

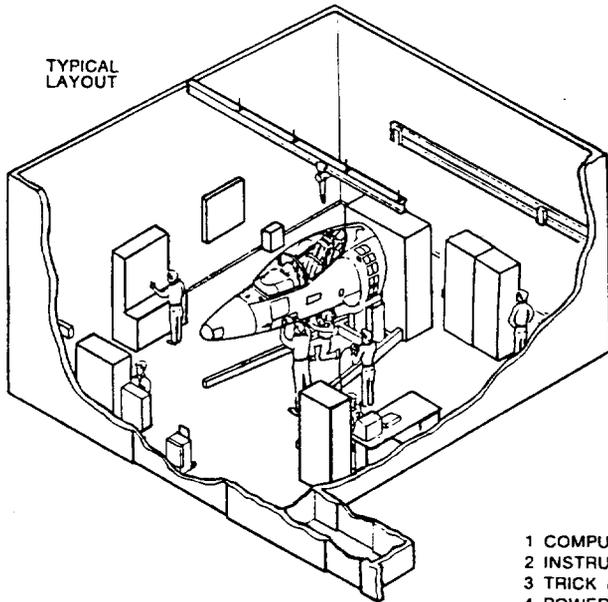
SUMMARY OF
AV-8B ACFT COCKPIT MAINT TRAINER

May 1986

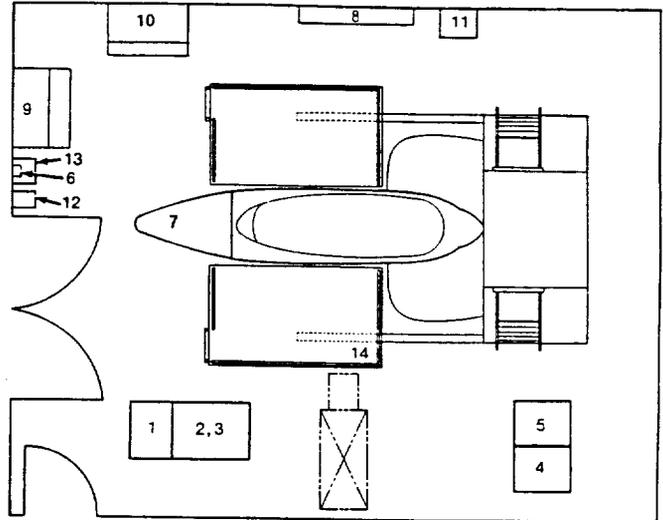
11H96

NAVAL TRAINING SYSTEMS CENTER

ORLANDO, FLORIDA



PLAN
VIEW



858-464

- | | |
|------------------------------------|---|
| 1 COMPUTATION SYSTEM (101) | 8 REAR ECS MODULE BOARD (110) |
| 2 INSTRUCTOR STATION (102) | 9 ECS MODULE BOARD (111) |
| 3 TRICK (103) | 10 GSE MODULE BOARD (112) |
| 4 POWER DISTRIBUTION CABINET (104) | 11 OXYGEN TEST SET (113) |
| 5 I/O CABINET (105) | 12 PRESSURIZED CABIN LEAKAGE TESTER (114) |
| 6 ALARM/ANNUNCIATOR PANEL (108) | 13 NITROGEN CART HOOK-UP PANEL (115) |
| 7 COCKPIT (109) | 14 PLATFORM |

TRAINING CATEGORY:

AV-8B ACFT COCKPIT MAINT TRAINER

ORIGINATING AGENCY:

DCNO/AIR

SECURITY CLASSIFICATION OF DEVICE:

Device 11H96 is unclassified.

PURPOSE OF DEVICE:

To integrate various hardware/human interface inputs and observations into a trainer system which facilitates the instructor directed organizational "O" level maintenance training of Aircraft Safety Equipment Mechanic (MOS 6085) with minimal support activity.

INTENDED USE:

To provide training in cockpit maintenance, troubleshooting, and unscheduled corrective maintenance which involve identifying instructor inserted malfunctions/failures and

removal/replacement of components within the AV-8B ECS, OBOGS, canopy, and ejection seat systems.

FUNCTIONAL DESCRIPTION:

The trainer simulates aircraft systems that are part of the cockpit system. The simulated systems are modeled in a static condition (aircraft on ground, standard atmosphere, temperature, zero acceleration). The trainer is divided into five major functional systems: power distribution, computation, I/O interface, instructor display/control, and student station systems. The power distribution system distributes and monitors the ac and dc power. The computation system consists of the computer/peripherals and trainer software simulation modules. The I/O system provides all analog and digital input/output signal requirements between the computation system and the trainer hardware. The instructor display/control system includes the alphanumeric display terminal, instructor control panel, tetherless remote instructor command keypad (TRICK), and alarm/annunciator panel. The student station includes a full mockup of the cockpit,

a cockpit rear ECS module board, ECS and GSE module boards, a modified oxygen system test set, a modified pressurized cabin leakage tester, and a simulated nitrogen cart hook-up panel. The instructor display/control system interfaces the instructor and the student station, providing overall trainer control and insertion/deletion capabilities. The instructor station is used to initially load the trainer program, enter initial conditions, freeze the training scenario, and perform computation system diagnostics. The trainer is also equipped with a DORT program to determine operational capability of the trainer. The I/O system is tested via a closed loop BITE test with a displayed fault indication to a card when a malfunction is detected.

PHYSICAL INFORMATION: Size (In.)

Item		<u>WxLxH</u>
1. Computation System Unit 101		35x26x71
CPU 101A2		
Floppy Disc Drive 101A3		
Mini-Disc Drive 101A5		
2. Instructor Station Unit 102		32x45x26
Instructor Alphanumeric		16x21x13
Display Terminal 102A1		
Instructor Control Panel 102A2		8x11x9
3. TRICK Unit 103		3x7½x1½
4. Power Distribution Cabinet Unit 104		32x28x78
5. I/O Cabinet Unit 105		32x24x78
6. Alarm/Annunciator Panel Unit 108		4x10x12
7. Cockpit Unit 109		138x228x142
8. Rear ECS Module Board Unit 110		48x72x2½
9. ECS Module Board Unit 111		31x41x75
10. GSE Module Board Unit 112		31x41x75
11. Oxygen System Test Set Unit 113		28x28x16
12. Pressurized Cabin Leakage Tester Unit 114		31x31x24

13. Nitrogen Cart Hook-up Panel 7x20x24
Unit 115

OPERATIONAL EQUIPMENT:

The operational equipment used in the trainer has been modified to facilitate trainer simulation and/or stimulation requirements.

EQUIPMENT REQUIRED (NOT SUPPLIED):

Refer to NTSC P-6070 Maintenance Instructions Manual (U).

POWER REQUIREMENTS: (Voltage)

120/208 vac	3 phase, 60 Hz
	20 amperes/phase
115/230 vac	3 phase, 400 Hz
	12 amperes/phase
28 vdc	5 amperes
Total VA	7,349

INSTALLATION REQUIREMENTS:

Floor Area:	22x28 feet
Equipment Access:	21 foot door
Personnel Access:	3 foot door
Ceiling Height:	Minimum 14 feet

PUBLICATIONS FURNISHED:

NTSC P-6066, CCDS (U).
 NTSC P-6070, Maintenance Instructions Manual (U).
 NTSC P-6070-S1 through -S3, Vendor Equipment Maintenance Instructions Manuals(U).

PERSONNEL:

Instructor: One qualified maintenance instructor.
Students: Class of up to 10.
Student Observers: One.

CONTRACT IDENTIFICATION:

Manufactured by Reflectone Inc. (50237)
 Tampa, Florida 33614, under NAVTRASYSCEN
 Contract No. N61339-84-C-0003.

Reproduction of this publication in whole or in part is permitted for any purpose of the United States Government.