

The magazine of the
Institute of Sound and
Communications Engineers
February 2011

ISCE

ISCE^{Ex}2011 edition

86 Hz | 170 Hz | 340 Hz | 679 Hz | 1.3 kHz | 2.6 kHz

86 Hz | 170 Hz | 340 Hz | 679 Hz

Inside this issue

- 1** Introduction from our President
- 1** Events Diary
- 2** Testing testing 123 or is it ટેસ્ટાગ્નિ ટેસ્ટાગ્નિ 123
- 3** Obituary:
John Heatherington MInstSCE
- 5** ISCE Pavilion at PLASA 2011
- 6** The rights of law
- 7** ISCE training courses
- 8** ISCE^{Ex} 2011
- 10** 65 years old... but no sign of retirement
- 12** Charity round-up
- 13** ISE, Amsterdam
- 14** ISCE Engineering Note 27.1
- 16** Sound with true flair
- 17** Supporting Members
- 17** New Members February 2011



SafeTechUK.com



Safetech (STS) offers a wide and diverse range of equipment and system solutions for the ever demanding needs of the Fire, Sound and Security industries all under one roof.

Safetech work in close association with their clients, from design to final commissioning stage, so as to ensure that the system that best meets their particular requirements in terms of quality and price is made available.

Fire



From conventional to addressable fire alarm equipment, fire extinguishers & more...

Sound



Amplifiers, Loudspeakers, Microphones, Volume Controllers, Voice Alarm Systems & more...

Security



Intruder Alarms, CCTV, Access Control, Audio/Video Door Entry Systems & more...

Maintenance



TRADE COUNTER *Open 7 Days A Week*



Be Safe with SafeTech

Safetech House, Springfield Road, Hayes, Middlesex UB4 0TH

Tel: 020 8848 6000

Fax: 020 8848 6001

E-mail: sales@safetechuk.com

www.SafetechUK.com

Introduction from our President

Terry Baldwin ComplInstSCE



Did you go to Integrated Systems Europe, in Amsterdam? I couldn't make it this year but I hear the show attracted a 22% increase in visitors on last year, and the exhibition was buzzing.

I am forever going on about how the Institute can help our members with training, accreditation, understanding standards and so on. Oh, and don't forget the camaraderie! However, I thought the other day, isn't it time our members helped us!

In particular, our quarterly magazine is put together by illustrious Ros and it would help enormously if you could write a few notes or better still an article for the magazine. You may not think it interesting, but I bet enough readers would. A very good example recently was that of Peter Roe, a member in East Sussex, who specialises in firework displays in conjunction with music, which needs to be synchronised. The article he wrote (having been bludgeoned into it) created much enthusiasm. I'm sure you know something you could share with other members.

Another way of helping would be to attract new members, perhaps your employees or, simply those interested in our fascinating industry. There are enough grades to suit all.

We welcome your contribution to the magazine with editorial and advertising. Please send news or articles to Ros

If you feel the ISCE is of value to you and should go from strength to strength, then consider becoming a supporting member. Many advantages for a small outlay, including a visit from me, your President, to say thank you!

This year ISCEx2011 is again at The Park Inn, Watford on Tuesday 1 March and we have an amazing mix of seminars for you to enjoy and we also welcome some new exhibitors this year. It really should prove to be the best ever. Please come along and meet old pals and see what's new. Parking is right next to the hotel, and there is further parking by the train station.

If you are of an outward disposition, then perhaps you would consider helping to man (or woman!) one of our regional exhibitions which are held around the country.

Finally, not really a directly related ISCE topic, but you could always volunteer to help your local audio library. Such libraries are a Godsend to those with reading difficulties.

Well that is it for this edition, it just leaves me to thank, as always, your Council for their on-going endeavours and, of course, the lovely Ros. ♦

Events Diary

1 March 2011
ISCEx2011, Watford, UK

9–14 April 2011
NAB Show, Las Vegas

6–9 April 2011
Prolight & Sound, Frankfurt

19–20 April 2011
PLASA Focus, Leeds, UK

26–28 April 2011
PALME, Dubai

16–19 May 2011
IFSEC, Birmingham, UK

8–13 September 2011
IBC, Amsterdam

12–15 September 2011
PLASA 2011, London, UK

Comments and/or opinions expressed by the editor, contributors and in letters are personal, and may not necessarily reflect the policy of the Council of the Institute of Sound and Communications Engineers

Published by the
Institute of Sound
and Communications
Engineers Ltd
PO Box 7966
READING RG6 7WY

**Manager, Secretariat
contact details**
Ros Wigmore
ISCE
PO Box 7966
Reading RG6 7WY
t/f: 0118 954 2175
e: ros@isce.org.uk
w: www.isce.org.uk

Company limited by
guarantee and registered
in England no 3288938.
Registered Office:
3 Bramfield Road East,
Rayleigh, Essex SS6 8RG
VAT registration number:
GB 781 3372 24

Design and production
DAGC
t: 0118 958 2334
e: info@dagc.co.uk
w: www.dagc.co.uk

Testing testing 123 or is it टेस्टगि टेस्टगि 123

David Futers MInstSCE

My first experience with sound was at the age of 15, when a teacher named Ray Adams (funny how you can always remember a mentor's name) taught me how to construct a valve amplifier as part of a science class. I was hooked on this magical stuff that had electrons rushing around in a way not many people understood.

Through the years, I moved through the circles of public address, watching and working with the changing technologies and getting involved with many interesting projects. To be honest, I had a great time, met many interesting and wonderful people – that includes you Chappers – and provided, I think, a service to a lot of organisations and individuals.

I was very lucky to be able to retire in my mid-fifties and spent time abroad, enjoying myself helping local schools in India to start computer education classes. At one teacher training college, I spent an afternoon listening to a lecture where the person delivering it spent more time adjusting volume controls to stop feedback than he did giving out useful information. I cringed. As he was my best friend in India, Jude Miranda, I offered to put in a system that would work all of the time. Of course, he was delighted but said that they did not have the funds to buy the equipment and needed to stick with what they had – a 100 watt amplifier with two 4 x 12s on steel tables 6ft high and a pretty cheap microphone held together with black electrical tape.



Being a bit flush in Indian terms at the time I, after agreeing it with the wife of course, decided to purchase the kit needed and donate it to the college. Wow, was he excited now. So it was off to the local PA equipment supplier in the main town for some kit. This was some experience I can tell you. The shop was no bigger than a small container but every available space was filled with boxes of brand new shiny equipment. With a copy of the catalogue and price list, in English, I went back to the apartment to design my system. This was fun, so much to choose from and prices that were unbelievable. They had massive re-entrant horns and drivers available for less than we could buy a bracket for, but they would not fit into the suitcase.

I bought everything needed and loaded it on a rickshaw flatbed (only 60 rupees or 80 pence to hire for 1 hour) and went up to the college ready to install.

I had decided on six small columns and a mixer amp and a nice couple of microphones and stands without electrical tape and some long XLR leads. Most buildings in modern India are concrete constructed and somewhere along the line, the formula gets a bit lost and the quality of this stuff varies quite a lot. We got the hard stuff, and I mean hard. We had hired a guy not because of his skill, but because he had an electric drill. Remember Wolf and Black & Decker in the 1950s? Yes that was it, but with the cable extended with two single core cables and, yes, more black tape. It terrified me with no earth and the ends of the single cores just pushed into the socket holes. His masonry drill bit was as old as the drill, so we had yet another trip to the town to purchase new ones. I got 10 for the price of one in the UK and they were branded as well, Rawlplug, and yes, I bought



a 3 pin 13 amp plug and a length of green cable so we had an earth, as I did not want to be responsible for the guy drilling while up a ladder.

After a few hours of putting up trunking and brackets, even though I say it myself, it was a neat installation. We were ready to hang the speakers, nice cream ones with three tappings 15 watt, 7.5 watt and 5 watt. I told Jude to start tapping at 5 watts and this started a great argument about how he needed them to be as high as possible as his system was 200 watts of unmitigated feedback. I told him to trust me, I am an expert.

Well the rest is history, the system was installed and working, "but only because the hall is empty" said Jude, "the real test will be at the inauguration". "The what, Jude?" I exclaimed. "Oh yes, all things new need an inauguration in India, complete with local priest and member of parliament and Uncle Tom Cobley and all. The appointed day arrived, the college kitchen had a spread of food fit for a king, flowers for the wife and me guest of honour. Good God, what if the PA was not loud enough, panic was setting in. Jude was not convinced either as he had his 200 watt monster set up as a back-up just in case. Well my system stood the test and worked perfectly, clear as a bell and no feedback. Everyone was delighted and after all of the speeches and presentations, we proceeded to what must have been the best Indian meal I have ever tasted. I was feeling really proud to have contributed to the success of the local teacher training college but decided to beat a hasty retreat when the local MP congratulated me and asked when I was starting the installations in other local schools. I love retirement. ♦

Obituary

John Heatherington MInstSCE

22/9/37 – 1/12/10

We were sad to learn of the sudden death of our member, John Heatherington of Acclaim Educational Consultants, Huyton in December last year.

John, an ISCE member since 2004, had worked in the industry since leaving school in 1953, and, in later years, worked with local schools by designing and building radio stations and teaching the children how to enjoy them.

Our condolences go to his family.

BALDWIN BOXALL

Let Baldwin Boxall be the guardian of your assets wherever quality, reliability and peace of mind are important

Voice Evacuation

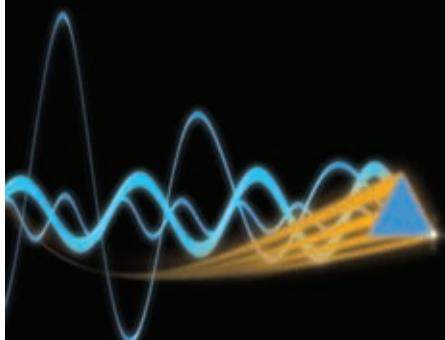
Disabled Refuge

Fire Telephones

Public Address

Disabled Toilet Alarms

Emergency Microphones



TEL: +44 (0) 1892 664422

FAX: +44 (0) 1892 663146

EMAIL: MAIL@BALDWINBOXALL.CO.UK

WEB: WWW.BALDWINBOXALL.CO.UK

BALDWIN BOXALL COMMUNICATIONS LTD
WEALDEN INDUSTRIAL ESTATE,
FARNINGHAM ROAD, CROWBOROUGH,
EAST SUSSEX, TN6 2JR, UNITED KINGDOM

LEADING THE WAY TO SAFETY

**For a sound job, always choose
an ISCE member**



ISCE

The Institute of Sound and Communications Engineers

The UK professional body for sound system designers, professional installers and consultants.

Members are bound by a code of conduct and promote the highest technical standards

Our Register of Members can be found on www.isce.org.uk

For more information
call **+44 (0)118 9542175** or
email **info@isce.org.uk**

Keeping industry standards high

ISCE Pavilion at PLASA 2011

11–14 September 2011, Earls Court

Since its launch in 2007, the ISCE Pavilion, designed for members of the Institute of Sound and Communications Engineers, has gone from strength to strength. With its prominent location in Earls Court 1, bookings are expected to be up again this year.

With industry professionals networking together and attracting the right kind of clients to the Pavilion, we also have the added benefit of a seating area, which makes an ideal place for exhibitors to conduct business with their visitors in a more comfortable environment.



There are three options on offer within the ISCE Pavilion:

- **4sqm shell package:** £1,760 + VAT
- **6sqm shell package:** £2,640 + VAT
- **Stand space:** £303 + VAT per sqm

Shell scheme packages include panels around the stand with the company names printed on a sign above. The build height can be a maximum of 2.5 metres. It also includes lighting, electrics, a table and four chairs.

The following discounts are applicable:

- PLASA Premier member: **25%**
- PLASA Standard member: **10%**
- ISCE Pavilion bookings: **5%**

We have also arranged literature racks for you to display your company brochures. For £150 + VAT, your company literature can be displayed on the rack and stocks overseen and replenished by ISCE. This is an ideal solution for companies who want a presence at the exhibition, but are not able to take a stand.

If you would like to book a stand or literature space, let Ros know by emailing ros@isce.org.uk and she will pass your details onto PLASA.



The rights of law

Michael Jakins MInstSCE

As sound and communications engineers, we have no argument with and happily expect our equipment to work according to ‘the law’. Well as long as it is Ohm’s Law!

But when ‘the law’ puts on a wig and stands in front of the Scales of Justice we no doubt often wish to be blind ourselves and, if possible, like the ostrich do our best to ignore its existence, certainly if the ‘the law’ is all about ‘rights’. Our desire for such ignorance is either due to the engineer’s understandable aversion to pages of documentation written in obscure language or, more frequently, to the inconvenience and difficulty of checking who owns any ‘rights’ and then obtaining permission to use the material.

So what are the ‘rights’ which may impact on our profession? Although there are many areas which affect our business, this article is restricted to those relating to ‘intellectual property rights’.

What is intellectual property?

Artists, authors, composers, designers, musicians, performers and others all gain a ‘right’ in the words or music they have written, diagrams or pictures they have drawn, music performed etc. It is basically their right to earn money from their creative talent.

Quite frequently this ‘right’ may be owned by a person’s employer, which is often the case in respect to the design or invention of a new product which has been produced whilst working for a company. Rights may be assigned to a publisher. They may now be the property of the estate (the heirs) of a dead composer or even gifted to an organisation. The most famous case of this being the royalties of *Peter Pan* to Great Ormond Street Hospital.

So whenever a book is published, a piece of music played or a CD broadcast, the owner of the ‘right’ is entitled to collect a fee. And perhaps more importantly before a performance takes place – particularly of a drama, musical or many major orchestral or choral works, permission to stage that performance needs to be sought. (Note, several schools have found themselves in trouble for unauthorised performances of *Joseph!*)

Finding out who is the current owner of copyright material, that is most items written or composed by

living persons and for up to 70 years after their death, can be a detective nightmare. Different periods and rules apply to recordings and other material. Don’t assume because you cannot find out who is the author and where they live, you are safe. They will find your photocopies or performance, even if it took place at Lesser Muddling in the Nowhere, on a wet Wednesday in November and then sue you.

Copyright law has been around for a long time. In 1709 the first act of Parliament (Statute of Anne) was passed recognising the ‘rights’ of a person or organisation to intellectual property. This had the full imposing title *An Act for the Encouragement of Learning, by vesting the Copies of Printed Books in the Authors or purchasers of such Copies, during the Times therein mentioned*. There have been many extensions, revisions and consolidations since this original Act which brought more types of material into the scope and recognising the invention of new media. Also the international aspect became codified under the Berne Convention in 1886, again this has been modified over the years. The current primary legislation is the 1988 Copyright, Designs and Patents Act, but other legislation and EU Directives also apply.

Collecting fees by most authors, composers etc has always been a difficult task, as unless your name happens to be Lloyd Webber or Rowlands, the sums due are probably very small and only received occasionally. So copyright societies (or collectives) have been formed, both to protect the interests of the various persons and act as collection agencies for fees. This has simplified the system in that for most items permission can be obtained from just one or two sources and artists get their income on a more regular basis.

The Performing Right Society Ltd is one such organisation and it has in recent months been forcefully making known the need for businesses to have a licence to play music on a business premises. One of the joys of owning more than one business is that I have received their letter primarily aimed at small businesses, more than once. However, as no staff or customers could enjoy music on these premises, that is one lot of commission they will not earn. A number of small businesses, such as

hairdressers have, however, received more than just the advisory letter and discovered to their cost that not having a licence can seriously dent their profit.

As workers in the media we find ourselves on both sides of the resultant legal minefield. Using, recording, copying or just installing equipment to reproduce sound and or vision may require us to seek permission or pay royalties to authors, composers, musicians or recording companies – or face the prospect of fines for failing to do so. Section 26 of the Act in particular relates to secondary infringement which could imply that, as installers, we have a liability if copyright was breached, if we knew that was likely to be the intention behind the purchase of the installation. But, equally, when we turn our microphones or cameras to record the action or sound and make the recording or film, we want to be rewarded for our talent.

For some of our customers the situation has been made easier by special collective arrangements. For instance, churches can resolve most of their problems by subscribing to Christian Copyrighting Licensing International. This covers a range of activities, including photocopying songs, preparing presentations, playing music and CDs in worship for

a small annual fee. Thus when I copied the words of a hymn for the congregation at the Church I was preaching in last week, it was both perfectly legal and the author will, at some time, get a few extra pence. The same organisation has similar schemes for schools, weddings and funerals.

This article is a very general introduction and does not constitute legal advice. ISCE members should, in any individual case, consult a specialist patent agent, copyright society or solicitor specialising in intellectual property law.

Some sources of further information:

Copyright Designs and Patents Act 1988

www.legislation.gov.uk/ukpga/1988/48/contents
This is a copy of the Act itself.

Christian Copyright Licensing International

www.ccli.co.uk
Also links through for information for schools, weddings, funerals.

Performing Rights Society

www.prssformusic.com/Pages/default.aspx
They have a comprehensive Introduction.
Also includes MCPS.

ISCE training courses

The ISCE basic electronics course, held in Watford recently, was a great success with full attendance.

Further training on AFILS is due in March and April and we are again, expecting a large number of attendees – so early booking is adviseable.



Exhibition and Seminar Day

Tuesday 1 March 2011 · 9.30am–5pm

Park Inn Hotel, 30–40 St Albans Road, Watford, Hertfordshire WD17 1RN
t: +44 (0)1923 429988 f: +44 (0)1923 254638 w: www.parkinn.co.uk

Running alongside the exhibition is a programme of seminars. We have four excellent speakers, covering subjects that are sure to interest you. All seminars will be commercially neutral, although demonstrations may naturally use the speakers' own products.

10.00am

Voice sounders for evacuation – where are they now?

Tony Payn, Vimpex Ltd

Voice sounders for alarm purposes are essentially alarm sounders that are also capable of playing a recorded voice message. This type of product is now firmly established as an alternative to simple coded alarm sounders and to more complex PA/VA systems. This presentation will discuss how voice sounders meet the requirements of alarm systems and looks at some of the technologies used within voice sounders.

11.00am

Video for audio engineers

David Tyas MInstSCE, Ikon AVS Ltd

Incorporating video into a project can be a good additional source of revenue for audio professionals. It may be simply adding a projector in a theatre, or digital signage to augment a VA system. But, with multiple analogue video formats and the transition to an equally confusing array of incompatible digital formats, what connects together and works, how do you convert between the formats and how do you cable and connect them?

This seminar will cover the basics of video with the emphasis on the newer formats, how to interface these and how to incorporate legacy products into systems.

2.30pm

Why loop systems are failing

Gordon Morris MInstSCE, Gordon Morris Ltd

We have the technical know-how. We have the enthusiasm. So why are loop systems failing?

As a hearing aid user for over fifty years, Gordon Morris is better placed than most to understand these issues. He will explore why loop systems fail and the technical and human complexity involved in making them work. This is not a blame game and is purely highlighting what the hearing aid user hears or does not hear. What more can the Institute do to influence and bring about a more satisfactory solution for the purchaser and above all, for the hearing aid user?

3.50pm

Loudspeakers & EN 54 part 24 – has Europe gone mad?

Peter Alberry-King MInstSCE, Penton UK Ltd

The enforcement of EN 54 part 24 is just around the corner. April 2011 is when we all take a deep breath as loudspeakers for use in voice alarm systems used for fire evacuation will have to be certified to EN 54 part 24. Peter Alberry-King will explain what the certification process is, the reasons for its introduction and explore the implications that EN 54 has for both manufacturers and installers. He will attempt to address the long list of questions that have been raised to date regarding the introduction of third-party certified loudspeakers.

How to get there

By road

Park Inn Hotel WD17 1RN
 M1 south Jn 5,
 M1 north Jn 6
 M25 clockwise Jn 19
 M25 counter-clockwise Jn 21a

Nearest train station

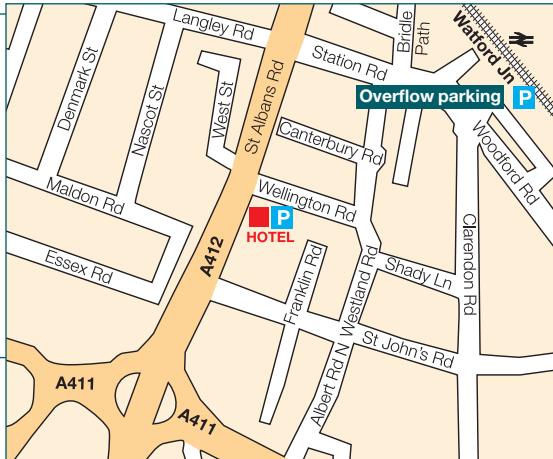
Watford Junction

Nearest airports

Heathrow and Luton

Parking

Hotel parking is limited.
 Overflow parking is available
 5 minutes walk away at
 Watford Junction Station



Exhibitors so far

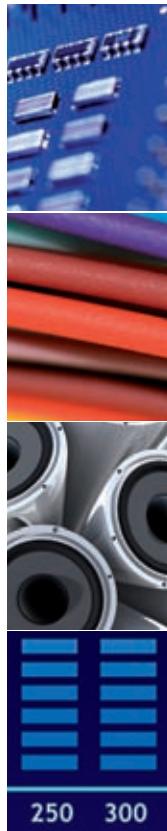
Ampetronic Ltd
 Ashdown AV – Clearsonic
 Ateis UK
 Baldwin Boxall
 Communications Ltd
 Cloud Electronics Ltd
 Communication Technology Ltd
 Current Thinking Ltd
 DNH Worldwide Ltd
 Fuzion plc
 Gordon Morris Ltd
 Ikon AVS Ltd
 Institute of Acoustics
 Kraken Acoustics Ltd
 Neutrik (UK) Ltd
 RCF Audio
 R W Salt Communications
 Sennheiser UK
 Shuttlesound
 SigNET (AC) Ltd
 Sound Directions Ltd
 TOA Corporation (UK) Ltd
 Vimpex Ltd
 Voice Perfect Ltd

"Communication Technology Ltd are pleased to support this year's ISCEx, as we have done now for a number of years. The show provides a great opportunity to meet old friends in the industry and network with newer prospects in a forum which is not too large.

ISCEx offers some excellent seminars on subjects that matter to us, presented by people who really understand and are passionate about the audio industry. A wealth of experience and expertise is available at ISCEx and it's a show of which we appreciate being a part."

Mike Ziolek

*Group Commercial Director
 Communication Technology*



65 years old... but no sign of retirement

Keith Golds AMInstSCE DNH Worldwide Ltd, www.dnh.co.uk



The original factory. It is still part of the complex today although it has been built up

The name of DNH may not be a household one in the wider world, but within the field of public address, the Norwegian loudspeaker manufacturer needs no introduction.

In March 2011, the company will celebrate the 65th year of its founding and while now, it would be no exaggeration to say that DNH is generally considered to be a force in the industry, it was from far humbler beginnings that it began.

In 1946 a former Norwegian POW, Frithjof Edwardsen, formed the fledgling business with repatriation money received when he was released. During his wartime incarceration Edwardsen had been forced to walk miles every day to break in German Army boots, so it was something of an irony that he set up his business in the former German barracks in the small Norwegian town of Kragero.

In the early days of the business DNH made drivers for use in OEM products, such as juke boxes and hi-fi systems. These units were renowned for their high sensitivity and were known as the 'golden loudspeakers' of DNH, and although nowadays DNH is more well known as a manufacturer of industrial loudspeakers, back in 1962 these drivers were very highly regarded, so much so that they were even used by a little known pop band called The Beatles.

Edwardsen quickly realised that operating out of a small town in a remote part of a country on the very edge of Europe he had to offer something special or his business would not be viable. He decided that the DNH name would be synonymous with quality and design. His other 'Eureka' moment was to realise that supplying loudspeakers in Norway alone was not

sustainable. As there was a burgeoning and developing Europe on his doorstep, Edwardsen decreed that DNH would start to export.

In the 1950s, DNH started to manufacture horn loudspeakers. Always with the watchwords of quality and design at the forefront they soon developed markets in Germany, Denmark and the Netherlands and, in 1957, DNH opened its first overseas office in Nurnberg, Germany.

Technological development also continued apace and in the 1960s DNH began production of the world's first loudspeakers for hazardous areas. The standard of manufacture for equipment used in the demanding environment of the North Sea must be maintained at a high level and the quality control DNH implemented then has been applied throughout the production ever since

Chief among the philosophies of DNH is that you can never stand still. The emphasis has always been placed on the value of research and development and the Kragero site has its own development laboratory including an anechoic chamber. The 1980s saw the development of the first music horn, a design that has subsequently been copied all over the world and the first ever plastic hazardous area loudspeaker was produced using a special anti static plastic compound unique to DNH.

With the expansion of the product range came the realisation that in order to serve the markets you need to be near them and full warehouse and sales facilities were opened in both the UK and Germany.

With the first decade of the 21st century behind us, DNH, now under the stewardship of Harald Edwardsen, the son of the founder, has offices in Philadelphia and Seoul and has developed into a truly worldwide organisation.

New challenges will be faced with the same enthusiasm and attention that has characterised DNH in the last 65 years, and already DNH has invested in developing products that comply with the EN54/24 standards.

The small company, operating out of a small town, in a remote part of a country on the very edge of Europe is set to be around for a long time to come. ♦



Makes the world sound....

The most extensive range of industrial & commercial loudspeakers ever.

65 Years of sound experience. Two year warranty on all products.

Speakers for all environments. Exporting to 60 countries world wide.

- Industrial
- Commercial
- Entertainment
- Hazardous areas
- Clean room
- Fire rated
- Voice alarm
- Underwater
- Vandal proof
- Low impedance &
100Vline loudspeakers

- Horn speakers
- Cabinet speakers
- Ceiling speakers
- Projection speakers
- Pendant speakers
- Column speakers
- Metal speakers
- Plastic speakers
- Music speakers
- Weatherproof speakers
- Explosion protected speakers

Reference sites include:-

Sports Stadiums

Lords Cricket Ground / Wimbledon All England Tennis Club / Barcelona FC

Transport

London Underground / Madrid Underground / Austrian Railway / Channel Tunnel

Marine

Royal Caribbean Cruise Liners / Irish, British, Norwegian, German and Italian Navy's

Retail

Harrods / McDonalds / Marks & Spencers

Airports

Heathrow / Munich / Amman / Torp / Malpensa

Government/Local authority

Nato Defence Alliance / Lisbon Zoo / RNLI / Singaporean Coastguard

Oil / Gas

North Sea, Gulf of Mexico, Caspian Sea, South America

Quality Assurance System to ISO 9001 • Quality Service and Sales Support

Hundreds of thousands of pounds worth of Loudspeakers in UK Stock • Choice of colour

Global product certification • Designed and Manufactured for easy Installation

Phone 01908 275000 Fax 01908 275100
sales@dnh.co.uk www.dnh.co.uk

Charity round-up



Independent registered charities associated with the ISCE

There are two independent registered charities that are associated with the ISCE, administered by independent trustees, who are long-service people from the sound and communications industry.

The Public Address Engineers Benevolent Fund

(registered charity no 216648) can offer immediate financial assistance to any member, bona fide dependant of any member or deceased member who, in the opinion of the trustees, needs assistance.

The Alex J.Walker Memorial Fund

(registered charity no 262085) can assist with training related funding.

The trustees ask you to please consider making donations to either of these Charities in order for them to continue providing assistance.

The Charities can accept bequests from members and this will reduce the inheritance tax on your estate. You are also able to gift aid your donation.

To receive a leaflet explaining the two Charities in more detail and learn how to make donations, please contact the administrator directly or ISCE office, who will guide you to the trustees.

Charities Administrator

Ron Walker
132 High Street North
Stewkley LU7 0EP
Tel: 01525 240444
Email: ron@stewk.co.uk

Institute Day charity donation

At the ISCE annual dinner held last November, in memory of our past President, the late David Hopkins OBE, we managed to raise a fantastic £542 for Beechwood Cancer Centre.

The Charity were delighted to receive our donation and assured us that it would be used wisely to bring comfort and support to all those who benefit from Beechwood.

One man's junk is another man's treasure

Bernard Bibby *FInstSCE*

I, like a number of you, have been making a lot of noise during our illustrious careers, but there comes a time when all good men give thought to retiring from the fray, only to find the need to still keep a hand in. An opportunity has come my way to give a little back to the society that has supported me for many years.

I have, with the help of our industry, put together a small PA system that I hire out for a small fee to raise money for charity; the Royal British Legion and more recently, Help for Heroes.

Apart from the hire side of the service, there is also a need to set up a practical based educational service that would involve local schools and youth organisations, who know how to make a lot of distorted noise, but have very little understanding of the technology.

As the time approaches for the need to undertake stocktaking and other house-keeping exercises, I would like you to go through all those dark recesses and finally make a decision to get rid of all the equipment that is taking up a lot of valuable space.

I can use whatever equipment is serviceable and anything else that is past its working life can be dissected to use as teaching aids.

Your help will encourage the next generation of engineers to get to grips with our industry and, at the same time, earn you a pat on the back for giving a bit back to the community that supports you and your enterprise.

It may be junk to you but it could be treasure to me, so please give your support.

To discuss in more detail and arrange collections (potentially at the next ISCE event) contact:

Bernard Bibby *FInstSCE*
Project Director
Swale Community Broadcasting Service
(SWALE RADIO)
Kent
Tel: 01795 479326
Email: bernard@bibbypublishing.com

ISE, Amsterdam 1–3 February 2011

This year's ISE attracted a record 34,870 attendance to the Amsterdam RAI and many of ISCE's supporting members were exhibiting

David Tyas MInstSCE of Ikon AVS reports on his experience;

"As part of the UKTI contingent exhibiting in Hall 1, there was little or no time to see much of the exhibition other than on the third day (Thursday) when it was significantly quieter. Without doubt, Halls 1–5 are the major focus where you could see an eclectic mix of manufacturers ranging from the big names to newcomers.

Being an AV company my RAS was set to AV and audio and in these areas, whilst a move to digital video was evident, there was no single WOW factor. These halls, along with

the others located over the bridge at the other end of the complex, offered a wide array of digital signage, 3D projection and all that goes with it.

Audio was reasonably well represented, particularly for the home and specialist sectors and whilst the no or low sound policy stops live demos, it does give the opportunity to discuss the finer points of the products and availability.

This was a good exhibition to do business and discuss opportunities with existing and perspective clients".



ISCE

The Institute of Sound and Communications Engineers



Register of members 2011

Register of Members 2011

The new *Register of Members 2011* is now live on the ISCE website.

If you missed the chance to be in this issue, please request an opt-in form from Ros, who will make sure you are included in the next quarterly update.

Automatic gain control, limiting and compression

JM Woodgate FInstSCE

The distinctions between automatic gain control (AGC), limiting and compression seems not to be clearly documented anywhere, not even in the little-known IEC 60268-8. For the purposes of this standard, automatic gain control is characterized by sufficient gain in the control loop to hold the steady-state amplifier output substantially constant for values of sinusoidal source e.m.f above a threshold value, and a release time-constant in the control loop of 1 s or greater. AGC does not, when correctly implemented, change the subjective quality of the programme signals.

Similarly, compression (amplitude compression) is characterised by gain in the control loop set so that the steady-state amplifier output increases with source e.m.f. less than proportionally for values of sinusoidal source e.m.f above a threshold value, and a release time-constant in the control loop of the order of milliseconds. Compression changes the subjective quality of the programme material.

Limiting is similar to compression in that it has a short release time-constant, but it has high control loop gain, so that the amplifier output stays substantially constant for values of sinusoidal source e.m.f above a threshold value, like AGC. Limiting changes the subjective quality of the programme material.

For both techniques, the attack time-constant in the control loop is usually of the order of milliseconds.

The compression ratio is the difference in decibels between an increment of level of source e.m.f and the resulting 1 dB increment of level of output current. There is evidence that compression ratios in the region of 2 can improve speech intelligibility, while values above 3 tend to make the sound quality strident and unpleasant. Compression is not desirable in amplifiers for AFILS, since the need for compression by an individual user, in different acoustic situations, is normally fulfilled by compression in the hearing aid. Compression can depress speech levels undesirably in noisy situations. However, AGC IS highly desirable in AFILS amplifiers, because a reduction in input signal level would otherwise seriously degrade intelligibility.

Figure 1 shows typical steady-state output/input characteristics.

Disclaimer

Care is taken to determine that 'Engineering Notes' do not refer to any copyrighted or patented circuit or technique, but ISCE can accept no responsibility in this connection. Users of the information in an 'Engineering Note' must satisfy themselves that they do not infringe any Intellectual Property Rights.

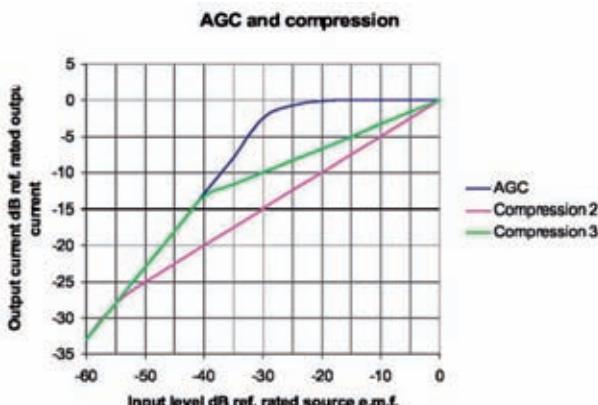


Figure 1 Typical steady-state output/input characteristics

Fuzion

quest
engineering

LT01 Cable Tester

*Find those show-stoppers
before they stop the show*



ONLY
£19.99

Want one?

call Fuzion on
01932 88 22 22

quoting offer code
QTISCE456

*Hurry, only 15
units are available
at this price...*

Find us at ISCEx2011

LT01 RRP £46. For full product details visit our website. Offer limited to one unit per customer. Special offer delivery charge of £5 applies or collect at ISCEx2011 (with prior agreement). All prices subject to VAT. Offer only available from Fuzion Ltd. Fuzion is the UK distributor for Quest products. Standard terms and conditions apply.

www.fuzion.co.uk

Sound with true flair

Flare Audio, who are soon to open a new research, development and demonstration facility in West Sussex, are announcing the launch of two new innovative products in Spring 2011.

A new compact high pack

The new compact, multi format high pack can be used as a true line source enclosure, point source enclosure or close field monitor. Using technology gained from Stealth Array, this new high pack speaker can be setup as a standard line array, point source cluster and standard high pack/monitor speaker. Made from the highest quality birch ply and featuring an interchangeable aluminium HF waveguide, the speaker is set to revolutionise the medium sized line array/high pack market.

Flare Audio's Davies Roberts TechInstSCE said 'We believe the time is right for a very high quality line array system that is flexible and versatile; the sound quality produced by this new speaker is simply breathtaking. The speaker can scale from a small single stand alone monitor to a 20 hang line array for large scale events.'

A new discovery in directional bass and a new bass enclosure

The quality of any sound system relies on its ability to react in balance to any given input and re-create identically the information it is receiving. To achieve the highest definition involves keeping all the audio waves for each frequency as sharp/thin as possible. It is true that sensitive drivers produce a thinner wave, but this sensitivity can be lost. The result is an undefined bass with a thick or blurred sound wave removing most extra definition gained from sensitive drivers.

Flare Audio is developing a new design that eradicates delay in bass enclosures so that all frequencies produced remain sharp. The sharpness or boom factor as it is measured in lower frequencies is significantly lower in this new design Flare Audio is developing than those from a folded horn, reflex or band pass design.

Davies Roberts said: 'Rather than people just feeling bass, we want them to hear every single detail and these new bass enclosures are revolutionary at doing that. Our aim is to produce the highest possible definition from a bass enclosure as well as being highly compact, highly directional and easy to use.'

Flare Audio welcomes enquiries from interested dealers and distributors to become a part of their rapidly expanding network.



Easy storage for your ISCE magazines

Quite often, our members need to refer back to articles in past copies of the ISCE magazine, only to find they are not immediately to hand.

We have come up with a solution of a smart new A5 ISCE branded magazine binder, which can store up to two year's worth of magazines and sit neatly on your shelf.

These will be available to buy at ISCE events throughout the year, at a discounted price of £5.00 including VAT. If you can't wait to get your hands on one, and want the binder posted to you, the price will be £6.50 including VAT.

Supporting Members

A K Barns Ltd, Cambs
www.soundplayback.com
Mr A Barns MInstSCE

ADS Worldwide, Manchester
www.ads-worldwide.com
Mr J Houldcroft MInstSCE

Akwi AV Ltd, Manchester
www.akwilav.com
Mr A Akka MInstSCE

Alarm & Communication Systems Ltd, Tyne & Wear
www.alarmcommsys.co.uk
Mr S Jefferson

Ampetronic Ltd, Nottinghamshire
www.ampetronic.com
Mr J Pieters MInstSCE

AMS Acoustics Ltd, London
www.amsacoustics.co.uk
Ms H Goddard FinstSCE

Arup Acoustics, Manchester
www.arup.com/acoustics
Mr D J Smith MInstSCE

Audio-Technica Ltd, Leeds
www.audio-technica.com
Mr S Drue

Baldwin Boxall Communications Ltd, East Sussex
www.baldwinboxall.co.uk
Mr T Baldwin ComplinstSCE

BC Technology Ltd, Northants
www.bctechnologyltd.co.uk
Mr R Schlimmer

BL Acoustics Ltd, Essex
www.blacoustics.co.uk
Mr B Larcombe MInstSCE

Blaydon Communications Ltd, Tyne & Wear
www.blaydoncomms.co.uk
Mr P Doughtery AMInstSCE

Bosch Security Systems, Middlesex
www.boschsecurity.co.uk
Paul Ward AMInstSCE

CIE Group Ltd, Nottinghamshire
www.cie-group.com
Mr J Doar AMInstSCE

Clarity UK Ltd, Essex
www.clarityuk.co.uk
Mr G Palmer AMInstSCE

Cloud Electronics Ltd, Sheffield
www.cloud.co.uk
Mr S Curtis

Commercial Audio Solutions Ltd, Derbyshire
www.commercialaudiosolutions.com
Mr W Mackie AMInstSCE

Communication Technology, East Sussex
www.communication-technology.co.uk
Mr A Walker FinstSCE

Contacta Ltd, Kent
www.contacta.co.uk
Mr R Dungan

Cooper Fulleon Ltd, Gwent
www.cooperfulleon.com
Mr R Choppin

Cooper Lighting & Safety Ltd, Doncaster
www.cooper-ls.com
Mr B Walder

C-TEC, Wigan
www.c-tec.co.uk
Mr A Green

CUK Ltd, Glasgow
www.cuk-audio.com
Mr S Thomson

Current Thinking Ltd, Tyne & Wear
www.current-thinking.com
Mr A Smith MInstSCE

Delta Telecom Sound & Security Ltd, Stockport
www.deltatelecom.co.uk
Mr A Ratcliffe AMInstSCE

DNH Worldwide Ltd, Milton Keynes
www.dnh.co.uk
Mr K Golds AMInstSCE

Duran-Audio UK Ltd, Cardiff
www.duran-audio.co.uk
Mr N Screen

Edworthy Audio Consulting, East Sussex
www.edworthyaudio.com
Mr D Edworthy HonFinstSCE

Fuzion plc, Surrey
www.fuzion.co.uk
Mr T Tortini

Gordon Morris Ltd, Somerset
www.gordonmorris.co.uk
Mr G Morris MInstSCE

Grainger Communications Ltd, Co. Tyrone
www.graingercommunication.com
Mr M Grainger MInstSCE

Ikon AVS Ltd, Worcestershire
www.ikonavs.com
Dr D Tyas MInstSCE

Mongey Communications, Co. Kildare
www.mongey.ie
Mr D Mongey

Northern Light, Edinburgh
www.northernlight.co.uk
Mr J Allen

NSR Communications Ltd, Hertfordshire
www.nscommunications.co.uk
Mr P Walker

Peavey Electronics Ltd, Northants
www.peaveyelectronics.com
Mr J Kennedy

Penton UK Ltd, West Sussex
www.penton.org
Mr P Alberry-King MInstSCE

Principle Link, Huddersfield
www.principle-link.com
Mr R Cooke

Provoice, Lancashire
www.provoice.co.uk
Mr J Gilroy MInstSCE

Pure Install Ltd, Lancashire
www.pureinstall.co.uk
Mr S Makinson

RCF Audio, Essex
www.rcfaudio.co.uk
Mr P Price MInstSCE

R K Sound Engineering Ltd, St Albans
www.rksound.co.uk
Mr J Raper MInstSCE

Romers Electronics Ltd, Blackburn
www.romers.co.uk
Mr J Caton MInstSCE

R W Salt Communications Ltd, Manchester
www.rwsalt.co.uk
Mr C Buckley AMInstSCE

Sennheiser UK, High Wycombe
www.sennheiser.co.uk
Mr A March MInstSCE

Shure Distribution UK, London
www.shuredistribution.co.uk
Mr T George-Tolonen

Shuttlesound Ltd, Surrey
www.shuttlesound.com
Mr D Howe MInstSCE

SigNET (AC) Ltd, Tyne & Wear
www.signet-ac.co.uk
Mr A Scott MInstSCE

Simpson Sound & Vision Ltd, Warwickshire
www.simpsonsoundandvision.com
Mr D Simpson MInstSCE

Solent Sound Systems Ltd, Southampton
www.solentsound.com
Mr R Gatehouse MInstSCE

Sound Directions Ltd, London
www.sounddirections.co.uk
Mr S Boivin-Champeaux

Sound Productions, Dublin
www.soundproductions.ie
Mr D McGlynn MInstSCE

TOA Corporation (UK) Ltd, Surbiton
www.toa.co.uk
Ms L Hall

New Members

February 2011

Affiliate Member

Ron Elliott
NTE Limited

Member

Jakob Kristinsson
ETOS ehf

Roland Hemming
RH Consulting

Steve Bain
Off Beat

Technician

David Wisker
Vivid Communications

Gareth Aldridge
Fulford Sound & Communication Services

James Candler
Superior Sound Systems

Martin Featherstone
CIE Group Ltd



COMMUNICATION
TECHNOLOGY



Manufacturing microphones in the UK for 30 years
Export enquiries welcome

*Items imported to the UK

Freephone 0800 917 8488 www.communication-technology.co.uk
sales@communication-technology.co.uk