

3M™ PELTOR™ X Series X4B and X5B Neckband Earmuffs

Technical Data Sheet

Product description

With a low-profile neckband and adjustable head strap, the 3M™ PELTOR™ X Series Neckband Earmuff adapts to the variety of headgear worn in a wide range of industries. Pairing adaptability with function, this allows workers to protect their hearing while wearing other protective headgear.

The design of the neckband allows earmuffs to be worn with a variety of face shields and headgear. The 3M™ PELTOR™ X Series Neckband Earmuff is compatible with headgear without accessory slots. Soft, adjustable head strap helps to maintain a secure fit with many different types of headgear.

NOTE: The neckband version is NOT electrically insulated.

Applications

Durable in rugged environments due to lightweight stainless steel band and high-strength cups. Boosted noise-blocking capability from specially formulated foam ear-cup inserts and cushions help keep out hazardous noise.

X marks the spot for comfortable hearing protection. Fit and your Personal Attenuation Rating with the X Series can be confirmed using the 3M™ E-A-Rfit™ Dual-Ear Validation System.

Standards

The X Series Neckband X4 & X5 Earmuffs have been tested by an accredited laboratory in accordance with the requirements stipulated in Australian/New Zealand Standard AS/NZS 1270:2002.

Declaration(s) of Conformity are available at:
www.3M.com/Hearing/certs.



Quick Reference

	X4B	X5B
Attenuation Data		
SLC ₉₀	29dB	34dB
Class	5	5
Tested to	AS/NZS1270:2022	AS/NZS1270:2022
Physical Properties		
Clamp Force	12.5 N	12.9 N
Weight	202g	319g
Material Listing		
Neckband	Stainless Steel Wire, Polyolefin, Acetal	
Cup Material	ABS	
Cushion	PVC and PU Foam	
Insert (Liner)	PU Foam	
Other		
Colour	Light Green/Black	Dark Grey/Black
Hygiene Kit	HYX4	HYX5
Compatible with 3M™ E-A-Rfit™ Validation System	Yes	

Fitting instructions

Research suggests that users may receive less noise reduction than indicated by the attenuation label value(s).

Performance will be reduced by anything that impairs the seal of the cushions against the wearers head e.g., thick spectacle frames, goggles, respirator straps, balaclavas, etc. If spectacles are worn, cushions must be soft and subtle to ensure seal. Select thin, flat temples or straps when wearing this product in combination with other PPE (safety glasses, goggles, or respiratory protection), to minimize interference with the seal of the earmuff cushions (i.e., acoustic seal).

Prior to fitting, inspect the product to ensure it is not damaged. Follow manufacturer’s instructions.

Neckband Earmuff

To fit the hearing protector:

1. Connect the two halves of the head strap together using the hook and loop fastener (Fig 1)
2. Insert the stitched end of the strap through the slots on each of the ear cups (Fig 2a, 2b). Each end of the strap should be held securely in ear cup slot
3. To adjust the length of the head strap, pull the two halves apart and re-attach so that the strap is firmly secured across the top of your head (Fig 3-5).

Caution: The neckband earmuffs must be worn with the head strap correctly attached to keep them firmly in position to maintain an effective acoustic seal. The protection level provided by neckband earmuffs may be reduced if the head straps are not worn correctly.

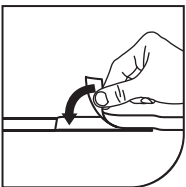


Fig 1

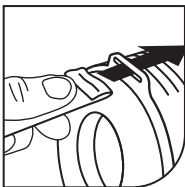


Fig 2a

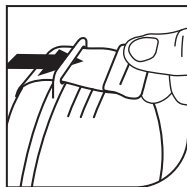


Fig 2b



Fig 3



Fig 4



Fig 5

Fit Check

When hearing protectors are correctly worn your own voice should sound hollow and sounds around you should not sound as loud as before.

Hearing Protector Fit Testing

The 3M™ E-A-Rfit™ Dual-Ear Validation System

The success of your hearing conservation program requires more than offering earplugs or earmuffs. Each worker needs to wear the most effective hearing protector for the environment and the correct fit for their unique anatomy.

With 3M™ E-A-Rfit™ Dual-Ear Validation System, you can quickly identify how much protection each worker receives from their 3M hearing protectors.

The Technology Behind 3M™ E-A-Rfit™

The 3M™ E-A-Rfit™ Dual-Ear Validation System is based on Field Microphone-In-Real Ear (F-MIRE) technology that measures the effectiveness of hearing protectors from inside a worker’s ears, providing accurate, quantitative results.

The tester wears a pair of modified 3M™ probed hearing protectors connected to a dual-element microphone. A loudspeaker is placed in front of the tester. When it emits a broadband noise, the dual-element microphone measures the signal in the ear canal and outside the ear plug. In less than five seconds, the difference between the two measurements is calculated and a Personal Attenuation Rating (PAR) is displayed.

It Starts with PAR.

The 3M™ E-A-Rfit™ Validation System puts the worker in the context of their noise environment and helps you understand their level of attenuation.

The results you get from the 3M™ E-A-Rfit™ is displayed as a PAR. The PAR is a numerical value that shows the reduction in sound level within the ear when a hearing protector is worn. The resulting PAR, combined with the worker’s exposure to noise, is used to determine if a worker is receiving appropriate protection from the noise hazard.

Knowing the PAR lets you identify workers who are inadequately protected, so you can provide real-time intervention and training.

Key Benefits of the 3M™ E-A-Rfit™ Dual-Ear Validation System include:

- Tests both ears simultaneously in less than 5 seconds
- Science-based, quantitative testing
- Fast, clear, and accurate results
- Tests 7 frequencies—125Hz to 8000Hz
- 3M™ Earplug, earmuff and headset (comms) testing capability

Contact your 3M Personal Safety Specialist to find out more about our 3M™ E-A-Rfit™ Dual-Ear Validation System or for assistance in solving your complex or day-to-day hearing conservation challenges.

* The 3M™ E-A-Rfit™ Dual-Ear Validation probed test cushions for X4B and X5B neckband earmuffs do not include the looped back plate (light grey), which is needed to attach the head strap for valid fit test results. The looped plate should be temporarily removed from the test subject’s regular cushions and attached to the probed cushions as shown for fit testing with the headstrap. Please read section on Cleaning & Maintenance for further guidance. If you require further information, contact your local 3M branch.

Attenuation Data

3M™ PELTOR™ X4B Neckband Earmuffs

AS/NZS 1270:2002

Frequency (Hz)	125	250	500	1000	2000	4000	8000	SLC ₈₀	Class	Clamp Force
Mean Attenuation (dB)	19.2	18.7	26.9	37.1	36.8	43.3	40.8	29 dB	5	12.5 N
Standard Deviation (SD) (dB)	4.3	3.9	5.1	5.3	3.5	5.6	4.9			
Mean minus SD (dB)	14.9	14.8	21.8	31.8	33.3	37.3	35.9			

Hearing protector Class 5 tested to AS/NZS1270. When selected, used and maintained as specified in AS/NZS1269, this protector may be used in noise up to 110dB(A) assuming an 85dB(A) criterion. A lower criterion may require a higher protection class.

3M™ PELTOR™ X5B Neckband Earmuffs

AS/NZS 1270:2002

Frequency (Hz)	125	250	500	1000	2000	4000	8000	SLC ₈₀	Class	Clamp Force
Mean Attenuation (dB)	22.8	24.4	34.8	43.1	38.7	40.4	39.7	34 dB	5	12.9 N
Standard Deviation (SD) (dB)	4.8	3.9	5.0	4.1	3.8	4.4	3.8			
Mean minus SD (dB)	18.0	20.5	29.8	39.0	34.9	36.0	35.9			

Hearing protector Class 5 tested to AS/NZS1270. When selected, used and maintained as specified in AS/NZS1269, this protector may be used in noise up to 110dB(A) assuming an 85dB(A) criterion. A lower criterion may require a higher protection class.

Mean = Mean attenuation value derived from testing in accordance with AS/NZS 1270:2002.

SD = Standard Deviation derived from testing in accordance with AS/NZS 1270:2002.

Mean-SD = Mean attenuation value minus Standard Deviation.

SLC₈₀ = Single number rating commonly used in Australia and New Zealand to compare acoustic performance of hearing protectors. The subscript '80' indicates that in well managed hearing protector programs, the protection provided is expected to equal or exceed the SLC₈₀ in 80% of protector-wearer noise spectrum combinations.

Class = A simplified process for selecting hearing protectors based on the wearers 8-hour equivalent continuous A-weighted sound pressure level.

3M strongly recommends personal fit testing of hearing protectors. Research suggests that users may receive less noise reduction than indicated by the attenuation label value(s) on the packaging due to variation in fit, fitting skill, and motivation of the user. Refer to applicable regulations and guidance on how to adjust attenuation label value(s). In the absence of applicable regulations, it is recommended that the attenuation label value(s) be reduced to better estimate typical protection.

The effectiveness of a hearing protector reduces dramatically when the hearing protector does not fit properly, is incorrectly inserted, or is not worn 100% of the time during ALL hazardous noise events. Removal of the hearing protector, even for brief moments, substantially reduces protection and greatly increases the risk of hearing damage.

Cleaning and Maintenance

Follow recommended care and cleaning instructions in order to maintain best noise reduction and function.

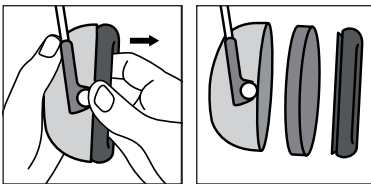
Cleaning

1. After use, wipe outside cups and hygiene pads so they remain clean and hygienic. The product be cleaned using mild detergent and water. Do not immerse in water. Do not clean with solvents such as acetone, or with waterless hand cleaners or products containing lanolin.
2. If the earmuffs cannot be cleaned or are damaged, dispose of the product and obtain a new pair.

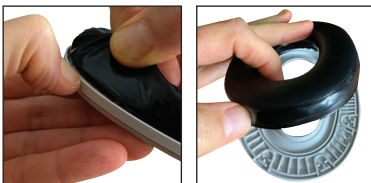
Maintenance – Changing the Hygiene Kit

Cushions and inserts can be replaced by using the approved Hygiene Kits for your 3M™ PELTOR™ Product. See 'Ordering Information' section.

1. Remove the existing earmuff cushion from your headset by placing your fingers in the cup to help enable you to pull the earmuff cushion out.



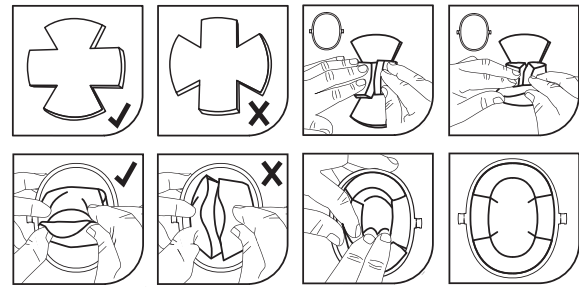
2. Once you have removed the earmuff cushion from the headset, proceed with the removal of the grey spacer from the existing earmuff. To separate the earmuff cushion from the grey spacer, carefully pull apart the cushion with one hand whilst forcing apart the grey spacer with the other.



3. Remove the foam inserts located inside the hearing protector cups and replace with the new foam inserts located in the new hygiene kit.



- 3a For the X5 series headsets, firstly pull out the foam insert from your new hygiene kit and place it on a flat surface as depicted in picture with the tick below. Fold side tabs into the middle and then fold top and bottom tabs on top of the side tabs. Place folded foam into the cup and maneuver until the hygiene kit is sitting snugly in the cup.



4. Connect the new earmuff located in your hygiene kit into the grey spacer by pressing down and around the cushion until the cushion securely clicks into place. The new earmuff cushion will only lock onto the rough side of the grey spacer, and not the smooth side. Securely lock the new cushion and grey spacer onto the hearing protector cups with the newly inserted foam inserts.



- 3M recommends replacing the hygiene kit every six months to maintain acceptable noise reduction, hygiene and comfort. In hot and humid environments more frequent changes may be required to maintain acceptable hygiene.
- 3M™ PELTOR™ HY100A Clean Hygiene Pads can be applied onto the earmuff cushions to help absorb sweat and moisture for improved comfort and hygiene.

Storage

- Store the product in a clean and dry area before and after use.
- Always store the product in the original packaging and away from any sources of direct heat or sunlight, dust and damaging chemicals.
- Operating temperature range: – 20°C (-4°F) to 50°C (122°F).
- Storage temperature range:– 20°C (-4°F) to 40°C (104°F).
- Relative humidity: <90%.

Disposal

If the product is to be disposed*, it should be disassembled and disposed of as solid waste. Please see local authority regulations or disposal advice and locations.

* Discard the product within 5 years from date of manufacture or immediately if damaged or cannot be cleaned.

Ordering Information

3M ID	Model	Description
Headsets		
UU008197848	X4B	3M™ PELTOR™ X4B Neckband Earmuffs
UU008197863	X5B	3M™ PELTOR™ X5B Neckband Earmuffs
Accessories – Hygiene		
XA007707608	HYX4	3M™ PELTOR™ HYX4 Hygiene Kit (cushion and foam insert/ liner)
XA007707616	HYX5	3M™ PELTOR™ HYX5 Hygiene Kit (cushion and foam liner)
XH001651351	HY100A	3M™ PELTOR™ HY100A Clean Hygiene Pad
3M™ E-A-Rfit™ Dual-Ear Validation System – Probe		
70071691136	393-3005-2	3M™ PELTOR™ Earmuff Probed Test Cushion D



WARNING!

These hearing protectors help reduce exposure to hazardous noise and other loud sounds. Misuse or failure to wear hearing protectors at all times that you are exposed to noise may result in hearing loss or injury. For proper use, see supervisor, User Instructions, or call 3M TechAssist Helpline 1800 024 464.

Always ensure the hearing protection device (HPD) is:

- Suitable for the application;
- Fitted correctly;
- Worn during all periods of exposure;
- Replaced when necessary.

Important Notice: To the extent permitted by law, 3M shall not be liable for any loss or damage including any loss of business, loss of profits, or for any indirect, special, incidental or consequential loss or damage arising from reliance upon any information herein provided by 3M. Nothing in this statement will be deemed to exclude or restrict 3M's liability for death or personal injury arising from its negligence.



3M Australia Pty Ltd
Personal Safety Division
 Bldg A, 1 Rivett Road
 North Ryde NSW 2113

TechAssist Helpline 1800 024 464
 Customer Service 1300 363 565
 Email techassist@mmm.com
 Web www.3m.com.au/ppesafety

3M New Zealand Ltd
Personal Safety Division
 94 Apollo Drive, Rosedale
 Auckland 0632

TechAssist Helpline 0800 364 357
 Customer Service 0800 252 627
 Email techassist@mmm.com
 Web www.3m.com/nz/ppesafety

PSD Products are Occupational Use Only.
 3M, PELTOR and E-A-RFit are trademarks of 3M. All other trademarks are property of their respective owner.
 © 3M 2023. All rights reserved.
 AV011510979