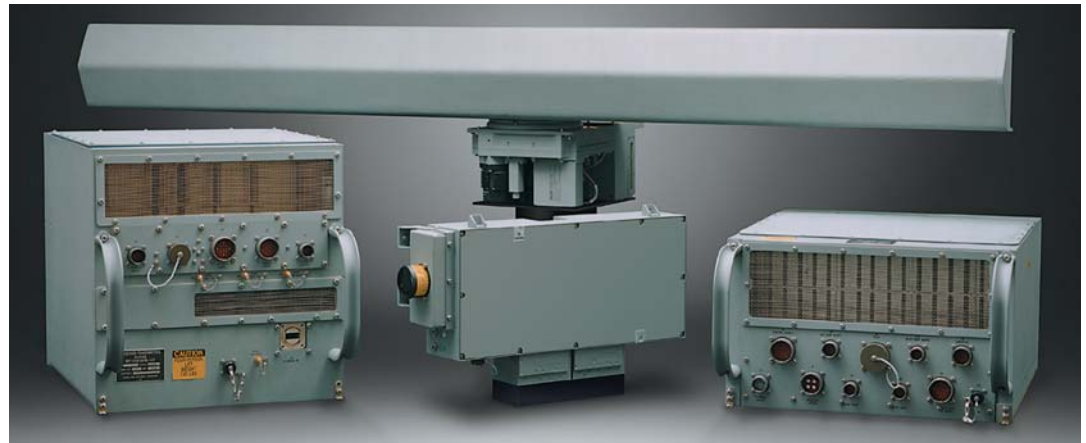


# AN/APS-147 Multi-Mode Radar

The World's Premier Surveillance Radar for Maritime Helicopters



*The AN/APS-147 meets the key design challenges of the maritime military helicopter environment.*

Telephonics designed, developed and produces the AN/APS-147 to meet the demanding performance requirements of the U.S. Navy MH-60R Multi-Mission Helicopter. The AN/APS-147 meets the key design challenges of the maritime military helicopter environment: ruggedness, light weight, low-prime power, extremely small target detection, high resolution imaging, and long range surface search.

The AN/APS-147 provides the MH-60R and its host ship, littoral and maritime domain awareness. MH-60R capabilities support the following Carrier and Expeditionary Strike Group and U.S. Navy missions:

- Anti-Submarine Warfare (ASW)
- Anti-Surface Warfare (ASuW)
- C4ISR
- Surface Surveillance
- Maritime Interdiction
- CSAR/SAR/MEDEVAC

- Logistic Support
- Identification Friend or Foe (IFF)
- Battle Damage Assessment
- Naval Surface Fire Support

### Imaging

Radar operators can classify detected moving ship targets under night and restricted visibility using the high resolution Inverse Synthetic Aperture Radar (ISAR) mode. This mode allows the MH-60R to operate outside of visual and lethal range of a potential

enemy and to identify detected targets when images are combined with other intelligence.

### Modes of Operation

- Long and Short Range Search
- Inverse Synthetic Aperture Radar (ISAR) Imaging
- Small Target/Periscope Detection
- Short Range Search and Rescue
- Navigation
- Identification Friend or Foe (IFF) Interrogator



# AN/APS-147 Multi-Mode Radar

## Fully Integrated Mission System

The AN/APS-147 is fully integrated into the MH-60R Common Cockpit™ avionics suite by Lockheed Martin. The radar is controlled through the aircraft's mission computer, and shown on 8"x10" color multi-function displays that provide the crew independent views of the radar data.



## IFF Interrogator

An IFF interrogator is integrated internally into the AN/APS-147 WRAs saving valuable weight and space. The IFF system provides Mark XII IFF modes 1, 2, 3A, and 4 to identify friendly IFF-equipped platforms in the operating areas, giving the MH-60R flight crew positive situational awareness.

## Shipboard Operations

The MH-60R, combined with the AN/APS-147, is designed to operate from helicopter-capable small combatants

to the largest aircraft carriers as a key element in the helicopter-ship system. Via the aircraft's C-band data link, shipboard personnel have virtually the same radar picture as the flight crew. The radar will withstand the harshest maritime and helo vibration environments.

## The Future

The modular design inherent in the AN/APS-147's signal processing give it the upgrade flexibility to meet the challenges of the future.

New or enhanced modes of operation that offer potential for improved situation awareness and mission effectiveness include:

- Low Probability of Intercept Mode
- Enhanced ISAR Resolution
- ISAR Automatic Classification Aids
- Automatic Periscope Detection & Discrimination
- Synthetic Aperture Radar Mode
- Mode 5/Mode S IFF
- Weather Mode



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