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.gnnetcom.co.uk
Noise at work made simple

New Europe-wide noise at work regulations have been implemented in spring 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 call-centre employee or a construction worker on the M1.

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.

New Europe-wide noise at work regulations have been implemented in spring 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 call-centre employee or a construction worker on the M1.

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.
New Europe-wide noise regulations were introduced in 2005 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 UK-based call centres are also experiencing problems with malicious callers who use whistles or similar devices to harm call 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.

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. In the UK the Health and Safety Executive has issued guidelines on action to take.

The guidelines are a sensible approach to take in any call 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 VoIP systems, where the headset might be the only guard protecting the user’s ears. So the choice of the right equipment is paramount.

Warning: VoIP has only one protection level
Current advice to call 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

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 call 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
Headsets designed to serve and protect

The state-of-the-art wireless headset technology from GN Netcom is especially designed with sound quality and hearing protection in mind.

- IntelliTone™ digital signal processing automatically regulates sound levels so the average level stays below a selected value
- Potentially damaging sound spikes are cut off before they reach harmful levels
- Developed for both traditional telephone systems and VoIP

This digital amplifier uses digital signal processor technology to provide a flexible, customizable amplifier that combines sound quality with protection. Combined with a GN corded headset, it offers the very best in sound quality and protection. By choosing a headset with duo ear cushions, background noise is efficiently kept out of the conversation making it easier to concentrate.

- Automatically reduces background noise and adjusts the volume of the incoming call
- Cuts off harmful sound spikes and maintains a pre-selected average volume
- Adjustable acoustic settings for each individual user