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**Federal Aviation
Administration**

InFO

Information for Operators

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http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info

An InFO contains valuable information for operators that should help them meet certain administrative, regulatory, or operational requirements with relatively low urgency or impact on safety.

SUBJECT: Noise Attenuation Properties of Noise-Canceling Headsets

Purpose: This InFO alerts operators, directors of operations (DOs), chief pilots, and flight crewmembers who may be using noise-canceling headsets of the potential for misdetection of audible alarms and other environmental sounds.

Background: Ordinary (non-noise-canceling) headsets reduce ambient noise levels through a physical means by providing some acoustical quieting. Noise-canceling headsets cancel noise through a combination of physical means and electronic means. While this technology can have many beneficial effects such as providing clearer communications, reduced pilot fatigue, and added comfort, electronic attenuation of important environmental sounds and alarms may occur.

Discussion: Noise-canceling headsets are most effective over a narrow frequency range, but the specific frequencies may vary by make and model. Also, these electronically attenuated frequencies are often proprietary to the manufacturer and may not be publicly available. Therefore, it is difficult to assess any effects the headsets may have on discerning environmental sounds such as:

- Vital communications between flight crewmembers or flight attendants, other than those attainable through interphone operations;
- Abnormal mechanical noises or abnormal engine sounds;
- Audible alarms other than those discernible by electronic means;
- Vibrations or wind noises; or
- Other aircraft during ground operations.

Recommended Action: Operators, DOs, chief pilots, and crewmembers of aircraft should evaluate their use of noise-canceling headsets. The FAA recommends sampling the available manufactured makes and models when performing such evaluations, since performance and attenuation properties vary. Evaluations should be conducted while both on the ground and in flight during normal operating conditions to ascertain if any audible alarms or other environmental sounds, or combinations thereof, can be detected while electronic noise attenuation is on and active. If any audible alarms or environmental sounds cannot be discerned, operators should elect to find other solutions to discern such alarms or sounds, or discontinue the use of noise-canceling headsets.