Bags of Noise

According to Beat Hohmann, Head of Acoustic Research at the Swiss National Accident Insurance Organisation, the noise output of an inflating air bag is the same as that of the simultaneous shots from two Swiss Army assault rifles! Air bags started out as 'Auto-ceptor safety pillows' in the late 1950's in the USA where, 40 years on, many drivers still do not wear seat belts. This led to the development of a 50 litre air bag for use in the USA, whilst beltwearing Europeans were supplied with 30 litre bags.

Air bags have saved many lives and also caused a few inadvertent deaths, especially of children and smaller adults, but it is their too responsive operation which is beginning to cause concern as a factor in avoidable hearing loss. Considering that air bags might deploy with a maximum velocity of over 200km/hr, driven by compressed gases or chemical reaction, producing peak sound levels of 150dB to 170dB, it is not surprising that hearing damage may occur.

There is mounting evidence of damage to hearing resulting from air bag deployment. Unfortunately, the deployment may occur at crash speeds which themselves are far from life threatening to a beltwearing driver. It is not an easy problem to solve. An occupant travelling at 100km/hr is covering nearly 0.3m in ten milliseconds, although crumpling of the front of the vehicle in a crash reduces the initial relative velocity of occupant and vehicle to a lower value than this. However, the air bag computer has only milliseconds to make complex comparisons between the measured deceleration and the reference levels built into it (often around 4g) and may misjudge the severity of a crash. One solution has been to depower air bags by around 30% so that they inflate less rapidly and to a smaller volume. At a more complex level, air bags have been designed with two independent inflation mechanisms. Control of these 'smart' bags, which also make judgements on the stature of the driver and whether they are wearing seat belts, gives crash-severity options to the inflation rate, so reducing the peak sound level in minor collisions. The simple option of a driver operated air bag DISABLE switch is not welcomed by insurance companies, although passenger air bags are acknowledged to be potentially dangerous for children and if a rear-facing child seat is used. Daimler-Chrysler have recently paid out substantial damages for a driver's burnt hand following air bag deployment in an accident. But, as their attorney put it "Holding Daimler-Chrysler liable in this case is like holding the manufacturer of a bullet proof vest responsible because their product saved someone's life but resulted in a few bruised ribs". Whilst this could be a legitimate viewpoint if the air bags functioned as designed, we may not have to wait long before there is a hearing damage claim resulting from incorrect deployment of an over-sensitive air bag.

DEMENTED POP FANS

Dementia is often characterized by a loss of reasoning abilities, language skills and memory. But researchers at the National Centre for Research and Care of Alzheimers Disease in Brescia, Italy, found that two of the patients who had acquired frontotemporal dementia, subsequently acquired something new: an appreciation for a kind of music they previous disliked. In one example cited in the study, a 68-year-old lawyer developed progressing apathy, indifference to his work, and a loss of inhibition, judgment, and speaking and abstract thinking skills. About two years after his diagnosis, he began to listen at full volume to a popular Italian pop music band. Formerly a classical music listener, he had once referred to pop music as "mere noise." In another example, a 73-year-old woman developed apathy and loss of interest in her children. About a year after her diagnosis, she developed an interest in music, where she had barely tolerated easy-listening tunes before, and began sharing her 11-year-old granddaughter's interest in pop music.

MORE BELLS WANTED

One hundred villagers have signed a petition asking for the church clock to chime all night because they cannot sleep without its tones. The residents are protesting against the church's experimental move to silence the clock's quarter and half-hour chimes between midnight and 7am after complaints from the landlord of a hotel in Giggleswick, North Yorks, who said they were upsetting guests. But one campaigner, Josephine Robinson, said the clock's chimes represented "the heartbeat of our village".

THAT COCKEREL

A family has been told to stop Cocky Locky, its rooster, crowing early in the morning. If the seven-year old bird breaks his silence before 7.30am he faces being put down and his owners Steve and Ellen Northgraves may have to explain themselves in court. Environmental Health officials served notice on the noisy cockerel after complaints. Mrs Northgraves, 36, said: "How are we supposed to keep him quiet until 7.30 exactly - put him in a sound–proof coop?