-RS232 adapter is always connected to the PC.</p> <p>Connect the end of the (RS232) series cable to the <i>SDT 170 MD</i>.</p>
2.	 DataManager	<p>Double click the icon of the <i>DataManager</i> application.</p>

-
3.  The *Detection of the SDT 170 MD* window is displayed for a few seconds.
Note: if this indication is replaced by an error message, refer to paragraph 15.5.
-
4.  The application is launched.
At the bottom of the screen, the following indications are displayed:
- DataManager 2.0: version number.
 - SDT 170 1.40 MD COM X: "X" being the communication port number used (see step 9, paragraph 15.3).
- These indications confirm the correct connection between the application and the *SDT 170 MD*.
-
5. The *DataManager* application can be used with its transfer functionalities.
-

15.5 IN CASE OF USB-RS232 COMMUNICATION PROBLEM

Proceed as follows:

1. Check that the *SDT 170 MD* is on.
2. If so, shut down the *SDT 170 MD*. Close the *DataManager* application.
3. Check that the connection between the PC and the adapter is correct.
4. If yes, modify the configuration parameters of the configuration in the following way:
 - a. With the explorer, access the following folder: C: /Program Files/SDT DataManager.
 - b. Double click on the *DataManager.ini* file.
 - c. Modify the numerical value of the line to obtain `Timer = 10`.
 - d. Modify the numerical value of the line to obtain `Unlock Timer = 10`.
 - e. Select *File/Save*.
5. Switch on the *SDT 170 MD*. Relaunch the *DataManager* application. Connection should be correct with the display of the *Detection SDT 170 MD* window in accordance with point 4 of paragraph 15.4.



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Instruction user manual

