

21 JULY 1994



Acquisition

**AUTOMATIC TEST SYSTEMS AND
EQUIPMENT ACQUISITION**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

NOTICE: This publication is available digitally on the SAF/AAD WWW site at: <http://afpubs.hq.af.mil>. If you lack access, contact your Publishing Distribution Office (PDO).

OPR: SA-ALC/LDA (Mr Mark A. Reinke)

Certified by: SAF/AQK
(Mr Lloyd K. Mosemann, II)

Pages: 5

Distribution: F

This instruction implements AFPD 63-2, *Acquisition of Automatic Test Systems (ATS) and Equipment (ATE)*. It describes Air Force procedures for centralizing ATS management to efficiently use limited resources, minimize the proliferation of test equipment unique to specific systems, standardize ATS, and ensure that the ATS we buy meets the requirements for maintaining and deploying both existing and developing weapon systems. To ensure full understanding of the acquisition and requirements coordination process, plus the terms used, readers should familiarize themselves with the Department of Defense (DoD) guidance and Air Force 63-series publications mentioned in this instruction.

SUMMARY OF REVISIONS

This is the first publication of AFI 63-201. It is a new issuance that implements AFPD 63-2, Automatic Test Systems and Equipment, which describes the Air Force's new policy on ATS management and direction and establishes policies to encourage the development and application of standardized ATS and ATE.

Section A—ATS Definition

1. Definition. For the purposes of this instruction, ATS consist of ATE and the Test Program Sets (TPS) required to test the unit-under-test (UUT). TPS include software, interface devices and necessary data. ATS are equipment designed to conduct analysis of functional or static parameters automatically and to evaluate the degree of UUT performance degradation. They may be used to perform fault isolation of UUT malfunctions. The decision making, control, or evaluative functions are conducted with minimum reliance on human intervention and usually done under computer control.

1.1. Standardized ATS are ATS that can satisfy the requirements of multiple systems and weapon systems and meet designated architecture and interface standards.

Section B—Responsibilities

2. Per HQ AFMC policy, the ATS Product Group Manager (PGM) is located at SA-ALC/LDA. The following lists the ATS PGM's required actions:

2.1. The ATS PGM develops and manages the process for determining each user's ATS acquisition. This ATS Selection Process includes:

- Cost, schedule, and performance, including operational requirements.
- Systems engineering and development.
- Review for standardization opportunities.
- Decision process milestone intervals.
- Required analyses to be performed.
- Membership of the ATS Selection Evaluation Team, in addition to the user.
- Integration of the user into the process.
- Estimates of funding requirements.

2.2. In response to each weapon system ATS requirement, the ATS PGM establishes and co-chairs, with the Weapon System Program Director (SPD), an ATS Decision Selection Panel which will determine the preferred ATS for acquisition after evaluating analyses of alternatives prepared by the ATS Selection Evaluation Team. Panel membership includes:

- SPD.
- User.
- ATS PGM.
- Depot Representative.
- Lab Representative.
- Others as deemed necessary by the ATS PGM or SPD.

2.3. The ATS PGM, in coordination with other SPDs, PGMs, Materiel Group Managers (MGMs), and Depots, also will:

- Establish and maintain an ATS database of existing and preferred ATS in the Air Force inventory.
- Establish and maintain cognizance of Army and Navy ATE databases.
- Consolidate and coordinate ATS requirements across the Air Force.
- Develop a long term Product Master Plan to standardize ATS into families of testers.
- Develop detailed capability requirements and UUT parametric data for each ATS requirement submitted by the user.

2.4. The ATS PGM represents the Air Force on ATS issues arising in Joint Programs and coordinates with the Army and Navy on ATS requirements and acquisitions.

2.5. The ATS PGM represents the Air Force in coordinating and satisfying Air Force ATS requirements in cooperation with the DoD ATS Executive Agent.

3. The Using Commands or Organizations:

- Determine the ATS capability required and provide justification and supporting analysis to the PGM and the applicable SPD. The analysis and justification must include mobility requirements, portability, mean-time-between-failure (MTBF), through-put, mean-time-to-repair (MTTR) and other operational and technical requirements critical to mission success.
- Establish and document requirements in Mission Needs Statements (MNS)s, Operational Requirements Documents (ORD)s, or published logistics needs, and provide requirements documentation to the ATS PGM.
- Participate with the ATS PGM's engineering advisor to define the test requirements and parametric information for the UUT required to satisfy the identified need.

4. HQ AFMC. This command will:

- Support the single manager and facilitate process issues
- Support ATS PGM budget submissions

5. System Program Directors. These directors must:

- Identify technical and operational ATS requirements.
- Provide test requirements data needed by the ATS PGM.
- Coordinate ATS requirements with the ATS PGM early in program definition.
- Co-chair the ATS Decision Selection Panel with the ATS PGM.
- Support the ATS PGM in the ATS selection process.
- Budget for ATS and provide funding to the ATS PGM for ATS acquisition, when appropriate.

6. Other Air Force Product Group Managers (PGM). When applicable, other Air Force PGMs will provide the ATS PGM with ATS related information upon request, and will keep the ATS PGM informed of ATS activities and needs.

7. Materiel Group Managers (MGM). When applicable, Air Force MGMs will provide the ATS PGM with ATS related information upon request, and will keep the ATS PGM informed of ATS activities and needs.

8. Laboratories. These activities:

- Identify ATS requirements for projected or potential workloads to the ATS PGM.
- Provide ATS solutions and analyses when needed by the ATS PGM.
- Keep the ATS PGM informed on new technology developments that might improve ATS capability.

Section C—How to Select ATS:

9. Initiating Requests. The user, SPD, PGM, or MGM shall notify the ATS PGM of all ATS requirements, whether new or replacement, or for modifications to existing ATE or ATS.

10. Evaluating Alternatives. Using the ATS Selection Process, the ATS Selection Evaluation Team performs technical, cost-benefit, and logistic analyses of potential ATS solutions and presents the results to the ATS Decision Selection Panel for final approval and selection.

10.1. The ATS Selection Evaluation Team considers all User ATS requirements in the context of total Air Force ATS requirements.

10.2. The DoD inventory of ATS Standard Families, or modifications to these systems, are the first alternatives evaluated for satisfying ATS requirements.

10.3. The second alternative evaluated is procurement of existing DoD inventory ATS/ATE.

10.4. The third alternative evaluated is a modification to existing DoD inventory ATS.

10.5. If previous solutions do not cost effectively meet the user's needs, the fourth alternative evaluated is commercial off the shelf (COTS) equipment, appropriately modified. A waiver is required unless COTS equipment is for depot use only (see section 4).

10.6. If none of the above alternatives can satisfy the requirements, new development may be authorized upon approval of a waiver request in accordance with DoD policy.

11. Making The Selection. Based on the evaluation of alternatives, the ATS PGM prepares an option briefing and presents it to the ATS Decision Selection Panel for final decision.

11.1. In the event of disagreements, either the ATS PGM or the weapon system SPD may seek recourse with the applicable DAC or PEO.

Section D—Waiver Process:

12. The acquisition program Milestone Decision Authority (MDA), as determined by ACAT level according to DoD Instruction 5000.2, is the approval authority for all waiver requests.

13. When there is agreement between the ATS PGM, the ATS Decision Selection Panel, and the SPD that neither existing nor modified existing DoD ATS inventory can cost effectively satisfy the customer's needs, the SPD, with ATS PGM assistance, develops a waiver requesting approval to acquire COTS or to develop new ATS. A waiver is not required for COTS equipment used only at depot level.

13.1. The SPD submits a copy of the waiver request to the MDA for final disposition.

14. If the SPD does not concur with the solution presented by the ATS Decision Selection Panel and elects COTS or new development as a solution, the SPD submits a waiver request to the MDA for final disposition. The SPD must include the ATS Decision Selection Panel's preferred solution and supporting rationale with the request for waiver. The SPD provides a copy of the waiver request to the ATS PGM.

14.1. Waiver requests shall include compelling evidence on cost, schedule and performance impacts. Analysis performed to support the waiver request includes requirements, impacts on the overall Air Force infrastructure, and mobility requirements necessary to support various weapon systems. A cost-benefit analysis comparing alternatives is required, along with an explanation of why existing or modified DoD ATS inventory cannot meet requirements.

14.2. Waiver requests include the ATS Selection Evaluation Team analyses of alternatives.

RICHARD E. HAWLEY, Lt General, USAF
Principal Deputy, Assistant Secretary of the
Air Force Acquisition