Radio Communication Simulators

Transas Radio Communication simulators based on PCs, software and hardware facilities have been developed for training and examining ship specialists who receive a General Operator Certificate (GOC) or Restricted Operator Certificate (ROC).

The program implemented in the simulator is in full compliance with IMO Resolution A.703(17) and the latest requirements of the STCW Convention, and ensures correct and efficient operation of all the GMDSS equipment subsystems in the scope specified in IMO Model Course 1.25.

**NEW FUNCTIONALITIES**

- Simulation of Inmarsat Fleet 77 TT-3084A satellite station by Thrane & Thrane. This station is the most forward-looking tool for global connection, comprising the vast range of functionalities and compliant with IMO A.888(21) resolution.
- Radio Direction Finder RHOTheta RT-500-M introduced as supplement for Search And Rescue training.
- Simulation of NAVTEX FURUNO NX-700A two-channel receiver compliant with IMO MSC.148(77) resolution.
- Ship Security Alert System.

**CONFIGURATION**

Transas GMDSS 4100 simulator (TGS) comprises one instructor workplace and up to 16 trainee workplaces. Each workplace includes one or several IBM compatible personal computers connected to the common local network. The telephone communication is provided by S.P. Radio microtelephone handsets connected to the sound card. TGS 4000 console with real controls of the communication facilities can be connected to the trainee workplace.

Two modes of student workplace are available:

- The student workplace can work both in network mode and standalone mode, when the trainee can make use of the self-education program.
- The PC-based simulator is designed for individual and joint training of fleet operators with expert assessment of their competency in accordance with STCW Code ’95.

**COMPLIANCE**

Transas has created four generations of GMDSS simulators, taking into account the requirements of relevant organisations. The Transas GMDSS simulators hold type approval certificates from the Department of Maritime Transport of Russia and international organisations (France Telecom, Canada Industry, MCA).

**FUNCTIONAL CAPABILITIES**

- Accurate simulation of equipment produced by one of the world’s leaders, the Danish company S.P. Radio (Sailor Compact 2000 and Sailor Program 4000 line), as well as of individual devices by other leading producers of ship equipment.
- Full simulation of MF/HF/VHF communication in DSC, telephony and telex modes and satellite communication in telephony, telex and facsimile modes between the workplaces (ships), and with coastal radio stations in the automatic and semiautomatic (with instructor input) modes for any shipping areas.
- Simulation of maritime safety information transmission via the SafetyNET, via NAVTEX radio stations and on HF NBDP frequencies. Imitates radio wave propagation using radio ether model, which takes into account the time of the day and distance between the stations.
- Availability of background noises in the telephone mode. Instructor capability to promptly enter different interference on the selected frequencies, to listen to the free channel signals of a coast station, and to operate in NBDP and DSC modes.
- Conducting SAR operations using the radar for detecting SART marks, prompt change of the ship’s course and speed.
- Instructor monitoring of any workplaces on the real time scale and recording of all the work to a log, unique scenario preparation, storage and running editor.
- Prompt switching of any workplace from the network operation mode to the single-user mode, which provides the self-education and self-testing modes for acquiring the skills to operate equipment and work in the communication channel.
- An electronic chart displaying the coast station bases, GMDSS sea areas, SAR areas, plus the capability to assess the radio communication range depending on the selected communication band.
- Recording and playback of radiotelephone communications;
- Two VHF and DSC RT4822 stations used on each trainee workplace.
- Ability to operate jointly with bridge operation simulator.

**NEW FEATURES**

- Portable VHF station for distress communications.
- The latest version of the simulator includes FURUNO GPS NAVIGATOR GP-90 instead of a generic GPS receiver. Compliant with all requirements and standards, it works in DGPS mode and provides visible communication satellites display, vessel routing, and more.
- 14 new complex scenarios (for different sea regions) are included in the Scenario Editor. It is also possible to insert the prepared sounds and noises into the scenario for automatic starting and stopping.

**NAVTEX Receiver Furuno FX-700 workplace**

**GPS Furuno GP-90**
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