Research audiometer AT-research

- Multi-channel audiometer designed for research purposes
- Using open ATR as external soundcard with your MatLab programmes
- Open speech audiometry using own speech- and noise-material without external sound card
- Special implant connection for direct stimulus presentation via hearing implants
- 3 air conduction and 2 bone conduction ports for parallel use without replugging
- Up to 16 freely usable speakers
- Implementation of research module MOLM
- Silent PC specially designed for AURITEC and the audiometer and built in Germany
- Ergonomic control unit with silent sliders
- Medical devide with CE marking – Advantageous for applications in front of ethics committee



AURITEC GmbH
Dernauer Straße 12
D - 22047 Hamburg

Internet: www.auritec.de
Tel.: +49 (0)40-69 65 40-0
E-mail: mail@auritec.de

© AURITEC | DS0044 | Rev.1 | 07.2025

Research audiometer AT-research

- Recording of a second series of measurements for all transducers in sound and speech audiometry (e.g. to determine an overhearing curve in AC)
- Display of old measurement curves in the current measurement
- Extended free-field measurement with polar plot for graphical representation of the measurement set-up
- Documentation of hearing systems in patient management
- Speech audiometry with the option of documenting the incorrect answers in the software

Options

- Multilingual and innovative speech audiometry
- Multi-channel audiometry
- Surround module with 8 pure channels that can be activated simultaneously; this allows different signals to be played independently at different volumes from several directions in order to create ecologically valid scenarios
- Implant output for gentle testing of CI patients
- Conditioning software with (own) images / videos
- Connection to practice programmes using and export function via HL7
- Possibility of hardware release for other programmes such as MatLab

Available test methods

- Oldenburg and other language procedures (MATCH, AAST, mFAST) and WESTRA software
- International Matrix tests (Oldenburger)
- Arabic matrix test and Arabic child sentence test
- ERKI as a validated test method for directional hearing with a 5° angular resolution
- Dichotic tests

Supra-threshold test procedures

› SISI, Lüscher, Carhart (autom.); Fowler, Stenger & Langenbeck, sweep-frequency Békésy

- Tinnitus determination with narrowband noise

Technical data

Tone audiometry signals

- Sine, white noise, pink noise, narrowband noise, steep narrowband noise
- Standard frequency range: 125 Hz - 8000 Hz
- Highest tone audiometry: 10000 Hz - 16000 Hz
- Warble tone 4 to 20 Hz frequency modulation, 2.5 to 12.5 % amplitude modulation
- Pulse tone according to DIN EN60645-1
- Amplification up to 120 dB HL for air conduction (depending on frequency and transducer)

Masking signals

– **Tone audiometry:**

- Each test signal is also available for masking

– **Speech audiometry**:

- Speech masking noise (=SMN)
- Option between continuous playback and pauses between items
- Pre-presented noise

– **Multichannel audiometry**:

- Speech material

➢ installed mono- and multisyllabic tests (e.g. Freiburg language test)

- Masking signals:

➢ white noise, pink noise, speech masking noise, ISTS, cafe, classroom, country road, motorway, party noise

External inputs

- Response microphone

Outputs

- 3x air conduction (DD45, DD450, ER3C)
- 2x bone conduction (B81, KLH96)
- Free field right and left
- Line-out for e.g. CI direct control
- Speech audiometry listener
- Optional: 100dB and110 dB loudspeaker
- Optional: 2x optical fiber for surround-modules (connects up to 16 free field speakers)

Class

- **Class II** for pure tone according to DIN EN 60645-1
- **Extendable** to **Class I**
- **Class B-E** for speech audiometry according to DIN EN 60645-1

PC specifications

- CPU Intel i5 or similar
- fanless
- Memory 8 GB RAM / Hard disc 250 GB
- Windows 11 Pro 64bit

Dimensions

- Audiometer: 34Lx30Wx15H / Surround module: 34Lx30Wx10L / PC: 28Lx27Wx10H

AURITEC