

Technical specifications:

Channels:	Two separate and identical channels
Frequency range:	
FRESH noise stimulus*:	125 - 12500 Hz
Insert phones:	Standard frequencies: 125 - 8000 Hz
TDH39:	Standard frequencies: 125 - 12500 Hz
HDA 200 phones:	Standard frequencies: 125 - 20000 Hz
BC:	Standard frequencies: 250 - 8000 Hz
SF:	Standard frequencies: 125 - 20000 Hz
Frequency resolution:	1/6, 1/12, 1/24 and 1/48 octave as well as 1 Hz**
NBN masking:	Available for each stimulus frequency
<small>* Range may be limited by choice of transducer, ** You can store up to 24 points for each audiometry curve</small>	
Stimulus types:	Tone, Warble, Pulsed tone, Pulsed warble, FRESH noise (FREquency Specific Hearing assessment noise) and Pulsed FRESH noise.
Masking types:	
Narrow Band Noise	
• AC and BC	Correlated
• SF	Non-correlated ^(a)
Speech Weighted Noise	
• AC and BC	Correlated
• SF	Non-correlated ^(a)
White Noise (Wide band noise)	
• AC and BC	Correlated
• SF	Non-correlated ^(a)
<small>(a) A maximum of 3 non-correlated simultaneous masking signals</small>	
Attenuator:	1, 2, or 5 dB step resolution over the entire range
Outputs:	
AC:	3 x 2 mono jacks, 1/4 "
BC:	2 x mono jacks, 1/4 "
SF power output:	4 x terminals, 4 x 40 W peak, 8Ω load
SF line output:	4 x RCA phone, 4 x 1.6 Vrms,
Standards:	
Audiometer:	EN60645-1, Type 1, EN60645-2 Type A-E, EN60645-4, and ANSI S3.6
Patient Safety:	Complies with EN 60601-1, Class 1, Type B; U2601-1; CAN/CSA-C22.2 NO 601.1-90.
EMC:	EN 60601-1-2
PC System Requirements:	
•	Pentium 4, 1.5 GHz
•	1 GB RAM
•	32 MB graphics adapter, 32 bit color
•	3 GB free disk space for installation of this software
•	Windows XP Professional SP1, Windows 2000 SP3 or Window Vista
•	Internet Explorer 6 Service Pack 1
•	A USB port for connection of the accessories
•	NOAH 3.1™ or higher for NOAH mode operation (www.himsa.com)

MADSEN Astera is an integral part of the OTOsuite software.

OTOsuite provides users with a convenient single point of entry to Immittance, Audiometry, Speech Mapping and Simulators. The seamless structure eliminates the need to switch back and forth between individual applications and makes audiometric data instantly available for counseling and hearing instrument verification.

Distributor:

Otometrics is the world's leading manufacturer of hearing and balance instrumentation and software, providing solutions ranging from infant screening applications and audiologic diagnostics to balance testing and hearing instrument fitting.

For more information about Astera, please visit www.myaudiometer.com

● Hearing Assessment ● Fitting Systems ● Balance Assessment

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The modern era of paediatric audiometry



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MADSEN Astera. It's familiar, and it's so much More



MADSEN Astera is a two-channel clinical audiometer based on state-of-the-art technology and modern paediatric audiology practice.

Focusing on the child
When testing children, it is important to be in close contact with the patient.

The MADSEN Astera Audiometer Control Panel has a traditional layout featuring detented attenuators that allow the user to "feel" changes in level, keeping his/her eyes on the child at all times. In addition, the audiometer software features large and clear audiograms displayed on a monitor that can also be viewed without looking down at the device.



Advanced behavioral testing
The multiple-speaker routing with the possibility of up to 4 speakers, an advanced communication system, and user test functionality make the Astera ideal for Visual Reinforcement Audiometry and Conditioned Play Audiometry.

By adding the optional extra pair of speakers, users can route each audiometer channel to one, two, three or all four speakers simultaneously. A user could also choose to route just the Talk-Forward through a speaker positioned at 0 degrees azimuth so that the child's attention could be centered without using the right/left speakers that are delivering the test stimulus. This eases the testing process significantly and saves time on changing settings.

Astera comes with an advanced patient communication system that includes a custom-made mic/monitor headset, a Talk-Back microphone, and a Talk-to-Assistant headset. As a special feature, the system has an option for tone presentation during Talk-Forward, which is an excellent tool for conditioning toddlers during Conditioned Play Audiometry.

Channel Specific Threshold Storing lets you measure both ears at the same time and yet store the results separately.

The extensive user test functionality allows users to create specific paediatric protocols to ensure consistent and efficient testing. Preferred settings are quickly chosen at the push of a button and test protocols can be shared among several users.



FREquency Specific Hearing Assessment Noise

With the Astera, Otometrics introduces FREquency Specific Hearing Assessment Noise (FRESH Noise) that is appropriately calibrated for paediatric testing.

FRESH™ Noise is a sound field stimulus that is sharply filtered so that it closely approximates a pure tone target. It is calibrated in Hearing Threshold Level, like Warble and Pure Tone stimuli, providing the user an alternative sound field stimulus for behavioral paediatric testing.

FRESH noise can be used in conjunction with Warble Tone to keep a child's attention without sacrificing the necessary precision to identify hearing loss and configuration.



MADSEN Astera

Integrated word lists
The MADSEN Astera come with integrated word lists, including the Arthur Boothroyd (AB) word lists, BKB- and IHR sentences. Words are played directly from the Astera with no need for an external CD player. Word lists are also available for viewing on the screen when performing live voice speech testing.

The testing process is fast and flexible, with options in the software for word presentation upon scoring of the previous word, timed word presentation, or presentation of only half lists or certain words. Phoneme scoring is available in addition to regular word scoring.

