



HEALTHWORLD INTERNATIONAL PHILS, CORP.



ECHOLAB

■ Otoacoustic Emissions System
TEOAE - SPOAE - ABR - AABR



Screening and clinical OAE

Echolab screener - TE OAE

Echolab clinical -

TE OAE, DP OAE, S OAE

Optional Upgrade: Screening ABR / AABR

User programmable protocols

PC connectivity through USB

Distributed by: **HEALTHWORLD INTERNATIONAL PHILS, CORP.**

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ECHOLAB - *Otoacoustic Emissions System* TEOAE - DPOAE - ABR - AABR

Full Featured Clinical OAE in the Palm of your hand

- *Innovative, fast, reliable*
- *Ideal handheld unit for easy neonatal screening as well as clinical testing; TEOAE, DPOAE, Suppression Test (with optional noise insert).*
- *Software programs allow EchoLab to be used in clinical as well as research applications*
- *Screening AABR testing using the optional ABR pre-amplifier*



Screening, simple as the smile of a child

- *Perfect answer to the needs of neonatal screening.*
- *Automatic control of the probe and the calibration, combined with the real-time measurement of the environmental noise ensure reliable results.*
- *Easy and fast operation*
- *Storage of 250 tests*
- *Faster data transfer through USB*

Light ? Perfect.

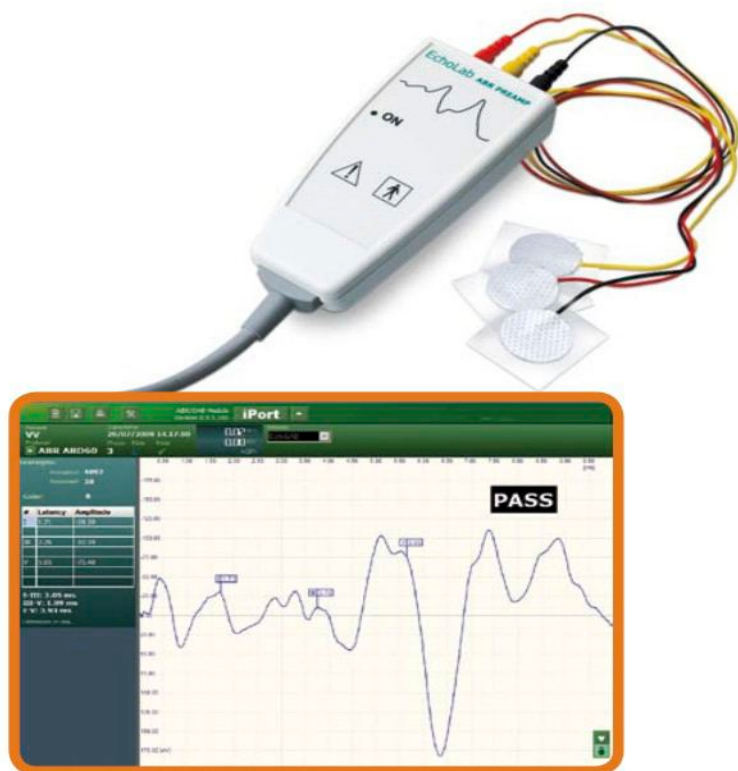
- *Exceptional light weight of the probe simplifies neonatal testing.*
- *Proper cleaning by removing probe end from the probe.*
- *Unique design of different sizes of eartips allow easy insertion in the ear canal with effective reduction in external noise.*



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- Unique Single software program communicates with all the LABAT Audiological Instruments.
- Common patient database for better management, allowing to view all the tests performed on each single patient.
- Sorting of statistical data by age, date, type of abnormality etc.
- Especially useful in neonatal screening to extract the "REFER" patients in order to recall them for next phase of testing.

LAP
Labat Audiologic Platform
the most evolved
audiological software.



The ABR / AABR Test

- Possible to conduct the ABR and AABR tests with the optional ABR pre-amplifier using click stimulation generated by the same OAE probe
- Impedance check prior to ABR testing
- Realtime ABR traces on LCD display
- Automatic interpretation of "PASS" or "REFER" in AABR

All the information on the display

From the simple final "PASS" / "REFER" to the complete trace of the tests TEOAE, DPOAE, SPONTANEOUS and ABR.



TEOAE
Automatic
Pass/Refer results



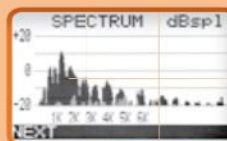
DPOAE
Complete DP-gram
with response and noise



TEOAE
Acquired response



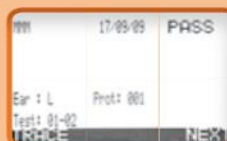
DPOAE
Histogram of F1/F2
and DP with "PASS" / "REFER"



TEOAE
Response spectrum



PROTOCOLS
User selected



AABR
Actual ABR trace



TEST COUNT
According to type,
and possibility to view them
on the display



ECHOLAB OAE Technical Data

Labat's EchoLab: otoacoustic emissions system for screening and clinical testing with AABR option. Hand held unit with alphanumeric keyboard.

OAE

- TEOAE - Transient Evoked OAE
- DPOAE - Distortion Product OAE

TEOAE - Linear and non-linear stimuli

- Frequency Range 1000-5000 Hz
- Frequency Resolution 50 Hz
- Frequency Accuracy $\pm 0,01\%$
- Stimulus Level 0-90 dB SPL
- Level accuracy ± 2 dB SPL
- Dynamic Range 90 dB SPL

DPOAE - distortion product

- Frequency Range 250-10,000 Hz
- Frequency Resolution 5,10,25 Hz programmable
- Frequency Accuracy 0,01%
- Stimulus intensity 0-90 dB HL
- Stimulus level accuracy ± 2 dB SPL
- Dynamic Range 90 dB SPL

LCD

- Graphic display 240x160 pixel high definition with visualization of: input signal, OAE trace, Spectrum, DP-gram, test results PASS/REFER
- Visualization of ABR trace

GENERAL CHARACTERISTICS OAE

sampling	TEOAE	DPOAE		
	25600	20480	25600	40000
Sampling per frequency	512	4096	1024	4000

- Microphone: 15 dB SPL a 1000 Hz 20 dB SPL a 2000 Hz
- Accuracy: 2 dB SPL microphone and in situ sound level
- Automatic in situ calibration

ACCESSORIES OAE

- SOAE probe
- Ear tips for adults and neonates
- Rechargeable NiMH battery
- Battery charger
- Probe cleaning kit
- CD with software LAP
- Carrying case
- Instruction manual

INTERNAL MEMORY AND DATA TRANSFER

- 250 test
- USB connection to PC

POWER SUPPLY

- Rechargeable NiMH battery with duration per charge >8 hours
- Automatic low battery warning
- Universal charger



AABR Technical Data

ACQUISITION

- 16 Bit ADC - CMR > 100dB
- Filters 100 Hz - 2500 Hz
- Analysis time: 10, 12 or 15 ms programmable
- Stimulus rate: up to 18/sec
- Number of averages: 1000 or programmable
- Automatic artifact control

STIMULUS

- click - positive - negative - alternate
- Max Intensity 90 dB SPL

GENERAL Information

ENVIRONMENTAL

Temperature shipping/inventory: -20°C to +50°C, -4° to +122°F
 Temperature working +15 to +35°C, +60 to + 95°F
 Humidity: 30% to 90%

DIMENSIONS / WEIGHT

cm 9,5 (w) x 23 (h) x 5,5 (d) - 3,7" (w) x 9" (h) x 2,2" (d)
 Net weight: 493 g - including battery

ELECTRODES IMPEDANCE CHECK

- Differential single electrode control

GRAPHIC VISUALIZATION

- ABR waveform during acquisition and final result Pass/Refer
- Latency cursor for wave V
- Test parameters

STANDARD ABR ACCESSORIES

- ABR amplifier with cable
- 10pkgs. of 3 pediatric pre-jelled single use electrodes

STANDARDS

AUDIOMETRICS UNITS

EN 60645-1 (1994), EN 60645-3 (1995);
 ANSI S3.6 (1996); EN ISO 389 (1995)

SECURITY

EN 60601-1 (1990) Class II - Type B
 EMC - EN 60601-1-1 (2001) - EMC; EN60601-1-2 (1993)

Specifications and features can be changed without notice.

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