PART 80 — STATIONS IN THE MARITIME SERVICES [ 47 CFR 80 ]

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Subpart A—General Information  General  **§ 80.1   Basis and purpose.**  This section contains the statutory basis for this part of the rules and provides the purpose for which this part is issued.  (a) *Basis.* The rules for the maritime services in this part are promulgated under the provisions of the Communications Act of 1934, as amended, which vests authority in the Federal Communications Commission to regulate radio transmission and to issue licenses for radio stations. The rules in this part are in accordance with applicable statutes, international treaties, agreements and recommendations to which the United States is a party. The most significant of these documents are listed below with the short title appearing in parenthesis:  Communications Act of 1934, as amended—(Communications Act).  Communications Satellite Act of 1962, as amended—(Communications Satellite Act).  International Telecommunication Union Radio Regulations, in force for the United States—(Radio Regulations).  Agreement Between the United States of America and Canada for the Promotion of Safety on the Great Lakes by Means of Radio, as amended, and the Technical Regulations annexed thereto—(Great Lakes Radio Agreement).  International Convention for Safety of Life at Sea, 1974, as amended, and the Annex thereto—(Safety Convention).  Vessel Bridge-to-Bridge Radiotelephone Act—(Bridge-to-Bridge Act).  (b) *Purpose.* This part states the conditions under which radio may be licensed and used in the maritime services. These rules do not govern radio stations operated by agencies of the U.S. Government.  **§ 80.2   Other regulations that apply.**  The U.S. Coast Guard has and can promulgate regulations which affect radiotelecommunication equipment carriage, operation and installation requirements for certain ships and stations. These regulations are found in Titles 33 and 46, Code of Federal Regulations. Inquiries concerning applicable U.S. Coast Guard regulations should be addressed to the Commandant (CG-652), U.S. Coast Guard, 2703 Martin Luther King Jr. Ave., SE, Washington, DC 20593, or to the nearest U.S. Coast Guard District Office.  **§ 80.3   Other applicable rule parts of this chapter.**  Other FCC rule parts applicable to licensees in the maritime services include the following:  (a) *Part 0.* This part describes the Commission's organization and delegations of authority. Part 0 also lists available Commission publications, standards and procedures for access to Commission records and location on Commission monitoring stations.  (b) *Part 1.* This part includes rules of practice and procedure for license applications, adjudicatory proceedings, procedures for reconsideration and review of the Commission's actions; provisions concerning violation notices and forfeiture proceedings; and the environmental processing requirements that, together with the procedures specified in §17.4(c) of this chapter, if applicable, must be complied with prior to the initiation of construction. Subpart Q of part 1 contains rules governing competitive bidding procedures for resolving mutually exclusive applications for certain initial licenses.  (c) *Part 2.* This part contains the Table of Frequency Allocations and special requirements in international regulations, forms of identification of stations, recommendations, agreements, and treaties. This part also contains standards and procedures concerning marketing of radio frequency devices, and for obtaining equipment authorization.  (d) *Part 13.* This part contains information and rules for the licensing of commercial radio operators.  (e) *Part 17.* This part contains requirements for the construction, marking and lighting of antenna towers, and the environmental notification process that must be completed before filing certain antenna structure registration applications.  (f) Part 20 of this chapter which governs commercial mobile radio services which include subpart J of this part (public coast stations).  (g) *Part 21.* This part contains rules concerning point-to-point microwave service authority relating to communication common carriers.  (h) *Part 64.* This part contains miscellaneous rules relating to communication common carriers.  (i) *Part 68.* This part contains technical standards for connection of terminal equipment to the telephone network.  (j) *Part 87.* This part contains rules for the aviation services. Some maritime frequencies are authorized for use by aircraft stations for safety and distress, public correspondence and for operational communications.  (k) *Part 101.* This part contains rules concerning the private microwave service relating to point-to-point communication requirements.  **§ 80.5   Definitions.**  *Aid to Navigation (ATON).* Any device or system external to a vessel or aircraft intended to assist a navigator to determine position or safe course, or to warn of dangers or obstructions to navigation.  REASON: From 33 CFR §62.3(a). Provisions for AIS ATONs and RACONs, which are defined in 33 CFR §62.3(a) as ATON, and are cited herein.  *Alaska—public fixed station.* A fixed station in Alaska which is open to public correspondence and is licensed by the Commission for radio communication with Alaska-Private fixed stations on paired channels.  *Alaska—private fixed station.* A fixed station in Alaska which is licensed by the Commission for radio communication within Alaska and with associated ship stations, on single frequency channels. Alaska-private fixed stations are also eligible to communicate with Alaska-public fixed stations on paired channels.  *Associated ship unit.* A portable VHF transmitter for use in the vicinity of the ship station with which it is associated.  *Automated maritime telecommunications system (AMTS).* An automatic maritime communications system.  *Automated mutual-assistance vessel rescue system (AMVER).* An international system, operated by the U.S. Coast Guard, which provides aid to the development and coordination of search and rescue (SAR) efforts. Data is made available to recognized SAR agencies or vessels of any nation for reasons related to marine safety.  *Automatic Identification System (AIS).* A maritime navigation safety communications system standardized by the International Telecommunication Union (ITU) and adopted by the International Maritime Organization (IMO) that provides vessel information, including the vessel's identity, type, position, course, speed, navigational status and other safety-related information automatically to appropriately equipped shore stations, other ships, and aircraft; receives automatically such information from similarly fitted ships; monitors and tracks ships; and exchanges data with shore-based facilities. AIS can also be used as an aid to navigation and to locate a vessel or person in distress.  *REASON: to include denoting of an AIS ATON and AIS SART.*  *Bridge-to-bridge station.* A radio station located on a ship's navigational bridge or main control station operating on a specified frequency which is used only for navigational communications, in the 156–162 MHz band.  *Cargo ship* is any ship not a passenger ship.  *REASON: Clarification (e.g as used in* *Part II of Title III of the Communications Act or the radio provisions of the Safety Convention). See below*  *Cargo ship safety radio certificate.* A certificate issued after a ship passes an inspection of the required radiotelephone or GMDSS radio installation. Issuance of this certificate indicates that the vessel complies with the Communications Act and the Safety Convention.  REASON: Obsolete  *Cargo ship safety radiotelephony certificate.* A certificate issued after a ship passes an inspection of a radiotelephone installation. Issuance of this certificate indicates that the vessel complies with the Communications Act and the Safety Convention.  *Passenger ship or vessel.* (1) When in reference to Part II of Title III of the Communications Act or the radio provisions of the Safety Convention, a that carries or is licensed or certificated to carry more than twelve passengers for hire. (2) When used in reference to Part III, Title III of the Communications Act or the Great Lakes Radio Agreement, a ship that carries passengers for hire  *REASON: Clarification (“category” isn’t a definition). Corrects obsolete or superfluous terms*  *Power-driven vessel.* Any vessel propelled by machinery.  *Towing vessel.* Any commercial ship engaged in towing another ship astern, alongside or by pushing ahead.  *Compulsory ship.* Any ship which is required to be equipped with radiotelecommunication equipment in order to comply with the radio or radio-navigation provisions of a treaty or statute to which the vessel is subject.  *Voluntary ship.* Any ship which is not required by treaty or statute to be equipped with radiotelecommunication equipment.  *REASON: Clarification (“category” isn’t a definition). Note terms may need to be arranged in alphabetical order or subcategorized under “vessel)*  *Coast station.* A land station ( a station not intended to be used while in motion) in the maritime mobile service  *REASON: Aligns with RR §1.75 definition of a coast station and §1.69 definition of a land station to clarify that a platform in the water can be licensed as a coast station as it is not intended to be used while in motion. A coast station need not be located on a coast.*  *Commercial communications.* Communications between coast stations and ship stations aboard commercial transport vessels, or between ship stations aboard commercial transport vessels, which relate directly to the purposes for which the ship is used including the piloting of vessels, movements of vessels, obtaining vessel supplies, and scheduling of repairs.  *Day.* (1) Where the word *day* is applied to the use of a specific frequency assignment or to a specific authorized transmitter power, its use means transmission on the frequency assignment or with the authorized transmitter power during that period of time included between one hour after local sunrise and one hour before local sunset.  (2) Where the word *day* occurs in reference to watch requirements, or to equipment testing, its use means the calendar day, from midnight to midnight, local time.  *Digital selective calling (DSC).* A synchronous system developed by the International Telecommunication Union Radiocommunication (ITU–R) Sector, used to establish contact with a station or group of stations automatically by means of radio. The operational and technical characteristics of this system are contained in ITU–R M.493–13 and ITU–R M.541–9 (both incorporated by reference, see §80.7) (see subpart W of this part.)  *Direction finder (radio compass).* Apparatus capable of receiving radio signals and taking bearings on these signals from which the true bearing and direction of the point of origin may be determined.  *Distress signal.* The distress signal is a message using any internationally recognized distress call format which indicates that a person, ship, aircraft, or other vehicle is threatened by grave and imminent danger and requires immediate assistance.  *REASON: This definition no longer aligns with the Radio Regulations (e.g. §32.13BA states “The radiotelephone distress signal consists of the word MAYDAY”). The proposed change instead aligns with the International Maritime Organization, International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual* (London, U.K.: CPI Books Limited, 2010): ix.]  (1) In radiotelephony, the international distress signal consists of the enunciation of the word “Mayday”, pronounced as the French expression “m'aider”. In case of distress, transmission of this particular signal is intended to ensure recognition of a radiotelephone distress call by stations of any nationality.  (2) For GMDSS, distress alerts result in an audible alarm and visual indication that a ship or person is threatened by grave and imminent danger and requests immediate assistance. These automatic systems contain sufficient information in the distress alert message to identify the vessel, prepare to assist and begin a search. However, except when transmitted via satellite EPIRB, the distress alert is just the initial call for help. Communication between the vessel or person in distress and the Rescue Coordination Center (RCC) or ship assisting should always follow.  *Distress traffic.* Distress traffic consists of all messages relating to the immediate assistance required by a person, ship, aircraft, or other craft in distress, including search and rescue communications and on-scene communications.  *Emergency position indicating radiobeacon (EPIRB) station.* A station in the maritime mobile service the emissions of which are intended to facilitate search and rescue operations.  *Environmental communications.* Broadcasts of information about the environmental conditions in which vessels operate, i.e., weather, sea conditions, time signals adequate for practical navigation, notices to mariners, and hazards to navigation.  REASON: *No longer allowed due to requirements for individual MMSIs*  *Global maritime distress and safety system (GMDSS).* An International Maritime Organization (IMO) worldwide coordinated maritime distress system designed to provide the rapid transfer of distress messages from vessels in distress to units best suited for giving or coordinating assistance. The system includes standardized equipment and operational procedures, unique identifiers for each station, and the integrated use of frequency bands and radio systems to ensure the transmission and reception of distress and safety calls and messages at short, medium and long ranges.  *GMDSS-recognized mobile satellite service.* A mobile satellite service which has been recognized as an element of the GMDSS by a decision of the International Maritime Organization.  REASON: *The IMO has established a process for recognizing GMDSS mobile satellite service providers in addition to Inmarsat. This phrase is proposed as a substitute for Inmarsat throughout Part 80.*  *Great Lakes.* This term, used in this part in reference to the Great Lakes Radio Agreement, means all of Lakes Ontario, Erie, Huron (including Georgian Bay), Michigan, Superior, their connecting and tributary waters and the St. Lawrence River as far east as the lower exit of the St. Lambert Lock as Montreal in the Province of Quebec, Canada, but does not include any connecting and tributary waters other than: the St. Marys River, the St. Clair River, Lake St. Clair, the Detroit River and the Welland Canal.  *Harbor or port.* Any place to which ships may resort for shelter, or to load or unload passengers or goods, or to obtain fuel, water, or supplies. This term applies to such places whether proclaimed public or not and whether natural or artificial.  *Inland waters.* This term, as used in reference to waters of the United States, its territories and possessions, means waters that lie landward of the boundary lines of inland waters as contained in 33 CFR 80.01, as well as waters within its land territory, such as rivers and lakes, over which the United States exercises sovereignty.  Inmarsat Ltd. is a private commercial company licensed in the United Kingdom.*Marine utility station.* A station in the maritime mobile service consisting of one or more handheld radiotelephone units licensed under a single authorization. Each unit is capable of operation while being hand-carried by an individual. The station operates under the rules applicable to ship stations when the unit is aboard a vessel, and under the rules applicable to private coast stations when the unit is on land.  *Maritime control communications.* Communications between private coast and ship stations or between ship stations licensed to a state or local governmental entity, which relate directly to the control of boating activities or assistance to ships.  *Maritime mobile repeater station.* A land station at a fixed location established for the automatic retransmission of signals to extend the range of communication of ship and coast stations.  *Maritime mobile-satellite service.* A mobile-satellite service in which mobile earth stations are located on board ships. Survival craft stations and EPIRB stations may also participate in this service.  *Maritime mobile service.* A mobile service between coast stations and ship stations, or between ship stations, or between associated on-board communication stations. Survival craft stations and EPIRB stations also participate in this service.  *Maritime mobile service identities (MMSIs).* Maritime mobile service identities are numeric identities that provide an international system for the identification of radio stations in the maritime mobile service. They consist of a series of nine digits which are transmitted over the radio path to uniquely identify ship stations, ship earth stations, coast stations, coast earth stations, group calls and other non shipborne stations operating in the maritime mobile service or the maritime mobile-satellite service. The types of numeric identities are described in ITU-R Recommendation M.585-7 and the associated Annexes, incorporated by reference in §80.7(c)(14).  REASON: To conform with ITU RR Article 19, Sec. 6, §19.100 and update to M.585-6.  *Maritime radiodetermination service.* A maritime radiocommunication service for determining the position, velocity, and/or other characteristics of an object, or the obtaining of information relating to these parameters, by the propagation properties of radio waves.  *Maritime support station.* A station on land used in support of the maritime services to train personnel and to demonstrate, test and maintain equipment.  *Marine utility station.* A station in the maritime mobile service consisting of one or more handheld radiotelephone units licensed under a single authorization. Each unit is capable of operation while being hand-carried by an individual. The station operates under the rules applicable to ship stations when the unit is aboard a vessel, and under the rules applicable to private coast stations when the unit is on land.  *REASON: To permit maritime use of VHF handheld by persons not associated with a particular ship (e.g. divers).*  *Navigable waters.* This term, as used in reference to waters of the United States, its territories and possessions, means the waters shoreward of the baseline of its territorial sea and internal waters as contained in 33 CFR 2.36.  *Navigational communications.* Safety communications pertaining to the maneuvering of vessels or the directing of vessel movements. Such communications are primarily for the exchange of information between ship stations and secondarily between ship stations and coast stations.  *Noncommercial communications.* Communication between coast stations and ship stations other than commercial transport ships, or between ship stations aboard other than commercial transport ships which pertain to the needs of the ship.  *Non-selectable transponder.* A transponder whose coded response is displayed on any conventional radar operating in the appropriate band.  *On-board communication station.* A low-powered mobile station in the maritime mobile service intended for use for internal communications on board a ship, or between a ship and its lifeboats and life-rafts during lifeboat drills or operations, or for communication within a group of vessels being towed or pushed, as well as for line handling and mooring instructions.  *On-board repeater.* A radio station that receives and automatically retransmits signals between on-board communication stations.  *Open sea.* The water area of the open coast seaward of the ordinary low-water mark, or seaward of inland waters.  *Operational fixed station.* A fixed station, not open to public correspondence, operated by entities that provide their own radiocommunication facilities in the private land mobile, maritime or aviation services.  *Passenger ship safety certificate.* A certificate issued by the Commandant of the Coast Guard after inspection of a passenger ship which complies with the requirements of the Safety Convention.  *Pilot.* Pilot means a Federal pilot required by 46 U.S.C. 764, a state pilot required under the authority of 46 U.S.C. 211, or a registered pilot required by 46 U.S.C. 216.  *Port operations communications.* Communications in or near a port, in locks or in waterways between coast stations and ship stations or between ship stations, which relate to the operational handling, movement and safety of ships and in emergency to the safety of persons.  *Portable ship station.* A ship station which includes a single transmitter intended for use upon two or more ships. Also, a station operating in the maritime mobile service designed to be carried by a person and capable of transmitting and/or receiving while in motion or during brief halts at specified locations.  *REASON: Proposed change aligns definition with that used by the NTIA Manual and more accurately describes how this station is used.*  *Private coast station.* A coast station, not open to public correspondence, which serves the operational, maritime control and business needs of ships.  *Public coast station.* A coast station that offers radio communication common carrier services to ship radio stations.  *Public correspondence.* Any telecommunication which the offices and stations must, by reason of their being at the disposal of the public, accept for transmission.  *Radar beacon (RACON).* A receiver-transmitter which, when triggered by a radar, automatically returns a distinctive signal which can appear on the display of the triggering radar, providing range, bearing and identification information.  *REASON: No longer used*  *Safety communication.* The transmission or reception of distress, alarm, urgency, or safety signals, or any communication preceded by one of these signals, or any form of radiocommunication which, if delayed in transmission or reception, may adversely affect the safety of life or property.  *Safety signal.* (1) The safety signal is the international radiotelephone signal which indicates that the station sending this signal is preparing to transmit a message concerning the safety of navigation or giving important meteorological warnings.  () REASON: No longer used  2In radiotelephony, the international safety signal consists of three oral repetitions of “Security,” pronounced as the French word “Securite,” sent before the call.  (3) For GMDSS, safety calls result in an audible alarm and visual indication that the station sending this signal has a very urgent message to transmit concerning the safety of navigation or giving important meteorological warnings.  *Selectable transponder.* A transponder whose coded response may be inhibited or displayed on a radar on demand by the operator of that radar.  *Selective calling.* A means of calling in which signals are transmitted in accordance with a prearranged code to operate a particular automatic attention device at the station whose attention is sought.  *Ship earth station.* A mobile earth station in the maritime mobile-satellite service located on board ship.  *Ship or vessel. Ship* or *vessel* includes every description of watercraft or other artificial contrivance, except aircraft, capable of being used as a means of transportation on water whether or not it is actually afloat.  *Ship radio station license.* An authorization issued by the Commission to operate a radio station onboard a vessel.  *Ship station.* A mobile station in the maritime mobile service located on-board a vessel which is not permanently moored, other than a survival craft station.  *Station.* One or more transmitters or a combination of transmitters and receivers, including the accessory equipment, necessary at one location for carrying on radiocommunication services.  *Survival craft station.* A mobile station in the maritime or aeronautical mobile service intended solely for survival purposes and located on any lifeboat, liferaft or other survival equipment.  *Underway.* A vessel is underway when it is not at anchor, made fast to the shore, or aground.  *Urgency signal.* (1) The urgency signal indicates that the calling station has a very urgent message to transmit concerning the safety of a mobile unit or a person  REASON: To align with ITU-R Radio Regulations Article 33.11.  REASON: No longer used.  (2) In radiotelephony, the international urgency signal consists of three oral repetitions of the group of words “PAN PAN”, each word of the group pronounced as the French word “PANNE” and sent before the call.  (3) For GMDSS, urgency calls result in an audible alarm and visual indication that the station sending this signal has a very urgent message to transmit concerning the safety of a ship, aircraft, or other vehicle, or of some person on board or within sight.  *Vessel traffic service (VTS)* means a service implemented by the United States Coast Guard designed to improve the safety and efficiency of vessel traffic and to protect the environment. The VTS has the capability to interact with marine traffic and respond to traffic situations developing in the VTS area.  *REASON: To be consistent with the definition in 33 CFR 161.*  *Watch.* The act of listening on a designated frequency.  **§ 80.7   Incorporation by reference.**  **REASON for changes to § 80.7 Incorporation by reference: This section has been rewritten to allow updating of all standards referenced in Part 80 to be accomplished in this section only. This is intended to simplify the rulemaking process necessary whenever the standards incorporated in this Part are routinely updated by their respective standards organizations, and to enable these references to be kept up to date.**  (a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Federal Communications Commission must publish notice of the change in the   Federal Register   and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030 or go to *http://www.archives.gov/federal\_register/code\_of\_federal\_regulations/ibr\_locations.html.* Also it is available for inspection at the Federal Communications Commission, 445 12th Street, SW., Washington, DC (Reference Information Center), and is available from the sources listed below.  (b) The International Maritime Organization (IMO), 4 Albert Embankment, London SE1 7SR, United Kingdom; *http://www.imo.org;* Tel. +44 (0)20 7735 7611; Fax +44 (0)20 7587 3210; email: *info@imo.org.*  (1) IMO Resolution A.525(13) (“IMO Resolution A.525(13)”), “Performance Standards for Narrow-band Direct Printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships,” including Annex, adopted 17 November 1983, IBR approved for §§80.905 and 80.1101.  (2) [Reserved].  (3) [Reserved].  (4) [Reserved].  (5) [Reserved].  REASON: No longer needed as they are incorporated in other standards  (6) IMO Resolution MSC.149(77) (“IMO Resolution MSC.149(77)”), “Adoption of the Revised Performance Standards for Survival Craft Two-Way VHF Radiotelephone Apparatus,” adopted on 3 June 2003, IBR approved for §§80.273 and 80.1101.  (7) IMO Assembly Resolution A.700(17), (“IMO Resolution A.700(17)”), “Performance Standards for Narrow-band Direct-printing Telegraph Equipment for the Reception of Navigational and Meteorological Warnings and Urgent Information to Ships (MSI) by HF,” adopted 6 November 1991, IBR approved for §80.1101.  (8) IMO Assembly Resolution A.801(19) Appendix 13, Annex 5 (“IMO Resolution A.801(19)”), “Criteria for Use When Providing Inmarsat Shore-Based Facilities for Use in the GMDSS,” adopted 23 November 1995, IBR approved for §80.1091.  (9) [Reserved].  (10) [Reserved].  (11) [Reserved].  (12) [Reserved].  (13) [Reserved].  (14) [Reserved].  (15) [Reserved].  (16) [Reserved].  (17) [Reserved].  (18) [Reserved].  (19) [Reserved].  (20) [Reserved].  REASON: No longer needed as they have been incorporated in other standards  (21) [Reserved]  *REASON: Replaced by IEC 62940Integrated Communication System.*  (22) IMO Assembly Resolution A.1001(25) (“IMO Resolution A.1001(25)”), “Criteria for the Provision of Mobile Satellite Communication Systems in the Global Maritime Distress and Safety System (GMDSS),” with Annex, adopted 29 November 2007, IBR approved for §80.1091.  (23) [Reserved].  (24) [Reserved].  (25) [Reserved].  (26) [Reserved].  REASON: No longer needed as they have been incorporated in other standards  (27) IMO Circular MSC/Circ. 1039, 28 May 2002, “Shore based maintenance of satellite EPIRBs, IBR approved for § 80.1105.  (28) IMO Circular MSC/Circ.1040 (“IMO Circular MSC/Circ.1040”), “Guidelines on annual testing of 406 MHz satellite EPIRBs” adopted 28 May 2002, IBR approved for § 80.1085 and 80.1101.  (29) IMO Circular MSC.1/Circ. 1389, 7 December 2010, “Guidance on procedures for updating shipborne navigation and communication equipment,**”** IBR approved for § 80.1105, 1085, 1101, and 80.809.  (30) IMO Resolution MSC. 97(73), International Code of Safety for High-Speed Craft, 2000 (2000 HSC Code),” adopted 6 December 2000, 2008 Ed., IBR approved for §80.1225 and 80.1226.  (31) IMO SN.1/Circ.289, 2 June 2010, Guidance on the Use of AIS Application-Specific Messages, IBR approved for §80.806.  (c) The International Telecommunication Union (ITU), Place des Nations, CH–1211, Geneva 20, Switzerland; *www.itu.int* ; Voice: +41 22 730 5111; Fax: +41 22 733 7256; email: *itumail@itu.int* .  (1) [Reserved].  REASON: No longer used.  (2) ITU–R Recommendation M.492–6 (“ITU–R M.492–6”), “Operational Procedures for the use of Direct-Printing Telegraph Equipment in the Maritime Mobile Service,” with Annex, 1995, IBR approved for §80.142.  (3) ITU–R Recommendation M.493–14, (“ITU–R M.493–14”), “Digital Selective-calling System for Use in the Maritime Mobile Service,” with Annexes 1, 2, 3, and 4 (9/2015), IBR approved for §§80.5, 80.179, 80.225, 80.1101, and 80.1113.  REASON: Update includes provisions for integral electronic navigation position consistent with other DSC-related proposals included herein.  (4) [Reserved].  REASON: No longer needed as they have been incorporated in other standards  (5) ITU–R Recommendation M.541–10 (“ITU–R M.541–10”) “Operational Procedures for the Use of Digital Selective-Calling Equipment in the Maritime Mobile Service,” with Annexes 1 through 5, 10/2015, IBR approved for §§80.5, 80.103, 80.179, 80.225, 80.359, 80.1101, 80.1113, and 80.1117.  (6) [Reserved].  (7) [Reserved].  (8) [Reserved]  REASON: No longer needed as they have been incorporated in other standards  (9) ITU–R Recommendation M.824–3 (“ITU–R M.824–3”), “Technical Parameters of Radar Beacons (RACONS),” with Annexes, 2007, IBR approved for §80.605.  (10) [Reserved].  REASON: No longer needed as they have been incorporated in other standards  (11) ITU–R Recommendation M.1371–5 (“ITU–R M.1371–5”), “Technical characteristics for a universal shipborne automatic identification system using time division multiple access in the VHF maritime mobile band,” with Annexes, 02/2014, IBR approved for §80.1101.  REASON: Update recognized by industry.  (12) [Reserved]  (13) [Reserved].  *REASON: No longer used*  (14) ITU-R Recommendation M.585-7 (ITU-R M.585-7), “Assignment and use of identities in the maritime mobile service”, with Annexes 03/2015, IBR approved for §80.5 and §80.16.  (15) ITU Radio Regulations, Edition of 2012, Volume 2 Appendixes, IBR approved for §80.97, §80.357, §80.359, §80.361, §80.363 and §80.371.  16) ITU Radio Regulations, Edition of 2012, Volume 1 Articles, IBR approved for §80.97, §80.314, §80.322, §80.323, §80.324, §80.325, §80.326, §80.327, §80.329, §80.1109, §80.1131, §80.1133 and §80.1135.  *REASON: Consequential to incorporation by reference made in the listed subparagraphs.*  (d) The International Electrotechnical Commission (IEC), 3 Rue de Varembe, CH–1211, Geneva 20, Switzerland; *www.iec.ch* ; phone: +41 22 919 02 11; fax: +41 22 919 03 00; email: *info@iec.ch* . (IEC publications can also be purchased from the American National Standards Institute (ANSI) through its NSSN operation ( *www.nssn.org* ), at Customer Service, American National Standards Institute, 25 West 43rd Street, New York NY 10036, telephone (212) 642–4900.)  (1) IEC 60092–101:1994+A1:1995 (“IEC 60092–101”), Edition 4.1, 2002–08, “Electrical installations in ships—Part 101: Definitions and general requirements,” IBR approved for §80.1101.  (2) [Reserved *REASON: Unnecessary since it is covered in IEC 60945. Deletion would align Part 80 with the European Union Marine Equipment Directive (MED)*  (3) IEC 60945:2002 (“IEC 60945”), Fourth edition, 2002–08, “Maritime navigation and radiocommunication equipment and systems–General requirements–Methods of testing and required test results,” with Annexes, IBR approved for §§80.273 and 80.1101.  (4) IEC 61097–1:2007(E) (“IEC 61097–1”), Second edition, 2007–06, “Global maritime distress and safety system (GMDSS)—Part 1: Radar transponder—Marine search and rescue (SART)—Operational and performance requirements, methods of testing and required test results,” with Annexes, IBR approved for §80.1101.  (5) IEC 61097–3:1994 (“IEC 61097–3”), First edition, 1994–06, “Global maritime distress and safety system (GMDSS)—Part 3: Digital selective calling (DSC) equipment—Operational and performance requirements, methods of testing and required testing results,” with Annexes, IBR approved for §80.1101.  (6) IEC 61097–4 (“IEC 61097–4”), Edition 3.0, 2012-05, “Global maritime distress and safety system (GMDSS)—Part 4: Inmarsat–C ship earth station and Inmarsat enhanced group call (EGC) equipment—Operational and performance requirements, methods of testing and required test results,” IBR approved for §80.1101.  (7) IEC 61097–6:2012(E) (“IEC 61097–6”), Edition 2.1 with Amd. 1, 2012-01, “Global maritime distress and safety system (GMDSS)—Part 6: Narrowband direct-printing telegraph equipment for the reception of navigational and meteorological warnings and urgent information to ships (NAVTEX),” IBR approved for §80.1101.  (8) IEC 61097–7:1996 (“IEC 61097–7”), First edition, 1996–10, “Global maritime distress and safety system (GMDSS)—Part 7: Shipborne VHF radiotelephone transmitter and receiver—Operational and performance requirements, methods of testing and required test results,” IBR approved for §80.1101.  (9) IEC 61097–8:1998(E) (“IEC 61097–8”), First edition, 1998–09, “Global maritime distress and safety system (GMDSS)—Part 8: Shipborne watchkeeping receivers for the reception of digital selective calling (DSC) in the maritime MF, MF/HF, and VHF bands—Operational and Performance Requirements, Methods of Testing and Required Test Results,” with Annexes, IBR approved for §80.1101.  (10) IEC 61097–9:1997(E) (“IEC 61097–9”), First edition, 1997–12, “Global maritime distress and safety system (GMDSS)—Part 9: Shipborne transmitters and receivers for use in the MF and HF bands suitable for telephony, digital selective calling (DSC) and narrow band direct printing (NBDP)—Operational and performance requirements, methods of testing and required test results,” with Annexes, IBR approved for §80.1101.    REASON: No longer used  (11) IEC 61097–12:1996(E) (“IEC 61097–12”), First edition, 1996–11, “Global maritime distress and safety system (GMDSS)--Part 12: Survival craft portable two-way VHF radiotelephone apparatus--Operational and performance requirements, methods of testing and required test results,” IBR approved for § 80.1101.  (12)[Reserved].  *REASON: IMSO announced closure of Inmarsat F-77 service on 1 Dec 2020. IMSO also stated that Inmarsat has informed IMSO that all manufacturers ceased production of new Inmarsat F77 terminals some time ago and no new terminals are now being fitted in ships. See NCSR 3/19/1*  (13) IEC 61097-14:2010 ed. 1.0, Global maritime distress and safety system (GMDSS) - Part 14: AIS search and rescue transmitter (AIS-SART) - Operational and performance requirements, methods of testing and required test results, IBR approved for § 80.1101 and 80.809.  *REASON: Recognized by IMO for use in the GMDSS*  (14) IEC 61097-15:2012E, First Edition, Global maritime distress and safety system (GMDSS) - Part 15: Inmarsat FB500 ship earth station - Operational and performance requirements, methods of testing and required test results , IBR approved for § 80.1101.  (15) IEC 61162–1:2016(E) (“IEC 61162–1”), Fifth edition, 2016, “Maritime navigation and radiocommunication equipment and systems--Digital interfaces--Part 1: Single talker and multiple listeners”, IBR approved for §§ 80.225. 80.273, 80.809 and 80.1101.  (16) IEC 61162-2 ed1.0 (1998-09) (“IEC 61162-2”), Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 2: Single talker and multiple listeners, high-speed transmission” , IBR approved for § 80.809.  (17) IEC 61162-3:2008+A1:2010+A2:2014(E) Consolidated Version (“IEC 61162-3 Ed 1.2) “Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 3: Serial data instrument network”, IBR approved for §§ 80.225. 80.273, 80.809 and 80.1101.  (18) IEC 61162-450 ed1.0 (2011-06) (“IEC 61162-450) ” Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 450: Multiple talkers and multiple listeners - Ethernet interconnection”, IBR approved for §§ 80.225. 80.273, 80.809 and 80.1101.  (19) IEC 61162-460 Ed. 1.0 (2015), Maritime navigation and radiocommunication equipment and systems - Digital interfaces – Part 460: Multiple talker and multiple listeners - Ethernet interconnection - Safety and security”, IBR approved for §§ 80.225. 80.273, 80.809 and 80.1101.  *REASON: IMO recognizes the whole of 61162-1 series for SOLAS-recognized uses such as the GMDSS.*  (20) IEC 61993–2:[2012] ed2.0 (E) (“IEC 61993–2 Ed. 2.0”), Second Edition, [2012–12], “Maritime navigation and radiocommunication equipment and systems--Automatic identification systems (AIS)--Part 2: Class A shipborne equipment of the universal automatic identification system (AIS)--Operational and performance requirements, methods of test and required test results,” with Annexes, IBR approved for § 80.1101 and 80.809.    (21) IEC 62238:2003(E) (“IEC 62238”), First edition, 2003–03, “Maritime navigation and radiocommunication equipment and systems--VHF radiotelephone equipment incorporating Class “D” Digital Selective Calling (DSC)--Methods of testing and required test results,” IBR approved for § 80.225.      *REASON: Standard withdrawn*    (22) IEC 62287–1:2010(E) (“IEC 62287–1”), Second edition, 2010-11, “Maritime navigation and radiocommunication equipment and systems–Class B shipborne equipment of the Automatic Identification System–Part 1: Carrier-sense time division multiple access (CSTDMA) techniques,” IBR approved for § 80.231.  (23) IEC 62287-2: 2013 (E)(“IEC 62287-2”), First edition, [2013-03], “Maritime navigation and radiocommunication equipment and systems–Class B shipborne equipment of the Automatic Identification System–Part 2: Self-organising time division multiple access (SOTDMA) techniques”, IBR approved for § 80.231.  *REASON: Class B AIS using Self-organizing time division multiple access (SOTDMA) techniques is now recognized.*  (24) [Reserved].  (25) IEC 62320-2:2016 (“IEC 62320-2”), Second Edition 2016, International Standard, “Maritime navigation and radiocommunication equipment and systems – Automatic identification system (AIS) – Part 2: AIS AtoN Stations – Operational and performance requirements, methods of testing and required test results” IBR approved for 80.809(a)(3)(i).    REASON: USCG Regulations recognizes use of AIS ATONs per 33 CFR § 62.52 Automatic Identification System Aids to Navigation (AIS AtoN).  (26) IEC 62388:2013 (“IEC 62388”), Edition 2.0 (2013-06), “Maritime navigation and radiocommunication equipment and systems–Shipborne radar–Performance requirements, methods of testing and required test results,” IBR approved for §§ 80.273 and 80.1101.  (27) IEC 62320-3:2015 (“IEC 62320-3”), Edition1.0 (2015-01), “Maritime navigation and radiocommunication equipment and systems - Automatic identification systems (AIS) - Part 3: AIS Simplex Repeater Station - Minimum operational and performance requirements, methods of testing and required test results”, IBR approved for §80.809  [(28) IEC 62940 :2016 (“IEC 62940”), Edition 1 (2016), “Maritime navigation and radiocommunication equipment and systems - Integrated communication system (ICS) - Operational and performance requirements, methods of testing and required test result”, IBR approved for §80.1083.  (e) The International Organization for Standardization (ISO), 1, ch. De la Voie-Creuse, CP 56, CH–1211, Geneva 20, Switzerland; *www.iso.org* ; Tel.: +41 22 749 01 11; Fax: +41 22 733 34 30; email: *central&iso.org* . (ISO publications can also be purchased from the American National Standards Institute (ANSI) through its NSSN operation ( *www.nssn.org* ), at Customer Service, American National Standards Institute, 25 West 43rd Street, New York NY 10036, telephone (212) 642–4900.)  (1) ISO Standard 3791 (“ISO Standard 3791”), “Office Machines and Data Processing Equipment—Keyboard Layouts for Numeric Applications,” First Edition 1976(E), IBR approved for §80.1101.  (2) [Reserved]  (f) The Radio Technical Commission for Maritime Services (RTCM), 1611 N. Kent Street, Suite 605, Arlington, VA 22209; *www.rtcm.org* ; telephone (703) 527–2000; email *pubs@rtcm.org* .  (1) RTCM 10150.0 Standard for VHF-FM Portable Marine Radiotelephone Equipment with Digital Selective Calling (DSC) and Global Navigation Satellite System (GNSS) Location Function, July 5, 2012 IBR approved for §80.225(a)(3).  REASON: This standard would allow DSC-equipped portable VHF radios to meet a standard tailored to their design and use, rather than having to comply with standards designed for mobile radios.  (2) RTCM 11000.4 (Standard for 406 MHz Satellite Emergency Position-Indicating Radiobeacons (EPIRB), June 1, 2015 RTCM 11000.4 (“RTCM 11000.4”), “RTCM Standard 11000.4 for 406 MHz Satellite Emergency Position-Indicating Radiobeacons (EPIRBs),” June 1, 2015, IBR approved for §80.1061.  (3) RTCM 11020.1 (“RTCM 11020.1”), RTCM Paper 222–2009–SC110–STD), “RTCM Standard 11020.0, Ship Security Alert Systems (SSAS) Using the Cospas-Sarsat System,” October 9, 2009, IBR approved for §80.277.  *(4) RTCM 12301.1,(“RTCM 12301”), VHF-FM Digital Small Message Services (VDSMS), July 10, 2009, IBR approved for §80.361.*  (g) COSPAS–SARSAT—International Satellite System for Search and Rescue, 700 de la Gauchetiere West, Suite 2450, Montreal, Quebec H3B 5 M2, Canada, telephone +1-(514) 954–6761, *www.cospas-sarsat.org* .  (1) COSPAS–SARSAT Standard C/S T.001 (“COSPAS–SARSAT Standard C/S T.001”), “Specification for COSPAS–SARSAT 406 MHz Distress Beacons,” Issue 3—Revision 16, December 2015, IBR approved for §80.1061.  (2) COSPAS–SARSAT Standard C/S T.007 (“COSPAS–SARSAT Standard C/S T.007”), “COSPAS–SARSAT 406 MHz Distress Beacon Type Approval Standard,” Issue 4—Revision 9, October 2014, IBR approved for §80.1061.  (h) National Marine Electronics Association (NMEA), 7 Riggs Avenue, Severna Park, MD 21146, telephone 410-975-9425, www.nmea.org, info@nmea.org  (1) NMEA 0183 V 4.10 Interface Standard, June 2012, with appendices, IBR approved for §§ 80.225. 80.273, 80.809.*REASON: Incorporating this standard by reference would allow manufacturers the option of using a more up-to-date data interface than that described by IEC*.  Subpart B—Applications and Licenses  **§ 80.11   Scope.**  This subpart contains the procedures and requirements for the filing of applications for licenses to operate radio facilities in the maritime services. part 1 of the Commission's rules contains the general rules of practice and procedure applicable to proceedings before the FCC.  **§ 80.13   Station license required.**  (a) Except as noted in paragraph (c) of this section, ship stations in the maritime service must be licensed individually by the FCC.  REASON: Fleet licenses are no longer allowed  (b) One ship station license will be granted for operation of all maritime services transmitting equipment on board a vessel. Radiotelegraph and narrow-band directing-printing equipment will not be authorized, however, unless specifically requested by the applicant.  (c) A ship station is licensed by rule and does not need an individual license issued by the FCC if the ship station is not subject to the radio equipment carriage requirements of any statute, treaty or agreement to which the United States is signatory, the ship station does not travel to foreign ports, and the ship station does not make international communications. A ship station licensed by rule is authorized to transmit radio signals using a marine radio operating in the 156-162 MHz band, , a Class A AIS, a Class B AIS, an AIS-SART, any type of EPIRB, and any type of radar installation . All other transmissions must be authorized under a ship station license. Even though an individual license is not required, a ship station licensed by rule must be operated in accordance with all applicable operating requirements, procedures, performance standards, and technical specifications found in this part.  REASON: only AIS devices intended for use aboard ship should be covered by a ship station license.  (d) A private coast or marine utility stations license is required to operate an AIS-ATON. In accordance with §80.807, authorization for an AIS-ATON must be obtained from the U.S. Coast Guard before an AIS-ATON license application can be filed with the FCC. *REASON: Provisions added for AIS Aids to Navigation device*  **§ 80.15   Eligibility for station license.**  (a) *General.* A station license cannot be granted to or held by a foreign government or its representative.  (b) *Public coast stations and Alaska-public fixed stations.* A station license for a public coast station or an Alaska-public fixed station cannot be granted to or held by:  (1) Any alien or the representative of any alien;  (2) Any foreign government or its representative;  (3) Any corporation organized under the laws of any foreign government;  (4) Any corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or its representative, or by a corporation organized under the laws of a foreign country; or  (5) Any corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or its representatives, or by any corporation organized under the laws of a foreign country, if the Commission finds that the public interest will be served by the refusal or revocation of such license.  (c) *Private coast and marine utility stations.* The supplemental eligibility requirements for private coast and marine utility stations are contained in §80.501(a).  (d) *Ship stations.* A ship station license may only be granted to:  (1) The owner or operator of the vessel;  (2) A subsidiary communications corporation of the owner or operator of the vessel;  (3) A State or local government subdivision.  *REASON: No longer required*  **§ 80.16 Assignment and use of numeric identities including maritime mobile service identities (MMSIs)**  (a) All assigned numeric identities, including but not limited to maritime mobile service identities (MMSIs) (collectively referred to as MMSIs) shall be in accordance with ITU-R Recommendation M 585 series, incorporated by reference in §80.7(c)(14).  (b)Users of any device specified in these regulations in which MMSIs are required must register and acquire an MMSI in accordance with the provisions of this section. Registration information must be validated biennially and updated whenever changes of address, vessel, telephone or other user contact information changes. Only a single MMSI ship station identity unique to that ship may be used by equipment associated with that ship.  (c) MMSIs for stations licensed by the FCC in accordance with Sections 80.13(a), (b), and (d) of these regulations shall be assigned by the FCC.  (d) Except as noted at (e) below, MMSIs for stations licensed by rule in accordance with Section 80.13(c) may be assigned by a private entity that is authorized by the FCC and the Coast Guard to assign MMSIs. The FCC may authorize private entities to assign MMSIs to stations that are not required by law to carry a radio and do not make international voyages. Authority for a private entity to issue MMSIs will be accomplished by a memorandum of agreement (MOA) among the private entity, the FCC and the U.S. Coast Guard. The MOU requires the private entity to provide the Coast Guard with a complete, updated database of defined format on a weekly basis, and requires the biennial validation of assigned MMSIs. Users of MMSI-dependent equipment licensed by the FCC by rule rather than by a station license may register and acquire an MMSI from an authorized private entity.  (e) MMSIs required by AIS Search and Rescue Transponders (SARTs) shall be be provided by the manufacturer in accordance with IEC 61097-14, incorporated by reference in §80.7((d)(13)  (f) MMSIs required by AIS Aids to Navigation (AtoN) devices will be provided by the U.S. Coast Guard. See also Subpart Q of these regulations.  (g) Each assigned MMSI must be properly programmed into devices required by these regulations to employ an MMSI. Knowingly programming any such device with an inaccurate MMSI, causing such a device to be programmed with an inaccurate MMSI, or falsifying MMSI registration information is prohibited.  *REASON: 47 CFR 2.301 requires each station using radio frequencies to identify itself according to the procedures proscribed, and ITU RR Art 19.2 prohibits all transmissions using false or misleading identification. Art 19 Section VI includes the requirements for the use of MMSIs.*  (h) Vessels having MMSI-dependent equipment installed may occasionally change from being licensed by rule to having a ship station licensed by the FCC. Similarly, vessels licensed by the FCC may later become licensed by rule. The private entity registering and assigning an MMSI must accept an MMSI assigned from the FCC when such a vessel becomes newly registered by rule. Similarly, the FCC will accept MMSIs assigned by a private entity when such a vessel becomes licensed by the FCC. In such cases, the relevant records for ship station license MMSIs or the privately assigned MMSI must be amended accordingly. *REASON: To ensure that the programmed MMSI always meets ITU and FCC regulations and is properly registered regardless of where the vessel operates.*  (i) Devices designed to be MMSI-coded by the user shall be capable of resetting and modifying the MMSI code by use of a personal identification number, password or similar means made available to a servicing agent.  *REASON: Reasonable means must be available to ensure the radio can always be with the proper MMSI even when sold or moved to another vessel.*  **Table of Maritime Numeric Identity (MMSI) Formats**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **MMSI Type** | **Apply to /Issued by** | **Database maintained by** | **Fee required** | **MMSI format** | **Remarks** | | Ship station license | FCC | FCC | Yes | MIDXXXXX0 |  | | Coast or utility station license | FCC | FCC | Yes | 00MIDXXXX |  | | AIS ATON | USCG | USCG | No | 99MIDXXXX | FCC station license required | | Licensed by rule (LBR) | LBR provider | LBR provider/USCG | \* | MIDXXXXXX |  | | Federal agency | Agency spectrum office or NTIA | Agency/USCG | No | various |  | | VHF handheld - LBR | LBR agent | LBR agent/USCG | \* | 8MIDXXXXX | Must have DSC with GNSS (eg GPS) | | VHF handheld / divers radio personal license | FCC | FCC/USCG | Yes | 8MIDXXXXX | Must have DSC with GNSS (eg GPS) | | Craft associated with parent ship | FCC or FCC agent | FCC /USCG |  | 98MIDXXXX |  | | AIS SART | Manufacturer assigned | Manufacturer | - | 970XXYYYY | XX manufacturer ID issued by CIRM  YYYY issued by manufacturer | | AIS man overboard device | Manufacturer assigned | Manufacturer | - | 972XXYYYY | (same as above) | | AIS EPIRB | Manufacturer assigned | Manufacturer | - | 974XXYYYY | (same as above) | | AIS search and rescue aircraft | USCG | USCG | No | 111MIDNXX | N indicates aircraft type |   \* Fees, if charged, are at the discretion of the authorized agent.  *REASON: New Section added to consolidate and clarify requirements for MMSIs. MMSIs are equivalent to radio call signs. Use of improper or unregistered MMSIs by DSC could lead to a delayed rescue of persons in distress, and by AIS to a hazard in navigation. Table is included for clarification*  **§ 80**.**.17   Administrative classes of stations**.  (a) Stations in the Maritime Mobile Service are licensed according to class of station as follows:  (1) Public coast stations.  (2) Private coast stations  (i) ATON (*see e.g.* § 80.807).  (3) Maritime support stations.  (4) *Ship stations*. The ship station license may include authority to operate other radio station classes aboard ship. See also §80.13(c)  *REASON: eliminate conflicting requirements with §80.13(c)*  (5) Marine utility stations. (i) VHF handhelds not associated with any craft (e.g. divers radio)  (ii) maintenance station  *REASON: required for use of aids to navigation stations and VHF handhelds not associated with any craft (e.g. divers radio).*  (b) Stations on land, or stations not intended to be used while in motion, in the Maritime Radiodetermination Service are licensed according to class of station as follows:  (1) Radiolocation stations.  (2) Radionavigation stations.  REASON: Clarification. Land stations may for example be offshore on fixed structures.  (c) Fixed stations in the Fixed Service associated with the maritime services are licensed as follows:  (1) Operational fixed stations.  (2) Alaska-public fixed stations.  (3) Alaska-private fixed stations.  § 80.21   Supplemental information required.  Applications must contain supplementary information as indicated in this section. Other supplemental information may be required by other rule sections of this part concerning particular maritime services.  (a) Each application for a new public coast station operating on frequencies in the band 156–162 MHz must include as supplementary information a chart, with supporting data, showing the service area contour computed in accordance with subpart P of this part.  (b) Each application for a new public coast station operating on frequencies in the band 156–162 MHz to be located within the coordination boundaries of “Arrangement “A” of the Canada/U.S.A. Frequency Coordination Agreement above 30 MHz”, must comply with the provisions of the “Canada/U.S.A. Channeling Agreement for VHF Maritime, Public Correspondence” as contained in §80.57.  (c) A new station on a vessel not located in the United States must not be documented or otherwise registered by any foreign authority. The foreign authorities where the vessel is located will not or cannot license the vessel radio equipment and can not object to the licensing of the equipment by the United States. An applicant must provide verification of these facts upon request by the Commission.  **§ 80.25   License term.**  (a) Licenses for ship stations in the maritime services will normally be issued for a term of ten years from the date of original issuance, or renewal.  (b) Licenses other than ship stations in the maritime services will normally be issued for a term of ten years from the date of original issuance, major modification, or renewal.  (c) Licenses for stations engaged in developmental operation will be issued for a period not to exceed one year from date of grant.  § 80.31   Cancellation of license.  Wireless telecommunications carriers subject to this part must comply with the discontinuance of service provisions of part 63 of this chapter.  **§ 80.33   Developmental license.**  This section contains rules about the licensing of developmental operations at stations subject to this part.  (a) *Supplemental eligibility.* An authorization for developmental operation will be issued only to persons eligible to operate such stations on a regular basis.  (b) *Showing required.* Each application for a developmental license must be accompanied by the following showing:  (1) The applicant has an organized plan of development leading to an objective;  (2) A point has been reached in the program where actual transmission by radio is essential to progress;  (3) The program will contribute to the use of the radio services subject to this part;  (4) The program will be conducted by qualified personnel;  (5) The applicant is legally qualified and possesses technical facilities for conduct of the program as proposed; and  (6) The public interest, convenience and necessity will be served by the proposed operation.  (c) *Statement of understanding.* The showing must state that the applicant agrees that any developmental license issued will be accepted with the express understanding that it is subject to change in any of its terms or to cancellation in its entirety at any time, upon reasonable notice but without a hearing, if, in the opinion of the Commission, circumstances should so require.  (d) *Assignable frequencies.* Applicants for a developmental license may be authorized to use a frequency or frequencies available for the service and class of station proposed. The number of frequencies assignable to a particular station will depend upon the specific requirements of the developmental program and the number of frequencies available for use in the area where the station is to be operated.  (e) *Developmental program.* (1) The developmental program as described by the applicant in the application for authorization must be substantially followed unless the Commission otherwise directs.  (2) Where some phases of the developmental program are not covered by the general rules of the Commission and the rules in this part, the Commission may specify supplemental or additional requirements or conditions.  (3) The Commission may, from time to time, require a station engaged in developmental work to conduct special tests which are reasonable to the authorized developmental program.  (f) *Use of developmental stations.* (1) Stations authorized to conduct developmental operations must conform to all applicable technical and operating requirements contained in this part, unless a waiver is specifically provided in the station authorization.  (2) Communication with any station of a country other than the United States is prohibited unless specifically provided in the station authorization.  (3) Developmental operations must not cause harmful interference to the operation of stations regularly authorized to use the frequency or frequencies.  (g) *Report of operation required.* A report on the results of the developmental program must be filed within 60 days of the expiration of the license. A report must accompany a request for renewal of the license. Matters which the applicant does not wish to disclose publicly may be so labeled; they will be used solely for the Commission's information. However, public disclosure is governed by §0.467 of this chapter. The report must include the following:  (1) Results of operation to date.  (2) Analysis of the results obtained.  (3) Copies of any published reports.  (4) Need for continuation of the program.  (5) Number of hours of operation on each authorized frequency during the term of the license to the date of the report.  **§ 80.37   One authorization for a plurality of stations.**  *Marine utility stations.* One station license may be issued to authorize a designated maximum number of marine utility stations operating at temporary unspecified locations, normally in multiples of ten stations when:  (a) The licensee of each station is the same; and  (b) The authorized area of operation of each station is the same.  § 80.39   Authorized station location.  This section describes the circumstances under which a coast station location is classified as permanent or temporary unspecified.  (a) *Permanent.* Whenever a station is to transmit from a single location, the station location is *permanent* and the location must be shown on the application.  (b) *Temporary unspecified.* Whenever a station is to transmit from unspecified locations within a prescribed geographical area, the station location is *temporary unspecified* and the proposed geographical operating area must be shown on the application.  § 80.41   Control points and dispatch points.  This section applies to coast or fixed stations at permanent locations.  (a) Applicants must provide the address or location of the control point where station records will be kept.  (b) When the address or location of a control point where station records are kept is to be changed, the licensee must request a modification of the station license.  (c) Control points not collocated with station records and dispatch points may be installed and used without obtaining any authorization from the Commission.  § 80.43   Equipment acceptable for licensing.  Transmitters listed in §80.203 must be authorized for a particular use by the Commission based upon technical requirements contained in subparts E and F of this part, except for transmitters that are used on vessels in the Maritime Security Fleet and are deemed to satisfy all Commission equipment certification requirements pursuant to section 53108(c) of Title 46 of the United States Code.  **§ 80.45   Frequencies.**  For applications other than ship stations, the applicant must propose frequencies and ensure that those requested frequencies are consistent with the applicant's eligibility, the proposed class of station operation, and the frequencies available for assignment as contained in subpart H of this part.  **§ 80.47   Operation during emergency.**  A station may be used for emergency communications when normal communication facilities are disrupted. The Commission may order the discontinuance of any such emergency communication service.  **§ 80.49   Construction and regional service requirements.**  (a) *Public coast stations.* (1) Each VHF public coast station geographic area licensee must notify the Commission of substantial service within its region or service area (subpart P) within five years of the initial license grant, and again within ten years of the initial license grant in accordance with §1.946 of this chapter. “Substantial” service is defined as service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal. For site-based VHF public coast station licensees, when a new license has been issued or additional operating frequencies have been authorized, the licensee must notify the Commission in accordance with §1.946 of this chapter that the station or frequencies authorized have been placed in operation within twelve months from the date of the grant.  (2) For LF, MF, and HF band public coast station licensees, when a new license has been issued or additional operating frequencies have been authorized, if the station or frequencies authorized have not been placed in operation within twelve months from the date of grant, the authorization becomes invalid and must be returned to the Commission for cancellation.  (3) Each AMTS coast station geographic area licensee must make a showing of substantial service within its service area within ten years of the initial license grant, or the authorization becomes invalid and must be returned to the Commission for cancellation. “Substantial” service is defined as service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal. For site-based AMTS coast station licensees, when a new license has been issued or additional operating frequencies have been authorized, if the station or frequencies authorized have not been placed in operation within two years from the date of the grant, the authorization becomes invalid and must be returned to the Commission for cancellation.  (b) *Public fixed stations.* When a new license has been issued or additional operating frequencies have been authorized, the licensee must notify the Commission in accordance with §1.946 of this chapter that the station or frequencies authorized have been placed in operation within twelve months from the date of the grant.  **§ 80.51   Ship earth station licensing.**  A ship earth station must display the Commission license.  **§ 80.53   Application for a portable ship station license.**  The Commission may grant a license permitting operation of a portable ship station aboard different vessels of the United States.  **§ 80.54   Automated Maritime Telecommunications System (AMTS)—System Licensing.**  AMTS licensees will be issued blanket authority for a system of coast stations and mobile units (subscribers). AMTS applicants will specify the maximum number of mobile units to be placed in operation during the license period.  **[Reserved]**  REASON: Fleet licenses are no longer allowed  **§ 80.57   Canada/U.S.A. channeling arrangement for VHF maritime public correspondence.**  (a) *Canada/U.S.A. arrangement.* Pursuant to arrangements between the United States and Canada, assignment of VHF frequencies in the band 156–162 MHz to public coast stations in certain areas of Washington state, the Great Lakes and the east coast of the United States must be made in accordance with the provisions of this section.  (b) *Definitions.* On the west coast, specific terms are defined as follows:  (1) *Inland Waters Public Correspondence Sector.* A distinct geographical area in which one primary and one supplementary channel is allotted. A number of local channels may also be authorized.  (2) *Coastal Waters Public Correspondence Sector.* A distinct geographical area in which one primary and one supplementary channel is allotted. Local channels may also be authorized.  (3) *Inland waters.* Inland waters of western Washington and British Columbia bounded by 47 degrees latitude on the south, the Canada/U.S.A. Coordination Zone Line B on the north, and to the west by 124 degrees 40 minutes longitude at the west entrance to the Strait of Juan de Fuca.  (4) *Coastal waters.* Waters along the Pacific Coast of Washington state and Vancouver Island within the Canada/U.S.A. Coordination Zone.  (5) *Inland Waters Primary Channel.* A channel intended to cover the greater portion of an Inland Waters Public Correspondence Sector. It may provide some coverage to an adjacent sector but must not provide coverage beyond the adjacent sector. Harmful interference beyond the adjacent sector must not occur. Only one primary channel will be authorized in any sector.  (6) Inland waters of western Washington and British Columbia bounded by 46°59'59.3" north latitude on the south, the Canada/U.S.A. Coordination Zone Line B on the south, and to the west by 124°40'4.7" west latitude at the west entrance to the Strait of Juan de Fuca.  Note: All coordinates are referenced to North American Datum 1983 (NAD83).  (7) *Inland Waters Local Channel.* A channel designed to provide local coverage of certain bays, inlets and ports where coverage by primary or supplementary channels is poor or where heavy traffic loading warrants. A local channel must not cause harmful interference to any primary or supplementary channels. Coverage must be confined to the designated sector.  (8) *Coastal Waters Primary Channel.* Same as (5) except for technical characteristics.  (9) *Coastal Waters Supplementary Channel.* Same as (6) except for technical characteristics.  (10) *Coastal Waters Local Channel.* Same as (7) except for technical characteristics.  (c) *Technical characteristics.* On the west coast, technical characteristics of public correspondence stations will be as follows:  (1) *Inland Waters Primary and Supplementary Channels.* The effective radiated power (ERP) must not exceed 60 watts. Antenna height must not exceed 152 meters (500 feet) above mean sea level (AMSL) with the exceptions noted in paragraph (d)(5) of this section.  (2) *Inland Waters Local Channel.* ERP must not exceed 8 watts with an antenna height of no more than 15 meters (50 feet) AMSL or the ERP must not exceed 2 watts with an antenna height of no more than 30 meters (100 feet) AMSL.  (3) *Coastal Waters Primary and Supplementary Channels.* ERP must not exceed 125 watts with no antenna restrictions.  (4) *Coastal Waters Local Channel.* ERP must not exceed 10 watts with a maximum antenna height of 76 meters (250 feet) AMSL.  (5) Harmful interference will be determined and resolved using the definition and procedures of the ITU Radio Regulations.  (6) To keep the ERP and antenna elevations at a minimum and to limit coverage to the desired areas, an informal application may be filed for special temporary authority in accordance with §§1.41 and 1.931 of this chapter to conduct a field survey to obtain necessary data for informal application. Such data may accompany the application and be used in lieu of theoretical calculations as required in subpart P of this part. The Seattle FCC District Office must be notified in advance of scheduled tests.  (d) *Canada/U.S.A. channeling arrangement for West Coast VHF maritime mobile public correspondence.* (1) The provisions of the Canada/U.S. channeling arrangement apply to waters of the State of Washington and of the Province of British Columbia within the coordination boundaries of “Arrangement A” of the Canada/U.S.A. Frequency Coordination Agreement above 30 MHz. In addition, all inland waters as far south as Olympia are to be included. A map of these waters is contained in paragraph (d)(6) of this section, Figure 1.  (2) The channeling arrangement applies to the following VHF public correspondence channels: Channels 24, 84, 25, 85, 26, 86, 27, 87 and 28.  (3) Public correspondence stations may be established by either country in accordance with the provisions of the arrangements. However, there must be an exchange of information prior to the establishment of new stations or a change in technical parameters of existing stations. Any channel except that used as primary or supplementary channel in a given sector is available for use as a local channel in that sector. Local channels are not protected from interference caused by primary or supplementary channels in adjacent sectors if these stations are in compliance with this section.  (4) Preliminary local Canadian/U.S. coordination is required for all applications at variance with this section. This coordination will be in accordance with the provisions of Arrangement “A” of the Canada/U.S. Frequency Coordination Agreement over 30 MHz. Stations at variance with the arrangement are not protected from interference and must not cause interference to existing or future stations which are in accordance with the agreement.  (5) The agreed channeling arrangements for the west coast are as follows:   |  |  |  | | --- | --- | --- | | **Public correspondence sector** | **Primary channel** | **Supplementary channel** | | British Columbia (Coastal Waters): |  |  | | Tofino | 24 | 26 | | Barkley Sound | 27 | 87A | | British Columbia (Inland Waters) |  |  | | Juan de Fuca West (Canada) | 26 | 24 | | Juan de Fuca East (Canada) | 86 | 84 | | Gulf Islands | 27 | 1 | | Strait of Georgia South | 26 | 86 | | Howe Sound | 24 | 84 | | Strait of Georgia North | 26 | 87A | | Campbell River | 28 | 85 | | Washington (Coastal Waters): |  |  | | Cape Johnson | 26 | 85 | | Point Grenville | 28 | 25 | | Washington (Inland Waters): |  |  | | Juan de Fuca West (U.S.A.) | 28 | 1 | | Juan de Fuca East (U.S.A.) | 25 | 1 | | San Juan Islands | 28 | 85 | | Puget Sound North | 24 | 87A | | Puget Sound Hood Canal | 26 | 25 | | Lower Puget Sound | 28 | 85 |   1Supplementary channel not available.  http://cfr.regstoday.com/data/CFR/T47/cfr_47_80_I001.gif  (e) *Canada/U.S.A. VHF channeling arrangement on the Great Lakes and the St. Lawrence Seaway.* Channels on the Great Lakes and the St. Lawrence Seaway will be assigned as follows:  (1) The provisions of the arrangement apply to the waters of the Great Lakes and the St. Lawrence Seaway within the coordination boundaries of “Arrangement A” of the Canada/U.S.A. Frequency Coordination Agreement above 30 MHz.  (2) The arrangement applies to the following public correspondence channels: Channels 24, 84, 25, 85, 26, 86, 27, 87, 28, and 88A.  (3) Canada and the U.S.A. use the following channeling arrangement:  (i) Canadian channels: 24, 85, 27, 88A (Note 1).  (ii) U.S.A. channels: 84, 25, 86, 87A, 28 (Note 2).  (iii) Shared channels: 26 (Note 3).  Notes: 1. Also assignable to U.S. Stations within the frequency coordination zone following successful coordination with Canada.  2. Also assignable to Canadian station within the frequency coordination zone following successful coordination with the United States.  3. Changes to existing assignments and new assignments within the frequency coordination zone of either country are subject to prior coordination with the other Administration.  (f) *Canada/U.S.A. channeling arrangement for East Coast VHF maritime mobile public correspondence.* For purposes of this section, channels on the east coast will be assigned as follows:  (1) The provisions of the arrangement apply to the Canadian and U.S.A. east coast waters including the St. Lawrence Seaway within the coordination boundaries of “Arrangement A” of the Canada/U.S.A. Frequency Coordination Agreement above 30 MHz.  (2) The arrangement applies to the following public correspondence channels: Channels 24, 84, 25, 85, 26, 86, 27, 87A, 28, and 88A.  (3) Canada and the U.S.A. use the following channeling arrangement:  (i) Canadian channels: 24, 85, 27, 88A (Note 1).  (ii) U.S.A. channels: 84, 25, 86, 87A, 28 (Note 2).  (iii) Shared channel: 26 (Note 3).  Notes: 1. Also assignable to U.S. stations within the frequency coordination zone following successful coordination with Canada.  2. Also assignable to Canadian stations within the frequency coordination zone following successful coordination with the United States.  3. Changes to existing assignments and new assignments within the frequency coordination zone of either country are subject to prior coordination with the other Administration.  *REASON: Consequential to reallocation of channels 87B and 88B to AIS in both US and Canada. “A” channels indicate the ship transmit side of internationally duplex channels used in a simplex manner.*  **§ 80.59   Compulsory ship inspections.**  (a) Inspection of ships subject to the Communications Act or the Safety Convention.  (1) The FCC itself will not normally conduct the required inspections of ships subject to the inspection requirements of the Communications Act or the Safety Convention.  Note: Nothing in this section prohibits Commission inspectors from inspecting ships. The mandatory inspection of U. S. vessels must be conducted by an FCC-licensed technician holding an FCC General Radiotelephone Operator License, GMDSS Radio Maintainer’s License, Second Class Radiotelegraph Operator’s Certificate, First Class Radiotelegraph Operator’s Certificate, or Radiotelegraph Operator License in accordance with the following table:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Category of vessel** | **Minimum class of FCC license required by private sector technician to conduct inspection—only one license required** | | | | | **General radiotele-phone operator license** | **GMDSS radio maintainer's license** | **Radiotelegraph**  **Operator**  **License**  **(formerly**  **Second class**  **Radiotelegraph**  **Operator’s**  **Certificate)** | **First class**  **Radiotelegraph operator’s**  **certificate** | | Radiotelephone equipped vessels subject to 47 CFR part 80, subpart S | √ | √ |  |  | |  |  |  |  |  | | GMDSS equipped vessels subject to 47 CFR part 80, subpart W | …….. | √ | …….. | …….. |   *REASON: Consequential to deletion of Subpart R*  (2) A certification that the ship has passed an inspection must be entered into the ship's log by the inspecting technician. The technician conducting the inspection and providing the certification must not be the vessel's owner, operator, master, or employee or their affiliates. Additionally, the vessel owner, operator, or ship's master must certify in the station log that the inspection was satisfactory. There are no FCC prior notice requirements for any inspection pursuant to paragraph (a)(1) of this section. An inspection of the bridge-to-bridge radio stations on board vessels subject to the Vessel Bridge-to-Bridge Radiotelephone Act must be conducted by the same FCC-licensed technician.  (3) Additionally, for passenger vessels operated on an international voyage the inspecting technician must send a completed FCC Form 806 to the Officer in Charge, Marine Safety Office, United States Coast Guard in the Marine Inspection Zone in which the ship is inspected.  (4) In the event that a ship fails to pass an inspection the inspecting technician must make a log entry detailing the reason that the ship did not pass the inspection. Additionally, the technician must notify the vessel owner, operator, or ship's master that the vessel has failed the inspection.  (5) Because such inspections are intended to ensure the availability of communications capability during a distress the Commission will vigorously investigate reports of fraudulent inspections, or violations of the Communications Act or the Commission's Rules related to ship inspections. FCC-licensed technicians, ship owners or operators should report such violations to the Commission through its National Call Center at 1–888–CALL FCC (1–888–225–5322).  (b) Inspection and certification of a ship subject to the Great Lakes Agreement. The FCC will not inspect Great Lakes Agreement vessels. An inspection and certification of a ship subject to the Great Lakes Agreement must be made by a technician holding one of the following: an FCC General Radiotelephone Operator License, GMDSS Radio Maintainer’s License, Second Class Radiotelegraph Operator’s Certificate, First Class Radiotelegraph Operator’s Certificate, or Radiotelegraph Operator License. The certification required by §80.953 must be entered into the ship's log. The technician conducting the inspection and providing the certification must not be the vessel's owner, operator, master, or an employee of any of them. Additionally, the vessel owner, operator, or ship's master must certify that the inspection was satisfactory. There are no FCC prior notice requirements for any inspection pursuant to §80.59(b).  (c) *Application for exemption.* (1) Applications for exemption from the radio provisions of part II or III of title III of the Communications Act, the Safety Convention, or the Great Lakes Radio Agreement, or for modification or renewal of an exemption previously granted must be filed as a waiver request using FCC Form 605. Waiver requests must include the following information:  (i) Name of ship;  (ii) Call sign of ship;  (iii) Official number of ship;  (iv) Gross tonnage of ship;  (v) The radio station requirements from which the exemption is requested:  (A) Radiotelephone (VHF/MF); and/or  (B) GMDSS or specified components of the GMDSS;  (vi) File number of any previously granted exemption;  (vii) Detailed description of the voyages for which the exemption is requested, including:  (A) Maximum distance from nearest land in nautical miles;  (B) Maximum distance between two consecutive ports in nautical miles; and  (C) Names of all ports of call and an indication of whether travel will include a foreign port;  (viii) Reasons for the exemption:  (A) Size of vessel;  (B) Variety of radio equipment on board;  (C) Limited routes; and/or  (D) Conditions of voyages;  (ix) A copy of the U.S. Coast Guard Certificate of Inspection an indication of whether the vessel is certified as a Passenger or Cargo ship (for passenger ships, list the number of passengers the ship is licensed to carry); and  (x) Type and quantity of radio equipment on board, including:  (A) VHF Radio Installation (indicate if GMDSS approved);  (B) Single Side-Band (SSB) (indicate if GMDSS approved);  (C) Category 1, 406 MHz EPIRB (GMDSS approved);  (D) NAVTEX Receiver (GMDSS approved);  (E) Survival Craft VHF (GMDSS approved);  (F) 9 GHz Radar Transponder or AIS SART (GMDSS approved);  (G) Ship Earth Station;  [Reserved](I) Reserve Power Supply (capability); and  (J) Any other equipment.  (2) Feeable applications for exemption must be filed with U.S. Bank, P.O. Box 979097, St. Louis, MO 63197–9000 at the address set forth in §1.1102. Emergency requests must be filed with the Federal Communications Commission, Office of the Secretary, 445 Twelfth Street, SW., TW-B204, Washington, DC 20554.  Note: With emergency requests, do not send the fee, you will be billed.  *REASON: Updated to remove equipment no longer required. Although a radio direction finding apparatus is still specified in the Communications Act it is no longer used and not required under these regulations.*  (d) *Waiver of annual inspection.* (1) The Commission may, upon a finding that the public interest would be served, grant a waiver of the annual inspection required by Section 362(b) of the Communications Act, 47 U.S.C. 360(b), for a period of not more than 90 days for the sole purpose of enabling a United States vessel to complete its voyage and proceed to a port in the United States where an inspection can be held. An informal application must be submitted by the ship's owner, operator or authorized agent. The application must be submitted to the Commission's District Director or Resident Agent in charge of the FCC office nearest the port of arrival at least three days before the ship's arrival. The application must include:  (i) The ship's name and radio call sign;  (ii) The name of the first United States port of arrival directly from a foreign port;  (iii) The date of arrival;  (iv) The date and port at which annual inspection will be formally requested to be conducted;  (v) The reason why an FCC-licensed technician could not perform the inspection; and  (vi) A statement that the ship's compulsory radio equipment is operable.  (2) Vessels that are navigated on voyages outside of the United States for more than 12 months in succession are exempted from annual inspection required by section 362(b) of the Communications Act, provided that the vessels comply with all applicable requirements of the Safety Convention, including the annual inspection required by Regulation 9, Chapter I, and the vessel is inspected by an FCC-licensed technician in accordance with this section within 30 days of arriving in the United States.  **§ 80.60   Partitioned licenses and disaggregated spectrum.**  (a) Except as specified in §20.15(c) of this chapter with respect to commercial mobile radio service providers, charges must not be made for service of:  (1) VHF Public Coast area licensees, *see* §80.371(c)(1)(ii), may partition their geographic service area or disaggregate their spectrum pursuant to the procedures set forth in this section.  (2) AMTS geographic area licensees, *see* §80.385(a)(3), may partition their geographic service area or disaggregate their spectrum pursuant to the procedures set forth in this section. Site-based AMTS public coast station licensees may partition their license or disaggregate their spectrum pursuant to the procedures set forth in this section, provided that the partitionee or disaggregatee's predicted 38 dBu signal level contour does not extend beyond the partitioner or disaggregator's predicted 38 dBu signal level contour. The predicted 38 dBu signal level contours shall be calculated using the F(50, 50) field strength chart for Channels 7–13 in §73.699 (Fig. 10) of this chapter, with a 9 dB correction for antenna height differential.  (3) Nationwide or multi-region LF, MF, and HF public coast station licensees, *see* §§80.357(b)(1), 80.361(a), 80.363(a)(2), 80.371(b), and 80.374, may partition their spectrum pursuant to the procedures set forth in this section, except that frequencies or frequency pairs licensed to more than one licensee as of March 13, 2002 may be partitioned only by the earliest licensee, and only on the condition that the partitionee shall operate on a secondary, non-interference basis to stations licensed as of March 13, 2002 other than the earliest licensee. Coordination with government users is required for partitioning of spectrum the licensing of which is subject to coordination with government users.  (b) *Technical standards* —(1) *Partitioning.* In the case of partitioning, all requests for authorization for partial assignment of a license must include, as an attachment, a description of the partitioned service area. The partitioned service area shall be defined by coordinate points at every 3 degrees along the partitioned service area unless an FCC-recognized service area is utilized (e.g., Metropolitan Service Area, Rural Service Area, or Economic Area) or county lines are used. The geographic coordinates must be specified in degrees, minutes, and seconds to the nearest second of latitude and longitude, and must be based upon the 1983 North American Datum (NAD83). In a case where an FCC-recognized service area or county lines are utilized, applicants need only list the specific area(s) (through use of FCC designations or county names) that constitute the partitioned area.  (2) *Disaggregation.* VHF (156–162 MHz) spectrum may only be disaggregated according to frequency pairs. AMTS spectrum may be disaggregated in any amount.  (3) *Combined partitioning and disaggregation.* The Commission will consider requests for partial assignment of licenses that propose combinations of partitioning and disaggregation.  (c) *License term.* The license term for a partitioned license area and for disaggregated spectrum shall be the remainder of the original licensee's term as provided for in §80.25 of this part.  (d) *Construction Requirements* —(1) *Partitioning.* Partial assignors and assignees for license partitioning have two options to meet construction requirements. Under the first option, the partitionor and partitionee would each certify that they will independently satisfy the substantial service requirement for their respective partitioned areas. If either licensee failed to meet its substantial service showing requirement, only the non-performing licensee's renewal application would be subject to dismissal. Under the second option, the partitioner certifies that it has met or will meet the substantial service requirement for the entire market. If the partitioner fails to meet the substantial service standard, however, only its renewal application would be subject to forfeiture at renewal.  (2) *Disaggregation.* Partial assignors and assignees for license disaggregation have two options to meet construction requirements. Under the first option, the disaggregator and disaggregatee would certify that they each will share responsibility for meeting the substantial service requirement for the geographic service area. If parties choose this option and either party fails to do so, both licenses would be subject to forfeiture at renewal. The second option would allow the parties to agree that either the disaggregator or the disaggregatee would be responsible for meeting the substantial service requirement for the geographic service area. If parties choose this option, and the party responsible for meeting the construction requirement fails to do so, only the license of the nonperforming party would be subject to forfeiture at renewal.  (3) *Site-based AMTS, and nationwide or multi-region LF, MF, and HF public coast.* Parties seeking to acquire a partitioned license or disaggregated spectrum from a site-based AMTS, or nationwide or multi-region LF, MF, and HF public coast licensee will be required to construct and commence “service to subscribers” in all facilities acquired through such transactions within the original construction deadline for each facility as set forth in §80.49. Failure to meet the individual construction deadline will result in the automatic termination of the facility's authorization.  Subpart C—Operating Requirements and Procedures  Station Requirements—General  **§ 80.61   Commission inspection of stations.**  All stations and required station records must be made available for inspection by authorized representatives of the Commission.  **§ 80.63   Maintenance of transmitter power.**  (a) The power of each radio transmitter must not be more than that necessary to carry on the service for which the station is licensed.  (b) Except for transmitters using single sideband and independent sideband emissions, each radio transmitter rated by the manufacturer for carrier power in excess of 100 watts must contain the instruments necessary to determine the transmitter power during its operation.  Station Requirements—Land Stations  **§ 80.67   General facilities requirements for coast stations.**  (a) All coast stations licensed to transmit in the band 156–162 MHz must be able to transmit and receive on 156.800 MHz and at least one working frequency in the band.  (b) All coast stations that operate telephony on frequencies in the 1605–3500 kHz band must be able to transmit and receive using J3E emission on the frequency 2182 kHz and at least one working frequency in the band.  **[Reserved]***REASON: No longer used nor required.*  **§ 80.69   Facilities requirement for public coast stations using telephony.**  Public coast stations using telephony must be provided with the following facilities.  (a) When the station is authorized to use frequencies in the 1605–3500 kHz band, equipment meeting the requirements of §80.67(b) must be installed at each transmitting location.  (b) The transmitter power on the frequency 2182 kHz must not exceed 50 watts carrier power for normal operation. During distress, urgency and safety traffic, operation at maximum power is permitted.  **§ 80.70   Special conditions relative to coast station VHF facilities.**  (a) Coast stations which transmit on the same radio channel above 150 MHz must minimize interference by reducing radiated power, by decreasing antenna height or by installing directional antennas. Coast stations at locations separated by less than 241 kilometers (150 miles) which transmit on the same radio channel above 150 MHz must also consider a time-sharing arrangement. The Commission may order station changes if agreement cannot be reached between the involved licensees.  (b) Coast stations which transmit on a radio channel above 150 MHz and are located within interference range of any station within Canada or Mexico must minimize interference to the involved foreign station(s), and must notify the Commission of any station changes.  (c) A VHF (156–162 MHz) public coast licensee initially authorized on any of the channels listed in the table in §80.371(c)(1), or an AMTS licensee initially authorized on any of the channel blocks listed in the table in §80.385(a)(2), may transfer or assign its channel(s), or channel block(s), to another entity. If the proposed transferee or assignee is the geographic area licensee for the geographic area to which the frequency block is allocated, such transfer or assignment will be deemed to be in the public interest. However, such presumption will be rebuttable.  **§ 80.71   Operating controls for stations on land.**  Each coast station, Alaska-public fixed station and Alaska-private fixed station must provide operating controls in accordance with the following:  (a) Each station using telegraphy or telephony must be capable of changeover from transmission to reception and vice versa within two seconds excluding a change in operating radio channel.  (b) During it hours of service, each station must be capable of:  (1) Commencing operation within one minute after the need to do so occurs;  (2) Discontinuing all emission within five seconds after emission is no longer desired. The emission of an unattended station in an automated multistation system at which restoration to standby is automatic on conclusion of a call must be discontinued within three seconds of the disconnect signal or, if a disconnect signal is not received, within twenty seconds after reception of the final carrier transmission from a ship station.  (c) Each station using a multichannel installation for telegraphy must be capable of changing from one telegraphy channel to any other telegraphy channel within the same sub-band below 525 kHz within five seconds. This requirement need not be met by equipment intended for use only in emergencies and not used for normal communication.  (d) Every coast station using a multi-channel installation for radiotelephony must be capable of changing from one telephony channel to another telephony channel within:  (1) Five seconds within the frequency band 1605–3500 kHz; or  (2) Three seconds within the band 156–162 MHz. This requirement also applies to marine utility stations.  **§ 80.72   Antenna requirements for coast stations.**  All emissions of a coast station a marine-utility station operated on shore using telephony within the frequency band 30–200 MHz must be vertically polarized.  § 80.74   Public coast station facilities for a telephony busy signal.  A “busy” signal, when used by a public coast station in accordance with the provisions of §80.111(d), must consist of the transmission of a single audio frequency regularly interrupted, as follows:  (a) *Audio frequency.* Not less than 100 nor more than 1100 Hertz, provided the frequency used for this purpose will not cause auto alarms or selective-ringing devices to be operated.  (b) *Rate of interruption.* 60 times per minute ±10%.  (c) *Duration of each interruption.* 0.5 second ±10%.  **§ 80.76   Requirements for land station control points.**  Each coast or fixed station subject to this part must have the following facilities:  (a) Except for marine utility stations, a visual indication of antenna current; or a pilot lamp, meter or equivalent device which provides continuous visual indication whenever the transmitter control circuits have been actuated.  (b) Capability to aurally monitor all transmissions originating at dispatch points and to disconnect the dispatch points from the transmitter or to terminate the operation of the transmitter.  (c) Facilities which will permit the responsible operator to turn the carrier of the radio transmitter on and off at will.  Station Requirements—Ship Stations  **§ 80.79   Inspection of ship station by a foreign Government.**  The Governments or appropriate administrations of countries which a ship visits may require the license of the ship station or ship earth station to be produced for examination. When the license cannot be produced without delay or when irregularities are observed, Governments or administrations may inspect the radio installations to satisfy themselves that the installation conforms to the conditions imposed by the Radio Regulations.  **§ 80.80   Operating controls for ship stations.**  (a) Each control point must be capable of:  (1) Starting and discontinuing operation of the station;  (2) Changing frequencies within the same sub-band;  (3) Changing from transmission to reception and vice versa.  (4) In the case of stations operating in the 156–162 MHz bands, reducing power output to one watt or less in accordance with §80.215(e).1  1 Ship station transmitters, except hand-held portable transmitters, manufactured after January 21, 1987 must automatically reduce the carrier power to one watt or less when turned to the frequency 156.375 MHz or 156.650 MHz. All ship station transmitters, except hand-held portable transmitters, used after January 21, 1997, must automatically reduce power as described above. A manual override device must be provided which when held by the operator will permit full carrier power operation on channels 13 and 67. Hand-held portable transmitters must be capable of reducing power to one watt, but need not do so automatically.  (b) Each ship station using telegraphy must be capable of changing from telegraph transmission to telegraph reception and vice versa without manual switching.  (c) Each ship station using telephony must be capable of changing from transmission to reception and vice versa within two seconds excluding a change in operating radio channel.  (d) During its hours of service, each ship station must be capable of:  (1) Commencing operation within one minute;  (2) Discontinuing all emission within five seconds after emission is no longer desired.  (e) Each ship station using a multi-channel installation for telegraphy (except equipment intended for use only in emergencies on frequencies below 515 kHz) must be capable of changing from one radio channel to another within:  (1) Five seconds if the channels are within the same sub-band; or  (2) Fifteen seconds if the channels are not within the same sub-band.  (f) Each ship station and marine-utility station using a multi-channel installation for telephony must be capable of changing from one radio channel to another within:  (1) Five seconds within the band 1605–3500 kHz; or  (2) Three seconds within the band 156–162 MHz.  *REASON: No longer used. These requirements are covered by ITU regulations.*  **§ 80.81   Antenna requirements for ship stations.**  All telephony emissions of a ship station or a marine utility station on board ship within the frequency band 30–200 MHz must be vertically polarized.  **§ 80.83   Protection from potentially hazardous RF radiation.**  Any license or renewal application for a ship earth station that will cause exposure to radiofrequency (RF) radiation in excess of the RF exposure guidelines specified in §1.1307(b) of the Commission's Rules must comply with the environmental processing rules set forth in §§1.1301–1.1319 of this chapter.  Operating Procedures—General  **§ 80.86   International regulations applicable.**  In addition to being regulated by these rules, the use and operation of stations subject to this part are governed by the Radio Regulations and the radio provisions of all other international agreements in force to which the United States is a party.  **§ 80.87   Cooperative use of frequency assignments.**  Each radio channel is available for use on a shared basis only and is not available for the exclusive use of any one station or station licensee. Station licensees must cooperate in the use of their respective frequency assignments in order to minimize interference and obtain the most effective use of the authorized radio channels.  **§ 80.88   Secrecy of communication.**  The station licensee, the master of the ship, the responsible radio operators and any person who may have knowledge of the radio communications transmitted or received by a fixed, land, or mobile station subject to this part, or of any radiocommunication service of such station, must observe the secrecy requirements of the Communications Act and the Radio Regulations. See sections 501, 502, and 705 of the Communications Act and Article 17 of the Radio Regulations.  **§ 80.89   Unauthorized transmissions.**  Stations must not:  (a) Engage in superfluous radiocommunication.  (b) Use telephony on 243 MHz.  (c) Use selective calling on 2182 kHz or 156.800 MHz.  (d) When using telephony, transmit signals or communications not addressed to a particular station or stations. This provision does not apply to the transmission of distress, urgency, or safety signals. It also does not apply to requests for assistance, or information or to test transmissions.  *REASON: Clarity. Also the two-tone radiotelephone alarm is no longer used.*  (e) Transmit while on board vessels located on land unless authorized under a public coast station license. Vessels in the following situations are not considered to be on land for the purposes of this paragraph:  (1) Vessels which are aground due to a distress situation;  (2) Vessels in drydock undergoing repairs; and  (3) State or local government vessels which are involved in search and rescue operations including related training exercises. (f) Transmit on frequencies or frequency bands not authorized on the current station license.  **§ 80.90   Suspension of transmission.**  Transmission must be suspended immediately upon detection of a transmitter malfunction and must remain suspended until the malfunction is corrected, except for transmission concerning the immediate safety of life or property, in which case transmission must be suspended as soon as the emergency is terminated.  **§ 80.91   Order of priority of communications.**  (a) All stations in the maritime mobile service and the maritime mobile-satellite service shall be capable of offering four levels of priority in the following order:  (1) Distress calls, distress messages, and distress traffic.  (2) Urgency communications.  (3) Safety communications.  (4) Other communications.  (b) In a fully automated system, where it is impracticable to offer all four levels of priority, category 1 shall receive priority until such time as intergovernmental agreements remove exemptions granted for such systems from offering the complete order of priority.  **§ 80.92   Prevention of interference.**  (a) The station operator must determine that the frequency is not in use by monitoring the frequency before transmitting, except for transmission of signals of distress.  (b) When a radiocommunication causes interference to a communication which is already in progress, the interfering station must cease transmitting at the request of either party to the existing communication. For traffic less than distress priority seeking to commence use of a frequency, the priority is established under §80.91.  REASON: Clarity  (c) Except in cases of distress, communications between ship stations or between ship and aircraft stations must not interfere with public coast stations. The ship or aircraft stations which cause interference must stop transmitting or change frequency upon the first request of the affected coast station.  **§ 80.93   Hours of service.**  (a) *All stations.* All stations whose hours of service are not continuous must not suspend operation before having concluded all communication required in connection with a distress call or distress traffic.  (b) *Public coast stations.* (1) Each public coast station whose hours of service are not continuous must not suspend operation before having concluded all communication involving messages or calls originating in or destined to mobile stations within range and mobile stations which have indicated their presence.  (2) Unless otherwise authorized by the Commission upon adequate showing of need, each public coast station authorized to operate on frequencies in the 3000–23,000 kHz band must maintain continuous hours of service.  (c) *Compulsory ship stations.* (1) Compulsory ship stations whose service is not continuous may not suspend operation before concluding all traffic originating in or destined for public coast stations situated within their range and mobile stations which have indicated their presence.  (2) For GMDSS ships, radios shall be turned on and set to proper watch channels while ships are underway.  *REASON: Effectively contradicted by the requirements of §80.1123. Additionally, standards improvements have largely corrected the alarming problems that caused some operators to shut off their DSC-equipped MF/HF radiotelephone equipment in the past.*  (d) *Ships voluntarily fitting GMDSS subsystems.* For ships voluntarily fitting GMDSS subsystems, radios shall be turned on and set to proper watch channels while ships are underway. If ship has duplicate GMDSS installations for DSC or GMDSS mobile satellite terminal, only one of each must be turned on and keeping watch.  (e) *Other than public coast or compulsory ship stations.* The hours of service of stations other than those described in paragraphs (b), (c), and (d) of this section are determined by the station licensee.  **§ 80.94   Control by coast or Government station.**  When communicating with a coast station or any Government station in the maritime mobile service, ship stations must comply with the instruction given by the coast station or Government station relative to the order and time of transmission, the choice of frequency, the suspension of communication and the permissible type of message traffic that may be transmitted. This provision does not apply in the event of distress.  **§ 80.95   Message charges.**  (a) Except as specified in §20.15(c) of this chapter with respect to commercial mobile radio service providers, charges must not be made for service of:  (1) Any public coast station unless tariffs for the service are on file with the Commission;  (2) Any station other than a public coast station or an Alaska—public fixed station, except cooperatively shared stations covered by §80.503;  (3) Distress calls and related traffic; and  (4) Navigation hazard warnings preceded by the SAFETY signal.  (b) The licensee of each ship station is responsible for the payment of all charges accruing to any other station(s) or facilities for the handling or forwarding of messages or communications transmitted by that station.  (c) In order to be included in the ITU List of Coast Stations public coast stations must recognize international Accounting Authority Identification Codes (AAIC) for purposes of billing and accounts settlement in accordance with Article 66 of the Radio Regulations. Stations which elect not to recognize international AAIC's will be removed from the ITU List of Coast Stations.  **§ 80.96   Maintenance tests.**  Stations are authorized to engage in test transmissions necessary for maintenance of the station. Test transmissions must conform to appropriate test operating procedures.  **§ 80.97   Radiotelegraph operating procedures.**  (a) Except as provided in the narrow band direct printing (NBDP) provisions of Subpart W of this part of the rules, all radio telegraphy is operated on a voluntary basis.  (b) Operations and procedures for radiotelegraph stations shall be in accordance with Articles 19, 52, 55 of the Radio Regulations, incorporated by reference in §80.7(c)(16), and Appendix 17 of the ITU Radio Regulations, incorporated by reference in §80.7(c)(15).  (c)      *REASON: Delete/Modify 80.97-80.100 as radiotelegraph is very rarely used*  **§ 80.101   Radiotelephone testing procedures.**  This section is applicable to all stations using telephony except where otherwise specified.  (a) Station licensees must not cause harmful interference. When radiation is necessary or unavoidable, the testing procedure described below must be followed:  (1) The operator must not interfere with transmissions in progress.  (2) The testing station's call sign, followed by the word “test”, must be announced on the radio-channel being used for the test.  (3) If any station responds “wait”, the test must be suspended for a minimum of 30 seconds, then repeat the call sign followed by the word “test” and listen again for a response. To continue the test, the operator must use counts or phrases which do not conflict with normal operating signals, and must end with the station's call sign. Test signals must not exceed ten seconds, and must not be repeated until at least one minute has elapsed. On the frequency 156.800 MHz, the time between tests must be a minimum of five minutes.  (b) Testing of transmitters must be confined to single frequency channels on working frequencies. However, , 4125 kHz and 156.800 MHz may be used to contact ship or coast stations as appropriate when signal reports are necessary. Short tests on 4125 kHz are permitted by vessels equipped with MF/HF radios to evaluate the compatibility of the equipment for distress and safety purposes. U.S. Coast Guard stations may be contacted on 4125 kHz 156.800 MHz for test purposes only when tests are being conducted by Commission employees, when FCC-licensed technicians are conducting inspections on behalf of the Commission, when qualified technicians are installing or repairing radiotelephone equipment, or when qualified ship’s personnel conduct an operational check requested by the U.S. Coast Guard. In these cases the test must be identified as “FCC” or “technical.”  *REASON: Neither the Coast Guard nor vessels maintain watch on 2182 kHz. However Coast Guard Communication Stations do maintain watch on 4125 kHz. See also http://www.navcen.uscg.gov/?pageName=cgcommsCall*  .  *REASON: Obsolete*  **§ 80.102   Radiotelephone station identification.**  This section applies to all stations using telephony which are subject to this part.  (a) Except as provided in paragraphs (d) and (e) of this section, stations must give the call sign in English. Identification must be made:  (1) At the beginning and end of each communication with any other station.  (2) At 15 minute intervals when transmission is sustained for more than 15 minutes. When public correspondence is being exchanged with a ship or aircraft station, the identification may be deferred until the completion of the communications.  (b) Private coast stations located at drawbridges and transmitting on the navigation frequency 156.650 MHz may identify by use of the name of the bridge in lieu of the call sign.  (c) Ship stations transmitting on any authorized VHF bridge-to-bridge channel may be identified by the name of the ship in lieu of the call sign.  (d) Stations under the control of a U.S. Government agency or a foreign authority, when communicating with such an agency or authority may be identified by the name of the station in lieu of the call sign, or as directed by the agency or foreign authority (e.g. vessel traffic service).  *REASON: Clarification*  (e) Voice traffic in a mobile satellite system is closed to other parties except the two stations involved and the identification is done automatically with the establishment of the call. Therefore, it is not necessary for these stations to identify themselves periodically during the communication. For terrestrial systems using DSC to establish radiotelephone communications, the identification is made at the beginning of the call. In these cases, both parties must identify themselves by ship name, call sign or MMSI at least once every 15 minutes during radiotelephone communications.  (f) VHF public coast stations licensed to serve a predetermined geographic service area are not required to provide station identification under this section. A site-based VHF public coast station may identify by means of the approximate geographic location of the station or the area it serves when it is the only VHF public coast station serving the location or there will be no conflict with the identification of any other station.  **§ 80.103   Digital selective calling (DSC) operating procedures.**  (a) Operating procedures for the use of DSC equipment in the maritime mobile service are as contained in ITU–R M.541–9 (incorporated by reference, see §80.7), and subpart W of this part.  (b) When using DSC techniques, coast stations and ship stations must use maritime mobile service identities (MMSI) assigned by the Commission or its designees.  (c) DSC acknowledgment of DSC distress and safety calls must be made by designated coast stations and such acknowledgment must be in accordance with procedures contained in ITU–R M.541–9 (incorporated by reference, see §80.7). Nondesignated public and private coast stations must follow the guidance provided for ship stations in ITU–R M.541–9 (incorporated by reference, see §80.7), with respect to DSC “Acknowledgment of distress calls” and “Distress relays.” (See subpart W of this part.)  (d) Group calls to vessels under the common control of a single entity are authorized. A group call identity may be created from an MMSI ending in a zero, assigned to this single entity, by deleting the trailing zero and adding a leading zero to the identity.  **§ 80.104   Identification of radar transmissions not authorized.**  This section applies to all maritime radar transmitters except radar beacon stations.  (a) Radar transmitters must not transmit station identification.  (b) [Reserved]  Operating Procedures—Land Stations  **§ 80.105   General obligations of coast stations.**  Each coast station or marine-utility station must acknowledge and receive all calls directed to it by ship or aircraft stations. Such stations are permitted to transmit safety communication to any ship or aircraft station. VHF (156–162 MHz) and AMTS (216–220 MHz) public coast stations may provide fixed or hybrid services on a co-primary basis with mobile operations.  **§ 80.106   Intercommunication in the mobile service.**  (a) Each public coast station must exchange radio communications with any ship or aircraft station at sea; and each station on shipboard or aircraft at sea must exchange radio communications with any other station on shipboard or aircraft at sea or with any public coast station.  (b) Each public coast station must acknowledge and receive all communications from mobile stations directed to it, transmit all communications delivered to it which are directed to mobile stations within range in accordance with their tariffs. Discrimination in service is prohibited.  **§ 80.107   Service of private coast stations and marine-utility stations.**  A private coast station or a marine-utility station is authorized to transmit messages necessary for the private business and operational needs of ships and the safety of aircraft.  **§ 80.108   Transmission of traffic lists by coast stations.**  (a) Each coast station is authorized to transmit lists of call signs in alphabetical order of all mobile stations for which they have traffic on hand. These traffic lists will be transmitted on the station’s normal working frequencies at intervals of:  (1) In the case of telegraphy, at least two hours and not more than four hours during the working hours of the coast station.  (2) In the case of radiotelephony, at least one hour and not more than four hours during the working hours of the coast station.  (b) The announcement must be as brief as possible and must not be repeated more than twice. Coast stations may announce on a calling frequency that they are about to transmit call lists on a specific working frequency.  **§ 80.109   Transmission to a plurality of mobile stations by a public coast station.**  Group calls to vessels under the common control of a single entity and information for the general benefit of mariners including storm warnings, ordinary weather, hydrographic information and press materials may be transmitted by a public coast station simultaneously to a plurality of mobile stations.  **§ 80.110   Inspection and maintenance of antenna structure markings and associated control equipment.**  The owner of each antenna structure required to be painted and/or illuminated under the provisions of Section 303(q) of the Communications Act of 1934, as amended, shall operate and maintain the antenna structure painting and lighting in accordance with part 17 of this chapter. In the event of default by the owner, each licensee or permittee shall be individually responsible for conforming to the requirements pertaining to antenna structure painting and lighting.  **§ 80.111   Radiotelephone operating procedures for coast stations.**  This section applies to all coast stations using telephony which are subject to this part.  (a) *Limitations on calling.* (1) Except when transmitting a general call to all stations for announcing or preceding the transmission of distress, urgency, or safety messages, a coast station must call the particular station(s) with which it intends to communicate.  (2) Coast stations must call ship stations by voice unless it is known that the particular ship station may be contacted by other means such as automatic actuation of a selective ringing or calling device.  (3) Coast stations may be authorized emission for selective calling on each working frequency.  (4) Calling a particular station must not continue for more than one minute in each instance. If the called station does not reply, that station must not again be called for two minutes. When a called station does not reply to a call sent three times at intervals of two minutes, the calling must cease for fifteen minutes. However, if harmful interference will not be caused to other communications in progress, the call may be repeated after three minutes.  (5) A coast station must not attempt to communicate with a ship station that has specifically called another coast station until it becomes evident that the called station does not answer, or that communication between the ship station and the called station cannot be carried on because of unsatisfactory operating conditions.  (6) Calls to establish communication must be initiated on an available common working frequency when such a frequency exists and it is known that the called ship maintains a simultaneous watch on the common working frequency and the appropriate calling frequency(ies).  (b) *Time limitation on calling frequency.* Transmissions by coast stations on 156.800 MHz must be minimized and any one exchange of communications must not exceed one minute in duration.  (c) *Change to working frequency.* After establishing communications with another station by call and reply on 156.800 MHz coast stations must change to an authorized working channel for the transmission of messages.  REASON: 2182 kHz no longer used for distress calling  (d) *Use of busy signal.* A coast station, when communicating with a ship station which transmits to the coast station on a radio channel which is a different channel from that used by the coast station for transmission, may transmit a “busy” signal whenever transmission from the ship station is being received. The characteristics of the “busy” signal are contained in §80.74.  Operating Procedures—Ship Stations  **§ 80.114   Authority of the master.**  (a) The service of each ship station must at all times be under the ultimate control of the master, who must require that each operator or such station comply with the Radio Regulations in force and that the ship station is used in accordance with those regulations.  (b) These rules are waived when the vessel is under the control of the U.S. Government.  **§ 80.115   Operational conditions for use of associated ship units.**  (a) Associated ship units may be operated under a ship station authorization. Use of an associated ship unit is restricted as follows;  (1) It must only be operated on the safety and calling frequency 156.800 MHz or on commercial or noncommercial VHF intership frequencies appropriate to the class of ship station with which it is associated.  *REASON: Unnecessarily restrictive. For example, it could be interpreted as precluding pilots from communicating with a VTS.*  (2) It must be equipped to transmit on the frequency 156.800 MHz and at least one appropriate intership frequency.  (3) Calling must occur on the frequency 156.800 MHz unless calling and working on an intership frequency has been prearranged.  (4) Power is limited to one watt.  (5) The station must be identified by the call sign of the ship station with which it is associated and an appropriate unit designator.  (b) State or local government vehicles used to tow vessels involved in search and rescue operations are authorized to operate on maritime mobile frequencies as associated ship units. Such operations must be in accordance with paragraph (a) of this section, except that the associated ship unit: May be operated from shore; may use Distress, Safety and Calling, Intership Safety, Liaison, U.S. Coast Guard, or Maritime Control VHF intership frequencies; and may have a transmitter power of 25 watts.  **§ 80.116   Radiotelephone operating procedures for ship stations.**  (a) *Calling coast stations.* (1) Use by ship stations of the frequency 2182 kHz for calling coast stations and for replying to calls from coast stations is authorized. However, such calls and replies should be on the appropriate ship-shore working frequency.  (2) Use by ship stations and marine utility stations of the frequency 156.800 MHz for calling coast stations and marine utility stations on shore, and for replying to calls from such stations, is authorized. However, such calls and replies should be made on the appropriate ship-shore working frequency.  (b) *Calling ship stations.* (1) Except when other operating procedure is used to expedite safety communication, ship stations, before transmitting on the intership working frequencies 2003, 2142, 2638, 2738, or 2830 kHz, should first establish communications with other ship stations by call and reply on 2182 kHz. Calls may be initiated on an intership working frequency when it is known that the called vessel maintains a watch on the working frequency.  *REASON: 2182 kHz watch no longer required*  (2) Except when other operating procedures are used to expedite safety communications, the frequency 156.800 MHz must be used for call and reply by stations and marine utility stations before establishing communication on one of the intership working frequencies. Calls may be initiated on an intership working frequency when it is known that the called vessel maintains a simultaneous watch on the working frequency and on 156.800 MHz.  *REASON: To allow cooperative VTSs and pilots to communicate too.*  (c) *Change to working frequency.* After establishing communication with another station by call and reply on 2182 kHz or 156.800 MHz stations on board ship must change to an authorized working frequency for the transmission of messages.  (d) *Limitations on calling.* Calling a particular station must not continue for more than 30 seconds in each instance. If the called station does not reply, the station must not again be called until after an interval of 2 minutes. When a called station called does not reply to a call sent three times at intervals of 2 minutes, the calling must cease and must not be renewed until after an interval of 15 minutes; however, if there is no reason to believe that harmful interference will be caused to other communications in progress, the call sent three times at intervals of 2 minutes may be repeated after a pause of not less than 3 minutes. In event of an emergency involving safety, the provisions of this paragraph do not apply.  (e) *Limitations on working.* Any one exchange of communications between any two ship stations on 2003, 2142, 2638, 2738, or 2830 kHz or between a ship station and a private coast station on 2738 or 2830 kHz must not exceed 3 minutes after the stations have established contact. Subsequent to such exchange of communications, the same two stations must not again use 2003, 2142, 2638, 2738, or 2830 kHz for communication with each other until 10 minutes have elapsed.  (f) *Transmission limitation on 2182 kHz and 156.800 MHz.* To facilitate the reception of distress calls, all transmissions on 2182 kHz and 156.800 MHz (channel 16) must be minimized and transmissions on 156.800 MHz must not exceed 1 minute.  (g) *Limitations on commercial communication.* On frequencies in the band 156–162 MHz, the exchange of commercial communication must be limited to the minimum practicable transmission time. In the conduct of ship-shore communication other than distress, stations on board ship must comply with instructions given by the private coast station or marine utility station on shore with which they are communicating.  Special Procedures—Public Coast Stations  **§ 80.121   Public coast stations using telegraphy.**  (a) *Narrow-band direct-printing (NBDP) operating procedures.* (1) When both terminals of the NBDP circuit are satisfied that the circuit is in operable condition, the message preamble must be transmitted in the following format:  (i) One carriage return and one line feed,  (ii) Serial number or number of the message,  (iii) The name of the office of origin,  (iv) The number of words,  (v) The date of handing in of the message,  (vi) The time of handing in of the message, and  (vii) Any service instructions. (See The ITU “Manual for Use by the Maritime Mobile and Maritime Mobile-Satellite Services”.)  (2) Upon completion of transmission of the preamble, the address, text and signature must be transmitted as received from the sender.  (3) Upon completion of transmission of the signature the coast station must, following the signal “COL”, routinely repeat all service indications in the address and for figures or mixed groups of letters, figures or signs in the address, text or signature.  (4) In telegrams of more than 50 words, routine repetition must be given at the end of each page.  (5) Paragraphs (a) (1) through (4) of this section need not be followed when a direct connection is employed.  (6) In calling ship stations by narrow-band direct-printing, the coast station must use the ship station selective calling number (5 digits) and its assigned coast station identification number (4 digits). Calls to ship stations must employ the following format: Ship station selective call number, repeated twice; “DE”, sent once; and coast station identification number, repeated twice. When the ship station does not reply to a call sent three times at intervals of two minutes, the calling must cease and must not be renewed until after an interval of fifteen minutes.  (7) A public coast station authorized to use NBDP frequencies between 4000 kHz and 27500 kHz may use class A1A emission on the “mark” frequency for station identification and for establishing communications with ship stations. The radio station license must reflect authority for this type of operation, and harmful interference must not be caused.  (b) *Watch on ship calling frequencies.* (1) Public coast stations using telegraphy must maintain a continuous watch during their working hours for calls from ship stations on frequencies in the same band(s) in which the coast station is licensed to operate. See subpart H of this part.  (2) Such station must employ receivers which are capable of being accurately set to any designated calling frequency in each band for which the receiver is intended to operate. The time required to set the receiver to a frequency must not exceed five seconds. The receiver must have a long term frequency stability of not more than 50 Hz and a minimum sensitivity of two microvolts across receiver input terminals of 50 ohms, or equivalent. The audio harmonic distortion must not exceed five percent at any rated output power.  (c) *Radiotelegraph frequencies.* Radiotelegraph frequencies available for assignment to public coast stations are contained in subpart H of this part.  **§ 80.122   Public coast stations using facsimile and data.**  Facsimile operations are a form of telegraphy for the transmission and receipt of fixed images between authorized coast and ship stations. Facsimile and data techniques may be implemented in accordance with the following paragraphs.  (a) *Supplemental Eligibility Requirements.* Public coast stations are eligible to use facsimile and data techniques with ship stations.  (b) *Assignment and use of frequencies.* (1) Frequencies in the 2000–27500 kHz bands in part 2 of this chapter as available for shared use by the maritime mobile service and other radio services are assignable to public coast stations for providing facsimile communications with ship stations. Additionally, frequencies in the 156–162 MHz and 216–220 MHz bands available for assignment to public coast stations for radiotelephone communications that are contained in subpart H of this part are also available for facsimile and data communications.  (2) Equipment used for facsimile and data operations is subject to the applicable provisions of subpart E of this part.  (3) The use of voice on frequencies authorized for facsimile operations in the bands 2000–27500 kHz listed in subpart H of this part is limited to setup and confirmation of receipt of facsimile transmissions.  **§ 80.123   Service to stations on land.**  Marine VHF public coast stations, including AMTS coast stations, may provide service to stations on land in accordance with the following:  (a) The public coast station licensee must provide each associated land station with a letter, which shall be presented to authorized FCC representatives upon request, acknowledging that the land station may operate under the authority of the associated public coast station’s license:  (b) Each public coast station serving stations on land must afford priority to marine-originating communications through any appropriate electrical or mechanical means.  (c) Land station identification shall consist of the associated public coast station’s call sign, followed by a unique numeric or alphabetic unit identifier;  (d) Radio equipment used on land must be certified for use under part 22, part 80, or part 90 of this chapter. Such equipment must operate only on the public correspondence channels authorized for use by the associated public coast station;  (e) Transmitter power shall be in accordance with the limits set in §80.215 for ship stations and antenna height shall be limited to 6.1 meters (20 feet) above ground level;  (f) Land stations may only communicate with public coast stations and must remain within radio range of associated public coast stations; and,  (g) The land station must cease operation immediately upon written notice by the Commission to the associated public coast station that the land station is causing harmful interference to marine communications.  Special Procedures—Private Coast Stations  **§ 80.131   [Reserved]**  *RTEASON: No longer in use.*  **§ 80.133   Private coast stations using facsimile in Alaska.**  Facsimile techniques may be implemented in accordance with the following paragraphs.  (a) Private coast stations in Alaska are eligible to use facsimile techniques with associated ship stations and other private coast stations in accordance with §80.505(b).  (b) The frequency 156.425 MHz is assigned by rule to private coast stations in Alaska for facsimile transmissions.  (c) Equipment used for facsimile operations is subject to the applicable provisions of subpart E of this part.  Special Procedures—Ship Stations  **§ 80.141   General provisions for ship stations.**  (a) *Points of communication.* Ship stations and marine utility stations on board ships are authorized to communicate with any station in the maritime mobile service.  (b) *Service requirements for all ship stations.* (1) Each ship station must receive and acknowledge all communications which are addressed to the ship or to any person on board.  (2) Every ship, on meeting with any direct danger to the navigation of other ships such as ice, a derelict vessel, a tropical storm, subfreezing air temperatures associated with gale force winds causing severe icing on superstructures, or winds of force 10 or above on the Beaufort scale for which no storm warning has been received, must transmit related information to ships in the vicinity and to the authorities on land unless such action has already been taken by another station. All such radio messages must be preceded by the safety signal.  (3) A ship station may accept communications for retransmission to any other station in the maritime mobile service. Whenever such messages or communications have been received and acknowledged by a ship station for this purpose, that station must retransmit the message as soon as possible.  (c) *Service requirements for vessels.* Each ship station provided for compliance with Part II of Title III of the Communications Act must provide a public correspondence service on voyages of more than 24 hours for any person who requests the service. Compulsory radiotelephone ships must provide this service for at least four hours daily. The hours must be prominently posted at the principal operating location of the station.  (d) Operating conditions. Effective August 1, 1994, VHF hand-held, portable transmitters used while connected to an external power source or a ship antenna must be equipped with an automatic timing device that deactivates the transmitter and reverts the transmitter to the receive mode after an uninterrupted transmission period of five minutes, plus or minus 10 percent. Additionally, such transmitters must have a device that indicates when the automatic timer has deactivated the transmitter. See also §80.203(c).  **[Reserved]**  *REASON: NBDP procedures not necessary in regulations and radiotelegraphy no longer in use.*  **§ 80.143   Required frequencies for radiotelephony.**  (a) Except for compulsory vessels, each ship radiotelephone station licensed to operate in the band 1605–3500 kHz must be able to receive and transmit J3E emission on the frequency 2182 kHz. If the station is used for other than safety communications, it must be capable also of receiving and transmitting the J3E emission on at least two other frequencies in that band. However, ship stations which operate exclusively on the Mississippi River and its connecting waterways, and on high frequency bands above 3500 kHz, need be equipped with 2182 kHz and one other frequency within the band 1605–3500 kHz.  *REASON: No longer required*  (b) Except as provided in paragraph (c) of this section, at least one VHF radiotelephone transmitter/receiver must be able to transmit and receive on the following frequencies:  (1) The distress, safety and calling frequency 156.800 MHz;  (2) The primary intership safety frequency 156.300 MHz;  (3) One or more working frequencies; and  (4) All other frequencies necessary for its service.  (c) Where a ship ordinarily has no requirement for VHF communications, handheld VHF equipment may be used solely to comply with the bridge-to-bridge navigational communication requirements contained in subpart U of this part.  **§ 80.145   [Reserved]**  Shipboard General Purpose Watches  **§ 80.146   [Reserved]**  **[Reserved]***REASON: No longer required consequential to U.S. Coast Guard discontinuance of watchkeeping on 2182 kHz.*  **§ 80.148   Watch on 156.8 MHz (Channel 16).**  Each compulsory vessel, while underway, must maintain a watch for radiotelephone distress calls on 156.800 MHz whenever such station is not being used for exchanging communications. The watch on 156.800 MHz is not required:  (a) Where a ship station is operating only with handheld bridge-to-bridge VHF radio equipment under §80.143(c) of this part; or  (b) For vessels subject to the Bridge-to-Bridge Act and participating in a Vessel Traffic Service (VTS) system when the watch is maintained on both the bridge-to-bridge frequency and a separately assigned VTS frequency.  Violations  **§ 80.149   Answer to notice of violation.**  (a) Any person receiving official notice of violation of the terms of the Communications Act, any legislative act, executive order, treaty to which the United States is a party, terms of a station or operator license, or the rules and regulations of the Federal Communications Commission must within 10 days from such receipt, send a written answer, in duplicate, to the office of the Commission originating the official notice. If an answer cannot be sent or an acknowledgment made within such 10-day period by reason of illness or other unavoidable circumstances, acknowledgment and answer must be made at the earliest practicable date with a satisfactory explanation of the delay. The answer to each notice must be complete in itself and must not be abbreviated by references to other communications or answers to other notices. The answer must contain a full explanation of the incident involved and must set forth the action taken to prevent a continuation or recurrence. If the notice relates to lack of attention to or improper operation of the station or to log or watch discrepancies, the answer must give the name and license number of the licensed operator on duty.  (b) When an official notice of violation, impending violation, or discrepancy, pertaining to any provision of Part II of Title III of the Communications Act or the radio provisions of the Safety Convention, is served upon the master or person responsible for a vessel and any instructions appearing on such document issued by a representative of the Commission are at variance with the content of paragraph (a) of this section, the instructions issued by the Commission's representative supersede those set forth in paragraph (a) of this section.  Subpart D—Operator Requirements  **§ 80.151   Classification of operator licenses and endorsements.**  (a) Commercial radio operator licenses issued by the Commission are classified in accordance with the Radio Regulations of the International Telecommunication Union.  (b) The following licenses are issued by the Commission. The international classification of each license, if different from the license name, is given in parentheses. The listed alphanumeric designators are the codes by which the licenses are identified in the Commission's Universal Licensing System.  (1) RR. Restricted Radiotelephone Operator Permit (radiotelephone operator's restricted certificate).  (2) RL. Restricted Radiotelephone Operator Permit-Limited Use.  (3) MP. Marine Radio Operator Permit (radiotelephone operator's restricted certificate). Consolidated with old Third Class Radiotelegraph Operator’s Certificates (T3) which is no longer issued or renewed.  (4) PG. General Radiotelephone Operator License (radiotelephone operator's general certificate).  (5) DO. GMDSS Radio Operator's License (General Operator's Certificate).  (6) RG. Restricted GMDSS Radio Operator's License (Restricted Operator's Certificate).  (7) DM. GMDSS Radio Maintainer's License.  (8) DB. GMDSS Radio Operator/Maintainer License.  (9) T3. Third Class Radiotelegraph Operator's Certificate (radiotelegraph operator's special certificate). Consolidated with Marine Radio Operator Permit (MP). No longer issued or renewed.  (10) T2. Second Class Radiotelegraph Operator's Certificate. . Consolidated into Radiotelegraph Operator License (T). No longer issued or renewed.  (11) T1. First Class Radiotelegraph Operator's Certificate. Consolidated into Radiotelegraph Operator License (T). No longer issued or renewed.  (12) T. Radiotelegraph Operator License. Consolidated from First and Second Class Radiotelegraph Operators Certificates (T1 and T2).  (c) The following license endorsements are affixed by the Commission to provide special authorizations or restrictions. Applicable licenses are given in parentheses.  (1) Ship Radar endorsement (Radiotelegraph Operator License , First and Second Class Radiotelegraph Operator's Certificate, General Radiotelephone Operator License).  (2) Six Months Service endorsement (Radiotelegraph Operator License, First and Second Class Radiotelegraph Operator's Certificate).  (3) Restrictive endorsements; relating to physical handicaps, English language or literacy waivers, or other matters (all licenses).  *REASON: Changes consequential to Amendment of the Commission’s Rules Concerning Commercial Radio Operators, Report and Order, WT Docket No. 10-177, 28 FCC Rcd 532, 535 ¶ 7 (2013) (Report and Order).*  Coast Station Operator Requirements  **§ 80.153   Coast station operator requirements.**  (a) Except as provided in §80.179, operation of a coast station transmitter must be performed by a person who is on duty at the control point of the station. The operator is responsible for the proper operation of the station.  (b) An operational fixed station associated with a coast station may be operated by the operator of the associated coast station.  Ship Station Operator Requirements  **§ 80.155   Ship station operator requirements.**  Except as provided in §§80.177 and 80.179, operation of transmitters of any ship station must be performed by a person holding a commercial radio operator license or permit of the class required below. The operator is responsible for the proper operation of the station.  **§ 80.156   Control by operator.**  The operator on board ships required to have a holder of a commercial operator license or permit on board may, if authorized by the station licensee or master, permit an unlicensed person to modulate the transmitting apparatus for all modes of communication except Morse code radiotelegraphy.  **§ 80.157   Radio officer defined.**  A *radio officer* means a person holding a radiotelegraph operator license or a GMDSS radio operator’s license with a GMDSS maintainer license or a first or second class radiotelegraph operator's certificate issued by the Commission who is employed to operate a ship radio station in compliance with Part II of Title III of the Communications Act. Such a person is also required to be licensed as a *radio officer* by the U.S. Coast Guard when employed to operate a ship radiotelegraph station.  *REASON: GMDSS has effectively redefined a radio officer. Note this paragraph should be considered for relocation to §80.5 Definitions.*  **§ 80.159   Operator requirements of Title III of the Communications Act and the Safety Convention.**  *REASON: No longer used or required.*  (a) Each cargo ship equipped with a radiotelephone station in accordance with Part II of Title III of the Communications Act must carry a radio operator who meets the following requirements:  (1) Where the station power does not exceed 1500 watts peak envelope power, the operator must hold a marine radio operator permit or higher class license.  (2) Where the station power exceeds 1500 watts peak envelope power, the operator must hold a general radiotelephone radio operator license or higher class license.  (d) Each passenger ship equipped with a GMDSS installation in accordance with subpart W of this part shall carry at least two persons holding an appropriate GMDSS Radio Operator License or, if the passenger ship operates exclusively within twenty nautical miles of shore, at least two persons holding either a GMDSS Radio Operator License or a Restricted GMDSS Radio Operator License, as specified in §13.7 of this chapter.  (e) Each ship transporting more than six passengers for hire equipped with a radiotelephone station in accordance with Part III of Title III of the Communications Act must carry a radio operator who meets the following requirements:  (1) Where the station power does not exceed 250 watts carrier power or 1500 watts peak envelope power, the radio operator must hold a marine radio operator permit or higher class license.  (2) Where the station power exceeds 250 watts carrier power or 1500 watts peak envelope power, the radio operator must hold a general radiotelephone operator license or higher class license.  **§ 80.161   Operator requirements of the Great Lakes Radio Agreement.**  Each ship subject to the Great Lakes Radio Agreement must have on board an officer or member of the crew who holds a marine radio operator permit or higher class license.  **§ 80.163   Operator requirements of the Bridge-to-Bridge Act.**  Each ship subject to the Bridge-to-Bridge Act must have on board a radio operator who holds a restricted radiotelephone operator permit or higher class license.  **§ 80.165   Operator requirements for voluntary stations.**  Minimum Operator License   |  |  | | --- | --- | | Ship Morse telegraph | T. | | Ship direct-printing telegraph | MP. | | Ship telephone, with or without DSC, more than 250 watts carrier power or 1,000 watts peak envelope power | PG. | | Ship telephone, with or without DSC, not more than 250 watts carrier power or 1,000 watts peak envelope power | MP. | | Ship telephone, with or without DSC, not more than 100 watts carrier power or 400 watts peak envelope power |  | | Above 30 MHz | None.1 | | Below 30 MHz | None1 | | Ship earth station | None1 |   1RP required for compulsory ships and international voyages.  *REASON: Obsolete*  General Operator Requirements  **§ 80.167   Limitations on operators.**  The operator of maritime radio equipment other than T–1, T–2, T, or G licensees, must not:  (a) Make equipment adjustments which may affect transmitter operation;  (b) Operate any transmitter which requires more than the use of simple external switches or manual frequency selection or transmitters whose frequency stability is not maintained by the transmitter itself.  **§ 80.169   Operators required to adjust transmitters or radar.**   1. All adjustments of radio transmitters in any radiotelephone station, radar station, EPIRB or AIS , or coincident with the installation, servicing, or maintenance of such equipment which may affect the proper operation of the station, must be performed by or under the immediate supervision and responsibility of a person holding a GMDSS Radio Maintainers License, GMDSS Radio Operator/Maintainer License, or General Radiotelephone Operator License.   *REASON: Inclusion of updated shipboard technology*  (b) Only persons holding an operator certificate containing a ship radar endorsement must perform such functions on radar equipment.  **§ 80.175   Availability of operator licenses.**  All operator licenses required by this subpart must be readily available for inspection.  **§ 80.177   When operator license is not required.**  (a) No radio operator authorization is required to operate:  (1) A shore radar, a shore radiolocation, maritime support or shore radionavigation station;  (2) A survival craft station or an emergency position indicating radio beacon;  (3) A ship radar station if:  (i) The radar frequency is determined by a nontunable, pulse type magnetron or other fixed tuned device, and  (ii) The radar is capable of being operated exclusively by external controls;  (4) An on board station; or  (5) A ship station operating in the VHF band on board a ship voluntarily equipped with radio and sailing on a domestic voyage.  (b) No radio operator license is required to install a VHF or AIS transmitter in a ship station if the installation is made by, or under the supervision of, the licensee of the ship station and if modifications to the transmitter other than front panel controls are not made.  *REASON: Inclusion of updated technology*  (c) No operator license is required to operate coast telephone stations or marine utility stations.  (d) No radio operator license is required to install a radar station on a voluntarily equipped ship when a manual is included with the equipment that provides step-by-step instructions for the installation, calibration, and operation of the radar. The installation must be made by, or under the supervision of, the licensee of that ship station and no modifications or adjustments other than to the front panel controls are to be made to the equipment.  **§ 80.179   Unattended operation.**  The following unattended transmitter operations are authorized:  (a) EPIRB operations when emergency conditions preclude attendance of the EPIRB transmitter by a person.  (b) Operation of AIS, when navigation status, if applicable, is set to at anchor, moored or aground.    *REASON: This method of alarming never came into practical effect. With DSC use by Rescue21 and on most VHF radios, its use is no longer appropriate. DSC standards referenced in §80.225 no longer provide for unattended transmitter operation. NBDP and AMTS no longer in use. Inclusion of AIS provided that its navigation status is not left as underway.*  Subpart E—General Technical Standards  **§ 80.201   Scope.**  This subpart gives the general technical requirements for the use of frequencies and equipment in the maritime services. These requirements include standards for equipment authorization, frequency tolerance, modulation, emission, power and bandwidth.  **§ 80.203   Authorization of transmitters for licensing.**  (a) Each transmitter authorized in a station in the maritime services, except as indicated in paragraphs (g), (h) and (i) of this section, must be certificated by the Commission for part 80 operations. The procedures for certification are contained in part 2 of this chapter. Transmitters of a model authorized before October 1, 1986 will be considered type accepted for use in ship or coast stations as appropriate.  (b) The external controls, of maritime station transmitters capable of operation in the 156–162 MHz band and manufactured in or imported into the United States after August 1, 1990, or sold or installed after August 1, 1991, must provide for selection of only maritime channels for which the maritime station is authorized. Such transmitters must not be capable of being programmed by station operators using external controls to transmit on channels other than those programmed by the manufacturer, service or maintenance personnel.  (1) Any manufacturer procedures and special devices for programming must only be made available to service companies employing licensed service and maintenance personnel that meet the requirements of §80.169(a) and must not be made available with information normally provided to consumers.  (2) The channels preprogrammed by manufacturers, service and maintenance personnel for selection by the external controls of a maritime station transmitter must be limited to those channels listed in this part and the duplex channels listed in Appendix 18 of the international Radio Regulations. The duplex channels listed in Appendix 18 of the international Radio Regulations must be used only in the specified duplex mode. Simplex operations on Appendix 18 duplex channels that are not in accordance with this part are prohibited.  (3) Except as provided in paragraph (b)(4) of this section, programming of authorized channels must be performed only by a person holding a First Class Radiotelegraph Operator’s Certificate, Second Class Radiotelegraph Operator’s Certificate, Radiotelegraph Operator License, or General Radiotelephone Operator License using any of the following procedures:  (i) Internal adjustment of the transmitter;  (ii) Use of controls normally inaccessible to the station operator;  (iii) Use of external devices or equipment modules made available only to service and maintenance personnel through a service company; and  (iv) Copying of a channel selection program directly from another transmitter (cloning) using devices and procedures made available only to service and maintenance personnel through a service company.  (4) Notwithstanding paragraph (b)(3) of this section, authorized channels may be programmed via computerized remote control by any person, provided that the remote control operation is designed to preclude the programming of channels not authorized to the licensee.  (5) VHF maritime radio station transmitters capable of being programmed by station operators by means of external controls that are installed in a maritime station by August 1, 1991, are authorized for use indefinitely at the same maritime station.  (c) All VHF ship station transmitters that are either manufactured in or imported into the United States, on or after August 1, 1993, or are initially installed on or after August 1, 1994, must be equipped with an automatic timing device that deactivates the transmitter and reverts the transmitter to the receive mode after an uninterrupted transmission period of five minutes, plus or minus 10 per cent. Additionally, such transmitters must have a device that indicates when the automatic timer has deactivated the transmitter. VHF ship station transmitters initially installed before August 1, 1994, are authorized for use indefinitely at the same maritime station. VHF hand-held, portable transmitters are not required to comply with the requirements in paragraph (c) of this section except when used as described in §80.141.  (d) Except for radar equipment, applicants for certification of radio equipment designed to satisfy Part II of Title III of the Communications Act or the Safety Convention must also submit with their application a working unit of the type for which certification is desired. Manufacturers of radar equipment intended for installation on voluntarily equipped ships by persons without FCC operators license must include with their equipment authorization application a manual that provides step-by-step procedures for the installation, calibration, and operation of the radar stations.  (e) [Reserved]  (f) Transmitters certificated for single sideband suppressed carrier radiotelephone transmissions may be used for facsimile transmissions without filing for a certification modification provided the transmitters retain certification and comply with the applicable standards in this part.  (g) Manufacturers of ship earth station transmitters intended for use in the GMDSS mobile satellite space segment must comply with the verification procedures given in part 2 of this chapter. Such equipment must be verified in accordance with the technical requirements provided by manufacturer and must be type approved by the manufacturer for use in the GMDSS mobile satellite space segment. The ship earth station input/output parameters, the data obtained when the equipment is integrated in system configuration and the pertinent method of test procedures that are used for type approval of the station model which are essential for the compatible operation of that station in the GMDSS mobile satellite space segment must be disclosed by the manufacturer upon request of the FCC. Witnessing of the type approval tests and the disclosure of the ship earth station equipment design or any other information of a proprietary nature will be at the discretion of the ship earth station manufacturer.  *REASON: To accommodate GMDSS mobile satellite service providers in addition to Inmarsat.*  (h) In addition to the certification requirements contained in part 2 of this chapter, applicants for certification of 406.0–406.1 MHz radiobeacons must also comply with the certification procedures contained in §80.1061 of this part.  (i) Certification is not required for U.S. Government furnished transmitters to fulfill a U.S. Government contract. However, such transmitters must comply with all technical requirements in this part.  (j) Certification is not required for transmitters authorized for developmental stations.  (k) Certification of individual radio transmitters requested by station applicants or licensees must also follow the certification procedure in paragraph (a) of this section. However, operation of such transmitters must be limited to the specific units individually identified on the station authorization.  (l) Ship station transmitters may be certificated for emissions not shown in §80.205 of this part. However, such emissions are not authorized for use in the United States or for communications with U.S. coast stations.  (m) Ship station MF, HF, and VHF transmitters may employ external or internal devices to send synthesized voice transmissions for distress and safety purposes on any distress and safety frequency authorized for radiotelephony listed in §80.369 provided the following requirements are met:  (1) The technical characteristics of the distress transmissions must comply with this part.  (2) A transmitter and any internal device capable of transmitting a synthesized voice message must be certificated as an integral unit.  (3) The synthesized voice distress transmission must begin with the words “this is a recording” and should be comprised of at least the radiotelephone distress call as described in §80.314(c) (1)-(4) and the ship's position in latitude and longitude, using figures for the degrees and minutes, together with one of the words NORTH or SOUTH and one of the words EAST or WEST..  REASON: 80.315 and .316 are no longer valid references. Revised text reflects the wording in the original references.  (4) Such transmission must be initiated manually by an off-switch that is protected from inadvertent activation and must cause the transmitter to switch to an appropriate distress and safety frequency. The radiotelephone distress call and message described in §§80.203(m)(3) (i) and (ii), respectively, may be repeated. However, the entire transmission including repeats must not exceed 45 seconds from beginning to end. Upon ending the transceiver must return to the receive mode and must not be capable of sending the synthesized distress call for at least thirty seconds. Placing the switch to the off position must stop the distress transmission and permit the transmitter to be used to send and receive standard voice communications.  (5) Use of the microphone must cause the synthesized voice distress transmission to cease and allow the immediate use of the transmitter for sending and receiving standard voice communications.  (6) No ship station shall include any device or provision capable of transmitting any tone or signal on a distress frequency for any purpose unless specific provisions exist in this part authorizing such tone or signal.  (n) Applications for certification of all marine radio transmitters operating in the 2–27.5 MHz band or the 156–162 MHz band must have a DSC capability in accordance with § 80.225. This requirement does not apply to transmitters used with AMTS or hand-held portable transmitters.      **§ 80.205   Bandwidths.**  (a) An emission designator shows the necessary bandwidth for each class of emission of a station except that in ship earth stations it shows the occupied or necessary bandwidth, whichever is greater. The following table gives the class of emission and corresponding emission designator and authorized bandwidth:   |  |  |  | | --- | --- | --- | | **Class of emission** | **Emission designator** | **Authorized bandwidth (kHz)** | | A1A | 160HA1A | 0.4 | | A1B | 160HA1B | 0.4 | | A1D12 | 16K0A1D | 20.0 | | A2A | 2K66A2A | 2.8 | | A2B | 2K66A2B | 2.8 | | A2D12 | 16K0A2D | 20.0 | | A3E | 6K00A3E | 8.0 | | A3N2 | 2K66A3N | 2.8 | | A3X3 | 3K20A3X | 25.0 | | F1B4 | 280HF1B | 0.3 | | F1B5 | 300HF1B | 0.5 | | F1B6 | 16KOF1B | 20.0 | | F1C | 2K80F1C | 3.0 | | F1D12 | 16K0F1D | 20.0 | | F2B6 | 16KOF2B | 20.0 | | F2C7 | 16KOF2C | 20.0 | | F2D12 | 16K0F2D | 20.0 | | F3C | 2K80F3C | 3.0 | | F3C7 | 16KOF3C | 20.0 | | F3E8 | 16KOF3E | 20.0 | | F3N9 | 20MOF3N | 20,000.0 | | G1D12 | 16K0G1D | 20.0 | | G2D12 | 16K0G2D | 20.0 | | G3D10 | 16KOG3D | 20.0 | | G3E8 | 16KOG3E | 20.0 | | G3N3,13 | 16KOG3N | 20.0 | | H2A | 1K40H2A | 2.8 | | H2B | 1K40H2B | 2.8 | | H3E11 | 2K80H3E | 3.0 | | H3N | 2K66H3N | 2.8 | | J2A | 160HJ2A | 0.4 | | J2B4 | 280HJ2B | 0.3 | | J2B5 | 300HJ2B | 0.5 | | J2B | 2K80J2B | 3.0 | | J2C | 2K80J2C | 3.0 | | J2D14 | 2K80J2D | 3.0 | | J3C | 2K80J3C | 3.0 | | J3E11 | 2K80J3E | 3.0 | | J3N | 160HJ3N | 0.4 | | NON | NON | 0.4 | | PON | (12) | (12) | | R3E11 | 2K80R3E | 3.0 |   1. [Reserved]  2Applicable only to transmissions in the 405–525 kHz band for direction finding.  3Applicable only to EPIRB's.  4Radioprinter transmissions for communications with private coast stations.  5NBDP radiotelegraph and data transmissions for communications with public coast stations.  6Applicable only to radioprinter and data in the 156–162 MHz band and radioprinter in the 216–220 MHz band.  7Applicable only to facsimile in the 156–162 MHz and 216–220 MHz bands.  8Applicable only when maximum frequency deviation is 5 kHz. See also paragraph (b) of this section.  9Applicable only to marine hand-held radar.  10Applicable only to on-board frequencies for maneuvering or navigation.  11Transmitters approved prior to December 31, 1969, for emission H3E, J3E and R3E and an authorized bandwidth of 3.5 kHz may continue to be operated. These transmitters will not be authorized in new installations.  12Applicable to radiolocation and associated telecommand ship stations operating on 154.585 MHz, 159.480 MHz, 160.725 MHz. 160.785 MHz, 454.000 MHz, and 459.000 MHz; emergency position indicating radiobeacons operating in the 406.000–406.1000 MHz frequency bank; and data transmissions in the 156–162 MHz band.  13[Reserved]  14The information is contained in multiple very low level subcarriers.  (b) For land stations the maximum authorized frequency deviation for F3E or G3E emission is as follows:  (1) 5 kHz in the 72.0–73.0 MHz, 75.4–76.0 MHz and 156–162 MHz bands;  (2) 15 kHz for stations which were authorized for operation before December 1, 1961, in the 73.0–74.6 MHz band.  **§ 80.207   Classes of emission.**  (a) Authorization to use radiotelephone and radiotelegraph emissions by ship and coast stations includes the use of digital selective calling and selective calling techniques in accordance with §80.225.  (b) In radiotelegraphy communications employing a modulated carrier the carrier must be keyed and modulated by an audio frequency.  (c) Authorization to use single sideband emission is limited to emitting a carrier;  (1) For full carrier transmitters at a power level between 3 and 6 dB below peak envelope power;  (2) For suppressed carrier transmitters at a power level at least 40 dB below peak envelope power; and  (3) For reduced or variable level carrier:  (i) In the 1600–4000 kHz band:  (A) For coast station transmitters 18±2 dB below peak envelope power;  (B) For ship station transmitters installed before January 2, 1982, 16±2 dB below peak envelope power; and  (C) For ship station transmitters installed after January 1, 1982, 18±2 dB below peak envelope power.  (ii) In the 4000–27500 kHz band:  (A) For coast station transmitters 18±2 dB below peak envelope power;  (B) For ship station transmitters installed before January 2, 1978, 16±2 dB below peak envelope power; and  (C) For ship station transmitters installed after January 1, 1978, 18±2 dB below peak envelope power.  (d) The authorized classes of emission are as follows:   |  |  | | --- | --- | | **Types of stations** | **Classes of emission** | | **Ship Stations**1 |  | | Radiotelegraphy: |  | | 100–160 kHz | A1A. | | 405–525 kHz | A1A, J2A. | | 1615–27500 kHz: |  | | Manual15,16,17 | A1A, J2A, J2B, J2D. | | DSC6 | F1B, J2B. | | NB–DP14,16 | F1B, J2B, J2D. | | Facsimile | F1C, F3C, J2C, J3C. | | 156–162 MHz2 | F1B, F2B, F2C, F3C, F1D, F2D. | | DSC | G2B. | | 216–220 MHz3 | F1B, F2B, F2C, F3C. | | 1626.5–1646.5 MHz | (4). | | Radiotelephony: |  | | 1615–27500 kHz16 | H3E, J2D, J3E, R3E. | | 27.5–470 MHz6 | G3D, G3E. | | 1626.5–1646.5 MHz | (4). | | Radiodetermination: |  | | 285–325 kHz7 | A1A, A2A. | | 405–525 kHz (Direction Finding)8 | A3N, H3N, J3N, NON. | | 154–459 MHz:12 | A1D, A2D, F1D, F2D, G1D, G2D. | | 2.4–9.5 GHz | PON. | | **Land Stations**1 |  | | Radiotelegraphy: |  | | 100–160 kHz | A1A. | | 405–525 kHz | A1A, J2A. | | 1605–2850 kHz: |  | | Manual | A1A, J2A. | | Facsimile | F1C, F3C, J2C, J3C. | | Alaska-Fixed | A1A, J2A. | | 4000–27500 kHz: |  | | Manual16 | A1A, J2A, J2B, J2D. | | DSC18 | F1B, J2B. | | NB–DP14,18 | F1,B J2B, J2D. | | Facsimile | F1C, F3C, J2C, J3C. | | Alaska-Fixed17,18 | A1A, A2A, F1B, F2B, J2B, J2D. | | 72–76 MHz | A1A, A2A, F1B, F2B. | | 156–162 MHz2,20 | F1B, F2B, F2C, F3C, F1D, F2D. | | DSC | G2B. | | 216–220 MHz3 | F1B, F2B, F2C, F3C. | | Radiotelephony: |  | | 1615–27500 kHz18,19 | H3E, J3E, R3E. | | 72–76 MHz | A3E, F3E, G3E. | | 156–470 MHz | G3E. | | Radiodetermination: |  | | 2.4–9.6 GHz | PON. | | Distress, Urgency and Safety8,9 |  | | 2182 kHz,11 | A2B, A3B, H2B, H3E, J2B, J3E. | | 121.500 MHz | A3E, AEX, N0N. | | 123.100 MHz | A3E. | | 156.750 and 156.800 MHz13 | G3E, G3N. | | 243.000 MHz | A3E, A3X, N0N. | | 406.0–406.1 MHz | G1D. |   1Excludes distress, EPIRBs, survival craft, and automatic link establishment.  2Frequencies used for public correspondence and in Alaska 156.425 MHz. *See* §§80.371(c), 80.373(f) and 80.385(b). Transmitters approved before January 1, 1994, for G3E emissions will be authorized indefinitely for F2C, F3C, F1D and F2D emissions. Transmitters approved on or after January 1, 1994, will be authorized for F2C, F3C, F1D or F2D emissions only if they are approved specifically for each emission designator.  3Frequencies used in the Automated Maritime Telecommunications System (AMTS). *See* §80.385(b).  4Types of emission are determined by the GMDSS mobile satellite service provider.  5[Reserved]  6G3D emission must be used only by one-board stations for maneuvering or navigation.  7Frequencies used for cable repair operations. *See* §80.375(b).  8For direction finding requirements see §80.375.  9Includes distress emissions used by ship, coast, EPIRBs and survival craft stations.  10 [Reserved]  *REASON: No longer used*  11Ships on domestic voyages must use J3E emission only.  12For frequencies 154.585 MHz, 159.480 MHz, 160.725 MHz, 160.785 MHz, 454.000 MHz and 459.000 MHz, authorized for offshore radiolocation and related telecommand operations.  13[Reserved]  14NB–DP operations which are not in accordance with ITU–R Recommendations M.625 or M.476 are permitted to utilize any modulation, so long as emissions are within the limits set forth in §80.211(f).  15J2B is permitted only on 2000–27500 kHz.  16J2D is permitted only on 2000–27500 kHz, and ship stations employing J2D emissions shall at no time use a peak envelope power in excess of 1.5 kW per channel.  17J2B and J2D are permitted provided they do not cause harmful interference to A1A.  18Coast stations employing J2D emissions shall at no time use a peak envelope power in excess of 10 kW per channel.  19J2D is permitted only on 2000–27500 kHz.  20If a station uses another type of digital emission, it must comply with the emission mask requirements of §90.210 of this chapter, except that Automatic Identification System (AIS) transmissions do not have to comply with the emission mask requirements of §90.210 of this chapter.  **§ 80.209   Transmitter frequency tolerances.**  (a) The frequency tolerance requirements applicable to transmitters in the maritime services are shown in the following table. Tolerances are given as parts in 106 unless shown in Hz.   |  |  | | --- | --- | | **Frequency bands and categories of stations** | **Tolerances1** | | (1) Band 100–525 kHz: |  | | (i) Coast stations: |  | | For single sideband emissions | 20 Hz. | | For transmitters with narrow-band direct printing and data emissions | 10 Hz2 | | For transmitters with digital selective calling emissions | 10 Hz. | | For all other emissions | 100. | | (ii) Ship stations: |  | | For transmitters with narrow-band direct printing and data emissions | 20 Hz. | | For transmitters with digital selective calling emissions | 10 Hz2 | | For all other transmitters | 10 Hz. | | (iii) Ship stations for emergency only: |  | | For all emissions | 20 Hz. | | (iv) Survival craft stations: |  | | For all emissions | 20 Hz. | | (v) Radiodetermination stations: |  | | For all emissions | 100. | | (2) Band 1600–4000 kHz: |  | | (i) Coast stations and Alaska fixed stations: |  | | For single sideband and facsimile | 20 Hz. | | For narrow-band direct printing and data emissions | 10 Hz.2 | | For transmitters with digital selective calling emissions | 10 Hz.2 | | For all other emissions | 50 Hz. | | (ii) Ship stations: |  | | For transmitters with narrow-band direct printing and data emissions | 10 Hz.2 | | For transmitters with digital selective calling emissions | 10 Hz.3 | | For all other transmitters | 20 Hz. | | (iii) Survival craft stations: | 20 Hz. | | (iv) Radiodetermination stations: |  | | With power 200W or less | 20. | | With power above 200W | 10. | | (3) Band 4000–27500 kHz: |  | | (i) Coast stations and Alaska fixed stations: |  | | For single sideband and facsimile emissions | 20 Hz. | | For narrow-band direct printing and data emissions | 10 Hz.2 | | For digital selective calling emissions | 10 Hz. | | For Morse telegraphy emissions | 10. | | For all other emissions | 15 Hz. | | (ii) Ship stations: |  | | For transmitters with narrow-band direct printing and data emissions | 10 Hz.2 | | For transmitters with digital selective calling emissions | 10 Hz.3 | | For all other transmitters | 20 Hz. | | (iii) Survival craft stations: | 50 Hz. | | (4) Band 72–76 MHz: |  | | (i) Fixed stations: |  | | Operating in the 72.0–73.0 and 75.4–76.0 MHz bands | 5. | | Operating in the 73.74.6 MHz band | 50. | | (5) Band 156–162 MHz: |  | | (i) Coast stations: |  | | For carriers licensed to operate with a carrier power: |  | | Below 3 watts | 10. | | 3 to 100 watts | 5.7 | | (ii) Ship stations | 10.4 | | (iii) Survival craft stations operating on 121.500 MHz | 50. | | (iv) EPIRBs: |  | | Operating on 121.500 and 243.000 MHz | 50. | | Operating on 156.750 and 156.800 MHz.6 | 10. | | (6) Band 216–220 MHz: |  | | (i) Coast stations: |  | | For all emissions | 5. | | (ii) Ship stations: |  | | For all emissions | 5. | | (7) Band 400–466 MHz: |  | | (i) EPIRBs operating on 406–406.1 MHz | 5. | | (ii) On-board stations | 5. | | (iii) Radiolocation and telecommand stations. | 5. | | (8) Band 1626.5–1646.5 MHz: |  | | (i) Ship earth stations | 5. |   1Transmitters authorized prior to January 2, 1990, with frequency tolerances equal to or better than those required after this date will continue to be authorized in the maritime services provided they retain approval and comply with the applicable standards in this part.  2The frequency tolerance for narrow-band direct printing and data transmitters installed before January 2, 1992, is 15 Hz for coast stations and 20 Hz for ship stations. The frequency tolerance for narrow-band direct printing and data transmitters approved or installed after January 1, 1992, is 10 Hz.  3[Reserved]  4For transmitters in the radiolocation and associated telecommand service operating on 154.584 MHz, 159.480 MHz, 160.725 MHz and 160.785 MHz the frequency tolerance is 15 parts in 106.  5[Reserved]  6[Reserved]  7For transmitters operated at private coast stations with antenna heights less than 6 meters (20 feet) above ground and output power of 25 watts or less the frequency tolerance is 10 parts in 106.  (b) When pulse modulation is used in land and ship radar stations operating in the bands above 2.4 GHz the frequency at which maximum emission occurs must be within the authorized bandwidth and must not be closer than 1.5/T MHz to the upper and lower limits of the authorized bandwidth where “T” is the pulse duration in microseconds. In the band 14.00–14.05 GHz the center frequency must not vary more than 10 MHz from 14.025 GHz.  (c) For stations in the maritime radiodetermination service, other than ship radar stations, the authorized frequency tolerance will be specified on the license when it is not specified in this part.  **§ 80.211   Emission limitations.**  The emissions must be attenuated according to the following schedule.  (a) The mean power when using emissions H3E, J3E and R3E:  (1) On any frequency removed from the assigned frequency by more than 50 percent up to and including 150 percent of the authorized bandwidth:  at least 25 dB for transmitters installed before February 1, 1992,  at least 28 dB for transmitters installed on or after February 1, 1992;  (2) On any frequency removed from the assigned frequency by more than 150 percent up to and including 250 percent of the authorized bandwidth: At least 35 dB; and  (3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 plus 10log10(mean power in watts) dB.  (b) For transmitters operating in the band 1626.5–1646.5 MHz. In any 4 kHz band the mean power of emissions shall be attenuated below the mean output power of the transmitter as follows:  (1) Where the center frequency is removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: At least 25 dB;  (2) Where the center frequency is removed from the assigned frequency by more than 100 percent up to 250 percent of the authorized bandwidth: At least 35 dB; and  (3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 plus 10log10(mean power in watts) dB.  (c) In any 4 kHz band the peak power of spurious emissions and noise at the input to the transmit antenna must be attenuated below the peak output power of the station as follows:  (1) 125 dB at 1525.0 MHz, increasing linearly to 90 dB at 1612.5 MHz;  (2) 90 dB at 1612.5 MHz increasing linearly to 60 dB at 1624.0 MHz;  (3) 90 dB from 1624.0 MHz to 1650.0 MHz, except at frequencies near the transmitted carrier where the requirements of paragraphs (b)(1) through (3) of this section, apply;  (4) 60 dB at 1650.0 MHz decreasing linearly to 90 dB at 1662.5 MHz;  (5) 90 dB at 1662.5 MHz decreasing linearly to 125 dB at 1752.5 MHz; and  (6) 125 dB outside above range, except for harmonics which must comply with (b)(3) of this section.  (d) The mean power of emissions from radiotelephone survival craft transmitters, 9 GHz search and rescue transponders, and radiotelegraph survival craft transmitters must be attenuated below the mean output power of the transmitter as follows:  (1) On any frequency removed from the assigned frequency by more than 50 percent, up to and including 100 percent of the authorized bandwidth: at least 25 dB;  (2) On any frequency removed from the assigned frequency by more than 100 percent of the authorized bandwidth: at least 30 dB.  (e) The mean power of EPIRBs operating on 121.500 MHz, 243.000 MHz and 406.0–406.1 MHz must be as follows:  (1) On any frequency removed from the assigned frequency by more than 50 percent, up to and including 100 percent of the authorized bandwidth: At least 25 dB;  (2) On any frequency removed from the assigned frequency by more than 100 percent: at least 30 dB.  (f) The mean power when using emissions other than those in paragraphs (a), (b), (c) and (d) of this section:  (1) On any frequency removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: At least 25 dB;  (2) On any frequency removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: At least 35 dB; and  (3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 plus 10log10(mean power in watts) dB.  (g) Developmental stations must conform to the standards for regular authorized stations.  **§ 80.213   Modulation requirements.**  (a) Transmitters must meet the following modulation requirements:  (1) When double sideband emission is used the peak modulation must be maintained between 75 and 100 percent;  (2) When phase or frequency modulation is used in the 156–162 MHz band the peak modulation must be maintained between 75 and 100 percent. A frequency deviation of ±5 kHz is defined as 100 percent peak modulation; and  (3) In single sideband operation the upper sideband must be transmitted. Single sideband transmitters must automatically limit the peak envelope power to their authorized operating power and meet the requirements in §80.207(c).  (b) Radiotelephone transmitters using A3E, F3E and G3E emission must have a modulation limiter to prevent any modulation over 100 percent. This requirement does not apply to survival craft transmitters, to transmitters that do not require a license or to transmitters whose output power does not exceed 3 watts.  (c) Coast station transmitters operated in the 72.0–73.0 MHz and 75.4–76.0 MHz bands must be equipped with an audio low-pass filter. The filter must be installed between the modulation limiter and the modulated radio frequency stage. At frequencies between 3 kHz and 15 kHz it must have an attenuation greater than at 1 kHz by at least 40log10(f/3) dB where “f” is the frequency in kilohertz. At frequencies above 15 kHz the attenuation must be at least 28 dB greater than at 1 kHz.  (d) Ship and coast station transmitters operating in the 156–162 MHz and 216–220 bands must be capable of proper operation with a frequency deviation that does not exceed ±5 kHz when using any emission authorized by §80.207.  (e) Coast station transmitters operated in the 156–162 MHz band must be equipped with an audio low-pass filter. The filter must be installed between the modulation limiter and the modulated radio frequency stage. At frequencies between 3 kHz and 20 kHz it must have an attenuation greater than at 1 kHz by at least 60log10(f/3) dB where “f” is the audio frequency in kilohertz. At frequencies above 20 kHz the attenuation must be at least 50 dB greater than at 1 kHz.  (f) Radiodetermination ship stations operating on 154.585 MHz, 159.480 MHz, 160.725 MHz, 160.785 MHz, 454.000 MHz and 459.000 MHz must employ a duty cycle with a maximum transmission period of 60 seconds followed by a minimum quiescent period four times the duration of the transmission period.  (g) Radar stations operating in the bands above 2.4 GHz may use any type of modulation consistent with the bandwidth requirements in §80.209(b).  (h) Radar transponder coast stations using the 2900–3100 MHz or 9300–9500 MHz band must operate in a variable frequency mode and respond on their operating frequencies with a maximum error equivalent to 100 meters. Additionally, their response must be encoded with a Morse character starting with a dash. The duration of a Morse dot is defined as equal to the width of a space and 1/3 of the width of a Morse dash. The duration of the response code must not exceed 50 microseconds. The sensitivity of the stations must be adjustable so that received signals below −10 dBm at the antenna will not activate the transponder. Antenna polarization must be horizontal when operating in the 9300–9500 MHz band and either horizontal or both horizontal and vertical when operating in the 2900–3100 MHz band. Racons using frequency agile transmitting techniques must include circuitry designed to reduce interference caused by triggering from radar antenna sidelobes.  (i) Variable frequency ship station transponders operating in the 2900–3100 MHz or 9300–9500 MHz band that are not used for search and rescue purposes must meet the following requirements:  (1) Non-selectable transponders must have the following characteristics:  (i) They must respond on all their frequencies with a maximum range error equivalent to 100 meters;  (ii) They must use a Morse encoding of “PS” (dot-dash-dash-dot, dot-dot-dot), meaning “You should not come any closer”. The width of a Morse dot is defined as equal to the width of a space and1/3of the width of a Morse dash;  (iii) When they employ swept frequency techniques they must not transmit on any frequency for more than 10 seconds in any 120 second period;  (iv) Any range offset of their response must occur during their pause on the fixed frequency;  (v) The duration of the response code must not exceed 50 microseconds;  (vi) The sensitivity of the stations must be adjustable so that received signals below −10 dBm at the antenna input will not activate the transponder;  (vii) Antenna polarization must be horizontal when operating in the 9300–9500 MHz band and either horizontal or both horizontal and vertical when operating in the 2900–3100 MHz band.  (viii) Transponders using frequency agile techniques must include circuitry designed to reduce interference caused by triggering from radar antenna sidelobes.  (2) Selectable transponders must be authorized under part 5 of the Commission's rules until standards for their use are developed.  (j) The transmitted signals of search and rescue transponders must cause to appear on a radar display a series of at least 20 equally spaced dots.  (k) The modulation requirements for EPIRB's are contained in subpart V.  § 80.215   Transmitter power.  (a) Transmitter power shown on the radio station authorization is the maximum power the licensee is authorized to use. Power is expressed in the following terms:  (1) For single sideband emission: Peak envelope power;  (2) For G3E emission: Carrier power;  (3) For PON and F3N emission: Mean power;  (4) For all emissions in the 1626.5–1646.5 MHz band: equivalent isotropic radiated power.  (5) For all other emissions: the carrier power multiplied by 1.67.  (b) *Coast station frequencies below 27500 kHz.* The maximum power must not exceed the values listed below.  (1) Public coast stations, except Alaska:  (i) Radiotelegraphy:  100–160 kHz—80kW  405–525 kHz—40kW  2035–2065 kHz—6.6kW  4000–8000 kHz—10kW  8000–9000 kHz—20kW  12000–27500 kHz—30kW  (ii) Radiotelephony:  2000–4000 kHz—day—800W  2000–4000 kHz—night—400W  4000–27500 kHz—10kW  (2) Private coast stations, except in Alaska: 1kW  (3) Coast stations in Alaska, public and private:  405–525 kHz—265W  1605–12000 kHz—150W  (c) *Coast station frequencies above 27500 kHz.* The maximum power must not exceed the values listed below.  (1) Coast stations:  156–162 MHz–50W1,2,13  1 Maximum authorized power at the input terminals of the station antenna.  216–220 MHz2  2 See paragraph (h) of this section.  (2) Marine utility stations:  156–162 MHz—10W  (d) *Ship station frequencies below 27500 kHz.* The maximum power must not exceed the values listed below:  (1) Radiotelegraphy: All ships—2kW3  3 For passenger ships 5000 gross tons and over—8kW. For cable-repair ships operating on radiodetermination frequencies, 15 watts; see §80.375(b).  (2) Radiotelephony:  (i) All ships—Great Lakes and Inland Waters—150W  (ii) All ships—Open waters; 2000–4000 kHz—150W  2182 kHz—emergency, urgency, or safety ship to shore—400W4  4 For passenger ships 5000 gross tons and over—1kW.  (iii) All ships—Open waters; 4000–27500 kHz—1.5kW5 .  5 For passenger ships 5,000 gross tons and over 3kW.  (3) Digital selective calling:  All ships 415–526.5 kHz—400 W  All ships 1605–4000 kHz—400 W  All ships 4000–27500 kHz—1.5 kW  (e) *Ship stations frequencies above 27500 kHz.* The maximum power must not exceed the values listed below.  (1) Ship stations 156–162 MHz—25W6, 13  6 Reducible to 1 watt or less, except for transmitters limited to public correspondence channels and used in an automated system.  13 The frequencies 156.775 and 156.825 MHz are available for navigation-related port operations or ship movement only, and all precautions must be taken to avoid harmful interference to channel 16. Transmitter output power is limited to 1 watt.  REASON: Consequential to WRC12 changes to Ap18 (to protect AIS satellite uplink channels).  Editorial: Note 13 should be moved from its current location between Notes 6 and 7, to the end after Note 12.  Marine utility stations and hand-held portable transmitters: 156–162 MHz–10W  (2) Ship stations 216–220 MHz—25W7  7 [Reserved]  (3) On board stations 456–468 MHz—4W8  8 Certification based on a carrier power of 4 watts with transmitter connected to a dummy load of matching impedance. The effective radiated power must not exceed 2 watts.  (4) Ship earth stations 1626.5–1646.5 MHz9  9 See paragraph (k) of this section.  (5) Ship radar stations with F3N emission—200 mW  (6) EPIRB locating—121.50010  10 See subpart V of this part.  (f) *Fixed stations.* The maximum power must not exceed the values+ listed below.  (1) Maritime support (receiver test):  R3E and J3C emission—150W  F3E emission—50W  (2) Operational fixed: 72–76 MHz and above 162 MHz11  11 See paragraph (l) of this section.  (3) Alaska—Private fixed:12  12 The frequencies 156.375 MHz and 156.650 MHz are primarily intership frequencies. When authorized for coast stations on a secondary basis, the normal output power must not exceed 1 watt and the maximum output power must not exceed 10 watts.  10–200 kHz—650W  405–525 kHz—265W  1605–12000 kHz—150W  (4) Alaska—Public fixed:  405–525 kHz—1kW  1605–12000 kHz—1kW  (g) The carrier power of ship station radiotelephone transmitters, except portable transmitters, operating in the 156–162 MHz band must be at least 8 but not more than 25 watts. Transmitters that use 12 volt lead acid storage batteries as a primary power source must be measured with a primary voltage between 12.2 and 13.7 volts DC. Additionally, unless otherwise indicated, equipment in radiotelephone ship stations operating in the 156–162 MHz band must meet the following requirements:  (1) All transmitters and remote control units must be capable of reducing the carrier power to one watt or less;  (2) Except as indicated in (g)(4) of this section, all transmitters manufactured after January 21, 1987, or in use after January 21, 1997, must automatically reduce the carrier power to one watt or less when the transmitter is tuned to 156.375 MHz or 156.650 MHz, and must be provided with a manual override switch which when held by an operator will permit full carrier power operation on 156.375 MHz and 156.650 MHz;  (3) Except as indicated in (g)(4) of this section, all ship station transmitters installed after January 9, 2006, must be capable of tuning to 156.775 MHz and 156.825 MHz and must automatically reduce the carrier power to one watt or less, with no manual override capability, when the transmitter is tuned to either 156.775 MHz or 156.825 MHz;  (4) Hand-held portable transmitters certified after [the date this Order becomes effective or certified three years after this Order becomes effective are required to comply with the automatic reduction of carrier power in (g)(2) of this section; and  *REASON: consequential to WRC12. Needed to protect satellite detection of AIS.*  (5) Transmitters dedicated for use on public correspondence duplex channels as additional equipment to a VHF ship station in the Great Lakes which meet all pertinent rules in this part are not required to reduce their carrier power to one watt.  (h) Coast stations in an AMTS may radiate as follows, subject to the condition that no harmful interference will be caused to television reception except that TV services authorized subsequent to the filing of the AMTS station application will not be protected.  (1) When located more than 169 kilometers (105 miles) from the antenna of a Channel 13 TV station and more than 129 kilometers (80 miles) from the antenna of a channel 10 station, the ERP of coast stations having an antenna height of 61 meters (200 feet) or less above ground must not exceed 1000 watts.  (2) Coast stations located less than 169 kilometers (105 miles) from a channel 13 TV station, or less than 129 kilometers (80 miles) from a channel 10 TV station, or when using a transmitting antenna height above ground greater than 61 meters (200 feet), must submit a plan to limit interference to TV reception, unless the station's predicted interference contour is fully encompassed by the composite interference contour of the system's existing stations, or the station's predicted interference contour extends the system's composite interference contour over water only (disregarding uninhabited islands). The plan must include:  (i) A description of the interference contour with identification of the method used to determine this contour; and  (ii) A statement concerning the number of residences within the interference contour. The interference contour includes only areas inside the TV grade B contour with the latter determined assuming maximum permissible TV antenna height and power for broadcast stations and the actual facility parameters for translators and low power TV stations. See part 73, subpart E of this chapter for further information on TV grade B contour determination.  (3) When located as described in paragraph (h)(2) of this section, the coast station (or stations affecting the same TV Grade B contour) will be authorized if the applicant's plan has limited the interference contour(s) to fewer than 100 residences or if the applicant:  (i) Shows that the proposed site is the only suitable location (which, at the application stage, requires a showing that the proposed site is especially well-suited to provide the proposed service);  (ii) Develops a plan to control any interference caused to TV reception within the Grade B contour from its operations; and  (iii) Agrees to make such adjustments in the TV receivers affected as may be necessary to eliminate interference caused by its operations.  (4) The applicant must eliminate any interference caused by its operation to TV reception within the Grade B contour that might develop within 90 days of the time it is notified in writing by the Commission. If this interference is not removed within the 90-day period, operation of the coast station must be discontinued. The licensee is expected to help resolve all complaints of interference, whether inside or outside the Grade B contour.  (5) The transmitter power, as measured at the input terminals to the station antenna, must be 50 watts or less.  (i) A ship station must have a transmitter output not exceeding 25 watts and an ERP not exceeding 18 watts. The maximum transmitter output power is permitted to be increased to 50 watts under the following conditions:  (1) Increases exceeding 25 watts are made only by radio command from the controlling coast stations; and  (2) The application for an equipment authorization demonstrates that the transmitter output power is 25 watts or less when external radio commands are not present.  (j) A ship installation with a transmitter output power exceeding 25 watts under the conditions of paragraph (i) of this section is exempted from the limitation of 18 watts ERP when operating in specific geographical areas identified in a plan for the use of higher power.  (k) Within the 1626.5–1646.5 MHz band the maximum e.i.r.p by a ship earth station in any direction in the horizontal plane or in the direction of the space station must not exceed +40 dB relative to one watt in any 4 kHz band in the main beam, except upon a satisfactory showing of need for greater power, in which case a maximum of +55 dB relative to one watt may be authorized.  (l) For operational fixed stations using frequencies in the 72–76 MHz band and for other classes of stations operating above 162.025 MHz, the transmitter power must be specified in the station authorization. Frequencies in the 72–76 MHz band are listed in §80.381. The operational requirements for 72–76 MHz are contained in subpart L of this part.  (m) For radiodetermination transmitters using A1D, A2D, F1D, F2D, G1D and G2D emissions on 154.585 MHz, 159.480 MHz, 160.725 MHz, 160.785 MHz, 454.000 MHz and 459.000 MHz the mean output power of the unmodulated carrier must not exceed 25 watts.  (n) For radiodetermination stations operating above 2400 MHz the output power must be as follows:  (1) For radar stations that use F3N emission the mean output power must not exceed 200 milliwatts;  (2) For search and rescue stations the output power must be at least 400 milliwatts peak e.i.r.p.  (3) For all other transponder stations the output power must not exceed 20 watts peak e.i.r.p. Licensees of non-selectable transponder coast stations operating in the 2920–3100 MHz and 9320–9500 MHz bands must notify in writing the USCG District Commander of any incremental increase of their station's output power above 5 watts peak e.i.r.p.  **§ 80.217   Suppression of interference aboard ships.**  (a) A voluntarily equipped ship station receiver must not cause harmful interference to any receiver required by statute or treaty.  (b) The electromagnetic field from receivers required by statute or treaty must not exceed the following value at a distance over sea water of one nautical mile from the receiver:   |  |  | | --- | --- | | **Frequency of interfering emissions** | **Field intensity in microvolts per meter** | | Below 30 MHz | 0.1 | | 30 to 100 MHz | .3 | | 100 to 300 MHz | 1.0 | | Over 300 MHz | 3.0 |   or  Deliver not more than the following amounts of power, to an artificial antenna having electrical characteristics equivalent to those of the average receiving antenna(s) use on shipboard:   |  |  | | --- | --- | | **Frequency of interfering emissions** | **Power to artificial antenna in microwatts** | | Below 30 MHz | 400 | | 30 to 100 MHz | 4,000 | | 100 to 300 MHz | 40,000 | | Over 300 MHz | 400,000 |   § 80.219   Special requirements for narrow-band direct-printing (NB–DP) equipment.  NB–DP and data transmission equipment installed in ship and coast stations before October 1, 1990, that operates on the frequencies in the 4,000–27,500 kHz bands must be capable of operation in accordance with the technical requirements of either ITU–R M.476–5 or ITU–R M.625–3 (both incorporated by reference, *see* §80.7), and may be used indefinitely. Equipment installed on or after October 1, 1990, must be capable of operation in accordance with the technical requirements of ITU–R M.625–3, 1995 (incorporated by reference, see §80.7). NB–DP and data transmission equipment are additionally permitted to utilize any modulation, so long as emissions are within the limits set forth in §80.211(f) and the equipment is also capable of operation in accordance with ITU–R M.625–3 (incorporated by reference, see §80.7).  **[Reserved]****[Reserved]***REASON: No longer required or used.*  **§ 80.225   Requirements for selective calling equipment.**  This section specifies the requirements for voluntary digital selective calling (DSC) equipment and selective calling equipment installed in ship and coast stations, and incorporates by reference ITU–R M.493; IEC 62238; IEC 61162-1; IEC 61162-3; IEC 61162-450; NMEA 0183 (all incorporated by reference, *see* §80.7).  (a) The requirements for DSC equipment voluntarily installed in coast or ship stations are as follows:  (1) Beginning [three years after the effective date of these rules],, the Commission will not accept new Applications (but will continue to process then-pending applications) for certification of non-portable DSC equipment that does not meet the requirements of ITU–R M.493 (series) and, in the case of Class D DSC equipment only, both ITU–R M.493 (series) and IEC 62238, incorporated by reference in § 80.7 (c)(3) and (d)(20), respectively).  *REASON: ITU-R Rec. M-493-14, incorporated by reference in §80.7(c)(3),requires Class D and E (VHF and HF respectively) radios have an integral position-fixing capability.Experience has shown that approximately 90% of DSC distress transmissions do not include an associated position and lives are being saved when such alerts include a position from radios such as handhelds which have an integral GPS. The costs have GPS receivers have been reduced such that it is now practical to include them in maritime radios.*  (2) Beginning [after the effective date of these rules], the FCC will not accept new applications (but will continue to process then-pending applications) for certification of handheld, portable DSC equipment that does not meet the requirements  of RTCM 10150 Standard for VHF-FM Portable Marine Radiotelephone Equipment with Digital Selective Calling (DSC) and Global Navigation Satellite System (GNSS) Location Function, incorporated by reference in §80.7(f)(1).  *REASON: Consequential to RTCM completing this standard, currently the only standard applicable to DSC-equipped handhelds.*  (3) The manufacture, importation, sale or installation of non-portable DSC equipment that does not comply with the standards referenced in paragraph (a)(1) of this section is prohibited.  (4) The manufacture, importation, sale of handheld, portable DSC equipment that does not comply with either of the standards referenced in paragraph (a)(1) or (a)(2) of this section is prohibited beginning March 25, 2015. Beginning [three years after the effective date of these rules], the manufacture, importation, sale of handheld, portable DSC equipment that does not comply with standard referenced in paragraph (a)(2) of this section is prohibited.  *REASON: ITU Rec M.493 and IEC 62238 were never intended to apply to handheld radios but were maintained for this purpose as an interim measure until and suitable VHF handheld standard became available.*  (5) Beginning [after the effective date of these rules], the FCC will not accept new applications (but will continue to process then-pending applications) for certification of DSC equipment having MMSI encoding modification provisions of §80.16(i). The equipment shall have data interface capability meeting the requirements of NMEA 0183, IEC 61162-1, IEC 61162-3 or IEC 61162-450 including the DSC and DSE data interface sentence or its equivalent, as incorporated by reference in §80.7(h)(1), (d)17 and (d)(18), respectively.  *REASON: Reasonable means must be available to ensure the radio can always be with the proper MMSI even when sold or moved to another vessel, and to ensure a consistent interface to devices capable of displaying distress information.*  (6) Approved DSC equipment that has been manufactured, sold, and installed in conformity with the Commission’s regulations in effect for the equipment on the date of its installation may be used indefinitely.  *REASON: Class C DSC radios no longer exist nor are allowed.*  (b) Selective calling equipment, other than that designed in accordance with paragraph (a) of this section, is authorized as follows:  (1) Equipment used in conjunction with the Automated Maritime Telecommunications System (AMTS) in the band 216–220 MHz,  (2) Equipment used to perform a selective calling function during narrow-band direct-printing (NB–DP) operations in accordance with ITU–R M.476–5 or ITU–R M.625–3 or ITU–R M.493–13 (all incorporated by reference, *see* §80.7), and  (3) Equipment functioning under the provisions of §80.207(a) includes the brief use of radiotelegraphy, including keying only the modulating audio frequency, tone signals, and other signalling devices to establish or maintain communications provided that:  (i) These signalling techniques are not used on frequencies designated for general purpose digital selective calling (DSC) and distress and safety DSC calling as listed in §80.359;  (ii) The authorized radiotelephone emission bandwidth is not exceeded;  (iii) Documentation of selective calling protocols must be available to the general public; and,  (iv) Harmful interference is not caused to stations operating in accordance with the International Radio Regulations.  **§ 80.227   Special requirements for protection from RF radiation.**  As part of the information provided with transmitters for ship earth stations, manufacturers of each such unit must include installation and operating instructions to help prevent human exposure to radiofrequency (RF) radiation in excess of the RF exposure guidelines specified in §1.1307(b) of the Commission's Rules.  **§ 80.229   Special requirements for automatic link establishment (ALE).**  Brief signalling for the purposes of measuring the quality of a radio channel and thereafter establishing communication shall be permitted within the 2 MHz–30 MHz band. Public coast stations providing high seas service are authorized by rule to use such signalling under the following conditions:  (a) The transmitter power shall not exceed 100 W ERP;  (b) Transmissions must sweep linearly in frequency at a rate of at least 60 kHz per second, occupying any 3 kHz bandwidth for less than 50 milliseconds;  (c) The transmitter shall scan the band no more than four times per hour;  (d) Transmissions within 6 kHz of the following protected frequencies and frequency bands must not exceed 10 µW peak ERP:  (1) Protected frequencies (kHz)   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 2091.0 | 4188.0 | 6312.0 | 12290.0 | 16420.0 | | 2174.5 | 4207.5 | 8257.0 | 12392.0 | 16522.0 | | 2182.0 | 5000.0 | 8291.0 | 12520.0 | 16695.0 | | 2187.5 | 5167.5 | 8357.5 | 12563.0 | 16750.0 | | 2500.0 | 5680.0 | 8364.0 | 12577.0 | 16804.5 | | 3023.0 | 6215.0 | 8375.0 | 15000.0 | 20000.0 | | 4000.0 | 6268.0 | 8414.5 | 16000.0 | 25000.0 | | 4177.5 | 6282.0 | 10000.0 |  |  |   (2) Protected bands (kHz)  4125.0–4128.0  8376.25–8386.75  13360.0–13410.0  25500.0–25670.0  (e) The instantaneous signal, which refers to the peak power that would be measured with the frequency sweep stopped, along with spurious emissions generated from the sweeping signal, must be attenuated below the peak carrier power (in watts) as follows:  (1) On any frequency more than 5 Hz from the instantaneous carrier frequency, at least 3 dB;  (2) On any frequency more than 250 Hz from the instantaneous carrier frequency, at least 40 dB; and  (3) On any frequency more than 7.5 kHz from the instantaneous carrier frequency, at least 43 + 10log10(peak power in watts) db.  **The following section is removed and placed under the new Subpart Q**    *REASON: Moved to Subpart Q*  Subpart F—Equipment Authorization for Compulsory Ships  **§ 80.251   Scope.**  (a) This subpart gives the general technical requirements for certification of equipment used on compulsory ships. Such equipment includes radar equipment and Ship Security Alert System (SSAS) equipment.  (b) The equipment described in this subpart must be certificated.  **[Reserved]**.  *REASON: No longer required or used*  **§ 80.271   Technical requirements for portable survival craft radiotelephone transceivers.**  (a) Portable survival craft radiotelephone transceivers must comply with IEC 61097-12 incorporated by reference in §80.7 (d)(11).(b) The transceivers must have a permanently attached waterproof label with the statement “Complies with the FCC requirements for survival craft two-way radiotelephone equipment”; and  (c) Portable radiotelephone transceivers that are already certificated may continue to be sold until [three years after adoption of these rules], and may continue to be used to satisfy the survival craft radiotelephone requirement until [six years after adoption of these regulations]. .    (d) Portable radiotelephone transceivers which are certified to meet the requirements of this section must be identified by an appropriate note in the Commission's database.  *REASON: The GMDSS portable survival craft radiotelephone transceiver is sufficient to meet this requirement.*  **§ 80.273 Radar standards.**    (a) Except as provided by U.S. Coast Guard Regulations at 33 C.F.R. § 164.72(a), radar installations on board ships that are required by the Safety Convention or the U.S. Coast Guard to be equipped with radar must comply with the following standards (all incorporated by reference, see § 80.7):    (1) IEC 62388, incorporated by reference in §80.7(d)(26)    ; and    (2) IEC 61162-1 incorporated by reference in §80.7(d)(15);  (3) IEC 61162-2 incorporated by reference in §80.7(d)(16);  (4) IEC 61162-3 incorporated by reference in §80.7(d)(17);  (5) IEC 61162-450 incorporated by reference in §80.7(d)(18); or  (6) NMEA 0183 incorporated by reference in §80.7(h)(1).  *REASON: Deleted standards are otherwise incorporated by reference and need not be included here. Added standards (IEC 61162-series and NMEA 0183) are intended to allow flexibility in data interface beyond that specified elsewhere.*        *REASON: This is deleted because (1) it relates to voluntary vessels and therefore should be at Subpart X; (2) IEC 62252 is currently NOT an accepted standard and no equipment is being built to this standard*  (b) For any ship of 10,000 tons gross tonnage and upwards or that is otherwise required to be equipped with two radar systems, each of the two radar systems must be capable of operating independently and must comply with the specifications, standards and general requirements set forth on paragraph (a)] of this section. One of the systems must provide a display with an effective diameter of not less than 320 millimeters (12.6 inches). The other system must provide a display with an effective diameter of not less than 250 millimeters (9.8 inches).  *REASON: IEC TC80 briefed NAV58 regarding the 'conflict' between MSC.191 and MSC.192 regarding display area and radar diameter. Both are specified in MSC.192 but only diameter in MSC.191. TC80 advised NAV of problems with the area specified in MSC.192 - available 16:9 aspect monitors cannot meet that requirement but do satisfy the required 320mm diameter and the supply 16:10 aspect monitors is dwindling fast*    (d) Radar installed before the effective date of these rules must meet and be maintained to comply with the Commission's regulations in effect for the equipment on the date of its installation.    **[Reserved]**  *REASON: Moved to new Subpart Q*  **§ 80.277   Ship Security Alert System (SSAS).**  (a) Vessels equipped with a Ship Security Alert System pursuant to the Safety Convention or 33 CFR 101.310 may utilize:  (1) Equipment that complies with RTCM 11020.1, incorporated by reference in§80.7(f)(3); or  REASON: System no longer in service  (2) Equipment that complies with the technical specifications found in IEC 61097-4, incorporated by reference in §80.7 (d)(6).  (3) IEC 60945  (b) [Reserved]  **[Reserved]**  **[Reserved]** **[Reserved]****[Reserved]****[Reserved]****[Reserved]**  *REASON: While 47 U.S.C. §351(a)(2) requires some vessels to have radio direction finding apparatus. This is an outdated provision no longer used. Today, the type of radio direction finding (RDF) equipment referenced in the provision is no longer used because it is not generally available, it is difficult to repair, the services used in conjunction with the RDF equipment are no longer available, and there are better, more technologically advanced services available. Consequently, the RDF equipment is no longer necessary and these regulations should be deleted, as should the statutory language requiring them.*  Subpart G—Safety Watch Requirements and Procedures  Coast Station Safety Watches  **§ 80.301   Watch requirements.**  (a) Each public coast station licensed to operate in the band 1605–3500 kHz must monitor such frequency(s) as are used for working or, at the licensee's discretion, 2182 kHz.  *REASON: No longer required*  (b) Each public coast station must provide assistance for distress communications when requested by the Coast Guard.  **§ 80.302   Notice of discontinuance, reduction, or impairment of service involving a distress watch.**  (a) When changes occur in the operation of a public coast station which include discontinuance, relocation, reduction or suspension of a watch required to be maintained on 156.800 MHz, notification must be made by the licensee to the nearest district office of the U.S. Coast Guard as soon as practicable. The notification must include the estimated or known resumption time of the watch.  (b) [Reserved]  **§ 80.303   Watch on 156.800 MHz (Channel 16).**  (a) During its hours of operation, each coast station operating in the 156–162 MHz band and serving rivers, bays and inland lakes except the Great Lakes, must maintain a safety watch on the frequency 156.800 MHz except when transmitting on 156.800 MHz.  (b) A coast station is exempt from compliance with the watch requirement when Federal, State, or Local Government stations maintain a watch on 156.800 MHz over 95% of the coast station's service area. Each licensee exempted by rule must notify the nearest district office of the U.S. Coast Guard at least thirty days prior to discontinuing the watch, or in the case of new stations, at least thirty days prior to commencing service. The Coast Guard may require any coast station to maintain the watch temporarily or permanently. The Coast Guard may also require any coast station to remain capable of either immediately resuming the watch or providing the Coast Guard direct dial-up access to the necessary 156.800 MHz transceiver at no charge so that the Coast Guard can maintain the watch.  (c) If the government station(s) providing the 156.800 MHz watch over the service area of an exempt station temporarily discontinues that watch, the exempt coast station upon receiving notice of this condition must maintain the watch on 156.800 HMz during the discontinuance. Automated maritime communications systems' compliance with this requirement is limited to the use of existing facilities.  Ship Station Safety Watches  **[Reserved]***REASON: No longer required*  **§ 80.305   Watch requirements of the Communications Act and the Safety Convention.**  (a) Each ship of the United States which is equipped with a radiotelephone station for compliance with part II of title III of the Communications Act or Chapter IV of the Safety Convention must:  (1) *REASON: No longer required*  (2) Keep a continuous and efficient watch on the VHF distress frequency 156.800 MHz from the room from which the vessel is normally steered while in the open sea outside a harbor or port. The watch must be maintained by a designated member of the crew who may perform other duties, relating to the operation or navigation of the vessel, provided such other duties do not interfere with the effectiveness of the watch. Use of a properly adjusted squelch or brief interruptions due to other nearby VHF transmissions are not considered to adversely affect the continuity or efficiency of the required watch on the VHF distress frequency. This watch need not be maintained by vessels subject to the Bridge-to-Bridge Act and participating in a Vessel Traffic Services (VTS) system as required or recommended by the U.S. Coast Guard, when an efficient listening watch is maintained on both the bridge-to-bridge frequency and a separate assigned VTS frequency.  (b) Each cargo ship of the United States which is equipped with a radiotelephone station for compliance with part II of title III of the Communications Act or chapter IV of the Safety Convention must while being navigated outside of a harbor or port:  (1) If it is not carrying MF/HF–DSC radio equipment or GMDSS-recognized mobile earth station ship earth station, keep a continuous watch on 4125 kHz in the room from which the vessel is normally steered while at sea, whenever such station is not being used for authorized traffic. Such watch must be maintained by at least one officer or crewmember who may perform other duties relating to the operation or navigation of the vessel, provided such other duties do not interfere with the watch.  (2) Keep a continuous watch on 156.800 MHz from the room from which the vessel is normally steered. The watch must be maintained by a crewmember who may perform other duties, relating to the operation or navigation of the vessel, provided such other duties do not interfere with the watch. Use of properly adjusted squelch of brief interruptions due to other nearby VHF transmissions are not considered to adversely affect the watch. This watch need not be maintained by vessels subject to the Bridge-to-Bridge Act and participating in a Vessel Traffic Services (VTS) system when a watch is maintained on both the bridge-to-bridge frequency and a VTS frequency.  (c) Each vessel of the United States transporting more than six passengers for hire, which is equipped with a radiotelephone station for compliance with 47 U.S.C. 381–386 but which is not carrying MF/HF-DSC radio equipment or a GMDSS-recognized mobile earth station, must, while being navigated in the open sea or any tidewater within the jurisdiction of the United States adjacent or contiguous to the open sea, keep a continuous watch on 4125 kHz while the vessel is beyond VHF communication range of the nearest VHF coast station, whenever the radiotelephone station is not being used for authorized traffic. A VHF watch must be kept on 156.800 MHz whenever such station is not being used for authorized traffic. The VHF watch must be maintained at the vessel's steering station actually in use by the qualified operator as defined by §80.157 or by a crewmember who may perform other duties relating to the operation or navigation of the vessel, provided such other duties do not interfere with the watch. The use of a properly adjusted squelch is not considered to adversely affect the watch. The VHF watch need not be maintained by vessels subject to the Bridge-to-Bridge Act and participating in a Vessel Traffic Services (VTS) system when an efficient listening watch is maintained on both the bridge-to-bridge frequency and a VTS frequency.  *REASON: Neither ships nor the US Coast Guard monitor 2182 kHz any longer, but the Coast Guard does monitor 4125 kHz. Nevertheless ships equipped with MF/HF radios equipped with DSC or with mobile satellite ship earth stations capable of distress communications need not monitor these frequencies.*    *REASON: This section should be deleted as radiotelegraph auto alarms are no longer used.*  **§ 80.308   Watch required by the Great Lakes Radio Agreement.**  (a) Each ship of the United States that is equipped with a radiotelephone station for compliance with the Great Lakes Radio Agreement must when underway keep a watch on:  (1) 156.800 MHz on board a vessel 20 meters (65 feet) and over in length, a vessel engaged in towing (See §80.951(b)), or a vessel carrying more than 6 passengers for hire. This watch must be maintained whenever the station is not being used for authorized traffic. However, a watch on 156.800 MHz need not be maintained by a vessel maintaining a watch on the bridge-to-bridge frequency 156.650 MHz *and* participating in a Vessel Traffic Services (VTS) system and maintaining a watch on the specified VTS frequency.  (2) 156.650 MHz on board a vessel 38 meters (124 feet) and over in length, a vessel engaged in towing (See §80.951(b)), or a vessel carrying more than six passengers for hire. This watch must be maintained continuously and effectively. Sequential monitoring is not sufficient. Portable VHF equipment may be used to meet this requirement. Vessels are exempted from this requirement while transiting the St. Lawrence Seaway and complying with the Joint Regulations of the St. Lawrence Seaway Authority and St. Lawrence Seaway Development Corporation between the lower exit of St. Lambert Lock at Montreal and Crossover Island, New York and in the Welland Canal and approaches between Calling in Point No. 15 and No. 16.  (b) The watch must be maintained by the master, or person designated by the master, who may perform other duties provided they do not interfere with the effectiveness of the watch.  **§ 80.309   Watch required by the Bridge-to-Bridge Act.**  In addition to the watch requirement contained in §80.148, all vessels subject to the Bridge-to-Bridge Act must keep a watch on the designated navigational frequency. The watch must be maintained by the master or person in charge of the vessel or the person designated by the master or person in charge to pilot or direct the movement of the vessel. The person standing watch may perform other duties provided such other duties do not interfere with the watch.  **§ 80.310   Watch required by voluntary vessels.**  Voluntary vessels not equipped with DSC must maintain a watch on 156.800 MHz (Channel 16) whenever the vessel is underway and the radio is not being used to communicate. Noncommercial vessels, such as recreational boats, may alternatively maintain a watch on 156.450 MHz (Channel 9) in lieu of VHF Channel 16 for call and reply purposes. Voluntary vessels equipped with VHF–DSC equipment must maintain a watch on either 156.525 MHz (Channel 70) or VHF Channel 16 aurally whenever the vessel is underway and the radio is not being used to communicate. Voluntary vessels equipped with MF–HF DSC equipment must have the radio turned on and set to an appropriate DSC distress calling channel or one of the radiotelephone distress channels whenever the vessel is underway and the radio is not being used to communicate. Voluntary vessels equipped with a GMDSS-recognized mobile satellite system must have the unit turned on and set to receive calls whenever the vessel is underway and the radio is not being used to communicate.  Distress, Alarm, Urgency and Safety Procedures  **§ 80.311   Authority for distress transmission.**  A mobile station in distress may use any means at its disposal to attract attention, make known its position, and obtain help. A distress call and message, however, must be transmitted only on the authority of the master or person responsible for the mobile station. No person shall knowingly transmit, or cause to be transmitted, any false or fraudulent signal of distress or related communication.  **§ 80.312   Priority of distress transmissions.**  The distress call has absolute priority over all other transmissions. All stations which hear it must immediately cease any transmission capable of interfering with the distress traffic and must continue to listen on the frequency used for the emission of the distress call. This call must not be addressed to a particular station. Acknowledgement of receipt must not be given before the distress message which follows it is sent.  **§ 80.313   Frequencies for use in distress.**  The voice frequencies specified in the bands below are for use by mobile stations in distress. The conventional emission is shown. When a ship station cannot transmit on the designated frequency or the conventional emission, it may use any available frequency or emission. Frequencies for distress and safety calling using digital selective calling techniques are listed in §80.359(b). Distress and safety NBDP frequencies are indicated by footnote 2 in §80.361(b).   |  |  |  | | --- | --- | --- | | **Frequency band** | **Emission** | **Carrier frequency** | | 1615–3500 kHz | J3E | 2182 kHz. | | 4-27.5 MHz | J3E | 4125 kHz | | 4-27.5 MHz | J3E | 6215 kHz | | 4-27.5 MHz | J3E | 8291 kHz | | 4-27.5 MHz | J3E | 12290 kHz | | 4-27.5 MHz | J3E | 16420 kHz | | 1615–3500 kHz | J2B | 2187.5 kHz | | 4-27.5 MHz | J2B | 4207.5 kHz | | 4-27.5 MHz | J2B | 6312 kHz | | 4-27.5 MHz | J2B | 8414.5 kHz | | 4-27.5 MHz | J2B | 12577 kHz | | 4-27.5 MHz | J2B | 16804.5 kHz | | 118–136 MHz | A3E | 121.500 MHz. | | 156–162 MHz | G3E | 156.800 MHz. | |  |  |  |   *REASON: “Voice” added for clarification. HF GMDSS radiotelephone frequencies, on which the USCG keeps watch for Distress, urgency, safety, call and reply purposes, have been added. VHF ch15 which used to be used by Class C EPIRB is, deleted.*  The maximum transmitter power obtainable may be used.  **§ 80.314   Distress voice communications.**  (a) Distress voice communications shall conform to the radiotelephone distress procedures of Article 32 of the ITU Radio Regulations, incorporated by reference in §80.7(c)(16).  *REASON: To be consistent with the international distress procedures proscribed in ITU-R RR Art 32, Section II A and B1.*  **[Reserved]**  *REASON: Radiotelegraph and radiotelephone alarms are no longer used.*  **[Reserved] [Reserved]***REASON: No longer used or required.*  **§ 80.320   [Reserved].**  *REASON: Radiotelephone alarm no longer used. These radiotelephone distress call and message transmission procedures are included in §80.314 Distress voice communications, which incorporates Article 32 of the ITU Radio Regulations by reference.*  **§ 80.321   Acknowledgement of receipt of distress message.**  (a) Stations of the maritime mobile service which receive a distress message from a mobile station which is beyond any possible doubt in their vicinity must immediately acknowledge receipt. However, in areas where reliable communication with one or more coast stations is practicable, ship stations may defer this acknowledgement for a short interval so that a coast station may acknowledge receipt.  (b) Stations of the maritime mobile service which receive a distress message from a mobile station which beyond any possible doubt is not in their vicinity, must allow a short interval of time to elapse before acknowledging receipt of the message in order to permit stations nearer to the mobile station in distress to acknowledge receipt without interference.  **§ 80.322   Form of acknowledgement.**  *REASON: No longer used.*  (a) The acknowledgement of receipt of a radiotelephone distress message shall conform to the procedures of Article 32 of the ITU Radio Regulations, incorporated by reference in §80.7(c)(16).  *REASON: To conform to already existing internationally recognized procedures in ITU Radio Regulations Article 32 Section II C1.*  **§ 80.323   Information furnished by an acknowledging station.**  (a) Every mobile station which acknowledges receipt of a distress message must  conform to the procedures of Article 32 of the ITU Radio Regulations, incorporated by reference in §80.7(c)(16).  REASON: To conform to already existing internationally recognized procedures in ITU Radio Regulations Article 32 Section II C1.  **§ 80.324   Transmission of distress message by station not itself in distress.**  (a) A mobile station or a land station which learns that a mobile station is in distress must transmit a distress message as proscribed in Article 32 of the ITU Radio Regulations, incorporated by reference in §80.7(c)(16).  *REASON: To conform to already existing internationally recognized procedures in ITU Radio Regulations Article 32 Section II B3.*  **§ 80.325   Control of distress traffic.**  (a) Control of distress traffic shall conform to the procedures of Article 32 of the ITU Radio Regulations, incorporated by reference in §80.7(c)(16).  *REASON: To conform to already existing internationally recognized procedures in ITU Radio Regulations Article 32 Section III A.*  **§ 80.326   Notification of resumption of normal working.**  (a) When distress traffic has ceased, or when complete silence is no longer necessary on a frequency which has been used for distress traffic, the station which has controlled this traffic should conform to the procedures of Article 32 of the ITU Radio Regulations, incorporated by reference in §80.7(c)(16).  *REASON: To conform to already existing internationally recognized procedures in ITU Radio Regulations Article 32 Section III A.***§ 80.327   Urgency signals and messages.**  (a) The transmission of and response to urgency signals and messages shall be performed in accordance with Article 33 of the ITU Radio Regulations, incorporated by reference in §80.7 (c)(16).*REASON: To conform to already existing internationally recognized procedures in ITU Radio Regulations Article 33 Section II.*  **§ 80.329   Safety signals and messages.**  (a) The safety signal and messages shall be performed in accordance with Article 33 of the ITU Radio Regulations, incorporated by reference in §80.7 (c)(16).*REASON: To conform to already existing internationally recognized procedures in ITU Radio Regulations Article 33 Section IV.*  **§ 80.331   Bridge-to-bridge communication procedure.**  (a) Vessels subject to the Bridge-to-Bridge Act transmitting on the designated navigational frequency must conduct communications in a format similar to those given below:  (1) This is the (name of vessel). My position is (give readily identifiable position, course and speed) about to (describe contemplated action). Out.  (2) Vessel off (give a readily identifiable position). This is (name of vessel) off (give a readily identifiable position). I plan to (give proposed course of action). Over.  (3) (Coast station), this is (vessel's name) off (give readily identifiable position). I plan to (give proposed course of action). Over.  (b) Vessels acknowledging receipt must answer “(Name of vessel calling). This is (Name of vessel answering). Received your call,” and follow with an indication of their intentions. Communications must terminate when each ship is satisfied that the other no longer poses a threat to its safety and is ended with “Out”.  (c) Use of power greater than 1 watt in a bridge-to-bridge station shall be limited to the following three situations:  (1) Emergency.  (2) Failure of the vessel being called to respond to a second call at low power.  (3) A broadcast call as in paragraph (a)(1) of this section in a blind situation, e.g., rounding a bend in a river.  **§ 80.332   Equipment to aid search and rescue operations.**  (a) Survival craft stations may transmit distress, urgency and safety signals, calls and messages.  (b) EPIRB's may transmit only in accordance with the requirements of subparts V and X of this part.  (c) Radar search and rescue transponders (SARTs and AIS search and rescue transmitters (SARTs) may transmit distress location signals.  *REASON: Accommodation of new technology recognized in this part.*  **§ 80.333   Stations in the maritime mobile-satellite service.**  The provisions of §§80.311 and 80.324 apply to the operations of ship earth stations in the maritime mobile-satellite service.  **§ 80.334   False distress alerts.**  A distress alert is false if it was transmitted without any indication that a mobile unit or person was in distress and required immediate assistance. Transmitting a false distress alert is prohibited and may be subject to the provisions of part 1, subpart A of this chapter if that alert:  (a) Was transmitted intentionally;  (b) Was not cancelled in accordance with §80.335;  (c) Could not be verified as a result of either the ship's failure to keep watch on appropriate frequencies in accordance with §80.1123 or subpart G of this part, or its failure to respond to calls from the U.S. Coast Guard;  (d) Was repeated; or  (e) Was transmitted using a false identity.  **§ 80.335   Procedures for canceling false distress alerts.**  If a distress alert is inadvertently transmitted, the following steps shall be taken to cancel the distress alert.  (a) VHF Digital Selective Calling.  (1) Reset the equipment immediately and cancel the alert by DSC, if the DSC equipment is so capable;  (2) Set to Channel 16; and  (3) Transmit a broadcast message to “ALL STATIONS” spoke three times “THIS IS” the name of the vessel spoken three times, call sign or registration number, the MMSI, and “PLEASE CANCEL MY DISTRESS ALERT OF” time (UTC or local).  (b) MF/HF Digital Selective Calling.  (1) Reset the equipment immediately and cancel the alert by DSC, if the DSC equipment is so capable;  (2) Immediately cancel the distress alert orally over the telephony distress traffic channel associated with each DSC channel on which the distress alert was transmitted; and  (3) (4) Transmit a broadcast message to “ALL STATIONS”, spoken three times, giving the ship's name, spoken three times, call sign or registration number, and MMSI, and “PLEASE CANCEL MY DISTRESS ALERT OF” time (UTC or local).  (b) MF/HF Digital Selective Calling;  (1) Reset the equipment immediately and cancel the alert by DSC, if the DSC equipment is so capable;  (2) Tune for radiotelephony on the distress and safety frequency in each band in which a false distress alert was transmitted; and  (3) Transmit a broadcast message to “All stations”, spoken three times, giving the ship's name, spoked three times, call sign or registration number, and MMSI, and “PLEASE CANCEL MY DISTRESS ALERT OF” time (UTC or local) n each band in which a false distress alert was transmitted.  (c) GMDSS-recognized mobile satellite ship earth station. Immediately notify the appropriate rescue coordination center that the alert is cancelled by sending a distress priority message by way of the same land earth station through which the false distress alert was sent. Provide ship name, call sign or registration number, and Mobile satellite identity with the cancelled alert message.  (d) EPIRB. If for any reason an EPIRB is activated inadvertently, immediately contact the nearest U.S. Coast Guard unit or appropriate rescue coordination center by telephone, radio or ship earth station and cancel the distress alert.  (e) General and other distress alerting systems. Notwithstanding paragraphs (a) through (d) of this section, ships may use additional appropriate means available to them to inform the nearest appropriate U.S. Coast Guard rescue coordination center that a false distress alert has been transmitted and should be cancelled.  *REASON: To be consistent with ITU-R RR Art 32 Section III*  Subpart H—Frequencies  Data and Radiotelephony**§ 80.351   Scope.**  The following sections describe the carrier frequencies and general uses of data and radiotelephony with respect to the following:  —Distress, urgency, safety, call and reply.  —Working.  —Digital selective calling (DSC).  —Narrow-band direct-printing (NBDP).  —Facsimile.  --VHF‐FM digital small message services (VDSMS).  *REASON: Consistent with RTCM petition for VDSMS services*  **§ 80.353   [Reserved]**      **[Reserved]**  *REASON: No longer used*  **§ 80.357   Working frequencies for data transmission.**  This section describes the working frequencies assignable to maritime stations for data.(a) *Ship station frequencies* —(1) *Frequencies in the 100–160 kHz band.* The following table describes the working carrier frequencies in the 100–160 kHz band which are assignable to ship stations. A ship station may also transmit on a data working channel of a coast station within the 100–160 kHz band when directed to do so by the coast station provided interference is not caused to any land, fixed, broadcast, or radiolocation station.   |  |  |  | | --- | --- | --- | |  | **100–160 (kHz)** |  | |  | 152 |  | |  | 153 |  | |  | 154 |  | |  | 155 |  | |  | 156 |  | |  | 157 |  | |  | 158 |  |   (2) *Frequencies in the 405–525 kHz band.* The following table describes the working carrier frequencies in the 405–525 kHz band which are assignable to ship stations. A ship station may transmit on a data working channel of a coast station in the 415–490 kHz band when directed to do so by the coast station.   |  |  |  | | --- | --- | --- | |  | **405–525 (kHz)** |  | |  | 1410 |  | |  | 425 |  | |  | 454 |  | |  | 468 |  | |  | 480 |  | |  | 2512 |  | |  | 3518 |  |   1The frequency 410 kHz may be used on a secondary basis for the transmission of radiodetermination information and for transmitting by radiotelegraph radiodetermination related messages to direction-finding stations.  2The frequency 512 kHz may be used as a supplementary calling frequency when 500 kHz is used for distress, safety and urgency communications. The use of the 512 kHz as a working frequency is prohibited in areas where it is used as a supplementary calling frequency when 500 kHz is used for distress, safety, and urgency communications.  3The frequency 518 kHz is a receive only frequency by ship stations. It is used by U.S. Coast Guard coast stations for NBDP transmissions of meteorological and navigational warnings to ships.  (3) *Frequencies in the 2000–27500 kHz band.* This paragraph describes the working frequencies and Channel Series in the 2000–27500 kHz band which are assignable to ship stations.  (i)  The use of frequencies in this part shall be in accordance with the International Radio Regulations at Appendix 17, “Frequency and channeling arrangements in the high-frequency bands for the maritime mobile service,” incorporated by reference in §80.7(c)(15).   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  | |  |  | 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Nevertheless they may be used for data on frequencies specified in ITU-R RR Ap.17, proposed to by incorporated by reference.*  **§ 80.359   Frequencies for digital selective calling (DSC).**  (a) *General purpose calling.* The calling frequencies for use by authorized ship and coast stations for general purpose DSC are included at Appendix 17 of the International Radio Regulations The use of frequencies in this part shall be in accordance with the International Radio Regulations at Appendix 17, “Frequency and channeling arrangements in the high-frequency bands for the maritime mobile service,” incorporated by reference in §80.7(c)(15).. In addition to the frequencies for DSC listed at Appendix 17, the ship frequencies 458.5 kHz and 2189.5 kHz, and the coast station frequencies 455.5 kHz and 2177.0 kHz 1 may also be used.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | |  | |  | | |  |  |  |  |  |  | |  |  |  |  |  |  | |  | 1 |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  |   1 The frequency 2177.0 kHz is also available to ship stations for intership calling and acknowledgement of such calls only.  (b) *Distress and safety calling.* The frequencies 2187.5 kHz, 4207.5 kHz, 6312.0 kHz, 8414.5 kHz, 12577.0 kHz, 16804.5 kHz and 156.525 MHz may be used for DSC by coast and ship stations on a simplex basis for distress and safety purposes, and may also be used for routine ship-to-ship communications provided that priority is accorded to distress and safety communications. The provisions and procedures for distress and safety calling are contained in ITU–R M.541–9 (incorporated by reference, *see* §80.7), and §80.103(c).  (c) *Working frequencies.* Coast and ship stations may use DSC techniques for general calling purposes on their assigned working frequencies in the 2000–27500 kHz band and on those frequencies in the 156–162 MHz band which are allocated for maritime control, commercial, non-commercial and public correspondence communications.  *REASON: These DSC frequencies have been updated by the ITU-R at WRC12 and therefore it is proposed to incorporate the ITU-R Radio Regulations Ap17 by reference.*  **§ 80.361   Frequencies for narrow-band direct-printing (NBDP) and data transmissions.**  (a) The use of frequencies for NBDP shall be in accordance with the International Radio Regulations at Appendix 17, “Frequency and channeling arrangements in the high-frequency bands for the maritime mobile service,” incorporated by reference in §80.7(c)(15)*REASON: These NBDP frequencies have been updated by the ITU-R at WRC12 and therefore it is proposed to incorporate the ITU-R Radio Regulations Ap17 by reference.*  (b) *Distress and calling.* The frequencies 2174.5 kHz, 4177.5 kHz, 6268.0 kHz, 8376.5 kHz, 12520.0 kHz, and 16695.0 kHz may be used for NBDP and data transmissions by coast and ship stations on a simplex basis for distress and safety purposes.  (c) The frequencies in the 156–162 MHz band available for assignment to public coast stations that are contained in §80.371(c) of this part are also available for radioprinter and data communications between ship and coast stations using F1B, F2B, F1D, or F2D emission.  (d) *VHF‐FM Digital Small Message Services*. Frequencies in the 156‐162 MHz band in this part may be used for VHF digital small message services (VDSMS) complying with RTCM Standard 12301 incorporated by reference in §80.7(f)(4), with the following exceptions:   |  |  | | --- | --- | | Channel | Frequency (MHz) | | 01A | 156.050 | | 63A | 156.175 | | 05A | 156.250 | | 65A | 156.275 | | 06 | 156.300 | | 66A | 156.325 | | 67 | 156.375 | | 70 | 156.525 | | 12 | 156.600 | | 13 | 156.650 | | 73 | 156.675 | | 14 | 156.700 | | 74 | 156.725 | | 15 | 156.750 | | 75 | 156.775 | | 16 | 156.800 | | 76 | 156.825 | | 77 | 156.875 | | 20A | 157.000 | | 22A | 157.100 | | AIS 1/2 | 161.975/162.025 |   Use of these channels for data are limited to the uses described in §§ 80.367, 80.371(c) and 80.373(f).  *REASON: Consequential to RTCM Petition for rulemaking to amend Part 80 of the Commission’s rules to provide for a digital small message service on certain Maritime VHF channels, July 24, 2009. Port operations channels, which include VTS channels, were included in the table above due to their recognized safety purpose per Articles §§1.30 and 33.7 of the ITU Radio Regulations. Data transmissions would be heard by a VHF radiotelephone operator as a series of clicks spaced one second apart, disappearing instantly when the radiotelephone press-to-talk button is pressed. This proposal is in accord with the Commission’s and the President’s goal of improving spectrum efficiency through the use of existing frequency spectrum “white spaces”.***§ 80.363   Frequencies for facsimile.**          (a) The use of frequencies for facsimile shall be in accordance with International Radio Regulations Appendix 17, “Frequency and channeling arrangements in the high-frequency bands for the maritime mobile service,” incorporated by reference in §80.7(c)(15). In addition to the frequencies listed in Appendix 17, the frequencies 2070.5 kHz, 2072.5 kHz, 2074.5 kHz, and 2076.5 kHz may also be used by ship stations. *REASON: These radiofacsimile frequencies have been updated by the ITU-R at WRC12 and therefore it is proposed to incorporate the ITU-R Radio Regulations Ap17 by reference.*  (b) The frequencies in the 156–162 MHz band available for assignment to public coast stations that are contained in §80.371(c) of this part are also available for facsimile communications between ship and coast stations using F2C or F3C emission.  (c) The frequency 156.425 MHz is assigned by rule to private coast stations and ship stations in Alaska for ship-to-shore and ship-to-ship facsimile transmissions using F2C or F3C emissions.  **Radiotelephony**  **§ 80.365   Scope.**  The following sections describe the carrier frequencies and general conditions of use for the following types of radiotelephony:  —Distress, urgency, safety, call and reply.  —Working.  —Public.  —Private.  **§ 80.367   General uses—radiotelephony.**  (a) Ship stations communicating with foreign coast stations may operate on any frequency designated by that coast station.  (b) Radiotelephony stations communicating with a Government station may transmit on a Government frequency when authorized to do so by the Government station or agency if the emission, bandwidth and frequency tolerance of the maritime station are within the same limits as the Government station.  (c) Frequencies assigned to Government radio stations are assignable to non-Government maritime stations for radiotelephony communications with other non-Government stations in connection with activities performed in coordination with or on behalf of the Government.     |  |  | | --- | --- | | Government Channel | Frequency (MHz) | | 21A | 157.050 | | 81A | 157.075 | | 22A[[1]](#footnote-1) | 157.100 | | 82A | 157.125 | | 23A | 157.150 | | 83A | 157.175 |   a. Use of this channel is described in §80.373(f) footnote 11.  *REASON: Table added for clarification*  (d) Frequencies in the 2000–27500 kHz band will be authorized only to ship stations that in addition are authorized to use frequencies in the 156–162 MHz band.  (e) Frequencies in the 2000–2850 kHz band will be authorized to private coast stations that in addition are authorized to use frequencies in the 156–162 MHz band.  (f) Ship and coast stations authorized to use frequencies in both the 2000–27500 kHz and 156–162 MHz bands must not use frequencies in the 2000–27500 kHz band for communications with any other station which is within the VHF service range.  (g) Coast and ship station radiotelephone working frequencies are available for DSC general purpose calling under the provisions of §80.207(a).  (h) Digital selective calling techniques are not authorized on the frequencies 2182 kHz or 156.800 MHz.  **§ 80.369   Distress, urgency, safety, call and reply frequencies.**  This section describes the general uses and frequencies assignable to maritime stations for distress, urgency, safety, call and reply radiotelephony communications.  (a) In the 1605–3500 kHz band, the frequency 2182 is an international radiotelephony distress, urgency and safety frequency for ship stations, public and private coast stations, and survival craft stations. It is also used for call and reply by ship stations on a primary basis and by public coast stations on a secondary basis. The carrier frequency 2191 kHz may be used as a supplementary calling frequency in areas of heavy usage of 2182 kHz. All stations must use J3E emission when operating on 2182 and 2191 kHz.  *REASON: No longer used or required*  (b) The frequencies 4125.0 kHz, 6215 kHz, 8291 kHz, 12290 kHz, and 16420 kHz may be used by coast and ship stations on a simplex basis for distress, urgency and safety communications. The frequency 4125.0 kHz may also be used for distress and safety communications between aircraft and maritime mobile stations.  *REASON: For clarity.*  (c) The frequency 5167.5 kHz is available to any station for emergency communications in the State of Alaska. Peak envelope power of stations operating on this frequency must not exceed 150 watts. This frequency may also be used by Alaska private fixed stations for calling and listening, but only for establishing communication.  (d) In the 4000–27500 kHz band, the following coast frequencies are available for assignment to public coast stations for call and reply communications. The paired ship frequencies are available for use by authorized ship stations.  Call and Reply Frequency Pairs in the 4000–27500 kHz   |  |  |  | | --- | --- | --- | | **Carrier Frequencies (kHz)** | | | | **Channel No.** | **Ship transmit** | **Coast transmit** | | 421 | 1,2,34125 | 14417 | | 606 | 2,36215 | 16516 | | 821 | 8255 | 8779 | | 1221 | 312290 | 13137 | | 1621 | 316420 | 17302 | | 1806 | 18795 | 19770 | | 2221 | 22060 | 22756 | | 2510 | 25097 | 26172 |   1The frequencies 4125 kHz, 4417 kHz, and 6516 kHz are also available on a simplex basis for private communications, see §80.373(c) of this part.  2The frequencies of 4125 kHz and 6215 kHz are also available on a simplex basis to ship and coast stations for call and reply, provided that the peak envelope power does not exceed 1 kW.  3The frequencies 4125 kHz, 6215 kHz, 8291 kHz, 12290 kHz, and 16420 kHz are also available on a simplex basis for distress, urgency and safety traffic, see paragraph (b) of this section.  *Reason: For clarity*  (e) In the 120–156 MHz band the following frequencies are used as indicated:  (1) The frequencies 121.500 MHz and 123.100 MHz using A3E emission are available for scene of action search and rescue operations to ship, coast and aircraft stations. Communications in support of search and rescue operations must employ the frequency 121.500 MHz only when communications on 123.100 MHz or other VHF frequencies is not practicable. Ship, coast and aircraft stations engaged in such communications on 121.500 MHz must shift to 123.100 MHz as soon as possible.  (2) The frequency 156.525 MHz is available for intership, ship and coast general purpose, distress, urgency and safety DSC calls.  *Reason: For clarity*  (3) The frequency 156.800 MHz is the international radiotelephone distress, urgency, safety, call and reply frequency for ship, public and private coast stations. Stations operating on 156.800 MHz must be able to transmit and receive using G3E emission.  (4) The frequency 156.450 MHz (channel 9) is available for intership, ship and coast station general purpose calling by noncommercial vessels, such as recreational boats. Distress, urgency and safety calls should initially be made on 156.800 MHz (channel 16) or, if equipped with DSC, on 156.525 MHz (channel 70).  **§ 80.371   Public correspondence frequencies.**  This section describes the radiotelephony working frequencies assignable to ship and public coast stations.  (a) *Working frequencies in the 2000–4000 kHz band.* The following table describes the working carrier frequency pairs in the 2000–4000 kHz band.   |  |  |  | | --- | --- | --- | | **Working frequency pairs in the 2000–4000 kHz band** | | | | **Region** | **Carrier frequency (kHz)** | | | **Ship transmit** | **Coast transmit** | | East Coast: | 2031.5 | 2490.0 | |  | 2118.0 | 12514.0 | |  | 2126.0 | 2522.0 | |  | 2142.0 | 2538.0 | |  | 2166.0 | 2558.0 | |  | 2198.0 | 2590.0 | |  | 2366.0 | 2450.0 | |  | 2382.0 | 52482.0 | |  | 2390.0 | 2566.0 | |  | 2400.0 | 2400.0 | |  | 2406.0 | 2442.0 | |  | 2406.0 | 42506.0 | | West Coast: | 2003.0 | 2450.0 | |  | 2009.0 | 2442.0 | |  | 2009.0 | 2566.0 | |  | 2031.5 | 2566.0 | |  | 2126.0 | 2522.0 | |  | 2206.0 | 2598.0 | |  | 2382.0 | 2466.0 | |  | 2406.0 | 2506.0 | |  | 2430.0 | 52482.0 | | Gulf Coast: | 2009.0 | 2466.0 | |  | 2134.0 | 2530.0 | |  | 2142.0 | 2538.0 | |  | 12158.0 | 12550.0 | |  | 2166.0 | 2558.0 | |  | 2206.0 | 2598.0 | |  | 2366.0 | 2450.0 | |  | 2382.0 | 52482.0 | |  | 2430.0 | 2572.0 | |  | 2458.0 | 2506.0 | | Great Lakes2: | 2118.0 | 2514.0 | |  | 2158.0 | 2550.0 | |  | 2206.0 | 2582.0 | | Alaska | 2131.0 | 52309.0 | |  | 2134.0 | 2312.0 | |  | 2237.0 | 2397.0 | |  | 2240.0 | 2400.0 | | Hawaii | 2134.0 | 2530.0 | | Caribbean: | 2009.0 | 2506.0 | |  | 32086.0 | 2585.0 | |  | 2134.0 | 2530.0 | | Guam | 2009.0 | 2506.0 |   1Unlimited hours of use from December 15 to April 1 and day only from April 1 to December 15. Harmful interference must not be caused to any station in the Great Lakes region.  2In the Great Lakes region 2206 kHz is not available for transmission to U.S. ships except in the case of distress. U.S. coast stations in the Great Lakes area may use 2514, 2550 and 2582 kHz on a shared basis with coast stations of Canada. Except in the case of distress, the frequency 2550 kHz must not be used for transmission to ship stations of Canada since the associated ship station transmit frequency 2158 kHz is not available to Canadian ship stations for transmission and 2582 kHz must not be used for public correspondence transmissions to U.S. ship stations since the associated ship transmit frequency 2206 kHz is not available to U.S. ship stations for transmissions except in the case of distress.  3Limited to a peak envelope power of 150 watts.  4Harmful interference must not be caused to any coast station in the Caribbean region.  5 *But see* section 80.373(c)(3) of this chapter.  (b) *Working frequencies in the 4000–27500 kHz band.* The use of working frequencies in the 4000-27500 kHz band shall be in accordance with International Radio Regulations Appendix 17, Rev. WRC-12, “Frequency and channeling arrangements in the high-frequency bands for the maritime mobile service,” incorporated by reference in §80.7(c)(15).With respect to frequencies that are assignable in more than one geographical area, once the frequency is assigned to one licensee, any subsequent license will be authorized on a secondary, non-interference basis with respect to the incumbent license's existing operation. If the first licensee later seeks authorization to operate in an additional geographic area, such authorization will be on a secondary, non-interference basis to other co-channel licensees.          *REASON: These frequencies have been updated by the ITU-R at WRC12 and therefore it is proposed to incorporate the ITU-R Radio Regulations Ap17 by reference.*  (c) *Working frequencies in the marine VHF 156–162 MHz band.* (1)(i) The frequency pairs listed in this paragraph are available for assignment to public coast stations for communications with ship stations and units on land.  Working Carrier Frequency Pairs in the 156–162 MHz Band1   |  |  |  | | --- | --- | --- | | Channel designator | **Carrier Frequency (MHz)** | | | **Ship transmit** | **Coast transmit** | | 24 | 157.200 | 161.800 | | 84 | 157.225 | 161.825 | | 255 | 157.250 | 161.850 | | 852 | 157.275 | 161.875 | | 26 | 157.300 | 161.900 | | 86 | 157.325 | 161.925 | | 27 | 157.350 | 161.950 | | 873 | 157.375 |  | | 28 | 157.400 | 162.000 | | 884 | 157.425 |  |   1For special assignment of frequencies in this band in certain areas of Washington State, the Great Lakes and the east coast of the United States pursuant to arrangements between the United States and Canada, see subpart B of this part.  2The frequency pair 157.275/161.875 MHz is available on a primary basis to ship and public coast stations. In Alaska it is also available on a secondary basis to private mobile repeater stations.  3 The former coast transmit frequency 161.975 MHz is available only for Automatic Identification System communications. No license authorizing a site-based VHF Public Coast Station or a Private Land Mobile Radio Station to operate on the frequency 161.975 MHz in VHF Public Coast Service Areas (VPCSAs) 1–9 will be renewed unless the license is or has been modified to remove frequency 161.975 MHz as an authorized frequency. In VPCSAs 10–42, site-based stations licensed to operate on frequency 161.975 MHz prior to March 2, 2009 may continue to operate on a co-primary basis on that frequency until March 2, 2024.  4The frequency 162.025 MHz is available only for Automatic Identification System communications. One hundred twenty kilometers (75 miles) from the United States/Canada border, the frequency 157.425 MHz is available for intership and commercial communications. Outside the Puget Sound area and its approaches and the Great Lakes, 157.425 MHz is available for communications between commercial fishing vessels and associated aircraft while engaged in commercial fishing activities.  5In VPCSAs 10–42, the working carrier frequency pair 157.250/161.850 MHz (Channel 25) is not available for assignment under part 80.  (ii) Service areas in the marine VHF 156–162 MHz band are VHF Public Coast Service Areas (VPCSAs). As listed in the table in this paragraph, VPCSAs are based on, and composed of one or more of, the U.S. Department of Commerce's 172 Economic Areas (EAs). *See* 60 FR 13114 (March 10, 1995). In addition, the Commission shall treat Guam and the Northern Mariana Islands, Puerto Rico and the United States Virgin Islands, American Samoa, and the Gulf of Mexico as EA-like areas, and has assigned them EA numbers 173–176, respectively. Maps of the EAs and VPCSAs are available for public inspection and copying at the FCC Public Reference Room, Room CY–A257, 445 12th Street, SW., Washington, DC 20554, 1–888–225–5322. In addition to the EAs listed in the table in this paragraph, each VPCSA also includes the adjacent waters under the jurisdiction of the United States. In VPCSAs 10–42, the working carrier frequency pair 157.250 MHz/161.850 MHz (Channel 25) is not available for assignment under part 80.   |  |  | | --- | --- | | **VHF Public coast station areas (VPCSAs)** | | | **VPCSAs** | **EAs** | | 1 (Northern Atlantic) | 1–5, 10 | | 2 (Mid-Atlantic) | 9, 11–23, 25, 42, 46 | | 3 (Southern Atlantic) | 24, 26–34, 37, 38, 40, 41, 174 | | 4 (Mississippi River) | 34, 36, 39, 43–45, 47–53, 67–107, 113, 116–120, 122–125, 127, 130–134, 176 | | 5 (Great Lakes) | 6–8, 54–66, 108, 109 | | 6 (Southern Pacific) | 160–165 | | 7 (Northern Pacific) | 147, 166–170 | | 8 (Hawaii) | 172, 173, 175 | | 9 (Alaska) | 171 | | 10 (Grand Forks) | 110 | | 11 (Minot) | 111 | | 12 (Bismarck) | 112 | | 13 (Aberdeen) | 114 | | 14 (Rapid City) | 115 | | 15 (North Platte) | 121 | | 16 (Western Oklahoma) | 126 | | 17 (Abilene) | 128 | | 18 (San Angelo) | 129 | | 19 (Odessa-Midland) | 135 | | 20 (Hobbs) | 136 | | 21 (Lubbock) | 137 | | 22 (Amarillo) | 138 | | 23 (Santa Fe) | 139 | | 24 (Pueblo) | 140 | | 25 (Denver-Boulder-Greeley) | 141 | | 26 (Scottsbluff) | 142 | | 27 (Casper) | 143 | | 28 (Billings) | 144 | | 29 (Great Falls) | 145 | | 30 (Missoula) | 146 | | 31 (Idaho Falls) | 148 | | 32 (Twin Falls) | 149 | | 33 (Boise City) | 150 | | 34 (Reno) | 151 | | 35 (Salt Lake City-Ogden) | 152 | | 36 (Las Vegas) | 153 | | 37 (Flagstaff) | 154 | | 38 (Farmington) | 155 | | 39 (Albuquerque) | 156 | | 40 (El Paso) | 157 | | 41 (Phoenix-Mesa) | 158 | | 42 (Tucson) | 159 |   (iii) Subject to paragraph (c)(3) of this section, each licensee may also operate on 12.5 kHz offset frequencies in areas where the licensee is authorized on both frequencies adjacent to the offset frequency, and in areas where the licensee on the other side of the offset frequency consents to the licensee's use of the adjacent offset frequency. Coordination with Canada is required for offset operations under any circumstance in which operations on either adjoining 25 kHz channel would require such coordination. *See* §80.57 of this part.  (2) Any recovered channel pairs will revert automatically to the holder of the VPCSA license within which such channels are included, except the channel pairs listed in the table in paragraph (c)(1)(i) of this section. Those channel pairs, and any channel pairs recovered where there is no VPCSA licensee, will be retained by the Commission for future licensing.  (e) Canada/U.S.A. channeling arrangement frequencies. The VHF frequencies assignable to ship and coast stations in the State of Washington and their usage limitations pursuant to the Canada/U.S.A. channeling arrangement are described in subpart B of this part.  (4) Subject to the requirements of §1.924 of this chapter and §80.21, each VPCSA licensee may place stations anywhere within its region without obtaining prior Commission approval provided:  (i) It provides to co-channel coast station incumbent licensees, and incumbent Private Land Mobile Radio licensees authorized under part 90 of this chapter on a primary basis, protection as defined in subpart P of this part. VPCSA licensees that share a common border may either distribute the available frequencies upon mutual agreement or request that the Commission assign frequencies along the common border.  (ii) The locations and/or technical parameters of the transmitters are such that individual coordination of the channel assignment(s) with a foreign administration, under applicable international agreements and rules in this part, is not required.  (iii) For any construction or alteration that would exceed the requirements of §17.7 of this chapter, licensees must notify the appropriate Regional Office of the Federal Aviation Administration (FAA Form 7460–1) and file a request for antenna height clearance and obstruction marking and lighting specifications (FCC Form 854) with the FCC, Attn: Information Processing Branch, 1270 Fairfield Rd., Gettysburg, PA 17325–7245.  (iv) The transmitters must not have a significant environmental effect as defined by §§1.1301 through 1.1319 of this chapter.  (d) *Working frequencies in the Mississippi River System.* The Mississippi River System includes the Mississippi River and connecting navigable waters other than the Great Lakes. The following simplex frequencies are available for assignment to public coast stations serving the Mississippi River System for radiotelephony communications. These simplex frequencies also are available for use by authorized ship stations within communication service range, whether or not the ship is operating within the confines of the Mississippi River System.  Mississippi River System Working Frequencies; Carrier Frequencies (kHz)   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 20861 | 4065 | 6209 | 8201 | 12362 | 16543 | | 2782 | 4089 | 6212 | 8213 | 12365 | 16546 | |  | 4116 | 6510 | 8725 |  |  | |  | 4408 | 6513 | 8737 |  |  |   1Limited to a maximum transmitter output of 150 watts (PEP).  (e) *Canada/U.S.A. channeling arrangement frequencies.* The VHF frequencies assignable to ship and coast stations in the State of washington and their usage limitations purusant to the Canada/U.S.A. channeling arrangement are described in subpart B of this part.  **§ 80.373   Private communications frequencies.**  This section describes the carrier frequencies assignable for ship-to-ship and ship-to-coast private communications.  (a) *Special requirements for private coast stations.* Assignment to private coast stations of radiotelephony frequencies in the 2000–27500 kHz band are subject to the following:  (1) Private coast stations must use J3E emission.  (2) On 2182 kHz, private coast stations must be capable of receiving J3E and H3E emissions.  (3) Except in the Mississippi River System and Great Lakes, private coast stations serving lakes or rivers are not authorized on the 2000–2850 kHz band.  (4) Private coast stations may use DSC for calling on their assigned frequencies in the 2000–27500 kHz band and on those frequencies in the 156–162 MHz band which are allocated for maritime control, commercial and non-commercial communications.  (b) Frequencies in the 2000–27500 kHz band for intership safety and other communications. This paragraph describes the geographic areas of operation and the frequencies and limitations in the band available for assignment for intership safety and operational simplex radiotelephone communications.  (1) *Frequencies avaiable.*   |  |  | | --- | --- | | **Carrier frequency (kHz)** | **Geographic area** | | 2003.0 | Great Lakes only. | | 2082.51,2 | All areas. | | 2093.01 | All areas. | | 2142.0 | Pacific coast areas south of 42 degrees north on a day basis only. | | 2203.02 | Gulf of Mexico. | | 2214.01 | All areas. | | 2638.01 | All areas. | | 2670.0 | All areas. | | 2738.01 | All areas except the Great Lakes. | | 2830.0 | Gulf of Mexico only. |   1Limited to a peak envelope power of 150 watts.  2Available on a secondary basis for intership communications by ships involved in non-commercial fishing.  (2) Except for 2093.0 kHz and 2214.0 kHz the frequencies shown in paragraph (b)(1) of this section are authorized primarily for intership safety communications in the indicated geographic area.  (3) Except for the frequencies 2093.0 kHz, 2214.0 kHz and 2670.0 kHz, the frequencies shown in paragraph (b)(1) of this section may be used on a non-interference basis to safety communications, for operational communications and, in the case of commercial transport ships and ships of municipal and state governments, for business communications.  (4) Ship stations may communicate with government coast stations on 2003.0 kHz about passage of vessels. Interference must not be caused to communications on the St. Lawrence Seaway and on the St. Mary's River.  (5) Ship stations may use 2670.0 kHz for communications with coast and ship stations of the U.S. Coast Guard. When a ship is not equipped to transmit on 2670.0 kHz or in the band 156–162 MHz the frequency 2003.0 kHz may be used on the Great Lakes for communications must not cause harmful interference to intership safety, operational and business communications.  (6) Navigational communications between ships and private coast stations may be exchanged on 2738.0 kHz and 2830.0 kHz. The frequencies 2214.0 kHz, 2738.0 kHz and 2830.0 kHz are assignable to private coast stations upon a showing that they need to communicate with commercial transport or Government ships. Private coast station applicants must show that public coast stations do not provide the required communications and harmful interference will not be caused to the intership use of these frequencies. The transmitter power must not exceed 150 watts. If 2214.0 kHz is authorized for ships, intership communication is also authorized. The geographic limitations to the frequencies 2738.0 kHz and 2830.0 kHz do not prohibit intership communication of less than 320 km (200 statute miles) when only one of the ship stations is within a permitted use geographic area.  (7) Private aircraft stations may communicate with ship stations on 2738.0 kHz and 2830.0 kHz if:  (i) The communications are limited to business or operational needs of the vessel while it is engaged in commercial fishing activities in the open sea or adjacent waters;  (ii) Harmful interference must not be caused to intership communications;  (iii) The maximum output power used for such communication must not exceed 25 watts;  (c) *Frequencies in the 2000–27500 kHz bands for business and operational communications.* (1) The following simplex frequencies in the 2000–27500 kHz band are available for assignment to private coast stations for business and operational radiotelephone communications. These simplex frequencies also are available for use by authorized ship stations for business and operational radiotelephone communications.  Business and Operational Frequencies in the 2000–27500 kHz Band; Carrier Frequencies (kHz)   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 2065.01,3 | 4146 | 6224 | 8294 | 12353 | 16528 | 18840 | 22159 | 25115 | | 2079.01,3 | 4149 | 6227 | 8297 | 12356 | 16531 | 18843 | 22162 | 25118 | | 2096.51 | 41252 | 6230 |  | 123596 | 16534 |  | 22165 |  | | 3023.04 | 44175 | 6516 |  |  |  |  | 22168 |  | |  | 56804 |  |  |  |  |  | 22171 |  |   1Limited to peak envelope power of 150 watts.  2The frequency 4125 kHz is also available for distress and safety, and calling and reply, see §80.369 (b) and (d) of this part.  3The frequencies 2065.0 kHz and 2079.0 kHz must be coordinated with Canada.  4The frequencies 3023.0 kHz and 5680.0 kHz are available to private coast stations licensed to state and local governments and any scene-of-action ships for the purpose of search and rescue scene-of-action coordination including communications with any scene-of-action aircraft.  5The frequency 6516 kHz is limited to daytime operations. The frequencies 4417 kHz and 6516 kHz are also available for calling and reply, see §80.369(d) of this part.  6The alternative carrier frequency 12359 kHz may be used by ship stations and coast stations for calling on a simplex basis, provided that the peak envelope power does not exceed 1 kW.  (2) Assignment of these frequencies is subject to the following general limitations:  (i) These frequencies are shared and are not available for the exclusive use of any station. No more than one frequency from each of the frequency bands will be authorized to a private station without justification;  (ii) The emissions must be J3E or J2D except that when DSC is used the emission must be F1B or J2B; and  (iii) Maximum transmitter output power is limited to 1 kW except as noted.  (3) In addition to the frequencies shown in paragraph (c)(1) of this section, the following coast transmit frequencies listed in the table in §80.371(a) of this chapter are available for assignment to private coast stations and authorized ship stations for simplex business and operational radiotelephone communications: in the East Coast, West Coast, and Gulf Coast regions, 2482 kHz; in the Alaska region, 2309 kHz. These frequencies shall not be assigned to public coast stations before July 25, 2002. After that date, only the above frequencies in the above regions that have been assigned to at least one private coast station shall continue to be available for assignment to private coast stations. If, by that date, in any of the above regions, any of the above frequencies has not been assigned to a private coast station, that frequency in that region shall be available for assignment only to public coast stations.  (d) *Radioprinter frequencies.* (1) The following table describes the bands available for radioprinter simplex communications between ship and private coast stations:  Frequency Bands (kHz)  2107–2170  4750–4850  2194–2495  5060–5450  2505–2850  5700–59501  3155–3400  7300–81001  4438–4650  1 After April 1, 2007, use of the sub-bands 5900–5950 kHz and 7300–7350 kHz shall be on the condition that harmful interference is not caused to HF broadcasting.  (2) Ship stations may conduct radioprinter communications with private coast stations on frequencies within these bands which are assigned to their associated private coast stations;  (3) Any alphanumeric code may be used; and  (4) The bandwidth of radioprinter communications on frequencies within these bands must not exceed 300 Hz.  (e) *Frequencies in the 2000–27500 kHz band for medical advisory communications.* (1) Private coast stations may be authorized to use any frequencies within the 2030–27500 kHz band that are allocated to Government and non-Government fixed or fixed and mobile radio services shown in the Commission's Table of Frequency Allocations contained in §2.106 of this chapter for communications with ship stations to provide medical treatment information or advice. Assignment of these frequencies is subject to the following limitations:  (2) No protection is provided from harmful interference caused by foreign stations; and  (3) A private coast station must cease operations on a frequency that causes harmful interference to a foreign station.  (f) Frequencies in the 156–162 MHz band. The following tables describe the carrier frequencies available in the 156–162 MHz band for radiotelephone communications between ship and private coast stations. ( Note: the letter “A” following the channel designator indicates simplex operation on a channel designated internationally as a duplex channel.)  Frequencies in the 156–162 MHz Band   |  |  |  |  | | --- | --- | --- | --- | | **Channel designator** | **Carrier frequency (MHz) ship transmit** | **Carrier frequency (MHz) coast transmit** | **Points of communication (intership and between coast and ship unless otherwise indicated)** | | **Port Operations** | | | | | 01A1 | 156.050 | 156.050 |  | | 63A1 | 156.175 | 156.175 |  | | 05A2 | 156.250 | 156.250 |  | | 65A | 156.275 | 156.275 |  | | 66A | 156.325 | 156.325 |  | | 123 | 156.600 | 156.600 |  | | 73 | 156.675 | 156.675 |  | | 143 | 156.700 | 156.700 |  | | 74 | 156.725 | 156.725 |  | | 7518 | 156.775 | 156.775 |  | | 7618 | 156.825 | 156.825 |  | | 774 | 156.875 |  | Intership only. | | 20A12 | 157.000 |  | Intership only. | | **Navigational (Bridge-to-Bridge)**5 | | | | | 677 | 156.375 | 156.375 |  | | 136 | 156.650 | 156.650 |  | | **Commercial** | | | | | 01A1 | 156.050 | 156.050 |  | | 63A1 | 156.175 | 156.175 |  | | 07A | 156.350 | 156.350 |  | | 677 | 156.375 |  | Intership only. | | 08 | 156.400 |  | Do. | | 0916 | 156.450 | 156.450 |  | | 10 | 156.500 | 156.500 |  | | 113 | 156.550 | 156.550 |  | | 7214 | 156.625 |  | Intership only. | | 18A | 156.900 | 156.900 |  | | 19A | 156.950 | 156.950 |  | | 79A | 156.975 | 156.975 |  | | 80A | 157.025 | 157.025 |  | | 88A8 | 157.425 | 157.425 |  | | **Digital Selective Calling** | | | | | 7015 | 156.525 | 156.525 |  | | **Noncommercial** | | | | | 6714 | 156.375 |  | Intership only. | | 6817 | 156.425 | 156.425 |  | | 0916 | 156.450 | 156.450 |  | | 69 | 156.475 | 156.475 |  | | 7119 | 156.575 | 156.575 |  | | 72 | 156.625 |  | Intership only. | | 78A | 156.925 | 156.925 |  | | 79A | 156.975 | 156.975 | Great Lakes only. | | 80A | 157.025 | 157.025 | Do. | | **Distress, Safety and Calling** | | | | | 16 | 156.800 | 156.800 |  | | **Intership Safety** | | | | | 06 | 156.300 |  | a. Intership, or b. For SAR: Ship and aircraft for the U.S. Coast Guard. | | **Environmental** | | | | | 1513 |  | 156.750 | Coast to ship only. | | **Maritime Control** | | | | | 17910 | 156.850 | 156.850 |  | | **Liaison and Safety Broadcasts, U.S. Coast Guard** | | | | | 22A11 | 157.100 | 157.100 | Ship, aircraft, and coast stations of the U.S. Coast Guard and at Lake Mead, Nev., ship and coast stations of the National Park Service, U.S. Department of the Interior. |   1156.050 MHz and 156.175 MHz are available for port operations and commercial communications purposes when used only within the U.S. Coast Guard designated Vessel Traffic Services (VTS) area of New Orleans, on the lower Mississippi River from the various pass entrances in the Gulf of Mexico to Devil's Swamp Light at River Mile 242.4 above head of passes near Baton Rouge.  2156.250 MHz is available for port operations communications use only within the U.S. Coast Guard designated VTS radio protection areas of New Orleans and Houston and Seattle, *see* §80.383. 156.250 MHz is available for intership port operations communications used only within the area of Los Angeles and Long Beach harbors, within a 25-nautical mile radius of Point Fermin, California.  *REASON: This frequency is also available for port operations in Seattle. Addition of other VTS eg lower Mississippi River may be required as well.*  3156.550 MHz, 156.600 MHz and 156.700 MHz are available in the U.S. Coast Guard designated port areas only for VTS communications and in the Great Lakes available primarily for communications relating to the movement of ships in sectors designated by the St. Lawrence Seaway Development Corporation or the U.S. Coast Guard. The use of these frequencies outside VTS and ship movement sector protected areas is permitted provided they cause no interference to VTS and ship movement communications in their respective designated sectors.  4Use of 156.875 MHz is limited to communications with pilots regarding the movement and docking of ships. Normal output power must not exceed 1 watt.  5156.375 MHz and 156.650 MHz are available primarily for intership navigational communications. These frequencies are available between coast and ship on a secondary basis when used on or in the vicinity of locks or drawbridges. Normal output power must not exceed 1 watt. Maximum output power must not exceed 10 watts for coast stations or 25 watts for ship stations.  6On the Great Lakes, in addition to bridge-to-bridge communications, 156.650 MHz is available for vessel control purposes in established vessel traffic systems. 156.650 MHz is not available for use in the Mississippi River from South Pass Lighted Whistle Buoy “2” and Southwest Pass entrance Mid-channel Lighted Whistle Buoy to mile 242.4 above Head of Passes near Baton Rouge. Additionally it is not available for use in the Mississippi River-Gulf Outlet, the Mississippi River-Gulf Outlet Canal, and the Inner Harbor Navigational Canal, except to aid the transition from these areas.  7Use of 156.375 MHz is available for navigational communications only in the Mississippi River from South Pass Lighted Whistle Buoy “2” and Southwest Pass entrance Mid-channel Lighted Whistle Buoy to mile 242.4 above Head of Passes near Baton Rouge, and in addition over the full length of the Mississippi River-Gulf Outlet Canal from entrance to its junction with the Inner Harbor Navigational Canal, and over the full length of the Inner Harbor Navigational Canal from its junction with the Mississippi River to its entry to Lake Pontchartrain at the New Seabrook vehicular bridge.  8Within that portion of VHF Public Coast Station Areas (VPCSAs) 1 through 9 listed in the table in Section 80.371(c)(1)(ii) within 120 km (75 miles) of the United States/Canada border, in the area of the Great Lakes, the Saint Lawrence Seaway, and the Puget Sound and the Strait of Juan de Fuca and its approaches, Maritime VHF Channel 88A (157.425 MHz) is available for use for public correspondence communications, subject to prior coordination with Canada. Maritime VHF Channel 88B (162.025 MHz) is available only for Automatic Identification System communications. One hundred twenty kilometers (75 miles) from the United States/Canada border, 157.425 MHz is available for intership and commercial communications. Outside the Puget Sound area and its approaches and the Great Lakes, 157.425 MHz is available for communications between commercial fishing vessels and associated aircraft while engaged in commercial fishing activities.  9When the frequency 156.850 MHz is authorized, it may be used additionally for search and rescue training exercises conducted by state or local governments.  10The frequency 156.850 MHz is additionally available to coast stations on the Great Lakes for transmission of scheduled Coded Marine Weather Forecasts (MAFOR), Great Lakes Weather Broadcast (LAWEB) and unscheduled Notices to Mariners or Bulletins. F3C and J3C emissions are permitted. Coast stations on the Great Lakes must cease weather broadcasts which cause interference to stations operating on 156.800 MHz until the interference problem is resolved.  11The frequency 157.100 MHz is authorized for search and rescue training exercises by state or local government in conjunction with U.S. Coast Guard stations. Prior U.S. Coast Guard approval is required. Use must cease immediately on U.S. Coast Guard request.  12The duplex pair for channel 20 (157.000/161.600 MHz) may be used for ship to coast station communications.  13Available for assignment to coast stations, the use of which is in accord with an agreed program, for the broadcast of information to ship stations concerning the environmental conditions in which vessels operate, i.e., weather; sea conditions; time signals; notices to mariners; and hazards to navigation.  14 [Reserved]*REASON: Could not identify the basis for this restriction on channels 67 and 72. Those channels are recognized in the ITU Radio Regs and in Canada as well as the U.S. as intership channels.*  15The frequency 156.525 MHz is to be used exclusively for distress, safety and calling using digital selective calling techniques. No other uses are permitted.  16The frequency 156.450 MHz is available for commercial use, including boater calling. This frequency is also available for intership, ship and coast general purpose calling by noncommercial vessels, such as recreational boats and private coast stations.  *REASON: Clarification since this frequency is listed twice in the Table*  17The frequency 156.425 MHz is assigned by rule to private coast stations in Alaska for facsimile transmissions as well as voice communications.  18 With the exception of AIS, the frequencies 156.775 and 156.825 MHz are available for navigation-related port operations or ship movement only, and all precautions must be taken to avoid harmful interference to channel 16, by limiting the transmitter output power to 1 watt. These frequencies are also available to AIS through the mobile satellite service (Earth-to-space) for the reception of long-range AIS broadcast messages from ships (Message 27; see Recommendation ITU-R M.1371 seriesincorporated by reference in § 80.7(c)).  *REASON: Consequential to WRC12 Final Acts.*  19156.575 MHz is available for port operations communications use only within the U.S. Coast Guard designated VTS radio protection area of Seattle (Puget Sound) *see,*  §80.383. Normal output power must not exceed 1 watt. Maximum output power must not exceed 10 watts.  (g)(1) On-board communications: This section describes the carrier frequency pairs assignable for on-board mobile radiotelephony communications. The center of the on-board repeater antenna must not be located more than 3 meters (10 feet) above the ship's working deck. These frequencies are available on a shared basis with stations in the Industrial/Business Radio Pool.  Frequencies for On-Board Communications   |  |  |  | | --- | --- | --- | | **Channel** | **Carrier frequency (MHz)** | | | **On-board mobile station** | **On-board repeater station1** | | 1 | 467.750 | 457.525 | | 2 | 467.775 | 457.550 | | 3 | 467.800 | 457.575 | | 4 | 467.825 | 457.600 |   1These frequencies may also be assigned to mobile stations for single frequency simplex operation.  (2) Where needed, equipment designed for 12.5 kHz channel spacing using the additional frequencies 457.5375 MHz, 457.5625 MHz, 467.5375 MHz, and 467.5625 MHz may be introduced for on-board communications.  (h) *Repeater frequencies in Alaska.* The following frequencies are assignable on a primary basis to public and on a secondary basis to private coast stations in Alaska for maritime repeater operations:  Repeater receive: 157.275 MHz  Repeater transmit: 161.875 MHz  (i) *Frequencies in the 1600–5450 kHz band for private communications in Alaska.* The following simplex frequencies are available for assignment to private fixed stations located in the State of Alaska for radiotelephony communications with ship stations. These simplex frequencies are available for use by authorized ship stations for radiotelephony communications with private fixed stations located in the State of Alaska.  Private communications in Alaska Carrier frequencies (kHz)   |  |  |  | | --- | --- | --- | | 1619.03 | 2382.0 | 2563.0 | | 1622.03 | 2419.0 | 2566.0 | | 1643.03 | 2422.0 | 2590.0 | | 1646.03 | 2427.0 | 2616.0 | | 1649.03 | 2430.0 | 3258.0 | | 1652.03 | 2447.0 | 13261.0 | | 1705.03 | 2450.0 | 4366.0 | | 1709.0 | 2479.0 | 4369.0 | | 1712.0 | 2482.0 | 4396.0 | | 2003.0 | 2506.0 | 4402.0 | | 2006.0 | 2509.0 | 4420.0 | | 2115.0 | 2512.0 | 4423.0 | | 2118.0 | 2535.0 | 25167.5 | | 2379.0 | 2538.0 |  |   1Ship stations must limit use of 3261.0 kHz to communications over distances which cannot be reached by the use of frequency below 2700 kHz or above 156.000 MHz.  2The frequency 5167.5 kHz is available for emergency communications in Alaska. Peak envelope power of stations operating on this frequency must not exceed 150 watts. When a station in Alaska is authorized to use 5167.5 kHz, such station may also use this frequency for calling and listening for the purpose of establishing communications.  3Use of these frequencies is on a secondary basis to Region 2 broadcasting.  (j) *Frequencies for portable ship stations.* VHF frequencies authorized for stations authorized carrier frequencies in the 156.275 MHz to 157.450 MHz and 161.575 MHz to 162.025 MHz bands may also be authorized as marine utility stations. Marine-utility stations on shore must not cause interference to any Automatic Identification System, VHF or coast station, VHF or UHF land mobile base station, or U.S. Government station.  **§ 80.374   Provisions for frequencies in the 4000–4063 and the 8100–8195 kHz bands shared with the fixed service.**  Coast station assignments in the 4000–4063 kHz band deviate from international provisions. Coast station assignments in the 4000–4063 kHz band are permitted provided that such stations must not cause interference to, and must accept interference from, stations operated by other countries in accordance with the Radio Regulations.  (a) *Frequencies in the 4000–4063 kHz band.* (1) The frequencies in the 4000–4063 kHz bands are available to ship and public coast stations for:  (i) Supplementary ship-to-shore duplex operations with coast stations assigned the frequencies described in §80.371(b) of this part;  (ii) Intership simplex operations and cross-band operations;  (iii) Ship-to-shore or shore-to-ship simplex operations; or  (iv) Duplex operations with coast stations assigned in the band 4438–4650 kHz, as described in §80.373(d) of this part.  (2) The following table describes the channelization of carrier frequencies in the 4000–4063 kHz band.  Carrier Frequencies (kHz)   |  |  |  |  | | --- | --- | --- | --- | | 4000 | 4015 | 4030 | 4045 | | 4003 | 4018 | 4033 | 4048 | | 4006 | 4021 | 4036 | 4051 | | 4009 | 4024 | 4039 | 4054 | | 4012 | 4027 | 4042 | 4057 |   (b) *Frequencies in the 8100–8195 kHz band.* (1) The frequencies in the 8100–8195 kHz bands are available to ship and public coast stations for:  (i) Supplementary ship-to-shore duplex operations with coast stations assigned the frequencies described in §80.371(b) of this part;  (ii) Intership simplex operations and cross-band operations; or  (iii) Ship-to-shore or shore-to-ship simplex operations.  (2) The following table describes the channelization of carrier frequencies in the 8100–8195 kHz band.  Carrier Frequencies (kHz)   |  |  |  | | --- | --- | --- | | 8101 | 8137 | 8167 | | 8104 | 8140 | 8170 | | 8107 | 8143 | 8173 | | 8110 | 8146 | 8176 | | 8116 | 8149 | 8179 | | 8119 | 8152 | 8182 | | 8122 | 8155 | 8185 | | 8125 | 8158 | 8188 | | 8131 | 8161 | 8191 | | 8134 | 8164 |  |   Radiodetermination  **§ 80.375   Radiodetermination frequencies.**  This section describes the carrier frequencies assignable to radiodetermination stations. Only direction finding radar stations will be authorized on land.  (a) *Direction finding frequencies.* The carrier frequencies assignable to ship stations for directional finding operations are:  Carrier Frequency  8364 kHz  121.500 MHz  243.00 MHz  (b) *Radiodetermination frequencies for cable-repair ships.* Except in Region 1 the channels in the 285–325 kHz band are assignable to ship stations for cable-repair radiodetermination operations. In Region 1 the channels available for assignment for such operations are limited to the 285–315 kHz band. The conditions of use of these channels are set forth in subpart X of this part. Channel usage must comply with the following requirements:  (1) They are not permitted within the territorial waters of a foreign country;  (2) Their output power must not exceed 15 watts; and  (3) They must not cause interference to any maritime station in the radionavigation service.  (c) *Radiodetermination frequencies below 500 MHz.* The frequencies 154.585 MHz, 159.480 MHz, 160.725 MHz, 160.785 MHz, 454.000 MHz and 459.000 MHz are authorized for offshore radiolocation and associated telecommand operations under a ship station license provided:  (1) The use of these frequencies is related to the ship's commercial operations;  (2) The station antenna height does not exceed 6 meters (20 feet) above sea level in a buoy station or 6 meters (20 feet) above the mast of the ship in which it is installed.  (d) *Radiodetermination frequency bands above 2400 MHz.* (1) The radiodetermination frequency bands assignable to ship and shore stations including ship and shore radar and transponder stations are as follows: 2450–2500 MHz; 2900–3100 MHz; 5460–5650 MHz; and 9300–9500 MHz.  (2) Assignment of these bands to ship and coast stations are subject to the following conditions:  (i) The 2450–2500 MHz band may be used only for radiolocation on the condition that harmful interference must not be caused to the fixed and mobile services. No protection is provided from interference caused by emissions from industrial, scientific, or medical equipment;  (ii) The use of the 2900–3100 MHz, 5470–5650 MHz and 9300–9500 MHz bands for radiolocation must not cause harmful interference to the radionavigation and Government radiolocation services. Additionally, the use of the 2900–3000 MHz band for radiolocation must not cause harmful interference to the Government meteorological aids service.  (iii) In the 2920–3100 MHz and 9320–9500 MHz bands the use of fixed-frequency transponders for radionavigation is not permitted;  (iv) Non-Government radiolocation stations may be authorized in the 5460–5470 MHz band on the condition that harmful interference shall not be caused to the aeronautical or maritime radionavigation services or to Government radiolocation service;  (v) The use of the 5460–5650 MHz band for radionavigation is limited to shipborne radar.  (e) *Search and rescue radar transponder stations.* The technical standards for search and rescue transponder stations are in subpart W of this part.  Ship Earth Stations  **§ 80.377   Frequencies for ship earth stations.**  The frequency band 1626.5–1645.5 MHz is assignable for communication, radiodetermination and telecommand messages, and developmental operations that are associated with the position, orientation and operational functions of maritime satellite equipment. The frequency band 1645.5–1646.5 MHz is reserved for use in the Global Maritime Distress and Safety System (GMDSS).  Aircraft Stations  **§ 80.379   Maritime frequencies assignable to aircraft stations.**  This section describes the maritime frequencies assignable to aircraft stations for simplex operations:  (a) Available frequencies:   |  |  | | --- | --- | | **Carrier frequency** | **Conditions of use** | | 2738 kHz | (1) | | 2830 kHz | (1) | | 3023 kHz | (2) | | 4125 kHz | (3) | | 5680 kHz | (2) | | 121.500 MHz | (4) | | 123.100 MHz | (4) | | 156.300 MHz | (5) | | 156.375 MHz | (5) | | 156.400 MHz | (5) | | 156.425 MHz | (5) | | 156.450 MHz | (5) | | 156.625 MHz | (5) | | 156.800 MHz | (5) | | 156.900 MHz | (5) | | 157.100 MHz | (6) | | 157.425 MHz | (5)(7) |   (b) The conditions of use of the carrier frequencies in paragraph (a) of this section, are:  (1) For permissible geographic areas of operation see §80.373(b)(1). For other limitations see §80.373(b)(7);  (2) Aircraft and ship stations may use 3023.0 kHz and 5680.0 kHz for search and rescue scene-of-action coordination including communications between these stations and participating land stations. Stations using these frequencies must use J3E emission;  (3) Assignable for distress and safety communications between aircraft and maritime mobile stations;  (4) Assignable for search and rescue between ships and aircraft. Stations using these frequencies must use A3E emission;  (5) These frequencies may be used by aircraft stations when:  (i) The altitude of aircraft stations does not exceed 300 meters (1,000 feet), except for reconnaissance aircraft participating in icebreaking operations where an altitude of 450 meters (1,500 feet) is allowed;  (ii) The mean power of aircraft stations must not exceed five watts;  (iii) Communications are limited to operations in which the maritime mobile stations are primarily involved and where direct communications between the aircraft and the ship or coast station is required;  (iv) Stations may use 156.300 MHz for safety purposes only;  (v) Stations may use 156.800 MHz for distress, safety and calling only; and  (vi) Use of 156.375 MHz by aircraft is not permitted in the New Orleans VTS area specified in §80.383.  (6) The use of 157.100 MHz is limited to communications with stations of the Department of Interior at Lake Mead, Nevada; and  (7) Commercial fishing vessels and associated aircraft may use 157.425 MHz while engaged in commercial fishing activities except within 120 km (75 miles) of the United States/Canada border and Puget Sound and the Strait of Juan de Fuca and its approaches, the Great Lakes, and the St. Lawrence Seaway.  Operational Fixed Stations  **§ 80.381   Frequencies for operational fixed stations.**  The following carrier frequencies in the 72–76 MHz band are assignable to operational fixed stations using vertical polarization, if no harmful interference is caused to TV reception on Channels 4 and 5. These frequencies are shared with the Land Mobile and Aviation Radio Services.  Operational Fixed Frequencies in the 72–76 MHz Band   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 72.02 | 72.28 | 72.64 | 72.90 | 75.68 | 75.94 | | 72.04 | 72.30 | 72.66 | 72.92 | 75.70 | 75.96 | | 72.06 | 72.32 | 72.68 | 72.94 | 75.72 | 75.98 | | 72.08 | 72.34 | 72.70 | 72.96 | 75.74 |  | | 72.10 | 72.36 | 72.72 | 72.98 | 75.76 |  | | 72.12 | 72.38 | 72.74 | 75.42 | 75.78 |  | | 72.14 | 72.40 | 72.76 | 75.46 | 75.80 |  | | 72.16 | 72.42 | 72.78 | 75.50 | 75.82 |  | | 72.18 | 72.46 | 72.80 | 75.54 | 75.84 |  | | 72.20 | 72.50 | 72.82 | 75.58 | 75.86 |  | | 72.22 | 72.54 | 72.84 | 75.62 | 75.88 |  | | 72.24 | 72.58 | 72.86 | 75.64 | 75.90 |  | | 72.26 | 72.62 | 72.88 | 75.66 | 75.92 |  |   Vessel Traffic Services System (VTS)  **§ 80.383   Vessel Traffic Services (VTS) system frequencies.**  This section describes the carrier frequencies available for use in the Coast Guard Vessel Traffic Services (VTS) systems within the designated geographic radio protected areas.  (a) Assigned frequencies:  Vessel Traffic Control Frequencies   |  |  | | --- | --- | | **Carrier frequencies (MHz)** | **Geographic areas** | | 156.250 | Seattle. | | 156.550 | New York, New Orleans,2Houston, Prince William Sound,2Berwick Bay. | | 156.600 | New York, New Orleans,2Houston, San Francisco,2Sault Ste. Marie.2 | | 156.700 | New York, New Orleans,2Seattle, San Francisco.1 |   1Private coast station licenses for the use of this frequency will not be renewed beyond November 1, 1997. Continued use until expiration must be on a noninterference basis to Coast Guard VTS communications.  2Private coast station licenses for the use of this frequency in this area will expire at the end of the current license term or five years after the adopted date of the final rule, whichever comes first. Continued use until expiration must be on a noninterference basis to Coast Guard VTS communications.  (b) The U.S. Coast Guard designated radio protection areas for VTS are as follows:  (1) *New York.* The rectangle between north latitudes 40 degrees and 42 degrees and west longitudes 71 degrees and 74 degrees 30 minutes;  (2) *New Orleans.* The rectangle between North latitudes 27 degrees 30 minutes and 31 degrees 30 minutes and West longitudes 87 degrees 30 minutes and 93 degrees;  (3) *Houston.* The rectangle between north latitudes 28 degrees 30 minutes and 30 degrees 20 minutes and west longitudes 93 degrees 30 minutes and 96 degrees;  (4) *Seattle (Puget Sound).* The area encompassed between the United States-Canadian border and a line drawn from 49 degrees North 121 degrees West on the United States-Canadian Border, to 46 degrees 30 minutes North 121 degrees West, then to 46 degrees 30 minutes North 125 degrees West, then to 48 degrees 30 minutes North 125 degrees West, and then east to the United States-Canadian Border;  (5) *San Francisco.* The rectangle between north latitudes 39 degrees and 37 degrees and west longitudes 120 degrees 50 minutes and 123 degrees 20 minutes; and  (6) *Prince William Sound.* The rectangle between North latitudes 61 degrees 17 minutes and 59 degrees 22 minutes and West longitudes 149 degrees 39 minutes and 145 degrees 36 minutes.  (7) *Sault Ste. Marie.* The rectangle between North latitudes 45 degrees and 47 degrees, and West longitudes 83 degrees and 85 degrees.  (8) *Berwick Bay.* The rectangle between North latitudes 28 degrees 30 minutes and 30 degrees 30 minutes, and West longitudes 90 degrees 50 minutes and 92 degrees.  (c) The use of the frequencies shown in paragraph (a) of this section is permitted in areas outside the Coast Guard radio protection areas provided there is no interference to VTS communications within the VTS areas.  Automated Systems  **§ 80.385   Frequencies for automated systems.**  This section describes the carrier frequencies for the Automated Maritime Telecommunications System (AMTS) and for other automated multi-station systems.  (a) *Automated Maritime Telecommunications System (AMTS).* (1) The Automated Maritime Communications System (AMTS) is an automated maritime telecommunications system.  (2) The following carrier frequencies are available for assignment to public coast stations for public correspondence communications with ship stations and units on land. AMTS operations must not cause harmful interference to the U.S. Navy SPASUR system which operates in the band 216.880–217.080 MHz.   |  |  |  |  | | --- | --- | --- | --- | | **Channel No.** | **Carrier frequency (MHz)** | | | | **Ship transmit1,3** | **Coast transmit2** | **Group** | | 101 |  | 216.0125 | D | | 102 |  | 216.0375 |  | | 103 |  | 216.0625 |  | | 104 |  | 216.0875 |  | | 105 |  | 216.1125 |  | | 106 |  | 216.1375 |  | | 107 |  | 216.1625 |  | | 108 |  | 216.1875 |  | | 109 |  | 216.2125 |  | | 110 |  | 216.2375 |  | | 111 |  | 216.2625 |  | | 112 |  | 216.2875 |  | | 113 |  | 216.3125 |  | | 114 |  | 216.3375 |  | | 115 |  | 216.3625 |  | | 116 |  | 216.3875 |  | | 117 |  | 216.4125 |  | | 118 |  | 216.4375 |  | | 119 |  | 216.4625 |  | | 120 |  | 216.4875 |  | | 121 |  | 216.5125 | C | | 122 |  | 216.5375 |  | | 123 |  | 216.5625 |  | | 124 |  | 216.5875 |  | | 125 |  | 216.6125 |  | | 126 |  | 216.6375 |  | | 127 |  | 216.6625 |  | | 128 |  | 216.6875 |  | | 129 |  | 216.7125 |  | | 130 |  | 216.7375 |  | | 131 |  | 216.7625 |  | | 132 |  | 216.7875 |  | | 133 |  | 216.8125 |  | | 134 |  | 216.8375 |  | | 135 |  | 216.8625 |  | | 136 |  | 216.8875 |  | | 137 |  | 216.9125 |  | | 138 |  | 216.9375 |  | | 139 |  | 216.9625 |  | | 140 |  | 216.9875 |  | | 141 | 219.0125 | 217.0125 | B | | 142 | 219.0375 | 217.0375 |  | | 143 | 219.0625 | 217.0625 |  | | 144 | 219.0875 | 217.0875 |  | | 145 | 219.1125 | 217.1125 |  | | 146 | 219.1375 | 217.1375 |  | | 147 | 219.1625 | 217.1625 |  | | 148 | 219.1875 | 217.1875 |  | | 149 | 219.2125 | 217.2125 |  | | 150 | 219.2375 | 217.2375 |  | | 151 | 219.2625 | 217.2625 |  | | 152 | 219.2875 | 217.2875 |  | | 153 | 219.3125 | 217.3125 |  | | 154 | 219.3375 | 217.3375 |  | | 155 | 219.3625 | 217.3625 |  | | 156 | 219.3875 | 217.3875 |  | | 157 | 219.4125 | 217.4125 |  | | 158 | 219.4375 | 217.4375 |  | | 159 | 219.4625 | 217.4625 |  | | 160 | 219.4875 | 217.4875 |  | | 161 | 219.5125 | 217.5125 | A | | 162 | 219.5375 | 217.5375 |  | | 163 | 219.5625 | 217.5625 |  | | 164 | 219.5875 | 217.5875 |  | | 165 | 219.6125 | 217.6125 |  | | 166 | 219.6375 | 217.6375 |  | | 167 | 219.6625 | 217.6625 |  | | 168 | 219.6875 | 217.6875 |  | | 169 | 219.7125 | 217.7125 |  | | 170 | 219.7375 | 217.7375 |  | | 171 | 219.7625 | 217.7625 |  | | 172 | 219.7875 | 217.7875 |  | | 173 | 219.8125 | 217.8125 |  | | 174 | 219.8375 | 217.8375 |  | | 175 | 219.8625 | 217.8625 |  | | 176 | 219.8875 | 217.8875 |  | | 177 | 219.9125 | 217.9125 |  | | 178 | 219.9375 | 217.9375 |  | | 179 | 219.9625 | 217.9625 |  | | 180 | 219.9875 | 217.9875 |  |   1Ship transmit frequencies in Groups C and D are not authorized for AMTS use.  2Coast station operation on frequencies in Groups C and D are not currently assignable and are shared on a secondary basis with the Low Power Radio Service in part 95 of this chapter. Frequencies in the band 216.750–217.000 MHz band are available for low power point-to-point network control communications by AMTS coast stations under the Low Power Radio Service (LPRS). LPRS operations are subject to the conditions that no harmful interference is caused to the United States Navy's SPASUR radar system (216.88–217.08 MHz) or to TV reception within the Grade B contour of any TV channel 13 station or within the 68 dBu predicted contour of any low power TV or TV translator station operating on channel 13.  3Ship transmit frequencies in Groups A and B are permitted to provide mobile-to-mobile communications where the written consent of all affected licensees is obtained.  (3) As listed in the table in this paragraph, AMTS Areas (AMTSAs) are based on, and composed of one or more of, the U.S Department of Commerce's 172 Economic Areas (EAs). See 60 FR 13114 (March 10, 1995). In addition, the Commission shall treat Puerto Rico, the United States Virgin Islands, and the Gulf of Mexico as EA-like areas. The Gulf of Mexico EA extends from 12 nautical miles off the United States Gulf coast outward into the Gulf. See §27.6(a)(2) of this chapter and 62 FR 9636. Maps of the EAs and AMTSAs are available for public inspection and copying at the Federal Communications Commission, Reference Center, 445 12th Street, SW., Room CY  A257, Washington, DC 20554. These maps and data are also available on the FCC Web site at *www.fcc.gov/oet/info/maps/areas/.* The Group A and B frequency pairs listed in the table in paragraph (a)(2) of this section are available for assignment to a single licensee in each of the AMTSAs listed in the table in this paragraph. In addition to the listed EAs listed in the table in this paragraph, each AMTSA also includes the adjacent waters under the jurisdiction of the United States.  AMTS areas (AMTSAs)   |  |  | | --- | --- | | **AMTSAs** | **EAs** | | 1 (Northern Atlantic) | 1–5, 10 9, 11–23, 25, 42, 46 | | 2 (Mid-Atlantic) | 24, 26–34, 37, 38, 40, 41, 174 | | 3 (Southern Atlantic) | 35, 36, 39, 43–45, 47–53, 67–107, 113, 116–120, 122– 125, 127, 130–134, 176 6–8, 54–66, 108, 109 | | 4 (Mississippi River) | 160–165 147, 166–170 | | 5 (Great Lakes) | 172 | | 6 (Southern Pacific) | 171 110–112, 114–115, 121, 126, 128, 129, 135–146, 148–159 | | 7 (Northern Pacific) |  | | 8 (Hawaii) |  | | 9 (Alaska) |  | | 10 (Mountain) |  |   (4) Channels in the 219–220 MHz band are also used on a secondary, non-interference basis by amateur stations participating in digital message forwarding systems. Amateur stations may not cause harmful interference to AMTS operations and must accept any harmful interference from AMTS operation. Amateur stations within 80 km (50 miles) of an AMTS coast station must obtain written approval from the AMTS licensee prior to operating in the 219–220 MHz band. Amateur stations within 640 km (398 miles) of an AMTS coast station must notify the AMTS licensee in writing at least 30 days prior to initiation of operations in the 219–220 MHz band. All amateur stations must notify the American Radio Relay League in writing at least 30 days prior to initiation of operations in the 219–220 MHz band (ARRL, 225 Main St., Newington, CT 06111–1494).  (b) Subject to the requirements of §1.924 of this chapter, §§80.215(h), and 80.475(a), each AMTS geographic area licensee may place stations anywhere within its region without obtaining prior Commission approval provided:  (1) The AMTS geographic area licensee must locate its stations at least 120 kilometers from the stations of co-channel site-based AMTS licensees. Shorter separations between such stations will be considered by the Commission on a case-by-case basis upon submission of a technical analysis indicating that at least 18 dB protection will be provided to a site-based licensee's predicted 38 dBu signal level contour. The site-based licensee's predicted 38 dBu signal level contour shall be calculated using the F(50, 50) field strength chart for Channels 7–13 in §73.699 (Fig. 10) of this chapter, with a 9 dB correction for antenna height differential. The 18 dB protection to the site-based licensee's predicted 38 dBu signal level contour shall be calculated using the F(50, 10) field strength chart for Channels 7–13 in §73.699 (Fig. 10a) of this chapter, with a 9 dB correction factor for antenna height differential.  (2) The locations and/or technical parameters of the transmitters are such that individual coordination of the channel assignment(s) with a foreign administration, under applicable international agreements and rules in this part, is not required.  (3) For any construction or alteration that would exceed the requirements of §17.7 of this chapter, licensees must notify the appropriate Regional Office of the Federal Aviation Administration (FAA Form 7460–1) and file a request for antenna height clearance and obstruction marking and lighting specifications (FCC Form 854) with the FCC, Attn: Information Processing Branch, 1270 Fairfield Rd., Gettysburg, PA 17325–7245.  (4) The transmitters must not have a significant environmental effect as defined by §§1.1301 through 1.1319 of this chapter.  (c) Any recovered frequency blocks will revert automatically to the holder of the geographic area license within which such frequencies are included. Any frequency blocks recovered where there is no geographic area licensee will be retained by the Commission for future licensing.  Alaska Fixed Stations  **§ 80.387   Frequencies for Alaska fixed stations.**  (a) The carrier frequencies listed in (b) of this section are assignable for point-to-point simplex radiotelephone communications between private fixed stations in Alaska. The frequency pairs listed in paragraph (d) of this section are assignable for point-to-point duplex radiotelephone communications between private and public fixed stations in Alaska. Fixed stations in Alaska authorized to share carrier frequencies with the maritime mobile service must always give priority on such frequencies to maritime distress, urgency and safety communications.  (b) *Alaska private-fixed station frequencies:*  Carrier Frequencies (kHz)   |  |  |  | | --- | --- | --- | | 1643.04 | 2430.0 | 2773.0 | | 1646.04 | 2447.0 | 3164.5 | | 1649.04 | 2450.0 | 3183.0 | | 1652.04 | 2463.0 | 3196.0 | | 1657.04 | 2466.0 | 3201.0 | | 1660.01,4 | 2471.0 | 3258.0 | | 1705.04 | 2479.0 | 3261.0 | | 1709.0 | 2482.0 | 3303.0 | | 1712.0 | 2506.0 | 3365.0 | | 2003.0 | 2509.0 | 4035.0 | | 2006.0 | 2512.0 | 5164.5 | | 2115.0 | 2535.0 | 35167.5 | | 2118.0 | 2538.0 | 5204.5 | | 2253.0 | 2563.0 | 26948.5 | | 2400.0 | 2566.0 | 27368.5 | | 2419.0 | 2601.0 | 8067.0 | | 2422.0 | 2616.0 | 8070.0 | | 2427.0 | 2691.0 | 211437.0 | |  |  | 2,5,11601.5 |   1Use of 1660.0 kHz must be coordinated to protect radiolocation on adjacent channels.  2Peak envelope power must not exceed 1 kW for radiotelephony. Teleprinter use is authorized.  3The frequency 5167.5 kHz is available for emergency communications in Alaska. Peak envelope power of stations operating on this frequency must not exceed 150 watts. When a station in Alaska is authorized to use 5167.5 kHz, such station may also use this frequency for calling and listening for the purpose of establishing communications.  4Use of these frequencies is on a secondary basis to Region 2 broadcasting.  5After April 1, 2007, use of the frequency 11601.5 kHz shall be on the condition that harmful interference is not caused to HF broadcasting.  (c) Use of the frequencies in paragraph (b) of this section must meet the following conditions:  (1) Communications between private coast and private fixed stations are prohibited; and  (2) Station licensees must not charge for third party communication services between their station and any other private fixed station.  (d) The following carrier frequency pairs are assignable for point-to-point communications between public fixed and private fixed stations:   |  |  | | --- | --- | | **Public fixed station frequencies (kHz)** | **Private fixed Station frequencies (kHz)** | | 12312.0 | 2632.0 | | 2604.0 | 2256.0 | | 2781.0 | 32474.0 | | 2784.0 | 2694.0 | | 3167.5 | 3354.0 | | 3180.0 | 2776.0 | | 3241.0 | 3357.0 | | 3362.0 | 3238.0 | | 24791.5 | 5207.5 | | 5370.0 | 45134.5,45137.5 |   1This frequency is assignable on a primary basis to public coast stations and on a secondary basis to public fixed stations.  2Teleprinter use is authorized.  3Peak envelope power must not exceed 1 kW.  4Licensees must cease all communications on 5134.5 kHz and 5137.5 kHz when notified by the State of Alaska of an emergency or disaster. Licensees may resume communication on these frequencies when notified by the State of Alaska that the disaster or harmful interference has ended.  (e) The public fixed station frequencies are assignable to common carriers.  (f) The private fixed station frequencies described in paragraph (d) of this section are assignable to private entities located in areas where common carrier facilities are not available. Private fixed stations operating on the frequencies in paragraph (d) of this section, must communicate with public fixed stations only. Private fixed stations are permitted to provide third party communications between their station and the public fixed stations. A charge for such service is prohibited.  (g) U.S. Government frequencies will be authorized if the Commission determines that the assignment is in the public interest.  Maritime Support Stations  **§ 80.389   Frequencies for maritime support stations.**  (a) *Marine receiver test.* Maritime support stations will be authorized to conduct receiver tests on the ship station frequencies of the channels assigned to the associated public coast station.  (b) *Shore radar and radiolocation tests.* The following frequency bands are available for assignment to demonstrate radar and radiolocation equipment. The use of frequencies within these bands must not cause harmful interference to the radionavigation service and the Government radiolocation service: 2450–2500 MHz, 2900–3100 MHz, 5460–5650 MHz, 9300–9500 MHz, 14.0–14.05 GHz.  Developmental Stations  **§ 80.391   Frequencies for developmental stations.**  (a) Ship and shore stations engaged in developmental operations may be assigned any frequency or frequencies assignable to the service and class of station they propose to operate. The following frequency bands are also assignable to ships and coast stations for developmental operations:   |  |  | | --- | --- | | **Ship transmit** | **Coast transmit** | | 5350–5460 MHz1 | 5350–5460 MHz1 | | 6425–6525 MHz |  | | 9000–9200 MHz1 | 9000–9200 MHz1 | | 11700–12200 MHz | 11700–12200 MHz | | 17700–19700 MHz |  | | 27500–29500 MHz |  |   1The bands 5350–5460 MHz and 9000–9200 MHz are assignable for developmental operations at ship and shore radiolocation stations if their operations do not cause harmful interference to aeronautical radionavigation or Government radiolocation services.  (b) Stations authorized to conduct developmental operations are prohibited from communicating with any station of a country other than the United States.  (c) Stations authorized to conduct developmental operations must not cause harmful interference to the operation of stations authorized in other public services nor to any United States Government or foreign station.  **[Reserved]**  *Reason: This is moved to the new Subpart Q, AIS*Subpart I—Station Documents  **§ 80.401   Station documents requirement.**  Licensees of radio stations are required to have current station documents as indicated in the following table:  ***\*DELETE THE FOLLOWING TABLE \****  ***\*INSERT THIS NEW TABLE\****      *REASON: Old table recreated for clarification. NGA Publication 117 dropped is one of the R5 options as it no longer contains necessary GMDSS information.*  Notes: 1. The expired station license must be retained in the station records until the first Commission inspection after the expiration date.  2. Alternatively, a list of coast stations maintained by the licensee with which communications are likely to be conducted, showing watch-keeping hours, frequencies and charges, is authorized.  3. Required only if station provides a service to ocean-going vessels.  4. Certification of a Great Lakes Agreement inspection may be made by either a log entry or issuance of a Great Lakes Agreement certificate. Radiotelephone logs containing entries certifying that a Great Lakes Agreement inspection has been conducted must be retained and be available for inspection by the FCC for 2 years after the date of the inspection.  5. The requirements for having the ITU List of Coast Stations and Special Services Stations, the IMO Master Plan of Shore-based Facilities for the GMDSS (IMO GMDSS.1/Circ. series), Admiralty List of Radio Signals Volume 5—Global Maritime Distress and Safety System are satisfied by having any one of those three documents.  6. These publications are only required on ships subject to the Safety of Life at Sea (SOLAS) Convention.  *COMMENT: ITU WRC07 deleted the requirements for many of the documents listed in 80.415 below and in the Table above. We therefore have revised the Table above, proposing that the requirement for carriage of publications be no stricter than the requirements of Appendix 16 of the Radio Regulations. We therefore propose Note 5 be added to the requirement for the List of Coast Stations and Special Services Stations, and that the new Note 6 be applied to the requirement for the List of Ship Stations and Maritime Mobile Service Identity Assignments. We have also made minor changes to the chart to accommodate earlier rulemakings (e.g. license by rule on voluntary vessels) or to simplify or reduce unnecessary requirements on licensees.*  **§ 80.403   Availability of documents.**  Station documents must be readily available to the licensed operator(s) on duty during the hours of service of the station and to authorized Commission employees upon request.  **§ 80.405   Station license.**  (a) *Requirement.* Except as provided in §80.13(c), stations must have an authorization granted by the Federal Communications Commission.  (b) *Application.* Application for authorizations in the maritime services must be submitted on the prescribed forms in accordance with subpart B of this part.  (c) *Posting.* (1) The current station authorization for a station other than a public coast station, or a clearly legible copy, must be posted at the principal control point of each station. If a copy is posted, it must indicate the location of the original. When the station license cannot be posted as in the case of a marine utility station operating at temporary unspecified locations or the ship or recreational boat does not have an enclosed wheelhouse, it must be kept where it will be readily available for inspection. The licensee of a station on board a ship subject to Part II or III or Title III of the Communications Act or the Safety Convention must retain the most recently expired ship station license in the station records until the first Commission inspection after the expiration date.  (2) Public coast stations authorized under this part must make available either a clearly legible copy of the authorization for each station at the principal control point of the station or an address or location where the current authorization may be found and a telephone number of that authorization's representative.  **§ 80.407   Operator authorization.**  This section contains information and rules pertinent to the application for and posting of radio operator authorizations. Rules applicable to radio operator requirements are contained in subpart D of this part and other rules pertinent to commercial radio operators are contained in part 13 of this chapter.  (a) *Application.* Detailed information about application forms, filing procedures, and places to file applications for radio operator authorizations is contained in the bulletin “Commercial Radio Operator Licenses and Permits.” This bulletin is available from any Commission District Office or from the FCC, Washington, DC 20554.  (b) *Posting.* When a Commission-authorized operator is required, the original authorization of each operator must be posted at the principal control point of the station. In lieu of posting, an operator who holds a restricted radiotelephone operator permit or a higher class operator license may have the operator authorization or a photocopy thereof available for inspection upon request by authorized Commission employees when operating the following:  (1) A voluntary station;  (2) Any class of ship station when the operator is on board solely to service the radio equipment; or  (3) A portable station.  **§ 80.409   Station logs.**  (a) *General requirements.* Logs must be established and properly maintained as follows:  (1) The log must be kept in an orderly manner. The log may be kept electronically or in writing. Unless otherwise stated, all classes of vessels may keep their log on a voyage basis or on a calendar basis (e.g. quarterly or monthly.) The required information for the particular class or category of station must be readily available. Key letters or abbreviations may be used if their proper meaning or explanation is contained elsewhere in the same log.  *REASON: Clarification*  (2) Erasures, obliterations, or willful destruction of written logs, or deletions of data or willful destruction of computer files or computer hardware containing electronic logs, is prohibited during the retention period. Corrections may be made only by the person originating the entry by striking out the error, initialing the correction and indicating the date of correction. With respect to electronic logs, standard computer editing procedures are permitted. However, logs shall be backed up onto a separate file storage media and printed monthly, or printed at least weekly if not backed up. These printouts shall be signed by the watch-officer or other person responsible for the maintenance of the station log.  *REASON: The requirement for an electronic strike-through with electronic signature is overkill and generally not complied with. This change is intended to conform to common practice.*  (3) Ship station logs must identify the vessel name, country of registry, and official number of the vessel.  (4) The station licensee and the radio operator in charge of the station are responsible for the maintenance of station logs.  (b) *Availability and retention.* Station logs must be made available to authorized Commission or U.S. Coast Guard employees upon request and retained as follows:  *REASON: To enable interagency support especially as FCC employees no longer inspect vessels.*  (1) Logs must be retained by the licensee for a period of two years from the date of entry, and, when applicable, for such additional periods as required by the following paragraphs:  (i) Logs relating to a distress situation or disaster must be retained for three years from the date of entry.  (ii) If the Commission has notified the licensee of an investigation, the related logs must be retained until the licensee is specifically authorized in writing to destroy them.  (iii) Logs relating to any claim or complaint of which the station licensee has notice must be retained until the claim or complaint has been satisfied or barred by statute limiting the time for filing suits upon such claims.  (iv) Applicable radiotelephone log entries record of inspections shall be retained until a subsequent inspection has been completed.  *REASON: Clarification of retention requirement*  (2) Logs containing entries required by paragraph (c) of this section must be kept either at the principal control point of the station or electronically filed at the station licensee's primary office or available to the Commission via secured access to the licensee's Internet web site. Logs containing entries required by paragraphs (e) and (f) of this section must be kept at the principal radiotelephone operating location while the vessel is being navigated. All entries in their original form must be retained on board the vessel for at least 30 days from the date of entry. Additionally, logs required by paragraph (f) of this section must be retained on board the vessel for a period of 2 years from the date of the last inspection of the ship radio station.  *Reason: Radiotelegraphy not required*  (c) *Public coast station logs.* Public coast stations must maintain a log, whether by means of written or automatic logging or a combination thereof. The log must contain the following information:  (1) “ON DUTY” must be entered by the operator beginning a duty period, followed in the case of a written log by the operator's signature. “OFF DUTY” must be entered by the operator being relieved of or terminating duty, followed in the case of a written log by the operator's signature.  (2) The date and time of making an entry must be shown opposite the entry.  (3) Failure of equipment to operate as required and incidents tending to unduly delay communication must be entered.  (4) All measurements of the transmitter frequency(ies) must be entered with a statement of any corrective action taken.  (5) Entries must be made giving details of all work performed which may affect the proper operation of the station. The entry must be made, dated and in the case of a written log signed by the operator who supervised or performed the work and, unless the operator is regularly employed on a full-time basis at the station, must also include the mailing address, class, serial number, and expiration date of the operator license.  (6) Entries must be made about the operation of the antenna tower lights when the radio station has an antenna structure requiring illumination by part 17 of this chapter.  (7) All distress or safety related calls transmitted or received must be entered, together with the frequency used and the position of any vessel in need of assistance.  (d)  [Reserved]  *Reason: Radiotelegraphy not required*  (e) *Ship radiotelephone logs.* A record must be kept of all incidents connected with the radiocommunication service which appear to be of importance to safety of life at sea.Logs of ship stations that are compulsorily equipped for radiotelephony must contain the following applicable log entries and the time of their occurrence. Communications include voice, DSC, data transmissions and any satellite-based communications. These include:  *REASON: New text from SOLAS IV/Reg 17 and §80.1075 accurately sums up the purpose of this regulation.*  *Also grammatical (restrictive use)*  (1) A summary of distress and urgency communications, including:   1. Distress and urgency communications transmitted by the station's own ship,   *REASON: Clarification.*  (ii) Distress communications received by the station's own ship. GMDSS ships shall log DSC calls per Subpart W.  *REASON: Clarification. .*  (iii) A summary of all relayed distress communications per §80.324, §80.1115, §80.1117 & §80.1121.  *REASON: Clarification. Requirement to log communications with SAR authorities removed to reduce burden to shipping*  (2) A summary of urgency and safety communications on other than VHF channels specifically directed toward the station's own ship.  *REASON: Clarification.* *To account for the old (e) (2) language differentiating VHF from all else. 'specifically directed' means generalized Urgency and Safety MSI or weather broadcasts do not have to be logged.*  (3) The time of any inadvertent transmissions of distress, urgency and safety alerts including the time and method of cancellation.  *REASON: urgency and safety signals no longer exist. Inadvertent distress alerts remains a problem.*  (4)  Pre-departure equipment checks shall be made & logged for all classes of vessels. Pre-departure entries shall be made that all the survival craft equipment have been inspected and are aboard. The daily test for Subpart S, T, U and W vessels shall be as required by those Subparts.  (5) (5) All classes of vessels shall perform tests and make a daily statement about the condition of the required radiotelephone equipment, as determined by either actual communications or test communications. For all vessels, the predeparture test is the daily test. Any of these vessels not returning to port within a day shall perform the daily test while at sea. *REASON: To conform with 80.1107*  (6) Survival Craft Equipment need not be tested on a Pre-departure or daily basis per the above. Instead -– monthly operational tests and log entries shall be done as follows:  (i) The SARTs have been inspected and tested.  (ii) The portable survival craft radio gear or SCTs have been inspected and tested.  (iii) The EPIRBs have been inspected and tested.  (iv) All survival craft equipment battery expiration date labels are intact and current. The EPIRB ARM or Hydrostatic expiration date label is intact and current. The NOAA registration label for the EPIRB is intact, current and the registration number is correct. Inflatable survival craft equipment are exempt.    (7) An entry at least once every thirty days that the batteries or other reserve power sources have been checked and are functioning properly. GMDSS vessels shall remove AC power to the console monthly and ensure that the reserve source of energy or emergency batteries provide power instantly to the console without interruption. Monthly entries of the specific gravity of lead-acid storage batteries and voltage readings of other types of batteries provided as a part of the compulsory installation shall be made. If cell-by-cell readings are available then all shall be recorded. Checks of the battery charging voltage and current readings shall be made and logged at least every month .  *REASON: Clarification*  (8) Results of any additional required equipment tests such as the annual or on demand battery inspections required by §80.921, §80.965 or Port State control inspections of GMDSS vessels overseas. Records of annual inspections shall be recorded per §80.409 (f).  REASON: Clarification.  (9) Results of inspections and tests of compulsorily fitted lifeboat radio equipment;  (10) When the master is notified about improperly operating radiotelephone equipment.  (11) At the beginning of each watch, the Officer of the Navigational Watch, or GMDSS Operator on watch, if one is provided, shall ensure that the navigation receiver is functioning properly and is interconnected to all GMDSS alerting devices which do not have integral navigation receivers, including: VHF DSC and MF/HF DSC.. An appropriate log entry of these actions shall be made.  REASON: *Satellite EPIRBs do not have interconnection capability to a navigation receiver. Ship earth stations have an integral navigation receiver. Regulated ships are required to to have a navigation receiver interconnected to DSC radios.*  (12) An entry describing any malfunctioning GMDSS equipment and another entry when the equipment is restored to normal operation.  (13) A GMDSS radio log entry shall be made whenever GMDSS equipment is exchanged or replaced (ensuring that ship MMSI identifiers are properly updated in the replacement equipment), when major repairs to GMDSS equipment are accomplished, and when annual GMDSS inspections are conducted. The name and license number of the technician performing the repair or replacement shall be entered into the log by the technician.  *REASON: To confirm completion of repair.*  (f) *Applicable radiotelephone log entries*. The log entries listed in paragraph (e) of this section are applicable as follows:  (Vessels subject to the Global Maritime Distress and Safety System (GMDSS) should also refer to subpart W of this Part for additional guidance on maintenance of the station log.)  *REASON: Clarity*  (1) Radiotelephony stations subject to the Communications Act and/or the Safety Convention must record entries indicated by paragraphs (e)(1) through (e)(13) of this section. Additionally, the radiotelephone log must provide an easily identifiable, separate section relating to the required inspection of the ship's radio station. Entries must be made in this section giving at least the following information.  (i) For ships that pass the inspection:  (A) The date the inspection was conducted.  (B) The date by which the next inspection needs to completed.  (C) The inspector's printed name, address and class of FCC license (including the serial number).  (D) The results of the inspection, including any repairs made and including a copy of the inspection check sheet.  *REASON: In FCC Report and Order CI Docket 95-55 released 1 May 1998, the Commission committed to a number of activities in overseeing privatized inspection including conducting random inspections of U.S. ships. Recognizing oversight must be constrained in this difficult budget environment, these minimal changes should help maintain the integrity of the inspection process.*  (E) The inspector's signed and dated certification that the vessel meets the requirements of the Communications Act and, if applicable, the Safety Convention and the Bridge-to-Bridge Act contained in subparts S, U, or W of this part and has successfully passed the inspection.  REASON: Consequential to deletion of Subpart R  (F) The vessel owner, operator, or ship's master's certification that the inspection was satisfactory.  (ii) For ships that fail the inspection:  (A) The date the inspection was conducted.  (B) The inspector's printed name, address and class of FCC license (including the serial number).  (C) The reason that the ship did not pass the inspection.  (D) The date and time that the ship's owner, operator or master was notified that the ship failed the inspection.  (2) Radiotelephony stations subject to the Great Lakes Agreement and the Bridge-to-Bridge Act must record entries indicated by paragraphs (e) (1), (3), (5), (6), (7), (8), (10), (11) and (13) of this section. Additionally, the radiotelephone log must provide an easily identifiable, separate section relating to the required inspection of the ship's radio station. Entries must be made in this section giving at least the following information:  (i) The date the inspection was conducted;  (ii) The date by which the next inspection needs to be completed;  (iii) The inspector's printed name, address and class of FCC license (including the serial number);  (iv) The results of the inspection, including any repairs made;  (v) The inspector's signed and dated certification that the vessel meets the requirements of the Great Lakes Agreement and the Bridge-to-Bridge Act contained in subparts T and U of this part and has successfully passed the inspection; and  (vi) The vessel owner, operator, or ship's master's certification that the inspection was satisfactory.  (3) Radiotelephony stations subject to the Bridge-to-Bridge Act must record entries indicated by paragraphs (e) (1), (3), (5), (6), (7), (10), and (11) of this section.  **§ 80.411   Vessel certification or exemption.**  (a) *Application.* The application procedures for inspection and certification and for exemptions are contained in §80.59.  (b) *Posting.* Communications Act, Safety Convention and Great Lakes Radio Agreement certificates or exemptions must be posted in a prominent, accessible place in the ship. Ships subject to the Great Lakes Agreement may, in lieu of a posted certificate, certify compliance in the station log required by section 80.409(f).  **§ 80.413   On-board station equipment records.**  (a) The licensee of an on-board station must keep equipment records which show:  (1) The ship name and identification of the on-board station;  (2) The number and type of repeater and mobile units used on-board the vessel; and  (3) The date and type of equipment which is added or removed from the on-board station.  (b) [Reserved]  **§ 80.415   Publications.**  (a) The following publications listed in the table contained in §80.401 are published by the International Telecommunications Union (ITU):  (1) Manual for Use of the Maritime Mobile and Maritime Mobile-Satellite Services (Maritime Manual).  (2) List IV—List of Coast Stations and Special Service Stations.  (3) List V—List of Ship Stations and Maritime Mobile Service Identity Assignments.  *REASON: Reflects updates to documents published by ITU.*  (b) The following publications listed in the table contained in §80.401 are available as follows:  (1) The IMO Master Plan of Shore-based Facilities for the GMDSS (IMO GMDSS.1/Circ. series) is available from the International Maritime Organization (IMO at <https://webaccounts.imo.org/>. Registration is required.  (2) The Admiralty List of Radio Signals, Volume 5—Global Maritime Distress and Safety System, may be purchased from distributors designated by UK Hydrographic Office, Admiralty Way, Taunton, Somerset TA1 2DN, United Kingdom, telephone +44 (0)1823 337900 x3333. See [www.ukho.gov.uk/](http://www.ukho.gov.uk/).  *REASON: Updates to availability of publications.*  **§ 80.417   FCC Rules and Regulations.**  The Commission's printed publications are described in subpart C of part 0 of this chapter. These publications may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The Commission does not furnish copies of these publications but will furnish a price list, Information Services and Publications—Bulletin No. 1, upon request. Requests for copies of this list may be directed to the Consumer Information Bureau, Consumer Information Network Division. Information bulletins and fact sheets containing information about communications issues and the Federal Communications Commission are also available on the Commission's web site at *www.fcc.gov* or *ftp.fcc.gov.*  Subpart J—Public Coast Stations  Stations on Land  **§ 80.451   Supplemental eligibility requirements.**  A public coast station license may be granted to any person meeting the citizenship provisions of §80.15(b).  **§ 80.453   Scope of communications.**  Public coast stations provide ship/shore radiotelephone and radiotelegraph services.  (a) Public coast stations are authorized to communicate:  (1) With any ship or aircraft station operating in the maritime mobile service, for the transmission or reception of safety communication;  (2) With any land station to exchange safety communications to or from a ship or aircraft station;  (3) With Government and non-Government ship and aircraft stations to exchange public correspondence;  (4) With units on land in accordance with §80.123.  (b) Public coast stations are authorized to communicate with a designated station at a remote fixed location where other communication facilities are not available.  (c) Public coast stations are authorized to transmit meteorological and navigational information of benefit to mariners.  (d) Each public coast telegraphy station is authorized to communicate with other public coast telegraphy stations to exchange message traffic destined to or originated at mobile stations:  (1) To exchange operating signals, brief service messages or safety communication;  (2) To exchange message traffic destined for a mobile station when the coast station initially concerned is unable to communicate directly with the mobile station;  (3) In the Great Lakes region, to exchange message traffic originated at a mobile station when the use of available point-to-point communication facilities would delay the delivery of such message traffic;  (4) Utilization of radiotelegraphy must not incur additional charges or replace available point-to-point communication facilities;  (6) Harmful interference must not be caused to communication between mobile stations and coast stations or between mobile stations.  *REASON: Reflects previous grant of FCC waiver.*  **[Reserved]***Reason: No more manual Morse Code telegraphy.*  **§ 80.459   Digital selective calling.**  Subpart H of this part lists frequencies assignable for DSC.  **§ 80.461   Narrow-band direct-printing.**  Subpart H of this part lists the frequencies assignable to public coast stations for operations with ship stations. Operating procedures are listed in subpart C of this part.  Use of Telephony  **§ 80.465   Assignment and use of frequencies for telephony.**  Subpart H of this part lists the frequencies available for assignment to public coast stations for telephony operations.  **§ 80.467   Duplication of VHF service.**  No duplication of service areas as determined by subpart P of this part will be permitted by public coast stations operating on the same VHF public correspondence channel. Within the service area of a station, the ratio of desired to undesired co-channel signal strengths on public correspondence channels must be at least 12dB.  **§ 80.469   Maritime mobile repeater stations in Alaska.**  (a) Maritime mobile repeater stations are authorized to extend the range of communication between a VHF public coast station located in Alaska and ship stations.  (b) On a secondary basis, maritime mobile repeater stations may be authorized to extend the range of a private coast station:  (1) In an area where VHF common carrier service is not available;  (2) A maritime mobile repeater station license expires 60 days after a public coast station in the area begins service.  (c) Maritime mobile repeater stations may not be authorized in cases where operational fixed frequencies can be employed.  (d) The provisions relating to duplication of service described in subpart P apply to maritime mobile repeater stations.  (e) The frequencies 157.275 and 161.875 MHz are assignable to maritime mobile repeater stations.  (f) Each maritime mobile repeater station must:  (1) Deactivate automatically within 5 seconds after the signals controlling the station cease; and  (2) During periods when it is not controlled from a manned control point, deactivate automatically not more than 20 minutes after its activation by a mobile unit.  **§ 80.471   Discontinuance or impairment of service.**  Except as specified in §20.15(b)(3) of this chapter with respect to commercial mobile radio service providers, a public coast station must not discontinue or impair service unless authorized to do so by the Commission.  Automated Systems  **§ 80.475   Scope of service of the Automated Maritime Telecommunications System (AMTS).**  (a) A separate Form 601 is not required for each coast station in a system. However, except as provided in §80.385(b) and paragraph (b) of this section, the applicant must provide the technical characteristics for each proposed coast station, including transmitter type, operating frequencies, emissions, transmitter output power, antenna arrangement, and location.  (1) Applicants proposing to locate a coast station transmitter within 169 kilometers (105 miles) of a channel 13 TV station or within 129 kilometers (80 miles) of a channel 10 TV station or with an antenna height greater than 61 meters (200 feet), must submit an engineering study clearly showing the means of avoiding interference with television reception within the grade B contour, *see* §80.215(h) of this chapter, unless the proposed station's predicted interference contour is fully encompassed by the composite interference contour of the applicant's existing system, or the proposed station's predicted interference contour extends the system's composite interference contour over water only (disregarding uninhabited islands).  (2) Additionally, applicants required to submit the above specified must give written notice of the filing of such applications(s) to the television stations which may be affected. A list of the notified television stations must be submitted with the subject applications.  (b) Coast stations for which the above specified need not be submitted because the proposed station's predicted interference contour is fully encompassed by the composite interference contour of the applicant's existing system or the proposed station's predicted interference contour extends the system's composite interference contour over water only (disregarding uninhabited islands) must, at least 15 days before the station is put into operation, give written notice to the television stations which may be affected of the proposed station's technical characteristics, the date it will be put into operation, and the licensee's representative (name and phone number) to contact in the event a television station experiences interference. No prior FCC authorization is required to construct and operate such a station, but, at the time the station is added, the AMTS licensee must make a record of the technical and administrative information concerning the station and, upon request, supply such information to the FCC. In addition, when the station is added, the AMTS licensee must send notification of the station's location to the American Radio Relay League, Inc., 225 Main Street, Newington, CT 06111–1494, and Interactive Systems, Inc., Suite 1103, 1601 North Kent Street, Arlington, VA 22209.  (c) An AMTS system may provide private mobile radio service in addition to or instead of public correspondence service. However, such communications may be provided only to stations whose licensees make cooperative arrangements with the AMTS coast station licensees. In emergency and distress situations, services must be provided to ship stations without prior arrangements.  (d) AMTS systems providing private mobile radio service instead of, or in addition to, public correspondence service are not required to be interconnected to the public switched network when providing such private mobile radio service. AMTS systems providing public correspondence service must be interconnected to the public switched network, but the licensee may also offer non-interconnected services.  **§ 80.477   AMTS points of communication.**  (a) AMTS coast stations may communicate with fixed platform stations located in the offshore waters of the Gulf of Mexico, with ship stations, and with land units in accordance with §80.123.  (b) AMTS licensees in the offshore waters of the Gulf of Mexico may use AMTS coast and ship station frequencies on a secondary basis for fixed service communications to support offshore AMTS operations.  (c) AMTS service may be provided to any vessel within communication service range of an AMTS station even though the vessel may not be operating within the confines of a served waterway.  (d) AMTS licensees may use AMTS coast and ship frequencies on a secondary basis for fixed service communications to support AMTS deployment in remote fixed locations at which other communications facilities are not available.  **§ 80.479   Assignment and use of frequencies for AMTS.**  (a) The frequencies assignable to AMTS stations are listed in subpart H of this subpart.  (b) The transmissions from a station of an AMTS geographic area licensee may not exceed a predicted 38 dBu field strength at the geographic area border, unless all affected co-channel geographic area licensees agree to the higher field strength. The predicted 38 dBu field strength is calculated using the F(50, 50) field strength chart for Channels 7 through 13 in §73.699 (Fig. 10) of this chapter, with a 9 dB correction factor for antenna height differential. Geographic area licensees must coordinate to minimize interference at or near their geographic area borders, and must cooperate to resolve any instances of interference in accordance with the provisions of §80.70(a).  (c) AMTS frequencies may be used for mobile-to-mobile communications if written consent is obtained from all affected licensees.  **§ 80.481   Alternative technical parameters for AMTS transmitters.**  In lieu of the technical parameters set forth in this part, AMTS transmitters may utilize any modulation or channelization scheme so long as emissions are attenuated in accordance with §80.211 at the band edges of each station's assigned channel group or groups.  Subpart K—Private Coast Stations and Marine Utility Stations  **§ 80.501   Supplemental eligibility requirements.**  (a) A private coast station or a marine utility station may be granted only to a person who is:  (1) Regularly engaged in the operation, docking, direction, construction, repair, servicing or management of one or more commercial transport vessels or United States, state or local government vessels; or is  (2) Responsible for the operation, control, maintenance or development of a harbor, port or waterway used by commercial transport vessels; or is  (3) Engaged in furnishing a ship arrival and departure service, and will employ the station only for the purpose of obtaining the information essential to that service; or is  (4) A corporation proposing to furnish a nonprofit radio communication service to its parent corporation, to another subsidiary of the same parent, or to its own subsidiary where the party to be served performs any of the eligibility activities described in this section; or is  (5) A nonprofit corporation or association, organized to furnish a maritime mobile service solely to persons who operate one or more commercial transport vessels; or is  (6) Responsible for the operation of bridges, structures or other installations that area part of, or directly related to, a harbor, port or waterway when the operation of such facilities requires radio communications with vessels for safety or navigation; or is  (7) A person controlling public moorage facilities; or is  (8) A person servicing or supplying vessels other than commercial transport vessels; or is  (9) An organized yacht club with moorage facilities; or is  (10) A nonprofit organization providing noncommercial communications to vessels other than commercial transport vessels.  (11) Responsible for providing a private aid to navigation as authorized by the U.S. Coast Guard.  *REASON: To provide for operation of AIS ATONs [or RACONs)*  (12) Operating at least one ship having a ship station license.  *REASON: The closure of most public coast stations justify opening license eligibility. License costs should be sufficient to limit unnecessary use.*  (b) Each application for station authorization for a private coast station or a marine utility station must be accompanied by a statement indicating eligibility under paragraph (a) of this section.  **§ 80.503   Cooperative use of facilities.**  (a) A person engaged in the operation of one or more commercial transport vessels or government vessels may receive maritime mobile service from a private coast station or a marine utility station on shore even though not the licensee of the private coast station or the marine utility station. Restrictions on cooperative arrangements are as follows:  (1) Foreign persons must be the licensees of the radio stations installed on board their vessels.  (2) The licensee of a private coast station or marine utility station on shore may install ship radio stations on board United States commercial transport vessels of other persons. In each case these persons must enter into a written agreement verifying that the ship station licensee has the sole right of control of the ship stations, that the vessel operators must use the ship stations subject to the orders and instructions of the coast station or marine utility station on shore, and that the ship station licensee will have sufficient control of the ship station to enable it to carry out its responsibilities under the ship station license.  (b) Cooperative arrangements are limited concerning cost and charges as follows:  (1) The arrangement must be established on a non-profit, cost-sharing basis by written contract. A copy of the contract must be kept with the station records and made available for inspection by Commission representatives.  (2) Contributions to capital and operating expenses are to be prorated on an equitable basis among all persons who are parties to the cooperative arrangement. Records which reflect the cost of the service and its nonprofit, cost-sharing nature must be maintained by the licensee of the station and made available for inspection by Commission representatives.  **§ 80.505   Points of communication.**  (a) Private coast stations and marine utility stations are authorized to communicate:  (1) With any mobile station in the maritime mobile service for the exchange of safety communications;  (2) With any land station for the purpose of aiding the exchange of safety communications;  (3) With ship stations.  (b) Private coast stations of the same licensee may be authorized to communicate on a secondary basis between themselves if:  (1) The communications are confined exclusively to those for which authority has been granted the coast station, and concerns ships with which one or both of the coast stations are authorized to communicate; and  (2) Other satisfactory point-to-point communication facilities between the coast stations are unavailable; and  (3) Coast stations which communicate with each other are not more than 160 km (100 miles) apart; and  (4) Harmful interference is not cause to mobile stations.  (c) A private coast station and associated marine utility stations serving and located on a shipyard regularly engaged in construction or repair of commercial transport vessels or Government vessels are authorize to communicate between stations when they are licensed to the same entity and communications are limited to serving the needs of ships on a non-interference basis to other stations in the maritime mobile service. A separate showing is required.  **§ 80.507   Scope of service.**  (a) A private coast station or marine utility station using telephony serves the operational and business needs of ships including the transmission of safety communication.  (b) In areas where environmental communications are provided by U.S. Government stations or by public coast stations, private coast stations and marine utility stations on shore must not duplicate that service. In other areas, private coast stations and marine utility stations on shore may transmit weather and hydrographic information required for the ships with which they normally communicate. Private coast stations may provide environmental communication service in areas where adequate service is not available.  (c) Each marine utility station on shore must be operated as a private coast station except that it may be operated at temporary unspecified locations. Marine utility stations on ships are operated as ship stations.  (d) Each private coast station is authorized by rule to use hand-held marine radios in the vicinity of the station's fixed transmitter site on those frequencies assigned to the private coast station. Hand-held communications must conform to those normally permitted under a marine utility station authorization and must be limited to contact with the associated private coast station and ship stations in the vicinity of the private coast station.  **§ 80.509   Frequency assignment.**  Frequencies assignable to private coast stations and marine utility stations are listed in subpart H.  **§ 80.513   Frequency coordination.**  (a) Except as provided in paragraphs (b) and (c) of this section each application for a new VHF private coast station license or modification of an existing license to be located in an area having a recognized frequency coordinating committee must be accompanied by:  (1) A report based on a field study, indicating the degree of probable interference to existing stations operating in the same area. The applicant must consider all stations operating on the working frequency or frequencies requested or assigned within 80 km (50 miles) of the proposed station location, and  (2) The report must include a statement that all existing licensees on the frequency within 80 km (50 miles) and the frequency coordinating committee have been notified of the applicant's intention to file an application. The notice of intention to file must provide the licensees concerned and the advisory committee with the following information: The frequency and emission; transmitter location and power; and the antenna height proposed by the applicant.  (b) Applications for modification need not be accompanied by the field study where the modification does not involve any change in frequency(ies), power, emission, antenna height, antenna location or area of operation.  (c)(1) In lieu of the field study, the applicant may acquire a statement from a frequency coordinating committee. The applicant must certify on the application concerning the recommendations of the coordinating committee. The committee must comment on the requested frequency or the proposed changes in the authorized station and give an opinion regarding the probable interference to existing stations. The committee must consider all stations operating on the requested frequency within 80 km (50 miles) of the proposed station location. The frequency coordinating committee statement must also recommend a frequency which will result in the least amount of interference to proposed and existing stations. Committee recommendations may also include comments on technical factors and may recommend restrictions to minimize interference.  (2) A frequency coordinating committee must be representative of all persons who are eligible for VHF private coast stations within the service area of the recognized frequency coordinating committee. A statement of organization, service area and composition of the committee must be submitted to the Commission for approval. The functions of any coordinating committee are purely advisory to the applicant and the Commission. Its recommendations are not binding upon either the applicant or the Commission.  **§ 80.514   Marine VHF frequency coordinating committee(s).**Organizations desiring to serve as a marine VHF frequency coordinating committee for their respective areas and having the support of the majority of affected licensees may petition the Commission for recognition.  *REASON: While these two councils are no longer in operation, provisions for VHF frequency coordinating committees should continue.*  **§ 80.515   Limitations on use.**  A private coast station or marine utility station using telephony must:  (a) Not be used for public correspondence;  (b) Not be used to transmit program material for radio broadcasting; and  (c) Not be used to transmit press material or news items which are not required to serve the needs of ships.  **§ 80.517   Time limitation on communication.**  All communication engaged in by private coast stations and marine utility stations must be limited to the minimum practicable transmission time. Each station licensee must employ standardized operating practices and procedures.  **§ 80.519   Station identification.**  (a) Stations must identify transmissions by announcing in the English language the station's assigned call sign. In lieu of the identification of the station by voice, the official call sign may be transmitted by tone-modulated telegraphy in international Morse Code manually or by means of an automatic device approved by the Commission. Transmissions on the navigation frequency (156.650 MHz) by stations on drawbridges may be identified by use of the name of the bridge in lieu of the call sign. Identification must be made:  (1) At the beginning and end of each exchange of communications and;  (2) At intervals not exceeding 15 minutes whenever transmissions or communications are sustained for more than 15 minutes.  (b) Marine utility stations, private coast stations, and associated hand-held radios, when exchanging communications, may be identified by a unit identifier in lieu of the call sign. Identification by transmission of the assigned call sign must be at the end of the exchange or at least once every 15 minutes.  Subpart L—Operational Fixed Stations  **§ 80.551   Applicability.**  This subpart contains rules applicable to operational fixed stations.  **§ 80.553   Supplemental eligibility requirements.**  An applicant for an operational fixed station must certify that:  (a) The applicant is the licensee of a coast station;  (b) Other suitable telecommunications facilities are not available to satisfy coast station requirements.  **§ 80.555   Scope of communication.**  An operational fixed station provides control, repeater or relay functions for its associated coast station.  **§ 80.557   Assignment and use of frequencies.**  The specific frequencies for these stations are listed in subpart H of this part.  **§ 80.559   Licensing limitations.**  Operational fixed stations are subject to the following licensing limitations:  (a) A maximum of four frequencies will be assigned.  (b) Stations will not be authorized when applications indicate less than 16 km (10 miles) separation between a proposed station and a TV transmitter operating on either Channel 4 or 5, or from the post office of a community in which either channel is assigned but not in operation.  (c) Stations located between 16 km (10 miles) and 128 km (80 miles) of a TV transmitter operating on either Channel 4 or 5, or from the post office of a community in which either channel is assigned but not in operation, are secondary to TV operations within the Grade B service contour.1  1 OET Bulletin No. 67, March 1988, entitled “Potential Interference from Operational Fixed Stations in the 72–76 MHz Band to Television Channels 4 and 5” describes an analytical model that can be used to calculate the potential interference that might result from a given fixed station operation. Copies of the bulletin may be obtained from the Commission's current duplication contractor. Information concerning the current duplication contractor may be obtained from the Office of Public Affairs, Consumer Assistance and Small Business Division, Telephone (202) 632–7000.  Subpart M—Stations in the Radiodetermination Service  **§ 80.601   Scope of communications.**  Stations on land or on the water in the Maritime Radiodetermination Service provide a radionavigation or radiolocation service for ships.  **§ 80.603   Assignment and use of frequencies.**  The frequencies available for assignment to radionavigation/radiolocation stations located on the shore or on the water are contained in Subpart H of this part.  REASON: Radionavigation/radiolocation stations need not be limited to shore.  **§ 80.605   U.S. Coast Guard coordination.**  (a) Radionavigation coast stations operated to provide information to aid in the movement of any ship are private aids to navigation. Before submitting an application for a radionavigation station, an applicant must obtain written permission from the cognizant Coast Guard District Commander at the area in which the device will be located. The Commission may request an applicant to provide documentation as to this fact. Note: Surveillance radar coast stations do not require U.S. Coast Guard approval.  (b) Coast station transponders (i.e., radar beacons, or racons) operating in the band 2900–3100 or 9300–9500 MHz shall meet the requirements of ITU–R M.824 (series) (incorporated by reference, see §80.7). Applications for certification of these transponders must include a description of the technical characteristics of the equipment including the scheme of interrogation and the characteristics of the transponder response, and test results demonstrating the device meets each applicable requirement of this ITU–R recommendation.  (c) The use of ship station transponders in the band 2900–3100 or 9300–9500 MHz other than those described in §§80.1085(a)(3) and 80.1095(b) is prohibited.  (d) For required U.S. Coast Guard coordination for AIS equipment *see* § 80.808.  *Reason: All AIS applications under this section have been moved to new Subpart Q.*  Subpart N—Maritime Support Stations  **§ 80.651   Supplemental eligibility requirements.**  (a) An applicant for a maritime support station must demonstrate a requirement for training personnel associated with the maritime service or for the testing, demonstration or maintenance of ship or coast radio equipment.  (b) [Reserved]  **§ 80.653   Scope of communications.**  (a) Maritime support stations are land stations authorized to operate at permanent locations or temporary unspecified locations.  (b) Maritime support stations are authorized to conduct the following operations:  (1) Training of personnel in maritime telecommunications;  (2) Transmissions necessary for the test and maintenance of maritime radio equipment at repair shops and at temporary unspecified locations;  (3) Transmissions necessary to test the technical performance of the licensee's public coast station(s) radiotelephone receiver(s); and  (4) Transmissions necessary for radar/racon equipment demonstration.  **§ 80.655   Use of frequencies.**  (a) The frequencies available for assignment to maritime support stations are described or listed in:  (1) Section 80.373 for scope of communications described in §80.653(b)(1);  (2) Sections 80.373 and 80.385 for scope of communications described in §80.653(b)(2); and  (3) Section 80.389 for scope of communications described in §80.653 (b)(3) and (4).  (b) Frequencies must be used only on a secondary, non-interference basis to operational maritime communications.  (c) Use of frequencies assigned to services other than the maritime radiolocation service is limited to one hour per twenty four hour period.  **§ 80.659   Technical requirements.**  The authorized frequency tolerance, class of emission, bandwidth, and transmitter power for maritime support stations are contained in subpart E of this part under the category associated with the intended use except for power limitations imposed upon stations operating within the scope of §80.653(b)(3), which are further limited by the provisions of §80.215(f).  Subpart O—Alaska Fixed Stations  **§ 80.701   Scope of service.**  There are two classes of Alaska Fixed stations. Alaska-public fixed stations are common carriers, open to public correspondence, which operate on the paired duplex channels listed in subpart H of this part. Alaska-private fixed stations may operate on simplex frequencies listed in subpart H of this part to communicate with other Alaska private fixed stations or with ship stations, and on duplex frequencies listed in subpart H of this part when communicating with the Alaska-public fixed stations. Alaska-private fixed stations must not charge for service, although third party traffic may be transmitted. Only Alaska-public fixed stations are authorized to charge for communication services.  **§ 80.703   Priority of distress and other signals.**  Alaska-public fixed stations, when operating on an authorized carrier frequency which is also used by the maritime mobile service, must give priority to distress, urgency or safety signals, or to any communication preceded by one of these signals.  **§ 80.705   Hours of service of Alaska-public fixed stations.**  Each Alaska-public fixed station whose hours of service are not continuous must not suspend operations before having concluded all communications of an emergency nature.  **§ 80.707   Cooperative use of frequency assignments.**  (a) Only one Alaska-public fixed station will be authorized to serve any area whose point-to-point communication needs can be adequately served by a single radio communication facility.  (b) Each radio channel authorized for use by an Alaska-private fixed station is available on a shared basis only. All station licensees must cooperate in the use of their respective frequency assignments to minimize interference.  **§ 80.709   Frequencies available.**  Frequencies assignable to Alaska fixed stations are listed in subpart H of this part.  **§ 80.711   Use of U.S. Government frequencies.**  Alaska-public fixed stations may be authorized to use frequencies assigned to U.S. Government radio stations for communications with Government stations or for coordination of Government activities.  Subpart P—Standards for Computing Public Coast Station VHF Coverage  **§ 80.751   Scope.**  This subpart specifies receiver antenna terminal requirements in terms of power, and relates the power available at the receiver antenna terminals to transmitter power and antenna height and gain. It also sets forth the co-channel interference protection that VHF public coast station geographic area licensees must provide to incumbents and to other VHF public coast station geographic area licensees.  **§ 80.753   Signal strength requirements at the service area contour.**  (a) The requirements for reception by a marine VHF shipboard receiver are satisfied if the field strength from the coast station, calculated in accordance with §80.771 is at least +17 dBu above one microvolt.  (b) These field strengths, voltages and powers at the receiver input are equivalent:  (1) −132 dBW (decibels referred to 1 watt).  (2) 1.8 microvolts across 50 ohms.  (3) +17 dBu (decibels referred to 1 microvolt per meter).  (4) 7 microvolts per meter.  **§ 80.755   Applicability.**  Applications for maritime frequencies in the 156–162 MHz band must include a map showing the proposed service area contour. The service area contour must be computed in accordance with the following procedures.  **§ 80.757   Topographical data.**  (a) In the preparation of profile graphs and in determining the location and height above mean water or sea level of the antenna site, the elevations or contour intervals must be taken from U.S. Geological Survey topographic quadrangle maps, U.S. Army Corps of Engineers maps or Tennessee Valley Authority maps, whichever is the latest, for all areas for which maps are available. If such maps are not published for the area in question, the next best topographic information must be used. The maps used must include the principal area to be served. U.S. Geological Survey topographic quadrangle maps may be obtained from the Eastern Distribution Branch, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202, for maps of areas east of the Mississippi River, including Minnesota, Puerto Rico, and the Virgin Islands, and from the Western Distribution Branch, U.S. Geological Survey, Federal Center, Denver CO 80225, for maps of areas west of the Mississippi River, including Alaska, Hawaii, Louisiana, Guam and American Samoa. Sectional aeronautical charts are available from the Distribution Division, National Ocean Service, Riverdale, MD 20840.  (b) In lieu of maps, the height above mean water or sea level of the antenna site may be computer generated, using elevations from a 30 second point or better topographic data file such as those available for the U.S. Geological Survey's National Geographic Information Center or the National Oceanic and Atmospheric Administration's National Geophysical Data Center. In case of dispute maps will be used to determine the correct value.  **[Reserved]***REASON:* *The area being serviced is the coastal or inland waterway. Average terrain elevation, while useful in calculating propagation over land, is not useful in calculating propagation over a waterway and leads to erroneous results.*  **§ 80.761   Conversion graphs.**  The following graphs must be employed where conversion from one to the other of the indicated types of units is required.  (a) *Graph 1.* To convert effective radiated power in watts to dBk or to dBW, find the power in watts on the horizontal axis. Move vertically along the line representing the power to the diagonal line. Move horizontally from the diagonal to the right side to read dBW and to the left to read dBk.  (b) *Graph 2.* To convert microvolts across 50 ohms to received power in dBW, find the signal in microvolts on the horizontal axis. Move vertically to the diagonal line, then move right horizontally to read dBW. http://cfr.regstoday.com/data/CFR/T47/cfr_47_80_I003.gif  http://cfr.regstoday.com/data/CFR/T47/cfr_47_80_I004.gif  (c) *Graph 3.* To convert received power in dBW to field intensity in dBu find the received power in dBW on the horizontal axis. Move vertically to the diagonal line, then move right horizontally to read dBu. http://cfr.regstoday.com/data/CFR/T47/cfr_47_80_I005.gif  **§ 80.763   Effective antenna height.**  The effective height of the antenna is the vertical distance of the center of the radiating system above the mean water or sea level .  *REASON: The area being serviced is the coastal or inland waterway. Average terrain elevation, while useful in calculating propagation over land, is not useful in calculating propagation over a waterway and leads to erroneous results*  **§ 80.765   Effective radiated power.**  Effective radiated power is used in computing the service area contour. The effective radiated power is derived from the transmitter output power, loss in the transmission system including duplexers, cavities, circulators, switches and filters, and the gain relative to a half-wave dipole of the antenna system.  **§ 80.767   Propagation curve.**  The propagation graph, §80.767 Graph 1, must be used in computing the service area contour. The graph provides data for field strengths in dBu for an effective radiated power of 1 kW, over sea water, fresh water or land (smooth earth); transmitting antena heights of 4,800, 3,200, 1,600, 800, 400, 200, and 100 feet; based on a receiving antenna height of 9 meters (30 feet), for the 156–162 MHz band. The use of this is described in this section.  (a) Calculate the effective radiated power of the coast station, Ps in dB referred to 1 kW (dBk), as follows: http://cfr.regstoday.com/data/CFR/T47/cfr_47_80_I006.gif  where,  Pt=Transmitter output power in dB referred to 1 kW: Transmitter output power in watts is converted to dBk by Pt=10 [log10 (Power in watts)]−30. Also see §80.761 Graph 1 for a conversion graph.  G=Antenna gain in dB referred to a standard half-wave dipole, in the direction of each plotted radial, and  L=Line losses between the transmitter and the antenna, in dB.  Notes: 1. To determine field strengths where the distance is known, for effective radiated powers other than 1kW (0 dBk): Enter the graph from the “statute miles” scale at the known distance, read up to intersection with the curve for the antenna height, read left to the “dBu for 1 kW radiated” scale and note the referenced field strength (Fe). The value of the actual field strength (F) in dBu will be F=Fe+Ps where Ps is the effective radiated power calculated above.  2. To determine distance, where the actual field strength is specified, for effective radiated powers other than 0 dBk: The value of the field referenced strength will be Fe=F−Ps in dBu. Enter the graph, from the “dBu for 1 kW radiated” scale at the corrected value of Fe, read right to intersection with the antenna height, read down to “statute miles” scale.  (b) Determine the antenna height. For antenna heights between the heights for which this graph is drawn, use linear interpolation; assume linear height-gain for antennas higher than 4,800 feet.  (c) For receiver antenna heights lower than 9 meters (30 feet), assume that the field strength is the same as at 9 meters (30 feet).  (d) Assume that propagation over fresh water or over land is the same as that over sea water. http://cfr.regstoday.com/data/CFR/T47/cfr_47_80_I007.gif  **§ 80.769   Shadow loss.**  Where the transmission path is obstructed the received signal must be adjusted to include shadow loss. Attenuation due to shadowing must be taken from §80.769 Graph 1, as follows:  (a) Inspect the map(s) to determine if a hill(s) obstructs an imaginary line of sight (dashed line on illustrative profiles of §80.769 Graph 1 from the average terrain elevation at the coast station antenna to the water level at the ship location. If average terrain elevation exceeds the actual ground elevation at the antenna site, the latter elevation must be used as the average terrain elevation.  (b) If a hill appears to obstruct the radio path, plot the antenna site elevation, the obstruction elevation and the height of the ship station on rectangular coordinate paper using elevation above mean sea level as the vertical scale and distance in statute miles as the horizontal scale. Then draw a straight line between the antenna and the ship.  (c) If a hill obstructs the imaginary line of sight, determine its height (H) above the imaginary line and its distance (D) from either the coast or ship station, whichever is nearer, as illustrated by examples “A” and “B” on Graph 1.  (d) Read the shadow loss from this Graph 1 and subtract that loss from the computed received signal.  (e) Where more than one hill obstructs the transmission path, determine the height and position of a single equivalent hill, as illustrated by example “C” on this graph. Read the shadow loss from this graph for the equivalent hill. http://cfr.regstoday.com/data/CFR/T47/cfr_47_80_I008.gif  **§ 80.771   Method of computing coverage.**  Compute the +17 dBu contour as follows:  (a) Determine the effective antenna height above mean sea level according to the procedures in §§80.757–80.761.  (b) Determine the effective radiated power according to §80,765. Determine for each radial the distance from the antenna site to the +17 dBu point of field strength using procedures of §§80.765 and 80.767.  (c) Plot on a suitable map each point of +17 dBu field strength for all radials and draw the contour by connecting the adjacent points by a smooth curve.  **§ 80.773   Co-channel interference protection.**  (a) Where a VHF public coast station geographic area licensee shares a frequency with an incumbent VHF public coast station licensee, the ratio of desired to undesired signal strengths must be at least 12 dB within the service area of the station.  (b) Where a VHF public coast station geographic area licensee shares a frequency with an incumbent private land mobile radio licensee, the VHF public coast station geographic area licensee must provide at least 10 dB protection to the PLMR incumbent's predicted 38 dBu signal level contour. The PLMR incumbent's predicted 38 dBu signal level contour is calculated using the F(50, 50) field strength chart for Channels 7–13 in §73.699 (Fig. 10a) of this chapter, with a 9 dB correction factor for antenna height differential, and is based on the licensee's authorized effective radiated power and antenna height-above-average-terrain.  (c) VHF public coast station geographic area licensees are prohibited from exceeding a field strength of +5 dBu (decibels referenced to 1 microvolt per meter) at their service area boundaries, unless all the affected VHF public coast station geographic area licensees agree to the higher field strength.  **Subpart Q Automatic Identification System (AIS) Stations and Equipment**  **§80.801 Scope.**  The Automatic Identification System (AIS) is a maritime navigation safety broadcast system. The simplex channels at 161.975 MHz (AIS 1) and 162.025 MHz (AIS 2), 156.775 MHz (AIS3), and 156.825 MHz (AIS4), each with a 25 kHz bandwidth, may be authorized only for AIS. In accordance with the Maritime Transportation Security Act, the United States Coast Guard regulates AIS carriage requirements for non–Federal Government ships. These requirements are codified at 33 CFR 164.46, 401.20. This subpart describes the additional technical, performance and certification requirements for the use of AIS frequencies and equipment in the maritime services. These requirements include United States Coast Guard approval or equipment authorization.  *REASON: Because of the large and growing numbers of AIS applications, all regulations concerning AIS have been consolidated into a new Subpart Q for ease of use. Source of §80.80: from former § 80.393 Frequencies for AIS stations.*  **§ 80.802 Station license required.**  **A**n AIS ship station may be licensed by rule, or an AIS may require a specific license depending upon the circumstances of operation as specified at Section 80.13. Eligibility requirements for a station license are set forth at Section 80.15.  *REASON: Clarification*  **§ 80.803 Broadcast of inaccurate data prohibited**  An AIS must always broadcast with a properly assigned MMSI in accordance with §80.16. Broadcasting an inaccurate or outdated MMSI or other data, is prohibited.  *REASON: Consistent with the warning in §80.231(b). Clarification that transmission of misleading identification information is prohibited.*  **§ 80.804 Prohibited operations**  (a) Operation of a private AIS base station.  (b) Except for AIS ATON or testing purposes in accordance with §80.805, AIS operation on land is prohibited.  (c) Except for AIS ATON, AIS operations from a non-self-propelled vessel (e.g. barge), unmanned vessel, aircraft, or a fixed platform or structure is prohibited.  *REASON: To more clearly define where AIS operation is permitted. Future operations on unmanned vessels, on land with a limited base station, or on aircraft used for search and rescue purposes in anticipated after further rulemaking.*  **§** **80.805 Testing of AIS equipment**  Testing of AIS equipment must be performed without transmitting over the air except in cases where it can be demonstrated that over-the-air testing is necessary for reliable results, *provided, however,*  over-the-air transmissions are permitted only: (i) in areas where the signal will not propagate over navigable waterways; (ii) for a maximum of 1 hour during any 24 hour period; and, (iii) in accordance with a valid marine support station license with a coast station MMSI assigned by the Commission in accordance with §§ 80.651 – 80.655 of these rules.  *REASON: Clarification consistent with FCC Notice DA-15-167A1 and §80.655(c). The propagation over navigable waterways restriction is considered necessary to protect AIS, e.g. from channel congestion these additional transmissions cause.*  **§ 80.806 Additional Communications and AIS Application Specific Messages**   1. In addition to the applicable rules contained in this section, permissible communications on AIS frequencies must be in accordance with United States Coast Guard regulations governing AIS at 33 C.F.R. §§ 66 and 164. 2. AIS Application Specific Messages are AIS binary messages where the data content is defined by the application: AIS Messages #6, #8, #25 and #26 as defined in ITU-R Rec, M.1371 (series) as incorporated by reference in §80.7(c)(11).   Use of AIS application-specific messages (ASM) are permissible only under the provisions of 33 CFR §164.46 *Automatic Identification System*.  *REASON: Consistent with USCG Regulations 33 CFR §164.46(d)(4) Application specific messages*  **§ 80.807 AIS Aids to Navigation (ATON) and AIS Repeaters.**  (a) Any device, including AIS, external to a ship that assists a vessel to determine position or safe course, or to warn of dangers or obstructions to navigation is an aid to navigation. As such, before submitting a license application for an AIS-ATON station, the applicant must first obtain written permission for the ATON from the cognizant Coast Guard District Commander in the area where the device will be located in accordance with Coast Guard regulations at 33 C.F.R. §66.01-5(i). This written permission must accompany the application for any AIS ATON station license.  (b) An AIS Repeater is a device operated to extend the receiving range of AIS in areas of impaired VHF coverage by retransmitting AIS messages. As such, before submitting a license application for an AIS Repeater station, the applicant must first obtain written permission from the cognizant Coast Guard District Commander in the area where the device will be located. This written permission must accompany the application for any AIS Repeater station license.  *REASON: To provide for private use of AIS ATONs and repeaters consistent with 33 CFR §62.52 and §66.01-5(i)*  **§ 80.808 Certification of AIS Equipment**  (a) Prior to submitting a certification application for any AIS device pursuant to Part 2, Subpart J of this chapter, the following information must be submitted in duplicate to the U.S. Coast Guard, Commandant (CG -ENG-3), 2703 Martin Luther King Jr. Ave., SE, Stop 7509, Washington, DC 20593-7509 or by email to [TypeApproval@uscg.mil](mailto:TypeApproval@uscg.mil). Class A AIS equipment approvals issued by European Notified Bodies under Mutual Recognition Agreements (MRAs) with the European Community (EC) and European Economic Area/European Free Trade Association (EEA/EFTA) and having an appropriate USCG Approval Number by an EC Notified Body do not require further U.S. Coast Guard review. If the approval of the Coast Guard is necessary, the following information must be submitted to the Coast Guard:  (1) The name of the manufacturer or grantee and the model number of the AIS device;  (2) Copies of the test report and test data obtained from the test facility showing that the device complies with the technical, performance and certification standards specified in this section;  (b) After reviewing the information described in paragraph (a) of this section, the U.S. Coast Guard will issue a letter stating whether the AIS device satisfies all of the applicable requirements specified in this section.  (c) A certification application for an AIS device submitted to the Commission must contain either a copy of the U.S. Coast Guard letter stating that the device satisfies all of the applicable requirements specified in this section or a copy of the notified body MRA type approval certification with USCG approval number, a copy of the technical test data, and the instruction manual(s).  (d) In addition to the labels or other identifying information required under certification provisions of Sections 2.925 and 2.926 of this chapter, each AIS device shall prominent instructions on how to enter into the device and confirm static data pertaining to the vessel and the following statement: “WARNING: It is a violation of the rules of the Federal Communications Commission to broadcast an improper MMSI or other inaccurate or outdated static data from this device.”  **§ 80.809 Technical, performance, certification and operational standards for AIS equipment.**  (a) AIS equipment must comply with the following technical, performance and certification standards:  (1) Class A AIS devices:  (i) ITU-R M.1371 (series), “Technical characteristics for a universal shipborne automatic identification system using time division multiple access in the VHF maritime mobile band,” with Annexes, incorporated by reference in §80.7(c)(11).  (ii) Either (1) NMEA 0183 Interface Standard, incorporated by reference in §80.7(h)(1), or IEC 61162-1, “Maritime navigation and radiocommunication equipment and systems--Digital interfaces--Part 1: Single talker and multiple listeners,” incorporated by reference in §80.7(d)(15), or (2) IEC 61162-3 “Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 3: Serial data instrument network”, incorporated by reference in 80.7(d)(17), or (3) IEC 61162-450 “ Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 450: Multiple talkers and multiple listeners - Ethernet interconnection”, incorporated by reference in 80.7(d)(18).  *REASON: While NMEA 0183 and IEC 61162-1 are equivalent, they are not identical in all respects. Because the NMEA version is typically the originating version, use of NMEA is preferred where differences do occur. Because foreign certification authorities and test houses may in some cases only recognize the IEC version of this standard, use of the IEC version is acceptable.*  (iii) IEC 61993-2, “Maritime navigation and radiocommunication equipment and systems--Automatic identification systems (AIS)--Part 2: Class A shipborne equipment of the universal automatic identification system (AIS)--Operational and performance requirements, methods of test and required test results,” incorporated by reference in §80.7(d)(19).  (2) Class B AIS devices:  (i) Class B (CS). IEC 62287-1 International Standard, “Maritime navigation and radio communication equipment and systems--Class B shipborne equipment of the Automatic Identification System--part 1: Carrier--sense time division multiple access (CSTDMA) techniques,” incorporated by reference in §80.7(d)(22);  (ii) Class B (SO). IEC 62287-2 “Maritime navigation and radiocommunication equipment and systems - Class B shipborne equipment of the automatic identification system (AIS) - Part 2: Self-organising time division multiple access (SOTDMA) techniques.” incorporated by reference in §80.7(d)(23).  (3) AIS-ATONS and AIS Repeaters:  (i) IEC 62320-2 International Standard, “Maritime navigation and radiocommunication equipment and systems – Automatic identification system (AIS) – Part 2: AIS AtoN Stations – Operational and performance requirements, methods of testing and required test results” incorporated by reference in §80.7(d)(25)  (ii) IEC 62320-3 International Standard, “ Maritime navigation and radiocommunication equipment and systems - Automatic identification systems (AIS) - Part 3: AIS Simplex Repeater Station - Minimum operational and performance requirements, methods of testing and required test results”, incorporated by reference in §80.7(d)(26).  (4) AIS-SART IEC 61097-14 International Standard, “Global maritime distress and safety system (GMDSS) – Part 14: AIS search and rescue transmitter (AIS-SART) – Operational and performance requirements, methods of testing and required test results” incorporated by reference in §80.7(d)(13).  (b) Means shall exist to update the operational software of all AIS devices certified [after the date this Order comes into effect] and all AIS devices imported, sold or installed [three years after the date this Order comes into effect] at the location where the device is installed in accordance with IMO MSC Circular incorporated by reference in §80.7(b)(29).  *REASON: (§80.809(b)) Equipment complexity and its affect upon safety require that means readily exist to update equipment software. This MSC Circular has been incorporated by footnote in SOLAS Chapters IV and V.*  *REASON: (§80.808 and §80.809). Relocation and cleanup of Class A and B AIS certification requirements from §80.275 and §80.231 respectively New AIS equipment such as the AIS SART, AIS Aids to Navigation equipment, and Class B (SO) equipment, have been introduced. Provisions for use of application specific messages have been introduced. Provisions for testing AIS equipment have also been included. Use of any of the data standards recognized by IEC in its 61162 family of standards is allowed.*      *REASON: In FCC R&O WT Docket 00-48 of Apr 9, 2002, the Commission noted that commenters were generally in agreement with thr proposal to substantially eliminate Subparts Q (which subsequently was deleted) and R. Subpart R was retitled to reflect that it now covers technical and operational requirements “to all compulsory ships which are not required to comply with subpart W (GMDSS) of this part in total or in part because they have received an exemption from all or some of the subpart W provisions” (§80.551). The R&O also noted that “as vessels operating pursuant to the fishing vessel exemption are not currently in compliance with GMDSS, they must be in compliance with certain other portions of Subpart…R. Therefore, we will create rule for vessels operating pursuant to that exemption and incorporate the necessary standards into that section. The remainder of the rules in Subpart…R shall be eliminated”..*  *Since this R&O was adopted, this Subpart and the technology included init has largely become obsolete, and exempted fishing vessel requirements have been included in Subpart W 80.1071 Exemptions. Therefore, Subpart R is proposed to be deleted.*  Subpart S—Compulsory Radiotelephone Installations for Small Passenger Boats  **§ 80.901   Applicability.**  The provisions of Part III of Title III of the Communication Act require United States vessels which transport more than six passengers for hire while such vessels are being navigated on any tidewater within the jurisdiction of the United States adjacent or contiguous to the open sea, or in the open sea to carry a radiotelephone installation complying with this subpart. The provisions of Part III do not apply to vessels which are equipped with a radio installation for compliance with Part II of Title III of the Act, or for compliance with the Safety Convention, or to vessels navigating on the Great Lakes.  **§ 80.903   Inspection of radiotelephone installation.**  Every vessel subject to Part III of Title III of the Communications Act must have a detailed inspection of the radio installation by an FCC-licensed technician in accordance with §80.59 once every two years. The FCC-licensed technician must use the latest FCC Information Bulletin, *How to Conduct an Inspection of a Small Passenger Vessel.* If the ship passes the inspection, the technician will issue a Communications Act Safety Radiotelephony Certificate. Communications Act Radiotelephony Certificates may be obtained from the Commission's National Call Center—(888) 225–5322—or from its forms contractor. The check list used for the inspection shall be retained on board the vessel and must be available for the next inspection.  REASON: *As recommended by the GMDSS Task Force, which believes there is a strong possibility of uncorrected EPIRB battery expirations and general unacceptable conditions of the installations over such a long period.*  **§ 80.905   Vessel radio equipment.**  (a) Vessels subject to part III of title III of the Communications Act that operate in the waters described in §80.901 must, at a minimum, be equipped as follows:  (1) Vessels operated solely within 20 nautical miles of land must be equipped with a VHF–DSC radiotelephone installation meeting the requirements of § 80.225 .  *REASON: USCG has built out a VHF shore-based network capable of DSC providing this coverage and consequently declared Sea Area A1.* *An 80.225 “Class D” radio should be sufficient. Not necessary to require the more expensive GMDSS “Class A” radio.*    *REASON: USCG has decided not to implement Sea Area A2*  (2) Vessels operated more than 20 nautical miles but not more than 200 nautical miles from the nearest land must:    (i) Be equipped with a VHF–DSC radiotelephone installation meeting the requirements of paragraph (a)(1) of this section;  *REASON: USCG has declared Sea Area A1*  (ii) Be equipped with either:  (A) An MF/HF DSC–capable independent single sideband radiotelephone meeting the requirements of paragraph (a)(3)(iii)(A) of this section and that is capable of operating on all distress and safety frequencies in the medium frequency and high frequency bands listed in § 80.369(a) and (b), on all of the ship-to-shore calling frequencies in the high frequency bands listed in § 80.369(d); or  REASON: Inclusion of AMVER channel requirement is confusing and no longer necessary.    (B) If operated in an area within the coverage of an GMDSS-recognized mobile satellite in which continuous alerting is available, a GMDSS-recognizedmobile satellite ship earth station meeting the requirements of §80.1101(b)(8) or (9).  *REASON: Simplify updates through §80.7 Incorporation by reference.*    (iii) Be equipped with a reserve power supply meeting the requirements of §§ 80.917(b), 80.919 and 80.921, and capable of powering the single sideband radiotelephone or the ship earth station (including associated peripheral equipment) required by paragraph (a)(4)(iii) of this section, including the navigation receiver referred to in § 80.905(a)(5);    (iv) Be equipped with a NAVTEX receiver meeting the requirements of §80.1101(b)(1) if voyages are planned to be for 24 hours or longer;    *REASON: As recommended by GMDSS Task Force. Simplify updates through §80.7 Incorporation by reference.*  (v) Be equipped with a Category I 406–406.1 MHz satellite emergency position-indicating radiobeacon (EPIRB) meeting the requirements of § 80.1061; and    (vi) Participate in the AMVER system while engaged on any voyage where the vessel is navigated in the open sea for more than 24 hours. Copies of the AMVER Bulletin are available at: AMVER Maritime Relations, USCG Battery Park Building, 1 South Street, Second floor, , New York, NY 10004–1499. Phone 212–668–7764.  REASON: Edits from most recent AMVER Manual.  (4) Vessels operated more than 200 nautical miles from the nearest land must:  (i) Be equipped with two VHF–DSC radiotelephone installations meeting the requirements of paragraph (a)(1) of this section. *REASON: MF-only radiotelephone equipment no longer exists, and with the Coast Guard termination of MF distress services is no longer appropriate.*  (ii) Be equipped with either:  (A) A DSC-capable independent single sideband radiotelephone meeting the requirements of paragraph (a)(3)(iii)(A) of this section and that is capable of operating on all distress and safety frequencies in the medium frequency and high frequency bands listed in §80.369(a) and (b), on all of the ship-to-shore calling frequencies in the high frequency bands listed in §80.369(d), and on at least four of the automated mutual-assistance vessel rescue (AMVER) system HF duplex channels; or  (B) If operated in an area within the coverage of an GMDSS-recognized mobilesatellite in which continuous alerting is available, a GMDSS-recognized ship earth station meeting the requirements of §80.1101(b)(8) or (9).  *REASON: Simplify updates through §80.7 Incorporation by reference.*  (iii) Be equipped with a reserve power supply meeting the requirements of §§80.917(b), 80.919 and 80.921, and capable of powering the single sideband radiotelephone or the ship earth station (including associated peripheral equipment) required by paragraph (a)(4)(iii) of this section, including the navigation receiver referred to in §80.905(a)(5);  (iv) Be equipped with a NAVTEX receiver meeting the requirements of §80.1101(b)(1);  *REASON: Simplify updates through §80.7 Incorporation by reference.*  (v) Be equipped with a Category I 406–406.1 MHz satellite emergency position-indicating radiobeacon (EPIRB) meeting the requirements of §80.1061;  and  *REASON: No longer used*  (vii) Participate in the AMVER system while engaged on any voyage where the vessel is navigated in the open sea for more than 24 hours. Copies of the AMVER Bulletin are available at: AMVER Maritime Relations, USCG Battery Park Building, Room 201, New York, NY 10004–1499. Phone 212–668–7764; Fax 212–668–7684.  (5) Vessels must comply with the requirements for interconnection to a navigation receiver contained in §80.1085(c).  REASON: *DSC distress alerts without position information has been a difficult recurring problem for US Coast Guard search and rescue personnel. Navigation receivers having interconnection capability is commonly used and required on most if not all regulated vessels (See 46 CFR §164.41 Electronic position fixing devices.).*(b) For a vessel that is navigated within the communication range of a VHF public coast station or U.S. Coast Guard station, but beyond the 20-nautical mile limitation specified in paragraph (a)(1) of this section, an exemption from the band 1605 to 2850 kHz installation requirements may be granted if the vessel is equipped with a VHF transmitter and receiver. An application for exemption must include a chart showing the route of the voyage or the area of operation of the vessel, and the receiving service area of the VHF public coast or U.S. Coast Guard station. The coverage area of the U.S. Coast Guard station must be based on written information from the District Commander, U.S. Coast Guard, a copy of which must be furnished with the application. The coverage area of a public coast station must be computed by the method specified in subpart P of this part.  (c) The radiotelephone installation must be installed to insure safe operation of the equipment and to facilitate repair. It must be protected against the vibration, moisture, temperature, and excessive currents and voltages.  (d) A VHF-DSC radiotelephone installation or a remote unit must be located at each steering station except those auxiliary steering stations which are used only during brief periods for docking or for close-in maneuvering. A single portable VHF-DSC radiotelephone set meets the requirements of this paragraph if adequate permanent mounting arrangements with suitable power provision and antenna feed are installed at each operator steering station. Additionally, for vessels of more than 100 gross tons, the radiotelephone installation must be located at the level of the main wheelhouse or at least one deck above the vessel's main deck.  **§ 80.907   Principal operating position.**  The principal operating position of the radiotelephone installation on vessels over 100 gross tons must be in the room from which the vessel is normally steered while at sea. If the station can be operated from any location other than the principal operating position, a positive means must be provided at the principal operating position to take full control of the station.  **§ 80.909   Radiotelephone transmitter.**  *REASON: MF-only radiotelephone equipment no longer exists, and with the Coast Guard termination of MF distress services is no longer appropriate.*  (a) The single sideband radiotelephone must be capable of operating on maritime frequencies in the band 1710 to 27500 kHz with a peak envelope output power of at least 120 watts for J3E emission on 2182 kHz or 4125 kHz and J3E emission on the distress and safety frequencies listed in §80.369(b).  (b) The transmitter complies with the power output requirements specified in paragraphs (a) or (b) of this section when:  (1) The transmitter can be adjusted for efficient use with an actual ship station transmitting antenna meeting the requirements of §80.923 of this part; and  (2) The transmitter, with normal operating voltages applied, has been demonstrated to deliver its required output power on the frequencies specified in paragraphs (a) or (b) of this section into either an artificial antenna consisting of a series network of 10 ohms effective resistance and 200 picofarads capacitance or an artificial antenna of 50 ohms nominal impedance. An individual demonstration of power output capability of the transmitter, with the radiotelephone installation normally installed on board ship, may be required.  (c) The single sideband radiotelephone must be capable of transmitting clearly perceptible signals from ship to shore. The transmitter complies with this requirement if it is capable of enabling communication with a public coast station on working frequencies in the 4000 to 27500 kHz band specified in §80.371(b) of this part under normal daytime operating conditions.  **§ 80.911   VHF transmitter.**  (a) The transmitter must be capable of transmission of G3E emission on 156.800 MHz, 156.300 MHz, and on the ship-to-shore working frequencies necessary to communicate with public coast stations serving the area in which the vessel is navigated.  (b) The transmitter must be adjusted so that the transmission of speech normally produces peak modulation within the limits 75 percent and 100 percent.  (c) The transmitter must be certificated to transmit between 20 watts and 25 watts, on each of the frequencies 156.300 MHz, 156.800 MHz and on ship-to-shore public correspondence channels, into 50 ohms effective resistance when operated with a primary supply voltage of 13.6 volts DC.  (d) When an individual demonstration of the capability of the transmitter is necessary the output power requirements prescribed in this paragraph must be met as follows:  (1) Measurements of primary supply voltage and transmitter output power must be made with the equipment drawing energy only from ship's battery;  (2) The primary supply voltage, measured at the power input terminals to the transmitter, and the output power of the transmitter, terminated in a matching artificial load, must be measured at the end of 10 minutes of continuous operation of the transmitter at its full power output.  (3) The primary supply voltage must not be less than 11.5 volts.  (4) The transmitter output power must be not less than 15 watts.  (5) For primary supply voltages, measured in accordance with the procedures of this paragraph, greater than 11.5 volts, but less than 12.6 volts, the required transmitter output power shall be equal to or greater than the value calculated from the formula  P=4.375(V)−35.313  where V equals the measured primary voltage and P is the calculated output power in watts.”  **§ 80.913   Radiotelephone receivers.**    *REASON: MF-only radiotelephone equipment no longer exists, and with the Coast Guard termination of MF distress services is no longer appropriate.*  (a) If a very high frequency radiotelephone installation is provided, the receiver used for maintaining the watch required by §80.303 must be capable of effective reception of G3E emission, be connected to the antenna system specified by §80.923 and be preset to, and capable of selection of, the frequencies 156.300 MHz, 156.800 MHz, and the receiving frequency(s) of public coast stations serving the area in which the vessel is navigated.  (b) One or more loudspeakers must be provided to permit reception on 4125 kHz as well as 156.800 MHz at the principal operating position and at any other place where listening is performed.  (c) Any receiver provided as a part of the radiotelephone installation must have a sensitivity of at least 50 microvolts in the case of MF equipment, and 1 microvolt in the case of HF or VHF equipment.  (d) The receiver required in paragraphs (a), (b) or (c) of this section must be capable of efficient operation when energized by the main source of energy. When a reserve source of energy is required pursuant to §80.905 or §80.917 of this part, the receiver must also be capable of efficient operation when energized by the reserve source of energy.  (e) The sensitivity of a receiver is the strength in microvolts of a signal, modulated 30 percent at 400 Hertz, required at the receiver input to produce an audio output of 50 milliwatts to the loudspeaker with a signal-to-noise ratio of at least 6 decibels. Evidence of a manufacturer's rating or a demonstration of the sensitivity of a required receiver computed on this basis must be furnished upon request of the Commission.  **§ 80.915   Main power supply.**  (a) There must be readily available for use under normal load conditions a main power supply sufficient to simultaneously energize the radiotelephone transmitter at its required antenna power, and the required receiver. Under this load condition the potential of the main power supply at the power input terminals of the radiotelephone installation must not deviate from its rated potential by more than 10 percent on vessels completed on or after March 1, 1957, nor by more than 15 percent on vessels completed before that date.  (b) When the main power supply consists of batteries, they must be installed as high above the bilge as practicable, secured against shifting with motion of the vessel, and accessible with not less than 26 cm (10 in.) head room.  (c) Means must be provided for adequately charging any batteries used as a main power supply. There must be a device which gives a continuous indication of the rate and polarity of the charging current during charging.  **§ 80.917   Reserve power supply.**  (a) Any small passenger vessel the keel of which was laid after March 1, 1957, must have a reserve power supply located on the same deck as the main wheel house or at least one deck above the vessel's main deck, unless the main power supply is so situated, if—  (1) The vessel is of more than 100 gross tons; or  (2) Beginning March 25, 2009:  (i) The vessel carries more than 150 passengers or has overnight accommodations for more than 49 persons; or  (ii) The vessel operates on the high seas or more than three miles from shore on Great Lakes voyages.  (b) The reserve power supply must be independent of the ship's propulsion and of any other electrical system, and be sufficient to simultaneously energize the radiotelephone transmitter at its required output power, and the receiver. The reserve power supply must be available for use at all times.  (c) When the reserve power supply consists of batteries, they must be installed as high above the bilge as practicable, secured against shifting with motion of the vessel, and accessible with not less than 26 cm (10 in.) head room.  (d) The reserve power supply must be located as near the required transmitter and receiver as practicable.  (e) All reserve power supply circuits must be protected from overloads.  (f) Means must be provided for charging any storage batteries used as a reserve power supply for the required radiotelephone installation. There must be a device which will give continuous indication of the rate and polarity of the charging current during charging.  (g) The cooling system of each internal combustion engine used as a part of the reserve power supply must be adequately treated to prevent freezing or overheating consistent with the season and route to be travelled by the particular vessel involved.  (h) Beginning [one year after this regulation becomes effective], any small passenger vessel that does not carry a reserve power supply must carry at least one VHF handheld radiotelephone meeting the requirements of RTCM Standard 10150 Class 2, incorporated by reference in §80.7(f)(1) .  **§ 80.919   Required capacity.**  If either the main or reserve power supply includes batteries, these batteries must have sufficient reserve capacity to permit proper operation of the required transmitter and receiver for at least 3 hours under normal working conditions.  **§ 80.921   Proof of capacity.**  (a) When directed by a representative of the Commission the vessel must prove by demonstration as prescribed in paragraphs (b), (c), (d) and (e) of this section, that the requirements of §80.919 are met.  (b) Proof of the ability of a storage battery used as a main or reserve power supply to operate over the 3-hour period established by a discharge test over the prescribed period of time, when supplying power at the voltage required for an electrical loss as prescribed by paragraph (d) of this section.  (c) When the required power supply consists of an engine-driven generator, proof of the adequacy of the engine fuel supply to operate the unit over the 3-hour period of time may be established by using as a basis the fuel consumption during a 1 hour period when supplying power, at the voltage required for operating an electrical load as prescribed by paragraph (d) of this section.  (d) In determining the required electrical load the following formula must be used:  (1) One-half of the current of the required transmitter at its rated output power; plus  (2) Current of the required receiver; plus  (3) Current of electric light, if required by §80.925; plus  (4) The sum of the current of all other loads the reserve power supply may provide in time of emergency.  (e) At the conclusion of the test specified in paragraphs (b) and (c) of this section, no part of the main or reserve power supply must have an excessive temperature rise, nor must the specific gravity or voltage of any storage battery be below the 90 percent discharge point.  **§ 80.923   Antenna system.**  An antenna must be provided in accordance with the applicable requirements of §80.81 of this part which is as efficient as practicable for the transmission and reception of radio waves. The construction and installation of this antenna must insure proper emergency operation.  **§ 80.925   Electric light.**  (a) If the vessel is navigated at night an electric light or dial lights which clearly illuminate the operating controls must be installed to provide illumination of the operating controls at the principal operating position.  (b) The electric light must be energized from the main power supply and, if a reserve power supply for the radiotelephone installation is required, from the reserve power supply.  **§ 80.927   Antenna radio frequency indicator.**  The transmitter must be equipped with a device which provides visual indication whenever the transmitter is supplying power to the antenna.  **§ 80.929   Nameplate.**  A durable nameplate must be mounted on the required radiotelephone equipment. When the transmitter and receiver comprise a single unit, one nameplate is sufficient. The nameplate must show the name of the manufacturer and the type or model number.  **§ 80.931   Test of radiotelephone installation.**  Unless normal use of the radiotelephone installation demonstrates that the equipment is in proper operating condition, a test communication on a required frequency in the 1605 to 27500 kHz band or the 156 to 162 MHz band must be made by a qualified operator each day the vessel is navigated. If the equipment is not in proper operating condition, the master must be promptly notified.  **§ 80.933   General small passenger vessel exemptions.**  (a) Subject U.S. vessels less than 50 gross tons which are navigated not more than 300 meters (1,000 feet) from the nearest land at mean low tide are exempt from the provisions of title III, part III of the Communications Act.  (b) All U.S. passenger vessels of less than 100 gross tons, not subject to the radio provisions of the Safety Convention, are exempt from the radiotelegraph provisions of Part II of Title III of the Communications Act, provided that the vessels are equipped with a radiotelephone installation fully complying with subpart S of this part.  (c) These exemptions may be terminated at any time without hearing, if in the Commission's discretion, the need for such action arises.  **§ 80.935   Station clock.**  Each station subject to this subpart must have a working clock or timepiece readily available to the operator.  Subpart T—Radiotelephone Installation Required for Vessels on the Great Lakes  **§ 80.951   Applicability.**  The Agreement Between the United States of America and Canada for Promotion of Safety on the Great Lakes by Means of Radio, 1973, applies to vessels of all countries when navigated on the Great Lakes. The Great Lakes Radio Agreement defines the Great Lakes as “all waters of Lakes Ontario, Erie, Huron (including Georgian Bay), Michigan, Superior, their connecting and tributary waters and the River St. Lawrence as far east as the lower exit of the St. Lambert Lock at Montreal in the Province of Quebec, Canada,” but does not include such of the connecting and tributary waters as may be specified in the Technical Regulations. The Technical Regulations do not include any connecting and tributary waters except the St. Mary's River, the St. Clair River, Lake St. Clair, the Detroit River and the Welland Canal. A vessel to which the Great Lakes Radio Agreement applies and which falls into the specific categories by paragraph (a), (b) or (c) of this section and not excepted by paragraph (d) or (e) of this section must comply with this subpart while navigated on the Great Lakes.  (a) Every vessel 20 meters (65 feet) or over in length (measured from end to end over the deck, exclusive of sheer).  (b) Every vessel engaged in towing another vessel or floating object, except:  (1) Where the maximum length of the towing vessel, measured from end to end over the deck exclusive of sheer, is less than 8 meters (26 feet) and the length or breadth of the tow, exclusive of the towing line, is less than 20 meters (65 feet);  (2) Where the vessel towed complies with this subpart;  (3) Where the towing vessel and tow are located within a booming ground (an area in which logs are confined); or  (4) Where the tow has been undertaken in an emergency and neither the towing vessel nor the tow can comply with this part.  (c) Any vessel carrying more than six passengers for hire.  (d) The requirements of the Great Lakes Radio Agreement do not apply to:  (1) Ships of war and troop ships;  (2) Vessels owned and operated by any national government and not engaged in trade.  (e) The Commission may if it considers that the conditions of the voyage or voyages affecting safety (including but not necessarily limited to the regularity, frequency and nature of the voyages, or other circumstances) are such as to render full application of the Great Lakes Agreement unreasonable or unnecessary, exempt partially, conditionally or completely, any individual vessel for one or more voyages or for any period of time not exceeding one year.  **§ 80.953   Inspection and certification.**  (a) Each U.S. flag vessel subject to the Great Lakes Agreement must have an inspection of the required radiotelephone installation at least once every 13 months. This inspection must be made while the vessel is in active service or within not more than one month before the date on which it is placed in service.  (b) An inspection and certification of a ship subject to the Great Lakes Agreement must be made by a technician holding one of the following: A General Radiotelephone Operator License, a GMDSS Radio Maintainer’s License, a Radiotelegraph Operator’s License, a Second Class Radiotelegraph Operator’s Certificate, or a First Class Radiotelegraph Operator’s Certificate. Additionally, the technician must not be the vessel's owner, operator, master, or an employee of any of them. The results of the inspection must be recorded in the ship's radiotelephone log and include:  (1) The date the inspection was conducted;  (2) The date by which the next inspection needs to be completed;  (3) The inspector's printed name, address, class of FCC license (including the serial number);  (4) The results of the inspection, including any repairs made; and  (5) The inspector's signed and dated certification that the vessel meets the requirements of the Great Lakes Agreement and the Bridge-to-Bridge Act contained in subparts T and U of this part and has successfully passed the inspection.  (c) The vessel owner, operator, or ship's master must certify that the inspection required by paragraph (b) was satisfactory.  (d) The ship's log must be retained on-board the vessel for at least two years from the date of the inspection.  **§ 80.955   Radiotelephone installation.**  (a) Each U.S. flag vessel of less than 38 meters (124 feet) in length while subject to the Great Lakes Agreement must have a radiotelephone meeting the provisions of this subpart in addition to the other rules in this part governing ship stations using telephony.  (b) Each U.S. flag vessel of 38 meters (124 feet) or more in length while subject to the Great Lakes Agreement must have a minimum of two VHF radiotelephone installations in operating condition meeting the provisions of this subpart. The second VHF installation must be electrically separate from the first VHF installation. However, both may be connected to the main power supply provided one installation can be operated from a separate power supply located as high as practicable on the vessel.  (c) This paragraph does not require or prohibit the use of other frequencies for use by the same “radiotelephone installation” for communication authorized by this part.  (d) [One year after this regulation becomes effective ,] at least one radiotelephone station must meet the requirements of §80.225 and must be interconnected to a navigation receiver in accordance with §80.1085(c).  REASON: *As recommended by the GMDSS Task Force, which notes that the USCC Rescue 21 VHF with DSC service is now operational in the Great Lakes.*  **§ 80.956   Required frequencies and uses.**  (a) Each VHF radiotelephone installation must be capable of transmitting and receiving G3E emission as follows:  (1) Channel 16—156.800 MHz-Distress, Safety and Calling; and  (2) Channel 6—156.300 MHz—Primary intership.  (b) The radiotelephone station must have additional frequencies as follows:  (1) Those ship movement frequencies appropriate to the vessel's area of operation: Channel 11—156.550 MHz, Channel 12—156.600 MHz, or Channel 14—156.700 MHz.  (2) The navigational bridge-to-bridge frequency, 156.650 MHz (channel 13).  (3) Such other frequencies as required for the vessel's service.  (4) One channel for receiving marine navigational warnings for the area of operation.  (c) Every radiotelephone station must include one or more transmitters, one or more receivers, one or more sources of energy and associated antennas and control equipment. The radiotelephone station, exclusive of the antennas and source of energy, must be located as high as practicable on the vessel, preferably on the bridge, and protected from water, temperature, and electrical and mechanical noise.  **§ 80.957   Principal operating position.**  (a) The principal operating position of the radiotelephone installation must be on the bridge, convenient to the conning position.  (b) When the radiotelephone station is not located on the bridge, operational control of the equipment must be provided at the location of the radiotelephone station and at the bridge operating position. Complete control of the equipment at the bridge operating position must be provided.  **§ 80.959   Radiotelephone transmitter.**  (a) The transmitter must be capable of transmission of G3E emission on the required frequencies.  (b) The transmitter must deliver a carrier power of between 10 watts and 25 watts into 50 ohms nominal resistance when operated with its rated supply voltage. The transmitter must be capable of readily reducing the carrier power to one watt or less.  (c) To demonstrate the capability of the transmitter, measurements of primary supply voltage and transmitter output power must be made with the equipment operating on the vessel's main power supply, as follows:  (1) The primary supply voltage measured at the power input terminals to the transmitter terminated in a matching artificial load, must be measured at the end of 10 minutes of continuous operation of the transmitter at its rated power output.  (2) The primary supply voltage, measured in accordance with the procedures of this paragraph, must be not less than 11.5 volts.  (3) The transmitter at full output power measured in accordance with the procedure of this paragraph must not be less than 10 watts.  **§ 80.961   Radiotelephone receiver.**  (a) The receiver must be capable of reception of G3E emission on the required frequencies.  (b) The receiver must have a sensitivity of at least 2 microvolts across 50 ohms for a 20 decibel signal-to-noise ratio.  **§ 80.963   Main power supply.**  (a) A main power supply must be available at all times while the vessel is subject to the requirements of the Great Lakes Radio Agreement.  (b) Means must be provided for charging any batteries used as a source of energy. A device which during charging of the batteries gives a continuous indication of charging current must be provided.  **§ 80.965   Reserve power supply.**  (a) Each passenger vessel of more than 100 gross tons and each cargo vessel of more than 300 gross tons must be provided with a reserve power supply independent of the vessel's normal electrical system and capable of energizing the radiotelephone installation and illuminating the operating controls at the principal operating position for at least 2 continuous hours under normal operating conditions. When meeting this 2 hour requirement, such reserve power supply must be located on the bridge level or at least one deck above the vessel's main deck.  (b) Instead of the independent power supply specified in paragraph (a) of this section, the vessel may be provided with an auxiliary radiotelephone installation having a power source independent of the vessel's normal electrical system. Any such installation must comply with §§80.955, 80.956, 80.957, 80.959, 80.961, 80.969 and 80.971, as well as the general technical standards contained in this part. Additionally, the power supply for any such auxiliary radiotelephone must be a “reserve power supply” for the purposes of paragraphs (c), (d) and (e) of this section.  (c) Means must be provided for adequately charging any batteries used as a reserve power supply for the required radiotelephone installation. A device must be provided which, during charging of the batteries, gives a continuous indication of charging.  (d) The reserve power supply must be available within one minute.  (e) The station licensee, when directed by the Commission, must prove by demonstration as prescribed in paragraphs (e)(1), (2), (3) and (4) of this section that the reserve power supply is capable of meeting the requirements of paragraph (a) of this section as follows:  (1) When the reserve power supply includes a battery, proof of the ability of the battery to operate continuously for the required time must be established by a discharge test over the required time, when supplying power at the voltage required for normal operation to an electric load as prescribed by paragraph (e)(3) of this section.  (2) When the reserve power supply includes an engine driven generator, proof of the adequacy of the engine fuel supply to operate the unit continuously for the required time may be established by using as a basis the fuel consumption during a continuous period of one hour when supplying power, at the voltage required for normal operation, to an electrical load as prescribed by paragraph (e)(3) of this section.  (3) For the purposes of determining the electrical load to be supplied, the following formula must be used:  (i) One-half of the current of the radiotelephone while transmitting at its rated output, plus one-half the current while not transmitting; plus  (ii) Current of the required receiver; plus  (iii) Current of the source of illumination provided for the operating controls prescribed by §80.969; plus  (iv) The sum of the currents of all other loads to which the reserve power supply may provide power in time of emergency or distress.  (4) At the conclusion of the test specified in paragraphs (e) (1) and (2) of this section, no part of the reserve power supply must have excessive temperature rise, nor must the specific gravity or voltage of any battery be below the 90 percent discharge point.  **§ 80.967   Antenna system.**  The antenna must be omnidirectional, vertically polarized and located as high as practicable on the masts or superstructure of the vessel.  **§ 80.969   Illumination of operating controls.**  (a) The radiotelephone must have dial lights which illuminate the operating controls at the principal operating position.  (b) Instead of dial lights, a light from an electric lamp may be provided to illuminate the operating controls of the radiotelephone at the principal operating position. If a reserve power supply is required, arrangements must permit the use of that power supply for illumination within one minute.  **§ 80.971   Test of radiotelephone installation.**  At least once during each calendar day a vessel subject to the Great Lakes Radio Agreement must test communications on 156.800 MHz to demonstrate that the radiotelephone installation is in proper operating condition unless the normal daily use of the equipment demonstrates that this installation is in proper operating condition. If equipment is not in operating condition, the master must have it restored to effective operation as soon as possible.  Subpart U—Radiotelephone Installations Required by the Bridge-to-Bridge Act  **§ 80.1001   Applicability.**  The Bridge-to-Bridge Act and the regulations of this part apply to the following vessels in the navigable waters of the United States:  (a) Every power-driven vessel of 20 meters or over in length while navigating;  (b) Every vessel of 100 gross tons and upward carrying one or more passengers for hire while navigating;  (c) Every towing vessel of 7.8 meters (26 feet) or over in length, measured from end to end over the deck excluding sheer, while navigating; and  (d) Every dredge and floating plant engaged, in or near a channel or fairway, in operations likely to restrict or affect navigation of other vessels. An unmanned or intermittently manned floating plant under the control of a dredge shall not be required to have a separate radiotelephone capability.  **§ 80.1003   Station required.**  Vessels subject to the Bridge-to-Bridge Act must have a radiotelephone installation to enable the vessel to participate in navigational communications. This radiotelephone installation must be continuously associated with the ship even though a portable installation is used. Foreign vessels coming into U.S. waters where a bridge-to-bridge station is required may fulfill this requirement by use of portable equipment brought a board by the pilot. Non portable equipment, when used, must be arranged to facilitate repair. The equipment must be protected against vibration, moisture, temperature and excessive currents and voltages.  **§ 80.1005   Inspection of station.**  The bridge-to-bridge radiotelephone station will be inspected on vessels subject to regular inspections pursuant to the requirements of Parts II and III of Title III of the Communications Act, the Safety Convention or the Great Lakes Agreement at the time of the regular inspection. If after such inspection, the Commission determines that the Bridge-to-Bridge Act, the rules of the Commission and the station license are met, an endorsement will be made on the appropriate document. The validity of the endorsement will run concurrently with the period of the regular inspection. Each vessel must carry a certificate with a valid endorsement while subject to the Bridge-to-Bridge Act. All other bridge-to-bridge stations will be inspected from time to time. An inspection of the bridge-to-bridge station on a Great Lakes Agreement vessel must normally be made at the same time as the Great Lakes Agreement inspection is conducted by a technician holding one of the following: a General Radiotelephone Operator License, a GMDSS Radio Maintainer's License, a Radiotelegraph Operator License, a Second Class Radiotelegraph Operator's Certificate, or a First Class Radiotelegraph Operator's Certificate. Additionally, the technician must not be the vessel's owner, operator, master, or an employee of any of them. Ships subject to the Bridge-to-Bridge Act may, in lieu of an endorsed certificate, certify compliance in the station log required by section 80.409(f).  **§ 80.1007   Bridge-to-bridge radiotelephone installation.**  Use of the bridge-to-bridge transmitter must be restricted to the master or person in charge of the vessel, or the person designated by the master or person in charge to pilot or direct the movement of the vessel. Communications must be of a navigational nature exclusively.  **§ 80.1009   Principal operator and operating position.**  The principal operating position of the bridge-to-bridge station must be the vessel's navigational bridge or, in the case of dredges, its main control station. If the radiotelephone installation can be operated from any location other than the principal operating position, the principal operating position must be able to take full control of the installation.  **§ 80.1011   Transmitter.**  (a) The bridge-to-bridge transmitter must be capable of transmission of G3E emission on the navigational frequency 156.650 MHz (Channel 13) and the Coast Guard liaison frequency 157.100 MHz (Channel 22A). Additionally, the bridge-to-bridge transmitter must be capable of transmission of G3E emission on the navigational frequency of 156.375 MHz (Channel 67) while transiting any of the following waters:  (1) The lower Mississippi River from the territorial sea boundary, and within either the Southwest Pass safety fairway or the South Pass safety fairway specified in §166.200 of the U.S. Coast Guard's Rules, 33 CFR 166.200, to mile 242.4 AHP (Above Head of Passes) near Baton Rouge;  (2) The Mississippi River-Gulf Outlet from the territorial sea boundary, and within the Mississippi River-Gulf outlet Safety Fairway specified in §166.200 of the U.S. Coast Guard's Rules, 33 CFR 166.200, to that channel's junction with the Inner Harbor Navigation Canal; and  (3) The full length of the Inner Harbor Navigation Canal from its junction with the Mississippi River to that canal's entry to Lake Pontchartrain at the New Seabrook vehicular bridge.  (b) [Reserved]  **§ 80.1013   Receiver.**  The bridge-to-bridge receiver must be capable of reception of G3E emission on the navigational frequency 156.650 MHz (Channel 13) and the Coast Guard liaison frequency 157.100 MHz (Channel 22A). In addition, the bridge-to-bridge receiver must be capable of reception of G3E emission on the navigational frequency of 156.375 MHz (Channel 67) while transiting in the waters of the lower Mississippi River as described in §§80.1011 (a)(1), (a)(2) and (a)(3) of this part.  **§ 80.1015   Power supply.**  (a) There must be readily available for use under normal load conditions, a power supply sufficient to simultaneously energize the bridge-to-bridge transmitter at its required antenna power, and the bridge-to-bridge receiver. Under this load condition the voltage of the power supply at the power input terminals of the bridge-to-bridge radiotelephone installation must not deviate from its rated voltage by more than 10 percent.  *REASON: Pre-1957 power supplies should no longer be on ships.*  (b) When the power supply for a nonportable bridge-to-bridge radiotelephone installation consists of or includes batteries, they must be installed as high above the bilge as practicable, secured against shifting with motion of the vessel, and accessible with not less than 26 cm (10 in.) head room.  (c) Means must be provided for adequately charging any rechargeable batteries used in the vessel's bridge-to-bridge radiotelephone installation. There must be provided a device which will give a continuous indication of the charging current during charging.  **§ 80.1017   Antenna system.**  (a) An antenna must be provided for nonportable bridge-to-bridge radiotelephone installations which is nondirectional and vertically polarized. The construction and installation of this antenna must ensure proper operation in time of an emergency.  (b) In cases where portable bridge-to-bridge equipment is permanently associated with a vessel, the equipment must be provided with a connector for an external antenna of a type capable of meeting requirements of paragraph (a) of this section and §80.71. The vessel must be equipped with an external antenna meeting requirements of paragraph (a) of this section and §80.71, capable of use with the portable equipment during a normal listening watch.  **§ 80.1019   Antenna radio frequency indicator.**  Each nonportable bridge-to-bridge transmitter must be equipped, at each point of control, with a carrier operated device which will provide continuous visual indication when the transmitter is supplying power to the antenna transmission line or, in lieu thereof, a pilot lamp or meter which will provide continuous visual indication when the transmitter control circuits have been placed in a condition to activate the transmitter.  **§ 80.1021   Nameplate.**  A durable nameplate must be mounted on the required radiotelephone or be an integral part of it. When the transmitter and receiver comprise a single unit, one nameplate is sufficient. The nameplate must show at least the name of the manufacturer and the type or model number.  **§ 80.1023   Test of radiotelephone installation.**  Unless normal use of the required radiotelephone installation demonstrates that the equipment is in proper operating condition, a test communication for this purpose must be made by a qualified operator each day the vessel is navigated. If the equipment is not in proper operating condition, the master must be promptly notified. The master must have it restored to effective operating condition as soon as possible.  Subpart V—Emergency Position Indicating Radiobeacons (EPIRB's)  **§ 80.1051   Scope.**  This subpart describes the technical and performance requirements for EPIRB stations  **§ 80.1053 Prohibition on , manufacture, importation, sale and use of Inmarsat–E and exclusive 121.5/243 MHz EPIRBs and ELTs in the Maritime services.**    The manufacture, importation, sale and use in the United States of Class A, Class B, Class S EPIRBs or emergency locator transmitters (ELTs) operating exclusively on 121.5/243 MHz) , or Inmarsat–E EPIRBs is prohibited under these Part 80 rules.  *REASON: editorial changes and addition of ELTs used in the maritime service.*  **§§ 80.1055-80.1059   [Reserved]**    **§ 80.1061   Special requirements for 406.0–406.1 MHz EPIRB stations.**  (a) Notwithstanding the provisions in paragraph (b) of this section, 406.0–406.1 MHz EPIRBs must meet all the technical and performance standards contained in the Radio Technical Commission for Maritime Services standard RTCM 11000 series incorporated by reference *in* §80.7(f)(2).  *REASON: Simplify updates through §80.7 Incorporation by reference*  (b) The 406.0–406.1 EPIRB, as required by the Safety Convention, must contain as an integral part a “homing” beacon operating on 121.500 MHz that meets all the requirements described in the RTCM Recommended Standards document described in paragraph (a) of this section. Except as provided by the Safety Convention, an EPIRB may contain an AIS SART in place of, or in addition to, the 121.5 MHz homing beacon.  *REASON: the AIS SART has proven to be a much more effective SAR locating device than the 121.5 MHz beacon. Allows 121.5 MHz beacon to be non-continuous, e.g. during transmission on other frequencies.*    (c) Prior to submitting a certification application for a 406.0–406.1 MHz radiobeacon, the radiobeacon must be certified by a test facility recognized by Cospas-Sarsat stating that the equipment satisfies the design characteristics associated with the measurement methods described in the current Cospas-Sarsat Standard C/S T.001 incorporated by reference in § 80.7(g)(1), and Cospas-Sarsat Standard C/S T.007 incorporated by reference in 80.7(g)(2). Additionally, the radiobeacon must be subjected to the environmental and operational tests associated with the test procedures described in Appendix A of RTCM Standard 11000 (series) incorporated by reference in § 80.7(f)(2), by a test facility accepted by the U.S. Coast Guard for this purpose. Information regarding accepted test facilities may be obtained from Commandant (CG–ENG-4), U.S. Coast Guard, 2703 Martin Luther King Jr. Ave. SE., Mail Stop 7509, Washington, DC 20593–7509, http:// [www.uscg.mil/hq/cg5/cg5214/epirbs.asp](F:\\Documents and Settings\\Joe\\Local Settings\\Temp\\www.uscg.mil\\hq\\cg5\\cg5214\\epirbs.asp)  REASON: Simplify updates through §80.7 Incorporation by reference. Editorial cleanup.  (1) After a 406.0–406.1 MHz EPIRB has been certified by the recognized test facilities the following information must be submitted in duplicate to the Commandant ( CG-ENG-4), U.S. Coast Guard, 2703 Martin Luther King Jr. Ave. SE, Mailstop 7509, Washington, DC 20593–7509 or by email to [TypeApproval@uscg.mil](mailto:TypeApproval@uscg.mil):    (i) The name of the manufacturer or grantee and model number of the EPIRB;    (ii) Copies of the certificate and test data obtained from the test facility recognized by Cospas-Sarsat showing that the radiobeacon complies with the Cospas-Sarsat design characteristics associated with the measurement methods described in the Cospas-SarsatStandard C/S T.001 and Cospas-Sarsat Standard C/S T.007, and RTCM 11000, all incorporated by reference in § 80.7(g)(1) and (2);  *REASON: Simplify updates through §80.7 Incorporation by reference. Editorial cleanup.*  (iii) Copies of the test report and test data obtained from the test facility recognized by the U.S. Coast Guard showing that the radiobeacon complies with the U.S. Coast Guard environmental and operational characteristics associated with the measurement methods described in Appendix A of the RTCM Recommended Standards; and  (iv) Instruction manuals associated with the radiobeacon, description of the test characteristics of the radiobeacon including assembly drawings, electrical schematics, description of parts list, specifications of materials and the manufacturer's quality assurance program.  (2) After reviewing the information described in paragraph (c)(1) of this section the U.S. Coast Guard will issue a letter stating whether the radiobeacon satisfies all RTCM Recommended Standards.  (d) A certification application for a 406.0–406.1 MHz EPIRB submitted to the Commission must also contain a copy of the U.S. Coast Guard letter that states the radiobeacon satisfies all RTCM Recommended Standards, a copy of the technical test data, and the instruction manual(s).  (e) An identification code, also known as a Unique Identification Number (UIN),issued by the manufacturer, must be programmed in each EPIRB unit to establish a unique identification for the EPIRB . The programming of an EPIRB for use in the U.S. may incorporate any protocol allowed in Annex A of Cospas-Sarsat document T.001, with the exception of those using station identification or MMSI numbers or Radio Call Signs. The National Oceanic and Atmospheric Administration (NOAA), as the U.S. program manager for the 406-406.1 MHz Cospas-Sarsat satellite system, may also assign specific bits for the National Use Protocols. With each marketable EPIRB unit, the manufacturer or grantee must include a postage pre-paid envelope and Registration form. The envelope is to be addressed to:  NOAA  SARSAT BEACON REGISTRATION  NSOF, E/SPO53,  1315 East West Hwy  Silver Spring, Maryland 20910.  Or, fax the signed form to NOAA at 301-817-4565.  The registration form must be pre- printed with the EPIRB UIN broken into 3 groups of 5 characters, along with the corresponding checksum using the algorithm provided by NOAA/SARSAT. The registration Form must request the owner's name, address, telephone number, type of ship, alternate emergency contact and other information as required by NOAA. The registration Form must also contain information regarding the availability to register the EPIRB at NOAA's online web-based registration database at: http://www/beaconregistration.noaa.gov. In addition, the following statement must be included: “WARNING--failure to register this EPIRB with NOAA before installation could result in a monetary forfeiture being issued to the owner.”    (f) To enhance protection of life and property it is mandatory that each 406.0–406.1 MHz EPIRB be registered with NOAA before installation and that information be kept up-to-date. Therefore, in addition to the identification plate or label requirements contained in §§ 2.925 and 2.926 of this chapter, each 406.0–406.1 MHz EPIRB must be provided on the outside with a clearly discernible permanent plate or label containing the following statement: “The owner of this 406.0–406.1 MHz EPIRB must register the UIN contained on this label with the National Oceanic and Atmospheric Administration (NOAA) either on-line at: http ;//www.beaconregistration.noaa.gov, or by mailing the paper form to:  NOAA  SARSAT BEACON REGISTRATION  NSOF, E/SPO53,  1315 East West Hwy  Silver Spring, Maryland 20910.  NOAA may also complement or update outdated registration information if credible information is provided by other sources. Vessel owners shall advise NOAA (in writing, by a phone call, or by updating the on-line registration database) upon change of vessel or EPIRB ownership, transfer of EPIRB to another vessel, or any other change in registration information.  (g) Once processed, NOAA will provide registrants with proof of registration and change of registration if applicable, in a letter, accompanied by a decal. This decal must be affixed to the beacon in such a way that it is visible when the beacon is installed.    (g) For 406.0–406.1 MHz EPIRBs whose UIN can be changed after manufacture, the identification code shown on the plate or label must be easily replaceable using commonly available tools. After the change of the UIN, the beacon must be registered as provided above, and the new proof of registration decal must be affixed to the beacon in such a way that it is visible when the beacon is installed.  *REASON: Editorial cleanup*  **§80.1062 Requirements for Testing and Maintenance of 406.0-406.1 MHz EPIRB stations**  406.0 – 406.1 MHz EPIRBs used on compulsory ships must be tested and maintained in accordance with the requirements and guidelines of the MSC Circulars incorporated by reference in §80.7(a)27) and (a)(28).  *REASON: Simplify updates through §80.7 Incorporation by reference*  **§ 80.1063 Maritime Personal Alerting Devices and Maritime Personal Locating Devices**  (a) Maritime personal alerting devices must operate on frequencies designated for distress alerting purposes. These devices must comply with the technical and performance standards required for equipment operating on the particular distress alerting frequencies employed. Equipment must meet the technical requirements for certification of equipment used for distress alerting purposes. The device must be programmed with and use a valid MMSI.  (b) Maritime personal locating devices must operate on frequencies designated for transmitting locating information. These devices must meet the technical and performance standards required for equipment operating on the particular frequencies employed. Equipment must meet the technical requirements for certification of equipment used for locating purposes. The device must be programmed with and use a valid MMSI.  *REASON: To ensure that devices marketed to the public for maritime distress alerting and locating purposes are interoperable with and do not unduly burden the Coast Guard.*  Subpart W—Global Maritime Distress and Safety System (GMDSS)  General Provisions  This subpart contains the rules applicable to the Global Maritime Distress and Safety System (GMDSS). Every ship of the United States subject to part II of title III of the Communications Act or the Safety Convention must comply with the provisions of this subpart. The rules in this subpart are to be read in conjunction with the applicable requirements contained elsewhere in this part; however, in case of conflict, the provisions of this subpart shall govern with respect to the GMDSS. For the purposes of this subpart, distress and safety communications include distress, urgency, and safety calls and messages.  **Source:**   57 FR 9065, Mar. 16, 1992, unless otherwise noted.  Note: No provision of this subpart is intended to eliminate, or in anyway modify, other requirements contained in this part with respect to part II of title III of the Communications Act.  **§ 80.1065   Applicability.**  (a) The regulations contained within this subpart apply to all passenger ships regardless of size and cargo ships of 300 tons gross tonnage and upwards.  (b) The requirements of this subpart do not modify the requirements for ships navigated on the Great Lakes or small passenger boats. The requirements contained in the Agreement Between the United States of America and Canada for Promotion of Safety on the Great Lakes by Means of Radio, 1973, continue to apply (see subpart T of this part). The requirements contained in part III of title III of the Communications Act continue to apply (see subpart S of this part).  (c) No provision in this subpart is intended to prevent the use by any ship, survival craft, or person in distress, of any means at their disposal to attract attention, make known their position and obtain help.  **§ 80.1067   Inspection of station.**  (a) Ships must have the required equipment inspected at least once every 12 months by an FCC-licensed technician holding a GMDSS Radio Maintainer's License. If the ship passes the inspection the technician will issue a Safety Certificate. Safety Certificates may be obtained from the Commission's National Call Center at 1–888–CALL FCC (1–888–225–5322) or from its field offices. The effective date of the ship Safety Certificate is the date the station is found to be in compliance or not later than one business day later. The FCC-licensed technician must use the latest FCC Information Bulletin, *How to Conduct a GMDSS Inspection.* Contact the FCC's National Call Center at 1–888–CALL FCC (1–888–225–5322) to request a copy. Copies are also available at <https://www.fcc.gov/forms>.  *REASON: It would be helpful if the Safety Certificates could be a downloadable and fill in .pdf like many IRS forms now are.*  (b) Certificates issued in accordance with the Safety Convention must be posted in a prominent and accessible place on the ship.  **§ 80.1069   Maritime sea areas.**  (a) For the purpose of this subpart, a ship's area of operation is defined as follows:  (1) *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.  (2) *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.  (3) *Sea area A3.* An area, excluding sea areas A1 and A2, within the coverage of a GMDSS-recognized mobile-satellite communication service supported by the ship earth station carried on board in which continuous alerting is available.  *REASON: To accommodate IMO-recognized mobile satellite service provider in addition to Inmarsat, consistent with IMO planned change sto SOLAS Chapter IV.*  (4) *Sea area A4.* An area outside sea areas A1, A2 and A3.  (b) Maritime sea areas are delineated in the International Maritime Organization Publication Master Plan of Shore-based Facilities for the GMDSS (IMO GMDSS.1/Circ. series) , available at https://webaccounts.imo.org/. Registration is required. **§ 80.1071   Exemptions.**  (a) In certain circumstances, partial or conditional exemptions may be granted to individual ships from the requirements of §§80.1085, 80.1087, 80.1089, 80.1091, and 80.1093 provided: such ships comply with the functional requirements of §80.1081 and a showing is made that such an exemption will not have a material effect upon the general efficiency of the service for the safety of all ships.  (b) An exemption may be granted under paragraph (a) of this section only:  (1) If the conditions affecting safety are such as to render the full application of §§80.1085, 80.1087, 80.1089, 80.1091, and 80.1093 unreasonable or unnecessary or otherwise not in the public interest;  (2) In exceptional circumstances, for a single voyage outside the sea area or sea areas for which the ship is equipped.  (c) All fishing vessels of 300 gross tons and upward are exempt from the subpart W requirements applicable for carriage of MF/HF-DSC equipment, and such vessels operating in Alaskan waters are exempt from the subpart W requirements applicable for VHF-DSC equipment until one year after the USCG establishes GMDSS coast facilities for Sea Area A1 in Alaskan waters. These exemptions are conditioned upon the following provisions being met:  (1) The ship is equipped with:  (i) A VHF radiotelephone installation.  (ii) An MF/HF radiotelephone installation.  (iii) A Category 1, 406.0–406.1 MHz EPIRB meeting the requirements of §80.1061;  (iv) A NAVTEX receiver meeting the requirements of §80.1101(c)(1);  (v) Survival craft equipment meeting the requirements of §80.1095;  (vi) A Search and Rescue Transponder meeting the requirements of §80.1101(c)(6); and  (2) The ship remains within coverage of a VHF coast station and maintains a continuous watch on VHF Channel 16; or  (3) The vessel remains within coverage of an MF coast station and maintains a continuous watch on 4125 kHz for vessels exempted from the MF/HF-DSC requirement and and VHF Channel 16 for vessels exempted from the VHF-DSC requirement.  *REASON: US Coast Guard announced establishment of Sea Area A1 except in Alaska on 20 Jan 2015, and also announced it would not be establishing Sea Area A2. MF-only radios are no longer in use. The Coast Guard discontinued watchkeeping on 2182 kHz.*  **§ 80.1073   Radio operator requirements for ship stations.**  (a) Ships must carry at least two persons holding GMDSS Radio Operator's Licenses as specified in §13.7 of this chapter for distress and safety radiocommunications purposes. The GMDSS Radio Operator's License qualifies personnel as a GMDSS radio operator for the purposes of operating a GMDSS radio installation, including basic equipment adjustments as denoted in the knowledge requirements specified in §13.203 of this chapter.  (1) A qualified GMDSS radio operator must be designated to have primary responsibility for radiocommunications during distress incidents, except if the vessel operates exclusively within twenty nautical miles of shore, in which case a qualified restricted radio operator may be so designated.  (2) A second qualified GMDSS radio operator must be designated as backup for distress and safety radiocommunications, except if the vessel operates exclusively within twenty nautical miles of shore, in which case a qualified restricted GMDSS radio operator may be so designated.  (b) A qualified GMDSS radio operator, and a qualified backup, as specified in paragraph (a) of this section must be:  (1) Available to act as the dedicated radio operator in cases of distress as described in §80.1109(a);  (2) Designated to perform as part of normal routine each of the applicable communications described in §80.1109(b);  (3) Responsible for selecting HF DSC guard channels and receiving scheduled maritime safety information broadcasts;  (4) Designated to perform communications described in §80.1109(c);  (5) Responsible for ensuring that the watches required by §80.1123 are properly maintained; and  (6) Responsible for ensuring that the ship's navigation position is entered into all installed DSC equipment, either automatically through a connected or integral navigation receiver, or manually at least every four hours when the ship is underway.  **§ 80.1074   Radio maintenance personnel for at-sea maintenance.**  (a) Ships that elect the at-sea option for maintenance of GMDSS equipment (see §80.1105) must carry at least one person who qualifies as a GMDSS radio maintainer, as specified in paragraph (b) of this section, for the maintenance and repair of equipment specified in this subpart. This person may be, but need not be, the person designated as GMDSS radio operator as specified in §80.1073.  (b) The following licenses qualify personnel as GMDSS radio maintainers to perform at-sea maintenance of equipment specified in this subpart. For the purposes of this subpart, no order is intended by this listing or the alphanumeric designator.  (1) DM: GMDSS Maintainer's License;  (2) DB: GMDSS Operator's/Maintainer's License.  (c) While at sea, all adjustments of radio installations, servicing, or maintenance of such installations that may affect the proper operation of the GMDSS station must be performed by, or under the immediate supervision and responsibility of, a qualified GMDSS radio maintainer as specified in paragraph (b) of this section.  (d) The GMDSS radio maintainer must possess the knowledge covering the requirements set forth in IMO Assembly on Training for Radio Personnel (GMDSS), Annex 5 and IMO Assembly on Radio Maintenance Guidelines for the Global Maritime Distress and Safety System related to Sea Areas A3 and A4.  **§ 80.1075   Radio records.**  A record must be kept, as required by §80.409 (a), (b) and (e). All incidents connected with the radiocommunication service must be recorded as required by paragraphs (e)(1) through (e)(13) of 80.409. , including all incidents connected with the radiocommunication service which appear to be of importance to safety of life at sea. These include:  *REASON: For clarity. The Radio Regulations no longer requires that a record be kept, but the Safety of Life at Sea (SOLAS) Convention does in Chapter IV Regulation 16.*  (a) Distress and urgency transmissions shall be logged per §80.409 (e) (1) (i).  (b) Subpart W vessels shall also enter their Sea Area of operation and Maintenance Methods per §80.1069 and §80.1105 on a voyage or calendar basis. Such vessels shall, on a voyage basis or calendar basis, record all licensed GMDSS Radio Operators including the required designations as primary/secondary operator per §80.1073.  (c) Subpart W vessels shall test all carriage-mandatory GMDSS equipment prior to departure as per §80.1105.  (d) Subpart W vessels shall test all carriage-mandatory GMDSS equipment daily at sea until arrival at the next port per §80.1107.  (e) Arrival at dock & departure from dock entries shall be made by Subpart W GMDSS ships to account for periods when the GMDSS equipment is not required to be on watch during port stays.  *REASON: For clarity in cross references to assist officers in compliance. For clarity regarding port stays.*  **§ 80.1077   Frequencies.**  The following table describes the frequencies used in the Global Maritime Distress and Safety System:   |  |  | | --- | --- | | Alerting: |  | | 406.0–406.1 EPIRBs | 406.0–406.1 MHz (Earth-to-space).\* 1544–1545 MHz (space-to-Earth).\* | | GMDSS-recognized mobile satellite service ship earth stations capable of voice and/or direct printing | 1626.5-1645.5 MHz (Earth-to-space).\*  1544–1545 MHz (space-to-Earth).\*  [Reserved]\* | | VHF DSC Ch. 70 | 156.525 MHz.1\* | | MF/HF DSC2 | 2187.5 kHz3, 4207.5 kHz, 6312 kHz, 8414.5 kHz, 12577 kHz, and 16804.5 kHz. \* | | On-scene communications: |  | | VHF Ch.16 | 156.8 MHz.\* | | MF Radiotelephony | 2182 kHz.\* | | NBDP | 2174.5 kHz.\* | | Communications involving aircraft: |  | | On-scene, including search and rescue | 156.8 MHz4\*, 121.5 MHz5\*, 123.1 MHz, 156.3 MHz, 2182 kHz\*, 3023 kHz, 4125\* kHz, and 5680 kHz.6 | | Locating signals: |  | | 406–406.1 EPIRB Beacons | 121.5 MHz.\* | | 9 GHz radar transponders  AIS-SART  VHF Channel AIS 1  VHF Channel AIS 2 | 9200-9500 MHz  161.975 MHz\*  162.025 MHz\* | | Maritime safety information (MSI): |  | | International NAVTEX | 518 kHz.7 | | Warnings | 490 kHz, 4209.5 kHz. | | NBDP | 4210 kHz, 6314 kHz, 8416.5 kHz, 12579 kHz, 16806.5 kHz, 19680.5 kHz, 22376 kHz, 26100.5 kHz. | | Satellite | 1530–1545 MHz.10\*  [Reserved]\* | | General distress and safety communications and calling: |  | | Satellite | 1530–1544 MHz (space-to-Earth) and 1626.5–1645.5 MHz and 1645.5-1646.5 MHz \*(Earth-to-space).10, 11  [Reserved]\* | | Radiotelephony | 2182 kHz, 4125 kHz, 6215 kHz, 8291kHz, 12290 kHz, 16420 kHz, and 156.8 MHz. \* | | NBDP | 2174.5 kHz, 4177.5 kHz, 6268 kHz, 8376.5 kHz, 12520 kHz, and 16695 kHz. | | DSC | 2187.5 kHz, 4207.5 kHz, 6312 kHz, 8414.5 kHz, 12577 kHz, 16804.5 kHz, and 156.525 MHz. \* | | Survival craft: |  | | VHF radiotelephony | 156.8 MHz\* and one other 156–174 MHz frequency | | 9 GHz radar transponders  AIS-SART  VHF Channel AIS 1  VHF Channel AIS 2 | 9200–9500 MHz.  161.975 MHz\*  162.025 MHz\* |   1Frequency 156.525 MHz can be used for ship-to-ship alerting and, if within sea area A1, for ship-to-shore alerting.  2For ships equipped with MF/HF equipment, there is a watch requirement on 2187.5 kHz, 8414.5 kHz, and one other frequency.  3Frequency 2187.5 kHz can be used for ship-to-ship alerting and, if within sea area A2, for ship-to-shore alerting.  4Frequency 156.8 MHz may also be used by aircraft for safety purposes only.  5Frequency 121.5 MHz may be used by ships for aeronautical distress and urgency purposes.  6The priority of use for ship-aircraft communications is 4125 kHz, then 3023 kHz. Additionally, frequencies 123.1 MHz, 3023 kHz and 5680 kHz can be used by land stations engaged in coordinated search and rescue operations.  7The international NAVTEX frequency 518 kHz is the primary frequency for receiving maritime safety information. The other frequencies are used only to augment the coverage or information provided on 518 kHz.  8[Reserved]  9[Reserved]  10In addition to EPIRBs, 1544–1545 MHz can be used for narrowband distress and safety operations and 1645.5–1646.5 MHz can be used for relay of distress alerts between satellites. Feeder links for satellite communications are assigned from the fixed satellite service, see 47 CFR §2.106.  11Use of the band 1645.5-1646.5 MHz (Earth-to-space) is limited to distress and safety operations.  \*Except as provided herein, any emission capable of causing harmful interference to distress, alarm, urgency or safety communications on any frequency denoted by an asterisk (\*) is prohibited. Any emission causing harmful interference to distress and safety communications on any of the discrete frequencies identified in this table is prohibited.  *REASON: Consequential to ITU WRC-07 Final Acts, Ap15, including inclusion of AIS SARTs, the band 1645.5-1646.5 MHz (Earth-to-space), and the prohibition of emissions capable of causing harmful interference to distress and related communications.*  Equipment Requirements for Ship Stations  **§ 80.1081   Functional requirements.**  Ships, while at sea, must be capable:  (a) Except as provided in §§80.1087(a)(1) and 80.1091(a)(4)(iii), of transmitting ship-to-shore distress alerts by at least two separate and independent means, each using a different radiocommunication service;  (b) Of receiving shore-to-ship distress alerts;  (c) Of transmitting and receiving ship-to-ship distress alerts;  (d) Of transmitting and receiving search and rescue co-ordinating communications;  (e) Of transmitting and receiving on-scene communications;  (f) Of transmitting and receiving signals for locating;  (g) Of transmitting and receiving maritime safety information;  (h) Of transmitting and receiving general radiocommunications to and from shore-based radio systems or networks; and  (i) Of transmitting and receiving bridge-to-bridge communications.  **§ 80.1083   Ship radio installations.**  (a) Ships must be provided with radio installations capable of complying with the functional requirements prescribed by §80.1081 throughout its intended voyage and, unless exempted under §80.1071, complying with the requirements of §80.1085 and, as appropriate for the sea area of areas through which it will pass during its intended voyage, the requirements of either §80.1087, §80.1089, §80.1091, or §80.1093.  (b) The radio installation must:  (1) Be so located that no harmful interference of mechanical, electrical or other origin affects its proper use, and so as to ensure electromagnetic compatibility and avoidance of harmful interaction with other equipment and systems;  (2) Be so located as to ensure the greatest possible degree of safety and operational availability;  (3) Be protected against harmful effects of water, extremes of temperature and other adverse environmental conditions;  (4) Be provided with reliable, permanently arranged electrical lighting, independent of the main and emergency sources of electrical power, for the adequate illumination of the radio controls for operating the radio installation; and  (5) Be clearly marked with the call sign, the ship station identity and other codes as applicable for the use of the radio installation.  (c) Control of the VHF radiotelephone channels required for navigational safety must be immediately available on the navigating bridge convenient to the conning position and, where necessary, facilities should be available to permit radiocommunications from the wings of the navigating bridge. Portable VHF equipment may be used to meet the latter provision.  (d) Shipborne Integrated Communication System (ICS) may be utilized to integrate all GMDSS equipment into a standard operator's console. Such installation must be certified in accordance with §80.1103 and meet the requirements of IEC 62040, incorporated by reference in§80.7(d)(28).  *REASON: IEC 62940 superceded IMO Res A.811(19).*  (e) In passenger ships, a distress panel shall be installed at the conning position. This panel shall contain either one single button which, when pressed, initiates a distress alert using all radiocommunications installations required on board for that purpose or one button for each individual installation. The panel shall clearly and visually indicate whenever any button or buttons have been pressed. Means shall be provided to prevent inadvertent activation of the button or buttons. If the satellite EPIRB is used as the secondary means of distress alerting and is not remotely activated, it shall be acceptable to have an additional EPIRB installed in the wheelhouse near the conning position.  • In passenger ships, information on the ship's position shall be continuously and automatically provided to all relevant radiocommunications equipment to be included in the initial distress alert when the button or buttons on the distress panel is pressed.  (f) In passenger ships, a distress alarm panel shall be installed at the conning position. The distress alarm panel shall provide visual and aural indication of any distress alert or alerts received on board and shall also indicate through which radiocommunication service the distress alerts have been received.  *REASON: To conform to SOLAS amendments which have come into force since this regulation was last updated.*  **§ 80.1085   Ship radio equipment—General.**  This section contains the general equipment requirements for all ships subject to this subpart.  (a) Ships must be provided with:  (1) A VHF radio installation capable of transmitting and receiving:  (i) DSC on the frequency 156.525 MHz (channel 70), and it must be able to initiate the transmission of distress alerts on channel 70 from the position from which the ship is normally navigated; and  (ii) Radiotelephony on the frequencies 156.300 MHz (channel 6), 156.650 MHz (channel 13), and 156.800 MHz (channel 16);  (2) A dedicated, non-scanning radio installation capable of maintaining a continuous DSC watch on VHF channel 70 which may be separate from, or combined with, that required by paragraph (a)(1)(i) of this section;  (3) A search and rescue locating device which must be stowed so that it is easily utilized (this transponder may be one of those required by §80.1095(b) for a survival craft);*REASON: to include AIS SART as well as radar SART in accordance with SOLAS.*  (4) A receiver capable of receiving international NAVTEX service broadcasts;  (5) If the ship is engaged on voyages in any area of a GMDSS-recognized mobile satellite service coverage in which an international NAVTEX service is not provided, a radio facility for reception of maritime safety information by the GMDSS-recognized mobile satellite service enhanced group calling system, (this requirement does not apply to ships engaged exclusively on voyages in areas where an HF direct-printing telegraphy maritime safety information service, as identified by the IMO GMDSS Master Plan Publication, is provided and the ship is fitted with equipment capable of receiving such service); and  (6) A satellite emergency position-indicating radio beacon (satellite EPIRB) which must be:  (i) Capable of transmitting a distress alert through the polar orbiting satellite service operating in the 406.0–406.1 MHz band (406.0–406.1 MHz EPIRB); and  (ii) Installed in an easily accessible position, ready to be manually released and capable of being carried by one person into a survival craft, capable of floating free if the ship sinks and of being automatically activated when afloat, and capable of being activated manually.  (iii) Examined and tested annually in accordance with the IMO standard, IMO Circular MSC/Circ.1040 (incorporated by reference in§80.7(b)(28)). *See* §80.1105(k).  (b) Ships must carry either the most recent edition of the IMO publication entitled GMDSS Master Plan of Shore-Based Facilities, the ITU List of Coast Stations and Special Service Stations, , or the Admiralty List of Radio Signals Volume 5 Global Maritime Distress and Safety System. Notice of new editions will be published on the Commission's Wireless Telecommunications Bureau web page under “Marine Services” and information will be provided about obtaining the new document.  (c) All GMDSS equipment capable of transmitting an automatic distress alert which includes position of the ship must have either an integral navigation receiver or connected to an external navigation receiver. If interconnection to an external navigation receiver is made, it shall be connected to all of the alerting devices referred to in paragraph (a) of this section.  REASON: *To conform to SOLAS Ch.IV requirements. DSC distress alerts without position information have been a problem for US Coast Guard search and rescue personnel.*  (d) Every passenger ship shall be provided with means for two-way on-scene radiocommunications for search and rescue purposes using the aeronautical frequencies 121.5 and 123.1 MHz from the position from which the ship is normally navigated.  **§ 80.1087   Ship radio equipment—Sea area A1.**  This section contains the additional equipment requirements for ships that remain within sea area A1 at all times.  (a) In addition to meeting the requirements of §80.1085, ships engaged on voyages exclusively in sea area A1 must be provided with a radio installation capable of initiating the transmission of ship-to-shore distress alerts from the position from which the ship is normally navigated, operating either:  (1) On VHF using DSC; or  (2) Through the polar orbiting satellite service on 406.0–406.1 MHz (this requirement may be fulfilled by the EPIRB required by §80.1085(a)(6), either by installing the EPIRB close to, or by allowing remote activation from, the position from which the ship is normally navigated); or  (3) On MF using DSC if the ship is engaged on voyages within coverage of MF coast stations equipped with DSC; or  (4) On HF using DSC; or  (5) Through the GMDSS-recognized mobile satellite service coverage. This requirement may be fulfilled by a ship earth station capable of two way communication.  (b) The VHF radio installation, required by §80.1085(a)(1), must also be capable of transmitting and receiving general radiocommunications using radiotelephony.  **§ 80.1089   Ship radio equipment—Sea areas A1 and A2.**  This section contains the additional equipment requirements for ships that remain within sea areas A1 or A2 at all times. Ships fitting in accordance with this section satisfy the sea area A1 requirements denoted in §80.1087.  (a) In addition to meeting the requirements of §80.1085, ships engaged on voyages beyond sea area A1, but remaining within sea area A2, must be provided with:  (1) An MF/HF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:  *REASON: MF-only radios no longer exist*  (i) 2187.5 kHz using DSC; and  (ii) 2182 kHz using radiotelephony;  (2) A radio installation capable of maintaining a continuous DSC watch on the frequency 2187.5 kHz which may be separate from or combined with, that required by paragraph (a)(1)(i) of this section; and  (3) Means of initiating the transmission of ship-to-shore distress alerts by a radio service other than MF operating either:  (i) Through the polar orbiting satellite service on 406.0–406.1 MHz (this requirement may be fulfilled by the EPIRB required by §80.1085(a)(6), either by installing the EPIRB close to, or by allowing remote activation from, the position from which the ship is normally navigated); or  (ii) On HF using DSC; or  (iii) Through the GMDSS-recognized mobile satellite service coverage; this requirement may be fulfilled by a GMDSS-recognized ship earth station.  (b) It must be possible to initiate transmission of distress alerts by the radio installations specified in paragraphs (a)(1) and (a)(3) of this section from the position from which the ship is normally navigated.  (c) Ships subject to this section must be capable of transmitting and receiving general radiocommunications using radiotelephony or direct-printing telegraphy by either:  (1) A radio installation operating on working frequencies in the bands between 1605–4000 kHz or between 4000–27500 kHz (this requirement may be fulfilled by the addition of this capability to the equipment required by paragraph (a)(1) of this section); or  (2) A GMDSS-recognized mobile satellite service ship earth station.  **§ 80.1091   Ship radio equipment—Sea areas A1, A2, and A3.**  This section contains the additional equipment requirements for ships that remain within sea areas A1, A2, or A3 at all times. Ships fitting in accordance with this section satisfy the requirements denoted in §80.1087 or §80.1089 for sea-areas A1 and A2. Ships fitting in accordance to this section have the option to comply with either the requirements of paragraph (a) or (b) of this section.  (a) In addition to meeting the requirements of §80.1085, ships subject to this section must be provided with:  (1) A GMDSS-recognized mobile satellite service ship earth station capable of:  (i) Transmitting and receiving distress and safety data communications;  (ii) Initiating and receiving distress priority calls;  (iii) Maintaining watch for shore-to-ship distress alert, including those directed to specifically defined geographical areas;  (iv) Transmitting and receiving general radiocommunications, using either radiotelephony or direct-printing telegraphy; and  (2) An MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:  (i) 2187.5 kHz using DSC; and  (ii) 2182 kHz using radiotelephony; and  (3) A radio installation capable of maintaining a continuous DSC watch on the frequency 2187.5 kHz which may be separate from or combined with that required by paragraph (a)(2)(i) of this section; and  (4) Means of initiating the transmission of ship-to-shore distress alerts by a radio service operating either:  (i) Through the polar orbiting satellite service on 406.0–406.1 MHz (this requirement may be fulfilled by the EPIRB required by §80.1085(a)(6), either by installing the EPIRB close to, or by allowing remote activation from, the position from which the ship is normally navigated); or  (ii) On HF using DSC: or  (iii) Through the GMDSS-recognized mobile satellite service, by an additional ship earth station.  Note to paragraph ( a )(4)( iii ): For ships subject to this subpart, sailing only in domestic waters, alternative satellite system fitting may be considered. However, the satellite system fitted must comply with all features of the GMDSS-recognized mobile satellite service system for its intended function. These are shown in IMO Resolution A.801(19) and in IMO Resolution A.1001(25) (both incorporated by reference, *see* §80.7). In any case, the alternative satellite system must provide continuous coverage for all sea areas in which the ship intends to sail.  (b) In addition to meeting the requirements of §80.1085, ships subject to this section must be provided with:  (1) An MF/HF radio installation capable of transmitting and receiving on all distress and safety frequencies in the bands between 1605–27500 kHz using DSC, radiotelephony, and narrow-band direct-printing telegraphy; and  (2) Equipment capable of maintaining DSC watch on 2187.5 kHz, 8414.5 kHz and on at least one of the distress and safety DSC frequencies 4207.5 kHz, 6312 kHz, 12577 kHz, or 16804.5 kHz although it must be possible to select any of these DSC distress and safety frequencies at any time (this equipment may be separate from, or combined with, the equipment required by paragraph (b)(1) of this section); and  (3) Means of initiating the transmission of ship-to-shore distress alerts by a radiocommunication service other than HF operating either:  (i) Through the polar orbiting satellite service on 406.0–406.1 MHz (this requirement may be fulfilled by the 406.0–406.1 MHz EPIRB required by §80.1085(a)(6), either by installing the 406.0–406.1 MHz EPIRB close to, or by allowing remote activation from, the position from which the ship is normally navigated); or  (ii) Through the GMDSS-recognized mobile satellite service (this requirement may be fulfilled by a GMDSS-recognized mobile satellite service ship earth station).  (4) In addition, ships must be capable of transmitting and receiving general radiocommunications using radiotelephony or direct-printing telegraphy by an MF/HF radio installation operating on working frequencies in the bands between 1605–4000 kHz and between 4000–27500 kHz (this requirement may be fulfilled by the addition of this capability to the equipment required by paragraph (b)(1) of this section).  (c) It must be possible to initiate transmission of distress alerts by the radio installations specified in paragraphs (a)(1), (a)(2), (a)(4), (b)(1), and (b)(3) of this section from the position from which the ship is normally navigated.  **§ 80.1093   Ship radio equipment—Sea areas A1, A2, A3, and A4.**  This section contains the additional equipment requirements for ships that sail in all sea areas, *i.e.,* sea areas A1, A2, A3, and A4. Ships fitting in accordance with this section satisfy the requirements denoted in §§80.1087, 80.1089, and 80.1091 for sea areas A1, A2, and A3.  (a) In addition to meeting the requirements of §80.1085 of this part, ships engaged on voyages in all sea areas must be provided with the radio installations and equipment required by §80.1091(b), except that the equipment required by §80.1091(b)(3)(ii) and §80.1091(b)(3)(iii) cannot be accepted as an alternative to that required by §80.1091(b)(3)(i), which must always be provided.  (b) Ships engaged on voyages in all sea areas also must comply with the requirements of §80.1091(c).  **§ 80.1095   Survival craft equipment.**  (a) At least three two-way VHF radiotelephone apparatus must be provided on every passenger ship and on every cargo ship of 500 tons gross tonnage and upwards. At least two two-way VHF radiotelephone apparatus must be provided on every cargo ship of between 300–500 tons gross tonnage. Portable two-way VHF radiotelephones must be stowed in such locations that they can be rapidly placed in any survival craft other than life rafts as required by Chapter III Regulations of the SOLAS Convention. (The SOLAS Convention can be purchased from International Maritime Organization (IMO), Publications, International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom; email: sales@imo.org, Tel: +44 (0)20 7735 7611, http://www.imo.org .) Alternatively, survival craft may be fitted with a fixed two-way VHF radiotelephone installation. Two-way VHF radiotelephone apparatus, portable or fixed, must conform to performance standards as specified in § 80.1101.  (b) At least one search and rescue locating device shall be carried on each side of every passenger ship and every cargo ship of 500 tons gross tonnage and upwards. At least one search and rescue locating device shall be carried on every cargo ship of 300 tons gross tonnage and upwards but less than 500 tons gross tonnage. Such search and rescue locating devices shall conform to performance standards as specified in § 80.1101. The search and rescue locating devices shall be stowed in such locations that they can be rapidly placed in any survival craft other than the life raft or life rafts required by the SOLAS Convention, Chpt. III, Regulation 31.1.4. Alternatively, search and rescue device shall be stowed in each survival craft other than those required by Regulation 31.1.4 of the SOLAS Convention. On ships carrying at least two search and rescue locating devices and equipped with free-fall lifeboats one of the search and rescue locating devices shall be stowed in a free‑fall lifeboat and the other located in the immediate vicinity of the navigation bridge so that it can be utilized on board and ready for transfer to any of the other survival craft. One of these search and rescue locating devices may be one that is required by § 80.1085(a)(3).  *REASON: To reflect updates in IMO regulations including the SOLAS Convention.*  (c) Survival craft equipment must be tested at intervals not to exceed twelve months. For batteries used for survival craft equipment, the expiration date of the battery must be clearly marked on both the battery and the exterior of the equipment. The expiration date of the battery shall be no more than the declared shelf life of the battery. Batteries must be replaced if the transmitter has been used in an emergency situation.  *REASON: To reflect updates in IMO regulations*  **§ 80.1099   Ship sources of energy.**  (a) There must be available at all times, while the ship is at sea, a supply of electrical energy sufficient to operate the radio installations and to charge any batteries used as part of a reserve source of energy for the radio installations.  (b) A reserve source of energy to supply radio installations must be provided on every ship for the purpose of conducting distress and safety radiocommunications, in the event of failure of the ship's main and emergency sources of electrical power. The reserve sources of energy must be capable of simultaneously operating the VHF radio installation required by §80.1085(a)(1) and, as appropriate for the sea area or sea areas for which the ship is equipped, either the MF radio installation required by §80.1089(a)(1), the MF/HF radio installation required by §80.1091(a)(2)(i) or §80.1093(a), or the GMDSS-recognized mobile satellite service ship earth station required by §80.1091(a)(1) and any of the additional loads mentioned in paragraphs (d), (e) and (h) of this section for a period of at least:  (1) One hour, on ships constructed on or after February 1, 1995;  (2) One hour, on ships constructed before February 1, 1995, if the emergency source of electrical power complies fully with all relevant requirements of SOLAS, Chapter II–1, Regulation 42 or 43 (as amended); or  (3) Six hours, on ships constructed before February 1, 1995, and on cargo ships of less than 500 tons gross tonnage, if the emergency source of electrical power is not provided or does not comply fully with all relevant requirements of SOLAS, Chapter II–1, Regulation 42 or 43 (as amended).  (c) The reserve sources of energy need not supply independent HF and MF radio installations at the same time. The reserve sources of energy must be independent of the propelling power of the ship and the ship's electrical system.  (d) Where, in addition to the VHF radio installation, two or more of the other radio installations, referred to in paragraph (b) of this section, can be connected to the reserve sources of energy, they must be capable of simultaneously supplying, for one hour, as specified in paragraph (b) of this section, the VHF radio installation and;  (1) All other radio installations which can be connected to the reserve sources of energy at the same time; or  (2) Whichever of the other radio installations will consume the most power, if only one of the other radio installations can be connected to the reserve sources of energy at the same time as the VHF radio installation.  (e) The reserve sources of energy may be used to supply the electrical lighting required by §80.1083(b)(4).  (f) Where a reserve source of energy consists of a rechargeable accumulator battery or batteries:  (1) A means of automatically charging such batteries must be provided which must be capable of recharging them to minimum capacity requirements within 10 hours; and  (2) Battery charge levels should be checked at intervals of 30 days or less with equipment turned ON and the battery charger turned OFF. Portable equipment with primary batteries such as EPIRBs and SARTs should be checked at the same intervals using methods recommended by the manufacturer. The results of battery checks should be recorded in the radio log.  (3) The capacity of the radio batteries should be checked at intervals not exceeding 12 months when the ship is not at sea. One method of checking the capacity is to fully discharge and recharge the batteries using normal operation current over a period of 10 hours. Assessment of the charge condition can be made at any time, but it should be done without significant discharge of the battery when the ship is at sea. Another method could be to check the capacity by means of a battery tester, e.g. in connection with a radio survey.  *REASON: A capacity test is an essential part of a rechargeable accumulator battery test. The added text is quoted from IMO COMSAR Circ. 32 §7.4.6.*  (g) The accumulator batteries which provide a reserve source of energy must be installed to ensure: The highest degree of service, a reasonable lifetime, reasonable safety; that the battery temperatures remain within the manufacturer's specifications whether under charge or idle; and that when fully charged, the batteries will provide at least the minimum required hours of operation under all weather conditions.  (h) If an uninterrupted input of information from the ship's navigational or other equipment to a radio installation required by this subpart (including the navigational receiver referred to in SOLAS Chapter IV, Regulation 18) is needed to ensure its proper performance, means must be provided to ensure the continuous supply of such information in the event of failure of the ship's main or emergency source of electrical power.  (i) An uninterruptible power supply or other means of ensuring a continuous supply of electrical power, within equipment tolerances, shall be provided to all GMDSS equipment that could be affected by normal variations and interruptions of ship's power.  **§ 80.1101   Performance standards.**  (a) The abbreviations used in this section are as follows:  (1) International Maritime Organization (IMO).  (2) International Telecommunication Union—Telecommunication Standardization Bureau (ITU-T) (Standards formerly designated as CCITT are now designated as ITU-T.)  (3) International Electrotechnical Commission (IEC).  (4) International Organization for Standardization (ISO).  (5) International Telecommunication Union—Radiocommunication Bureau (ITU-R) (Standards formerly designated as CCIR are now designated as ITU-R.)  (a) All equipment specified in this subpart must meet the general requirements for shipboard equipment in conformity with applicable performance specifications which are incorporated by reference at §80.7(d)(1), (d)(2), (d)(3). Additionally, data interconnection to and from the equipment must be in accordance with one of the applicable standards set forth at §80.7(h)(1),or 80.7(d)(15), or 80.7(d)(17) or 80.7(d)(18).  (b) The equipment specified in this subpart must be tested to and must also conform to the appropriate standards listed in paragraphs (b)(1) through (10) of this section, which are incorporated by reference (*See* §80.7).  (1) NAVTEX receivers:  iIEC 61097-6, incorporated by reference in §80.7(d)(7).  (2) Shipboard VHF radio equipment:  iITU–R M.493 (series) incorporated by reference in §80.7(c)(3).  (ii) IEC 61097-7 incorporated by reference in §80.7(d)(8).  (iii) IEC 61097-8 incorporated by reference in §80.7(d)(9).  (iv) IEC 61097-3 incorporated by reference in §80.7(d)(5).  3MF/HF radio equipment:  iITU–R M.493– (series) incorporated by reference in §80.7(c)(3).  (ii) IEC 61097-8 incorporated by reference in §80.7(d)(9).  (iii) IEC 61097-3 incorporated by reference in §80.7(d)(5).  (iv) IEC 61097-9 incorporated by reference in §80.7(d)(10), required only for equipment used for meeting the requirements for GMDSS Sea Area A3 or A4.  (5) 406.0–406.1 MHz EPIRBs:  The 406.0–406.1 MHz EPIRBs must comply with §80.1061 and §80.1062.  (6) Search and rescue locating devices, either:  (i) 9 GHz radar transponders  (a) IEC 61097-1, incorporated by reference in §80.7(d)(4); or  (ii) AIS search and rescue transmitter (SART)  (a) IEC 61097-14, incorporated by reference in §80.7(d)(13).  (7) Two-Way VHF radiotelephone:  iIEC 61097-12, incorporated by reference in §80.7(d)(11).  (8) GMDSS-recognized Ship Earth Station Capable of Two-Way Communications:  (9) Inmarsat–C Ship Earth Station Capable of Enhanced Group Calling  IEC 61097-4, incorporated by reference in §80.7(d)(6)      *REASON: Since radars are not part of the GMDSS they don’t belong in this Subpart or in this section. They were probably put here since these radars are for compulsory ships, primarily SOLAS, as is GMDSS. The radar standards appear at 80.273* (c) Means shall exist to update the operational software of all equipment certified [after the date this Order comes into effect] and all equipment imported, sold or installed [three years after the date this Order comes into effect] at the location where the device is installed in accordance with IMO MSC Circular incorporated by reference in §80.7(b)(29).  *REASON: Equipment complexity and its affect upon safety require that means readily exist to update equipment software. This MSC Circular has been incorporated by footnote in SOLAS Chapters IV and V.*  *REASON: Changes to this section are consequential to the move of all standards incorporated by reference to §80.7.*  **§ 80.1103   Equipment authorization.**  (a) All equipment specified in §80.1101 must be certificated in accordance with 47 CFR part 2 specifically for GMDSS use, except for equipment used in the GMDSS-recognized mobile satellite service space segment which must be type-approved by that GMDSS-recognized mobile satellite service provider and verified in accordance with 47 CFR part 2 specifically for GMDSS use. The technical parameters of the equipment must conform to the performance standards as specified in §80.1101. For emergency position-indicating radiobeacons operating on 406.0–406.1 MHz (406.0–406.1 MHz EPIRBs) that were authorized prior to April 15, 1992, and meet the requirements of §80.1101, the manufacturer may attest by letter that the equipment (indicate FCC ID#) meets the requirements of §80.1101 and request that it be denoted as approved for GMDSS use.  (b) Applicants for certification must submit with their applications measurement data sufficiently complete to ensure compliance with the technical parameters. The application must include the items listed in 47 CFR 2.1033. Additional measurement data or information may be requested depending upon the equipment. For items not listed in §2.1033 of this chapter, the applicant must attest that the equipment complies with performance standards as specified in §80.1101 and, where applicable, that measurements have been made that demonstrate the necessary compliance. Submission of representative data demonstrating compliance is not required unless requested by the Commission.  (c) Applicants for verification must attest that the equipment complies with performance standards as specified in §80.1101 and, where applicable, that measurements have been made that demonstrate the necessary compliance. Submission of representative data demonstrating compliance is not required unless requested by the Commission. An application must include the items listed in §§2.953 and 2.955 of this chapter and a copy of the type-approval certification indicating that equipment meets GMDSS standards and includes all peripheral equipment associated with the specific unit under review.  (d) Submission of a sample unit is not required unless specifically requested by the Commission.  (e) In addition to the requirements in part 2 of this chapter, equipment specified in §80.1101 shall be labeled as follows: “This device complies with the GMDSS provisions of part 80 of the FCC rules.” Such a label is not required for emergency position-indicating radiobeacons operating on 406.0–406.1 MHz (406.0–406.1 MHz EPIRBs) that were authorized prior to April 15, 1992.  **§ 80.1105   Maintenance requirements.**  (a) Equipment must be so designed that the main units can be replaced readily, without elaborate recalibration or readjustment. Where applicable, equipment must be constructed and installed so that it is readily accessible for inspection and on-board maintenance purposes. Adequate information must be provided to enable the equipment to be properly operated and maintained (see IMO Resolution A.569(14)).  (b) Radio equipment required by this subpart must be maintained to provide the availability of the functional requirements specified in §80.1081 and to meet the performance standards specified in §80.1101.  (c) On ships engaged on voyages in sea areas A1 and A2, the availability must be ensured by duplication of equipment, shore-based maintenance, or at-sea electronic maintenance capability, or a combination of these.  (d) On ships engaged on voyages in sea areas A3 and A4, the availability must be ensured by using a combination of at least two of the following methods: duplication of equipment, shore-based maintenance, or at-sea electronic maintenance capability.  (e) Irrespective of the maintenance methods used, a ship must not depart from any port unless and until the ship is capable of performing all distress and safety functions as specified in §80.1081.  (f) Irrespective of the maintenance methods used, all manufacturers' instruction manuals and maintenance manuals for each piece of equipment required and installed must be available on-board ship. Adequate tools, spare parts, and test equipment appropriate to the methods used by the ship as recommended by the manufacturer should be provided. The manuals, tools, spare parts, and test equipment, as applicable, should be readily accessible.  (g) If the duplication of equipment maintenance method is used, the following radio installations, in addition to other equipment requirements specified in this subpart, must be available on-board ships for their sea areas as applicable. Equipment carried in accordance with this paragraph must comply with §§80.1101 and 80.1103. Additionally, each radio installation must be connected to a separate antenna and be installed and be ready for immediate operation.  (1) Ships, equipped in accordance with §80.1087 for sea area A1, must carry a VHF radio installation complying with the requirements of §80.1085(a)(1).  (2) Ships, equipped in accordance with §80.1089 for sea areas A1 and A2, must carry a VHF radio installation complying with the requirements of §80.1085(a)(1) and an MF radio installation complying with the requirements of §80.1089(a)(1) and being able to fully comply with watch requirements as specified in §80.1123(a)(2). The MF radio installation installed for duplication must also comply with the requirements §80.1089(c).  (3) Ships, equipped in accordance with §80.1091 for sea areas A1, A2, and A3, must carry a VHF radio installation complying with the requirements of §80.1085(a)(1) and either an MF/HF radio installation complying with the requirements of §80.1091(b)(1) and being able to fully comply with watch requirements as specified in §80.1123(a)(2) or a GMDSS-recognized mobile satellite service ship earth station complying with the requirements of §80.1091(a)(1). The MF/HF radio installation or the GMDSS-recognized mobile satellite service ship earth station installed for duplication must also comply with the requirements §80.1091(c).  (4) Ships, equipped in accordance with §80.1093 for sea areas A1, A2, A3, and A4, must carry a VHF radio installation complying with the requirement of §80.1085(a)(1) and an MF/HF radio installation complying with the requirements of §80.1091(b)(1) and being able to fully comply with watch requirements as specified in §80.1123(a)(2). The MF/HF radio installation installed for duplication must also comply with the requirements §80.1091(c).  (h) The radio installations specified in paragraph (g) of this section (referred as “duplicated equipment”), in addition to the appropriate radio equipment specified in §80.1099 (referred as “basic equipment”), must be connected to the reserve sources of energy required by §80.1099. The capacity of the reserve sources of energy should be sufficient to operate the particular installation (*i.e.,* the basic equipment or the duplicated equipment) with the highest power consumption, for the appropriate period specified in §80.1099. However, the arrangement for the reserve sources of energy must be such that a single fault in this arrangement cannot affect both the basic and the duplicated equipment.  (i) If the shore-based maintenance method is used, the following requirements apply.  (1) Maintenance services must be completed and performance verified and noted in the ship's record before departure from the first port of call entered after any failure occurs.  (2) Except for survival craft equipment described in 80.409, each GMDSS equipment must be tested and performance verified and the results noted in the ship's record before departure from every port. To accomplish this, each ship shall carry a performance checkoff sheet listing each GMDSS equipment carried on a mandatory basis.  *REASON: Survival craft equipment proposed to be tested monthly*  (j) If the at-sea maintenance method is used, the following requirements apply.  (1) Adequate additional technical documentation, tools, test equipment, and spare parts must be carried on-board ship to enable a qualified maintainer as specified in §80.1074 to perform tests and localize and repair faults in the radio equipment.  (2) Only persons that comply with the requirements of §80.1074 may perform at-sea maintenance on radio installations required by this subpart.  (k) Satellite EPIRBs shall be maintained and tested in accordance with §80.1062  **§ 80.1107   Test of radiotelephone station and non-radiotelephone station equipment.**  (a) Unless the normal use of the required radiotelephone station, including the DSC capabilities, demonstrates that the equipment is operating, a test communication on a required or working frequency must be made each day the ship is navigated;  (b) Non-radiotelephone station equipment including, but not limited to, devices such as handheld sealed lifeboat radios, EPIRBs, AIS SARTs, and radar SARTs, must be tested monthly to assure proper operation. *REASON: We are proposing monthly testing as opposed to weekly testing as was provided at the “logs” requirement at 80.409(e)(5)(ii).*  (c) When tests are performed by a person other than the master and the equipment is found to be defective, the master must be promptly notified.  Operating Procedures for Distress and Safety Communications  **§ 80.1109    Operational procedures for distress communications in the global maritime distress and safety system (GMDSS)**  Operational procedures for distress communications shall conform to Article 32 of the ITU Radio Regulations, incorporated by reference in §80.7 (c)(16).  *REASON: to ensure international consistency in the transmission of and response to distress alerts and distress communications.*    **§ 80.1111    [Reserved]***.*  **§ 80.1113    [Reserved] .**  **§ 80.1114   False distress alerts.**  The provisions of §§80.334 and 80.335 apply to false distress alerts.  **§ 80.1115    [Reserved] .**    **§ 80.1117    [Reserved] .**  (  **§ 80.1119    [Reserved] .**  (  **§ 80.1121    [Reserved] .**  (  **§ 80.1123   Watch requirements for ship stations.**  (a) While at sea, all ships must maintain a continuous watch:  (1) On VHF DSC channel 70, if the ship is fitted with a VHF radio installation in accordance with §80.1085(a)(2);  (2) On the distress and safety DSC frequency 2187.5 kHz, if the ship is fitted with an MF radio installation in accordance with §80.1089(a)(2) or §80.1091(a)(3);  (3) On the distress and safety DSC frequencies 2187.5 kHz and 8414.5 kHz also on at least one of the distress and safety DSC frequencies 4207.5 kHz, 6312 kHz, 12577 kHz, or 16804.5 kHz appropriate to the time of day and the geographical position of the ship, if the ship is fitted with an MF/HF radio installation in accordance with §80.1091(a)(2)(ii) or §80.1093(a) of this part (this watch may be kept by means of a scanning receiver limited to six distress and safety DSC frequencies); and  (4) For satellite shore-to-ship distress alert, if the ship is fitted with a GMDSS-recognized mobile satellite service ship earth station in accordance with §80.1091(a)(1).  (b) While at sea, all ships must maintain radio watches for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the ship is navigating.  (c) Every ship while at sea must maintain, when practicable, a continuous listening watch on VHF Channel 16. This watch must be kept at the position from which the ship is normally navigated or at a position which is continuously manned.  (d) On receipt of a distress alert transmitted by use of digital selective calling techniques, ship stations must set watch on the radiotelephone distress and safety traffic frequency associated with the distress and safety calling frequency on which the distress alert was received.  (e) Ship stations with narrow-band direct printing equipment must set watch on the narrow-band direct-printing frequency associated with the distress alert signal if it indicates that narrow-band direct-printing is to be used for subsequent distress communications. If practicable, they should additionally set watch on the radiotelephone frequency associated with the distress alert frequency.  **§ 80.1125   [Reserved].**  *.*  **§ 80.1127   [Reserved].**  **§ 80.1129    [Reserved] .**  **§ 80.1131   Transmissions of urgency communications.**  The transmission of and response to urgency communications shall be performed in accordance with Article 33 Section II – Urgency communications of the ITU Radio Regulations, incorporated by reference in §80.7 (c)(16).    *REASON: To conform to already existing internationally recognized procedures in ITU Radio Regulations Article 33 Section II.*  **§ 80.1133   Transmission of safety communications.**  The transmission of and response to safety communications shall be performed in accordance with the ITU Radio Regulations Article 33, Section I – General and Section IV – Safety communication, incorporated by reference in accordance with §80.7 (c)(16).    *REASON: To conform to already existing internationally recognized procedures in ITU Radio Regulations Article 33 Section II.*  **§ 80.1135   Transmission of maritime safety information.**  (a) The operational details of the stations transmitting maritime safety information in accordance with this section are indicated in the ITU List of Coast Stations and Special Service Stations, the Admiralty List of Radio Signals, Volume 5—Global Maritime Distress and Safety System and IMO Master Plan of Shore-based Facilities for the GMDSS (IMO GMDSS.1/Circ. series).  *REASON: Reflect ITU and IMO publication changes.*  (b) Maritime Safety Information is transmitted in accordance with ITU Radio Regulation Article 33 Section V - Transmission of maritime safety information, incorporated by reference in accordance with §80.7 (c)(16). (c) Maritime safety information is transmitted via satellite in the maritime mobile-satellite service using the band 1530–1545 MHz (see §80.1077).  .  Subpart X—Voluntary Radio Installations  General  **§ 80.1151   Voluntary radio operations.**  Voluntary ships must meet the rules applicable to the particular mode of operation as contained in the following subparts of this part and as modified by §80.1153:  Operating Requirements and Procedures—Subpart C  Equipment Technical Requirements—Subpart E  Frequencies—Subpart H  **§ 80.1153   Station log and radio watches.**  (a) Licensees of voluntary ships are not required to maintain radio station logs.  (b) When a ship radio station of a voluntary ship is being operated, the appropriate general purpose watches must be maintained in accordance with §§80.147 and 80.310.  Voluntary Telegraphy  *REASON: Radioprinter and radiofacsimile transmissions from ships are no longer used.*  **§ 80.1159   Narrow-band direct-printing (NBDP).**  NBDP is a form of telegraphy for the transmission and receipt of direct printing public correspondence. *REASON: NBDP public coast station restriction is no longer necessary. For example, ship-to-ship NBDP is authorized in the GMDSS.*  **§ 80.1161   Emergency position indicating radiobeacon (EPIRB).**  EPIRB transmissions must be used only under emergency conditions. The various classes of EPIRB's are described in subpart V of this part.  Voluntary Telephony  **§ 80.1165   Assignment and use of frequencies.**  Frequencies for general radiotelephone purposes are available to ships in three radio frequency bands. Use of specific frequencies must meet the Commission's rules concerning the scope of service and the class of station with which communications are intended. The three frequency bands are:  (a) *156–158 MHz (VHF/FM Radiotelephone).* Certain frequencies within this band are public correspondence frequencies and they must be used as working channels when communicating with public coast stations. Other working frequencies within the band are categorized by type of communications for which use is authorized when communicating with a private coast station or between ships. Subpart H of this part lists the frequencies and types of communications for which they are available.  (b) *1600–4000 kHz (SSB Radiotelephone).* Specific frequencies within this band are authorized for single sideband (SSB) communications with public and private coast stations or between ships. The specific frequencies are listed in subpart H of this part.  (c) *4 – 26 MHz (SSB Radiotelephone).* Specific frequencies within this band are authorized for SSB communications with public and private coast stations. The specific frequencies are listed in subpart H of this part.  REASON: HF Maritime radiotelephones now authorized to operate up to 26 MHz.  **§ 80.1169   [Reserved]**  **§ 80.1171   Assignment and use of frequencies.**  (a) The frequencies assignable to AMTS stations are listed in §80.385(a). These frequencies are assignable to ship and coast stations for voice, facsimile and radioteletypewriter communications.  (b) [Reserved]  On-Board Communications  **§ 80.1175**   **Scope of communications of on-board stations.**  (a) On-board stations communicate:  (1) With other units of the same station for operational communications on the ship.  (2) With on-board stations of another ship or shore facility to aid in oil pollution prevention during the transfer of 250 or more barrels of oil.  (3) With other units of the same station in the immediate vicinity of the ship for operational communications related to docking, life boat and emergency drills or in the maneuvering of cargo barges and lighters.  (b) An on-board station may communicate with a station in the Business Radio Service operating on the same frequency when the vessel on which the on-board station is installed is alongside the dock or cargo handling facility.  **§ 80.1177   Assignment and use of frequencies.**  On-board frequencies are assignable only to ship stations. When an on-board repeater is used, paired frequencies must be used. On-board repeater frequencies must be used for single frequency simplex operations. On-board frequencies are listed in subpart H.  **§ 80.1179   On-board repeater limitations.**  When an on-board repeater is used, the following limitations must be met:  (a) The on-board repeater antenna must be located no higher than 3 meters (10 feet) above the vessel's highest working deck.  (b) Each on-board repeater must have a timer that deactivates the transmitter if the carrier remains on for more than 3 minutes.  **§ 80.1181   Station identification.**  (a) On-board stations must identify when:  (1) The vessel is within 32 km (20 miles) of any coastline; or  (2) The communications are likely to be received aboard another vessel.  (b) Identification, when required, must be:  (1) Transmitted at the beginning and the end of a series of communications. Whenever communications are sustained for a period exceeding 15 minutes, station identification must be transmitted at intervals not exceeding 15 minutes.  (2) In English and must include the name of the vessel, followed by a number or name designating the respective mobile unit, for example: “S.S. United States Mobile One, this is Mobile Two.”  **§ 80.1183   Remote control for maneuvering or navigation.**  (a) An on-board station may be used for remote control of maneuvering or navigation control systems aboard the same ship or, where that ship is towing a second ship, aboard the towed ship.  (b) The remote control system transmissions must contain a synchronization signal and a message signal composed of a documentation number group, a company control group, an actuation instruction group, and a termination of transmission group.  (1) The synchronization signal must be the control character “SYN”, transmitted twice.  (2) The message signal is composed of the following groups:  (i) The documentation number group must be transmitted once and be the ship's U.S. Coast Guard documentation number or, if the ship is not documented, the call sign of the on-board station.  (ii) The company control group, composed of three letters taken from AAA through ZZZ, which must be transmitted one time.  (iiii) The actuation instruction group, composed of two letters taken from AA through ZZ, which must be transmitted one time.  (iv) The termination of transmission group, composed of the control character “EM”, which must be transmitted twice.  (c) The receiving system must:  (1) Reject any actuation instruction until it recognizes and accepts the company control group.  (2) Reject any company control group until it recognizes and accepts the documentation number group.  (d) The emission employed must be G2D. The provisions applicable to G3E emission are also applicable to G2D emission.  (e) The binary information must be applied to the carrier as frequency-shift keying (FSK) of the standard tones 1070 and 1270 Hz. “0” (low) must correspond to 1070 Hz and “1” (high) must correspond to 1270 Hz. The signalling rate must be 300 bits per second.  (f) The alphabet employed must be the United States of America Standard Code for Information Interchange (USASCII), contained in the United States of America Standards Institute publication USAS X3.4–1968.  (1) The bit sequence must be least significant bit first to most significant bit (bit 1 through 7), consecutively.  (2) The character structure must consist of 8 bits (seven bits plus one character parity bit) having equal time intervals.  (3) “Odd” parity is required.  Mobile-Satellite Stations  **§ 80.1185   Supplemental eligibility for mobile-satellite stations.**  Stations in the maritime mobile-satellite service must meet the eligibility requirements contained in this section.  (a) A station license for a ship earth station may be issued to:  (1) The owner or operator of a ship.  (2) A corporation proposing to furnish a nonprofit radio communication service to its parent corporation, to another subsidiary of the same parent, or to its own subsidiary, where the party to be served is the owner or operator of the ship aboard which the ship earth station is to be installed and operated.  (b) A station license for a portable ship earth station may be issued to the owner or operator of portable earth station equipment proposing to furnish satellite communication services on board more than one ship or fixed offshore platform located in the marine environment.  **§ 80.1187   Scope of communication.**  Ship earth stations must be used for telecommunications related to the business or operation of ships and for public correspondence of persons on board. Portable ship earth stations are authorized to meet the business, operational and public correspondence telecommunication needs of fixed offshore platforms located in the marine environment as well as ships. The types of emission are determined by the GMDSS-recognized mobile satellite service provider.  **§ 80.1189   Portable ship earth stations.**  (a) Portable ship earth stations are authorized to operate on board more than one ship. Portable ship earth stations are also authorized to be operated on board fixed offshore platforms located in international or United States domestic waters.  (b) Portable ship earth stations must meet the rule requirements of ship earth stations with the exeception of eligibility.  (c) Where the license of the portable ship earth station is not the owner of the ship or fixed platform on which the station is located, the station must be operated with the permission of the owner or operator of the ship or fixed platform.  **Radiodetermination**  **§ 80.1201   Special provisions for cable-repair ship stations.**  (a) A ship station may be authorized to use radio channels in the 285–315 kHz band in Region 1 and 285–325 kHz in any other region for cable repair radiodetermination purposes under the following conditions:  (1) The radio transmitting equipment attached to the cable-marker buoy associated with the ship station must be described in the station application;  (2) The call sign used for the transmitter operating under the provisions of this section is the call sign of the ship station followed by the letters “BT” and the identifying number of the buoy.  (3) The buoy transmitter must be continuously monitored by a licensed radiotelegraph operator on board the cable repair ship station; and  (4) The transmitter must operate under the provisions in §80.375(b).  Subpart Y— **High Speed Craft Radio Installations**  **§80.1225 Applicability**  This Subpart is applicable to vessels that are subject to the “International Code of Safety For High Speed Craft, 2000” (the “2000 HSC Code”), as adopted by the IMO MSC, and incorporated as Chapter X of the International Convention for the Safety of Life at Sea (“SOLAS”), incorporated herein by reference, see § 80.7(b)(30).  **§80.1226 High Speed Craft Radio Operations**  (a) Vessels subject to the 2000 HSC Code must comply with all requirements specified at Chapter 14, Radio Communications, of the HSC Code, incorporated herein by reference, see §80.7(b)(30).  (b) In addition to the requirement in (a) above, High Speed Craft must meet the rules applicable to the maritime services contained in this part. In the event that there is any conflict between the provisions of the 2000 HSC Code and the rule provisions in this part, the provisions of the 2000 HSC Code shall govern.  *REASON: Provisions for High Speed Craft in accordance with changes to the SOLAS Convention are proposed. Competitive bidding proposed to be moved to a new Subpart Z at the end of Part 80. If reasons exist for keeping Competitive Bidding in Subpart Y, then propose High Speed Craft be included in a new Subpart e.g. Subpart XA).*  **Subpart Z Competitive Bidding**  **Source:** 63 FR 40065, July 27, 1998, unless otherwise noted.  **§ 80.1251   Maritime communications subject to competitive bidding.**  Mutually exclusive initial applications for VPCSA licenses and AMTS coast station licenses are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this part.  **§ 80.1252   Designated entities.**  (a) This section addresses certain issues concerning designated entities in maritime communications services subject to competitive bidding.  (b) *Eligibility for small business provisions.* (1) A small business is an entity that, together with its affiliates and controlling interests, has average gross revenues not to exceed $15 million for the preceding three years.  (2) A very small business is an entity that, together with its affiliates and controlling interests, has average gross revenues not to exceed $3 million for the preceding three years.  (3) [Reserved]  (4) A consortium of small businesses (or a consortium of very small businesses) is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (b)(1) of this section (or each of which individually satisfies the definition in paragraph (b)(2) of this section). Where an applicant or licensee is a consortium of small businesses (or very small businesses), the gross revenues of each small business (or very small business) shall not be aggregated.  (c) A winning bidder that qualifies as a small business, as defined in §80.1252(b)(1), or consortium of small businesses may use the bidding credit specified in §1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as a very small business, as defined in §80.1252(b(2), or consortium of very small businesses may use the bidding credit specified in §1.2110(f)(2)(i) of this chapter.  (d) A winning bidder that qualifies as a small business or a consortium of small businesses as defined in §80.1252(b)(1) or §80.1252(b)(5) of this subpart may use the bidding credit specified in §1.2110(e)(2)(ii) of this chapter. A winning bidder that qualifies as a very small business or a consortium of very small businesses as defined in §80.1252(b)(2) or §80.1252(b)(5) of this subpart may use the bidding credit specified in §1.2110(e)(2)(i) of this chapter. |  |

ANNEX 2

PART 2—FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS [47CFR 2]

**§ 2.303   Other forms of identification of stations.**

(a) The following table indicates forms of identification which may be used in lieu of call signs by the specified classes of stations. Such recognized means of identification may be one or more of the following: name of station, location of station, operating agency, official registration mark, flight identification number, maritime mobile service numeric identities and maritime mobile service identities (MMSIs), , characteristic signal, characteristic of emission or other clearly distinguishing form of identification readily recognized internationally. Reference should be made to the appropriate part of the rules for complete information on identification procedures for each service.

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| ***Class of station*** | ***Identification, other than assigned call sign*** |
| Aircraft (U.S. registry) telephone | Registration number preceded by the type of the aircraft, or the radiotelephony designator of the aircraft operating agency followed by the flight identification number. |
| Aircraft (foreign registry) telephone | Foreign registry identification consisting of five characters. This may be preceded by the radiotelephony designator of the aircraft operating agency or it may be preceded by the type of the aircraft. |
| Aeronautical | Name of the city, area, or airdrome served together with such additional identification as may be required. |
| Aircraft survival craft | Appropriate reference to parent aircraft, e.g., the air carrier parent aircraft flight number or identification, the aircraft registration number, the name of the aircraft manufacturer, the name of the aircraft owner, or any other pertinent information. |
| Ship | Maritime mobile service identity (MMSI). When an official call sign or MMSI is not yet assigned: Complete name of the ship and name of licensee. On 156.65 MHz: Name of ship. |
| Ship survival craft | MMSI |
| Public coast and Limited Coast | The approximate geographic location in a format approved by the Commission. |
|  | Coast station MMSI |
| Maritime mobile: other maritime stations such as handheld VHF radios with integral DSC and GNSS, AIS search and rescue transmitters (AIS-SART), man overboard (MOB) device, EPIRB-AIS, and radio used by a diver | Maritime Mobile Service Numeric Identifier (similar to MMSI; MMSIs may be used only to identify a ship station) |
| Fixed | Geographic location. When an approved method of superimposed identification is used, QTT DE (abbreviated name of company or station). |
| Fixed: Rural subscriber service | Assigned telephone number. |
| Land mobile: Public safety, forestry conservation, highway maintenance, local government, shipyard, land transportation, and aviation services | Name of station licensee (in abbreviated form if practicable), or location of station, or name of city, area, or facility served. Individual stations may be identified by additional digits following the more general identification. |
| Land mobile: Industrial service | Mobile unit cochannel with its base station: Unit identifier on file in the base station records. Mobile unit not cochannel with its base station: Unit identifier on file in the base station records and the assigned call sign of either the mobile or base station. Temporary base station: Unit designator in addition to base station identification. |
| Land mobile: Domestic public and rural radio | Special mobile unit designation assigned by licensee or by assigned telephone number. |
| Land mobile: Railroad radio service | Name of railroad, train number, caboose number, engine number, or name of fixed wayside station or such other number or name as may be specified for use of railroad employees to identify a specific fixed point or mobile unit. A railroad's abbreviated name or initial letters may be used where such are in general usage. Unit designators may be used in addition to the station identification to identify an individual unit or transmitter of a base station. |
| Land mobile: Broadcasting (remote pickup) | Identification of associated broadcasting station. |
| Broadcasting (Emergency Broadcast System) | State and operational area identification. |
| Broadcasting (aural STL and intercity relay) | Call sign of the broadcasting station with which it is associated. |
| Broadcasting (television auxiliary) | Call sign of the TV broadcasting station with which it is licensed as an auxiliary, or call sign of the TV broadcasting station whose signals are being relayed, or by network identification. |
| Broadcasting (television booster). | Retransmission of the call sign of the primary station. |
| Disaster station | By radiotelephony: Name, location, or other designation of station when same as that of an associated station in some other service. Two or more separate units of a station operated at different locations are separately identified by the addition of a unit name, number, or other designation at the end of its authorized means of identification. |

(b) Maritime mobile service identities (MMSIs) will be authorized by the Commission under the provisions of §2.303(a) and as specified in § 80.16.

*REASON: These changes to Part 2 are proposed to remove outdated identities no longer used and to include maritime mobile service identities (MMSIs). MMSIs are critical to and used extensively by the maritime mobile service*.

1. [↑](#footnote-ref-1)