

# Titan

Middle Ear Analyzer



*Fast, multi-purpose  
and portable*



**Interacoustics<sup>®</sup>**

leading diagnostic solutions

# Titan

## Middle Ear Analyzer

### “Ready, Set, GO!”

The Titan was designed with functionality in mind as clinical efficiency requires instrumentation that can address a variety of uses in order to compliment clinicians multi-tasking test environments. The flexibility of the Titan enables performance of middle ear evaluations with the hand held device or in conjunction with PC software operation. Ease of use and the small portable design makes the Titan an ideal choice that does not compromise reliability, capability or quality of test data.

#### Full Test Capability

The Titan comes in two versions to satisfy the clinical needs of a variety of users. The basic version includes standard tympanometry, ipsi and contra acoustic reflexes, acoustic reflex decay and 3 Eustachian tube function tests (intact, perforated and patulous). The extended version adds multi-probe tone tympanometry for pediatric evaluations (i.e. 678, 800 & 1kHz probe tone), acoustic reflex latency and Y, B, G components of tympanometry. Also included is a new automatic gain control to establish absolute SPL test values during reflex testing.

#### PC integration

Whether you choose to use the Titan as a hand held device or with a PC, the power of the software on the PC and in the Titan provide un-matched functionality in a clinical middle ear analyzer. Unlimited variations of protocols that you create from the software are easily uploaded to the handheld device. This means you can create automatic sequences that can be selected from the hand held device and they will function exactly as if you ran them from the PC. Another practical function is the ability to upload patient names into the hand held device. This makes it easy to pair up the test results to the appropriate patient prior to downloading the data back to the PC database. PC integration provides obvious time saving advantages. The imbedded Print Wizard generates professional customized full page reports, integrates middle ear results with audiometry and generates reports for EMR systems.

#### Portability

The Titan comes standard with a small, protective carrying case for hearing professionals on the move. New battery technology provides up to 3 ½ hours of continuous use and with power saving features in the software it is common to get a full day of testing before recharging.

#### Bottom-line

**Titan—a robust solution to help your practice perform more efficiently!**



*Titan carrying case included*

#### Titan

- *A complete clinical device in a hand-held design*
- *Fully customizable protocols, displays and reports*
- *Integrated reports (Audio + Tymp)*
- *Two way PC Integration*
- *Unique probe design with light indicator*

### 'Endless Airflow' Technology

The pump system in the Titan uses an endless airflow system that continues to deliver pressure even when slight air leaks are present. This is a big advantage when dealing with infants and patients with difficult ear canal seals. The intelligent pump control system employs adaptive speed control around the tympanic peak for improved accuracy and resolution.

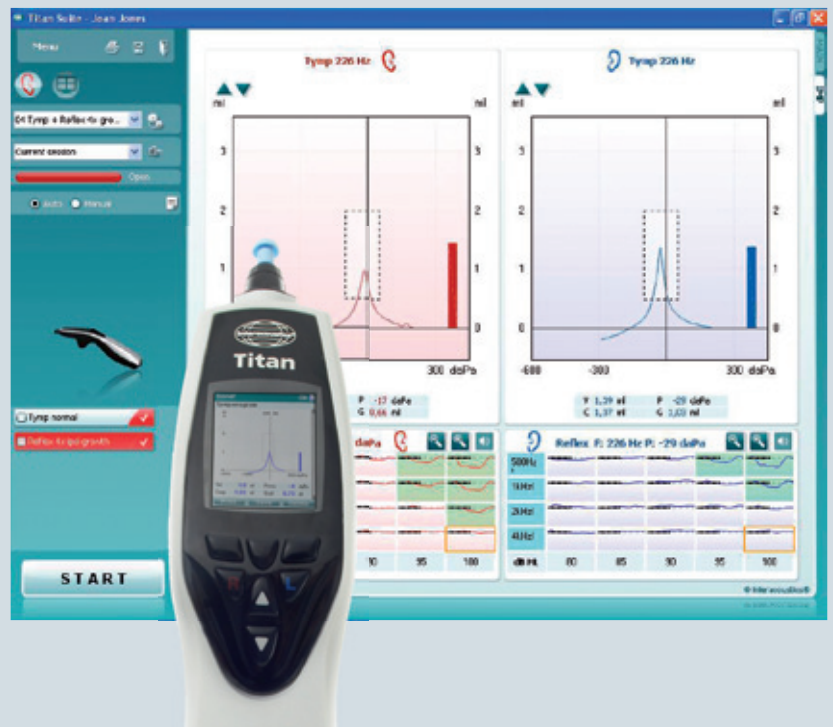
### Smart Probe

A problem every clinician has faced is the need to replace a broken probe. This typically requires scheduling a visit by your local service representative to replace and recalibrate a probe to the instrument. It also means expensive 'downtime' in your clinic. The Titan solves this dilemma by incorporating the calibration within the probe. Now you can simply order a new probe and snap it back into place and be up and running no time. Functionality of the extended clinical probe cable and box provide convenient operation away from the instrument. With the press of a button you can change test ears and start or pause a test. Test status clues for the examiner are provided by the bright LED lights on the probe end.

### Ergonomic Design

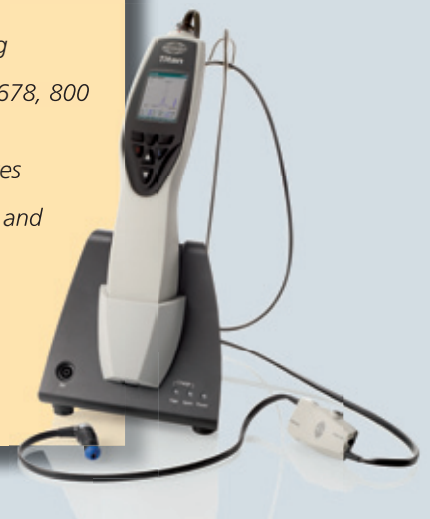
The slim, lightweight design of the Titan makes it ideal for performing screening and diagnostic middle ear evaluations. The detachable probe cone on the clinical extension cable quickly changes the Titan into a simple hand held screener for added flexibility.

No more struggling with viewing tests on a small screen with poor resolution. The Titan's beautiful, color display has outstanding resolution for easy viewing of test results. By simply pressing the down arrow key you can scroll through a patient's complete evaluation.



### Clinical highlights

- Automatic and manual testing
- High frequency probe tones (678, 800 and 1000Hz) are optional
- Ipsi and contra acoustic reflexes
- 3 ETF tests: Intact, perforated and patulous
- Reflex decay
- Extended reflex decay
- Reflex latency



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# Reporting and printing

Titan sets the standard for modern audiology clinics. It enables results to be output in electronic form to EMR systems or to be easily shared over a network. This means that information can follow the patient between departments and specialists.

### Design your own reports

Although electronic communication plays an increasing role in audiology, the printed report is still important. The Titan software suite includes an embedded print wizard, a very flexible tool enabling the realization of individual reporting needs, as well as adherence to internal reporting and archiving structures to streamline clinic workflow.

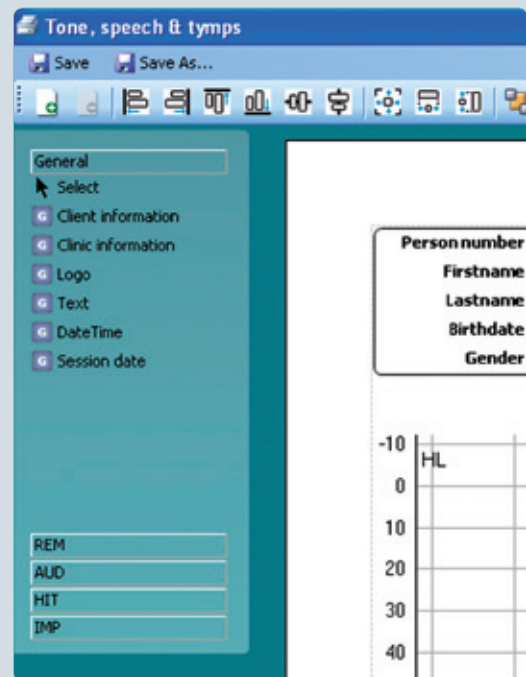
The print wizard can merge audiometric and impedance data for full patient reporting. Once completed, test data is automatically routed to predefined templates, eliminating redundancy and the labor intensive tasks routinely involved in getting all information presented on a single page. Reports can either be printed or saved as a PDF for insertion into EMR systems.

### Print Options

Printers connected to a PC that include the Titan software program generate custom designed reports in a professional format. Also available are direct printing solutions with an optional small, thermal printer for portability or other possibilities include printing directly to Deskjet style printers.

### Database Options

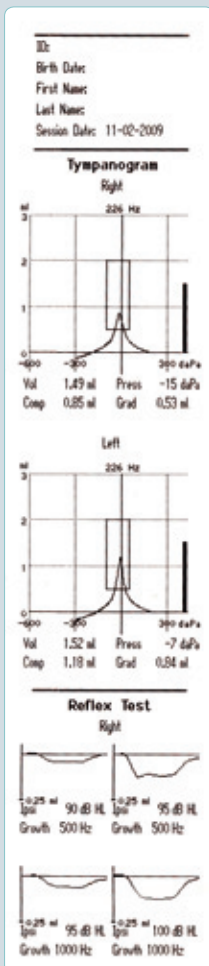
The Interacoustics OtoAccess database program comes standard with the Titan and provides an ideal solution for integrating the Titan test data into patient data files. Other Interacoustics diagnostic test data may be integrated into the same database. Alternately, the Titan is compatible with NOAH.



Merge and configure input from different sources in the Print Wizard

### Reporting highlights

- Customizable print-outs
- NOAH3 and OtoAccess™ compliant
- EMR integration
- Portable printer option



Printout from Titan via the optional portable printer



# Titan

## Middle Ear Analyzer



# Technical Specifications

## Impedance Measuring System

**Probe tone:** Frequency: 226 Hz. Optional high frequency probe tones: 678 Hz, 800 Hz, 1000 Hz  
Level: 69 dB HL with AGC option for assuring constant level at different ear canal volumes.

**Air pressure:** Control: Automatic.  
Indicator: Measured value is displayed on the graphical display.  
Range: -600 to +300 daPa.  
Pressure limitation: -750 daPa and +550 daPa.  
Pressure change rate: Very slow, Slow, Medium, Fast, Automatic with slow speed at compliance peak. Selectable in the set-up.

**Compliance:** Range: 0.1 to 8.0 ml at 226 Hz probe tone (Ear volume: 0.1 to 8.0 ml) and 0.1 to 15 mmho at 678, 800 and 1000 Hz probe tone.

**Test types:** Tympanometry Automatic, where the start and stop pressure can be user programmed in the set-up function.  
Manual control of all functions.  
ETF1 – Non perforated eardrum (Williams test)  
ETF2 – Perforated eardrum (Toynbee test)  
ETF3 – Patulous Eustachian tube (Sensitive baseline tympanometry for 10 up to 60s.)

**Indicators:** Graphical display Compliance is indicated as ml and pressure as daPa. In PC-controlled mode admittance, susceptance and conductance can be printed.  
Stimulus level is indicated as dB Hearing Level.

**Memory:** Tympanometry: 1 curve per ear per tympanometry test. 3 curves per ear per Eustachian tube function test. Theoretically an infinite number of tests per protocol.

## Reflex Functions

**Signal sources:** Tone - Contra, Reflex: 250, 500, 1000, 2000, 3000, 4000, 6000, 8000 Hz.  
Tone - Ipsi, Reflex: 500, 1000, 2000, 3000, 4000 Hz.  
NB noise - Contra, Reflex: 250, 500, 1000, 2000, 3000, 4000, 6000, 8000 Hz.  
NB noise - Ipsi, Reflex: 1000, 2000, 3000, 4000 Hz.  
Noise - Contra, Reflex: Wide Band, High Pass, Low Pass.  
Noise - Ipsi, Reflex: Wide Band, High Pass, Low Pass.

**Outputs:** Contra Earphone: EARTone 3A insert for Reflex measurements or TDH39 headphone by request at an additional charge.  
Ipsi Earphone: Probe earphone incorporated in the probe system for Reflex.

**Test types:** Manual Reflex. Manual control of all functions.

Automated Reflex:  
- Single intensities  
- Reflex growth

Reflex Decay. Automatic, 10 dB above threshold and manually controlled with stimulus durations of 10 and 30s.

Reflex latency. Automated, first 300 ms from stimulus start.

Read more here:  
[www.interacoustics-us.com/com/Titan](http://www.interacoustics-us.com/com/Titan)



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# Technical Specifications - continued

**USB:** Input/output for computer communication. Titan can be fully operated from PC. The measurements can then be followed on PC screen. Data can be sent to and saved on the PC and stored in OtoAccess™.

**Printer** Optional thermal printer (wired or BT) as well as print option through PC suite.

**Compatible Windows software:** Interacoustics Database OtoAccess™ and NOAH 3.6.1 or higher.

**Power supply:** ASA30M – 0301

**Consumption:** 0,8 – 0,4 A

**Dimensions/weight:** (LxWxH) 2.4x2.4x11 inch. Weight: 0.8 lbs

**Impedance standard:** IEC 60645-5/ANSI S3.39, Type 1

**Safety standard:** IEC 60601-1, Class I, Type B.

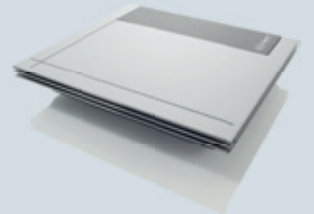
**Medical CE-mark:** Yes, UL approved

**Included parts Titan:** Titan handheld unit with basic probe  
Cradle  
USB cable  
ASA30M power supply (with converter)  
Clinical probe extension - 6 feet  
ER3A contra insert phone  
BET55 ear tips and box  
DG – LiBat – 001 back-up battery  
4 cavities (0.2, 0.5, 2 and 5cc)  
Titan PC suite with IMP440  
OtoAccess™  
Operation manual  
Multilingual CE manual  
TCB carrying bag

**Options Titan:** Short probe extension  
Thermal printer AB1310/AB1310 Bluetooth  
HBC39 contra cup headset  
High frequency probe tones

## Other solutions from Interacoustics:

- Equinox<sup>2.0</sup> Clinical Audiometer
- Affinity<sup>2.0</sup> Hearing Aid Analyzer
- FireWire<sup>®</sup> VNG
- Eclipse ABR-OAE-ASSR
- AA222 Audio Traveller - audiometer and middle ear analyzer in one



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### Sales and service in your area:

Read more here:  
[www.interacoustics-us.com/com/Titan](http://www.interacoustics-us.com/com/Titan)

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