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## Manual Machine Stethoscope PCE-S 42



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## 1 Introduction

Thank you for purchasing a machine PCE-S 42 from PCE Instruments.

This electronic stethoscope is a new high-performance maintenance tool as well as an economic instrument used to locate bearing or mechanical noises. It is particularly applicable to use in a noisy environment to detect and maintain hidden trouble of equipment at its early stage, so that the normal operation of equipment can be assured and the huge economic losses arising from equipment breakdown can thus be avoided.

The electronic stethoscope is supplied with a highly sensitive probe which can effectively locate the parts of the machine where the noises come from, such as the trembling sounds of valve tremor, tappet vibration, loose piston, vibrations of gears and pumps, even the noise from the operation of the solenoid of relay. Moreover, it can also detect and monitor the flow and clogging of liquid, operating status of all kinds of motors, internal-combustion engines, diesel engines, engines and domestic appliances, as well as the running state of automatic running water system in industrial and mining enterprises.

It is widely applied in the watercraft industry, automobile industry, chemical industry, metallurgy industry, machine tools, household electrical appliances and machinery industry.

## 2 Safety notes

Keep the probe and stethoscope head far away from rotating objects.

Please read this manual carefully and completely before you use the device for the first time. The device may only be used by qualified personnel and repaired by PCE Instruments personnel. There is no warranty of damages or injuries caused by non-observance of the manual.

- The device may only be used in the approved temperature range.
- The case should only be opened by qualified personnel of PCE Instruments.
- The instrument should never be placed with the user interface facing an object (e.g. keyboard side on a table).
- You must not make any technical changes to the device.
- The appliance should only be cleaned with a damp cloth / use only pH-neutral cleaner.

This user manual is published by PCE Instruments without any guarantee.

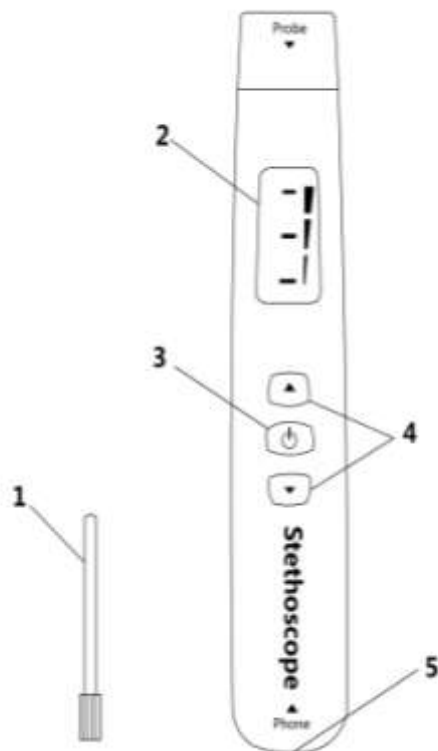
We expressly point to our general guarantee terms which can be found in our general terms of business.

If you have any questions please contact PCE Instruments.

## 3 Specification

Frequency range	30 Hz ... 15 KHz
Operating temperature	-10 ... +45 °C
Output volume	digital adjustment (32 grades)
Headphones	32 Ω
Battery	4 x AAA batteries
Battery life	approx. 30 h
Dimensions	220 x 35 x 35 mm
Probe size	280 & 70 mm

## 4 System description



- 1 Probe
- 2 Power-on indicator
- 3 ON/OFF control button
- 4 Volume button
- 5 Headphone jack

## 5 Using the device

### 5.1 General use

- Attach the probe of proper length to the front-end of the instrument according to your needs and screw the measuring tip firmly into the thread.
- Plug the headphones into the jack at the bottom of the instrument, put on the headphones the size of which can be adjusted.
- Switch on the stethoscope by pressing the ON/OFF button, as well as the machine to be tested, touching the part of the machine to be tested with the measuring tip.
- The instrument is working properly when the lower LED power indicator lights up in blue colour. Press the volume control once to increase the volume to hear sounds.
- The instrument will switch off if the volume button has not changed for 2 minutes.
- If the noise becomes louder when you increase the volume, this indicates that the instrument works normally. Adapt the volume to your requirements by means of the arrow keys. Please note that the headphones are also equipped with a volume control.
- Three LEDs indicate the volume level which is passed on to the headphones. The LED which is closest to the measuring tip indicates that the maximum volume is reached. There are 32 different volume levels. The instrument will switch to automatic mode automatically if you push and hold the button longer than 30 seconds.
- When moving the probe to a new position, it is easy to judge the distance of sound to the noise source.

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### **5.2 Low-battery indicator**

The lower LED will keep flash to show low battery voltage. The instrument can still work but the quality of the measurement will decrease.

### **5.3 Hearing protection function**

The user does not always notice that the noise he/she hears is bad for the human ear. Therefore, this mechanical faults stethoscope is designed with a function to control the volume below the international environment noise standards.

## 6 Contact

If you have any questions about our range of products or measuring instruments please contact PCE Instruments.

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