



Hearing Protection



It's a matter of choice.



Hearing conservation is about more than supplying your employees with earplugs or earmuffs that block the most noise. It is about finding the solution that's right for your people.

At Howard Leight, we realise that the people who depend on our products to protect their hearing are as diverse as you can imagine. The way people select the right hearing protection can be just as diverse. We've designed this catalogue with these guidelines in mind.

What's most important to you and your employees? Reusability vs. hygiene? Long-term comfort? Class? Detectability? Convenience? Unique industry requirements? You'll find all of Howard Leight®'s hearing protection products indexed in ways that help you find the solution you need, your way.

The right fit for every user, every environment

This product selection guide helps you learn more about the products you currently use and explore new options.

Noise-Induced Hearing Loss is 100% preventable.









Hearing Conservation

Understand the basics of hearing conservation, regulations that impact your decision making and best practices designed to make your Hearing Conservation Program more effective.

VeriPRO® & QuietDose™

VeriPRO helps to determine each employee's actual attenuation in minutes.

QuietDose provides the ultimate in accuracy for assessment of personal workplace noise risk.

Earplugs Pages 8-19

Already know that earplugs work well for your environment? Explore our full line of products to discover options for fit, class, materials and more.

Earplug
Fitting Guide
Page 20

Earmuffs Pages 21-37

Need to understand all the options for your employees? Discover a range of wearing styles, choices for enhancing communications and a wide range of special features for every environment.

Earmuff Fitting Guide Page 44

Search By... Pages 38-43

Does your industry or application have special requirements? Our "Search by..." sections will help guide your product selection.

Attenuation Charts Pages 45-47

Review the full attenuation charts for all our products.

Noise-induced hearing loss is 100% preventable.

Unlike most occupational injuries, there is no visible evidence of noise-induced hearing loss (NIHL). It is not traumatic and often goes unnoticed when it first occurs. Noise-induced hearing loss accumulates over time, its effects realised long after the damage has been done. NIHL is **permanent and irreversible**. With proper education, motivation and protection, however, it is also **100% preventable**.

More than 3.5 Million Australians – or nearly 17 percent of the total population – suffer hearing loss. For about 60% of those Australians (2.1 million), industrial deafness is the major cause". In Australia, hearing loss ranks second to musculoskeletal disease (above cardiovascular disease 3rd and cancer 8th) in the national health priorities. The direct financial cost of hearing loss per annum is estimated at about \$11.75bn. (Source: Access Economics 2006 "The Economic Impact and Cost of Hearing Loss in Australia.)

Howard Leight is committed to providing new motivational materials and training tools to build an effective Hearing Conservation Program that works for your employees. Visit **howardleight.com** throughout the year to learn more and access these tools.

When is noise considered hazardous? Anytime you must shout at someone an arm's length away to be heard. While exposure to hazardous noise is common, prevention of NIHL is simple: consistent use of properly fitted hearing protection when exposed to hazardous noise. That is the goal of every Hearing Conservation Program.

Noise-induced hearing loss is not solely a workplace issue. It can happen off the job, too. Many employees use power tools, attend loud rock concerts and sporting events, or participate in shooting sports. All are opportunities for exposure to hazardous noise. Prevention is the key, on and off the job.

Indicators of Noise-Induced Hearing Loss.

Although there are no visual signs, there are a few simple indicators of NIHL. Identification in its early stages can help prevent further damage.

High-Frequency Hearing Loss.

When hearing impairment begins, the high frequencies are often lost first, which is why people with NIHL have difficulty hearing high pitched sounds such as human voices, alarms and signals. Compared to other sounds, they will seem muffled or distorted. With normal hearing, conversations are understandable if they are loud enough. When someone suffers from noise-induced hearing loss, simply turning up the volume does not make speech clearer. The clarity is adversely affected regardless of how loud the volume.

Gradual Progression.

NIHL rarely happens overnight. Rather, it accumulates over time with every unprotected exposure to hazardous noise, usually in both ears. This progression can be detected through healthy hearing practices, including the performance of annual audiograms on all employees in your Hearing Conservation Program. Audiograms can identify whether your employees are experiencing a Temporary Threshold Shift (TTS), or a Standard Threshold Shift (STS), which indicates permanent damage and requires further preventative action.

Common Symptoms.

Those suffering from noise-induced hearing loss will experience tinnitus (ringing in the ears) or muffled hearing. Non-auditory effects of NIHL may include increased stress, high blood pressure, sleep problems and/or headaches.



Damage Prevention

Since noise induced hearing loss can not be cured, it must be prevented. There are several noise control techniques including engineering controls and administrative controls. Personal hearing protection should be regarded as first aid until noise levels can be reduced to 'safe' levels, or as a last resort when noise can not be engineered out.

COMMON NOISE LEVELS

Quiet Office	50-60dB
Restaurant	60-70dB
50kW Electric Motor	90dB
Heavy Vehicle	90dB
Grinder	83-115
Compressor	101-123dB
Diesel Generator	107-111dB
Mining Drill	108-113dB
Power Saw	110dB
Rock Drill	110dB

Personal hearing protection is usually available in two forms: earplugs and earmuffs. Earplugs are usually made of silicone, or foam, and are inserted into the ear canal. Earmuffs completely enclose the ear, and are held in place against the side of the head by a headband.

Earplugs and Earmuffs work by blocking the sound waves from reaching the inner ear. The process of blocking the sound waves is called attenuation. The higher the attenuation the more noise is blocked from reaching the inner ear.

The Class System

Under the Australian Standard AS/NZS 1270:2002, the class system is a simple way to select a hearing protector appropriate to a noise exposure. Once the extent of the noise hazard has been determined by a noise level survey, the user simply applies this to a table like the one below to select an appropriate hearing protector.

CLASS	SLC₀₀ dB	FOR USE IN NOISE
1	10-13	less than 90dB(A)
2	14-17	90 to less than 95dB(A)
3	18-21	95 to less than 100dB(A)
4	22-25	100 to less than 105dB(A)
5	26 or greater	105 to less than 110dB(A)

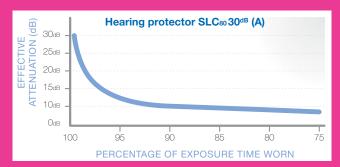
All calculations are based on the maximum exposure limit of 85dB Leg. 8hr.

Example: if a noise level survey shows a person will be exposed to a noise level of 102dB(A)Leq8hr using the above table, we can see that a Class 4 hearing protector is required for protection against this level of noise.

In Australia the SLC $_{80}$ rating is still an acceptable method for the selection of hearing protectors according to clause A2.3 in Appendix A of AS/NZS1269.3-2005.

Workplace Protection

Discomfort or irritation when wearing hearing protection is particularly apparent and can lead to removal of the hearing protector. This is commonly what happens with high attenuating hearing protectors that are often heavier and more uncomfortable. You only have to remove your hearing protection a few minutes every day for the damaging effects of noise to accumulate. This is why 100% wear time is so important.



Over a working day, periods of a few minutes of unprotected exposure can easily accumulate. An example of reduced effective protection is removing your hearing protector for 10 minutes during a total exposure time of 1 hour. The effective protection provided by a high attenuating hearing protector (30dB) is reduced to 8dB. This makes the effective protective value 22dB less than expected, by wearing the hearing protector 83% of the time over 1 hour.

It is vital that every effort is made to encourage 100% wear time. This can be achieved through training and providing suitable hearing protection that is comfortable enough to wear all day.

Hearing Product Test Procedure

The method of testing a hearing protector to AS/NZS 1270:2002 is an involved process, and ensures that the protector will meet the requirements of workers in the real world.

In an approved laboratory, 20 naive subjects are individually tested with earplugs, and 16 subjects with earmuffs. They are provided with the hearing protector and printed instructions for fitting and are not given any assistance from the tester.

The test subject is asked to respond to different noise frequencies of where mathematically the SLC_{80} is calculated. The Class of the protector is determined by the SLC_{80} .

re Howard Leight earplug and earmuff packaging display the protector's SLC₆₀ rating and class.

Create a successful Hearing Conservation Program through best practices.

Occupational noise-induced hearing loss (NIHL) is a major compensable industrial disease in Australia and results in substantial economic costs.

The National Code of Practice for Noise Management and Protection of Hearing at Work provides practical guidance on how the national standard can be achieved. It requires that employees who have work areas with noise levels at or above 85dB(A) have, access to hearing protection on the job.

Implementing a Hearing Conservation Program may appear complicated, but there are a number of best practices safety managers can employ to ensure compliance with regulations and promote employee hearing safety.

Noise Control and Planning

Policy. Using a sound level meter, take a general measurement of noise in each section of your facility.

Program of Action. Assign a member of management who will assume responsibility for duties such as: Noise hazard identification, required assessment. Decide on: possible engineering noise control measures, administrative controls, suitable HPDs, appropriate signage, employee training, audiometric testing, monitoring procedures, maintain relevant records, provide for periodic management review

Noise Identification and Assessment

Noise Identification. Identification of workplace noise hazards enables immediate control measures to be put into place, and affected employees to be assessed and monitored.

Noise Assessment. All workplaces where employees are exposed to 85dB(A) or greater should be assessed. Assessments should be repeated at intervals not exceeding 5 years or upon any change to the workplace including new machinery, changes to the building structure or extended shift hours.

Objectives. To identify all employees likely to be exposed to noise at or above 85dB(A). Obtain information on noise sources and work practices. Check the effectiveness of measures taken to minimise exposure. Assist in the selection of appropriate HPDs. Delineate hearing protector areas.

How to Carry out a Noise Assessment? In the case of tonal, high frequency or low frequency components, an octave band analysis may be required.

Instruments. Sound Level Meter: an instrument consisting of a microphone, amplifier and meter or display, designed to measure the sound pressure level. Sound Exposure Meter: an instrument for measuring noise exposure over time by automatically integrating sound energy thoughout a measurement period.

Engineering Noise Control Measures

New Plant and workplaces.

The design and construction of new workplaces and installations should (as much as practical) attempt to limit noise exposure to noise.

Existing Plant & Workplaces. Noise exposure levels should be reduced below 85dB(A). This can be achieved by reducing noise at the source, or engineering treatment of the noise transmission path.

Engineering Treatment of the Source. The preferred method is to permanently remove the problem of excessive noise. This can be achieved by: elimination or replacement of noisy machinery, minor design changes to equipment, regular maintenance, noise barricading, separating, moving or isolating of the

noise elements/components.

Engineered Treatment of the Noise Transmission Path. When engineering controls at the source are not practical, treatment of the noise transmission path is the next choice. This includes distancing the noise, adding barriers, or placing acoustically absorbent materials to block the path of the noise.

Further Guidance. Refer to Australian & New Zealand Standards AS/NZS 1269.3 for more information. Review your local state regulations at www.howardleight.com/bestpractices/plan

Best Practices that promote and motivate Hearing Conservation.

Document Exposure.

Each employees noise exposure should be recorded in his/her personnel file.

Document Changing Conditions.

Whenever you make a change in equipment or process, you need to document this change, even if the noise level is reduced.

Employee noise exposures are best determined by wearing a Sound Exposure Meter for the entire workshift. The microphone should be located as close as practical to the worker's ear. A Sound Exposure Meter that records exposures under the hearing protector (such as the Howard Leight QuietDose in-ear dosimeter) provides the best available documentation of exposures for workers in noise.

Employing engineering controls is best practice when it comes to the hierarchy of noise exposure.





Personal Hearing Protectors

Hearing Protector Areas. Where engineering or administrative controls are unable to reduce exposure to below 85dB(A) for an 8 hour shift, employees should be supplied with, and wear effective personal hearing protectors. Areas of excessive noise should be sign posted, and their boundaries clearly defined.

Selection of Personal Hearing
Protectors. Ensure personal hearing
protectors will provide wearers with
reliable adequate protection. Selection
should be based upon - compliance with
the Australia/NZ Standard AS/NZS 1270,
degree of attenuation required,
suitability in specific application,
comfort, and safety.

Inspection and Maintenance. Employers should ensure that personal hearing protectors are regularly inspected and maintained, and report any damage or deterioration.

Training and Supervision. Employees should be given guidance in the selection of appropriate personal hearing protectors, including instructions for their use, fitting, care, maintenance and limitations.

Training

Training Objectives. Minimise NIHL and tinnitus by an approach that emphasises engineering controls, promotes understanding of the nature of noise and its related health effects, and promote the policy uptake.

Program Content. Training programs aimed at the reduction of NIHL should include topics such as: What is noise and its effects on hearing, social handicaps of NIHL, responsibilities of employees and employers, workplace noise control policies, nature and location of noise hazards, general & specific control measures, guidance in use of personal hearing protection, reporting noise changes, and the nature of audiometric testing.

Audiometric Testing

Purpose. The hearing of employees exposed to noise can be monitored through regular audiometric examinations. Any changes in hearing levels over time should be thoroughly investigated as to the cause, and the need for prevention.

Testing Scheme. Testing should be undertaken by appropriately trained personnel, using equipment that is in accordance with AS/NZS 1269.3 specifications. The audiometric testing scheme, should include a reference test with periodic monitoring and audiometric tests to follow.

Assessment of Audiograms. Audiograms should be assessed and action taken in accordance with section 9 of AS/NZS 1269.4 It should be noted that testing itself is not a preventative approach to Hearing Conservation.

Action to be Taken When Threshold Shift Detected. Actions may include review of the employees job to identify any changes which may have occurred, measures to reduce of the levels of noise and the duration of exposure, verify the performance of personal hearing protectors.

Updating of Reference Audiograms.Records: The reference audiogram should be updated whenever a significant permanent threshold shift has occurred or every 10 years, whichever occurs first.

Offer variety that conforms with job requirements. Including, single use, reuseable and banded earplugs, and earmuffs. Make access to HPDs convenient for employees. Personal Attenuation Rating. Determine employees' earplug fit effectiveness by using field verification systems such as VeriPRO®. Find out if they are receiving appropriate protection, provide additional fit training, or guide product selection.

Provide one-on-one training.

Studies have shown that this is the most effective method of optimising the attenuation of a HPD; especially earplugs.

Continual exposure to education.

Display educational, informative and motivational posters in common areas and near hearing protection sources. Offer toolbox trainings throughout the year.

Retain records from your testing service provider and keep in a safe, secure place, as a confidential document. This will be useful for trouble shooting and as reference for workers' compensation.

Review audiometric results immediately with employees - Studies show that doing this immediately after testing yields a more positive impact.



A personal approach to Hearing Conservation

VeriPRO makes it easy to get an accurate, real-world picture of your employees' hearing protection. Find out whether they 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 out 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.



What is VeriPRO?

VeriPRO is a testing technology that makes it easy to get an accurate 'real world' picture of the attenuation that an employee is getting from their earplugs at their workplace.

Why is such a test necessary?

Whilst the SLC₈₀ rating is a good indicator of the performance of a given earplug, this assumes a good fit. VeriPRO answers the age-old question: "How do I know if the earplug is fitted properly?"

By verifying earplug effectiveness and providing an opportunity for education, VeriPRO becomes an integral part of a successful Hearing Conservation Program. It identifies under or over protected employees; provides training and employee documentation, makes HPD selection an objective process and quantifies individual attenuation at the workplace.

How does VeriPRO work?

VeriPRO is software which is installed on a Desktop or Laptop PC. It utilises specially designed headphones connected to the computer by USB.

VeriPRO's test method is simple to learn and fast to complete. Using the headphones, VeriPRO users balance tones using an on-screen slider bar so that the tones are equally loud in both ears, without and with earplugs. The results assess the user's fit and provides a Personal Attenuation Rating. The test may be conducted on any brand of earplug; including custom products.

If poor fitting results are obtained, the program can run a 90 second training video on the specific earplug and give the opportunity to try the test again. Studies have shown that individual training is the most effective means of improving earplug attenuation.



The test does not require a sound proof booth for testing to be performed.

VeriPRO can be used with employees who have existing hearing loss.

VeriPRO can run in four different modes:

QUICK CHECK – Short, simple test utilising only one frequency in each ear (takes about 2 minutes)

COMPLETE CHECK – Full test, using five frequencies in each ear (takes about 10 minutes)

TRAINING MODE – Includes 90 second "How-to-Fit" videos for each earplug, showing correct insertion.

REPORT MODE – Individual and historical reports can be generated for each user in hardcopy or softcopy.

Key features:

- Measures real world attenuation by using unmodified earplugs
- Simple software installation and hardware set-up
- Fast, accurate, easy-to-understand results displayed within minutes
- Captures and stores historical information on employee PAR
- Fulfills hearing protector training requirements
- · Works with any manufacturer's earplug









Know precisely. Protect personally.

Measure the noise your workers hear. All of it.

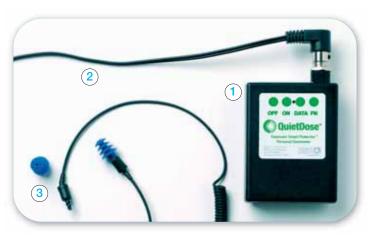
Existing noise measurement devices provide information based on ambient area assessments. Conclusions from the data are based on estimates, assumptions and best guesses, rather than a truly accurate analysis of the sounds that impact workers' ears.

QuietDose[™] is a new and essential addition to any workplace Hearing Conservation Program. Using a highly refined method of sound capture, QuietDose[™] provides previously unattainable and highly precise data points that allow both workers and management to make the smartest, best-informed hearing protection decisions.

Close enough just isn't good enough.

QuietDose[™] is the first noise level monitoring system that uses in-ear dosimetry to measure every sound that reaches the user's eardrum. Dramatically more precise than existing area or personal sampling devices currently in use, QuietDose[™] data equips safety managers to:

- determine whether workers are using their earplugs or earmuffs correctly
- track and address the potential of noise-induced hearing loss (NIHL) in real time
- potentially eliminate dual protection
- provide workers more appropriate hearing protectors
- streamline worker deployment by matching shift hours with proper protection more accurately



1 Exposure Smart Protector® [ESP] Dosimeter

Two-channel noise dosimeter measures cumulative noise exposure dose. LEDs alert user to excessive instantaneous and cumulative noise exposure in real time.

2 Microphone Harness

Transmits data from Eartips to ESP Dosimeter.

(3) Eartips | Earmuffs

Innovative in-ear microphones thread snugly inside QuietDose™ Eartips to record exact, real-time noise levels, providing – and evaluating – hearing protection for multiple QuietDose™ users. Earmuff model will also be available.

Category Documented Noise-induced Hearing Loss/LAeq,8h (daily noise exposure levels)	Description Annual audiograms confirm and document a significant decline in hearing long after it occurs.	Key Actions QuietDose™ provides real-time feedback to workers and managers. At-Risk workers who approach the noise-dose limit on any given day are immediately notified, and corrective action can be taken before the next workday	
At-Risk Workers	Workers who have been identified as "at-risk" of further hearing loss detected through annual audiograms.		
Worker Training and Sampling	Train workers on the proper use of hearing protectors and tactics to achieve safe exposure levels during their entire work shift	Real-time monitoring and feedback provides each worker with quantitative data for assessment, reinforce the importance of hearing loss prevention and personal strategies to prevent overexposures.	
Dual-Protection/Extreme Noise Exposures	In extreme noise hazards workers may be required to wear dual protection [earplugs and earmuffs] and may be limited in their time in certain environments.	Determination of acceptable daily noise exposure levels can eliminate the need for dual protection and enhance the effective time-deployment of workers in some extreme noise environments.	
Engineering Controls	Companies may consider a significant financial investment into engineering controls to reduce specific noise levels.	Compare overall costs between implementing a QuietDose™ program for a group of workers versus capital improvements to engineer out noise. Most likely, the cost to monitor employee noise dose is significantly lower and also takes less time to implement than engineering controls.	



It's all about choice.

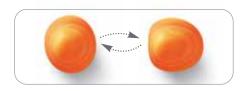
A commitment to hearing protection means considering all the features that make one earplug different from another: material, shape, size and class. Howard Leight makes it easy to compare products and ensure that all your employees receive the right fit and protection.

Selecting the right protection for your employees means more than choosing the earplug with the highest SLC₈₀ or Class.

Fit

Fitting ear canals of all shapes and sizes doesn't have to be difficult.

The right earplug should feel comfortable in the ear canal without compromising protection. Howard Leight® earplugs offer a combination of advanced design and material science that ensures the proper fit for every employee.



Polyurethane Foam

Our patented open-cell polyurethane foam formulation used in Single-Use earplugs delivers a comfortable fit without compromising protection.



Conforming Material Technology

(CMT) A marvel of user-friendly design, the CMT in SmartFit® utilises body heat to adapt to each wearer's ear canal for a comfortable, personalised fit.



Sized Earplugs

One size doesn't always fit all. That's why Howard Leight® offers many Multiple-Use earplugs in a variety of sizes.

Selection.

Why so many earplugs?

Because people, their ears and their environments are all so different. Howard Leight offers the widest range of styles to accommodate almost any situation.

Shapes

To provide the best fit for every ear, Howard Leight earplugs are available in a range of shapes to match your individual comfort preference.



Dispensers are an economical and convenient way to ensure easy access to hearing protection.
Use them everywhere you find hazardous noise.



Cording Options In many environments, employees need to remove earplugs during the course of the day. Our range of corded products makes removing and refitting more convenient.



Protection.

Hearing protection only works when people use it.

Howard Leight earplugs provide a range of attenuation levels that target hearing protection without compromising overall employee safety.



Lower Attenuation

Avoid overprotection in marginal noise environments with lower class earplugs, like our new Clarity® multiple-use earplugs.



Highest Attenuation

For those exposed to high levels of hazardous noise, our Max® earplug's Class 5 offers the highest attenuation available.

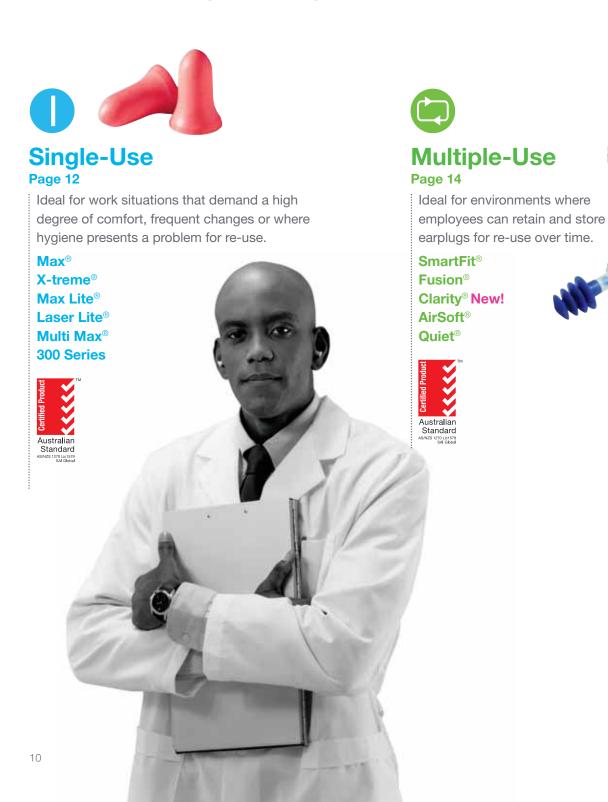


Intermittent Noise

For employees who are in and out of noisy areas, banded earplugs are a convenient solution, they can be put on and removed in a snap.

Earplug Overview

Every ear has different requirements for fit. Every environment has different requirements for protection. That's why Howard Leight provides a wide range of earplug choices.







Detectable

Page 16

Specially created for environments where contamination from foreign objects is unacceptable.

Laser Trak® SmartFit® Detectable Fusion® Detectable







Dispensers

Page 17

Save time and space, reduce waste and increase convenience with earplug dispensers.

Leight® Source 400 Leight® Source 500



Banded

Page 18

An alternative style of hearing protection for those who work in areas of intermittent noise.

QB1HYG® QB2HYG® QB3HYG® PerCap®





Single-Use

An economical and convenient choice for work situations that demand a high degree of comfort, frequent changes or where hygiene presents a problem for reuse.



Highest Class in Single-Use

The world's most-used polyurethane foam earplug

Bell shape for maximum in-ear comfort

Contoured design for easy insertion, resists the tendency to back out of the ear canal

Polyurethane foam enhances comfort, especially for long-term wear

Smooth, soil-resistant skin prevents dirt build-up

SKU / Style / Packaging

MAX-1 / Uncorded / 1pr Polybag R-01110 / Uncorded / 5pr, w/storage cylinder MAX-LS4 / Uncorded / 200pr bulk refill bag MAX-1D / Uncorded / 500pr bulk refill box MAX-30 / Corded / 1pr Polybag





Comfortable with high attenuation

Comfortable earplug with high SLC80 ratings

Brightly coloured offering high visibility and worker compliance

Smooth tapered shape for easy insertion and removal

Corded version helps to guard against the earplugs falling onto the floor

Conveniently sized hand dispensing option for easy accessibility

Wall or bench top dispenser provides a refillable option for the whole work area

SKU / Style / Packaging

XTR-1 / Uncorded / 1pr Polybag XTR-30 / Polycord / 1pr Polybag 1006821 / Uncorded / 100pr Hand Dispenser XTR-LS4 / Uncorded / 200pr bulk refill bag





Comfort for smaller ear canals

Ideal for people with smaller ear canals

Low-pressure polyurethane foam expands gently for comfortable, long-term wear

Contoured T-shape for easy handling and fit

Smooth, soil-resistant skin prevents dirt build-up

SKU / Style / Packaging

LPF-1 / Uncorded / 1pr Polybag LPF-LS4 / Uncorded / 200pr bulk refill bag LPF-1-D / Uncorded / 500pr bulk refill box LPF-30 / Corded / 1pr Polybag



Industries and Applications

Agriculture + Farming
Automotive
Aviation
Building Construction
Forestry
Furniture Manufacturing
General Contracting

Heavy Construction
Landscaping
Lumber/Wood Products
Manufacturing
Metal Fabrication
Military + Law Enforcement
Mining

Petrochemical
Pulp + Paper
Sporting
Steel
Transportation Equipment
Utility/Waste Management



Highly visible protection

Vibrant colours for high visibility

Self-adjusting polyurethane foam expands to fit virtually every wearer

Contoured T-shape for easy insertion and fit

Smooth, soil-resistant skin prevents dirt build-up

SKU / Style / Packaging

LL-1 / Uncorded / 1pr Polybag LL-LS4 / Uncorded / 200pr bulk refill bag LL-1-D / Uncorded / 500pr bulk refill box LL-30 / Corded / 1pr Polybag





One earplug, two sizes

Improves individual fit while simplifying inventory

Self-adjusting polyurethane foam expands to fit virtually every wearer

Smooth, soil-resistant skin prevents dirt build-up

SKU / Style / Packaging

MM-1 / Uncorded / 1pr Polybag MM-LS4 / Uncorded / 200pr bulk refill bag



New and energised

Features a tapered shape for easy insertion and a smooth hygienic outer to eliminate irritation

Two sizes available to suit the majority of workers

New energised look white and yellow earplug

Smooth PVC-free hygienic outer surface

SKU / Style / Packaging

1005073 / Large Uncorded / 1pr Polybag 1005074 / Small Uncorded / 1pr Polybag 1007192 / Large Uncorded / 10pr Polybag 1007193 / Small Uncorded / 10pr Polybag 1000106 / Large Polycord / 1pr Polybag 1000107 / Small Polycord / 1pr Polybag 1006186 / Large Uncorded / 200pr bulk refill bag 1006187 / Small Uncorded / 200pr bulk refill bag 1017573 / Large Uncorded / 500pr bulk refill box 1017574 / Small Uncorded / 500pr bulk refill box





Multiple-Use

Ideal for environments where employees can retain and store earplugs for reuse over time — reducing waste and saving money.



Revolution in personalised fit

Patented Conforming Material Technology™ (CMT) uses body heat to adapt earplug to the individual shape of each wearer's ear canal

Delivers superior comfort and a truly individual fit

Simplifies inventory control — a single product fits almost every wearer

Detachable cord system and HearPack® storage case

SmartFit Process Industry style features attached cotton cord and paper bag, ideal for pulp & paper or tobacco processing industries (SMF-30W-PA)

SKU / Style / Packaging

SMF-30A / Detachable Fabric Cord / HearPack SMF-30W-PA / Attached Cotton Cord / Paper Bag





All-day comfort, easy handling

Patented dual-material design combines firm core for easy handling with soft flanges for comfort and fit

FlexiFirm® stem is easy to grasp, ensuring easy insertion into the ear canal

SoftFlanges™ create comfortable seal in the ear canal for superior comfort and protection

Unique detachable cord system adapts to virtually any application

Two sizes fine-tunes fit for personal comfort and safety (blue/regular, green/small)

SKU / Style / Packaging

FUS30-HPA / Regular Corded / HearPack FUS30S-HPA / Small Corded / HearPack





Enhanced communication

Patented Sound Management Technology™ (SMT) blocks low and medium frequencies while higher frequencies (voice, signals, alarms) can be heard more naturally, with less distortion

Prevents employee isolation by enhancing communication

Lower attenuation ideal for marginal noise environments of 95dB or lower, preventing overprotection

Woven cord adjusts to user needs and reduces sound transmission, cord adjuster adapts length to suit personal preference or application

Reusable case with hook allows wearers to attach to belt loop, apron, bag or other work tools

Two sizes fine-tunes fit for personal comfort and safety

SKU / Style / Packaging

1005329 / Regular (blue) Corded / Reusable Case 1005328 / Small (green) Corded / Resuable Case



Industries and Applications

Agriculture + Farming
Assembly/Light Manufacturing
Automotive
Aviation
Building Construction
Food + Beverage

Forestry
General Contracting
Landscaping
Lumber/Wood Products
Manufacturing
Metal Fabrication

Military
Petrochemical
Pulp + Paper
Printing
Utility/Waste Management
Warehousing



Optimised for comfort

Delivers optimal protection and increased long-term comfort

Advanced air pocket design features internal noise-blocking fins

Four-flange profile creates better seal in the ear canal

Less pressure in the ear canal eliminates that "plugged up" feeling

Rounded flanges fit better in the ear canal

Firm stem facilitates easy insertion and removal

Outstanding noise-blocking protection highest attenuation in Multiple-Use

SKU / Style / Packaging

DPAS-30R / Red Polycord / 1pr Polybag DPAS-30W / White Nylon Cord / 1pr Polybag AS-1 / Uncorded / Reusable Case AS-30R / Red Polycord / Reusable Case





Easy handling, better fit

Patented no-roll design is easy to handle and fit

Contoured shape comfortably matches contours of the ear canal

Smooth, non-irritating skin provides all-day comfort, easy to clean for long-term use

Built-in insertion stem makes insertion quick and easy

SKU / Style / Packaging

QD-1 / Uncorded / 1pr Polybag QD-30 / Corded / 1pr Polybag



Reusable cases for long-term use

For employees who are able to store their earplugs between use, we offer a choice of durable storage cases that improve hygiene and protect earplugs from damage.





Cords for Added Convenience

Some workers need to remove their earplugs during the course of a day's work. We offer a variety of products with cords that make removing/refitting earplugs more convenient and reduce product loss.





Detectable

Specially created for environments where contamination from foreign objects is unacceptable.

Industries
and Applications
Food + Beverage Processing
Lumber/Wood Products
Pulp + Paper
Tobacco



High attenuation in Single-Use

Visual and metal detectability plus long-term comfort

Non-ferrous metal grommet and bright colors easily detected by visual and automated inspection

Self-adjusting polyurethane foam expands to fit virtually any wearer

Contoured T-shape for easy insertion and wear

Smooth soil-resistant skin prevents dirt build-up

SKU / Style / Packaging

LT-30 / Corded / 1pr Polybag



Revolution in personalised fit

Patented Conforming Material Technology™ (CMT) adapts to the shape of the surrounding ear canal when inserted and returns to its original shape when removed

Delivers superior comfort and a truly individual fit

Simplifies inventory control — a single product fits almost every wearer

Blue color provides high visibility in visual detection

Metal ring on stem detectable by automated equipment (SmartFit Detectable only)

SKU / Style / Packaging

SDT-30A / SmartFit Detectable / 1pr Polybag SMF-30BUA / SmartFit Blue/Nylon Cord / 1pr Polybag





Total protection, comfort and fit

Patented dual-material design

FlexiFirm® stem is easy to grasp, ensuring easy insertion into the ear canal

SoftFlanges™ create comfortable seal in the ear canal for superior comfort and protection

Metal stem ring easily detected by automated equipment

Blue color provides high visibility in detection

Two sizes fine-tunes fit for personal comfort and safety. Regular (translucent blue stem), Small (clear stem)

HearPack® case for storage between use

SKU / Style / Packaging

FDT-30A / Regular (translucent blue stem) Corded / HearPack FDT-30-SMA / Small (clear stem) Corded / HearPack





Dispensers

Save time and space, and reduce waste with earplug dispensers. For big or small operations, dispensers offer an economical, hygienic and user-friendly source for hearing protection.



Versatile earplug dispenser

Tabletop or wall-mount plastic dispenser provides a user-friendly source for earplugs

Durable plastic design is an economical choice for dispensing earplugs

Twist knob to dispense earplugs

Catch basin prevents earplugs from falling to the ground

Holds 400 pairs of Howard Leight Single-Use earplugs: Max®, X-treme®, Max Lite®, Laser Lite®, Multi Max®, 300 Series

Supplied as an empty unit

SKU / Style / Packaging

LS-400 / Leight Source 400



Permanent mounted dispenser

Heavy-duty anodized aluminum withstands constant use

Mount on wall for easy access

Crank handle to dispense earplugs

Ideal for large factories and process industries

Holds 500 pairs of Howard Leight earplugs: Max®, Max Lite®, Laser Lite®, 300 Series

Supplied as an empty unit

SKU / Style / Packaging LS-500 / Leight Source 500

Bulk refill options

Following is a complete listing of compatible products and packaging options for use with Leight Source Dispensers.

Leight Source 400 Bulk refill bag 200 pair/bag

Max MAX-LS4

Max Lite LPF-LS4

Laser Lite LL-LS4

Multi Max MM-I S4

X-treme

300 Series 1006186 (Large) 1006187 (Small) Leight Source 500 Bulk refill box 500 pair/box

Max MAX-1-D Max Lite

LPF-1-D

Laser Lite

LL-1-D

300 Series 1017573 (Large) 1017574 (Small)







Refill LS500



Banded

An alternative for those who work in intermittent noise or for managers and visitors who move in and out of noisy areas.



Inner-aural protection

Smooth, ergonomic pods fit in the ear canal for maximum protection

Patented band design prevents ear pods from touching dirty or contaminated surfaces

Lightweight and portable — designed especially for environments with intermittent noise hazards

Includes a pair of replacement pods for extended use

SKU / Style / Packaging

QB1 / Inner-Aural Band / Resealable Bag QB100 / Replacement Pods / Polybag





Supra-aural protection

Soft pods rest partially in the ear for a balance of comfort and protection

Patented band design prevents ear pods from touching dirty or contaminated surfaces

Lightweight and portable — designed especially for environments with intermittent noise hazards

Includes a pair of replacement pods for extended use

SKU / Style / Packaging

QB2 / Supra-Aural Band / Resealable Bag QB200 / Replacement Pods / Polybag





Semi-aural protection

Super-soft lightweight pods rest outside the ear for superior comfort

Patented band design prevents ear pods from touching dirty or contaminated surfaces

Lightweight and portable — designed especially for environments with intermittent noise hazards

Includes a pair of replacement pods for extended use

SKU / Style / Packaging

QB3 / Semi-Aural Band / Resealable Bag QB300 / Replacement Pods / Polybag



Industries and Applications

Assembly/Light Manufacturing Aviation Food + Beverage Processing General Contractor Landscaping Manufacturing Metal Fabrication Petrochemical Pulp + Paper Supervisors Warehousing



Folding semi-aural protection

Super-soft lightweight pods rest outside the ear for superior comfort

Compact, folding design easy to store in pocket

Lightweight and portable – designed especially for environments with intermittent noise hazards

Multiple positions provide flexibility: over-the-head, under-the-chin or behind-the-neck wear

SKU / Style / Packaging

1000276 / Folding Band / Resealable Bag 1000277 / Replacement Pods / Polybag



Banded earplugs and other PPE

Banded earplugs are a good choice for workers who need to use other PPE, such as safety eyewear, hard hats or respirators.



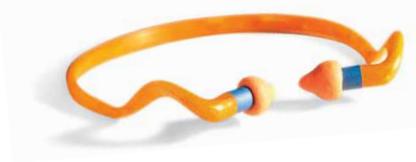
Pods remove for easy maintenance

Replacement pods, available in multiple packs, improve hygiene and extend use.



Designed for good hygiene

Patented band design prevents ear pods from touching dirty or contaminated surfaces when set down.



Earplug Fitting Instructions

Keys to Successful Hearing Protection with Earplugs

Wear

Read and follow all earplug fitting instructions

Selection

Avoid overprotection in minimal noise environments – in selecting the best earplug for your situation, consider noise levels and your need to communicate with co-workers or hear warning signals on the job

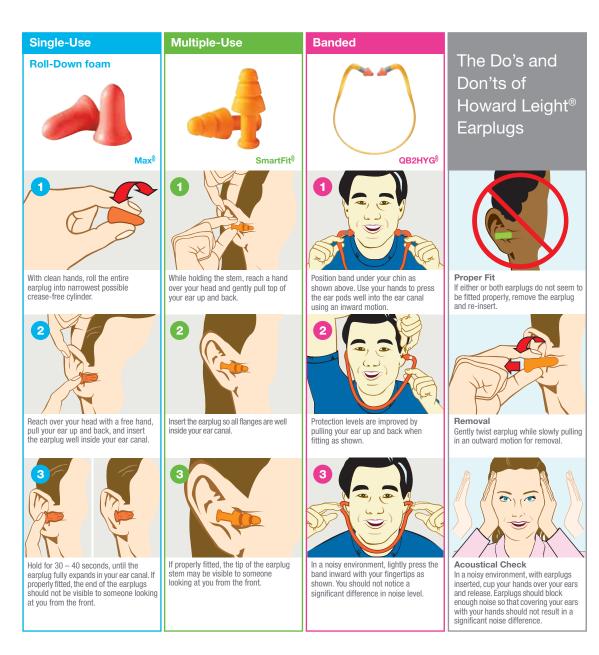
Maintenance

Inspect earplugs prior to wear for dirt, damage or hardness – discard immediately if compromised

For proper hygiene, discard Single-Use earplugs after use

With proper maintenance, Multiple-Use earplugs can last for 2-4 weeks; clean with mild soap/water and store in a case when not in use

Clean and replace pods on Banded earplugs regularly



Download a copy of our Earplug Instruction Poster at howardleight.com or call 1300 139 166 to request a copy.



The ultimate in safety and protection.

Every day, employees count on Howard Leight® earmuffs to block noise and manage sound in some of the world's most acoustically challenging environments. Utilising Bilsom® Technology, we offer a range of earmuffs with varying product features and attenuation levels targeted to the demands of different users and environments.

We offer the widest range of advanced earmuff protection so that every employee can work comfortably and safely.



Our engineers know that wearers value both comfort and protection.

We engineer all our products to balance comfort, safety and performance for employees in all kinds of environments.

Selection.

Why so many choices?

We offer the most innovative product features and widest choices for every user, in every environment.

Protection.

Your employees need the right level of protection.

Not enough and they're vulnerable to hearing damage. Too much and they become isolated from their environment. Our innovations deliver protection at both extremes.

Ultraslim Earcups

Avoid overprotection in lower levels of hazardous noise and improve employee safety, without the bulk and weight of standard earmuffs.



Multiple-Position Headbands

More personalised comfort with options for over-the-head, behind-the-neck or under-the-chin. Great for use with other PPE.



Earmuff Accessories

Accessories for accessibility and maintenance allow you to customise your earmuff to suit any job.



Variety of Wearing Styles

A choice of styles provides options for every individual comfort preference and allows easy integration with other PPE.



Dielectric Construction

Robust, non-deforming construction protects employees in electrical environments. Available in Thunder®, Viking® Mach™1, and Clarity®.



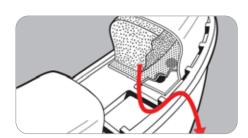
High Visibility

Improve employee safety in lowlighting or outdoor applications. We offer the widest variety of highvisibility earmuffs in the industry.



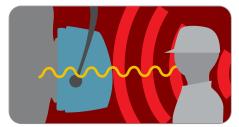
Air Flow Control™ (AFC) Technology

This patented technology delivers optimal attenuation across all frequencies without increasing earcup size or weight. Standard on most Noise Blocking earmuffs.



Sound Management Technology™

(SMT) Patented SMT blocks harmful noise while allowing surrounding sounds like alarms, warnings and co-workers' voices to be heard more naturally.



Electronic Earmuffs

AM/FM Radio earmuffs block hazardous noise and provide superior radio sound quality for increased employee motivation and productivity.



Earmuff Overview

Our products meet the demands of challenging environments by combining advanced technology with performance and comfort features that put people first.



Noise Blocking

Page 26

From maximum attenuation to maximum value, we set the standard for noise blocking hearing protection.

Leightning® Leightning® Hi-Visibility Thunder®

Viking® Mach™1











Sound Management

Page 32

Our patented passive and electronic technologies block noise while allowing alarms, warnings and even co-workers' voices to be heard more naturally.

Clarity® Impact® Impact® Sport





Radio

Page 34

Add music and routine jobs become more satisfying. Protect employees from noise – and provide a built-in AM/FM radio.

Radio Hi-Visibility Electo®





Accessories

Page 37

Explore a range of accessories for added convenience, comfort and hygiene.

Leightning[®]

Maximum protection and contemporary design

The Leightning series delivers high performance and robust steel wire durability that withstands daily use and abuse without compromising comfort.

Features patented Air Flow Control™ technology for optimal attenuation across all frequencies and snap-in ear cushions for easy maintenance.



Headband

Comfortable over-the-head design ideal for many applications

Robust steel headband withstands demanding use and tough environments

Patented Air Flow Control™ for optimal attenuation across all frequencies, without increased size or weight

Padded foam headband for long-wearing comfort with minimal pressure on the head

Telescopic height adjustment remains fixed during use

SKU / Description

1010922 / L1 1010923 / L2 1010924 / L3







Helmet

Earcups snap in place during use and swing back when not needed

Earcups work with a wide range of popular hard hats

Adaptor parts 1000244, 1000245 & 1000249 included (see page 37 for details)

Snap-in ear cushions make replacement quick and easy

Telescopic height adjustment remains fixed during use

SKU / Description

1012536 / L1H 1012537 / L2H





Neckband

Sleek, behind-the-head design works with face shields, visors, hard hats and other PPE

Includes attached elastic headband strap for better positioning

Multiple attenuation levels for targeted protection across a variety of environments

LON features ultraslim, lightweight earcups, ideal for use with welding helmets

Superior comfort ultraslim style is ideal when compact earmuffs and reliable protection are required

SKU / Description

1013460 / LON 1011994 / L1N 1011995 / L2N





Leightning® Hi-Visibility

Maximum attenuation and high visibility

With all the features of Leightning® earmuffs, Leightning Hi-Visibility models have added features designed for environments or conditions where protection and visibility are paramount. Bright green earcups provide high visibility and contrast and an exclusive reflective headband that illuminates when exposed to light.



Folding

Convenient folding design for easy storage

L0F ultraslim design folds to less than 25cm wide

Belt storage case also available (see page 37 for details)

SKU / Description

1013461 / L0F 1011997 / L2F





L1HHV SLC₈₀ 28dB Class 5



Headband

Comfortable over-the-head design ideal for many applications

SKU / Description 1013941 / L3HV

Helmet

Earcups snap in place during use and swing back when not needed

Earcups work with a wide range of popular hard hats

3 pairs of adapters included

SKU / Description

1014680 / L1HHV

Folding

Convenient folding design for easy storage

Belt storage case also available (see page 37 for details)

SKU / Description 1013942 / L2FHV

Thunder[®]

Top-of-the-line protection and comfort

The Thunder series is engineered with all-day comfort in mind. Its dielectric construction withstands use and abuse, while protecting employees in electrical environments. Patented Air Flow Control™ technology provides optimal attenuation across all frequencies and snap-in ear cushions for easy maintenance.



Headband

Comfortable over-the-head design, ideal for many applications

Inner-ventilated headband minimises pressure on the head; breathes easier in warm/humid climates (T2 and T3 only)

Uniform headband pressure for all head sizes, providing better comfort for long-term wear

Non-deforming outer headband withstands rough treatment in the toughest workplaces

Quick-Click height adjustment remains fixed during wear

SKU / Description

1010928 / T1 1010929 / T2 1010970 / T3







Helmet

Earcups snap in place during use and swing back when not needed

Earcups work with a wide range of popular hard hats

Adaptor parts 1000244, 1000245 & 1000249 included (see page 37 for details)

Dielectric construction suitable for all workplaces, especially electrical environments

Patented Air Flow Control™ for optimal attenuation across all frequencies, without increased size or weight

SKU / Description

1012530 / T1H 1012531 / T2H 1012532 / T3H





T1F SLC₈₀ 30dB Class 5

Folding

Convenient folding design for easy storage

Belt storage case also available (see page 37 for details)

Non-deforming outer headband withstands rough treatment in the toughest workplaces

Quick-Click height adjustment remains fixed during wear

SKU / Description

1011600 / T1F

Air Flow Control[™] Technology

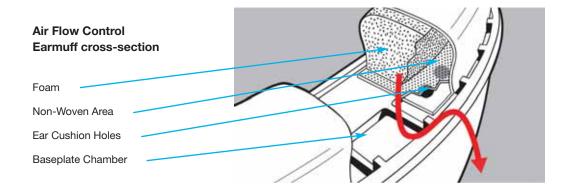
Patented Bilsom® Technology solves the problem of poor low-frequency attenuation

Noise blocking earmuffs traditionally attenuate very well in high frequencies, but poorly in the low frequencies. With our patented Air Flow Control (AFC) technology, we found a way to deliver superior low-frequency attenuation and more consistent performance across the whole frequency range without increasing the size or weight of the earmuff.

How it works:

Inside the snap-in AFC ear cushion, a series of holes allows the cushion to breathe more effectively and channels the air out of the base cushion, much like a car shock absorber. This controlled flow of air dampens low-frequency vibrations while maintaining excellent high frequency attenuation.

Air Flow Control is a standard feature on all Leightning®, Leightning® Hi-Visibility, Thunder® and Viking® series earmuffs.



Viking[®]

Multiple-position headband for alternative use

Viking earmuffs give employees the flexibility to wear their earmuffs in three positions, making it easy to use with other PPE. Its robust dielectric construction withstands use and abuse and provides protection in electrical environments. Features patented Air Flow Control™ technology and snap-in cushions for easy maintenance.



Multiple-Position

Allows wearer to select position: over-thehead, behind-the-head or under-the-chin

Multiple-position headband allows for a variety of wearing styles; a great alternative to cap-mounted earmuffs – wear when using other PPE

Patented Air Flow Control™ technology delivers optimal attenuation across all frequencies, without increasing earcup size or weight

Inner-ventilated headband reduces pressure on head; breathes easier in warm/humid climates

Snap-in ear cushions make replacement quick and easy

Elastic headband strap for better positioning when worn behind-the-head or under-the-chin

Non-deforming, dielectric construction, suitable for electrical environments

SKU / Description

1010925 / V1 1010926 / V2 1011170 / V3







Earmuffs and Eyewear: The thinner the frame, the better the attenuation.

The attenuation of an earmuff depends on a tight seal between the ear cushion and the head. Research conducted at the Howard Leight Acoustical Laboratory shows that safety eyewear with a thin frame (a width of 2 mm or less at the temples, where the earmuff cushion meets the frame), caused no significant decline in attenuation. However, eyewear with wider frames caused noticeable gaps in the seal and lowered attenuation – up to 5dB – particularly at low frequencies.

Economical protection

Mach™1

Economical protection for short-term use. Lightweight dielectric construction offers protection at a low price.



Dual Protection: Proceed with caution.

Dual protection is often the only method for achieving maximum protection in the most hazardous noise environments – but it has its limitations. When both earplugs and earmuffs are worn in combination the maximum attenuation is limited by flanking sound transmission paths in the skull. For this and other reasons the attenuation values of the individual hearing protectors cannot be simply added. With the combination of earmuffs and earplugs the dominant effect comes from the earplugs. The combination of high attenuation earplugs and high attenuation earmuffs will provide similar attenuation to the combination of low attenuation earmuffs and high attenuation earplugs. However, some research suggests that dual protection is overused. In less extreme environments, a properly fitted high attenuating earplug or earmuff may be the best solution to providing the right level of protection.

Example

If you were to combine the Viking V3 Earmuff - 32dB and Max Earplug - 26dB, you can estimate the dual protection noise level, by adding 5dB to the higher SLC_{80} protector:

32dB (Viking V3) + 5dB = 37dB of protection.



Features

Extremely lightweight construction provides comfort for all-day wear

Dielectric construction suitable for electrical environments

SKU / Description 1010421 / Mach 1

Clarity®

Using our patented Sound Management Technology™ (SMT), Clarity series earmuffs improve employee safety by blocking harmful noise while allowing voice and signal frequencies to be heard more naturally. Advanced Sound Management
Technology enhances communication



Headband

Comfortable over-the-head design, ideal for many applications.

Inner-ventilated headband minimises pressure on the head, breathes easier in warm/humid climates

Non-deforming outer headband withstands rough treatment in the toughest workplaces

SMT's uniform attenuation allows wearer to hear co-workers, instructions and other important sounds more naturally while blocking out harmful noise

Quick-Click height adjustment remains fixed during wear

Snap-in ear cushions make replacement quick and easy

SKU / Description

1011142 / C1 1011146 / C3





Helmet

Earcups snap in place during use and swing back when not needed

Earcups work with a wide range of popular hard hats

Adaptor parts 1000244, 1000245 and 1000249 included (see page 37 for details)

Dielectric construction suitable for all workplaces, especially electrical environments

Uniform headband pressure for all head sizes, providing better comfort for long-term wear

SKU / Description

1011242 / C1H 1011243 / C3H





Folding

Convenient folding design for easy storage

Belt storage case also available (see page 37 for details)

SKU / Description

1011143 / C1F



Multiple-Position

Allows wearer to select position over-thehead, behind-the-head or under-the-chin.

SKU / Description

1011145 / 0

Impact®

Electronic sound amplification

Impact earmuffs enhance awareness through advanced sound amplification technology. Wearers hear important sounds in their environment – co-workers, alarms and warning signals – at a safely amplified level. Ideal for the hearing-impaired. Helps eliminate the feeling of isolation.

Impact® Sport

Impact Sport has the basic features of Impact, with added features designed for sport shooting and field use.



Headband

Inner-ventilated headband minimises pressure on the head, breathes easier in warm/humid climates

Non-deforming outer headband withstands rough treatment in the toughest workplaces

Quick-Click height adjustment remains fixed during wear

Amplifies ambient sound to a safe 82dB – response technology reverts to passive hearing protector if noise reaches 82dB

Sound amplification increases communication and awareness – employees can hear alarms/warning signals, co-workers' voices

SKU / Description

1010376 / Impact



Helmet

Earcups snap in place during use and swing back when not needed

Earcups work with a wide range of popular hard hats

Directionally placed stereo microphones amplify and enhance sound for more natural hearing

Snap-in ear cushions make replacement quick and easy

Automatic shut-off after 4 hours

Includes 2 AA batteries for 140 hours of use

SKU / Description

1010632 / Impact H



Folding

Patented Air Flow Control™ technology for optimal attenuation across all frequencies

Convenient folding design for easy storage

Belt storage case also available (see page 37 for details)

Automatic shut-off after 4 hours

Includes 2 AAA batteries for 350 hours of use

Wearers can hear important ambient sounds, including other shooters and environmental noise

Low-profile design with cut-out for full clearance of firearm eliminates interference while shooting

AUX input allows connection to external MP3 or other audio devices for listening off the field

SKU / Description

1013530 / Impact Sport



Radio

Add music and routine jobs become more satisfying. Our AM/FM Radio earmuffs deliver superior reception and sound while lightweight designs and unique headband ensure superb comfort for all-day wear.

Enhanced employee motivation and productivity



High Visibility

Bright green earcups and a reflective headband provide high visibility, contrast and safety

AUX input connects to MP3 players and other audio devices

Features patented Air Flow Control™ Technology for optimal attenuation across all noise frequencies, without increasing size or weight of the earcup

Includes 3.5mm connection cable

High-quality AM/FM radio reception

Radio volume does not exceed 82dB

Inner-ventilated headband minimises pressure on the head; breathes easier in warm/humid climates

Non-deforming outer headband withstands rough treatment in demanding environments

Snap-in ear cushions make replacement quick and easy

Includes 2 AA batteries for 140 hours of use

SKU / Description

1015543 / Radio Hi-Visibility

Music increases motivation for wearers

Where appropriate, radio earmuffs can increase employee motivation and productivity - all within safe listening levels. Radio volume does not exceed 82dB.



Protection, amplification and built-in AM/FM radio

Electo®

Combines the entertainment benefit of our AM/FM Radio earmuff with advanced sound amplification technology. Allows wearers to hear important communications – other co-workers' voices, alarms and important warning signals – at a safely amplified level, while listening to the radio.



Headband

Comfortable over-the-head design, ideal for many applications

Inner-ventilated headband reduces pressure on head; breathes easier in warm/humid climates

Non-deforming outer headband withstands rough treatment in the toughest workplaces

Quick-Click height adjustment remains fixed during wear

Sound amplification increases environmental awareness – employees can hear alarms/ warning signals, co-workers' voices

AM/FM radio volume does not exceed 82dB; separate controls for amplification and volume

SKU / Description

1010374 / Electo



Helmet

Earcups snap in place during use and swing back when not needed

Earcups work with a wide range of popular hard hats

Directionally placed stereo microphones amplify and enhance sound for more natural hearing

Snap-in ear cushions make replacement quick and easy

Includes 2 AA batteries for 140 hours of use

SKU / Description

1010631 / Electo H

Radio earmuffs as hearing protection devices?

A radio earmuff should allow the enjoyment of music at safe levels and reduce background disturbance in a noisy environment.

In order to do this, our radios feature circuitry that limits volume output. When the radio is turned on (active mode), the sound volume is electronically limited to a safe 82dB(A). Since the output is limited to a safe maximum, the radio adds minimal additional noise exposure. In a high-noise job that is also repetitive or monotonous, a radio earmuff can add considerable enjoyment for workers, without sacrificing hearing protection. To learn more about Radio Earmuffs, visit our website to download our Sound Source™ article at howardleight.com



Earmuff Solutions

Every day, workers count on Howard Leight earmuffs to block out noise and manage sound in some of the world's most acoustically challenging environments. These products meet these demands through a combination of advanced technology, performance and comfort features that put people first.

Earmuff features for enhanced comfort and fit include:

Comfort headband

Distributes pressure evenly, resulting in the same comfortable fit regardless of head size

Multiple position including: Over-the-head, behind-the-head, behind the neck or under-the-chin.

Our earmuffs provide the most options for use with hard hats, respirators, face visors and other personal protective equipment.

Snap in ear cushions

For extended performance and lifetime of your earmuffs, our exclusive snap on ear cushions, make replacement easy.

Quick Click height adjustment

Allows easy fit adjustment that stays in place





High Visibility?

In many occupations, workers face the challenge of protecting themselves not only from noise but additional environmental hazards on the job. Workers such as airport ground crews, roadway construction crews, railroad workers and utility workers are all exposed to additional safety risks in addition to noise – speeding traffic on the highway, airplanes navigating the tarmac, inclement weather, nightwork – and require a high degree of visibility. It is also important to be able to see and find your earmuffs easily, especially in low-lighting, so they don't get left behind and create potentially dangerous situations.

Storage?

Before and after use, store in a dry cool place. The temperature should not exceed $+55^{\circ}\text{C}$.

Maintenance?

Check your earmuffs for signs of wear and tear to maintain optimal protection and 100% wear time.

- Check for deformation of the headband
- Are the earmuff cushions cracked or worn?
- Are there any cracks in the earmuff shell?
- Are there any broken parts of the earmuff?

If you have answered 'yes' to any of the above, your earmuff should be discarded and replaced.

Earmuffs and in particular cushions may deteriorate with use and should be examined at frequent intervals for cracking and leakage. For ear cushions replacement, just pull off the old ones and snap in the new. For the ordering of new ear cushions, please see information about Hygiene Kits.

Clean your ear cushions and headband by wiping with a cloth and luke warm mild soapy water to remove any grime. Do not dip them into water.





Slim Belt Clip New!

A simple and convenient solution for attaching earmuffs to the belt or pocket when not in use. Lightweight, low profile design.

SKU / Description

1016730 / Slim Belt Clip



Hygiene Kits

For extended earmuff performance and life as well as improved hygiene, these snap-in ear cushions and foam inserts should be replaced every 6 months, more often with heavy use. Each kit comes with one pair of ear cushions and one pair of foam inserts.

SKU / Description

1006080 / Clarity C1/C1F/C1H 1006017 / Clarity C2

1006081 / Clarity C3/C3H

1010974 / Thunder T1/T1H/T1F

1010975 / Thunder T2/T2H 1010976 / Thunder T3/T3H

1011998 / Leightning L1/L1H/L1N/L0N/L1HHV/Viking V1 1011999 / Leightning L2/L2H/L2N/L2F/L2FHV/Viking V2

1011999 / Leightning L2/L2H/L2N/L2F/L2FHV/VI 1012000 / Leightning L3/L3HV/Viking V3

1008000 / Radio HV/Electo/Electo H/Impact/Impact H

1015280 / Impact Sport



Folding Belt Case

Durable nylon case with belt loops and easy-to-open Velcro® flap. Folds flat. Fits Leightning® L2F, Leightning® Hi-Visibility L2FHV, Thunder® T1F, Clarity® C1F and Impact® Sport earmuffs.

SKU / Description

1000251 / Folding Earmuff Belt Case



Helmet Adapters

Howard Leight offers a large selection of easy-to-snap-on adapters to accommodate a variety of hard hats. The durable plastic and metal styles withstand demanding conditions.

SKU / Style / Description

1000244 / 3713 / Prosafe/Norton/NZ Safety 1000245 / 3714 / Protector, Cig, Unisafe, Paramount, Scott, ProChoice 1000249 / 3718 / MSA



Cool Pads

Apply to ear cushions to improve overall comfort and hygiene.

A dermatologically tested material absorbs 15 times its weight in moisture and keeps ears warm in cold climates. Fits all Howard Leight earmuffs.

SKU / Description

1000364 / 100pr dispenser pack 1000365 / 5pr pack

Search by Special Feature

Diverse conditions and employee populations can limit and focus product selection. The following are key special features among earplugs and earmuffs that target special requirements.

Dielectric

High-Visibility

Sound Management



Working under conditions with dielectric requirements? Most Howard Leight® earplugs are free from metal components. Many of our earmuffs feature a robust non-deforming dielectric construction that withstands use and abuse, while protecting your employees in electrical environments.

Earplugs

All Single-Use, Multiple-Use and Banded Earplugs

Earmuffs

Thunder® series, Viking® series, Mach™ 1, and Clarity® series



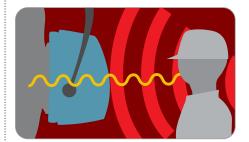
High-visibility products improve overall employee safety for some outdoor or low lighting environments. Brightly colored earplugs improve visibility for both safety and compliance checks. Howard Leight Hi-Visibility earmuffs not only feature bright green earcups, but also reflective headbands for additional visual reference.

Earplugs

Laser Lite®, QB1HYG® and QB2HYG®

Earmuffs

Leightning® Hi-Visibility L1HHV/L2FHV/L3HV, and Radio Hi-Visibility



Sometimes blocking sound isn't enough. You need to block noise out and let information in. Howard Leight offers a variety of earplugs and earmuffs that deliver Uniform Attenuation, blocking out noise while alarms, warnings and even coworkers' voice frequencies can be heard more naturally. Earmuffs that feature Sound Amplification enhance users' awareness of their environment to safe levels and revert to passive protection in hazardous noise.

Earplugs

Uniform Attenuation: Multiple-Use - Clarity®

Earmuffs

Uniform Attenuation: Clarity® series

Sound Amplification: Impact® series Impact® Sport Electo® series



Climate

Small Sizes

Other PPE



Indoors or outdoors, it is important to select the appropriate HPDs for your physical environment and ensure comfort over a work shift.

Hot Climates

In hot/humid environments, employees may be most comfortable in Single-Use, Multiple-Use or Banded earplugs.

Earplugs

All Single-Use, Multiple-Use and Banded Earplugs

Cold Climates

Colder climates generally require earmuffs to protect from exposure to hazardous noise and inclement weather.

Earmuffs

All Noise Blocking, Sound Management and Radio models

Earmuff Accessories

Cool Pads



Employees with smaller ear canals should be fitted with low-pressure or self-adjusting polyurethane foam earplugs, or Multiple-Use earplugs that are available in a variety of sizes.

Earplugs

Max Lite® Laser Lite® 300 Series Fusion® Multi Max® Clarity®

Low-Pressure Foam Self-Adjusting Foam Small/Large Small/Regular Small/Regular Small/Regular Fusion® Detectable Small/Regular



Avoid compromising overall employee safety when utilising other types of personal protective equipment (PPE).

Safety Eyewear

Thick frames (6mm) can cause a gap between the head and earmuffs, reducing optimal attenuation by 2 - 5dB. Switch to thin temple frames or use any of our Single-Use, Multiple-Use or Banded Earplugs.

Hard Hats

Use Cap-Mounted earmuffs that slot onto hard hats when possible. For full-brim hard hats, select Multiple-Position or Neckband earmuffs, or Banded earplugs. All of our Cap-Mounted earmuffs come with hard hat adapters.

Earmuffs

Cap-Mounted: Leightning® L1H/L2H, Leightning® Hi-Visibility L1HHV, T1H/T2H/T3H and Clarity® C1H/C3H Neckband: Leightning L0N/L1N/L2N

Respirators

Choose any segment/style of earplugs, or ultraslim Neckband earmuffs that allow clearance between earcup and hood.

Earplugs

All Single-Use, Multiple-Use and Banded Earplugs

Earmuffs

Neckband: Leightning L0N

Search by Industry

From experience working with a variety of industries and customers worldwide, we offer top product recommendations in key industries.

If your industry is not listed, use these insights to help with your decision.

Automotive

Automobile + Vehicle Manufacturing, Auto Repair, Automotive Aftermarket

Employees throughout the automotive industry are exposed to a wide range of constant and intermittent hazardous noise, often over long periods of time. For these exposures, both comfort and convenience are priorities. Selecting polyurethane foam Single-Use or conforming Multiple-Use earplugs enhances comfort, while Banded earplugs or earmuffs are ideal for employees who are intermittently exposed to noise. Also, dispensers offer a convenient earplug source for any workforce.

Earplugs

Max®, Max Lite®, Laser Lite®, SmartFit®, AirSoft®, Quiet®, QB1HYG®, QB2HYG®, Leight® Source 400 and Leight® Source 500

Earmuffs

Leightning® L0F/L1, Thunder® T1/T2, Viking® V1/V2, Clarity® C1 and Impact®

Aviation



Airport Ground Crews, Gate Agents, Aircraft Mechanics, Aircraft Manufacturing, Aeronautics

As mobile employees, airport workers are exposed to a wide range of hazardous noise levels, often intermittently. Banded earplugs and earmuffs are the best line of defense, as they are easily accessible. Corded earplugs are ideal for gate agents, especially worn around the neck when not in use. Aircraft mechanics and those in aeronautics are often exposed to high levels of noise and should utilise high attenuation HPDs.

Earplugs

Max, Laser Lite, SmartFit, Fusion®, QB1HYG®, QB2HYG® and PerCap®

Earmuffs

Leightning L2F/L3, Leightning Hi-Visibility L2FHV, L3HV, Thunder T3 and Clarity C3

Earmuff Accessories

Slim Belt Clip, Folding Earmuff Belt Case

Construction



Steel Work, Masonry, Carpentry, Pipefitting, Electrical, HVAC, Painting, Welding, Roofing

Construction workers face a wide range of hazards (falls, electrocution, debris, chemicals) in addition to hazardous noise exposure. Ensure overall employee safety by selecting HPDs that do not compromise other PPE and offer a high degree of visibility. Also, avoid overprotection by selecting HPDs with attenuation suited for your employees' exposure, especially in marginal noise environments.

Earplugs

Max, Laser Lite, SmartFit, Fusion, AirSoft, Quiet, Clarity and QB2HYG®

Earmuffs

Any Noise Blocking Earmuff and Clarity series



Energy Production

Process Industries

Industrial Manufacturing



Oil + Gas Production, Chemical Manufacturing, Mining, Energy Production, Utilities

Employees in these industries face a wide variety of worksite hazards (respiratory hazards, falls, explosions) in addition to exposure to hazardous noise. Employees are required to wear other PPE (safety eyewear, hard hats, respirators, gas monitors). They also face the additional risk of hearing loss due to exposure to ototoxic chemicals (solvents, heavy metals). Make sure your employees are properly protected with HPDs that work with other PPE and are dielectric in explosive environments.

Earplugs

Max®, Laser Lite®, SmartFit®, Fusion®, AirSoft®, Clarity® and QB2HYG®

Earmuffs

Leightning® L0N/L2H, Leightning® Hi-Visibility L1HHV/L2FHV/L3HV, Thunder® T2/T3H, Viking® V3 and Clarity® C3H

Earmuff Accessories

Slim Belt Clip, Cool Pads



Food + Beverage Processing, Food Service, Pulp + Paper, Tobacco

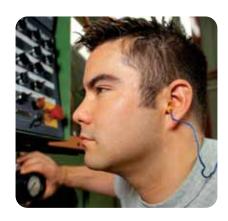
Many process industries utilise control procedures such as visual and metal detection to avoid contamination of the final product. We recommend attached corded or banded earplugs in contrasting colours (especially blue) and/or styles that are metal detectable. Paper packaging is available as a recycleable option for Process Industries. Earmuffs should match the noise level for your specific application as well as work with other PPE your employees may use.

Earplugs

Laser Trak®, AirSoft, SmartFit Process Industry, SmartFit Detectable, SmartFit Blue, Fusion Detectable and PerCap®

Earmuffs

Leightning L0F/L2/L3/L2H/L0N and Clarity C1



Consumer Goods, Light Assembly/Manufacturing, Furniture, Textiles, Printing, Warehousing

Those who work in industrial manufacturing need protection against hazardous noise and a highly comfortable HPD. If it's not comfortable, it won't be worn properly or at all. We recommend HPDs that ensure proper protection and superb comfort over time. Our polyurethane foam Single-Use earplugs and Multiple-Use earplugs, featuring Conforming Material Technology[™], deliver on both. Our earmuffs also deliver a wide range of attenuation and comfort features that put industrial employees first.

Earplugs

All Single-Use, Multiple-Use and Banded Earplugs

Earplug Dispensers

Leight® Source 400 and Leight Source 500

Earmuffs

Leightning L2/L3, Thunder T1/T1F/T3, Viking V2, Clarity C1 and Radio HV

Search by Exposure Level

Start with the level of noise to which your employees are exposed. Then use the index below to identify the earplug and earmuff options with attenuation levels that are right for their work environment.



Keep these tips in mind as you choose:



Match product choices to the specific attenuation levels for your environment



Too much protection may put employees at risk, especially in low levels of hazardous noise



Optimal protection is based on proper earplug fit



Make sure employees receive proper training on how to use their earplugs or earmuffs 85dB Hearing protection must be worn. It is required for exposures of 85dB or higher. For hearing protection in areas exceeding 110dB, it is important to be sure the earplug or earmuff you are using is properly fitted. As the SLC₈₀ rating system often underestimates the amount of protection workers receive when they fit their hearing protectors properly, the real-world attenuation should be measured with a fit verification system (such as VeriPRO).

For extreme noise levels (over 105dB), it is important to seek specialist advice on how to measure the individual fit of the protector to determine your actual protection level.

				,					,
Noise Exposure dB	A		80	85	90	95	100	105	110
Noise Blocking Earm	uffs								
	SLC ₈₀ (dB)	Class							
Leightning® L1	29dB	5							
Leightning® L2	31dB	5							
Leightning® L3	33dB	5							
Leightning® L3 Hi-Vis	33dB	5							
Leightning® L1H	28dB	5							
Leightning® L2H	29dB	5							
Leightning® L1N	30dB	5							
Leightning® L2N	31dB	5							
Leightning® L2F	30dB	5							
Leightning® L2F Hi-Vis	30dB	5							
Leightning® L0N	25dB	4							
Leightning® L0F	25dB	4							
Leightning® L1H Hi-Vis	28dB	5							
Thunder® T1	29dB	5							
Thunder® T2	31dB	5							
Thunder® T3	33dB	5							
Thunder® T1F	30dB	5							
Thunder® T1H	26dB	5							
Thunder® T2H	30dB	5							
Thunder® T3H	31dB	5							
Mach™ 1	22dB	4							
Viking® V1	28dB	5							
Viking® V2	30dB	5							
Viking® V3	32dB	5							
Sound Management I	Earmuffs								
	SLC ₈₀ (dB)	Class							
Clarity® C1	23dB	4							
Clarity® C2	26dB	5							
Clarity® C3	28dB	5							
Clarity® C1F	24dB	4							
Clarity® C1H	24dB	4							
Clarity® C3H	27dB	5							
Electronic & Radio Ea	armuffs								
	SLC ₈₀ (dB)	Class							
Electo®	24dB	4							
Electo® Cap Mounted	26dB	5							
Impact®	24dB	4							
Impact® Cap Mounted	26dB	5							
Impact® Sport	24dB	4							
Radio Hi-Visibility	27dB	5							

Earmuff Fitting Instructions

Keys to Successful Hearing Protection with Earmuffs

Wear

Read and follow all earmuff fitting instructions

Remove all hair under ear cushions

Selection

Avoid overprotection in minimal noise environments – consider noise levels and need to communicate with co-workers or hear warning signals on the job

Maintenance

Regularly inspect earcups and ear cushions for cracks and leaks – discard if earcups are visibly damaged or compromised

Clean earcups and ear cushions regularly with mild soap and water

Replace ear cushions and foam inserts every 6 months under normal wear, every 3 months with heavy use or in humid/extreme climates



Download the Earmuff Instruction Poster at howardleight.com or call 1300 139 166 to request a copy

Attenuation Data

Class testing in accordance with AS/NZS 1270:2002



Single-Use Earplugs

Max® MAX-1/	Corde	d Max-	30 Acc	cording to	test me	thod AS/	NZS 127	0:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	29.4	29.0	30.1	30.2	33.2	42.8	42.7	26dB	5
Std. Deviation dB	9.4	9.7	9.5	7.7	4.7	5.1	6.9		
Laser Lite® Ll	1/Coi	ded Ll	L-30 A	ccording	to test n	nethod AS	S/NZS 12	70:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	24.4	23.6	25.6	26.5	32.3	42.0	42.5	25dB	4
Std. Deviation dB	6.9	5.9	5.5	5.4	4.3	4.7	6.7		
303 sml 1005	074/Ige	e 10050	073 Ac	cording t	o test m	ethod AS	/NZS 127	0:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	22.3	21.6	23.4	24.8	32.8	39.6	41.7	22dB	4
Std. Deviation dB	7.3	7.2	7.8	7.0	6.4	8.8	9.5		
304 Corded s	ml 1000	0107/lg	je 1000	106 Ad	cording t	o test me	ethod AS/	NZS 1270	:2002
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	23.6	22.9	24.9	25.1	32.8	39.8	43.6	24dB	4
Std. Deviation dB	6.8	7.3	6.4	5.6	5.0	7.6	6.8		
Max Lite® LPF	-1/Coi	rded LI	PF-30	Accordir	ig to test	method	AS/NZS	1270:200	2
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	24.2	23.6	25.3	26.2	32.0	41.8	43.6	25dB	4
Std. Deviation dB	5.2	5.1	6.7	5.4	4.0	4.8	5.6		
Multi Max® M	M-1 A	ccording	to test n	nethod AS	S/NZS 12	70:2002			
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	26.7	25.3	26.0	27.1	32.4	39.6	42.7	24dB	4
Std. Deviation dB	5.6	5.7	7.6	6.8	5.0	6.3	7.9		
X-Treme® 100	6716/C	orded	10067	17 Acco	rding to t	est meth	od AS/NZ	S1270:20	02
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	22.5	24.0	27.1	28.5	32.6	39.8	42.9	26dB	5
Std. Deviation dB	6.6	6.1	4.8	6.3	5.2	4.1	5.2		



Quiet® QD-1	۸ سائن <i>ہ</i> ہ			C/N7C 1/	20.000	,			
	Accordino								
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	21.3	20.1	20.5	22.7	28.5	40.6	39.3	20dB	3
Std. Deviation dB	9.2	7.3	7.5	6.2	4.7	9.3	8.7		
Quiet® Cordeo	1 QD-3	D Accor	ding to te	est metho	od AS/NZ	S 1270:2	002		
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	27.5	26.5	27.6	28.1	32.5	42.1	42.7	23dB	4
Std. Deviation dB	9.0	9.8	10.7	8.8	6.5	7.8	7.9		
AirSoft® AS-1, AS-30R, DPAS-30R, DPAS-30W According to test method AS/NZS 1270:2002									
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	33.0	32.6	32.3	31.9	33.9	35.6	40.6	26dB	5
Std. Deviation dB	8.1	9.3	10.2	9.3	6.5	8.4	6.1		
SmartFit® Und	corded	SMF-3	30A Ac	cording t	o test me	ethod AS	/NZS 127	0:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	20.4	20.8	22.4	25.2	30.4	33.4	37.8	20dB	3
Std. Deviation dB	8.0	9.3	9.0	8.6	5.9	7.6	8.0		
SmartFit® Cotton corded SMF-30W-PA According to test method AS/NZS 1270:2002									
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	19.8	21.1	22.0	21.4	27.4	31.2	36.7	16dB	2
Std. Deviation dB	12.2	10.3	9.9	9.6	8.4	8.5	11.3		

Continued next column.



Clarity® Earpl	ugs Sn	nall an	d Regi	ular Ad	cording f	to test m	ethod AS	/NZS 127	0:2002
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	19.4	22.1	24.9	26.2	27.4	26.6	37.1	21dB	3
Std. Deviation dB	8.2	8.0	6.5	6.6	5.6	4.7	7.8		
Fusion® Earplugs Small and Regular According to test method AS/NZS 1270:2002									
Fusion® Earpl	ugs Sr	nall an	d Regi	ular Ad	cording	to test m	ethod AS	/NZS 127	0:2002
Fusion® Earpl Frequency/Hz	ugs Sr 125	nall an ²⁵⁰	d Reg	ular Ad 1000	cording 2000	to test m 4000	ethod AS 8000	S/NZS 127 SLC80	0:2002 Class
•									



Detectable Earplugs

SmartFit® Det	ectabl	e SDT-	30A/B	lue SN	F-30B	UA			
According to test m	nethod AS	S/NZS 12	70:2002						
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	19.8	21.1	22	21.4	27.4	31.2	36.7	16dB	2
Std. Deviation dB	12.2	10.3	9.9	9.6	8.4	8.5	11.3		
Fusion™ Detectable Regular FDT-30A/Small FDT-30-SMA									
According to test method AS/NZS 1270:2002									
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	24.3	23.3	26.2	28.5	31.6	33.4	40.0	22dB	4
Std. Deviation dB	9.1	9.5	9.2	10.2	6.1	10.8	10.3		
Laser Trak® L	Г-30 А	ccording	to test m	ethod AS	S/NZS 12	70:2002			
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	24.9	25.6	25.9	27.1	30.9	41.2	44.0	25dB	4
Std. Deviation dB	7.3	5.5	7.5	5.9	4.6	6.0	5.4		



Banded Earplugs

QB1HYG® Ban	ided (u	nder c	hin) A	ccording	to test m	nethod AS	S/NZS 12	70:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	21.4	19.9	17.5	19.4	24.6	34.8	35.9	16dB	2
Std. Deviation dB	10.0	8.0	8.3	6.9	6.3	9.5	8.6		
QB2HYG® Ban	ded (u	nder c	hin) A	ccording	to test m	nethod AS	S/NZS 12	70:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	25.8	23.1	20.2	22.4	30.6	37.5	40.4	21dB	3
Std. Deviation dB	7.8	7.3	5.8	4.7	5.3	5.8	6.3		
QB3HYG® Ban	ded (u	nder c	hin) A	ccording	to test m	nethod AS	S/NZS 12	70:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	23.2	20.0	18.4	20.6	28.6	32.9	35.9	20dB	3
Std. Deviation dB	6.9	6.2	4.9	3.9	5.1	4.0	5.7		
PerCap® Over	-head	100027	6 Acco	rding to	test meth	nod AS/N	ZS 1270:	:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	23.7	19.2	17.5	20.0	31.2	36.8	41.0	20dB	3
Std. Deviation dB	5.9	4.5	3.6	4.0	4.0	5.2	5.9		
PerCap® Behi	nd-hea	d Acco	rding to t	test meth	nod AS/N	ZS 1270:	2002		
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	25.0	22.5	20.0	21.2	31.6	35.5	41.1	22dB	4
Std. Deviation dB	5.4	5.6	4.9	3.5	3.9	4.7	4.4		
PerCap® Unde	r-chin	Accordi	ng to tes	t method	AS/NZS	1270:20	02		
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	22.3	19.0	18.3	19.0	31.3	37.2	39.9	20dB	3
Std. Deviation dB	4.5	4.2	4.4	4.0	3.1	4.2	6.0		



Noise Blocking Earmuffs

	4 11		101000					_	_
Leightning® L									
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	19.6	21.9	27.5	31.6	31.7	36.9	38.3	29dB	5
Std. Deviation dB	3.9	3.5	3.7	2.3	3.6	2.5	2.4		
Leightning® L	1N Nec	ckband	i 10119	94 Acc	cording to	test me	thod AS/	NZS 1270	0:2002
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	18.5	22.3	28.4	32.0	32.5	37.5	39.7	30dB	5
Std. Deviation dB	2.8	3.8	2.9	2.4	3.4	2.7	3.2		
Leightning® L	1H Cap	o-mour	nted 10	12536	Accordin	g to test i	method A	S/NZS 12	70:2002
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	17.6	20.1	25.9	29.8	31.5	37.4	40.9	28dB	5
Std. Deviation dB	2.9	3.4	3.0	3.7	2.9	2.9	3.4		
Leightning® L1	IHHV C	ap-mo	unted 1	014680) Accordi	na to test	method	AS/NZS 12	270:2002
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	17.6	20.1	25.9	29.8	31.5	37.4	40.9	28dB	5
Std. Deviation dB	2.9	3.4	3.0	3.7	2.9	2.9	3.4	2000	0
Leightning® L								70 1070	2000
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	18.8	24.5	30.3	34.8	33.1	36.4	38.5	31dB	5
Std. Deviation dB	3.2	4.4	3.5	3.3	2.1	2.3	2.5		
Leightning® L									
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	21.4	25.4	30.7	33.4	33.6	37.3	39.5	31dB	5
Std. Deviation dB	3.2	3.4	2.8	3.4	2.4	4.2	4.0		
Leightning® L	ON Ne	ckband	d 10134	460 Ac	cording t	o test me	ethod AS	/NZS 127	0:2002
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	15.2	17.0	21.8	25.5	29.0	38.9	38.9	25dB	4
Std. Deviation dB	3.4	3.1	2.3	2.0	3.1	2.5	2.9		
Leightning® L	2F Fol	ding 10	11997	Accordi	ing to tes	t method	AS/NZS	1270:20	02
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	20.8	24.6	30.0	31.6	32.0	38.9	39.4	30dB	5
Std. Deviation dB	2.9	2.3	2.9	2.9	2.4	2.6	2.9		
Leightning® L	OF Fol	dina 10	013461	Accord	lina to te:	st metho	d AS/NZS	S 1270:20	002
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	15.6	18.6	22.9	24.5	30.6	39.4	39.6	25dB	4
Std. Deviation dB	3.9	2.9	3.1	2.0	3.7	2.6	1.7		
Leightning® L								NZS 1270	างกกว
					2000		8000		
Frequency/Hz	125	250	500	1000		4000		SLC80	Class
Mean Value dB	20.8	24.6	30.0	31.6	32.0	38.9	39.4	30dB	5
Std. Deviation dB	2.9	2.3	2.9	2.9	2.4	2.6	2.9		
Leightning® L2	2H Cap	-moun	ted 10°	12537	Accordin	g to test i	method A	S/NZS 12	70:2002
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	17.9	22.3	28.9	31.4	31.4	37.5	39.1	29dB	5
Std. Deviation dB	2.4	2.9	3.4	3.6	3.5	4.6	3.1		
Leightning® L	3 Heac	lband '	101092	Acco	rding to 1	test meth	nod AS/N	ZS 1270::	2002
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	22.2	26.3	33.3	37.6	35.1	38.1	39.2	33dB	5
Std. Deviation dB	4.3	3.9	3.5	3.9	2.5	2.1	1.7		
Leightning® L	3HV He	eadbar	nd 1013	3941 Ac	cording	to test m	ethod AS	S/N7S 127	70.2002
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
1104401103/112	22.2	26.3	33.3	37.6	35.1	38.1	39.2	33dB	5
Mean Value dB	22.2	20.0		3.9	2.5	2.1	1.7	JJUD	J
Mean Value dB	12	3.0		0.5	2.0	۷.۱	1.7		
Std. Deviation dB	4.3	3.9	3.5				A O /N-30	1070-00	
Std. Deviation dB Thunder® T1 I	leadba	and 10 ⁻	10928	Accordir				1270:200	
Std. Deviation dB Thunder® T1 F Frequency/Hz	12 5	and 10 ⁻ 250	1 0928 500	Accordir 1000	2000	4000	8000	SLC80	Class
Std. Deviation dB Thunder® T1 b Frequency/Hz Mean Value dB	125 17.7	250 21.7	10928 500 27.2	Accordin 1000 31.6	2000 33.6	4000 32.6	8000 36.1		
Std. Deviation dB Thunder® T1 I Frequency/Hz Mean Value dB Std. Deviation dB	125 17.7 3.4	250 21.7 3.0	500 27.2 2.6	1000 31.6 2.2	2000 33.6 2.3	4000 32.6 4.0	8000 36.1 4.4	SLC80 29dB	Class 5
Std. Deviation dB Thunder® T1 I Frequency/Hz Mean Value dB Std. Deviation dB	125 17.7 3.4	250 21.7 3.0	500 27.2 2.6	1000 31.6 2.2	2000 33.6 2.3	4000 32.6 4.0	8000 36.1 4.4	SLC80 29dB	Class 5
Std. Deviation dB Thunder® T1 F Frequency/Hz	125 17.7 3.4	250 21.7 3.0	500 27.2 2.6	1000 31.6 2.2	2000 33.6 2.3	4000 32.6 4.0	8000 36.1 4.4	SLC80 29dB	Class 5
Std. Deviation dB Thunder® T1 Frequency/Hz Mean Value dB Std. Deviation dB Thunder® T1 H	125 17.7 3.4 Cap-r	250 21.7 3.0 mounte	500 27.2 2.6 ed 1012	1000 31.6 2.2 2530 A	2000 33.6 2.3 ccording	4000 32.6 4.0 to test n	36.1 4.4 nethod A	SLC80 29dB S/NZS 12	Class 5 70:2002
Std. Deviation dB Thunder® T1 F Frequency/Hz Mean Value dB Std. Deviation dB Thunder® T1H Frequency/Hz	125 17.7 3.4 Cap- r	250 21.7 3.0 nounte	500 27.2 2.6 ed 1012 500	Accordin 1000 31.6 2.2 2530 A 1000	2000 33.6 2.3 ccording 2000	4000 32.6 4.0 to test n 4000	36.1 4.4 nethod A 8000	SLC80 29dB S/NZS 12 SLC80	Class 5 70:2002 Class

Thunder® T1F	Foldin	ıg 1011	600 A	ccording	to test m	nethod AS	S/NZS 12	70:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	19.2	21.9	27.6	32.3	33.1	36.4	38.5	30dB	5
Std. Deviation dB	3.2	2.3	2.5	3.2	3.4	3.6	3.7		
Thunder® T2	Headba	and 10 ⁻	10929	Accordi	ng to test	method	AS/NZS	1270:200)2
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	21.2	26.0	31.5	34.6	34.2	33.6	37.0	31dB	5
Std. Deviation dB	3.7	3.1	4.0	2.2	3.0	2.6	3.8		
Thunder® T2H	l Cap-r	nounte	ed 1012	2 531 A	ccording	to test r	nethod A	S/NZS 12	70:200
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	18.7	23.8	29.5	33.3	32.9	35.8	39.3	30dB	5
Std. Deviation dB	3.8	4.3	2.8	2.9	2.6	3.1	2.9		
Thunder® T3	Headba	and 10	10970	Accordi	ng to test	method	AS/NZS	1270:200)2
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	21.2	26.2	32.1	35.7	36.6	38.7	40.1	33dB	5
Std. Deviation dB	2.5	2.7	3.1	3.9	2.6	3.4	2.9		
Thunder® T3H	l Cap-r	nounte	ed 1012	2 532 A	ccording	to test r	nethod A	S/NZS 12	70:200
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	22.2	26.4	32.3	36	32.4	38.6	40.6	31dB	5
Std. Deviation dB	4.1	3.7	4.0	1.9	3.2	2.8	4.0		
Mach™ 1 1010	0421 A	ccording	to test m	nethod As	S/NZS 12	70:2002			
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	7.8	9.7	21.4	29.0	31.8	29.8	29.0	22dB	4
Std. Deviation dB	3.1	2.9	4.5	4.2	5.4	3.8	6.2		
Viking® V1 Ov	er-hea	d 1010	925 A	ccording	to test m	nethod AS	S/NZS 12	70:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	19.3	22.6	26.8	30.6	32.6	37.6	36.0	28dB	5
Std. Deviation dB	4.2	3.8	4.4	3.6	3.5	3.3	4.2		
Viking® V1 Un	der-ch	in Acc	ording to	test met	hod AS/N	IZS 1270):2002		
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	15.2	19.6	25.7	30.6	31.1	36.5	34.7	27dB	5
Std. Deviation dB	4.2	4.0	3.6	1.7	3.7	4.1	2.6		
Viking® V1 Be	hind-h	nead A	ccording	to test n	nethod AS	S/NZS 12	70:2002		
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	15.1	19.3	24.9	29.7	30.0	36.4	32.9	26dB	5
Std. Deviation dB	3.3	3.1	3.1	3.7	4.2	4.1	3.4		
Viking® V2 Ov	er-hea	d 1010	926 A	ccordina	to test m	nethod AS	S/NZS 12	70:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	18.5	23.1	28.2	33.1	33.4	35.5	36.0	30dB	5
Std. Deviation dB	3.6	4.4	3.4	3.2	2.4	2.5	3.8		
Viking® V2 Be									
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	16.6	20.9	27.3	32.0	32.8	34.8	33.9	29dB	5
Std. Deviation dB	3.7	3.8	3.9	2.5	3.3	3.0	3.3	2002	
Viking® V2 Un									
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	16.9	23.2	28.6	32.3	33.0	36.6	35.1	30dB	5
Std. Deviation dB	3.5	3.4	2.9	2.3	2.5	3.7	3.0	JUUD	3
Viking® V3 Ov								70.2002	
	125								Closs
Frequency/Hz		250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	20.2	26.9	31.5	37.0	35.2	36.3	38.0	32dB	5
Std. Deviation dB	3.8	2.7	3.4	3.8	3.3	3.4	3.1		
Viking® V3 Be									Ol -
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	18.7	23.5	30.9	34.9	32.7	34.9		30dB	5
Std. Deviation dB	3.4	3.4	2.5	2.3	3.1	4.4	4.3		
Viking® V3 Un									
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	20.8	25.4	32.3	36.3	34.6		36.7	32dB	5
Std. Deviation dB	3.3	2.8	2.3	3.3	4.3	3.5	4.9		



Clarity® C1 He	eadban	d 1011	142 Ad	ccording	to test m	ethod AS	S/NZS 12	70:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	16.5	21.7	25.4	24.0	28.1	31.0	32.0	23dB	4
Std. Deviation dB	4.3	4.9	4.6	2.7	5.6	3.7	3.1		
Clarity® C1H (Cap-mo	ounted	10112	42 Acc	ording to	test me	thod AS/I	NZS 1270	:2002
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	16.0	22.0	26.8	25.1	25.9	31.4	31.1	24dB	4
Std. Deviation dB	5.8	4.8	3.7	2.3	3.4	4.7	4.1		
Clarity® C1F F	olding	10111	43 Acc	ording to	test met	hod AS/I	NZS 1270):2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	15.8	23.6	27.0	23.3	26.6	34.6	31.7	24dB	4
Std. Deviation dB	1.6	3.4	1.7	2.8	2.8	2.8	4.9		
Clarity® C2 He	eadban	d 1011	145 Ad	ccording	to test m	ethod AS	S/NZS 12	70:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	17.8	24.9	28.7	26.6	29.5	28.5	29	26dB	5
Std. Deviation dB	3.0	3.0	2.5	2.7	2.9	3.2	2.9		
Clarity® C2 Be	ehind-l	nead A	ccordina	to test r	nethod A	S/NZS 12	270:2002	2	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	18.8	23.5	29.1	26.2	30.5	28.1	27.8	26dB	5
Std. Deviation dB	4.5	2.7	3.6	2.1	3.8	3.2	2.8		
Clarity® C2 Ur	nder-ch	nin Acc	ording to	test me	thod AS/I	NZS 1270	0:2002		
Frequency/Hz	125	250	500	1000	2000	4000		SLC80	Class
Mean Value dB	20.5	24.4	29.6	26.3	30.2	29.5	29.8	26dB	5
Std. Deviation dB	3.7	2.6	2.9	2.8	3.8	3.9	3.0		
Clarity® C3 He	eadban	d 1011	146 Ad	ccording	to test m	ethod AS	S/NZS 12	70:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	22.7	27.0	34.3	30.3	30.5	34.5	34.9	28dB	5
Std. Deviation dB	5.2	7.0	4.6	4.4	4.5	3.8	3.6		
Clarity® C3H (Cap-mo	ounted	10112	43 Acc	ording to	test me	thod AS/I	NZS 1270	:2002
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	19.2	26.5	32.9	29.6	28.5	33.9	33.5	27dB	5
Std. Deviation dB	6.2	6.2	6.2	2.6	3.1	3.2	2.2		
Impact® Head	lband 1	101037	6 Accor	ding to t	est meth	od AS/NZ	ZS 1270::	2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	12.8	17.4	25.6	24.9	27.8	38.7	43.1	24dB	4
Std. Deviation dB	2.4	4.5	4.4	2.9	3.3	5.0	4.2		
Impact® Cap-	mount	ed <u>101</u>	0632	Accordin	g to test i	method A	AS/NZS 1	270:2002	2
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	13.8	16.8	29.3	28.7	29.4	37.9	43.0	26dB	5
Std. Deviation dB	4.5	2.9	5.8	4.7	3.6	3.7	4.9		
Impact® Spor	t 10135	30 Acc	cordi <u>ng t</u>	tes <u>t me</u>	thod AS/	NZS <u>12</u> 7	0:2002		
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	15.3	20.3	22.1	25.0	26.7	35.3	36.4	24dB	4
Std. Deviation dB	4.4	4.4	3.1	2.4	3.4	2.8	2.6		



Radio Earmuffs

Electo® Headl	oand 1	010374	Accord	ling to te	st metho	d AS/NZS	1270:2	002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	12.8	17.4	25.6	24.9	27.8	38.7	43.1	24dB	4
Std. Deviation dB	2.4	4.5	4.4	2.9	3.3	5.0	4.2		
Electo® Cap-r	nounte	d 10100	631 A	ccording	to test m	ethod AS	NZS 12	70:2002	
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	13.8	16.8	29.3	28.7	29.4	37.9	43.0	26dB	5
Std. Deviation dB	4.5	2.9	5.8	4.7	3.6	3.7	4.9		
Radio High-Vi	s 1015	543 Acc	ording t	to test m	ethod AS	/NZS 127	0:2002		
Frequency/Hz	125	250	500	1000	2000	4000	8000	SLC80	Class
Mean Value dB	17.6	22.7	28.8	29.0	30.3	38.4	41.3	27dB	5
Std. Deviation dB	3.9	3.4	4.2	4.3	3.1	3.7	3.6		

Hearing Support

Every day, employees are exposed to potentially harmful noise, both on and off the job. The Howard Leight® range of Hearing Support Material helps employees and employers better understand noise risks in everyday activities. This supporting literature aims to provide information on hearing protection requirements, and assists workplaces in making more informed decisions about their hearing protection program.

The range of hearing support material contains information on new product developments as well as fitting, care and maintenance instructions to assist with correct application and usage.

Some of the hearing support materials include the following:

Part Number	Description	Part Number	Description
BRO35	Bilsom 303 brochure	POST7	Noise thermometer poster
BRO36	VeriPRO® gatefold brochure	POST8	Earmuff fitting poster
BRO39	Howard Leight product guide	POST9	Earplug fitting poster
FLY25	VeriPRO® insert	POST15	Care/maintenance of earplugs and earmuffs
FLY26	Impact Sport flyer	PROM1	Hearing protection wear time wheel







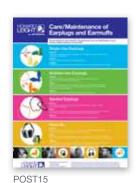














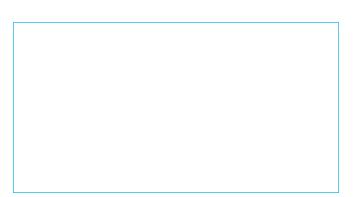
Hearing Conservation support.

As part of our ongoing commitment to your hearing safety, we have a Hearing Conservation Specialist as part of our team, who can assist with seminars, fit training and to discuss your workplace conservation requirements.

Hearing Support Material can be obtained by contacting your local Sperian representative or by contacting the Sperian Marketing Department by email: marketing.australia@sperianprotection.com or by phoning our Customer Service Centre on 1300 139 166 (Australia) or 0800 322 200 (New Zealand)







SPERIAN PROTECTION AUSTRALIA PTY LTD

43 Garden Boulevard, Dingley, Victoria 3172 Australia

Tel: 1300 139 166 Fax: 1300 362 491 New Zealand Tel: 0800 322 200

