

3M™ PELTOR™ EEP-100 Electronic Earplugs

Technical Data Sheet

Description

The 3M™ PELTOR™ EEP-100 Electronic Earplug helps protect your hearing, and can help promote situational awareness and communications in challenging environments. This kit includes a protective charging case and an assortment of eartips.

The earpieces are rechargeable via a micro-USB jack on the charging case. The case also provides easy and convenient storage of the earpieces when not being used. The small and lightweight design helps improve the overall comfort and user experience, and makes it compatible with most head borne Personal Protective Equipment (PPE), such as helmets and face shields.



EEP-100

Features

- Helps provide hearing protection via replaceable eartips
- Level-dependent function (for situational awareness)
- Intuitive one-button operation
- Rechargeable via USB
- Durable storage and charging case (IP54)
- Small and lightweight design
- Compatible with most head-borne 3M Personal Protective Equipment
- Compatible with 3M™ E-A-Rfit validation system



Level-dependent
function for ambient
listening to help improve
situational awareness



Applications

The 3M™ PELTOR™ EEP-100 electronic earplugs can enhance communication in noisy environments. Suitable for users who need to be aware of their surroundings in noisy environments. Can be used in most industrial applications where earmuffs may not be compatible with worn PPE. Can also be used by hunters and recreational shooters.

Standards

This 3M™ PELTOR™ Hearing protector 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.

Quick Reference

3M™ PELTOR™ Electronic Earplugs EEP-100 EU					
	3M™ UltraFit™ Communication Tips 370-TEPS-25, 370-TEPM-25, 370-TEPL-25	3M™ PELTOR™ CCC Communication Eartip CCC-GRM-25	3M™ Skull Screws™ Communication Ear Tips PELTIPS-01 (Not in Kit. Purchased Separately)	Earpiece	Charging Case
Attenuation Data					
SLC80	16dB	23dB	23dB	N/A	N/A
Class	2	4	4	N/A	N/A
Tested to	AS/NZS1270:2002	AS/NZS1270:2002	AS/NZS1270:2002	N/A	N/A
Physical Properties					
Weight	N/A	N/A	N/A	4.7g	57g
Case Size (LxWxH)	N/A	N/A	N/A	N/A	89.6mm x 61.6mm x 27.3mm
Material Listing					
Power Control Button	N/A	N/A	N/A	Silicone TPV	N/A
Level Dependent Microphone for Ambient Listening	N/A	N/A	N/A	ABS Plastic	N/A
Charging Contacts	N/A	N/A	N/A	Gold	N/A
Eartip Stem	N/A	N/A	N/A	ABS Plastic	N/A
Earplugs/Eartips	SEBS TPE	Polyurethane Foam	Polyurethane Foam	N/A	N/A
Case Material	N/A	N/A	N/A	N/A	ABS
Specifications					
<i>Earplug Power/Electrical Characteristics</i>					
Battery	N/A	N/A	N/A	Non-replaceable lithium-ion battery	N/A
Charging	N/A	N/A	N/A	In charging case using Micro B USB Cord	Micro B USB Cord
Charging Time	N/A	N/A	N/A	In charging case - approximately 180 minutes	Approximately 180 minutes.
Operating Time	N/A	N/A	N/A	Up to 16 hours	N/A
Earplug Volume Steps	N/A	N/A	N/A	3 Steps: Low, Normal, High	N/A
<i>Operating & Storage Temperature</i>					
Operating temperature	N/A	N/A	N/A	-20°C to +50°C (-4°F to 122°F)	0°C to +45°C (32°F to 113°F)
Storage Temperature (<90% humidity)	N/A	N/A	N/A	N/A	Complete kit: -20°C to 40°C (104°F).
<i>Microphone (Level Dependent Technology)</i>					
Type	N/A	N/A	N/A	Omni-directional	N/A
Other					
Colour	Khaki Green/ Cream/Brown	Grey	Grey	Green	Green
Level-Dependent Function	N/A	N/A	N/A	Yes	N/A
Compatible with 3M™ E-A-Rfit™ Validation System	Yes	Yes	Yes	N/A	N/A

Use limitation: Never modify or alter this product.

Fitting Instructions

Hearing protectors need to be in good working order and be worn as directed. Please visit the User Instructions for further guidance if needed.

To fit the hearing protector:

- Earpiece should be powered off prior to insertion.
- Do not insert the earpiece directly into the ear without a correctly attached 3M™ PELTOR™ Eartip.
- Eartips should be clean and in good condition before fitting.

Eartip Selection

Three 3M™ UltraFit™ Eartip sizes (small: 7-12 mm, medium: 8-13 mm, and large: 9-16 mm) are provided as well as a single size of the 3M™ PELTOR™ CCC-GRM-25 Eartips (6-9 mm).

To choose the appropriate 3M™ UltraFit™ Eartip size, begin with the medium size. Ensure that it is small enough to penetrate the ear canal and provide a secure fit but also is large enough that at least one flange seals the ear canal at the canal entrance. If the medium size does not provide a proper fit, proceed with the small or large size eartips as these were designed to fit users for whom the medium size is not suitable.

With the 3M™ CCC-GRM-25 Eartip (6-9 mm), one size is intended to fit most.

With the 3M™ Skull Screw™ Eartip (8-14 mm), one size fits most users also, but this Eartip is not included in pack when purchasing the EEP-100 or TEP-200. It can however be purchased separately. Please see 'Ordering Information'

WARNING: Do not use product if proper fit cannot be obtained.

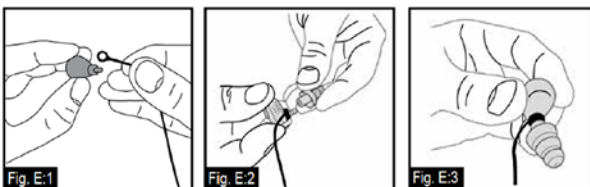
Attaching Eartips and Optional Retention Cord (not included with EEP-100 EU)

Only Use 3M™ PELTOR™ Eartips designed for use with this product. Do not insert the earpiece directly into the ear without a correctly attached 3M™ PELTOR™ Eartip.

Note: For the EEP-100 EU, the retention cord may be purchased separately (see 'Ordering Information').

To attach optional retention cord to eartips:

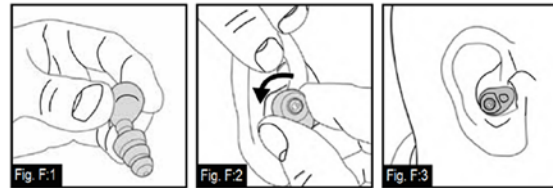
1. To attach the optional retention cord, place one end of the retention cord onto the eartip stem (Fig. E:1).
2. Push the eartips (Fig. E:2) onto the eartip stem.
3. Fully seat the eartip at the base of the eartip stem (Fig. E:3)



Fitting Eartip

1. Select a proper eartip size for your ear canal.
2. Hold the earplug with the eartip attached (Fig. F:1).
3. Insert the eartip into the ear canal while pulling the ear outward away from the head and upward with the opposite hand (Fig. F:2).
4. Rotate the earplug toward the back of the head (Fig. F:3).
5. With the earplug powered off, check to ensure you have a good eartip fit. Pull the earpiece gently. It should not come out of the ear easily. If it does, repeat the insertion.

CAUTION: For greater comfort and safety, remove the eartips slowly with a twisting motion to gradually break the seal (Fig. F: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™ UltraFit™ Communication Eartips 370-TEPS-25, 370-TEPM-25, 370-TEPL-25

AS/NZS 1270:2002

Test Frequency (HZ)	125	250	500	1000	2000	4000	8000	SLC ₈₀	Class
Mean Attenuation (dB)	23.7	20.5	23.2	22.5	26.8	27.1	29.9	16dB	2
Standard Deviation (SD) (dB)	11.7	10.7	11.8	9.9	7.8	10.1	9.7		
Mean minus SD (dB)	12.0	9.8	11.4	12.6	19.0	17.0	20.2		

Hearing protector Class 2 tested to AS/NZS 1270. When selected, used and maintained as specified in AS/NZS 1269, this protector may be used in noise 90 dB(A) to less than 95dB(A), assuming an 85dB(A) criterion.

3M™ PELTOR™ CCC Communication Ear tips CCC-GRM-25

AS/NZS 1270:2002

Test Frequency (HZ)	125	250	500	1000	2000	4000	8000	SLC ₈₀	Class
Mean Attenuation (dB)	24.8	22.8	26.4	27.2	33.4	35.7	38.0	23dB	4
Standard Deviation (SD) (dB)	8.9	8.5	9.8	7.3	4.6	5.2	9.7		
Mean minus SD (dB)	15.9	14.3	16.5	19.9	28.8	30.5	28.3		

Hearing protector Class 4 tested to AS/NZS 1270. When selected, used and maintained as specified in AS/NZS 1269, this protector may be used in noise 100 dB(A) to less than 105dB(A), assuming an 85dB(A) criterion.

3M™ Skull Screws™ Communication Eartips PELTIPS-01 (Not in Kit. Purchased Separately)

AS/NZS 1270:2002

Test Frequency (HZ)	125	250	500	1000	2000	4000	8000	SLC ₈₀	Class
Mean Attenuation (dB)	26.9	23.6	28.2	29.2	32.6	35.3	36.9	23 dB4	4
Standard Deviation (SD) (dB)	11.8	10.2	11.2	8.8	6.6	7.8	10.8		
Mean minus SD (dB)	15.0	13.4	17.1	20.4	26.0	27.5	26.1		

Hearing protector Class 4 tested to AS/NZS 1270. When selected, used and maintained as specified in AS/NZS 1269, this protector may be used in noise 100 dB(A) to less than 105dB(A), assuming an 85dB(A) criterion.

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.

Charging Case

The interior of the charging case should be kept free from dust and debris. The charging points must make direct contact with the charging contact on the earpiece to ensure charging.

Cleaning these contact points with a cotton swab or soft cloth is recommended if visual inspection reveals debris or if the user experiences problems charging the earpieces.

To maintain water resistance capability, the perimeter of the charging case and seal ring must be kept free of dirt and other materials that would prevent proper closing of the case and the Micro B USB charging port cover must be closed.

Earpiece

Earpieces can be cleaned with a lightly damp cloth. Using a cotton swab to clean the charging contacts may be required if debris is visible or if the user experiences problems charging the earpieces.

* Remove and clean the eartips routinely and more frequently for those who produce excess ear wax.

Eartips Cleaning & Replacement

3M™ UltraFit™ Eartips (reusable): Wash eartips with warm water and soap as needed. Look for tears or cracks under any of the flanges. Replace as needed.

3M™ Skull Screw™ Eartips and 3M™ CCC-GRM-25 Eartips (disposable): Clean by wiping with a clean, dry cloth. Replace if the eartip is damaged, detached from the stem, or if it is not soft and pliable.

Battery Disposal

EEP-100 EU in-ear earplugs have a non-replaceable lithium-ion battery. Many rechargeable batteries are required to be recycled by Local, State, and National Laws. To properly recycle/dispose of the battery, always follow local solid waste disposal regulations.

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 (complete kit): -20°C to 40°C (104°F).
- Relative humidity: <90%.

Disposal

This product contains electrical and electronic components and must not be disposed of using standard refuse collection. Please consult local directives for disposal of electrical and electronic equipment.

Ordering Information

3M Code	Model #	Description
In Ear Communication		
70071730785	EEP-100 EU	3M™ PELTOR™ EEP-100 Electronic Earplug Kit
Accessories		
70071673795	TEP-CORD	3M™ PELTOR™ Replacement Cord
Communication Tips		
70071673720	370-TEPS-25	3M™ UltraFit™ Communication Eartip Replacement, SMALL
70071673738	370-TEPM-25	3M™ UltraFit™ Communication Tips Replacement, MEDIUM
70071673746	370-TEPL-25	3M™ UltraFit™ Communication Eartips Replacement, LARGE
70071675212	CCC-GRM-25	3M™ CCC-GRM Communication Eartip Replacement
70071615275	370-1019-10	3M™ Skull Screws™ Communication Ear Tips Replacement . (Not in Kit. Purchased Separately)
3M™ E-A-Rfit™ Dual-Ear Validation System - Probe		
70071734456	393-2032-50	3M™ Ultra Fit™ Communication Eartip Probe - SMALL
70071734464	393-2033-50	3M™ Ultra Fit™ Communication Eartip Probe - MEDIUM
70071734472	393-2034-50	3M™ Ultra Fit™ Communication Eartip Probe - LARGE
70071734449	393-2031-50	3M™ CCC-GRM Communication Eartip Probe
70071734431	393-2030-49	3M™ Skull Screws™ Communication Eartip Probe

In the box

- 2 x Electronic Earplugs
- 1 x Charging case
- 2 x 3M™ Ultra Fit™ Communication Tips Replacement, Large
- 2 x 3M™ Ultra Fit™ Communication Tips Replacement, Medium
- 2 x 3M™ Ultra Fit™ Communication Tips Replacement, Small
- 2 x 3M™ PELTOR™ Communication Tip, CCC-GRM
- 1 x USB cable 1 x User Instructions

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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