

Wavelength band	ITU–Region 1	ITU–Region 2	ITU–Region 3	Sharing require-ments. See § 97.303 (Paragraph)
Do	14.225–14.350	14.225–14.350	14.225–14.350	
17 m	18.068–18.168	18.068–18.168	18.068–18.168	
15 m	21.025–21.200	21.025–21.200	21.025–21.200	
Do	21.30–21.45	21.30–21.45	21.30–21.45	
12 m	24.89–24.99	24.89–24.99	24.89–24.99	
10 m	28.0–29.7	28.0–29.7	28.0–29.7	

(e) For a station having a control operator who has been granted an operator license of Novice Class or Technician Class and who has received credit

for proficiency in telegraphy in accordance with the international requirements.

Wavelength band	ITU region 1	ITU region 2	ITU region 3	Sharing requirements (see § 97.303 paragraph)
<i>HF</i>	<i>MHz</i>	<i>MHz</i>	<i>MHz</i>	
80 m	3.675–3.725	3.675–3.725	3.675–3.725	(a)
40 m	7.050–7.075	7.10–7.15	7.050–7.075	(a)
15 m	21.10–21.20	21.10–21.20	21.10–21.20	
10 m	28.10–28.50	28.10–28.50	28.10–28.50	
<i>VHF</i>	<i>MHz</i>	<i>MHz</i>	<i>MHz</i>	
1.25 m	222–225	(a)
<i>UHF</i>	<i>MHz</i>	<i>MHz</i>	<i>MHz</i>	
23 cm	1270–1295	1270–1295	1270–1295	(h)(i)

[54 FR 25857, June 20, 1989; 54 FR 39535, Sept. 27, 1989, as amended at 55 FR 30457, July 26, 1990; 56 FR 28, Jan. 2, 1991; 56 FR 3043, Jan. 28, 1991; 56 FR 19610, Apr. 29, 1991; 56 FR 32518, July 17, 1991; 57 FR 32450, July 22, 1992; 58 FR 64385, Dec. 7, 1993; 59 FR 54833, Nov. 2, 1994; 60 FR 15687, Mar. 27, 1995; 63 FR 42280, Aug. 7, 1998; 63 FR 68980, Dec. 14, 1998; 65 FR 6550, Feb. 10, 2000]

§ 97.303 Frequency sharing requirements.

The following is a summary of the frequency sharing requirements that apply to amateur station transmissions on the frequency bands specified in § 97.301 of this part. (For each ITU Region, each frequency band allocated to the amateur service is designated as either a secondary service or a primary service. A station in a secondary service must not cause harmful interference to, and must accept interference from, stations in a primary service. See §§ 2.105 and 2.106 of the FCC Rules, *United States Table of Frequency Allocations* for complete requirements.)

(a) Where, in adjacent ITU Regions or Subregions, a band of frequencies is allocated to different services of the same category, the basic principle is the equality of right to operate. The stations of each service in one region must operate so as not to cause harmful interference to services in the other

Regions or Subregions. (See ITU *Radio Regulations*, No. 346 (Geneva, 1979).)

(b) No amateur station transmitting in the 1900–2000 kHz segment, the 70 cm band, the 33 cm band, the 13 cm band, the 9 cm band, the 5 cm band, the 3 cm band, the 24.05–24.25 GHz segment, the 77.0–77.5 GHz segment, the 78–81 GHz segment, the 144–149 GHz segment, and the 241–248 GHz segment shall cause harmful interference to, nor is protected from interference due to the operation of, the Government radiolocation service.

(c) No amateur station transmitting in the 1900–2000 kHz segment, the 3 cm band, the 77.0–77.5 GHz segment, the 78–81 GHz segment, the 144–149 GHz segment, and the 241–248 GHz segment shall cause harmful interference to, nor is protected from interference due to the operation of, stations in the non-Government radiolocation service.

(d) No amateur station transmitting in the 30 meter band shall cause harmful interference to stations authorized

by other nations in the fixed service. The licensee of the amateur station must make all necessary adjustments, including termination of transmissions, if harmful interference is caused.

(e) In the 1.25 m band:

(1) Use of the 219–220 MHz segment is limited to amateur stations participating, as forwarding stations, in point-to-point fixed digital message forwarding systems, including inter-city packet backbone networks. It is not available for other purposes.

(2) No amateur station transmitting in the 219–220 MHz segment shall cause harmful interference to, nor is protected from interference due to operation of Automated Maritime Telecommunications Systems (AMTS), television broadcasting on channels 11 and 13, 218–219 MHz Service systems, Land Mobile Services systems, or any other service having a primary allocation in or adjacent to the band.

(3) No amateur station may transmit in the 219–220 MHz segment unless the licensee has given written notification of the station's specific geographic location for such transmissions in order to be incorporated into a data base that has been made available to the public. The notification must be given at least 30 days prior to making such transmissions. The notification must be given to: The American Radio Relay, Inc., 225 Main Street, Newington, CT 06111-1494.

(4) No amateur station may transmit in the 219–220 MHz segment from a location that is within 640 km of an AMTS Coast Station that uses frequencies in the 217–218/219–220 MHz AMTS bands unless the amateur station licensee has given written notification of the station's specific geographic location for such transmissions to the AMTS licensee. The notification must be given at least 30 days prior to making such transmissions. The location of AMTS Coast Stations using the 217–218/219–220 MHz channels may be obtained from either:

The American Radio Relay League, Inc., 225 Main Street, Newington, CT 06111-1494;

or

Interactive Systems, Inc., Suite 1103, 1601 North Kent Street, Arlington, VA 22209; Fax: (703) 812-8275; Phone: (703) 812-8270.

(5) No amateur station may transmit in the 219–220 MHz segment from a location that is within 80 km of an AMTS Coast Station that uses frequencies in the 217–218/219–220 MHz AMTS bands unless that amateur station licensee holds written approval from that AMTS licensee. The location of AMTS Coast Stations using the 217–218/219–220 MHz channels may be obtained as noted in paragraph (e)(4) of this section.

(f) In the 70 cm band:

(1) No amateur station shall transmit from north of Line A in the 420–430 MHz segment.

(2) The 420–430 MHz segment is allocated to the amateur service in the United States on a secondary basis, and is allocated in the fixed and mobile (except aeronautical mobile) services in the International Table of allocations on a primary basis. No amateur station transmitting in this band shall cause harmful interference to, nor is protected from interference due to the operation of, stations authorized by other nations in the fixed and mobile (except aeronautical mobile) services.

(3) The 430–440 MHz segment is allocated to the amateur service on a secondary basis in ITU Regions 2 and 3. No amateur station transmitting in this band in ITU Regions 2 and 3 shall cause harmful interference to, nor is protected from interference due to the operation of, stations authorized by other nations in the radiolocation service. In ITU Region 1, the 430–440 MHz segment is allocated to the amateur service on a co-primary basis with the radiolocation service. As between these two services in this band in ITU Region 1, the basic principle that applies is the equality of right to operate. Amateur stations authorized by the United States and radiolocation stations authorized by other nations in ITU Region 1 shall operate so as not to cause harmful interference to each other.

(4) No amateur station transmitting in the 449.75–450.25 MHz segment shall cause interference to, nor is protected from interference due to the operation of stations in, the space operation service and the space research service or Government or non-Government stations for space telecommand.

(g) In the 33 cm band:

(1) No amateur station shall transmit from within the States of Colorado and Wyoming, bounded on the south by latitude 39° N., on the north by latitude 42° N., on the east by longitude 105° W., and on the west by longitude 108° W. This band is allocated on a secondary basis to the amateur service subject to not causing harmful interference to, and not receiving protection from any interference due to the operation of, industrial, scientific and medical devices, automatic vehicle monitoring systems or Government stations authorized in this band.

(2) No amateur station shall transmit from those portions of the States of Texas and New Mexico bounded on the south by latitude 31°41' N., on the north by latitude 34°30' N., on the east by longitude 104°11' W., and on the west by longitude 107°30' W.

(h) No amateur station transmitting in the 23 cm band, the 3 cm band, the 24.05-24.25 GHz segment, the 77-77.5 GHz segment, the 78-81 GHz segment, the 144-149 GHz segment, and the 241-248 GHz segment shall cause harmful interference to, nor is protected from interference due to the operation of, stations authorized by other nations in the radiolocation service.

(i) In the 1240-1260 MHz segment, no amateur station shall cause harmful interference to, nor is protected from interference due to the operation of, stations in the radionavigation-satellite service, the aeronautical radionavigation service, or the radiolocation service.

(j) In the 13 cm band:

(1) The amateur service is allocated on a secondary basis in all ITU Regions. In ITU Region 1, no amateur station shall cause harmful interference to, and shall be not protected from interference due to the operation of, stations authorized by other nations in the fixed and mobile services. In ITU Regions 2 and 3, no amateur station shall cause harmful interference to, and shall not be protected from interference due to the operation of, stations authorized by other nations in the fixed, mobile and radiolocation services.

(2) In the United States:

(i) The 2300-2305 MHz segment is allocated to the amateur service on a sec-

ondary basis. (Currently the 2300-2305 MHz segment is not allocated to any service on a primary basis.);

(ii) The 2305-2310 MHz segment is allocated to the amateur service on a secondary basis to the fixed, mobile, and radiolocation services;

(iii) The 2390-2417 MHz segment is allocated to the amateur service on a primary basis, and amateur stations operating within the 2400-2417 MHz segment must accept harmful interference that may be caused by the proper operation of industrial, scientific, and medical devices operating within the band.

(iv) The 2417-2450 MHz segment is allocated to the amateur service on a co-secondary basis with the Federal Government radiolocation service. Amateur stations operating within the 2417-2450 MHz segment must accept harmful interference that may be caused by the proper operation of industrial, scientific, and medical devices operating within the band.

(k) No amateur station transmitting in the 3.332-3.339 GHz and 3.3458-3525 GHz segments, the 2.5 mm band, the 144.68-144.98 GHz, 145.45-145.75 GHz and 146.82-147.12 GHz segments and the 343-348 GHz segment shall cause harmful interference to stations in the radio astronomy service. No amateur station transmitting in the 300-302 GHz, 324-326 GHz, 345-347 GHz, 363-365 GHz and 379-381 GHz segments shall cause harmful interference to stations in the space research service (passive) or Earth exploration-satellite service (passive).

(l) In the 9 cm band:

(1) In ITU Regions 2 and 3, the band is allocated to the amateur service on a secondary basis.

(2) In the United States, the band is allocated to the amateur service on a co-secondary basis with the non-Government radiolocation service.

(3) In the 3.3-3.4 GHz segment, no amateur station shall cause harmful interference to, nor is protected from interference due to the operation of, stations authorized by other nations in the radiolocation service.

(4) In the 3.4-3.5 GHz segment, no amateur station shall cause harmful interference to, nor is protected from interference due to the operation of, stations authorized by other nations in the fixed and fixed-satellite service.

(m) In the 5 cm band:

(1) In the 5.650–5.725 GHz segment, the amateur service is allocated in all ITU Regions on a co-secondary basis with the space research (deep space) service.

(2) In the 5.725–5.850 GHz segment, the amateur service is allocated in all ITU Regions on a secondary basis. No amateur station shall cause harmful interference to, nor is protected from interference due to the operation of, stations authorized by other nations in the fixed-satellite service in ITU Region 1.

(3) No amateur station transmitting in the 5.725–5.875 GHz segment is protected from interference due to the operation of industrial, scientific and medical devices operating on 5.8 GHz.

(4) In the 5.650–5.850 GHz segment, no amateur station shall cause harmful interference to, nor is protected from interference due to the operation of, stations authorized by other nations in the radiolocation service.

(5) In the 5.850–5.925 GHz segment, the amateur service is allocated in ITU Region 2 on a co-secondary basis with the radiolocation service. In the United States, the segment is allocated to the amateur service on a secondary basis to the non-Government fixed-satellite service. No amateur station shall cause harmful interference to, nor is protected from interference due to the operation of, stations authorized by other nations in the fixed, fixed-satellite and mobile services. No amateur station shall cause harmful interference to, nor is protected from interference due to the operation of, stations in the non-Government fixed-satellite service.

(n) In the 3 cm band:

(1) In the United States, the 3 cm band is allocated to the amateur service on a co-secondary basis with the non-government radiolocation service.

(2) In the 10.00–10.45 GHz segment in ITU Regions 1 and 3, no amateur station shall cause interference to, nor is protected from interference due to the operation of, stations authorized by other nations in the fixed and mobile services.

(o) No amateur station transmitting in the 1.2 cm band is protected from interference due to the operation of industrial, scientific and medical devices on 24.125 GHz. In the United States, the

24.05–24.25 GHz segment is allocated to the amateur service on a co-secondary basis with the non-government radiolocation and Government and non-government Earth exploration-satellite (active) services.

(p) The 2.5 mm band is allocated to the amateur service on a secondary basis. No amateur station transmitting in this band shall cause harmful interference to, nor is protected from interference due to the operation of, stations in the fixed, inter-satellite and mobile services.

(q) No amateur station transmitting in the 244–246 GHz segment of the 1 mm band is protected from interference due to the operation of industrial, scientific and medical devices on 245 GHz.

(r) In the 4 mm band:

(1) Authorization of the 76–77 GHz segment of the 4 mm band for amateur station transmissions is suspended until such time that the Commission may determine that amateur station transmissions in this segment will not pose a safety threat to vehicle radar systems operating in this segment.

(2) In places where the amateur service is regulated by the FCC, the 77.5–78 GHz segment is allocated to the amateur service and amateur-satellite service on a co-primary basis with the Government and non-Government radiolocation services.

(3) No amateur or amateur-satellite station transmitting in the 75.5–76 GHz segment shall cause interference to, nor is protected from, interference due to the operation of stations in the fixed service. After January 1, 2006, the 75.5–76 GHz segment is no longer allocated to the amateur service or to the amateur-satellite service.

(s) An amateur station having an operator holding a General, Advanced or Amateur Extra Class license may only transmit single sideband, suppressed carrier, (emission type 2K8J3E) upper sideband on the channels 5332 kHz, 5348 kHz, 5368 kHz, 5373 kHz, and 5405 kHz. Amateur operators shall ensure that their transmission occupies only the 2.8 kHz centered around each of these 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

§ 97.305

47 CFR Ch. I (10–1–04 Edition)

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.

[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]

§ 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).
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).
1mm	Entire band	MCW, phone, image, RTTY, data, SS, test, pulse	(7), (8), and (12).