

# DeafWatch™

## Everyone deserves to feel safe.

### Introduction

DeafWatch™ makes recommending a fire alarm system for the hard of hearing simple.

DeafWatch™ combines a best-in-class signal and outstanding specifications at a fair price, so your customer saves money without compromising on quality. And with an average service life of 15 years, its whole-life costs offer exceptional value.

With DeafWatch™, you and your users can be confident that, in the event of a fire, they will be warned immediately and repeatedly. We have supplied complete solutions to universities, colleges, schools, large retailers, office blocks, warehouses, police stations, hospitals, apartment blocks and blue-chip companies like Bloomberg, Deutsche Bank and the Royal Mail. They find DeafWatch™ an extremely viable, cost-effective choice.

### DeafWatch

DeafWatch™ uses a **Technically Assigned Licence** from Ofcom. This ensures exceptional power output and coverage within the specified area as well as the monitored signal security.

DeafWatch™ works intelligently alongside visual alarms, using dedicated night-time pagers to cover residences. The pager covers hard-to-reach and hard-to-cover spaces, while the visual alarm can be better focused on public access and high-risk areas.

**DeafWatch™ meets all recommendations of BS5839:1.** Read on for all you need to make an informed decision on which fire alarm system for the hearing-impaired to recommend.



**For affordable peace of mind please contact:**

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## Why do you need to provide a fire alarm for the hearing-impaired?

Not only are employers legally obliged to keep all their people as safe as possible, they have a moral duty to do so.

Around a third of the adult population of the UK have a hearing impairment, or half of those over 55 years old . Approximately 1.2mil people are severely or profoundly deaf. This means they may not hear your fire alarm. The problem is worse at night, when users remove their hearing aids to sleep, so it's vital that buildings have systems that can alert them.

Several orders and acts require that disabled people have the same provision as everyone else. For example, the **Regulatory Reform (Fire Safety) Order 2005** states that employers make sure all their employees are protected from fire, including the disabled. Similarly, the **Equality Act** requires institutions to give disabled people the same services that others receive.

If a commercial fire alarm doesn't provide for the hard of hearing, that is discrimination.

All this means that if a hearing-impaired person dies because of insufficient alarm provision, a company could be prosecuted on a corporate manslaughter charge.

**British Standard 5839-1** Although these acts point out the responsibility of employers, they don't set the standards for fire alarms and protocols. This is left to **British Standard BS5839-1 and its associated standards.**

This standard sets out the operating parameters and safety requirements for **both** an audible fire alarm system and for supplementary systems like DeafWatch™.

Basic paging systems are not designed to comply with this standard. If you identify a risk, but address it with a below-par system, you could be found culpable if something were to happen.

## What is DeafWatch™?

DeafWatch™ integrates with standard fire-alarms and when a fire alarm is raised, DeafWatch™ sends an immediate, repetitive signal to specially adapted pagers, held by your hearing-impaired users. This ensures they are alerted at the same time as people who can hear the fire alarm.

The system complies with all relevant standards and gives you legal protection should the worst happen.

With DeafWatch™, you can be secure in the knowledge that your hearing-impaired users are as safe as the hearing. Our transmitters give best-in-class coverage to provide the highest possible level of safety, without breaking the bank.

Because our transmitters send the strongest possible signal, you need fewer of them to cover a greater area. This can save you money over alternative providers, who usually need many more transmitters to achieve the same coverage.

DeafWatch™ has been designed with the user in mind. We are constantly looking at ways to improve the user experience, without impairing the absolute safety of the system.

DeafWatch™ guarantees you the best value, the highest level of service and the certainty that everyone will receive an alert should the fire-alarm be activated.

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<sup>1</sup> "One in three adults in the UK are Deaf, have hearing loss or tinnitus", RNID, prevalence of deafness and hearing loss, July 2024 -<https://www.tandfonline.com/doi/full/10.1080/14992027.2024.2341956>

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## Technically Assigned Licence

Having a technically assigned licence protects your alarm system's radio frequency from interference from both licenced and illegal sources.

### **Only a technically assigned licence ensures broadcast security now and in the future.**

Unlicensed systems are restricted to very low power (usually 0.25 - 0.5 watt) and offer absolutely no protection from interference from either legitimate or illegitimate sources. BS5839-1 specifically advises against using unlicensed frequencies.

Some companies provide systems that operate on a **Simple Site Licence**. But this offers only limited protection from interference. The licences are self-regulated by users, meaning that Ofcom does not oversee the licence application or allocate licences based on potential interference - it simply distributes licences via an automated online form. The new applicant picks their frequency and coding from a restrictive list and should ideally test if the channel is clear before deployment.

What's more, simple site licences do not offer **'grandfather rights'**. These rights state that your system has been licensed longer, you have privilege. If you only have a simple site licence and your system interferes with a newer system installed in the area, Ofcom may demand that you change your frequency, despite the fact your system was in place first. We do not think that this is an appropriate approach.

**A technically assigned licence prevents this happening.** DeafWatch™ licences are overseen by Ofcom, protecting you from legitimate and illegitimate interference.

If you possess a technically assigned licence, Ofcom effectively excludes others from your desired area. Anyone who applies for a future licence on your frequency within your exclusive usage area will be denied it by Ofcom.

Licences overseen by Ofcom usually benefit from much higher power ratings. With our distress fire alarm frequencies, we are permitted to broadcast anything up to 25 watts effective radiated power compared to a 2-watt cap for simple site licences.

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## DeafWatch™ Pager

The robust DeafWatch™ is a battery-operated radio receiver that vibrates vigorously and flashes an LED when receiving an alert. The message will be shown on the backlit LCD until reset.

The pager offers:

- Technically assigned reception on a stronger and more reliable signal that cannot be legally obstructed
- Powerful vibration
- Whole-screen messages of up to 80 characters, so users don't have to wait for the message to scroll
- Backlit message display
- Long battery life (8-12 weeks) with at least one day's low-battery warning
- Cannot be accidentally switched off
- Vibrate function cannot be switched off in a menu
- Robust design and build
- Fire alarm messages will repeat until the fire alarm panel is reset

Our pagers are programmed with a vibrate-only override, power feature locked out and strong vibration. They are also configured to operate on a technically assigned frequency, meaning they have a better range and are less prone to interference than inferior licenced products (which may cost more).

For night-time applications we use a smaller pager which fits inside an ergonomic wrist strap. This is an effective way of waking users, as the pager vibrates directly against the skin. It has the added advantage that the vibrating unit stays with the user if they go to the toilet or leave their bed.



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## **The Visual Alarms Directive (VADS)**

Wireless Alert Solutions Ltd has been providing fire safety for disabled people in a range of environments since 2004.

During that time, the fire alarm market has slowly come to terms with the challenges and opportunities that come with opening up buildings, jobs and services to disabled people.

The welcome introduction of the visual alarms directive (BS EN 54-23) in 2010 shows that major fire alarm manufacturers and providers now recognise that deaf people represent a large and growing disabled user group that have been specifically excluded from this essential service.

The inclusion of visual alarms under the umbrella of European standards is confirmation of decades of work by specialists and focus groups in this area.

The directive fulfils a requirement that is long overdue and combines excellent technology and detailed deployment. However, it undeniably brings costs in time and money to deploy install and maintain systems.

For example, lux levels can change depending on size of window, direction of light, time of the year or day and office layout. Visual alarms can also drain significant amounts of power from a fire alarm system, meaning that they need additional dedicated electrical support and a larger backup supply.

### **DeafWatch™ is recognised by the British Standards as a suitable alternative to Visual Alarms.**

Whilst DeafWatch™ can futureproof a building against needing visual alarms. It also allows the designer to focus visual alarms on the public

access and high-risk areas that really need it, while DeafWatch™ covers the rest of the building. This gives designers and fire alarm companies more flexibility in design and price, without sacrificing safety.

### **Deaf fire alarm misconceptions**

Over the past few decades, some manufacturers have tried to differentiate themselves in unique ways which aren't actually unique. Here are some examples.

### **The National Roaming Standard**

This is not a nationally or market-recognised standard. It's a core functionality of paging which isn't unique. However, its official-sounding name can confuse clients.

### **Radio Signal Sculpture**

Some companies use this myth to make low-powered systems seem more attractive. Obviously, a radio signal will travel many times further in open space than through a concrete building. **But a radio signal cannot be sculpted.** Systems that promote this also deflect from the option of covering multiple buildings with a single panel, which supplies the very best value for money.

DeafWatch™ power output and frequency can cover 99% of buildings with a single transmitter. Only a handful of buildings in the UK require more than one DeafWatch™ panel. This means that DeafWatch™ provides superior value for money.

DeafWatch™ can be tailored to your building. With the correct antenna, installation location and tailored radio output, coverage can be managed as well as possible.

This is not sculpture, just good practice.

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## How DeafWatch™ Compares

<b>Feature</b>	<b>Legacy Provider Simple Site Licence</b>	<b>DeafWatch™ Technically Assigned Licence</b>	<b>Benefit</b>
<b>Ownership</b>	Open frequency.	Exclusive frequency.	An exclusive frequency means your DeafWatch™ alarm's signal is protected from interference from other systems.
<b>Regulation</b>	Self-regulated.	Regulated by Ofcom.	The DeafWatch™ frequency is allocated by Ofcom, whereas self-regulation means you're as secure as the least competent installer.
<b>Future Security of Frequency</b>	None	Complete	Simple site offers no "grandfather rights", meaning any new self-regulated complainant can challenge your long-standing licence. Ofcom allocates the DeafWatch™ licence.
<b>Frequency</b>	Choose one of 35 frequencies from 49Mhz to 49.4870 MHz	168.9375 MHz	Covers up to 10 times the area.
<b>Maximum Power</b>	2 watts	25 Watts	Greater power increases signal range and consistency.
<b>Building Material Performance</b>	Designed to cover only one small to medium, lightweight building (non-concrete), poor performance at range.	Penetrates all building construction materials easily including excellent performance on super-dense constructions (subject to survey).	Better penetration eradicates 'black-spots' and the need to provide additional transmitters.
<b>Coverage</b>	Covers building by building.	Covers multiple buildings.	Fewer transmitters results in a considerable cost reduction.
<b>Adjustable Output for "sculpted" signal.</b>	Yes	Yes	Turn the power up or down to an appropriate amount to cover the desired area.

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## **DeafWatch™ Success Stories**

Thanks to the power of DeafWatch™ transmitters, we can cover any building whatever the shape, size and composition. We sell at a fair price, making both capital and revenue costs manageable and affordable. A host of institutions have already taken advantage of our outstanding service.

Imperial College London buildings are fully covered by DeafWatch™. They are delighted that they have complete peace of mind at exceptional value.

In 2006, The University of Northampton replaced a legacy system, which offered partial coverage and was too expensive to expand, with DeafWatch™. We worked with the integrated fire alarm system to bring the potential cost down to a fraction of the cost. In 2018, the University opens a new campus at Waterside and we saved tens of thousands of pounds by relocating updated DeafWatch™ systems.

In 2022, Aston University selected DeafWatch™ as their preferred solution for fire alarm provision across their University site in north Birmingham. Aston University's centre piece is the third largest brick-built building in the UK. We were able to cover nearly the entire building with a single transmitter, coming in at a quarter of the cost of our competitors.

Royal Mail has installed DeafWatch™ in more than 30 delivery depots and sorting offices. The company has been hugely impressed by the coverage of DeafWatch™. All buildings we have surveyed have required only a single transmitter. The 3.2-acre Bloomberg Building, London is fully covered by DeafWatch™. The 14-storey building also has half the building underground and a complicated hyper-dense build structure, which made for quite a challenge.

## **Other clients include:**

- **Imperial College London (2008)**  
48 buildings across west London
- **Café Royal Piccadilly (2022)**  
complete coverage for guests and staff
- **Kirklees College (2004)**  
complete coverage across seven sites
- **Bedford College Group (2010)**  
28 buildings across six locations
- **University of Birmingham (2009)**  
over seventy buildings
- **University of Worcester (2009)**  
20 buildings across three sites
- **Leicester College (2006)**  
8 buildings across four sites
- **De Montfort University (2009)**  
complete coverage across 29 buildings
- **GlaxoSmithKline Headquarters (2023)**  
complete coverage
- **Deutsche Bank Headquarters (2023)**  
complete coverage
- **Bloomberg Headquarters (2016)**  
complete coverage
- **Whitehall Cabinet Office (2023)**  
complete coverage
- **Whitehall Foreign, Commonwealth and Development Office (2013)**
- **Walsall Council (2004)**  
complete coverage
- **West Northamptonshire Council (2023)**  
5 sites
- **Ministry of Defence – Defence School of Transport (2013)**

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## DeafWatch™ Transmitter

The DeafWatch™ Mk IV transmitter is a wall-mounted key-locked steel enclosure (200h x 300w x 180d mm), weighing just over 5kg. LED indicators show system status and there is a key switch for system test and fire test mode.

The transmitter is connected to a building's fire alarm system via monitored interfaces on the addressable loop (or a direct connection). We recommend connections are made with fire-rated cable. When the fire alarm system activates, the fire alarm opens a pair of volt-free contacts (or vice versa). This is detected by the DeafWatch™ transmitter, which repeatedly and simultaneously transmits an alarm message to all vibrating pagers within range, until the contacts are reversed by the building's fire alarm system.

The DeafWatch™ Mk IV can be easily interfaced with all fire alarm systems. It can support single and multiple evacuation zones, and single/double-knock activations.

Each DeafWatch™ transmitter will be connected to an aerial. The exact location and type of aerial will be determined during the radio site survey, which covers characteristics of the building and the area where we need to ensure signal coverage.



This is most commonly a small whip aerial, mounted securely to the top of the transmitter case. Other aerials are designed for fixing to the sides of walls, in the void of a suspended ceiling, in an electrical riser or similar. Occasionally, when one transmitter is being used to provide signal coverage for a whole site with multiple buildings, we will mount an external aerial.

Every DeafWatch™ transmitter site is individually licensed by Ofcom, the Government Office of Communications. This means that we use a controlled and regulated frequency that provides protection from interference. Our equipment will not affect the proper running of other electronic equipment and can be used in radiosensitive environments. We undertake all the necessary paperwork associated with obtaining the initial relevant licence for your site.



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## **How We Make Your Life Easier**

### **Project Management**

We realise that we are a small cog in a much larger machine. Rather than taking control of the whole installation, we are happy to work with your existing contractors to ensure the process is smooth. We add value where we are best placed – in the technical support of your preferred contractor.

### **Site Survey**

We offer you a free site survey. This allows us to determine how many transmitters are required and where to situate them to provide full coverage throughout your site. We begin the process by using building plans and satellite imagery to provide an estimate. Our highly skilled and experienced engineers then visit the site and walk around to ensure that there are no black-spots and that the location has comprehensive coverage.

### **Installation**

95% of our installations are managed through contractors and fire alarm companies. We keep the price low and your contractors and clients happy. Our job is to make you look good.

### **Commissioning**

Once installation has been completed, Wireless Alert Solutions will then visit the site to program, survey & ensure that everything is working properly before sending the certification. We will provide two more surveys during the warranty period to ensure that coverage is still guaranteed.

### **System Training**

As part of the commissioning process, we will take time to demonstrate DeafWatch™ to any individuals who will be responsible.

### **Maintenance**

We provide 12 months' on-site warranty as standard, which covers all parts and labour. We also include two six-monthly site surveys to confirm the system is conforming with both BS5839-1 and the Wireless Telegraphy Act. Subsequent maintenance which again covers all parts and labour and on-going twice-yearly surveys is charged annually at 20% of the net cost of the equipment.



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