

FLEXIBLE SOFTWARE PLATFORM

# BK Connect<sup>®</sup> – sound and vibration software that works like you work





# BK Connect – Modular Analysis Software

THE FULL-FEATURE ANALYSIS PLATFORM BK CONNECT SIMPLIFIES TESTING AND ANALYSIS PROCEDURES, ENABLING YOU TO WORK EVEN MORE EFFICIENTLY AND WITH A HIGH DEGREE OF FLEXIBILITY.

For sound and vibration professionals, software solutions can be unintuitive and complex. Too much time is spent on manual workarounds, validation, and repeated measurements, ultimately risking bad data, and wasted time.

BK Connect is designed around your needs and tasks adding a new dimension to testing and analysis user friendliness. From test operators and engineers, sound, and vibration specialists to test managers and test requesters, BK Connect gives you access to what you need, when you need it.

# Test Operators and Engineers: Streamline Processes

Make testing and analysis processes a simple matter of running the program, recording the measurement, and reporting the results with integrated quick reporting, and a user-defined intuitive navigation between tasks, including the accelerometer mounting check to minimize uncertainty.

#### Sound and Vibration Specialists: Increase Efficiency

Solve even the most complex tests and analyses with high confidence using the graphical process chains for easy setup of analysis processes, and result matrix for a quick and intuitive overview of your data. The processing and workflows in BK Connect can be preconfigured using a template or evolve as you learn about your device under test using the favorites to specify what functionality should be visible in the user interface.

### **Test Managers: Maximize Performance**

Enjoy the benefits of near real-time data retrieval from your Team Server and get access to a global transducer calibration database where you can trace data quality to minimize errors. With the BK Connect Data Viewer you can find, sort and compare data faster. The integrated reporting lets you review and approve test data with a high level of confidence.

### **Test Requesters: Make Confident Decisions**

Reduce time to market and secure a more attractive return on investment for your products by making more confident decisions on your product's design, durability and quality, thanks to the quicker visualization and reporting for a streamlined data interpretation. Find, sort and compare fully documented data based on the metadata added during the acquisition and increase the value of the data far beyond the specific test request.

### **Configurable User Workflows**

BK Connect's flexible setup enables you to configure it to meet your needs and the way you work, ensuring a high level of efficiency when performing repeated standard tests.



#### Intuitive Software

BK Connect's simple and intuitive user interface makes it easy to navigate between tasks – get results while spending less time on completing tasks.



#### Integrated Software Platform

BK Connect integrates the functions and analysis you need in the same system, eliminating the tedious and error-prone data transfers between multiple systems.

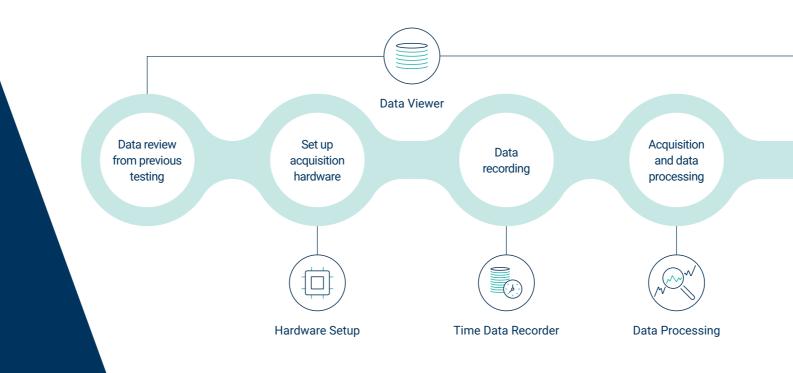




# **Reliable Data**

BK Connect and Team Server's exceptional data management gives you accurate, ordered, and well-documented (meta)data, to ensure confident decision making.

# **Open System** BK Connect is compatible with data from third-party systems and provides an open programming API that supports third-party applications and integration.



# **General Purpose** Analysis Software

BK Connect applications are user-centric, modular and form the foundation for your sound and vibration analysis platform. Each core application can function as a stand-alone tool, performing basic tasks. When combined with other applications as a custom set of tools, it enables tailored workflows.

# Simply Get the Job Done with BK Connect Applets

BK Connect applets are licensed templates from the BK Connect sound and vibration software platform that are designed to meet specific analysis requirements for industry- and application-specific tasks. The applets are designed to provide you with a complete testing solution from data acquisition and measurement to recording, analysis and reporting.

Find out more on www.bksv.com/bk-connect-applets

#### Measurement setup and data recording

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The most fundamental parts of data acquisition are the ability to record time data and to review historical data from previous tests. When ready, the hardware setup allows you to configure your transducers, either using physical or virtual hardware. Once you have recorded the time data, the possibilities for what can be accomplished are limitless.

- Data Viewer and Team Server
- Hardware set up
- Recorder

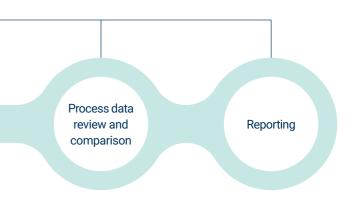
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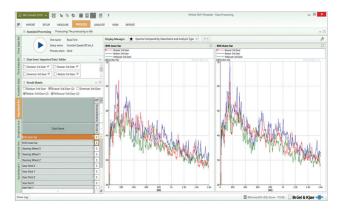
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• File importer/exporter finite element model interface

Discover the measurement setup and data recording core applications.





# Data processing and signal analysis

At the heart of any data processing system are the many types of signal analysis available, allowing the user to solve simple or complex problems. Whether performing 2D FFT analysis on stationary signals or generating 3D waterfall analysis for non-stationary signals, BK Connect has the analysis calculations you need.

- Overall analysis
- Data processing
- FFT
- CPB
- Advanced calculations
- Order analysis
- Order tracking
- FRF
- Envelope analysis

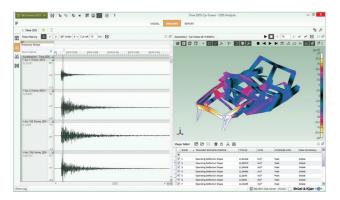
Discover the data processing and signal analysis core applications.

# **Structural Dynamics Software**

STRUCTURAL DYNAMICS ALLOWS YOU TO OBSERVE, ANALYSE AND DOCUMENT THE DYNAMIC BEHAVIOUR AND PROPERTIES OF STRUCTURES USING A SINGLE SOFTWARE PLATFORM COVERING PRE-TEST ANALYSIS, MEASUREMENT, ANALYSIS AND MODEL CORRELATION.

# **Operating Deflection Shapes (ODS) Analysis**

ODS analysis is used for determining the vibration patterns of machinery and structures under various operating conditions influenced by factors such as engine speed, load, and ambient forces. The vibration patterns are shown as animated geometry models. The ODS application features all three types of ODS analysis: Time, Spectral and Non-stationary.



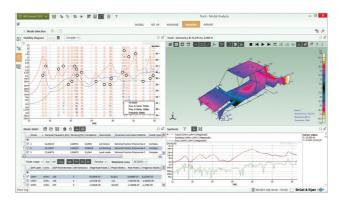
### Model Correlation

The Correlation Analysis application includes pre-test analysis for test optimization and finite element (FE) model correlation for design validation. FE models from Nastran, Ansys, Abaqus and UFF can be imported. The correlation workflow includes geometry alignment, DOF mapping, CrossMAC and Cross-orthogonality calculations, and mode pairing.



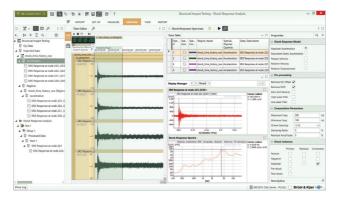
# **Modal Analysis**

The Modal Analysis application supports single and poly-reference hammer and shaker modal testing. Accurate modal results are obtained even in the most demanding situations using dedicated excitation signals including stepped sine, and a targeted set of best-in-class mode indicator functions, curve-fitters, and analysis validation tools.



# Shock Response Spectrum (SRS) Analysis

The Shock Response Spectrum is used to determine the damage potential of components and systems from transient events, such as pyroshocks and structural impacts, in order to ensure their survival in known environments. All five SRS models mentioned in ISO 18431–4:2007 are implemented in the SRS Analysis application.

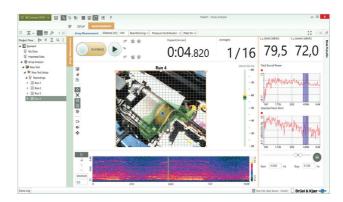


# **Acoustic Software**

ACOUSTIC SIGNATURE STARTS FROM VISUALIZING THE SOUND FIELD USING NOISE SOURCE IDENTIFICATION TO UNDERSTAND NOT ONLY THE ACOUSTIC LEVEL, BUT ALSO WHETHER THE END USER WILL LIKE THE SOUND OF THE PRODUCT.

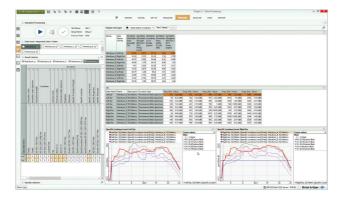
### Array Analysis

Acoustic Camera is a complete troubleshooting system for real-time noise source identification (NSI) that can be used for both stationary and non-stationary measurements. The Array Analysis application includes beamforming and holography.



### **Sound Quality Metrics**

Traditional objective measuring and analysis methods such as A-weighted sound pressure and FFT analysis are not enough for analyzing product sound. For characterizing product sound quality, the Sound Quality Metrics calculation option is designed to quantify acoustic emissions in terms of human response.



# Indoor Pass-by

Indoor pass-by allows you to easily set up and perform indoor pass-by measurements simulating the pass-by noise of a vehicle. The Indoor Pass-by application includes a pass-by viewer, source path contribution analysis and volume velocity source measurements.

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