



VET HDO monitor system[®]
 MD PRO USB 2.0
 MD / BT PRO Bluetooth
 MD Equine

An important element of:
 Routine examinations
 Search for diagnosis
 Control of disease / treatment
 Monitoring SVR
 Stroke Vascular Resistance
 Monitoring during anesthesia

VET HDO[®] monitor system

Non Invasive Blood Pressure measurement in dogs and cats



Technical Datas

SAP - DAP - MAP 5 - 300 mmHg
 Heart Rate 550 bpm

Valve accuracy 5 - 325 mmHg

Gain - Signal amplification

Loop function

PC remote control

Supply Items

VET HDO MD PRO

VET HDO MD/BT PRO Bluetooth

for small animals

VET HDO MD/BT Equine

✓ BOX

✓ MDSWIN / HDO Manual

✓ USB 2.0 Transfer cable

optional: BT1000 external Bluetooth-Adapter

✓ Power supply

INPUT 100V - 240V, 0,4A 47- 63Hz,

Output 6V === 1,5 A max.

Battery powered possible

4 x AA LR6 1,5 V

4 X AA 1,5 V min. 2400 mA

Rechargeable Batteries

Supply Items

Modell:

VET HDO MD Pro

VET HDO MD/BT PRO

Serial Number: -----

BT1000 Serial Number -----

Cutfs: Tail measurement is required

C1 - Cat and small dogs ✓

D1 - Small dogs ✓

D2 - Large dogs ✓

H1 - Equine

MDSWIN Software for analysis ✓

XP Framework 2.0

Vista Win 7 Win 8

32 / 64 Bit

Warranty

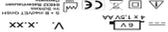
Each System is warranted against manufacturers' defects in workmanship and materials, under requirement use and with proper maintenance for a period of two (2) years after the date of original purchase.

Date of purchasing HDO

----- . 2 . -----

Distributed by:

Technical data sheet

<p>Function and operation of each part: Brief explanations of each function</p>	<p>Raw materials : Generic name and their standards of each part mentioned in #1</p>	<p>Electrical Standard / Classification</p>	<p>Manufacturer</p>	<p>Normal rated voltage of mains power supply (optional) 110-240V AC 1,5 A 50/60 Hz power supply for VET HDO Monitor 6V DC (Internal batteries: 4x 1,5V AA // or external power supply 6V DC)</p>	<p>Normal rated voltage of the device HDO MD PRO VET HDO Monitor</p>	<p>Electrical power consumption VET HDO Monitor</p>	<p>Type of Protection</p>	<p>Degree of protection against electrical shock Degrees of protection provided by enclosures (IP Code). Protection of patient against electrical shockClassification of the applied part (HUMAN)</p>	<p>Isulation class Ambient conditions Storage/transport</p>	<p>System/Block Diagram Block diagram</p>	<p>System diagram (isolations diagram) System diagram (isolations diagram)</p>	<p>Control Test and test standard S + B medVET have entrusted the European Notified Body EUROCAT with identification</p>	<p>In-house test method Warning for use</p>	<p>Production flow chart (If there are several manufacturing plants, indicate which plant covers which process)</p>	<p>General Shut down with Powersupply / Shut down with Batterypowered</p>	<p>In the interest of environmental protection, please dispose of the device and batteries in accordance with national or local regulations or environmental protection and recycling</p>		
<p>See user manual Hardware HDO- for Software MDSwin- US / UK / DE / IT / ESP / NL</p>	<p>Rawmaterials_HDO-US / UK / DE / IT / ESP / NL</p>	<p>S + B medVET GmbH , Neuer Weg 4 64832 Babenhausen, Germany</p>	<p>110-240V AC 1,5 A 50/60 Hz power supply for VET HDO Monitor 6V DC (Internal batteries: 4x 1,5V AA // or external power supply 6V DC)</p>	<p>5 W</p>	<p>Class II</p>	<p>IP 30 Applied part: type B without def-proof Power supply already approved, class 3inter- nal pump not safety relevant because powered with SELV (safety extra-low voltage)</p>	<p>Isulation class C EN 60601-1:2008 +10 bis +40°C 30-75% atm humidity 700-1060 hPa</p>	<p>see: Blockdiagram MD_UK,Schematic MD_US</p>	<p>see Isolationdiagram_MD, HDO is isolated</p>	<p>CE 0535 o test the electrical safety and the accuracy of data according the relevant stan- dards IEC/EN 60601-1, IEC/EN 1060-1+ 1060-3, Biocompatibility is shown by ISO 10993-1, A risk management has been performed according DIN EN ISO 14971 and their standard related to performance, function and working of device</p>	<p>see : user manual hardware / software</p>	<p>see : Flowchart of production</p>	<p>Shut down by disconnect the Powersupply after 4 minuten in Standby, Label according to</p>	<p>VET HDO Monitor MEMODIAGNOSTIC SN XXXX V . X.XXX</p>				

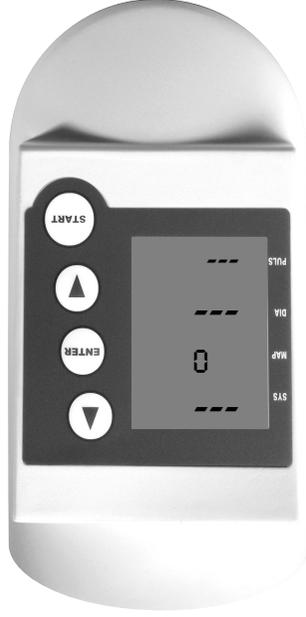
Basic settings

Changes of the basic settings possible via **FP** Function menu parameter

Parameter	Value	Unit
P1	225	SYS
P2	9	MAP
P3	25	DA
P4	200	PULS

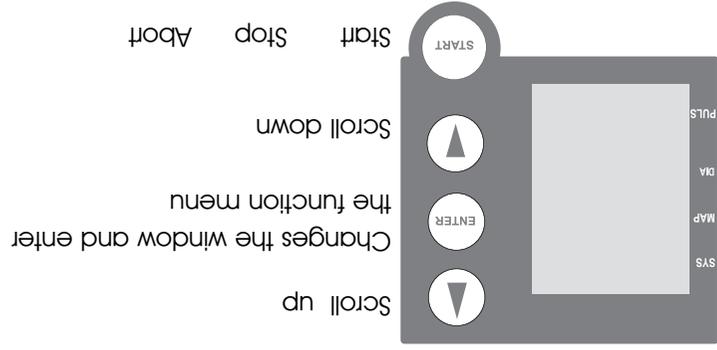
P1 Inflates up to 225 mmHg 150 > = 300
 P2 Deflation rate 9 mmHg/sec. 3 > = 18
 P3 Deflates up to 25 mmHg/end of measurement 5 > = 50
 P4 Gain 70 / 100 / 140 / 200 / 280 / 400 / 560 / 640
 P5 Cuff selection C1 D1 D2 H1 (H1 is only shown by HDO Equine)

The unit switches automatically in a sleep mode if not in use for more than 3-4 minutes. To "wake up" the system simply press START.



START
Wake up

keyboard



system wake up, system is booting



confirms the selected cuff



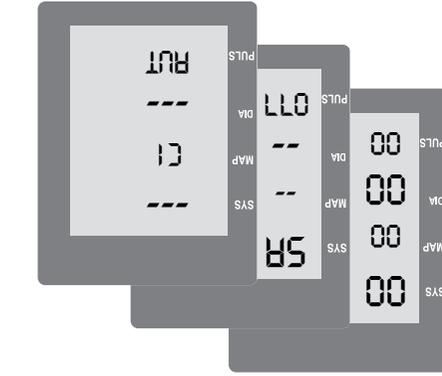
or double click

starts the function menu/submenu Parameters



stop a active measurement

finishes/leaves the function menu



wake up the system



-There is no data in the

0

memory;

1-50 -There is still data in the memory

Up and down between



functions [1 01 02

confirm cuff



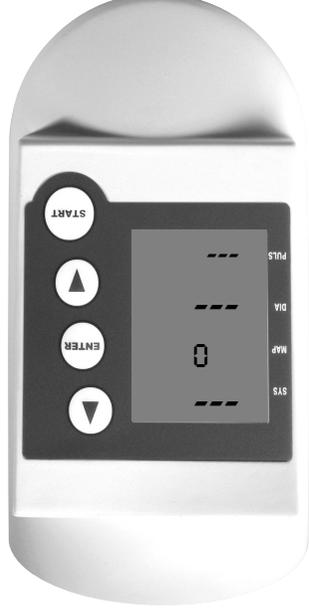
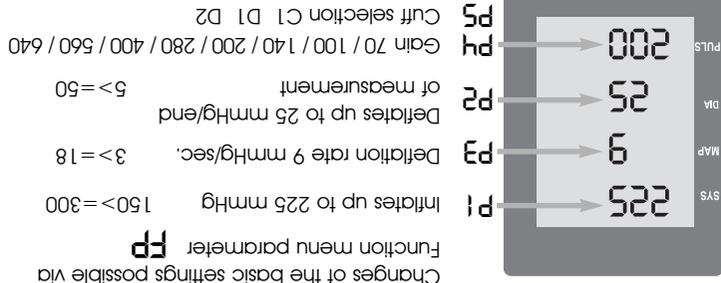
The system is ready to measure.

starts the measurement

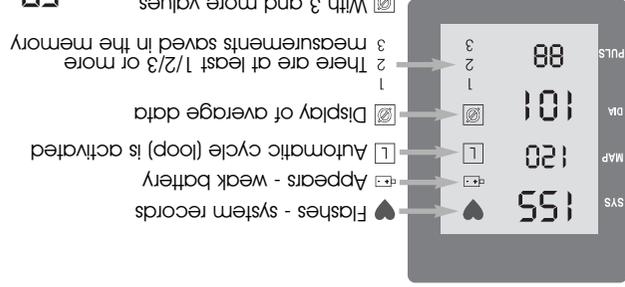


Basic settings

Changes of the basic settings possible via function menu parameter **FP**



Display



FR Function History = Displays data in the memory

FR Function Average = Displays the averages

FC Function Clear = deletes all data

FE Function Erase = Deletes single data of your choice

FL Function Loop = set up automatic intervals (Loop)

FD Function Download = Transfers data/graphs to PC

FP Function Parameter = set up parameters

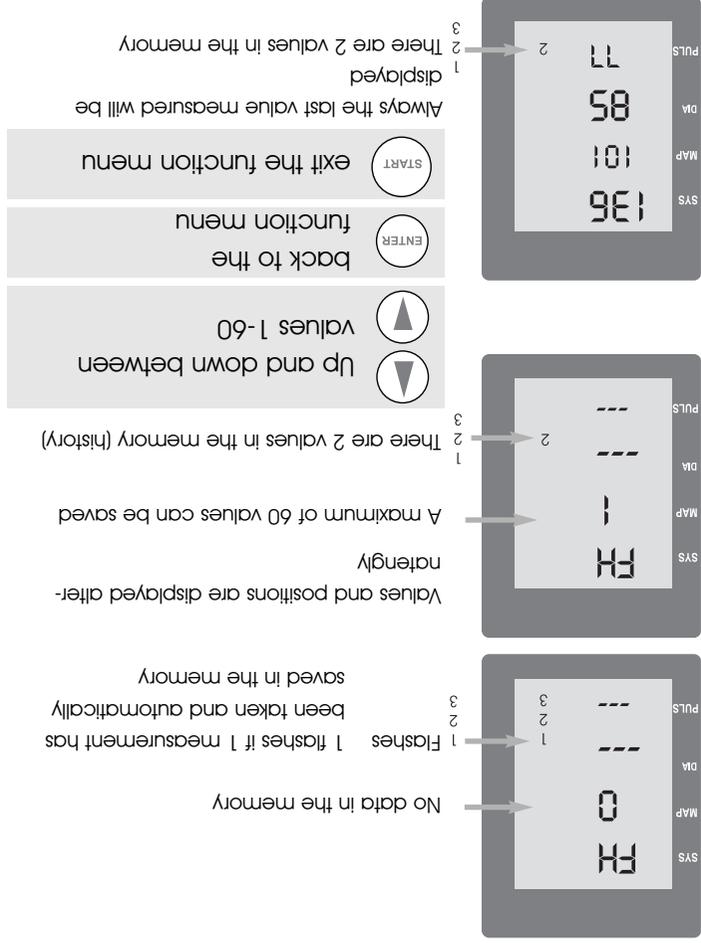
Up and down
between functions



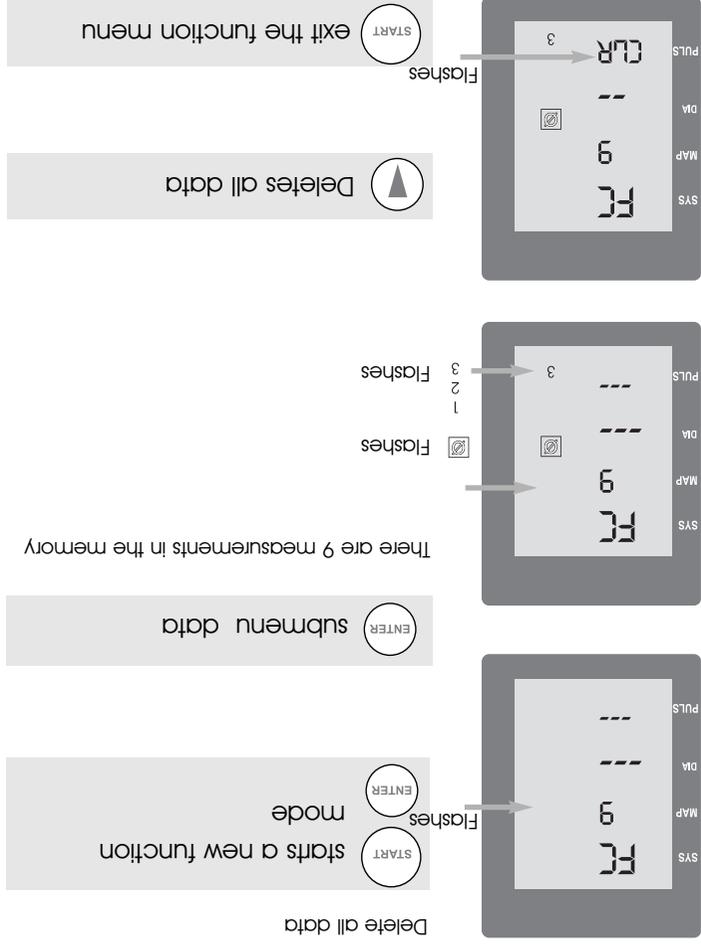
Function Menu Average



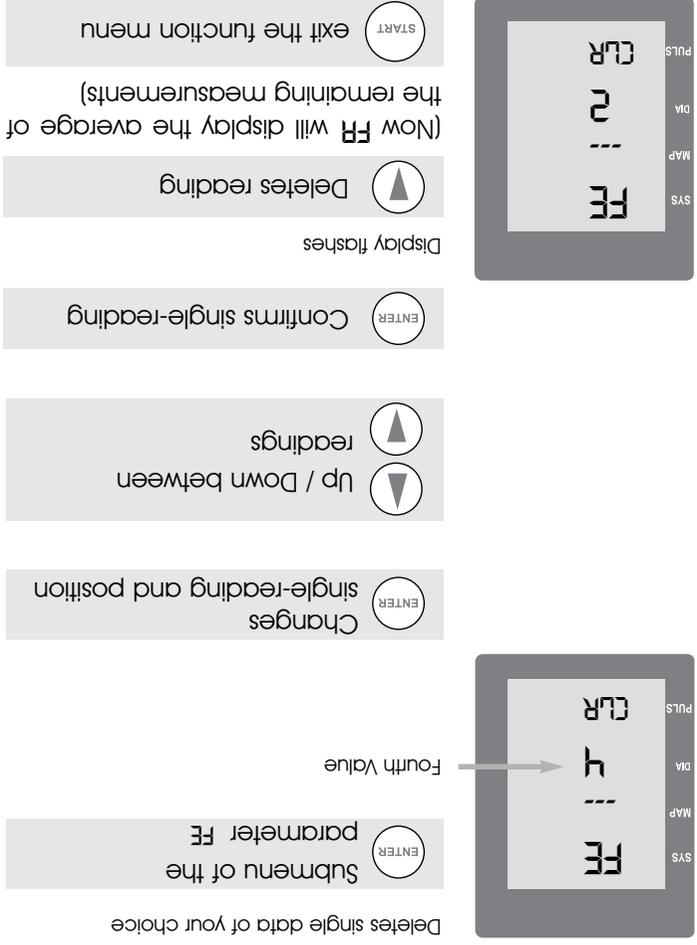
Function Menu History



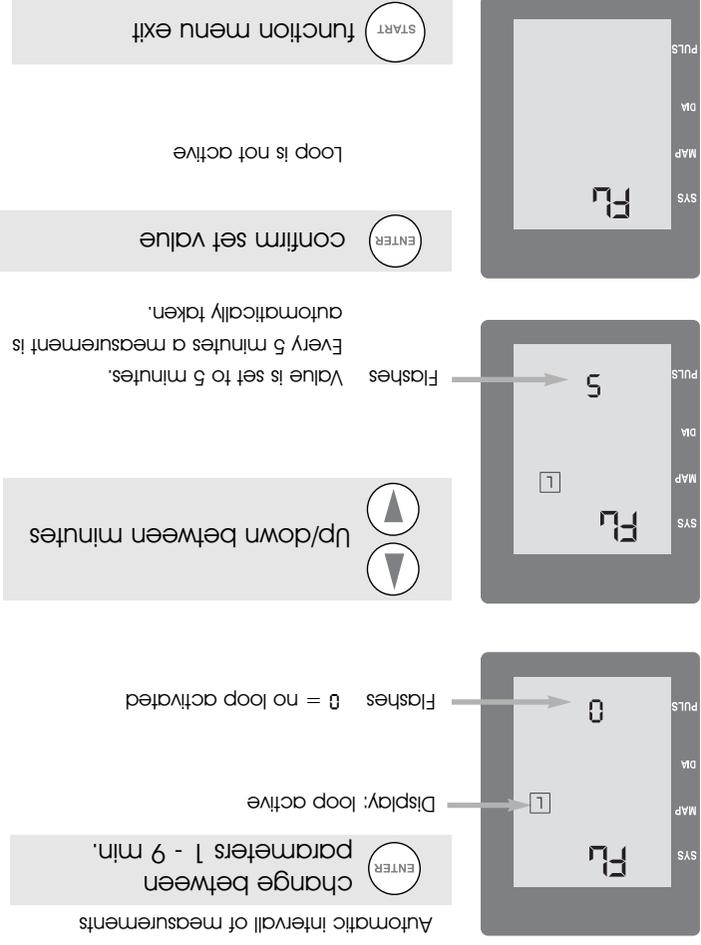
Function Menu Clear



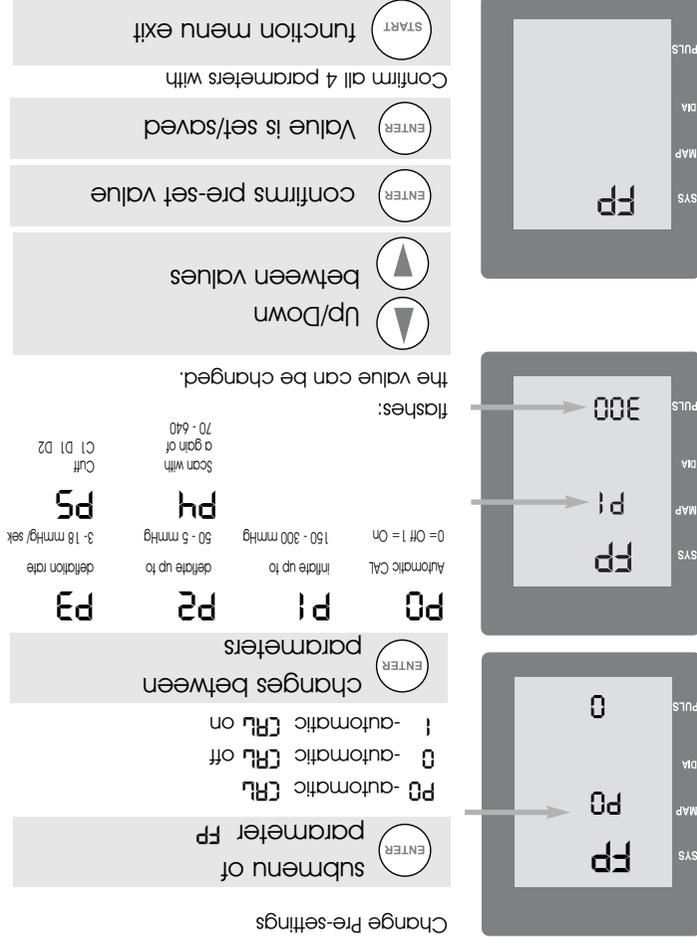
Function Erase



Function Menu Loop



Function Menu Parameter FP



Function RUT

The first measurement adapted the parameters FP 1-4 to the physiology of the measured animal (Calculatory Measurement)



0 - AUT On
1 - AUT Off

When switching on, the MID is generally preset to average parameters (see basic settings)

What does RUT mean?

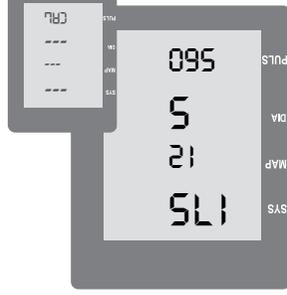
RUT is an automatic calculatory measurement, which will not be saved. RUT measurement adjusts the MID-Set-Up after the first measurement. FP 1-4 automatically to each patient individually and this optimizes the following measurement.

The chosen Set-Up will be displayed alternately with the first reading and RUT will appear when the reading is displayed.

No RUT Set-Up will be displayed: the parameters have already been perfectly adjusted to the patient and no changes have been necessary.

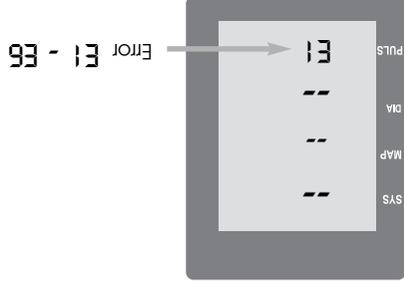
The first RUT reading will only be displayed but not saved.

RUT : This is a calculatory first measurement



E-error display

Measurement has not been saved!



Error E1 - E6

- E 1 abort by the user
- E 2 too many artefacts
- E 3 Amplitude of the signal is too weak
- E 4 Gain goes up for one step in CAL
- E 4 measurement automatic
- E 4 Deflation rate is too slow
- E 5 ----
- E 6 Cuff is too loose

Example: After 5 sec. do not coming up to 20 mmHg
pressure is longer than 8 sec.
selection of cuff was wrong

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