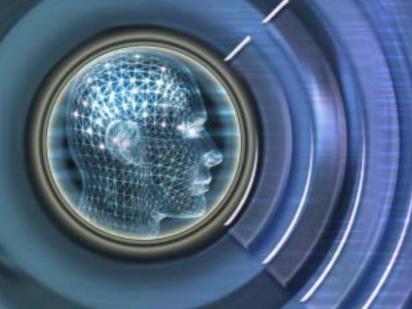


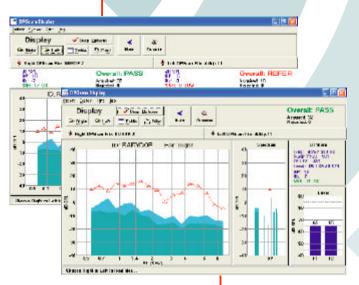
# Smart OAE



**Otoacoustic Emissions** 



# The Complete Choice for Otoacoustic Emissions Testing, inc



#### Multiple Views

View the in-ear stimulation intensities and noise levels for each DP testing frequency. Graphically display the entire spectrum for each recorded frequency or view a numerical table of results.

#### Customizable Display

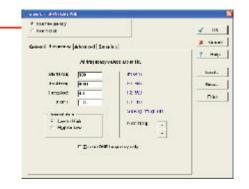
For easy comparison, view data from both ears simultaneously, or view data from a single ear with a detailed point-by-point analysis.

#### Automatic Assessment for Fast Screening

Acquired DP test results are automatically labeled as PASS or REFER, based on user-defined passing criteria. Base the criteria on SNR and/or absolute DP SPL level and/or Standard Deviation(s) of DP above noise floor.

#### Accessible Normative Data

Choose to use the supplied normative data or easily create your own, customized normative data to suit your specific needs. Build norms files for different ages and gender by defining the expected DP response level, noise floor level and their respective standard deviations.



#### Easy Data Acquisition

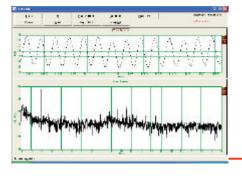
Straightforward controls allow you to start, pause or resume data acquisition by making a single mouse click. User-selectable testing options can be set to automatically load each time the software is started.

#### Unlimited Control with Scripting

Gain complete control on the testing parameters and data acquisition and your tests by using the powerful built-in scripting language. Specify your own testing frequencies and levels to acquire fine structure DP Grams

#### Fast Test Setup

Quickly customize the DP test by choosing start and ending frequencies and the number of frequencies per octave to test. Define F2:F1 ratio, L1 and L2 stimulus level and the level of in-ear stimulus correction. Activate test stopping rules for faster patient screening.



#### **Built-In Calibration Module**

Single mouse click calibration procedure makes it easy to calibrate the OAE probe. Also, calibrate at specific frequencies and clearly view the signal in both the time and frequency domains. Password protected, to prevent tampering.

#### Upgrades · Smart

- Smart IVRA\* Smart

\*upgrade available for the Univers

### uding Distortion Product, Transient and Spontaneous OAEs

# SmartTroAE

#### Multiple Response Displays

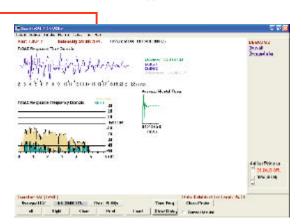
View the response in both time and frequency domains, and the meatal response.

#### Suppression Masking Option

Upgrade your hardware to include ipsilateral or contralateral masking and analyze its effects on the efferent neural system.

#### Adjustable Artifact Rejection

Move the artifact rejection level slider to block out unwanted noise contaminants and obtain optimal quality responses.

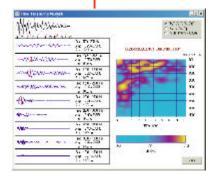


#### Accessible Test Parameters

Modify the testing parameters, including intensity, rate and number of acquisition sweeps with a few clicks of the mouse.

#### **Time-Frequency Plots**

Analyze acquired transient data with this powerful tool to detect spontaneous emissions and noise contaminants. View the response peak amplitude and latency characteristics for a specific frequency range. Examine responses using the Time-frequecy distribution graphs for the response, noise or SNR.



#### Spontaneous OAE

Acquire spontaneous OAE's with a click of a mouse.



#### Numerous Stimulus Choices

Perform classic transient otoacoustic emissions testing, or select pure tones with a variety of envelope choices to fulfill your testing needs. View the selected stimulus in both the time and frequency domains.



Screener EP

Audiometer

al Smart Box only.





# Smart Choices

#### Software Features:

- Easy-to-use, Windows® based interface and multitasking capabilities.
- Integrated, shared database with all other IHS programs.
  Includes export capabilities to other common medical databases.
- Online help at any point in the program at the press of a key.
- Built-in system calibration, self-check and system diagnostics modules.
- Automatic default parameters allow fast start-up and testing.
- User-defined testing protocols for automated data collection.
- Automated referral letter generation.
- Print reports, including patient information and testing parameters, to any Windows® supported printer.

#### **Smart DPOAE Features:**

- Automated user-defined Pass/Refer criteria.
- User-defined normative data display region.
- Automated, variable artifact rejection based on measured noise conditions.
- Display of DPgram including amplitude and noise as a function of stimulation frequencies, noise spectral information, individual DP data point information and single or dual ear display options.

#### SmartTrOAE Features:

- User-selectable artifact rejection level.
- Display of response in frequency and time domains.
- Display of meatal response.
- Time-frequency plots of response, noise or signal-tonoise ratio.
- Frequency range breakdown display including peak amplitude and peak amplitude position.
- Spontaneous OAE testing function.
- Masking option
- Suppression Option

# Universal Smart Box Features:

- Light and portable.
- Connects to any Windows® computer via a USB Port.
- Up to four Auditory Evoked Potential recording channels.
  High frequency option.
  Notched noise masking option.
- One OAE channel (DP and/or Transient and Spontaneous).
  High frequency option.
  Supression option.
- Optional auditory transducers: OAE probe, insert earphones, bone vibrator, headphones, sound field (with external amplifier) and/or high frequency transducers.
- Upgradable to include Intelligent Visual Reinforcement Audiometry (IVRA.), SmartEP and SmartScreener.

## Universal Smart Box Jr Features:



- Light and portable.
- Connects to any Windows® computer via a USB Port
- Up to two Auditory Evoked Potential recording channels.
- One OAE channel (DP and/or Transient and Spontaneous).
- Optional auditory transducers: insert earphones, headphones, bone vibrator and/or OAE probe.
- Upgradable to include SmartEP and SmartScreener.

\*Preamplifier box (shown) not included in OAE-only systems



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<sup>\*</sup> Windows is a registered trademark of Microsoft Corporation.