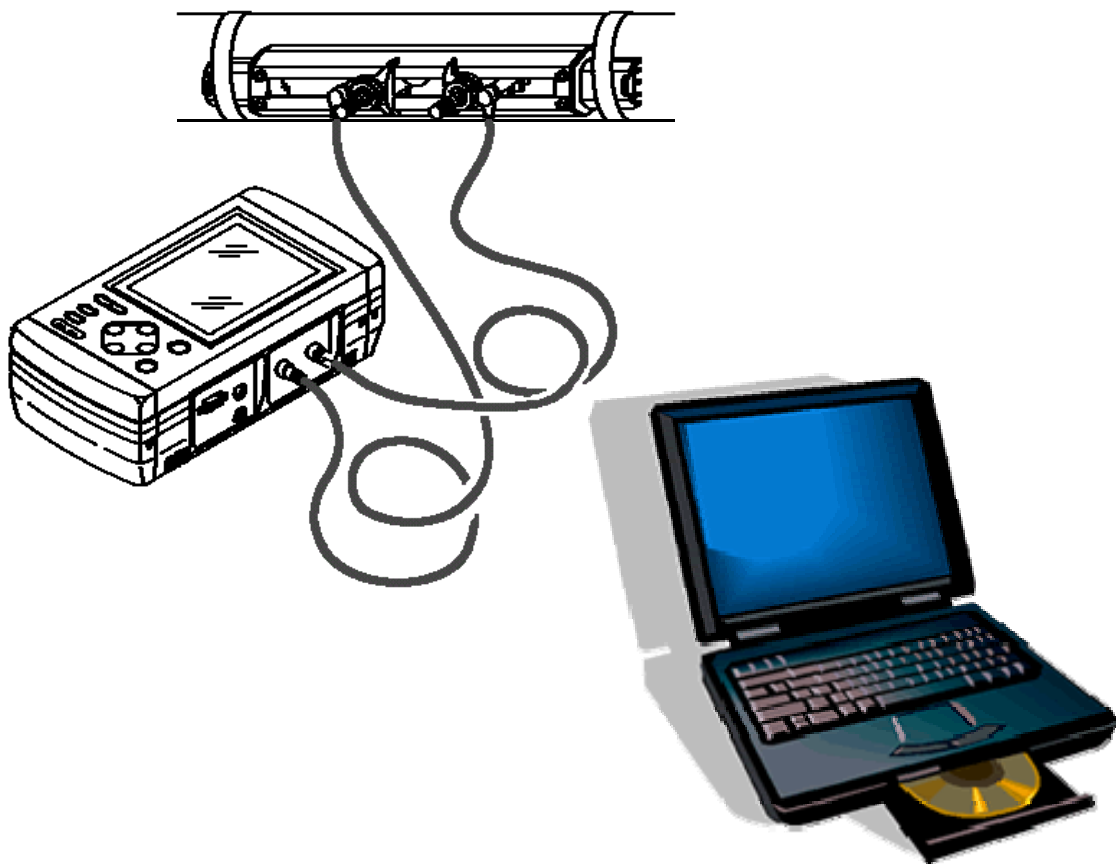




Badger Meter Europa GmbH

PortaSonic 7000



PC-SOFTWARE

July 2007 (Rev. 2.05N)

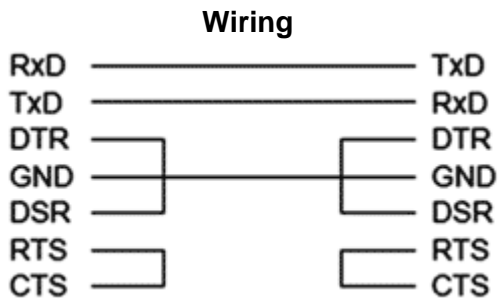
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1. Introduction

This software can show the measured values easily (on-line data or logger data) on personal computers from the portable ultrasonic flow meter (PortaSonic 7000). A Null modem cable is necessary to permit the communication between the PortaSonic 7000 and the PC computer. The cable connects two PCs via serial interface. If an USB/RS232 converter is used, it is necessary to configure COM1 or COM2 for the used serial interface in the software driver included with the converter.



2. Hardware

Ultrasonic flowmeter PortaSonic 7000

Standard RS232 cable

Pin No.	Signal name	Meaning	Signal direction
2	RxD	Receive data	Input
3	TxD	Send data	Output
4	DTR	Data terminal ready	(Not used)
5	GND	Signal ground	
6	DSR	Data set ready	(Not used)
7	RTS	Request to send	(Not used)
8	CTS	Clear to send	(Not used)

Recommended PC computer:

- Processor: PENTIUM 100 MHz mini.
- Hard disk: 5MB mini.
- RAM memory: 32MB mini.
- SVGA display (800x600 pixels mini.)
- Operating system: Windows 95/98/XP

3. Connection of RS-232C cable

When using an optional personal computer, use RS-232C cable for serial transmission between the RS-232C connector of the personal computer and the "SERIAL" connector of the main unit.



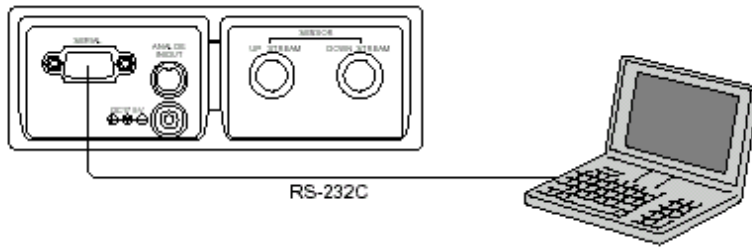
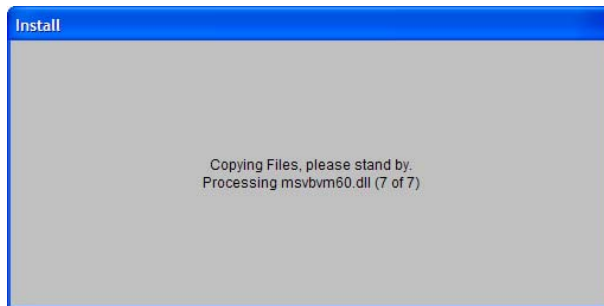


Figure 1: Connection of RS-232C cable

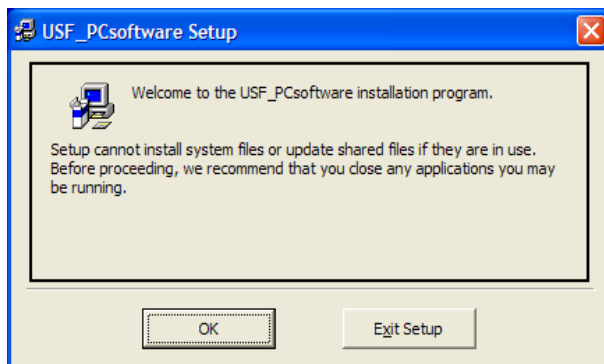
4. Installation of PC software

The PortaSonic 7000 PC-software is supplied on one CD. The procedure of installation is the following:

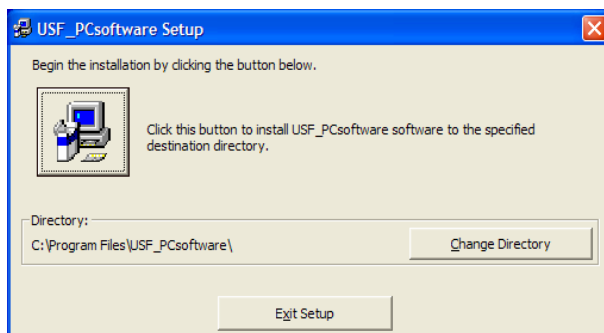
- Insert the CD in the drive.
- Execute "setup.exe" in the CD drive. Select \Eng_version directory for English version and \Version_Fra for French version. The following screen is displayed.




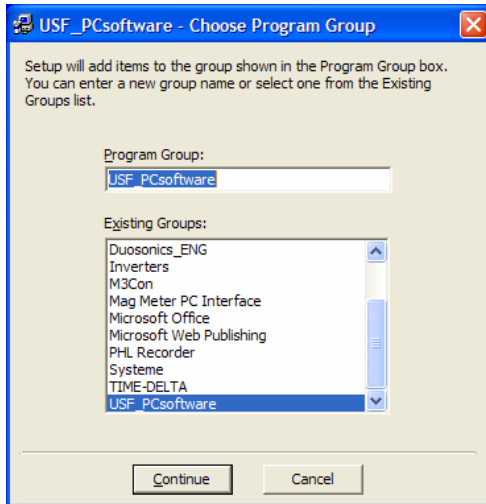
- After loaded all installation files, the following screen is displayed:



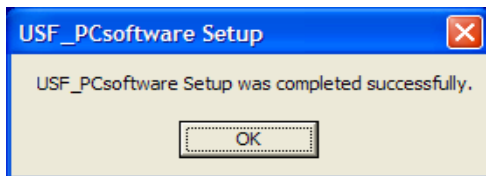
- Select "OK" button.



- Select “Change Directory” if you want to change the directory of installation program.
- Select  to install the software.
- Configure the name of program group (PortaSonic by default) and select “Continue” button to continue the installation of software.

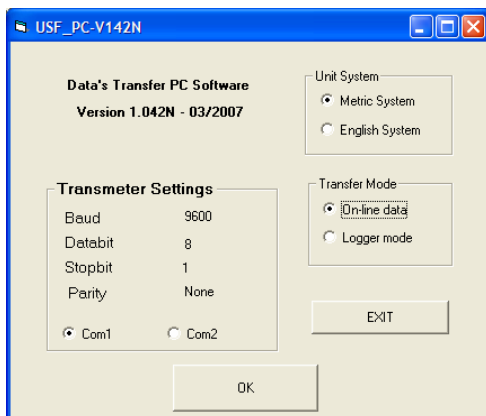


When the following screen is displayed, the installation is finished. Select “OK” to close the installation software.



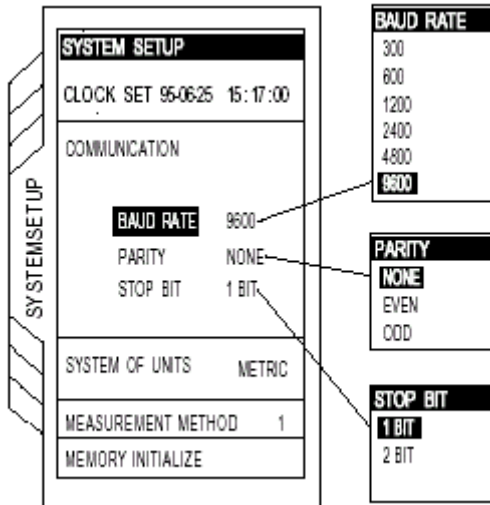
5. Use of software

Start the PortaSonic 7000 software to select the *PortaSonic* program in the start menu. The following screen is displayed:



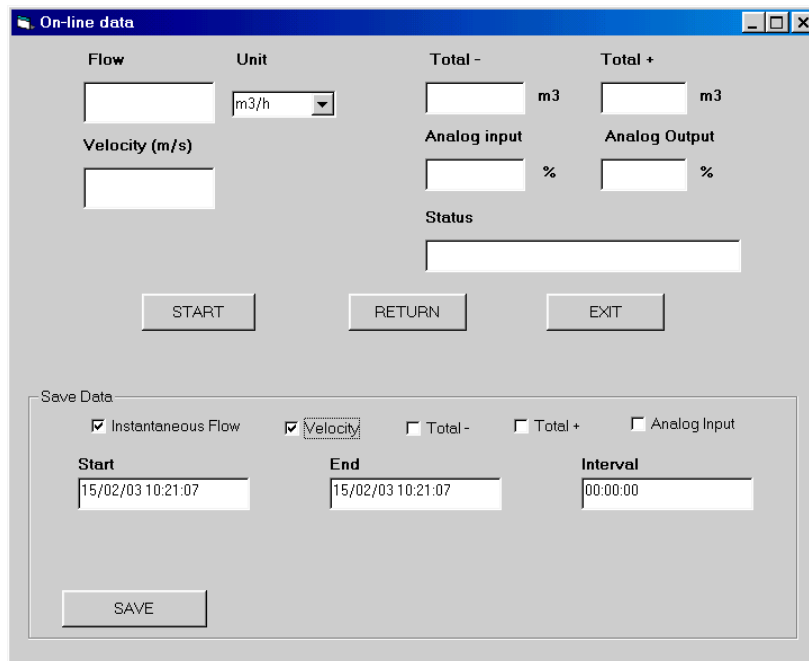
It permits to select the used PC communication serial port (Com1 or Com2), the type of unit system (metric or English system) and the type of transfer mode (on-line data or logger mode).

Before selecting the “OK” button, it is necessary to configure the parameters of serial communication in the PortaSonic 7000 as indicated below:

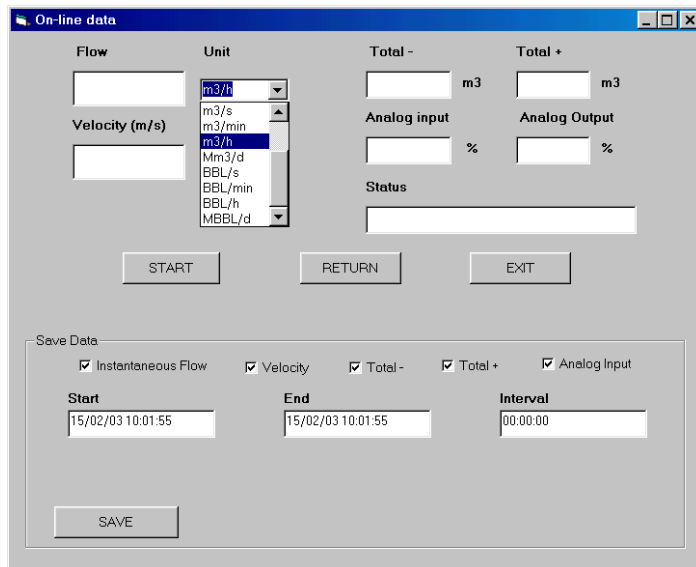


5.1 On-line data mode

When this mode is selected, the following screen is displayed:



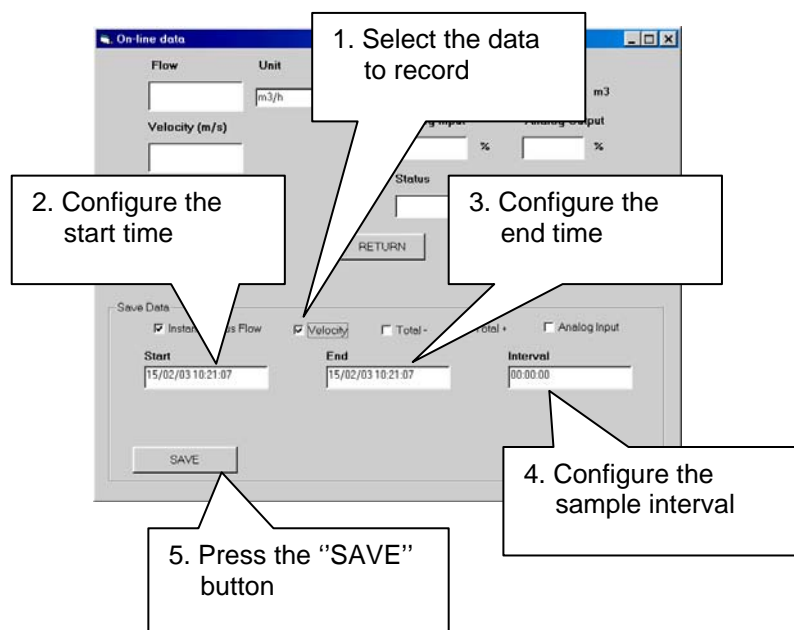
The *On line data* window is divided in two parts. The first part permits the display of the mainly data of measurement (flow, velocity, total, analogue input/output and status). Before starting the communication with the PortaSonic 7000, it is necessary to choose the type of unit of flow.



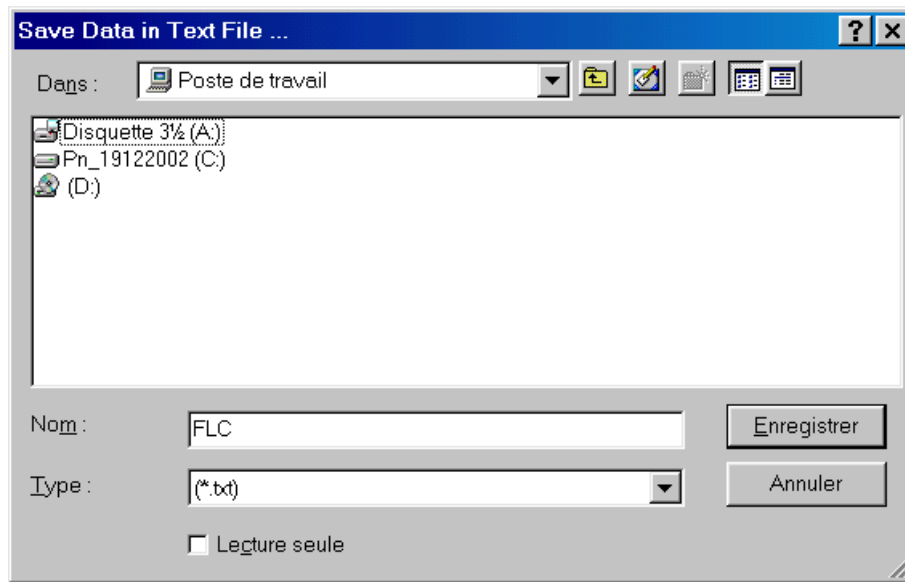
The “START” button permits the start of communication with PortaSonic 7000 and the refresh of the data. The “STOP” button permits the stop of the communication and the refresh of the data.

The “RETURN” button permits the return to the first display. It is necessary to stop the communication before to press the “RETURN” button. The “EXIT” button permits to leave the software.

The second part of the “On-line data” display permits to record the data of measurement in the text file on the hard disk of PC computer. The procedure is the following:

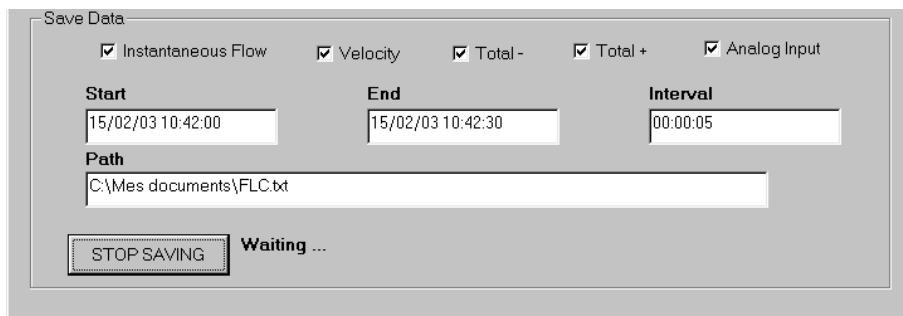


The following window is displayed:



Enter the name of the text file and select the directory on the hard disk of the PC computer where you want save the data. Press then the "Save" / "Enregistrer" button to start the record function.

The message *Waiting...* is displayed until the start time of save data. The message *Saving...* is displayed during the save of data. The "STOP SAVING" button permits to stop the operation.



The message *Data Saved...* is displayed when the data saving is completed.

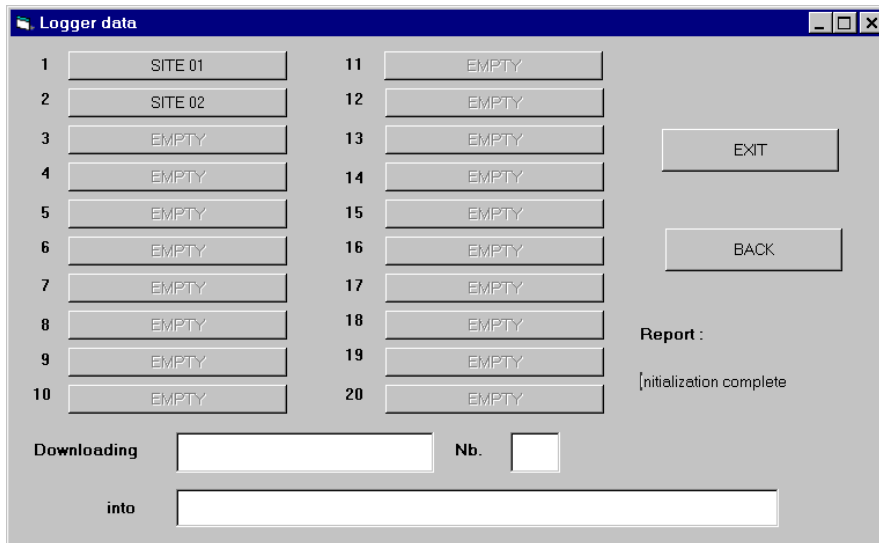


All the data are saved in a text file (FLC.txt by default). The format of this file and some information to open it are described in section 6 of this manual.



5.2 Logger mode

When this mode is selected, the following screen is displayed:

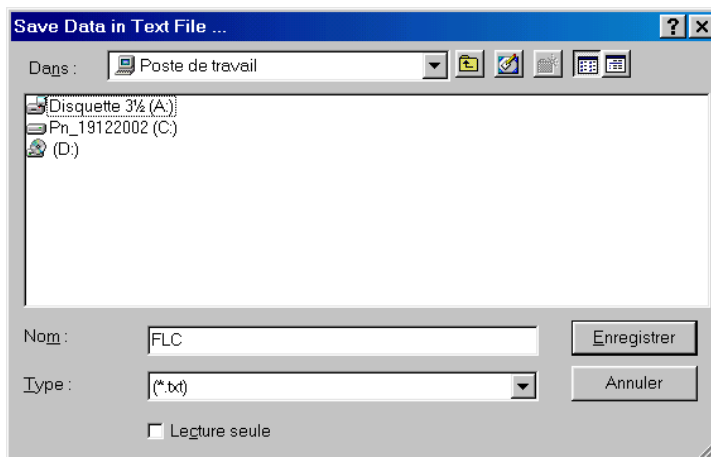


This window indicates the status of the 20 logger files available in the memory of the PortaSonic 7000. The following indications are available:

EMPTY	The file is empty
DATA LOGGER SAMPLING	Data saving
XX.....XX	The file is ready to upload

The "BACK" button permits the return to the first display. The "EXIT" button permits to leave the software. The report area indicates the status of communication between the PC computer and the PortaSonic 7000. To upload the logger file of PortaSonic 7000 to hard disk of PC computer, the procedure is the following:

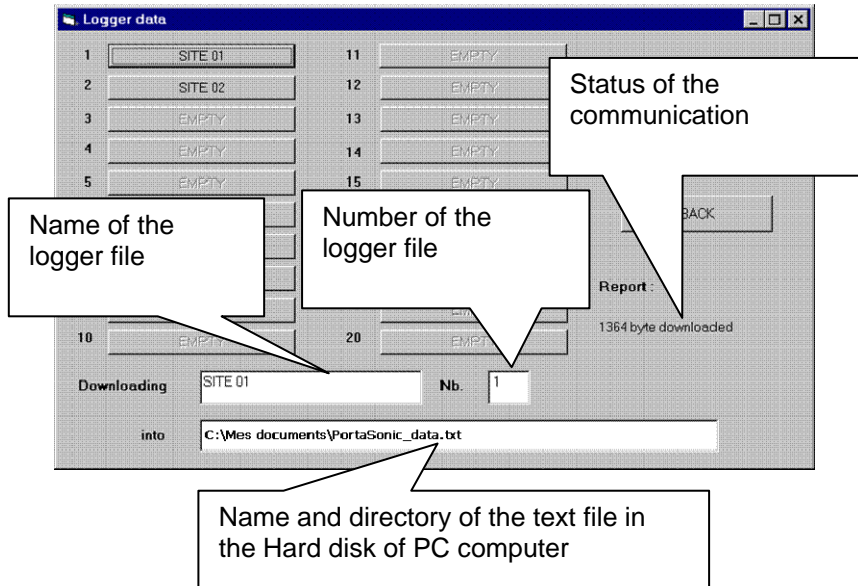
1. Select the logger file to upload.
2. The following window is displayed:



Enter the name of the text file and select the directory on the hard disk of the PC computer where you want to upload the logger file.

3. Press then the "Save" / "Enregistrer" button to start the record function.

The following indications are displayed on the logger data screen.

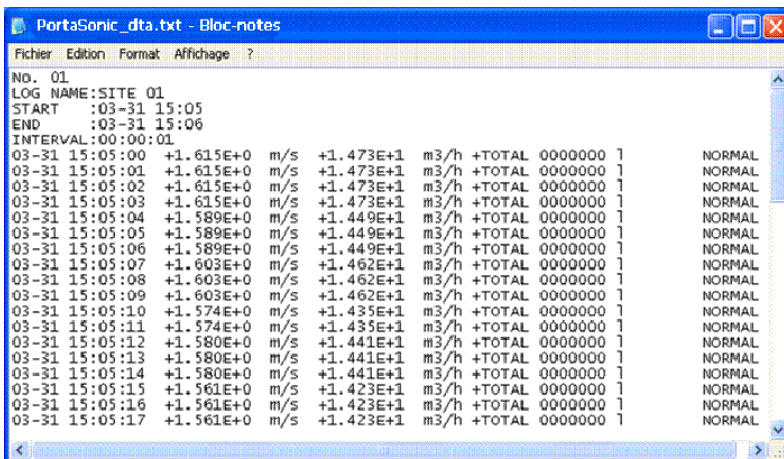


All the data are saved in a text file (PortaSonic.txt by default). The format of this file and some information to open it are described in section 6 of this manual.

6. Use of text files

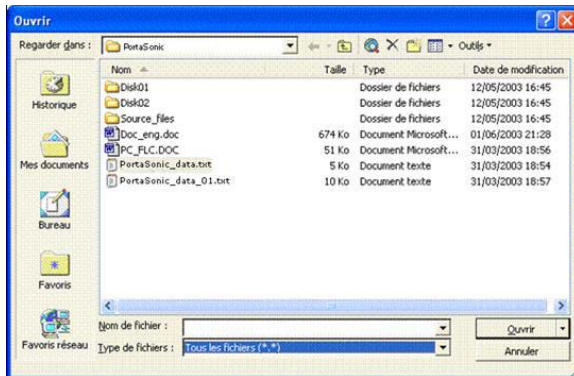
The use of text format permits to open the files of data with all PC software's.

The following picture shows the possibility to open the files with a simple application as notepad (supply with Windows® free of charge).

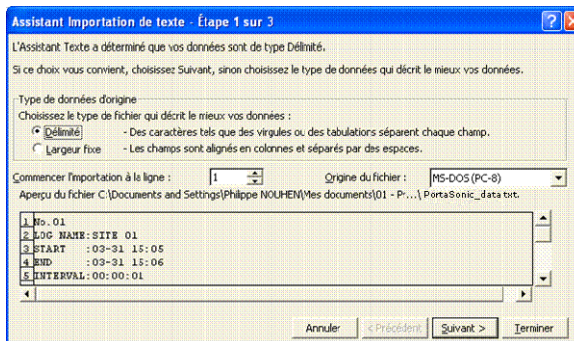


It is also possible to use a spreadsheet application as EXCEL of Microsoft®. The procedure is the following:

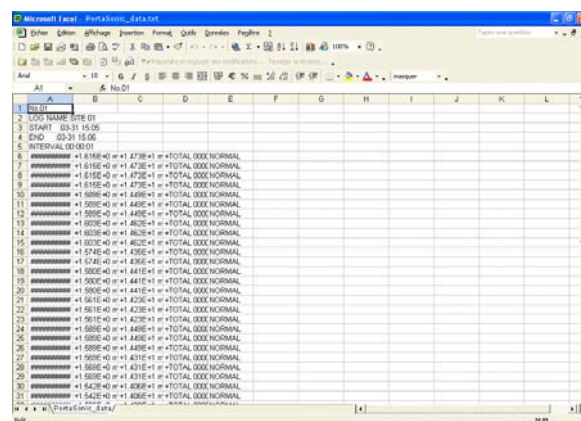
1. Open the text file with the command **File/Open...** (select text type or all files in the open menu),



2. Follow the instruction by default of export menu of Excel.

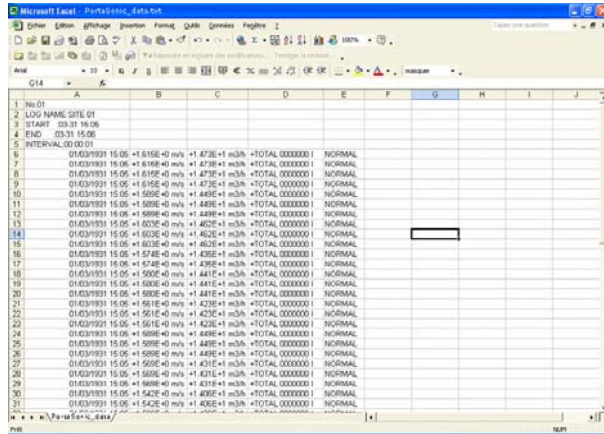


3. All the data in the file are displayed in text format. It is necessary to adapt the size of column to see all data.



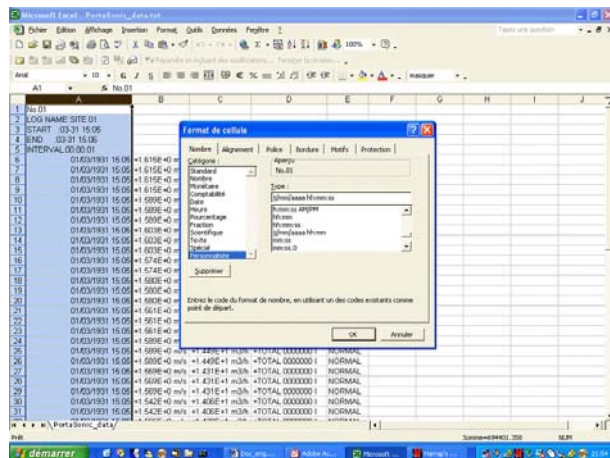
Display after txt file export function



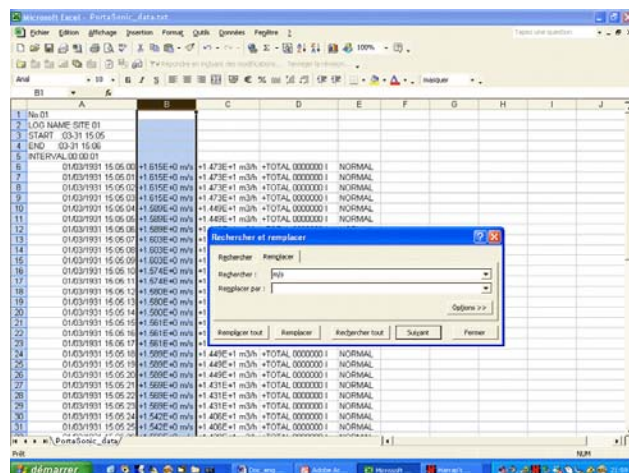


Display after adapt of column size

In the time column, it is possible to add the display of second with the customized format function. Select the customized format "dd/mm/yyyy hh:mm" and add ":ss".



Then, it is necessary to use the **Replace** command to cancel the units in each column and to adapt the decimal sign (dot or comma) to your country standard.



Caution

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Windows® and Excel® are registered trademarks of Microsoft Corporation, USA.

7. Warranty

Badger Meter warrants that the products will be free from any defects caused by faulty material or workmanship for a period of twelve (12) months from the date of sale of the products to the enduser (the 'warranty period') PROVIDED THAT, during the warranty period:

1. Badger Meter receives notice setting out full details of any defect in any product and details of the time and place of purchase of the product and
2. The enduser returns the product to Badger Meter or its nearest representative at its own costs.

Badger Meter shall, as its option, repair or replace the product found defective by its inspection or refund the price paid by the enduser for that product.

Badger Meter's liability and the enduser's rights under this warranty shall be limited to such repair, replacement or refund and, in particular, shall not extend to any direct, special, indirect or consequential damage or losses of any nature.

Note:

This warranty does not form part of, nor does it constitute, a contract between Badger Meter and the enduser. It is additional to any warranty given by the seller of the products and does not exclude, limit, restrict or modify the rights and remedies conferred upon the enduser, or the liabilities imposed on the seller, by any statute or other laws in respect of the sale of the product.



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