The Next Marine Corps F/A-18 Targeting Pod: ATFLIR or LITENING?

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The Next Marine Corps F/A-18 Targeting Pod: ATFLIR or LITENING?
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Introduction

The Marine Corps is at a crucial crossroads in its constant effort to remain technologically relevant. Currently, Marine F/A-18 Hornets are not authorized to employ laser-guided bombs (LGBs) when illuminating a target with its NITEHAWK targeting pod, due to the pod's low fidelity and increased chances of target misidentification. As a remedy, the Navy and Marine Corps, as well as F/A-18 air forces around the world, are in the process of selecting and integrating a new targeting pod. The contenders are the LITENING AT, in service with Marine AV-8B squadrons, and the Advanced Tactical Forward Looking Infrared (ATFLIR) pod, in service with Navy F/A-18 Super Hornet squadrons. Current plans have the Marine expeditionary (land-based D model) Hornets slated to receive the LITENING AT, while the Marine carrier-based (A+ and C) Hornets will receive the ATFLIR. However, the Marine Corps should equip its carrier-based F/A-18s with the LITENING AT instead of the ATFLIR because the LITENING AT is equally capable, less costly, and more quickly available.

History and Capabilities

When the ATFLIR was first devised by Raytheon in 1998, the original intent was that it be the only targeting pod to be used on USMC/USN F/A-18s, with an overall buy of 574 ATFLIRs to equip 324 Navy and Marine Corps legacy (F/A-18A+ through D) Hornets,

and 250 Navy Super (F/A-18E/F) Hornets.[1] This does not represent the actual Navy/Marine Corps inventory of Hornets, because factors such as a 70-80% mission capable rate, long-term upgrades, maintenance, etc. were taken into account.

After the LITENING's Israeli developer, the Rafael Armament Development Authority, reached an agreement in 1998 with Northrup Grumman to co-develop, produce, and market (U.S. and some foreign military customers)[2], the Marine Corps' purchased its first LITENING to equip Marine AV-8B Harriers. Since then, the Marine Corps has announced the intention to purchase sixty LITENING pods for use on F/A-18D Hornets,[3] which were originally scheduled to receive the ATFLIR.

Both the LITENING AT and the ATFLIR are capable systems and both represent a quantum leap forward in terms of capability for the F/A-18. Both pods have multiple features, such as FLIR imaging with magnification, electro-optical imaging with magnification, laser designation, and laser-spot detection, eliminating the need to carry multiple pods and thereby freeing weapons stations for additional ordnance. Additionally, once the ATFLIR has the capability added as is planned, both pods will have a real-time data link capability to pass live video feeds to forward air controllers (FACs), ground commanders, and intelligence-gathering assets. Both pods have also been proven in combat, both pods represent a leap forward in terms of reliability and ease of maintenance, and both pods have already

been physically and electronically integrated for U.S. Navy/Marine Corps and foreign military F/A-18s. The capabilities differences between the two pods are minor enough to be ignored for the sake of this discussion. Therefore, the decision for or against either targeting pod comes down to less obvious factors.

Cost

The most recent estimates show that the Navy will spend about $1.8 billion in order to procure 574 ATFLIRs[4], representing a cost of approximately $3.1 million for each ATFLIR. In contrast, the Marine Corps initial purchase of 24 LITENING pods for its F/A-18D Hornets cost $40 million,[5] an individual cost of $1.7 million for each. Cost was the determining factor for the Royal Australian Air Force, which decided to equip its F/A-18A+ Hornets with the LITENING after a decision between the LITENING AT, ATFLIR, and Lockheed's Sniper XR targeting pod.[6] In fact, the RAAF purchased thirty-seven pods for $77 million, or $2.1 million for each LITENING AT.[7] In these days of ever-tightening budgetary constraints, the Marine Corps cannot afford to throw away 1-1.4 million dollars per targeting pod for no added capability.

Availability

Procurement Delay

Since low rate initial production (LRIP), and subsequent full rate production in December 2003, were authorized, Raytheon has delivered 75 ATFLIR pods to the Navy as of June 2005.[8] Production rates as of February 2005 were approximately one ATFLIR every fifteen days, with production rates planned to increase to three each week in May 2005, and six each week by December 2006.[9] Waiting for the supply to catch up with the demand represents a significant investment of time for the Navy and Marine Corps. In contrast, as of February 2004, Rafael and Northrup Grumman had delivered 400 of 500 LITENING pods[10] from an assembly line that is already established and fully operational. The ATFLIR's slow production rate has already raised some eyebrows, with the commander of the USS John F. Kennedy Strike Group, Rear Adm. Barry McCullough, testifying before the Senate in April 2005 that the limited number of ATFLIRs posed a "significant challenge" for strike aircraft operating over Iraq. At the time, the Strike Group had only received four ATFLIR pods for its 34 F/A-18C Hornets,[11] which creates a question regarding how the Navy allocates its limited supply of ATFLIRs.

Allocation

As of February 2005, fifty-one ATFLIR pods were deployed aboard six aircraft carriers,[12] representing an average of 8.5 pods per carrier air wing, or approximately twice as many as the USS John F. Kennedy Strike Group had received by April. However,

as mentioned, the USS John F. Kennedy Strike Group has thirty-four F/A-18C (i.e. legacy, not Super) Hornets embarked. Of the fifty-one pods deployed in February 2005, forty-nine of those pods were allocated for Super Hornets, and 2 for legacy Hornets.[13] This is a significant mismatch given the fact that for every Super Hornet deployed aboard aircraft carriers, there are approximately 2.5 legacy Hornets. As an analogy, that is like changing the oil in the family's new car while ignoring the older car that is driven 2.5 times as often. As long as Super Hornets are produced at equal or greater rates as ATFLIR, the majority of ATFLIRs will be paired with brand new Super Hornets.

Why ATFLIR?

All this raises an issue about why the Marine Corps purchased the ATFLIR pod in the first place. The explanation can be found, in part, in the relationship between the Navy and Marine Corps. The Navy and Marine Corps team has, with few exceptions, been mutually beneficial. The fact that the Navy and the Marine Corps both fly the legacy Hornet has produced lower initial cost, lower logistical support requirements aboard the aircraft carrier, and greater flexibility in the allocation of resources. Consequently, the Marine Corps wants to maintain commonality with the Navy when purchasing a major system such as a targeting pod. However, when one considers that the only reason the Navy is equipping its legacy Hornets with ATFLIR is

because it is equipping its Super Hornets with ATFLIR, and the only reason that the Marine Corps is equipping its carrier-based legacy Hornets with the ATFLIR is to maintain commonality with the Navy legacy Hornets, the logic becomes a little less clear.

The Marine Corps can purchase the LITENING for about two-thirds the cost of the ATFLIR. Typically, a Marine carrier-based Hornet squadron reports operationally to the Marine Corps and uses its logistical supply chain three-fourhts of the time, and the Navy one-fourth of the time. In essence, the Corps is planning to increase logistical requirements three-fourths of the time (when OPCON to the USMC) in order to reduce logistical requirements one-fourth of the time (when OPCON to the USN), all in the name of commonality.

Conclusion

In addition to issues of logistical support and flexibility, the Marine Corps should change its present plans and equip all its Hornets with the LITENING AT because it is equally-capable, lower-cost, and more rapidly available than the ATFLIR. The precedent is already set; the Marine Corps changed its plans for the F/A-18D targeting pod. Now the Marine Corps should continue down this path in order to bring all of its Hornets into the twenty-first century.

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Endnotes

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4. Sandra I. Erwin, “DOD Begins Review of Targeting Pods,” National Defense, vol. 89, iss. 612: 14, http:search.ebscohost.com.
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6. Patricia Parmalee, “RAAF Buys LITENING AT,” *Aviation Week and Space Technology*, September 12, 2005, 13.
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12. Geoff Fein, “ATFLIR Begins Full-Rate Production,” *Defense Daily*, February 24, 2005, 1.
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