SmartOAE

SmartOAE is the smart choice for complete diagnostic and screening Otoacoustic Emissions testing.

Quality, Flexibility, and Simplicity

"Let our ingenuity make your testing easier."

INTELLIGENT HEARING SYSTEMS

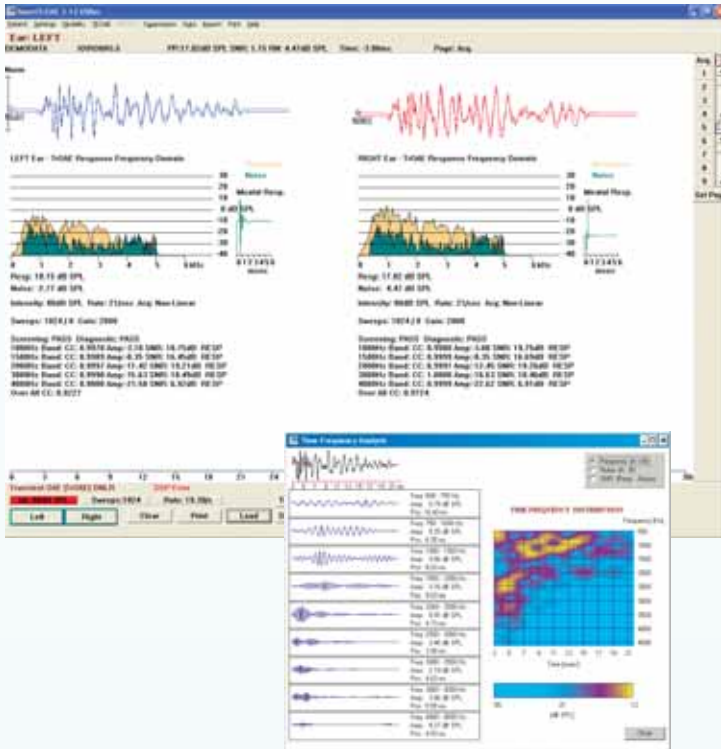Many Options, One Smart System

SmartDPOAE

Fast Screening to Full Diagnostic Distortion Product OAE

- Fast and easy test setup and data analysis using default parameters.

- Automatic probe-fit check and in-ear calibration.

- User-selectable testing parameters and stopping criteria.

- Easy-to-interpret, colorful DPgrams and detailed information for each frequency tested.

- View both right and left ear results in one color-coded, side-by-side display.

- Comprehensive data table shows detailed numeric values for all data points.

- Clear Pass or Refer indications based on user selected passing criteria.

- Optional display of normative ranges on the DPgram facilitates response analysis.

- User-customizable normative display ranges.

- Automatic saving of last test settings for easy test replication.

- Built-in scripting feature allows advanced users to define sequences of frequencies and intensities for automated data collection.
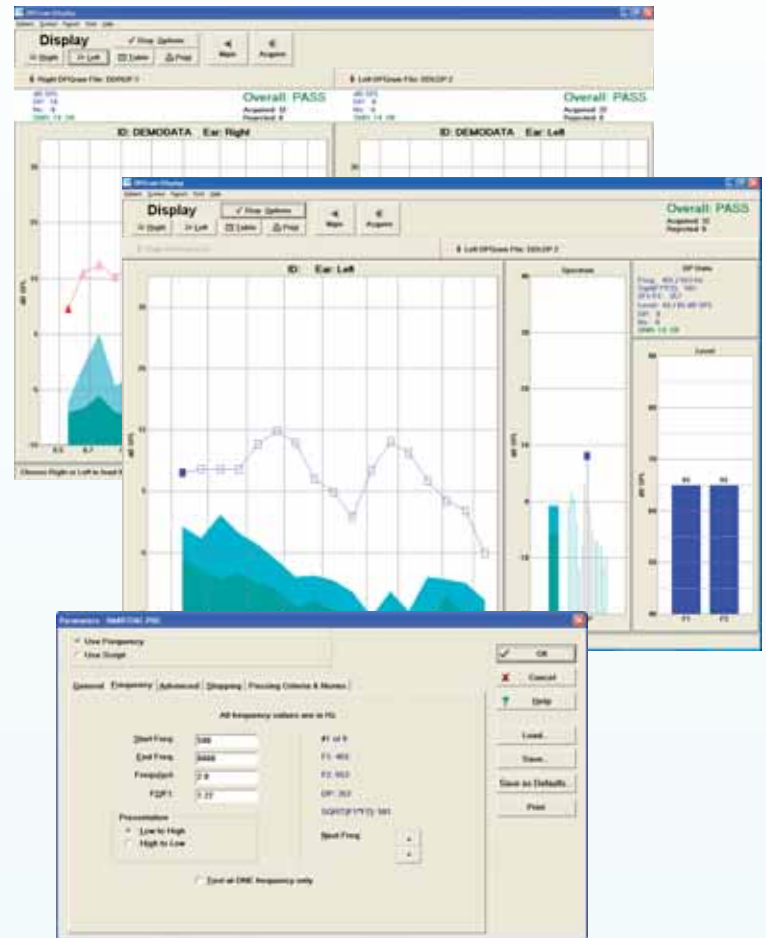
SmartTrOAE

A Complete Solution for Transient Evoked OAE

- Includes both Transient Evoked OAE and Spontaneous OAE acquisition modes.

- Fast and easy test setup and data analysis using default parameters.

- Clear Pass or Refer indications based on user selected passing criteria.

- View the OAE time signal, frequency analysis, and the ear canal response.

- Move the artifact rejection level slider to block out unwanted noise contamination.

- Time-Frequency plots can be used to illustrate how the frequency composition of transient OAE responses, Noise, and SNR change over time.

- Automatic probe-fit check and in-ear calibration.

- Built-in continuous contralateral masking (requires additional transducer).

- Optional simultaneous, dual-ear testing.

- Ipsilateral masking option includes full control of suppressor level, duration, and the amount of time between the masking and the stimulus signals.* **

- Full-featured suppression analysis incorporating temporal and spectral comparison of control and suppression data.* **

- Advanced users can change the stimulus from clicks to tones or user-defined stimulus files.

*Some options not available for all hardware platforms.

**Advanced research tools.

SmartDPOAE and SmartTrOAE Are Part of an Integrated Suite

At any time, add additional functionalities as you need them, all of which share the same integrated patient database and report generation.

- SmartEP (Diagnostic Evoked Potentials)

- SmartEP-ASSR (Auditory Steady State Responses)

- IntelligentVRA (Visual Reinforcement Audiometry)

- SmartAudiometer (PC Based Audiometer)

- SmartScreener-Plus 2 (Infant Hearing Screener)

- PetScreener (ABR Based Animal Screener)

- SmartEP-CAM** (Continuous Acquisition EP Module)

- SmartUSB-ActiveX** (User Programmable Controls)

Smart Features

Software

- Simple interface makes programs easy to learn and use.
- Supplied default parameters allow fast start-up and testing.
- Full control over numerous parameters for the ultimate flexibility in testing.
- Automated user-programmable Pass/Refer criteria, with stopping rules based on these criteria.
- User-defined testing protocols for automated data collection.

- Advanced features include in-the-ear calibration, variable artifact rejection, and high resolution spectral analysis.
- Integrated, shared database with all other IHS programs.
- Save reports directly to PDF file format.
- Export capabilities to other medical databases such as Hi*Track and OZ Systems.
- Built-in system calibration, self-check, and system diagnostics modules.

SmartTrOAE

- Graphical displays of the OAE time signal, frequency analysis, and ear canal response.
- User-selectable artifact rejection level.
- Exclusive advanced features include time-frequency plots of response, noise, and signal-to-noise ratio.
- Tabular statistical data including cross-correlation and SNR values.
- User-modifiable Pass/Refer criteria for both diagnostic and screening functions based on five separate frequency bands.
- In-ear correction can be turned on or off.
- Contralateral masking option included.
- Optional advanced ipsilateral suppression.
- Linear, non-linear, and spontaneous acquisition modalities are included.

SmartDPOAE

- Easy-to-interpret DP-grams that show OAE amplitudes, SNR values, and measured stimulus and noise levels.
- Shaded display regions for supplied or user-specified normative data ranges.
- Easy custom setup, simply specify the frequency range and the number of test frequencies per octave.
- Full user control over stimulus levels, frequency ratio, artifact rejection level, and sweep count.
- Artifact rejection level is automatically adjusted depending on actual noise conditions.
- Unique capability to display one or two standard deviations of the measured noise levels to validate SNR.
- High frequency options:
    - up to 16 kHz for ototoxicity monitoring
    - up to 32 kHz for animal research.

Computer Requirements

- Windows® based computer.
- Minimum 4GB RAM.
- Minimum 5GB available hard drive space.
- Minimum XGA display (1024x768 screen resolution).
- Two available USB ports.
- Removable media, network drive, or secure internet storage site for data backup recommended.

Hardware

- USB Plug-and-Play.
- Up to 2 OAE recording channels.
- Optional transducers: insert earphones or high frequency transducers.
- Easily upgradable to include SmartEP, SmartEP-ASSR, SmartAud, SmartScreener-Plus 2, IVRA.