

# 3M™ PELTOR™ CH-3 FLX2 Headset

## Technical Data Sheet



### Description

The 3M™ PELTOR™ CH-3 FLX2 Headset will bring hearing protection and communication in noisy environments into a new level of performance with newly designed speakers and microphone. The newly designed dual mold cup gives a modern and slim look together with bright yellow colour for enhanced visibility.

### Applications

The 3M™ PELTOR™ CH-3 FLX2 Headset can enhance communication in noisy environments. Suitable for work in Pulp and Paper, Construction, Airport applications and other workplaces, where the workers need to be connected to their 2-way handheld or fixed systems throughout the day to help facilitate frequent contacts with co-workers.

### Features

- Newly designed headband
- Bright yellow colour for enhanced visibility
- Detachable down lead connector for high flexibility
- Improved speaker efficiency to fit today's digital device
- New noise-cancelling, water resistant microphone (IP68)
- Compatible with 3M™ E-A-Rfit validation system

### Standards

These 3M™ PELTOR™ Headsets have 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](http://www.3M.com/Hearing/certs)

### Configuration

#### -110 Headset Standard J11

- High Attenuation Standard J11 Headset
- Connects to an external PTT with J11 port
- Also compatible with Ground Mech FLX2-201 cable

#### -111 Headset with Built-In PTT

- In-Built PTT conveniently located on the left hand side of the cup
- -111 headset suits a wide range of different cable options to match today's most common 2-way radios and wired solutions.



CH-3 FLX2 Headband (-110, -111)



CH-3 FLX2 Helmet Att. (-110, -111)



Hearing protection for communicating with external two-way radio

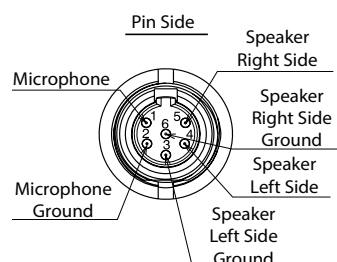


Noise cancelling boom microphone for clear speech transmission in noisy environments

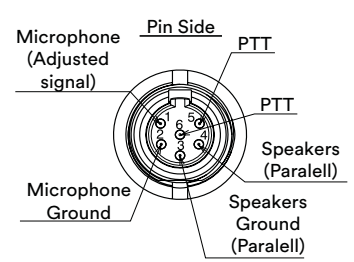


### Wiring Pin Configuration

#### -110 Headset



#### -111 Headset



## Quick Reference

	3M™ PELTOR™ CH-3 FLX2 Headsets		
	Headband MT74H52A-110 / MT74H52A-111	Neckband MT74H52B-110 / MT74H52B-111	Helmet Attach MT74H52P3E-110 / MT74H52P3E-111
<b>Attenuation Data</b>			
SLC80	31dB	30dB	29dB
Class	5	5	5
Tested to	AS/NZS1270:2002	AS/NZS1270:2002	AS/NZS1270:2002
<b>Physical Properties</b>			
Clamp Force	10.7 N	12 N	9.6 N
Weight (Batteries Included)	275g	256g	226g
<b>Material Listing</b>			
Cup		ABS Plastic	
Headband	PVC, PA, Stainless Steel Wire	N/A	N/A
Helmet Attachment Arm / Neckband	N/A	Stainless Steel Wire	Stainless Steel Wire
Cable		PE,TPE	
Two-Point Fastener		POM	
Cushion		PVC foil and PUR foam	
Insert (Liner)		PUR foam	
Level Dependent Microphone for Ambient Listening		N/A	
Speech Microphone		ABS,PA	
Cable Jack		Nickel Plated Brass	
<b>Specifications</b>			
Wired connectivity	Yes. FLX2 dependant on Version (-110 or -111). FLX2 Connector 6-Pin, Mini XLR		
Microphone/ Type	Noise cancelling microphone, Dynamic 150 Ohm, IP 68 (6m/30min) Sensitivity -71dB±3dB(OdB=1v/Pa 1KHz) @50CM Frequency response 200Hz~7KHz		
Speakers	46 mm diameter, 230 Ohm +/-10%, SPL 107 +/- 2dB, 100-8000 Hz, IP54		
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 (excl. batteries)		
<b>Other</b>			
Colour	Bright Yellow		
Hygiene Kit	HY84		
Compatible with 3M™ Versaflo™ HeadTop	No		
Compatible with 3M™ E-A-Rfit™ Validation System	Yes		
Helmet Attachment Backplate	N/A	N/A	On Product P3E (30mm)
<b>Use limitation: Never modify or alter this product.</b>			

## 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 ear muffs 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).

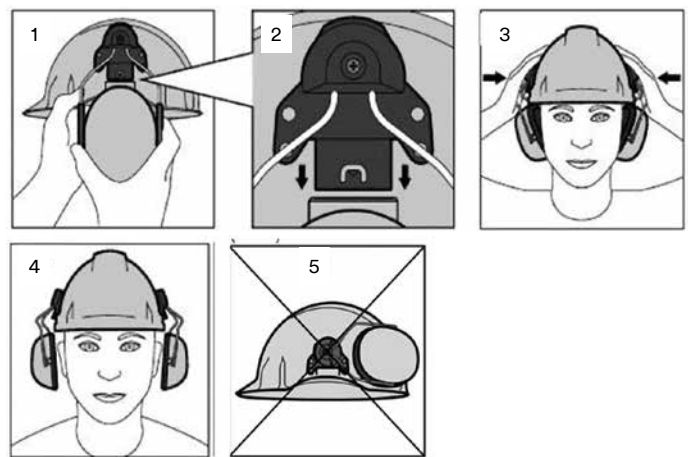
**Caution:** The neckband earmuffs must be worn with the head strap correctly attached to keep them firmly in position to maintain an effective acoustic seal. The protection level provided by neckband earmuffs may be reduced if the head straps are not worn correctly.



## 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™ CH-3 FLX2 Headband Headsets MT74H52A-110 / MT74H52A-111

AS/NZS 1270:2002

Test Frequency (HZ)	125	250	500	1000	2000	4000	8000	SLC <sub>80</sub>	Class	Clamp Force
Mean Attenuation (dB)	19.7	19.8	29.0	38.0	35.0	34.2	37.4	31dB	5	10.7 N
Standard Deviation (SD) (dB)	2.9	2.7	2.7	2.7	2.8	2.3	4.1			
Means minus SD (dB)	16.8	17.1	26.3	35.3	32.2	31.9	33.3			

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™ CH-3 FLX2 Neckband Headsets MT74H52B-110 / MT74H52B-111

AS/NZS 1270:2002

Test Frequency (HZ)	125	250	500	1000	2000	4000	8000	SLC <sub>80</sub>	Class	Clamp Force
Mean Attenuation (dB)	18.4	18.9	27.7	35.1	36.9	34.7	37.2	30dB	5	12 N
Standard Deviation (SD) (dB)	3.6	3.3	3.4	2.9	2.7	3.6	3.3			
Means minus SD (dB)	14.8	15.6	24.3	32.2	34.2	31.1	33.9			

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™ CH-3 FLX2 Helmet Attach Headset\* MT74H52P3E-110 / MT74H52P3E-111

AS/NZS 1270:2002

Test Frequency (HZ)	125	250	500	1000	2000	4000	8000	SLC <sub>80</sub>	Class	Clamp Force
Mean Attenuation (dB)	17.8	19.8	28.5	33.9	34.0	32.7	36.2	29dB	5	9.6 N
Standard Deviation (SD) (dB)	4.0	3.8	3.7	3.5	3.6	3.1	4.3			
Means minus SD (dB)	13.8	16.0	24.8	30.4	30.4	29.6	31.9			

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.

\* These earmuffs were tested in combination with the HC600 industrial safety helmet using the P3E 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

**SLC<sub>80</sub>** = 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.

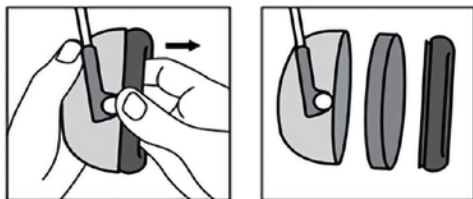
**NOTE:** Do NOT immerse the hearing protector in water.

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.

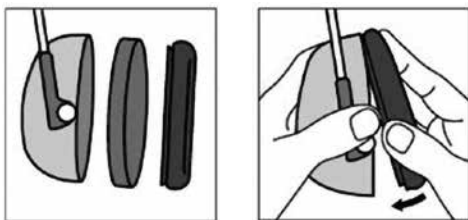
### Maintenance - Changing the Hygiene Kit

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.
- 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
<b>Headsets</b>		
UU010246302	MT74H52A-110	3M™ PELTOR™ CH-3 FLX2 J11 Headset, Headband
UU010246914	MT74H52B-110	3M™ PELTOR™ CH-3 FLX2 J11 Headset, Neckband
UU010246922	MT74H52P3E-110	3M™ PELTOR™ CH-3 FLX2 J11 Headset, Helmet Attach
UU010250932	MT74H52A-111	3M™ PELTOR™ CH-3 FLX2 Headset with Built-In PTT, Headband
UU010249074	MT74H52B-111	3M™ PELTOR™ CH-3 FLX2 Headset with Built-In PTT, Neckband
UU010247599	MT74H52P3E-111	3M™ PELTOR™ CH-3 FLX2 Headset with Built-In PTT, Helmet Attach
<b>Accessories - FLX2 Cables: -110</b>		
UU009731140	FLX2-200	3M™ PELTOR™ FLX2 Cable J11 Standard
UU010325718	FLX2-201	3M™ PELTOR™ FLX2 Cable for Ground Mechanic
<b>Accessories - FLX2 Cables: -111</b>		
UU010126348	FLX2-111	3M™ PELTOR™ FLX2 Cable for Hytera DP7*
UU010124293	FLX2-35	3M™ PELTOR™ FLX2 Cable for Icom angled 2-pin
UU010124301	FLX2-44	3M™ PELTOR™ FLX2 Cable for Icom F31/F41
UU010126330	FLX2-64	3M™ PELTOR™ FLX2 Cable for Icom F34/F44
UU010054110	FLX2-36	3M™ PELTOR™ FLX2 Cable for Kenwood 2-pin
UU009731132	FLX2-107	3M™ PELTOR™ FLX2 Cable for Kenwood Multipin
UU010126314	FLX2-18	3M™ PELTOR™ FLX2 Cable for Motorola GP900
UU009898113	FLX2-21	3M™ PELTOR™ FLX2 Cable for Motorola GP300/DP1400
UU009879477	FLX2-32	3M™ PELTOR™ FLX2 Cable for Motorola GP340
UU009731124	FLX2-63	3M™ PELTOR™ FLX2 Cable for Motorola Mototrbo
UU010126322	FLX2-65	3M™ PELTOR™ FLX2 Cable for Motorola GP344
UU010902672	FLX2-69	3M™ PELTOR™ FLX2 Cable for Motorola DP2400/3441
UU010123584	FLX2-101	3M™ PELTOR™ FLX2 Cable for Sepura STP
UU009898071	FLX2-28	3M™ PELTOR™ FLX2 Cable for Mobile/Dect Phones
<b>Accessories - Helmet Adaptors/Backplates</b>		
UU010853503	Z3GS/2 (25mm)	Helmet Adapter for 3M™ Scott Safety Helmets and 3M™ Scott Safety Visor Range
XL001642468	Z3E/2 (30mm)	Helmet Adapter for Common Helmets
XL001642484	Z3G/2 (25mm)	Helmet Adapter for 3M™ Visor Range
<b>Accessories - Hygiene</b>		
UU010391918	HY84	3M™ PELTOR™ HY84 Hygiene Kit (cushion and foam liner)
XH001651351	HY100A	3M™ PELTOR™ HY100A Clean Hygiene Pad
<b>3M™ E-A-Rfit™ Dual-Ear Validation System - Probe</b>		
70071691110	393-3001-2	3M™ PELTOR™ Earmuff Probed Test Cushion B

### In the box

- 1 x 3M™ PELTOR™ CH-3 FLX2 Headset,
- 1 x User instruction

### 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.



Available from



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