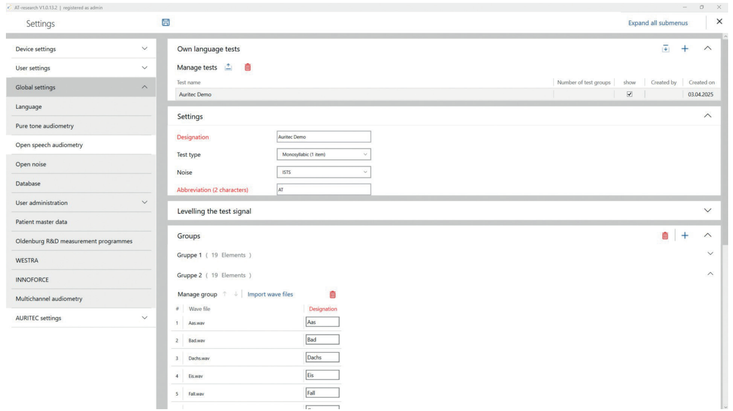
Free speech audiometry

AT-research offers free configurability of speech audiometry.

- Integration of own speech tests
- Use your own signal sources for S and N
- Definition of own signals and noises
- Variable level control for adaptive measurements
- Individual word length and number of words
- Creating your own sentence tests and different measurement series
- Convenient documentation of incorrect answers

Levelling of the test signals makes sure that the results of these speechtests are almost exact.



User Interface with an example of a self-configured speechtest

Hearing implants can be easily controlled via a separate hardware output.

Module with CI output and cable connection to the hearing aid (here MedEL device)

This achieves the following:

- Reduction of interference
- Elimination of masking for monaural and dichotic measurements
- Precision in tone audiometry.

Calibration measurements ensure that a signal always has the same volume for the patient, regardless of whether it is played via loudspeakers or transmitted via the audiometer's CI output.

Electrical output signal from a Sonnet 2 cochlear implant processor above the signal level on the audiometer when played through speakers (blue) and cable (green).

AURITEC© | FL0015 | Rev. 1 | 01.05.2025

AURITEC Medizindiagnostische Systeme GmbH
Dernauer Straße 12
D-22047 Hamburg, Germany

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

AT-research

Multi-channel audiometer for research in audiology

www.auritec.de

AURITEC

After years of technological leadership in the field of clinical audiometry, AURITEC has designed an audiometer for use in research.

The most important features of the AT-research are:

- Multichannel capability
- Free configurability in speech audiometry
- Direct connection of implants
- Access and control via MatLab.

For the hardware, AURITEC relies on the sophisticated technology of the clinical audiometers.

The equipment was developed in close cooperation with scientists and designed to meet the requirements of universities and colleges, university clinics and the hearing aid industry.

Scope of delivery:

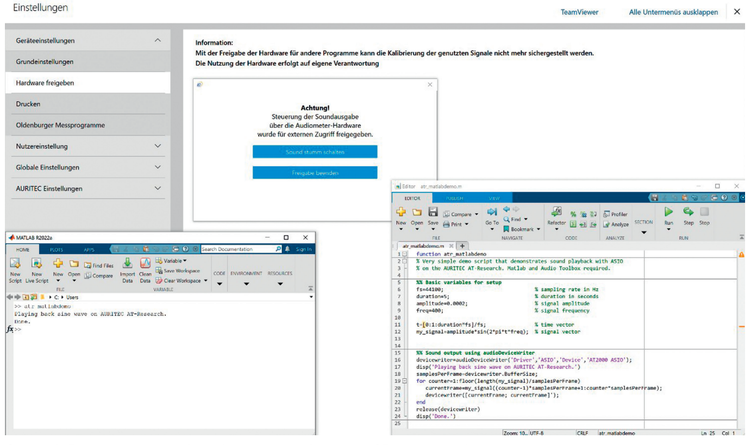
- Audiometer
- Surround module
- Headphons: AC and BC
- Four 90dB loudspeakers with tripod*
- AURITEC Silent PC
- Research module of the OMA

*Compliant with speech audiometry standards

Main elements of the AT-research Hardware

As a medical device with CE marking - a considerable advantage for applications to the ethics committee - the AT-research is ideally suited for conducting studies. However, it can also be used with patients.

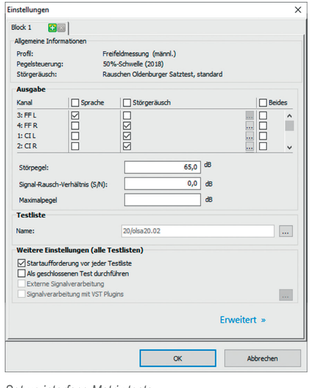
The scope for design is considerably extended by the fact that the user can access the sound card via self-written Matlab scripts and thus effectively control the audiometer.



Control of AT-research via user-defined Matlab programs (outside the CE approval area)

The data is exported in digital format and can also be anonymized.

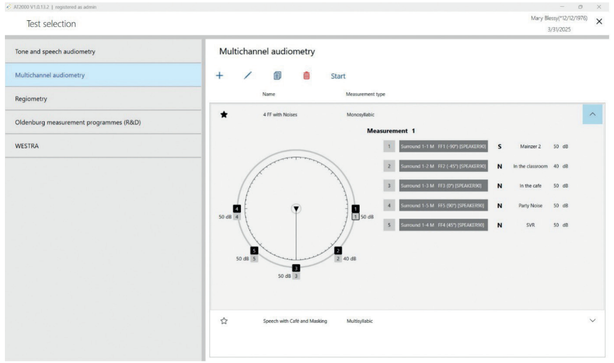
AT-research is equipped with the research module of the Oldenburg measurement programs, so that the Oldenburg sentence test can be carried out in AT-research with four channels.



Set up interface Matrix tests

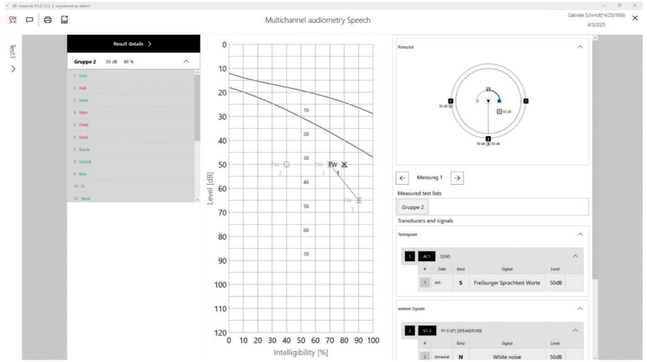
Multi-channel audiometry

The AT-research surround module offers a total of eight free-field outputs. This allows the user to create their own measurement configurations, including highly complex ones such as the simultaneous presentation of eight different signals from different directions with masking. The large selection of transducers meets the requirements for high precision. The number of outputs can be increased to 16 with an additional surround module.



User interface with an example of speech audiometry in multi-channel audiometry

The simple visualization enables a better understanding of the measurement setup. The configuration can be saved for a list of measurements, eliminating the need for repeated readjustments.



User interface with an example of speech audiometry