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# the Measure

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

## Welcome

Welcome to the third issue of *The Measure*, the newsletter from Cirrus Research.



Ralph Schöne, Germany

It has been a busy Summer at Cirrus with new staff joining us and the opening of our office in Frankfurt, Germany.

We're delighted to announce that

we have completed the Type Approval of the optimus red and green sound level meters at the PTB in Germany. You can read more about this on page 2.

Over the summer we've been involved in a number of events around the 2012 Olympics including the 'All the Bells' event in Beverley which you can also read about in this issue.

If you've missed a previous issue of *The Measure*, they are now available for download from the Cirrus website at [www.cirrusresearch.co.uk/library](http://www.cirrusresearch.co.uk/library)

We hope you enjoy reading *The Measure* and look forward to receiving your comments and questions. Equally we'd love to hear from you if you would like to participate in any of our features. Just send me an email.

James Tingay, Editor

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### **Did you know...?**

The number of noise related complaints to local authorities totalled 105,000 in 2010/11



READ ALL ABOUT IT!  
How we measured  
an Olympic sound  
See page 4



## Have you heard...?

Although Cirrus is a UK based manufacturer (something that we are very proud of), our export sales team and our network of distributors are selling our noise measurement instruments across the world.

In the last 10 years alone, we've shipped our sound level meters, noise dosimeters and noise measurement systems to over 130 countries across the globe.

Call us on **0844 664 0812** to find out more.



## Did you know...?

### Blog updates



Last year we took the top 10 most read posts on our blog and made them into an e-book which over 3,000 people have downloaded.

Selected posts contained questions such as "What is A weighting?" and "What do you need to measure to meet the Noise at Work Regulations?"

As it's been nearly 12 months since the last edition, we're putting together an updated version which will be available for download from the Cirrus website from early October.



# PTB Approval for the optimus red and green sound level meters

We are delighted to announce that the optimus red and optimus green sound level meters have been Type Approved by the PTB in Germany!

The Class 1 CR:171 (optimus green) and Class 1 CR:161 (optimus red) sound level meters have been type approved by the PTB to the latest standards for sound level meters, DIN EN 61672, which is the same as IEC 61672.

The PTB or Physikalisch-Technische Bundesanstalt is the German National Metrology Institute and is recognised as one of the most prestigious national test laboratories in the world. After a series of long and detailed tests, which include both electrical and acoustic verification, approval numbers have been issued for the Class 1 optimus green and optimus red instruments as follows:

CR:161A, CR:161B & CR:161C

CR:1710, CR:171A & CR:171B

The approval numbers are:

21.21 / 12.02 for the CR:171 series (CR:1710, CR:171A & CR:171B)

21.21 / 12.03 for the CR:161 series (CR:161A, CR:161B & CR:161C)

#### What is Type Approval?

Type Approval, or Pattern Approval, is a method where a test laboratory such as the PTB tests an instrument against a set of standard tests to ensure that it meets the performance claims of the manufacturer.

The optimus sound level meters have been

designed to meet the requirements of IEC 61672 (and the corresponding EN and DIN standards) and so these independent tests have been carried out to verify that the instruments do indeed meet these requirements. The IEC 61672 standard is in three parts.

The first of these is known as *Electroacoustics – Sound level meters – Part 1: Specifications* and this defines the performance specifications for the instruments.

Part 2 is known as *Electroacoustics – Sound level meters – Part 2: Pattern evaluation tests* and this defines the tests and checks that a laboratory must carry out when they are testing an instrument for Type or Pattern approval. These are the tests that the PTB have been carrying out on the optimus sound level meters.

Part 3 is known as *Electroacoustics – Sound level meters – Part 3: Periodic tests* and this defines the tests that should be carried out during a Periodic or routine verification.

More information about these sections of the IEC standard can be found in the following blog post on the Cirrus Research website:

[www.cirrusresearch.co.uk/blog/2012/07/iec-61672-a-standard-for-sound-level-meters-in-three-parts/](http://www.cirrusresearch.co.uk/blog/2012/07/iec-61672-a-standard-for-sound-level-meters-in-three-parts/)

## Ask Jim...



### What's the quietest place in the world?



This was a question that I was asked recently at one of our Cirrus Product Training Courses.

The quietest place measured is the Anechoic Test Chamber at Orfield Laboratories, Minneapolis, Minnesota, USA. Tests carried out on the 21st January 2004 gave a background noise reading of -9.4 dB(A)!

It may appear that it is impossible to measure below 0dB but remember that decibels are a ratio of two numbers and the value used to set the zero point in noise measurement is  $20 \times 10^{-6}$  Pascals.

If the change in pressure measured is less than this, you will get a negative dB value.

James Tingay, Editor

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## Focus on... Trojan Noise Nuisance Recorder

# Newham Council turns the volume down on noise nuisance

Newham Borough, located just five miles east of the City of London, has experienced huge amounts of regeneration and redevelopment over the last twenty years through government investment schemes for Newham and the surrounding boroughs. The redevelopment has successfully attracted a younger age group as well as several different cultures from all over London, resulting in under 25 year olds making up over 40 per cent of the 254,000 residents living in Newham<sup>1</sup>.

Newham London

Muhammad Islam, Senior Environmental Health Officer at Newham Council's Noise and Nuisance team, explains: "The diversity within Newham Borough makes it a vibrant and exciting place to live. However, like all boroughs, we have our challenges such as noise nuisance complaints - of which we get on average, around 155 a week from residents.

We have a duty to investigate complaints of noise nuisance; the most common being continuous barking dogs, car doors slamming at night, loud music or televisions, shouting, banging doors and DIY activities. Many noise problems, particularly those involving neighbours, can be resolved informally by individuals speaking to each other to explain the problem. However, if this approach fails, we put processes in place to help.

Councils and local authorities across the UK have slightly different adaptations and approaches to enforcing noise nuisance. There is no set guideline for noise or frequency of decibel (dB) levels that residents have to follow and it is up to the individual councils and boroughs to use their own judgement for statutory noise nuisances under Section 79 of the Environmental Protection Act 1990.

In most scenarios, local authorities and councils like Newham, advise that in reported cases of noise nuisances, the resident approaches the individual responsible directly, which more often than not, results in both parties coming to an amicable agreement. However, this approach doesn't always work and the next suggested step is an independent third party mediation procedure.

If the noise nuisance persists and informal action fails to resolve the problem, a formal complaint needs to be implemented; residents then approach the Noise and Nuisance team to investigate directly, which involves regular visits from a Noise Officer."

A noise nuisance recorder is installed if: the noise

The Trojan helps local authorities and housing associations provide quick and accurate noise measurements to support noise nuisance cases

is intermittent, it is not witnessed despite officers visiting the complaint on a number of occasions or it cannot be witnessed because it occurs when the council's out of hours noise response service is not in operation. This machine records the noise levels over a 7-10 day period and is used to help decide whether it constitutes a statutory noise nuisance and if further action is required.

### Valuable piece of equipment

Muhammad Islam explains, "A noise nuisance recorder is an extremely valuable piece of equipment for local authorities and housing associations, as it provides the means of monitoring whether a noise complaint by a local resident is credible. The results that we gather from the noise monitoring instrument give us a clear idea of whether the noise nuisance report is legitimate and whether or not we issue an abatement notice."

To help obtain vital information and record concise and clear data to support noise nuisance cases, Newham Council has recently invested in two Trojan Noise Nuisance Recorders from Cirrus Research. The Trojan helps local authorities and housing associations provide quick and accurate noise measurements to support noise nuisance cases and it is supplied in a discreet backpack, allowing the officer who installs the Trojan to leave with the same backpack, so as not to arouse the suspicion of neighbours.

Muhammad Islam concludes: "Previous noise nuisance recorders have been very complex to use, making it difficult for members of the Noise and Nuisance team to configure the instruments to their specific requirements. It is vital that a noise measurement instrument is simple to use and that the measured noise is accurate. The Trojan does just that; it is simple to use and has the functionality that is necessary for noise nuisance to be accurately measured. When the instrument is inside the small black box it is connected to an interface. When this is connected, the instrument recognises that it is plugged in and switches to noise nuisance mode. This configures the instrument automatically to give the functions and features needed, removing the need for any setup or configuration.

The Trojan has saved the council and residents a substantial amount of time and money!"

For further information on the Trojan please contact Cirrus Research on 0845 230 2434 or visit [www.cirrus-trojan.co.uk](http://www.cirrus-trojan.co.uk)

## Trojan Noise Nuisance Recorder



# The bells ring out for the 2012 Olympics

As part of the build up to the opening ceremony of the 2012 Olympics we were at the 'All the Bells' event in Beverley's Wednesday Market.

The event was led by East Riding's Town Crier Michael Wood, three times World Champion Town Crier and Britain's Loudest Town Crier.

At 8.12am, hundreds of residents, many with hand bells, created a mass of noise for 3 minutes. After which Michael Wood led three cheers to the Olympics and TeamGB.

As part of the event, we measured the noise from the 3 minutes of bells and from Michael himself! Over the 3 minutes of the event, we measured an LAeq of 92.7dB!

To show how loud just one hand bell can be, we also measured Michael ringing a bell at close range which gave us an LAFmax of 120dB(A)!

Cirrus has been involved with measuring noise from Town Criers over the past few years, and in 2010, we measured the noise levels at the British Town Crier Championships in Bridlington where we measured Michael's cry at almost 105dB!



## Meet the team

Here's an update on our UK Sales & Customer Support team at Cirrus.



**Craig Storey**  
Business Development



**Kevin Worth**  
Business Development



**Richard Cutting**  
Technical Customer Support



**Nigel Palmer**  
Customer Services Manager

To contact the team  
email: [sales@cirrusresearch.co.uk](mailto:sales@cirrusresearch.co.uk)

## Events in 2012/13

**October 22nd 2012**  
NSC Congress & Expo, Orlando, Florida, USA

**November 13th 2012**  
SLCNG Annual ASB Conference & Exhibition 2012, St Johns Hotel, Solihull, Nr Birmingham, UK

**26th – 27th February 2013**  
IOSH Conference & Exhibition 2013, London ExCel

**May 14th 2013**  
Safety & Health Expo, NEC, Birmingham, UK

**May 18th 2013**  
AIHce, Montreal, Canada

**September 15th 2013**  
Internoise 2013, Innsbruck, Austria

## Supporting Hearing Dogs for Deaf People

We've chosen Hearing Dogs for Deaf People as our charity for 2012/2013.

Hearing Dogs for Deaf People is a national charity and centre of excellence in training hearing dogs to alert deaf people to everyday household sounds and danger signals in the home, workplace and in public buildings.

The charity has a training centre at Bielby in East Yorkshire which is only 30 miles from the Cirrus head office in Hunmanby and we are very excited to be supporting this excellent cause.

You can find out more at  
[www.hearingdogs.org.uk](http://www.hearingdogs.org.uk)



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