Audio-SMART

Portable System for Diagnostics and Screening

- Truly portable middle-ear diagnostics
- High-frequency probe tone
- Diagnostic and screening OAE and ABR
- Wireless Bluetooth connection
- User-friendly interface with touchscreen

Neurosoft

HEARING DIAGNOSTICS

IMPEDANCE
OAE
ABR

HEARING
DIAGNOSTICS –
IT IS SIMPLE

Audio-SMART is a lightweight, compact device that can be easily placed in a doctor's gown pocket. Power battery ensures the continuous operation during the whole day. Audio-SMART is complete and flexible solution for the routine examination of patients staying in different wards or rooms.

Over 15 years we have been designing the audiological equipment for you. Audio-SMART is the newest system that accumulated all our experience and latest technologies, built for the future.

You can easily customize Audio-SMART to your needs. Match the tests from the wide battery with your current needs and upgrade quickly when your demands change.

The touchscreen display allowed us designing intuitive and simple graphic interface. All required options are in one spot. You can enter patient's data, perform the tests, review and print the results by simple touch of your finger.

15
YEARS IN AUDIOLOGY

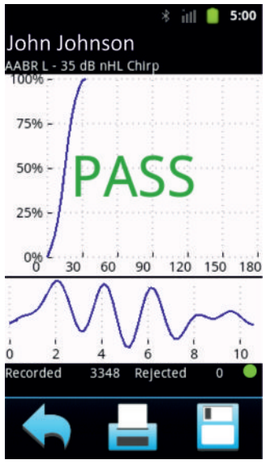
LIST OF TESTS

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 taping 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.

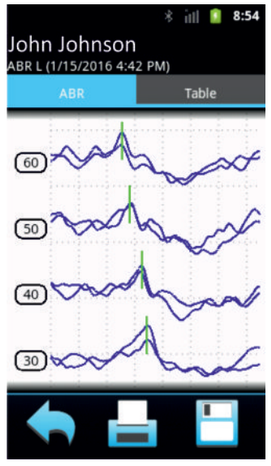
DPOAE

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.



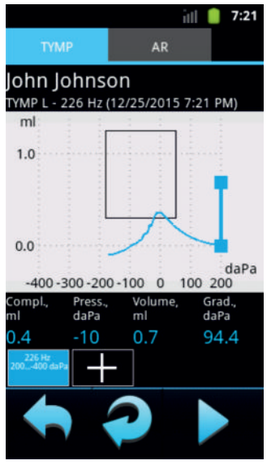
AABR

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 test.



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.

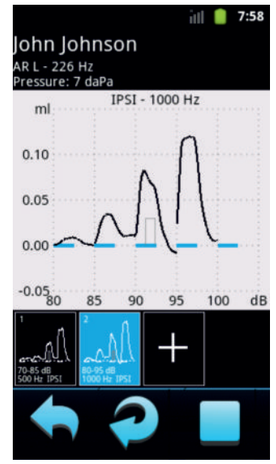


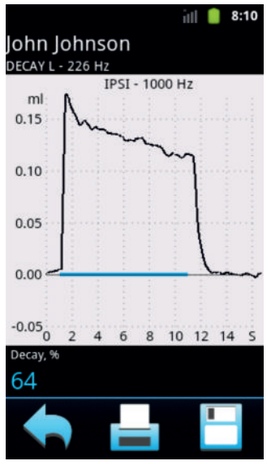
TYMPANOMETRY

Audio-SMART provides 226- and 1000 Hz tympanometry. Traditional 226 Hz probe tone is a standard for adult tympanometry. The high-frequency probe tone allows testing of newborns and infants when the ear is not fully developed. You can easily switch between probe tones, standard and extended ranges during testing. Up to 4 tympanograms with different settings can be done in one session. You can choose auto-stop setting when the measuring is stopped automatically after peak has been detected. It reduces the test time and prevents from delivering extra pressure to a healthy ear.

ACOUSTIC REFLEXES

Acoustic reflexes are measured ipsi- and contralaterally (through a headphone or insert earphone). The Automatic Gain Control function maintains safe and accurate intensity of stimulation for small ear canal sizes. Continuous monitoring and recording of middle ear immitance changes is performed in External AR mode. This mode allows recording acoustic reflexes induced by external stimulator that can be synchronized if it is connected to the plusTymp trigger input. This option allows measuring acoustic reflexes evoked by a cochlear implant.



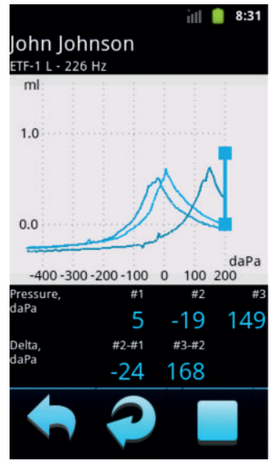


ACOUSTIC REFLEX DECAY

Acoustic reflex decay is defined as a decrease in acoustic reflex contraction during the sustained acoustic stimulation. Reflex decay test can be performed with ipsilateral as well as contralateral stimulation using a single TDH39 headphone or optional insert earphone (EarTone 3A and EarTone 3C).

EUSTACHIAN TUBE FUNCTION TEST

Eustachian tube function test can distinguish between normal and abnormal function of the Eustachian tube system. Intact eardrum can be tested with Eustachian tube function test using three tympanograms on one screen (normal, Valsalva maneuver and Toynbee test). For a patulous Eustachian tube testing you can use the External AR mode mentioned above.



NEURO-AUDIO-SCREEN MANAGER

Neuro-Audio-Screen Manager software allows managing the process of hearing screening and diagnostic testing done with the Audio-SMART device.

The program maintains a single database for all your Audio-SMART tests:

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

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

Windows

OS X

Android

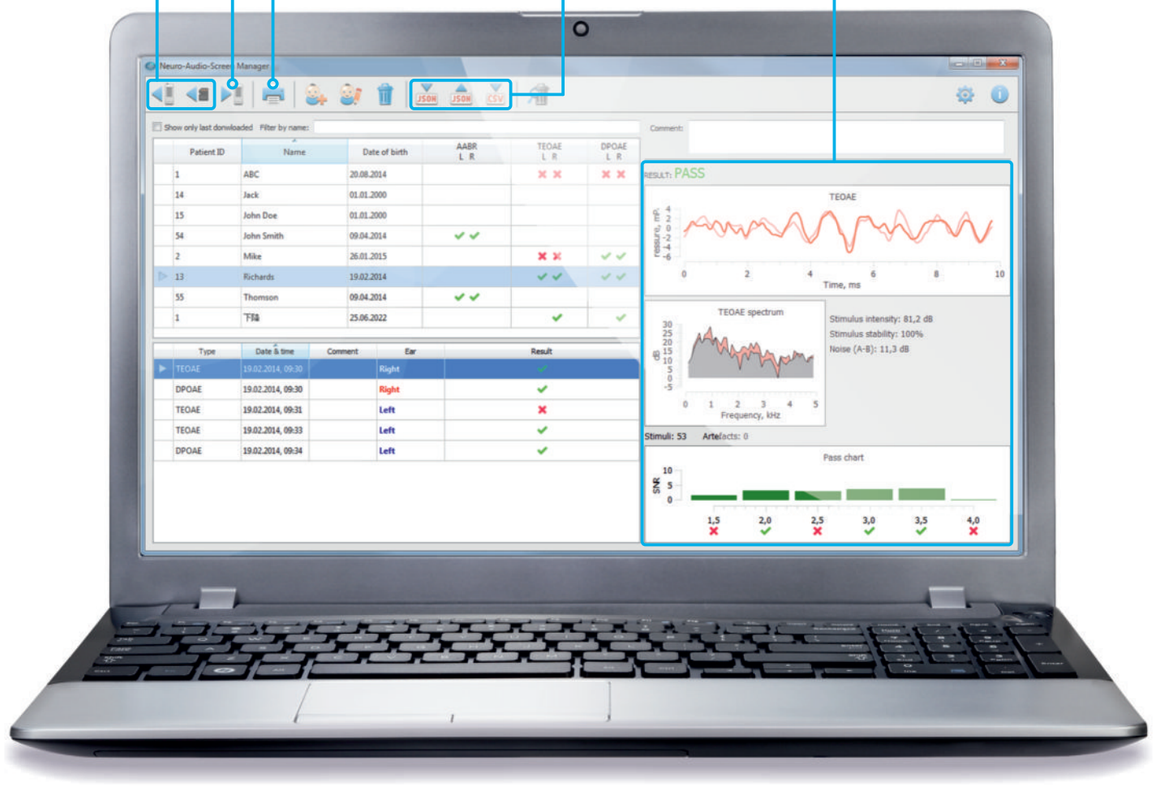
DATA DOWNLOADING VIA BLUETOOTH
OR FROM MICRO SD CARD

UPLOADING PATIENT LISTS

PRINTING OF REPORTS

DATA EXPORT TO JSON, CSV

REVIEW OF EXAM RESULTS



PORTABLE

Portable Audio-SMART device can be used to perform outpatient hearing examination. The device can function autonomously for a long time. The large memory allows saving almost unlimited number of records. The device and the accessories are kept in a specially designed ergonomic transportation bag.

WIRELESS THERMAL PRINTER

The exam results can be printed with wireless thermal printer via Bluetooth interface.

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

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