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Insert the USB-Flashcard into the USB drive

The explorer opens automatically or explore and open the FlashUSB drive and start with **click on**.

Please check your Hardware (*version of Windows and 32 or 64 bit*).

Please check the Administration rights

The installation guide loaded from USB Flash. Select language.

Start with the preinstallation for **HDO driver**.

If **Bluetooth Driver** *for recommended BT1000 USB-stick is available*, start the preinstallation

Connect your HDO with your PC and check if your device could be detected.

Now start the MDSWIN Installation for Windows 10

Having completed the preinstallation successfully

-- 1. Driver for HDO -- 2. Driver for Bluetooth (*If HDO is Bluetooth required*) --3. MDSWIN analyse Software

MDSwin 3010TAB for Tablets, Notebooks and monitors with low resolution. Or 3010 for standard PC

Accept the installation **"I agree"**.

Accept the Data Directory `C:\VET_HDO-3010` with **"Next"**.

Complete the installation with **"Exit"**.

If the hardware is the first time your system has been connected, Windows will indicate *"new hardware has been found"*. (*no info from WIN 10*)

Follow the windows automatic installation

1. Connect the **HDO** device to your computer, using the USB cable which is provided.

**If Bluetooth is provided**. The first connection has to be **done with HDO and USB** ! later you search for Bluetooth. *see page 5*

VETHDO 5.0xx ICON. appears at the desktop. Click on VET HDO icon.

MDSWIN Software analyse starts and asking for the data directory

Create your data directory on C: drive

For Server select your server drive. Server needs read and write rights!

Bluetooth installation go *to page 24-26*.

Content of USB Flashcard

HDO Driver

BT Driver

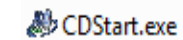
MDSWIN installation

Teamviewer Remote

Manuals

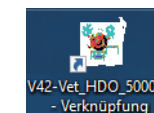
Videos

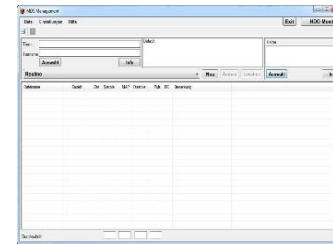
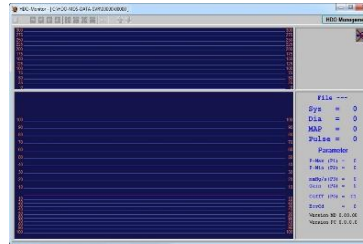
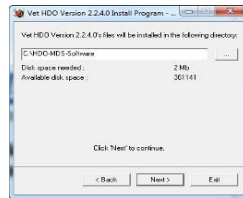
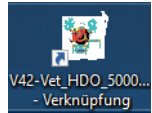
Papers



**Start installation**

Click on accept !

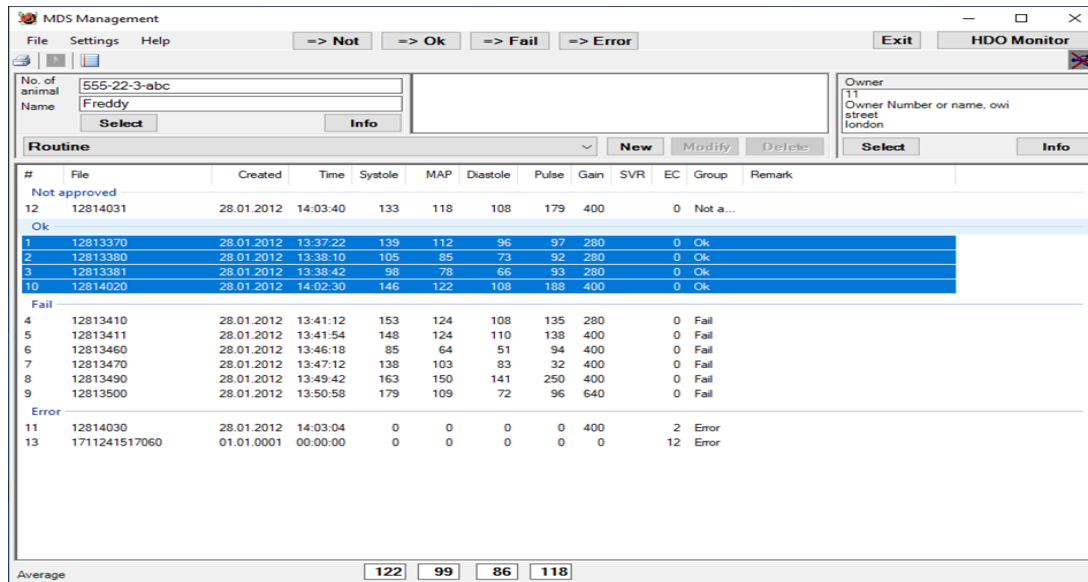




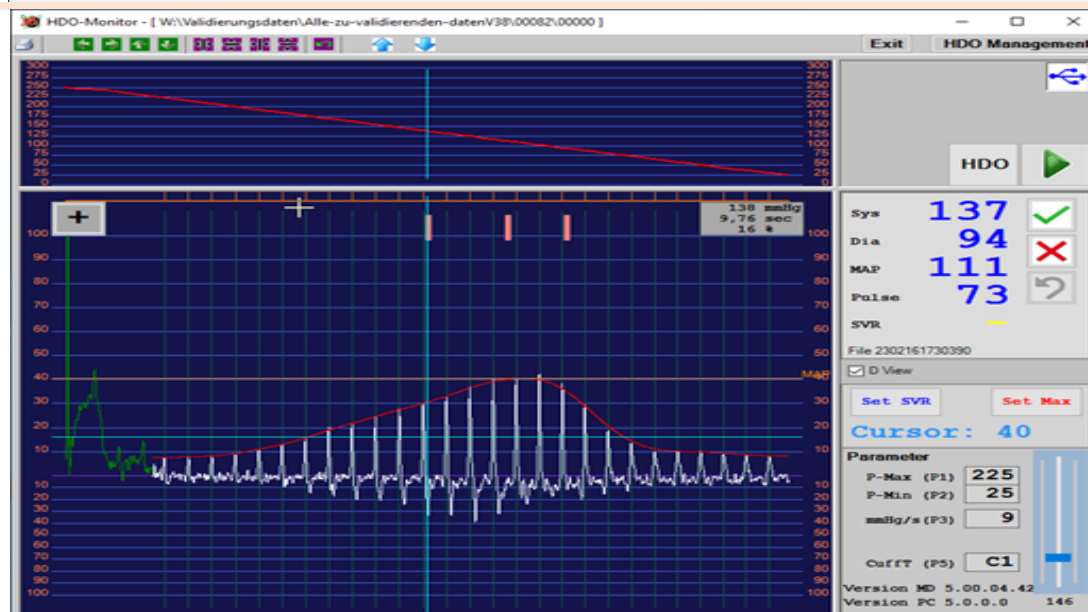
- Start the VET HDO Analyse Software: click on Icon from your desktop
- Define your own main directory `C:\HDO-MDS-DATA` ( *only first time* ):
- Computer administration rights are required for the installation
- With the Menu “Settings” you can choose
  - COM= connection to HDO with USB or Bluetooth or BT1000 adapter
  - Language= selection of Language
  - Data Directory= selection of memory location
  - SVR - activation of SVR Analysis (ask your provider for the Key)
  - Dview- activation (ask your provider for the Key)
- here is saved all files about costumers, patients and other data
- If you want to install the software in **the network** you have to change the main directory.
- Review Computer Network Operation
- The Main directory has to be assignet to your local C:/ or your network drive
- **Network:** All Workstations require the installation of the VET HDO Device Drivers and MDSwin Software. Select main directory for each PC

- Standard directory: `C:\HDO-DATA`
- Networkinstallation
- Changing data directory
- Data directory
- Network

The MDS software consists of two components. **Owner** and **Patient** administration and the visual part of the measurement.



- PET Owner records
- File list
- Patient records, in relation to owner
- Patient records, in relation to animal
- Event (*routine*) related to a patient
- Remarks related to Owner and or Patient
- Navigation to Management List *A1 or A2*
- Navigation to visual graphic window *click on HDO Monitor*
- Printout of measurements
- Import of measurements from HDO
- Exit: close the Software
- File: Import, Export, CSV-File for Excel
- Average *marked blue*



- Visual part of the measurements
- Display of USB / BT connection status
- Display of HDO button for Parametersettings and Start
- Display of linearity
- Display of Live measurements
- Display of analyzed values
- Display of device presetting Parameters
- Display if status : not approved - approved - failt – error
- Display of graphical visual assessment
- Display Cview
- Systole, Dialstole, mittlerer arterieller Druck, Puls, SVR
- SET SVR and SET SVRmax and Cursorposition
- 123mmHg position 12,66sec (*light blue analyse line*)
- + - or small or large illustration

In **MDS Management** your measurements are listet by creating date A1 or Approved quality A2 sorted by status of judgement

MDS Management interface showing a table of measurements for an animal named Freddy. The table is sorted by status: Not approved, Ok, Fail, and Error. The 'Ok' status is highlighted in blue. A context menu is visible over the table with options: Approved, Bemerkung, Löschen, Ok, Fail, Not.

#	File	Created	Time	Systole	MAP	Diastole	Pulse	Gain	SVR	EC	Group	Remark
<b>Not approved</b>												
12	12814031	28.01.2012	14:03:40	133	118	108	179	400		0	Not a...	
<b>Ok</b>												
1	12813370	28.01.2012	13:37:22	139	112	96	97	280		0	Ok	
2	12813380	28.01.2012	13:38:10	105	85	73	92	280		0	Ok	
3	12813381	28.01.2012	13:38:42	98	78	66	93	280		0	Ok	
10	12814020	28.01.2012	14:02:30	146	122	108	188	400		0	Ok	
<b>Fail</b>												
4	12813410	28.01.2012	13:41:12	153	124	108	135	280		0	Fail	
5	12813411	28.01.2012	13:41:54	148	124	110	138	400		0	Fail	
6	12813460	28.01.2012	13:46:18	85	64	51	94	400		0	Fail	
7	12813470	28.01.2012	13:47:12	138	103	83	32	400		0	Fail	
8	12813490	28.01.2012	13:49:42	163	150	141	250	400		0	Fail	
9	12813500	28.01.2012	13:50:58	179	109	72	96	640		0	Fail	
<b>Error</b>												
11	12814030	28.01.2012	14:03:04	0	0	0	0	400		2	Error	
13	1711241517060	01.01.0001	00:00:00	0	0	0	0	0		12	Error	

Average: 122 99 86 118

### Management List A2

selection of not checked- ok- fail- error  
 the List is sortet by selection  
 Navigation of Listform  
 not Approved = still to be checked  
 OK = measurement is good  
 Fail = measurement is bad  
 Error = system sorts on its own  
 Measurement you can judge the measurement  
 left mouse click on measurement.



right mouse click for Approval > remarks> delete  
 average of all OK measurements *click on headline OK*

MDS Management interface showing a table of measurements sorted by date. The 'Ok' status is highlighted in blue.

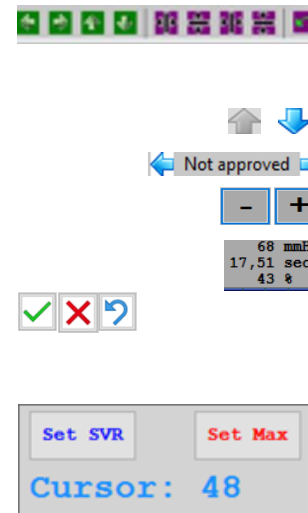
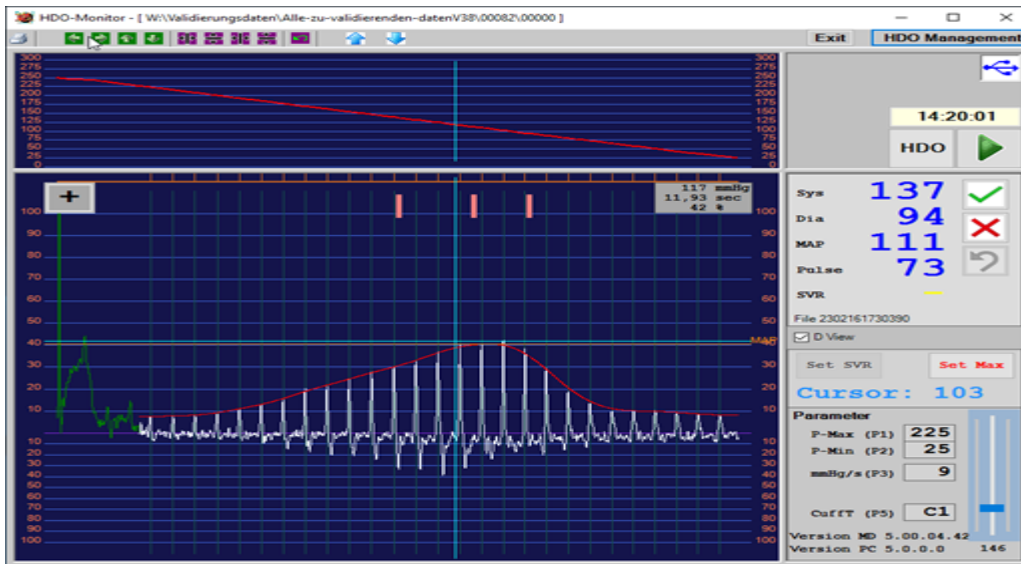
#	File	Created	Time	Systole	MAP	Diastole	Pulse	Gain	SVR	EC	Group	Remark
13	1711241517060	01.01.0001	00:00:00	0	0	0	0	0		12	Error	
12	12814031	28.01.2012	14:03:40	133	118	108	179	400		0	Not a...	
11	12814030	28.01.2012	14:03:04	0	0	0	0	400		2	Error	
10	12814020	28.01.2012	14:02:30	146	122	108	188	400		0	Ok	
9	12813500	28.01.2012	13:50:58	179	109	72	96	640		0	Fail	
8	12813490	28.01.2012	13:49:42	163	150	141	250	400		0	Fail	
7	12813470	28.01.2012	13:47:12	138	103	83	32	400		0	Fail	
6	12813460	28.01.2012	13:46:18	85	64	51	94	400		0	Fail	
5	12813411	28.01.2012	13:41:54	148	124	110	138	400		0	Fail	
4	12813410	28.01.2012	13:41:12	153	124	108	135	280		0	Fail	
3	12813381	28.01.2012	13:38:42	98	78	66	93	280		0	Ok	
2	12813380	28.01.2012	13:38:10	105	85	73	92	280		0	Ok	
1	12813370	28.01.2012	13:37:22	139	112	96	97	280		0	Ok	

Average: 126 104 91 140

### Management List A1

selection by date and course  
 Navigation of Listform  
 Column *Group* shows status of judgement  
 Average display of marked measurements  
*selection is marked blue*

In MDS Monitor the visualized part of measurements

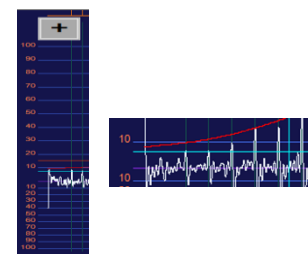
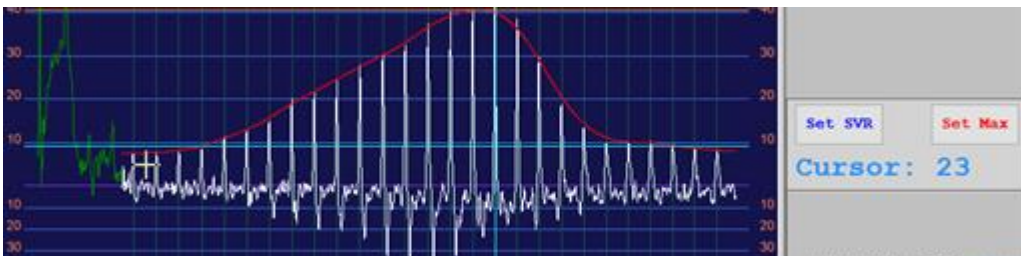
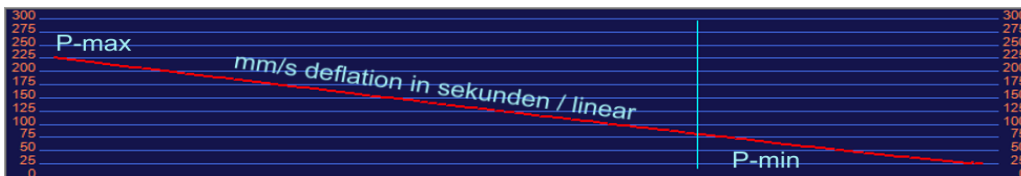


Judgment of Measurement  
 enlarge, zoom out and reset  
 examination of linearity  
 go to next measurement  
 changes to the rating list  
 enlarge zoom full graphic  
 Position of crosshair *light blue*  
*Amplitude size in %*  
 Judgment OK-> Fail ->.Backspace

*time stamp*  
 10:29:52

Set SVR Judgment -- Set SVR  
**Maximum**

SVR shows crosshair position *for*  
*example* Cursor 40%



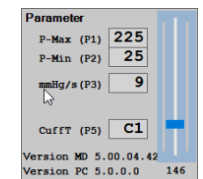
Judgments Parameter and graphic  
 Pmax inflation 225mHg  
 millimeter in sec. Pulsadapted  
 deflation  
 Pmin deflation to 25 mmHg  
 Puls detection ok Rhythm ok

175 -300mmHg  
 6-15 mmHg  
 10-50mmHg



Skala: maximal workload of the  
 amplitudes and pulswaves

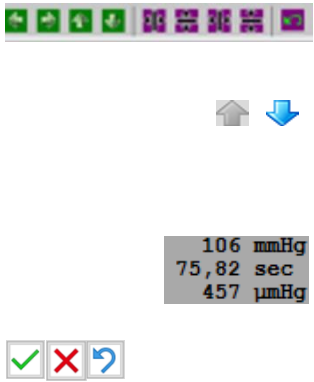
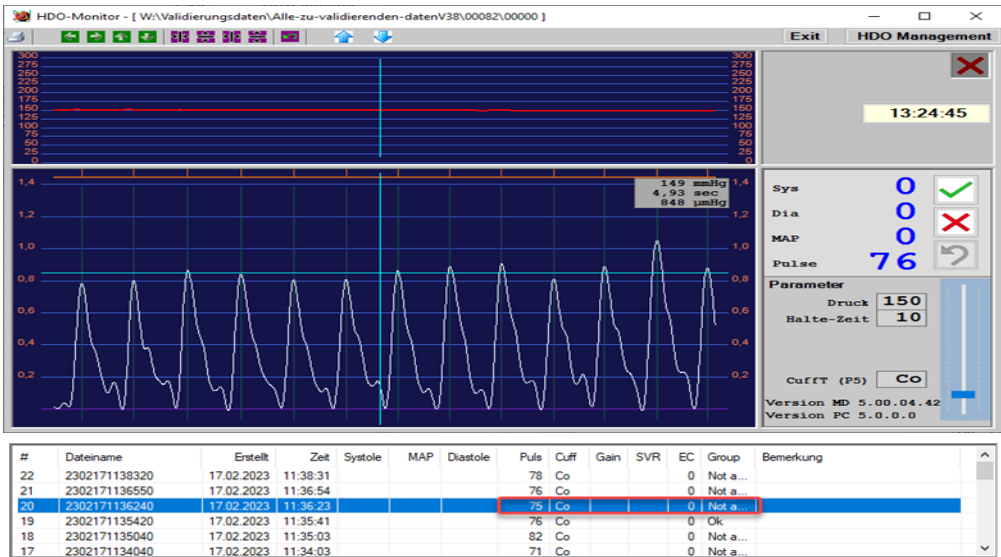
10 – 100 %



Presystolic-offset. *mind. 4 amplitude*  
 Bell shaped ok

# Navigation Monitor Constant measurement 5.0

In MDS Monitor the visualized part of constant measurement



Judgment of Measurement CO  
 enlarge, zoom out and reset  
 examination of rhythm  
 go to next measurement



enlarge zoom full graphic  
 Position of crosshair *light blue*  
 Amplitude size in µmHg.



Judgment OK-> Fail ->.Backspace  
**Maximum**

shows crosshair position for  
 example Cursor max amplitude  
 Constant with 150mmHg, for 10  
 sec. 868 µmHg Amplitudesize.

CO measurement is listed  
 with CO and puls

MD Parameter

**Parameter**

Cufft **Co** P mmHg **100**

Loop t **10**

Loop n **1**

Auto  
 Sleep SD card **11**

**Pro**  
 Firmware 5.00.04.42

Cufft **Co** P mmHg **100** Time **10**

Loop t **0** Loop n **1**

Cufft **Co** P mmHg **100** Time **100**

Loop t **0** Loop n **1**

Time **10**

- 1 Select cufftype CO
  - 2 Select P mmHg
  - 3 Select Time sec
  - 4 select constant loop
- Sample:  
 Loop t = 60 sec  
 Loop 4 = 4 a'10 sec  
 when Time 10 sec  
 total 40 sec loop plus  
 deflate and inflate are  
 round about 60 sec.

Judgments Parameter CO  
 Judgments Parameter  
 P mmHg offset 100 mmHg  
 Higher as systolic pressure  
 Time offset 10 sec  
 Judgments Parameter

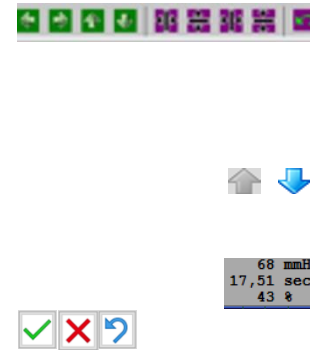
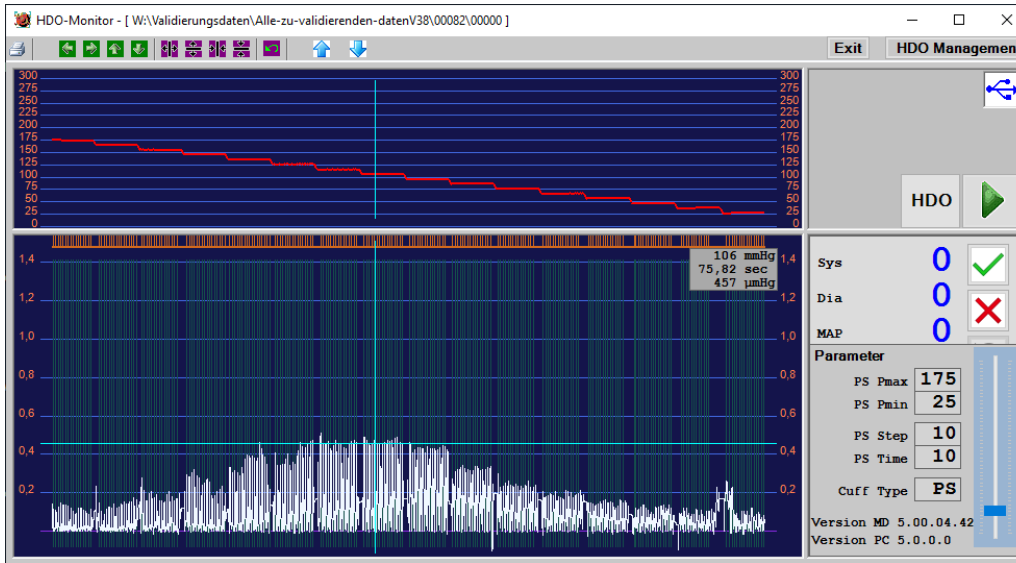
50 mmHg – 225  
 10 sec – 120 sec  
 0.1 µmHg – 5000  
 in mmHg  
 0.1 mmHg - 5.0

Puls detection ok Rhythm ok





In MDS Monitor the visualized part of amplitude pressure measurements



## Judgment of Measurement PS

- enlarge, zoom out and reset
- examination of linearity
- go to next measurement
- enlarge zoom full graphic
- Position of crosshair *light blue*
- Amplitude size in % or  $\mu\text{mHg}$
- Judgment OK -> Fail ->.Backspace
- Maximum**
- SVR shows crosshair position for example Cursor max. 105 mmHg
- 40% or 457 mmHg *Dview*
- View % /  $\mu\text{mHg}$  *Dview is on/off*



P-Max	175	P-Max	175	P-Min	25	PS-Step	25	PS-Time	10
P-Min	275	P-Min	25	PS-Step	75	PS-Step	25	PS-Time	20
PS-Step	250	PS-Step	25	PS-Step	50	PS-Step	10	PS-Time	10
PS-Step	225	PS-Step	25	PS-Step	25	PS-Step	10	PS-Time	10
PS-Step	200	PS-Step	25	PS-Step	25	PS-Step	10	PS-Time	10
PS-Step	175	PS-Step	25	PS-Step	25	PS-Step	10	PS-Time	10
PS-Step	175	PS-Step	25	PS-Step	25	PS-Step	10	PS-Time	10

## Judgments Parameter PS

- Pmax inflation 175mmHg
- Pmin 25 mmHg
- PS-Steps deflation 10 mmHg
- PS-Time hold 10 sec

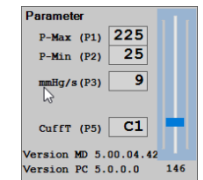
- 175 -275 mmHg
- 25 -75 mmHg
- 10-25 mmHg
- 10-20 sec.



Skala: maximal workload of the amplitudes and pulswaves

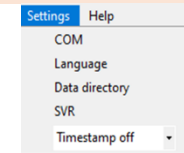
10 – 100 %

Bell shaped ok

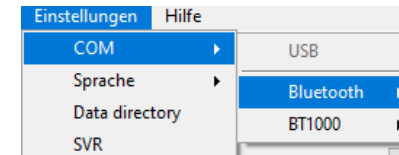




Start the Software with the Desktop ICON goto Settings

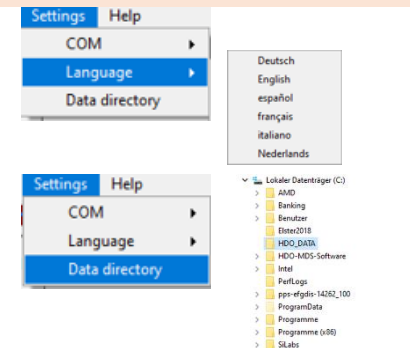


Select the desired connection to the computer see more page 26-27-28



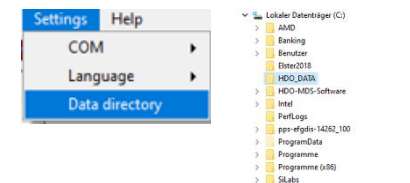
Language selection

Goto Settings and select language.



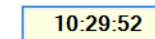
Change main directory:

Goto *Settings* and select Main directory for *Datadirectory*



Activate Timestamp ( *Eventmarker* )

On /off



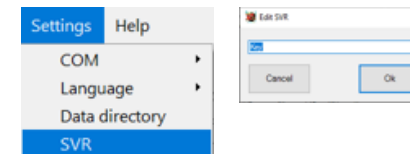
Activate SVR Analyse

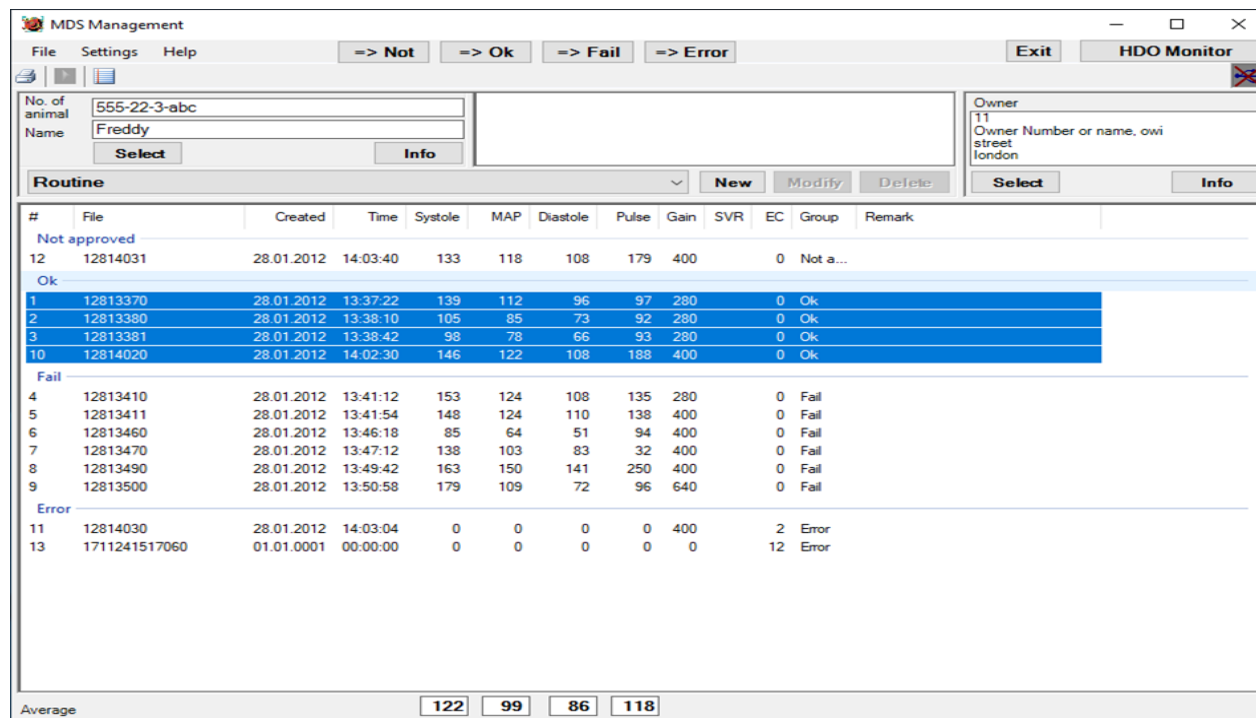
Goto *Settings* and select *SVR*

Ask your Provider for activating code

You have to activate only one time SVR

**When all settings are placed restart the Software**





**Exit** close the Software

**HDO-Monitor** Visual measurement *go to HDO*

**Display** the owner data

**Select** button Owner- function

for selecting, creating and changing.

**Info** Informationen about owner

**Display** the animal data

**Select** button animal- function

for selecting, creating and changing.

**Info** Informationen about animal

**Display** event ( routine ) for selected animal

**Select** button new modify Delete

for selecting, creating and changing event

**Average** of marked blue

**File** Import, export, copy, move, print measurement data.

**Print** Button

**Import** Measurements from SD Card within HDO Device

Change in list form A1 A2

**Display** of patient number and name of the patient selected

**Select** button Patient- function for selecting, creating, changing and deleting patient records.

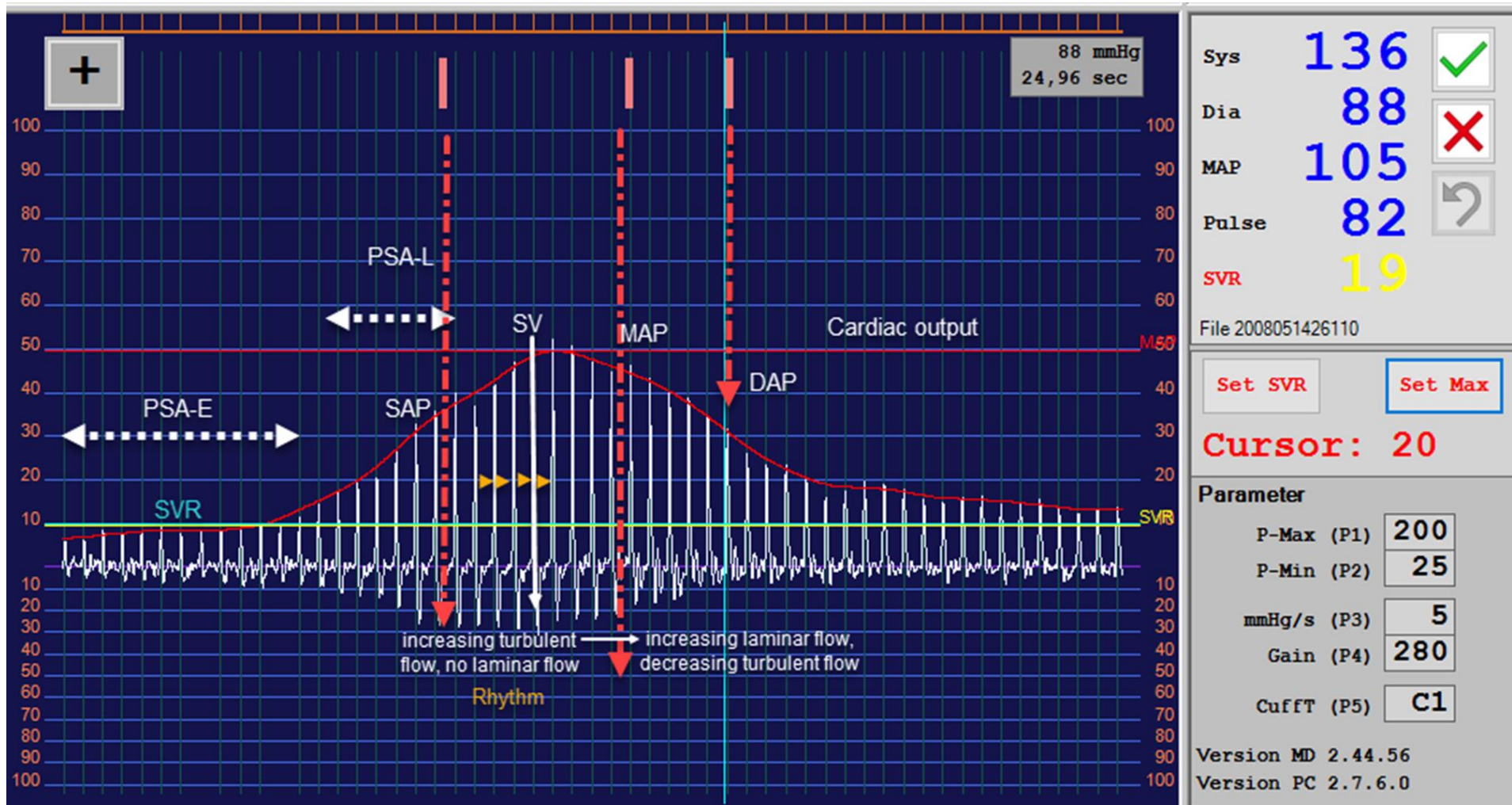
**Info** Informationen about patient

**Pick event:** function for selecting, creating, changing and deleting event records

**Display** of measurements of the selected patient.

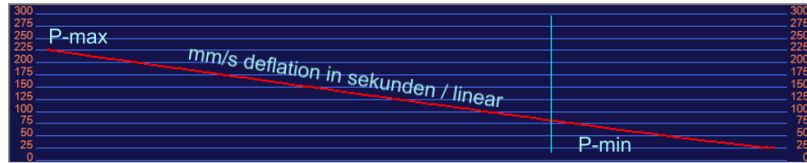
**Average** of marked measurements

*selection is marked blue*





Display linear deflation line: must linear



HDO Monitor

Loop  
 2m 22s n=1

HDO

Change in Monitor / Management

Next measurement

Change to the corresponding evaluation list A1 A2

not approved >> OK >>Fail >>Error

Display status USB / BT > Sleep > not connected

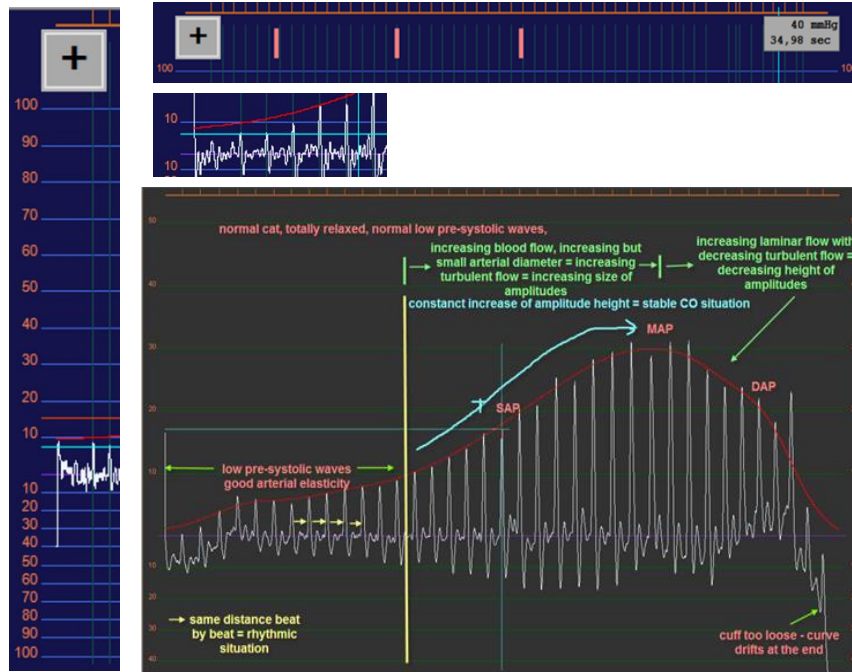
Display „mmHg“ Point of measurement

**Loop** displays time for next autom start

**HDO** opens Parameter window

**start** for measurement

**stops** measurement



recognized pulses

enlarge/ zoom out /In

crosshair position on

presystolic wave

Sys	148	✓
Dia	97	✗
MAP	121	
Pulse	79	
SVR	22	

File 2302201649250

Display Result Assess series of measurement

D View

Set SVR    Set Max

Cursor: 41

Dview activation ( ask for activating code )

SET SVR: saves the Measuring position of the crosshair horizontal of pre-systolic peak

Parameter

P-Max (P1) 225

P-Min (P2) 25

mmHg/s (P3) 9

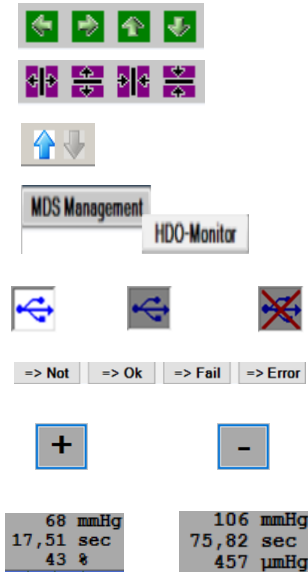
CuffT (P5) C1

Version MD 5.00.04.42

Version PC 5.0.0.0 146

Display settings *Parameters* of HDO unit after a single measurement is done.

Slider for view grafic



Option for navigation in Monitoranalyse

Move graphics > horizontally and vertically

Scale graphics > scale up and down / horizontally and vertically

shows graphic of the next measurement from the list

**switch between Monitor and management window**

Display HDO-MD USB or BT Status > connected > connected but sleepmodus > not connected

Switch to the respective evaluated measurement series

Graphic zoom

The pointer position is at the coordinate *cross light blue* > Position in mmHg / time from the measurement beginning / Amplituden size in Dview % in Amplituden Size  $\mu\text{mHg}$



click on Set SVR button > Saves the horizontal position which was defined by the crosshair position the top of presystolic wave

click on Set Max button > Saves the horizontal position which was defined by the red SVR max line position the top of mean arterial pressure wave define by 100%. *See page 10 screen analyse*

**Dview off** shows a standard Pulswave analyse

**Dview On** shows the real amplitude size in mmHg ( ask your support for aktivating code )

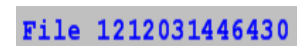


Assess measurement :

Measurement accepted as well > Measurement not accepted as good > Withdraw assessment  
opens the parameter window starts a measurement abort measurement



Button for importe VET HDO Offline measurements Printer icon - to start printing



Year 12 month 12 day 03 hour 14 minute 46 sec 43 total reding in 1 min. 0



# Start up Hardware for measurement

## Hardware

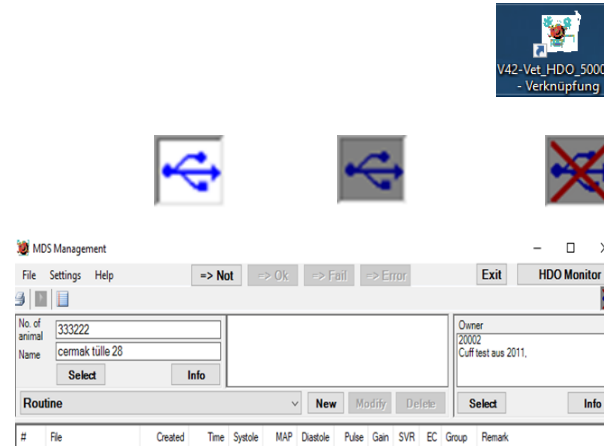


Power supply Connect HDO with 5 V PWR **USB\_C**  
 6 V Older version PIN connector  
 With 5V **USB\_C** please check ON / OFF *light green*  
 Optional for powersupport 4 x AAA 1.5v Battery  
 Powerbank min. 2600 mAh  
 Can be charged with HDO PWR attach the cuff at the HDOI

USB 2.0 PC > to mini USB HDO connection is made to the PC **or Bluetooth** with recommended BT1000



## Software



**Start Software with desktop Icon**

**click on button** if lost the BT connection

Check status of the connection

Select Owner

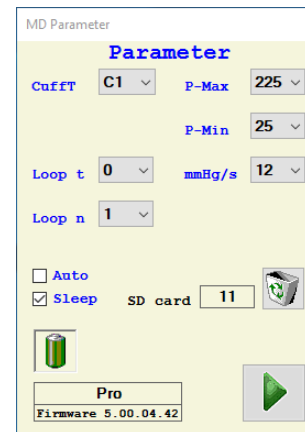
Select animal

Check Event  
*Routine is the standard*



Press START button one time, you wake up the HDO.

Select cuff with arrow up or down  
 Press ENTER to confirm the cuff  
 C1 cat and small dogs  
 D1 small dogs > 25 kg  
 D2 large dogs  
 H1 for HDO Equine only  
 H2 for HDO Equine only



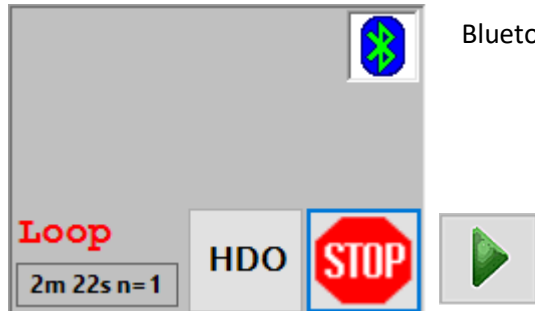
Check Parameter

**Check if cuff is confirm before by HDO**  
 Start Measurement or alternative Press START on HDO

*Double check : !*  
*Make sure that cuff is on HDO selected and confirmed with ENTER*

**Always remove empty Batteries !**

# Start up with Parameter window



Bluetooth is active



Aktiv Sleep not connected



Start measurement

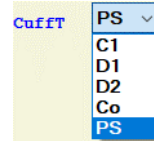
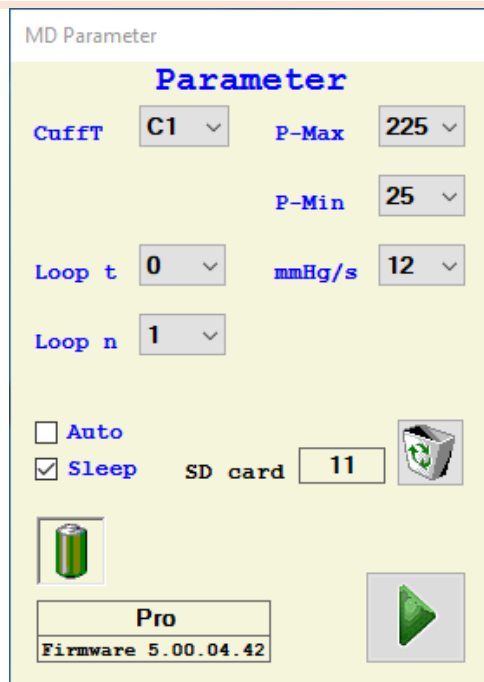


Stop an activ reading

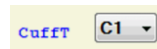


Calling the Parameter window

Loop starts in 2minutes and 22sec. until the next measurement interval

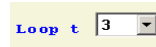


Select cuff type **C1** for Cat - **D1** for small dog – **D2** large dog front limb or **CO** for Constant or **PS** for Amplitude pressure measurement



For a standard measurement  
Selection to inflate 225 mmHg  
Selection to drain 25mmHg

175 / 300  
15 / 45



Set Time ( t ) 3 minutes next measurement in 3 minutes



Set Loop ( n ) for interval 1 or two measurements after 3 min.

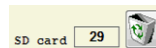
To cancel the Loop, after stop, please reset Loop

t / 0

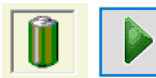


Tick Auto for first measurement and start with Co measurement  
HDO falls after 3.5 minutes in sleepmode

automatic  
redognize  
of  
Frequency  
Puls and  
Pulssize.



Delete the measurements on the SD card



Status battery  
Start measurement

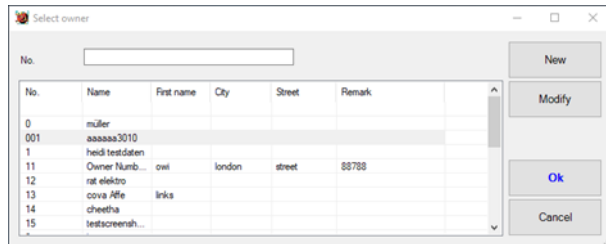
**NEW: in HDO 5.0 Tick on Auto and start the first measurement as a Constant measurement. HDO recognize Puls frequency and size of Amplitudes automatically !**

**After finishing the first CO measurement HDO switch to a standard Cuffselection for the first measurement. No Gain no Deflationrate had to be set by hand.**

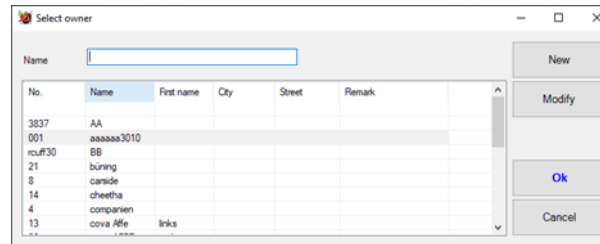


## Start up with selection or creation of an owner record

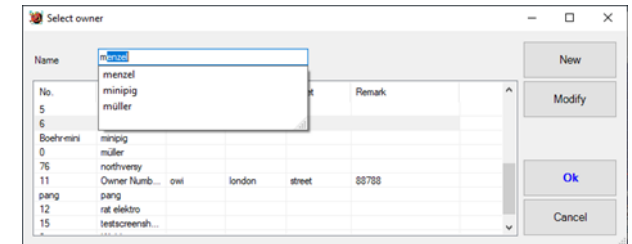
Select, create or change an Owner record in the *MDS Management* window. You can select an Owner, when it has been stored before in the MDS Software. The owner can be assigned to several animals



sorted by number



sorted by name *highlighted blue*



search with matchcode

Button Select

Opens the list of owner

Sorted by list

click on No. or name or each other field

Search for

input field with first letter

Create new

Click on "New" to open the customer data entry form

Modify

Click on "modify" to open the customer data entry form where you can change any field

TIP

Use the customer ID numbers from your hospital management program.

Select and accept

Select the customer from the customer list: the selection is marked blue. Press „Select“ to accept. In combination with "select animal or create new" allows you to select the animals associated with the owner or you can add new animals related to the owner.

Abort

Select created

Means that no changes are made. The previously selected customer remains selected in the software

Info

Entries are stored. The window closes and you return to the customer list. This is where you select the required owner

At the field INFO you can save Informations about the owner

The entries are not stored. No new owner record was created.

Abort

## Start up with selection or creation of an animal record

Select, create, change or delete an animal record in the MDS Management window.

No.	Name	Bom	Species	Breed	Sex	Remark
1	catname elsa	08.08.2017	Default	Default	unknown	Default
2	ery	06.08.2014	Default	Default	female	information about the cc

sorted by number

No.	Name	Bom	Species	Breed	Sex	Remark
1	catname elsa	08.08.2017	Default	Default	unknown	Default
2	ery	06.08.2014	Default	Default	female	information about the cc
3	testcat	16.10.2020	Default	Default	unknown	
5	yyy-testcat	16.10.2020	Default	Default	unknown	
4	zzz-test	16.10.2020	Default	Default	unknown	

sorted by name *highlighted blue*

No.	Name	Bom	Species	Breed	Sex	Remark
1	catname elsa	08.08.2017	Default	Default	unknown	Default
2	ery	06.08.2014	Default	Default	female	information about the cc
3	testcat	16.10.2020	Default	Default	unknown	
5	yyy-testcat	16.10.2020	Default	Default	unknown	
4	zzz-test	16.10.2020	Default	Default	unknown	

search with matchcode

Button Select

Opens the list of animal

Sorted by list

click on No. or name or each other field

Search for

input field with first letter

Create new

Click on "New" to open the animal data entry form

Modify

Click on "modify" to open the animal data entry form where you can change any field.

Owner selection: You assign an owner to an patient (animal)

TIP

Use the animal ID numbers from your hospital management program.

Species / breed

Opens an entry form for species (*e.g. dog*) and breed data (*e.g. collie*). You can enter several breeds under one species.

Select the animal from the animal list: the selection is marked blue. Press „Select“ to accept.

Select and accept

Means that no changes are made. The previously selected customer remains selected in the software

Abort

Entries are stored. The window closes and you return to the customer list. This is where you select the required owner

Select created

At the field INFO you can save Informations about the owner

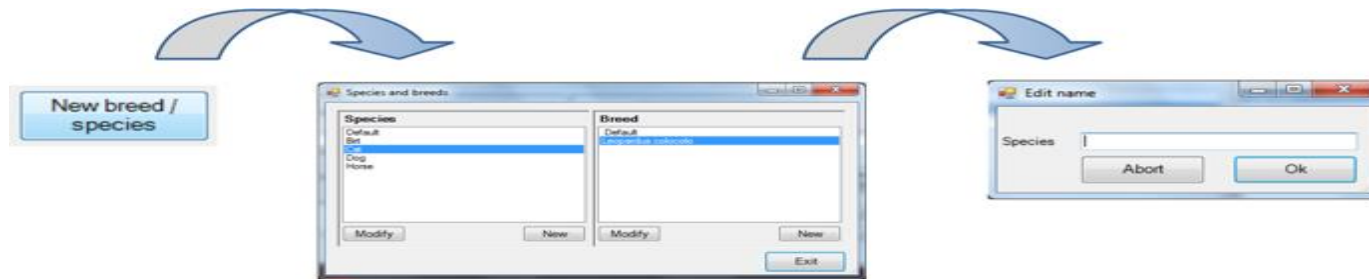
Info

The entries are not stored. No new owner record was created.

Abort

## Administration of animal species and breed

The creation of a species and its related breed. This is only required if the species or the breed does not exist yet as a record



### Species

Enter or create new species

Create new

Modify species

Enter new species

Enter or create new

### for breeds

Modify breeds

Enter new breeds

Exit

### Breeds

Opens the list of new breeds/ species

The *species / breed* administration panel opens. You can enter a new species or change the name according to the button selected.

Click on "New" to open the Species entry form.

Click on and select the correct species *selection is marked blue*, press "modify" and assign the name and press "OK"

Click on „exit“. The species is stored and ready to be selected.

Select species *selection is marked blue* You see all breeds created and assigned to the species.

Click on "new" in the breed window to assign a new breed.

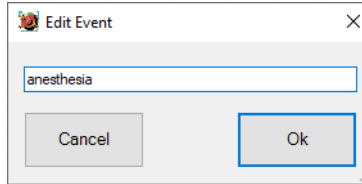
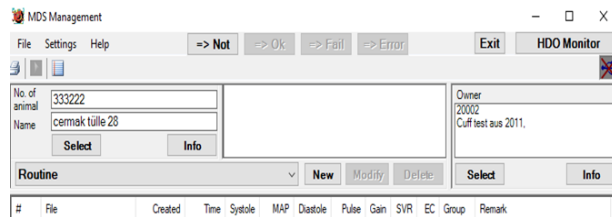
Click on and select the correct breeds *selection is marked blue*, press "modify" and assign the name and press "OK"

The newly created breed is now found in the breed list and can be selected in the drop-down field and be assigned to the animal.

Click on „exit“ the window closes

## Creating a measurement series EVENT

The *Event* (measurement series) allows for a specific evaluation and documentation of situations. e.g. It may be of interest to do routine measurements and or monitoring of anesthesia and to be able to assess case histories on the basis of readings.



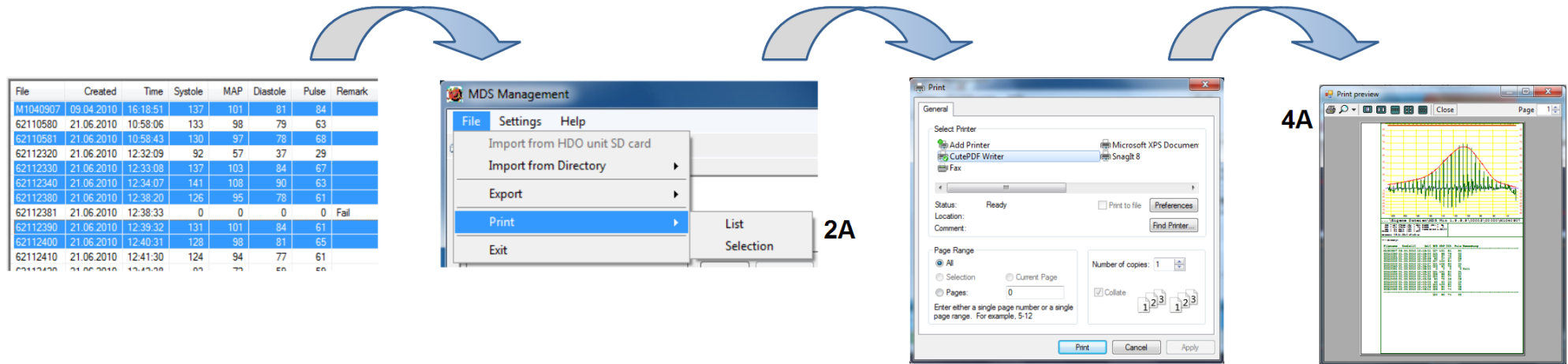
Creat new Event

Select event

- Select  
You can create or modify Events or continue adding measurement data to an existing serie  
Click on Pulldown e.g. "Routine" and select the *Event*.
- Create new  
Click on „new“ A new window opens where you can assign a new event name. Enter with "OK".
- Modify  
Click on „modify“ A new window opens where you can assign a new name to an existing event. Enter with "OK".  
The existing readings will remain with the new event name.
- Delete  
When deleting the Event, all measurements in that series are deleted.  
Click on "YES" to confirm deletion. Use "NO" to cancel the deletion.
- Attention  
In case, your data will be permanently lost !

## Print measurement graphics or list

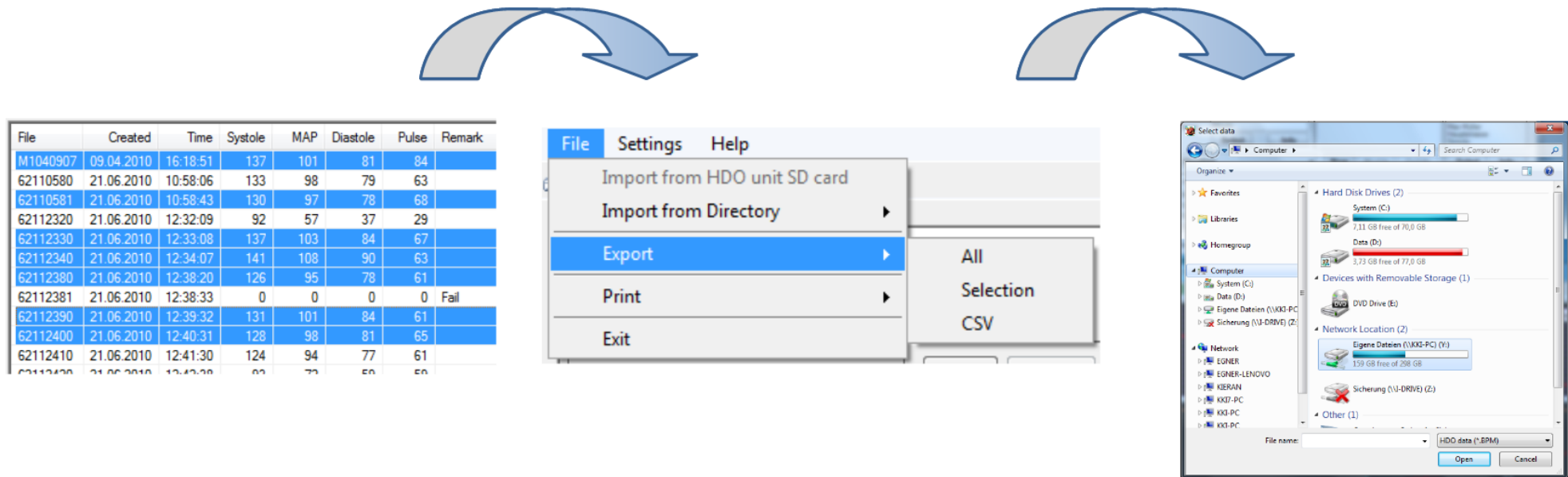
There are two modes of printing. One is simple text printing of measurement data *listing*, the other is a print of measurement *graphic/s*. Data from an *Event* or series of individual measurements can be selected *selection is marked blue* and printed.



Selection of the measurement/s  
 Undo the selection  
 File / Print  
 Graph / Print  
 printer selection  
 printout preview  
 Print


Selection of the measurements to be printed from the list of measurements. *The selection is marked blue* Use the mouse button to mark the measurements you want to print. Keep the **Strg** or the **Shift** depressed to mark the data and click on the required measurements. The measurement marked last is rendered graphically. Click once more on the measurement *the selection will be removed*. After marking the measurements click on file >> *print*. Then you can release the function key. Select the kind of printing, either list *listing* or selection *graphics*. The printer selection window opens where you can choose your printer for printing the measurements. The printout preview of the page is generated. Click on the printer icon of the print preview to start printing. Use a virtual PDF Printer system for printing PDFs (*for saving files to management software*). We recommend „PrimoPDF“ or Cut Writer“ Software (Shareware).

Data export is provided for medical support / telemedicine. You can select an *Event* and export *all selected measurements*.



- Selection of the measurement/s
- Undo the selection
- File / Export
- Select Directory
- Confirm selected
- Directory

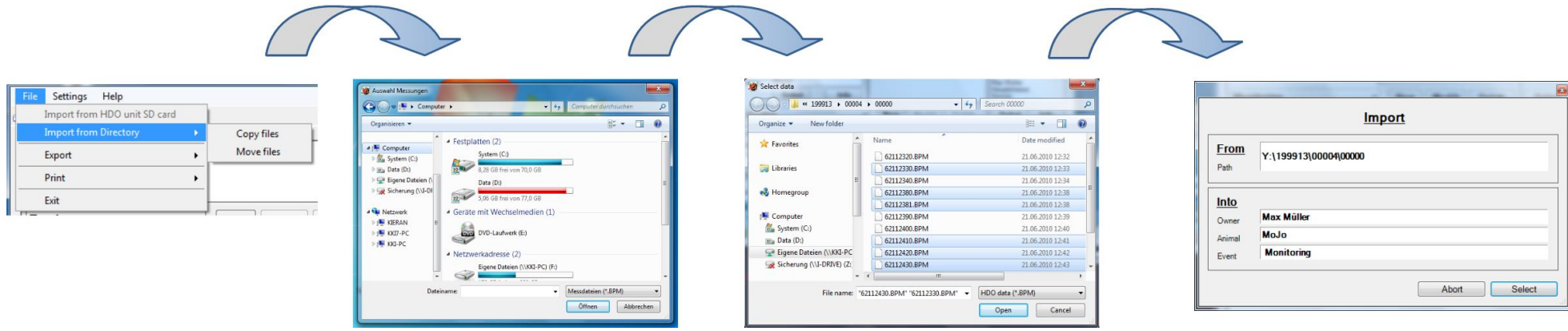
Selection of the measurements to be exported from the *list of measurements*. *the selection is marked blue* Use the *mouse button* to mark the measurements you want to export. Keep the **Strg** or the **Shift** depressed to mark the data and *click* on the required measurements.

Click once more on the measurement  *the selection will be removed*

After marking the measurements click on file >> export. Then you can release the function key.

The target window opens for the export destination.

Select the required folder and confirm with *OK*. *The selection is marked blue*




Enter or select  
owner > animal > event  
Connect

if none exists (owner and animal must exist or must be created before!).  
HDO to PC with the USB-cable or activate the BT with start the HDO unit.

Enter or create new

The related *owner* >> *animal* >> *Event*, or create a new one.

Transfer window  
View and select  
Select  
Import

The import symbol  appears and "import from SD card" is an active option in the pull-down file menu. Select either option to begin import.  
Import measurements  
„Total“ shows how many of measurements are stored in the HDO MD Device.  
Click on the „Import“ button to import the selected measurements into the selected *Owner* >> *animal* >> *Event*. On completion, the window closes automatically. The import does not delete the measurements from the HDO device. Refer to the HDO device manual for how to delete from the HDO device.  
A maximum of **60** measurements are stored (without a timestamp) in the HDO MD device !

Tip



## Computer network operation

The software allows you central data administration and to use several computers in different locations for measurement operations. You must have to set up a network for this purpose.



Network computer having access to released network resource (read-write rights)

Prerequisite:

Up-to-date software condition Framework 2.0

Installation of HDO MD drivers at all

Workstations

Access to released network resource

Access to MDSsoftware-exe on the file server

Server, NAS

network computer with released network resource

Prerequisite:

Released main directory (Root) of the MDSsoftware.exe

Network computer having access to released network resource (read-write rights)

Prerequisite:

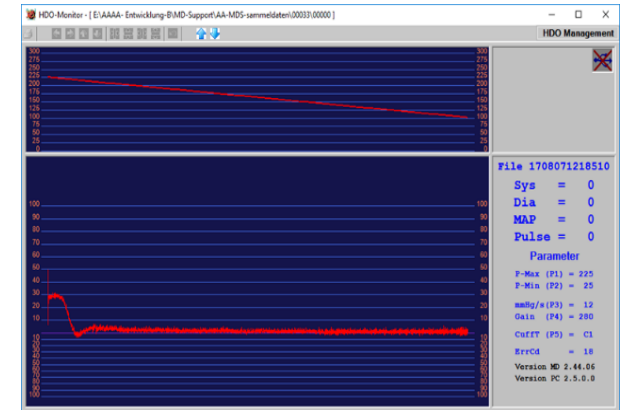
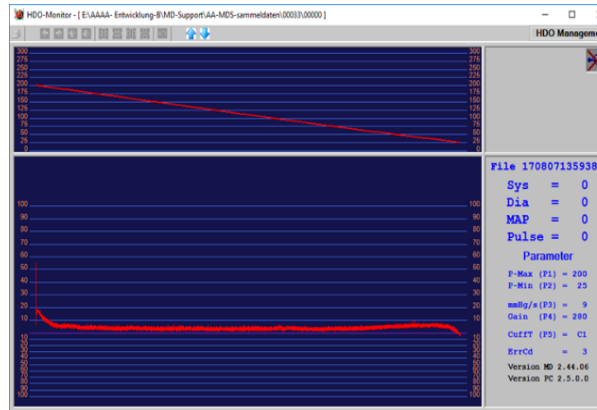
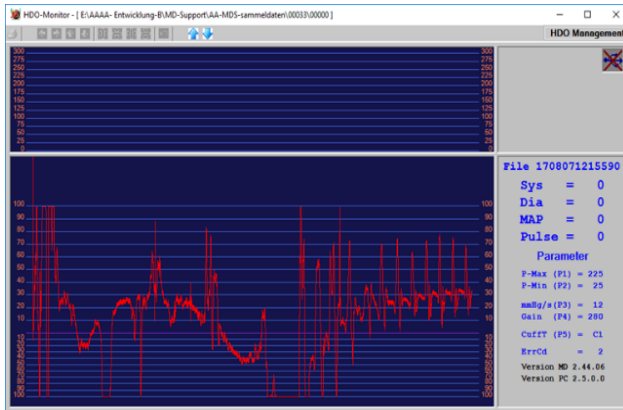
Up-to-date software condition Framework 2.0

Installation of HDO MD drivers at all

Workstations

Access to released network resource

Access to MDSsoftware-exe on the file server



Error 2 Too many artefacts

- calm the animal
- observe surroundings
- position cuff at tail

- E1 Abort by the user
- E2 Too many artefacts
- E3 Amplitude of the signal is too weak

Error 3 Amplitude too small > check cuff:

- too tight
- too slack
- raise GAIN

- E4 Deflation rate is too slow
- E5 No cuff attached
- E6 Cuff is too loose or wrong cuff or cuff is leaking

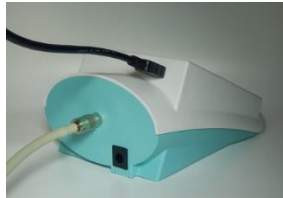
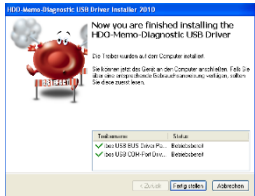
Error 10-19

- Check USB Cabel
- Check Bluetoothadapter
- Check Batterypower

- E7 Error in analysis
- E8 Abort by the device
- E9 SD card error
- E10 File read error

With a PC connection, you can control and regulate the HDO from the PC such as start/stop function or changes parameters. For the communication options we need a driver installation which is described below. For types of connections, please do not use the same USB port.

The VET HDO/MDSWIN installation card appropriate the drivers for USB and BT1000: They are pre-installed at first! Administration rights are required!



### Selection A: USB

If you are using USB: please disconnect the **BT1000** adapter and restart the software.

### Selection B: PC-Bluetooth

If you are using BT please disconnect the **USB cable** and restart the software.

### Selection C: BT1000-adapter Silicon Labs

If you are using BT1000 please disconnect the **USB cable** and restart the software.

It must necessarily be connected to the USB cable to complete the hardware installation (device discovery)! MDSWIN before the start!

The installation routine asks you at a time, when the active hardware to connect to the USB.

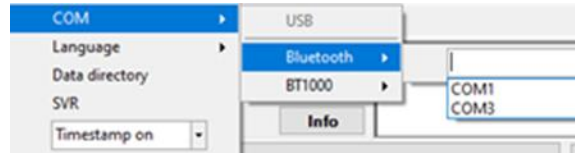
HDO MD - Device driver expected

For foreign manufacturers is the driver to install vendor-specific and can be done before / after the installation MDSWIN Software.

There are pre-install the drivers. Starting MDSWIN and perform settings on the BT-allocation as follows.

When selecting your connection with a built-in PC-BT and or standard external BT adapter should be prerequisite knowledge of the system. It is not possible for us to document all known and unknown BT adapter and system settings in our manual. Ask them to your system administrator.

first installation: its needed that the HDO is connected with the USB cabel at first



### Selection B: PC-Bluetooth

New installation:

Install Drivers

Connect HDo the first time with USB cable

General Procedure for BT external systems

Prerequisite: you have already installed a software for Bluetooth connections. The HDO has been successfully connected to the USB cable and once detected the hardware in the system.

Alternatively, use commercially available external BT adapter and software.

1. Starting the BT software
  - 1.1 The HDO BT device must be switched on
2. Search Bluetooth connections
3. HDO xxxx (serial number) are found, add devices
4. Right mouse click: display the COM port

After a successful BT involvement in your system

*GOTO Settings*

COM Einstellungen/Settings > COM > Bluetooth > COM

Accept: the system-detected COM xx

# HDO – BT1000-Bluetooth- connections

(MDSWIN installation USBflash included in delivery) during the initial installation will be actively connected to the USB on the computer to recognize the new hardware must be after the pre-installation of the hardware drivers. You will be prompted in the installation routine.

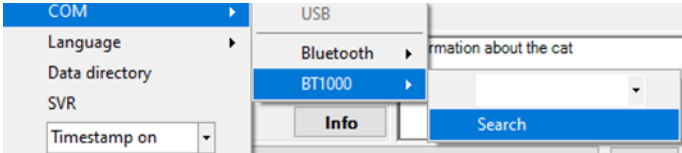
The VET HDO/MDSWIN installation card appropriate the drivers for USB and BT1000 : They are pre-installed at first ! Administration rights are required!



HDO must be on



BT1000 adapter for PC



### Selection C: BT1000-adapter Silicon Labs

Loosing BT connection when

1. Low Battery
2. Problem with USBport PC side
3. Connect and disconnect when Software is running.

Approach with BT 1000

**Prerequisite:** successful installation routine is to have completed.

Administration rights are required.

The HDO has been successfully connected to the USB cable and once detected the hardware in the PC system!

Connect the BT 1000 into a USB port.

**GOTO Settings >COM BT1000 >Search**

The HDO must be turned on!

After a successful search

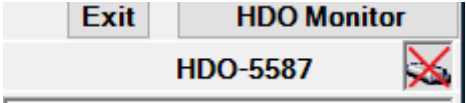
(HDO display with serial number) and show *ready*.

Confirm the detection with **Connect**.

Click on button **Close** to close the search window.

It will give them the e.g. HDO-2363 for selection mark it blue 2363

Click in a **blank area** to the selection window to close.



Reconnect after power off

Click on button HDO-5587