

PRODUCT DATA

Test for I-deas Acoustic Intensity Measurements — BZ-6008

Test for I-deas Acoustic Intensity Measurements software provides comprehensive capabilities for collecting real-time data for calculating acoustic intensities and related quantities. Acoustic intensity methods are useful in locating noise sources and provide the advantage that measurements can be made in almost any environment without the requirement of special facilities such as an anechoic room. The power of the user interface, together with a unique implementation of geometry-based data management tools, provides a high level of organisation and ease-of-use.

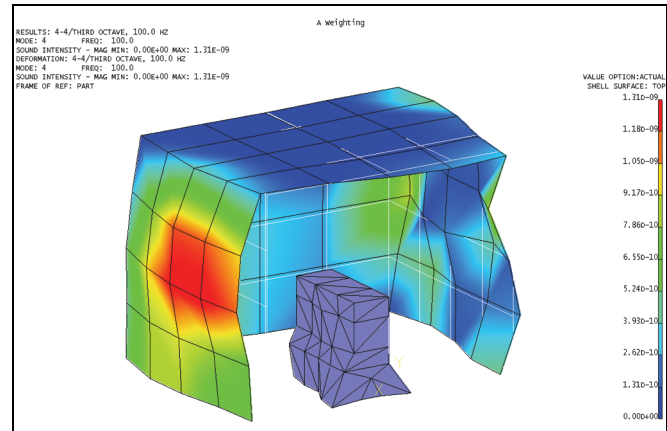
USES

- For collecting acoustic intensity data from microphone pairs

User Interface

An advanced user interface provides a new level of ease-of-use in setting up and managing the measurement process. Real-time displays, intelligent forms, geometry displays, and icons guide you through the process, streamline test instrument setup, and minimise the potential for error.

- Real-time data can be visually monitored in a preview mode as well as during the acquisition process. Up to 20 channels can be displayed simultaneously to view waveform and frequency content. Up to 90 channels can be monitored simultaneously using the min/max display. Several types of real-time display are provided, including time, windowed time, time and windowed, spectra, time and spectra, min/max level, and waterfall (frequency-based)
- Forms: Setup conditions and channel organisation are managed using convenient forms that automatically handle the interaction of the various parameters and, depending on the previous parameters selected, present only choices appropriate for the selected measurement
- Geometry-based: Special geometry-picking features supplement traditional methods of associating instrument input channels with measurement locations on the test structure. Additionally, geometry picking can be used to display measurement results



- Programmability, icons: Programmability provides great flexibility, enabling you to customise the software to meet specialised applications. Icons provide fast, cursor-picked access to commands, command strings, and program files

Acoustic Intensity Measurements

The following types of multichannel measurements can be acquired and written to disk storage: acoustic intensities, auto power spectras, cross-power spectras, coherence, and sound power.

Instrument Setup

A logical progression of forms is used to set up the data acquisition conditions.

- Definition: A convenient configure channels form is used to define the probes used to measure acoustic intensity. Each probe definition includes the two microphones connected to two input channels, the space between the microphones, the geometric element associated with the measurement, the area measured, and the phase compensation function
- Sampling: The sampling conditions for time or frequency domain measurements are set up using a form addressing all the interdependent sampling

- parameters including number of spectral lines, maximum frequency, frame size, and Δt
- Triggering methods: Select from free run, first frame, and every frame. Trigger sources include manual, channel, and external. Optional delays include pre-trigger and post-trigger
- Autorange: Sets the percentage of the sampling frame or the percentage overhead (buffer zone beneath the full-scale limit)
- Windows: Hanning, flat top, exponential, and impact
- Averaging: Stable averaging is supported
- Convenience: The type of real-time measurement calculation to be performed and type of results to be written to disk are set up in a convenient form
- Setup management: Multiple instrument setups can be stored and recalled for later use

Channel Setup

The relationships between input channels, measurement locations, and transducers are conveniently assigned and managed using forms and, as appropriate, picked from a geometric image of the test structure.

- Channel configuration and updating: A convenient form sets up the number of microphone pairs and the method of updating the channels, including manual keyboard entry of the next set of measurement locations and moving transducers by picking from a geometric image to define the next set of measurement locations
- Channel table: A convenient form enables the user to associate these key setup parameters: input channel number, measurement coordinate and description, input voltage range, voltage or charge mode, coupling, and transducer sensitivity

- Transducer tables: A table defining each transducer type, serial number, and calibration information can be set up, stored, and linked to the setup conditions. This table can be exported to an ASCII file and later imported for use with future tests
- Tracking: Measurement run tracking enables management and retrieval of data from multiple runs of the same set of measurements. An attribute is automatically added indicating which groups of data were acquired during the same measurement

Calibration

A microphone calibration capability is provided for use with a pistonphone where single or multiple channels can be calibrated to a known reference dB level and frequency. A phase calibration feature for microphone pairs provides for accurate phase compensation. Phase compensation functions are appropriately applied to the measurements obtained from all microphone pairs to correct phase inaccuracies. All required data management is automatically taken care of.

Results Graphing

Results can be displayed in XY graphs as acoustic intensity, intensity phase, auto spectra, reactive intensity, phase, sound power, and coherence versus frequency. The spectra browser provides complete capabilities for 2D and 3D graphing of the data in terms of narrow band, octave, 1/3-octave, 1/n-octave, and applying A, B, C weightings. Extensive cursoring and tagging features are available on the various 2D and 3D graph formats. Comprehensive geometry creation and geometry-based acoustic intensity contour and vector displays are available. All of the Test for I-deas Core Test features for real-time rotation and viewing are provided.

Specifications – Test for I-deas Acoustic Intensity BZ-6008

PREREQUISITE

Test for I-deas Core Test BZ-6000

Ordering Information

BZ-6008-F	Test for I-deas Acoustic Intensity	M1-6008-F	Annual Software Maintenance and Support Agreement	M2-6008-F	Annual Software Maintenance and Upgrade Agreement
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Brüel & Kjær reserves the right to change specifications and accessories without notice

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