

VEHICLE DISABLING WEAPON

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ABSTRACT

A means of directly injecting radio-frequency electrical current into the electronic circuits of vehicles is described. The disabling current is transmitted through two channels of highly ionized air. The channels are created by the multi-photon ionization of the air within two beams of far-ultraviolet laser radiation directed to the vehicle. The current flows in a circuit from an electrode near the origin of one beam through the channel of ionized air within it, then through the target vehicle and back along the conductive channel within the second beam. The current frequency is 100 megahertz and the pulse width is 300 microseconds. The wavelength of the ultraviolet laser radiation is between 180 and 250 nanometers. At the wavelengths and fluence employed, there is little or no ocular hazard. The calculated theoretical range is two kilometers

KEY WORDS: VEHICLE, DISABLING, LASER, ULTRAVIOLET, ELECTRICAL.