

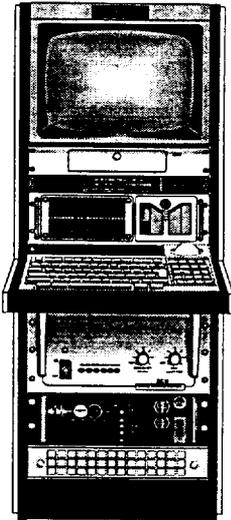
SUMMARY OF
RADAR SHIP AVOIDANCE TRAINER (RSAT)

NOVEMBER 1996

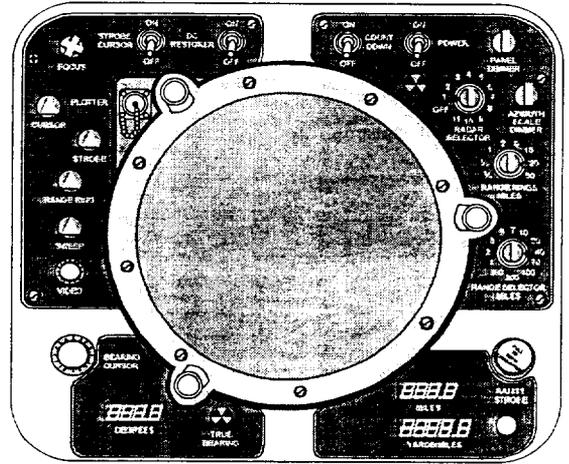
Device 21H31

NAVAL AIR WARFARE CENTER TRAINING SYSTEMS DIVISION

ORLANDO, FL



RSAT



AN/SPA-25

TRAINING CATEGORY:

SUBMARINE SYSTEMS

ORIGINATING AGENCY:

NAVSEA

SECURITY CLASSIFICATION OF
DEVICE:

Device 21H31 is unclassified.

PURPOSE OF DEVICE:

Provides organizational radar ship avoidance training at the "A" School Submarine Electronics Technician Course.

INTENDED USE:

The Radar Ship Avoidance Trainer (RSAT), Device 21H31 is designed to teach the fundamentals of contact avoidance using multiple

contact scenarios relative to ownship. It is capable of generating multiple targets on a AN/SPA-25 radar display to familiarize trainees with techniques of tracking and verifying target course and speed. The trainer controls ownship and individual contacts course and speed.

FUNCTIONAL DESCRIPTION:

Device 21H31 is installed at the Naval Submarine School Groton, CT. building 533, room 220. The trainer consists of Commercial-Off-The-Shelf equipment including a Instructor Console (IC), a RMS-12 Radar Simulator and four AN/SPA-25s. The IC and RMS-12 are housed in a 19-inch electronics rack w/bullnose. The electronics rack also contains an AC power control and cooling-air fan unit.

The IC is implemented with a commercial 80486 personal computer. The IC is operated via a Graphical User's Interface software program using Windows 3.1. The IC automatically downloads the Radar Simulator software program, loaded on the ICs hard drive, to the simulation equipment. The interface with the Radar Simulator is via an RS-232 serial communications channel.

All instructor functions are performed at the IC. Radar training exercises can be initiated, saved, and loaded from the IC. The RMS-12C produces synchro, trigger, and video signals to the AN/SPA-25s in the form of realistic radar displays depicting ownship and target motion and antenna "sweeps". The RMS-12C contains a sweep generator and video simulator.

The SPA-25s are tactical units. Of the four SPA-25s available to RSAT, two are dedicated and two receive inputs via a switchboard. The switchboard allows the associated SPA-25 to be shared between RSAT and the facility AN/BPS-15 Radar.

PHYSICAL INFORMATION:

The RSAT meets the transportation requirements for existing passageways and doors in NAVSUBSCOL building 533 and is transportable via standard commercial means. The trainer classroom requires 12,000 BTU/H of cooling environmental air conditioning and must operate at 55-85° Fahrenheit temperature and 55-85% relative humidity.

Classroom space for the RSAT is 25' X 19' (475 square feet total floor space).

Sufficient space is provided to access the trainer for the conduct of training and trainer maintenance.

EQUIPMENT REQUIRED (Not Supplied):

None.

POWER REQUIREMENTS:

120vac, 60 HZ, single phase with three 20 Amp circuit breakers.

Emergency Power Off switch at the room exit door.

PUBLICATIONS FURNISHED:

Systems Interface Manual, Radar Ship Avoidance Trainer (RSAT), Device 21H31 (U), NAWCTSD P-7235 (U). See NAWCTSD P-7235 (U) for supplemental documents.

PERSONNEL:

Instructors will be submarine school graduates, instructor qualified, and paygrade E-5 or above. Two instructors are required for the conduct of RSAT training.

The Contractor Operation and Maintenance of Simulators contractor will operate and maintain the RSAT.

CONTRACT IDENTIFICATION:

Naval Air Warfare Center Training System Division, Orlando, Florida.

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