

What can I gain from wearing dual protection (plug + muff)? And by the way, can hearing protectors block all sound?

Dual protection is normally recommended for noise environments with exposures exceeding a time-weighted average level of 105 dBA, or for users who simply wish to block additional sound for extra protection or reduced annoyance.

When using dual protection, especially for low-frequency noise, the earplug you select is the key. We suggest a high-quality foam plug like the E•A•R[®] Classic[®] or E•A•RSoft[®] foam earplug together with a small and comfortable earmuff such as the Peltor[®] H6 or E•A•R[®] Model 1000 earmuff. Once you have properly inserted the earplug (see [E•A•R[®] Plug Instruction Booklet](#) for details), the selection of a particular earmuff is essentially unimportant. Therefore, smaller, lighter, less-expensive choices make the most sense. Alternatively you can select from any of our foam or premolded earplugs together with an E•A•R or Peltor muff of your choosing (see [EARLog 13](#) for additional details on attenuation to be gained when products are combined). In general, combined protection provides approximately 5-dB gain over the more protective of the individual devices at most frequencies.

As for "blocking all sound," that is not possible. Even when noise is effectively stopped from entering the earcanal, it can "get around" the hearing protector (technically called bypassing the hearing protector) by vibrating the bones of the head and neck to directly stimulate the inner ear. See [EARLog 5](#) and [EARLog 13](#) for additional details. Also, if you place your head on a vibrating object while wearing a hearing protector (for example lean your head against the exterior cabin wall of a jet while wearing earplugs during flight), you will often notice a substantial increase in the sound level, since you are coupling your head more effectively to the vibrating object and thereby increasing the efficiency of the bypass process.

NOTE: When wearing an earmuff and an earplug, OSHA gives credit for 5-dB of additional protection above that of the higher attenuating device. See the [OSHA Technical Manual](#).