

**MT10**

*Handheld Tympanometer*



*Fast and reliable*



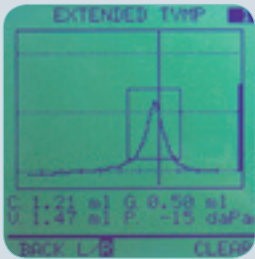
**Interacoustics®**

leading diagnostic solutions

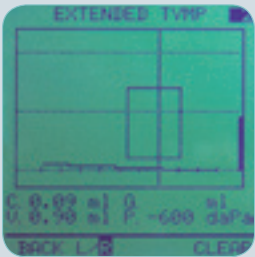
# MT10

## Handheld Tympanometer

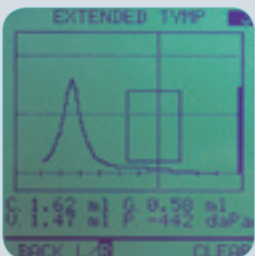
### Fast and reliable



A healthy middle ear will produce a tympanogram easily recognized by its shape. The peak will be within the pass / refer box.



Fluid in the middle ear produces a flat tympanogram. Often such fluid is not visible by otoscopy.



An occluded eustachian tube will cause the peak of the tympanogram to be displayed to the left of the pass / refer box.

In modern healthcare settings fast and reliable testing is paramount. The MT10 is built to meet these requirements in an easy and very cost effective way. For example otitis media, a major cause of temporary or permanent hearing impairment in children, can be easily and quickly detected with the MT10.

#### Objective analysis

The MT10 automatic impedance audiometer is fast and easy to operate and provides objective measures that cannot be obtained by otoscopy alone.

#### Easy and fast tympanograms

Results can be obtained quickly and easily with no response required from the patient. This is especially beneficial when dealing with difficult-to-test patients or small children.

#### Clinical application

The MT10 is also well suited for clinical use as tympanograms and reflex responses are all recorded with great detail. The MT10 is therefore a competent tool for detecting the following conditions:

- Otitis Media
- Perforated Eardrum
- Tympanostomy tube checks
- Ossicular disruptions
- Eustachian Tube function
- Tympanosclerosis
- Cholesteatomas
- Certain neurological disorders
- Post medical treatment follow ups

#### Extended tympanometry

The extended tympanometry feature ensures that even a very negative middle-ear pressure is diagnosed correctly. This can help differentiate between reduced eardrum mobility and excessive negative middle-ear pressure.

#### Ipsilateral Acoustic Reflex

Four different reflex tests may be performed per ear using either manual or automatic intensity selection. The test is carried out at the correct pressure level and the actual reflex characteristics are displayed on the screen for the operator to view and interpret.

- 4 frequencies (500, 1000, 2000, 4000 Hz)
- Single or multiple dB level threshold search
- Auto detection of threshold

#### 20 patients in memory

The MT10 can hold test results of up to 20 patients in its memory. This makes it possible to screen a large group of patients and print out the data at a later time.

#### Printing and data transfer

Results may be printed out on the matching high speed thermal printer MTP10. Data may also be transferred to the Interacoustics database program OtoAccess™ for Windows® and printed together with other patient data. Data transfer to NOAH is also possible.

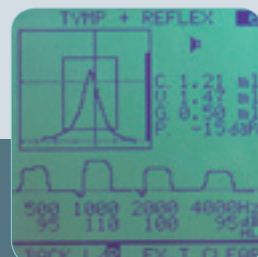
#### Screening audiometry

A screening audiometry feature allows a pre-set dB level for quick evaluations. The operator may store responses and print the results along with tympanometry data.

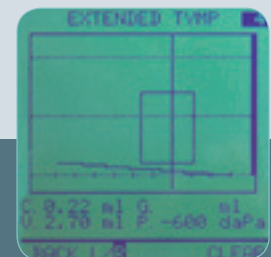
Screening Audiometry is easily performed semi-automatically.



The acoustic reflex test may be performed to support and enhance the diagnosis. Pass / refer is easily determined.



A perforated eardrum or a correctly functioning tympanostomy tube will produce a flat curve. This test result is easily distinguishable from the "Fluid Ear" mentioned above, as it has a much higher "V" measurement.





Example of printout from the MTP10

- MT10**
- -600 to +300 daPa
  - Ipsilateral Reflexes
  - Screening audiometry
  - 20 patient memory



**Portability**

- Lightweight
- Handheld device
- Load data into base station for printing
- Optional carrying case available

The MT10 handheld middle ear tester can be delivered either with the MTS10 desk unit (charger and RS232C) as seen here or with the MTP10 base station with built-in high speed thermal printer, charger and interfacing to PC (as seen on the frontpage).



Leading diagnostic solutions

# Technical Specifications

<b>Tests:</b>	
<b>Tympanometry:</b>	Normal: +200 to -300daPa. Extended: +300 to - 600daPa.
<b>Acoustic Reflex test:</b>	4 reflexes per ear. Automatic intensity search or fixed stimulus intensity. Intensities: Up to 110dBHL (100dBHL @ 3-4kHz). Frequencies: 0.5kHz, 1kHz, 2kHz, 3kHz, 4kHz. Actual reflex recorded and displayed.
<b>Screening audiometry:</b>	Intensity: 10dBHL to 50dBHL. Frequency: 0.5kHz, 1kHz, 2kHz, 3kHz, 4kHz.
<b>Probe tone:</b>	Frequency: 226Hz +/-3%. Amplitude: 85dB SPL +/- 3dB.
<b>Pressure:</b>	Direction of Sweep: Positive to negative. Pump Speed: 250 - 350 daPa/sec. Resetting Time: 0 Seconds. Pressure Accuracy: +/- 10% or 10daPa.
<b>Compliance range:</b>	0.0 to 2.5 cc displayed. 0.0 to 5.0 cc numeric. Compliance Accuracy: +/- 5% or 0.1 ml.
<b>Internal memory:</b>	Tympanogram, 4 reflex recordings and audiogram for both left and right ear. 20 patients' full testing scheme. Selective patient storing.
<b>Printing:</b>	MTP10 high speed thermal printer station (optional). Standard 8 cm thermal paper. Through PC using OtoAccess™ or PrintView software (optional).
<b>Interface:</b>	Full data transfer to PC through base stations MTS10 or MTP10.
<b>Compatible software for Windows®:</b>	PrintView for on-line PC monitoring and printing. OtoAccess™ database and diagnostic modules. NOAH Impedance Module allows test results to be stored and viewed within the NOAH program.
<b>Power supply:</b>	3 high quality rechargeable NiMH batteries incl. Accepts standard AA NiCd batteries. Automatic charging of rechargeable batteries while resting in MTS10 or MTP10.
<b>Dimensions and weight:</b>	(LxWxH): 10x25x13 cm / 4x10x5 inches. Weight: 500 g / 1.1 lbs.
<b>Impedance standard:</b>	IEC 60645-5, ANSI S3.39, Type 2.
<b>Audiometer standard:</b>	IEC 60645 -1, ANSI S3.6, Type 5
<b>Safety standard:</b>	IEC 60601-1, Class 1, Type B.
<b>Medical CE-mark:</b>	Yes
<b>Included parts MT10/ MTS10:</b>	MT10 MTS10 Desk unit (charger and RS232C) EPS11 Power supply RCB10 3 NiMH rechargeable batteries BET50 Set of eartips Operation manual CD. Multilingual CE instructions for use
<b>Included parts MT10/ MTP10:</b>	MT10 MTP10 Base station with built in high speed thermal printer, charger and interfacing to PC. TPR10 3 rolls of thermal paper UPS400 Power supply RCB10 3 NiMH rechargeable batteries BET50 Set of eartips Power cable Operation manual CD. Multilingual CE instructions for use
<b>Optional parts:</b>	ACC10 Carrying case for MT10 + MTP10 OtoAccess™ and Diagnostic Modules la-NOAH-Imp module IFC69 cable for PC connection (9 pins) IFC59 cable for PC connection (25 pins)

## Sales and service in your area:

### Interacoustics A/S

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E-mail: info@interacoustics.com  
DK-5610 Assens, Denmark  
Web: www.interacoustics.com

## Other Middle Ear Analyzers:

- AT235 Middle Ear Analyzer
- AT235h Middle Ear Analyzer with high probe tones

## Audiometry and Middle Ear Analyzer in one:

- AA220 Audio Traveller
- AA222 Audio Traveller



A robust carrying case, the ACC10, accommodating the MTP10 printer and the MT10, is available.



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Read more here:  
[www.interacoustics.com/com/MT10](http://www.interacoustics.com/com/MT10)



leading diagnostic solutions