

individual receivers or to groups of receivers provided the emissions comply with the following:

(1) Different information must be transmitted to each receiver.

(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 oper-

ation 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 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.