

# AUDIOLAB

■ Two channel clinical audiometer



*Tonal Audiometry*  
*Vocal Audiometry*  
**MASKING**  
**SISI**  
**ABLB**  
*Decay Test*  
**BEKESY**

# AUDIOLAB

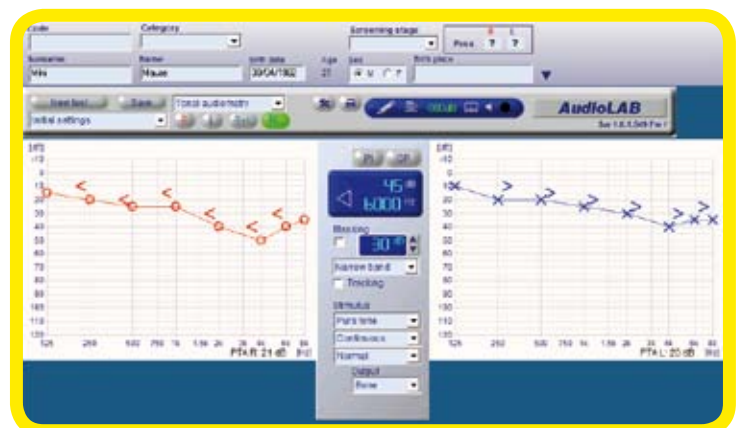
■ Two channel clinical audiometer



## AudioLab, advanced technology in a small package.

It weights only 250 grams and it is so small that it can be conveniently carried with a laptop PC, but when it is put to work it rivals any 2 channel audiometer.

All the functions of a completely independent 2 channel audiometer are at your disposal. A simple click of the mouse or the keyboard allows the execution of audiometric tests and displays the results on the PC monitor. At the end of the test the results can be saved in the PC memory and at your convenience printed via the PC printer.





## LAP, the most evolved audiological software.

Labat's technology has developed an exclusive software program as an answer to audiological needs.

The LAP program allows the direct transfer of data from the measuring instrument to the computer and simplifies the statistical data manipulation.

With the LAP program the user can visualize all the tests of each single patient. Statistical data can then be obtained by age, types of abnormalities, date of testing etc.

The LAP program is especially useful in neonatal screening to extract the REFER patients in order to automatically recall them for the next phase of testing.

The LAP program comes with all of Labat's audiological instrumentation.



### **High power**

For free-field testing, two active high power speakers are available as an option.



### **High frequency**

With the optional high frequency version, which includes high frequency headphones, frequencies up to 20,000 Hz can be presented.

As a further option the ER-5A insert phones are available.



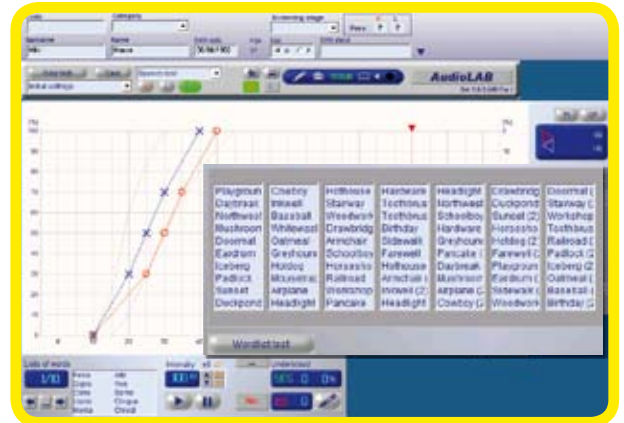


# AudioLab is not out of words.

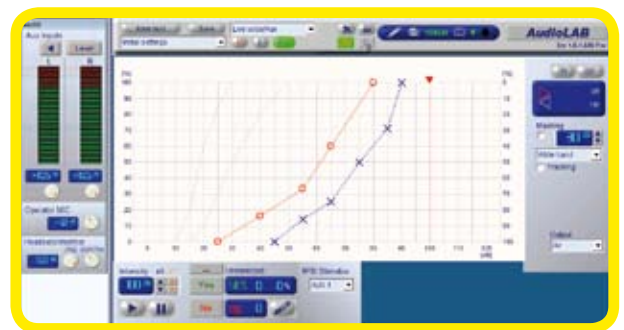
It is not necessary to connect an external CD player to AudioLab. In its internal Flash Memory, AudioLab has lists of words that can be presented to the patient at the selected intensity.

Just in case, AudioLab has inputs for the 2 channels where an external CD can be connected, so that there is no limitation to the speech material that can be utilized.

## Internal Speech



## External Speech



# Easier masking, more convenient superimposing.

With the Tracking function, AudioLab sends to the contralateral headphone the amount of masking noise according to the rules. The appropriate difference between tone and masking noise is preprogrammed in a table which the user can modify at will.

During the testing, it is possible to recall a previous audiogram in order to follow the evolution of the patient.

## The principal supraliminal audiological tests available.



**SISI TEST**



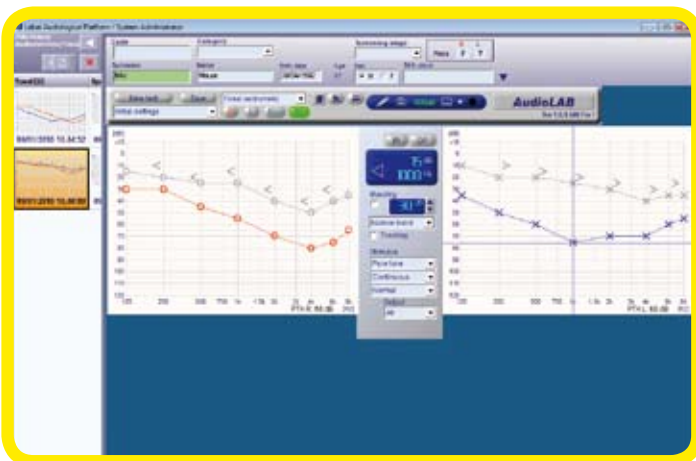
**ABL**



**DECAY TEST**



**BEKESY**



# Technical characteristics

## AUDIOLAB

Clinical audiometer two channels (EN 60645-1)  
Type 1 A-E (EN 60645-1 - EN 60645-2) - Type 2 A-E (ANSI S36)  
Number of channels: 2, identical and independent

## OUTPUT

AC R - AC L - AC R+L - BC R-L - FF R - FF L - FF R+L  
Masking contralateral with AC, BC, FF

## PURE TONE FREQUENCIES

AC: 125 - 8.000 Hz  
AC: (HF version): 8.000 - 20.000 Hz  
BC: 250 - 8.000 Hz  
FF: 125 - 8.000 Hz

Intensity range (1.000 Hz) - 10 + 120 dB HI

## MAXIMUM OUTPUT LEVEL

PURE TONE 1.000 Hz				
TRANSDUCER	TDH 49	ER-3A	B 71	FF
dB HL	120	115	75	100
NBM	95	95	-	95

## SPEECH AUDIOMETRY

TRANSDUCER	TDH 49	ER-3A	B 71	FF
dB HL	100	100	-	100
SN - WN	95	95	-	95

## VOCAL MATERIAL

- List of the words installed in to flash memory
- CH1 - CH2 independent inputs, CD1, CD2 two separate VU-Meters, masking noise SM and WM.

## SIGNAL MODE

- Normal ON - Normal OFF
- Continuos - pulsed
- Warble - frequency modulated  $\pm 5\%$  rate 5 Hz
- ABLB\*
- SISI with increment 1-2-3-4-5 dB.\*
- DECAY TEST\*
- BEKESY\*
- PAT RESPONSE
- TALK - BACK
- TALK - FORWARD
- Digital output for control Peep-Show

\*Only clinical version

## ACCURACY

- Resolution 16 Bit
- Precision  $\pm 50$  ppm
- Stability  $\pm 100$  ppm
- Distorsion < 1%
- Ratio signal/noise > 100dB
- Power supply: USB port

## STANDARD ACCESSORIES

- Head phone TDH 49
- Head phone HDA 200 (only HF version)
- Radio EAR B.71 bone vibrator
- Pat response
- USB cable
- CD with software
- Operating manual

## OPTIONAL ACCESSORIES

- Head phone ER-5A or ER-3A
- Operator microphone
- Patient microphone
- Cables for silent room

## ENVIRONMENTAL STORAGE TEMPERATURE

- 20 °C +50 °C

## OPERATING TEMPERATURE

- 5 °C +40 °C

## OPERATING RELATIVE HUMIDITY

- 10 - 90%

## MECHANICAL

Dimensions: cm 9,5 (w) x 15,7 (d) x 3 (h)  
Weight: 260 g

## STANDARDS

AUDIOMETRICS EQUIPEMENTS  
EN 60645-1 (1994) EN 60645-2 (1997)  
EN 60645-4 (1995) - ANSI S3.6 (1996)  
EN ISO 389 (1995) - ISO 389-2 (1994)  
ISO 389-3 (1994) - ISO 389-4 (1998)  
ISO 389-7 (1996)

## SECURITY

EN 60601-1 (1990) class II - type B  
EMC - EN 60601-1-2 (2001)

