



# r140

PORTABLE OAE  
HEARING SCREENER



## PRODUCT SPECIFICATIONS

### GENERAL SPECIFICATIONS

#### DIMENSIONS AND WEIGHT

- L x W x H: 180 x 135 x 41 mm
- Net weight: 450 g
- Case: self-extinguish ABS UL 94 V0

#### DISPLAY

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

#### DATA TRANSFER

- Bluetooth 2.1
- Via USB cable

#### COMMUNICATION PORT

- No. 1 USB slave
- No. 1 USB host

### COMPLIANCE/REGULATORY STANDARDS

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

- EN 60645-6
- Safety: EN 60601-1
- EMC: EN 60601-1-2

### ENVIRONMENTAL CONDITIONS

#### OPERATING ENVIRONMENT

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

### POWER

#### POWER SUPPLY

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

#### BATTERY LIFE (RECHARGEABLE BATTERY)

- Up to 3 hours of continuous testing
- Charge time with external medical power supply:  
80% in 2 hours. Charging cradle provided as a standard.



### TEOAE

#### SAMPLE RATE

- 24 bit 44,1ksp/s

#### STIMULUS RATE

- 66 Hz

#### WINDOW OF ANALYSIS

- 512 samples (3 - 15 ms)

#### STIMULATION

- non-linear click

#### ACQUISITION BANDWIDTH

- from 750 Hz to 5 kHz

#### ARTEFACT LEVEL

- from 20 to 60 dB SPL

### TEOAE PROTOCOLS

Type	Frequencies	Averaging Time (s)	Pass SNR (dB)	Passing frequencies for test Pass
Screening	1, 1.5, 2, 3, 4 kHz	30 - 75	3, 6, 9, or 12	2 - 5
Diagnostic	1, 1.5, 2, 3, 4 kHz	30 - 75	3, 6, 9, or 12	2 - 5

3 configurable protocols  
Stimulus intensity: 70 - 90 dB pe SPL

## DPOAE

### FREQUENCY RATIO F2/F1

• 1,22

### ARTEFACT LEVEL

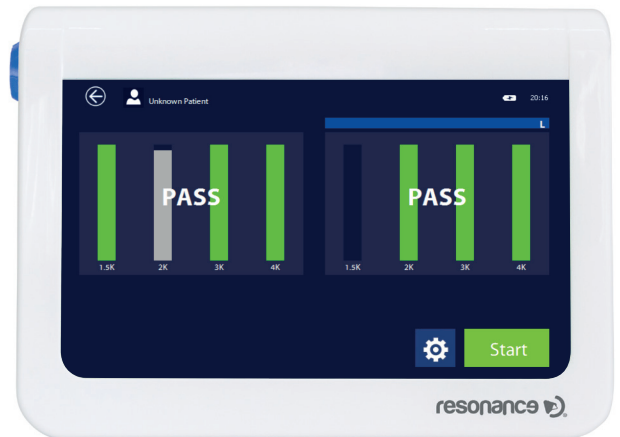
• from 0 to 40 dB SPL

## DPOAE PROTOCOLS

Type	Available frequencies	F2 Frequencies (kHz)	Pass SNR (dB)	Passing frequencies for test Pass
Screening	2 - 6	1.5, 2, 2.5, 3, 3.3, 4, 4.5, 5, 5.6, 6	3, 6, 9 or 12	2 - 6
Diagnostic	Up to 15	1.5, 2, 2.5, 3, 3.3, 4, 4.5, 5, 5.6, 6 6.6, 7, 8, 10, 12 Selectable by the user	3, 6, 9 or 12	2 - 15

3 configurable protocols  
L1/L2: Stimulus level F2

Average Time (per frequency): Automatic or 2, 4, 8, 16s



## MEASUREMENT TYPES

Screening and Diagnostic Testing

### TEOAE

• 0.7 to 5 kHz, Stimulus 70-90 dB pe SPL

### DPOAE

• 1.5 to 12 kHz, 30 to 70 dB SPL

### PROBE

- Connector: LEMO push-pull, circular
- Description: - Integrated microphone and receivers in probe head  
- Calibration data stored in the probe
- Cable length: 130 cm
- Weight: 5 g
- Ear tips: Disposable multi-size  
Resonance ear tips

## CRADLE

For battery charging and desktop use

## DATA

Over 1,000 tests in the unit  
Internal database: Available and with possibility of reviewing test results  
Transfer to PC: via Bluetooth 2.1  
via USB cable

## STANDARD ACCESSORIES

- OAE Probe
- Medical Power supply
- MDS Software suite
- Disposable Ear Tips starter kit
- Calibration Cavity
- User's Manual
- Carrying bag
- Pen Drive
- Touch screen pen

## OPTIONALS

- Wi-Fi printer
- External keyboard
- RE-VO USB Video otoscope
- Wallmount kit

## r140 CONFIGURATION OVERVIEW

The r140 is available in 5 different configurations. The available protocols for each configuration are summarized below:

	r140 TEOAE Screener	r140 DPOAE Screener	r140 TEOAE Advanced Screener	r140 DPOAE Advanced Screener	r140 TE/DPOAE Advanced Screener
SKU	4300103010	4300103015	4300103030	4300103040	4300103050
TEOAE SCREENING	●		●		●
TEOAE DIAGNOSTIC			●		●
DPOAE SCREENING		●		●	●
DPOAE DIAGNOSTIC				●	●