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(d) Any device used by a station to automatically generate the radio-telephone alarm signal must be certified by the Commission.

[51 FR 31213, Sept. 2, 1986, as amended at 54 FR 40059, Sept. 29, 1989; 63 FR 36606, July 7, 1998]

§ 80.223 Special requirements for survival craft stations.

(a) Survival craft stations capable of transmitting on:

(1) 2182 kHz must be able to operate with A3E or H3E and J2B and J3E emissions;

(2) 121.500 MHz must be able to operate with A3E or A3N emission.

(b) Survival craft stations must be able to receive the frequency and types of emission which the transmitter is capable of using.

(c) Any EPIRB carried as part of a survival craft must comply with the specific technical and performance requirements for its class contained in subpart V of this chapter.

[68 FR 46966, Aug. 7, 2003, as amended at 73 FR 4482, Jan. 25, 2008]

§ 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 Recommendation M.476-5, "Direct-Printing Telegraph Equipment in the Maritime Mobile Service," with Annex, 1995; ITU-R Recommendation M.493-11, "Digital Selective-calling System for Use in the Maritime Mobile Service," with Annexes 1 and 2, 2004; ITU-R Recommendation M.541-9, "Operational Procedures for the Use of Digital Selective-Calling Equipment in the Maritime Mobile Service," with Annexes 1 through 5, 2004; ITU-R Recommendation M.625-3, "Direct-Printing Telegraph Equipment Employing Automatic Identification in the Maritime Mobile Service," with Annex, 1995; RTCM Paper 56-95/SC101-STD, "RTCM Recommended Minimum Standards for Digital Selective Calling (DSC) Equipment Providing Minimum Distress and Safety Capability," Version 1.0, August 10, 1995; and IEC 62238, First edition, "Maritime naviga-

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tion and radiocommunication equipment and systems—VHF radio-telephone equipment incorporating Class 'D' Digital Selective Calling (DSC)—Methods of testing and required test results," March 2003. ITU-R Recommendations M.476-5 with Annex, M.493-11 with Annexes 1 and 2, M.541-9 with Annexes 1 through 5, and M.625-3 with Annex, RTCM Paper 56-95/SC101-STD Version 1.0, and IEC 62238, First edition, are incorporated by reference. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of these standards can be inspected at the Federal Communications Commission, 445 12th Street, SW., Washington, DC (Reference Information Center) or 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. The ITU-R Recommendations can be purchased from the International Telecommunication Union (ITU), Place des Nations, CH-1211 Geneva 20, Switzerland. The RTCM standards can be purchased from the Radio Technical Commission for Maritime Services (RTCM), 1800 N. Kent Street, Suite 1060, Arlington, Virginia 22209, <http://www.rtcn.org>, e-mail pubs@rtcn.org.

(a) The requirements for DSC equipment voluntarily installed in coast or ships stations are as follows:

(1) Prior to March 25, 2009, DSC equipment must meet the requirements of the following standards in order to be approved for use:

(i) RTCM Paper 56-95/SC101-STD, RTCM Recommended Minimum Standards for Digital Selective Calling (DSC) Equipment Providing Minimum Distress and Safety Capability," Version 1.0, August 10, 1995, and ITU-R Recommendation M.493-10, "Digital Selective-calling System for Use in the Maritime Mobile Service," with Annexes 1 and 2, 2000 (including only equipment classes A, B, D, and E); or

(ii) ITU-R Recommendation M.493-11, "Digital Selective-calling System for Use in the Maritime Mobile Service," with Annexes 1 and 2, 2004, and, in the

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case of Class D DSC equipment only, IEC 62238, First edition, “Maritime navigation and radiocommunication equipment and systems—VHF radiotelephone equipment incorporating Class ‘D’ Digital Selective Calling (DSC)—Methods of testing and required test results,” March 2003.

(2) Beginning March 25, 2009, 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 Recommendation M.493-11, “Digital Selective-calling System for Use in the Maritime Mobile Service,” with Annexes 1 and 2, 2004, and, in the case of Class D DSC equipment only, IEC 62238, First edition, “Maritime navigation and radiocommunication equipment and systems—VHF radiotelephone equipment incorporating Class ‘D’ Digital Selective Calling (DSC)—Methods of testing and required test results,” March 2003.

(3) Beginning March 25, 2012, the Commission 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 ITU-R Recommendation M.493-11, “Digital Selective-calling System for Use in the Maritime Mobile Service,” with Annexes 1 and 2, 2004, and, in the case of Class D DSC equipment only, IEC 62238, First edition, “Maritime navigation and radiocommunication equipment and systems—VHF radiotelephone equipment incorporating Class ‘D’ Digital Selective Calling (DSC)—Methods of testing and required test results,” March 2003.

(4) The manufacture, importation, sale or installation of non-portable DSC equipment that does not comply with either of the standards referenced in paragraph (a)(2) of this section is prohibited beginning March 25, 2011.

(5) The manufacture, importation, or sale of handheld, portable DSC equipment that does not comply with either of the standards referenced in paragraph (a)(3) of this section is prohibited beginning March 25, 2015.

(6) Approved DSC equipment that has been manufactured, sold, and installed

in conformity with the requirements of this section may be used indefinitely.

(b) Manufacturers of Class C DSC equipment to be used on United States vessels must affix a clearly discernible permanent plate or label visible from the operating controls containing the following:

WARNING. This equipment is designed to generate a digital maritime distress and safety signal to facilitate search and rescue. To be effective as a safety device, this equipment must be used only within communication range of a shore-based VHF marine channel 70 distress and safety watch system. The range of the signal may vary but under normal conditions should be approximately 20 nautical miles.

(c) 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 Recommendation M.476-5, “Direct-Printing Telegraph Equipment in the Maritime Mobile Service,” with Annex, 1995, or ITU-R Recommendation M.625-3, “Direct-Printing Telegraph Equipment Employing Automatic Identification in the Maritime Mobile Service,” with Annex, 1995, ITU-R Recommendation M.493-11, “Digital Selective-calling System for Use in the Maritime Mobile Service,” with Annexes 1 and 2, 2004, 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 signaling 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,

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(iv) Harmful interference is not caused to stations operating in accordance with the International Radio Regulations.

[54 FR 10009, Mar. 9, 1989, as amended at 62 FR 40306, July 28, 1997; 68 FR 46966, Aug. 7, 2003; 73 FR 4482, Jan. 25, 2008]

§ 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.

[53 FR 28225, July 27, 1988]

§ 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

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(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 $43 + 10\log_{10}$ (peak power in watts) db.

[62 FR 40307, July 28, 1997]

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 automatic-alarm-signal keying devices, survival craft radio equipment, watch receivers, radar equipment and Ship Security Alert System (SSAS) equipment.

(b) The equipment described in this subpart must be certificated.

(c) The term *transmitter* means the transmitter unit and all auxiliary equipment necessary to make this unit operate as a main or emergency transmitter in a ship station at sea. Each separate motor-generator, rectifier, or other unit required to convert the ship primary power to the phase, frequency, or voltage necessary to energize the transmitter unit is considered a component of the transmitter.

(d) *Average ship station antenna* means an actual antenna installed on board ship having a capacitance of 750 picofarads and an effective resistance of 4 ohms at a frequency of 500 kHz, or an artificial antenna having the same electrical characteristics.

[51 FR 31213, Sept. 2, 1986, as amended at 63 FR 36606, July 7, 1998; 68 FR 46966, Aug. 7, 2003; 73 FR 4483, Jan. 25, 2008]