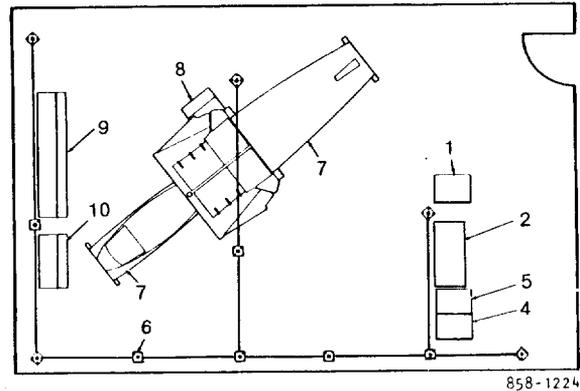


- 1 COMPUTATION SYSTEM (101)
- 2 INSTRUCTOR STATION (102)
- 3 TRICK (103) (NOT SHOWN)
- 4 POWER DISTRIBUTION CABINET (104)
- 5 I/O CABINET (105)



858-1224

- 6 ALARM/ANNUNCIATOR PANEL
- 7 COCKPIT/FUSELAGE (108)
- 8 DISTRIBUTION PANEL (109A1)
- 9 SYSTEM MODULE BOARD (111)
- 10 GSE MODULE BOARD (112)

AV-8B AIRCRAFT ELECTRICAL SYSTEM MAINTENANCE TRAINER, DEVICE 11H95

TRAINING CATEGORY:

MAINTENANCE TRAINING (Misc)

ORIGINATING AGENCY:

DCNO/AIR

SECURITY CLASSIFICATION:

Device 11H95 is unclassified.

PURPOSE:

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 Electrical Systems Technician (MOS 6335) with minimal activity.

INTENDED USE:

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

FUNCTIONAL DESCRIPTION:

The trainer simulates the aircraft electrical system. The systems simulated are modeled in a static condition (aircraft on ground, standard atmosphere, temperature, and zero acceleration). A full mockup of the fuselage including the cockpit and module boards containing items found in other parts of the aircraft and system GSE 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/fuselage is a full scale fuse-

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lage including two-and three-dimensional representations for system panels and components with functional capabilities. The simulation models power plant, electrical, lighting instrument, and inertial navigation systems and provides for instructor-inserted simulated malfunctions. System components (cockpit/fuselage, system module board, and GSE module board) are electrically interlinked through the instructor station and computation system. The system module board contains various electrical connectors and components associated with the exterior lighting, inertial navigation system, and aural cue system. The active mounted components which function realistically include the representative aircraft formation and position lights. The GSE module board contains a simulated electrical power unit and emergency stop switch. The instructor station display/control system provides the interface between the instructor and the student station, providing overall trainer 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 the 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:

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	30 x 28 x 78
5. I/O Cabinet Unit 105	30 x 24 x 78
6. Alarm/Annunciator Panel Unit 108	6-1/2 x 7-1/4 x 10
7. Cockpit/Fuselage Unit 109	96 x 288 x 104
8. Distribution Panel 109A1	30 x 23 x 80
9. Systems Module Board Unit 111	96 x 30 x 75
10. GSE Module Board Unit 112	39-1/2 x 30 x 75

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-6069 Maintenance Instructions Manual (U).

POWER REQUIREMENTS: (VOLTAGE)

120/208 VAC.	3-Phase, 60 Hz. 20 amperes/phase
28 VDC	5 amperes
Total VA:	7,200

INSTALLATION REQUIREMENTS:

Floor Area:	28'7" x 39'8"
Equipment Access:	12' door
Personnel Access:	3' door
Ceiling Height:	Minimum 10'

PUBLICATIONS FURNISHED:

NTSC P-6068, CCDS (U)
NTSC P-6069, Maintenance Manual (U)
NTSC P-6069-S1 through -S4, Vendor Equipment Maintenance Instructions Manuals
NTSC P-5191, Operator's Manual (U).

PERSONNEL:

Instructor: One (1) qualified AV-8B Electrical System Instructor

Students: Class of up to Ten (10).

Student Observers: One (1)

CONTRACT IDENTIFICATION:

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

LOCAL STOCK NUMBER:

6910-LL-C00-6571