

EMTEC LABORATORIES - CUSTOM MADE NOISEBREAKER EAR DEFENDERS

- Emtec Laboratories is based in Shropshire, and manufactures Noisebreaker custom made ear defenders.
- The company was founded by Alec Sneyd F.S.H.A.A. who developed and refined the "NOISEBREAKERS."
- For the last forty years these have been regarded in the industry as market leaders in hearing protection.
- Noisebreakers, being custom-made are very comfortable and they allow the wearer to communicate easily.



Key Advantages

- **Comfort - custom made from non-allergenic silicone**
- **Vented - to prevent 'plugged up' feeling**
- **Filtered - to avoid over-protection or isolation**
- **Durable - no moving parts or electronics to wear out or injure the ear**
- **Convenient - can be worn under helmets or headphones**
- **Environmentally friendly - virtually indestructible**
- **Cost effective - 6+ year lifetime (limited due to the growth of the ear)**

- Options available :**
- Blue, red, orange, beige, pink, green
 - With cord attached
 - Metal detectable
 - Adaption for mp3 players

Noisebreaker Product Description

The Emtec NOISEBREAKER is a personally moulded and vented earplug. The NOISEBREAKER carries BS 5108 and has been accredited with the CE mark. It is a silicone rubber moulding which is moulded to each individual ear. The plug incorporates a central drilled channel in which a filter is placed which allows pressure equalisation.

The acoustic filter attenuates all sounds going to the ear but attenuates more in the mid-band range (approximately 1kHz-6kHz). Because of the through channel in the "ear plug" a person is not completely isolated from his surroundings and conversations and warning signals may be heard

To clean the Noisebreakers, simply wash them in mild soapy water.



Left



Right

To insert the Noisebreakers :

1. Place the ear canal part (with the hole in) just into you ear canal, with the top of the Noisebreaker twisted forward of your ear , figure 1
2. Twist the top of the Noisebreaker backwards, figure 2
3. Continue twisting the top of the Noisebreaker until its top sits under the helix part of the ear, figure 3

Figure 1



Figure 2



Figure 3



THE 'REAL WORLD' ATTENUATION OF HEARING PROTECTORS (testing both muffs and disposable ear plugs)

This research does not apply to custom moulded earplugs, which are equally as effective in the real world as they are in the laboratory.

"It has long been felt that due to a number of variables between the industrial (real world) situation and the test conditions that workers do not get the level of protection suggested by the standard data test.

The Health and Safety Executive sponsored this research project ...to establish the level of protection actually achieved by workers wearing such protectors in industry and to compare these 'real world' results with the test data."

"The testing of hearing protection in laboratory conditions tends to give an unrealistically high estimate of their performance as, the subjects are usually familiar with the objectives of the test and are given precise instructions on the fitting of the device. Also the protector is usually new, and the subjects do not wear spectacles, and care is taken to ensure that beards or long hair do not impair the effectiveness of the device."

A number of muffs and disposable ear plugs were tested and "in general, there is a degradation in mean attenuation and an increase in the standard deviation associated with all the protectors when the 'field' data is compared with that quoted by the manufacturers."

The report concluded that for muffs "the degradation in performance is slightly more severe at the higher frequencies and that the average overall reduction is about 5 dB(A)," and that "for plugs the degradation in performance is more uniform across the whole range of frequencies giving a reduction in overall attenuation of approximately 7-15 dB(A)."

There are several reasons to explain the poorer protection in the real world of hearing protectors, including,
* Attitude and education of the workforce, ("almost certainly due to improper use of the plugs in terms of inadequate fitting.")

* "the use of spectacles impairs the effectiveness of muffs"

The report concluded that "The results of this study confirm the often stated belief that the field performance of hearing protectors is markedly less than that which is predicted from the manufacturer's specification of their performance."



SOME NOISEBREAKER USERS

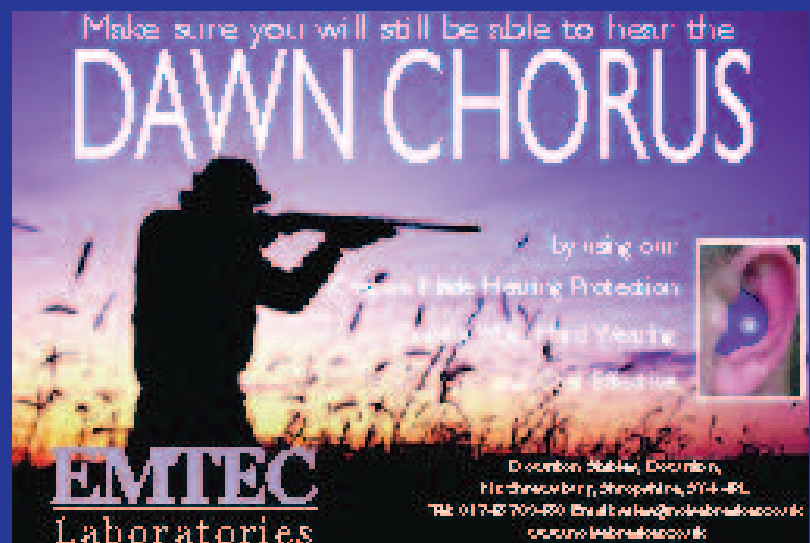
Emtec have been manufacturing and developing the Noisebreaker earplug for the last 40 years, we have a wide range of users including :

- Oil and Gas
- Food Manufacturing
- Brewing and Bottling
- Construction
- Engineering
- Printing
- M.O.D.
- Police Forces
- Power Generation



Emtec Noisebreakers are also ideal for :

- Shooters
- Musicians
- Motorcyclists
- Swimming
- Snorers



Make sure you will still be able to hear the
DAWN CHORUS

by using our
Custom Made Hearing Protection
you will find years of
peaceful relaxation

EMTEC
Laboratories

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Changes to the Noise at Work regulations 2006

Hearing loss caused by exposure to noise at work continues to be a significant occupational disease. Recent research estimates that 170,000 people in the UK suffer deafness, tinnitus or other ear conditions as a result of exposure to excessive noise at work.

Currently (under the Noise at Work Regulations 1989) the first action level (link to heading Action levels) is a daily personal noise exposure of 85 dB(A), the second action level is a daily personal noise exposure of 90 dB(A), and the peak action level is a peak sound pressure of 200 pascals.

When the Physical Agents (Noise) Directive was implemented with new regulations in early 2006, the first action level is now 80 dB(A) and a peak value of 112 pascals, the second action level is 85 dB(A) and 140 pascals, and there is to be a limit value of 87 dB(A) and 200 pascals.



Attenuation details on Noisebreakers tested at Salford University, Dept of Applied Acoustics EN352-2 : 1993 Report No. HP/95/15

Frequency	63	125	250	500	1000	2000	4000	8000
Mean Attenuation	13.9	16.1	19	22.7	25	32.2	41.1	36.9
Mean - 1 S.D.	7.9	11.9	14.5	18.2	21.6	27.2	36.3	31.9
Mean + 1 S.D.	19.9	20.3	23.5	27.2	28.4	37.2	45.9	41.9

H = 28 M = 21 L = 17 SNR = 25
CE 95 0194

HEARING PROTECTION : COST COMPARISON

2014 Prices - Disposable plugs	2014 Prices Noisebreakers
17p per pair	£80 per pair
Useage (on average) 3 pairs per day per person = 51p	
Therefore cost per 5 day week = £2.55	
Cost over a 5 year period (ignoring inflation) = £612	
With a workforce of 70 personnel, cost = £42,840	£5600

COST SAVING TO YOUR DEPARTMENT **£37,240** OVER 5 YEARS.

Current typical plc break-even cost comparison is 12-18 months.

Emtec Noisebreaker - loss rates

Average plc loss rate since 2000 = 2.4%

I've used them for a couple of weeks now – once at a 100 bird registered shoot, and then again this weekend where I shot two 50 bird rounds back to back – so they've had 3 or 4 hours consecutive use in real-life competition. **The hearing protection is absolutely fantastic – but most importantly, they are super comfortable.** From the moment of rotating them into my ear, they sit perfectly still without any slipping or movement. As they sit inside the ear, they do not interfere with gun mount at all. You can have clear conversations at normal levels – and you don't have that 'sealed in' feeling that you get with some tight fitting earplugs.

Emtec Noisebreakers are an excellent addition to any shooters kitbag – RRP is £75 + VAT – which is a good value alternative to expensive electronic ear defenders. A pair of Noisebreakers will pay for themselves inside a year if you are currently using foam defenders each time you go shooting – and they'll protect your ears much better in the long run.

Historically it was always difficult to encourage people within the construction industry to wear any type of hearing protection. There was always a reason or excuse why they couldn't or wouldn't wear them. For the last ten years, every tunnelling job I have been on we have used EMTEC noise breakers. **They do what it says on the tin, they protect your hearing they are comfortable and they are cost effective.** The best recommendation I can give is from the workforce itself. They always ask if they get them at the start of the contract, they wear them all day even in the canteen and some ask if they can buy another pair themselves for their motor bikes, clay shooting etc. My personal favourite was when a foreman stopped the job and had his team of men searching the workplace as he had lost one. I have used and believe in them but most of all the men believe and use them – **Douglas Price H&S Manager MVB JV – Lee Tunnel Project**



The advertisement for EMTEC Laboratories features a dark background with a silhouette of a person shooting a shotgun at sunset. The text reads: 'Make sure you will still be able to hear the DAWN CHORUS by using our Custom Made Hearing Protection Comfortable Hard Wearing and Cost Effective'. An inset image shows a close-up of a human ear with a blue custom-made earplug. At the bottom, the EMTEC Laboratories logo is displayed, along with contact information: 'Downton Stables, Downton, 10a Stone Way, Shrewsbury, SY4 4PL, Tel: 01743 709480, Email: sales@noisebreaker.co.uk, www.noisebreaker.co.uk'.

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