BAE SYSTEMS

AN/ALE-55

Fiber-optic towed decoy (FOTD)

Delivering protection against current and future RF missile threats.

The AN/ALE-55 subsystem consists of an on-board signal conditioning assembly and the FOTD. The signal conditioning assembly converts RF frequencies to light for transfer through the fiber-optic line. The system has two modes. In the primary mode, the onboard EW system detects and analyzes a threat, determines the appropriate response, and then sends that response down the line to the FOTD for transmission. The alternative back-up mode is an independent repeater. In this mode, the threat signal is detected, modulated, and then sent down the line to the FOTD. The system can interface with any on-board techniques generator, and can convert any technique. This broad capability enables the system to be installed on a variety of aircraft and to handle both today's range of techniques and any developed to defeat future threats.

Ready now

The AN/ALE-55 has been extensively flight-tested on a variety of aircraft, demonstrating robust aerodynamic performance and its ability to jam threats. The AN/ALE-55 is currently in full rate production with over 3,000 FOTDs delivered for U.S. and FMS customers.

Reliable protection against advanced RF threats

Key features and benefits

- High-powered coherent jamming across a broad frequency range to defeat advanced RF threats ensures superior protection.
- Unlike centrifugal braking, the AN/ALE 55 state-of-the-art active braking system maximizes system response time to meet the demanding requirements for defeating advanced RF threats. This active braking system allows for extremely fast and precise decoy deployment, allowing a second FOTD to be quickly deployed if necessary.
- Dual high-powered traveling wave tubes generate enough power to protect a variety of platforms from fighters to large airlift aircraft.
- Upgradeable for new threats, the AN/ALE-55 provides a warfighting edge.
- Efficient broad-beam antennas optimize the jamming signal. The antennas employ integral linearization, using detectors built into the antennas, to assure the FOTD operates at optimum power level.
- Variable drag fins that open and close in response to air pressure and speed, ensure stable flight under wide altitude and speed variation, produces highly reliable jamming performance.
- Fighter versions of the AN/ALE-55 include a highly robust signal and towline that has been tested on multiple aircraft to meet the required deployment and tow envelope.
- With its ability to configure to multiple interfaces, the AN/ALE-55 advanced subsystem reduces complexity.

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