

# r36m<sup>PT</sup>

CLINICAL MULTIFREQUENCY  
MIDDLE EAR ANALYZER



## PRODUCT SPECIFICATIONS

SKU: 4300102830

### GENERAL SPECIFICATIONS

#### DIMENSIONS AND WEIGHT

- L x W x H: 370 x 290 x 180 mm
- Net weight: 3.5 kg

#### TEST TYPES

Tympanometry, Acoustic Reflex, Reflex Decay, nr. 3 Quick Tests, Acoustic Reflex Latency Test (ARLT), ETF (Intact, Perforated and Patulous), Special tests (Growth-DLI and Non-acoustic), Multifrequency Tympanometry

#### DISPLAY

- 7" TFT Color display

#### USER INTERFACE

- Multilingual

#### PRINTER

- External fast thermal printer available as optional

#### REPORTS

- pdf report created directly from the device and stored on USB Pen drive with possibility to add patient data and tests comments via the USB Keyboard (optional)
- Data transfer to PC using Resonance Management Data Suite

#### "CHILDREN" FEATURE

- To help keep the child involved while running a test, a series of animated images appears on the color display

#### DATA TRANSFER TO PC

- Via cable through USB port

#### COMMUNICATION PORT

- Nr.1 USB host type A
- Nr.1 USB slave type B

#### WINDOWS® COMPATIBLE SOFTWARE

- Resonance MDS Management Data Suite

### POWER

#### POWER SUPPLY

- 110 - 240 V AC 50/60 Hz 40 VA
- Fuses: 2 x T 1 A L 250 V

#### CONSUMPTION

- Max current: 0.15 A
- Power consumption: 40 VA

### ENVIRONMENTAL

#### OPERATING ENVIRONMENT

- Storage: -20° C up to +50° C
- Operating: +15° C up to +35° C
- Humidity: up to 90%, (non-condensing)
- Ambient pressure: from 700 hPa up to 1060 hPa

### TYMPANOMETRY OPERATING SPECIFICATIONS

#### PROBE TONE

- 226 Hz for Admittance (Y) curve tympanometry
- 1000 Hz for Admittance (Y) curve tympanometry with added Susceptance (B) and Conductance (G) curves

#### INTENSITY

- 226 Hz: 85 dB SPL  $\pm$  2dB
- 678, 800 and 1000 Hz: 75 dB SPL  $\pm$  2 dB
- Frequency Accuracy:  $\pm$  0.5%
- Harmonic distortion: Less than 1%

#### ADMITTANCE MEASUREMENTS

- Compliance range at 226 Hz: 0.05 up to 7 ml
- Sensitivity scale: Autoscale to appropriate range; available scale at 226 Hz: 1.5, 2, 5 or 7 ml
- Compliance range at 678, 800 and 1000 Hz: 0 to +25 mmho
- Sensitivity scale HF: Autoscale to appropriate range, available scales at 678, 800 and 1000 Hz: 5, 10, 15, 20, 25 mmho

#### AIR PRESSURE

- Control: Automatic and Manual
- Range: from +400 up to -600 daPa adjustable in 50 daPa steps
- Pressure accuracy:  $\pm$ 10 daPa or  $\pm$ 10%
- Sweep rate: 50, 100, 200, 300 daPa/sec and automatic
- Indicator: Measured value is displayed
- Safety limitations: -800 up to +600 daPa

#### EUSTACHIAN TUBE FUNCTION

- ETF test for use with both intact and perforated eardrums
- Available also test for patulous tympanic membrane

#### ACOUSTIC REFLEX TESTS

- Reflex test method: Threshold, Automatic, Manual
- Stimulus duration: 0.5, 1 or 2 sec.
- User selectable protocols for all test methods
- Ipsi or Contralateral stimulation for all reflex test
- Automated peak search functions available for all test methods
- Manual Reflex: Pump manual control of all stimuli
- Reflex Decay: Threshold, Automatic, Manual
- Stimulus duration: 10 or 20 sec.
- ARLT: Threshold, Automatic, Manual
- Stimulus duration: 1 sec. fixed
- Non-Acoustic: 10/20 sec.

#### FREQUENCIES AND INTENSITY RANGES

- Ipsilateral:
- Pure tone level range (dB HL) from 50 to 110
  - Noise level range (dB SPL) from 50 to 100
  - Frequency: 500, 1000, 2000, 3000, 4000 Hz
  - Noise: BBN, HP or LP
  - Frequency accuracy:  $\pm$ 1%
  - Harmonic distortion (THD): less than 3%

Contralateral:• Pure tone level range (dB HL) from 50 to 120

- Noise level range (dB SPL) from 50 to 115
- Frequency: 250, 500, 1000, 2000, 3000, 4000, 6000, 8000 Hz
- Noise: BBN, HP or LP
- Frequency accuracy:  $\pm$ 1%
- Calibration accuracy  $\pm$ 3 dB
- Level steps: 1, 2, 5 or 10 dB
- On/Off ratio: 70 dB minimum

### QUALITY SYSTEM

Manufactured, designed, developed and marketed under an ISO 13485, ISO 9001 certified quality system. Medical CE mark and FDA approval.

### COMPLIANCE/REGULATORY STANDARDS

Designed, tested and manufactured to meet the European and International Standards:

- MDD 93/42/EEC and its revised versions: Class IIa (as referred to in Annex IX, rule 10 of said MDD 93/42 EEC )
- Safety: IEC 60601-1, 3rd edition, Class 1 Type B
- EMC: IEC 60601-1-2
- Impedance: IEC 60645-5/ANSI S.3.39 Type 1

### STANDARD ACCESSORIES

- Probe HF Multifrequency
- Headband and probe handle
- Probe cleaning tool kit
- DD45 for Contra
- Insert for Contra
- Kit of assorted ear tips
- Calibration cavity with probe holder
- Device dust cover
- Multilingual Quick user's handbook
- Pen Drive
- USB cable device to PC
- Resonance® MDS software with NOAH® module included
- Power supply cable (110 – 220 V)
- Spare fuse

### OPTIONALS

- External USB Keyboard
- External fast thermal printer
- Carrying bag

Resonance makes no warranty, nor assumes any legal liability or responsibility for the accuracy, typing errors or mistakes, correctness or completeness of any information in this datasheet. The information in this datasheet was correct to the best of our knowledge at the time of printing.