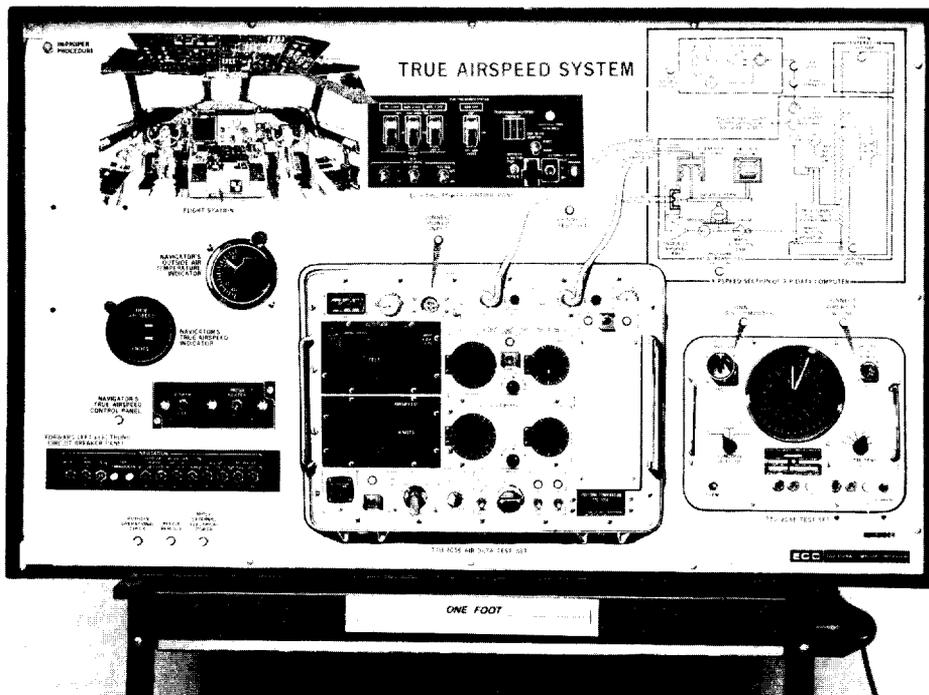


DIRECTORY OF NAVAL TRAINING DEVICES



TRUE AIRSPEED SYSTEM T/A, DEVICE 6E25

TRAINING CATEGORY:

BASIC SCIENCE (Electricity)

ORIGINATING AGENCY:

DCNO/AIR

SECURITY CLASSIFICATION:

Device 6E25 is unclassified.

PURPOSE:

The purpose of the training device is to represent the True Airspeed System of carrier fixed wing aircraft. The training device will enable the student to get classroom experience in performing an operational check and diagnosing and replacing malfunctioning components or circuits.

INTENDED USE:

The trainees will generally be enlisted personnel, E-3 and below. Training will take place at Aviation Electrician's Mate School. The device will be used for practical hands-on training and

evaluation of training by an instructor. The troubles have a degree of difficulty and are similar to actual troubles experienced in the Aviation Electrician's Mate field.

FUNCTIONAL DESCRIPTION:

The True Airspeed System (A/A24G-9) computes and indicates true airspeed from indications derived from three (3) measurements made of the airstream. These measurements are total pressure, static pressure, and total temperature. The system operates automatically to indicate accurately true airspeeds of 70 - 450 knots at all altitudes from 1,000' below sea level up to 30,000' above sea level. The system contains the following components: A true airspeed computer and mount assembly, a true air speed indicator, a total temperature sensor, and a control panel with two (2) switches.

The True Airspeed System Trainer shall display all system electrical components and controls required to operate the system as contained in the carrier fixed wing aircraft. A P-3 aircraft shall be used as a model system for the trainer. The controls shall be represented as in actual aircraft. The training device shall permit the stu-

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dent to practice operational checks and to identify and isolate electrical faults using a true airspeed tester (TTU-208E), air data test set (TTU-205E), and logical trouble shooting procedures. The device shall simulate a typical true airspeed indicating system composed of a true airspeed computer and mount assembly, a true airspeed indicator, a total temperature sensor, pitot and static pressure inputs and control panel with two (2) switches. The indication observed by the student shall simulate an actual airspeed ranging from 70 - 450 knots at all altitudes from sea level up to 30,000' above sea level.

The trainer shall consist of the following major components:

1. Display Panel - shall depict the operation of the True Airspeed System. It shall contain Pilot/copilot's Station, Navigator's Station, True airspeed System schematic, TTU-205E Data Test Set, TTU-208E Test Set.
2. Master Console - shall contain student evaluation indicators. The master console shall enable the instructor to insert one of three (3) malfunctions into the simulated system.
3. Simulated System Schematic Diagram - a schematic and parts list shall be furnished.
4. Protective Cover - made of heavy duty vinyl and equipped with heavy duty zipper and pocket to store manuals.
5. Training Device Clock - shall indicate total time the device has been connected to power.

An alarm system shall be available to the instructor. It shall alert the student and instructor when a wrong procedure has been attempted. When the alarm is triggered, the training situation shall freeze with no further operations capable of being performed. A reset button is available to reset the trainer after counseling the student. The system shall be built with a replace/repair counter which counts everytime a student attempts a repair/replace action, and also an elapsed time indicator. These items shall indicate if a trainee is attempting to analyze the system or is randomly selecting repair/replace actions and the time expended to correct a malfunction.

PHYSICAL INFORMATION:

The trainer frame structure shall be constructed from an aluminum alloy weldment or welded steel beam components. The dimensions of the trainer display area shall be approximately 1.2 meters long by 0.75 meters high. Total weight of the trainer display panel shall not exceed 45 Kilograms.

The panel face shall be a light color (white/beige) with the components and connecting lines a dark color. Front panel markings shall be covered with a wear resistant coating to prevent marring or obliteration of the markings.

ENVIRONMENTAL CHARACTERISTICS:

The training equipment shall withstand the following climatic conditions:

Temperature

- (1) Operating: 15° to 45° C
- (2) Nonoperating and Storage: -20° to 65° C

Relative Humidity - up to 95% condensation due to temperature change.

INSTALLATION AREA:

Classroom

POWER REQUIREMENTS:

The trainer is designed to permit operation from a 110/115 volt, 60 Hz power source with a maximum load of 15 amperes.

PUBLICATIONS FURNISHED:

Operator/Maintenance Manuals

RELATED TRAINING DEVICES:

6E12 thru 6E22, 6E24, 11H68/8A

PERSONNEL:

Instructor: One (1)
Student: One (1) or Two (2)

CONTRACT IDENTIFICATION:

Manufactured by Educational Computer Corp., Orlando, FL under NAVTRASYS-CEN Contract No. N61339-78-C-0139.

LOCAL STOCK NUMBER:

6910-LL-C00-4743