



Full two-channel audiometer

Digital signal processing (DSP) technology

NOAH™ compatible

Build-in or external printer options

Complete patient communications facilities

Direct control of CD player

Automatic speech test scoring

The complete 2-channel clinical audiometer

Our top-of-the-line audiometer, MADSEN Orbiter 922-2 incorporates many of the key characteristics found in today's personal computers: peripherals such as keyboard, display, printer; "intelligent" menu-driven software, non-volatile memory for permanent storage of setup and other parameters, interfaces for communication with PC's and other devices - all integrated into one dedicated instrument to make daily routines faster and more reliable.

Complete patient communication facilities

Orbiter 922 Version 2 not only provides every audiometric facility required in the daily clinical setting, but also additional test capabilities which are useful in a variety of clinical and research applications:

- Direct control of optional CD player
- Built-in free-field amplifier and monitoring loudspeaker
- Individual calibration of earphones, bone conductor, free field, masking insert phone, and E-A-RTONE® 3A insert phones; calibration data stored in non-volatile memory.

MADSEN Orbiter

High frequency testing up to 20 kHz

In addition, the advanced DSP system architecture and two separate oscillators feature:

- High-frequency testing up to 20,000 Hz
- Complete Békésy audiometry as well as MLB and DLF special tests
- Frequency accuracy of $\pm 0.03\%$
- High-resolution multiple frequencies (with increments down to 1 Hz)



Technical specifications:

Channels:

2 separate and identical channels (2 oscillators)

Outputs:

Phones, bone, insert, free-field loudspeaker via external or internal amplifier

Tone Stimuli:

Pure, pulsed or warble tones

Frequency Range:

Air, FF: 125 to 20,000 Hz

Bone: 250 to 8,000 Hz

Frequency Resolution:

Standard frequencies, 6/12/24/48 points per octave, or 1 Hz

Masking Signals:

White Noise, Speech Noise, Narrow Band Noise or External (CD/Tape)

Attenuator:

1 dB step resolution

Hearing Level Range:

Maximum output limited by transducer capability

Air: -10 to 120 - 125 dB HL at 500 - 6,000 Hz

Bone: -10 to 70 - 80 dB HL at 500 - 4,000 Hz

Speech Input:

Microphone or CD/Tape 1-2

Special Tests:

S.I.S.I., ABLB, Stenger, Rainville, DLI, Auto Threshold, Tone decay,

MCL/UCL, DLF, MLB, Békésy, HFA; 10 user-programmable tests

Data Communication:

RS232C Serial Data Interface

Printer:

Optional built-in thermal printer or external

Display:

640 x 200 monochrome LCD display, viewing area 224 x 98 mm

Power Supply:

AC 50 - 60 Hz, 100 - 127 V or 200 - 240 V

Patient Safety:

Complies with EN 60601-1, Class I, Type B

Dimensions:

522 x 418 x 155 mm, 20.5 x 16.5 x 6.1 in. (W x D x H)

Net Weight:

9 kg, 20 lbs