

Still one of the lowest-priced field calibrated microprocessor audiometers available today



Microprocessor Audiometer

First introduced in the early 1980's, the Monitor MI-5000 series audiometer has been reengineered to meet our goal of another two decades of dependable service. This new design takes full advantage of new computer technologies, as well as the latest in digital signal processing techniques. The result assures the performance of the MI-5000B will meet or exceed all current and anticipated ANSI, OSHA, and safety standards for this class of audiometer well into the future. The redesign has left unaltered the general design, rugged construction, convenient panel layout, and informative LCD display. Even though it is still one of lowest priced field calibrated microprocessor audiometers available today, its low cost is probably not what convinced E.I. DuPont De Nemours & Co. to standardize on this new audiometer for their entire U.S. operation.

MI-5000B

MI-5000B Series II Microprocessor Audiometer

Benefits

- **Workhorse:** Rugged construction provides years of trouble-free operation
- **Small footprint:** Compact size allows placement of audiometer virtually anywhere
- **Easy to use:** Convenient and user-friendly panel layout simplifies use
- **Highly compatible:** Works with numerous hearing testing software packages

Features

- Small, lightweight, and portable
- Rugged construction
- Built-in talkover (automatic pause while in use)
- Complies with OSHA test requirements and qualifies as a microprocessor
- Allows for field calibration of output levels
- Optional automatic shut-off after one hour of inactivity (selection stored in nonvolatile memory)
- Excellent immunity to low line voltages

Testing features...

- Pause and resume capability
- Switch from automatic to manual as needed
- Start with either ear with option to test 8kHz
- Starting ear, whether to test 8 kHz, and other audiometer parameters can be stored in nonvolatile memory
- Error messages displayed on screen and in easily understood terms
- "Listening" test controlled by the patient response switch from inside the booth
- Audible alert for end-of-test and error conditions (toggle "active" or "inactive" from front panel)

Printouts include...

- Three-frequency-threshold averaging on printouts
- Flagged manually determined thresholds

Communications features...

- RS-232 data string compatible with popular output formats
- Compatible with numerous hearing testing software packages
- User-adjustable communication parameters (e.g, baud, word length, and stop bits)

Specifications:

Test Frequencies: 500, 1000, 2000, 3000, 4000, and 6000 Hz. 8000 is optional

Frequency Accuracy: Crystal controlled, less than 1% error at all frequencies

Frequency Sequence: Start either ear, 1000, 500, 1000 retest, 2000, 3000, 4000, 6000, (optional 8000). Second ear, 500, 1000, 2000, 3000, 4000, and 6000 (optional 8000)

Intensity Range: Expanded to -10 to 90 dB hearing levels in 5 dB steps (0-90 dB range selectable)

Attenuator Linearity: Less than 0.75 dB error for any 5 dB step, less than 1 dB error for any 10 dB step, less than 2 dB accumulated error relative to the calibration level

Tone Rise/Fall Times: 44/32 ms typical

Test Paradigm: Modified Hugheson-Westlake in automatic mode with full manual override capability

Testing Time: On a cooperative individual or biological simulator, approximately 5.5 minutes

Stimulus Characteristics:

- A. Pulse train is 1.2 seconds with 50% duty cycle (200 ms on and 200 ms off) with three pulsed tone presentations.
- B. Time between pulse train is varied randomly between 1 and 2 seconds.
- C. Patient response window is 1.8 seconds from the beginning of the pulse train.
- D. Pulse train terminates when response switch is depressed.

Error Warnings: Audible alert (when active) with visual display of specific error encountered. The following error conditions are detected and signaled.

- A. Threshold not established at 1000 Hz, first ear
- B. Retest failure at 1000 Hz
- C. Patient responding when no tone is being presented
- D. Failure to establish threshold within allotted time (pause and alert optional at this error)

Audiometer Calibration: All audiometer calibration parameters meet ANSI S3.6 1996 Standard for Audiometers. Output levels are calibrated through secured keyboard entry.

Safety: Designed to meet UL544 Standard for Medical and Dental Equipment and CSA C22.2 No. 125-M1984 Environmental Products/Health Care Technology

Earphone: Telephonics Corporation TDH-49 earphones with MX-41/AR cushions

Power Requirements: 120 VAC, 60 Hz, 32 VA

Physical Dimensions: 2.75" high, 7.5" wide, 9" deep.

Net Weight: Unit, 2.6 lbs; earphone assembly, 1 lb; power supply, 1.2 lbs

Standard Equipment: MI-5000B audiometer with RS-232 output and internal talkover, earphone assembly, patient response switch, power supply, patch cords (2), Operator Manual

REPRESENTED BY

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