

3. Insert owner and patient name (and any other necessary information, such as a clinical interpretation) in the PDF Creator window in the first field and click on «Email».
4. Click on «Save» in the following window and a new window by the electronic mail service provider will appear.
5. Enter correct e-mail address and any additional information in the «Subject» line.
6. Send e-mail.

9.17 Setting time/date and Myogram filter

Opening the PULSOVET battery cover will erase the previously programmed date and time information. It must be reset through the PULSOVET PC-Program, as outlined below:

1. Connect the PULSOVET to the PC unit with the PC-cable.
2. On the PC unit, click on the function «PULSOVET» → «PULSOVET adjusting».
3. Click on «set time/date» and the desired Myogram filter setting (ON or OFF).
4. Click on «Save» (the PULSOVET will accept the time and date as programmed in the PC unit).

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Disclaimer and Limitation of Liability

PULSONIC AG assumes no responsibility or liability for any damage and/or loss resulting from the use of this manual.

PULSONIC AG assumes no responsibility for any loss or claims by third parties which may arise through the use of this software.

PULSONIC AG assumes no responsibility for any damage or loss of stored data as a result of malfunction or repairs. Be sure to make backup copies of all data on other media to protect against data loss.

Important:

Please read the License Agreement before using the PULSOVET PC-program. Using the software indicates that you have accepted the terms of this Agreement.

Pulsonic AG reserves the right to alter the content of this User's Guide and any specifications of the software program without prior notice.

IMPORTANT:



Overview of the three PULSOVET Numbers (No.):

PULSOVET ID No.:

Defines a recorded and stored ECG record in the PULSOVET device (e.g., 1P, 2P, etc.).

PULSOVET Patient No.:

Corresponds to the «Tattoo/Chip No.» and defines a patient in the PULSOVET PC Software program. It may contain up to ten characters (numbers and/or letters), to be chosen by the medical staff.

PULSOVET Record No.:

Defines a unique, classified ECG record for a given patient, defined by a PULSOVET Patient No. It consists of the date and time the ECG record was recorded and stored with the PULSOVET (i.e., dd.mm.yyyy, hh:mm; e.g., 15.04.2006,16:51).

9.14 Deleting an ECG record

1. Click once on the selected ECG record in the «Patient records» window.
2. Click on the line function «Patient records» → «Delete record» → «OK».

IMPORTANT:



A displayed ECG record cannot be deleted.

9.15 Printing a classified ECG record

1. Click on the line function «Option» → click «Print» → set printer name → «OK»
2. Double click on the selected ECG record in the «Patient records» window, click on the icon «Print».

IMPORTANT:

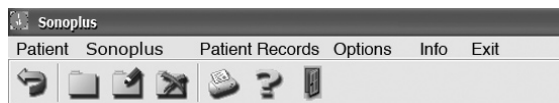


Only classified records will be printed or mailed.

9.16 Electronic mailing of a classified ECG record

The PDFCreator software must be installed on your PC prior to proceeding with electronic mailing of classified ECG records. PDFCreator is a free tool (see also GNU General Public License) available on www.pdfcreator.com. "Click" the "Download Now" button and fill in the "Name" and "Email" address fields. A direct download site will be emailed to you at your email address. "Click" the "Run" button to install PDFCreator directly to your computer. Once you have successfully downloaded, restart your PC and proceed with points 1 to 6 as outlined below:

Open Pulsonic Software:



1. Double click on the ECG record selected for electronic mailing in the «Patient records» window.
2. Click on the line function «Patient records» → PDF/Mail.

1	Indication for Use	4
2	Limited Warranty	4
3	How to Use the PULSOVET PC-Software	4
4	Veterinarian's Responsibility	5
5	Installation Requirements	5
6	Installing the Software	5
7	Opening the Program	6
8	Update the PULSOVET PC-Program	6
9	PC Screen Presentation and Line Functions	6
9.1	Program icons	6
9.2	Hardcopy patient list	7
9.3	Adding a new patient	7
9.4	Editing a patient file	8
9.5	Deleting a patient file	8
9.6	Connecting the PC-Cable to the PULSOVET	9
9.7	Downloading stored ECG records	10
9.8	Deleting «Unclassified records»	10
9.9	Classifying/filing a downloaded ECG record	11
9.10	Editing a classified ECG record	12
9.11	Displaying an ECG record	12
9.12	ECG Zoom function	13
9.13	Electronic paper description	13
9.14	Deleting an ECG record	14
9.15	Printing a classified ECG record	14
9.16	Electronic mailing of a classified ECG record	14
9.17	Setting date/time and Myogram filter	15

1 Indication for Use

The PULSOVET PC software is a comprehensive and userfriendly Windows-based program designed to download, display, edit, archive, print and electronically mail ECG records previously recorded and stored with the PULSOVET device.

2 Limited Warranty

The PULSOVET PC-Software disk is warranted against defects in material and manufacture for a duration of three (3) months from the date of purchase. The warranty provides for free replacement of the program disk only. In case of defect, please send the disk to your dealer or directly to the manufacturer. The warranty is void if unauthorized or unqualified persons attempt to service the software.

Excluded from this warranty is damage caused by accident or as a result of improper handling.

Any liability for damage or loss resulting from the installation of the PULSOVET PC software is excluded.

3 How to Use the PULSOVET PC Software

1. Insert enclosed CD in the CD driver and follow installation instructions (the «PULSOVET» icon will appear on the screen).
2. Restart PC after software installation.
3. Open the PULSOVET PC program by clicking on the «PULSOVET» icon.
4. Set up the COM-Port.
5. Connect PULSOVET to PC.
6. Enter new patient coordinates.
7. Download stored ECG records from the PULSOVET to the PC.
8. Allocate downloaded ECG records to the appropriate patient (i.e., classify/file downloaded ECG records).
9. Display and review any downloaded ECG records, as desired.
10. Print and/or electronically mail downloaded ECG records, as desired.

9 PC Screen Presentation and Line Functions

9.12 ECG Zoom function

While reviewing an ECG record, double click on the ECG section of interest to enlarge the section by 300% in a new window (e.g., P-wave, QRS, ST segment, etc., Fig. 13).

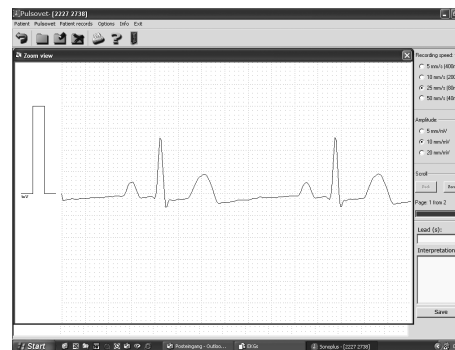


Fig. 13 ECG Zoom

9.13 Electronic paper description

The PULSOVET software program allows the review of downloaded ECG tracings, either directly on the PC screen or as printouts. ECG tracings are shown on a background (either electronic or as hardcopy ECG paper) marked with 1 cm squares which are divided by dashed lines into 25 squares of equal size, each measuring 2 mm.

IMPORTANT:



Conventional ECG paper is marked with 5 mm squares which are divided by continuous lines into 25 squares of equal size, each measuring 1mm.

On the vertical axis, 1 cm corresponds to 1 mV, while on the horizontal axis, 1 mm (or 2 mm) corresponds, as a function of the recording speed, to:

Recording speed	5 mm/s	10 mm/s	25 mm/s	50 mm/s
1 mm corresponds to	200 ms	100 ms	40 ms	20 ms
2 mm correspond to	400 ms	200 ms	80 m	40 ms

9.10 Displaying an ECG record

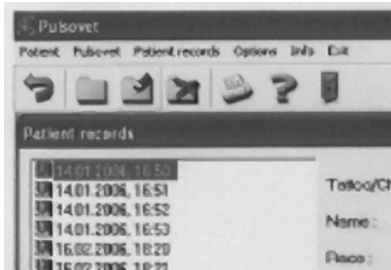


Fig. 11 «Patient record» window

In the «Patient records» window, double click on any classified ECG record of interest. The selected ECG record is now displayed (Fig. 12).

9.11 Interpreting a classified ECG record



Fig. 12 Displaying an ECG record

It is recommended to define, for each classified ECG record, the anatomical positioning of either the PULSOVET (i.e., direct ECG recording) or the adhesive electrodes (i.e., use of 3-lead ECG cable) during recording and to write a clinical interpretation of the ECG record into the «Interpretation» box (Fig. 12).

IMPORTANT:



- While reviewing an ECG record on the PC unit, recording speed and ECG voltage amplitude may be changed by clicking on the desired speed or voltage level.
- ECG recording interruptions, contained within downloaded ECG records, are recognized by the PULSONIC software program and are marked by red dots when the ECG record is displayed.

4 Veterinarian's Responsibility

IT IS THE VETERINARY'S RESPONSIBILITY TO ASSURE THAT ALL PC DOWNLOADED ECG RECORDINGS ARE CORRECTLY LABELED.

5 Installation Requirements

Minimum installation requirements for the PULSOVET PC-Software are:

- Pentium 233 MHz processor or higher.
- At least 20 MB of free disk space.
- Operating systems: Windows 98, 2000, NT, Me or XP.
- For MAC user: a virtual PC for MAC is needed (Program version 6.1).

6 Installing the Software

1. Insert the PULSOVET PC-Software disk into the disk driver of your computer.
2. If setup does not start automatically, double click on the icon «My computer» → Setup.exe file.
3. Follow the screen instructions and enter selections, as appropriate.
4. When finished with the installation procedures, restart the PC unit.

After installing the PULSOVET PC-Software, the PULSOVET icon appears on the desktop and the PULSOVET option is listed in the Windows «Start» menu.

7 Opening the Program

Double click on the PULSOVET icon on the desktop or click on the PULSOVET option in the Windows «Start» menu.

8 Update the PULSOVET PC-Program

1. Open the PULSOVET program.
2. Click on the «Info» function → click on «Update».
3. Follow the screen instructions.

IMPORTANT

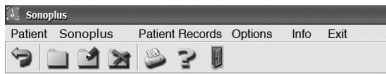


To update the software you need an Internet connection.

9 PC Screen Presentation and Line Functions

The PULSOVET PC Program contains the following line functions:

Patient	PULSOVET	Patient Records	Options	Info	Exit
Back	Read records	Display record	General	Update	
New patient file	PULSOVET adjusting	Print record	Interface		
Edit patient		PDF/Mail	Print patient		
Delete patient	Data recording delete	Delete record			
Print patient list	PULSOVET switch off				
switch off					



9.1 Program icons (shortcuts)

The PULSOVET PC Program contains the following program icons, as depicted in Figure 1:



Fig. 1 Program icons

Fig. 1 Program icons

9 PC Screen Presentation and Line Functions

9.9 Classifying/filing a downloaded ECG record

1. Open the «Search Patients» window (Fig. 9).

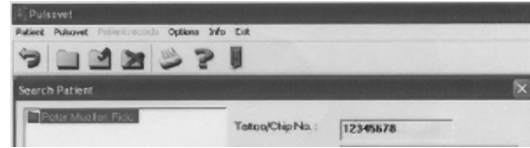


Fig. 9 «Search Patients» window

2. Double click on the desired patient name in the «Search Patients» window; the window now changes to the «Patient records» window (Fig. 10).

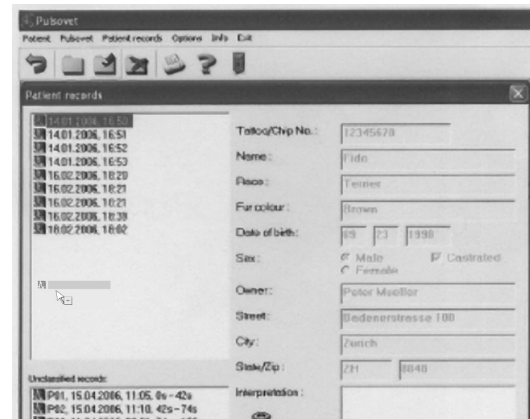


Fig. 10 «Patient records» window

3. Click with the left mouse button on an ECG record in the «Unclassified Records» box (bottom of the window) selected for classification/filing and drag the record into the «Patient records» box (top of the window, Fig. 10). The selected ECG record is now classified. Each classified record is defined by date and time of its recording and storage with the PULSOVET, referred to as the PULSOVET Record No. (i.e., during classification/filing an ECG record “loses” its PULSOVET ID No. and corresponding storage time).

4. Ascertain again the classified ECG record has been filed with the correct patient, as specified in the hardcopy patient list.

IMPORTANT:



Prior to classification/filing, an unclassified ECG record can be reviewed to assess its quality and/or utility by double clicking on the record while still in the «Unclassified Records» box.

9.7 Downloading stored ECG records

- While downloading ECG data from the PULSOVET to the PC unit, ECG recording functions of the PULSOVET are disabled.
- The field «Unclassified Records» in the «Patient records» window must be free of any downloaded ECG records before new ECG records can be downloaded from the PULSOVET.

To download new ECG records:

1. Switch on the PULSOVET, properly connected to the PC.
2. Start the PULSOVET program.
3. Click on the function «PULSOVET» → «Read records»

During the download, which requires a few seconds, the following picture is displayed on the LCD display (Fig. 7).

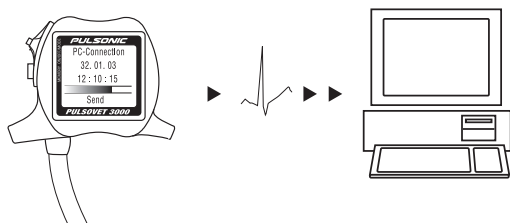


Fig. 7 Downloading stored ECG records from the PULSOVET to the PC unit

Newly downloaded ECG records appear as «Unclassified Records» in the «Patient records» window (Fig. 8).

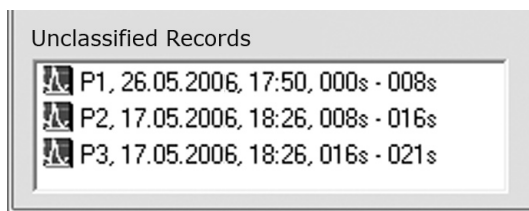


Fig. 8 Sample of a listing of unclassified records in the «Unclassified Records» window

9.8 Deleting «Unclassified Records» [remove period]

Click with the left mouse button on the ECG record in the «Unclassified Records» box that you wish to delete and drag the record to the wastepaper → click «OK».

9.2 Hardcopy patient list

- To print out a hardcopy patient list, click on the line function «Patient» → «Print patient list».
- In order to correctly classify stored ECG records, the veterinary professional should note the following items on the hardcopy patient list (Fig. 2):

1. PULSOVET ID No. as displayed by the PULSOVET (e.g., 1P).
2. Owner name, patient name, date of birth.
3. Start and End time (storage time) of the ECG recording, as displayed by the PULSOVET.
4. Any remarks, including recorded ECG lead (e.g., lead II taken with softclips) and/or anatomical positioning of the PULSOVET during direct ECG recording (e.g., left lateral chest).

Patientlist Pulsovet 3000



Pulsovet ID-Nr	Name	Start from	Stop to	Remarks
1P	Peter Sample, Fido, 2004	1	30	NSR, lead II
2P	Roger Smith, Tara, 2000	31	55	VES, lead II

Fig. 2 Example of a patient list

9.3 Adding a new patient



1. Click on the icon «New patient file» or on the line function «Patient» → «New Patient».
2. Enter patient and owner data (patient name, race, fur color, date of birth, sex and owner name and address).
3. Enter also a patient identification number (may contain up to 10 characters, numbers and/or letters) in the «Tattoo/Chip No.» box, defined as the «PULSOVET Patient No.» and either corresponding to an existing «Tattoo/Chip No.» (up to the first 10 characters, numbers and/or letters) or chosen by the veterinary staff.

The new patient name (e.g., Peter Sample, Fido) will be displayed in the «Search patient» window.

9.4 Editing a patient file



1. Click on the selected patient name in the «Search patients» window.
2. Click on the icon or on the line function «Patient» → «Edit patient».

The patient file will be displayed and can be updated.

IMPORTANT:



- Classified ECG records are linked to the «Tattoo/Chip No.», defined as the «PULSOVET Patient No.». Altering the «Tattoo/Chip No.» will erase all linked ECG records. They can be restored by changing the altered «Tattoo/Chip No.» back to the original number.
- Editing of a patient file is only possible after at least one ECG record has been classified.

9.5 Deleting a patient file



1. Click on the patient's name selected for deletion in the «Search patients» window.
2. Click on the function «Patient» → «Delete patient» → Yes.

IMPORTANT:



By deleting a patient file the corresponding classified ECG records will also be deleted.

9.6 Connecting the PC-Cable to the PULSOVET

Connect the RS-232 PC-cable from the PC-port to the PULSOVET connector (Figs. 3 and 4).

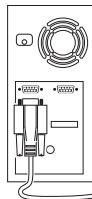


Fig. 3 RS-232 PC-cable in PC-port

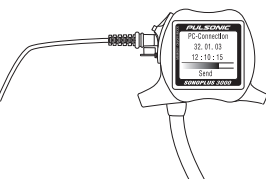


Fig. 4 PULSOVET connector

If your PC-unit is only equipped with a USB-Port, you must use the USB-RS-232 Serial Converter and connect it to the PULSOVET PC-cable (Figure 5). For correct installation, please follow the instructions enclosed with the USB-RS-232 Serial Converter.

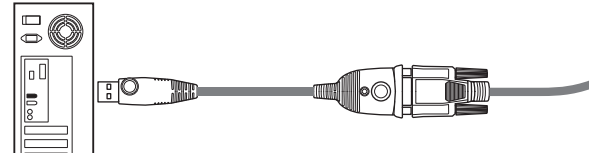


Fig.5 Connection of the USB-RS-232 Serial Converter to the RS-232 PC-cable.

Check installation of USB-Serial Converter:

Click with the right mouse button on «My computer» → «Control Panel» → «Hardware» → «Device Manager».

Click «Ports (COM & LPT)»; the Comm Port will be displayed as «Prolific USB-to-Serial Comm Port».

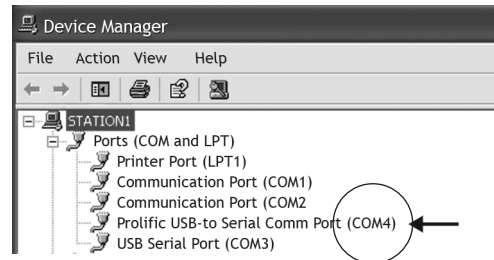


Fig. 6a Device Manager

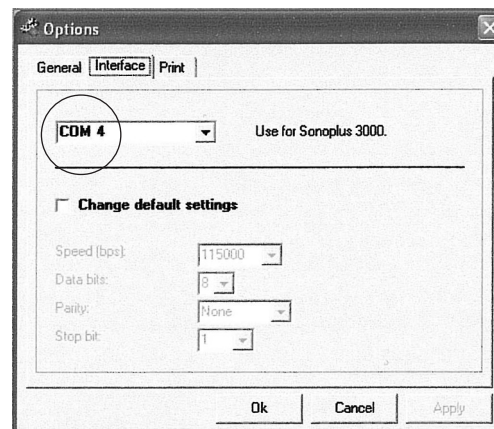


Fig. 6b Sonoplus Comm Port set up

Set up the interface Comm Port with the same number as displayed (e.g. Fig. 6a) on the Device Manager Window.