



Naval Communication Systems

KenBIT Maritime Branch in Gdynia is the contractor of integrated communication systems on ships and boats. The systems allow to operate radio communication with the shore stations, other ships and aircrafts. Depending on the system configuration, communication may be open or encrypted with use of the national or NATO encryption. The system provides HF and VHF/UHF transmitting and receiving, satellite communication, and reception in the VLFS band.

The basic components of the system are:

- antennas system,
- radio communication means (*transmitters, receivers, transceivers, satellite terminals etc.*),
- switches and commutators,
- interfaces,
- modems,
- cryptographic equipment,
- terminal end points (*field communication working posts, terminals etc.*),
- radio communication logger,
- communication console,
- emergency power supply.

Antennas system is designed and implemented individually, depending on the type of ship, and the quantities and types of radio in the system. To minimize the interference from transmitting equipment is main concern, in particular. Commutator included in the system allows to select any of the antenna for any radio. Antenna system is protected against overload. Radio communication means integrated in the ship's system may be freely selected by the user.

Switching devices (*commutator*) allow to combine any of the radio, modems, cryptographic equipment and terminal end points. This way it is possible to achieve any required system configuration. Changing the settings is very simple and requires only pressing buttons for appropriate commutating fields. Frequently used configuration may be stored in commutator to be recalled with one-button press.

FEATURES

- Design and installation of customized antenna systems.
- Radio means integrated with ship's radio communication system.
- Commutating equipment.
- Interfaces for system integration.
- Data transmission modems.
- Installation of encryption equipment (*domestic and/or NATO*).
- Communication systems end terminals and equipment.
- Uninterrupted power supply systems.



Interfaces are used to integrate elements of marine communication system. Through them it is possible to achieve compatibility of system components and signals passing through the audio and data transmission. Thanks to interfaces, it is possible to use in the system any of the components indicated by the user e.g.: radio stations, terminals, cryptographic equipment, etc., and connect to the already existing systems on the ship, e.g. intercom, computer network, etc.

Modems allow to use the ship's system for the purpose of the data transmission. They collaborate with radio and encryption devices and terminals through switches and interfaces. The nature and type of modem depends only on the user's needs.

Cryptographic equipment is selected by the user. Naval communication system may work with national or NATO cryptographic equipment.

Terminal end points of the naval communication system can be freely selected by the user. This can be for example field working communication points located within particular post of the combat ship, data terminals,

printers, faxes, etc. Also the software contained in data terminals depends only on the needs of the user, e.g.: ACP-127, MHS, etc.

Radio communication logger is an optional add-on enabling recording, archiving and playback of radio communications. Quantity of registered channels and capacity archive recorder depends on the needs of the user. Recorder can also record calls from outside the system, e.g. from internal communication equipment, telephones, etc.

Communication console (desktop) allow to operate the system from one location. This post may be located at any point of the ship, such as the bridge, operator's cabin, etc. Communication console have blocks for remote control of radio means and cooperating with them microphones and speakers, terminal end equipment, internal communication equipment, etc. Configuration of communication desktop is done in accordance with the recommendations of the user.

Emergency power supply for ship's communications system secure the operation in case of power failure from the main power system. In such situation, the components of a system are automatically switched to the battery power supply, while the device powered from the AC is switched on the UPS. Emergency power circuit is equipped with automatic charging and control of the batteries. Duration of operation with use of emergency power supply depends on user requirements.

Naval communication systems offered by KenBIT are characterized by reliability and easy handling, while fulfilling all the requirements for communication systems resulting from the national and the NATO provisions. They are mounted in a 19" rack consoles/cabinets. This makes easy access to the components of the system for maintenance and service. The modification of the system design is at low cost. The system meets the requirements of the MIL-STD 810E standard for vibration, as well as the environmental standard DIN 40050. Under the terms of the EMC system meets the requirements of the MIL-STD 285 standard.