

§ 80.205

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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:

(i) the radiotelephone distress call as described in § 80.315(b) and the ship's position as described in § 80.316(c); or

(ii) the radiotelephone distress message as described in § 80.316(b). If available, the ship's position should be reported as described in § 80.316(c).

(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.

diate use of the transmitter for sending and receiving standard voice communications.

(n) Applications for type acceptance of all marine radio transmitters operating in the 2–27.5 MHz band or the 156–162 MHz band received on or after June 17, 1999, 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.

[51 FR 31213, Sept. 2, 1986, as amended at 53 FR 41434, Oct. 28, 1987; 53 FR 37308, Sept. 26, 1988; 54 FR 31839, Aug. 2, 1989; 56 FR 3787, Jan. 31, 1991; 56 FR 57496, Nov. 12, 1991; 56 FR 57988, Nov. 15, 1991; 57 FR 8727, Mar. 12, 1992; 62 FR 40305, July 28, 1997; 63 FR 36606, July 7, 1998]

§ 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 |
| A1D | 16K0A1D | 20.0 |
| A2A | 2K66A2A | 2.8 |
| A2B | 2K66A2B | 2.8 |
| A2D | 16K0A2D | 20.0 |
| A3E | 6K00A3E | 8.0 |
| A3N | 2K66A3N | 2.8 |
| A3X | 3K20A3X | 25.0 |
| F1B | 280HF1B | 0.3 |
| F1B | 300HF1B | 0.5 |
| F1B | 16K0F1B | 20.0 |
| F1C | 2K80F1C | 3.0 |
| F1D | 16K0F1D | 20.0 |
| F2B | 16K0F2B | 20.0 |
| F2C | 16K0F2C | 20.0 |
| F2D | 16K0F2D | 20.0 |
| F3C | 2K80F3C | 3.0 |
| F3C | 16K0F3C | 20.0 |
| F3E | 16K0F3E | 20.0 |
| F3N | 20M0F3N | 20,000.0 |
| G1D | 16K0G1D | 20.0 |
| G2D | 16K0G2D | 20.0 |
| G3D | 16K0G3D | 20.0 |
| G3E | 16K0G3E | 20.0 |
| G3N | 16K0G3N | 20.0 |
| H2A | 1K40H2A | 2.8 |
| H2B | 1K40H2B | 2.8 |
| H3E | 2K80H3E | 3.0 |
| H3N | 2K66H3N | 2.8 |
| J2A | 160HJ2A | 0.4 |
| J2B | 280HJ2B | 0.3 |
| J2B | 300HJ2B | 0.5 |
| J2B | 2K80J2B | 3.0 |

| Class of emission | Emission designator | Authorized bandwidth (kHz) |
|-------------------------|---------------------|----------------------------|
| J2C | 2K80J2C | 3.0 |
| J3C | 2K80J3C | 3.0 |
| J3E ¹¹ | 2K80J3E | 3.0 |
| J3N | 160HJ3N | 0.4 |
| NON | NON | 0.4 |
| PON | (¹²) | (¹²) |
| R3E ¹¹ | 2K80R3E | 3.0 |

¹ On 500 kHz and 2182 kHz A1B, A2B, H2B and J2B emissions indicate transmission of the auto alarm signals.
² Applicable only to transmissions in the 405–525 kHz band for direction finding.
³ Applicable only to EPIRB's.
⁴ Radioprinter transmissions for communications with private coast stations.
⁵ NB–DP radiotelegraph and data transmissions for communications with public coast stations.
⁶ Applicable only to radioprinter and data in the 156–162 MHz band and radioprinter in the 216–220 MHz band.
⁷ Applicable only to facsimile in the 156–162 MHz and 216–220 MHz bands.
⁸ Applicable only when maximum frequency deviation is 5 kHz. See also paragraph (b) of this section.
⁹ Applicable only to marine hand-held radar.
¹⁰ Applicable only to on-board frequencies for maneuvering or navigation.
¹¹ Transmitters 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.
¹² Applicable 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 Class C EPIRB stations may not be used after February 1, 1999.

(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.

[51 FR 31213, Sept. 2, 1986, as amended at 52 FR 7418, Mar. 11, 1987; 53 FR 37308, Sept. 26, 1988; 56 FR 11516, Mar. 19, 1991; 57 FR 43407, Sept. 21, 1992; 58 FR 33344, June 17, 1993; 59 FR 7714, Feb. 16, 1994; 62 FR 40305, July 28, 1997; 63 FR 36606, July 7, 1998]

§ 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 side-band 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 |
| 1605–27500 kHz: | |
| Manual | A1A, J2A |
| DSC | F1B, J2B |
| NB–DP ¹⁴ | F1B, J2B |
| Facsimile | F1C, F3C, J2C, J3C |
| 156–162 MHz ² | F1B, F2B, F2C, F3C, F1D, F2D |
| DSC | G2B |
| 216–220 MHz ³ | F1B, F2B, F2C, F3C |
| 1626.5–1646.5 MHz ... | (⁴) |
| Radiotelephony: | |
| 1605–27500 kHz ⁵ | H3E, J3E, R3E |
| 27.5–470 MHz ⁶ | G3D, G3E |
| 1626.5–1646.5 MHz ... | (⁴) |
| Radiodetermination: | |
| 285–325 kHz ⁷ | 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 |
| 14.00–14.05 GHz | F3N |
| 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: | |
| Manual | A1A, J2A |
| DSC | F1B, J2B |