

NORTHROP GRUMMAN*Electronic Systems*

APR-39A(V)2 Threat Warning System

Versatile, Accurate, Reliable, Low-Cost, Integrated Survivability Suite



*Be the Hunter
Not the Prey*

For even the best pilot, extracting a multitude of information from on-board sensors is not an easy task. The complexity of the electronic battlefield requires integrated subsystems which provide clear and accurate information to assist the aviator. With over 30,000

Northrop Grumman Threat Warning Systems installed on military aircraft worldwide, Northrop Grumman has long recognized the need for systems integration and has developed a specific approach for a low cost, integrated survivability suite.

At the heart of this suite is the Northrop Grumman APR-39A(V)2 Threat Warning System (TWS)/ Electronic Warfare Controller (EWC). Specifically designed to offer maximum survivability for helicopters and transport fixed wing aircraft, features include:

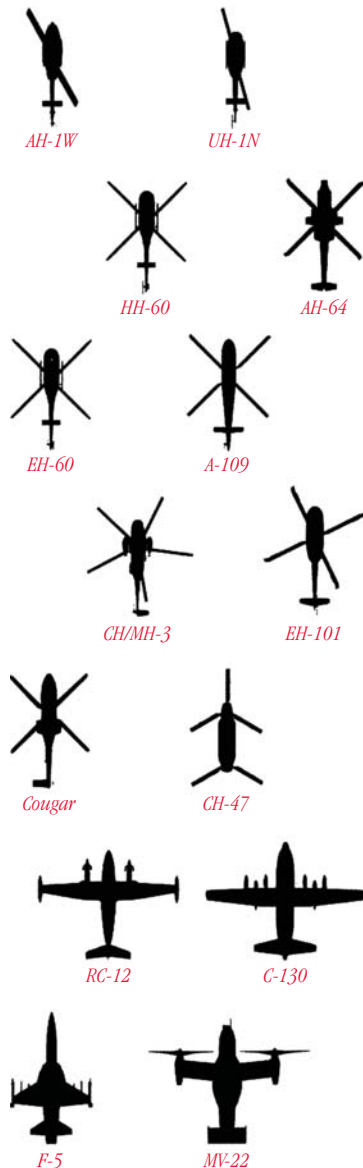
- Lightweight, low cost, sophisticated, powerful
- 100% DoD standard Ada software language
- Flight line reprogrammable threat library
- Controller for a completed integrated survivability suite
- Reduced crew workload through easy-to-understand threat symbols and articulated voice warning
- Ability to handle new and complex emitters, including MMW

This low cost system provides state-of-the-art technology combining lightweight and low power consumption. The APR-39A(V)2's highly sensitive, multireceiver architecture provides rapid identification and continuous 360° threat warning for today's complex battlefield.

APR-39A(V)2 Threat Warning System

Versatile, Accurate, Reliable, Low-Cost, Integrated Survivability Suite

APR-39A(V)2 Applications



The APR-39A(V)2 Threat Warning System (TWS) also functions as the EW Controller (EWC) for Integrated EW Suites. When interfaced with laser warning, missile warning and countermeasure dispensing systems, the suite provides multi-spectral warning as well as semi-automated and automated countermeasures.

Types of Radar Emitters Detected

- Pulsed
- Pulse Doppler
- Scanning Emitters
- Agile PRIs
- Continuous Wave
- Low Probability of Intercept

Frequency Coverage

- E to K and C/D

Northrop Grumman's APR-39A(V)2 automatically detects, identifies and alerts the crew to each threat. It determines the emitter's direction and mode of operation such as missile guidance, track, and search. Four quadrant antennas provide 360° azimuthal coverage providing voice, audio and graphic video alert to the crew.

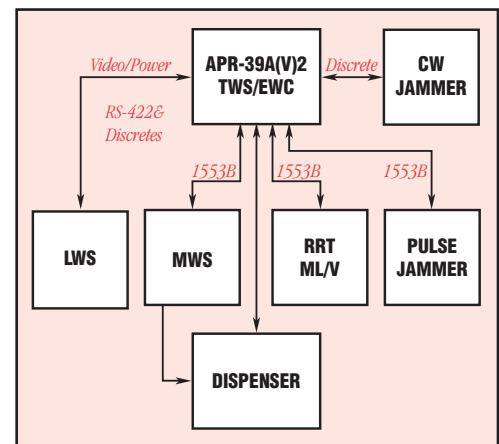
The APR-39A(V)2 Radar Warning System consists of the following major LRUs:

- Four Quadrant Antennas
- Two Dual Channel Receivers
- One Central Processor/Receiver
- One Display Unit
- One Control Unit
- One Blade Antenna

APR-39A(V)2 TWS/EWC

Frequency Range:	E to K and C/D
Weight:	35 lb/15.8 kg
Volume:	775 in ³ /12,710 cm ³
Power:	200 W, 28 Vdc
Software:	100% Ada
Display:	Bright light/ NVG compatible, alphanumeric symbology
Audio:	Synthetic voice
Reprogramming:	Standard MLVs
Interfaces:	1553B, RS-422
Integration:	AVR-2/2A, AAR-47, ALQ-136, ALQ-162, ALE-47, ASM-687, RRT, Mission Data Recorder

APR-39A(V)2 Interfaces



USN/USMC's New Threat Warning System

The APR-39A(V)2 successfully completed U.S. Navy/Marine Corps operational evaluation. Designed for lightweight airborne applications on fixed wing, rotary wing, tilt rotor and transport aircraft, this system is readily adaptable to a wide variety of aircraft installations by virtue of its small size and modular construction. Its modern processor analyzes outputs of four quadrant antennas, providing specific identification of threat types, bearing and lethality, while maintaining sufficient sensitivity to provide timely warning of terminal threats.

For more information, please contact:

Northrop Grumman Corporation
 RF Electronic Warfare
 Director of RF EW Business Development
 600 Hicks Road
 Rolling Meadows, IL 60008-1098
 Phone: (847) 259-9600, ext. 4828
 Fax: (847) 870-5713
 e-mail: rf-ew@ngc.com
 website: www.northropgrumman.com

Specifications and features subject to change without notice.