FREQUENTLY ASKED QUESTIONS

What makes earplugs high-fidelity?

Most earplugs reduce sound more in the high frequencies than the lows and mid range, which produces unnatural, muffled sound. Etymotic's high-fidelity earplugs reduce sound evenly at all frequencies so sound is unaltered, just quieter. No other earplugs, passive or electronic can prove that claim.

How much noise is too much?

Whether you are a professional or amateur musician, director, music educator, front-of-house crew, security personnel, music industry support staff or in the audience, you are often exposed to high levels of sound, sometimes for long periods.

Noise-induced hearing loss from excessive exposure to high-level sound depends on the intensity and duration of sound. Some persons are more susceptible to hearing loss from loud sound than others. The longer the exposure at high levels the greater the risk. Think: How long, how loud, how often?

How do I know which size ETY•Plugs to use?

Both sizes fit most ears, but the standard earplugs are more comfortable for many users with smaller ear canals. Studies by Etymotic Research and an independent, accredited lab show that most users can achieve a seal with the standard fit. Ear size cannot be predicted by a person's physical size, age or gender.

Are there advantages of custom Musicians Earplugs™ vs ready-fit ETY•Plugs®?

ETY•Plugs reduce sound by 20 dB and are ideal for a wide range of occupations, musical events and recreational activities. **Musicians Earplugs** have interchangeable filters that offer three levels of protection—9 dB,15 dB and 25 dB—to accommodate different playing styles, sound levels and venues. Musicians Earplugs are the ultimate in comfort because they are customized.

What are the advantages of the Music•Pro™ electronic earplugs?

Music•PRO earplugs combine two active hearing protectors in a single device that allows natural hearing when sound levels are safe, provides protection when hearing is at risk and avoids the inconvenience of removing earplugs to hear soft sounds and speech. They are ready-fit, with no custom molds required and provide either 9-dB or 15-dB protection and amplification of soft sounds when desired.

WHICH EARPLUG IS RIGHT FOR ME?

CUSTOM•FIT EARPLUGS

Musicians Earplugs™ available through hearing professionals, are custom, high-fidelity earplugs developed by Etymotic Research over 25 years ago. Earmold laboratories that make molds for Musicians Earplugs pass rigorous manufacturing requirements to ensure uniform quality and performance.

READY•FIT EARPLUGS

ETY•Plugs® ready-fit earplugs were developed as a low-cost alternative to Musicians Earplugs, and remain the highest-fidelity non-custom earplugs available today.

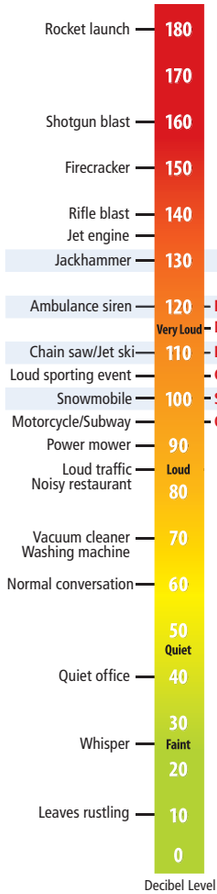
ELECTRONIC EARPLUGS

Music•PRO™ electronic earplugs provide either 9-dB or 15-dB protection at the flip of a switch. They reduce loud, continuous sound when it reaches unsafe levels, and instantly protect from loud, percussive sounds. They provide 6 dB of amplification, enhancing soft passages or the speech of a director or other musicians.

	ER-9	ER-15	ER-25	MP-915	ETY•Plugs	Harmful Sound Comes From
Small strings	●	●		●	●	Own instrument
Large strings	●	●		●	●	Brass section
Woodwinds		●		●	●	Brass section
Brass		●	●	●	●	Own instrument, other brass
Flutes		●		●	●	Percussion
Percussion		●	●	●	●	Own instruments, other percussion
Vocalists	●	●		●	●	Own voice, speakers, monitors
Acoustic guitar	●	●		●	●	Drums, speakers, monitors
Amplified instruments		●	●	●	●	Speakers, monitors
Marching bands		●	●	●	●	Instruments behind
Music teachers		●		●	●	Multiple sources
Recording engineers		●		●	●	Speakers, monitors
Sound crews		●		●	●	Speakers, monitors

Ref: Chasin, M. Musicians and the Prevention of Hearing Loss. Singular Publishing Group

Musicians Earplugs filters are interchangeable, so it is possible to use one type of filter in one mold and another type in the other mold, depending on the source and the location of sound.



NOISE-INDUCED HEARING LOSS
Know the Risk

Time to reach daily exposure limit

		dB	No earplugs	Using ETY•Plugs
		130	< 1 second	90 seconds
	Rock Concert	121	7 seconds	<12 minutes
	Marching Band	115	< 30 seconds	<48 minutes
	Drumline	110	< 90 seconds	2.5 hours
	Concert Band	106	< 4 minutes	7.0 hours
	Symphony	100	15 minutes	SAFE
	Orchestra Pit	94	1 hour	SAFE

For every 3 dB over 85 dB, safe exposure time is reduced by half.

Example:
85 dB 8 hours
88 dB 4 hours
91 dB 2 hours

ABOUT ETYMOTIC

Etymotic Research is committed to protecting and enhancing the listening experience for musicians, music educators, audio professionals and consumers. For thirty years, Etymotic has manufactured products to help people hear better now, and preserve their hearing for the future.

ETYMŌTIC RESEARCH INC.

www.etymotic.com 847-228-0006 • 888-389-6684

EREM-B19-A

ETYMŌTIC

"true to the ear"

High-Fidelity Hearing Protection

- Custom-fit, ready-fit and electronic earplugs
- Sound is reduced evenly
- Communication is clear
- Fatigue from noise is reduced
- Richness of music is preserved

musicians earplugs™ ETY•Plugs earplugs Music•PRŌ High-Fidelity Electronic Musicians Earplugs™

FACT More than 30 million Americans are exposed to hazardous sound levels on a regular basis. Exposure occurs in the workplace, in recreational settings, and at home. About one-third (10 million) can attribute their hearing loss, at least in part, to noise.

Source: National Institute on Deafness and Other Communication Disorders

THE GOOD NEWS

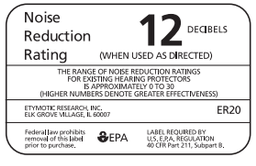
Noise-induced hearing loss can be prevented!

- ✓ Using high-fidelity earplugs reduces the risk of hearing damage from noise in the workplace, loud music at concerts and excessive noise at venues such as air shows, parades, athletic events and motor sports.
- ✓ For musicians, regular use of high-fidelity earplugs while practicing and performing protects against the cumulative effects of overexposure to loud sound throughout life.
- ✓ A little time may be required to acclimate to any earplugs. Ultimately, most musicians report that when they use high-fidelity earplugs they can hear their own instrument better, as well as the balance and blend with those around them.

ABOUT NOISE REDUCTION RATING (NRR)

NRR is a single number based on a formula required by the Environmental Protection Agency (EPA) that is supposed to indicate the amount of noise reduction a hearing protector provides. However, numerous studies have shown that NRR is a poor indicator of performance in the real world. Etymotic earplugs provide equal protection across frequencies, and NRR underestimates the amount of protection from flat attenuation earplugs. A proposed revision to NRR labeling regulation is currently under review.

NRR for ETY•Plugs is 12 dB, but measurements of properly inserted ETY•Plugs indicate they provide almost equal sound reduction of 20 dB across frequencies.



NRR for Etymotic's electronic earplugs is 25 dB, but when deeply sealed they provide approximately 35-40 dB of sound reduction for very loud sounds.

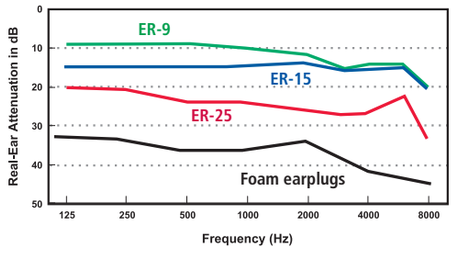
musicians earplugs™

The original high-fidelity **CUSTOM•FIT** earplugs

ACCU Technology®

Musicians Earplugs filters have a diaphragm which functions as an acoustic compliance, while the volume of air in the sound bore of the custom earmold acts as an acoustic mass. The combination of the two produces a resonance at approximately 2700 Hz (as in the normal ear), which results in smooth, flat attenuation.

- 3 levels of sound reduction: 9 dB, 15 dB and 25 dB
- Filters are interchangeable
- Custom molds require ear impressions



ER-9 Provides flat 9-dB sound reduction through the mid range and 15 dB in the highs
ER-15 Provides uniform 15-dB sound reduction across frequencies
ER-25 Provides 25-dB essentially flat sound reduction across frequencies

Color options: Clear, Beige, Brown, Blue and Red

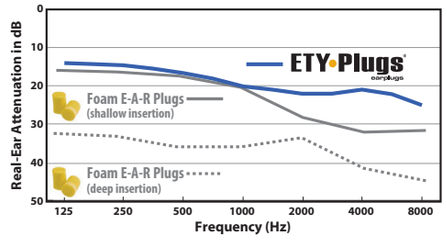
ETY•Plugs® earplugs

The only high-fidelity **READY•FIT** earplugs

ACCU Technology®

ETY•Plugs use an ACCU•Tuned™ resonator and acoustic resistor to replicate the natural response of the ear canal. Their unique construction and proprietary sound path reduce sound levels evenly across the frequency range. When sound enters the earplug, it is reduced without changing sound quality—the same as the ear would hear it, only quieter.

- Reduces sound evenly by 20 decibels
- Reusable
- Low cost
- 2 sizes: standard and large



ETY•Plugs provide almost equal sound reduction across the range of hearing.
Foam earplugs reduce the high frequencies, degrading the quality of speech and music.

STANDARD FIT — Blue eartip, Clear stem

LARGE FIT — White eartip, Red, Purple, Clear or Blue stem

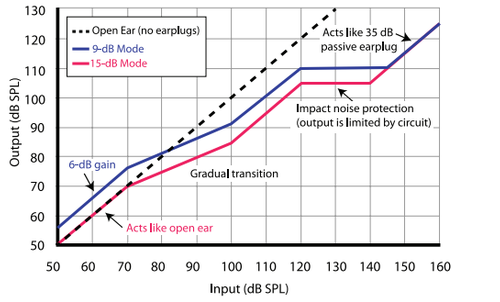
Music•PRO High-Fidelity Electronic Musicians Earplugs™

The first high-fidelity **ELECTRONIC** Musicians Earplugs

ACCU Technology®

Music•PRO electronic earplugs circuitry automatically changes output levels as sound input levels change. Hearing is natural, as if nothing is in the ears, until sound exceeds safe levels. As sound levels increase, earplugs gradually provide 9- or 15-dB sound reduction. Natural hearing is restored when sound returns to safe levels.

- Provides either 9-dB or 15-dB protection
- Ready-fit—custom molds are not required
- Clear communication
- Instantaneously protects from loud, percussive sounds
- Enhances soft sounds if desired



Includes:
- 1 pair MP-9-15 earplugs
- ACCU•Fit™ eartips
- Flexible neck cord
- Filter tool and ACCU•Filters™
- Cleaning tool
- Batteries (#312 zinc air)
- Protective case