


SECURITY KEEPS SYSTEMS SAFE.  
INTELLIGENT SECURITY HELPS SAVE LIVES.  
Our prevention-first approach protects critical IoT devices.

LEARN MORE

  
Intelligent Security. Everywhere.

SHARON WEINBERGER

SECURITY   02.10.2000 06:14 AM

# Report: Nonlethal Weapons Could Target Brain, Mimic Schizophrenia

Of all the crazy, bizarre less-lethal weapons that have been proposed, the use of microwaves to target the human mind remains the most disturbing. The question has always been: is this anything more than urban myth? We may not have the final answer to this question, but a newly declassified Pentagon report, [Bioeffects of Selected](#) [...]



Of all the crazy, bizarre less-lethal weapons that have been proposed, the use of microwaves to target the human mind remains the most disturbing. The question has always been: is this anything more than urban myth? We may not have the final answer to this question, but a newly declassified Pentagon report, *Bioeffects of Selected Non-Lethal Weapons*, obtained by a private citizen under the Freedom of Information Act, provides some fascinating tidbits on a variety of exotic weapons ideas.

Among those discussed are weapons that could disrupt the brain, as well as my longtime obsession, the "Voice of God" device, which creates voices in people's heads. As the report notes, "Application of the microwave hearing technology could facilitate a private message transmission. It may be useful to provide a disruptive condition to a person not aware of the technology. Not only might it be disruptive to the sense of hearing, it could be psychologically devastating if one suddenly heard 'voices within one's head.'"

Voices in your head disturbing? Heck, yeah, considering it's something most people associate with schizophrenia. The age-old question is whether such a weapon is possible. According to the report, it's not only possible, it's already been demonstrated in crude form:

ADVERTISEMENT

*Because the frequency of the sound heard is dependent on the pulse characteristics of the RF energy, it seems possible that this technology could be developed to the point where words could be transmitted to be heard like the spoken word, except hat it could only be heard within a person's head. In one experiment, communication of the words from one to ten using "speech modulated" microwave energy was successfully demonstrated. Microphones next to the person experiencing the voice could not pick up the sound. Additional development of this would open up a wide range of possibilities.*

*....  
This technology requires no extrapolation to estimate its usefulness. Microwave energy can be applied at a distance, and the appropriate technology can be adapted from existing radar units. Aiming devices likewise are available but for special circumstances which require extreme specificity, there may be a need for additional development. Extreme directional specificity would be required to transmit a message to a single hostage surrounded by his captors. Signals can be transmitted long distances (hundreds of meters) using current technology. Longer distances and more sophisticated signal types will require more bulky equipment, but it seems possible to transmit some of the signals at closer ranges using man-portable equipment.*

If voices in your head aren't disturbing enough, the report also goes on to theorize about a microwave weapon that could use electromagnetic pulses to disrupt the brain's functioning. It would work through "a rhythmic-activity synchronization of brain neurons that disrupts normal cortical control of the corticospinal and corticobulbar pathways that disrupts normal functioning of the spinal motor neurons which control muscle and body movements."

This concept is still very theoretical, the report notes:

*Application of electromagnetic pulses is also a conceptual nonlethal technology that uses electromagnetic energy to induce neural synchrony and disruption of voluntary muscle control. The effectiveness of this concept has not been demonstrated. However, from past work in evaluating the potential for electromagnetic pulse generator to affect humans, it is estimated that sufficiently strong internal fields can be generated within the brain to trigger neurons.*

Sadly, there's little context for the report, which is dated 1998, and no specific references to current programs or research, if any, about such weapons.

TOPICS

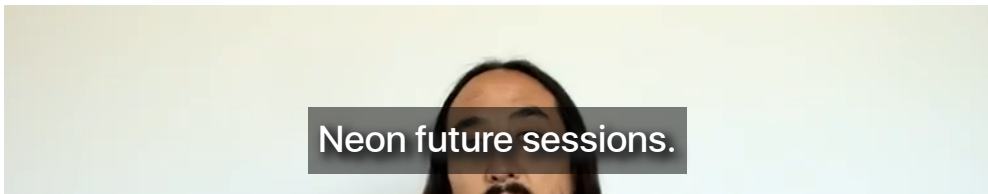
BIZARRO

LASERS

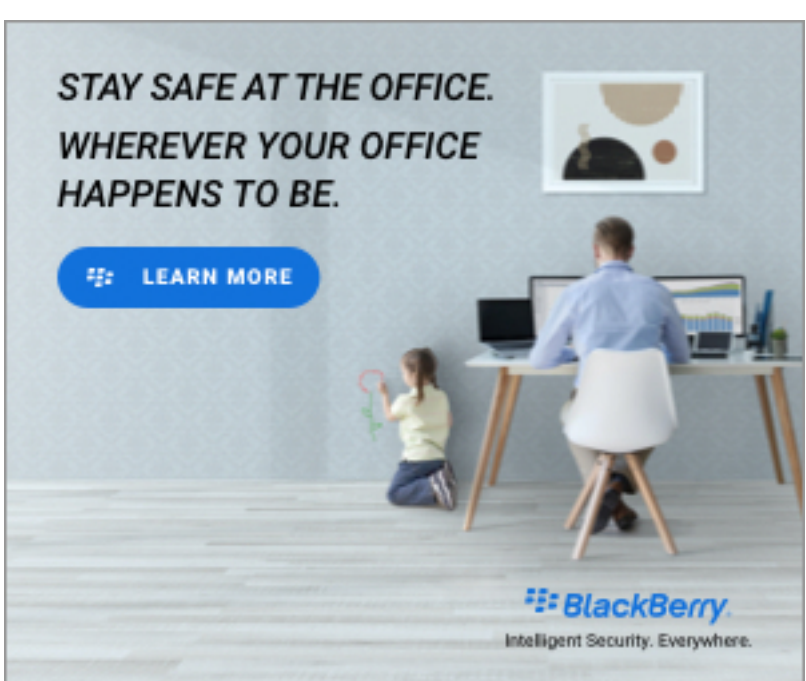
LESS-LETHAL

WEAPONS AND AMMO


WATCH



Ray Kurzweil & Steve Aoki Talk Technology, the Future & Humanity

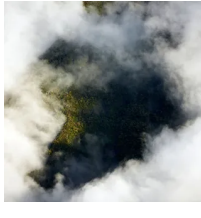


## Most Popular

- 


BUSINESS

**Borrowed a School Laptop? Mind Your Open Tabs**

SIDNEY FUSSELL
- 


SCIENCE

**A Huge Subterranean 'Tree' Is Moving Magma to Earth's Surface**

ROBIN GEORGE ANDREWS
- 

GEAR

**The Best Espresso Machines for the Home Barista**

JESS GREY
- 

SCIENCE

**Another Global Pandemic Is Spreading—Among Pigs**

MARYN MCKENNA

One year for \$29.99 \$10

Get WIRED

SUBSCRIBE

WIRED

WIRED is where tomorrow is realized. It is the essential source of information and ideas that make sense of a world in constant transformation. The WIRED conversation illuminates how technology is changing every aspect of our lives—from culture to business, science to design. The breakthroughs and innovations that we uncover lead to new ways of thinking, new connections, and new industries.

### MORE FROM WIRED

Subscribe  
Newsletters  
FAQ  
Wired Staff  
Press Center

### CONTACT

Advertise  
Contact Us  
Customer Care  
Send a tip securely to WIRED  
Jobs

