

NEURO-AUDIO-SCREEN

Portable Hearing Screening System for Newborns and Infants



Neurosoft

HEARING
DIAGNOSTICS

TEOAE
DPOAE
ABR

- three-in-one: TEOAE, DPOAE and ABR
- user-friendly interface with touchscreen
- hearing screening in noisy environment
- ABR curve with wave V marker
- results printed on portable printer

WHY IS IT IMPORTANT?

Hearing loss is one of the most common congenital anomalies, occurring in approximately three infants of every thousand babies. About half of the children born with hearing loss have no known risk factors for it. Normal hearing in the first six months of life is also considered critical for speech and language skills. Early identification and appropriate intervention before six months of age allows a child with hearing loss to facilitate language acquisition and develop healthy speech.

Unfortunately, subjective methods have not proven to be reliable in detecting hearing impairments in the first months and years of baby's life.

That is why objective methods should be used. Measures of OAE or ABR have shown to be effective methods of screening for hearing loss in neonates and infants. Universal newborn hearing screening has become the expected standard of care internationally.

In addition, the majority of children suffer from middle ear infections that are the most common for infants and toddlers. In most cases otitis media can cause transient or fluctuating hearing loss. But persistent infection or persistent fluids in the middle ear may result in permanent hearing loss. It is recommended that a child's hearing should be checked repeatedly during each of the first years of life because hearing is central to a child's language development and communication.

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Over 15 years of experience
in audiology!



LARGE COLOR DISPLAY

shows the exam procedure and exam results in both text and graphic form. If you doubt about the text result, you can study graphs, traces and spectrum and make your own decision.

HIGH-CAPACITY MEMORY

allows storing a large amount of exams in a device memory. You can examine up to several hundred patients and then print results or export them to computer database via Bluetooth.

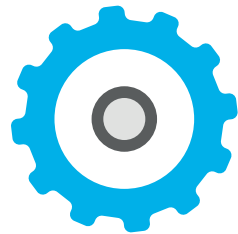
HIGH-POWER LI-ION BATTERY WITHOUT MEMORY EFFECT

operates the whole day without recharge. The device also can operate being connected constantly to the power supply unit.

SMALL DIMENSIONS AND LIGHT WEIGHT

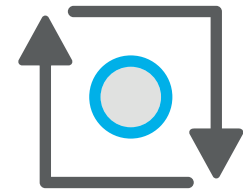
make the device portable. You can place it in your pocket and move along the hospital with it.

NEURO-AUDIO-SCREEN ADVANTAGES



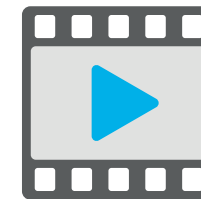
CUSTOMIZABLE SETTINGS

You can adjust test settings using only one button. For example, you can use different modes of OAE test: "Screening", "Noisy (screening)", etc. It allows customizing settings quickly in order to perform any hearing exam starting from screening in a noisy room and up to expert study in a specialized hospital.



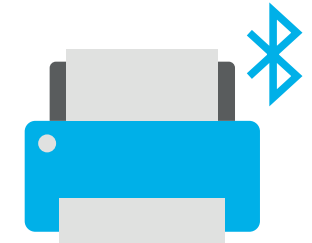
COMPATIBILITY OF DATA FORMAT WITH NEURO-AUDIO DIAGNOSTIC OAE AND EP SYSTEM

provides continuity of diagnostic information obtained during hearing screening and during specialized diagnostic study.



VIDEO GUIDE

Detailed video guide supplied with device demonstrates Neuro-Audio-Screen tests and trains to work with the program. It allows all users even without special training to master the device functions quickly.



WIRELESS BLUETOOTH INTERFACE

allows printing exam results on wireless printer and exporting data saved in the device memory to the external computer with installed Neuro-Audio-Screen Manager software. The program is supplied free with the device.

DEVICE USABILITY

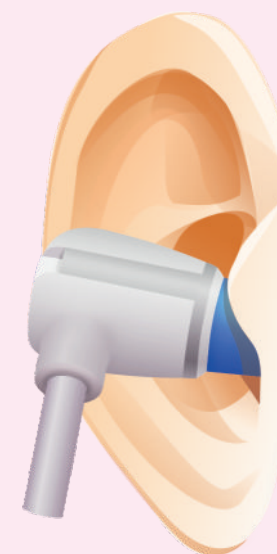
The large color display allows showing the data and controlling the device functions.

The menu with the list of available tests is displayed on the screen after device switching on. You should insert OAE probe into a patient's ear properly and start the test by touching the button. The program informs you if the OAE probe is inserted incorrectly. The test is performed in automatic mode. As soon as the test is completed, the program shows "PASS" or "REFER" result. It is quite simple!



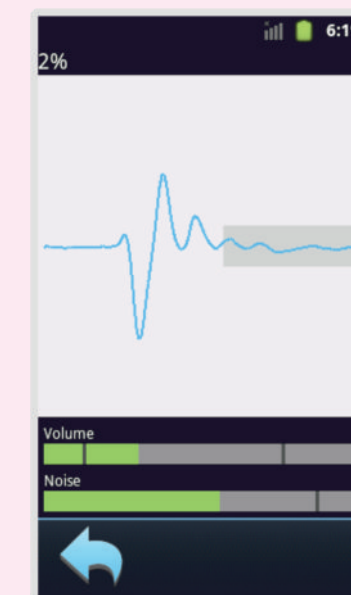
STEP 1

Enter patient's data and select the test



STEP 2

Insert OAE probe



STEP 3

Automatic check of OAE probe fitting



STEP 4

Recording and review of obtained results

LIST OF TESTS

TEOAE

Advanced algorithm of artifact rejection improves the instrument ability to perform test in difficult-to-test conditions. If you found that conditions change during testing you can easily restart test just by tapping one button. Along with PASS/REFER result, you get more information for diagnostic purpose: response waveform, spectrum, graphic presentation of SNR in different bands, etc.

DPOAE

This test allows obtaining results in noisy conditions. You can perform not only screening but also diagnostics with up to 12 frequencies. Response spectrum, residual noise and estimated DP level for each frequency is available for evaluation. The high frequency DP (up to 12 kHz) can be useful for evaluation of patients in process of ototoxicity treatment.

AABR

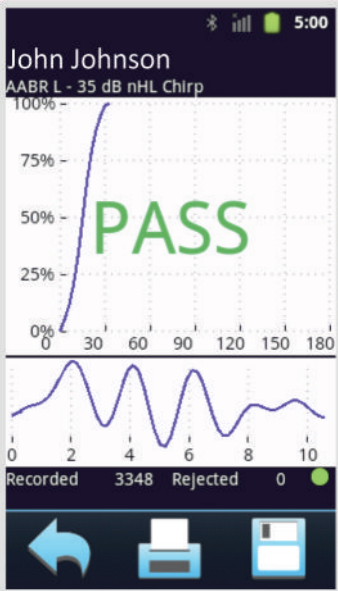
If you use only OAE test for screening, some impaired patients (for example, with auditory neuropathy spectrum disorder) will be missed. That's why automated ABR screening is required in some cases (for example, in neonatal intensive care unit). High stimulus repetition rate and run-time compensated Chirp stimuli guarantee fast response detection time. Advanced algorithm of response analysis in frequency domain allows detecting automatically the response in difficult conditions with high electromagnetic interference. The device has switchable input. It will automatically switch to the correct position if mastoid montage is used. So you don't care on repositioning of electrodes during testing.

ABR

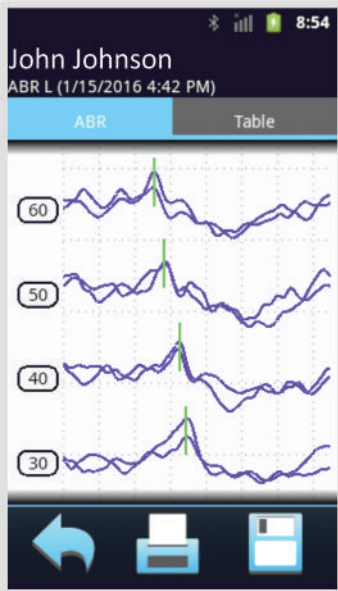
If you get REFER result during screening test, you need to make ABR test to specify the diagnosis. You can do it with the same instrument. You can record ABR curves with several stimulus levels per test sequence, set wave V marker to measure latencies, generate intensity-latency table. Multi-touch feature of the screen allows zooming curves easily when finding ABR waves. Optional headphones can be used to stimulate with high stimulus levels.



DPOAE test



AABR test



ABR test

NEURO-AUDIO-SCREEN MANAGER

Neuro-Audio-Screen Manager software allows managing the process of hearing screening study with Neuro-Audio-Screen device.

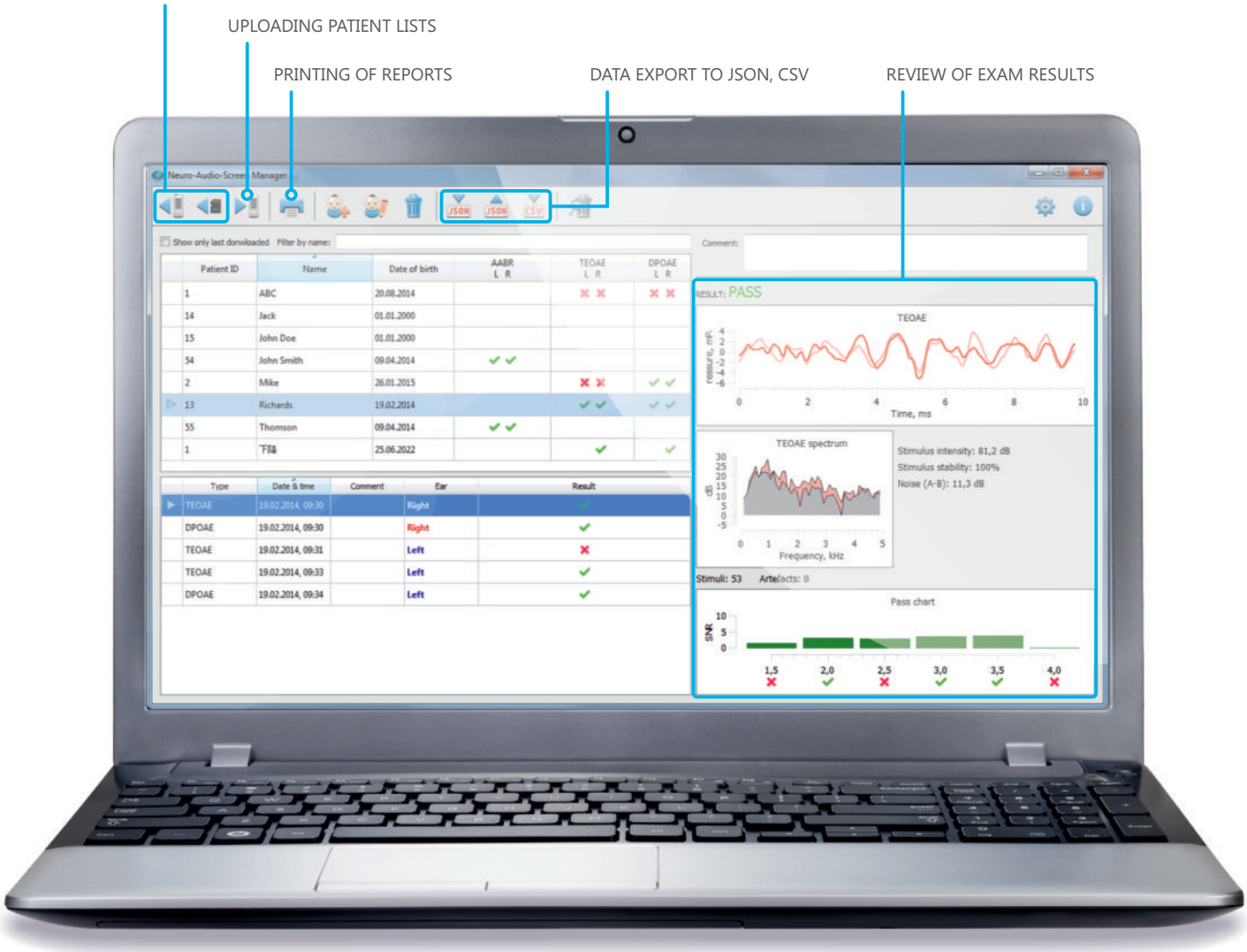
The program maintains a single database for all hearing screening tests:

- all patients and exams are in one database
- flexible search options
- automatic data backup
- trashcan for secure removal of patients and exams

Neuro-Audio-Screen Manager software is available on the following platforms:



DATA DOWNLOADING VIA BLUETOOTH
OR FROM MICRO SD CARD







CONFIGURATIONS

The device is supplied in one of two configurations:

- Neuro-Audio-Screen with all above-mentioned tests
- Neuro-Audio-Screen/OAE with TEOAE and DPOAE tests only

The second configuration variant can be easily upgraded to full-featured one.

NEUROSOFT AUDIOLOGY PRODUCT LINE

	Neuro-Audio	Audio-SMART	Neuro-Audio-Screen	aScreen
				
APPLICATION	Clinical ABR&OAE analyzer	Diagnostic/screening ABR&OAE and middle ear analyzer	Diagnostic/screening ABR&OAE analyzer	OAE screening
TESTS	ABR, MLR, LLR, ECoChG, VEMP, ASSR, P300, MMN, PTA, TEOAE, DPOAE, SOAE	Tympanometry, AR, AR decay, ETF, TEOAE, DPOAE, ABR	TEOAE, DPOAE, AABR, ABR	TEOAE, DPOAE
HARDWARE	PC-based	Portable standalone	Portable standalone	Portable smartphone-based



2016 July



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