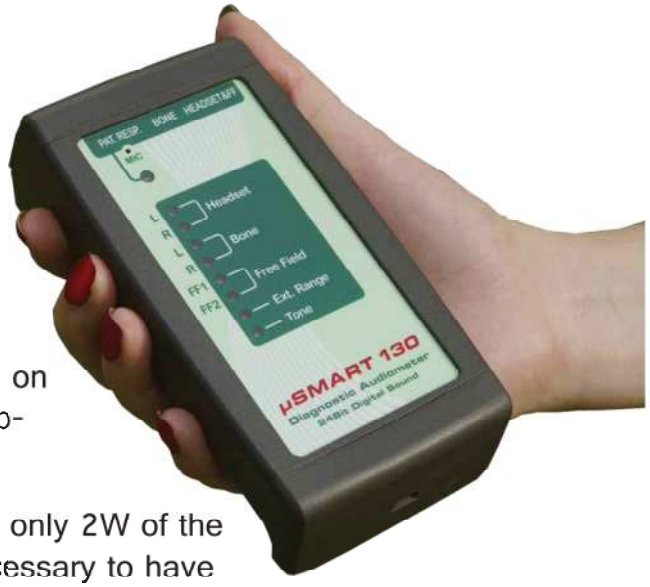
µSMART

VIDEOMED®
SMART SOLUTIONS

IMPORTANT TASKS REQUIRE
SMART SOLUTIONS

µSmart is an excellent digital clinic audiometer with high frequency up to 20kHz. Unmatched quality of sound delivered by this device allows for perfect simulation of real-world sound situations. It integrates with a PC to provide a comprehensive and pro-active audiometric facility. The device is ideal for both: stationary hearing loss measurement and hearing loss measurement next to the patient's bed.

Double playback-independent channels of µSmart enables playback of two different sounds in the left and right ear. It can also mask the noise from the diagnosed ear for even better measurement. The loudness scale starts from -10 dB up to 130* dB. It has a built-in amplifier for speech audiometry.



Test results are stored in a database which can be on local machine or in the internet. It also features support for NOAH 4.x system.

µSmart is a energy-saving audiometer, and it uses only 2W of the electrical energy from USB connector. It is not necessary to have access to the electric power since it can work on laptop battery.

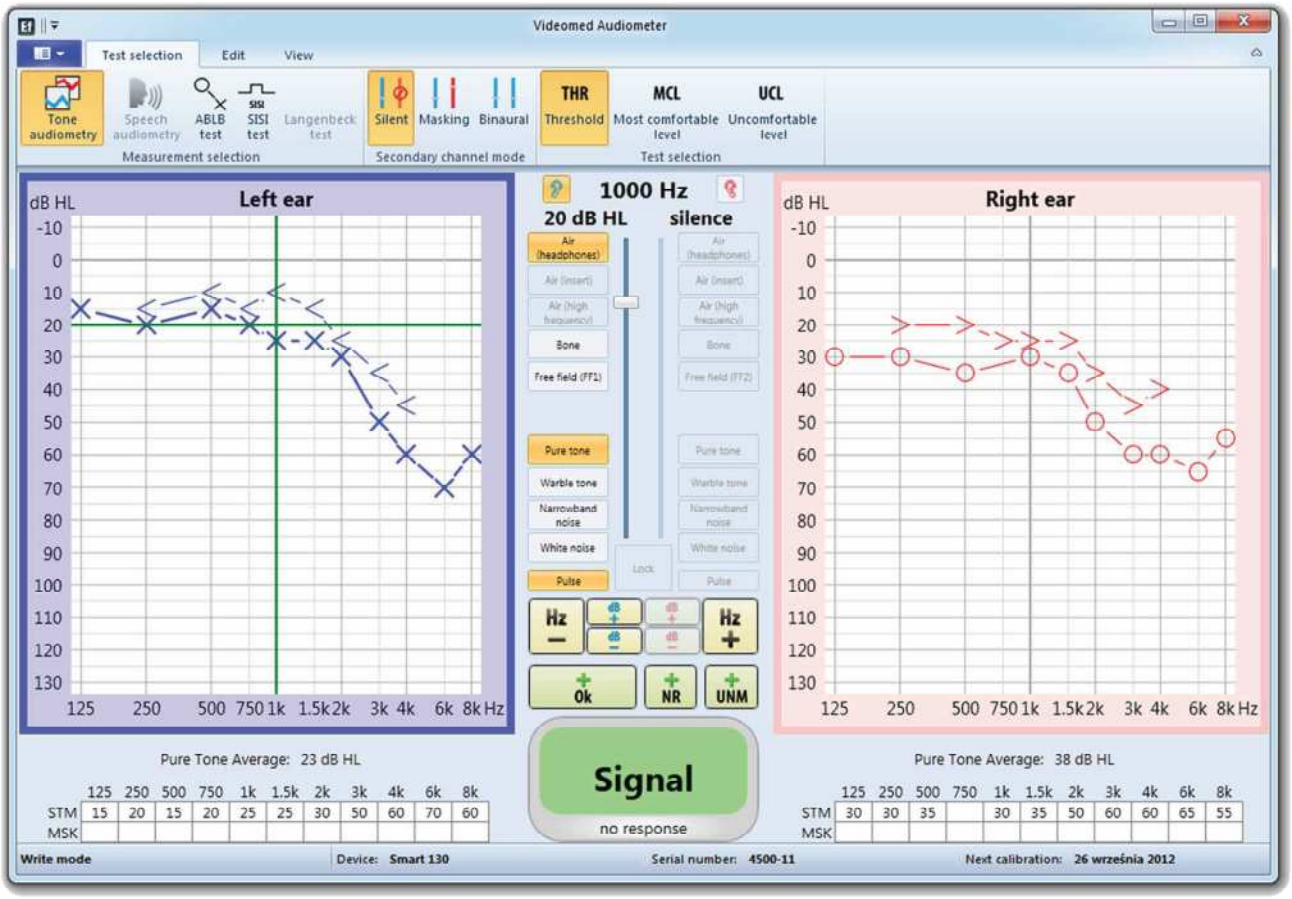
It is perfect for measurement of patient hearing loss of any severity. This device is specially useful for patients whose moving possibilities are limited, since it does not require audiometric booth. It can be connected to PC or laptop. µSmart goes in a full package which contains all the necessary equipment for diagnostics. It has standard Jack output sockets. It is ideal for examination in the audiometric booth.

Software designed by our engineers for µSmart is Effetha 2. It is software for acquisition and storage of test results (it works also with: Ultra 130, Smart 130, Audio 4002 System). This software has features like:

- recording visits for different patients
- store patients' personal / contact data
- reviewing patient's previous visit frequencies and loudness change (UCL, SISI test, air, bone audiometry, THR, MCL, ABLB)
- word and digit speech test
- shortcut customization
- note taking for each patient visit
- client-server database system

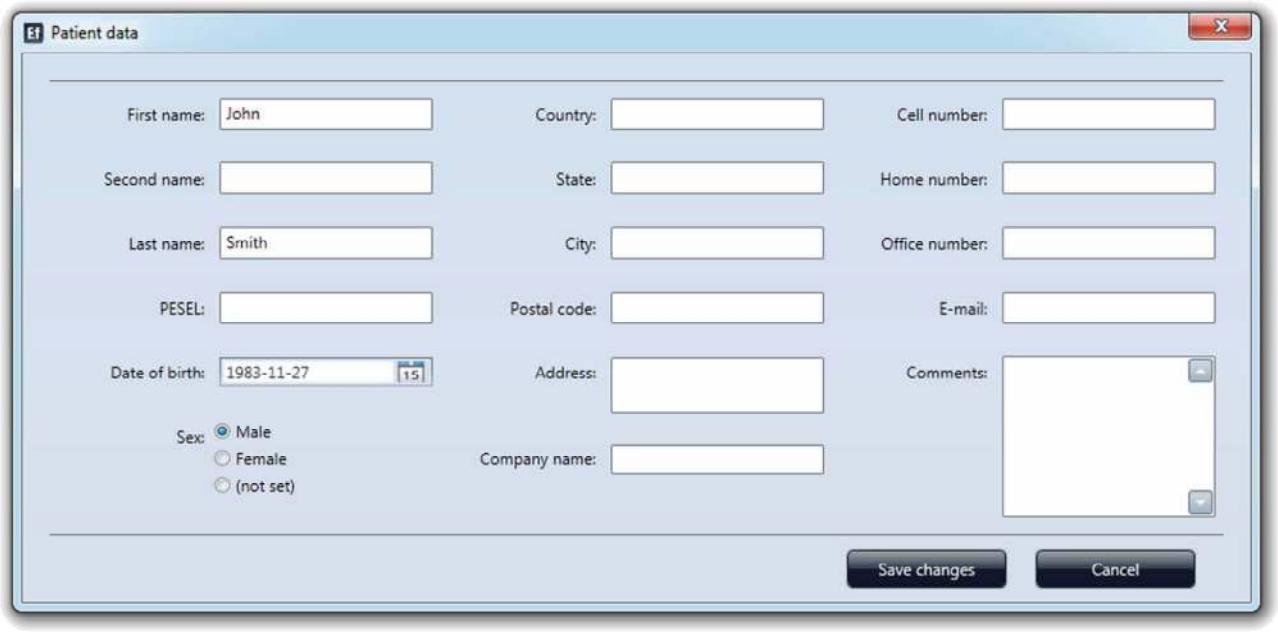
* With PD81 headset. 120 dB otherwise.

Effetha is currently available in English and Polish languages. If you are interested in your own language it can be easily prepared thanks to universal character of our software. In such case please contact us. All text is stored with UTF-8 encoding, making the software independent of specific language. This software also works with Effetha Video so it is possible to compare data of patients from the video examination.



It is user friendly and it is possible to learn quickly how does it works. Patients can also quickly learn how to cooperate with diagnostics.

Software is protected by password which will prevent from unauthorized use.
Effetha works with Windows 7 (32/64bit), Vista and XP operating systems.



Noise dampening

Frequency Khz	0.25	0.5	1	2	3.15	4.5	6.3	8
Noise dampening dB PD81 headphones	15	19	25	36	41	44	40	35

Frequencies and maximum sound intensity

	AC dBHL	AC dBHL	AC dBHL	BC dBHL	NB dBHL	Free field
Hz	Headphones TDH-39	Headphones PD 81	Headphones Ear-Tone 5A	Bone transducer B 71	Headphones PD 81	dBSPL
125	85	100	85	-	80	80 dB with standard speaker
250	100	120	95	35	100	
500	115	120	115	55	100	
750	120	130	115	60	100	
1000	120	130	120	65	100	
1500	120	125	120	75	100	
2000	120	125	120	75	100	
3000	120	125	120	70	100	
4000	120	125	115	70	100	
6000	120	120	100	50	100	
8000	105	115	90	50	100	

Sound level ranges per sound emission type

Type	Ranges	
Air conduction (left & right ear)	125 ~ 8kHz	-10 ~ 130 dBHL
Bone conduction (left & right ear)	250 ~ 8kHz	-10 ~ 75 dBHL
Narrow band noise	125 ~ 8kHz	-10 ~ 100 dBHL
Free field	250 ~ 8kHz	-10 ~ 80 dBHL

Standards compliance

Safety standards	IEC 60601-1, Class II, Applied parts type B. Continuous operation. IEC6060-1-1, IEC60601-1-2
Audiometer Standards	Audiometer: IEC 60645 -1, ANSI S3.6, type 2. Speech: IEC 60645-2/ANSI S3.6, type B or B-E.
Calibration	AC: ISO389-1, ISO389-2; BC: ISO389-3, IEC 60645-4 (Optional), ISO 389-5 (Optional)
Medical CE-mark	CE044

Functionality details

Extended range function		Safeguards from accidential sound output above congfiured sound level which could otherwise be harmful to some patients.
Masking stimulus		Automatic selection of narrow band noise or white noise for tone presentation and speech noise for speech presentation.
Input	Channel 1	Tone, Microphone 1, CD 1, NB, SN, WN, PN
	Channel 2	
Output	Channel 1	Air Left, Air Right, Bone L+R, Free Field 1+2, Insert phones, HF phones
	Channel 2	
Available transducers		PD81 or TDH39 or HDA200 for HF Audiometric headset, EARTone 5a Audiometric insert phones, B71 Bone conductor. CIR33 Insert earphone set for masking or monitoring. Passive speaker for FF or Active speaker AS10 for FF
Tone presentation		Manual. Single or multiple pulses.
Patient signal		One hand held push button.
Intensity		AC: -10 to 120/130 (TDH39/PD81) dB HL in 1, 2 or 5dB steps.
		BC: -10 to 80 dB in 1, 2 or 5 dB steps
Frequency range		125Hz to 8kHz. Optional HF up to 20 kHz.
Patient communication		Talk Forward
Frequency selection		Any frequency in range can be freely disabled if needed
Standard tests		SISI, ABLB
Optional, license-based tests		Speech from hard drive (wave files), Stenger, Stenger Speech, Auto threshold, Langenbeck (tone in noise), Békésy Test, 2 channel tone/speech, 2 channel Master Hearing Aid.
Connectors (sockets)		Power miniUSB, Free Field 1+2+Phone L/R (MiniDin), Bone (MiniDin), Patient Response/Mic2 (MiniDin)

Software

	Operating System	
Compatible software	Mircosoft Windows	Linux
Effetha 2	●	● *
VIDEOMED NOAH 4.x module	●	

Physical parameters

Dimensions (LxWxH)	74 x 146 x 53 mm / 2.9 x 5.8 x 2.0 inches
Weight	190 g / 0.42 lbs (without transducers)
Power supply	USB 2.0 5V

Included parts

- PD 81 Audiometric headset
- B71 Bone conductor
- Patient response button
- Builtin microphone
- USB AA wire
- Operation manual
- Diagnostic software Effetha 2 (languages: EN PL **)
- Passive speaker for FF

Optional parts

- TDH - 39
- EARTone5A Audiometric insert phones
- HDA200 Audiometric Headest for HF
- CIR33 Insert earphone set for masking
- Talkback Microphone
- AS10 Active Speaker 10W for FF
- AS4 Active Speaker 4W for FF ***
- VIDEOMED NOAH 4.x module
- Diagnostic software Effetha 2
- Carrying case

* With VMware for Linux

* Supported languages: English, Polish - please contact us if you need support for your langauge version

** AS4 Active Spearker powered from USB or external supply 5V. Maximum power when powered from USB: 2.3W.

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We recommend also our other available products:

Audio 4002 System

Smart 130

Ultra 130

VIDEOSMART

Video otoscope

Hearing aids

About us

We are polish company established in 1989. Our goal is to provide innovative and efficient solutions for hearing disorders and virtual image systems. We are Polish precursor in digital hearing aids manufacturing. With this experience we can deliver cutting edge engineering solutions that makes our products work so well and intuitive software which enables you to work with pleasure and speed.

Our team gathers people who want to create modern, functional and long-lasting products. We specialize in audiometers – those manufactured by us are functional and easy to handle.

Software which is used with our hardware is specially designed for ease of use and excellent stability.

Contact us:

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