

SPEAR

Specialized Portable Electromagnetic Attack Radiator



INNOVATION IN A COUNTER UAS CAPABILITY

SPEAR provides a portable, compact, and deployable High Power Electromagnetic (HPEM) source as a directed energy weapon against individual and swarm drone threats. The innovative system was designed as an intentional, single-pulse to repetition rate, high-power electromagnetic radiator. Due to its portable size, low weight, low power requirements, and effectivity, SPEAR provides Counter small Unmanned Aircraft System (C-sUAS) capabilities to ground vehicles, fixed platforms, and field troops.



Key Advantages from an Innovative Design

- High effectivity; low SWaP
- Low-cost system with ~1M magazine depth with low cost per shot; minimal logistics support needed
- Ultrawide bandwidth permits engagement of targets without prior knowledge of specific vulnerabilities
- Ability to disrupt and destroy targets with both front- and back-door coupling
- Counter heterogeneous sUAS swarms simultaneously without prior knowledge of threat type
- Defeat ranges beyond distances associated with ISR/ RSTA type UAS swarm attack distances
- System electromagnetically couples with heterogeneous target systems regardless of size
- Independent of threat orientation due to simultaneous horizontal and vertical polarization
- Rapid deployment; instantaneous effectivity
- Easily transportable, set-up/power-up in seconds to minutes

SPEAR →
DIRECTED ENERGY

 **LEONARDO DRS**

SPECIALIZED PORTABLE ELECTROMAGNETIC ATTACK RADIATOR

WHY SPEAR

- Effectivity on vulnerable targets is virtually instantaneous
- Wide bandwidth permits engagement of targets without prior knowledge of specific vulnerabilities
- Able to counter multiple types/platforms of swarm sUAS simultaneously
- Effective at countering ISR/RSTA type UAS threats at ranges well beyond those associated with attacking sUAS swarms
- Innovative technologies have reduced system SWaP supporting integration on vehicle platforms, small pull-behind trailers, or for use by dismounted troops
- Contributes critical niche advantages to a layered defense approach



A UWB antenna efficiently radiates the impulse output waveform, resulting in UWB frequency electromagnetic energy content.

Airborne & Intelligence Systems

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