resonance ®

r17a HDA 280

SCREENING PORTABLE TOUCH SCREEN AUDIOMETER

PRODUCT SPECIFICATIONS

GENERAL SPECIFICATIONS

DIMENSIONS AND WEIGHT
- L x W x H: 180 x 135 x 41 mm
- Net weight: 450 g.
- Body material: self-extinguishing ABS

TEST TYPES
Pure Tone test, Speech Test (performed with on-board recorded speech material), Autothreshold, Resonance Play Audiometry (optional)

DISPLAY
- 7" TFT Resistive touch screen display
- 800 by 480 resolution at 133 pixels per inch (ppi) 262K colors

USER INTERFACE
- Intuitive icon system

REPORTS
- Data transfer to PC with Resonance Management Data Suite installed

DATA TRANSFER TO PC
- Bluetooth 2.1

USB PORT
- Nr.1 USB host type A
  (pen drive connection for software upgrade)
- Nr.1 mini USB slave
  (for patient response connection)

WINDOWS® COMPATIBLE SOFTWARE
- Resonance MDS Management Data Suite

MAIN SYSTEM COMPONENTS
- Operative system: Microsoft® Windows® Embedded Compact
- CPU: TEGRA® 2 dual core @ 1Ghz

POWER

POWER SUPPLY
- Built-in 3.6 V/3.1 Ah rechargeable lithium-ion battery
- External Medical power supply/charger:
  Input 100 - 240 Vac / 0.3 A - 50/60 Hz; Output +5 Vdc / 2 A

CONSUMPTION (WITH RECHARGEABLE BATTERY)
- Up to 3 hours of testing working on speech test modality.
- Charge time with external medical power supply: up to 80% in 2 hours

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

AUDIOMETRY OPERATING SPECIFICATIONS

RANGE
- Frequency range (AC):
  125 - 12500 Hz
- Frequency range (BC):
  250 - 6000 Hz
- Range stimuli level -10 up to 110 dB HL
- Range stimuli level BC: -10 up to 70 dB HL

ACCURACY
- Frequency < 0.5%
- Distortion < 1%
- Crosstalk >70dB
- Attenuator linearity 1 dB per 5 dB step, max 3 dB whole range

TYPE OF SIGNALS
- Pure tone: sine wave from 125 to 12.5 Khz
- Warble: +/- 5% frequency sine wave modulated, modulation: sine wave 5 Hz
- Narrow band noise: 24 dB/oct filtered noise
- Speech noise: 1 khz 12 dB/oct filtered noise
- White noise
- Speech material recorded on internal SD-card
- On/Off rise – fall time: 40msec

OUTPUT TRANSDUCERS
- ACR, ACL: HDA280 headphones. IP30 (optional)
- BC: B71W

STIMULUS PRESENTATION MODALITY
- Presentation: Normal
- Modality: Steady, Pulsed (rate 2 Hz)
- dB step variation: 1 dB, 2 dB, 5 dB.

QUALITY SYSTEM

Manufactured, designed, developed and marketed under an ISO 13485, ISO 9001 certified quality system. Medical CE marks 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 II Type BF
- EMC: IEC 60601-1-2
- Audiometer:
IEC 60645-1and ANSI S3.6: Type 3
IEC 60645-2 (only for the functions regarding the speech test; the device is not an A or B model)
- RoHS II compliant

STANDARD ACCESSORIES

- HDA280 headphones
- B71W bone conductor
- Built in talk over microphone for patient communication
- Patient response push button
- Multilingual Quick user's handbook
- Resonance® MDS software
- Medical Power supply (100 Vac – 240 Vac)
- Carrying bag
- Charging Cradle
- Pen Drive (with Multilingual Quick user's handbook)
- Touch screen pen

OPTIONALS

- External USB Keyboard
- IP30 Insert headphones
- Pediatric Headset (AC or BC)
- Resonance Play Audiometry for children
- VTMR Audiometry test for adults
- Wi-Fi thermal printer

RoHS 2 COMPLIANT