

3M™ PELTOR™ WS™ LiteCom Pro III Ex Headset ANZEx Certified

Technical Data Sheet

Description

The 3M™ PELTOR™ WS™ LiteCom Pro III Ex Headset is the next generation protective communication solution. With an integrated, programmable analog/digital two-way radio, Bluetooth® Multipoint connectivity, noise-cancelling speech microphone, and level-dependent function for ambient listening, the 3M™ WS™ LiteCom Pro III Ex Headset not only helps protect you against potentially hazardous noise, but also makes it easy to communicate in noisy environments and helps you maintain situational awareness.

Features

- Programmable analog/digital DMR two-way radio communication
- Bluetooth® multipoint functionality
- Water tight speech microphone (IP68)
- Level-dependent function for ambient listening
- Voice menu with multiple language selection
- Push-to-Listen function
- Rechargeable battery, Li-Ion
- Voice operated transmission (VOX)
- Busy channel indication
- Auto power off function
- Battery status indication
- IS (Intrinsically Safe) approval ANZEx/IECEX/ATEX

Applications

The 3M™ PELTOR™ WS™ LiteCom Pro III Ex Headset, ANZEx-approved, offers wireless communication in noisy environments. Can be used for work in Oil & Gas Industry, Mining and where intrinsic safety products are required. Approved for use in potentially explosive environments in accordance with the ANZEx scheme and the IECEx scheme for dust, gas and underground mining.



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



Hearing protection with built-in two-way radio



Intrinsically safe design



Bluetooth® Connectivity

Approvals

The intrinsically safe WS LiteCom Pro III (EU) models are approved as Group I equipment for use in mines susceptible to firedamp, as group II equipment for use in explosive gas atmosphere and as group III equipment for use in explosive dust atmosphere. The products are certified by Ex Testing & Certification Pty Ltd according to certificate ANZEx 23.4184X and by DNV Product Assurance AS according to IECEx PRE 16.0086X with Ex protection:

Ex ia I Ma $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$

Ex ia IIC T4 Ga $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$

Ex ib IIIC T130°C Db $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$

Standards

3M Svenska AB hereby declares that this 3M™ PELTOR™ Headset is in compliance with the essential requirements and other provisions set out in the ACMA (Australian Communications and Medical Authority) regulations. The product has been tested by an accredited laboratory in accordance with the requirements is AS/NZS 1270 and has met the specifications of hearing protector Class 5. When selected, used and maintained as specified in AS/NZS 1269, this hearing protector may be used in noise up to 110db(A) assuming and 85 db(A) criterion. A lower criterion may require a higher protector class.

Specifications

Model	Weight (with ACK082)
Headband	521 g
Helmet attachment	512 g
Neckband	475 g
Built-in Two-way Radio	
Frequency range	403 – 470 MHz
Operation mode	Simplex
Channels	70 programmable channels
Channel separation	12,5 kHz and 25 kHz
Modulation	Analog: 2,5 kHz (FM) and 5 kHz (FM) Digital: 2,5 kHz (4-level FSK)
Microphone type	Dynamic (MT73)
Receiver sensibility	Typical -120 dBm
Selective squelch	Programmable (supports CTCSS and DCS)
Output power	200 / 20 / 10 mW ER
Range	Outdoors up to 2 km depending on conditions
Operating temperature	-20°C to +50°C
Power	
Li-Ion battery	ACK082, included in delivery
Charging time	12 hours
Capacity	3,7 V, 1350 mA, 5 Wh
Operating time	8 hours * (90 stby / 5 tx / 5 rx)
*can be increased up to 12 hours with the power save feature	
Storage	
Recommended storage conditions	-20° C - +55° C, <90% humidity
Recommended max. shelf life	Headset: 3 years Battery: 1 year

Fitting Instructions

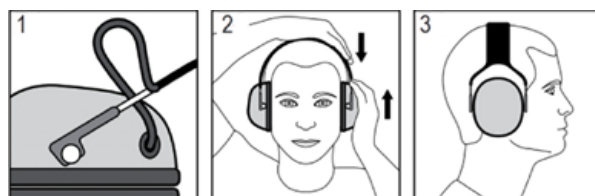
Inspect the hearing protector before each use. If damaged, select an undamaged hearing protector or avoid the noisy environment.

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).



Neckband Headset

To fit the hearing protector:

1. Place the cups in position over the ears (Fig 1).
2. Keep the cups in position, place the head strap on top of your head and lock it tight in position (Fig 2).
3. The head strap should be positioned across the top of your head and should support the weight of the headset (Fig 3).

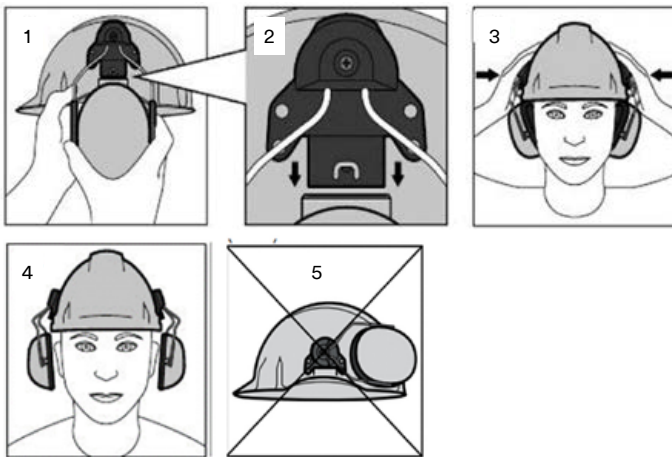
Caution: The neckband earmuffs must be worn with the head strap correctly attached to keep them firmly in position to maintain an effective acoustic seal. The protection level provided by neckband earmuffs may be reduced if the head straps are not worn correctly.



Helmet Attach Headset

To fit the hearing protector:

- **Fit the cup:** Push the attachment blade firmly into the slot on the side of the helmet until it clicks into place (Fig 1 & 2)
- **Working position:** With the cups over the ears press the arms inwards until you hear a click on both sides indicating a firm seal (Fig 3).
- **Stand-by position:** Lift the cups to the fixed stand-by position. In a noisy environment the ear muffs must be worn in the working position at all times (Fig 4).
- **Parking position:** First lift the cups to the stand-by position (Fig 4), then rotate them up to the next fixed position.
- **Ventilation mode:** Avoid placing the cups against the helmet as this prevents ventilation (Fig 5).
- **Storage mode:** When the helmet is not in use, lower the earmuffs and press them inward. Keep the cups clean and dry and store at normal room temperature.



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™ WS™ LiteCom Pro III Headset, Headband MT73H7A4D10EU, MT73H7F4D10EU-50 AS/NZS 1270:2002

Test Frequency (HZ)	125	250	500	1000	2000	4000	8000	SLC ₈₀	Class	Clamp Force
Mean Attenuation (dB)	20.7	23.9	32.0	33.9	36.1	39.6	39.6	32dB	5	14.1 N
Standard Deviation (SD) (dB)	3.5	3.3	4.0	2.2	3.7	2.6	3.3			
Means minus SD (dB)	17.2	20.6	28.0	31.7	32.4	37.0	36.3			

3M™ PELTOR™ WS™ LiteCom Pro III Headset, Neckband MT73H7B4D10EU, MT73H7B4D10EU-50 AS/NZS 1270:2002

Test Frequency (HZ)	125	250	500	1000	2000	4000	8000	SLC ₈₀	Class	Clamp Force
Mean Attenuation (dB)	16.1	18.6	30.1	36.0	37.4	38.0	37.7	30dB	5	12.6 N
Standard Deviation (SD) (dB)	3.3	4.0	3.8	3.8	4.2	3.7	4.2			
Means minus SD (dB)	12.8	14.6	26.3	32.2	33.2	34.3	33.5			

3M™ PELTOR™ WS™ LiteCom Pro III Headset, Helmet Attach MT73H7P3E4D10EU*, MT73H7P3E4D10EU-50* AS/NZS 1270:2002

Test Frequency (HZ)	125	250	500	1000	2000	4000	8000	SLC ₈₀	Class	Clamp Force
Mean Attenuation (dB)	19.1	20.0	28.4	32.2	34.5	35.9	36.7	29dB	5	11 N
Standard Deviation (SD) (dB)	4.4	4.8	4.6	3.0	3.2	3.9	4.6			
Means minus SD (dB)	14.7	15.2	23.8	29.2	31.3	32.0	32.1			

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.

* These earmuffs were tested in combination with the HC600 industrial safety helmet using the P3G adapter and may give different levels of protection if fitted to different helmets.

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

- Carry out a visual battery condition check. Replace if battery leakage or defects are detected.
- Use a cloth wetted with soap and warm water to clean the outer shells, headband and ear cushions.

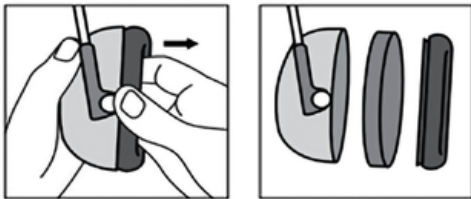
NOTE: Do NOT immerse the hearing protector in water.

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.

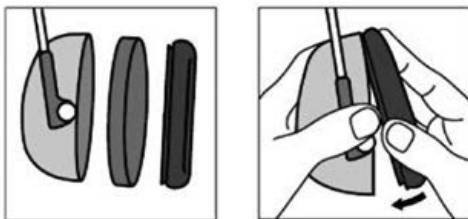
Maintenance - Changing the Hygiene Kit

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

1. Remove the cushions and inserts as shown.



2. Replace the worn or damaged cushions and insert with the new pair from the approved 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.
- Remove battery before storing the product for extended periods
- 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
UU008014225	MT73H7F4D10EU-50	3M™ PELTOR™ WS™ LiteCom Pro III Ex Headset, 403-470 MHz, Analog/Digital, Ex, EU version, Headband
UU008014233	MT73H7P3E4D10EU-50	3M™ PELTOR™ WS™ LiteCom Pro III Ex Headset, 403-470 MHz, Analog/Digital, Ex, EU version, Helmet
UU008014217	MT73H7B4D10EU-50	3M™ PELTOR™ WS™ LiteCom Pro III Ex Headset, 403-470 MHz, Analog/Digital, Ex, EU version, Neckband

Replacement Parts and Accessories

XL001644068	MT90-02	Throat microphone for WS™ LiteCom Pro III Ex Headset, ATEX
UU008176040	ACK082	Rechargeable Li-Ion battery pack (only for WS™ LiteCom Pro III Ex Headset)
11003072094	AL2AH	Charge cable for ACK082
XH001680194	FR08	Power Supply for AL2AH
XH001654579	FL5602-50	External PTT for WS™ LiteCom Pro III Ex Headset, ATEX
XH001652532	M60/2	Wind shield for surround mic
UU008197921	HY83	Hygiene kit
AT010580697	HYM1000	Hygiene tape for boom mic
UU008159483	M171/2	Wind protector for mic, 2 pcs

In the box

- 1 x 3M™ PELTOR™ WS™ LiteCom Pro III Ex Headset.
- 1 x Battery (ACK082)
- 1 x Power supply FR08
- 1 x Cable AL2AH (for ACK082)
- 1 x Hygiene kit HY83
- 1 x User instruction
- 1 x Intrinsic Safety Guide

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.

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.



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