



PROGRAM MANAGER BRIEFING SERIES

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AOC POST-EVENT REPORT Program Manager Briefing Series NAVAIR PMA-234 Overview

On February 2, the Association of Old Crows (AOC) welcomed U.S. Navy Captain Michael “Bobby” Orr, Program Manager for PMA-234, Airborne Attack Systems, to provide an overview of the PMA-234 capability portfolio, including the Next Generation Jammer (NGJ) Mid-Band and Low Band increments.

NGJ is a family of weapon systems to augment and replace the legacy ALQ-99, currently onboard the Navy EA-18G Growler. It is three separate programs that fall under the same umbrella. CAPT Orr briefly mentioned the current status of the programs. The NGJ-Mid Band (MB) is currently in the Engineering and Manufacturing Development (EMD) phase and has been in flight tests since August 2020. The NGJ-Low Band (LB) is about to get underway with an expected delivery of four test articles to the government in FY 2022 and eight operational prototypes to the fleet in FY 2025. NGJ-High Band (HB) is not yet an official program of record for the Navy but is being explored for the future. It is important to note that the NGJ system is not going to be immediately replacing the ALQ-99, there will be a transition period before that happens, in fact, they will be flying together for the life of the EA-18G. The NGJ brings more opportunities and options, combined with the platform of the Growler provides more capability against different types of threats. The Department of Defense (DOD) states that the development of these programs addresses the shortfalls of the legacy systems and the ever-growing threats on our nation.

The AN/ALQ-99 tactical jamming system was developed in the 1970s for the EA-6B, and was also used by the EF-111A. The system has been updated and improved over time and is carried by EA/18Gs. The current version of the system, called the ALQ-99F(V), achieved IOC in 1999. The Navy states that the ALQ-99 “is the only airborne tactical jamming system in the Department of Defense inventory. [The] ALQ-99 [system] is facing material and technological obsolescence and cannot counter all current, much less future, threats.” According to CAPT Orr, this statement captures the need for the NGJ and all the capabilities that will follow along once it replaces the ALQ-99 over the next couple of years.

CAPT Orr shared the latest progress in the development of the NGJ-MB, also known as the AN/ALQ-249. Specifically, the AN/ALQ-249 utilizes the latest digital, software-based, and Active Electronically Scanned Array technologies to address advanced and emerging threats. Raytheon Technologies built it with the help of more than 500 national suppliers. NGJ-MB provides a tremendous amount of capability through enhanced agility and precision within

jamming assignments, attacking multiple targets simultaneously, increased interoperability, and expanded broadband capacity. It entered flight test on August 7, 2020, and became the first ever dual-pod radiation flight on September 3. Despite uncertainty due to the COVID-19 pandemic, chamber and lab testing continues with over 800 hours in the High-Power Electronic Attack Technique Radiation (HEATR) chamber and more than 1,300 hours in the Air Combat Environment Test and Evaluation Facility. The Navy has also been able to conduct the first logistics demonstration at Naval Air Station located in Patuxent River, Maryland.

For FY 2021, there have been preparations for Milestone C in the coming months to gain approval to proceed into low-rate initial production (LRIP). This fiscal year's largest scope of effort is to continue developmental flight and chamber testing while focusing on completing test points to support Milestone C and entry into the Independent Operational Test and Evaluation (IOT&E) phase. The second point of focus is the logistics demonstration necessary to gain fleet maintainer inputs on maintenance equipment, pod maintenance, and handling procedures.

The NGJ-LB is also an external pod that will address advanced and emerging threats using the latest digital software-based array technologies and will provide enhanced Airborne Electronic Attack capabilities to disrupt, deny and degrade enemy air defense ground communication systems in the lower frequency range. NGJ-LB is very similar to MB in that it has the same type of capability except for increased frequency ranges. The NGJ-LB employs both reactive and pre-emptive jamming techniques while enhancing the friendly force's use of it.



CAPT Orr spoke briefly about the NGJ-LB contract award for \$469 million to L3Harris technologies on December 18, 2020, to enter the EMD phase. This award supports the final design efforts and manufacturing of eight operational prototype pods and four test pods used for various levels of testing and fleet employment to include airworthiness functionality and integration with and carriage on the EA-18G Growler host aircraft. In response to the award, a formal protest was submitted to the Government Accountability Office (GAO) from Northrop Grumman Corporation that will put the award on hold until a final decision, which is expected within 100 days.

Before the award, the NGJ-LB accomplished the Materiel Solutions Analysis phase executing two Demonstrations of Existing Technologies contracts with L3Harris and Northrop Grumman and collected over 3 million data points. The testing lasted about twenty months and was completed last summer through help from officials to get it done as fast as possible and later received Milestone B and Acquisition Category (ACAT).

The EMD award status notwithstanding, another key program success that continues to evolve is the Australian government's cooperative development efforts, which also flies the EA-18G along with ALQ-99 pod. This partnership has fostered a tremendous growth of EW technical and operational expertise.

The NGJ has also received significant attention from Congress. Most recently, the FY 2021 National Defense Authorization Act, which became law on January 3, included a provision (Section 128) that requires the Secretary of the Navy, in consultation with the Vice Chairman of the Joint Chiefs of Staff, to provide a report to the congressional defense committees, no later than July 30, 2021, defining a strategy to ensure full spectrum electromagnetic superiority using the ALQ-249 Next Generation Jammer. This provision was initially included in the Senate version without similar language in the House bill. In the Conference Report accompanying the Senate version (SRept 116-236), the Senate Armed Service Committee noted that the ALQ-249 is the only standoff jamming capability in the Joint Force that can provide electronic warfare support in a conflict envisioned by the National Defense Strategy (NDS). The committee is concerned that the current strategy and force structure of naval electronic warfare forces will not be sufficient to meet the joint warfighting concept's needs.

The NGJ is the next step in the evolution of Airborne Electronic Attack and is needed to meet current and emerging Electronic Warfare gaps, ensure kill chain wholeness against growing threat capabilities and capacity, and keep pace with threat weapons systems advances and continuous expansion of the AEA mission area. AOC will continue to closely monitor the development of this necessary and long-overdue upgrade to Navy airborne EW.