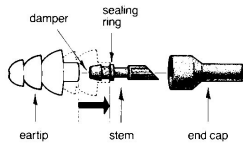


What Makes the ER-20s High Fidelity?

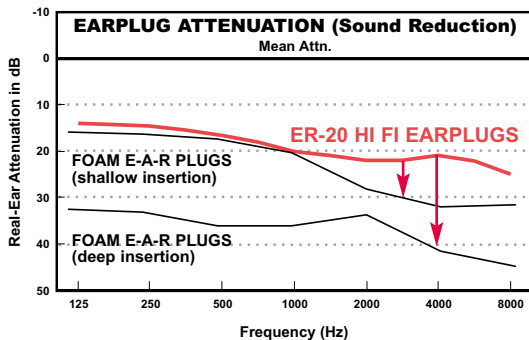
ER-20s use a patented tuned resonator and acoustic resistor which replicate the natural response of the ear canal so that sound heard with these earplugs is as clear as the original, just quieter.



The ER-20s have virtually the same fidelity as **Musicians Earplugs** (custom earplugs worn by professionals). For more information about Musicians Earplugs consult a hearing professional or visit www.etymotic.com.

fidelity /fidélitee/ n.

1. faithfulness; loyalty.
2. strict conformity to truth or fact.
3. exact correspondence to the original
4. precision in reproduction of sound



Lost high frequencies with conventional earplugs compared to ER-20s.

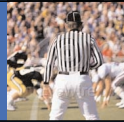
Aircraft

crew
flight instructors
passengers
pilots



Athletics

athletes
coaches
sporting events



Construction

carpenters
equipment operators
road builders
steel workers



Emergency Vehicles

EMTs
highway patrol
firefighters



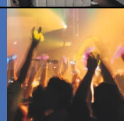
Industrial

factory workers
shop teachers
students
supervisors



Leisure

concerts
night clubs
noisy restaurants



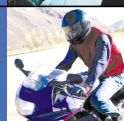
Medical-Dental

dentists
dental hygienists
dental technicians
surgeons



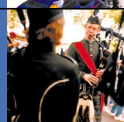
Motor Sports

motorcyclists
pit crews
race car drivers
spectators



Music

concerts
marching bands
musicians
night clubs



Others

delivery drivers
market traders
night club staff
truck drivers



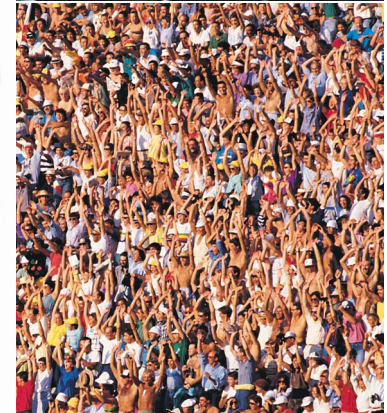
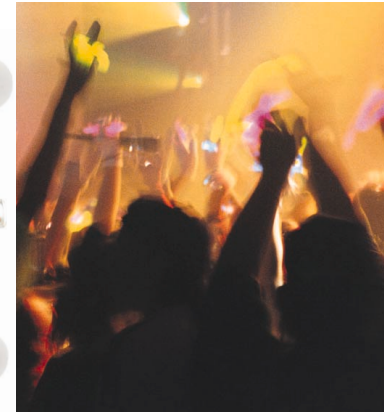
ETYMOTIC RESEARCH

Colors of Clarity

ER-20 High Fidelity Earplugs

Colors of Clarity

Effective for anyone who needs to hear accurately in noise.



Music • Concerts • Travel • Sporting Events
• Motorsports • Clubs

For more information on high fidelity hearing protection visit www.etymotic.com

The ER family of earplugs is covered by U.S. Patents #4,852,683 #5,113,967 #5,887,070.
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4/02-10



ER-20 Benefits

- Low cost
- Ready-fit
- Replicates the ear's natural response
- Sound quality is preserved
- Speech is clear, not muffled
- Reduces sound approximately 20 dB at all frequencies

How Much Protection Do You Need?

Hearing loss is a function of exposure time, the average sound level and the peak level of very loud sounds. OSHA set industrial limits of 8 hours per day at 90 dBA. NIOSH recommends a maximum allowable exposure of 40 hours per week at 85 dBA.

Recommended Maximum Weekly Exposure (NIOSH, 1998)

Sound level (dB)	Exposure type	No protection	Using ER-20s
60	Conversation	SAFE	-
80-85	Noisy restaurant Vacuum cleaner Average factory	40 HRS.	SAFE
88	Circular saw Loud party Motorcycle	20 HRS.	SAFE
94	Subway Riding mower	5 HRS.	SAFE
97	Live band	2.5 HRS.	40 HRS.
100	Sporting event Chain saw Snowmobile	1.25 HRS.	20 HRS.
112	Blues bar/Rock concert	5 MINS.	1.25 HRS.
115	Ambulance siren	2.5 MINS.	36 MINS.
140	Jet engine Gun shot Firecracker	INSTANT LOSS	

Above 125 dB you are at risk for any period without maximum protection

Allowable Daily Exposure (OSHA and NIOSH)

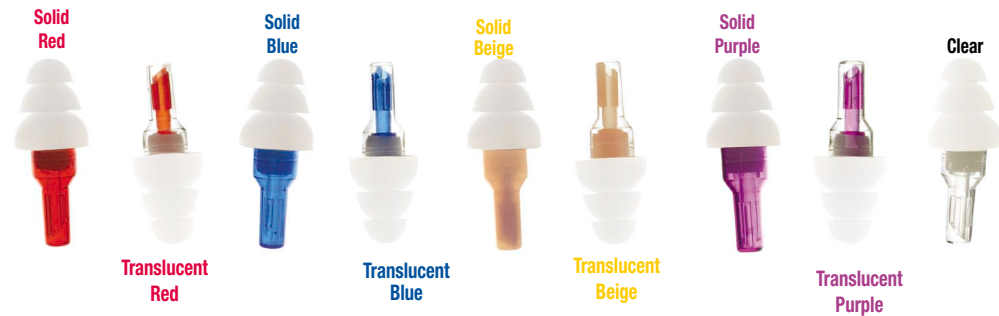
source level in dB	85	88	90	92	94	95	97	100	105	110	115	120
OSHA	16		8	6		4	3	2	1	½	¼	⅛
NIOSH	8	4			1	½	¼	⅛				

OSHA and NIOSH values listed above are given in *daily* exposure limits. According to the OSHA standard, a person can be exposed to a 95 dB environment for 4 hours before risking hearing damage. With 10 dB of protection that person can be exposed to 95 dB for 16 hours per day. NIOSH values are more conservative.

For maximum protection, foam earplugs, muffs or other hearing protection devices are recommended.

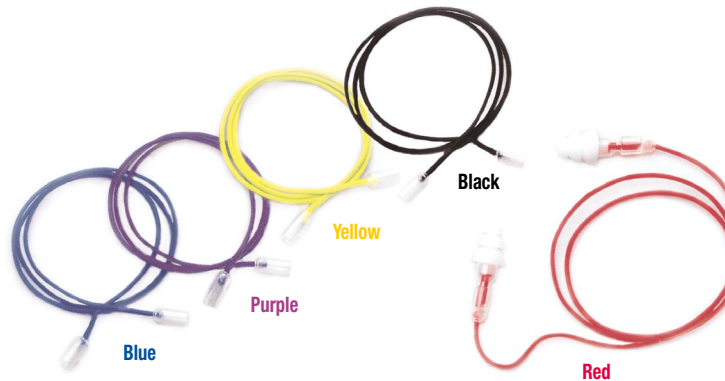
Colors of Clarity

ER-20 Colors and Styles*



* All earplugs reduce sound 20 dB

Optional Neck Cords



Carrying Case



About NRR (Noise Reduction Rating)

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.

