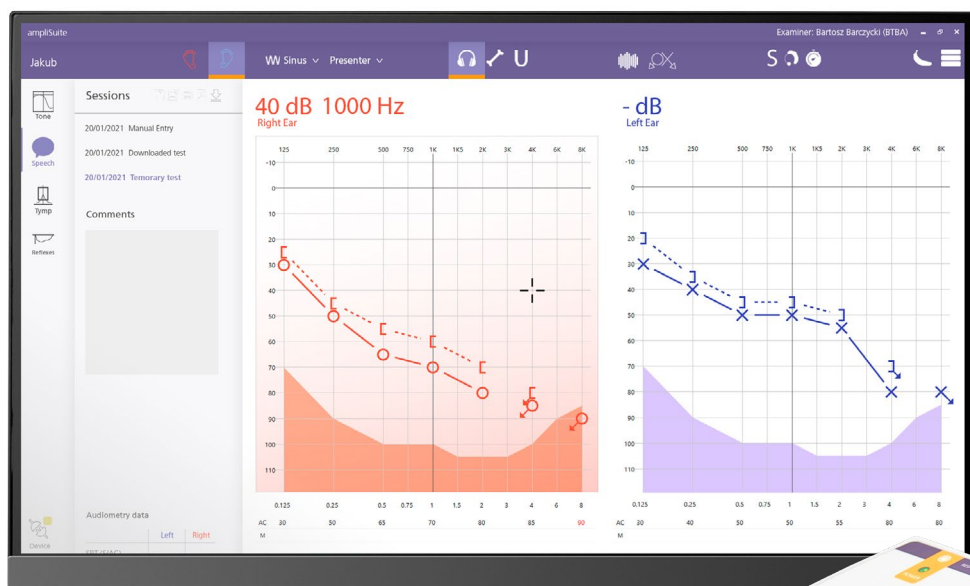




For everyone

# CA850/4A

Military screening  
audiometer



# CA850/4A

## Military screening audiometer

The definitive military screening audiometer designed to meet all current and future audiometric screening requirements. Efficient screening, automated processes and on-board capability for additional testing requirements, the CA850/4A supports screening programmes in the most efficient manner.

### Key features

- Configuration options available based on requirements
- Automatic and manual test modes (inc. Békésy test)
- PULHHEEMS and HSE categorisation
- Unique educational and assessment tools
- Extensive data analysis and trending
- Third-party EMR connectivity
- Communication channel
- Intuitive and ergonomic design
- Compact, lightweight and portable
- Speech-in-Noise (SiN) ready



## Configuration options

The CA850/4A works with all Windows compatible computer / tablet systems. Supplied without or without a dedicated computer, the CA850/4A can integrate with required IT configurations.

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 saving and reduced environmental footprint

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.

## Comprehensive testing

This automatic screening audiometer is a reliable choice for medical professionals who require a vast range of screening modes. It includes automatic (computer / Békésy) and manual operation options to measure and assess hearing thresholds in accordance with safety critical hearing standards.

It also has configurable options so 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.

A PC-based  
military screening  
audiometer



# 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 requirements, the CA850/4A offers additional results management options to optimise the user's requirements. Users are also able to 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.







# Functional hearing test ready

Many command-and-control organisations are using additional 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 the Amplivox SiN test work?

As part of the FHAS, the Amplivox SiN test assesses hearing ability in environments that have been replicated from real-life situations that police officers and service personnel might operate in.

This test establishes the quietest level at which a subject can repeatedly hear and understand a command in a complex listening environment. It consists of two parts which assess the effect of sensorineural hearing loss as well as auditory processing ability.

Commands are given within a relevant background noise through standard audiometric headphones, and the subject is required to enter their selection of variables through a visual display unit (VDU) such as a touchscreen tablet.

Ready callsign, number go to colour now

Bravo	Charlie	Delta
Echo	Hotel	Kilo
Lima	Oscar	Tango

1	2	3
4	5	6
8	9	10

Black	Blue	Brown
Gold	Green	Grey
Pink	Red	White

Press 'Start' to begin test

Start

Next

## What makes our SiN test different?

Our SiN test is based on a Coordinate Response Measure (CRM) test. This particular SiN test has been chosen because of its ability to represent many operational requirements with a simple command structure, whilst delivering an objective and repeatable assessment.

This SiN test assesses hearing alongside auditory processing performance within a variety of relevant background environments. It also assesses tests within a variety of communication formats, ensuring assessments are made based on complex listening environments which reflect real-life situations.

# CA850/4A

## Military screening audiometer

## 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 country adaptors
- Carry case
- Manual & software (available via website download)
- USB cable (PC connection)

### Optional equipment

- USB portable power bank (external)
- Ear cushion covers (Audiocup or standard type)
- ER-75 electro acoustic ear simulator
- Audiology booth
- Booth leads



For everyone

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The Amplivox policy is one of continuous development and consequently the equipment may vary in detail from the description and specification in this publication.

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