

# OMNI-DIRECTIONAL WEAPON LOCATING RADAR

An affordable, state-of-the-art, **multi-mission radar offering full hemispherical coverage and “look down” capabilities** for unconventional battlefield scenarios

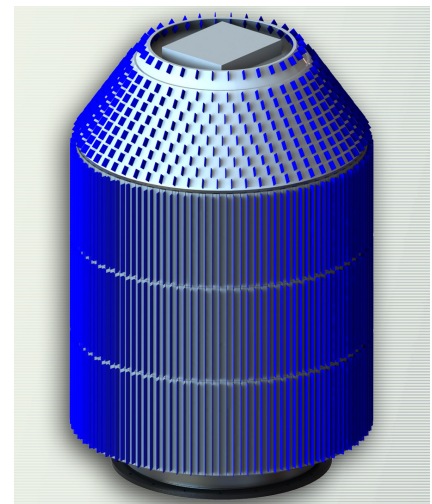
The Omni-directional Weapon Locating (OWL) radar, being developed by SRC, Inc. for the U.S. Army, will be the most advanced counterfire target acquisition radar ever built. The system provides surveillance over a hemispherical coverage volume – a capability that is not currently available with current radars. It can detect, track and locate mortar, cannon and rocket firing positions with unprecedented accuracy over a wide variety of threat trajectories in asymmetrical warfare environments, while simultaneously providing a high-update air surveillance capability.

OWL provides flexible energy management and agile waveform generation through its uniquely designed, electronically steered antenna, which scans 360-degrees in azimuth, and from minus 20-degrees to 90-degrees in elevation. It provides an “any beam, any direction, any time” freedom that enables OWL to run multiple missions at the same time (such as hemispherical sense-and-warn, counterfire target acquisition, air surveillance and counter-UAS) far more efficiently than existing radar systems. OWL’s antenna and waveform design deliver a very high scan rate providing early warning for high-speed, low quadrant elevation, or QE, targets.

OWL employs an advanced, high-capacity digital signal processor and an extremely low phase noise



**OWL LEVERAGES MODERN TECHNOLOGIES AND AN INNOVATIVE ARCHITECTURE, PROVIDING THE COVERAGE AND PRECISION NEEDED FOR MODERN WARFARE**



The OWL radar provides a unique "look down" capability to increase coverage on challenging terrain.

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RF design to provide superior clutter performance. Better clutter management leads to greater flexibility with emplacement options and surveillance areas. For example, with OWL, there is no need to steer above mountains - it can stare directly into hillsides and urban clutter and still deliver full performance.

OWL's enhanced Doppler processing capability and novel non-rotating antenna architecture also make it possible to detect and track extremely slow moving targets well beyond the capability of most other radars.

With more than two decades of counterfire radar experience, SRC continues to redefine possible with innovative solutions like the OWL radar.

## BENEFITS

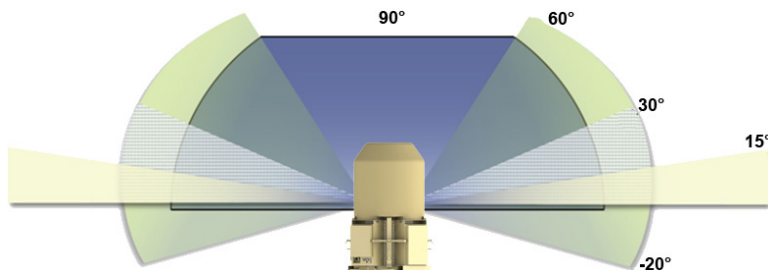
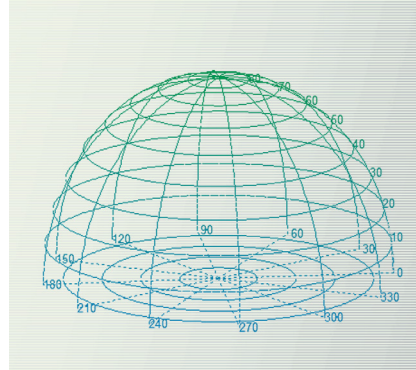
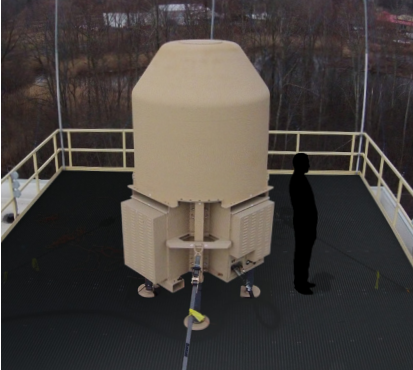
- Any beam, any direction, any time
- Unprecedented detection and accuracy performance in complex, asymmetrical threat environments
- High scan rates provide early warning and excellent tracking of high velocity weapons
- Outstanding clutter cancellation yields more flexible emplacement scenarios without compromising performance
- Small footprint and low cost

## SPECIFICATIONS

- Power requirements: < 40 kW
- System weight: < 5,800 lb
- System size: 6 ft (length) by 6 ft (width) by 13 ft (height, with legs fully extended)
- Operating frequency: S-Band

## FEATURES

- Provides beyond hemispherical surveillance coverage (-20° to 90° elevation, 360° azimuth)
- Configurable for 360° or focused sector coverage
- Simultaneously detects and tracks small, slow, low targets with large and high-speed threats
- Performs multiple missions in parallel
- Utilizes a non-rotating, electronically steered antenna
- Offers high-resolution, fully coherent Doppler waveforms and processing



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