



TA-4J AIRCRAFT OPERATIONAL FLIGHT TRAINER, DEVICE 2F90A

TRAINING CATEGORY:

AVIATION (Operation Flight/Weapon System)

ORIGINATING AGENCY:

DCNO/AIR

SECURITY CLASSIFICATION:

Device 2F90A is unclassified.

PURPOSE OF DEVICE:

To provide for increased proficiency of TA-4J pilots by simulation of the following operations: normal/emergency procedures (air, land, and shipboard), preflight, startup, takeoff, maneuvers, instrument flight, weapons operations, landing, shutdown, and postflight.

INTENDED USE:

At Naval Air Stations for familiarization and refresher training of student pilots.

FUNCTIONAL DESCRIPTION:

Device 2F90A simulates the response of TA-4J controls, instruments, and systems, to include the aural, motion, and force-feel sensations.

The Computational System consists of FORCE computer CPUs and peripherals: OPCON terminal; one 80MB fixed disk; and one 655K floppy disk drive. These units, through Instructor and Trainee inputs to the simulation software database, output digital/analog signals to reconfigure cockpit flight controls and indicators, motion assemblies, ICS and aural equipment. This reconfiguration is performed many times a second, is transparent to the Trainee, and ensures that motion, aural, ICS, and flight control operations are in concert. Maintenance and troubleshooting requirements are supported by on-line and off-line computer implemented VME diagnostic tests.

DIRECTORY OF NAVAL TRAINING DEVICES

PHYSICAL INFORMATION:

UNIT	NAME	H	W	D
1	Trainee Station	150	47	97
2	Instructor Station	40	47	48
3	Systems Rack	78	23	32
4	Hydraulic Power Unit	72	36	18
5	Interconnect Rack	45	78	18
6	Flight Control Rack	56	20	18
7	Printer Unit	39	19	30
8	OPCON Station	44	35	30
9	Jumpseat/Skirt	34	36	64
10	* Oil Cooler	36	36	18

(* = Optional)

Total Weight (including cables) is about 8,500 lbs.

POWER REQUIREMENTS:

120/208-volt, 60 Hz, 3-phase, 85% PF, 30 amps filtered for Cockpit and Computer Assemblies.

120/208-volt, 60 Hz, 3-phase, 85% PF, 25 amps unfiltered for Hydraulic Power Unit.

INSTALLATION REQUIREMENTS:

Min Installation Area: 200 Sq. Ft.
 Ambient Temperature: 70° F
 Relative Humidity: 55%
 Overhead Lighting: 100 lm/Sq. Ft.
 Utility Area Noise: 90 dB Max
 All Other Area Noise: 70 dB Max

PUBLICATIONS FURNISHED:

1. Technical Manual, Operator and Maintenance Instructions, TA-4J Operational Flight Trainer, Device 2F90A, NTSC P-5983 (U)
2. Planned Maintenance System (PMS), TA-4J Operational Flight Trainer, Device 2F90A, NTSC P-5984 (U)
3. Commercial Computer Documentation Set for the TA-4J Operational Flight Trainer, Device 2F90A, NTSC P-5985 (U)
4. Technical Manual, Instructor's Utilization Handbook, TA-4J Operational Flight Trainer, Device 2F90A, NTSC P-5986 (U)
5. Technical Manual, On The Job Training Handbook, TA-4J Operational Flight Trainer, Device 2F90A, NTSC P-5987 (U)

PERSONNEL:

Instructor: One (1), Instructor Pilot qualified in TA-4J aircraft operations.

Operators: None, device is Instructor Pilot operated.

Trainee: One (1) Student Pilot

Maintenance: Two (2) journeyman level electronics technicians, 40 hour/week each.

CONTRACT IDENTIFICATION:

Manufactured by Quintron Corp., Chantilly, VA under NAVTRASYSCEN Contract No. N61339-87-C-0087.

LOCAL STOCK NUMBER:

6930-LL-C00-6959