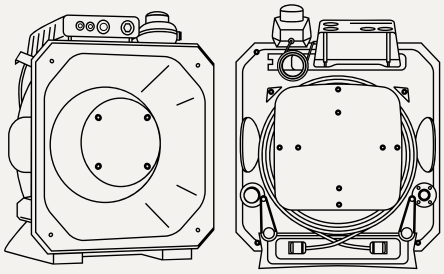
ACOUSTIC WEAPONS

Acoustic weapons, also known as long-range acoustic devices or sound cannons, are devices that project very loud, focused sound over long distances. Serious questions remain about the safety and efficacy of acoustic weapons in crowd-control contexts.

How they work

Acoustic weapons function by delivering loud, painful, and even dangerous levels of noise. In comparison with conventional speakers, acoustic weapons use arrays of small transducers to create highly concentrated and amplified sound. Often marketed as communications systems or "hailing devices," they are pressed into service in crowd control, leveraging their alarm functions as means to disperse crowds through aural pain.



Deployment mechanism

The LRAD, and similar devices, require space and energy. They are therefore often found as stationary projectors, or commonly in protest settings, mounted on vehicles.

Common types

LONG RANGE ACOUSTIC DEVICE (LRAD)
The LRAD has a range of 8,900 meters for intelligible speech and a maximum output of 162 decibels at one meter. It can cause pain (110-130dB) at 20 meters.

"MOSQUITO"
This is a type of stationary area-denial weapon. This high-pitched sound weapon produces a constant noise that is audible and painful to younger people, while leaving older people (over 30s) unaffected.

INFRASONIC WEAPON
This newer technology is under investigation. It would deliver very low frequency sounds which would be inaudible but could cause discomfort and disorientation.

Health Impacts

Acute exposure to focused sound can provoke pain, nausea, and temporary threshold shift (hearing loss). There is little peer-reviewed literature on the long-term effects of acoustic weapons on people, although some reports suggest prolonged ear pain, headaches, and permanent threshold shift may result from long exposures to these weapons. These weapons can be indiscriminate, causing harm or pain to protestors, bystanders, and even police officers themselves.

Variables that can exacerbate injuries

The risk of permanent hearing loss is determined by both sound intensity and duration of exposure. Use of these weapons at close range or for prolonged periods of time create situations in which long-term adverse effects become increasingly likely.

Policy recommendations

- There are serious concerns about the high potential of acoustic weapons to cause serious and permanent injury.
- The lack of proper research and evidence about acoustic weapons' health effects remains, despite their increased use in recent years.
- Use of acoustic weapons in protests should be suspended, at least until such concerns are addressed.

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