Audiometry
precision

The high quality of the AD229b makes it well suited for any stationary or portable application where diagnostic testing of air, bone and speech is performed. The time saving automatic threshold test combined with the computer interface makes the AD229b ideal for modern healthcare environments. The Talk Forward and Talk Back functions make it easy to work with the AD229b, especially with sound booth installations. Full NOAH compatibility completes the picture.

leading diagnostic solutions

Interacoustics®

Diagnostic Audiometer AD229b

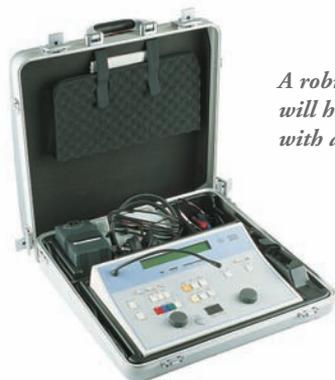## - Efficient diagnostic examinations

Auto Threshold

The AD229b incorporates a facility for performing threshold determination automatically. The test procedure is based on the Hughson-Westlake method (up 5dB, down 10dB) and conforms to ISO 8253-1. Desired test frequencies may be selected freely by the user. After testing the test results can be recalled from the memory of the AD229b or transferred to a PC for database storage or printing.

ABLB / Stenger

As well as the pre-programmed ABLB test the AD229b can perform the Stenger Test with pure tones for evaluating malingering, or as a binaural speech test with a monophonic speech signal.

Printing

PC connectivity provides options for data storage and full page reports via NOAH or the Interacoustics database software OtoAccess™.

A robust carrying case will hold the AD229b with all its accessories.

Data Storage with Windows® Based Software

Transferring data to a PC is possible by two different applications. The Interacoustics database OtoAccess™ enables data collection from multiple instrument sources into one patient file. Hearing aid information may also be included. NOAH hearing aid fitting software will also integrate the test data when used with the Interacoustics NOAH audiometry module software.

Sound Field Installation

Speech and pure tone may be presented under free field conditions. Available system ranges from 90dB SPL to 115dB SPL, and is medically approved. A set of connection panels, AFC8, is available for connection to a sound booth.

Speech Testing and Communication

• Live Voice speech testing is easy to perform using the built-in goose neck microphone.

• CD or tape players may be connected.

• Talk back is provided for sound field installations.

• Talk forward is available using the built-in microphone. The intensity is easily adjusted on the front panel.

• Monitoring is possible either through the operator's headset or through the built-in monitor loudspeaker.

Earphones and Noise Excluders

• Amplivox features independent suspension of the TDH39 earphones.

• Peltor - traditional noise excluding headset.

• Insert phones - EAR-Tone 5A insert phones feature very low cross hearing and reduce need for masking. Ambient noise is also attenuated.
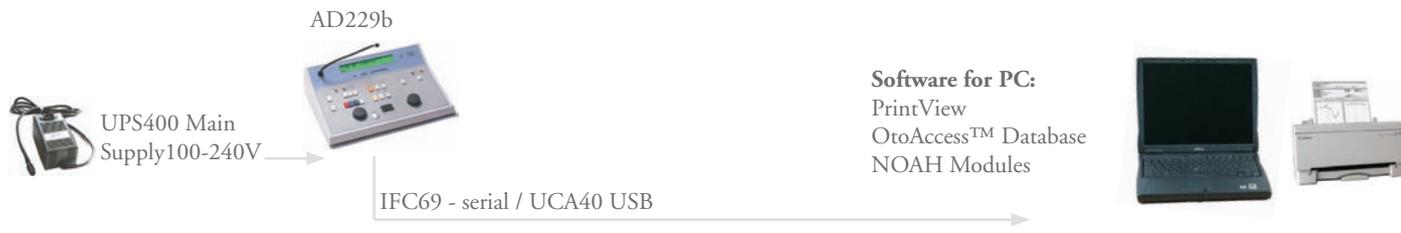
TDH39 headset   *EAR-Tone 5A Insert Phones*

Interconnections

AD229b

UPS400 Main
Supply100-240V

IFC69 - serial / UCA40 USB

Software for PC:
PrintView
OtoAccess™ Database
NOAH Modules

General Technical Specifications

Standards:
Audiometer: EN 60645 -1, ANSI S3.6, Type 2
Speech: EN60645-2/ANSI S3.6 type B or B-E.
Safety: EN 60601-1, Class I, Type B.

Medical CE-mark:
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.

Calibration: AC: ISO 389-1 (TDH39),
ISO 389-2 (EAR-Tone5A), BC: ISO 389-3.

Frequencies and Maximum Hearing Levels:

Hz	AC dBHL TDH39	AC dBHL EAR-Tone5A	BC dBHL B71	NB/SN dBHL	FF dBSPL
125	90	90		80	90dB to 115dB SPL depending on FF system
250	110	105	45	100	
500	120	110	65	110	
750	120	115	70	110	
1000	120	120	70	110	
1500	120	120	70	110	
2000	120	120	75	110	
3000	120	120	80	110	
4000	120	115	80	110	
6000	120	100	55	110	
8000	110	95	50	90	

Extended Range Function: If not selected,
the AC output will be limited to 20dB below
maximum output.

Input: Tone, Warble Tone ±5%, 5Hz (true sine
wave frequency modulation), tape/CD, mic.
Masking Stimulus: Automatic selection of narrow
band noise (or white noise) for tone presentation
and speech noise for speech presentation.

Outputs: Left, Right, Bone L+R, Insert Phones,
Insert Masking, FF1, FF2.

Transducers:
TDH39 Audiometric Headset.
EAR-Tone 5A Insert Phones (optional).
HDA200 Audiometric Headset (optional).
B71 Bone Conductor.

Talk Forward: Built in talk forward microphone.
0-110dB SPL continuously adjustable on
operation panel.
Monitor: Output of tape or CD through built-in
speaker or through external earphone or speaker.
Tone Presentation: Manual or Reverse.
Single pulse.
Multiple pulses 250-5000 msec. on/off.
Frequency Selection: 125Hz, 250Hz, 750Hz,
1500Hz or 8kHz may freely be deselected if a
quicker test routine is desired.
Synchronous Masking: Locks channel 2
attenuator to channel 1 attenuator.
Store Function: Internal memory for AC L/R and
BC L/R and full speech curve.

Tests:
ABLB
Stenger (Binaural pure tone stimulation).
Stenger Speech (Binaural speech test with
monophonic signal).
Auto Threshold: Patient controlled Hughson
Westlake procedure according to ISO 8253-1.

Display: Alpha-Numeric Display.
Patient Signal: Reed switch push button.

Examples of Compatible Windows Software:
Interacoustics database and diagnostic modules
PrintView for on-line PC monitoring and
printing.
NOAH hearing aid fitting software.

Construction: Plastic cabinet.
Attenuator controls:
Rotary switches (Push buttons optional).

Power Supply: External UPS400 (included).
100 - 115 V or 230 V Please specify.
Consumption: 40 VA

Dimensions (LxWxH): 36x26x10 cm /
14x10x4 inches.
Weight: 1.8kg/4.0 lbs. (external power supply
UPS400 + 0.8kg/1.8 lbs.)
Air freight packing:
1 case: 48x31x37 cm /19x12.2x14.6 inches.
Gross weight: 5.6 kg/12.4 lbs.

Included Parts:
TDH39 Audiometric headset
B71 Bone conductor
APS3 Patient response button
UPS400 External power supply
200 AF12 Audiogram charts
3 Pens
Power cable
Dust cover
Operation manual CD
Multilingual CE instructions for use

Optional Parts:
21925 Amplivox audiocups, noise reducing headset
50250 Peltor noise reducing headset (may be
supplied at no extra cost)
ACC25 Carrying case
EAR-Tone5A Audiometric insert phones
HDA200 Audiometric headset
CIR22 Insert earphone set for masking or
monitoring

UCA40 USB computer cable
IFC69 (9 pins) serial computer cable
EM400 Talk back microphone
MTH400 Monitor headset
MTH400M Monitor headset with boom mic.
Push buttons instead of rotary switches
OtoAccess™ Database and diagnostic modules
software
PrintView software
IA-NOAH-Aud Software