Army Technology

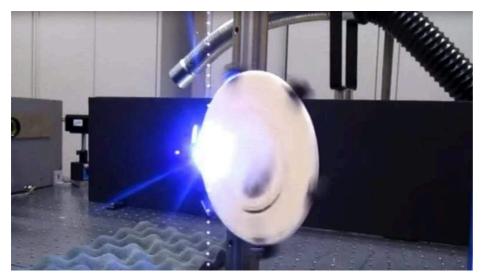
Uncategorised

US military creates human voice weapon using air and lasers

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Robert Scammell | March 27, 2018

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The device creates noise at a specific point in space, meaning soldiers between the weapon and the target are unaffected. Credit: Department of Defence

The US military's Joint Non-Lethal Weapons Program (JNLWD) is developing a weapon that alters atoms using lasers to create a human voice.

The weapon, called the Laser-Induced Plasma Effect, currently resembles a high-pitched screech, but the Department of Defence (DoD) hopes that it will eventually sound human enough to be used as a deterrent during crowd control.

The device creates noise at a specific point in space, meaning soldiers between the weapon and the target are unaffected, as opposed to a speaker which directs sound with a wider scope.

Military scientists created the sound using a femtosecond laser to fire a burst of focused light for 10 to 15 seconds. This rips the electrons from air molecules and creates a ball of plasma, which is then hit with a second nanolaser tuned to an extremely narrow range of wavelengths.

When the plasma field is manipulated in a precise way, sound is produced that resembles a near-human screech.

Head of JNLWD's technology division David Law told DefenseOne.com: "We're this close to getting it to speak to us. I need three or four more kilohertz."

According to the DoD's Non-Lethal Weapons Program, the aim is to minimise fatalities and permanent injuries to personnel, filling a gap between 'shouting and shooting'.

The effect is easier to create at a distance: "Range is a function of the optics," said Law. "The bigger the mirrors, the farther the range.

"A five-inch mirror creates the effect about one kilometre away; an 8-inch mirror, about five kilometres. They've created plasmas at 20 or 30 kilometres. This is the first non-lethal weapon that could go out tens of kilometres."

Such non-lethal weapons are suited to urban terrains containing civilians, or security checkpoints.

The team hopes the device will recreate human voices within the next three years.

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