



TIMPANI

Handheld tympanometer / Screening audiometer

DESCRIPTION

Timpani is a handheld screening tympanometer capable of performing automatic tympanometry exam as well as, optionally licensed, acoustic reflexes test and screening pure tone audiometry.

The device features a wide color display with touchscreen interface.

AVAILABLE TESTS

- Automatic Tympanometry @ 226 Hz (1000 Hz optional)
- Acoustic Ipsi-Reflex Test (optional)
- Automatic Test Sequence (tympanometry + reflex test, optional)
- Screening Pure Tone Audiometry (optional)

MIDDLE EAR ANALYZER SPECIFICATIONS

PROBE TONE

Frequency: 226 Hz

1000 Hz (optional)

Level: 85 dB SPL (@ 226 Hz)

75 dB SPL (@ 1000 Hz)

COMPLIANCE MEASUREMENT SYSTEM

Measurement range: 0.2 ÷ 8.0 ml (@ 226 Hz)

0.9 ÷ 16.0 mmho (@ 1000 Hz)

TYMPANOMETRY

Meatus compensated viewing mode

Single scan

Scan interval (choice): standard, from +200 to -400 a daPa
reduced, from +100 to -200 daPa

Safety limits: -750 daPa and +550 daPa

Scan rate: 400 daPa/sec

Auto start feature

ACOUSTIC REFLEX TEST

Ipsilateral stimulation, probe tone @ 226Hz

Pulsed stimulus for reduced artifacts

Exam modes available:

- Automatic threshold
- Fixed intensity

Exam pressure:

- Automatic, between tympanogram peak pressure and peak pressure minus tympanogram width (or ambient pressure, when no peak found)

AVAILABLE STIMULI AND LEVELS

Pure tones: 500Hz, 1000Hz, 2000Hz, 4000Hz

Attenuator step (selectable): 5 or 10 dB (automatic threshold)
5 dB (fixed intensity)

Minimum Intensity: 70 dB HL

Maximum intensity: 100 dB HL

AUDIOMETER SPECIFICATIONS

AVAILABLE OUTPUTS AND TRANSDUCERS

AC: supra-aural DD45, insert earphones ER-3C

AVAILABLE STIMULI AND LEVELS

Stimulus: pure tone (see table)

Attenuator step: 5 dB

Minimum Intensity: -10 dB HL

Maximum Intensity and available frequencies:

Frequency (Hz)	AC DD45 (dB HL)	AC ER-3C (dB HL)
125	70	70
250	90	90
500	100	100
750	100	100
1.000	100	100
1.500	100	100
2.000	100	100
3.000	100	100
4.000	100	100
6.000	100	100
8.000	90	90

DEVICE SPECIFICATIONS

PRINTER

Optional integrated Bluetooth thermal printer.

Paper dimensions: 58mm

CALIBRATION

Validity: 12 months

All the parameters set through a dedicated software.

COMPUTER INTERFACE

Connection: USB (driverless)

Compatible software: Inventis Maestro

DISPLAY

Type: Graphical color TFT LCD, capacitive touchscreen

Size: diagonal 2.8", 43.2 x 57.6 mm

Resolution: 240 x 320 x RGB

POWER SUPPLY

Internal battery: Lithium-Ion rechargeable battery

Battery life: >4 hours of continuous use

Main Unit: 5Vdc, 1.4A

External adapter USB dedicated: 100-240 Vac, 50/60 Hz, 0.3-0.15A, responding to EN 60601-1 standard

MECHANICS

Size (WxDxH): 65 x 44 x 240 mm / 2.6 x 1.8 x 9.5 in

Weight: 340 g / 12 oz

APPLICABLE STANDARDS

Impedance: EN 60645-5 Type 2, ANSI S3.39 Type 3

Pure tone audiometry: EN 60645-1 Type 4, ANSI S3.6 Type 4

Calibration: EN ISO 389-1, EN ISO 389-2

Electrical safety: EN 60601-1

EMC: EN 60601-1-2

CE CERTIFICATE

93/42/EEC classification: Class IIa

Classification rule (Annex IX, 93/42/EEC): 10

Notified body: TÜV SÜD Product Service GmbH (0123)

PRODUCT CODES

11440: Timpani – Handheld tympanometer

INCLUDED PARTS

- Main unit
- Assorted ear tips
- Medical grade power supply
- USB connection cable
- Carrying case
- User manual
- Inventis software suite

OPTIONAL EXTENSION PACKAGES

- 11504: 1 kHz probe tone license (for tympanometry exam)
- 11505: Reflex license – Basic (Stimuli @ 1 kHz)
- 11506: Reflex license – Plus (Stimuli @ 0.5, 1, 2, 4 kHz)
- 11507: Screening Pure Tone Audiometry (only AC) – without transducers

OPTIONAL ACCESSORIES

- 11508: Docking station for Timpani
- 11509: Bluetooth thermal printer for Timpani
- 11510: Pre-calibrated headset for PTA with Timpani (DD-45)
- 11511: Pre-calibrated insert earphones for PTA with Timpani (ER-3C)
- 11512: Patient response button for PTA with Timpani
- 10506: Calibration cavities

DISPOSABLES (with order code)

- 10488: White tips (diam. 6 mm) – Set of 30
- 10489: Pink tips (diam. 7 mm) – Set of 30
- 10490: Violet tips (diam. 8 mm) – Set of 30
- 10491: Green tips (diam. 10 mm) – Set of 30
- 10492: Red tips (diam. 12 mm) – Set of 30
- 10493: Blue tips (diam. 14 mm) – Set of 30
- 10494: Orange tips (diam. 16 mm) – Set of 30
- 10495: Light blue tips (diam. 18 mm) – Set of 30
- 10496: Yellow tips (diam. 21 mm) – Set of 30
- 10511: Box with assorted tips – Set of 160
- 10554: Cleaning brushes for the tympanometer probe
- 11517: Thermal paper for Bluetooth printer (box of 5 rolls)

Timpani is designed by:

INVENTIS s.r.l.

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