

Motorcycle Hearing Protection - Earplugs - Street Survival

Hear Me... Before It's Too Late
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Ears Are for More Than Hanging Sunglasses On

Imagine you're getting dressed for that all-day ride-riding pants, jacket, boots, gloves and helmet. Did you forget anything? Yes-hearing protection. But before you dismiss this as just another safety article, you should know that reading these words may save you from years of debilitating hearing loss.

Most riders think that the majority of noise associated with riding comes from the motorcycle itself. However, wind noise created by air turbulence produces almost all noise over 35 mph and can exceed by 10,000 times (over 40 decibels higher) the sound level of ordinary conversation. That doesn't sound good-and it's not.(Sound is measured in decibels on a logarithmic scale. This means a sound 10 decibels higher is actually 10 times louder, 20 decibels is 100 times louder, etc.)

If you look at the chart, you can see various sound sources, their approximate intensity and the amount of time in a 24-hour period that the Occupational Safety and Health Administration says exposure to that sound should not result in hearing damage.

Measurements of motorcycle riding noise levels vary, but are generally around 85-95 dB at speeds up to 35 mph, climbing to 110-116 dB at 65 mph. According to the chart, you shouldn't ride on the highway for more than 15 minutes a day.

Which is why you need hearing protection-it's ridiculously easy to exceed hearing-safety thresholds in a short period of time. Don't think wearing a full-face helmet will cut it, either; studies have shown that, at best, they only provide a 3-5 dB reduction in sound reaching the rider's ears.

What's the answer, then? Simple: earplugs. Earplugs lessen the amount of sound reaching your ears, with most having a noise reduction rating of between 20 dB and 33 dB. Looking at our example-at 115 dB and only 15 minutes of time before exposure is harmful-if we put in 33-dB-rated earplugs, we'd then be able to ride for as long as we wanted without hearing loss. (Don't forget: Any hearing loss is permanent.)

Foam earplugs will last for at least several days of riding. They're inexpensive and come in a variety of sizes, shapes, materials and even degrees of hardness. Reusable earplugs can be worn for months on end and can be cleaned. These are usually made of soft silicone rubber and may contain special filters that allow a greater range of sound frequencies to reach the ear at lower sound levels (such as conversations at stoplights) and provide a higher level of sound attenuation at higher sound levels, using technology similar to that found in earplugs worn by gun users.



Finally, there are custom-molded earplugs. These are made of silicone rubber molded to the user's ear and can last for years. They provide a snug fit, exactly matching the contours of the user's ear canal. Custom earplugs can also be made with the same kind of filters found in the reusable plugs for the "ultimate" earplug. They can even have earphones molded in.

Now you can hit the road for that all-day ride.

Special thanks to Tom Bergman of The Ear Plug Super Store (earplugstore.stores.yahoo.net).

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| NOISE SOURCE | SOUND LEVEL (in dB) | Maximum OSHA Exposure Time |
|-------------------------------|---------------------|----------------------------|
| conversation | 65 | unlimited |
| motorcycle (at rest, idle) | 85 to 88 | 16 to 10.6 hours |
| lawn mower, shop tools | 90 | 8 hours |
| leaf blower | 95 (up to 105) | 4 hours (at 95 dB) |
| chain saw | 100 to 105 | 2 hours to 1 hour |
| woodworking shop, stereo | 110 | 30 minutes |
| sandblasting | 115 | 15 minutes |
| ambulance siren, rock concert | 120 | 7.5 minutes |
| jet engine | 130 | 1 minute, 52 seconds |