

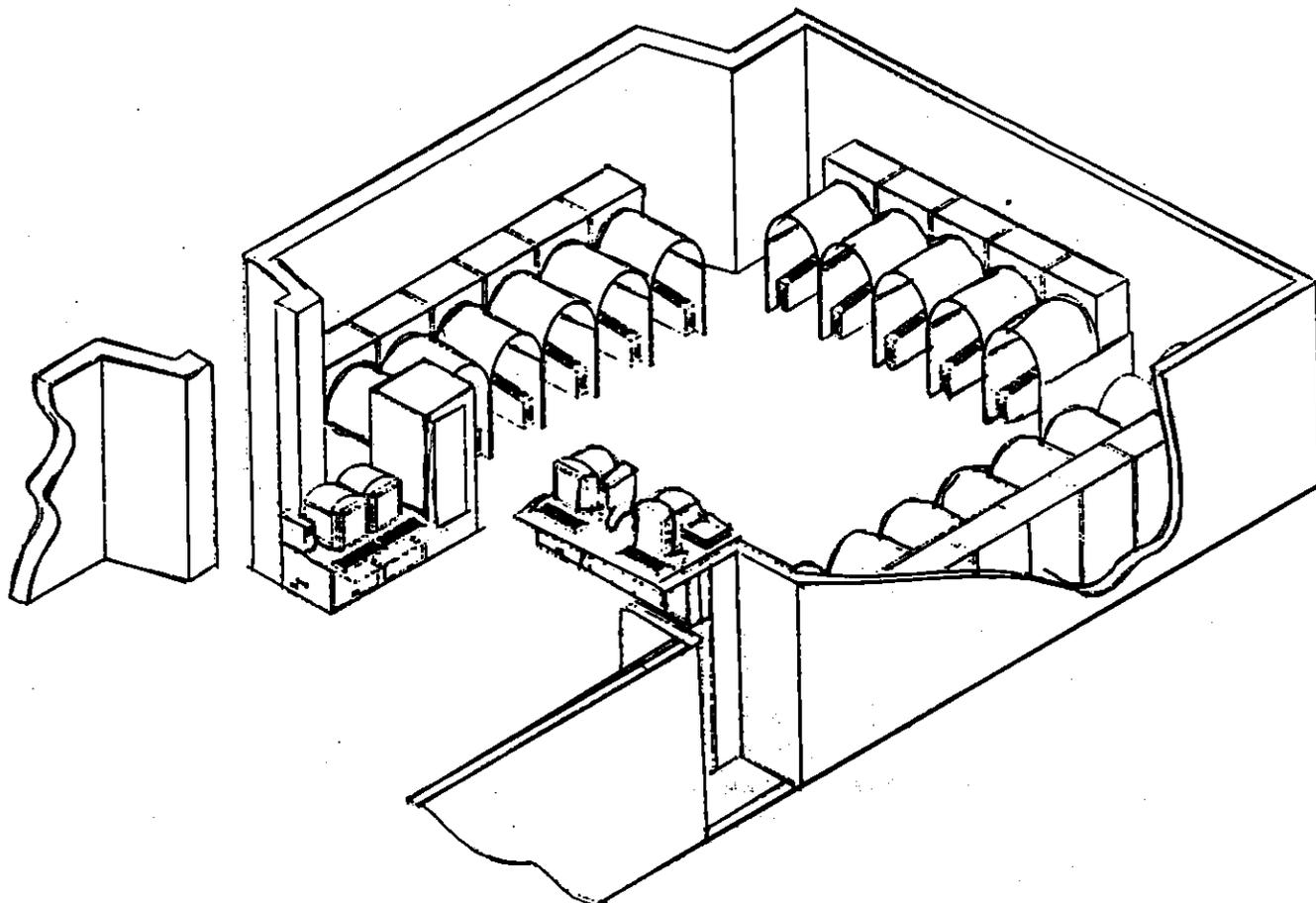
**SUMMARY**  
of  
**AVIATION COMMUNICATION/NAVIGATION TRAINER DEVICE 2B47**

**MAY 1997**

**DEVICE 2B47**

**NAVAL AIR WARFARE CENTER TRAINING SYSTEMS DIVISION**

**ORLANDO, FLORIDA**



**TRAINING CATEGORY:**

**SURFACE**

**ORIGINATING AGENCY:**

**NAVAIRSYSCOM**

**SECURITY CLASSIFICATION OF DEVICE:**

**Device 2B47 is unclassified.**

**PURPOSE OF DEVICE:**

**To provide a means of training flight navigators in ground and airborne communications, operation of flight instruments and gauges, and fuel and cockpit task management.**

**To simulate or duplicate communication and navigation controls found in the T-34C and T-1A aircraft.**

**INTENDED USE:**

**To provide extensive simulated task practice in airway navigation, flight task management, fuel and time computations and management, aircraft maneuvering, real-time position reporting, point-to-point navigation callouts, crew coordination practice.**

**To teach the basics of instrument navigation, communication, and fuel and cockpit task management for up to 20 students at a time.**

## FUNCTIONAL DESCRIPTION:

Device 2B47 consists of 25 computers including two Instructor/Operator Stations (IOSs) and 20 Student Stations (SSs) that are networked together by a server and 100BASE-T hubs. Each trainer has a Sound System to provide communication among instructors and students and a means of recording up to two hours of student mission communications.

The IOSs have two PCs with 21-inch monitors and a printer. The instructor controls training from these stations and monitors student actions and progress. The instructor can print student maps, detailed mission status, and summaries of the current status of all stations. The instructor can assist each student by issuing commands, messages, and malfunctions to each SS and by talking to the student through the headset. The instructor controls the mode of the SS and can freeze the mission to assist the student by replaying all or part of the mission.

Each SS simulates an aircraft cockpit and uses a 21-inch monitor to display the instruments and gauges. The SS has additional controls for entering flight and communications data. The student can control altitude, airspeed, and heading and tunes navigation and communications receivers using generic control panels. Any set of CONUS NAVAIDs can be used to build navigation scenarios. Students will enter flight management data and navigate to designated waypoints utilizing NAVAIDs, instruments, and other flight aids.

The SS can be put in a Snapshot Mode, which displays, on the SS monitor, a map showing the simulated aircraft, NAVAIDs, waypoints, etc. and a table listing gauge readings. The SS can also be put in Replay Mode and any portion of the two-hour training session can be replayed at the SS.

The Trainer Server (TS) controls processing and communications between IOS and SS. Device 2B47 has also been designed to provide a means to present Interactive Courseware (ICW).

The Sound System is a PC-based communications system that allows radio and voice communications among instructors and students. This system records up to two-hours of communications for each student running a mission. It also provides generic background chatter (air/ground transmissions) and NAVAID Morse Code idents.

## PHYSICAL INFORMATION:

### Facilities

61 ft 4 in. x 29 ft 6 in. floor area  
(houses two trainers)  
8-foot ceiling height  
4-ft wide x 84-inch high door

### Air-conditioning

60 - 85°F temperature  
40 - 80% humidity

### EQUIPMENT REQUIRED (Not Supplied):

None.

### POWER REQUIREMENTS:

120 VAC, 60 Hz, single phase circuits  
24 Equipment circuits @ 15 amps  
246 Amps maximum load

### PUBLICATIONS FURNISHED:

1. Operation & Maintenance Manual for Aviation Communication/Navigation Trainer, NAWCTSD P-7268 (U)
2. Training System Utilization Handbook for Aviation Communication/Navigation Trainer, NAWCTSD P-7271 (U)
3. Commercial Off-the Shelf (COTS) Manuals, NAWCTSD P-7270 (U)
4. Planned Maintenance System, NAWCTSD P-7269 (U)

### PERSONNEL:

Instructor/Operators - 1 or 2 per trainer  
Trainees - 1 to 20 per trainer

### CONTRACT IDENTIFICATION:

Manufactured by Jason Associates Corporation,  
San Diego, CA 92130-2053, under NAWCTSD  
Contract No. N61339-96-C-0028

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