



Ultimate  
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# Our hearing protection guide.

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# Our hearing protection guide.

## Answering common questions in a handy guide.

### PRODUCT SPOTLIGHT



OUR REF: UC-EP03C

Soft **CORDED** PU foam earplugs which expand gradually to conform exactly to the size and shape of virtually any ear canal. Extremely high SNR 37 for very noisy environments. Extremely cost effective.

**EN 352-2:2002**



**SNR 37**



More information available online at [www.ultimateindustrial.co.uk](http://www.ultimateindustrial.co.uk)

### Introduction

Issuing an employee with hearing protection should really be considered a last resort when all other options have been explored. There are many ways to reduce noise levels before they even reach the ear including screens, enclosures, acoustic jackets to name a few. Modern machinery should be engineered to keep noise levels as low as practical as detailed in **The Supply of Machinery (Safety) Regulations 2008**. If noise levels are still high, this should be clearly stated on the machinery concerned. Many noise sources cannot be reduced in practice, and it is in this event that individual protection should be evaluated. A full risk assessment should be carried out by suitably qualified persons who can measure the relevant levels and advise of the level of protection needed.

### Who needs protection

It is self evident that a worker in a noisy press shop or using pneumatic tools needs some form of protection but what about the cleaner using a vacuum for 8 hours a day or a worker in a busy restaurant?

Areas where some form of hearing protection may be needed vary considerably and only an accurate Risk Assessment and noise survey can give a definitive answer. In simple terms, if you cannot hold a normal conversation with another person who is within 2 metres then you may need some form of protection. Lower noise levels for long periods can be just as damaging as short term exposure to higher levels.

### More is not always better...

The better the protection, the more the hearing is protected? This may seem to be the obvious solution to noise in the workplace but this is one of the few situations where this does not apply. Using very high levels of protection can have the effect of isolating the worker. They will be unable to communicate verbally and have to remove the ear protection to have a verbal conversation. In very high noise levels this short exposure can have serious implications.

Noise levels should be reduced to a "safe" level only so that the wearer can still hear what is going on around him. Consider a worker in danger, would he hear a shouted warning from a nearby colleague? This means that different ear protection may need to be worn in different areas so that noise levels are reduced to a safe level, yet still allow communication. In practice levels of 75 - 80dB at the ear are optimal but you should not reduce these levels below 70dB or allow them to exceed 85dB.

### Hearing loss

Exposure to high levels of noise, typically over 87dB can cause damage to a persons hearing that is permanent. Thousands of people within the UK have damaged hearing directly as a result of excessive noise at work. Loss of hearing is not the only problem when exposed to high noise levels, tinnitus (a constant ringing or buzzing in the ears) can be a permanent distressing condition which can be life altering.

Hearing loss can be slow to become noticeable, with slight losses over many years. Others around will often become aware of the loss in someones hearing first, with the individual themselves not noticing anything for several years, by which time the damage is done and irreversible.

### A simple indication of protection levels

| A-weighted noise level (dB) | Select a protector with an SNR of ... |
|-----------------------------|---------------------------------------|
| 85-90                       | 20 or less                            |
| 90-95                       | 20-30                                 |
| 95-100                      | 25-30                                 |
| 100-105                     | 30 or more                            |

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UC-EP07B headband. SNR 20



### Hearing protection - what do I need to do?

Full details on managing noise in the workplace are beyond the scope of this guide but in very simple terms you will need to ensure that a worker is not exposed to noise levels above 87 decibels on a daily or weekly basis after taking into account any hearing protection being used. Once you have measured the workplace noise levels, anything over 80 decibels will require action. More information on this is readily available on line from many sources including the Health and Safety Executive.

### What types of hearing protection are available?

A very brief description of some of the more popular hearing protection is covered below to help with preliminary choices.

#### Foam earplugs

**Foam earplugs** are available in various styles and can offer very high levels of protection. The type of foam used can also be adjusted to give different levels of protection for lower noise levels. While some styles can be washed, dried and re-used, they are more typically disposed of at the end of the shift. Various dispensing systems are available with a very low cost per plug. This style of protection can come in standard, corded or detectable versions for use in the food industry. While cheap to buy they require careful fitting and have to be rolled between thumb and forefinger to compress the foam before insertion. We would not recommend these in dirty environments or where they need to be frequently removed.

#### Detectable earplugs

**Detectable earplugs** are generally confined to the food industry where they can be detected if lost, potentially into the product being processed. Typically they are similar to standard plugs but have an added metallic component such as a brass ball bearing incorporated into the earplug for detection by automated scanning equipment and are usually coloured blue.

#### Flanged earplugs

**Flanged earplugs** can be made of silicon rubber or thermoplastic and are more expensive than foam plugs.

They tend to offer lower protection levels but are easier to insert and remove without the need to touch the contact surface. They are often described as re-usable earplugs as they are easy to wash and dry but in practice still tend to be discarded at the end of the shift.

#### Earbands or semi-inserts

**Earbands or semi-inserts** are part way between earplugs and earmuffs. Various styles are available and comprise of a foam plug which is held in place by a plastic band over the head or around the neck. More expensive than the two options above, they can be economic choices as the foam plug can usually be replaced. They are easy to use and remove and do not require the user to touch the foam plug which is important if the user has contaminated hands or is wearing gloves.

#### Earmuffs

**Earmuffs** are one of the more expensive options but are re-usable and can be incorporated with other protective equipment such as safety helmets. Available with a wide range of protection levels and fitting options, for example headbands, neckbands, helmet mounts. There are also electronic versions for communications, entertainment and control of noise levels but these can be expensive to buy and maintain.



More information available online at [www.ultimateindustrial.co.uk](http://www.ultimateindustrial.co.uk)



Our selection guides to eyewear, respiratory, hand and arm protection, work at height, head protection, workwear and clothing and footwear.



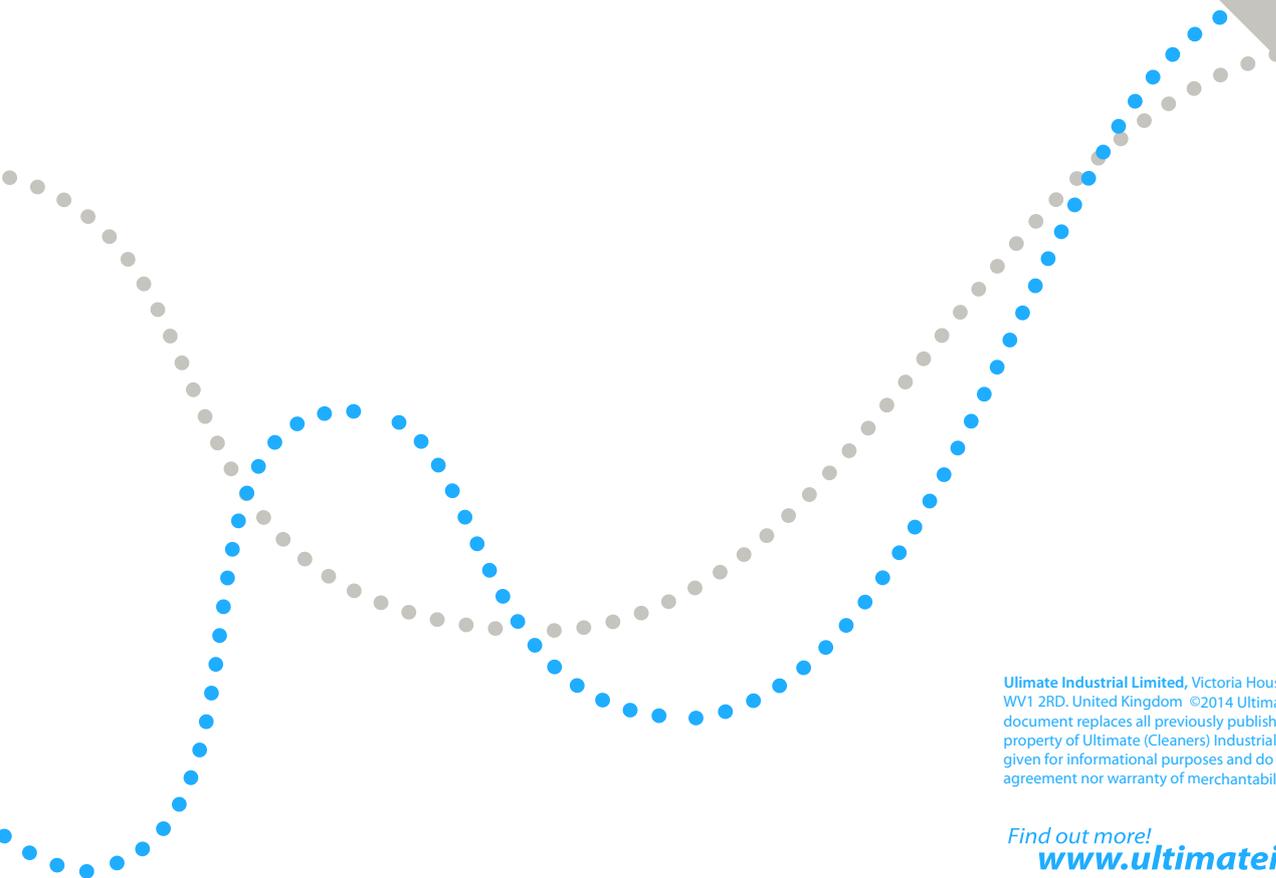
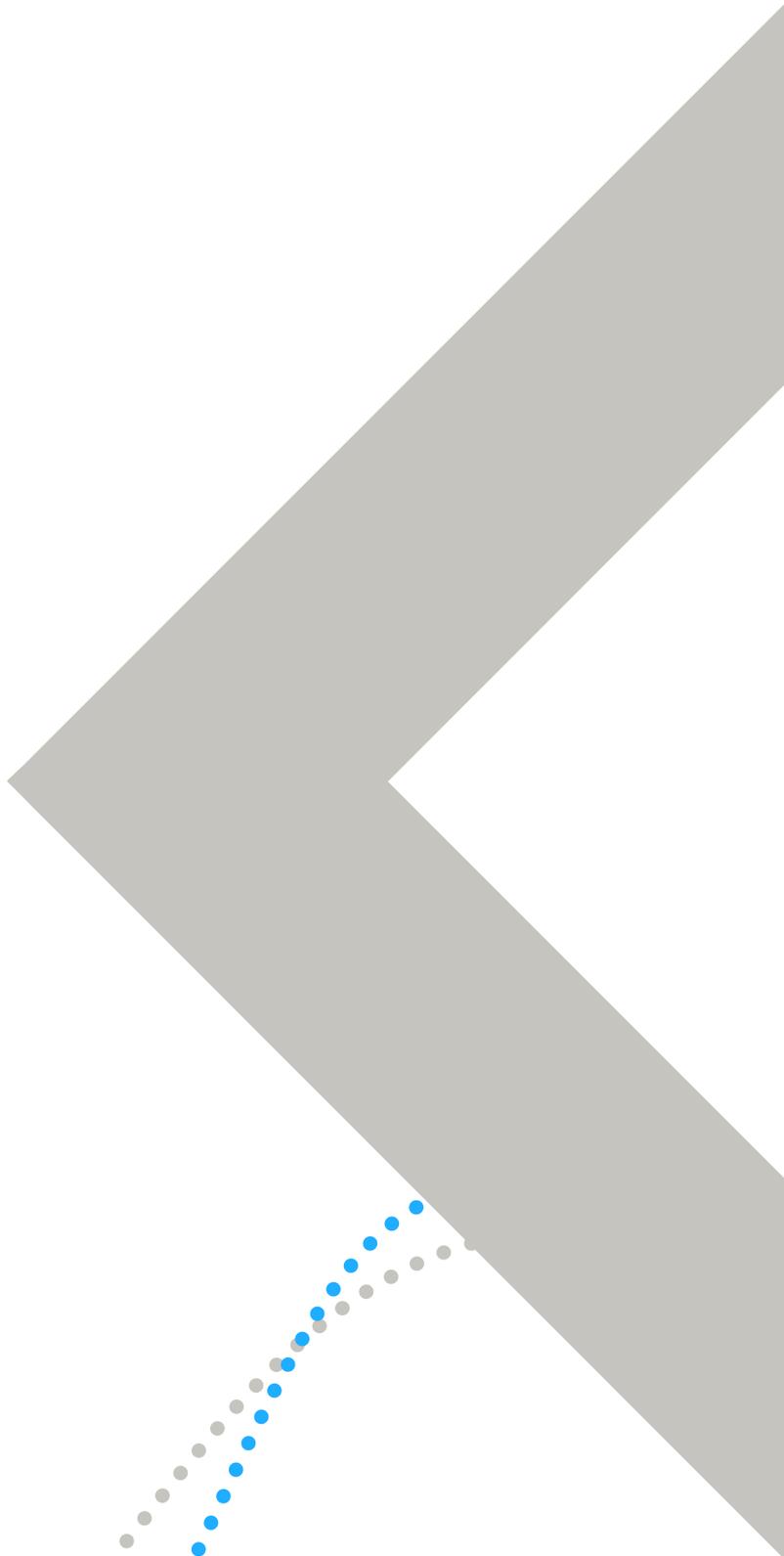
An extensive range of Scott safety Protector™ hearing defenders.



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