



SAAB



SEA GIRAFFE RADARS

**Ready. Agile.
Focused.**

Multi-role radars for the U.S. Sea Services

Superior Performance in Challenging Environments

The AN/SPS-77, AN/SPN-50 and Multi-Mode Radar (MMR) deliver Saab's long experience in supplying Giraffe radar systems to a wide variety of demanding missions. Today, the Sea Giraffe lineage capitalizes on this experience and performance, protecting naval surface ships and aiding naval aviators in their safe return aboard ship.

Today's Sea Giraffe derived radars, the AN/SPS-77, AN/SPN-50 and MMR, couple outstanding performance with unprecedented flexibility. The easily modified architecture provides the ability to change performance by optimizing radar parameters to adapt to a wide variety of missions, from simultaneous air and surface surveillance to air traffic control. Additionally, the radar's flexibility permits the opportunity to integrate additional signal processing functions, like weather map generation, as well as detection of small unmanned aerial systems.

Responding to evolving threats, the radar's surface channel detects small targets on the surface with high probability. The AN/SPS-77 and MMR are designed to rapidly and reliably detect small, fast-moving targets at all altitudes and in severe clutter, typical of the naval environment.

Processing target returns concurrently from multiple beams in elevation delivers high altitude coverage and monopulse accuracy.



Multi-role 3D naval surveillance/air traffic control radar

- Instantaneous elevated coverage (14 beams 0-70° updated on all antenna revolutions)
- Streamlined man-machine interface
- A variety of developed interfaces for easier combat management system (CMS) integration
- Solid state technology for improved detection and longer range
- Easy below deck transmitter module maintenance



Secure Operations in any Scenario



Saab's multi-role 3D radar can provide ATC services or a full range of non-conflicting functions for simultaneous:

- Air surveillance and tracking
- Surface surveillance and tracking
- Low cross section target detection
- Target classification and identification, including that of moving and hovering helicopters
- Target indication to weapon systems for precision anti-air and anti-surface engagement
- Gunfire support, including high-resolution splash spotting
- Helicopter landing and long-range surveillance

These radars provide fully automatic operation on both air and surface targets, whether operating in blue water or littoral environments, to minimize operator interaction. They are supported by a variety of techniques to eliminate land and weather-driven clutter.

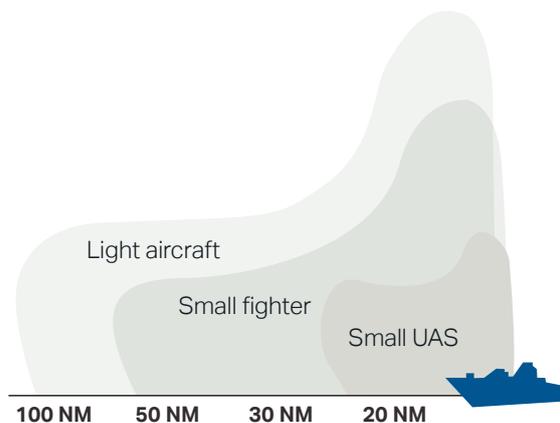
As an air traffic control (ATC) asset, the AN/SPN-50 demonstrates its flexible design characteristics through improved reliability to meet demanding ATC requirements, ease of integration into existing ATC control and display systems, and increased range and detectability required for carrier operations. It does this by optimizing radar update rates, waveforms, duty cycles and pulse-width.

Integrated logistics support (ILS) is an important part of system delivery. The Sea Giraffe derivatives contain a very high level of commonality, while performing different missions. This commonality reduces life cycle costs with improved system availability, high mean time between critical failure (MTBCF), and US-based support.



Technical Data

Radar type	Solid state 3D radar
Antenna type	3D phased array digital beam forming
Frequency	C (G/H)-band
Elevation coverage	> 70°
Rotation rate	Mission dependent
Instrumented range	Max 100 NM
Capacity	
• Air	> 200 tracks
• Surface	> 400 tracks
Stabilization	Electronic



Developed over decades to meet the most challenging demands of naval and maritime operations, the Sea Giraffe radar systems are the latest in a long line of groundbreaking innovation by Saab. Designed to rapidly adapt and overcome new and evolving threats, Sea Giraffe provides advanced capability to detect, defend, and act first; ensuring dominance in the air–sea battlespace and control of the maritime environment.



U.S. Sea Services Sea Giraffe Radar Platforms



LCS Independence variant



Nimitz class CVN



America class LHA



Wasp class LHD



Offshore Patrol Cutter



Expeditionary Sea Base

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