



EA-6B (ICAP II) OPERATIONAL FLIGHT/NAVIGATION TRAINER , DEVICE 2F143

TRAINING CATEGORY:

AVIATION (Operational Flight/Navigation Trainer)

ORIGINATING AGENCY:

DCNO/AIR

SECURITY CLASSIFICATION:

Device 2F143 is unclassified.

PURPOSE:

Device 2F143 provides training for pilot and ECMO 1 in normal, abnormal, and emergency procedures involving all phases of flight, including takeoff and landing from carrier and land, and enroute flight of all types. Also provides training in navigation skills for the pilot and ECMO 1.

INTENDED USE:

The EA-6B trainer is a fixed-base trainer designed for installation in a permanent-type military facility. The trainer will provide training in

the development of pilot and ECMO/copilot skills and techniques to efficiently operate the EA-6B aircraft.

FUNCTIONAL DESCRIPTION:

Device 2F143 simulates the operational and performance characteristics of the EA-6B aircraft on the ground and throughout the flight envelope (including inflight refueling), recreating carrier takeoff and landing effects, realistic cockpit sounds, motion, visual scenes, instrument presentations, navigation and communication reception, and feel of the flight controls. The environment for sight, sound, and feel, are accomplished through the interfacing of the computation, I/O, visual, aural cue, motion, control loading, instructor display/control, DRLMS, and flight systems. The instructor provides task inputs to the computation system. The computation system displays flight instrument parameters that correspond to the scenarios selected by the instructor, and coordinates the appropriate digital and analog command signals to the dynamic systems that create the visual, aural, flight, and motion simulation effects. The students perform the flight and navigation training exercises, and their responses

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are fed back to the computation system and to the instructor for evaluation. The computation system consists of the computer/peripherals and trainer software simulation modules. The I/O interface provides all analog and digital input/output signal requirements between the computation system and the trainer hardware. The instructor display/control system provides the instructor with the means of monitoring and controlling the training scenario including: trainer status, problem control, student instruction, trainer mode selection, and malfunction insertion and deletion. The six-degree-of-freedom motion system provides pitch, roll, yaw, heave, and lateral/longitudinal translation in any combination about the motion axes. The control loading system provides the student with realistic feel of forces applied to controls as experienced in the real-world environment. The flight systems consist of the simulated aircraft flight and aircraft mission equipment. The visual system displays, at the trainer cockpit windscreens and IOS, realistic images of ground features, horizon, cloud deck, sky, and moving vehicles. The aural cue system generates aircraft dynamic sounds of training value in the cockpit.

PHYSICAL INFORMATION:

Device 2F143 is a permanently installed trainer. Refer to NTSC-P-5612 for list of descriptive details.

EQUIPMENT REQUIRED (NOT SUPPLIED):

Refer to NTSC-P-5612 for list of equipment required but not supplied.

POWER REQUIREMENTS:

Trainer Equipment:	120/208 VAC, 60 Hz, 3-Ph, 120 amps/phase
Visual System:	120/208 VAC, 60 Hz, 3-ph, 83amps/phase
DRLMS System:	120/208 VAC, 60 Hz, 3-Ph, 133 amps/phase
Air Conditioner:	120/208 VAC, 60 Hz, 3-Ph, 30 amps/phase
HPU:	277/480 VAC, 60 Hz, 3-Ph, 170 amps/phase
Air Compressor:	277/480 VAC, 60 Hz, 3-Ph, 3.5 amps/phase

INSTALLATION REQUIREMENTS:

Simulator Room	
Floor Area	40' x 42.8'
Ceiling Height	32'
Area	1,704 Sq. Ft.

Computer Room

Floor Area	24' x 40'
Ceiling Height	10'
Area	960 Sq. Ft.

Instructor Room

Floor Area	18' x 20'
Ceiling Height	10'
Area	360 Sq. Ft.

Hydraulic Room

Floor Area	15' x 21'
Ceiling Height	12'
Area	315 Sq. Ft.

Maintenance Room

Floor	14' x 20'
Ceiling Height	10'
Area	280 Sq. Ft.

PUBLICATIONS FURNISHED:

1. Instructor Utilization Handbook for EA-6B Operational Flight and Navigation Trainer (OF/NT) Device 2F143 - NTSC-P-5608 (U).
2. Operation & Maintenance Instructions EA-6B Operational Flight and Navigation Trainer (OF/NT) Device 2F143 - NTSC-P-5612 (U).
3. Integrated Operations & Maintenance Manual For EA-6B (OF/NT) Device 2F143 Visual System - NTSC-P-5614 (U).
4. Operation & Maintenance Instructions EA-6B Digital Radar Landmass Simulator Device 2F143 - NTSC-P-5616-1 (U).
5. Maintenance Requirement Cards EA-6B Operational Flight and Navigation Trainer (OF/NT) Device 2F143 - NTSC-P-5631 (U).

PERSONNEL:

Instructor:	Two (2) qualified instructor pilots
Operators:	Instructor or maintenance technician operator
Trainees:	Two (2) maximum
Observers:	One (1)

CONTRACT IDENTIFICATION:

Manufactured by Reflectone, Inc. (50237)
Tampa, FL 33634 under NAVTRASYS SCEN
Contract No. N61339-86-C-0075.

LOCAL STOCK NUMBER:

6930-LL-C00-6795