# Otowave 202

Portable tympanometer

The Amplivox Otowave 202 provides fast, objective middle ear measurements to assist in identification of middle ear disorders.

## **Functionality**

The Otowave 202 features a comprehensive range of test functions including 226Hz impedance measurements and a programmable range of both ipsi and contra lateral reflex test measurements at 500Hz, 1kHz, 2kHz and 4kHz.

## Ease of use

When testing children, very fast, accurate middle ear measurements are essential. The advanced technology within the Otowave 202 makes this possible. The Otowave 202 is also very intuitive to use with on-screen information displayed before, during and after the automatic test. The compliance peak, compliance peak pressure, gradient, ear canal volume can be measured within seconds.

User-defined ipsi and contra lateral reflex test measurements can be easily added to the test sequence to ensure a comprehensive test routine that is completed in the minimum amount of time. This programmable function includes reflex selection, levels and sensitivity. The large display area facilitates a graphical display of the reflex response and a pass/fail result.

## **Recording results**

Results are displayed for review on a large high-resolution graphics display. Results can be:

- saved within internal memory with a patient identifier
- printed via an infra-red connection to the optional portable printer or PC designated printer via Tympview PC application
- transferred via USB to a PC/NOAH database using the optional Amplivox impedance module

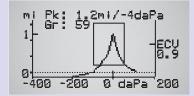
## Usage and portability

Lightweight and compact, the Otowave 202 is designed to be used both in a static clinical setting, or as a totally portable 'go anywhere' instrument where it can be used with either Alkaline or rechargeable batteries. For clinical settings the supplied mains adaptor may be used for convenience.



amplivox specialists in healthcare products

Fast, accurate impedance measurements



- **Programmable ipsilateral** reflex tests
- **Programmable** contralateral reflex tests
- **Totally portable**
- Intuitive use

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- **High resolution graphics** display
- **Optional portable printer** and PC interface

# **Otowave 202**

Portable tympanometer

# **Technical specifications**

#### **Tympanometry measurements**

Probe tone:	226Hz +/-2%; 85dB SPL +/-2dB
Pressure range:	+200daPa to -400daPa +/-10daPa or +/-10% (whichever is larger)
Direction of sweep:	Positive to negative
Volumetric range:	0.2ml to 5ml +/-0.1ml or +/-5% (whichever is larger)
Analysis performed:	Compliance peal level, compliance peak pressure level, gradient and equivalent ear canal volume

#### **Reflex measurements**

Reflex type:	Ipsilateral, contralateral or both
Reflex frequencies:	User defined – 500Hz, 1kHz, 2kHz and 4kHz (+\- 2%)
Reflex levels (ipsilateral):	70dBHL to 100dBHL +/-2dB (programmable in 5 or 10dB steps)
Reflex levels (contralateral):	70dBHL to 110dBHL +/-2dB (programmable in 5 or 10dB steps)
Reflex detection threshold:	0.01ml to 0.5ml (configurable in 0.01ml steps)
Analysis performed:	Reflex maximum amplitude and pass/fail at each test level

#### Data management

Internal database:	20 patient records with patient record identification
Electronic data storage (database PC requirements):	NOAH aud module Amplivox NOAH impedance module Transfer via USB cable/port
Printing:	Designated printer: high speed portable thermal printer Data transfer: Infra-red IrDA 9600 Baud Printing may also be completed via a PC with the relevant applications



Physical data	
Power:	Mains – Amplivox mains adapter (approved to medical safety standards) Batteries – 4xAlkaline AA or 4xNiMH (rechargeable >2.3Ah)
Dimensions (mm):	190 long x 85 wide x 40 high (excluding connections) Probe – 130 long x 25 (max) diameter
Weight:	330g (without batteries); 430g (with batteries) Probe – 110g (incl. connecting cable)

### Standards

The Otowave conforms to the relevant clauses of the following standards.

Safety:	EN60601-1
EMC:	EN 60601-1-2
Impedance:	EN60645-5 Type 2 tympanometer
CE Mark:	Complies to EU Medical Device Directive

# Equipment

#### **Standard equipment**

- Test cavities
- Operating manuale ear-tipsCarrying case
- Set of disposable ear-tips
  Carrying car
- Contralateral transducers
  Mains adapter
- 4 x 1.5V alkaline 'AA' batteries (UK only)

#### **Optional equipment**

- Amplivox NOAH impedance module
- USB cable
- Additional sets/quantities of disposable ear tips
- Amplivox Tympview PC application
- High speed portable thermal printer





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