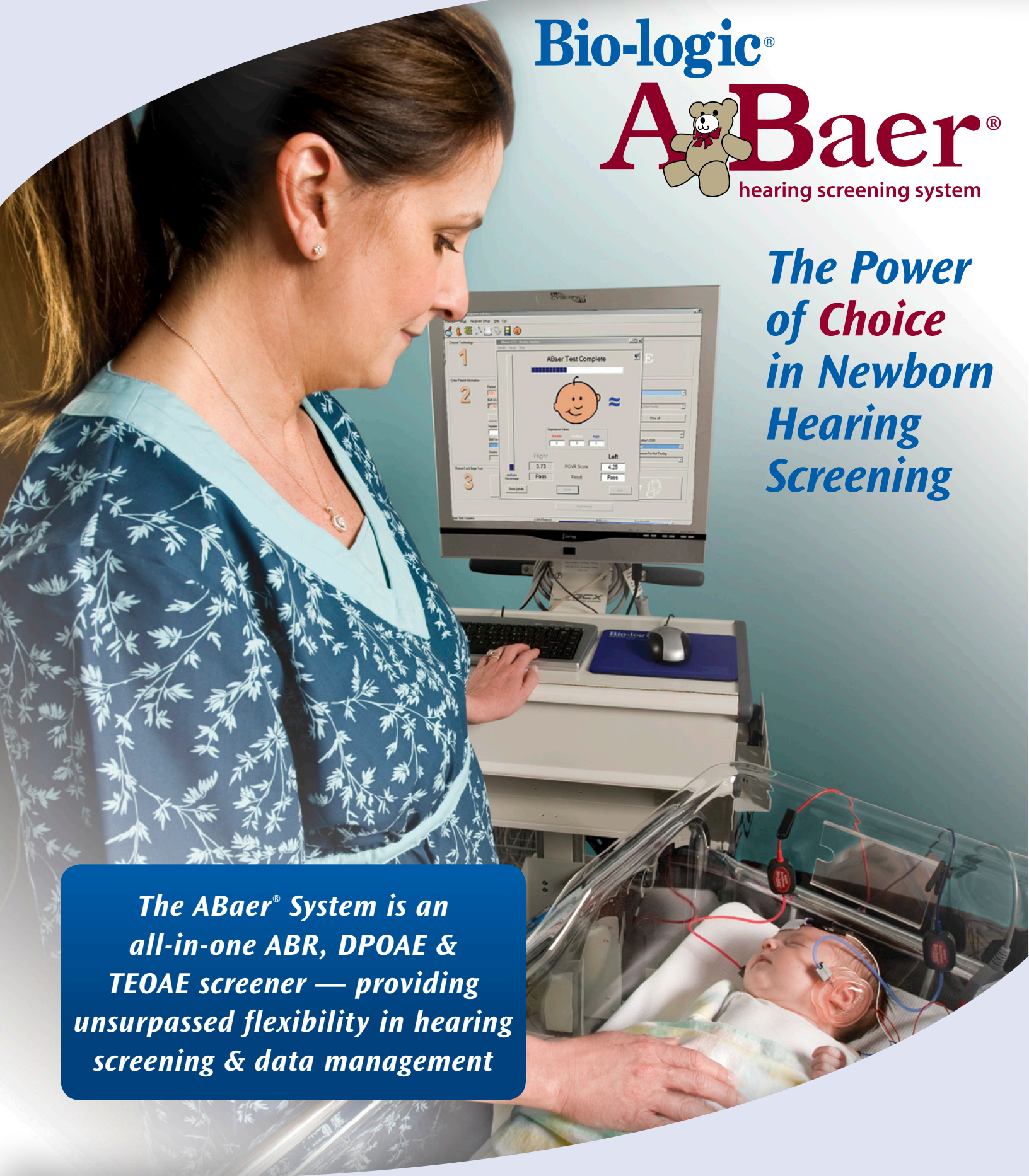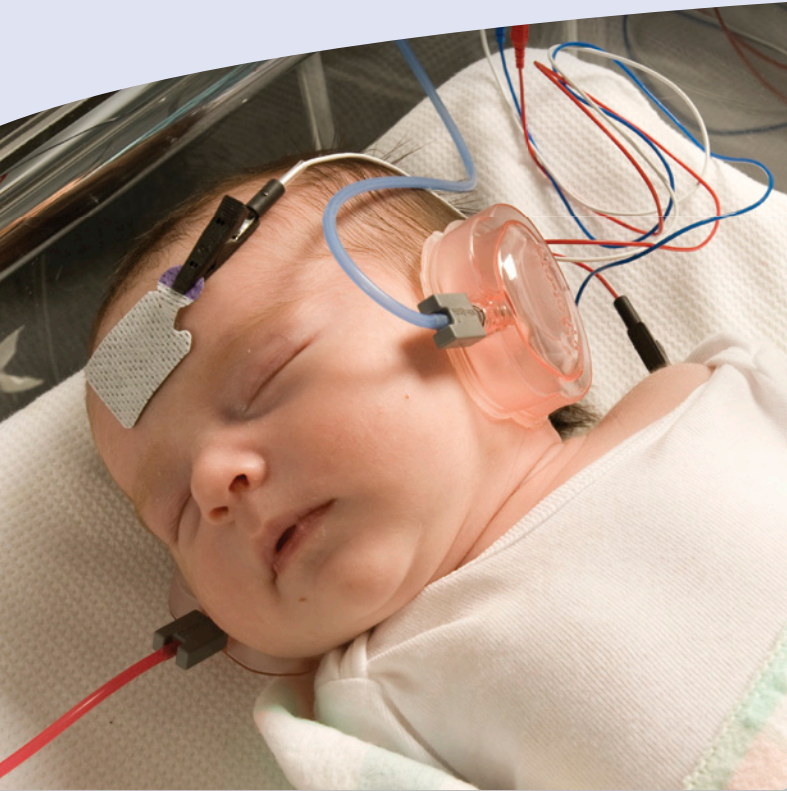# natus

Bio-logic®
ABaer®
hearing screening system

The Power of *Choice* in Newborn Hearing Screening

The ABaer® System is an all-in-one ABR, DPOAE & TEOAE screener — providing unsurpassed flexibility in hearing screening & data management

FAST & SIMPLE OPERATION

- Keyboard/mouse functions provide easy navigation
- Colored, graphical displays guide you easily through the screening process
- Patient ABR waveforms are available for viewing
- Automated pass/refer results
- Pre-set screening parameters — no user adjustments necessary
- Tutorial videos provide helpful tips on how to conduct a screen

Customizable Patient Report

- Export results to personal computer via CD or USB
- Barcode reader available for input of medical record numbers

ALL-IN-ONE ABR, DPOAE & TEOAE SCREENING SYSTEM

ABR technology

Utilizes proprietary Point Optimized Variance Ratio (POVR) Algorithm

- Developed by the House Ear Institute, a leader in auditory research since 1946
- Efficient screening
  - Test automatically stops if the probability of achieving a PASS result is very low
- Statistically proven
  - 99.96 % theoretical statistical bilateral sensitivity
  - 95 % specificity

Distortion Product Otoacoustic Emissions (DPOAE)

- High sensitivity for cochlear hearing loss
- Frequency specific screening: 2, 3, 4, and 5 kHz
- Fast test times
  - Approximately 10 seconds per ear
- In-the-ear stimulus calibration and ear probe stability check prior to testing

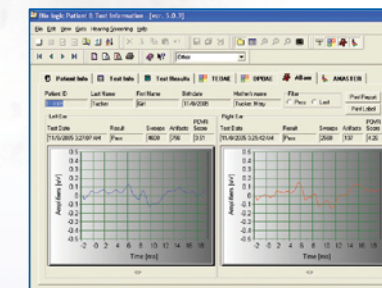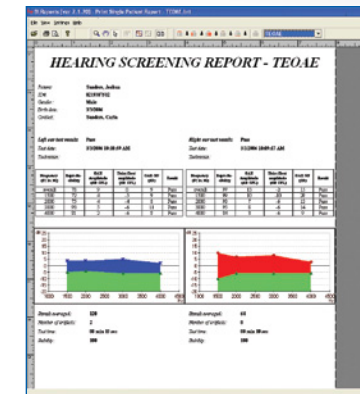#### Transient Evoked Otoacoustic Emissions (TEOAE)

- High sensitivity for cochlear hearing loss
- Testing frequency range: 1.2 to 3.5 kHz
- Fast test times
  - Approximately 10 seconds per ear
- Ongoing ear probe stability check throughout the test

Multiple Technology Configurations

- ABR, DPOAE & TEOAE technologies are available in different combinations
- Ideal for one-stage, two-stage or combined screening protocols


Waveforms available for viewing

FLEXIBLE DATA TRANSFER & DATA MANAGEMENT

- Stores an expanded set of patient demographic data
- User-definable data entry fields are available to meet program requirements
- Provides customizable reports for parents & physicians
- Access to screening database & statistical reports can be restricted to authorized individuals via password
- Includes built-in data management software
- Compatible with 3rd party data management systems such as OZ SIMS & Hi*Track
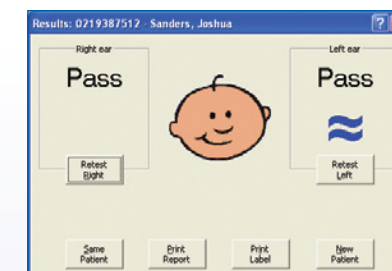
Automated PASS Result

BUILT-IN CONTINUOUS QUALITY IMPROVEMENT

- Generates statistical reports on program outcome measures
  - Hospitals can monitor the effectiveness of their screening program on an ongoing basis

CONVENIENT SCREENING WORKSTATION

- Cart allows easy transport of ABaer System to different locations
- Spacious drawer & basket are available for storing screening supplies

Technical Specifications:

PHYSICAL
ABaer interface device:
Dimensions:
    7.6 x 4.0 x 1.7 inches
    19.4 x 10.1 x 4.4 cm (H x W X D)
Weight:
    14 oz (400 grams)

POWER SUPPLY
6 V DC

ABR DATA ACQUISITION
Analysis Time	(window length) 21.33 msec
A/D Resolution	16 Bit
Artifact Rejection	>13 uV
Points Per Trace	256
Electrode Montage	Forehead to Test Ear or Forehead to Nape of Neck (dependent on transducer choice)

ABR AMPLIFIERS
Channels	1 Optically Isolated
Gain	x30,000
High Pass Filter	100 Hz
Low Pass Filter	1500 Hz
CMR Ratio	>110 dB, at 50/60 Hz
Impedance Test	Internal, 1000 Hz sine wave

ABR STIMULUS
Type	100 µs click
Polarity	alternating
Rate	37.1/sec
Intensity	35 dB nHL default (option for 30 or 40 dB nHL as an alternative)

ABR TRANSDUCER CHOICES
ABaer Probe (OAE-type)
Insert Earphones with in-the-ear tips
Insert Earphones with Halo Ear Muffin®
TDH-39 headphones

COMPUTER
System requires PC with dedicated USB and Windows® XP Professional operating system.
Bio-logic-supplied PC specifications are available upon request.

CART
Five-caster cart accommodates ABaer module, laptop or panel PC, deskjet printer, isolation transformer and supplies.

SAFETY
Designed to meet the following standards:
IEC 60601-1 Class II
UL 2601-1
CSA-C22.2 No. 601.1
AAMI-ES1
CE Certified

Contact your local customer service representative for more information.
***Note:** Specifications are subject to change without notice.*

The ABaer Hearing Screening System includes:

- ABaer screener with panel PC or laptop computer
- Screening cart
- Data management software (built-in)
- Electrode (patient) cable
- OAE probe
  (optional for ABR, included with OAE)
- Insert earphones with adapters
- Deskjet printer (optional)
- Seiko label printer (optional)
- Supply starter kit
- Instructional materials

Ordering Information:

ITEM	PART NUMBER
ABaer, ABR, Label Printer	AB1001
ABaer, ABR, Regular "PC" Printer	AB1002
ABaer, ABR, Label Printer, OAE Probe	AB1003
ABaer, ABR, Regular "PC" Printer, OAE Probe	AB1004
ABaer, ABR, DPOAE, Label Printer	AB1005
ABaer, ABR, DPOAE, Regular "PC" Printer	AB1006
ABaer, ABR, TEOAE, Label Printer	AB1007
ABaer, ABR, TEOAE, Regular "PC" Printer	AB1008
ABaer, ABR, DP & TEOAE, Label Printer	AB1009
ABaer, ABR, DP & TEOAE, Regular "PC" Printer	AB1010

Trusted Reliability.
Flexible Innovation.
Proven Excellence.

natus
hearing diagnostics