

frequencies. Transmissions shall not exceed an effective radiated power (e.r.p) of 50 W PEP. For the purpose of computing e.r.p. the transmitter PEP will be multiplied with the antenna gain relative to a dipole or the equivalent calculation in decibels. A half wave dipole antenna will be presumed to have a gain of 0 dBd. Licensees using other antennas must maintain in their station records either manufacturer data on the antenna gain or calculations of the antenna gain. No amateur station shall cause harmful interference to stations authorized in the mobile and fixed services; nor is any amateur station protected from interference due to the operation of any such station.

(t)(1) The 7–7.1 MHz segment is allocated to the amateur and amateur-satellite services on a primary and exclusive basis throughout the world, except that the 7–7.05 MHz segment is:

(i) Additionally allocated to the fixed service on a primary basis in the countries listed in 47 CFR 2.106, footnote 5.140; and

(ii) Alternatively allocated to the fixed service on a primary and exclusive basis (*i.e.*, the segment 7–7.05 MHz is not allocated to the amateur service) in the countries listed in 47 CFR 2.106, footnote 5.141.

(2) The 7.1–7.2 MHz segment is allocated to the amateur service on an exclusive basis in Region 2. Until March 29, 2009, the 7.1–7.2 MHz segment is allocated to the amateur and broadcasting services on a co-primary basis in Region 1 and Region 3 and the use of the 7.1–7.2 MHz segment by the amateur service shall not impose constraints on the broadcasting service intended for use within Region 1 and Region 3. After March 29, 2009, the 7.1–7.2 MHz segment is allocated to the amateur service on

a primary and exclusive basis throughout the world, except that the 7.1–7.2 MHz segment is additionally allocated to the fixed and mobile except aeronautical mobile (R) services on a primary basis in the countries listed in 47 CFR 2.106, footnote 5.141B.

(3) The 7.2–7.3 MHz segment is allocated to the amateur service on an exclusive basis in Region 2 and to the broadcasting service on an exclusive basis in Region 1 and Region 3. The use of the 7.2–7.3 MHz segment in Region 2 by the amateur service shall not impose constraints on the broadcasting service intended for use within Region 1 and Region 3.

[54 FR 25857, June 20, 1989; 54 FR 39536, Sept. 27, 1989, as amended at 56 FR 19611, Apr. 29, 1991; 56 FR 23025, May 20, 1991; 56 FR 32518, July 17, 1991; 56 FR 40801, Aug. 16, 1991; 57 FR 40344, Sept. 3, 1992; 60 FR 15687, Mar. 27, 1995; 61 FR 15386, Apr. 8, 1996; 62 FR 9673, Mar. 3, 1997; 63 FR 42280, Aug. 7, 1998; 68 FR 33026, June 3, 2003; 69 FR 3265, Jan. 23, 2004; 69 FR 77950, Dec. 29, 2004; 70 FR 46681, Aug. 10, 2005]

§ 97.305 Authorized emission types.

(a) An amateur station may transmit a CW emission on any frequency authorized to the control operator.

(b) A station may transmit a test emission on any frequency authorized to the control operator for brief periods for experimental purposes, except that no pulse modulation emission may be transmitted on any frequency where pulse is not specifically authorized and no SS modulation emission may be transmitted on any frequency where SS is not specifically authorized.

(c) A station may transmit the following emission types on the frequencies indicated, as authorized to the control operator, subject to the standards specified in § 97.307(f) of this part.

Wavelength band	Frequencies	Emission types authorized	Standards see § 97.307(f), paragraph:
MF:			
160 m	Entire band	RTTY, data	(3).
160 m	Entire band	Phone, image	(1), (2).
HF:			
80 m	Entire band	RTTY, data	(3), (9).
75 m	Entire band	Phone, image	(1), (2).
40 m	7.000–7.100 MHz	RTTY, data	(3), (9).
40 m	7.075–7.100 MHz	Phone, image	(1), (2), (9), (11).
40 m	7.100–7.150 MHz	RTTY, data	(3), (9).
40 m	7.150–7.300 MHz	Phone, image	(1), (2).
30 m	Entire band	RTTY, data	(3).
20 m	14.00–14.15 MHz	RTTY, data	(3).

Wavelength band	Frequencies	Emission types authorized	Standards see § 97.307(f), paragraph:
20 m	14.15–14.35 MHz	Phone, image	(1), (2).
17 m	18.068–18.110 MHz ...	RTTY, data	(3).
17 m	18.110–18.168 MHz ...	Phone, image	(1), (2).
15 m	21.0–21.2 MHz	RTTY, data	(3), (9).
15 m	21.20–21.45 MHz	Phone, image	(1), (2).
12 m	24.89–24.93 MHz	RTTY, data	(3).
12 m	24.93–24.99 MHz	Phone, image	(1), (2).
10 m	28.0–28.3 MHz	RTTY, data	(4).
10 m	28.3–28.5 MHz	Phone, image	(1), (2), (10).
10 m	28.5–29.0 MHz	Phone, image	(1), (2).
10 m	29.0–29.7 MHz	Phone, image	(2).
VHF:			
6 m	50.1–51.0 MHz	MCW, phone, image, RTTY, data	(2), (5).
Do	51.0–54.0 MHz	MCW, phone, image, RTTY, data, test	(2), (5), (8).
2 m	144.1–148.0 MHz	MCW, phone, image, RTTY, data, test	(2), (5), (8).
1.25 m	219–220 MHz	Data	(13).
Do	222–225 MHz	MCW, phone, image, RTTY, data, test	(2), (6), (8).
UHF:			
70 cm	Entire band	MCW, phone, image, RTTY, data, SS, test	(6), (8).
33 cm	Entire band	MCW, phone, image, RTTY, data, SS, test, pulse	(7), (8), and (12).
23 cm	Entire band	MCW, phone, image, RTTY, data, SS, test	(7), (8), and (12).
13 cm	Entire band	MCW, phone, image, RTTY, data, SS, test, pulse	(7), (8), and (12).
SHF:			
9 cm	Entire band	MCW, phone, image, RTTY, data, SS, test, pulse	(7), (8), and (12).
5 cm	Entire band	MCW, phone, image, RTTY, data, SS, test, pulse	(7), (8), and (12).
3 cm	Entire band	MCW, phone, image, RTTY, data, SS, test	(7), (8), and (12).
1.2 cm	Entire band	MCW, phone, image, RTTY, data, SS, test, pulse	(7), (8), and (12).
EHF:			
6 mm	Entire band	MCW, phone, image, RTTY, data, SS, test, pulse	(7), (8), and (12).
4 mm	Entire band	MCW, phone, image, RTTY, data, SS, test, pulse	(7), (8), and (12).
2.5 mm	Entire band	MCW, phone, image, RTTY, data, SS, test, pulse	(7), (8), and (12).
2 mm	Entire band	MCW, phone, image, RTTY, data, SS, test, pulse	(7), (8), and (12).
1 mm	Entire band	MCW, phone, image, RTTY, data, SS, test, pulse	(7), (8), and (12).
—	Above 300 GHz	MCW, phone, image, RTTY, data, SS, test, pulse	(7), (8), and (12).

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§ 97.307 Emission standards.

(a) No amateur station transmission shall occupy more bandwidth than necessary for the information rate and emission type being transmitted, in accordance with good amateur practice.

(b) Emissions resulting from modulation must be confined to the band or segment available to the control operator. Emissions outside the necessary bandwidth must not cause splatter or keyclick interference to operations on adjacent frequencies.

(c) All spurious emissions from a station transmitter must be reduced to the greatest extent practicable. If any spurious emission, including chassis or power line radiation, causes harmful interference to the reception of another radio station, the licensee of the interfering amateur station is required to take steps to eliminate the interference, in accordance with good engineering practice.

(d) For transmitters installed after January 1, 2003, the mean power of any spurious emission from a station transmitter or external RF power amplifier transmitting on a frequency below 30 MHz must be at least 43 dB below the mean power of the fundamental emission. For transmitters installed on or before January 1, 2003, the mean power of any spurious emission from a station transmitter or external RF power amplifier transmitting on a frequency below 30 MHz must not exceed 50 mW and must be at least 40 dB below the mean power of the fundamental emission. For a transmitter of mean power less than 5 W installed on or before January 1, 2003, the attenuation must be at least 30 dB. A transmitter built before April 15, 1977, or first marketed before January 1, 1978, is exempt from this requirement.

(e) The mean power of any spurious emission from a station transmitter or