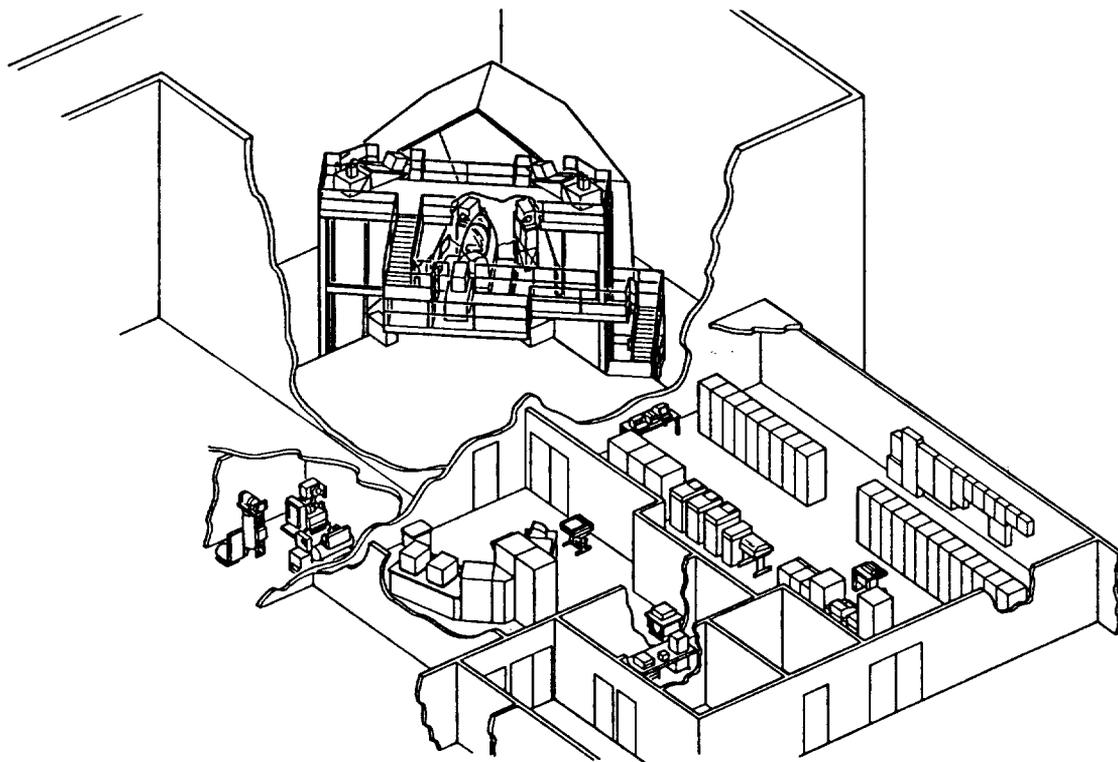


## DIRECTORY OF NAVAL TRAINING DEVICES



### AV-8B WEAPONS SYSTEM TRAINER (WST), DEVICE 2F149

**TRAINING CATEGORY:**

AVIATION (Operational Flight/Navigation Trainer)

**ORIGINATING AGENCY:**

DCNO/AIR

**SECURITY CLASSIFICATION:**

Device 2F149 is secret.

**PURPOSE:**

Develop pilot proficiency in AV-8B aircraft operations.

**INTENDED USE:**

The WST is used to train student pilots in AV-8B operational and tactical procedures. Operational procedures include: V/STOL and conventional takeoff and landing, aircraft control and instrument flight procedures. Tactical procedures include: weapons delivery, low altitude tactics, offensive air combat maneuvering, and defensive electronic countermeasures. The WST is also used to reinforce training in normal/degra-

ded/emergency operations of simulated aircraft systems.

**FUNCTIONAL DESCRIPTION:**

The WST is installed in a multiroom training facility with a high bay area. The WST is grouped and located in adjacent rooms which include: Trainee Station, Instructor Operator Station, Computer Room, Debrief Room, and Utility Room.

The trainee station includes a full size replica of the AV-8B crew station and a visual scene projection system. The crew station contains controls, indicators, and cockpit equipment required to perform the training mission. A flight control system simulates AV-8B flight control characteristics. A G-suit/seat, G-dimming, and buffet system simulates G-forces and motion cuing. An aural simulation system simulates the AV-8B crew station aural environment. A communications system simulates all COM/NAV capabilities.

Computer image generation (CIG) equipment develops imagery video for the trainer dynamic visual scenes. The dynamic visual scenes simulate a 400 x 400 nautical mile area and include special target areas and weapons effects.

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The instructor operator station (IOS) is the trainer control center. The IOS provides the capability to select, initiate, and record the training mission and to monitor and evaluate trainee performance. Basic operating modes include planning, training, demonstration, and replay. Demonstration, instant replay, and simulation freeze operations are provided to emphasize a particular situation during the training session.

### PHYSICAL INFORMATION:

**Trainee Station Room:** 40' H x 51' W x 54' L

**Computer Room:** 10' H x 30' W x 54' L

**Instructor Operator Station Room:**  
10' H x 22' W x 32' L

**Utility Room:** 10' H x 17' W x 29' L

**Debrief Room:** 10' H x 11' W x 13' L

**Total Floor Area:** 5,714 Sq. Ft.

### POWER REQUIREMENTS:

120/208 VAC, 5-wire, 60 Hz, 3-Ph, 700 amperes per phase maximum.

### PUBLICATIONS FURNISHED:

1. Maintenance Instructions, AV-8B WST Device 2F149, NAVTRADEV P-5380, (U)
2. Maintenance Requirement Cards, AV-8B WST Device 2F149, NAVTRADEV P-5381, (U)
3. Instructors Handbook, AV-8B WST Device 2F149, NAVTRADEV P-5386, (U)

### PERSONNEL:

**Instructor:** One (1) instructor pilot qualified in AV-8B weapons systems training procedures.

**Operator:** One (1) MARCOR civilian to assist the instructor pilot.

**Trainee:** One (1) student pilot.

**Maintenance Personnel:** Six (6) MARCOR civilian personnel.

### CONTRACT IDENTIFICATION:

Manufactured by McDonnell Aircraft Co., St. Louis, MO under NAVTRASYSCEN Contract No. N61339-82-C-0022.

### LOCAL STOCK NUMBER:

6930-LL-C00-6897