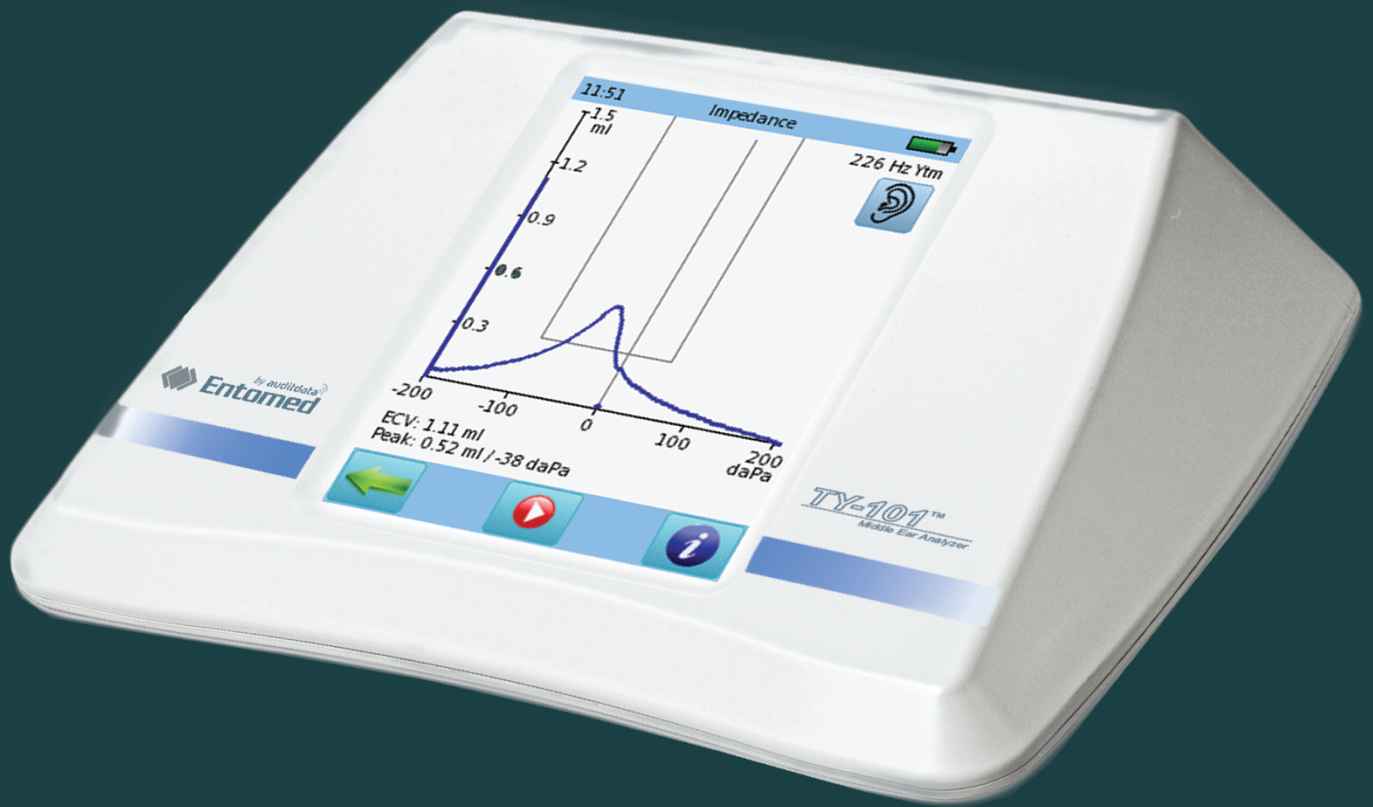


Entomed



Datasheet

TY-101 Tympanometer

Auditdata

Standards	Tympanometry	IEC 60645-5:2004
	Electrical Safety	IEC 60601-1: IEC 60601-1:2005 + Cor.: 2006 + Cor.: 2007 + A1:2012
	EMC	IEC 60601-1-2: 2014
	PEMS	IEC 60601-1-4: 2000
	Usability	IEC 60601-1-6:2010+A1:2013
	Audiometry	IEC 60645-1:2017
	The device fulfils all requirements of the Medical Device Directive 93/42/EEC, class II a. PATH MEDICAL is the legal manufacturer of the device for regulatory compliance.	
Tympanometry	Probe Tone	226Hz
	Pressure Range	-600 to +300 daPa
	Test Types	Tymp & Reflex automatic sequence
Acoustic Reflex	Stimuli (with EP-TY probe)	500, 1000, 2000, 3000, 4000 Hz, BB, HP, LP stimulus up to 105 dB HL
	Stimulus Presentation Modes	Ipsilateral
	Screening Levels	70 to 100 dB HL; step size: 5 dB
	Test Methods	Ipsilateral reflex and automatic reflex threshold
Instrument	Dimensions	150 x 210 x 45 mm
	Weight	475 g
	Display	240 x 320 pixel, 5.0 "
	Connections	USB
	Power Supply	Friwo FW 7662M/12 (GPP6)
	Output Rating for Power Supply Unit	100-240 V, AC, 50-60 Hz, 0.15 A
	Output Voltage and Nominal Impedance	5 Vpp, 32 Ω
	Rechargeable Battery	3.7 V Li-Ion
	Power Consumption	max. 2 W
	Maximum Operating Time with Fully Charged Batteries	ca. 6 to 8 hours (dependent on usage)
	Maximum Charging Time	ca. 8 hours
	Memory Capacity	up to 1000 patients, ca. 1000 tests (dependent on test type)

OPTIONAL MODULES TO TY-101

Tympanometry & Acoustic Reflexes	High Frequency	1000Hz
	Multi Frequency Tympanometry	2 tones simultaneously (226 and 1000Hz)
	Contralateral Reflexes	DD45 Contra HB7 headphone
OTO Acoustic Emissions TEOAE	TEOAE Objective test for checking outer hair cell functionality within 0.7 to 4 kHz (either in entire frequency range or in five frequency bands) using a short-term broadband stimulus and statistical response detection.	
	TEOAE Quick	
	Test Frequencies	0.7 - 4kHz – fixed frequency range
	Stimulus Level	85 dB peSPL
	Stop Criterion	Fixed
	TEOAE Diagnostic	
	Test Frequencies	1,1.5,2, 3, 4 kHz
	Stimulus Level	60 to 85 dB peSPL; 5 dB steps
	Stop Criterion	Selectable user defined stop criteria 3, 4 or 5 out of 5 frequency band
	Selectable SNR	6 or 9 dB
	Stimulus Protocol	Nonlinear
	Test Time	15 s, 30 s, 60 s, Automatic
	Usable Transducers	Ear Probe (EP-DP, EP-VIP, EP-TY, EP-LT)
	OTO Acoustic Emissions DPOAE	DPOAE Objective test for checking outer hair cell functionality at specific frequencies using two sine stimuli overlapping on.
DPOAE Quick		
Frequencies f_2 :		1, 1.5, 2, 3, 4, 5, 6, 8 kHz
Stimulus Levels L_2		30 to 65 dB SPL; step size: 5 dB
L_2/L_1 Relation		Automatic (scissor paradigm: $L_1 = 0.4 L_2 + 39$ dB SPL, Kummer et al. 1998)
SNR Stop Criterion		6, 9, 12 dB
Overall Stop Criterion		x out of y (with y = number of selected frequencies, $x = y/1/y-2$ & $x > y/2$) with "as fast as possible" option, i.e. stop as soon as overall criterion is fulfilled or cannot be fulfilled anymore
Maximum Number of Recalibrations Until Stop		0, 1, 3, 10
Manual Retest		
DPOAE Diagnostic		
Frequencies f_2 (standard)		1, 1.5, 2, 3, 4, 5, 6, 8 kHz
Frequencies f_2 (with DPHIRES license)		Linear: 0.8 to 10 kHz (step size: 0.5 kHz from 1 to 10 kHz), steps: 10 to 1000 Hz (step size: 10 Hz, minimum step size depends on start and stop frequency)
Stimulus Levels L_2		30 to 65 dB SPL; step size: 5 dB (single and multiple selections possible)
L_2/L_1 Relation		Automatic (scissor paradigm), $L_1=L_2$, $L_1=L_2+5$ dB, $L_1=L_2+10$ dB (max. L_1 limited to 65 dB SPL)
SNR Stop Criterion		6, 9, 12 dB
Minimum DPOAE Level Criterion		-20, -15, -10, -8, -5, 0 dB
Measurement Time		Adaptive timeout, manual minimum/maximum timeout (2 to 120 s)

STANDARD AND OPTIONAL PARTS/LICENSES

Standard	100188-US	EP-TY Probe Long
	100587	Accessory Box Combi
	100734	Accessory Box Plastic Tips Mushroom
	100414	Direct Print Feature
	100560	Tymp Screening License
	100524	Power Supply (without primary adapter)
	100525-US	US Adapter
	100525-EU	European Adapter
	100525-UK	UK adapter
	100525-USA-EU-UK-AUS	Set of all adapters
	100549	Test Cavity for Tymp
	100904-EN	English Manual
Optional	100689	1000Hz Tymp License
	100725	DD45 Contra HB7 headphone
	100587	Accessory Box Combi
	100734	Accessory Box Plastic Tips Mushroom
	100708-D	Carry Case
	100116	NOAH Connector License
	100525-AUS	AUS/NZ Power Supply Adaptor