

THE Measure

Keeping you up-to-date with the world of **noise measurement**

Cirrus enters the world of vibration



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Welcome to the latest edition of **The Measure**

As always it is a packed issue but even more so this time around with the launch of Cirrus' first ever vibration meter – the Revo™.

It is the first time Cirrus has moved out of the noise measurement market, with the decision being driven by the number of our clients who were pushing for a joint noise and vibration offering from us. Turn to p2 for a full introduction to the Revo.

Going back to noise monitoring, we have a great case study based on the use of the Cirrus doseBadge™ at the National Railway Museum at York and the London Science Museum, courtesy of our client, the Science Museum Group. The kits were used behind the scenes in the workshops rather than front of house on both sites.

Our usual *News Round-up* column is still proving popular and just shows the world of noise measurement can be as wacky as any other sector out there. We touch on an Elvis-loving head teacher and guinea fowl causing a noise nuisance to a local community.

Cirrus is also having a bigger presence than ever at the S&HExpo in London this year with our brand new stand including digital games to enjoy. See our full exhibition diary on the back page to plan where to meet the Cirrus team over the summer and into the autumn.

Thanks and enjoy.

Thomas Shelton, Editor

Stay connected with the noise experts

 [linkedin.com/company/cirrus-research-plc](https://www.linkedin.com/company/cirrus-research-plc)
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 www.cirrusresearch.co.uk/blog
 www.youtube.com/user/CirrusResearch

Safety at work, now in your hands

We want to make safety at work easily achievable for everyone. That's why we're entering into the world of vibration with the launch of the Revo™ Vibration Meter.



Measuring vibration

The need to monitor vibration has arisen from the permanent health effects over-exposure can cause. This is usually transmitted into the hands and arms of workers using heavy machinery, power tools and vehicles.

Hand-Arm Vibration Syndrome (HAVS) or Whole Body Vibration (WBV) can cause irreversible damage to muscles, joints, circulation and nerves. The HSE estimates that as many as 5 million people are already exposed to HAV in the workplace, with numbers increasing every year.

The Revo has been designed to allow you to measure, analyse and assess vibration data easily. This will enable you to better protect your workforce from HAVS or WBV and protect your business from potential HSE prosecution.

What's included?

The Revo comes with everything you need to carry out HAV measurements. The complete kit includes the vibration meter and all the accessories, such as the Triaxial Accelerometer, cables and mounts.

For Whole Body Vibration measurements and more specialist applications, the Revo

can also be supplied with an extended range of accessories, including the Triaxial Whole Body Seat Accelerometer.

Get compliant

To ensure you record accurate vibration data, the Revo meets all of the relevant industry standards, including the ISO 5349 and European Directive 2002/44/EC, as well as the ISO 8041:2005.

Its robust and compact instruments can also be used to measure Whole-Body

vibration to ISO 2631, as well as vibration on passenger and merchant ships to ISO 6954.

Need more information?

Visit www.cirrusresearch.co.uk/revo where you can download a free copy of the product datasheet. This will give you all the information and technical specifications you need, as well as a breakdown of what's included in the kit.



Why choose the Revo?

- 2 in 1 functionality: Specifically designed for hand-arm and whole-body vibration
- Small and compact
- Easy to use – no complicated set-up
- Stores up to 10,000 measurements
- Includes a reporting package for easy data analysis and reporting

To learn more and see the Revo in action:
visit us on stand P2150

at the Safety and Health Expo, London ExCel 16-18 June.



Ask the Noise Doctor

Can you give me an overview of the UK Control of Noise at Work Regulations?



The UK Control of Noise at Work Regulations were introduced just over 10 years ago to cover all industry sectors and bring us in line with the broader EU Directive.

There were some exemptions – the music and entertainment sectors came into force three years later – but overall its aim was to ensure that employees' hearing was protected from excessive noise at work that would cause them to lose their hearing or suffer permanent damage.

The 2005 Regulations replaced the 1989 version and brought in various new requirements; for example, the noise level where action was needed to protect workers fell by 5 decibels. Employers are now required to arrange hearing checks for workers regularly exposed to 85 decibels or above.

This means extra protection all round for the UK workforce but has the legislation actually achieved what it set out to do a decade ago? According to official figures from the HSE the UK has around 18,000 people suffering deafness, tinnitus or other hearing conditions caused by excessive noise at work.

Each year there are thousands of claims being made under the term 'Industrial Deafness' due to occupational noise. Call centres have sprung up that specialise in cold calling on the issue and this trend will continue throughout 2015 and beyond.

However, analysts do believe that claims for Noise Induced Hearing Loss (NIHL) may have peaked and could start dropping as firms and insurers become more aware of the risks posed by NIHL claims.



Follow the Noise Doctor on **twitter @TheNoiseDoc**

doseBadge builds up a head of steam in York

You might expect to see some level of noise measurement in the world-famous National Railway Museum but you'd probably guess that would be front of house, where the locomotives take centre stage. That's only part of the story though!



Product

doseBadge
NoiseTools® software

End user

Anna Kavanagh, Group Health & Safety
Advisor for the Science Museum Group.

Location

The National Railway Museum, York
and the London Science Museum.

Application

Measure noise levels in the workshops at
both museum sites.

Challenges

The employees based in the workshops
have access to up to 40 different types of
equipment and it was hard to monitor on a
consistent basis the noise levels they were
being subjected to.

Both museum sites at the National Railway Museum and the London Science Museum have their own workshops that are used for maintenance work as well as creating displays for the many varied exhibitions that take place on site. The workshop employs around 15 staff, working 9 hour shifts each, using up to 40 different types of equipment with varying degrees of noise.

Whilst the equipment was not used for long periods, it was hard to monitor on a consistent basis the noise levels the employees were being subjected to. Anna Kavanagh, Group Health & Safety Advisor for the Science Museum Group bought two Cirrus doseBadge kits to help test this out. The teams are constantly working on new exhibits that are regularly changed and modified to keep the attractions fresh and interesting for the museum visitors. The York team had the extra duties associated with keeping some of the world's most famous locomotives in tip top condition.

"They may only be cutting out shapes for a display for a few seconds but it is high intensity noise and I needed to be confident this didn't take them over their daily allowance," explained Anna. "The doseBadges are ideal because they don't get in the way of the day to day working and give me the full picture of what the employee has been exposed to during a typical shift."

"Fortunately we found out this time that the men we monitored were all well within the 135dB peak levels and they didn't exceed their daily limits either, so it was very helpful."

The doseBadge enabled Anna to get the data she needed over a full shift to ensure that the workers weren't subjected to high levels of noise that would take them over the UK Noise at Work levels.

It also meant that she didn't have to devote a day of her time to each employee to monitor them using other static methods which freed up her diary to get on with other tasks.

She liked the easy to use software that comes as standard with the doseBadges. "It gives you the full picture," she said. "You know you have the evidence there to rely on over a set period of time."

For more information on the doseBadge call 0845 2302434 or visit www.cirrusresearch.co.uk



Did you know...?

...there are 4 types of noise

Whether it's an innocent beep, a plane flying overhead or heavy machinery at work, you can't escape noise. When it comes to measuring the different types of noise, we usually want to replicate the performance of the human ear to get an accurate representation of its impact. Here's a breakdown for the four different types of noise that affect us all.

1. Continuous Noise

Continuous noise is what it says on the tin. It's noise that is produced continuously by machinery that keeps running without interruption. This could come from factory equipment, heating or ventilation systems. You can measure continuous noise for just a few minutes with a sound level meter to get a sufficient representation of the noise level. If you want to analyse the noise further, you need to look for a sound level meter with Octave Band analysis.

2. Intermittent Noise

Intermittent noise is a noise level that increases and decreases rapidly. This might be a freight train passing by, factory equipment that operates in cycles or aircraft overhead. You measure intermittent noise in a similar way to continuous noise with a sound level meter. However, you also need to note the duration of each occurrence and the time between each one.

3. Impulsive Noise

Impulsive noise is most commonly associated with the construction and demolition industry. Impulsive noises are commonly created by explosions or construction equipment such as pile drivers. Don't forget that even in an environment that is generally quiet, a single very loud noise can cause hearing damage so it's important to measure Peak levels alongside the average or Leq value.

4. Low Frequency Noise

Low frequency noise makes up part of the fabric of our daily soundscape. Whether it's the low background humming from power plants or the roaring of large diesel engines, we're exposed to low frequency noise constantly. This is the hardest type of noise to reduce at source, so it can easily spread for miles around. For low frequency noise, you should be using a sound level meter with Third Octave Band analysis so you can analyse the low frequencies that make up the noise.

On our travels!

1-3 Jun 2015	American Industrial Hygiene Conference & Exposition 2015 Salt Lake City, Utah, USA
7-9 Jun 2015	American Society of Safety Engineers 2015 Dallas, Texas, USA
16-18 Jun 2015	Safety & Health International Excel, London, UK
9-12 Aug 2015	Internoise 2015 San Francisco, CA, USA
20-21 Aug 2015	OSHIndia Chennai, India
28-30 Sept 2015	National Safety Council Congress & Expo 2015 Atlanta, GA, USA

Noise Academy

Cirrus is now offering an IOSH-recognised Noise at Work Training Course as part of its Noise Academy support for clients.

This course not only covers how to deal with your noise at work risk assessment but also provides advice on managing those noise risks. Recognised by IOSH, the chartered body for health and safety professionals, all delegates will be awarded a certificate upon successful completion of the course and exam.

The 4½ day course will be delivered by highly qualified consultants from the Industrial Noise and Vibration Centre (INVC) Ltd via Focus Health and Safety.

The course usually costs £975 with an additional £75 for exams and certification. If you book through Cirrus Research, you automatically save 10%. For more information on what's covered and to book online visit:

www.cirrusresearch.co.uk/training/iosh-noise-at-work-course/

Cirrus Product Training Courses on offer this summer include:

4 Aug 2015	Oulton Park Circuit, Cheshire	18 Aug 2015	The East Midlands Conference Centre
15 Sep 2015	Castle Combe Circuit, Wiltshire		

News Round-up:

It's too loud in Lagos

TWENTY FOUR churches and mosques in Lagos, Nigeria, have been shut down in the last year after flouting noise nuisance laws. The churches faced the full wrath of the law over noise pollution, caused by loud speakers used in day services and night vigils.

What a "fowl" noise

AN ELDERLY couple are falling fowl of their neighbours and could be hauled before the beak over noise caused by their guinea fowl. Maurice and Phyllis Dainty, 69 and 71, have been served with a statutory noise nuisance notice and had 21 days to move their 34 birds from their home in Scorton or face fines of up to £5,000.

All shook up

AN ELVIS loving headteacher has been taken to court in Cape Town, SA, after his neighbours were left "all shook up" over his fondness for the King of Rock 'n' Roll. Residents claim they are sleep deprived and they blame headmaster Brian Isaacs and his PA system.

Party ON! – Party OFF!

POLICE LAUNCHED a pre-emptive strike on a massive house party in Leeds, shutting it down before it even got going. More than 300 invited guests were told to bring drugs and alcohol to the all-night event in Headingley, which was advertised on social media. But police were one step ahead and issued a notice, that meant from 10am on the day only the tenants were allowed in the property and anyone else there could be arrested.

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