

NORTHROP GRUMMAN

AN/ALQ-218 Tactical Jamming Receiver

Force Protection: Real Time Situational Awareness for Tactical Cueing of Jammers/Onboard Sensors



Northrop Grumman's ALQ-218 fully satisfies the unique requirement for a tactical jamming receiver system. In battle, the ALQ-218 tactical jamming receiver is the first system "on the scene" to detect the enemy. The ALQ-218 provides the initial verification for the correlation between the planned Electronic Order of Battle (EOB) and the actual "on the scene" EOB. The ALQ-218 enables aircrews and/or commanders to make quicker and more intelligent decisions to ensure the maximum protection of the friendly forces.

The ALQ-218 successfully meets the required probability of detection and response time necessary to provide situational awareness for reactive (surgical) jamming. High-powered jammer energy can be concentrated on specific threats and as a result of the jamming, the ALQ-218 follows the changing enemy radar tactics.

The ALQ-218 features two independent receiver groups (primary and auxiliary). The primary receiver group is composed of four channelized and four cued receivers which operate in tandem to provide immediate signal acquisition, accurate parameter measurement, timely updates and precision direction-finding/geolocation. The auxiliary receiver group provides an extended frequency capability, offloads the primary receiver from long dwell time measurements, and aids in the recognition of intrapulse modulation plus the updating of range estimates for geolocation.

Geolocation/Target-cueing Capability

The ALQ-218 utilizes a unique combination of short, medium and long baseline interferometer techniques with a patented passive ranging algorithm to provide geolocation of emitters for cueing jammers and other onboard sensors such as electro-optical/infrared sensors and radar.

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Unique, Demonstrated “Look Through” Capability

The ALQ-218 is the world’s only tactical jamming receiver system with proven “look-through” software to permit periodic surveillance of the threat environment while jamming is in progress. The “lookthrough” capability allows the ALQ-218 receiver system to operate in close proximity to onboard high power jammers.

The ALQ-218’s “look-through” capability was successfully demonstrated during the EA-6B ADVCAP (Advanced Capability) program which reached full scale development in FY93. This program provided the technical basis for much of the current production program, the EA-6B Improved Capability III (ICAP III).

The Heart of EA-6B ICAP III

The ALQ-218 onboard the EA-6B ICAP III, is the latest in a series of upgrades to the venerable EA-6B Prowler which flies the electronic warfare (EW) mission for the U.S. Navy, Air Force and Marine Corps. Often described as the “Heart of ICAP III,” the ALQ-218 provides the upgraded Prowler with the ability to precisely identify and pinpoint the location of enemy radar sites for a more effective use of HARM missiles.

The EA-6B ICAP III equipped Prowler made its first flight in 2001 and entered production in the Fall of 2003.

The Navy’s Choice for EA-18

The ALQ-218 receiver is the U.S. Navy’s choice for the new EA-18 Advanced Electronic Attack aircraft, a derivative of the F/A-18F Super Hornet, currently in production. The EA-18 uses virtually the same EW suite developed by Northrop Grumman for ICAP III, with the addition of an advanced digital receiver group performing the auxiliary receiver functions.. The ALQ-218 receiver electronics has been repackaged and is installed in the EA-18’s nose gun-bay, with the antennas mounted on wingtip pods. Northrop Grumman is currently producing ALQ-218 shipsets to support both the EA-6B and EA-18 fleets.

The ALQ-218 has a spiral development improvement roadmap that allows for installation on any air, sea, or land based platform. It is currently being installed on the P-8A Poseidon ASW/ASUW aircraft.



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Specifications and features subject to change without notice.