



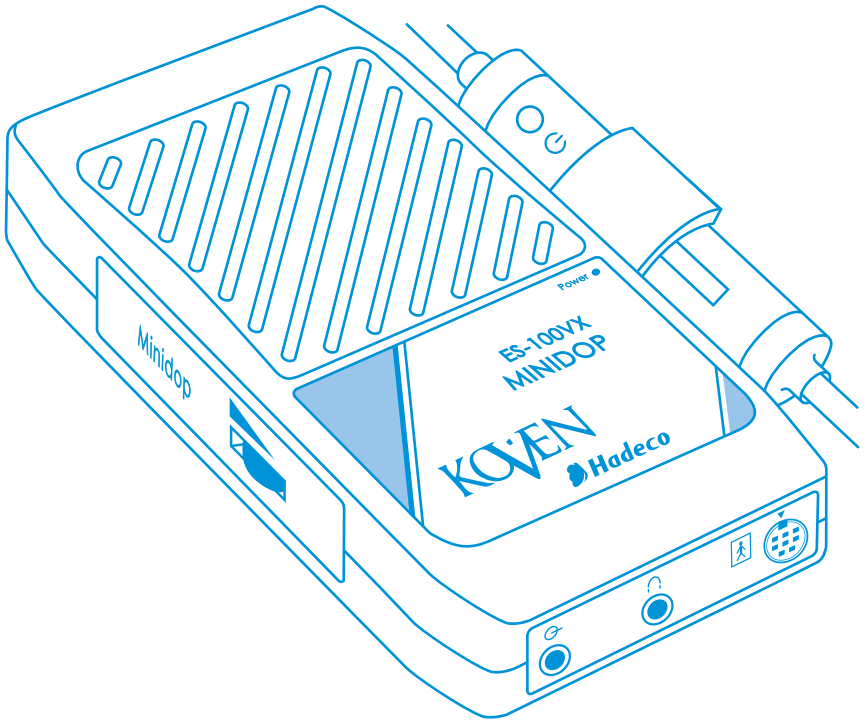
JORVET HAND-HELD MINI DOPPLER

J0563 | USER MANUAL



PRODUCT FEATURES

- ▶ Small, Hand-held Size
- ▶ Great Sensitivity
- ▶ Convenient Probe Activation Button (Turns Doppler On & Off)
- ▶ Automatic Power "Off"
- ▶ Two Cuff Sizes: 2.5cm & 5cm



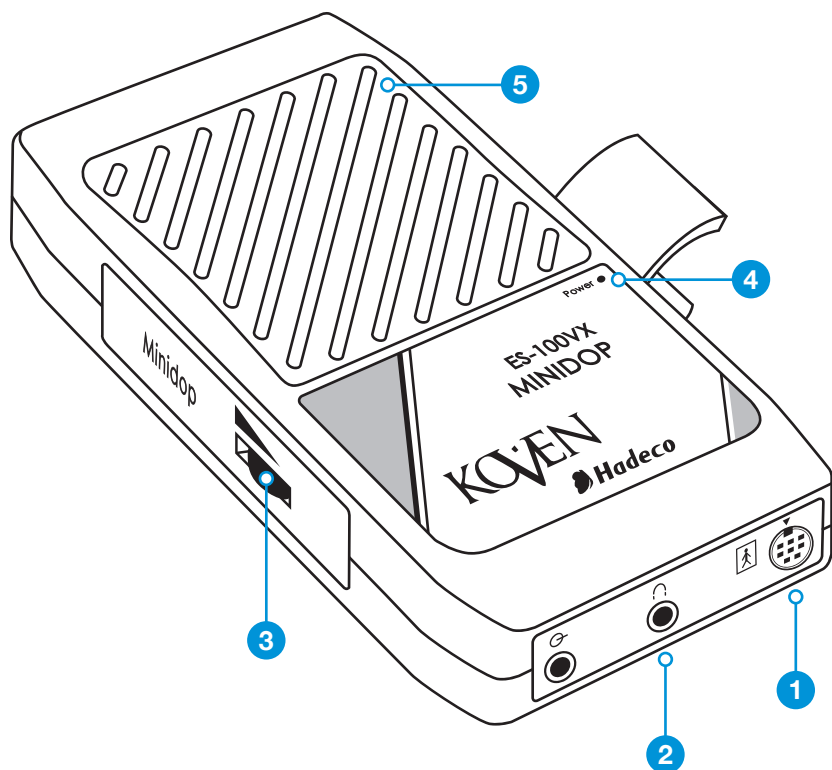
Thank you for choosing the JorVet Hand-held Doppler.

We want you to get the most out of the MiniDop and to have your experience in using it proceed with ease. Detailed instructions are provided along with the product's operating instructions on how to correctly use it and how to take full advantage of all controls and functions.

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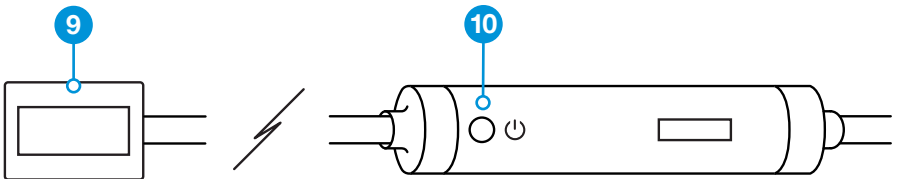
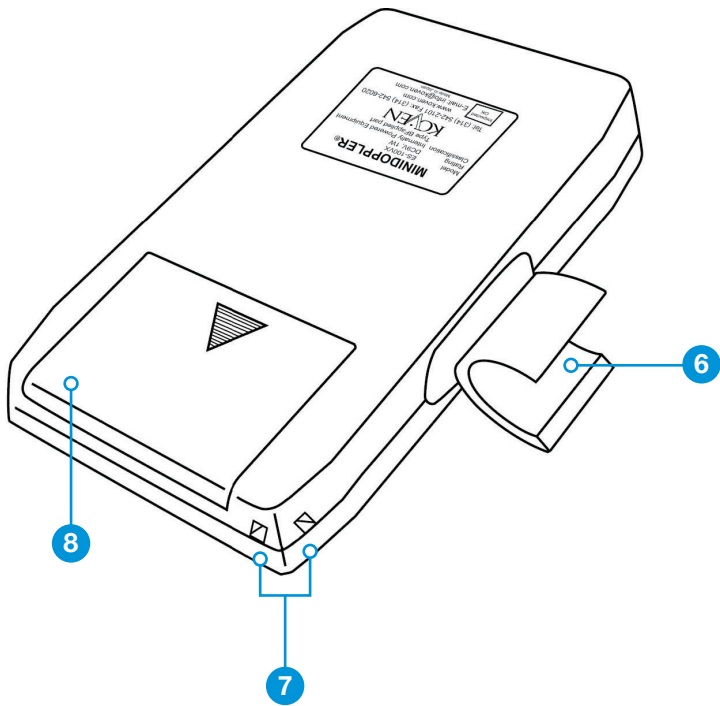
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MINIDOP CONTROLS



FRONT

- 1 PROBE CONNECTION**
To connect the probe to the Doppler
- 2 HEADSET**
To connect the headset
- 3 VOLUME CONTROL**
To adjust volume control
- 4 POWER INDICATOR**
Indicates power On/Off
- 5 SPEAKER**
Outputs Doppler sounds



BACK

- 6 PROBE HOLDER**
For probe handle placement when not in use
- 7 STRAP HOLES**
To connect the carry strap
- 8 BATTERY COVER**
Battery compartment for battery replacement
- 9 FLAT PROBE**
8 MHz – Vascular
- 10 PROBE BUTTON**
Activates the ES-100VX (On probe handle)

OPERATING INSTRUCTIONS

- ▶ Open the battery cover. Set a 9V alkaline square type battery in the unit ensuring that the positive and negative electrodes correspond to the (+/-) marks on the battery box. **See Figure A**

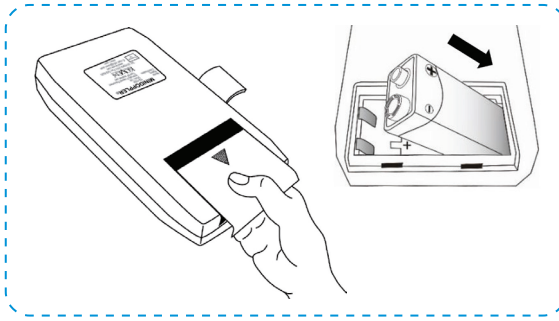


Figure A

- ▶ Connect the probe with the small dot up on the probe connector (12 o'clock). **See Figure B**
- ▶ Depress the probe button to turn the unit ON. **See Figure C**

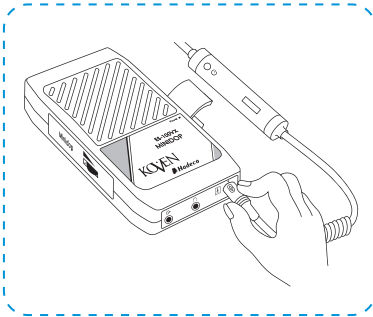


Figure B

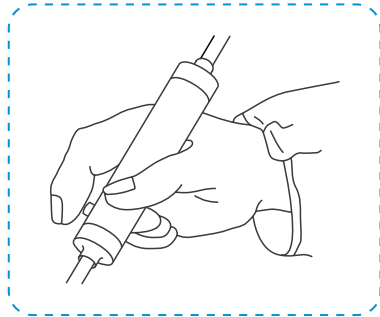


Figure C

- ▶ Make sure the power indicator on the unit is ON. Turn the volume control to minimum, then slowly turn the volume up. **See Figure D**

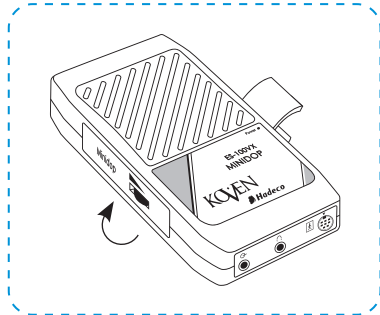


Figure D

- ▶ Put the ultrasonic gel on the probe top or on the patient's skin.
- ▶ Put the probe on the measurement area and move it slowly to locate the point where maximum Doppler sounds are heard. The flat probe should be 90 degrees placed flat on the animal's skin over vessel.
- ▶ Connect the headset when necessary. Headset can be used to listen to Doppler sounds. It will cut off the MiniDop speaker to the room. **See Figure E**
- ▶ Depress the probe button again to turn the unit OFF. If the unit is left ON, the power automatically shuts OFF in about 5 minutes. **See Figure F**

Note: The auto-off time depends on room temperature.

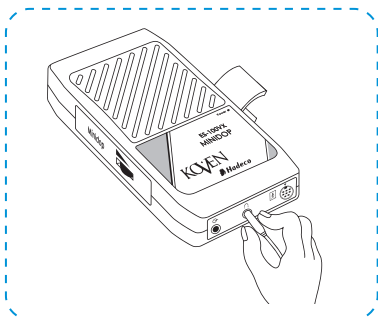


Figure E

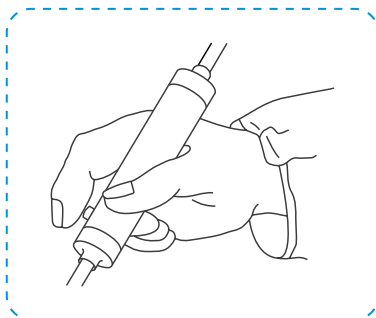


Figure F

- ▶ If the power indicator becomes dark, replace the battery with a new one. Use a 9V alkaline battery only. **See Figure G**

Note: A non-alkaline battery may cause a short

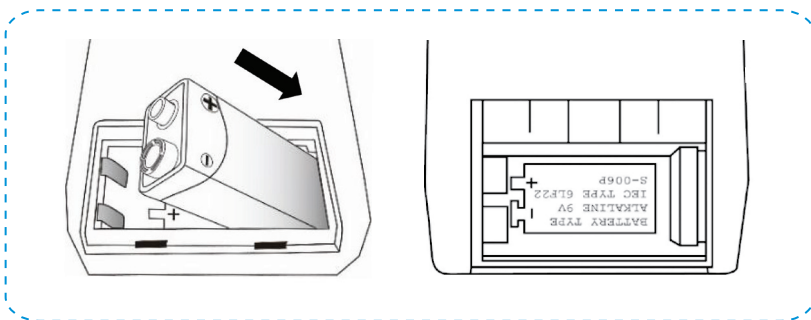


Figure G

DIRECTIONS FOR USE

Indirect Arterial Blood Pressure Monitoring with the Doppler Unit

- ▶ Clip the palmer aspect of the foot just proximal to the metacarpal pad. It is important to clip the fur as short as possible. Rub a small amount of ultrasound gel on the skin in the midline area where the palmer arterial arch is located. It can be palpated on large dogs and is actually just slightly medial to the midline.
- ▶ Place a large “dollop” of ultrasound gel on the non-numbered side of the Doppler flow probe. Place the probe in the location of the artery described in above and tap it in place tightly. (Turn on the Doppler unit with the flow probe plugged into the unit. The flow probe should not be frequently disconnected from the unit as this loosens the connectors and wires in the unit).
- ▶ Ensure that the unit is charged. A swishing sound should be heard each time blood flows through the artery. If blood flow is not heard, use the probe as a locator and move it slightly until the swishing sound is heard and then re-tape in place.
- ▶ Make a loop in the cord of the flow probe. Tape the cord to the foot/metacarpal loop right over the tape used to fixate the flow probe to the skin initially.
- ▶ The blood pressure cuff is now in place. The cuff’s width should approximate the width and be up to two times that of the forearm (mid-radial region). It is applied so that the mid-section on the rubber blade inside the cuff is directly over the posterior medial aspect (where the radial artery is located). This can be located by digitally occluding the area and hearing the swishing sounds of the Doppler stop indicating the artery is at that location because its flow is now temporarily blocked.
- ▶ When the cuff is applied the INDEX line on the end of the cuff should fall within the RANGE on the cuff, which is diagrammed on the inside. If outside this range, the reading will be either falsely low (with cuffs too big for the size of the limb it is surrounding) or falsely high (with the cuff too small). An estimate can be arrived and that will indicate how far off, in percentage, the cuff reading will be, taken by observing the amount of length of the indexed area.
- ▶ A small amount of adhesive tape is added around the cuff to prevent it from popping the Velcro and showing a falsely high reading.
- ▶ The cuff is inflated by squeezing the rubber bulb with the air outlet nozzle closed until the manometer reading is 20-30mm Hg above when the swishing sound stopped. The air-outlet nozzle is slowly opened and the cuff is allowed to slowly deflate. When the swishing sound is first heard again, this marks the flow of blood through the artery corresponding to SYSTOLIC PRESSURE on the sphygmomanometer. The sound should be a shorter choppy sound than was heard when the cuff was not inflated.
- ▶ The cuff deflation is continued slowly as the characteristics of the swishing sound are carefully monitored. A light “backward” sound or diastolic “swish” sound is again heard (or as it is again sounded prior to any cuff inflation) corresponding to DIASTOLIC PRESSURE when a very mild amount of “backflow” in the artery occurs. The diastolic pressure is not always evident.

- ▶ Diastolic pressure can be detected by closely watching the dial of the manometer. If it oscillates reproducibly at certain times on the deflation cycle, this corresponds to within 10mm Hg of the diastolic pressure (by sound). For accuracy, when the diastolic sound cannot be heard, pressure is simply recorded as “systolic all the way down”. This is especially frequent during periods of high stress when the vessels are under significant catecholamine influence and the area is acting “stiff”, or in very small or cold patients where the vessels are simple to small to allow sound change detection.

Note: Normal systolic values of dogs and cats range from 110-160mm Hg.

CLEANING INSTRUCTIONS

Probe

- ▶ Remove the Doppler gel from the probe head after each use.
- ▶ Clean or disinfect the probe using a cotton ball soaked in alcohol.
- ▶ Consult manufacturer before using any other chemical disinfectants.
- ▶ **DO NOT** submerge probe in any liquid.

Main Unit

- ▶ To clean main unit, use a little water and wipe with a soft dry cloth. **DO NOT** submerge in liquid.

WARRANTY

- ▶ This equipment is guaranteed for a period of one year after the date of purchase when used under normal conditions.
- ▶ In the event of any trouble during the warranty period, please contact the dealer from whom you purchased the unit.
- ▶ In case the warranty period is over, please contact the dealer for a charged service.

IMPORTANT

THE WARRANTY CARD MUST BE RETURNED WITHIN TWO WEEKS OF PURCHASE!

CAUTIONS

Probe

- ▶ The standard probe is for transcutaneous use **ONLY**. The probe transducer is a very thin and delicate part. Please take care **NOT** to drop or hit the probe tip. **DO NOT** submerge probe in any liquid.

Ultrasound Gel

- ▶ **ALWAYS** use an ultrasound gel. Using other materials such as baby oil or cream may not produce the correct Doppler sounds and may damage the probe.

Battery

- ▶ When battery is low, the power indicator becomes dark. Also there will be no speaker sounds. Replace the battery if these conditions exist (refer to **Figure G** on page 7).

PACKAGE CONTENTS

The JorVet Hand-held Doppler Package Includes the Following Items

- ▶ **J0563D1** Flat Probe (Includes probe tip holder)
- ▶ **J0563D2** Mini Doppler Detector Unit
- ▶ **J0563D3** Sphygmomanometer for Mini Doppler
- ▶ **J0563D4** 2.5cm Cuff
- ▶ **J0563D5** 5.0cm Cuff
- ▶ **J0563D8** Headset for Doppler
- ▶ Hadeco Carrying Case
- ▶ 9V Alkaline Battery
- ▶ Adjustable Strap
- ▶ Ultrasonic Gel
- ▶ User Manual
- ▶ Use of the Doppler for the Feline Patient Booklet
- ▶ Warranty Card

SPECIFICATIONS

PROBE	MODEL	FREQUENCY
J0563D1	Flat Probe	8mHz

DETAILS	
Battery	DC 9V, Alkaline Square Type
Battery Life	Approximately 3 hours (Alkaline)
Auto Shut-Off	Automatic after approximately 5 minutes of inactivity. Varies with room temperature.
Probe Button	Power On/Off
Speaker Output	200 mW or more
External Outputs	Headset (3.5mm jack) – Cuts off sound from speaker
Dimensions	Main Unit 75mm (W) x 140mm (D) x 25mm (H) Probe 20mm (Diameter) x 105mm (L)
Weight	Approximately 270 grams (Includes battery & probe)

PRINCIPLES OF DOPPLER FLOW

The JorVet Doppler is designed to receive blood flow velocity information by ultrasound. A specific frequency is transmitted from the probe to the patient.

Technically, the transceiver amplifies a high frequency oscillation output for transmission to the transducer. The voltage is converted by a piezoelectric crystal (transducer) to ultrasound. The ultrasound beam is transmitted to blood cells flowing through the arteries or to beating fetal hearts. The ultrasound beam is reflected by the crystal in the transducer which converts the ultrasound into a voltage. A Doppler shift occurs between the emission and reception of the ultrasound beam.

Advantages of using Doppler flow detectors include ease of application, portability, applicability to hypotensive animals, and usefulness as an audible monitor of the arterial pulse and peripheral blood flow.



Professional Veterinary Equipment Supplier

Jorgensen Laboratories, Inc. | Loveland, CO 80538

800.525.5614 | fax 970.663.5042 | www.jorvet.com | info@jorvet.com