

§ 80.207

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Class of emission	Emission designator	Authorized bandwidth (kHz)
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 band; and data transmissions in the 156–162 MHz band.
¹³ Class C EPIRB stations may not be used after February 1, 1999.
¹⁴ The 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:

- 5 kHz in the 72.0–73.0 MHz, 75.4–76.0 MHz and 156–162 MHz bands;
- 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; 68 FR 46962, Aug. 7, 2003]

§ 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 ^{15 16 17}	A1A, J2A, J2B, J2D
DSC ⁶	F1B, J2B
NB-DP ^{14 16}	F1B, J2B, J2D
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 16}	H3E, J2D, J3E, R3E
27.5–470 MHz ⁶	G3D, G3E
162.5–1646.5 MHz	(⁴)

Types of stations	Classes of emission
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 Stations¹	
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 ¹⁶	A1A, J2A, J2B, J2D
DSC ¹⁸	F1B, J2B
NB–DP ^{14 18}	F1B, J2B, J2D
Facsimile	F1C, F3C, J2C, J3C
Alaska—Fixed ^{17 18}	A1A, A2A, F1B, F2B, J2B, J2D
72–76 MHz ^{2 18}	A1A, A2A, F1B, F2B
156–162 MHz ^{2 20}	F1B, F2B, F2C, F3C, F1D, F2D
DSC	G2B
216–220 MHz ³	F1B, F2B, F2C, F3C
Radiotelephony:	
1605–27500 kHz ^{18 19}	H3E, J3E, R3E
72–76 MHz	A3E, F3E, G3E
156–470 MHz	G3E
Radiodetermination:	
2.4–9.6 GHz	PON
Distress, Urgency and Safety^{8 9}	
2182 kHz ^{10 11}	A2B, A3B, H2B, H3E, J2B, J3E
121.500 MHz	A3E, A3X, N0N
123.100 MHz	A3E
156.750 and 156.800 MHz ¹³	G3E, G3N
243.000 MHz	A3E, A3X, N0N
406.025 MHz	G1D

¹ Excludes distress, EPIRBs, survival craft, and automatic link establishment.

² Frequencies 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.

³ Frequencies used in the Automated Maritime Telecommunications System (AMTS). See § 80.385(b).

⁴ Types of emission are determined by the INMARSAT Organization.

⁵ 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.

⁶ G3D emission must be used only by one-board stations for maneuvering or navigation.

⁷ Frequencies used for cable repair operations. See § 80.375(b).

⁸ For direction finding requirements see § 80.375.

⁹ Includes distress emissions used by ship, coast, EPIRBs and survival craft stations.

¹⁰ On 2182 kHz A1B, A2B, H2B and J2B emissions indicate transmission of the auto alarm signals.

¹¹ Ships on domestic voyages must use J3E emission only.

¹² For 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 Class C EPIRB stations may not be used after February 1, 1999.

¹⁴ NB–DP operations which are not in accordance with CCIR Recommendation 625 or 476 are permitted to utilize any modulation, so long as emissions are within the limits set forth in § 80.211(f).

¹⁵ J2B is permitted only on 2000–27500 kHz.

¹⁶ J2D 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.

¹⁷ J2B and J2D are permitted provided they do not cause harmful interference to A1A.

¹⁸ Coast stations employing J2D emissions shall at no time use a peak envelope power in excess of 10 kW per channel.

¹⁹ J2D is permitted only on 2000–27500 kHz.

²⁰ If 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.

[51 FR 31213, Sept. 2, 1986; 51 FR 34984, Oct. 1, 1986; as amended at 52 FR 7418, Mar. 11, 1987; 52 FR 35244, Sept. 18, 1987; 53 FR 8905, Mar. 18, 1988; 53 FR 37308, Sept. 26, 1988; 54 FR 40058, Sept. 29, 1989; 54 FR 49993, Dec. 4, 1989; 56 FR 11516, Mar. 19, 1991; 57 FR 43407, Sept. 21, 1992; 58 FR 33344, June 17, 1993; 62 FR 40305, July 28, 1997; 63 FR 36606, July 7, 1998; 67 FR 48564, July 25, 2002; 68 FR 46963, Aug. 7, 2003; 69 FR 64672, Nov. 8, 2004]