

# Advanced user guide

## Instruction for use

Version 2.42

*15 April 2013*

*To download the latest version of the software and the manual please go to  
[www.impeto-medical.com/distributor-resources](http://www.impeto-medical.com/distributor-resources)*

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## Introduction

The 2.4 version of the EZSCAN, SUDOSCAN and SUDOSCAN+ softwares have been completed with a Supervisor mode with more options.

This manual describes how to use the Supervisor mode.

The Supervisor mode is only accessible by authorized distributors. Contact Impeto Medical to get the password.

The Supervisor mode allows to:

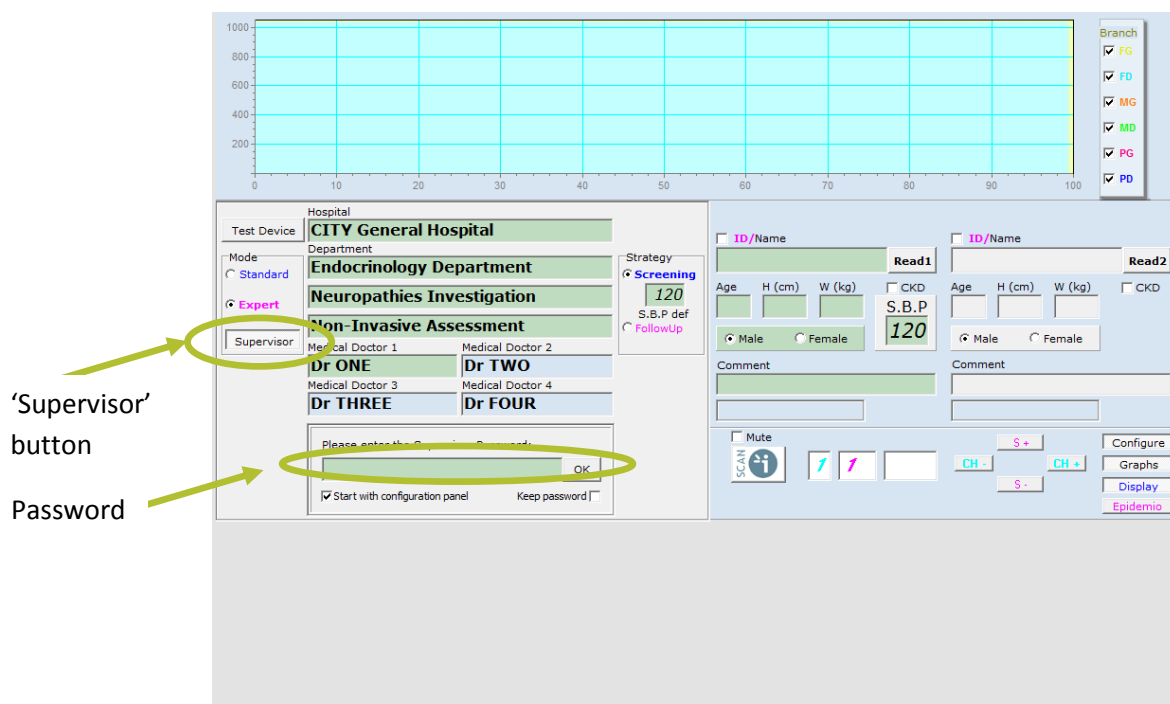
- Choose the language
- Choose the option of Date of Birth
- Modify the hints/report
- Set-up internet connection
- Set-up the report sending by email
- Set-up a server : copy data on a server, read patient data from a server
- Concatenate data
- Block the program minimization

**The full electronic User guide is available :**

- **on your device desktop: please contact your distributor to access the desktop.**
- **on Impeto Medical website: <http://www.impeto-medical.com/distributor-resources/> .**  
**Contact your distributor to have the password.**

**A free print copy of the User guide can be requested by contacting Impeto Medical.**

## 1. Access to the Supervisor mode



- 1 Click on the Expert checkbox.
- 2 Click on the 'Supervisor' button.
- 3 Enter the password and click on 'OK'.

To close the Supervisor mode:

Click again on the "Supervisor" button.

### NOTE

The password will be memorized if the "Keep password" checkbox is checked. To reset, the software must be upgraded.

# ENGLISH

## 2. Language Selection/SUDOSCAN selection

EZSCAN and SUDOSCAN can be configured in several languages.

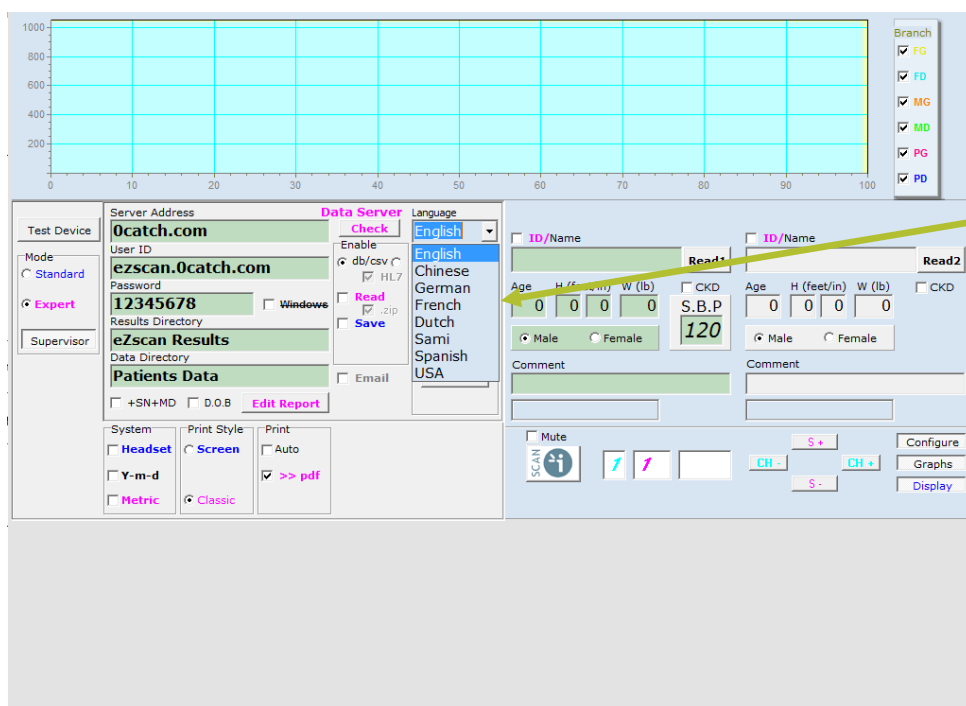
- English
- Chinese
- German
- French
- Dutch
- Sami
- Spanish

SUDOSCAN is available only in English. To select SUDOSCAN, click on USA.



**WARNING**

“USA” must be always selected in the USA.



Language selection

1

Click the arrow on the drop down menu.

2

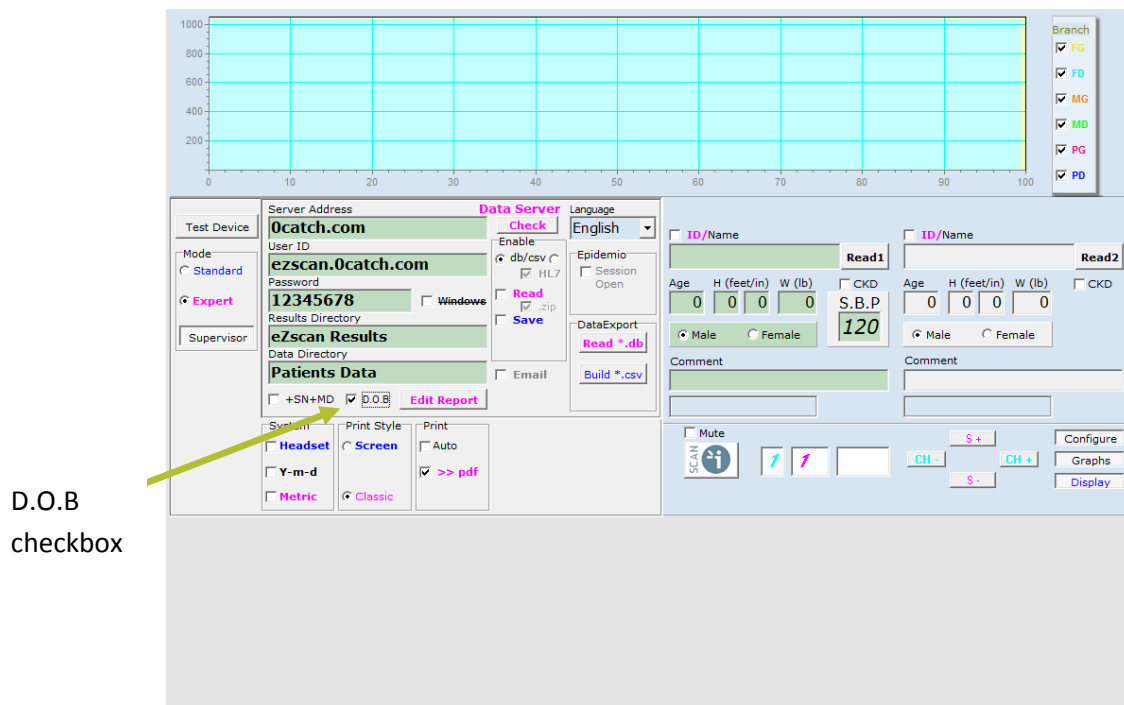
Select one of the languages in the language menu.

**NOTE**

The selected language is memorized even after upgrading the software.

### 3. Date of birth

The date of birth can also be entered when the patient data are entered before a scan.



- 1 Check the D.O.B checkbox.

Once the supervisor mode is closed and when you enter the patient data for a scan:

- 2 Choose the date format by clicking on the « Y-m-d » check box.
- 3 Double click on the “Age” box.  
*A drop-down calendar and the numerical virtual keyboard appears.*
- 4 Enter or select the date of birth.
- 5 Click on OK. *The age will be automatically calculated.*

The screenshot displays a medical software interface. At the top is a large grid with a y-axis from 0 to 1000 and an x-axis from 0 to 100. Below the grid is a form for patient information. On the left, there are sections for 'Test Device' (CITY General Hospital), 'Mode' (Standard, Expert), 'Strategy' (Screening, FollowUp), and 'Medical Doctor 1' (Dr ONE). A numeric keypad is overlaid on the left side of the form. On the right, there is a 'Patient' section with fields for 'ID / Name', 'Age', 'H (cm)', 'W (kg)', 'S.B.P' (120), 'HbA1c' (6.5), 'CKD', and 'Comment'. A date dropdown menu is open, showing '1 juin' and '1976'. A yellow arrow points to this dropdown with the text 'Drop down calendar'.

## NOTE

Even if the “Date of birth” option is selected, the age can be entered manually. The year of birth will then be calculated and the first of January is displayed by default.

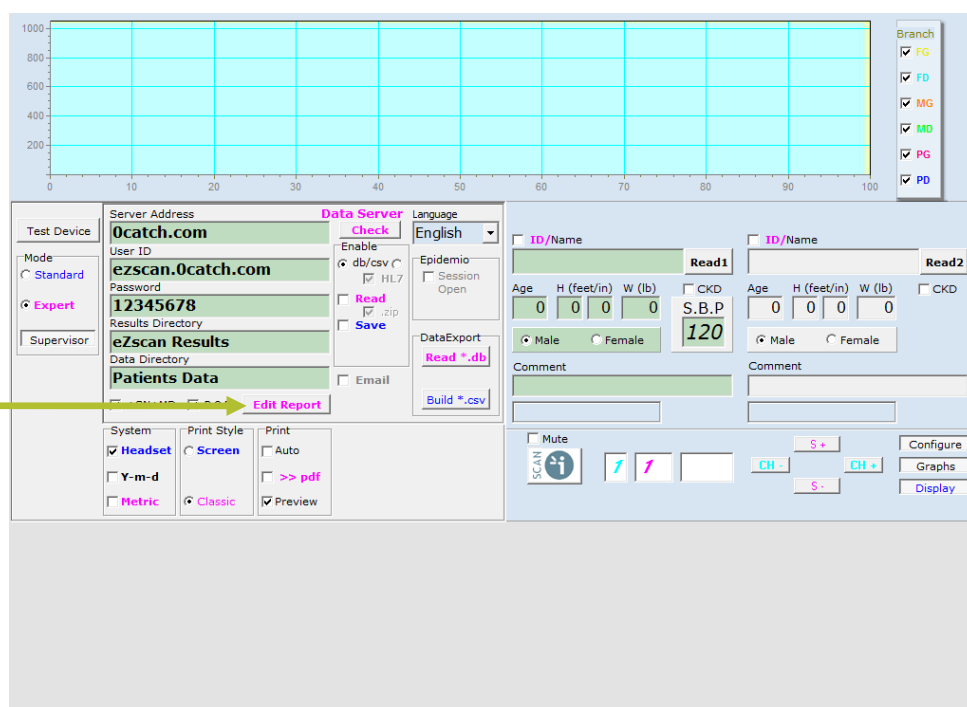
The calendar language depends on the Windows configuration.

## 4. Modify the Hints/report

The EZSCAN Hints and the SUDOSCAN Report texts can be modified.

- 1 Click on the “Edit Report” button.
- 2 Click on the “Sudoscan report” or “eZscan hints” window.
- 3 Double click on the text to make the virtual keyboard appear.
- 4 Modify the text.
- 5 Click on the “Edit Report” button to close and save the hints.

‘Edit Hints  
and  
Report’  
button



### NOTE

The Hints file is not saved when the software is upgraded.

So if you have modified the hints texts, it is advised to save the File before upgrading the software:



1

Go to:

Start > My computer > Local Disk (C:) > Program Files > IMPETO

---

2

Save the file “Languages – doctors.db” on the desktop.

---

3

Upgrade the software

---

4

Paste the saved “Languages – doctors.db” in Start > My computer > Local Disk (C:) > Program Files > IMPETO

---

## 5. Internet connection setup



### WARNING

If the device is connected to Internet, it is advised to install an antivirus on the device. We accept no responsibility for any infection of your device with a computer virus.

The device can be connected to internet through an Ethernet cable or with WiFi.

To use an Ethernet cable:

1

Plug an Ethernet cable to the Ethernet socket on the back of the master unit.

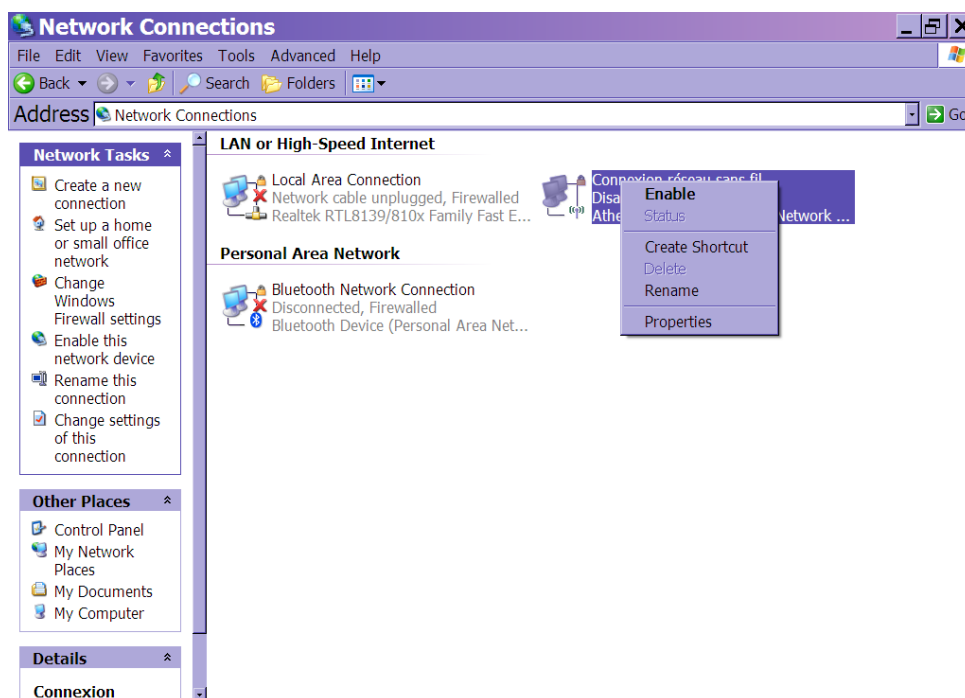
To connect through WiFi:

1

From the Start Menu, open Windows Control Panel.

2

Inside Control Panel, click on the "Network Connections" option.

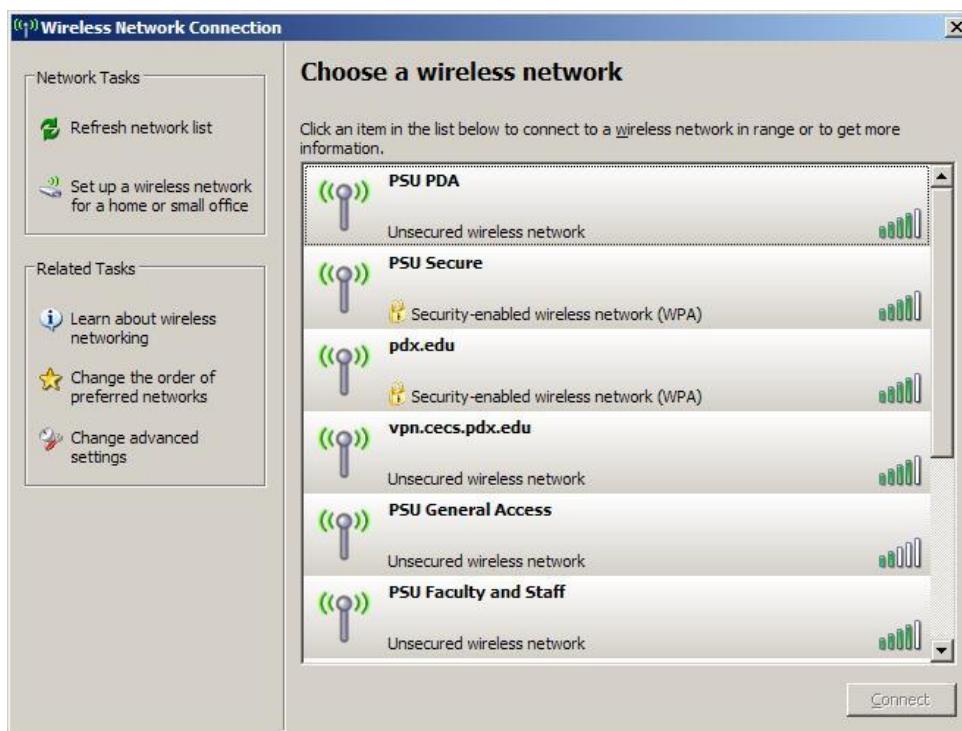


3

Right-Click on "Wireless Network Connexion".

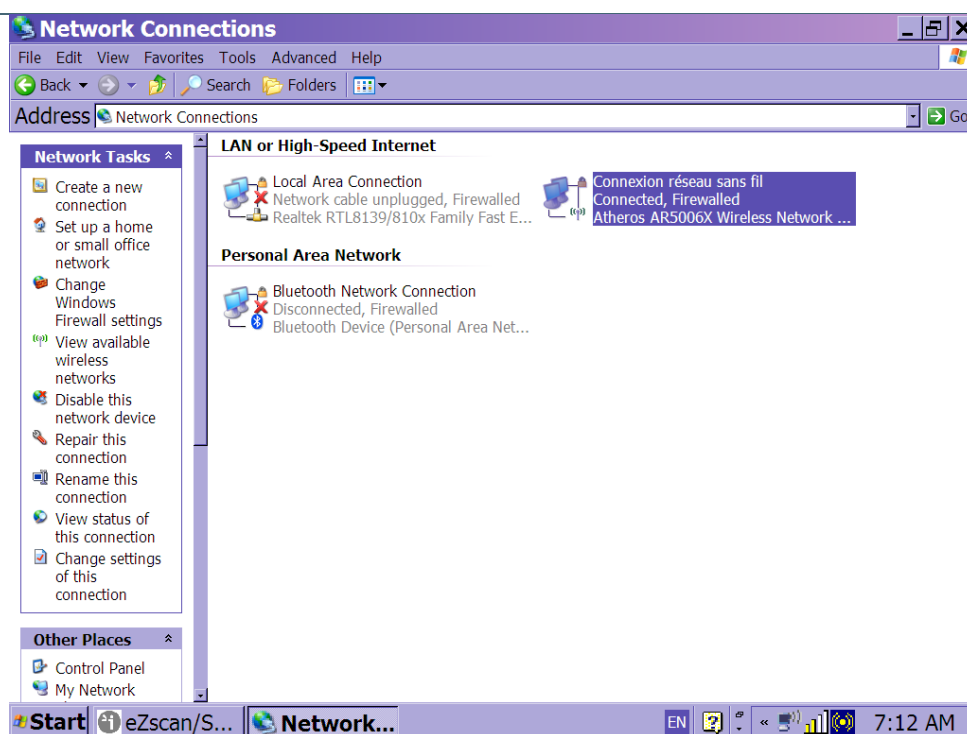
4 Click on “Enable” to activate the Wifi.

5 In the “Network Tasks” menu situated on the left of the window, click on “View available wireless network”.



6 Click on the desired network.

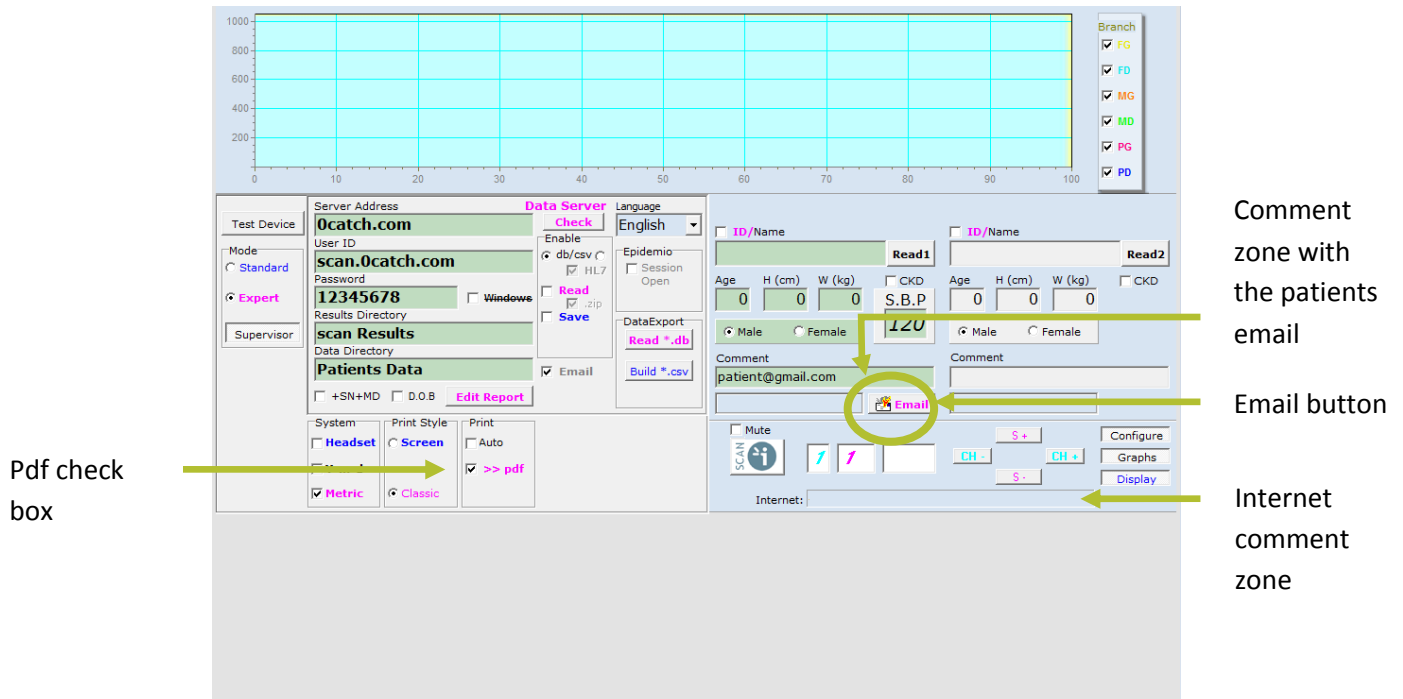
7 Enter a password if necessary.



*Two icons will appear at the bottom of the screen to indicate that the wifi is activated and that the EZSCAN/SUDOSCAN is connected to internet.*

## 6. Send a report by email

The EZSCAN/SUDOSCAN has to be connected to internet first (See section 6).



- 1 Click on the pdf checkbox.
- 2 Click on the Email checkbox.  
*A new "Email" button appears.*
- 3 Retrieve the patient data (See section 7).  
*A pdf report is automatically generated.*
- 4 Enter the patient email address in the 'Comment' field.  
*If entered prior to a scan, the email address will be saved along with the patient's data for sending emails in the future.*
- 5 Click on the Print button to generate a pdf report and save it on the Desktop (See section 6.2.4). *Do not modify the file name of the report.*

6

Click on the “Email” button.

*The device searches for the Impeto SMTP server and a message appears in the Internet comment zone when the report has been sent.*

*The pdf report is erased from the desktop.*

---

### NOTE

A valid email address must contain an '@'. No other verification is made.

## 7. Save the data on a server

The data can be saved on a local server or on a remote server. Saving the data on a server is useful to have a backup or to store/collect data coming from several devices all in one place.

The hierarchical structure of the server is as follow:

**IP address**

**<User ID>**

**<Password>**

**Results directory**

**Data directory**

### 7.1. Server setup

Each Medical Doctor (MD1 to MD4) may have a different server setup.

The device has to be connected to internet (See section 6).

1

Select the desired MD.

**Server data**

**Check data server button**

**Internet comment zone**

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Advanced

2

Enter the server specifications into the Server data zone:

- Server IP address
- User ID
- Password (if necessary)
- Results directory
- Data directory

3

To check if the specifications are correct for the desired server, click on the Check Data Server button.

*A message in the Internet comment zone will confirm the availability of the server.*

## 7.2. Add new directories in the server structure

In order to make each patient data & results files unique, it is recommended to separate them according to the Serial Number (SN) and Doctor number (MD).

The screenshot shows the 'Data Server' configuration window. The 'Server Address' is '0catch.com' and the 'User ID' is 'ezscan.0catch.com'. The 'Password' is '12345678'. The 'Results Directory' is 'ezscan Results' and the 'Data Directory' is 'Patients Data'. The '+SN+MD' checkbox is checked, and a yellow arrow points to it with the label '+SN+MD checkbox'. Other options include 'D.O.B', 'Email', 'Print Style', and 'Print'. The 'Internet' status at the bottom indicates 'All directories are available'.

1

Check on the +SN+MD check box

These new directories will be inserted into the server as follow:



## ENGLISH

### IP address

<User ID>

<Password>



Results directory

Data directory

---

2

Uncheck on the +SN+MD check box.

---

All patient test results will be saved into the same server directory, regardless of the devices' serial number and Medical Doctor.

## 8. Copy patient data to a server

'Save on server' checkbox

The screenshot shows the 'Data Server' section of the ezscan software. The 'Save' checkbox is highlighted with a green arrow. The interface includes radar charts for ANODES, CATHODES, and GLOBAL, patient data entry fields, and a status bar at the bottom showing 'Internet: Connecting to 0catch.com...'.

1 Check the « Save » checkbox in the “Enable” menu.

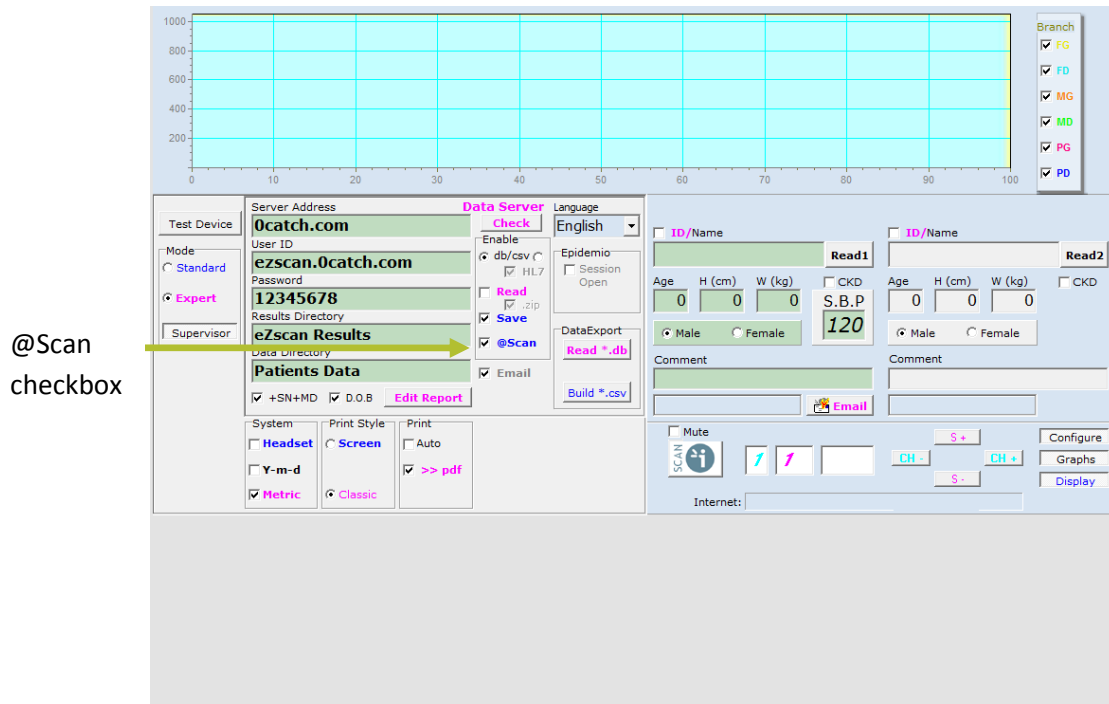
2 Retrieve the desired patient’s data (See section 7).

The screenshot shows the 'Data Server' section of the ezscan software. The 'Save' checkbox is checked. The status bar at the bottom shows 'Internet: Upload completed'.

*The device connects to server.*

*A message in the Internet comment zone indicates that the upload is successful.*

In order to be able to save the test results after each scan, it may be useful to check if the connection to the server is possible prior to each scan and prevent a new scan to be performed in case the connection is not successful:



Check the @Scan checkbox in order to confirm a successful connection to the server prior to each scan.

## 9. Read patient data from a server

1

Check the 'Read' and '.db' checkboxes in the Enable menu and the "Data server" checkbox in order to enable reading patient data from the specified remote server.

'db'  
checkbox

'Read  
from  
server'  
checkbox

The screenshot shows the 'Data Server' configuration panel in the software. The panel includes the following elements:

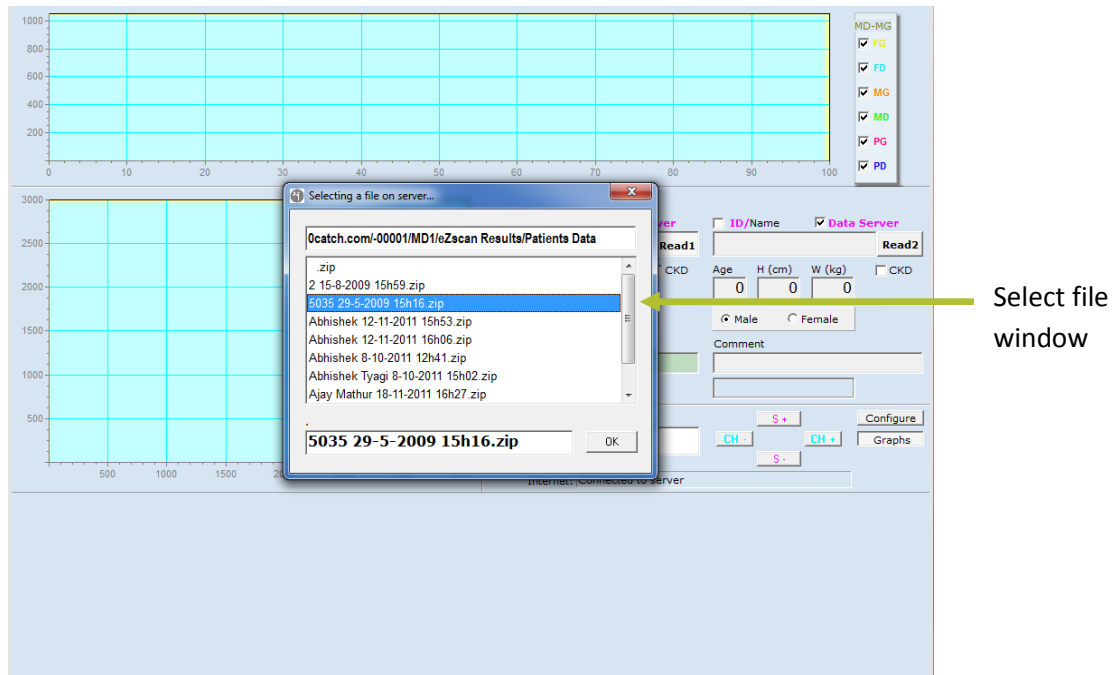
- Server Address:** 0catch.com
- User ID:** ezscan.0catch.com
- Password:** 12345678
- Results Directory:** ezscan Results
- Data Directory:** Patients Data
- Enable:** db/csv (checked), HL7 (checked), zip (checked)
- Read:** (checked)
- Save:** (unchecked)
- Data Server:** (checked)
- Language:** English
- Epidemiology:** Session Open (unchecked)
- DataExport:** Read \*.db (checked), Build \*.csv (button)
- System:** Headset (unchecked), Screen (checked), Y-m-d (checked), Metric (checked)
- Print Style:** Auto (checked), >> pdf (button)
- Print:** (button)
- Branch:** FG (checked), FD (checked), MG (checked), MD (checked), PG (checked), PD (checked)
- Read1:** (button)
- Read2:** (button)
- Age, H (cm), W (kg), CKD:** (fields for patient data)
- Comment:** (text area)
- Email:** (button)
- Mute:** (button)
- Internet:** (text area)

Data server  
checkbox

Read  
button

2

Click on the 'Read' button.



*The device connects to the server and a list of patient visits appears in a new window.*

3

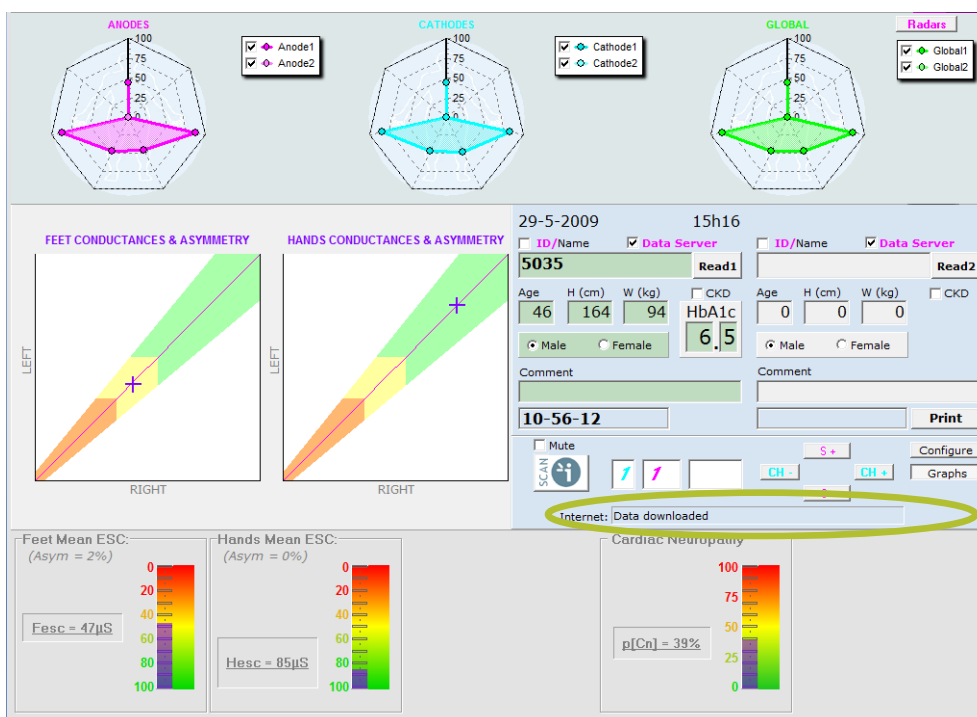
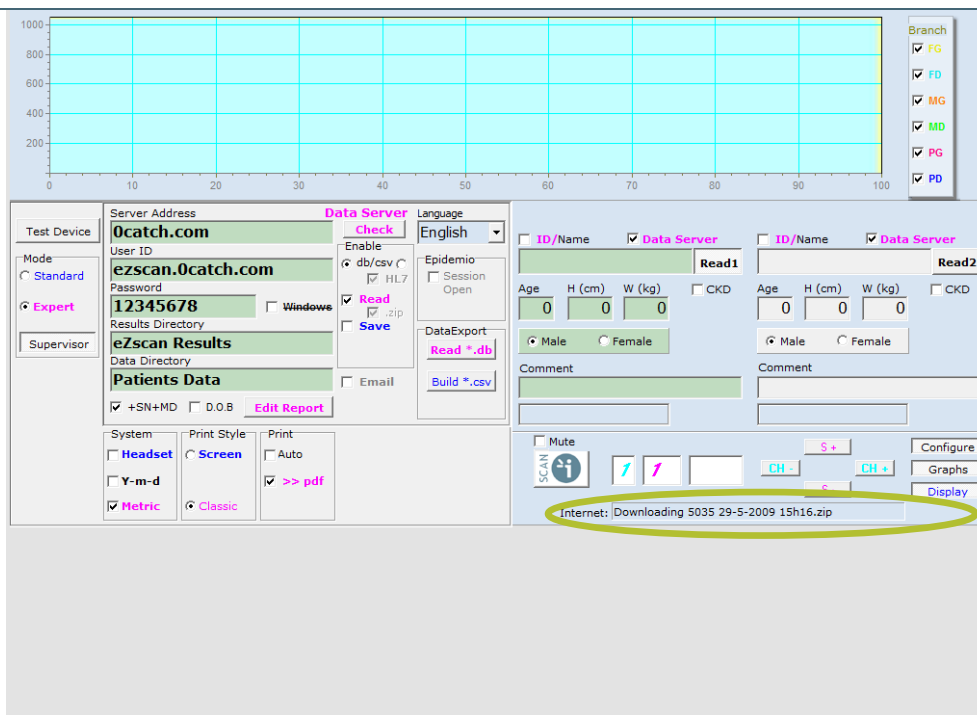
Select the desired patient file.

*The files are compressed to save space on the remote server.*

4

*The device connects to the server.*

*A message in the Internet comment zone indicates that the download is successful.*



The selected patient file is read from the server and the results are displayed.

#### NOTE

Once the details of the Internet Server access path are specified, unpress the 'Supervisor' button.

## ENGLISH

If the 'Read' check box has been selected in the 'Supervisor' mode, it might be required to read patient data locally on the EZSCAN/SUDOSCAN device, without reopening the 'Supervisor' mode again in order to deselect the 'Read' check box:

---

Uncheck the 'Data Server' checkbox in order to enable reading patient data locally.

---

## 10. Read and Save patient data from/to a remote server

1

Check all 'Read' and 'Save' and '.db' checkboxes in the Enable menu in order to enable reading patient data from the specified remote server and backup patient data to server after each new scan.

'db'  
checkbox

'Read  
from  
server'  
checkbox

'Save to  
server'  
checkbox

Data server  
checkbox

Read  
button

2

Uncheck 'Data Server' checkbox in order to retrieve a patient locally on your EZSCAN device instead of the server.

3

Perform SCAN operations as usual.



## 11. Export several patient data to a data server

- 1 Uncheck the “Read” and check the “Save” checkboxes in the Enable Menu.
- 2 Make sure to check the ‘.db’ checkbox and retrieve a first patient with “Read1” button.

3

The screenshot shows the 'Supervisor' panel of the software. A large grid is at the top. Below it, the 'Data Server' section has a 'Check' button. The 'Enable' section has checkboxes for 'db/csv', 'HL7', 'Read', 'Save', '@Scan', and 'Email'. The 'DataExport' section has a 'Read \*.db' button. The 'Supervisor' panel also has a 'Data Directory' section with 'eZscan Results' and 'Patients Data'. The 'System' section has 'Headset', 'Screen', 'Auto', and 'Metric' options. The 'Print' section has 'Print Style' and 'Print' options. The 'Internet' section has a 'Remote Connection Status Line'. Annotations with yellow arrows point to the 'Save' checkbox, the 'Read \*.db' button, and the 'Read1' button.

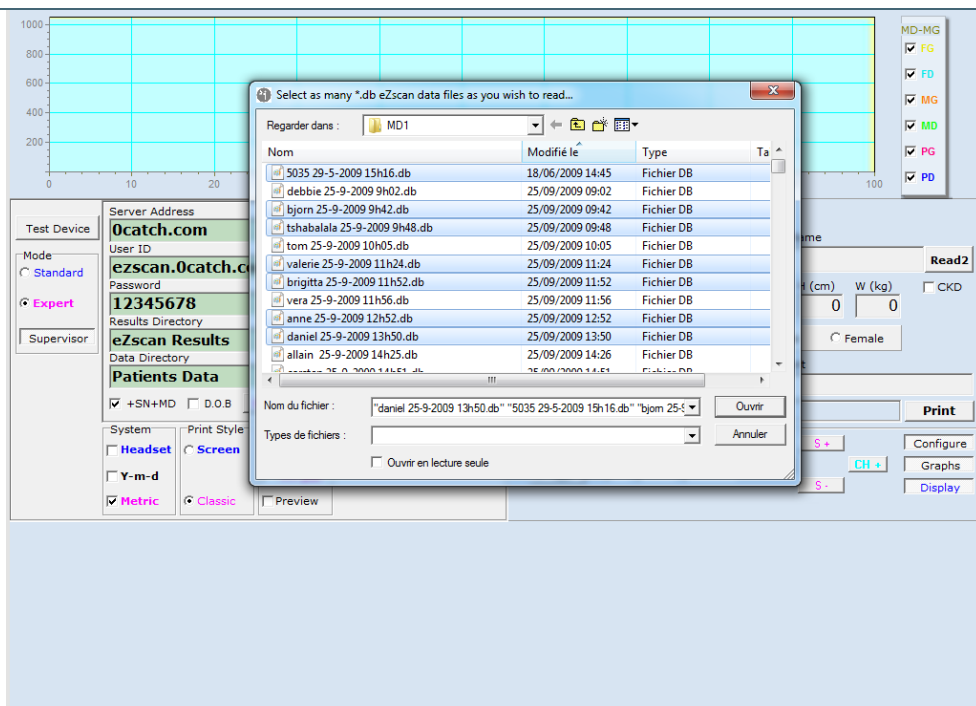
‘Save’ checkbox

‘Read1’ button

‘Read\*.db’ button

Click on the ‘Read\*.db’ button in the DataExport menu of the ‘Supervisor’ panel.

- 4 In the ‘Read files’ window, select the patient data (one or several) to be exported.

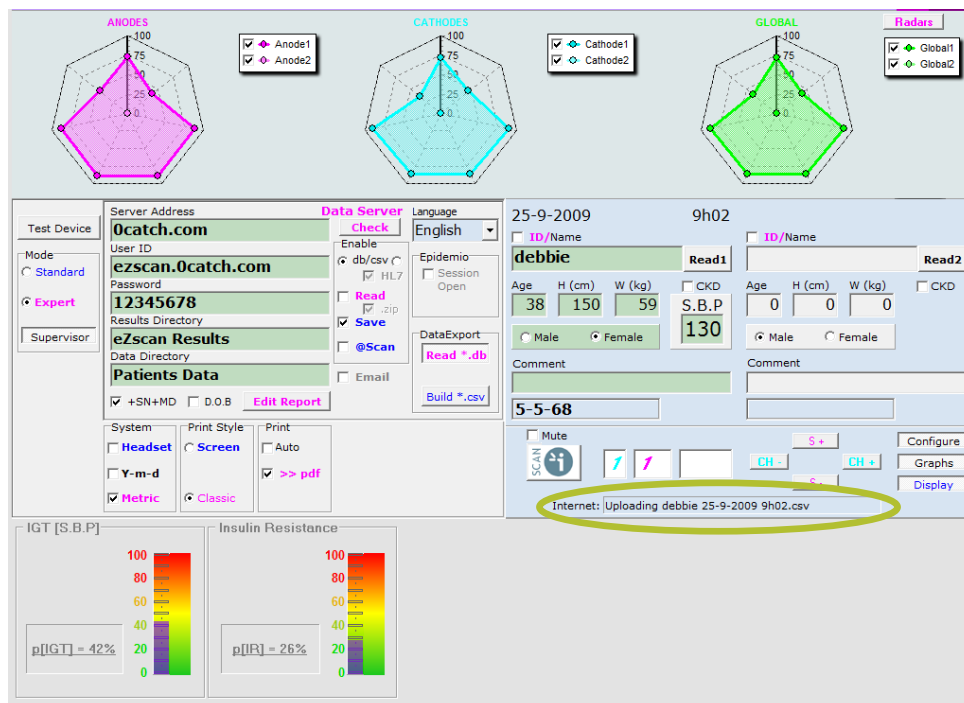


Use preferably a keyboard or mouse to easily select several files at the same time!

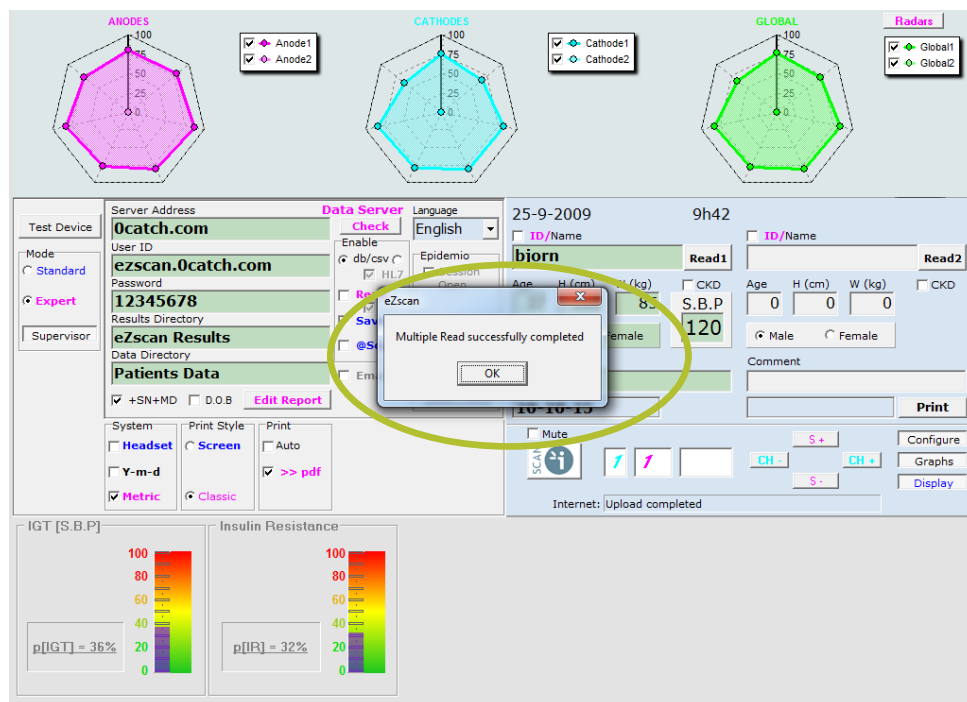
5

Click on « open ».

The software reads all selected patient data one by one.



A message in the Internet comment zone indicates that each upload is successful.



*A message in the Internet comment zone indicates that the Multi Read is successful.*

## 12. Concatenate .csv data files

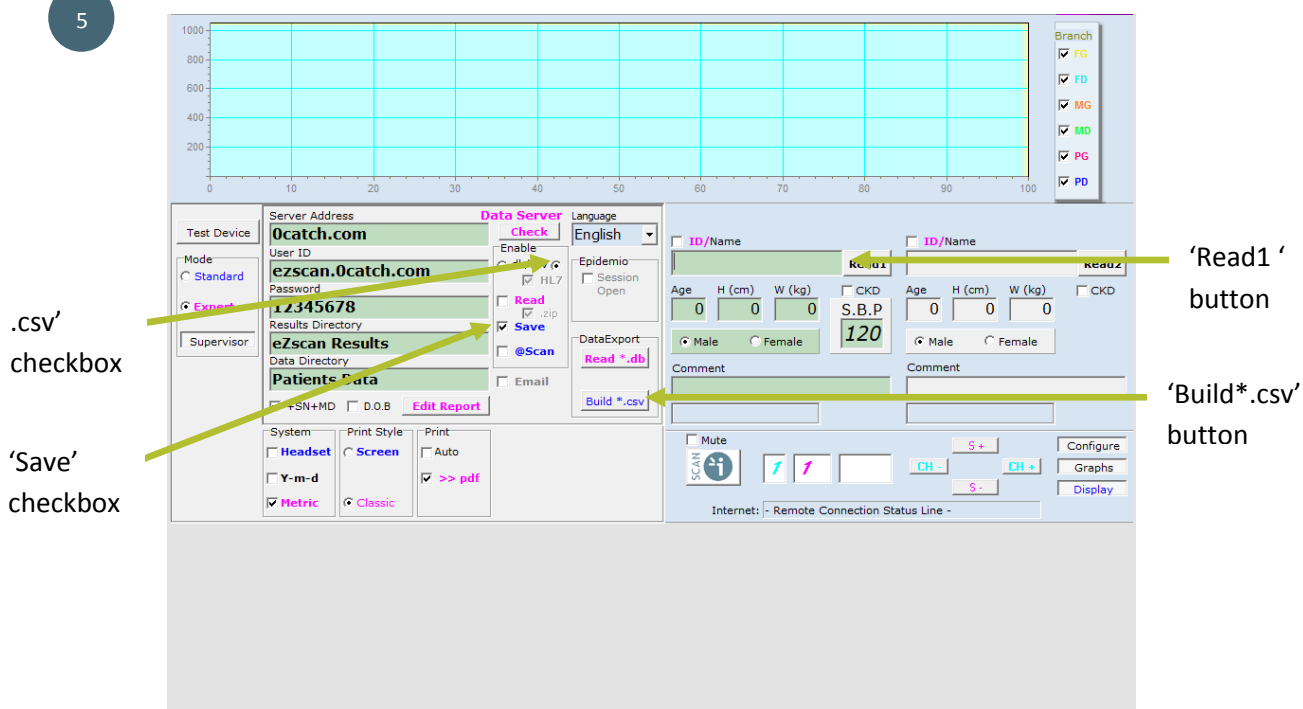
Data resulting from a test are stored in a Excel compatible .csv file. In the context of a clinical trial, it can be useful to concatenate several .csv data files in one single file, either locally or sent to a server.

- 1 Prior to concatenate .csv data files, it is advised to generate individual .csv files with the latest software installed with a LOCAL multiple read operation, as detailed in section 5.3.6.6 above, after unchecking BOTH 'Read' and 'Save' checkboxes in the Enable Menu.

Then proceed as follow:

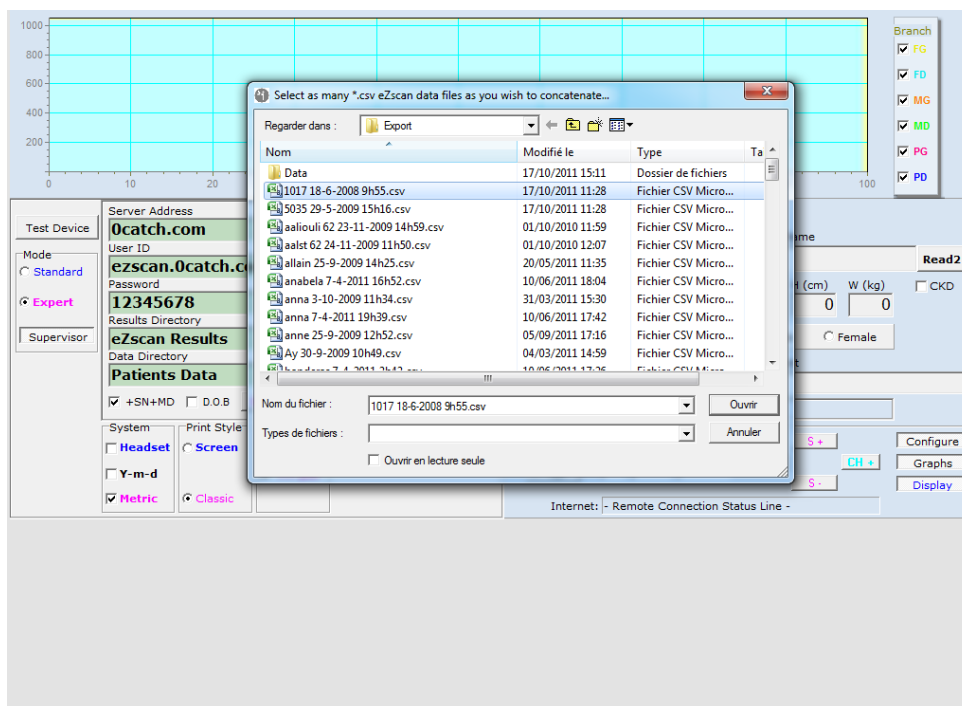
- 2 Keep both 'Read' and 'Save' checkboxes unchecked for creating a LOCAL concatenated file, or check the 'Save' checkbox only to create a concatenated file on the specified server.
- 3 Check the ".csv" checkbox in the Enable Menu.
- 4 Retrieve a first .csv file with "Read1" button.

5



Click on the "Build\*.csv" button in the DataExport menu.

6

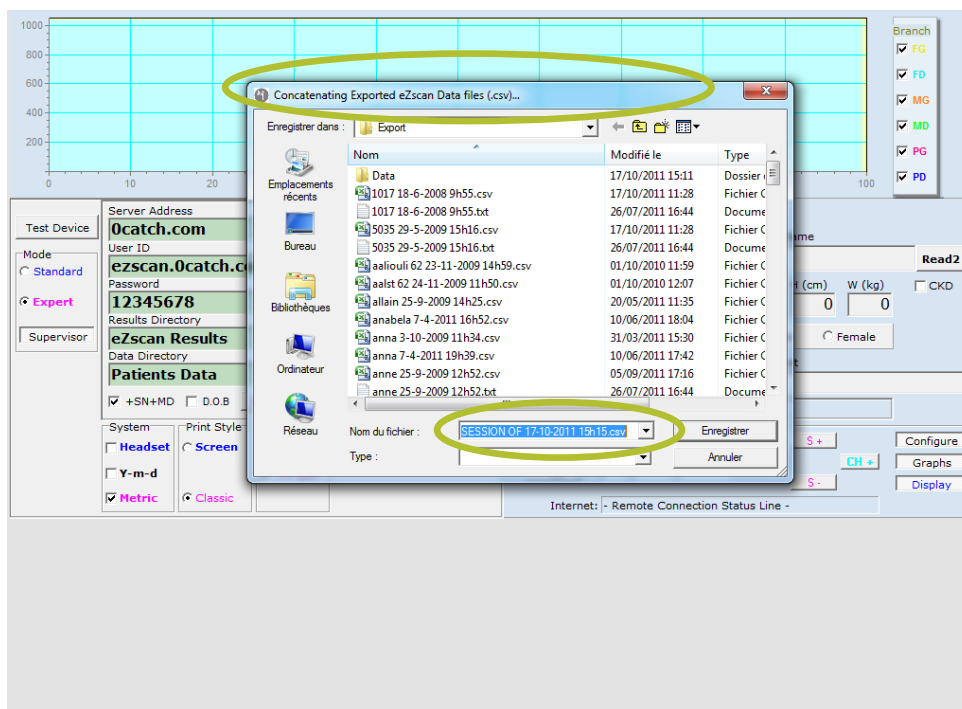


Select as many .csv data files as you wish to concatenate.

Click on « open ».

All selected .csv files are read sequentially.

7



The concatenated file is automatically named as "SESSION OF date time.csv" but it can be modified.

The concatenated file is saved in C:\Program Files\IMPETO\DataBase18F2.13\MD1\Export. It can be sent by email.

## 13. Epidemiology

This section is intended only to the users of EZSCAN.

The epidemiology tool enables to make statistics.

The tool can be triggered in the morning as part of a day of testing, for example. Patient results will be included in the statistics all day long.

The statistics can also be done afterwards.

Active the emidepiology at the beginning of the screening session:

1

Check the “Session Open” checkbox in the Epidemio menu.

Session  
checkbox

The screenshot shows the EZSCAN software interface. At the top is a large grid with a y-axis from 0 to 1000 and an x-axis from 0 to 100. Below the grid is a sidebar on the left with sections for 'Test Device' (0catch.com), 'Mode' (Standard, Expert), 'Supervisor', 'Data Server' (ezscan.0catch.com), 'Results Directory' (eZscan Results), 'Data Directory' (Patients Data), 'System' (Headset, Screen), 'Print Style' (Y-m-d, Metric), and 'Print' (Auto, pdf). The 'Epidemio' menu is open, showing 'Session Open' checked, 'Include' button highlighted with a green arrow, 'DataExport' (Read \*.db, Build \*.csv), and 'Email'. The right sidebar contains 'ID/Name' fields, 'Read' buttons (Read1, Read2), 'Age', 'H (cm)', 'W (kg)', 'CKD', 'S.B.P', 'Male', 'Female', 'Comment', 'Mute', 'SCAN', 'CH -', 'CH +', 'S -', 'S +', 'Configure', 'Graphs', 'Display', and 'Epidemio'.

2

Click on the « Include » button.

*Once this is set up, the user can go back to the standard mode.*

*All patients results will be included in the statistics all along the screening session.*

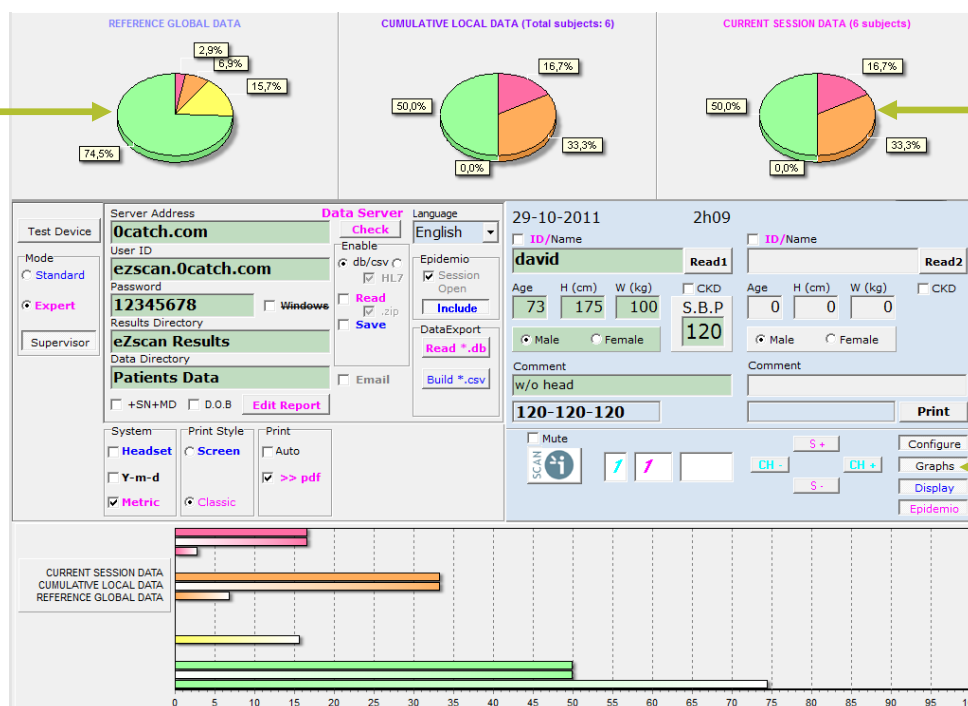
Include  
button

The screenshot shows the eZscan software interface. A yellow arrow points to the 'Include' button in the 'Data Server' section. The interface includes a large grid at the top, a 'Test Device' section on the left, and a 'Data Server' section in the center. The 'Data Server' section has fields for 'Server Address' (0catch.com), 'User ID' (ezscan.0catch.com), 'Password' (12345678), and 'Results Directory' (eZscan Results). There are also buttons for 'Check', 'Read', 'Save', 'Include', 'DataExport', and 'Build \*.csv'. The 'Include' button is highlighted with a yellow arrow.

At the end of the screening session, the statistics can be observed in the Supervisor mode:

Click on the Graphs button.

Reference  
global data



Statistics of  
the current  
session

Graphs  
button

## NOTE

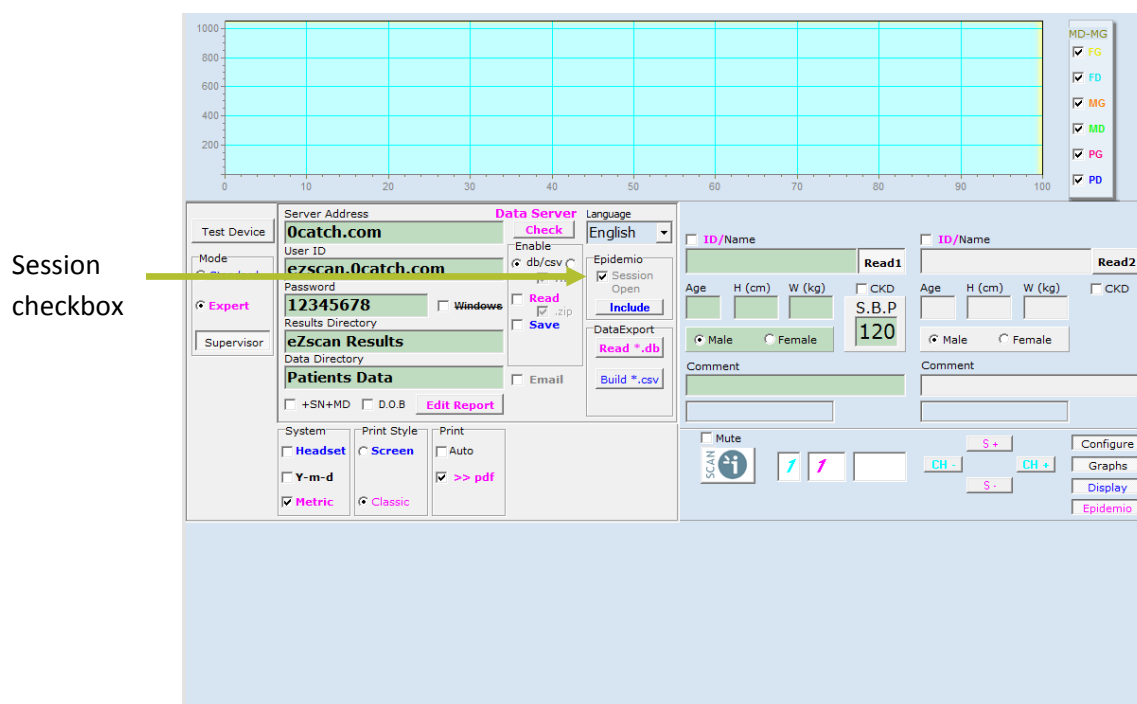
Make a READ when an epidemiology session is open, will include the read data in the statistics.

Click twice on the “Include” button to suppress the current epidemio session display.

Analyse the statistics at the end of a screening session:

1

Check the “Session Open” checkbox in the Epidemio menu.



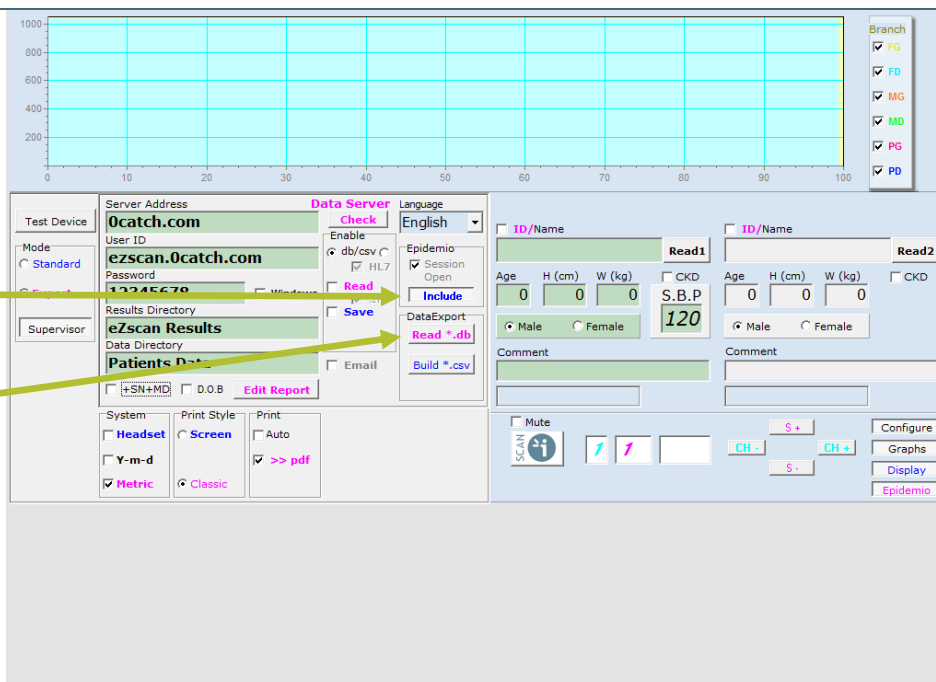
2

Click on the « Include » button.



Include  
button

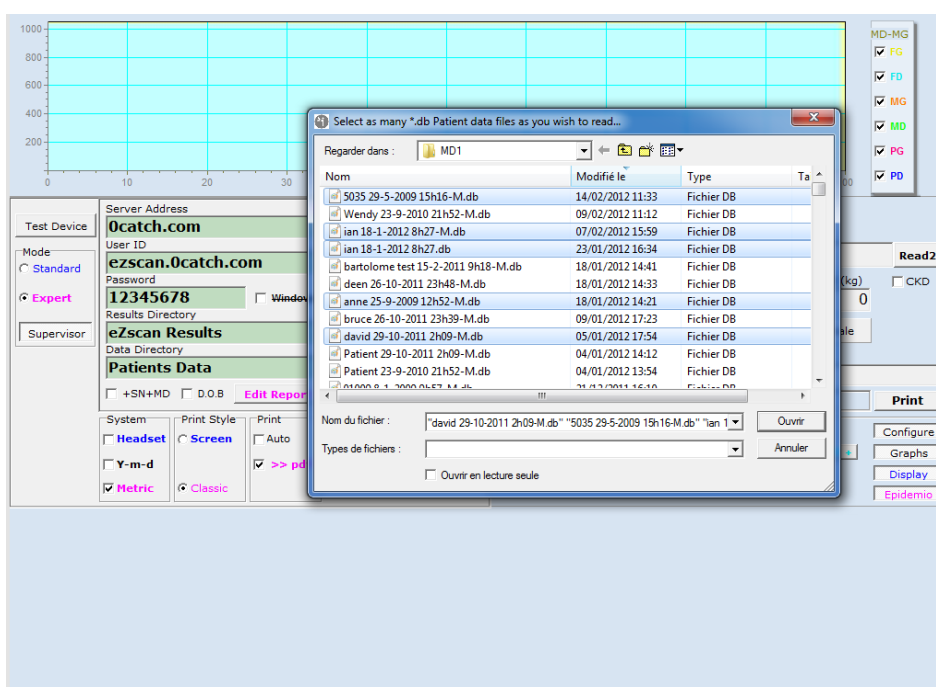
Read  
\*.db  
button

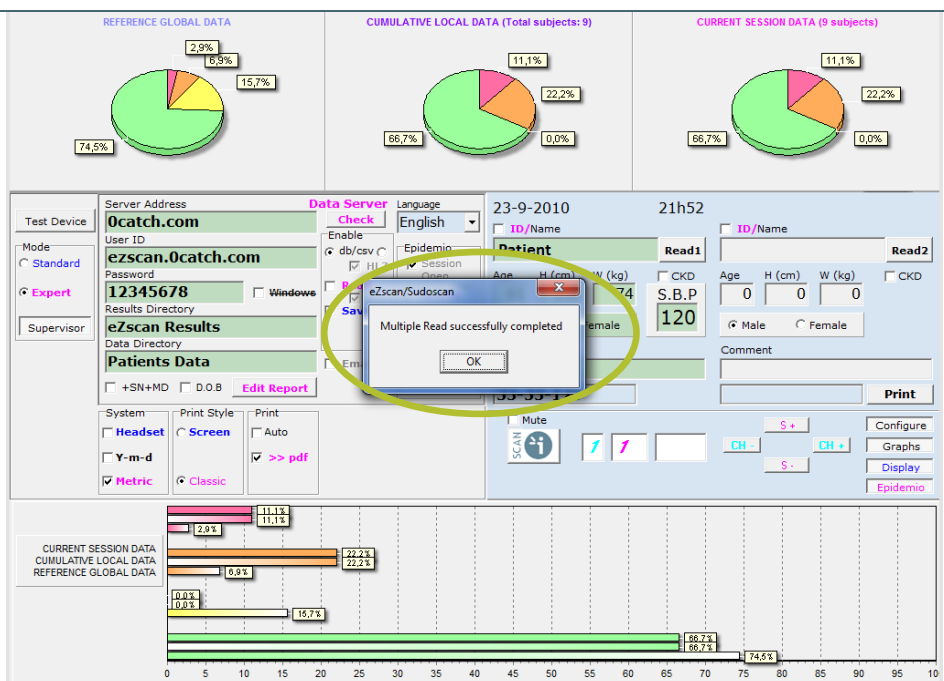


3

Click on the « Read \*.db » button and selected the data you wish to include in the statistics.

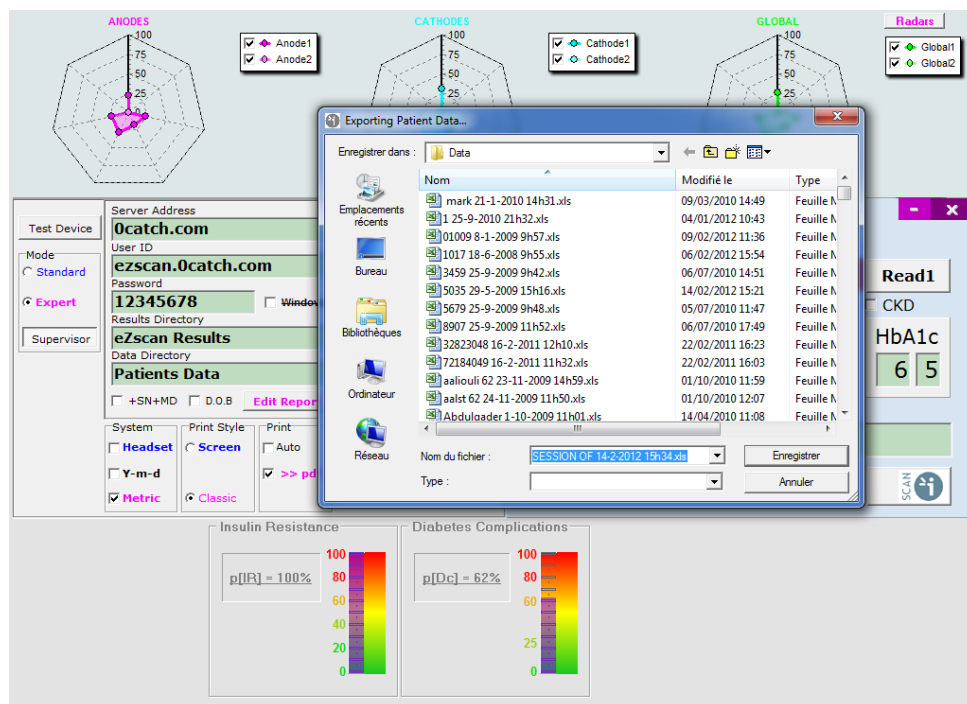
*A message appears to inform that the Multiple Read is successful.*





## Save an epidemio session

Uncheck the “Session Open” checkbox.  
*The session is saved in the file MD>Export>Data.*



## Retrieve an epidemio session

Go to: C:\Program Files\IMPETO\DataBase18F2.13\MD1\Export\Data

## 14. Exit or minimize the programme

1

Click on the Shut down button.

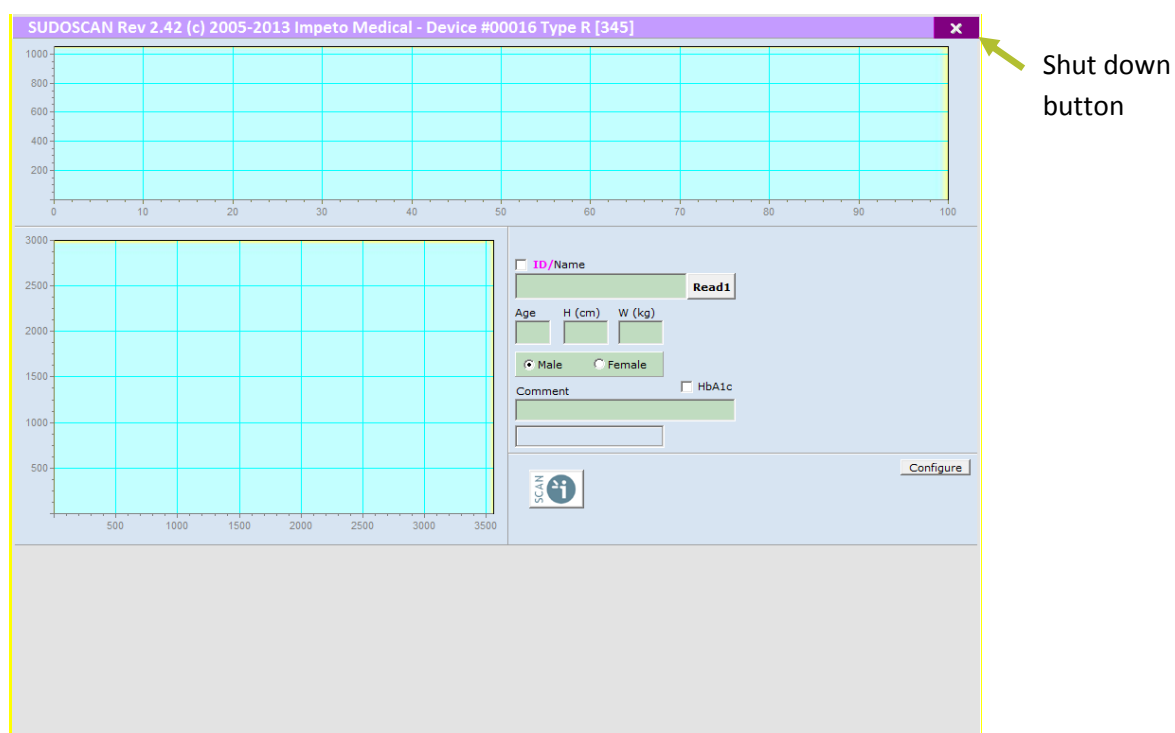
*A shut down window appears.*

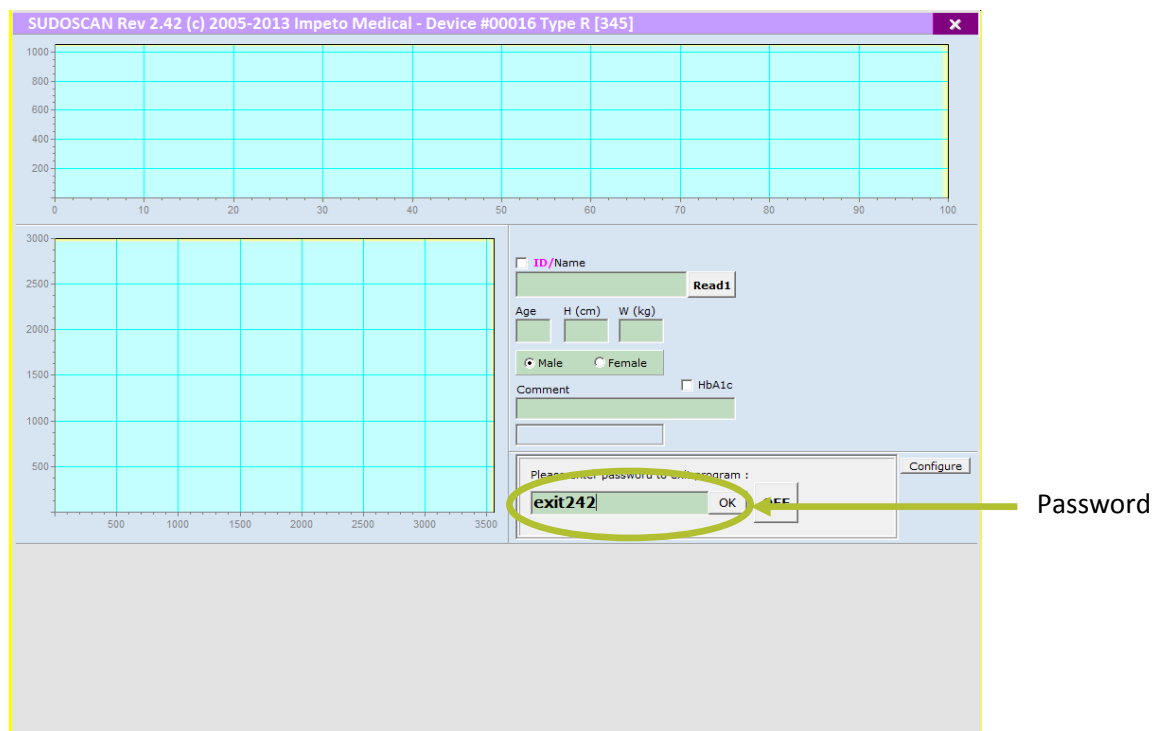
2

Enter the password “exit242” to exit the programme or “mini242” to minimize.

3

Click on OK.







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EZCAN Approved in 2006

SUDOSCAN approved in 2010

[www.impeto-medical.com](http://www.impeto-medical.com)