

Bruel & Kjaer UK **Monthly Newsletter**/December 2011

Welcome to the December issue of our monthly Newsletter, which provides a round up of the latest news, products and courses from Bruel & Kjaer UK.

If you would like further information about any of the features in this newsletter, please contact ukinfo@bksv.com

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Seasons Greetings & Happy New Year

from everyone at Bruel & Kjaer



Bruel & Kjaer UK has donated the money, normally spent on Christmas Cards, to the following charity, chosen by our staff:

Alzheimer's Society

Environmental:

NoiseSentinel the Only Option for London's Crossrail Project



Brüel & Kjær's real-time noise monitoring subscription service, NoiseSentinel, is set to ensure the compliance of the Crossrail construction works.

Crossrail is a large infrastructure project that will create a new rail link across London from west to east.

Since significant amounts of the necessary construction work will take place in highly built-up areas, with night works required in some cases, noise compliance is a critical consideration for the building contractors.

The building contractors operating at the Liverpool Street site, BAM Nuttall Kier Joint Venture (BNK JV), turned to acoustic consultants Anderson Acoustics for a real-time noise management solution – in order to fulfill the Crossrail project's noise pollution obligations, and prevent operations being delayed.

According to Andy Knowles, Director of Acoustic Services at Anderson Acoustics, "Given the scale of this construction and constraints, a key requirement was high reliability of the noise monitoring system. Experiencing failures that could require construction work to be stopped is not an option. The capability to present the data in the right place at the right time was critical."

The NoiseSentinel system hardware is entirely owned and operated by Brüel & Kjær, allowing the building contractors BNK JV to avoid capital outlay on equipment, and to focus on their core business.

This was also a key consideration for the consultancy Anderson Acoustics, who were attracted by the ability to completely outsource the monitoring part of their services, while being supplied with the data needed to provide consultancy services.



"Brüel & Kjær offers a highly professional and complete package that enabled our client to meet their obligations whilst not having to purchase and operate hardware. This means they are able to focus on effective management of noise from their works whilst freeing our resources to provide them with expert support on this complex issue." said Mr Knowles.

A web-based interface monitors and warns management staff of noise increases, with a trigger alerting them of any small noise increase above pre-determined threshold, warning that a noise limit may be close to being breached and mitigating action should be taken. Noise increases significantly above a pre-determined threshold will trigger an alert, as a noise limit may have been breached.

A sound recording is automatically made whenever an alert is issued, and this is available to the site operators within seconds, so they can investigate the source of the noise and determine if it was construction noise or not.

At the Liverpool Street enabling works site, there are three noise-sensitive locations nearby where real-time monitoring is required as a condition of the Section 61 planning consent issued by the City of London Corporation. BNK JV also decided to install a fourth noise monitor on the construction site itself, so that events could be related back to this site with greater certainty.

According to Dan Saunders, European Sales Driver for Brüel & Kjær, “We are very pleased that our service is able to assist in the Crossrail construction project, and see it as a logical solution for large projects of this type – completely freeing the project drivers to focus on what they do best.”

[Read more about Noise Sentinel](#)

Industrial:

Sound Intensity in the Palm of Your Hand

Machinery manufacturers that are required by law to provide precise specifications of products noise levels can reduce the time and effort involved, by using Brüel & Kjær's new hand held sound intensity system: 2270-G.

A combination of strict legislation and customers demanding noise-friendly surroundings has increased pressure for manufacturers producing products, such as:

- ✓ Refrigerators
- ✓ Washing Machines
- ✓ Lawn mowers
- ✓ Electric motor devices



to label the noise output in accordance to national and international standards.

Many machines also contain parts from sub-suppliers, which means in order for manufacturers to predict noise output, they must label individual parts to ensure the final product is in accordance with national and international standards.

To simplify this process, Brüel & Kjær has created its 2270-G, a complete sound intensity system comprising of the hand-held sound level analyser (2270), Sound Intensity Software (BZ-7233) and Sound Intensity Probe Kit.

This portable, battery operated system allows one person to make sound intensity measurements complying with the IEC 61043 sound intensity standard.

Users simply swap the 2270 meter's microphone for the sound intensity probe to start measuring.

The BZ-7233 software transforms the analyser into a powerful measurement tool, using the intensity technique to determine sound power levels and locate noise sources using contour maps.

A unique phase calibration technique allows users to make all measurements with a 12mm spacer covering a frequency range from 50 Hz to 10 kHz.

The sound intensity system is part of Brüel & Kjær's 2270 range, which offers many sound and vibration analysis applications.

For more information, please visit: www.bksv.com/Type2270G

New Software - Introducing PULSE 16.1

PULSE 16.1 is now available to download.

The new benefits include:

- ✓ Improved version of PULSE Reflex Core with Time Editor included in Like-for-Like policy
- ✓ Improved calculation speed and direct integration of the Function Organiser in PULSE LabShop



Download PULSE 16.1

Save, transfer and recall hardware configurations

With PULSE 16, it is possible to save your current configuration to recall later or to share with a colleague.

Get the most flexibility from your hardware investment; use a module on its own for small tests or combine multiple modules for large tests.



Learn more about PULSE Front-end setup

Turning rear car windows into sound systems

Read how the University of Windsor - using Brüel & Kjær hardware and PULSE software, including Reflex - has played an integral role in the development of automotive glass subwoofer technology:

Read the case study



Exclusive offers for M1 agreement holders*

PULSE Reflex Core Like-for-Like: Upgrade to the full Type 8702 and receive Type 8703 at a 50% discount

Add PULSE Reflex Modal Analysis Software to your current software for up to a **25% discount**

Receive up to a **40% discount** on PULSE Reflex Modal Analysis when you trade in your current modal analysis software



**Offers valid until 1 July 2012*

Transducers & Conditioning:

Pick of the bunch - Online filter for simple Transducer selection

Brüel & Kjær offers the industry's largest line of measurement microphones to help you make the most accurate acoustic measurements possible.

Our website also offers a straightforward selection process to our wide variety of transducer products, which includes:

- ✓ Free field microphones
- ✓ Diffuse field microphones
- ✓ Pressure field microphones
- ✓ Low noise microphones
- ✓ Array microphones
- ✓ Outdoor microphones



Visitors simply use the filters (below) to refine their search according to sound field, polarization and frequency ranges:

Sound Field	<input type="text" value="Any"/>
Polarization	<input type="text" value="Any"/>
<input type="button" value="SEARCH"/>	

Frequency range >	<input type="text"/>	-	<input type="text"/>	Hz
Max. SPL >	<input type="text"/>	dB		

For more information, visit [Transducer & Conditioning](#) section of our website.

Brüel & Kjaer Service Centre:

Brüel & Kjaer Royston: ISO 14001 Certified

Brüel & Kjaer Royston has successfully achieved ISO 14001 certification, the key environmental standard for many global businesses.

ISO 14001 is an International Standard on Environmental Management and specifies a system of controls against which an organisation can be certified, by an accredited third party - in this case the British Standards Institute (BSI).

The company will meet its environmental objectives using specified strategies, which include managing its resources to minimise raw material usage, correctly disposing of waste, reducing harmful emissions and promoting energy conservation and recycling.

Where possible, Brüel & Kjaer Royston will use components, materials or substances that are less harmful to the environment and raise this awareness amongst its employees, to enable them to carry out their work with the same consideration.

Brüel & Kjaer's VTS Head of Operations, Andrew Turner said: "We are delighted to achieve this certification for the management system now implemented at our UK site in Royston. This means that our facility for engineering, manufacturing and servicing LDS shakers - and Brüel & Kjaer UK's calibration laboratory - are now fully ISO 14001 compliant and ready to meet our global customer requirements and environmental responsibilities."

[Read more about Brüel & Kjaer service and calibration](#)



Training & Courses:

New dates for 2012 - Bruel & Kjaer UK's Training Courses & Webinars

Download Bruel & Kjaer UK's **2012 Training Course Calendar** now:

[Click Here](#)

Bruel & Kjaer UK Courses 2012:

Sound Insulation Measurements - 17th April

[Register Now](#)

PULSE User Training - 2nd & 3rd May

[Register Now](#)

Theory & practice of noise measurement -
16th & 17th May

[Register Now](#)



Bruel & Kjaer UK FREE Interactive Training Sessions

Take advantage of free online training with Bruel and Kjaer UK's expert engineers by signing up for our one-hour web-based courses:

Basic 2250 Hand-Held Analyser - 12th January

[Register Now](#)

Advanced 2250 Hand-Held Analyser -
19th January

[Register Now](#)

MATRON-3 USER - 26th January

[Register Now](#)

Basic 2250 Hand-Held Analyser - 9th February

[Register Now](#)

Advanced 2250 Hand-Held Analyser -
16th February

[Register Now](#)

MATRON-3 USER - 23rd February

[Register Now](#)



Vibration Testing for Engineers and Technicians - 20th & 21st March [Register Now](#)

This two day course provides a practical introduction to the subject of vibration testing.

Designed around the needs of engineers new to the subject of vibration testing and yet offering a useful refresher course for the more experienced user, this course explains how to interpret vibration test specifications and apply them to a vibration test system.

Subjects covered are sinusoidal vibration, random vibration, and shock/bump testing together with a background to the equipment required for each type of test, methods of control and simple fixturing.

The course emphasises the practical aspects of vibration testing - the realities, the problems encountered and the common mistakes which can be made. The course removes the mystery and mystique of vibration testing and replaces it with facts and common sense.

Vibration hands on practical course and test simulation - 22nd March [Register Now](#)

An optional 3rd day is available which covers the LDS Laser usb Controller for sine, random, shock and mixed mode testing and continues a more in depth hands on for the student.

Tests will be run on an LDS V830 to provide each student with confidence for a realistic setup of an air cooled system.



Day 3 is 90% practical and puts into practice the lessons learnt on days 1 and 2, including all project parameters, error messages and control methods whilst observing resonance and Limit control on a test piece.

Bring along your specifications and requirements. The 3rd day will be restricted to a maximum of 6 customers to allow all students some test time.

(Only available at Royston UK company Headquarters)

Tailor-made Courses

Bespoke, on-site courses are also available for customers with LDS vibration equipment.

For further details on these specialised courses, please contact:
trevor.harrison@bksv.com

Global product & service information:

Satellite test system for INPE passes factory acceptance test

Brüel & Kjær has successfully completed the Factory Acceptance Test (FAT) of a data acquisition and vibration test system for INPE, Brazil.

INPE - or The National Institute for Space Research - is a civilian research centre for aerospace activities within the Brazilian Ministry of Science and Technology.

The new system is for performing mechanical satellite qualification and acceptance testing, where vibration, shock and acoustic fatigue testing is used to simulate the environment experienced during satellite launch.



The Brüel & Kjær system comprises a complete suite of test applications for data recording, acoustic fatigue testing and vibration testing, including transient, random, and swept-sine test types.

Data recording is performed with a Brüel & Kjær LAN-XI data acquisition system. This COTS, rack-mounted data acquisition system can be moved around the test-bay together with the satellite, to assist in performing different tests. This allows the use of short analogue cabling between satellite and data acquisition system and allows sensors to be left on the satellite between tests, drastically reducing setup time.

Data acquisition is controlled via remote LAN-based workstations, where simultaneous real-time level and FFT/CPB/Time monitoring can be performed on all channels during recording.

LAN-XI gives a distributed system architecture that allows different users access to different tasks. Local monitoring is performed in the high-bay area, data acquisition and post-processing in the data acquisition and post-processing room, remote monitoring in shaker control room and data viewing and reporting in a dedicated client room.

The analysis system integrates Brüel & Kjær's PULSE Labshop Recorder and FFT/CPB analyser, PULSE Reflex Shock Response Analysis, PULSE Reflex Data Viewer and PULSE Data Manager (PDM).

The complete test workflow is organised from one customised, workflow-oriented user-interface. From pre-planning, through setup of PULSE, calibration of sensors, data recording, post processing of data, visualisation and comparison of analysed data, to reporting and database archiving.

The Brüel & Kjær satellite test system cements a long-lasting Brüel & Kjær /INPE relationship. Brüel & Kjær's LDS electrodynamic shakers have been providing INPE with satellite vibration test capabilities since the 1980s. Adding the Brüel & Kjær data acquisition and analysis system provides INPE with a complete state-of-the-art satellite qualification and acceptance test system.

[Read more about PULSE LAN-XI](#)

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