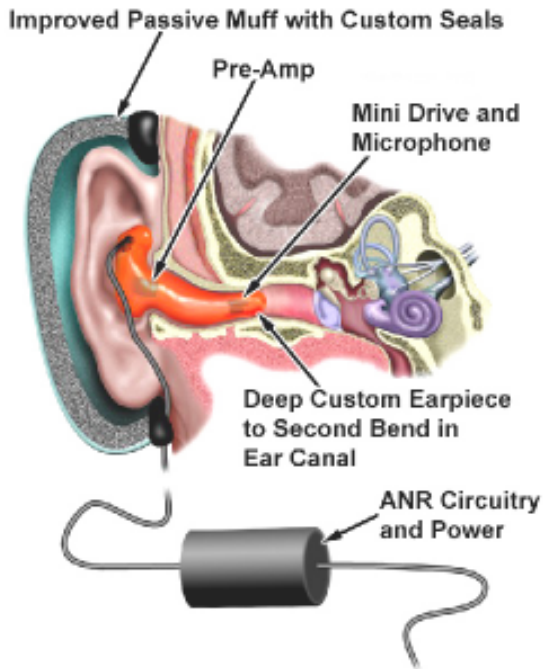


MINI LOUDSPEAKERS FOR ACTIVE NOISE REDUCTION EARPLUGS

US Air Force Research Laboratory



PROJECT DESCRIPTION

This project focuses on the development of a small, high-output loudspeaker which could be incorporated into active noise control earplugs worn by military personnel exposed to very high sound levels. Sound levels on the flight deck of an aircraft carrier, for example, can be well above the threshold of pain and ordinary earmuffs are inadequate to mitigate the high sound levels. Commercially sold active noise reduction earmuffs offer an additional technology for reducing the noise but are not adequate to lessen the severity of very high sound levels. Therefore the U.S. Air Force initiated a research program to develop active noise reduction earplugs to be used in conjunction with the commercial earmuffs.

Acentech's RH Lyon Division developed designs for tiny loudspeakers which appear capable of meeting the high output levels needed for noise cancellation in the Air Force application. We collaborated with a manufacturer of hearing aid elements to construct prototype miniature loudspeaker drivers. The goal is to provide the Air Force with prototypes of the final design that can be tested for use by Air Force personnel.

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Acentech

CONSULTING SERVICES

- Transducer design
- Prototype development
- Active noise control
- Test and evaluation

