AURES CENTER

AEP, OAE & AUDIOMETRY DIAGNOSTIC SYSTEM

otopront®

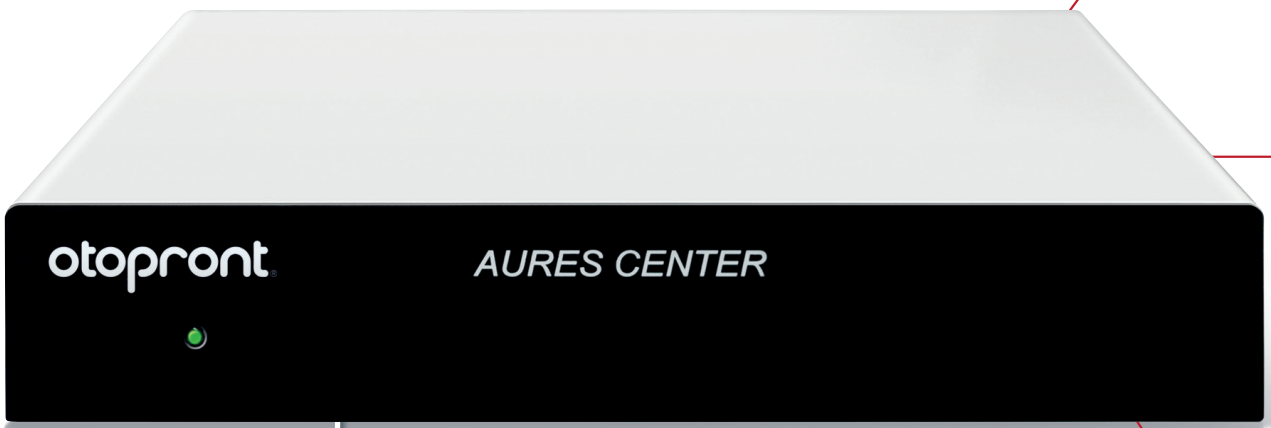
AURES CENTER

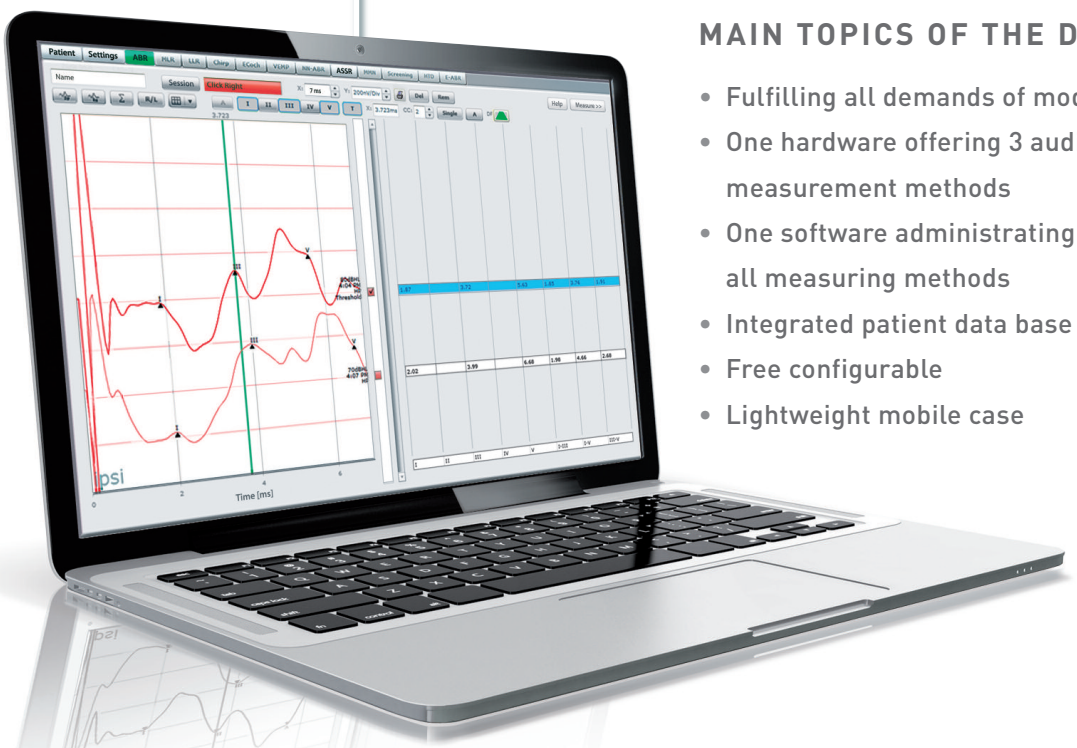
One hardware offering

The **AURES CENTER** presents a highly integrated and innovative audiological concept of development. It offers the combination of various audiometric measurement methods (AEP, OAE and AUDIOMETER) for daily routine as well as for ambitious clinical processes.

The unique aspect of **AURES CENTER** is the modular software concept in one hardware device. All requirements of modern audiology are available and can be individually configured to the customers' needs.

The basic concept of AURES CENTER is the management of reproduceable and consistent results for each audiometric measurement method. The integrated patient database allows the accurate administration of all audiometric measurement results within one hardware device.





MAIN TOPICS OF THE DEVICE

- Fulfilling all demands of modern audiology
- One hardware offering 3 audiometric measurement methods
- One software administrating all measuring methods
- Integrated patient data base
- Free configurable
- Lightweight mobile case

3 audiometric measurement methods

AURES CENTER **AEP**

The measurement of **Evoked Response Audiometry AEP** is a basic diagnostic tool in the daily audiologic routine. Especially to meet demanding applications in clinics and doctor's practices, the Aures Center AEP has been developed.

The unique concept allows it to configure or to upgrade the system depending on the needs of the user!

- Usable for all AEP-applications
- Configurable system
- Offering a range of several frequency-specific methods: **ASSR, Cirp** and **MuSIC**
- Special applications like EBERA + ECochG available
- Digital pre-amplifier offering advanced performance in different environments like operating rooms

AURES CENTER **OAE WITH ACTIVE-NOISE-REDUCTION®**

In audiology the measurement of **Otoacoustic Emissions** is an important component for testing the function of the cochlea. It is also a globally recognized measurement method for use in newborn hearing screening.

However, the reliability of the diagnosis and the speed of the measurement are highly dependent on the environmental noise flor.

Often in newborn stations and in incubators such measurements cannot be performed due to high ambient noise. The reason is a too tiny signal-to-noise ration (SNR) which does lead into a low specificity of the measurement.
The new development **Active-Noise-Reduction® system** records also the background noise allowing the user a direct and individual adaption of the OAE measurement to the environmental noise.

Advantages of the OAE with Active-Noise-Reduction© compared with conventional OAE-methods:

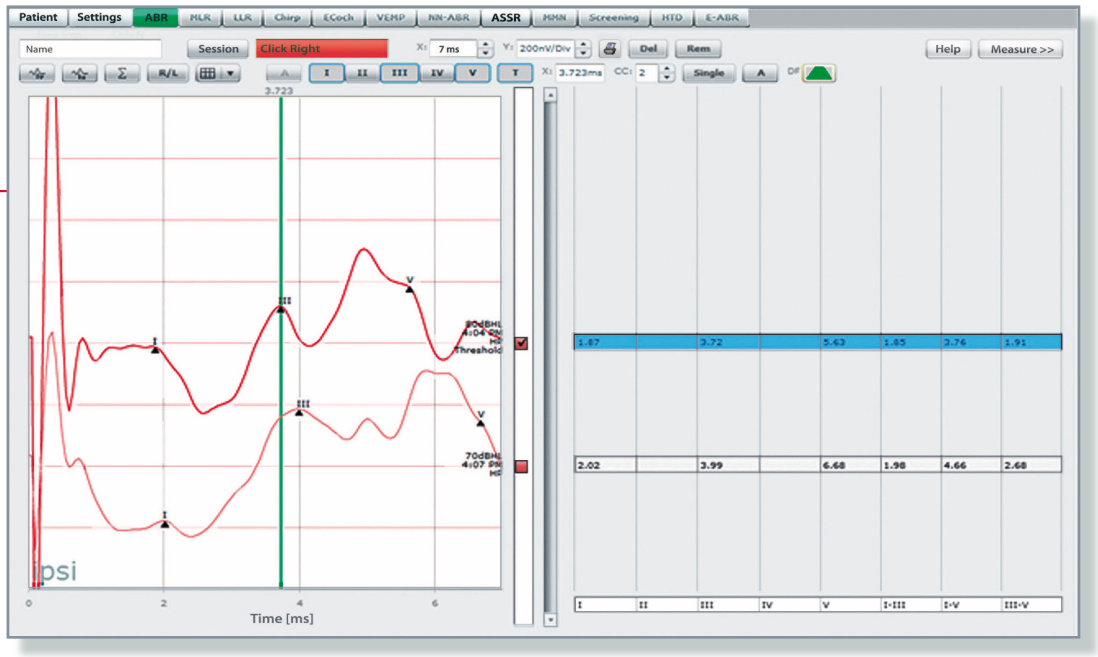
- Highly reduced influence of the ambient noise
- High reproductibility of the measurement results
- Faster measurement due to low artifact rates

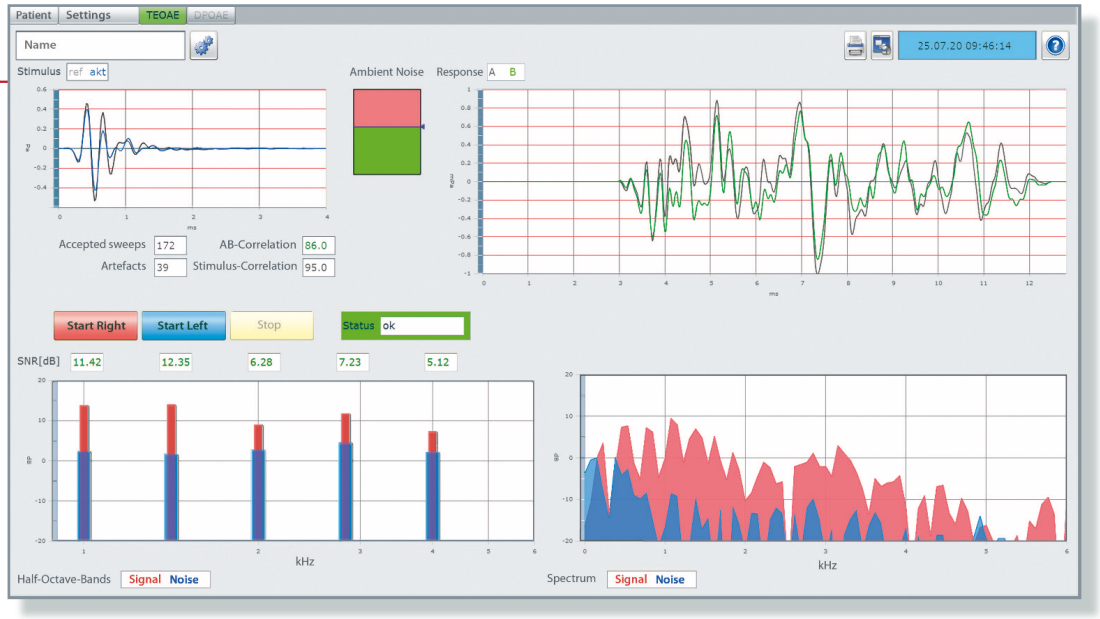
AURES CENTER **AUDIOMETER AND SPEECH**

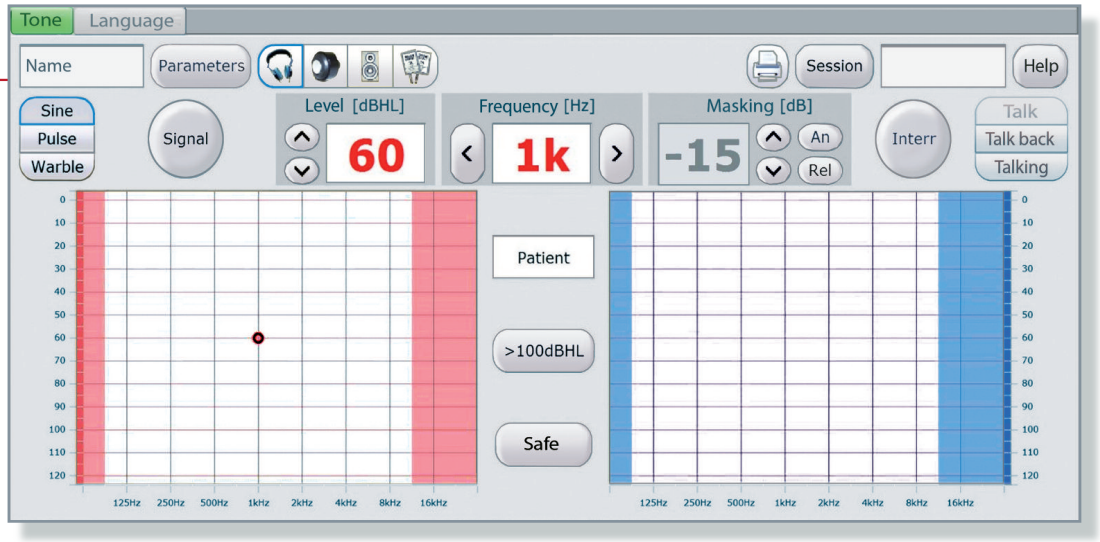
The advanced audio function allows all classical diagnostic tests to be performed such as air conduction, bone conduction and speech audiometry, also national speech tests.
The system meets the needs of daily routine in clinics and private practices. The patient data base is integrated which allows fast patient management.

Inputs

- Patient switch, headset, talk back microphone, CD-player


Patient
Settings
ABR
MLR
LLR
Chirp
ECoch
VEMP
NN-ABR
ASSR
MMN
Screening
HTD
E-ABR
Name
Session
Click Right
Del
Rem
Help
Measure >>
Single
Time [ms]
psi


Patient
Settings
TEOAE
DPOAE
Name
25.07.20 09:46:14
Stimulus
ref
akt
Ambient Noise
Response
A
B
Accepted sweeps
172
AB-Correlation
86.0
Artefacts
39
Stimulus-Correlation
95.0
Start Right
Start Left
Stop
Status
ok
SNR[dB]
11.42
12.35
6.28
7.23
5.12
kHz
Half-Octave-Bands
Signal
Noise
Spectrum


Tone
Language
Name
Parameters
Session
Help
Sine
Pulse
Warble
Signal
Level [dBHL]
60
Frequency [Hz]
1k
Masking [dB]
-15
An
Rel
Interr
Talk
Talk back
Talking
Patient
>100dBHL
Safe
125Hz
250Hz
500Hz
1kHz
2kHz
4kHz
8kHz
16kHz

Technical data Modules

AURES CENTER AEP

Maximum level	Stimulation	100 dBHL
		110 dBHL (ASSR)
	Masking	max. 70 dBHL (adjustable)
Frequency range	BERA	30 Hz – 2500 Hz
		150 Hz – 2500 Hz
	MERA	30 Hz – 300 Hz
	VEMP	90 Hz – 300 Hz
	CERA	0,3 Hz – 30 Hz
Stimuli	Click	150 µs
	Gauss	2 ms (0.5; 1; 2; 4 kHz)
	Burst	320 ms (0.5; 1; 2; 4 kHz)
	ASSR	Amplitude – modulated – sinewave
	Modulation	80 – 90 Hz
	Frequencies	0.5; 1; 2; 4 kHz
	Wave	Wave – Files (free selectable)

Preamplifier	Channels	2
	Sensitivity	100 µVss
	Input impedance	>10 MOhm
	Input noise	< 0.8 µV
	CMMR	> 120 dB
	Impedance check	internal
Signal processing	AD resolution	16 Bit
	Filter	digital low/high-pass (adjustable)
	Artefact rejection	0 – 100 %
	Stimulus number	10 – 10000 (adjustable)
	Repetition rate	3 – 90 Hz (adjustable)
Analyze time	BERA	40 ms (adjustable)
	LLR	800 ms (adjustable)
Transducers	Headphone HDA 300, Insert phone ER-3C, KLH 96, Free-field	

AURES CENTER OAE (TE-OAE) with Active-Noise-Reduction®

Device standard	EN 60645-6	
TE-OAE-probe	Frequency range	0.5 – 8 kHz
	Stimulus intensity	40 – 85 dB SPL
	Middle frequencies	1, 1.5, 2, 3, 4 kHz
	Active-Noise-Reduction®	YES
	FFT-Display:	YES
	Probe fitting display	YES
	Pass / Refer Display	YES
	Patient data base	integrated
	Size of Display	8 inch

AURES CENTER OAE (DP-OAE) with Acitve-Noise-Reduction®

Device standard	EN 60645-6	
DP-OAE-probe	Frequency range	0.5 – 8 kHz
	Stimulus intensity	40 – 85 dB SPL
	Middle frequencies	0.5, 0.75, 1, 1.5, 2, 3, 4, 6 kHz
	Active-Noise-Reduction®	YES
	DP-Gram	YES
	Probe fitting display	YES
	Pass / Refer Display	YES
	Patient database	integrated
	Size of Display	8 inch

AURES CENTER AUDIO Audiometer

Device standards	EN 60645-1, EN 60645-2	
Tests	Tone	
Frequencies	125, 250, 500, 750, 1000, 1500, 2000, 3000, 4000, 6000, 8000 Hz	
Level range	Air conduction	–10 dB – 120 dB HL
	Bone conduction	–10 dB – 80 dB HL
	Free field (passive)	–10 dB – 85 dB HL
Level Step	1 dB or 5 dB (noise-free)	
Masking	narrow band, broad band, speech noise	

Transducer	Air conduction	Headphone HDA 300 Insert phones ER-3C
	Bone conduction	Conductor KLH 96
	Free field (passive)	Canton speaker
Inputs	patient switch, headset, talk back microphone, CD player	
Patient database	integrated	

Technical data Aures Center

Device classification	Class (93/42/EWG)	IIa
	Protection class	II
	Applied part	Type B
	Isolated applied part	Type BF
	IP rating	IPX0
Accepted environmental conditions	Temperature	15 – 35 °C
	Pressure	98 ... 104 kPa
	Relative humidity	30 ... 90 %
Safety standards	EN 60601-1, EN 60601-1-2, EN 60601-2-40	
Accepted degree of contamination (EN 60601-1)	2	
Device standards	AEP	EN 60645-7
	OAE	EN 60645-6
	Audiometer	EN 60645-1
Dimension	302 x 60 x 170 mm (W x H x D)	
Input	Voltage input AC	100 – 230 V~
	Current consumption	0.6 – 1.0 A
	Frequency	47 – 63 Hz
Output	Voltage output DC	15 V=
	Current consumption	2.0 A
	Power	30 W

Technical requirements Tablet / Notebook

(No component of the AURES CENTER system itself)

Data / Functions	
Processor	Intel Core i3, 2.30 GHz
Memory	4.096 MB RAM
Harddisk	120 GB
Display size	13"
Resolution	1366 X 768
USB-Interface	2.0 High Speed
Operating system	Windows 7 or Windows 10

All designs and specifications subject to change without notice.

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