

# **GMDSS Simulator and Radiostation**

## **GMDSS Simulator**

Transas GMDSS simulator TGS 5000 accurately simulates actual communications between ships and coast stations and supports up-to-date maritime satellite and terrestrial communication systems. The simulator is used to get acquainted with the proper handling of GMDSS devices intended for distress, urgency and safety communications, and general communications.

#### Simulations include:

- MF / HF / VHF communications, by using DSC devices, telephony and radio telex devices
- satellite communications, by using Inmarsat devices and Cospas-Sarsat EPIRB
- emitting and receiving MSI messages using SafetyNET, NAVTEX and HF NBDP systems
- propagation of radio waves, considering the specifics of individual frequency bands
- performing SAR operations, by using radar, SART, AIS-SART and EPIRB devices to guide and locate the accident site.

Transas GMDSS simulator TGS 5000 enables operation with different generations of equipment, from obsolete to the up to date, including:

- Sailor Compact 2000
- Sailor System 4000
- Sailor 5000
- Sailor 6000
- VHF & DSC FURUNO FM-8800S Jotron AIS SART according to IMO Resolution MSC. 256 (84) as an alternative to a radar SART device
- Inmarsat C, Inmarsat Fleet77, Inmarsat FBB
- AIS Class A
- Glonass / GPS receiver.



The simulator also contains electronic map on which it is possible to determine sea areas defined by the GMDSS and look through the most important information about the land infrastructure of the GMDSS. In addition to information on land facilities, the simulator also contains an electronic version of the manual for each device and an electronic version of the required ship literature.

The simulator's capabilities are fully in accordance with the amended STCW 1978 Convention and IMO Model Courses 1.25 and 1.26. The simulator was certified by Det Norske Veritas (DNV) as a Class A radio communication simulator, following Standard No. 2.14. It consists of two instructors and ten student workstations and it supports the network and independent mode on each workstation. It can also be used for self-assessment and exams. It is possible to set different scenarios and tasks on the instructor workstations, including all GMDSS communication procedures according to communication priorities. The network mode with the navigation simulator is also enabled, which further expands the possibilities of its application.



## **GMDSS Radiostation**

In addition to the GMDSS simulator, the Faculty also has a GMDSS radio station. The old station, which has been used for more than 20 years, was replaced in 2020 by a new Sailor Compact 6000 station. It is a functional maritime radio station that fully meets the training requirements of GMDSS operators.

The station consists of the following equipment:

- SAILOR 6222 VHF DSC
- SAILOR 63695 MF/HF Transceiver
- SAILOR TT-3027C Inmarsat Mini-C Transceiver Antenna
- SAILOR 6390 Navtex Receiver
- SAILOR 6301 MF/HF Control Unit
- SAILOR 6004 Control Panel
- 2 x SAILOR 6018 Message Terminal
- SAILOR 6103 Alarm Panel.

All mobile radio stations have a license for the use of radio frequency spectrum issued by the Croatian Regulatory Authority for Network Industries



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