

PortaSonic 7000



PC-SOFTWARE

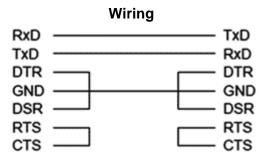
July 2007 (Rev. 2.05N)

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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.

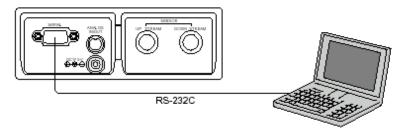


Figure 1: Connection of RS-232C cable

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.

BUSF_PCsoftwa	re Setup	×
Begin the installation	n by clicking the button below.	
	Click this button to install USF_PCsoftware sof destination directory.	tware to the specified
Directory:		1
C:\Program Files\U	SF_PCsoftware\	Change Directory
	E <u>x</u> it Setup	

- 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 "<u>C</u>ontinue" button to continue the installation of software.

😼 USF_PCsoftware - Choose Program Group
Setup will add items to the group shown in the Program Group box. You can enter a new group name or select one from the Existing Groups list.
Program Group: USF_PCsoftware
Existing Groups:
Duosonics_ENG Inverters M3Con Macka DC Interface
Mag Meter PC Interface Microsoft Office Microsoft Web Publishing PHI Recorder
Systeme TIME-DELTA
USF_PCsoftware
Cancel

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

USF_PCsoftware Setup	×
USF_PCsoftware Setup was completed successfu	illy.
OK	

5. Use of software

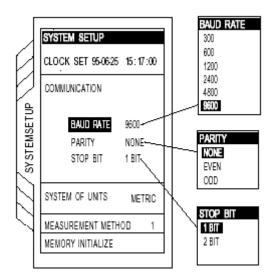
Start the PortaSonic 7000 software to select the PortaSonic program in the start menu. The following screen is displayed:

USF_PC-V142N		
	isfer PC Software 042N - 03/2007	Unit System Metric System English System
Transmete	r Settings	Transfer Mode
Baud	9600	On-line data
Databit	8	C Logger mode
Stopbit	1	
Parity	None	
• Com1	C Com2	EXIT
	ОК	



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 bellow:



5.1 On-line data mode

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

💐 On-line data					_ 🗆 🗙
Flow	Unit	Total -	т	otal +	
	m3/h 💌		m3	m3	
Velocity (m/s)		Analog input	A	analog Output	
			%	%	
		Status			
STAR	г	RETURN	EXI	т	
Save Data					
🔽 Instantaneous F	low 🔽 Velocity	🗖 Total - 🛛 🗖	Total +	🗖 Analog Input	
Start 15/02/03 10:21:07	End	/03 10:21:07	inte 00:0		-
SAVE					

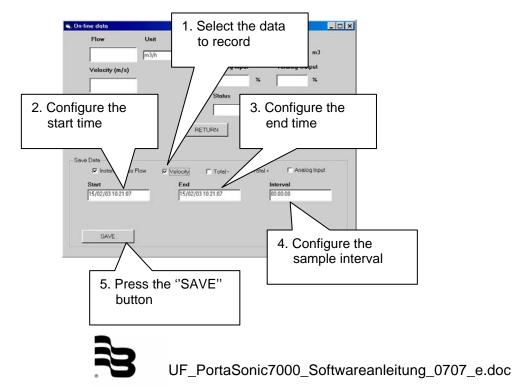
The *On line data* window is divided in two parts. The first part permits the display of the mainly data of measurement (flow, velocity, total, analogue input/output and status). Before starting the communication with the PortaSonic 7000, it is necessary to choose the type of unit of flow.

≒, On-line data					_ 🗆 ×
Flow	Unit	Total -	Tota	al +	
	- m3/h -		m3	m3	
, Velocity (m/s)	m3/s m3/min	Analog input	Ana	alog Output	
	Mm3/d		%	%	
I	BBL/s BBL/min	Status			
	BBL/h MBBL/d				
STA	рт	RETURN	EXIT		
		RETORN	EXII		
Save Data	Flow 🔽 Velocity	v 🔽 Total - 🔽	Total +	Analog Input	
Start	End		Interve	·	
15/02/03 10:01:55	15/1	02/03 10:01:55	00:00:0	0	
SAVE					

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:

Save Data in 1	Text File		? ×
Da <u>n</u> s: 📃	Poste de travail	💌 🗈 💆 🛛	
	<u>6 (A;)</u> 2 (C;)		
No <u>m</u> :	FLC		<u>E</u> nregistrer
<u>T</u> ype :	(*.txt)	•	Annuler
	Le <u>c</u> ture seule		li.

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.

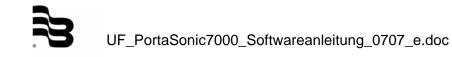
The message *Waiting...* is displayed until the start time of save data. The message *Saving...* is displayed during the save of data. The "STOP SAVING" button permits to stop the operation.

Save Data		
🔽 Instantaneous Flow	🔽 Velocity 🔽 Total -	🔽 Total + 🔽 Analog Input
Start	End	Interval
15/02/03 10:42:00	15/02/03 10:42:30	00:00:05
Path	,	
C:\Mes documents\FLC.txt		
STOP SAVING Waitin	ıg	
STOP SAVING Savin	g	

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

SAVE	Data Saved

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:

🐂 Logger	data			
1	SITE 01	11	EMPTY	
2	SITE 02	12	EMPTY	
3	EMPTY	13	EMPTY	EXIT
4	EMPTY	14	EMPTY	
5	EMPTY	15	EMPTY	
6	EMPTY	16	EMPTY	BACK
7	EMPTY	17	EMPTY	
8	EMPTY	18	EMPTY	Report :
9	EMPTY	19	EMPTY	
10	EMPTY	20	EMPTY	nitialization complete
Downloa	ading		Nb.	

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
XXXX	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:

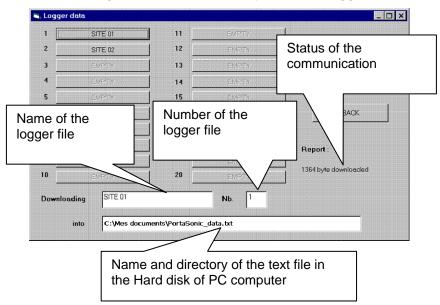
- 1. Select the logger file to upload.
- 2. The following window is displayed:

Save Data	a in Text File		? ×
Da <u>n</u> s :	의 Poste de travail	💌 🗈 💆	
➡[Disque ➡ Pn_191 ⊉ (D:)	tte 3½ (A.)) 22002 (C.)		
No <u>m</u> :	FLC		<u>E</u> nregistrer
<u>T</u> ype :	(*.txt)	•	Annuler
	Le <u>c</u> ture seule		

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).

Fichier Edition Format Affichage	7		
NO. 01 .0G NAME:SITE 01 .0G NAME:SITE 01 START :03-31 15:05 ND :03-31 15:06 ND :03-31 15:06 NTERVAL:00:00:01 33-31 15:05:00 +1.6151 33-31 15:05:00 +1.6151 33-31 15:05:00 +1.6151 33-31 15:05:05 +1.5891 33-31 15:05:05 +1.5891 33-31 15:05:05 +1.5891 33-31 15:05:05 +1.6031 33-31 15:05:05 +1.6031 33-31 15:05:05 +1.6031 33-31 15:05:10 +1.5741 33-31 15:05:11 +1.5741 33-31 15:05:12 +1.5801 33-31 15:05:12 +1.5801 33-31 15:05:12 +1.5801 33-31 15:05:14 +1.5741 33-31 15:05:15 +1.5811 33-31 15:05:15 +1.5801 33-31 15:05:15 +1.5801 33-31 15:05:15 +1.5801 33-31 15:05:15 +1.5801 33-31 15:05:15 +1.5801 33-31 15:05:15 +1.5801 33-31 15:05:15 +1.5801 33-31 15:05:15 +1.5801 33-31 15:05:15 +1.5801 33-31 15:05:15 +1.5801 33-31 15:05:15 +1.5801 33-31 15:05:15 +1.5801 33-31 15:0	0 m/s +1.473E+1 0 m/s +1.473E+1 0 m/s +1.473E+1 0 m/s +1.473E+1 0 m/s +1.449E+1 0 m/s +1.449E+1 0 m/s +1.449E+1 0 m/s +1.462E+1 0 m/s +1.462E+1 0 m/s +1.435E+1 0 m/s +1.435E+1 0 m/s +1.435E+1 0 m/s +1.441E+1 0 m/s +1.441E+1 0 m/s +1.442E+1 0 m/s +1.442E+1 0 m/s +1.423E+1	m3/h +TOTAL 0000000] m3/h +TOTAL 0000000]	NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL NORMAL



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),

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Favoris	Nom de fichier : Type de fichiers : Tous les fichiers :		<u>-</u>	Quvrir

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.

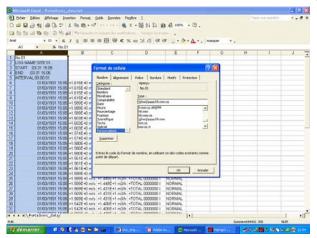
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Display after txt file export function

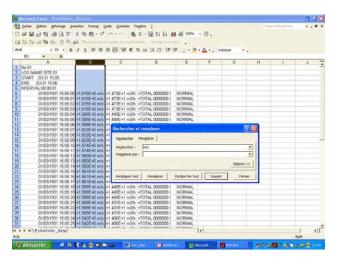
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3	START	03-31 16:05										
4	END /	03-31 15:06										
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8		01.03/1931 15:0	6 +1.615E+0 m/s	+1.473E+1 =3/h	*TOTAL 00000001	NORMAL.						
9		01/03/1931 15:0	5 +1.615E+0 m/s	+1.473E+1 m3/h	+TOTAL 00000001	NORMAL						
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iî.		01/03/1931 15:0	5 +1.589E+0 m/s	+1.449E+1 m3/h	+TOTAL 0000000 1	NORMAL						
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6		01.03/1931 15.0	5 +1 603E +0 m/s	+1.402E+1 m3/h	+TOTAL 00000001	NORMAL						
14		01.03/1931 15:0	6 +1.603E+0 m/s	+1.462E+1 m3/h	+TOTAL 0000000 1	NORMAL						
15		01/03/1931 15:0	6 +1.603E+0 m/s	+1.462E+1 m3/h	+TOTAL 0000000 1	NORMAL		<u> </u>				
i£		01/03/1931 15 0	5 +1.574E+0 m/s	+1.435E+1 =:3/h	+TOTAL 00000001	NORMAL						
17		01.03/1931 15:0	6 +1 574E+0 m/s	+1.435E+1 m3/h	+TOTAL 00000001	NORMAL						
ið		01.03/1931 15.0	5 +1 590E +0 m/s	+1.441E+1 m3/h	+TOTAL 00000001	NORMAL						
6		01.03/1931 15.0	5 +1.580E+0 m/s	+1.441E+1 m3th	+TOTAL 00000001	NORMAL						
20		01.03/1931 15 0	5 +1 580E+0 m/s	+1.441E+1 ==3/h	+TOTAL 0000000 1	NORMAL						
		01.03/1931 15:0	5 +1 551E+0 m/s	+1 473E+1 m3/h	+TOTAL 0000000 I	NORMAL						
21		01/03/1931 15:0	5 +1.561E+0 m/s	+1.423E+1 m3/h	+TOTAL 00000001	NORMAL						
5		01/03/1901 15:0	6 +1.561E+0 m/s	+1.423E+1 m3/h	+TOTAL 00000001	NORMAL						
14		01/03/1931 15:0	5 +1.589E+0 m/s	+1.449E+1 m3/h	+TOTAL 00000001	NORMAL						
5		01/03/1931 15:0	6 +1.589E+0 m/s	+1.449E+1 m3/h	+TOTAL 00000001	NORMAL						
76		01.03/1931 15 0	6 +1.589E+0 m/s	+1.449E+1 m3/h	+TOTAL 0000000 I	NORMAL						
ð.		01/03/1931 15:0	6 +1 569E +0 m/s	+1.431E+1 m3/h	+TOTAL 00000001	NORMAL						
ñ		01/03/1901 15 0	5 +1.569E+0 m/s	+1.401E+1 m3/h	+TOTAL 00000001	NORMAL						
6		01/03/1901 16:0	6 +1.669E +0 m/s	+1.431E+1 m3/h	+TOTAL 00000001	NORMAL.						
30		01/03/1931 15:0	5 +1 542E+0 m/s	+1.406E+1 m3/h	+TOTAL 00000001	NORMAL						
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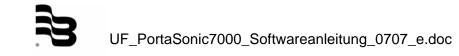
Display after adapt of column size

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".

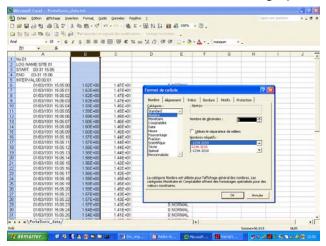


Then, it is necessary to use the *Replace* command to cancel the units in each column and to adapt the decimal sign (dot or comma) to your country standard.

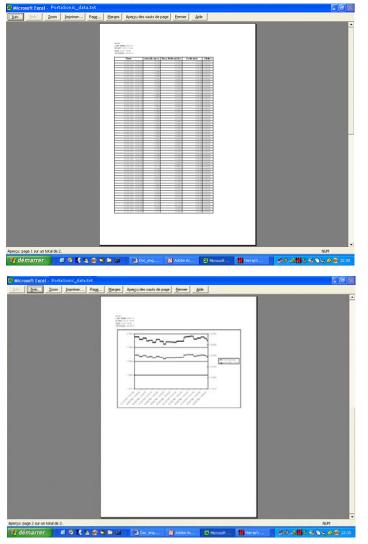




When all the text data are cancelled, it is possible to change the type of numerical data in order to use them for calculation and/or graphical representation.



Example of final spreadsheet after export data and change format





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Caution

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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.

Hotline

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