



Harp Basic LT

DIAGNOSTIC AUDIOMETER

CLASSIFICATION

IEC 60645-1: Type 2 Class A/AE
ANSI S3.6: Type 2A/2AE

AVAILABLE SIGNALS

Stimulus: pure tone, warble tone
2 external inputs for speech audiometry
MIC input for live speech audiometry
Masking: NBN, WN, SN

SIGNALS SPECIFICATION

Attenuator step: 1 and 5 dB
Presentation: Continuous, Pulsed (0.5, 1 and 2 Hz)
Warble: 5 Hz sin wave modulating signal

AVAILABLE OUTPUTS AND TRANSDUCERS

AC: TDH-39 / DD45 headphones, ER-3 / IP30 insert earphones
BC: B-71 bone vibrator
Free field
Insert masking earphone: IME-100

AVAILABLE TESTS

- Pure Tone audiometry
- Auto threshold (modified Hughson-Westlake)
- Speech audiometry (2 channels)
- ABLB
- SISI: automatic score; 1 dB increment (5 dB for familiarization)
- Stenger, with pure tone or speech stimulation
- Tone decay, with 60 or 120 sec. duration
- DLI, with increments between 0 and 5 dB
- 2 independent channels Master Hearing Aid

PURE TONE: FREQUENCIES AND MAXIMUM LEVELS (dB HL)

Freq. (Hz)	AC TDH-39 DD45	AC ER-3 IP30	AC ER-5(*)	BC	FF (**)
125	80	90	90	-	75
250	100	105	100	45	85
500	110	110	110	65	95
750	115	115	120	70	95
1.000	120	120	120	75	95
1.500	120	120	120	80	95
2.000	120	120	115	80	95
3.000	120	120	115	75	95
4.000	120	110	110	75	95
6.000	105	95	100	55	90
8.000	95	90	90	50	85

(*) Transducer supported but no more available for purchasing

(**) The values refer to "normal" range; add 10 dB to each value in case of "extended range" option selected

SPEECH AUDIOMETRY: MAXIMUM LEVELS (dB HL)

AC (*) TDH-39 DD45	AC ER-3 IP30	AC ER-5	BC	FF
100	100	100	55	Normal: 75 Extended: 85

(*) Reduce by 20dB in case of free field equivalent filter activation.

PATIENT – OPERATOR COMMUNICATION

Talk over: built-in or external microphone
Talk back: through built-in speaker or monitor headset (included); patient microphone included
Patient response trigger

MONITOR SIGNAL

Both channels monitored through the built-in speaker or monitor headset

INTERNAL DATABASE

Up to 100 patients both AC and BC thresholds (only pure tone exams)

CALIBRATION

Validity: 12 months
All the parameters set through the device software

COMPUTER INTERFACE

Connection: USB (driverless)
Compatible software: Inventis Maestro

HYBRID TECHNOLOGY

Description: Harp can be controlled either as a stand-alone or as a PC-controlled audiometer
It requires Inventis Maestro software

DISPLAY

Live display of the graph of all the tests
Type: Graphical colour TFT LCD
Size: diagonal 4.3", 95 mm x 54 mm
Resolution: 480 x 272

POWER SUPPLY

Maximum consumption: 8 Watts
Power supply: 6V, 2A cont., through an external medical grade 100-240 Vac 50/60 Hz power supply

MECHANICS

Without integrated printer:
Size (WxDxH): 32 x 32 x 9 cm / 12.6 x 12.6 x 3.5 in
Weight: 1.8 Kg / 4.0 lbs

FREIGHT PACKING

Size (WxDxH): 47 x 40 x 35 cm / 18.5 x 15.8 x 13.8 in
Gross weight: 4.2 Kg / 9.3 lbs



APPLICABLE STANDARDS

Pure tone audiometry: IEC 60645-1, ANSI S3.6
 Speech audiometry: IEC 60645-1, ANSI S3.6
 Calibration: ISO 389-1 (TDH 39 and DD45), ISO 389-2 (ER-3, IP30, ER-5), ISO 389-3 (B71), ISO 389-7 (FF)
 Electrical safety: IEC 60601-1, Class I type BF
 EMC: IEC 60601-1-2

CE CERTIFICATE

93/42/EEC classification : Class IIa
 Classification rule (Annex IX, 93/42/EEC): 10
 Notified body: TÜV SÜD Product Service GmbH (0123)

PRODUCT CODES

11135: Harp model Basic LT – Diagnostic audiometer

INCLUDED PARTS

- DD45 supra-aural headphones
- B71 bone vibrator
- Patient response switch
- Monitor headset with boom microphone
- Clip-on microphone for patient-to-operator communication
- Medical grade power supply
- USB connection cable

OPTIONAL ACCESSORIES (with order code)

- 10833: ER-3C insert earphones
- 11748: IP30 insert earphones
- 10177: IME-100 insert masking earphone
- 10181: Desktop microphone for live speech tests
- 10179: Amplivox Audiocups noise excluding enclosures for TDH-39 / DD45 headphones
- 11259: Silenta Supermax noise excluding enclosures for TDH-39 / DD45 headphones
- 10180: Cable set for sound booth
- 10182: Soft carrying case
- 10266: One active speaker FBT J-5A

Harp is developed by:

INVENTIS s.r.l.

CORSO STATI UNITI, 1/3
 35127 PADOVA – ITALY
 PHONE: +39.049.8962 844
 FAX: +39.049.8966 343
 info@inventis.it
 www.inventis.it

Follow us on Twitter
<http://twitter.com/inventissrl>

The Inventis Quality System complies with ISO 13485 standard.

Inventis® is a registered trademark of Inventis s.r.l.