

Airboat Hearing Safety

By **Doug Sartin**

Whether being used for a hunting trip, search and rescue mission, airboat tour or recreational fun, airboats are an exhilarating way to explore the waterways of the world. While exciting, airboats do pose risks due to prolonged exposure to sound levels created by the engine and wind.

Prolonged exposure to noise without adequate hearing protection can cause irreversible hearing damage. It is extremely important for airboaters, who are in prolonged close proximity to airboat engine and propeller sounds, to use hearing protection.

Hearing Loss Disorders

People of all ages experience gradual hearing loss over time. Hearing loss can be attributed to the body's aging process, bacteria, head injury, earwax, and often the result of exposure to excessive noise levels. Many of us who have not been treated for hearing loss may have mild to moderate symptoms of which we are completely unaware. Often this loss is due to exposure to high noise during our daily lives.

Prolonged exposure to noise levels above 90 dB is proved to lead to significant and permanent hearing loss. With most airboats producing noise levels from 80- to 90+ dB, hearing protection is strongly recommended. Noise-induced hearing loss and Tinnitus are the two main hearing loss disorders.

NIHL is an increasingly prevalent disorder that results from exposure to high intensity levels of sound for long periods of time. It is the result of the ear's hair cells and supporting structures being overstimulated by intense sound traveling into and through the auditory system.

Tinnitus is the perception of ringing in the ears in the absence of corresponding external sound and indicates that inner ear or nerve damage has occurred. It can be caused by high noise exposure, head and neck trauma, cardiovascular disease, and other disorders. With each exposure to prolonged loud noises, tinnitus can worsen by lasting longer and eventually creating permanent damage.

Noise-Induced Fatigue

Long exposure to high and low frequency noise waves can create noise-induced fatigue. There is a psychological overload impact from the wind and engine's high-frequency sound waves. Noise-induced fatigue created by loud noises can make it harder to concentrate and cause irritability. Studies show that increased blood pressure,

decreased attention span, raised heartbeat, nausea and fatigue can be caused by prolonged exposure to sounds of 90 dB or higher. Continuous exposure to vibration can also play a factor in this type of fatigue, as well.

This fatigue has been linked to numerous boating and private aircraft accidents over the years.

Prevention and Protection

To properly protect yourself, it is important to remember that hearing loss is cumulative and there is no cure for permanent hearing loss resulting from your ears' vulnerability to loud noises. Preventative measures should always be taken to protect your ears from constant high-environment noises and frequencies. Using hearing protection devices can reduce noise exposure by 20 to 30 decibels without interfering with your work or entertainment.

The most inexpensive way to protect your ears is by using ear plugs or earmuffs. Ear plugs come in different shapes and sizes and go directly into the ear to block the outer ear canal from noise. Earmuffs are different from earplugs as they suppress loud sounds by completely covering the outer ear. While most modern airboats don't operate at this sound level, simultaneously using earplugs and earmuffs should be considered when exposed to high-noise levels exceeding 108 dB for better protection.

A recommended alternative to earplugs and earmuffs are noise-reducing headsets. Headsets connected to intercom systems reduce noise levels in order to protect hearing and also allow users to communicate among boat operator and other riders on the boat and over radios to remote users. Increased communication leads to not just greater enjoyment but increased safety. Headsets come in a variety of styles for different applications, can have special noise-canceling microphones, and vary in cost depending on quality and complexity.



Noise-reducing headsets protect hearing and also allow users to communicate among boat operator and other riders on the boat and over radios.

Headset systems from a company like Setcom / Piratecom can reduce noise by up to 24 dB. A 24-dB headset reduces a 100 dB sound source down to 76 dB. Using ear plugs in combination with a headset can increase the noise reduction capabilities even more. The use of an intercom system and noise-canceling headsets can help prevent hearing loss and noise-induced fatigue without affecting the enjoyment of using your airboat.

Preventative devices are the only way to reduce the amount of sound that reaches your ears.

There is no better time than the present to begin taking precautions to protect your hearing and prevent auditory disorders later in life.

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