

ALQ-135M

Combat Proven System

Providing F-15K Aircraft and Aircrews Protection from RF Threats

- *Installed and Operational on First Lot of Aircraft*
- *Integrated with F-15K Radar and RWR*
- *In-Country Reprogramming Tool Delivered*
- *Samsung Thales Company Produced Key Assemblies*



Northrop Grumman's AN/ALQ-135 is a fully automatic, internally mounted electronic combat system that manages and defeats multiple threats simultaneously, prioritizing and neutralizing the most imminent dangers. The latest configuration improves on heritage ALQ-135 systems by replacing multiple processors with a new PowerPC^(TM)-based system that offers significant speed and memory enhancements. The ALQ-135M also makes use of sophisticated microwave power module (MPM) transmitter technology to reduce weight and boost performance.

In-Country Reprogramming (ICR)

The ICR mission data file generation tool gives the Republic of South Korea Air Force the invaluable ability to create, modify and maintain mission data and to produce mission data files. It also allows them to customize all the features and capabilities of the ALQ-135M to their own unique requirements.

Northrop Grumman has delivered and completed ICR tool training for representatives of the Republic of South Korea and Boeing Company.

Partnered with Local Industry

Northrop Grumman partnered with Samsung Thales Company (STC) for co-production of all required ALQ-135M power supplies for use aboard the F-15K aircraft.

STC successfully delivered 62 ALQ-135M power supplies to Northrop Grumman in early 2005. These deliveries support Northrop Grumman ALQ-135M LRU deliveries through 2007, and Boeing F-15K aircraft deliveries through 2008.

Deliveries Underway

Initial deliveries and installation of the first Northrop Grumman ALQ-135M systems are already underway with deliveries of the remainder of the 40-unit order expected to continue through 2007.

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AN/ALQ-135 Heritage System

Since 1990 Northrop Grumman's AN/ALQ-135(V) internal self-protection countermeasures system has protected USAF F-15C/E aircraft and their crews in every operational deployment from RF air-to-air and surface-to-air threats. During Operation Desert Storm, the AN/ALQ-135 logged more than 6,600 hours of combat, without losing a single aircraft to a covered threat. In addition, the AN/ALQ-135 demonstrated superior performance in subsequent operations in the Balkans, in Kosovo and in Operations Southern Watch and Northern Watch, enforcing the "no-fly zone" over Iraq.

During the lifetime of the AN/ALQ-135 system Northrop Grumman has continually provided upgrades in order to meet the ever-evolving threat. Since 1990 the AN/ALQ-135 underwent five major suite updates that included improvements to threat techniques, reliability, built-in test, simultaneous coherent threat protection, and updated processors. In addition, several hardware upgrades were performed throughout to improve reliability, performance and producibility.

The AN/ALQ-135 provides full-band frequency coverage of all tactical threat systems. The AN/ALQ-135 has passed U.S. Government Independent Operational Test & Evaluation and achieved a Milestone 3 decision. The AN/ALQ-135 is fully integrated within the F-15 Tactical Electronics Warfare Suite (TEWS) and with other onboard avionics including the F-15 fire control radar and the ALR-56C radar warning receiver.

For more information, please contact:

Northrop Grumman Corporation
 Electronic Systems
 RF Combat & Information Systems
 Director of RFCIS Business Development
 600 Hicks Road
 Rolling Meadows, IL 60008-1098
 Phone: (847) 259-9600, ext. 6909
 Fax: (847) 870-5713
 e-mail: rfcis@ngc.com
 website: www.northropgrumman.com

New Technology

The ALQ-135M provides substantial volume reduction, weight savings and reliability improvements over heritage systems by using Northrop Grumman's award winning MPM Ultraband technology.

- Reduced system weight by 63 percent and volume by 71 percent
- Increased reliability by an estimated 10 times mean time between failures (MTBF)

In addition, the ALQ-135M provides other system improvements:

- Replaced multiple processors with a new Power PC™-based system that offers significant speed and memory enhancements
- Added application specific and monolithic microwave integrated circuits which improved coherent jamming techniques
- Added ICR tool to provide ability to create, modify and maintain mission data



ALQ-135 Transmitter upgrade delivers power comparable to heritage transmitters with 63% less weight.

Specifications

Description	Max. Weight (lb / kg)	Dimensions W x H x D (in / cm)	Volume (in ³ / cm ³)
High Band Receiver Processor (HBRP)	112 / 50.8	8.0 x 14.0 x 21.5 20.3 x 35.6 x 54.6	2,408 / 39,460
Mid Band Receiver Processor (MBRP)	100 / 45.4	8.0 x 14.0 x 21.5 20.3 x 35.6 x 54.6	2,408 / 39,460
Aft MPM Transmitter, Dual Channel	28 / 12.7	6.5 x 4.6 x 13.6 16.5 x 11.7 x 34.5	406.6 / 6,664
Forward Right MPM Transmitter, Single Channel	21.5 / 9.8	6.5 x 4.6 x 13.6	406.6 / 6,664
Forward Left MPM Transmitter, Single Channel		16.5 x 11.7 x 34.5	
Pre-Amplifier	10.5 / 4.8	3.5 x 6.75 x 8.25 8.9 x 17.1 x 21.0	194.9 / 3,194
Diplexer / Switch Assembly	5.5 / 2.5	11.0 x 2.1 x 4.5 27.9 x 5.3 x 11.4	104 / 1,703
EMI Filter, Right Forward	1.4 / 0.6	3.4 x 1.5 x 5.1	26 / 426
EMI Filter, Left Forward		8.6 x 3.8 x 13.0	
EMI Filter, Right Aft			
Antenna / Coupler, Transmit, Aft	6.5 / 2.9	7.0 x 6.75 17.8 x 17.1 (Tail boom outer diameter)	Per tail boom
Antenna / Coupler, Forward Wing Glove, Transmit, Right Hand	5.3 / 2.4	13.7 x 5.0 x 5.4	Per wing glove
Antenna / Coupler, Forward Wing Glove, Transmit, Left Hand		34.8 x 12.7 x 13.7 (Wing glove outer diameter)	

Specifications and features subject to change without notice.