



MF/HF/VHF DSC MARINE RADIO TEST SYSTEM MRTS-7

General description

The International Marine Organization requires that all GMDSS equipment is to meet the appropriate performance requirements. In case of test failure ships may be detained in port.

The MF/HF/VHF/DSC/NAVTEX Marine Radio Test System MRTS-7 is intended to provide accurate, independent validation of the operation of the following equipment:

- MF/HF radiotelephone equipment;
- MF/HF DSC controllers;
- MF/HF receivers with the DSC;
- VHF receiver-transmitters;
- VHF receiver-transmitters with DSC;
- VHF duplex radiotelephony equipment;
- NAVTEX equipment;

In accordance with the requirements under IMO A.948(23) resolution and other local classification authorities.

The GMDSS Tester MRTS-7 is specified equipment for ship surveyors, classification societies and administrative authorities.

The GMDSS Tester MRTS-7 allows ensuring the GMDSS equipment meets the appropriate performance requirements.

Operation / Features

The GMDSS Tester MRTS-7 is portable and user-friendly test device.

The GMDSS Tester MRTS-7 allows to test:



VHF receiver-transmitters:

- efficiency tests on 6, 13 and 16 channels;
- test of frequency and output power;

VHF receiver-transmitters with DSC:

- test confirming the correctness of the MMSI code programmed in equipment without any broadcast emission;
- test of correct transmission/reception of DSC messages by means of transmission/reception of test message;

MF/HF radiotelephone equipment:

- test of frequency tolerance in range (1600 – 30000) kHz;
- efficiency tests by means of transmission line quality and transmitter output power measurements;
- efficiency test in all frequency range (1600 – 30000) kHz;

MF/HF DSC controllers:

- test confirming the correctness of the MMSI code programmed in equipment;
- test of presence of emergency signal on MF/HF with DSC by means of transmission of DSC Distress message;

MF/HF receivers monitoring the DSC:

- efficiency test by means of transmission of test call;

NAVTEX equipment:

- efficiency test by means of transmission of test message;

VHF duplex radiotelephony equipment:

- efficiency tests on 6, 13 and 16 channels;
- frequency tolerance test and frequency deviation estimation;

VHF equipment of duplex radiotelephony with airplanes including operating on 121.5MHz and 123.1MHz:

- frequency and power measurements;
- carried radiophone stations operating in range (300,025-300,225) MHz (intended for river-sea vessels):
- frequency and power measurements.

The tester is capable to receive the MF/HF/VHF radios emission working in normal mode without any connections by means of telescopic antenna, and transmit the DSC message both by means of telescopic antenna and direct HF cable connection to DSC receiver input.





Besides the tester allows to:

- generate the HF signals in range of 0,5 – 200 MHz;
- measure the signals frequency in range 0,1 – 640 MHz.

Tester is power supplied by external 12-28V DC source. Also tester can be connected to 100-240VAC/50-60Hz by adaptor.

Features:

- Large range of GMDSS Test equipment is supported;
- Easy navigation, user-friendly menu, large LCD display;
- Internal database of received messages;
- Easy connection to PC, laptop, notebook to process the stored data;
- Windows user friendly desktop application for database storage and review, process and test reports printout;
- Easy recalibration without returning back to factory;
- 1 year warranty.

PC Connection

On completing all the tests it is required to process the measured data, make ready and print test reports using Tester PC software.

To do this the 406MHz tester can be easily connected to any PC or laptop. One can connect the device by means of standard USB A - USB A cable and special software available on this website. Also the special FTDI driver should be installed for proper connection.

The minimal requirements are Microsoft OS (Windows XP, Windows Vista or Windows 7) and a USB port. No extra hardware configuration is required.



All the downloads are available on the web-site.

Tester PC connection is very simple. All you have to do is to attach one end of the USB cable to the tester and the other one to the PC. Then install the drivers following the standard Windows wizard guidance. After the driver is installed run the software. No extra software installation is required. Just run the executive file and press DOWNLOAD MESSAGE button. All saved data will be transferred to PC.



Technical description

Tester is power supplied by external 12-28V DC source. Also tester can be connected to 100-240VAC/50-60Hz by adaptor.

According to service conditions the device is designed for operation in the internal rooms at the temperature +0°C +45°C, and relative air humidity of 95%.

Complete set of the GMDSS Tester MRTS-7

- Marine Radio Test System (MRTS-7)
- Power supply unit
- Power measurement unit PS-1 (optional)
- RF Cable
- Antenna
- Computer Cable
- Software
- Technical description and operation manual (English)
- Device packing



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