

§ 90.1323

(2) If the transmitter employs an antenna system that emits multiple directional beams but does not emit multiple directional beams simultaneously, the total output power conducted to the array or arrays that comprise the device, *i.e.*, the sum of the power supplied to all antennas, antenna elements, staves, etc. and summed across all carriers or frequency channels, shall not exceed the limit specified in paragraph (a) of this section, as applicable. The directional antenna gain shall be computed as follows:

(i) The directional gain, in dBi, shall be calculated as the sum of 10 log (number of array elements or staves) plus the directional gain, in dBi, of the individual element or stave having the highest gain.

(ii) A lower value for the directional gain than that calculated in paragraph (b)(2)(i) of this section will be accepted if sufficient evidence is presented, *e.g.*, due to shading of the array or coherence loss in the beam-forming.

(3) If a transmitter employs an antenna that operates simultaneously on multiple directional beams using the same or different frequency channels and if transmitted beams overlap, the power shall be reduced to ensure that the aggregate power from the overlapping beams does not exceed the limit specified in paragraph (b)(2) of this section. In addition, the aggregate power transmitted simultaneously on all beams shall not exceed the limit specified in paragraph (b)(2) of this section by more than 8 dB.

(4) Transmitters that emit a single directional beam shall operate under the provisions of paragraph (b)(2) of this section.

(c) Mobile and portable stations are limited to 1 watt/25 MHz EIRP. In any event, the peak EIRP density shall not exceed 40 milliwatts in any one-megahertz slice of spectrum.

§ 90.1323 Emission limits.

(a) The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based

47 CFR Ch. I (10-1-05 Edition)

on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or less, but at least one percent of the emission bandwidth of the fundamental emission of the transmitter, provided the measured energy is integrated over a 1 MHz bandwidth.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

§ 90.1331 Restrictions on the operation of base and fixed stations.

(a)(1) Except as provided in paragraph (a)(2) of this section, base and fixed stations may not be located within 150 km of any grandfathered satellite earth station operating in the 3650-3700 MHz band. The coordinates of these stations are available at <http://www.fcc.gov/ib/sd/3650/>.

(2) Base and fixed stations may be located within 150 km of a grandfathered satellite earth station provided that the licensee of the satellite earth station and the 3650-3700 MHz licensee mutually agree on such operation.

(3) Any negotiations to enable base or fixed station operations closer than 150 km to grandfathered satellite earth stations must be conducted in good faith by all parties.

(b) (1) Except as specified in paragraph (b)(2) of this section, base and fixed stations may not be located within 80 km of the following Federal Government radiolocation facilities:

St. Inigoes, MD—38° 10' N., 76°, 23' W.
Pascagoula, MS—30° 22' N., 88°, 29' W.
Pensacola, FL—30° 21' 28" N., 87°, 16' 26" W.

NOTE: Licensees installing equipment in the 3650-3700 MHz band should determine if there are any nearby Federal Government radar systems that could affect their operations. Information regarding the location and operational characteristics of the radar systems operating adjacent to this band are provided in NTIA TR-99-361.

(2) Requests for base or fixed station locations closer than 80 km to the Federal Government radiolocation facilities listed in paragraph (b)(1) of this section will only be approved upon successful coordination by the Commission with NTIA through the Frequency Assignment Subcommittee of the

Interdepartmental Radio Advisory Committee.

§ 90.1333 Restrictions on the operation of mobile and portable stations.

(a) Mobile and portable stations may operate only if they can positively receive and decode an enabling signal transmitted by a base station.

(b) Any mobile/portable stations may communicate with any other mobile/portable stations so long as each mobile/portable can positively receive and decode an enabling signal transmitted by a base station.

(c) Airborne operations by mobile/portable stations is prohibited.

§ 90.1335 RF safety.

Licensees in the 3650–3700 MHz band are subject to the exposure requirements found in §1.1307(b), 2.1091 and 2.1093 of our Rules.

§ 90.1337 Operation near Canadian and Mexican borders.

(a) Fixed devices generally must be located at least 8 kilometers from the U.S./Canada or U.S./Mexico border if the antenna of that device looks within the 160° sector away from the border. Fixed devices must be located at least 56 kilometers from each border if the antenna looks within the 200° sector towards the border.

(b) Fixed devices may be located nearer to the U.S./Canada or U.S./Mexico border than specified in paragraph (a) of this section only if the Commission is able to coordinate such use with Canada or Mexico, as appropriate.

(c) Licensees must comply with the requirements of current and future agreements with Canada and Mexico regarding operation in U.S./Canada and U.S./Mexico border areas.

PART 94 [RESERVED]

PART 95—PERSONAL RADIO SERVICES

Subpart A—General Mobile Radio Service (GMRS)

Sec.

95.1 The General Mobile Radio Service (GMRS).

95.3 License required.

95.5 Licensee eligibility.

95.7 Channel sharing.

95.21 GMRS system description.

95.23 Mobile station description.

95.25 Land station description.

95.27 Paging receiver description.

95.29 Channels available.

95.33 Cooperative use of radio stations in the GMRS.

95.45 Considerations on Department of Defense land and in other circumstances.

95.51 Antenna height.

95.101 What the license authorizes.

95.103 Licensee duties.

95.105 License term.

95.115 Station inspection.

95.117 Where to contact the FCC.

95.119 Station identification.

95.129 Station equipment.

95.135 Maximum authorized transmitting power.

95.139 Adding a small base station or a small control station.

95.141 Interconnection prohibited.

95.143 Managing a GMRS system in an emergency.

95.171 Station operator duties.

95.179 Individuals who may be station operators.

95.181 Permissible communications.

95.183 Prohibited communications.

APPENDIX A TO SUBPART A TO PART 95—LOCATIONS WHERE GMRS IS REGULATED BY THE FCC

Subpart B—Family Radio Service (FRS)

GENERAL PROVISIONS

95.191 (FRS Rule 1) Eligibility and responsibility.

95.192 (FRS Rule 2) Authorized locations.

95.193 (FRS Rule 3) Types of communications.

95.194 (FRS Rule 4) FRS units.

Subpart C—Radio Control (R/C) Radio Service

GENERAL PROVISIONS

95.201 (R/C Rule 1) What is the Radio Control (R/C) Radio Service?

95.202 (R/C Rule 2) How do I use these rules?

95.203 (R/C Rule 3) Am I eligible to operate an R/C station?

95.204 (R/C Rule 4) Do I need a license?

95.205 (R/C Rule 5) Where may I operate my R/C station?

95.206 (R/C Rule 6) Are there any special restrictions on the location of my R/C station?

HOW TO OPERATE AN R/C STATION

95.207 (R/C Rule 7) On what channels may I operate?