

audioscan®

PC Werth  
**AUDIOLOGY**  
equipment

## RM500 SL

Hearing Instrument Fitting System  
Fit Counsel Verify



audioscan®

PC Werth  
Advanced Sound Technologies

## RM500 SL

Hearing Instrument Fitting System  
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## Best Science, Best Fit™

### The Best Science Means The Best Fit

And the best fit is the key to building your practice. Audioscan's easy to use Speechmap® fitting environment ensures the best fit by utilizing the only available properly controlled and analysed speech signal...which is also repeatable for accurate comparison. This exclusive scientific method is your best fit guarantee.

### You can take it with you

Other hearing instrument fitting systems claim to be portable, offering cases, bags, and even wheels! The RM500 SL is the portable champion. Unplug it, close it and go. It has an extremely durable case and the frame is constructed of custom aluminum casting to ensure toughness and low weight.

**If you need portability you need an RM500 SL.**



### All New Features

- 12.1" colour display
- Battery drain test\*
- Built-in telecoil test
- Sensory Loss Simulator™
- All new, easy to use keypad
- Open fit protocol for valid and accurate open fittings
- DSL®5 and NAL-NL1 fitting methods
- Choose from calibrated real speech, tone, or noise stimuli
- Valid for all types of instruments and fittings including open type fittings
- Easily re-enter audiometric data using the optional scanner\*\*
- Nearly 40% smaller than the original RM500!

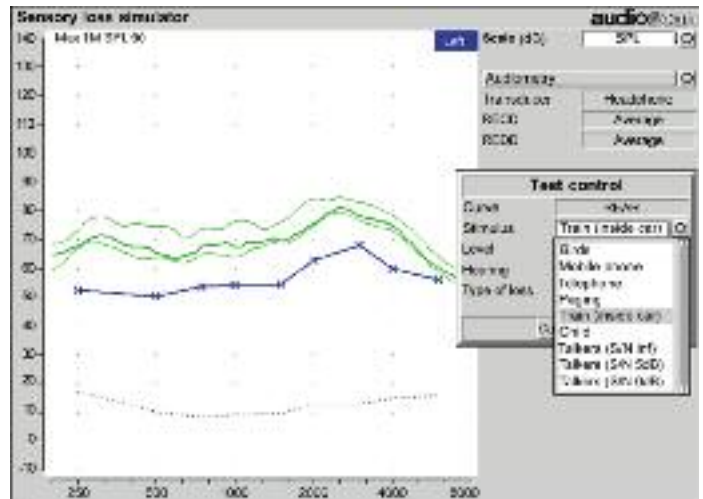
\* Battery drain testing requires battery pills

\*\* The scanner may be purchased as an accessory

### What Makes Audioscan Different?

#### Sensory Loss Simulator™

Other currently available devices only simulate an ear plug – simply applying a linear loss across all frequencies. The Audioscan SLS is the first cochlear hearing loss simulator available in a hearing instrument fitting system....accurately simulating a non-linear loss for the first time.



**This breakthrough simulator can apply a linear or non-linear loss in real time to your client audiogram which makes it an invaluable counseling and selling tool.**

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## RM500 SL

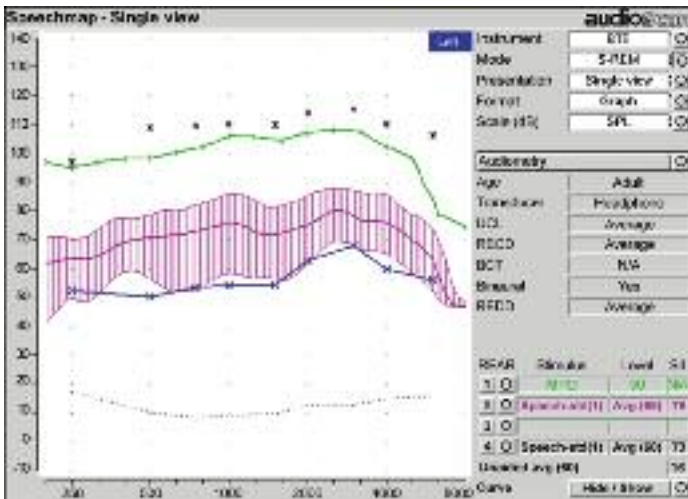
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### What Makes Audioscan Different?

#### Speechmap®

Speechmap is a unique fitting environment that provides a variety of digitally-recorded real-speech signals and also allows the use of live speech. These recorded speech passages ensure that your measurements are repeatable. The speech passages are also controlled in real time to produce a calibrated spectrum in the sound field and the test box. DSL, NAL-NL1 and the Speech Intelligibility Index all assume specific spectra for speech. If this specific spectra is not applied significant errors will result.



The Audioscan Speechmap system is the only system available that delivers the appropriate speech signal, properly analyzed.

### FM systems easily fit in the large test box.



A test box bigger than that of most desktop units and a refined user interface means portability and ease-of-use are no longer mutually exclusive.

### Do you need an Audioscan Verifit or SL?

Feature	RM500 SL	Verifit®
Real Speech (Calibrated)	√	√
12.1" Colour Display	√	√
Dual Probes	-	√
Patented Directional REM Test	-	√
Patented Directional HIT Test	-	√
Telephone Magnetic Field Simulator	√	√
Integrated Carrying Case	√	-
Integrated Battery Drain	Accessory	√
Network Ready	√	√
Soundbox (Integrated)	31 square inches	53 square inches
Barcoded Audiometric Data Entry	Accessory	Accessory
DSL®5	√	√
NAL-NL1	√	√
RECD Transducer	Accessory	√
Speechmap®	√	√
Integrated Probe Monitor	-	√
External Monitor Capability	-	√
External Speaker Capability	-	√
Sensory Loss Simulator™	√	√

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## Specifications

### General

Overall dimensions.....	15.5"x12.75"x4.25"
Weight.....	15lb
Display type.....	fluorescent backlit active colour
Display size.....	12.1" diagonal
Resolution.....	800x600 (SVGA)
Printer type.....	thermal line printer
Printer resolution .....	200 dots per inch
Paper width.....	3" (80 mm)
Power Amplifiers.....	2
Stimulus channels.....	2
Measurement channels.....	1
Connectors.....	1 USB
	1 Ethernet (RJ45)
	1 RS232 serial (9D)
	2 auxiliary audio outputs (1/4" mono)
	1 RECD transducer (3.5mm st)
	1 test chamber ref mic (3.5mm st)
	1 coupler microphone (3.5mm st)
	1 battery substitute (3.5mm st)
	1 real-ear mics (3.5mm st)

### Probe Microphone Measurement

Speakers.....	1 x 2" x 3"
Probe microphone tube.....	Silicone 1.0 mm diameter x 75 mm
Probe microphone noise floor .....	(200-8000 Hz): <45 dB SPL
Frequency range.....	200-8000Hz
Test Stimuli frequency-modulated tone, tone-burst, pink noise, calibrated speech	
Frequency modulation.....	triangular +/-5% at 36 Hz
Test stimulus level for tones.....	40-85 dB SPL in 5 dB steps
Test stimulus accuracy at reference mic. for tones (200 - 2000 Hz).....	+/- 1.5 dB SPL
Test stimulus accuracy at reference mic. for tones (2000 - 8000 Hz).....	+/- 2.5 dB SPL
Equalization method.....	pressure method
Analysis frequencies per octave (tones).....	12
Analysis bandwidth (speech, noise).....	1/3 octave
Measurement accuracy at 1 kHz.....	+/- 1dB
Measurement accuracy re 1 kHz	
	+/- 1 dB (200-5000Hz)
	+/- 2.5 dB (5000-8000Hz)
Battery drain resolution.....	+/- .01 mA
Measurement range.....	20-135 dB SPL (200-2500 Hz)
	30 -140 dB SPL (2500-8000 Hz)

### Other tests available

Real-ear harmonic distortion  
 Real-ear spectral analysis  
 Manual measurement of output, gain and distortion

### Fitting methods available

Speechmap with DSL, NAL-NL1  
 Insertion gain with NAL-RP, NAL-NL1  
 Fig 6, Pogoll, Berger, Libby

### HIT Chamber

Working space.....	8.8"x 3.5"x 1.5"
Test box isolation @ 1kHz.....	>25dB
Speaker.....	1-2"x3"
Induction coils	
	1 Telephone Magnetic Field Simulator (TFMS ANS1 S3.22 - 2003)
Battery simulator.....	per ANSI S3.22 - 2003
Frequency range.....	200 - 8000 Hz
Coupler microphone noise floor.....	(200 - 8000 Hz): <40 dB SPL
Test stimuli.....	tone, pink noise, calibrated or live speech
Test stimulus levels.....	40 to 90 dB SPL in 5 dB steps
Test stimulus levels (inductive).....	31.6mA/m per ANSI S3.22 - 2003
Test stimulus distortion	
	<2% at 90 dB SPL
	<0.5% at 70 dB SPL
Test stimulus accuracy at reference mic for tones (200-2000 Hz).....	+/- 1.5 dB SPL
Test stimulus accuracy at reference mic for tones (2000-8000 Hz).....	+/- 2.5 dB SPL
Equalization method.....	pressure method
Analysis frequencies per octave.....	12
Analysis filter bandwidth.....	1/12 octave
Measurement accuracy at 1 kHz.....	+/- 1 dB
Measurement accuracy re 1 kHz	
	+/- 1 dB (200-5000 Hz)
	+/- 2.5 dB (5000-8000 Hz)
Measurement range.....	30 - 140 dB SPL
Harmonic distortion measurement.....	2nd and 3rd or 2nd plus 3rd
Harmonic distortion range.....	200 - 4000 Hz
Harmonic distortion accuracy.....	+/- 1%
Battery drain range.....	0 - 20 mA
Battery drain accuracy.....	+/- 5%
Battery drain resolution.....	+/- .01 mA

Full-on Gain  
 Reference Test Gain  
 Frequency Response  
 Frequency Range  
 Maximum OSPL90  
 Harmonic Distortion  
 Attack & Release time  
 Equivalent Input Noise  
 Input/Output Curves  
 Coupler SPL - Telephone Simulator  
 Simulated Telecoil Sensitivity  
 Battery Drain

### Other Tests Available

Coupler SPL vs frequency  
 Coupler gain vs frequency  
 Spectral analysis  
 Distortion vs frequency  
 Manual measurement of output, gain and distortion

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