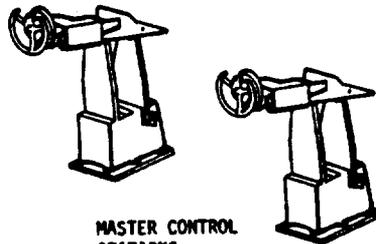
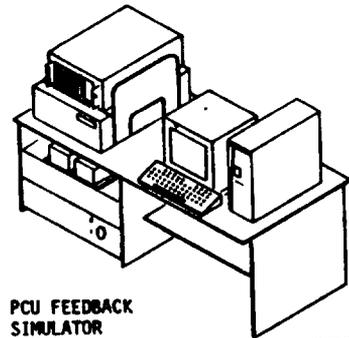
SIMULATOR
PROCESSOR
SYSTEMMASTER CONTROL
STATIONSPCU FEEDBACK
SIMULATOR

MTH88002-1A

TRIDENT SHIP CONTROL MAINTENANCE LABORATORY SCML TRAINER, DEVICE 11B99A**TRAINING CATEGORY:**

MAINTENANCE TRAINING (Electronics)

ORIGINATING AGENCY:

NAVSEA

SECURITY CLASSIFICATION:

Device 11B99A is unclassified.

PURPOSE OF DEVICE:

To support realistic training at the system, subsystem, and equipment levels in operation and maintenance of the ship control area of a TRIDENT submarine.

INTENDED USE:

The device is used to train interior communication technicians and data systems technicians with varying degrees of proficiency in operation and maintenance of the ship control area of a TRIDENT submarine in the Ship Control Maintenance Laboratory (SCML).

FUNCTIONAL DESCRIPTION:

Device 11B99A consists of three (3) separate units that simulate tactical and nontactical signals of tactical equipment. The three (3) units are Unit 22 - Simulation Processor System (SPS), Unit 27 - Position Control Unit Feedback Simulator (PCU FB SIM), and Unit 26 - Master Control Station (MCS).

The SPS is made up of five (5) units mounted on or in a computer desk. These units are a laser printer, a Zenith 386 Computer, a power panel assembly, an Instructor Control Console (ICC), and a standby power source. During operations and maintenance training, the SPS simulates tactical equipment signals. The signals can be fault free or simulated failures and are used to stimulate the laboratory tactical equipment for controlled training exercises. The SPS simulates ship dynamics and Ship Control Station stimuli. Responses to the simulated signals are returned to the SPS. The SPS also sends and receives data signals to and from the PCU FB SIM. Using the ICC, the instructor is able to enter and monitor commands necessary to transmit the simulated signals. The laboratory instructor uses the laser printer to permanently record SPS simulations and responses for the controlled training exercises.

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The PCU FB SIM consists of six (6) units mounted on or in a computer desk. Three (3) of the units and the computer desk are the same type used in the SPS. The units unique to the PCU FB SIM are the expansion chassis, the power supply assembly, and a different model standby power source. The PCU FB SIM receives command and reference signals from the five (5) tactical Position Control Units (PCUs) via the expansion chassis. The PCU FB SIM provides closed-loop position control for the five (5) PCUs by simulating the responses. After the PCU FB SIM is initially turned on, all instructor inserted simulations are initiated at the ICC of the SPS; thereafter, the PCU FB SIM requires no manning.

There are two (2) MCSs, which are modified SSN-688 class submarine master control stations (inboard MCS and outboard MCS), provided with Device 11B99A. These are mounted on the deck in front of the Ship Control Panel of the Ship Control Station (SCS). Manual movement of the MCS sends two (2) independent sets of signals directly to the SCS. These signals are rudder manual commands and planes manual commands.

PHYSICAL INFORMATION:

Number of Pieces:

Three (3) major sizes:

Unit 22 - 41" H x 29" D x 60" W

Unit 26 - 35" H x 50" D x 23" W
each MCS (2 items)

Unit 27 - 44" H x 29" D x 60" W

Weight:

Unit 22 - 375 lbs.

Unit 26 - Approximately 250 lbs.
each MCS (2 items)

Unit 27 - 440 lbs.

Total Device (including cables) - 1,325 lbs.

POWER REQUIREMENTS:

Unit 22 - 120 Volt, 60-Hz, 20-amp cap. outlet

Unit 26 - 115 Volt, 400-Hz, 1-amp reference voltage each MCS (2 items)

Unit 27 - 120 Volt, 60-Hz, 20-amp cap. outlet

INSTALLATION REQUIREMENTS:

Floor Loading:

Unit 22 - 48 lb/sq ft

Unit 26 - 48 lb/sq ft

Unit 27 - 57 lb/sq ft

Air Conditioning:

Unit 22 - 5886 BTU/hr

Unit 26 - 10.5 BTU/hr ea MCS (2 items)

Unit 27 - 5507 BTU/hr

PUBLICATIONS FURNISHED:

Technical Manual, Operation and Maintenance with Parts List, Ship Control Maintenance Laboratory, Device 11B99A, NAVTRADEV P-5484 (U).

PERSONNEL:

Instructor: Not Applicable

Operator: Instructor Operated

Trainees: Not Applicable

Maintenance: One (1) IC or DS (1 hour per 40-hour utilization)

CONTRACT IDENTIFICATION:

Manufactured by Ocean Technology, Inc., Burbank CA under NAVTRASYSCEN Contract No. N61339-87-C-0058.

LOCAL STOCK NUMBER:

6910-LL-C00-6912