



For everyone

CA850/4A

Military screening
audiometer



Screening audiometry



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The definitive military screening audiometer designed to meet all current and future audiometric screening requirements.

For 90 years Amplivox has worked closely with hearing health professionals to design, manufacture, and develop reliable screening and diagnostic instruments.

By listening to their needs, we've delivered solutions that have not only met expectations, but exceeded them.

Designed specifically for military use, the CA850/4A screening audiometer is a reliable choice for medical professionals who require a vast range of screening modes.

Equipped with automated processes and in-built capacity to meet additional testing needs, the device supports screening programmes in the most effective manner.

Benefits

- Pre-qualify leads to ensure quality referrals
- Grow & diversify your business through increased testing
- Save time and resources without the need for an audiologist
- Easily assess hearing as part of a holistic health check
- Deliver a hearing screening service with no additional software, costs, or subscription fees

90
YEARS
amplivox



Testing

The Amplivox SiN test

Many command-and-control organisations are using tools to assess a subject's hearing ability in complex listening environments.

Pure tone audiometry (PTA) is used to measure hearing acuity where as Speech-in-Noise (SiN) testing can be used to measure hearing ability.

The Amplivox SiN test* is based on a Coordinate Response Measure (CRM) test and has been developed to assess the hearing ability of Authorised Firearms Officers as well as other command-and-control personnel with a proven ability to separate hearing ability levels.

The Functional Hearing Test (FHAS) is pre-built into the system, allowing for an efficient and remote upgrade as and when required.

*Developed in partnership with the University of Southampton and Civil Nuclear Constabulary

How does it work?

The SiN test assesses the effect of sensorineural hearing loss, as well as the subject's auditory processing ability.

It establishes the quietest level the subject can correctly hear a spoken command within background sounds reflective of real-life situations. This is done separately for each ear.

Subjects are tested in two simulated listening scenarios through standard audiometric headphones, with responses entered through a touch screen device.

One scenario simulates natural listening with background talking. The other simulates listening through a radio communication system with the sound of an engine running in the background.

What makes our SiN test different?

Our SiN test has been approved by the College of Policing.

The test is based on the British English Coordinate Response Measure (CRM) test (footnote), representing many police requirements with a simple command structure ("Ready [call sign] [number] go to [colour] now") whilst delivering an objective and repeatable assessment.

It assesses hearing loss and auditory processing using two highly relevant simulated listening scenarios as well as speakers with different accents, ensuring assessments are as accurate to real-life situations.

Footnote: <http://dx.doi.org/10.1080/14992027.2017.1317370>



Key features

Comprehensive testing

The device includes automatic (computer / Békésy) and manual operation options to measure and assess hearing thresholds in accordance with safety critical hearing standards.

With configurable options the test can be customised to the users' specific requirements, ensuring accurate and efficient testing. Designed to connect directly to a PC (automatic testing) or as a stand-alone manual audiometer (manual mode).

The CA850/4A also has built in configuration to be upgraded to a Functional Hearing Assessment System (FHAS) with Speech-in-Noise (SiN) testing.

Configuration options

The CA850/4A works with all Windows compatible devices and can be supplied with or without a dedicated computer.

Alternatively, the CA850/4A can be supplied with a laptop allowing for complete mobile testing, with features that can be restricted according to user requirements.

Cost savings

The CA850/4A reduces the need for additional hardware requirements such as printers, toners / ink cartridges and dedicated paper, making for a paperless audiometry workflow.

Results processing

The CA850/4A offers automated workflow management from patient information testing and results calculations, along with referral guidance. Test results are categorised according to PULHHEEMS and HSE standards.

To support different user requirements, the CA850/4A has additional results management options. Users can also select between different options at a later date if desired.

Standalone / No Database

For users who do not wish to maintain two databases or would like to maintain a standalone system, the CA850/4A software can operate without a database. Test results are automatically categorised and can be processed (Printed / PDF).

With Database

For those who wish to manage test results in a separate database as part of a Hearing Conservation Programme, users can use the supplied Amplivox database solution. This software allows for results processing, results comparisons, trending and automated recalls to support in the efficient delivery of a hearing conservation programme.

Third-party EMR Integration

The device can be integrated directly with many leading commercially available Electronic Medical Record (EMR) systems including Cority, Eopas, G2 and Cohort to provide a seamless audiometric test function.

The system can also be configurable to bespoke EMR applications typically used within the MoD.

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Technical specifications

Air conduction audiometry

Frequency range (kHz):	0.25, 0.5, 1, 1.5, 2, 3, 4, 6, 8
Frequency accuracy:	<1%
Distortion:	<2%
Output level range:	-10dBHL to 100dBHL $\pm$ 3dB
Output level step size:	Békésy: 2.5dB Computer: 5dB Manual: 5dB
Test method:	Manual and automatic audiometry PC controlled, Békésy, Computer (Hughson Westlake, BS6655)
Threshold level:	Békésy: 1dB, Computer: 5dB Manual: 5dB

Communication

Talk over:	Integrated
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System requirements (PC operated)

Operating system:	Stand alone PC with Windows 10 or higher
Memory:	Internal memory and available disc space as required by the PC operating system
Software:	Via USB cable to designated EMR systems
Interface:	USB

Physical data

Graphic display:	2 lines of 24 characters
Power:	Mains: 240Vac 50/60Hz
Dimensions (L x W x H):	252 x 170 x 65mm
Weight:	720g / 1.58lbs

Safety and standards

Safety:	IEC 60601-1 (plus UL, CSA & EN deviations)
EMC:	IEC 60601-1-2
Performance:	Type 2 (IEC 60645-1:2017), Type 3BE (ANSI S3.6:2010)
CE Mark:	Complies to EU Medical Device Regulation (MDR 2017/745)

Standard equipment

- Amplivox Audiocups (noise-reducing enclosures)
- Patient response switch
- Power supply with

Optional equipment

- USB portable power bank (external) (Audiocup or standard type)
- Ear cushion covers
- ER-75 electro acous-

