

How to Conduct an Inspection of a Fishing Vessel Radio Installation For Compliance with the Fishing Vessel GMDSS Waiver

The GMDSS is a ship-to-shore safety system that uses satellite and automated terrestrial communications systems. The GMDSS requires ships to carry various types of communications equipment depending upon the voyages of the ship. The GMDSS also requires ships to comply with certain functional requirements. The GMDSS rules are found in subpart W of Part 80 [Code of Federal Regulations, Title 47, Part 80].

Pursuant to the GMDSS, cargo ships are required to carry communications equipment depending upon which of the four Sea Areas, A1, A2, A3 or A4, the vessel operates. Traditionally, the FCC has treated fishing vessels as cargo vessels because the Communications Act defines "cargo ship" as "any ship not a passenger ship."

In 1998, the Commission granted a waiver of the GMDSS radio carriage requirements for all fishing vessels irrespective of which Sea Area the fishing vessel operated in and subsequently proposed Rules regarding the mandatory carriage of GMDSS radio equipment by fishing vessels. On March 27, 2002, the Commission adopted final rules that require fishing vessels operated in Sea Area A3 and A4 to fully comply with the GMDSS effective October 3, 2003. The Commission adopted a waiver of certain GMDSS requirements for fishing vessels that operate within VHF and MF coverage areas. The fishing vessel waiver is effective until one year after the USCG declares that Sea Area A1 or Sea Area A2 are fully operational and capable of receiving distress calls on the DSC VHF and MF distress channels. After that date, all compulsory vessels, including fishing vessels of 300 gross tons or more, must comply with all the GMDSS requirements appropriate to their area of operation.

Fishing vessels whose routes include voyages outside of what would normally be considered Sea Area A2, for example, voyages into Sea Area A3 or Sea Area A4 must fully comply with the GMDSS radio requirements contained in subpart W of Part 80 now. See "[How to Conduct a GMDSS Inspection](#)", for further information on how to conduct an inspection of a fishing vessel operated in Sea Area A3 or Sea Area A4.

Fishing vessels 300 gross tons and up, including fish tender vessels, catcher boats and fish processors that operate in what would normally be considered Sea Area A1 or Sea Area A2, generally 20 nautical miles from land and 100 nautical miles from land, respectively, may in lieu of installing a VHF DSC radio or a MF DSC radio and meeting the operational requirements of the GMDSS rules for all Sea Areas, comply with the radio requirements contained in the Commission's Fishing Vessel Order. See, In the Matter of Amendment of Parts 13 and 80 of the Commission's Rules Concerning Maritime Communications, FCC 02-102, for further information. The full text is available at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-02-102A1.doc.

This inspection checklist should be used by FCC licensed inspectors as a guide when inspecting any fishing vessel that wishes to operate under the terms of the FCC's waiver.

Definitions of Sea Areas. Ships must comply with the requirements for all Sea Areas in which they operate.

Sea Area A1-An area within the radiotelephone coverage of at least one VHF coast station in which continuous DSC alerting is available as defined by the International Maritime Organization.

Note: For purposes of determining whether a fishing vessel operates within the coverage area of a VHF station inspectors should determine whether the vessel remains within 20 nautical miles of the nearest land at all times during its voyages.

Sea Area A2-An area, excluding sea area A1, within the radiotelephone coverage of at least one MF coast station in which continuous DSC alerting is available as defined by the International Maritime Organization. Basically MF coverage of up to 100 nautical miles.

Note: For purposes of determining whether a fishing vessel operates within the coverage area of a MF station inspectors should determine whether the vessel remains within 100 nautical miles of the nearest land at all times during its voyages.

I. Fishing Vessel Radio Equipment

A. All Fishing Vessels operating in either Sea Area A1 or A2 must comply with the following:

1. Provide a VHF installation that meets the following requirements
 - a. Must be able to initiate transmission of distress alerts from position from which ship is navigated.
 - b. Required channels for radiotelephony (transmit and receive)--6, 13, 16.
 - c. Transmitter power output between 8 and 25 watts.
 - d. Frequency tolerance 10 Hz/MHz.
 - e. Type accepted for Maritime Use.
2. Provide a SART--Search And Rescue Transponder.
 - a. Two required for ships 500 gross ton or greater.
 - b. One required for ships of between 300 and 500 gross tons.

- c. Type accepted for GMDSS (must have a label so stating).
- d. Self test capability required.

B. NAVTEX receiver

- 1. Dedicated receiver
- 2. Type accepted for GMDSS (must have a label so stating).
- 3. Capable of receiving NAVTEX information at all times during the voyages areas in which ship operates.

C. INMARSAT ship earth station with enhanced group calling, e.g. SafetyNet or HF direct printing equipment capable of receiving HF maritime safety information. Note this requirement only applies to ships operated in areas where NAVTEX is not available.

D. A category 1, 406 MHz EPIRB.

- 1. Must have an automatic release mechanism and be mounted in a location that is not likely to be blocked if ship should capsize. Must also be capable of manual release, manual activation, and of automatic activation when placed in water.
- 2. Battery date not expired.
- 3. Registered with NOAA.
- 4. Type Accepted for GMDSS (must have a label so stating).
- 5. Self test capability.

E. IMO publication GMDSS Master Plan of Shore-Based Facilities available on board.

F. Must be able to initiate distress alert from position from which the vessel is normally navigated.

II. Sea Area A1

A. Fishing vessels that operate only in waters that would normally be designated as Sea Area A1 must meet the above requirements for all ships and the following:

- 1. Be capable of transmitting a distress message using one of the following:
 - a. A second VHF installation; or,
 - b. A MF installation; or,

- c. A separate HF installation; or,
 - d. A separate INMARSAT installation; or,
 - e. By using the Category I, 406 MHz EPIRB (this requirement may be met by either mounting the EPIRB required for all ships near the conning position or by having remote activation capability).
2. The VHF installation required for all ships must be capable of operating on all marine VHF channels.

III. Sea Areas A1 and A2

- A. A. Ships that operate in Sea Areas A1 and A2 must meet the requirements for all ships and the following:
 1. MF Radiotelephone installation (See NOTES below).
 2. Radiotelephone transmitter must meet the requirements of § 80.855.
 3. Must operate on 2182 kHz and 2638 kHz and at least two other frequencies for ship-to-shore or ship-to-ship communication.
 4. Radiotelephone receiver must meet the requirements of § 80.858(a).
 5. Receiver must be capable of receiving H3E and J3E communications on 2182 kHz, J3E communications on 2638 kHz and the receiving frequencies associated with the transmitting frequencies listed in 3 above.
 6. Receiver must be capable of monitoring 2182 kHz for radiotelephony distress and safety communications at all times when the transmitter is not being used.
 7. Must have a means to initiate a distress alert by either:
 - a. The category I, 406 MHz EPIRB (This requirement may be met by installing the 406 MHz EPIRB close to the conning position or by having remote activation capability); or,
 - b. A separate HF installation with DSC capability; or,
 - c. A separate INMARSAT installation.
 - d. It must be possible to initiate a radiotelephone distress alert from the position from which the ship is normally navigated.
 - e. Ships must have the capability to transmit and receive general radio communications using radiotelephony or direct-printing telegraphy by either:

- i. An MF or HF installation with the capability to operate on working frequencies in the bands 1605-4000 kHz or 4000-27500 kHz (This capability may be added to the MF installation.); or,
- ii. An INMARSAT ship earth station.

Inspection notes: Conduct a radio check on the MF installation and, if installed, on the HF radio.

IV. Survival Craft Equipment

H. Fishing vessels that are greater than or equal to 300 gross tons but less than or equal to 500 gross tons must carry 2 two-way VHF portable radiotelephones. The equipment must be type accepted for GMDSS use and must bear a label so stating. Alternatively, the ship's survival craft may be fitted with a fixed VHF radio installation(s) in which case the portable units are not required.

I. Fishing vessels that are greater than 500 gross tons must carry 3 two-way VHF portable radiotelephones. If the ship's survival craft are fitted with fixed VHF radiotelephone installations, the portable units are not required.

Inspection notes: Check frequency tolerance, modulation, battery manufacture date & half-life date. Survival craft radiotelephones (whether fixed or portable) must be type accepted for GMDSS use and must bear a label so stating.

V. Ship sources of energy

J. Reserve power must meet either six hour or 1 hour requirement. See § 80.1099.

K. Six hours for ships constructed before February 1, 1995.

L. One hour for ships constructed on or after February 1, 1995, or older ships that are not fitted with emergency power or do not voluntarily comply with SOLAS, Chapter II-1, Regulation 42 or 43.

M. An uninterruptible power supply or other means of ensuring a continuous supply of electrical power must be provided to all GMDSS equipment that could be affected by normal variations and interruptions of ship's power.

N. When the reserve source of energy consists of batteries;

1. Equipment must be provided for automatically recharging them to minimum required capacity in not more than 10 hours.

2. The battery capacity must be checked at intervals not exceeding 12 months. If not completed within past 12 months, this must be done during inspection. These checks must not be performed while the vessel is at sea.
3. Storage batteries provided as a reserve source of energy must be installed in accordance with applicable electrical codes and good engineering practice. They must be protected from adverse weather and physical damage. They must be readily accessible for maintenance and replacement.

VI. Separate Lighting

- O. Permanently installed lighting sufficient to illuminate the operating controls of the radio installation and powered from a source independent of the ship's main and emergency power sources, if equipped, must be provided.

VII. Publications and Documents

- P. Valid station license.

- Q. Operator license(s).

0. Two operators with a GMDSS Radio Operator license are required, one must be designated as the primary operator in times of distress.
1. One member of crew with GMDSS Radio Maintainer License if on-board maintenance option is elected.

- R. Station log.

- S. Publications

0. FCC Rules & Regulations Part 80.
1. IMO publication: Master Plan of Shore Based Facilities (Most recent edition).
2. Alphabetical List of Maritime Mobile Call Signs.
3. List of Ship Stations.
4. Manual for Use by Maritime Mobile Service and Satellite Service.
5. List of Coast Stations.
6. List of Radiodetermination and Special Services Stations.

VIII. Maintenance Methods

- T. Fishing Vessels operated in what would normally be Sea Area A1 or A2 must select at least one of the following three methods of maintenance.
0. At-sea maintenance -- requires at least one member of the crew holding a GMDSS Maintainer License.
 1. Shore based maintenance -- requires ship to have shore based maintenance available.
 2. Duplication of equipment -- means that the following equipment, in addition to all other requirements must be carried:
 - a. Sea Area A1--a complete VHF installation (including antenna).
 - b. Sea Area A2--a complete VHF installation and a complete MF installation (including antennas).

NOTES: The duplicated equipment must be immediately available for use--this means that while the equipment does not have to be in standby, it must be installed and ready to be operated without any assembly.

IX. Spare Parts

- U. Tools, spares, and test equipment as deemed necessary
- V. Instruction and maintenance manuals, recommended spare parts, tools, and test equipment for all required equipment should be provided.