

## About GN

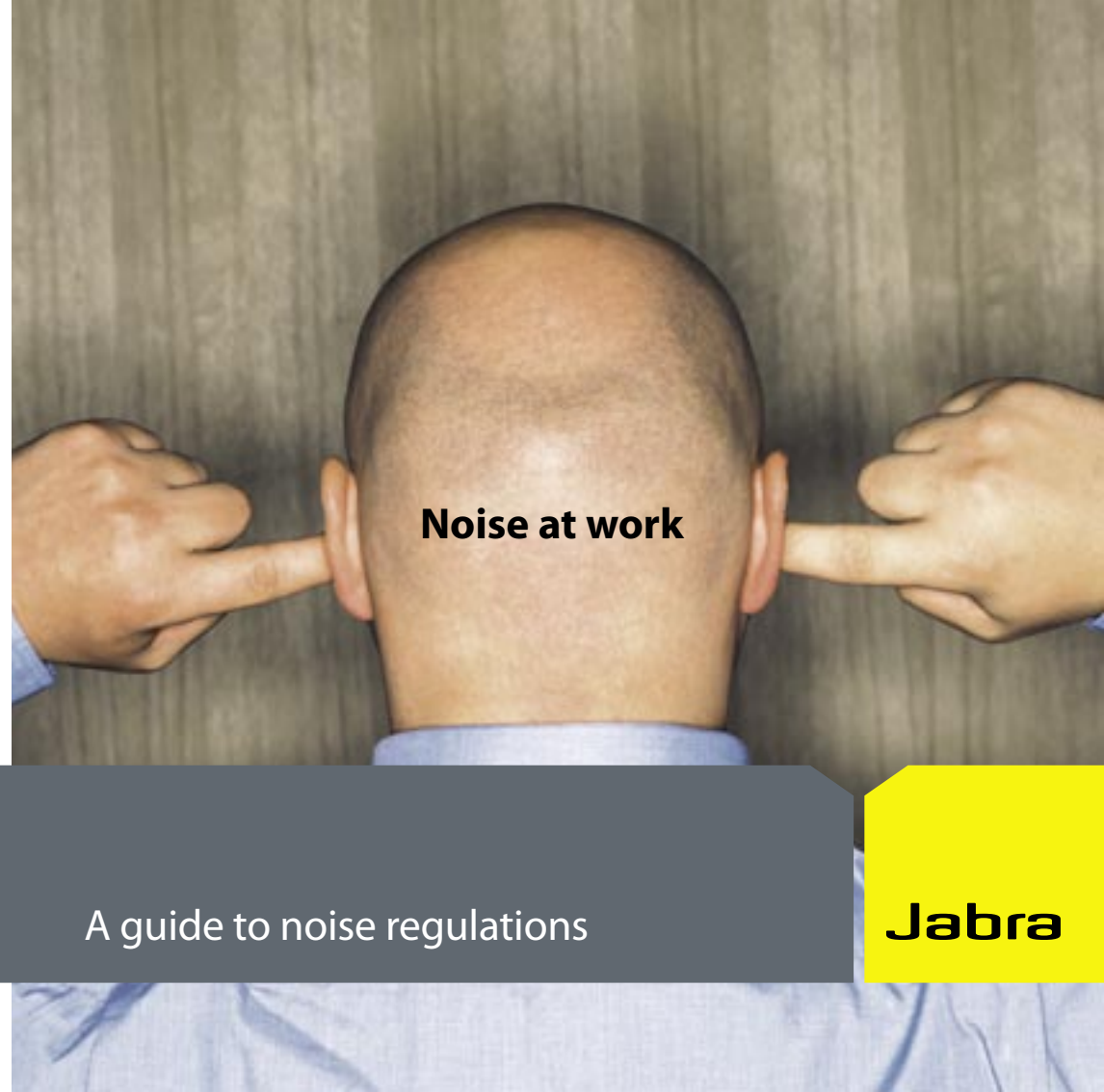
GN has been helping people communicate since 1869 and is a world leader in innovative headset solutions. All of our products will in future carry the Jabra brand which reflects our heritage and passion for great design, outstanding comfort and superior sound quality. By joining forces under one brand we aspire to better serve our customers in a rapidly changing world where communication needs and technologies converge. Our dedication to being the preferred provider of headsets to both the business and consumer markets remains the same.

For more information visit [www.jabra.com](http://www.jabra.com)



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**Noise at work**

A guide to noise regulations

**Jabra**

# Noise at work made simple

New Europe-wide noise at work regulations have been implemented in 2006. This booklet can help your workplace comply with those regulations.

## What is noise?

When we speak of noise at work, we do not simply mean loud or annoying sounds. Noise at work means the grand total of all acoustic presence in your workplace, whether you are a conductor of the Royal Philharmonic Orchestra, a contact centre employee or a construction worker on a busy freeway.

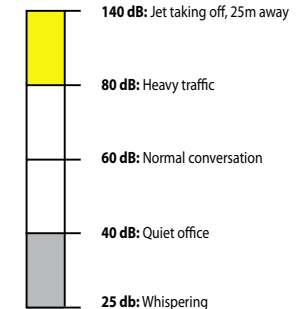
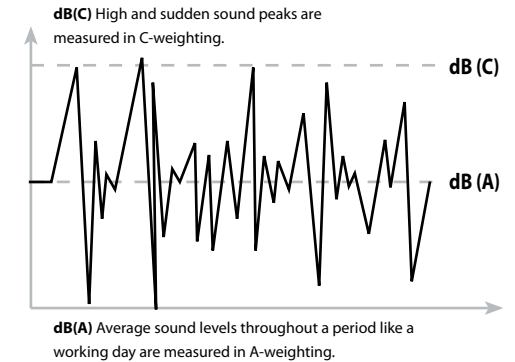


# When is noise harmful?

Noise can harm a person in two ways. As we all know, very loud and sudden sounds may lead to temporary deafness, ringing in the ears (tinnitus) or even permanent hearing loss. But there is another kind of noise that is just as harmful: the constant exposure to high noise levels throughout a workday. Not only can it lead to stress and illness, but also to hearing loss over time. To distinguish between these two kinds of harmful sounds, we need to know how to measure them.

## How is sound measured?

Noise is measured in decibels or dB for short. Because of the way the human ear works, we can only perceive changes of 3 dB in sound levels. Yet every 3 dB doubles the sound output, so what might seem like small differences in numbers can be quite significant.



Some examples of typical noise levels. A quiet office may range from 40-50 dB, while a road drill can produce 100-110 dB.

# When is loud, too loud?



The Europe-wide noise regulations were introduced to protect the workforce against the most widespread industrial injury of the 21st century. These regulations require employers to take specific action at three distinct action values:

## Lower exposure action values

- daily or weekly average exposure of 80 dB(A)
- peak sound pressure of 135 dB(C)

The employer must provide training and information on noise at work and how to prevent damage. Suitable hearing protection must be available to any employees who want to use it, though they do not have to.

## Upper exposure action values

- daily or weekly average exposure of 85 dB(A)
- peak sound pressure of 137 dB(C)

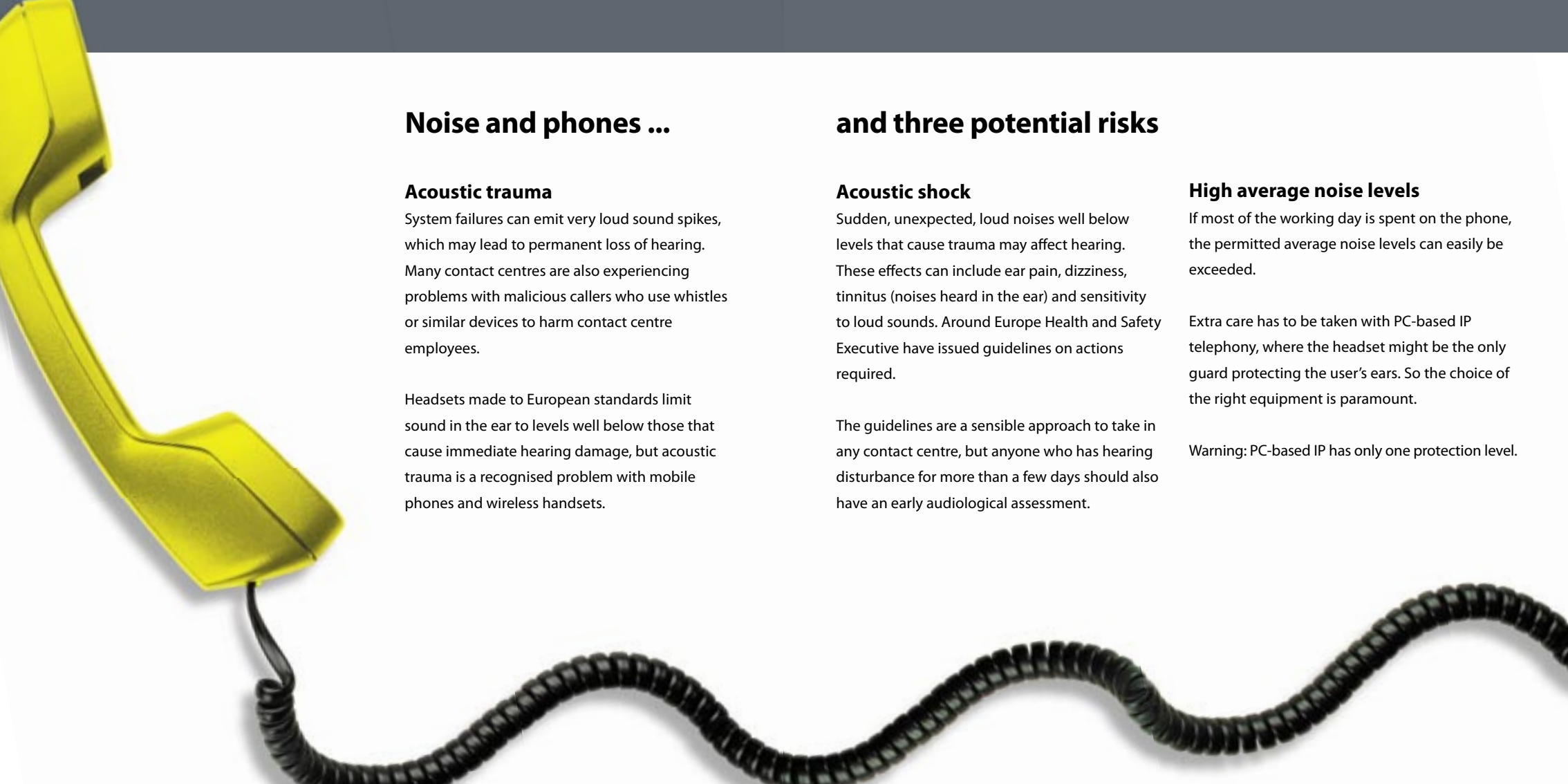
At this level and above, the employer must take steps to reduce noise exposure to the lowest level that is reasonably practical. Through information and training, employees must learn about noise at work and the risks. All employees must wear suitable hearing protection, which the employer must supply.

## Exposure limit values

- daily or weekly average exposure of 87 dB(A)
- peak sound pressure of 140 dB(C)

These values must never be exceeded. If a limit value is exceeded the employer must identify the cause and take steps to ensure that it cannot happen again.

The figures for daily or weekly averages are measured throughout an 8 hour work day. If you cannot lower exposure levels, you might have to lower exposure time. If you halve the time spent in a noisy area it will reduce noise exposure by 3 dB.



## Noise and phones ...

### Acoustic trauma

System failures can emit very loud sound spikes, which may lead to permanent loss of hearing. Many contact centres are also experiencing problems with malicious callers who use whistles or similar devices to harm contact centre employees.

Headsets made to European standards limit sound in the ear to levels well below those that cause immediate hearing damage, but acoustic trauma is a recognised problem with mobile phones and wireless handsets.

## and three potential risks

### Acoustic shock

Sudden, unexpected, loud noises well below levels that cause trauma may affect hearing. These effects can include ear pain, dizziness, tinnitus (noises heard in the ear) and sensitivity to loud sounds. Around Europe Health and Safety Executive have issued guidelines on actions required.

The guidelines are a sensible approach to take in any contact centre, but anyone who has hearing disturbance for more than a few days should also have an early audiological assessment.

### High average noise levels

If most of the working day is spent on the phone, the permitted average noise levels can easily be exceeded.

Extra care has to be taken with PC-based IP telephony, where the headset might be the only guard protecting the user's ears. So the choice of the right equipment is paramount.

Warning: PC-based IP has only one protection level.

## What can you do to protect your colleagues?

Granted, the noise regulations may seem daunting. However, only a few easy steps are necessary to significantly reduce the risk of noise-related work accidents in an office environment. Start by focusing on those especially at risk:

- Employees in contact centres
- Receptionists
- Support staff using telephones
- Sales staff

The risk for these groups is higher for one simple reason: they use their telephone a lot.



## The Health and Safety Executive's guidelines

Current advice to contact centres is that they should implement a traceable reporting system for headset users who may have been exposed to acoustic shock incidents.

The following information should be reported:

- Date and time of the incident
- Details of the source of the exposure
- Description of the noise
- Duration of the exposure
- Details of the headset and telephone equipment used
- Whether the incident was electronically recorded (a copy should be kept for future reference)
- Symptoms experienced by the operator directly related to the acoustic shock incident

[www.acousticshock.org](http://www.acousticshock.org)

## Corded headsets designed to serve and protect

### Jabra GN2000

The Jabra GN2000 Series headsets feature superb call clarity for both PC-based IP telephony and traditional telephony, plus optional wideband stereo for other audio applications. Best of all, they're tested to withstand rough handling by multiple users, which makes them perfect for use in Contact Centres. For safety, they also feature our PeakStop™ technology, which cuts off sudden loud noises above 118 dB SPL.

Paired with a Jabra GN1220 or GN8210, this headset delivers outstanding sound quality and acoustical protection.

- Robust design for exceptional comfort and day-after-day durability
- Optional wideband sound for natural audio quality
- Large ear-cushions for extra comfort
- Choice of noise-cancelling microphone or SoundTube boom arm with GN2000 IP



### Jabra GN2100

The award-winning Jabra GN2100 Series offer outstanding sound quality. In fact, many users say it gives them the feeling they're having a "face to face" conversation. The headset's lightweight, ergonomic design provide a unique combination of style and comfort. The noise-cancelling microphone eliminates background noise, and build-in the PeakStop™ technology protects users from harmful sound spikes.

Paired with a Jabra GN1220 or GN8210, this headset offers ultimate sound quality and acoustical protection.

- Exclusive lightweight design
- Award-winning headset design
- Flexibility through a wide range of accessories and wearing styles for individual optimization
- Excellent Hi-Fi IP telephony (80 – 15,000 Hz)
- Noise-cancelling microphone for the noisy environments



## Convenient Noise-at-work compliance

### Jabra GN1220

The Jabra GN1220 offers inexpensive connectivity to a wealth of telephone systems and no nonsense, hassle-free compliance with the latest in EU noise regulation. The GN1220 features eight separate wire configurations – including three with built-in microphone amplification. Just connect the GN1220 and headset through the Quick Disconnect (QD) plug and flick the slide from one position to the next until a dial tone is heard. It's as simple as that! Noise-at-work compliance has never been more convenient.

- Makes our most popular corded headsets compliant with EU Noise-at-work directive (EN 2003/10/EC)
- Works with most desk phones including IP hard phones
- Simple 8-position slide adjustment means no need for a user manual



### Jabra GN8210

The completely digital Jabra GN8210 amplifier utilises state-of-the-art, Digital Signal Processing (DSP) technology throughout to provide a flexible, customisable amplifier that gives the best sound quality with the highest degrees of protection against acoustic exposure and shock. When combined with any corded Jabra headset, the GN8210 becomes an unbeatable solution that reduces background noise interference on both the incoming and outbound signals.

- Compliant with EU Noise-at-work directive (EN 2003/10/EC)
- Reduce background noise on the incoming caller's signal
- Automatically adjusts the volume of the incoming caller
- Unsurpassed acoustic protection
- Adjustable acoustic settings
- Compatible with any corded Jabra headset



## Wireless headset - Noise-at-work compliant

**Jabra**  
**GN9350**

The dual-connection Jabra GN9350 wireless headset provides high performance in both traditional and PC-based telephone environments. Jabra GN9350 provides all the benefits of hands-free mobility in a lightweight, ergonomic, and futureproof design. Digital Signal Processing (DSP) technology enriches sound quality, and maintains a safe consistent volume level. Jabra GN9350 is fully compliant with EU Noise-at-work regulations.

- DSP and IntelliTone™ for superb sound quality and greater hearing protection
- Futureproof investment thanks to built-in USB interface for IP telephony
- Noise-cancelling microphone
- Around-the-clock talk time with optional second battery
- Lightweight design and multiple wearing styles – neckband included
- Multi-unit conferencing capability



## Three ways to reduce noise

### 1) Redesign the work environment

Keep noisy machinery and processes away from quieter areas or areas where people spend most of their time. Use absorptive material to reduce reflected sound.

### 2) Inform about noise issues

Give employees information, instruction and training about the risks, control measures and hearing protection.

### 3) Use equipment with built-in noise protection

In office environments the telephone can represent the greatest risk. So choose a phone and headset combination that not only cuts off sound spikes, but also lowers average noise levels.

**For more information visit [www.jabra.com](http://www.jabra.com)**