

Interacoustics AC40 Kamplex KC50

Clinical Audiometer - Efficient Hearing Examinations



AC40

The AC40 is a comprehensive audiometer specifically designed for advanced clinical applications. Pre-programmed and automated testing features are simple to access and save valuable time. The AC40 comes standard with high frequency audiometry, multi-frequency, MLD, built-in free field amplifiers and more. The large LCD screen provides a large view of your test parameters without obstructing your view of the patient.



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General Technical Specification

Standards:

Audiometer: EN 60645-1, EN 60645-2, EN 60645-4/ANSI S. 3.6.

Tone audiometer type: 1

Speech Audiometer type: A or A-E.

Calibration: ISO389-1, ISO389-2, ISO 389-

Safety: EN 60601-1. EMC: EN 60602-1-2

Medical CE-mark:

Interacoustics A/S meets the requirements the Medical Device Directive 93/42/EEC. Quality system is made by TÜV – identification

Channels: Two independent channels.

Frequencies and Maximum Hearing Levels:

| Hz | AC | BC | NB |
|-------|--------------|----|-------------|
| 125 | 90 | | 80 |
| 160 | 95 | | 85 |
| 200 | 100 | | 90 |
| 250 | 110 | 45 | 100 |
| 315 | 115 | 50 | 105 |
| 400 | 120 | 65 | 110 |
| 500 | 120 | 65 | 110 |
| 630 | 120 | 70 | 110 |
| 750 | 120 | 70 | 110 |
| 800 | 120 | 70 | 110 |
| 1000 | 120 | 70 | 110 |
| 1250 | 120 | 70 | 110 |
| 1500 | 120 | 70 | 110 |
| 1600 | 120 | 70 | 110 |
| 2000 | 120 | 75 | 110 |
| 2500 | 120 | 80 | 110 |
| 3000 | 120 | 80 | 110 |
| 3150 | 120 | 80 | 110 |
| 4000 | 120 | 80 | 110 |
| 5000 | 120 | 60 | 110 |
| 6000 | 120 | 55 | 110 |
| 6300 | 120 | 50 | 110 |
| 8000 | 110/105 | 50 | 100/90 |
| 9000 | 105 | | 90 |
| 10000 | 100 | | 90 |
| 11200 | 95 | | 85 |
| 12500 | 90 | | 85 |
| 14000 | 85 | | 75 |
| 16000 | 75 | | 65 |
| 18000 | 110 (dB SPL) | | 95 (dB SPL) |
| 20000 | 110 (dB SPL) | | 95 (dB SPL) |

»**Extended Range**« allows air conduction intensities to be limited to 20 dB below max output.

Channel 1: Input: Tone, Microphone 1+2, Tape/CD 1+2, NB, SN, WN, PN. Output: Left, Right, Bone L+R, Free Field 1+2, Insert phones, HF phones.

Channel 2: Input: Tone, Microphone 1+2, Tape/CD 1+2, NB, SN, WN, PN. Output: Left, Right, Free Field 1+2, Insert phones, HF phones, Insert masking.

Presentations Ch 1: Manual or reverse. Continuous, single or multiple pulses. Single and Multiple Pulse Speed: Programmable from 50-5000 mS in 50 mS steps.

Presentations Ch 2: Manual or reverse. continuous, simultaneous or alternate to Ch 1.

Frequency Range: 125-20000 Hz divided in two ranges: 125-8000 Hz and 8000-20000 Hz.

Frequency Resolution: Multi frequency, Programmable in 1, 1/2, 1/3, 1/6, 1/12, 1/24 octave steps.

Modulation: Warble: programmable frequency: 5,10,25,50 Hz and programmable intensity: +/- 0, 0.2, 0.4, 0.6, 0.8, 1, 2, 3, 4, 5, 10, 15, 20, 25%.

Synchronous Masking: Locks Ch 2 attenuator to follow Ch 1 attenuator.

Attenuators: Totally click free, -10 to 120 dB HL in 1 or 5 dB steps. Tone Switches: Silent touch switches on front panel and remote controlled switches.

Patient Response: Two independent patient response buttons, one for Right and one for Left.

Communication: Talk forward: 0-110 dB SPL: Continuously adjustable on operation panel, built-in goose neck microphone.

Talk Back: Microphone input. Level adjusted on operation panel.

Monitor: Built in speaker or external loudspeaker. Monitor output level for Ch 1 and Ch 2 adjusted separately on operation panel.

Assistant monitor: Output to external earphone.

SPECIFICATION CAN BE SUBJECT TO CHANGE WITHOUT NOTICE

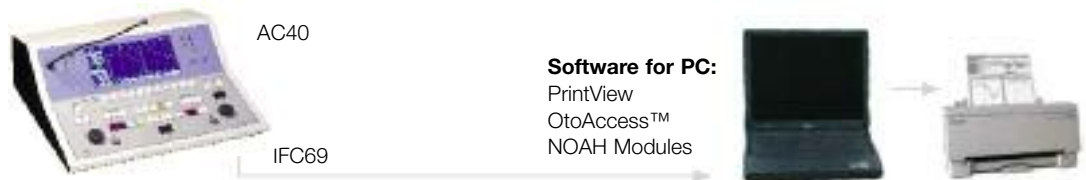
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General Technical Specification - continued

Interconnections



Computer Communication: Built-in RS232C two way computer interface which allows the computer to both monitor and control the AC40.

Examples of Compatible Windows® Software:

Interacoustics database program.
PrintView for on-line PC monitoring and printing.
NOAH hearing aid fitting software.

Test Types:

Tone: Manual, continuous, single pulse, pulsing (variable).

Speech: Live voice through goose neck microphone or external microphone, Tape or CD inputs. Score counter: Calculates % of correct score for speech.

Auto Threshold: Patient controlled Hughson-Westlake Test after ISO 8253-1. 3 out of 5 or 2 out of 3 as response criteria. Reduced frequency range option for rapid testing.

Békésy Test:

125Hz to 16kHz Fixed Frequency or Sweep Frequency Békésy. Continuous or pulsed tone.

Difference Limen Intensity:

0.0dB - 5.0dB in 9 steps.

Difference Limen Frequency:

0.0% - 5.0% in 9 steps.

Loudness Balancing:

250Hz, 500Hz, 1kHz, 2kHz, 4kHz, 6kHz NB noise with direct comparison to standard curves.

Difference Masked Unmasked:

Graphically compares the threshold measurements with and without masking.

Weber:

250Hz to 8kHz with dedicated graphical presentation.

ABLB:

Individually adjustable pulse speed and pulse length.

TTdecay:

Calculation according to Rosenberg (1958).

Masking Level Difference (MLD):

Noise out of phase and signal out of phase. Automatic calculation.

Monaural Loudness Balancing (MLB):

Programmable test setup.

SISI:

0, 0.2, 0.4, 0.6, 0.8, 1, 2, 3, 5 dB, 20 increments.

Automatic score counter which calculates in % the number of responses to 1 dB increments.

Stenger:

Pure tone or Speech can be used for Stenger test.

Lombard test.

Doerfler-Stewart test.

Free Field:

System FFAC40: Built in 2x12W amplifier AC40-APD and two ALS3 speakers. 95dB SPL. (Optional)

System FF105: External 2x70W amplifier, AP70, and two ALS7 speakers. 105dB SPL. (Optional)

Display:

Graphic 640x200 monochrome LCD display with (CFL) back lighting. Electronic viewing angle adjustment.

Dimensions: (LxWxH): 50x47x20 cm/ 20x19x8 inches.

Weight: 13 kg/29 lbs.

Air Freight Packing: Dimensions: (LxWxH): 83x60x30cm/33x24x12 inches.

Gross Weight: 22 kg/49 lbs.

Power: AC 50-60 Hz. 220-240 V

Consumption: Max. 180 VA.

Included Parts:

TDH39 Audiometric Headset
MIB71 Bone Conductor
High Frequency Headset
Patient Response Buttons (2)
Power Cable 110 or 230 V (please specify)
PCR-AC40 Dust Cover
MI 111 Audiogram Charts
Operation Manual on CD
Multilingual CE Manual

Options:

AC40-APD Built-in 2x12 watt Power Amplifier for FF

Optional Parts:

AP70 2x70 Watt Power Amplifier
ALS7 FF Loudspeaker (AP70)
EM400 Electret Microphone for Talk Back
EMS400 Wall Mounted Talk Back Microphone
Audiocup Enclosures
EAR-Tone 5A Insert Phones for audiometry
HDA200 Audiometric headset

CIR22 Insert Earphone for masking and monitoring
MTH400 monitor headset
MTH400M monitor headset with boom mic.
AFC13 Sound Cabin Connection Panel
Patient Signal Buttons (2)
IFC59/IFC69 RS232C Computer Connection Cable
OtoAccess™ Database Program
PrintView Software Program
IA-NOAH-Aud Software Program

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