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REPORT BY THE COMPTROLLER GENERAL OF THE UNITED STATES

(U) AN OPPORTUNITY TO REDUCE PROLIFERATION AND IMPROVE
ACQUISITION STRATEGY FOR ELECTRONIC COMBAT JAMMERS

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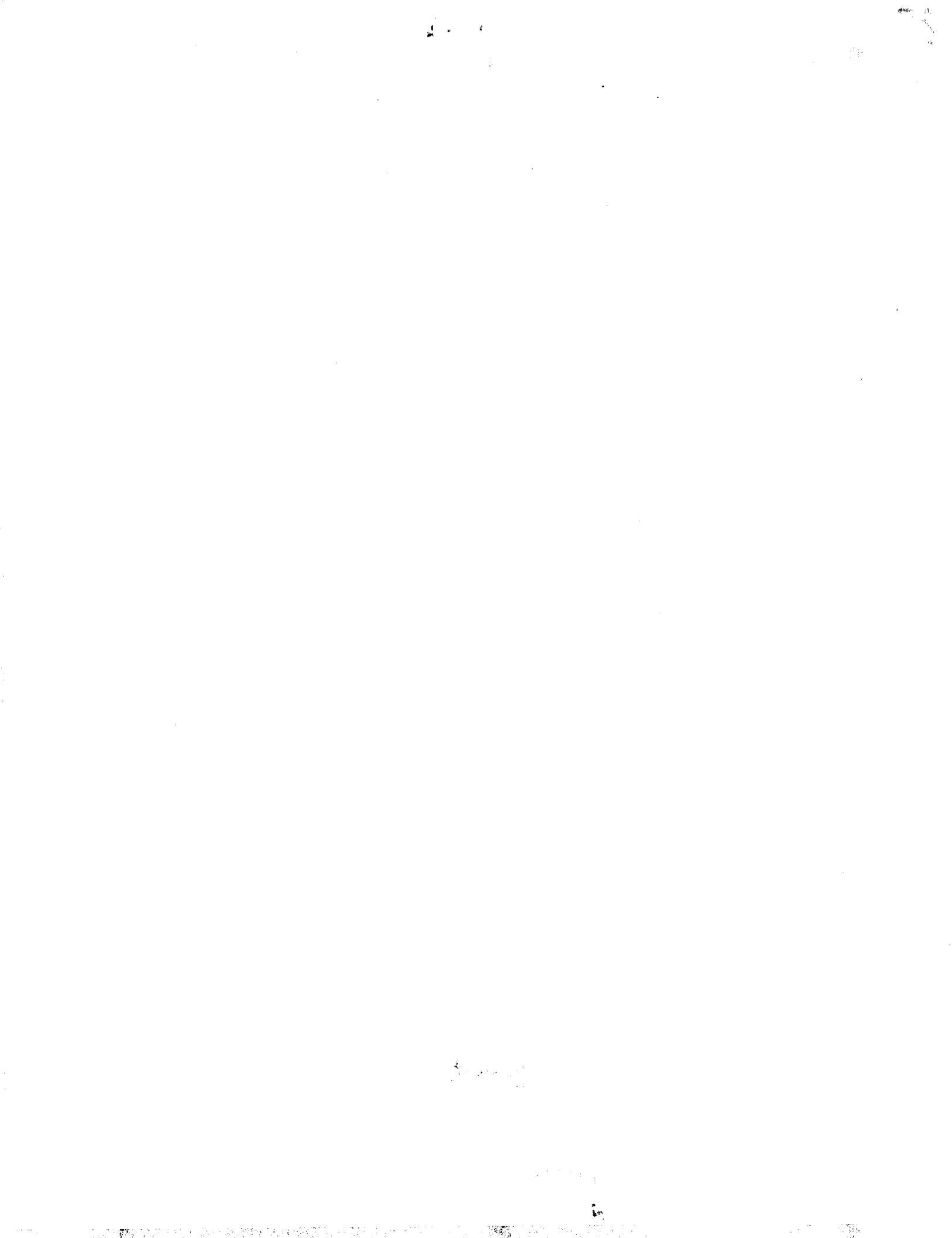


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EXECUTIVE SUMMARY

The Congress has expressed concern about the proliferation of electronic combat jammers, indicating a desire to have functionally common and adequately tested systems to facilitate interservice needs. In this regard, particular attention has been given to two aircraft self-protection jammers--the Air Force ALQ-131 and the jointly developed Navy/Air Force ALQ-165. The latter is commonly referred to as the Airborne Self-Protection Jammer (ASPJ). The cost of developing and producing these systems from 1985 and beyond is expected to exceed \$6 billion.

GAO made this review to (1) determine whether interservice common use of the ASPJ is being achieved and (2) evaluate the Air Force acquisition strategy for the ALQ-131.

BACKGROUND

The Department of Defense (DOD) acquires jammers to protect aircraft against hostile air defense weapons.

The ALQ-131, an Air Force pod-mounted system attached to the aircraft's wing or fuselage, is being acquired in four progressively sophisticated versions, referred to as Blocks I through IV.

The ASPJ is a joint Navy/Air Force program developed primarily as an internally mounted jammer system. At least two upgraded versions of this jammer, both internal and pod, are being developed.

Similarly, two power management systems are being developed for the ALQ-131--the Comprehensive Power Management System (CPMS) and the Receiver/Processor (R/P). These systems enable the jammer to automatically detect and concentrate jamming power and apply the most effective techniques against each specific threat.

RESULTS IN BRIEF

Currently, the Air Force and Navy plan to spend billions of dollars acquiring the ALQ-131, ASPJ, and other jammers to meet a common threat. GAO believes that one common jammer in pod and internal configurations could satisfy interservice needs for tactical fighter aircraft.



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The Air Force needs to review its acquisition strategy of concurrent testing and production for the ALQ-131 Block II jammers. A similar strategy was used to acquire the Block I jammers which led to reliability and maintainability problems.

PRINCIPAL FINDINGS

Common Interservice Use of Jammer Not Vigorously Pursued

The Air Force has not taken advantage of the opportunity to reduce proliferation of electronic combat systems as intended by the Congress. Instead of vigorously pursuing use of the jointly developed ASPJ, the Air Force has increased use of its own ALQ-131 and other service unique jammers. (See pp. 6 to 14.)

GAO's comparison of ALQ-131 and ASPJ specifications indicate that the jammers are functionally about the same and interservice needs could be satisfied with a common jammer. (See pp. 15 and 16.)

Commitment to Use CPMS Not Followed

The Air Force has developed two improved versions of its R/P for use on the ALQ-131, notwithstanding a commitment to the Congress to use the CPMS. Competition is cited by the Air Force as the reason for having both the R/P and CPMS. However, GAO found that the Air Force is already buying the R/P without competing it against the CPMS. (See pp. 10 to 15.)

Production Begins Before Satisfactory Test Results

The Air Force produced and deployed Block I of the ALQ-131 although it failed to pass various operational reliability and maintainability tests. As a result, many of the deployed jammers required major part replacements and significant technical adjustments. For example, GAO determined that over \$115 million had been spent to purchase parts for 29 jammer components experiencing the highest failure rate. (See pp. 20 to 26.)

The Air Force believes that jammer supportability problems have been corrected and that recent data indicate increased system reliability. However, GAO found that many of these same problems still exist. (See pp. 26 to 31.)



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ALQ-131
Block II
Acquisition
Approach

Despite problems experienced with Block I jammers, the Air Force started producing the ALQ-131 Block II in May 1983 before conducting operational flight testing of actual prototypes. (See pp. 28 to 31.)

RECOMMENDATIONS

GAO recommends that the Secretary of Defense require an independent assessment of the ALQ-131 and ASPJ programs to include an evaluation of their relative cost and performance capabilities. This evaluation should include consideration of other jammer upgrade programs, such as the ALQ-184, ALQ-189, and ALQ-135 update. Upon completing the assessment, the most cost beneficial system should be developed in pod and internal versions to satisfy interservice requirements. This approach could enhance commonality and reduce proliferation of electronic combat systems by eliminating (1) the need to upgrade many older jammers and (2) the additional development cost of new jammers.

The independent assessment could result in a conclusion to use either the ASPJ or ALQ-131 as the candidate common-user system. If the ALQ-131 is selected, the independent evaluation should be expanded to cover the costs and capabilities of the R/P and CPMS so the most cost-effective system is acquired to meet operational requirements.

In addition, the Air Force should be directed by the Secretary of Defense to slow production and stop further contract awards for the Block II jammer and power management systems until operational tests provide reasonable assurance that performance will be satisfactory. (See pp. 37 and 38.)

**AGENCY
COMMENTS**

DOD did not concur with GAO's first recommendation. It stated that assessments have already been conducted of various jammers, including the ALQ-131 and ASPJ, and that another assessment is not necessary. DOD said it is not possible to satisfy current jammer requirements with a single system in internal and pod versions.



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It noted that to develop an internal ALQ-131 would be an extremely difficult task, but a supersonic ASPJ pod could be available in 1991 if such a program were initiated.

The various assessments mentioned by DOD were performed on specific systems, generally comparing a particular Air Force system with ASPJ. GAO believes that to develop both short- and long-term commonality plans, an objective independent assessment of the numerous planned and ongoing update and development programs should be conducted. In addition, DOD could improve jammer commonality in the short term if it initiated the ASPJ supersonic pod program and accelerated its availability schedule. This could eliminate the need for other Air Force unique update and development programs.

DOD also did not concur with GAO's second recommendation. DOD said it has conducted in-depth reviews of the R/P and CPMS programs and another assessment is not necessary. Accordingly, both systems will complete specific simulation testing before the fiscal year 1985 R/P procurement is allowed to continue. Based on these tests, one system will be selected for production.

In GAO's opinion, simulation testing is not sufficient. The most cost-effective power management system should be selected only after operational flight testing is completed in ALQ-131 Block II pods.

DOD partially concurred with GAO's third recommendation. DOD agreed that additional operational testing is required before Block II production continues, and fiscal year 1985 ALQ-131 production funds have been withheld pending the outcome of these tests. However, DOD said the R/P has already been operationally tested with satisfactory results.

The test results referred to above relate to prior versions of the R/P and, in GAO's opinion, produced questionable results. Therefore, GAO believes that the current R/P should complete operational testing before additional contract awards are made. (See pp. 38 to 40.)

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