



*A personal approach to Hearing Conservation*

Hearing Conservation is about more than supplying your employees with earplugs or earmuffs. It is about finding the solution that's right for your people. VeriPRO® is the quick and easy way to make sure your employees are getting the most out of their hearing protection. It's one more way that Howard Leight helps create Hearing Conservation Programs without compromise.

Turn the page to learn more.

HOWARD  
LEIGHT   
by SPERIAN

# Assessing Fit Effectiveness of Earplugs

The published Noise Reduction Rating (NRR) is a laboratory estimate of a hearing protector's effectiveness. But how well does that protector actually perform in the ear of a noise-exposed worker in the workplace?

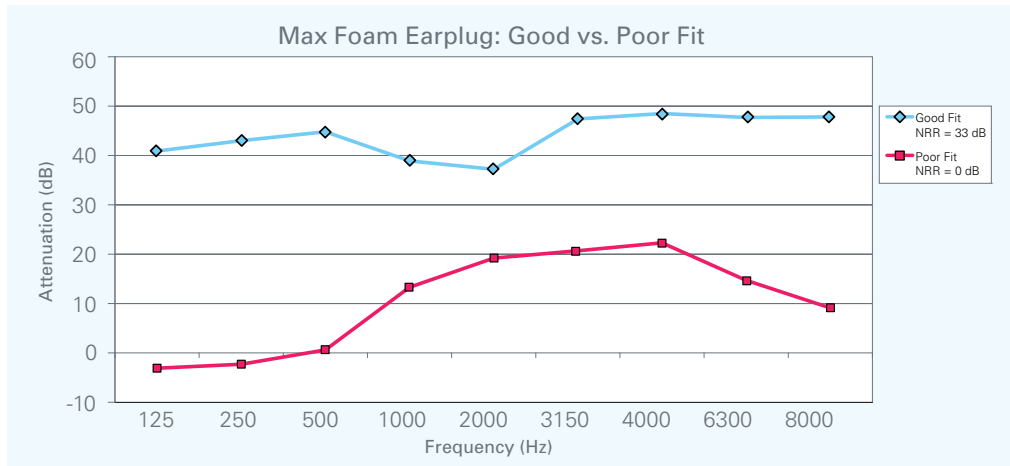


Figure 1. Demonstration of good and bad earplug attenuation across 125-8000 Hz using the Howard Leight® Max® single-use earplug. Test data from the Howard Leight Acoustical Laboratory, San Diego, CA.

Figure 1 shows the difference in attenuation between two fittings of the same earplug in the same worker's ear on the same day. In both cases, the earplug appeared to be far enough in the ear canal to visually satisfy a cursory compliance check. However the difference is that a good insertion — i.e., when the earplug is deeply inserted and achieves a good seal in the ear — is enough to cause a 30+ dB improvement in attenuation. The worker with a poor fit may be lulled into a false sense of protection when he detects slight muffling of high-frequency sounds or when some of the “edge” is taken off shrill noise. But because the poor fit has seriously compromised low-frequency protection, the effective overall protection is 0 dB!

For decades, in fact, studies in the workplace have shown hearing protectors to be underperformers: real-world attenuation (noise blocking) is quite often less than the published NRR for many workers. These studies have spawned a variety of de-rating schemes for hearing protectors which are often misunderstood or misapplied, such as the 50% OSHA de-rating; or the NIOSH 75 / 50 / 30% de-rating for earmuffs, formable earplugs, and pre-molded earplugs respectively.

More recent studies, however, offer some good news: a significant core of workers do achieve good attenuation. For these users, the earplugs are working!

## Factors Contributing to Good Fit

When various factors were evaluated to predict a good earplug fit, one factor stood out: **one-on-one training**. The more often a worker receives Individual Training in the proper use of hearing protectors, the higher the probability of a good fit. The same could not be said for Group Training; when measuring good attenuation in the field, the number of group sessions the worker attends appeared to make no difference. While there are other good reasons to offer group training in a Hearing Conservation Program (effects of noise, and an explanation of audiometric testing, for example), group training is **not** the best method for teaching hearing protector fitting procedures.

Enforcement was also a good predictor of positive earplug performance, but only when it was coupled with one-on-one training. When strong enforcement policies were in place without proper training, workers were actually more likely to have a poor fit than a good fit.

Finally, the study looked at the question of whether an employee who achieved low attenuation with one type of earplug would get the same low results from other models as well. Interestingly, workers who tried a second pair of earplugs often had major leaps in attenuation, bringing them closer to the published NRR — confirming the wisdom that by offering a variety of suitable hearing protectors, employees have a better chance of achieving optimal attenuation for their noise environment.



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## On-Site Verification Has Never Been Easier

VeriPRO® makes it easy to get an accurate, real-world picture of your employees' hearing protection. Find out whether your employees are receiving optimal protection, require additional training on how to fit their earplugs, or need to try a different model. VeriPRO uses sophisticated software in a user-friendly format to find the Personal Attenuation Rating (PAR) your employees are receiving from their earplugs.

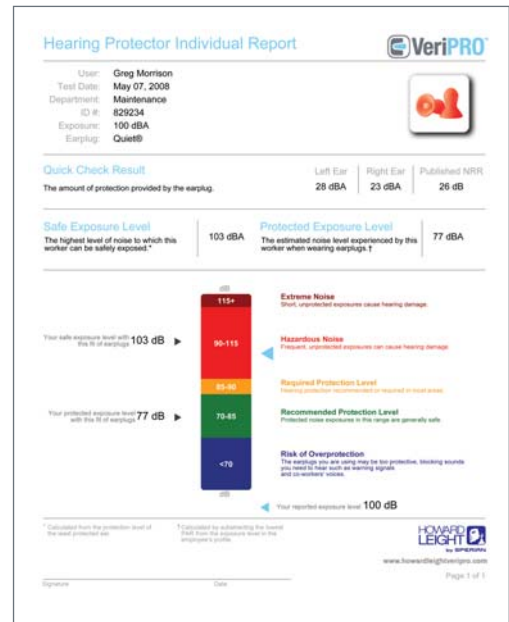
Developed in conjunction with the House Ear Institute (www.hei.org), VeriPRO's three-part process checks the effectiveness of an employee's earplug fit in each ear over a range of frequencies. This information is then captured in individual and group reports, accessible by the safety manager.

By verifying earplug effectiveness and providing an ideal opportunity for education, VeriPRO becomes an integral part of a successful Hearing Conservation Program.

## Implement Better Hearing Conservation Practices

VeriPRO is a simple and effective way to implement better Hearing Conservation practices in any workplace.

- ▶ Measures the Personal Attenuation Rating (PAR) for each employee
- ▶ Captures real-world attenuation by using unmodified earplugs
- ▶ Works with any earplug, corded or uncorded, from any manufacturer
- ▶ Fulfills regulatory requirements to ensure proper initial fitting of hearing protection
- ▶ Creates accurate, easy-to-understand reports within minutes, including PAR, Safe Exposure Levels and Protected Exposure Levels, mapped out on an easy-to-read report
- ▶ Documents training and proper fit for new or existing employees
- ▶ Fit training videos provide additional training opportunity
- ▶ Provides an ideal opportunity for one-on-one education



## Safety Manager Benefits

VeriPRO helps fulfill OSHA requirements for proper fit, provides an opportunity for training, and documents results for a more successful Hearing Conservation Program.

## Employee Benefits

VeriPRO demonstrates the importance of hearing protection in the workplace, and helps employees select and compare protectors to find the best choice for their ears and specific application.



# It's a Matter of Choice

When fit-testing with a variety of earplugs, VeriPRO® confirms the value of choice. Employers who only offer one type of earplug to noise-exposed workers unknowingly rob themselves of one of their best tools in preventing hearing loss: a selection of protectors. VeriPRO fit-testing research in the field showed the following:

- ▶ When new hires were given the choice of several different earplugs, only one-third of them initially chose their best-protecting earplug. In other words, for new employees, the “first choice” is often their “worst choice.”
- ▶ Workers who achieve low Personal Attenuation Ratings with one type of earplug often show immediate and significant improvement just by trying a different earplug. If the goal is to offer the best protection to noise-exposed workers, a safety manager’s best tool can be a true variety of suitable hearing protectors.
- ▶ Sixty days following fit-testing using multiple earplugs, 80% of tested workers could recall the best-fitting earplug. Fit-testing results provided “sticky training” — training that made a behavioral difference in noise-exposed workers over time.

## Conclusion

Research has shown that a considerable proportion of employees already achieve effective attenuation with their existing earplugs with proper fit, and that other employees can improve results with training and the ability to choose from a variety of earplugs. However, group or casual training yields minimal results in reducing hearing loss. In fact, most employees soon forget Hearing Conservation training provided by posters, brochures or large group sessions.

A personal approach to Hearing Conservation training includes *fit-testing of the worker's own earplugs*, and a selection of various earplugs from which the employee can choose the most comfortable and most protective model. Such experiential training, including the use of VeriPRO, increases the measured attenuation of the earplug, increases the observed use of hearing protection, and sticks over time.

## Want VeriPRO to be a part of your Hearing Conservation Program?

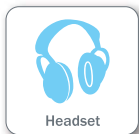
Call 877-VERIPRO or visit [www.howardleight.com/veripro](http://www.howardleight.com/veripro) to learn more about VeriPRO!

### What's Included

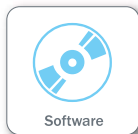
VeriPRO comes with an audio processor, an audiometrically optimized headset, software, QuickStart guide and one USB connection cable.



Audio Processor



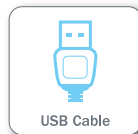
Headset



Software



Reference Guide



USB Cable

### System Requirements

Minimum Requirements: 700Mhz CPU, 256MB RAM

Recommended Requirements: 1.2Ghz CPU or faster, 512MB RAM

Hard-Disk Space Requirements: 500MB

Software Requirements: Windows XP with SP2 or later, Microsoft .NET Framework 2.0

### Ordering Information

**SKU:** VERIPRO

**Description:** **VeriPRO System — Single Software License.** Carrying Case Includes Audiometrically Optimized Headset, Audio Processor, CD with Software, Replacement Ear Cushions, Earplug Samples, Quick Reference Guide, Technical Support.

**Packaging:** Carrying Case



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Sperian Hearing Protection, LLC, recommends all users of its products undergo thorough training and that all warnings and instructions provided with the products be thoroughly read and understood prior to use. It is necessary to assess hazards in the work environment and to match the appropriate personal protective equipment to particular hazards that may exist. At a minimum, a complete and thorough hazard assessment must be conducted to properly identify the appropriate personal protective equipment to be used in a particular work environment.

**▲FAILURE TO READ AND FOLLOW ALL PRODUCT WARNINGS AND INSTRUCTIONS AND TO PROPERLY PERFORM A HAZARD ASSESSMENT MAY RESULT IN SERIOUS PERSONAL INJURY, ILLNESS OR DEATH.**  
For further information on VeriPRO or other Hearing Conservation topics, contact Howard Leight VeriPRO Technical Support at: 877-VERIPRO.

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