Frequently Asked Questions:

What’s wrong with conventional earplugs?
A They muffle speech and music. Conventional earplugs reduce sound more in the high frequencies than in the low and mid frequencies, which makes music and voices unclear and unnatural. Deeply-inserted foam earplugs can provide 30-40 dB of sound reduction, but only a small amount is typically needed.

How much protection do people need?
A Hearing loss is a function of exposure time, the average sound level, and the peak level of very loud sounds. Some persons are more susceptible to hearing loss from high-level sound than others. Most musicians do not need maximum protection, and many industrial workers can be adequately protected with as little as 10 dB of sound reduction. The majority of eight-hour-equivalent noise exposure in industry falls between 85 and 95 dB.

Why are deep earmolds required for Musicians Earplugs?
A Earmolds need to seal deeply in the bony portion of the ear canal or the wearer will hear a hollow or boomy sound in their own voice when speaking, singing or playing a brass or wind instrument. This unpleasant or distracting sound is called the occlusion effect. Deep earmolds (past the second bend of the ear canal) will eliminate this problem.

Is there a non-custom high fidelity earplug?
A Yes. ER-20 High Fidelity Earplugs are ready-fit earplugs that preserve sound quality while reducing sound levels approximately 20 dB at all frequencies. ER-20s reduce harmful sound without distorting speech and music. For more information visit www.etymotic.com.

What does NRR mean?
A The EPA requires manufacturers to print a noise reduction rating (NRR) on all non-custom earplugs. The NRR for ER-20s is 12 dB, but actual clinical measurements of properly inserted ER-20s indicate that these earplugs provide almost equal sound reduction (20 dB) at all frequencies in real ears. The required formula used to determine NRR includes an adjustment for individual variability and for those persons who do not wear ear protection as instructed. Many investigators have found no consistent rank order correlation between the real-world NRRs and labeled NRRs. NRR is computed from laboratory data that are not representative of the values attained in the real world by actual users.

What Musicians Say
(from the Chicago Symphony Orchestra)
As quoted in the Chicago Tribune and the Daily Herald

Bill Buchman bassoonist
“I’m in front of the trumpets and trombones... The ER-15s let me hear myself playing and also the entire orchestra so I can correctly perceive my relation to the other instruments.”

Lawrence Neuman violist
“These earplugs don’t block out what I want to hear. They just tone it down and keep things equalized. I also wear mine on planes and the CTA, which is incredibly loud; I love them.”

Lee Lane violist
“I’d tried everything... When these came along, I was absolutely delighted; they’ve been very successful for me.”

Burl Lane contrabassoonist
“ER-15s make this job fun again.”

Who uses Musicians Earplugs?
• Musicians
• Marching bands
• Sound crews
• Recording engineers
• Band teachers
• Concert goers
• DJs
• Airline personnel
• Athletic coaches
• NFL football players
• Referees and timekeepers
• Traders
• Wedding photographers
• Motorcyclists
• Dentists
• Construction workers
• Industrial workers
• Truck drivers
Musicians Earplugs replicate the natural response of the ear canal so that sound heard with these earplugs has the same quality as the original, just quieter.

**Harmful Sound Comes From:**

- Small strings
- Large strings
- Woodwinds
- Brass
- Percussion
- Vocalists
- Acoustic guitar
- Amplified instruments
- Marching bands
- Music teachers
- Recording engineers
- Sound crews

**Recommended Earplugs for Musicians**

Musicians practice and perform in a variety of different settings and they are exposed to high levels of sound, sometimes for long periods. They require different amounts of protection depending on the sound levels they encounter during rehearsals and performances.

**Quick Reference Guide**

- **ER-9 Musicians Earplug**
  - Flat 9 dB sound reduction through the mid range. Same high frequency protection as the ER-15

- **ER-15 Musicians Earplug**
  - Provides uniform 15 dB sound reduction across all frequencies

- **ER-25 Musicians Earplug**
  - Provides 25 dB of relatively flat sound reduction across all frequencies

**Button Colors**

- Clear
- Beige
- Brown
- Red
- Blue

**Interchangeability**

Identical dimensions. Change buttons for different listening conditions.

**Earmold styles**

- Standard
- Partially countersunk
- Countersunk

**Insertion**

Moisten the mold for ease of insertion.

**Cleaning**

- Remove button from mold. Use water and mild soap on the mold only.
- Dry mold thoroughly before replacing button.

**Replacement**

Discoloration, shrinkage, cracking, hardening of earmold material, deterioration in performance.

Musicians Earplugs require custom earmolds. Deep impressions past the second bend of the ear canal must be taken to ensure the effectiveness of these earplugs and to reduce the occlusion effect.