

# Otowave 302

## Tympanometer

The **Amplivox Otowave 302** is a desktop solution for reliable and objective middle ear measurements.

### Choice and functionality

There are 2 versions of the **Otowave 302** available, each designed to satisfy exacting clinical and screening measurement requirements.

- The **Otowave 302** (H-Option) features a comprehensive specification including user defined:
  - Probe tone impedance measurements at 226Hz and 1000Hz (scalar, vector and component measurements; admittance (Y), susceptance (B), conductance (G)).
  - Range of ipsilateral and contralateral reflex test measurements at 500Hz, 1kHz, 2kHz and 4kHz.
- The **Otowave 302** (Standard Option) provides 226Hz probe tone impedance measurements (scalar) together with a user programmable range of ipsilateral and contralateral reflex test measurements at 500Hz, 1 kHz, 2 kHz and 4 kHz.

### Recording results

The **Otowave 302** is very intuitive to use with clear on-screen information, which can be easily seen from a wide range of viewing positions. Results can be:

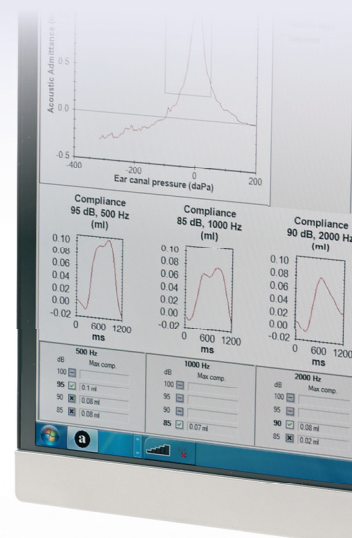
- saved within internal memory with a patient identifier
- printed via the optional portable thermal printer
- transferred to a PC using the supplied Amplivox TympView application for paper print and electronic document requirements
- transferred to the NOAH database using the supplied Amplivox NOAH Impedance module

### Usage and portability

The **Otowave 302** can easily be used in a static clinical setting, where its small size is of great benefit when clinic space is at a premium.

The **Otowave 302** is also supplied with a custom designed carry case for any potential mobile requirements.

- **Fast, accurate impedance measurements**
- **Intuitive use**
- **226Hz or 1000Hz tympanometry (H-Option)**
- **Optimised, user selectable measurement speeds**
- **Ipsilateral and contralateral reflex tests**
- **Easy to read large graphics display**
- **Portable**
- **PC connectivity and optional portable printer**



specialists in healthcare products

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### Technical specifications

#### User selected languages

- English
- French
- German
- Italian
- Portuguese
- Spanish

#### Tympanometry measurements

Probe tone level and accuracy:	226Hz +/-2%; 85dB SPL +/-2dB 1000Hz +/- 2%; 79dB SPL +/-2dB (H-Option) over ear canal volume range
Pressure range and accuracy:	+200daPa to -400daPa +/-10daPa or +/-10% (whichever is larger) over range 0.1ml to 5ml
Direction of sweep:	Positive to negative pressure
Volumetric range and accuracy:	226Hz: 0.2ml to 5ml 1000Hz: 0.1ml to 5ml +/-0.1ml or +/-5% (whichever is larger)
Analysis performed:	Admittance peak level in ml (226Hz) or mU (1000Hz) & pressure at peak; Gradient in daPa (for 226Hz); Ear canal volume (ECV)
Measurement sweep speeds:	Selectable: 100, 200 or 300 daPa/sec

#### Reflex measurements

Reflex type:	Ipsilateral, contralateral or both
Reflex frequencies:	Ipsilateral and contralateral: User-configurable. Selectable from: 500Hz, 1kHz, 2kHz & 4kHz (+/-2%)
Reflex levels (Max levels):	Ipsilateral: 70dBHL to 100dBHL (+/-3dB) Contralateral: 70dBHL to 110dBHL (+/-3dB)
Reflex detection threshold:	0.01ml to 0.5ml +/-0.01ml (configurable in 0.01ml steps)
Analysis performed:	Reflex maximum amplitude and pass/fail at each test level

#### Data management

Internal database:	36 patient records with patient record identifier
Printing direct to printer:	Optional designated high speed portable thermal printer
PC database interface:	The Amplivox NOAH Impedance module is supplied as standard for data transfer to the NOAH database using a USB connection
Viewing & printing from a PC:	The Amplivox TympView application is supplied as standard to transfer data to a PC using a USB connection for review and print

#### Physical data

Power:	Mains: 100-240Vac; 50/60Hz via Amplivox mains adapter (approved to medical safety standards)
Dimensions (mm):	270 wide x 175 deep x 70 high (excluding connections) Probe: 130 long x 25 (max) diameter
Weight:	302 tympanometer: 760g Probe: 115g (incl. connecting cable)

#### Standards

The **Otowave 302** conforms to the relevant clauses of the following standards

Safety:	IEC 60601-1 (including national requirements for US and Canada)
EMC:	IEC 60601-1-2
Impedance:	IEC 606045-5 Type 2 tympanometer ANSI S3.39 Type 2 tympanometer
CE mark:	Complies to EU Medical Device directive

#### Standard equipment

- Test cavities
- Starter pack of disposable ear tips
- Contralateral transducer
- Mains adapter
- USB cable
- CD with operating manual, Amplivox TympView and NOAH impedance module PC applications
- Carrying case

#### Optional equipment

- Portable thermal printer
- Rolls of thermal printer paper
- Additional quantities of disposable ear tips
- Additional probe tip

Authorized Distributor:  
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