MediTECH Electronic GmbH

AUDIO 4 LAB – Module BRAIN AUDIOMETER

Test and Training of Language Related Abilities

Dear hearing experts!

Every day you get to know people with problems in hearing – they still seem to listen well, but they poorly understand spoken words. This applies to the seven years olds with school problems, teenagers who are often tired during a school day (despite sufficient sleep!), as well as the adult Plus40-year-olds, who interfer in the everyday noise. Also at the hearing aids supply of the generation of Plus60, a look at the central hearing functions for better listening comprehension is essential.

You will test quickly and accurately basic central language-related hearing functions with the *Medi*TECH® brain audiometer system. The automated evaluation offers you and the persons concerned reliable statements on the current abilities of the central hearing; standard data or age reference values provide the basis for the related funding opportunities. The process is solid scientifically proven in several studies.

Usage with children

From the age of five the brain audiometer system offers standard data to compare purposes. Preschool children with language problems as well as children with school and learning problems have often weak central hearing features.

With the brain audiometer in the AUDIO4LAB you test eight typical central functions, which are important for language comprehension and related skills of high importance. Based on the results the best training program will be created for the specific needs.

Brain audiometer – part of a whole

The brain audiometer is an important part of the Warnke® method. It is created in close cooperation between research and practice and its test facilities are continuously developed.

The corresponding test methods determine current abilities in listening, seeing and moving in children and adults. This allows an individual fundamental training – and that works.

Usage with 'young' adults

ENT doctors report increasingly plus-40 year-olds having difficulties in listening comprehension – especially in noisy environments. But the classic diagnosis of hearing often shows no abnormalities. Causes are often based on problems with central auditory processing.

The central hearing functions are evaluated based on age reference values, which are typically gradually deteriorate from mid-20s. It also becomes hard work to listen to orals and to understand them. Specific training enables young adults to achieve significantly better measurements and improve their speech comprehension in noisy environment.

Usage with Plus-60-year olds

Ears as well as the central hearing processing plus-60-year-olds are mature typically sustainably. A pure supply of ears with hearing often brings no desired success – result: hearing aids for drawers.

A hearing aid fitting without an audiogram is UNTHINKABLE.

The same applies to the acquisition of central hearing functions: assessment of central hearing missing crucial information for the future success of hearing understanding.

The brain audiometer gives answers

Product Summary

The abilities of Brain Audiometer

- 8 central hearing and perception functions using standard data / age reference values
- Individual settings
- Normtest, test and training settings, additional setting changeable and storable
- Computer based evaluation, documentation and report creation via key use
- Effectiveness of the process through several studies systematically proven

- **NEW in AUDIO4LAB: Module Brain Audiometer**
  - Measurement of speech understanding in noise (PST sound discrimination test)
  - Reply message by clients via the control unit.
  - No pressing 2 answer keys for „Medium-stimulus"-therefore: reduction of false answers through intuitive response message

AUDIO4LAB

Control unit

Technical issues

- Data storage in the device
- Data transfer via USB cable
- Size (cm) – w-h-d
  AUDIO4LAB: 29 x 10 x 21,5
  Control unit: 15 x 3,5 x 9 + cable: 195
- Weight:
  AUDIO4LAB: 1,20 kg
  Control unit: 0,15 kg
- Menu control via display
- Evaluation to the system directly or via additional PC software

Excursion to *Medi*TOOLs

Comprehensive client management (database)

- Documentation of all steps and results
- Automated reporting of individual clients
- Graphical and wordsmith evaluation
- Explanations of each test step can be called

Low Level Functions

Visual order threshold

You exercise the time rate of your brain, the so-called order threshold. This is the period of your ability to perceive closely following sensory stimuli as separate entities and to sort them out. This visual ability is very important, for example, for processing short words read..

Auditory order threshold

As with the visual time rate, the order threshold of the auditory clock pulse may be exercised, though not using the sensory canal Sight but, instead, Hearing. This ability is very important for processing short sounds heard. It contributes essentially to better hearing and comprehension of talking.

Spatial hearing

This exercise trains your directional hearing ability. This is very important to identify noise and especially talking from different directions, to associate or to ignore. Lateral noise in space, for example, is heard by the ears at different moments.

Pitch discrimination

Pitch differentiation is exceedingly important for talking but also for understanding speech. The emphasis of the words and recognising single vowels assume an unimpaired pitch differentiation. Here you exercise distinguishing pitches of low level spacing.

Ear-Hand-Coordination

Exercising with the metronome helps you to acquire the ability to process perceived stimuli in the mind and to convert them into motion as quickly as possible. Rapid processing of information is very important for thinking, talking and writing. This exercise trains especially the coordination of the right and left hemisphere.

Choice Reaction Time

Here you exercise the auditory choice response time. First a lateral choice has to be made (choice) to respond as quickly as possible (response). In many everyday situations, lightning response is demanded of our hearing. The choice response time exercise specifically trains and improves this requirement.

Frequence Pattern

You exercise to recognise tiny differences in sound sequences. This ability is most important to distinguish specific auditory sounds unambiguously from others. Each sound is represented by a distinct sound pattern in the mind. If very short sounds differ only slightly from others, they are comprehended only after reliable identification.

Duration Pattern

The more exactly a sound pattern is recognised, the better sounds may be distinguished. This affects not only the sound sequence but also the sound length which is exercised like the sound sequence, with three tones - one is different from the others. This single sound has to be reliably recognised despite continuous reduction of the sound spacings.

AUDIO4LAB – Module Brain Audiometer – test and training of central hearing abilities

The AUDIO4LAB can be leased, rented or financed - please contact us for more information

AUDIO4LAB - brain audiometer set

Content:

- AUDIO4LAB device with module brain audiometer
- Control device (for input of answers)
- power supply unit, manual
- Stereo Headphones MT-70-X (open system)
- USB cable connectiion to connect the device with a PC
- *Medi*TOOLs – software for evaluation and documentation
- audioFitness screening software
- extensive information material

Recommended

*Medi*TOOLs software service contract (single user licence)
AUDIO4LAB service contract

Additional you will need a PC for MediTOOLs software
Information about computer requirements you will find
www.pc.meditech.de

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Please contact us for more information

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