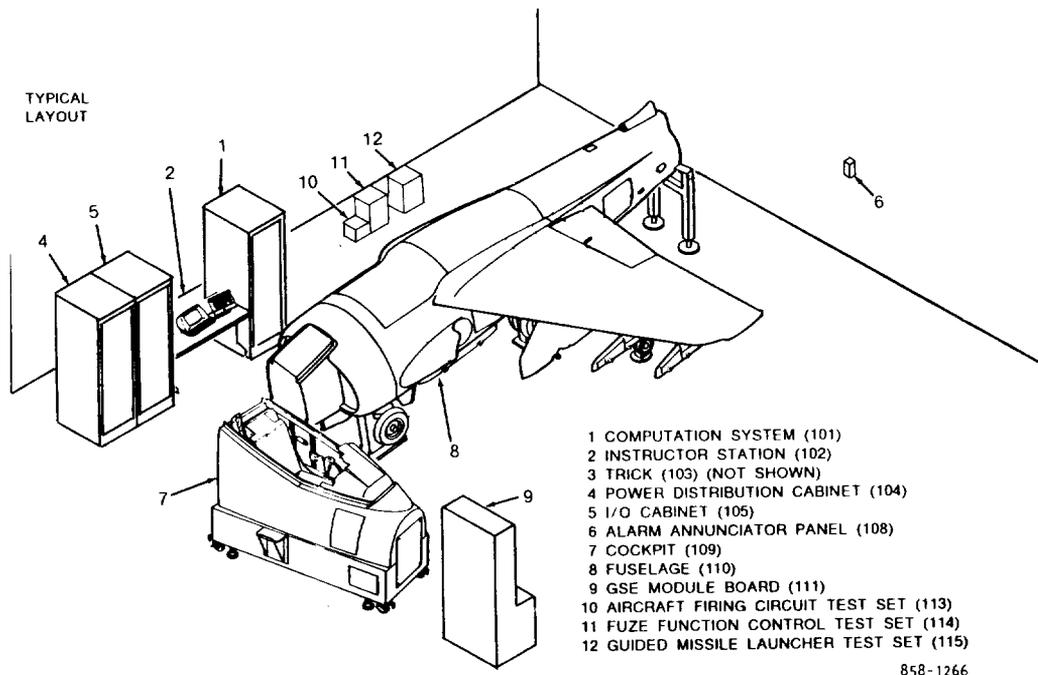


DIRECTORY OF NAVAL TRAINING DEVICES



AV-8B AIRCRAFT ARMAMENT SYSTEM MAINTENANCE TRAINER, DEVICE 11H98

TRAINING CATEGORY:

MAINTENANCE TRAINING (Misc)

ORIGINATING AGENCY:

DCNO/AIR

SECURITY CLASSIFICATION:

Device 11H98 is unclassified.

PURPOSE:

To integrate various hardware/human interface inputs and observations into a trainer system which facilitates instructor directed organizational "O" level maintenance training of Aircraft Ordnance Technicians (MOS 6235) with minimal support activity.

INTENDED USE:

To provide armament systems maintenance training including troubleshooting and unscheduled corrective maintenance involving tasks of identifying instructor inserted malfunctions/failures and removal/replacement of designated components within the AV-8B armament systems.

FUNCTIONAL DESCRIPTION:

The trainer simulates the aircraft armament systems. The systems simulated are modeled in a static condition (aircraft on ground, standard atmosphere, temperature, and zero acceleration). A full mockup of the fuselage with left wing, cockpit and module board containing items found in other parts of the aircraft and GSE test sets are provided as part of the student station to accomplish the training objectives. The trainer is divided into five (5) major functional systems: power distribution, computation, real-time input/output (I/O), instructor display/control, and student station systems. The power distribution system includes the hardware for distribution and monitoring 120/208 VAC 60 Hz power and 28 VDC 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 simulated cockpit is a full scale for-

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ward fuselage section including two-and three-dimensional representations for system panels and components with functional capabilities. The fuselage simulation models the left wing, in-board, intermediate, outboard and center pylons and provide for instructor inserted malfunctions and to which are mounted operational launchers and ejector racks. Armament systems components (cockpit, fuselage, GSE module board and test sets are electrically interlinked through the instructor station and computation system. The GSE module board contains a simulated electrical power unit, a forward fuselage circuit breaker/distribution panel, a main circuit breaker forward electrical protection panel, and a simulated external power cable. System GSE includes stimulated AN/AWM-54, AN/AWM-42A, and AN/ASM-464 test sets. The instructor station display/control system provides the interface between the instructor and student station, providing overall trainer control 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 DORT program determines trainer operational capability. The I/O system is tested via a closed loop BITE test which displays a fault indication to a card.

PHYSICAL INFORMATION:

Item	Size (in.) W x L x H
1. Computation System Unit 101 CPU 101A2 Floppy Disc Drive 101A3 Mini-Disc Drive 101A5	35 x 26 x 71
2. Instruction Station Unit 102 Instructor Alphanumeric Display Terminal 102A1 Instructor Control Panel 102A2	32 x 45 x 26 16 x 20 x 13 8 x 11 x 9
3. TRICK Unit 103	3 x 7-1/2 x 1-1/2
4. Power Distribution Cabinet Unit 104	32 x 28 x 78
5. I/O Cabinet Unit 105	32 x 24 x 78
6. Alarm/Annunciator Panel Unit 108	6-1/2 x 7-1/4 x 10
7. Cockpit Unit 109	39 x 93 x 64
8. Fuselage Unit 110	89-1/2 x 351 x 104
9. GSE Module Board Unit 111	39-1/2 x 30 x 75
10. Aircraft Firing Circuit Test Set AN/AWM-54 Unit 113	4-1/2 x 11-1/2 x 7
11. Fuze Function Control Test Set AN/AWN-42A Unit 114	8 x 8 x 8
12. Guided Missile Launcher Test Set AN/ASM-464 Unit 115	12-1/2 x 15 x 15-1/2

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-6072 Maintenance Instructions Manual (U).

POWER REQUIREMENTS: (VOLTAGE)

120/208 VAC.	3-Phase, 60 Hz. 20 amperes/phase
28 VDC	8 amperes
Total VA:	7,200

INSTALLATION REQUIREMENTS:

Floor Area:	40' x 28'7"
Equipment Access:	21' door
Personnel Access:	3' door
Ceiling Height:	Minimum 10'

PUBLICATIONS FURNISHED:

NTSC P-6068, CCDS (U)
NTSC P-6072, Maintenance Manual (U)
NTSC P-6072-S1 through -S3, Vendor Equipment
Maintenance Instructions Manuals
NTSC P-5194, Operator's Manual (U).

PERSONNEL:

Instructor: One (1) qualified AV-8B Arma-
ment System Maintenance
Instructor

Students: Class of up to Ten (10).

Student Observers: One (1)

CONTRACT IDENTIFICATION:

Manufactured by Reflectone Inc. (50237),
Tampa, FL 33614 under NAVTRASYS-SCEN Con-
tract No. N61339-84-C-0003.

LOCAL STOCK NUMBER:

6910-LL-C00-6574