Pulses immobilize cars with RF Safe-Stop from e2v

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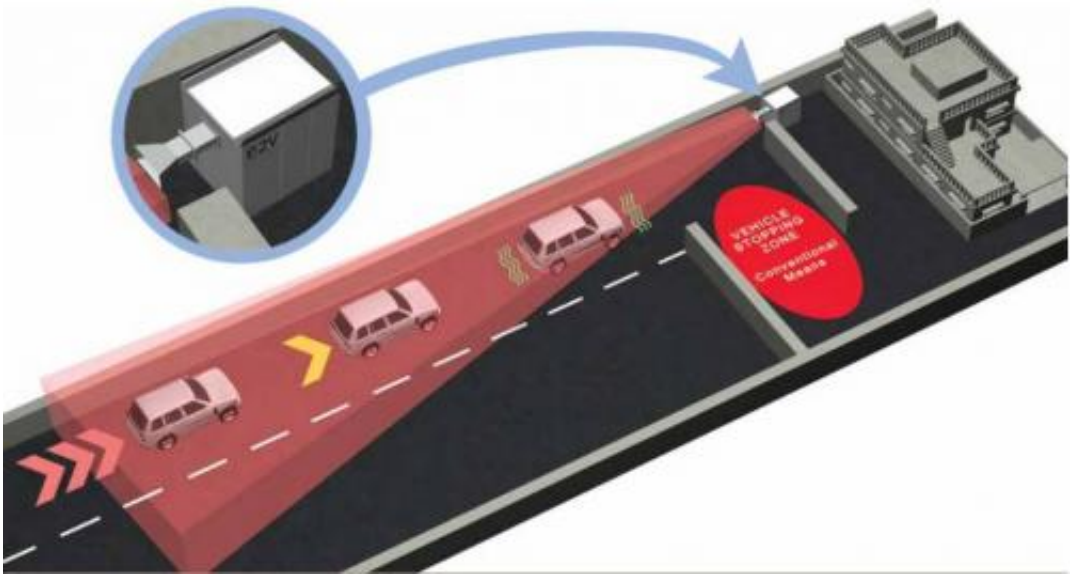

(Phys.org) —A UK company's prototype has shown how cars can be immobilized by blasting electromagnetic waves. RF Safe-Stop is a system that stops engines. Its ability to send electronic pulses out towards targeted vehicles forces those vehicles' engines to cut out. As a non-lethal weapon, the unit can disable the engines of not only cars but also small boats, doing the job, in just seconds, at a distance up to 50m. One suggested defense use, in temporarily disabling a vehicle's electronic systems, would be to thwart drivers using their vehicles as car bombs as well as to defend sensitive locations from cars that refuse to stop.

A recent report from the BBC said there has also been a show of police interest in the device, which is made by the UK-based e2v. a company that designs, develops and manufactures technology systems and components. The BBC was recently given a demo of the device at an airfield in Worcestershire. In the demo, a car drove towards the device at around 15mph. As it entered the RF-Safe-Stop range, the car's warning lights and dials showed erratic behavior. The engine stopped. The car rolled to a halt. As part of the event, e2v assembled a varied group of not only cars but also motorbikes, to test the device against a range of vehicles. The intense RF pulses-are designed to immobilize the management system of a vehicle's engine; the aim is to "confuse" the electronics and render them temporarily inoperable. According to product manager Andy Wood, 17 nations and five UK government bodies have shown interest in e2v's technology.

The system can be adapted for various applications. Wood told *The Engineer* that RF Safe-Stop could be fitted into fixed-based installations and boats and that there were blueprint ideas to integrate it into a helicopter.

The company's RF Safe-Stop flyer states that demonstration hardware developed by the company has had proven effects for engine-stopping and disruption via the company's patented switching products in conjunction with high-power magnetrons, "and carefully packaging these with appropriate antennas." The company notes that its design approach has enabled a solution that can be adapted to suit specific customer needs. Listing application areas for its RF Safe-Stop technology, the e2v includes checkpoint enforcement and, at sea, harbor entry protection and anti-piracy.

More information: — www.e2v.com/e2v/assets/File/RF%20Safe-StopTM/23567_RF%20Safe%20Stop%20System%20Flyer_A4%202pp_V8_AW_LOWRES.pdf

— www.theengineer.co.uk/military … -50m/1017308.article
— www.bbc.co.uk/news/technology-25197786