



PRO-PROTECT | PRO-COMMS
ELECTRONIC HEARING PROTECTION







PRO-PROTECT | PRO-COMMS

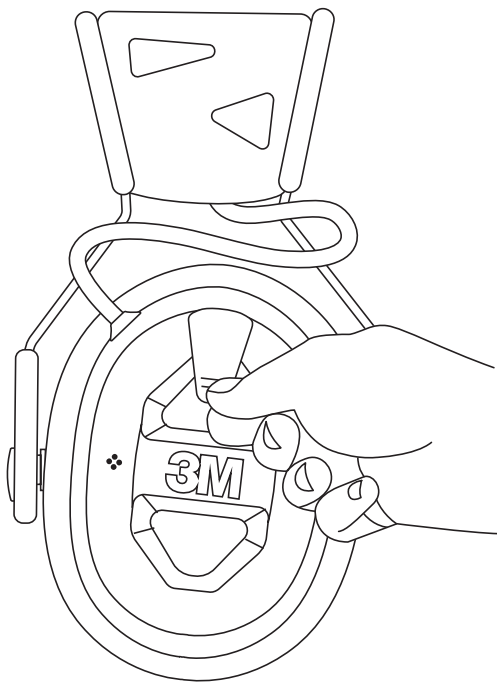
ELECTRONIC HEARING PROTECTION

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BASIC OPERATIONS

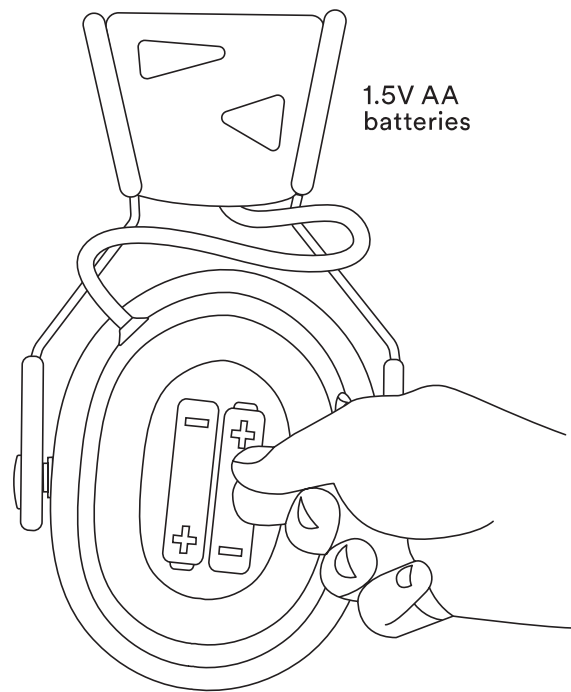
PRO-PROTECT | PRO-COMMS ELECTRONIC HEARING PROTECTION

INSTALLING BATTERIES:



Release the latch by pushing upwards.
Battery door will lift off.

INSTALLING BATTERIES:



1.5V AA
batteries

Install two 1.5V AA batteries as shown.
Replace battery door bottom-end first.

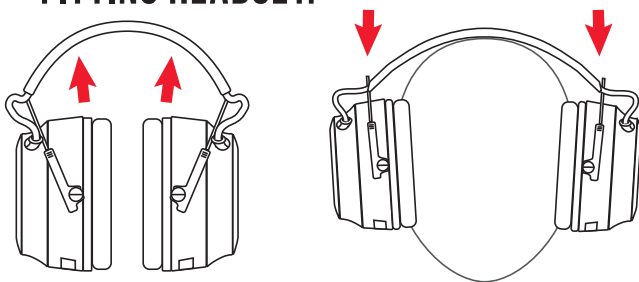
Note:

- Do not mix old and new batteries
- Do not mix alkaline, standard or rechargeable batteries

BASIC OPERATIONS

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FITTING HEADSET:



Fully extend sliders and place cups over ears so that microphones are facing forward. Then, tighten headband using sliders.

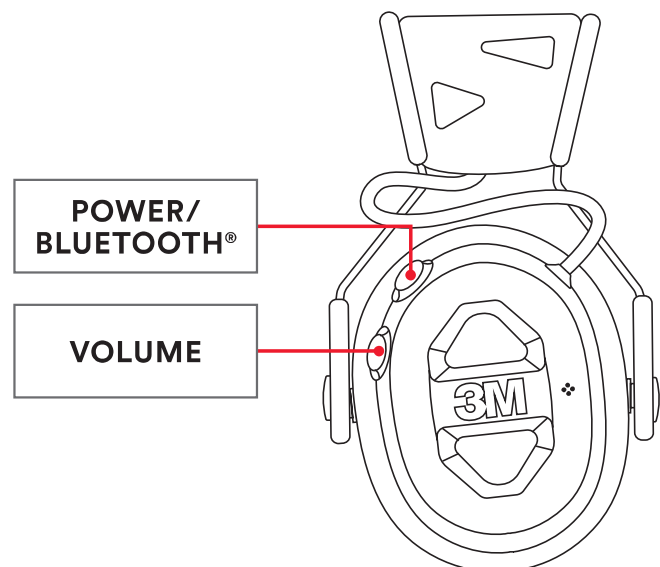
Product Lifetime

It is recommended that you replace your product within 5 years from date of manufacture. The lifetime of the product will be highly dependent on the environment in which the product is stored, used, serviced, and maintained. The user must regularly inspect the product to determine when it has reached its end of life. Examples that the product may have reached its end of life are:

- Visible defects such as cracks, deformations, loose or missing parts.
- Experience of a deterioration in the hearing protector's attenuation performance, strange noise or abnormal high sound volumes from the product's electronic sound reproduction.

NOTE: Product lifetime does not include batteries.

POWER AND VOLUME:



Press and hold power button for 3 seconds to power ON/OFF headset. Voice Assist will announce "Power ON" or "Power OFF."

Adjust ambient volume by selecting one of the four levels by pressing the volume button (SPEAKER). To mute the ambient volume, press and hold the volume button. While muted, press the volume button once to return to your last volume setting.

Performance is best when volume is set to lowest level needed for conversation.

BASIC OPERATIONS

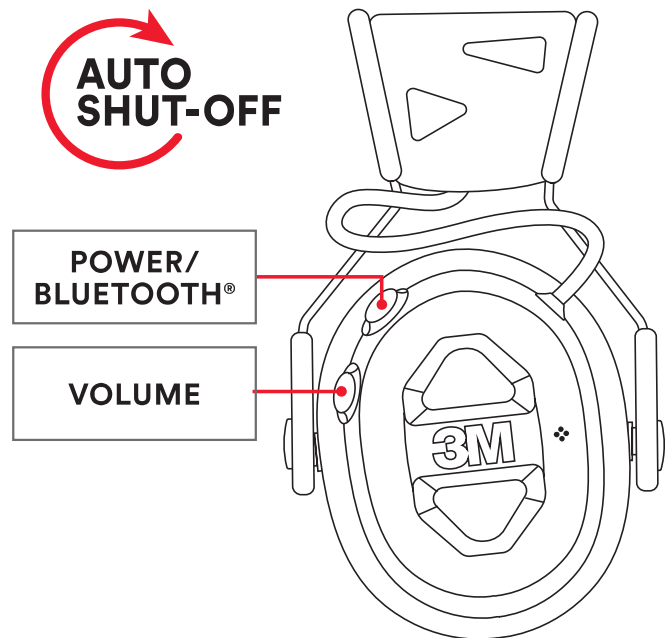
PRO-PROTECT | PRO-COMMS ELECTRONIC HEARING PROTECTION

LOW BATTERY WARNING:



Headset will give a "Battery Low" warning every 20 minutes when battery voltage is low. Additional warnings will occur as hearing protector powers down. Replace batteries at this time.

AUTO SHUT-OFF:

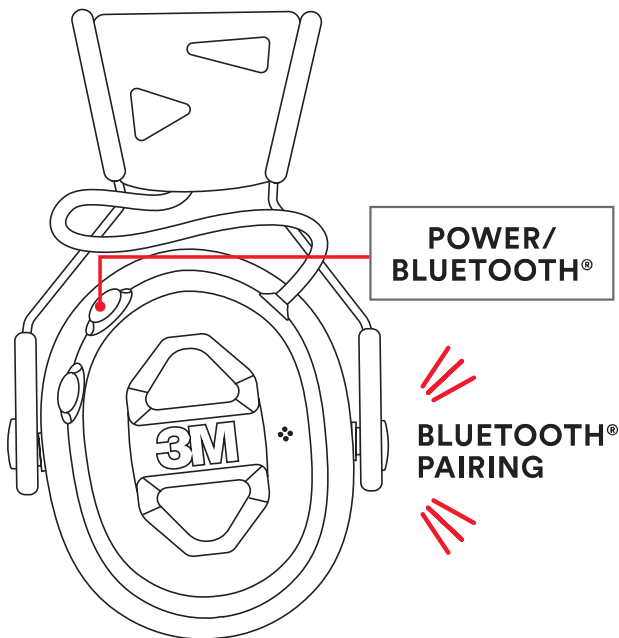


After a period of inactivity for 4 hours, a 10-second countdown will begin before hearing protector automatically powers down. To reset Auto Shut-Off, simply adjust volume. After Auto Shut-Off, press and hold the power button for 3 seconds to turn the unit on.

BASIC OPERATIONS

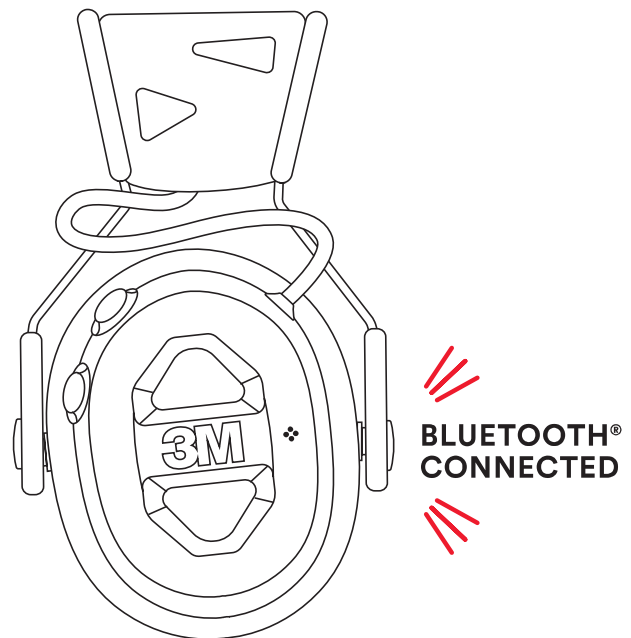
PRO-PROTECT | PRO-COMMS ELECTRONIC HEARING PROTECTION

PAIR DEVICE FUNCTION:



Quickly double-press the Bluetooth® button to enter pairing mode. You will hear "Bluetooth Pairing". Make sure your Bluetooth® enabled device is scanning/searching for devices. Check your device to make sure it has discovered "3M Pro-Protect" or "3M Pro-Comms" as appropriate. Select to connect to the hearing protector.

ONCE YOUR DEVICE IS PAIRED:



Once connected successfully, you will hear "Bluetooth Connected".

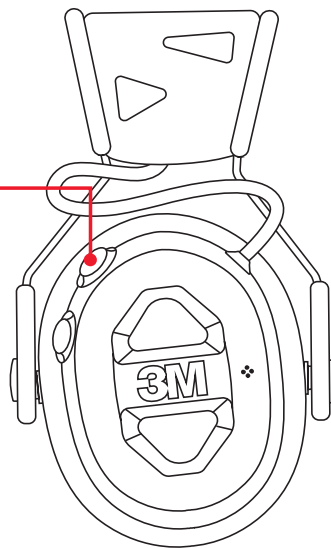
Once your device has been connected successfully to the "3M Pro-Protect" or "3M Pro-Comms" as appropriate, it will automatically link the next time you turn on the hearing protector. A "Bluetooth Connected" voice message will play once the connection is successfully established. To connect to a new device, follow the same instructions and possibly "forget" or "unpair" original device.

BLUETOOTH® OPERATIONS

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INCOMING CALLS, MESSAGES, ALERTS & AUDIO PLAYBACK:

PAUSE/PLAY Press once
ADVANCE TRACKS Double Press Quickly
PREVIOUS TRACKS Triple Press Quickly
ANSWER / TERMINATE CALL Press once
REJECT A CALL Press and hold

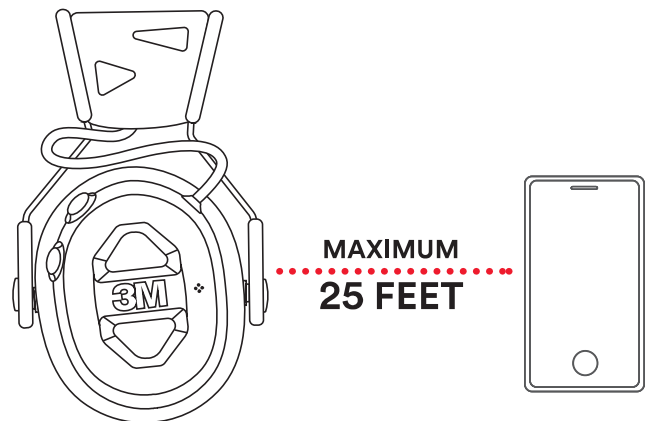


To answer or disconnect a call, press the Bluetooth® button once.

To reject a call and return to Bluetooth® from a "3M Pro-Protect" or "3M Pro-Comms," press and hold the Bluetooth® button.

After disconnecting from the call you will hear "Call terminated".

3M PRO ELECTRONIC HEARING PROTECTORS WIRELESS BLUETOOTH® RANGE:

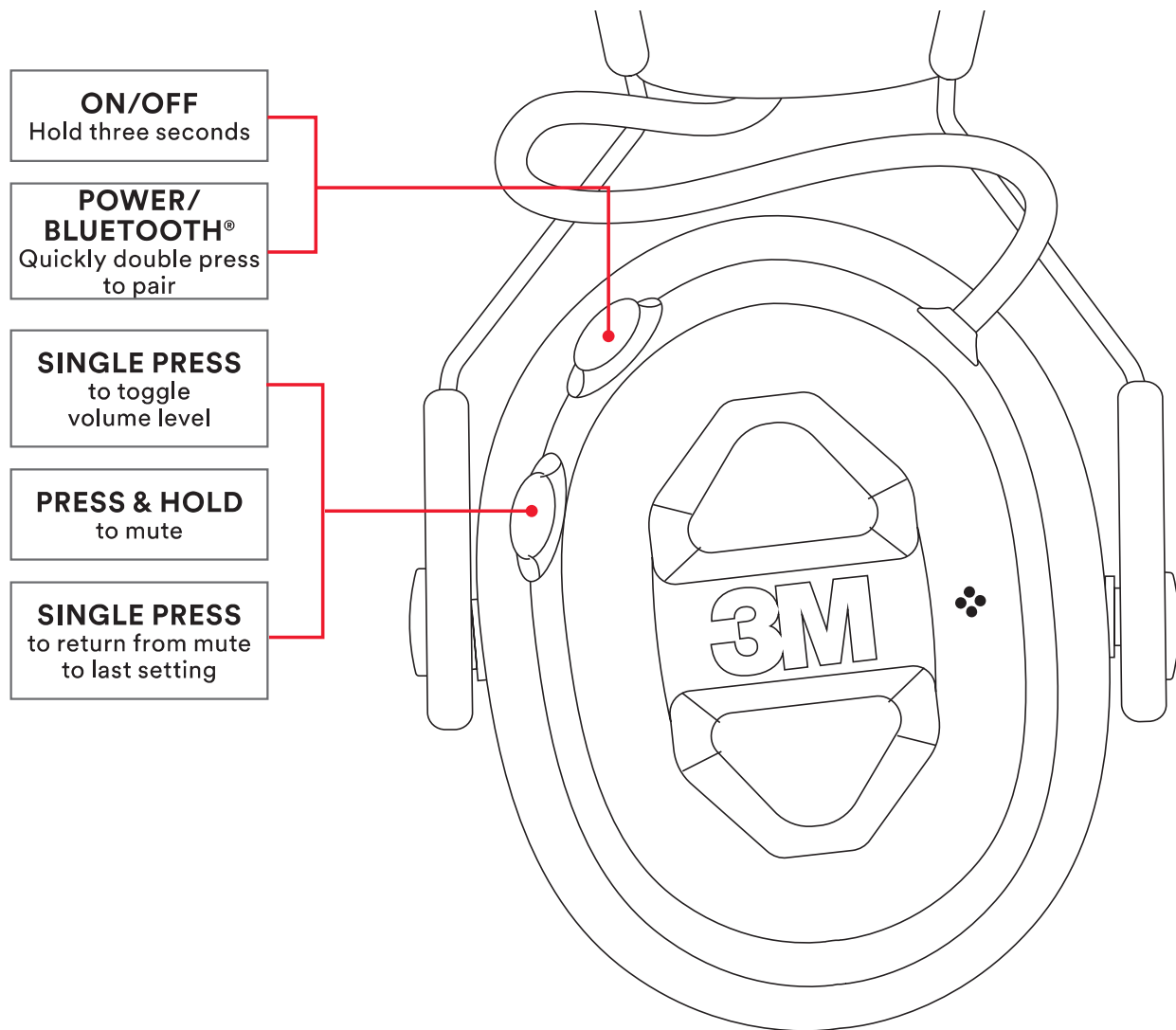


The typical range between a Bluetooth® enabled device and the 3M Pro Electronic Hearing Protectors is approximately 25 feet. This distance may vary depending on the device. As the distance between the Bluetooth® enabled device and the hearing protector increases, the risk of the signal dropping also increases.

For best results, keep your Bluetooth® enabled device on your body or within an arm's length of the 3M Pro Electronic Hearing Protectors while using Bluetooth® Mode.

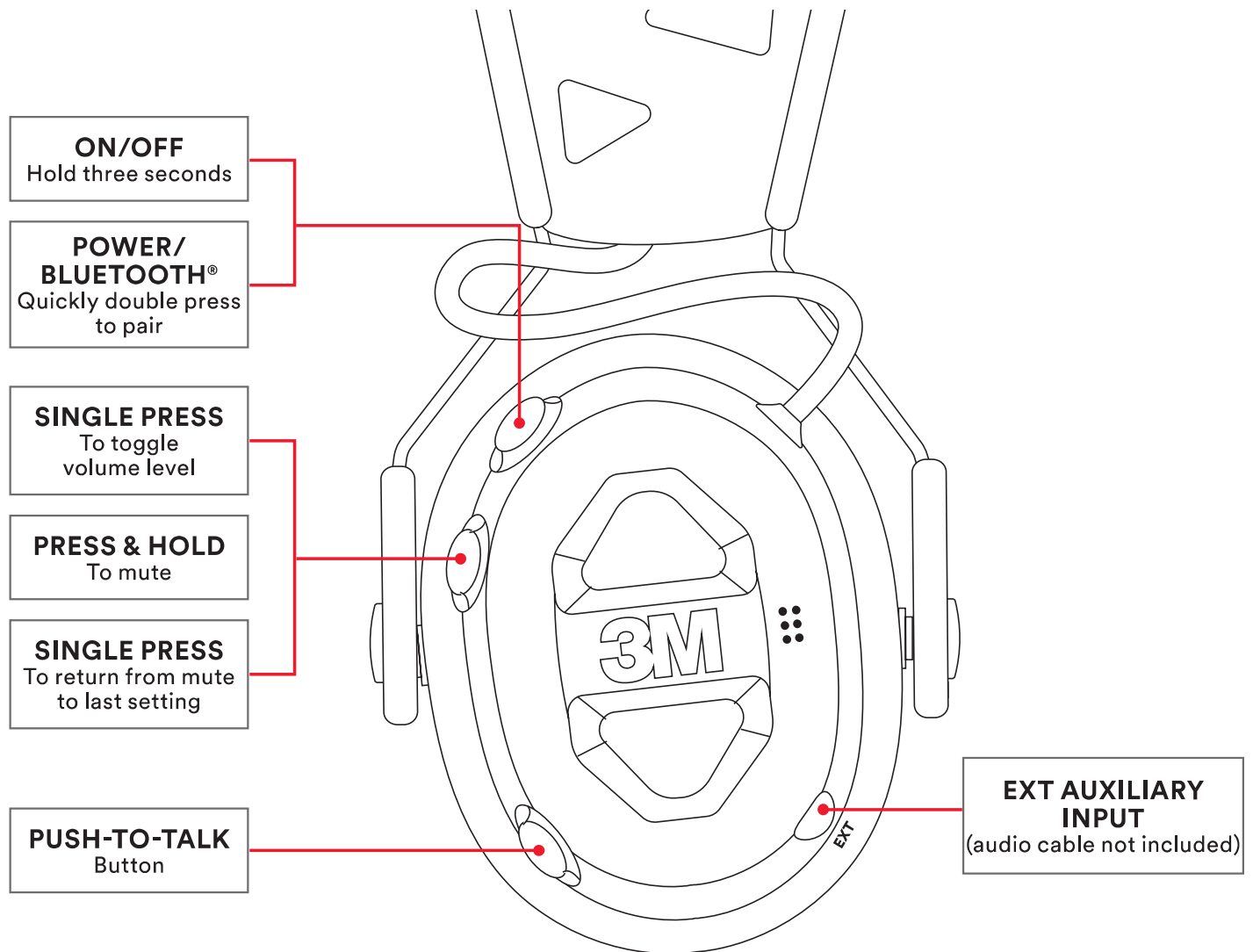
NAVIGATION

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NAVIGATION

PRO-COMMS ELECTRONIC HEARING PROTECTION



MICROPHONE PLACEMENT

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For clearest communications, place microphone directly in front of mouth 1/8 inch away as shown in picture.

To adjust length of boom mic, loosen the locking ring on the microphone shaft and extend or shorten as needed. Tighten locking ring when desired length is obtained.

HEARING PROTECTOR TO HEARING PROTECTOR COMMUNICATIONS USING THE ZELLO APP

The 3M Pro-Comms Hearing Protector can be configured to talk in real-time to individuals and groups anywhere in the world using the Zello Push-to-Talk (PTT) mobile phone app. Once downloaded to your mobile phone and paired to the 3M Pro-Comms Hearing Protector, the Zello Push-to-Talk service transforms your regular phone and Pro-Comms hearing protector into a PTT walkie-talkie-like device, complete with its own "Push-to-Talk" button. This two-way communication feature allows for quick and easy conversations between team members and groups in high noise environments which helps increase productivity.

Zello is a third-party app that does not have affiliation with 3M. By using the Zello app, note that you may be required to agree to their terms of use and privacy policy.

COMMUNICATIONS SET-UP

iOS PUSH-TO-TALK INSTRUCTIONS

Pairing to the Pro-Comms Hearing Protector

Pair your phone with the Pro-Comms Hearing Protector by following the steps listed in the BASIC OPERATIONS ...PAIR DEVICE Function section.

Install Zello (iOS)

Find the Zello Walkie Talkie app in the iOS app store and tap GET to download it and install directly onto your iPhone device. After download is complete, tap OPEN to open Zello and create your account.

Create Account

1. Tap Sign Up
2. Enter your desired username, e-mail and password. Please note that a username cannot be changed. Tap "Create Account."
3. Enter your Display Name and optional phone number. This information is kept private and only used to reset your password and allow your contacts to find you by email or phone number. You can always add your phone number after creating your profile.

Set Up PTT Button

1. After tapping the 3 bars in the upper left corner of your screen, select Options.
2. Select Push-to-talk buttons
3. Select "Add New Device". Make sure your Bluetooth and Location are enabled on your phone.
4. Follow the instructions on your screen and select "3M Pro-Comms Hearing Protector" or "PTT-Z".
5. You may now use the push-to-talk button on your 3M Pro-Comms Hearing Protector as you would the push-to-talk button in the Zello app.

Note: If you have issues configuring or using the Zello app please contact the Zello Customer Support for assistance.

COMMUNICATIONS SET-UP

ANDROID PUSH-TO-TALK INSTRUCTIONS

Pairing to the Pro-Comms Hearing Protector

Pair your phone with the Pro-Comms Hearing Protector by following the steps listed in the BASIC OPERATIONS ...PAIR DEVICE Function section.

Install Zello (Android)

Find the Zello Walkie Talkie app in the Google Play app store and tap INSTALL to download it and install directly onto your Android device. After download is complete, tap OPEN to open Zello and create your account.

Create Account

1. Tap Sign Up
2. Enter your desired username, e-mail and password. Please note that a username cannot be changed. Tap "Create Account."
3. Enter your Display Name and optional phone number. This information is kept private and only used to reset your password and allow your contacts to find you by email or phone number. You can always add your phone number after creating your profile.

Set Up PTT Button

1. After tapping the 3 bars in the upper-right corner of your screen, select Options.
2. Select Push-to-talk buttons
3. Select "Add New Device". Make sure your Bluetooth and Location are enabled on your phone.
4. Follow the instructions on your screen and select "3M Pro" or "PTT-Z".
5. You may now use the push-to-talk button on your 3M™ Pro-Comms hearing protector as you would the push-to-talk button in the Zello app.

Note: Some Android phones may experience issues automatically releasing from Hands-Free Profile (HFP) after engaging the push-to-talk button on the hearing protector. To help resolve this issue, follow the procedure below:

1. Open the Zello app and click the three vertical dots at the top right corner of the screen.
 2. Select Options, then Audio, then for Legacy Bluetooth Mode, choose On from the drop-down menu.
- When you turn on this mode, it will automatically exit HFP after releasing the PTT button for three seconds.

When you receive a Zello message, the unit will enter HFP mode, and you can exit HFP mode with a short press of the top button.

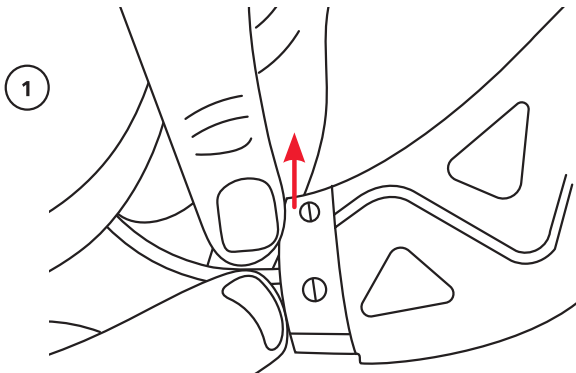
From here you can proceed to set up the push-to-talk button per the above.

Note: If you have issues configuring or using the Zello app please contact the Zello Customer Support for assistance.

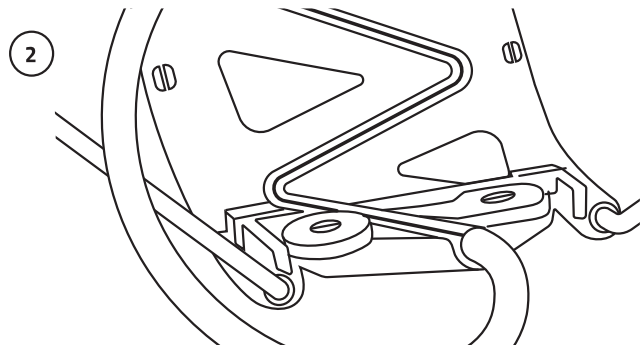
HARD HAT ATTACHMENT

PRO-PROTECT ELECTRONIC HEARING PROTECTION

Please note – in order to attach 3M™ Pro-Protect to a hard hat, you will need to use the hard hat earmuff adapters, 3M™ PELTOR™ Hard Hat Guide Arms Assembly, part number P3EG-PK.



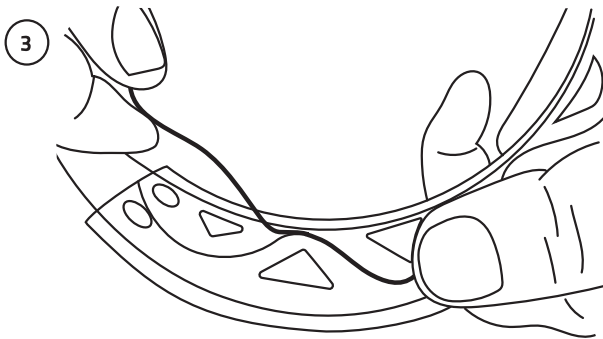
1. Grab headband near the cable on the inside and outside of the end cap. Lift up to pop off the end cap from the mounting plate on the headband. Repeat on the other side.



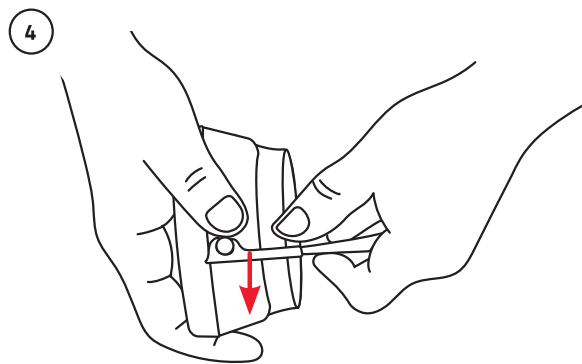
2. Headband with end caps removed.

HARD HAT ATTACHMENT

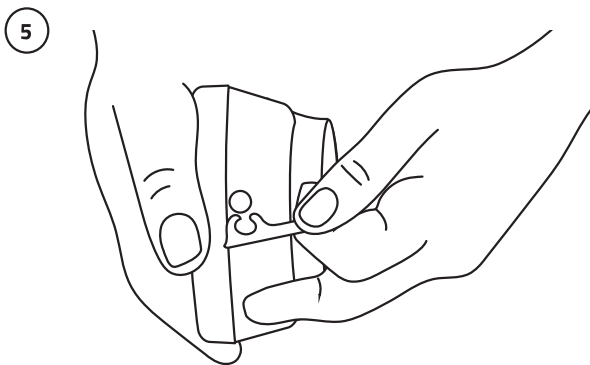
PRO-PROTECT ELECTRONIC HEARING PROTECTION



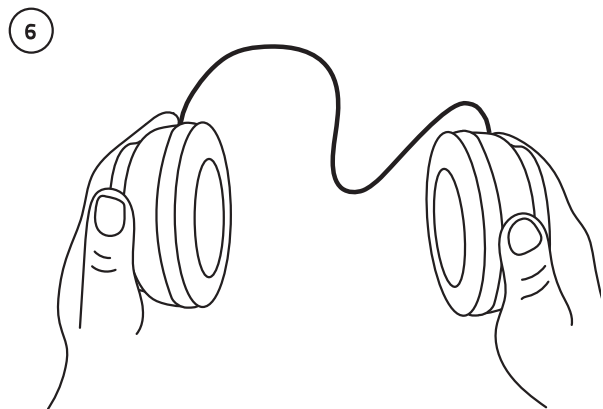
3. Once end caps are removed, dislodge the headband cable from the headband channel by grasping the cable near the end cap, and start to pull slowly until the headband cable is free.



4. In order to detach the cups from the headband, start by rotating one of the cups outward so that it is at a 90 degree angle to the headband forks.



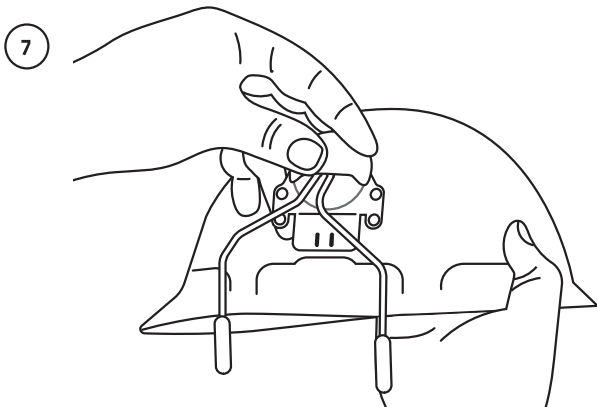
5. Once 90 degrees, push on each side of the fork until it dislodges. Repeat this for the other fork on the cup. Repeat for other cup.



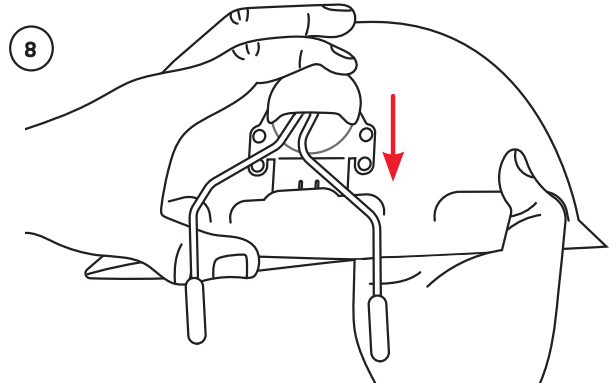
6. Cups are now free from the headband.

HARD HAT ATTACHMENT

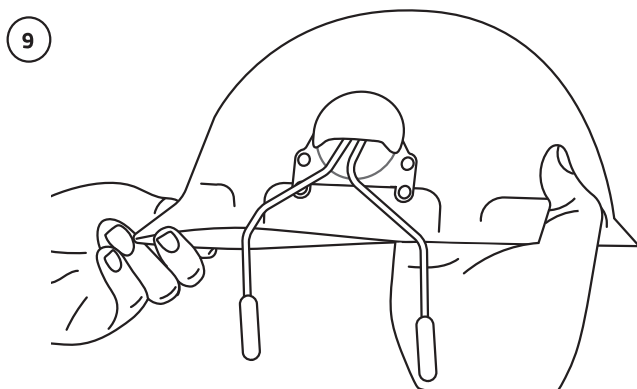
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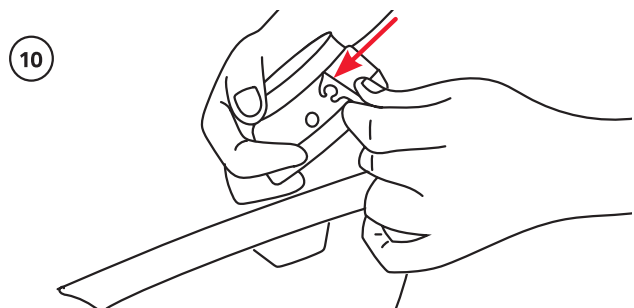
7. Align the hard hat adaptor tabs with the hard hat mounting slots.



8. Press the hard hat adaptor down into the hard hat slots until the adaptor clicks in place.



9. Once in place the hard hat with adaptors should look like above image.

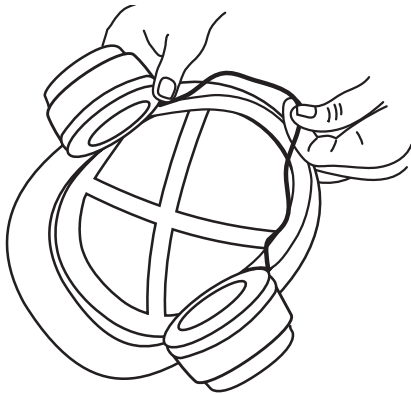


10. Reattach the cups to the headband (make sure to attach Left and Right cups to their respective sides of the hard hat - look inside cup for "L" and "R" for reference). Rotate the cups 90 degrees and push each side of the fork until hinge locks onto the fork. Repeat for each fork.

HARD HAT ATTACHMENT

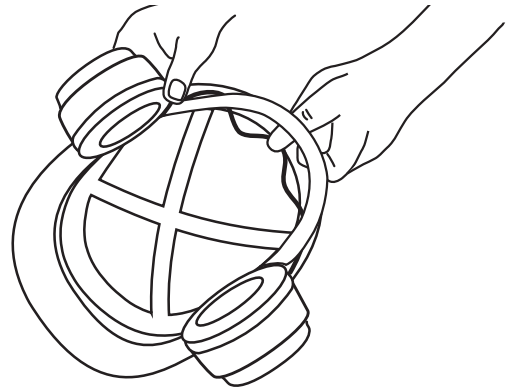
PRO-PROTECT ELECTRONIC HEARING PROTECTION

11



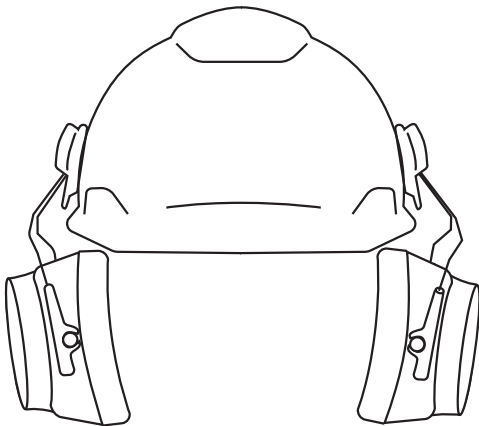
11. Remove the two suspension keys near the back of the hard hat (as shown in picture) by pulling them out of their key slots.

12



12. Place the cord inside the hard hat under the suspension so that it is out of the way. Reattach the suspension keys by pushing them back into the key slots until they are seated firmly.

13

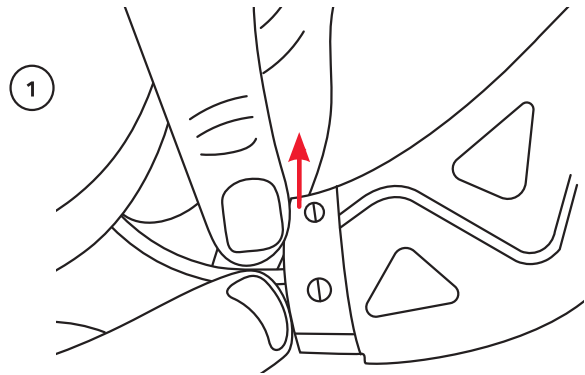


13. Completed assembly should look like above image.

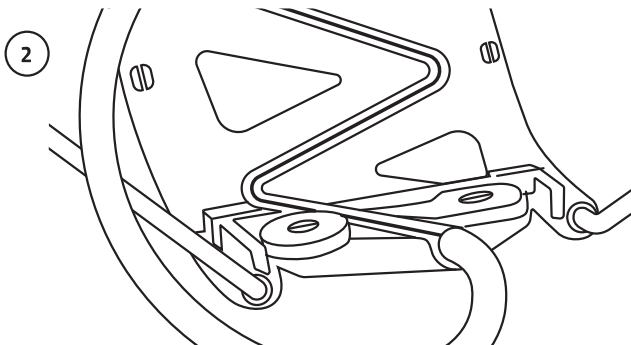
HARD HAT ATTACHMENT

PRO-COMMS ELECTRONIC HEARING PROTECTION

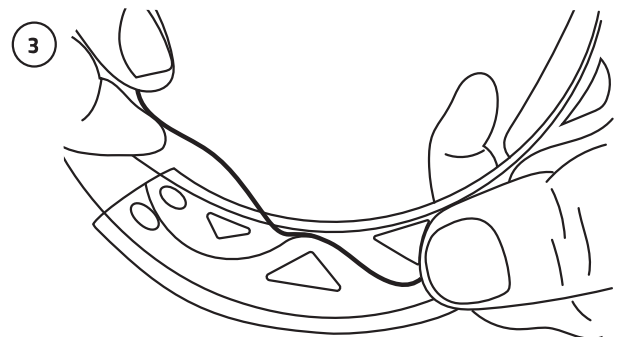
Please note – in order to attach 3M™ Pro-Comms to a hard hat, you will need to use the hard hat earmuff adapters, 3M™ PELTOR™ Hard Hat Guide Arms Assembly, part number P3EG-PK.



1. Grab headband near the cable on the inside and outside of the end cap. Lift up to pop off the end cap from the mounting plate on the headband. Repeat on the other side.



2. Headband with end caps removed.

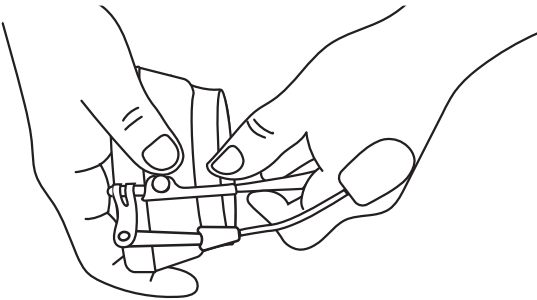


3. Once end caps are removed, dislodge the headband cable from the headband channel by grasping the cable near the end cap, and start to pull slowly until the headband cable is free.

HARD HAT ATTACHMENT

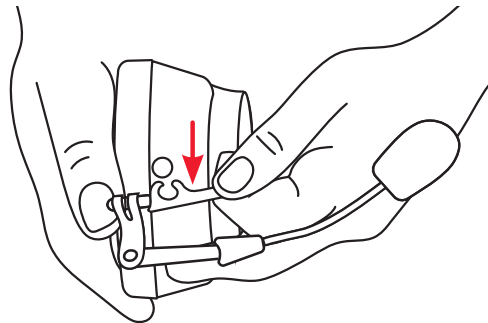
PRO-COMMS ELECTRONIC HEARING PROTECTION

4



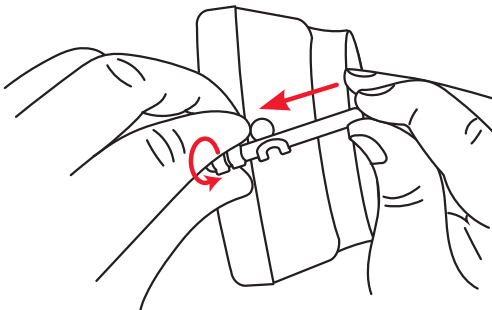
4. In order to detach the cups from the headband, start by rotating one of the cups outward so that it is at a 90 degree angle to the headband forks.

5



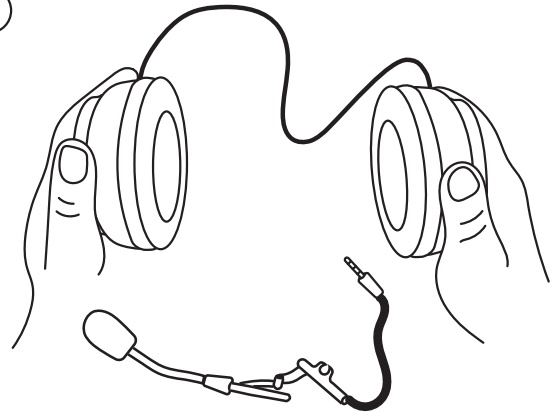
5. Once 90 degrees, push on each side of the fork until it dislodges. Repeat this for the other fork on the cup. Repeat for other cup.

6



6. Once cup is removed, you will need to remove the boom microphone slider from the fork. To do so, rotate slider 90 degrees and pull off fork. Next, unplug boom microphone from cup.

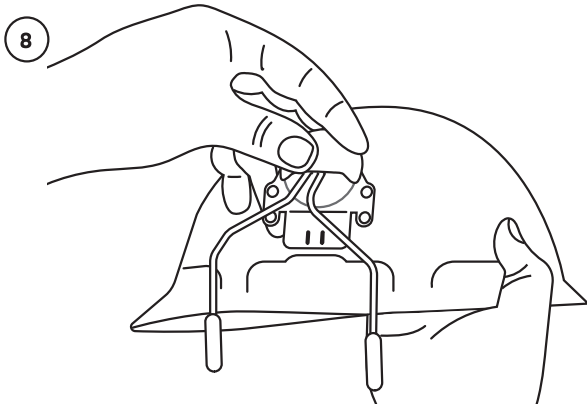
7



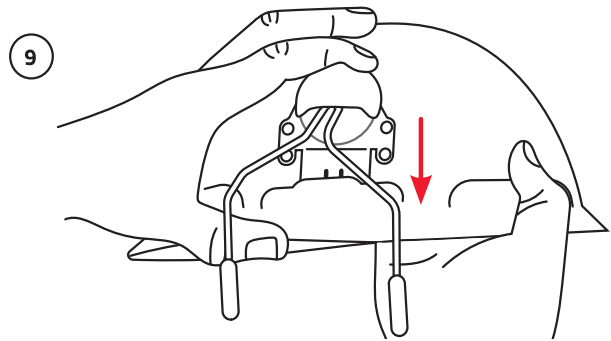
7. Cups are now free from the headband.

HARD HAT ATTACHMENT

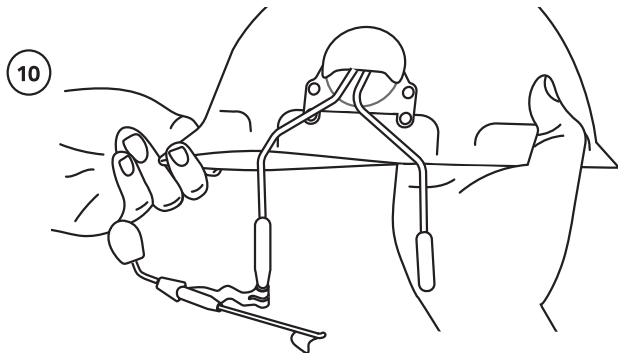
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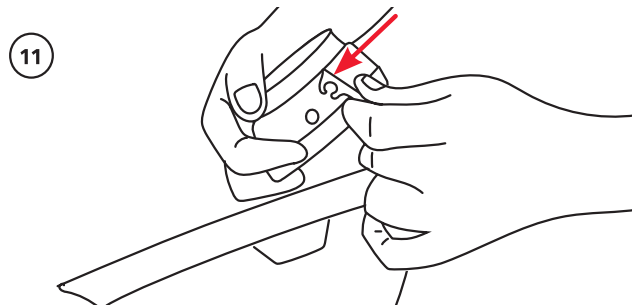
8. Align the hard hat adaptor tabs with the hard hat mounting slots.



9. Press the hard hat adaptor down into the hard hat slots until the adaptor clicks in place. Once hard hat adapters are attached to hard hat, you will need to attach the boom microphone and slider to the left front fork.



10. To do so, first remove the original slider (turn 90 degrees and pull), and then place boom microphone slider on by turning slider 90 degrees and pushing onto fork. Once in place, the hard hat with adaptors and boom microphone should look like above image.

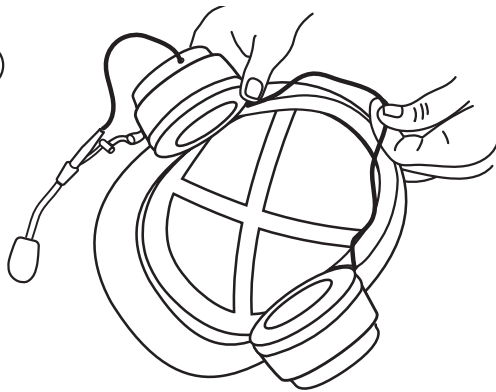


11. Reattach the cups to the headband (make sure to attach Left and Right cups to their respective sides of the hard hat - look inside cup for "L" and "R" for reference). Rotate the cups 90 degrees and push each side of the fork until hinge locks onto the fork. Repeat for each fork.

HARD HAT ATTACHMENT

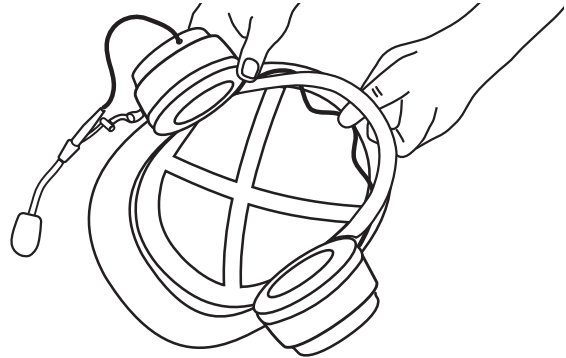
PRO-COMMS ELECTRONIC HEARING PROTECTION

12



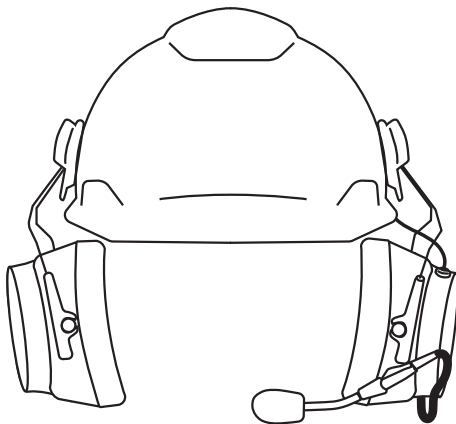
12. Remove the two suspension keys near the back of the hard hat (as shown in picture) by pulling them out of their key slots.

13



13. Place the cord inside the hard hat under the suspension so that it is out of the way. Reattach the suspension keys by pushing them back into the key slots until they are seated firmly.

14



14. Completed assembly should look like above image.



SAFETY INFORMATION

PRO-PROTECT | PRO-COMMS ELECTRONIC HEARING PROTECTION

Please read, understand, and follow all safety information contained in these instructions prior to the use of this electronic hearing protection product. Retain these instructions for future reference.

INTENDED USE:

This electronic hearing protection product is intended to help protect against hazardous noise. This electronic hearing protection product is used in loud noise environments. Use in any other application has not been evaluated by 3M and may lead to an unsafe condition.

EXPLANATION OF SIGNAL WORD CONSEQUENCES	
 WARNING:	Indicates a hazardous situation which, if not avoided, could result in serious injury or death.
 CAUTION:	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury and/or property damage.

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. If there is any drainage from your ear or if you have an ear infection, consult with your physician before wearing hearing protection. Failure to do so may result in hearing loss or injury. For proper use, see user instructions or call 3M Technical Service toll free at 1-800-494-3552.

To reduce the risks associated with hazardous voltage and fire:

- Never use this product, or charge/replace batteries, in an explosive environment.
- Do not mix old and new batteries.
- Do not mix alkaline, standard or rechargeable batteries.
- Risk of explosion if battery is replaced by an incorrect type.
Dispose of used batteries according to the local requirements.

SAFETY INFORMATION

PRO-PROTECT | PRO-COMMS ELECTRONIC HEARING PROTECTION

TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS NOISE:

- Always wear hearing protectors when you are exposed to noise.
- Ensure hearing protection is properly fitted. Follow any fitting instructions included with this product.
- Do not bend or reshape the headband or hard hat attachment as this will cause a loose fit and sound leakage.
- For best protection, the ear cushions should seal firmly against your head. Anything that interferes with the seal, such as long hair (pull back to the extent possible), thick or poorly fitting eyeglass temples, pencils or caps, may lessen the protection.
- If you suspect that the noise reduction is inadequate, remove yourself from the noisy environment and then check fit, inspect the hearing protector, or consider another type of hearing protector.
- Do not immerse in water. Clean with a damp cloth and mild soap. Do not use harsh or abrasive chemicals.
- Earmuffs must be regularly inspected for cracks or worn parts and for proper fitting. Replace as needed.
- Do not store the hearing protector in direct sunlight or at temperature above 131°F (55°C). For example, behind a windshield or in a window.
- Using the entertainment or communication features of this device may reduce your situational awareness and ability to hear workplace warning signals. Stay alert and adjust the audio volume to the lowest acceptable level.

CAUTION

TO REDUCE THE RISKS ASSOCIATED WITH CHEMICAL EXPOSURE AND FIRE:

- Do not store with the batteries installed. A leaking battery may cause bodily injury or damage to the hearing protector.



The WEEE logo (shown at the left) appears on the product to indicate that this product must not be disposed of or dumped with your other household wastes. You are liable to dispose of all your electronic or electrical waste equipment by relocating over to the specified collection point for recycling of such hazardous waste. Dispose of components in accordance with all applicable local and governmental regulations.

SAFETY INFORMATION

EMC REGULATORY INFORMATION

FCC WARNING:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

ISED (Innovation, Science and Economic Development) Canada Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. this device may not cause interference, and
2. this device must accept any interference, including interference that may cause undesired operation of the device.

CAN ICES-003 (B)/NMB-003 (B)

PRODUCT LIFETIME

PRO-PROTECT | PRO-COMMS ELECTRONIC HEARING PROTECTION

It is recommended that you replace your product within 5 years from date of manufacture. The lifetime of the product will be highly dependent on the environment in which the product is stored, used, serviced, and maintained. The user must regularly inspect the product to determine when it has reached its end of life. Examples that the product may have reached its end of life are:

- Visible defects such as cracks, deformations, loose or missing parts.
- Experience of a deterioration in the hearing protector's attenuation performance, strange noise or abnormal high sound volumes from the product's electronic sound reproduction.

NOTE: Product lifetime does not include batteries.

NOISE REDUCTION RATING (NRR)

PRO-PROTECT | PRO-COMMS ELECTRONIC HEARING PROTECTION

The U.S. Environmental Protection Agency (EPA) has selected the Noise Reduction Rating (NRR) as the measure of a hearing protector's noise-reducing capabilities. 3M makes no warranties as to the suitability of the NRR as a measure of actual protection from any noise level since such protection depends on the sound level (loudness), how long you listen to the loud sound and how well you fit the earmuff over your ears. Although hearing protectors can be recommended for protection against harmful effects of impulse noise, the NRR is based on the attenuation of continuous noise and may not be an accurate indicator of the protection attainable against impulse noise such as gunfire.

When worn according to the User Instructions, this hearing protector helps reduce exposure to both continuous noises, such as industrial noises and noises from vehicles and aircraft, as well as very loud impulse noises, such as gunfire. It is difficult to predict the required and/or actual hearing protection obtained during exposure to impulse noises. For gunfire, the weapon type, number of rounds fired, proper selection, fit and use of hearing protection, proper care of hearing protection and other variables will impact performance. If your hearing seems dulled or you hear a ringing or buzzing during or after any noise exposure (including gunfire), or for any other reason you suspect a hearing problem, your hearing may be at risk. To learn more about hearing protection for impulse noise, visit [3M.com/hearing](https://www.3m.com/hearing).

WARNING

U.S. EPA specifies the NRR as the measure of hearing protector noise reduction. However, 3M makes no warranties as to the suitability of the NRR for this purpose. 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 or guidance on how to adjust attenuation label values. It is recommended that the NRR be reduced by 50% to better estimate typical protection.

NOISE REDUCTION RATING (NRR)

PRO-PROTECT HEARING PROTECTION

Noise Reduction Rating

25 DECIBELS


(WHEN USED AS DIRECTED)

THE RANGE OF NOISE REDUCTION RATINGS FOR EXISTING HEARING PROTECTORS IS APPROXIMATELY 0 TO 30 (HIGHER NUMBERS DENOTE GREATER EFFECTIVENESS)

3M COMPANY
ST. PAUL, MN

Model 90545

Federal law prohibits removal of this label prior to purchase

 EPA

LABEL REQUIRED BY U.S. E.P.A. REGULATION 40 CFR PART 211 SUBPART B

The EPA references to Federal relate to US Federal laws.

ATTENUATION DATA | 3M PRO-PROTECT WITH STANDARD SEALING RINGS

ANSI S3.19-1974

TEST FREQUENCIES (HZ)	125	250	500	1000	2000	3150	4000	6300	8000	NRR	CSA Class
Mean Attenuation (dB)	18.4	22.6	30.6	38.4	32	37.8	38.8	38.9	38.3	25	B
Standard Deviation	2.9	2.2	3.0	2.6	2.9	3.9	4.2	3.4	2.6		

The level of noise entering a person's ear when a hearing protector is worn as directed is closely approximated by the difference between the A-weighted environmental noise level and the NRR.

EXAMPLE

1. The environmental noise level as measured at the ear is 92 decibels dB(A).
2. The NRR is 25 dB(A).
3. The level of noise entering the ear is approximately 67 dB(A).

NOISE REDUCTION RATING (NRR)

PRO-PROTECT HEARING PROTECTION

Noise Reduction Rating

26 DECIBELS


(WHEN USED AS DIRECTED)

THE RANGE OF NOISE REDUCTION RATINGS FOR EXISTING HEARING PROTECTORS IS APPROXIMATELY 0 TO 30 (HIGHER NUMBERS DENOTE GREATER EFFECTIVENESS)

3M COMPANY
ST. PAUL, MN

Model 90545-S10C

Federal law prohibits removal of this label prior to purchase

 EPA

LABEL REQUIRED BY U.S. E.P.A. REGULATION 40 CFR PART 211 SUBPART B

The EPA references to Federal relate to US Federal laws.

ATTENUATION DATA | 3M PRO-PROTECT WITH GEL SEALING RINGS

ANSI S3.19-1974

TEST FREQUENCIES (HZ)	125	250	500	1000	2000	3150	4000	6300	8000	NRR	CSA Class
Mean Attenuation (dB)	18.8	21.8	31.0	38.0	35.5	40.5	43.2	43.0	42.9	26	A
Standard Deviation	2.8	1.9	3.0	3.3	3.1	3.8	4.0	2.6	2.2		

Noise Reduction Rating

25 DECIBELS


(WHEN USED AS DIRECTED)

THE RANGE OF NOISE REDUCTION RATINGS FOR EXISTING HEARING PROTECTORS IS APPROXIMATELY 0 TO 30 (HIGHER NUMBERS DENOTE GREATER EFFECTIVENESS)

3M COMPANY
ST. PAUL, MN

Model 90545

Federal law prohibits removal of this label prior to purchase

 EPA

LABEL REQUIRED BY U.S. E.P.A. REGULATION 40 CFR PART 211 SUBPART B

The EPA references to Federal relate to US Federal laws.

ATTENUATION DATA | 3M PRO-PROTECT WITH STANDARD SEALING RINGS ON HARD HAT

ANSI S3.19-1974

TEST FREQUENCIES (HZ)	125	250	500	1000	2000	3150	4000	6300	8000	NRR	CSA Class
Mean Attenuation (dB)	16.7	21.2	30.4	36.8	31.7	37.9	39.6	40.0	38.8	25	B
Standard Deviation	2.3	2.0	3.0	2.1	2.6	3.0	3.6	4.4	3.2		

NOISE REDUCTION RATING (NRR)

PRO-PROTECT HEARING PROTECTION

Noise Reduction Rating

26

DECIBELS


(WHEN USED AS DIRECTED)

THE RANGE OF NOISE REDUCTION RATINGS FOR EXISTING HEARING PROTECTORS IS APPROXIMATELY 0 TO 30 (HIGHER NUMBERS DENOTE GREATER EFFECTIVENESS)

3M COMPANY
ST. PAUL, MN

Model 90545-SIOC

Federal law prohibits removal of this label prior to purchase

 EPA

LABEL REQUIRED BY U.S. E.P.A. REGULATION 40 CFR PART 211 SUBPART B

The EPA references to Federal relate to US Federal laws.

ATTENUATION DATA | 3M PRO-PROTECT WITH GEL SEALING RINGS ON HARD HAT

ANSI S3.19-1974

TEST FREQUENCIES (HZ)	125	250	500	1000	2000	3150	4000	6300	8000	NRR	CSA Class
Mean Attenuation (dB)	16.7	21.2	30.4	36.8	31.7	37.9	39.6	40.0	38.8	26	B
Standard Deviation	2.3	2.0	3.0	2.1	2.6	3.0	3.6	4.4	3.2		

NOISE REDUCTION RATING (NRR)

PRO-COMMS ELECTRONIC HEARING PROTECTION

Noise Reduction Rating

26


DECIBELS
(WHEN USED AS DIRECTED)

THE RANGE OF NOISE REDUCTION RATINGS FOR EXISTING HEARING PROTECTORS IS APPROXIMATELY 0 TO 30
(HIGHER NUMBERS DENOTE GREATER EFFECTIVENESS)

3M COMPANY
ST. PAUL, MN

MODEL 90546-SIOC

Federal law prohibits removal of this label prior to purchase

 EPA

LABEL REQUIRED BY U.S. E.P.A. REGULATION 40 CFR PART 211 SUBPART B

The EPA references to Federal relate to US Federal laws.

ATTENUATION DATA | 3M PRO-COMMS WITH GEL SEALING RINGS

ANSI S3.19-1974

TEST FREQUENCIES (HZ)	125	250	500	1000	2000	3150	4000	6300	8000	NRR	CSA Class
v	19.6	23.3	30.8	36.8	35.9	42.7	43.5	43.2	43.7	26	A
Standard Deviation	2.8	2.7	3.2	2.7	2.8	3.4	2.9	3.1	2.7		

The level of noise entering a person’s ear when a hearing protector is worn as directed is closely approximated by the difference between the A-weighted environmental noise level and the NRR.

EXAMPLE

- 1. The environmental noise level as measured at the ear is 92 decibels dB(A).
- 2. The NRR is 26 dB(A).
- 3. The level of noise entering the ear is approximately 66 dB(A).

NOISE REDUCTION RATING (NRR)

PRO-COMMS ELECTRONIC HEARING PROTECTION

Noise
Reduction
Rating

25


DECIBELS
(WHEN USED AS
DIRECTED)

THE RANGE OF NOISE REDUCTION RATINGS
FOR EXISTING HEARING PROTECTORS
IS APPROXIMATELY 0 TO 30
(HIGHER NUMBERS DENOTE GREATER EFFECTIVENESS)

3M COMPANY
ST. PAUL, MN

Model 90546-SIOC

Federal law prohibits
removal of this label
prior to purchase

 EPA

LABEL REQUIRED BY
U.S. E.P.A. REGULATION
40 CFR PART 211
SUBPART B

The EPA references to Federal relate to US Federal laws.

ATTENUATION DATA | 3M PRO-COMMS HEARING PROTECTOR WITH GEL SEALING RINGS ON HARD HAT ANSI S3.19-1974

TEST FREQUENCIES (HZ)	125	250	500	1000	2000	3150	4000	6300	8000	NRR	CSA Class
Mean Attenuation (dB)	19.2	20.5	30.1	37.1	33.2	40.3	42.8	43.5	42.6	25	A
Standard Deviation	3.1	1.8	2.9	3.5	2.5	4.2	4.3	3.2	3.3		

NOISE REDUCTION RATING (NRR)

PRO-PROTECT | PRO-COMMS ELECTRONIC HEARING PROTECTION

CAUTION

For noise environments dominated by frequencies below 500 Hz, the C-weighted environmental noise level should be used. The NRR used in the above examples was achieved under laboratory conditions.

AUDIO INPUT LEVEL

The audio level in the hearing protector is dependent on the audio input level. To prevent harmful noise levels, the hearing protector audio level is limited to 82 dB(A) when connected to a Personal Music Player (PMP). If the hearing protector is connected to a PMP or other device with a very high output level, it is the user's responsibility to set the audio input level to a safe level. The maximum permitted audio input level for 8 hours of usage time, compressed speech and music is 209.4mV.

WARRANTY

The 3M Pro-Protect and 3M Pro-Comms Hearing Protector is warranted to be free of defects in material and workmanship for a period of one (1) year from the date of original purchase. 3M will, at its option, refund or replace without charge, except for transportation costs, parts that fail under normal use and service when operated and maintained in accordance with our instructions. This warranty does not cover damage caused by misuse, abuse, unauthorized modifications, or resulting from use of third-party accessories. Proof of purchase is required to verify eligibility.

LIMITATION OF LIABILITY:

3M will not be liable for any loss or damage arising from use of this product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability. Some states and countries do not allow the exclusion of limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Hereby, 3M declares that the radio equipment type *3M Pro-Protect and 3M Pro-Comms Hearing Protector* is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: 3Msafety.com

EUT Temperature	-20°C - +55°C
Operating Frequency (RF):	BT:2402-2480MHz
Max RF output power	Pro-Protect 3.9dBm(EU) Pro-Comms BT (EDR):-0.9dBm (EU) BLE:3.4 dBm

LABORATORY ATTENUATION FOR AUSTRALIA / NEW ZEALAND SOUND LEVEL CONVERSION (SLC80) RATING

3M Pro-Protect with Standard Sealing Rings

AS/NZS 1270:2002

TEST FREQUENCIES (HZ)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	17.6	19.4	27.2	35.9	31.1	36.5	36.1
Standard Deviation	4.2	4.9	3.5	2.6	4.2	3.8	5.2

SCL₈₀ 27.6 dB Class 5 Clamping Force: 10.4 N Mass 321g

3M Pro-Protect with Gel Sealing Rings

AS/NZS 1270:2002

TEST FREQUENCIES (HZ)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	18.4	18.5	26.7	36.4	33.3	37.7	39.8
Standard Deviation	4.7	3.7	2.4	2.1	2.9	5.0	4.7

SCL₈₀ 29.0 dB Class 5 Clamping Force: 10.2 N Mass 383g

3M Pro-Protect with Standard Sealing Rings on Hard Hat

AS/NZS 1270:2002

TEST FREQUENCIES (HZ)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	18.9	19.5	27.4	34.7	31.7	38.2	37.5
Standard Deviation	4.4	3.8	4.0	3.0	3.0	4.5	5.9

SCL₈₀ 28.2 dB Class 5 Clamping Force: 12.3 N Mass 330g

3M Pro-Protect with Gel Sealing Rings on Hard Hat

AS/NZS 1270:2002

TEST FREQUENCIES (HZ)	125	250	500	1000	2000	4000	8000
Mean Attenuation (dB)	18.9	18.5	26.6	35.5	33.1	39.0	41.9
Standard Deviation	3.8	3.8	2.2	2.9	4.4	5.0	3.6

SCL₈₀ 28.6 dB Class 5 Clamping Force: 11.9 N Mass 393g

This product has been tested in accordance with the requirements in AS/NZS 1270 and has met the specifications of hearing protector Class 5.

When selected, used and maintained as specified in AS/NZS 1269.3, this hearing protector may be used in noise up to 110 dB(A) assuming an 85dB(A) criterion. A lower criterion may require a higher protector class.

Improper fit of this device will reduce its effectiveness in attenuating noise. Consult the enclosed instructions for proper fit.

FREQUENTLY ASKED QUESTIONS

PRO-PROTECT | PRO-COMMS ELECTRONIC HEARING PROTECTION

Q: I'm double tapping, but it's not connecting to my phone/device. What should I do?

A: Is your unit saying, "Bluetooth pairing?" If not, you need to double tap more quickly (2 presses in less than ½ second). Keep trying until you hear it.

Q: My hearing protector says, "Bluetooth pairing," but it isn't showing up on my phone/device. How do I get my phone/device to recognize the unit?

A: Try the following suggestions. If one step doesn't resolve the issue, go to the next step:

1. Make sure you are searching/scanning for Bluetooth devices on your phone.
2. Turn your phone's Bluetooth off and on.
3. Turn your phone completely off and turn it back on.
4. You may have too many other Bluetooth products paired to your phone. Try to "forget" or "unpair" some and try connecting again.
5. Check to see if your phone needs any system updates, and update if needed.
6. Perform a "factory reset" on your hearing protection device (see last FAQ).
7. If you still cannot pair, you will need to contact your phone's manufacturer for help as it is likely an issue with the phone's Bluetooth firmware.

Q: I can pair to my phone just fine, but when I try to pair to a different device, it won't work. What can I do?

A: You may need to "forget" or "unpair" the device from your phone in order to connect to a new device

Q: Can I mute the incoming ambient noise (ie, the "hear through" feature or "situational awareness")?

A: Yes, you need to press and hold the volume button for 3 seconds to mute. To unmute and return to your previous volume setting, press the volume button once.

Q: I'm hearing white noise (or static or wind) when the device is on.

A: In certain situations, airflow (from wind or HVAC systems) can be amplified and sound like white noise or static.

Q: How do I turn my device back on after it auto-shuts off?

A: Press and hold the power button for 3 seconds.

Q: How long is the manufacturer's warranty?

A: One year with proof of purchase.

Q: How do I reset the unit? (Factory Reset)

A: For Pro-Protect, turn the unit on, then press and hold the "Power/Bluetooth®" button and the Volume" button together until the unit says, "Default Settings" and then turns off. For Pro-Comms, turn unit on, then press and hold the "Power/Bluetooth" button and the "PTT" button together until the unit says, "Default Settings" and then turns off.

