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.
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™.
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.

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.

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.

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.
### Interconnections

- **UPS400 Main Supply**: 100-240V
- **AD229b**

### 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:**

**Frequencies and Maximum Hearing Levels:**

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<thead>
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<th>Frequency (Hz)</th>
<th>TDH39</th>
<th>EAR-Tone5A</th>
<th>B71</th>
<th>AC dBHL</th>
<th>BC dBHL</th>
<th>NB/SN dBHL</th>
<th>FF1 dB</th>
<th>FF2 dB</th>
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</tbody>
</table>

**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.

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

**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.

**General Technical Specifications**

**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

**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

**Software for PC:**
- PrintView
- OtoAccess™ Database
- NOAH Modules

**Software for PC:**
- 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

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