

3M™ PELTOR™ CH-5 High Attenuation Headset Headband

Technical Data Sheet

Description

The 3M™ PELTOR™ CH-5 High Attenuation headsets are intended to help provide protection against hazardous noise levels and very loud sounds. With new innovative technology and design, the CH-5 headset achieve a very high attenuation. A water tight boom microphone (IP68) allows for operation in wet conditions. Easy to use and maintain.

Features

- Professional Hearing Protection with one of the highest SLC₈₀ values on the market
- Noise attenuating ear cups help provide hearing protection in environments with extreme hazardous noise
- Water resistant microphone (IP68)
- Robust construction, easy to maintain
- Compatible with 3M™ E-A-Rfit validation system

Applications

The 3M™ PELTOR™ CH-5 High Attenuation Headsets offer a very high noise attenuation and impact sound protection. Designed to be used in extreme military environments such as tanks (crew headsets), ground crew around fighter jets and helicopters together with 3M™ PELTOR™ PTT Adapters or direct to an intercom system.

Standards

This 3M™ PELTOR™ Headsets has been tested by an accredited laboratory in accordance with the requirements specified in the Australian/New Zealand Standard AS/NZS1270:2002.

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



MT73H450A-86



Hearing protection for communicating with external two-way radio



Noise cancelling boom microphone for clear speech transmission in noisy environments



Quick Reference

3M™ PELTOR™ CH-5 High Attenuation Headset Headband MT73H450A-38 / MT73H450A-86

Attenuation Data	
SLC80	37dB
Class	5
Tested to	AS/NZS1270:2002
Physical Properties	
Clamp Force	10.7 N
Weight (Batteries Included)	498g
Material Listing	
Cup	ABS Plastic
Headband	PVC, PA, Stainless Steel Wire
Helmet Attachment Arm /Neckband	N/A
Cable	PE,TPE
Two-Point Fastener	POM
Cushion	PVC foil and PUR foam
Insert (Liner)	PUR foam
External Connector	Metal Bronze
Speech Microphone	ABS,PA
J22 (Speech Microphone)	TPE
PTT Button	PBT
Specifications	

Wired connectivity



Microphone/ Type	Noise cancelling microphone, Dynamic 150 Ohm, IP 68 (6m/30min) Sensitivity $-71\text{dB} \pm 3\text{dB}$ (0dB=1v/Pa 1KHz) @50CM Frequency response 200Hz~7KHz
Speakers	230 Ohm +/-15%, SPL 93 +/- 3dB
Operating temperature	-20°C (-4°F) to 50°C (122°F)
Storage temperature	-20°C (-4°F) to 40°C (104°F) <90% humidity
Product lifetime	Up to 5 years
Other	
Colour	Dark Grey
Hygiene Kit	HY45
Compatible with 3M™ E-A-Rfit™ Validation System	Yes
Compatible with 3M™ Versalfo™	N/A
Helmet Attachment Backplate	No

Use limitation: Never modify or alter this product.

Fitting Instructions

Inspect the hearing protector before each use. If damaged, select an undamaged hearing protector or avoid the noisy environment.

When additional personal protective equipment is necessary (e.g. safety glasses, respirators, etc.), select flexible, low profile temples or straps to minimize interference with the earmuff cushion. Remove all other unnecessary articles (e.g. hair, hats, jewelry, headphones, hygiene covers, etc.) that could interfere with the seal of the earmuff cushion and reduce the protection of the earmuff.

Headband Headset

To fit the hearing protector:

1. Slide out the cups and tilt the top of the cup out, as the cable must be on the outside of the headband (Fig 1).
2. Pull the cups apart and place the earmuffs over the ears so that the cushions form a snug seal around the ears.
3. Adjust the height of the cups by sliding them up or down while holding the headband in place (Fig 2).
4. The headband should be positioned across the top of your head (Fig 3)



Fit Check

When hearing protectors are correctly worn, your 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

Attenuation Data

3M™ PELTOR™ CH-5 High Attenuation Headset, Headband MT73H450A-38, MT73H450A-86

AS/NZS 1270:2002

Test Frequency (HZ)	125	250	500	1000	2000	4000	8000	SLC ₈₀	Class	Clamp Force
Mean Attenuation (dB)	25.5	26.2	37.8	43.1	39.0	41.8	40.0	37dB	5	10.7 N
Standard Deviation (SD) (dB)	3.0	2.5	3.4	2.7	2.7	3.2	3.2			
Means minus SD (dB)	22.5	23.7	34.4	40.4	36.3	38.6	36.8			

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

- Use a cloth wetted with soap and warm water to clean the outer shells, headband and ear cushions.

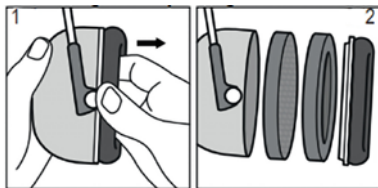
NOTE: Do NOT immerse the hearing protector in water.

If the hearing protector gets wet from rain or sweat, turn the earmuffs outwards, remove the ear cushions and foam liners, and allow to dry before reassembly. The ear cushions and foam liners may deteriorate with use and should be examined at regular intervals for cracking or other damage. When used regularly, 3M recommends replacing the foam liners and ear cushions at least twice a year to maintain consistent attenuation, hygiene, and comfort. In hot and humid environments more frequent changes may be required to maintain acceptable hygiene. If an ear cushion is damaged, it should be replaced.

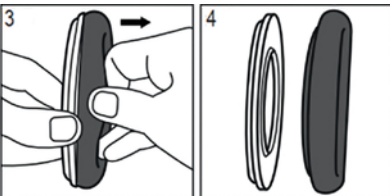
Maintenance - Changing the Hygiene Kit

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

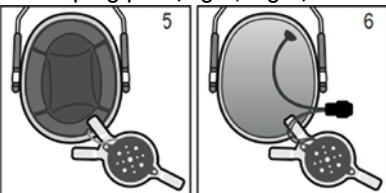
1. Remove the earmuff cushion, the spacer, the foam ring and the damping pad from the cup. (Fig 1, Fig 2)



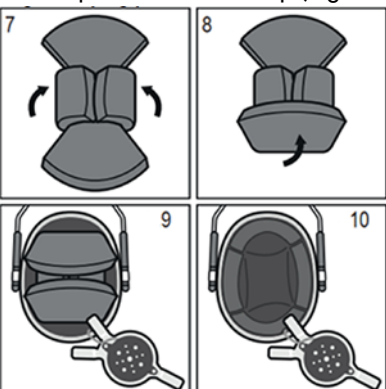
2. Remove the earmuff cushion from the spacer (save the spacer) (Fig 3, Fig 4)



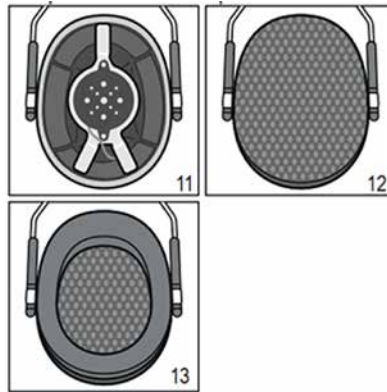
3. Move the earphone outside the cup and remove the large damping pad (Fig 5, Fig 6)



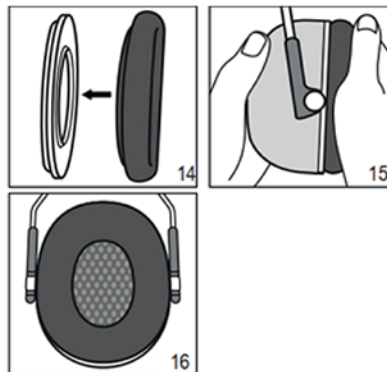
4. Place the new large damping pad beside the cup as shown. Fold the sides of the large damping pad inwards and place inside the cup (Fig 7 - Fig 10)



5. Place the earphone inside the large damping pad and place the new damping pad and the new foam ring on top (Fig 11 - Fig 13)



6. Attach the new earmuff cushion to the spacer, place on top of the foam ring and press together (Fig 14 - Fig 16)



CAUTION: Always make sure that the communication is functioning after replacing the hygiene kit.

- 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.
- Storage temperature range: -20°C (-4°F) to 40°C (104°F).
- Relative humidity: <90%.
- For headband versions: make sure that no force is applied to the headband and that the cushions are not compressed.
- Helmet attachment version: ensure the earmuffs are in the storage position and that the cushions are not compressed.

Disposal

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

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

Australia: Customers must refer to their Local Council Municipal area for disposal of electronics at their end of life.

New Zealand: Customers must dispose of electronics at their end of life in their local e-waste disposal bins.

Ordering Information

3M Code	Model #	Description
Headsets		
UU008027532	MT73H450A-38	3M™ PELTOR™ CH-5 Hearing Protector, Headband, J11 PELTOR™ Connection
UU008027565	MT73H450A-86	3M™ PELTOR™ CH-5 Hearing Protector, Headband, J11 NATO Connection
Accessories - Microphone		
UU008163634	MT73/1	3M™ PELTOR™ Water Resistant Boom Microphone (IP 68)
UU008159483	M171/2	3M™ PELTOR™ M171/2 Wind Shield/Wind Protector, 2 pcs for speech microphone
AT010580697	HYM1000	3M™ PELTOR™ HYM1000 Microphone Protection
Accessories - Hygiene		
UU008117135	HY45	3M™ PELTOR™ HY45 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

In the box

- 1 x Headset
- 1 x User Instruction

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.



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