



DEPARTMENT OF THE NAVY  
OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
WASHINGTON, DC 20350-2000

IN REPLY REFER TO

OPNAVINST 3960.15  
OP-913

6 MAY 1991

OPNAV INSTRUCTION 3960.15

From: Chief of Naval Operations

Subj: VALIDATION OF NAVY AIR DEFENSE THREAT SIMULATORS

Encl: (1) U.S. Navy Electronic Warfare Training Ranges  
(2) U.S. Navy Electronic Warfare Test and Evaluation Ranges/Laboratories

1. Purpose. To establish an approach and assign responsibilities for validation of Navy air defense threat simulators. The scope of this instruction will be expanded through revisions to address validation of the complete spectrum of Navy threat simulators.

2. Background

a. All three services develop and use air defense simulators. DoD oversight responsibility is carried out through the DoD Executive Committee on Threat Simulators (EXCOM) and the Joint-Service CROSSBOW-S committee. DoD Manual 5000.3-M-6 of April 1989 (NOTAL) was issued to establish policy, procedures and guidelines for simulator validation. CROSSBOW-S has established validation criteria and the capability to technically review service written validation reports for adequacy and to make approval recommendations to the EXCOM. 5000.3-M-6 has been cancelled with the publication of the new DoD Directive 5000.1 of 23 February 1991 (NOTAL), DoD Instruction 5000.2 of 23 February 1991 (NOTAL), and 5000.2-M of February 1991 (NOTAL). It is the intent of this instruction to avoid conflict with the new DoD instructions and implement OSD guidelines that were presented in 5000.3-M-6.

b. Major acquisition and procurement decisions for airborne electronic warfare systems are based on the results of the testing of developmental hardware against air defense threat simulators. For those decisions to be informed and correct, the simulators must be valid representations of the threat. A "validated" simulator does not mean that every parameter of the simulator is identical to the equivalent parameter of the actual threat system, but that parametric measurements of the simulator fall within tolerances required to support the test/training requirements for which the simulator is to be used. The parameters of the actual threat system are those stated by the current DIA threat assessment.



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3. Scope. This instruction is applicable to all Navy air defense threat simulators located at ranges and laboratories listed in enclosures (1) and (2) which are used for:

- a. developmental testing,
- b. operational testing and tactics development, or
- c. training of Navy aircrew personnel.

4. Approach

a. All Navy air defense simulators fielded after 1985, which are used for development and testing of weapon systems or training of Navy aircrew personnel, must be validated. Earlier simulators will be validated after undergoing a major update or modification, or as funding permits in conjunction with routine operations and maintenance.

b. The validity of air defense threat simulators will be evaluated throughout the lifetime of each simulator. This includes design validation, initial deployment validation, and in-service validation. Design validation will be conducted at the specification review, and reviewed/updated at the critical design review. Initial deployment validation will be conducted on-site at the applicable range or laboratory using measured data and factory acceptance test data as appropriate. In-service validation will be conducted whenever major modifications or updates are made to the simulator.

c. Each threat simulator will be subjected to validation procedures or processes (following Commander Naval Air Systems Command Validation Procedures Manual) to establish and document a baseline comparison with its associated threat and to ascertain the extent of the operational and technical performance difference between the two. This validation process will be continued throughout the simulator's life cycle.

d. Validation reports will note and explain the differences between the simulators and the current Defense Intelligence Agency-approved threat data and will describe the impact of the differences on testing or training.

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e. Every effort will be made within resource constraints to manage the threat simulator validation program so that there is an organizational difference between the functions of design and validation. If the validation management team is not different from that of the simulator developers, care must be taken to ensure that the results of validation are purely objective and free from bias.

#### 5. Responsibility

a. Chief of Naval Operations (CNO) will fund the air defense threat simulator validation process. OP-05 will fund the costs involved in validation of those simulators used for combat aircrew training purposes. OP-091 will fund the costs involved in the validation of simulators used for testing purposes. The Navy representative to the EXCOM, CNO (OP-913), will review and forward simulator validation reports to CROSSBOW-S Management Office.

b. Commander Naval Air Systems Command (COMNAVAIRSYSCOM) will serve as CNO's technical agent for Navy air defense simulator validation. Validation procedures under this instruction will be implemented. Joint-Service requirements for simulator validation will be coordinated through the CROSSBOW-S Committee. Technical review of simulator validation reports will be coordinated with applicable user program offices for comment. Recommendations to approve simulators as valid for developmental testing will be submitted to CNO (OP-913). Recommendations to approve simulators as valid for training of Navy Combat personnel will be submitted via CNO (OP-553) to CNO (OP-913).

c. Commander Operational Test and Evaluation Force will coordinate with COMNAVAIRSYSCOM to review simulator validation reports, and recommend to CNO (OP-913) approval of simulators as valid for the purpose of operational test and evaluation.

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6. Action. COMNAVAIRSYSCOM will establish a Navy air defense simulator validation capability for the purpose of validating all air defense threat simulators developed or used by the Navy.

7. Reports. The reporting requirements contained in this instruction are exempt from reports control by SECNAVINST 5214.2B.



J. GUY REYNOLDS

Director  
Test and Evaluation and  
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U.S. NAVY EW TRAINING RANGES

Pacific Missile Range Facility, Barking Sands, HI  
Pinecastle Electronic Warfare Range, Jacksonville, FL  
Southern California Offshore Range (SCORE)  
Crow Valley, Republic of the Philippines (RP)  
Yuma TACTS Range, MCAS Yuma, AZ  
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Beaufort TACTS Range, MCAS Beaufort, SC  
Mid Atlantic Electronic Warfare Range, Cherry Point, NC  
Atlantic Fleet Weapons Training Facility, Roosevelt Roads, PR

Enclosure (1)

U.S. NAVY EW T&E RANGES/LABORATORIES

Naval Air Test Center, Patuxent River, MD  
Pacific Missile Test Center, Point Mugu, CA  
Naval Weapons Center, China Lake, CA  
Naval Research Laboratory, Washington, DC  
Naval Air Development Center, Warminster, PA