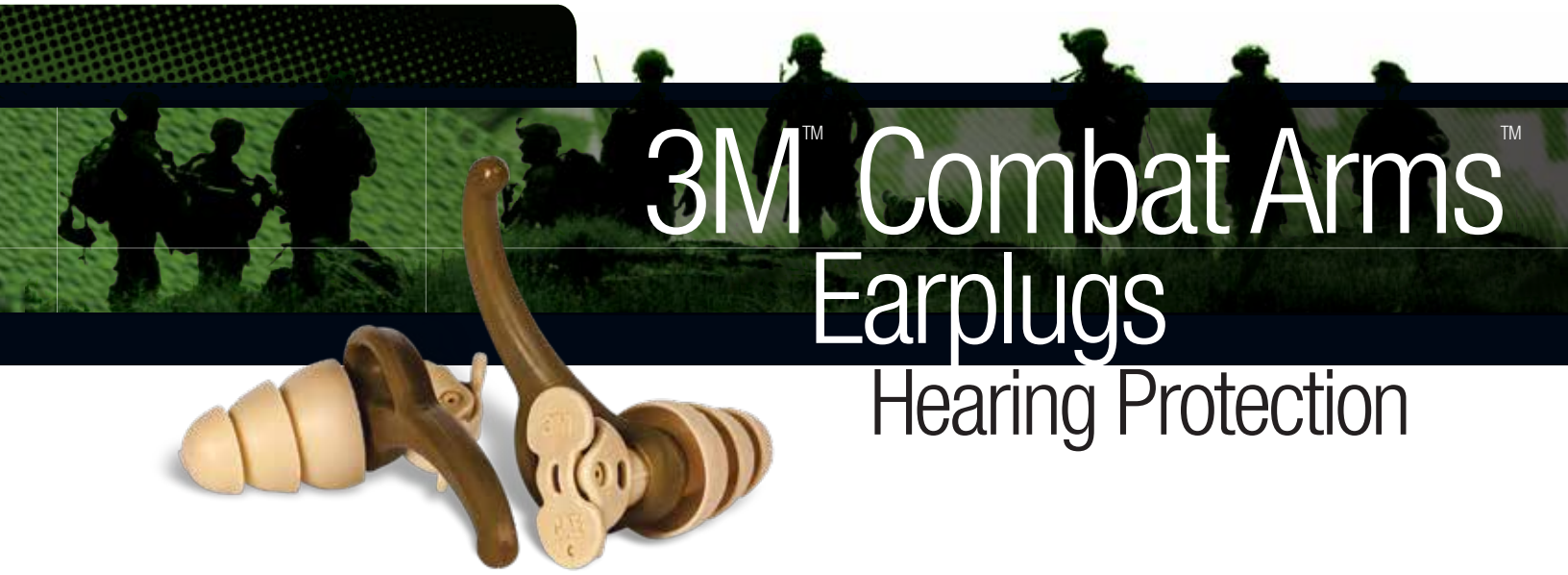

3M™ Combat Arms™ Earplugs

Hearing Protection

3M™ Combat Arms™ Earplugs - Generation 4.1

Fitting Instructions

The 3M Combat Arms Earplugs - Generation 4.1 are available in three sizes. Consult with your Hearing Conservation Program Manager, healthcare provider or the manufacturer for advice on selecting the best earplug size to properly fit your ear canal.

The earplugs contain a housing assembly featuring a rocker switch with a tiny hole and CAE on the lower tab and 3M logo on the upper tab. When the tab featuring the 3M logo is pressed ***(see Fig. 1)*** the device acts as a conventional earplug, providing protection against steady noise arising from aircraft, vehicles, generator and watercraft, for example. This is called the Closed Mode. Notice that sounds are quieter in this mode. When the tab featuring the CAE and tiny hole marking is pressed ***(see Fig. 2)*** the device allows some sound to pass through, while still helping to protect hearing from impulse noise such as weapons fire. This is called the Open Mode. The Open Mode may assist the user with improved situational awareness.

Step 1. Ensure that the plug labeled with an "L" is used for the left ear and the plug labeled with an "R" is used for the right ear. Ensure that the retainer is generally orientated as shown in relation to the rocker switch.

Step 2. Insert the plug into the ear canal while pulling the ear outwards and upwards with the opposite hand. Ensure that the rocker switch is in a vertical position. ***(see Fig. 3)***

Step 3. Use your index finger to push and bend the retainer into the concha to help ensure that the earplug is seated securely. ***(see Fig. 4)***

Step 4. If properly inserted, the retainer should be fully secured in the concha and not protruding out of the ear at any point. ***(see Fig. 5)***

Step 5. If the retainer or earplug doesn't fit properly ***(see Fig. 6 & 7)*** it can be removed and reinserted.

Removing Earplugs

For greater comfort twist the earplug gently to break the seal before removing it from the ear canal.

Caution: Rapid removal may damage the ear. It is not recommended to remove the earplugs by pulling the cord. ***(see Fig. 8)***

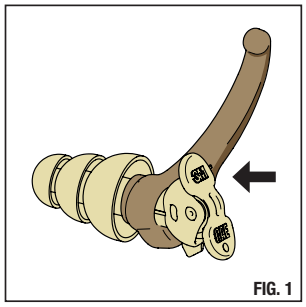
FIG. 1

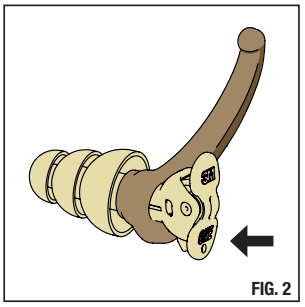
FIG. 2

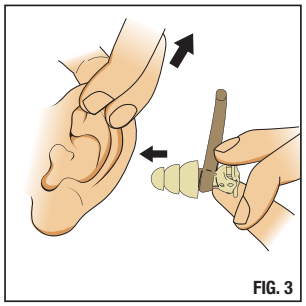
FIG. 3

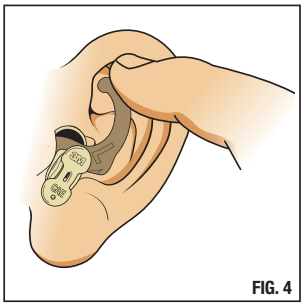
FIG. 4


FIG. 5

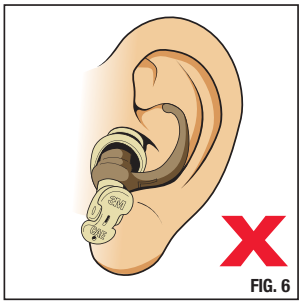
FIG. 6

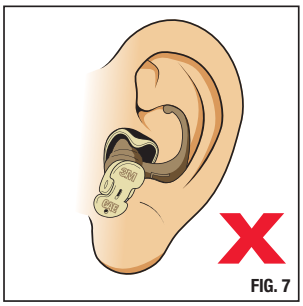
FIG. 7

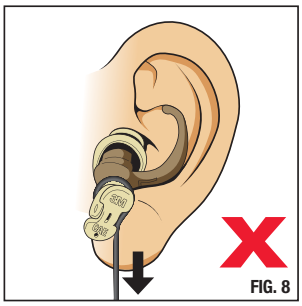
FIG. 8

Fit Checking

Choose the smallest size that provides a good seal and secure fit, but is large enough that the outer flange seals the ear canal at the ear canal entrance. One quick and easy fit check is the pump test. The seal can be tested by gently pumping the plug in and out of the ear canal, while the rocker switch is in the Closed Mode position. When a proper acoustic/pneumatic seal is present, the pumping motion will cause pressure changes in the ear which the wearer should be able to detect. They will be much less noticeable or totally absent while the rocker switch is in the Open Mode position. If no difference can be detected between the Open/Closed Modes, the plug is probably not sealing the ear. Additionally, the user's voice should sound louder and deeper when they speak or hum.

Cleaning and Disinfecting

These earplugs are reusable and should only be cleaned with mild soap and warm water. Allow to dry at room temperature. Do not immerse the rocker switch assembly in water as this can clog the filter. Do not use alcohol or other disinfectant as these may damage the earplugs. Do not use heat to dry the product. Hard plastic parts may be wiped clean. Discard the product immediately if there is any sign of damage.

⚠ WARNING!

1. Always be sure that the complete product is:
   a) Suitable for the application b) Fitted correctly c) Worn during all periods of exposure d) Replaced when necessary
2. This product may be adversely affected by certain chemical substances. Further information should be obtained from the manufacturer.
3. Earplugs fitted with a connecting cord should not be used where there is a risk that the cord may be caught up during use.
4. When used in the Open Mode against continuous noise, the product may not offer adequate protection in all operating environments which may lead to noise-induced hearing loss.
5. Although test data from the ISL laboratory for peak noise reduction shows that the product offers increasing levels of protection against peak impulse noise up to 190 dB peak, it is recommended that the product should be restricted to a maximum external level of 160 dB in order to ensure that the level effective to the ear remains below the Peak Exposure Limit Value of 140 dB.
6. In the unlikely event of the earplug tip becoming lodged in the ear canal, seek medical attention.
7. Failure to follow all instructions on the use of these personal protection products and/or failure to properly wear the complete product during all periods of exposure may adversely affect the wearer's health, lead to severe or life threatening illness or permanent disability.
8. When individuals are firing weapons and exposed to impulsive sounds, the severity of exposure is influenced by the weapon, ammunition, number of rounds fired and numerous other variables. Proper selection, fit, use and care of the hearing protector are very important. All of these factors make it difficult to predict the required and/or actual protection obtained. Regardless of the hearing protector being worn, the user should be alert to his or her own hearing. If during or after an exposure, tinnitus (ringing or buzzing in the ears) is heard or the user's hearing seems muffled or dulled, or for any other reason the user suspects a hearing problem, the fit, condition and adequacy of the protector should be carefully checked and/or a more protective device or combination of devices (such as earmuffs and earplugs together) should be worn. For those exposed to weapons fire on a regular basis, periodic hearing evaluations are advised.

LABORATORY ATTENUATION

Combat Arms™ Earplugs - Open Mode — **ANSI S3.19-1974**

Frequency (Hz)	125	250	500	1000	2000	3150	4000	6300	8000	NRR	CSA CLASS
Mean Attenuation in dB	6.1	6.6	11.0	17.3	24.4	26.6	20.4	30.1	33.1	8	C
Standard Deviation dB	3.7	3.9	2.8	2.7	3.8	4.1	3.7	5.2	3.1		

Combat Arms™ Earplugs - Closed Mode — **ANSI S3.19-1974**

Frequency (Hz)	125	250	500	1000	2000	3150	4000	6300	8000	NRR	CSA CLASS
Mean Attenuation in dB	30.6	29.6	30.5	26.8	31.4	32.9	30.6	35.6	41.8	21	BL
Standard Deviation dB	3.4	4.0	3.9	3.1	3.7	5.0	4.8	4.6	4.2		

CAUTION! Hearing protection must be worn at all time in noisy surroundings for proper protection. Improper fit or inconsistent use of this device will reduce its effectiveness in attenuating noise.
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 environment noise level as measured at the ear is 92 dBA.
2. The NRR in the Closed mode is 21 decibels (dB).
3. The level of noise entering the ear is approximately equal to 71 dBA.

CAUTION: For noise environments dominated by frequencies below 500 Hz, the C-weighted environmental noise level should be used. Although hearing protectors can be recommended for protection against the harmful effects of impulse noise, the Noise Reduction Rating (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.

WARNING: Choking hazard. Keep away from infants and small children. 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 hazardous noise may result in hearing loss or injury. For correct use, consult supervisor, User Instructions, or call in the U.S.A. at 1-800-243-4630. If there is any drainage from your ear or you have an ear infection, consult with your physician before wearing earplugs. Failure to do so may result in hearing loss or injury.

The power to protect your world.℠

3M