



## COLLEGE OF WILLIAM AND MARY TECHNOLOGY TRANSFER OFFICE

TITLE (AND CASE NUMBER) OF INVENTION:

**SONIC NETS TO REPEL BIRDS (WM-1323)**

INVENTORS: John Swaddle, Mark Hinders

APPLICATIONS: Bird Control (agricultural, aviation, etc.)

SUMMARY:

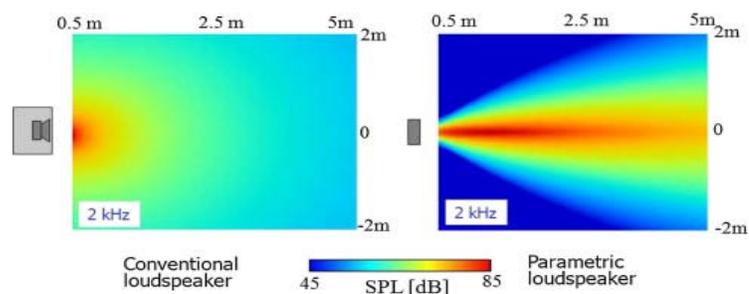
Our patent-pending technology utilizes focused sound to block vocal communication among birds, making the birds likely to move to other areas. The technology can be deployed at crop locations, airfields, and anywhere else that bird presence is undesirable.



This is an unconventional and novel approach to a very old problem. Startle sounds (and objects) have been used in the past to scare away birds, but birds often quickly habituate. Even the use of predator vocalizations or the presence of threatening live animals (dogs, farmers) have had limited success in displacing pest birds over the long-term. It can take very large investments in personnel hours to maintain these "scare" regimes and they have limited success: they are neither sustainable nor effective.

By blending advancements in acoustic engineering and the application of avian behavioral ecology, we are developing a novel approach: the use of carefully engineered sound to block communication channels for birds. Many bird species rely on vocal communication in most of their life history aspects. Birds that cannot communicate effectively within their environment tend to suffer a reduction in fitness and thus will move to a habitat that will allow for better communication. Our sonic nets broadcast frequencies that are optimized to disrupt avian songs/calls and hearing, systematically blocking vocal communication for those species and increasing the likelihood that the birds will go elsewhere. By using the new technology of non-linear acoustic parametric arrays, we can physically contain sound, thereby preventing leak-over sound pollution to surrounding areas.

Preliminary studies have shown substantial reduction in bird numbers in areas where our sonic nets have been deployed.



PATENT STATUS: United States patent pending

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