



# 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	60	70
250	80	90
500	90	95
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	90	80
8.000	85	70

## 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: more than 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 IEC 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: IEC 60645-5 Type 2, ANSI S3.39 Type 3  
Pure tone audiometry: IEC 60645-1 Type 4, ANSI S3.6 Type 4  
Calibration: ISO 389-1, ISO 389-2  
Electrical safety: IEC 60601-1  
EMC: IEC 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 with cleaning brush
- USB cable
- Medical grade USB power supply
- Carrying case
- User manual

### 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

- 11510: Headset for PTA with Timpani (DD45)
- 11511: Insert earphones for PTA with Timpani (ER-3C)

### OPTIONAL PARTS

- 10506: Calibration cavities
- 11508: Docking station for Timpani
- 11509: Bluetooth thermal printer for Timpani
- 11512: Patient response button for PTA with Timpani

### 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
- 11517: Thermal paper for Bluetooth printer (box of 5 rolls)
- 10554: Cleaning brushes for the tympanometer probe

Timpani is designed by:

#### INVENTIS s.r.l.

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