

Affinity^{2.0}
Hearing Aid Fitting



Affinity^{2.0}
- The professional fitting solution



Interacoustics[®]

Leading diagnostic solutions

Affinity^{2.0}

Hearing Aid Fitting

The concept

The Affinity^{2.0} is a powerful and stylish instrument that interfaces with a full range of integrated audiologic software modules on your laptop or desktop PC. This combination of hardware and software make the Affinity^{2.0} the perfect instrument for hearing assessment, hearing aid fitting and patient satisfaction.

Modules – your security for the future

- Audiometry (basic & advanced)
- Hearing Aid Testing
- Real Ear Measurements
- Visible Speech

As new hearing aid technologies evolve – so will the Affinity^{2.0}. The Affinity^{2.0} modules will be upgraded as new stimuli or other advanced techniques become available. All associated patient records in are stored through NOAH or through our own database program called OtoAccess. Both programs are networkable.

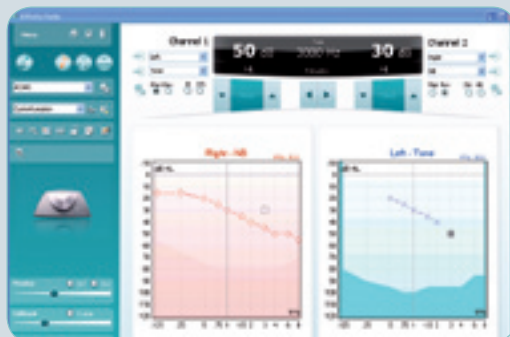
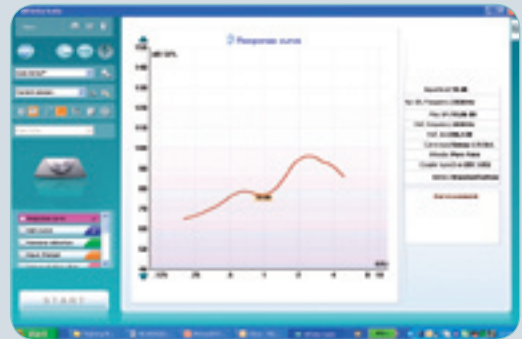
A complete package

Affinity^{2.0} has speech, tone and noise stimuli with a wide range of options. All the necessary hardware accessories are included with each module and are engineered to the highest standards. Every accessory has its own dedicated outlet, so there is no need to unplug devices between activities.

Input and Output – your own designs

Printed reports are user designed through a print wizard and include a complete set of default reports.

Data can be imported into the system, a feature used by dispensing chains to distribute standard tests to their stores and by dispensers to download specifications from a manufacturer. Output from Affinity^{2.0} is in PDF or XML format depending on the purpose.



The Affinity^{2.0} is available with audiometry, real ear measurement, visible speech and hearing aid testing software modules.

Sales and Counseling

A Visible Speech module is available with the Affinity^{2.0} to assist you in educating the client and family members on the complexities of hearing aid amplification and the benefits they will receive. Client decisions on cost/benefit may hinge on their comfort level during the educational process and Visible Speech technology will have a positive influence on their total hearing aid selection experience.

Personal settings and protocols

The new generation of Interacoustics products permit personalized test configurations to match your clinical needs. The Affinity^{2.0} includes a set of tests that may be modified to quickly get you up and running to your own standards and stored for future use.

These user defined protocols are saved under a unique name for easy recall via a drop down menu. This enables multiple users to make test selections that are suitable for their own applications. Larger clinics or dispensing facilities will find this feature useful as these protocols can be downloaded and transferred to these sites over the internet.

Tracking changes

Adding your observations to test results is often valuable when clients make repeat visits or have special needs. In addition, the integrated database allows results from different dates to be displayed together. This saves time when troubleshooting a hearing aid and is important when monitoring the progression of hearing loss in a client. Comparisons can be both onscreen and printed in reports.



Affinity^{2.0}

- *Modular and upgradeable*
- *User designed output*
- *Personal settings*
- *Sales & Counseling tools*



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Affinity^{2.0}

Hardware

Design and quality

All in one solution

The Affinity^{2.0} combines all the elements of audio-metry, HIT and REM into an appealing and compact design. The attention to detail and quality provides you with assurance in the reliability of your results.

Easy access test chamber

The Affinity^{2.0} test chamber is ergonomically designed to that permit easy access for placement of hearing aids, couplers and accessories.

High quality parts

Couplers are engineered of high quality stainless steel to ensure a lifetime of use. A unique 'snap on' coupling ring allows quick and easy interchanges between couplers.

A rear storage compartment helps keep components organized and out of the way.

Dedicated outlets

Dedicated input and output connections reduce the need for swapping cables at any point in your evaluations. A hinged cabling cover maintains a professional appearance in your office.

Portable

An optional hard cover case adds portability to Affinity^{2.0}'s many functions. Ideal for the dispensers who make home visits or distribute their time among a number of clinics or institutions. The specially designed case carries Affinity^{2.0} and all accessories.



Hardcover carrying case.



Easy access built in test chamber

Affinity^{2.0} Hardware

- All in one solution
- Easy access test chamber
- High quality parts
- Dedicated outlets
- Portable

Affinity^{2.0}

HIT440

Hearing Instrument Testing

The HIT440 provides current ANSI diagnostic measurements for comparison to manufacturer specifications. User defined protocols are easily configured to evaluate specific hearing aid characteristics and performance. A wide range of stimuli including ICRA signals are available to test the newest in non-linear hearing aids.

- **Endless loop testing** for suspected intermittent faults
- **Directional microphone testing**
- **Built-in test sequences**
- **Compatibility with TBS25** (greater attenuation)
- **Historical sessions for comparison**
- **Report Page**
- **Customization**

Additional features

- Tests all types of hearing aids
- NOAH compatible
- Variable smoothing of curves
- Telecoil testing
- Manual override
- Import/Export of protocols.
- Wide Range of test stimuli



HIT440

- *Directional microphones*
- *Customization of setup*
- *Report page*
- *Historical session*
- *Built-in test sequences*



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Affinity^{2.0}

REM440

Real Ear Measurement

The REM440 software module performs real ear measurement and associated functions for the Affinity^{2.0}. The software has a wide range of functions for verifying hearing aids, including the increasingly popular open fit instruments. A powerful sales and counseling tool (VSP) is available to supplement fitting of hearing aids.

Open fit capability

The Calibrate for Open Fit function (substitution method) handles the new trend of open fittings seen in products like Oticon Delta, Phonak Micro Savia and Widex Passion. It provides a wide range of settings and stimuli for testing non-linear hearing instruments.

RECD and normative data

RECD is of increasing importance as more babies with hearing loss are identified because of neonatal hearing screening. Specially designed components enable a rapid test fitting of children whose attention span is very short.

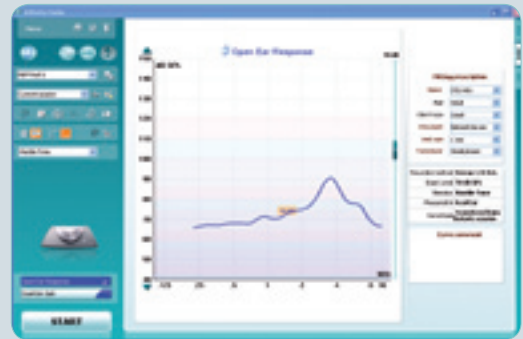
In cases where measurement of REUR and RECD is not practical, REM440 provides age related normative data to approximate these values. This can be used to avoid stress in the evaluation (e.g. with tired infants).

Concurrent operation

The REM440 can be open at the same time as other fitting applications to enable smooth adjustment and verification of the hearing aid.

User protocols and customization of setup

You can design user protocols for different categories of client (e.g. adults and or children) or different clinicians using the Affinity^{2.0} can design their own protocols. Or you can use specific aid types. This will often save you significant time and is more convenient. User protocols are stored on a drop down menu and run by single click selection.



Twin Headset (both sides with probe and reference microphones).



REM440

- Open fit capability
- Visible Speech
- RECD
- Normative data
- Concurrent operation
- Historical session
- Report Page
- Customization of setup
- Open Ear Gain, Real Ear to Coupler and Insertion Gain

Affinity^{2.0}

VSP440

Visible Speech - Sales and Counseling

The Visible Speech module is designed specifically for hearing aid dispensers. It addresses the task of explaining technical issues to non technical users. It is built around the features available in modern hearing aids and designed to simplify the process of explaining what the user gets for their investment. Visible Speech has shown itself to be one of the best support tools available.

As a sales tool

Visible Speech is interactive. It presents objective REM measurements in an easily understood way, reinforcing what your client experiences and providing the basis for a discussion of the features they need. You can demonstrate and explain the difference between two aids or settings and answer their questions with onscreen displays.

As a counseling tool

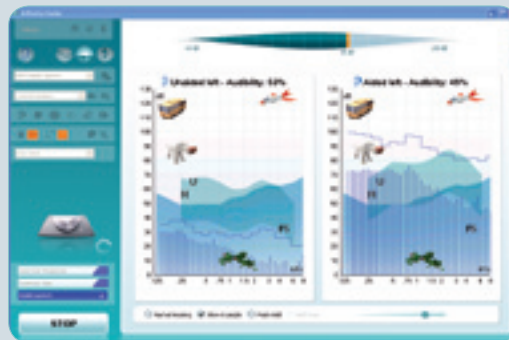
Realistic expectations are the major psychological factor in use of the hearing aid. Visible Speech is a practical tool to that end. Explain compression, power output limitation and other advanced features in a simple way - also for the relatives who are often a motivating factor when people seek hearing assistance. Normal hearing view allows for comparing the hearing loss to normal hearing.

Wave player

Stimuli in Affinity^{2.0} are not restricted to standard tones and speech. You can add files in WAV format containing any type of noise. You can even record a relatives voice and play it back through the WAV player to find out which of two settings work best.

Other features

- Demonstrate the benefit of two aids
- Explains advanced non linear aids
- Explain fine-tuning of hearing aid
- Better customer service
- Increased sales
- Fewer returns



VSP440

- Promotes sales
- Encourages binaural fittings
- Family counseling/education
- Demonstrate hearing aid benefits



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AC440

Audiometry software

The AC440 software turns the Affinity^{2.0} into one of the most powerful diagnostic audiometers available today. Above and beyond the standard air, bone and speech capabilities, there are a wide variety of test applications that make it ideal for the high end clinical environment or for any active dispensing practice. Multiple methods of using the software allow previous experiences with stand alone devices to transfer easily. Historical data retrieval will display overlapping audiograms for diagnostic and educational purposes and even transfers immediately into the REM440 fitting software.

Report page

Each test session contains a report page which functions as a holding place for comments. This ensures that vital tester observations are not lost and can also function as a summary page for test results. The report page is saved with the test results and made available whenever the session is recalled.

Full test battery

The AC440 has a basic set of test for traditional audiometry but also includes a battery of tests suitable for CAPD, differential diagnosis, tinnitus, hearing loss and hearing aid simulations.

Sales and counseling

The AC440 can be supplemented with modules for Hearing Loss Simulation (HLS440) or Master Hearing Aid (MHA440). These tools engage clients and relatives in the fitting process. This is especially important in establishing the trust and confidence of first-time users.

Historical sessions

Any historical audiogram can be retrieved for display while you are performing a test, or after you have completed the examination. It is an invaluable tool when assessing changes over time with your clients and aids in the counseling process.

User protocols and customization

User protocols are great time savers. They are collections of settings for a particular test procedure

or clinician. They enable you to save your preferences or standard procedures on a drop down menu from where you can load or run them with a single click. There is no limit to the number of protocols you can save.

Dedicated keyboard

The AC440 has an optional dedicated audiometric keyboard to aid in the transition from stand alone equipment to PC based. Function keys may be customized to eliminate the cycle of menu driven selections and speed up your test time.

Data extraction and output

The modern era of electronic medical records requires methods of data extraction for condensing patient records and sharing information across clinics. The new generation of Interacoustics instrumentation is designed to streamline this process, thereby improving economy, efficiency and speed of data management. Data may be extracted in PDF and XML formats for printouts and email attachments.

High Frequency (HF440)

The high frequency option on the AC440 software module permits an extended frequency range out to 20KHz which is typically used for ototoxic monitoring. When used with the Multiple Frequency selection it becomes and even more powerful tool for discreet analysis of tinnitus.

Masking Level Difference

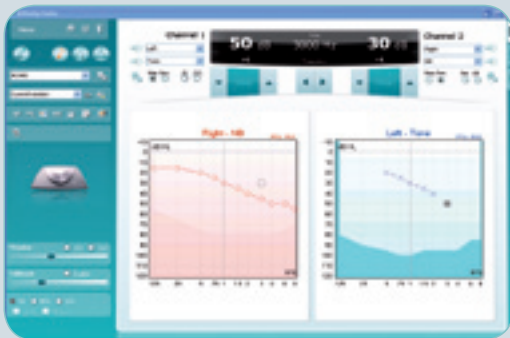
The MLD test is used as part of the CAPD test battery. Low frequency stimuli in combination with NB noise (binaurally) and acoustical phase differences will produce threshold shifts and may help identify persons with auditory binaural integration problems.

Speech tests from the hard drive

This feature saves time by eliminating the need for an external CD player for the majority of your speech tests. Choices for scoring methods allow you to customize the word presentations and view the chosen word lists.

Other features

- Print wizard: design your own reports
- Advanced sound field applications
- Full client communication connections
- Intuitive pre-programmed tests protocols
- Integrated database. All data in one place means all data is available to you.
- Results sharing: printed pdf, exported xml.
- Air, bone and speech
- Free field applications
- Full client communication connections
- Possibility for individual user profiles



AC440

- Report Page
- Full-test battery
- Sales and counselling
- License-driven software
- Session history: compare audiograms
- Customization of setup / User protocols
- Dedicated keyboard
- Data extraction
- High Frequency
- MLD
- Speech from harddrive
- Professional appearance



Dedicated audiometer keyboard



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AC440 Specifications

Standards:	Safety: IEC 60601-1, Class I, Type B, UL 2601-1, CAN/CSA-C22.2 No. 601.1-M90, IEC 60601-1-1. EMC: IEC 60601-1-2.																																																																																				
Audiometer standards:	Tone: IEC 60645-1/ANSI S3.6 Type 1; Speech: IEC 60645-2/ANSI S3.6 Type A or A-E																																																																																				
Calibration:	AC: ISO389-1, ISO389-2; BC: ISO389-3.																																																																																				
Extended range function:	If not activated, the AC output will be limited to 20 dB below maximum output.																																																																																				
Input:	Tone, Warble Tone, NB, CD1, CD2, Mic1, Mic2, wave files.																																																																																				
Masking stimulus:	Narrow Band Noise or White Noise or Speech Noise.																																																																																				
Outputs:	AC Left + Right, BC Left + Right, Insert Phone Left + Right, Insert Masking, FF1 and FF2. (Line/power 2x10W/4Ω).																																																																																				
Transducers:	TDH39 Audiometric headset, B71 Bone conductor.																																																																																				
Tone presentation:	Manual or Reverse. Single or multiple pulses.																																																																																				
Patient signal:	One or two (optional) hand held push button.																																																																																				
Patient communication:	Talk Forward and Talk Back.																																																																																				
Storage capacity:	Tone audiogram: dB HL, MCL, UCL, binaural, aided.																																																																																				
Speech audiogram:	WR1, WR2, WR3, MCL, UCL, aided, unaided, binaural.																																																																																				
Compatible software:	NOAH 3 compatible office systems, OtoAccess™.																																																																																				
Maximum hearing levels:	<table border="1"> <thead> <tr> <th>Hz</th> <th>AC(dBHL) TDH39</th> <th>AC(dBHL) HDA200</th> <th>AC(dBHL) EARTone5A</th> <th>BC(dBHL) B71</th> <th>NB(dBHL) TDH39</th> <th>Extern FF (dBHL)</th> </tr> </thead> <tbody> <tr><td>125</td><td>90</td><td>100</td><td>95</td><td>-</td><td>75</td><td>80</td></tr> <tr><td>250</td><td>110</td><td>110</td><td>100</td><td>45</td><td>95</td><td>95</td></tr> <tr><td>500</td><td>120</td><td>115</td><td>110</td><td>65</td><td>110</td><td>100</td></tr> <tr><td>750</td><td>120</td><td>120</td><td>120</td><td>70</td><td>110</td><td>105</td></tr> <tr><td>1000</td><td>120</td><td>120</td><td>120</td><td>70</td><td>110</td><td>105</td></tr> <tr><td>1500</td><td>120</td><td>115</td><td>120</td><td>70</td><td>110</td><td>105</td></tr> <tr><td>2000</td><td>120</td><td>115</td><td>120</td><td>75</td><td>110</td><td>105</td></tr> <tr><td>3000</td><td>120</td><td>115</td><td>120</td><td>80</td><td>110</td><td>110</td></tr> <tr><td>4000</td><td>120</td><td>115</td><td>120</td><td>80</td><td>110</td><td>110</td></tr> <tr><td>6000</td><td>120</td><td>105</td><td>105</td><td>50</td><td>110</td><td>105</td></tr> <tr><td>8000</td><td>110</td><td>105</td><td>100</td><td>50</td><td>100</td><td>85</td></tr> </tbody> </table>	Hz	AC(dBHL) TDH39	AC(dBHL) HDA200	AC(dBHL) EARTone5A	BC(dBHL) B71	NB(dBHL) TDH39	Extern FF (dBHL)	125	90	100	95	-	75	80	250	110	110	100	45	95	95	500	120	115	110	65	110	100	750	120	120	120	70	110	105	1000	120	120	120	70	110	105	1500	120	115	120	70	110	105	2000	120	115	120	75	110	105	3000	120	115	120	80	110	110	4000	120	115	120	80	110	110	6000	120	105	105	50	110	105	8000	110	105	100	50	100	85
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6000	120	105	105	50	110	105																																																																															
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Included Parts: Affinity^{2.0} Hardware
Affinity^{2.0} AC440 CD with speech files
TDH39 Audiometric headset
B71 Bone conductor
APS3 Patient response switch
EMS400 Talk back Microphone
EARTONE 3A inserts (sub. 5A's upon request)
Talk back microphone
Standard USB cable
Power Cable 120 or 230V
Patch cords
Warranty card
Calibration certificate
Operation manual

Optional Parts: Audiometer keyboard with live voice mic.
EarTone5A audiometric headset
ACC60 Affinity carrying case
CIR22 Insert masking earphones
MTH400 Headset
UCO15 Optical USB Extension Cable

Included tests: Masking Level Difference (MLD440)
Multi Frequency Module (MF440),
Speech from Hard-drive (SFH440),
Weber Test
SISI test (SISI440)
Master Hearing Aid (MHA440),
Hearing Loss Simulator (HLS440)

Optional tests: High Frequency audiometry (HF440)



Read more here:
www.interacoustics-us.com/us/Affinity



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REM440 Specifications

Real Ear Measurement:	EN 61669, ISO 12124, ANSI S3.46.
Frequency Range:	100-10000Hz.
Frequency distortion:	2%
Frequency Accuracy:	± 1%.
Intensity range:	40 – 90 dB
Intensity accuracy:	± 1.5 % dB
Frequency Resolution:	1/3, 1/6, 1/12 and 1/24 octave or 1024 point FFT.
Sweep Speed:	1.5 - 12 sec.
Stimulus Signal:	Warble Tone, Pure Tone, Random noise, Pseudo random noise, Band limited white noise, Chirp, ICRA, Real Speech, any other sound file (automatic calibration available).
Measurement Intensity Range:	Probe microphone 40-145 dB SPL ± 2 dB. Reference microphone: Intensity: 40 – 100 dB
PreProgrammed Protocols:	REM440 module comes with a set of Test Protocols loaded. Additional Test Protocols can be designed by user, or easily imported into the system.
Compatible Software:	NOAH 3, OtoAccess™.
Available Tests:	REUR - REIG- RECD - REAR - REAG - REOR - REOG - REUG - Input - Output
Included Parts:	Affinity ^{2.0} REM440 CD IHM60 In-situ headset with probe microphone and reference microphone (double) IGT50 Insertion gain tubes 36 pcs. Standard USB cable Power cable 120 or 230V Operation manual
Optional Parts:	SPL60 Transducer Kit for RECD measurement incl. probes and eartips BET60 Box with Eartips for for RECD measurement. Calibration adaptor for insitu reference VSP440 Visible Speech Module

Read more here:
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HIT440 Specifications

Hearing Aid Analyzer:	EN 60118-0, EN 60118-7, ANSI S3.22.
Frequency Range:	100-10000Hz.
Frequency Resolution:	1/3, 1/6, 1/12 and 1/24 octave or 1024 point FFT.
Frequency Accuracy:	± 1%.
Sweep Speed:	1.5 - 12 sec.
Stimulus Signal:	Warble Tone, Pure Tone, Random noise, Pseudo random noise, Band limited white noise, Chirp, ICRA, Real Speech, any other sound file (automatic calibration available).
Stimulation Intensity Range:	40-100 dB SPL in 1 dB steps.
Intensity accuracy:	± 1.5 % dB
Stimulus Distortion:	Less than 1 % THD.
Coupler Microphone Ranges:	40-145dB.
FF Loudspeaker Output:	Max 6 W into 8ohms, max 10 W into 4 ohms.
Telecoil drive in Test box:	10 – 100 mA/meter.
Battery Simulator:	Standard types are selectable, Custom types within 1.1 – 1.6 V, 0 – 25 Ohm range.
Test box:	Built-in test box holds telecoil drive as well as special dual speaker set for checking directional microphone function.
PreProgrammed Protocols:	HIT module comes with a set of Test Protocols loaded. Additional Test Protocols can be designed by user, or easily imported into the system.
Compatible Software:	NOAH 3, OtoAccess™.
Available Tests:	IEC118, ANSI 3.22, Custom - OSPL90 - Full On Gain - Input/Output - Attack/Recovery Time - Reference Test Gain - Frequency Response - Equivalent Input Noise - Harmonic Distortion - Intermodulation Distortion - Battery Current Drain/Battery Life Time - Microphone Directionality - Coil Frequency Response - Coil Harmonic Distortion - Coil Full-On Gain Response
Included Parts:	Affinity ^{2.0} HIT440 CD 2CC coupler with microphone and adaptors for ITE, BTE and Body Style HA Coupler seal wax Reference Microphone Standard USB Cable Power Cable 120 or 230V Operation Manual
Optional Parts:	Battery Adapters BAA675, BAA13, BAA312, BAA10, BAA5 Couplers 1.2CC and 0.6CC: ITE, BTE, Body Ear Simulator TBS25M External Test Chamber incl. cables. ACC60 Affinity carrying Case Calibration Adaptor

Affinity^{2.0}

Hardware

Safety Standards:	EN 60601-1, Class I, Type B, UL 2601-1, CAN/CSA-C22.2 No. 601.1-M90, EN 60601-1-1. EMC: EN 60601-1-2.
Medical CE-mark:	The CE-mark indicates that Interacoustics A/S meets the requirements of the Annex II of the Medical Device Directive 93/42/EEC. Approval of the quality system is made by TÜV – identification no. 0123.
Computer Communication:	Built-in USB1.1 computer interface. Optical isolation available.
PC Minimum Requirements:	Processor/clock speed: 800 MHz Pentium 3 or better. System RAM: Minimum 128 MB Screen Resolution: Minimum 800 x 600 Harddisk space: Minimum 500 MB free disk space. Operating System: Windows 98 SE/2000/ XP/ME.
Construction:	Painted metal cabinet bottom and moulded plastic top.
Weight:	5.5 kg / 12.1 lbs.
Dimensions:	(WxDxH): 42x38x15 cm / 16.5x15x5.5 inches

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Interacoustics – the best choice

With over 40 years of experience, Interacoustics is dedicated to supplying its customers with the best possible solutions for their audiologic needs. This is accomplished by maintaining a continuous dialogue with healthcare professionals working in all sectors of audiology. Our equipment meets the highest possible engineering standards and we provide design know-how that can only come from close contact with clinical practice.

Solutions on every scale

Designing equipment for every size of clinic in so many countries puts us in the unique position of being able to offer solutions that fit your requirements exactly. Audiometry, tympanometry, electrophysiology, hearing aid testing, balance investigation are all within our scope and can be integrated to suit your needs.

Design for diagnosis

We design equipment to make testing and interpretation easier. This means better interfaces, well designed screen layouts, printed reports and interaction over networks with databases and electronic records systems. In most cases, you can configure the settings and layout yourself.

Support worldwide

The Interacoustics name is not only your guarantee of quality and functionality, but also for support. We operate in over 100 countries worldwide through a well coordinated network of distributors and service centres to ensure that you receive total support and service.



Products in this group:

- Affinity^{2.0} hardware
- HIT440 Hearing Instrument Testing module
- REM440 Real Ear Measurement module
- AC440 Audiometry module
- VSP440 Visible Speech counseling module

Related products:

- TBS25 External Test Chamber



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Sales and service in your area:

Read more here:
www.interacoustics-us.com/us/Affinity

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