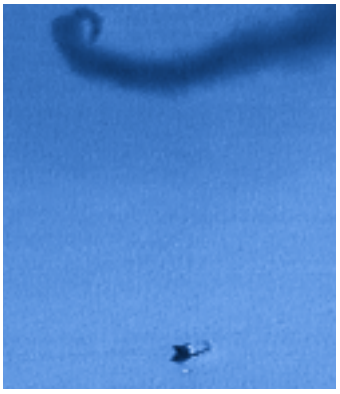
NORTHROP GRUMMAN

AN/AAQ-24(V) NEMESIS

In Production, Deployed and Tailored to Any Platform



Actual Missile Jamming Effectiveness

The Infrared Missile Threat

In Operation Desert Storm, at least 20 U.S. aircraft were destroyed by infrared (IR) missiles.[1]

A decade later in Afghanistan and Iraq, infrared missiles remained one of the primary threats to allied aircraft, especially large platforms with significant IR signatures. During modern conflicts, IR missiles have accounted for an estimated 90% of all losses incurred from enemy fire.[2]

Traditional IR countermeasures are not effective against the modern IR missiles that are growing in popularity among terrorist groups and in third-world countries. A Directional Infrared Countermeasures (DIRCM) system is required to defeat the latest and future advanced IR threat, and has a lower life cycle cost compared to other IR countermeasure approaches.

Modular System Protects Rotary- and Fixed-Wing Aircraft

The AAQ-24(V) NEMESIS system is flexible and adaptable to numerous aircraft types, currently installed on 29 platforms. The system is slated for installation on an additional six different platforms, including large and small fixed-wing aircraft, rotorcraft, and VIP platforms.

Worldwide Contracts and Customers

The AAQ-24(V) NEMESIS is the world's only operationally deployed laser DIRCM system.

- Systems are currently in use by US, UK, Denmark, and Australia.
- Fixed wing platforms include: BAE-146, G-550, Challenger, C-130 (variants), L1011, 747, A330, 737, C17.
- Rotorcraft platforms include: EH-101, SeaKing, MH-53, CV-22, Lynx

Demonstrated Benefits

- Simultaneously tracks and defeats multiple threats in clutter environments
- Fast, accurate threat detection and simultaneous jamming in all current IR threat Bands (I, II and IV)
- Counters all fielded IR missile threats using a single generic jam waveform
- Does not require stress-inducing complementary aircraft maneuvers of a flare-based system
- All-weather, all-altitude operation
- Complete end-to-end self-testing features reduce life-cycle maintenance
- Compatible with existing support facilities

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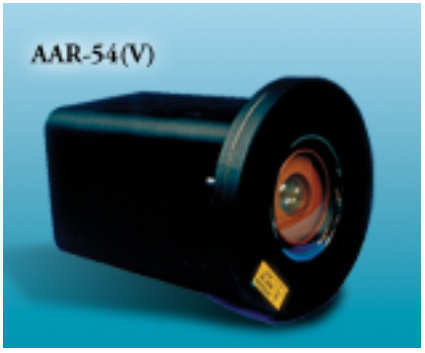
Installations Tailored to Your Platform, Mission and Budget

The Northrop Grumman AN/AAQ-24(V) NEMESIS DIRCM is a modular system comprised of a family of proven components that can be mixed and matched to protect a wide range of large and small aircraft, both rotary- and fixed-wing, from the modern IR missile.

Small Laser Transmitter Assembly (SLTA) In production, with 285 systems delivered. The Air Mobility Command alone projects 440 systems will be required over the next five years – this is in addition to other DoD services and foreign allied requirements.



AN/AAR-54(V), a fourth-generation ultraviolet (UV) missile warning system provides extended detection ranges and greatly reduced false alarms compared to other existing UV systems.

From four to six sensors can be installed to provide up to full spherical coverage.

The AAQ-24(V) NEMESIS is available in a laser-based configuration. Northrop Grumman then selects from a modular family of transmitters, jammers and missile warning systems to provide a customized installation best able to meet your specific platform, mission and budget requirements. Upgrades to existing systems are easy to install without further modifications to the airframes.

Personal Computer Memory Card Interface Adapter (PCMCIA) for Customized Operation

PCMCIA, or "Smart Cards," enable the user to tailor each AAQ-24(V) NEMESIS installation for:

- Techniques and jam codes
- Reprogramming
- Maintenance
- Aircraft configuration

Autonomous or Integrated Operation

- Operates as a "federated" system using the AAQ-24(V) NEMESIS CIU as the pilot interface.
- Operates as an autonomous subsystem within an aircraft's defensive suite with information displayed on existing multi-function display.

LRU	Size (cm) [L x W x H]	Size (in) [L x W x H]	Nominal Weight (kg)	Nominal Weight (lb)	Standby Power (W)	Max Power (W)
Processor	51.5 x 19.5 x 19.4	20.3 x 7.7 x 7.7	16.6	36.4	399	399
Small Laser Transmitter Assembly (SLTA)	35.6 dia x 42	14 dia x 16.6	31.9	70	580	1905
Control Indicator Unit	20.8 x 14.6 x 4.8	8.2 x 5.8 x 1.9	1.2	2.5	25	25
AAR-54 Long Sensors (Max = Heaters)	12.1 dia x 17.1	4.8 dia x 6.8	1.9	4.1	17	55

1. Sandra I. Erwin. "U.S. Warplanes Vulnerable to Shoulder-Fired Missiles." *National Defense*, December 2001.

2. Michael Puttre. "Facing the Soulder-Fired Threat." *Journal of Electronic* Defense. April 2001.

Specifications and features subject to change without notice.

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