

## § 27.54

(k) For operations in the 2385-2390 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB. Compliance with these provisions is based on the procedures described in paragraph (a)(4) of this section.

(l) 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.

[62 FR 16497, Apr. 7, 1997, as amended at 65 FR 3147, Jan. 20, 2000; 65 FR 17602, Apr. 4, 2000; 65 FR 42883, July 12, 2000; 67 FR 5511, Feb. 6, 2002; 67 FR 41855, June 20, 2002; 69 FR 5715, Feb. 6, 2004]

### § 27.54 Frequency stability.

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

### § 27.55 Signal strength limits.

(a) *Field strength limits.* For the following bands, the predicted or measured median field strength at any location on the geographical border of a licensee's service area shall not exceed the value specified unless the adjacent affected service area licensee(s) agree(s) to a different field strength. This value applies to both the initially offered service areas and to partitioned service areas.

(1) 2110-2155, 2305-2320 and 2345-2360 MHz bands: 47 dB $\mu$  V/m.

(2) 698-764 and 776-794 MHz bands: 40 dB $\mu$  V/m.

(3) The paired 1392-1395 MHz and 1432-1435 MHz bands and the unpaired 1390-1392 MHz band (1.4 GHz band): 47 dB $\mu$  V/m.

(b) *Power flux density limit.* For base and fixed stations operating in the 698-746 MHz band, with an effective radiated power (ERP) greater than 1 kW, the power flux density that would be produced by such stations through a combination of antenna height and vertical gain pattern must not exceed 3000 microwatts per square meter on the ground over the area extending to 1 km from the base of the antenna mounting structure.

[69 FR 5715, Feb. 6, 2004]

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### § 27.56 Antenna structures; air navigation safety.

A licensee that owns its antenna structure(s) must not allow such antenna structure(s) to become a hazard to air navigation. In general, antenna structure owners are responsible for registering antenna structures with the FCC if required by part 17 of this chapter, and for installing and maintaining any required marking and lighting. However, in the event of default of this responsibility by an antenna structure owner, the FCC permittee or licensee authorized to use an affected antenna structure will be held responsible by the FCC for ensuring that the antenna structure continues to meet the requirements of part 17 of this chapter. See § 17.6 of this chapter.

(a) *Marking and lighting.* Antenna structures must be marked, lighted and maintained in accordance with part 17 of this chapter and all applicable rules and requirements of the Federal Aviation Administration. For any construction or alteration that would exceed the requirements of section 17.7 of this chapter, licensees must notify the appropriate Regional Office of the Federal Aviation Administration (FAA Form 7460-1) and file a request for antenna height clearance and obstruction marking and lighting specifications (FCC Form 854) with the FCC, WTB, 1270 Fairfield Road, Gettysburg, PA 17325.

(b) *Maintenance contracts.* Antenna structure owners (or licensees and permittees, in the event of default by an antenna structure owner) may enter into contracts with other entities to monitor and carry out necessary maintenance of antenna structures. Antenna structure owners (or licensees and permittees, in the event of default by an antenna structure owner) that make such contractual arrangements continue to be responsible for the maintenance of antenna structures in regard to air navigation safety.

### § 27.57 International coordination.

(a) WCS operations in the border areas shall be subject to coordination with those countries and provide protection to non-U.S. operations in the 2305-2320 and 2345-2360 MHz bands as appropriate. In addition, satellite DARS

operations in WCS spectrum shall be subject to international satellite coordination procedures.

(b) Operation in the 698-764 MHz and 776-794 MHz bands is subject to international agreements between Mexico and Canada. Unless otherwise modified by international treaty, licenses must not cause interference to, and must accept harmful interference from, television broadcast operations in Mexico and Canada.

(c) Operation in the 1710-1755 MHz and 2110-2155 MHz bands is subject to international agreements with Mexico and Canada.

[62 FR 9658, Mar. 3, 1997, as amended at 67 FR 5511, Feb. 6, 2002; 69 FR 5715, Feb. 6, 2004]

**§ 27.58 Interference to MDS/ITFS receivers.**

(a) WCS licensees shall bear full financial obligation to remedy interference to MDS/ITFS block downconverters if all of the following conditions are met:

(1) The complaint is received by the WCS licensee prior to February 20, 2002;

(2) The MDS/ITFS downconverter was installed prior to August 20, 1998;

(3) The WCS fixed or land station transmits at 50 or more watts peak EIRP;

(4) The MDS/ITFS downconverter is located within a WCS transmitter's free space power flux density contour of  $-34$  dBW/m<sup>2</sup>; and

(5) The MDS/ITFS customer or licensee has informed the WCS licensee of the interference within one year from the initial operation of the WCS transmitter or within one year from any subsequent power increases at the WCS station.

(b) Resolution of the complaint shall be at no cost to the complainant.

(c) Two or more WCS licensees collocating their antennas on the same tower shall assume shared responsibility for remedying interference complaints within the area determined by paragraph (a)(4) of this section unless an offending station can be readily determined and then that station shall assume full financial responsibility.

(d) If the WCS licensee cannot otherwise eliminate interference caused to MDS/ITFS reception, then that li-

censee must cease operations from the offending WCS facility.

(e) At least 30 days prior to commencing operations from any new WCS transmission site or with increased power from any existing WCS transmission site, a WCS licensee shall notify all MDS/ITFS licensees in or through whose licensed service area they intend to operate of the technical parameters of the WCS transmission facility. WCS and MDS/ITFS licensees are expected to coordinate voluntarily and in good faith to avoid interference problems and to allow the greatest operational flexibility in each other's operations.

[62 FR 16498, Apr. 7, 1997]

**§ 27.59 [Reserved]**

**§ 27.60 TV/DTV interference protection criteria.**

Base, fixed, control, and mobile transmitters in the 698-764 MHz and 776-794 MHz frequency bands must be operated only in accordance with the rules in this section to reduce the potential for interference to public reception of the signals of existing TV and DTV broadcast stations transmitting on TV Channels 51 through 68.

(a) *D/U ratios.* Licensees must choose site locations that are a sufficient distance from co-channel and adjacent channel TV and DTV stations, and/or must use reduced transmitting power or transmitting antenna height such that the following minimum desired signal-to-undesired signal ratios (D/U ratios) are met.

(1) The minimum D/U ratio for co-channel stations is:

(i) 40 dB at the hypothetical Grade B contour (64 dB $\mu$  V/m) (88.5 kilometers (55 miles)) of the TV station;

(ii) For transmitters operating in the 698-746 MHz frequency band, 23 dB at the equivalent Grade B contour (41 dB $\mu$  V/m) (88.5 kilometers (55 miles)) of the DTV station; or

(iii) For transmitters operating in the 746-764 MHz and 776-794 MHz frequency bands, 17 dB at the equivalent Grade B contour (41 dB $\mu$  V/m) (88.5 kilometers (55 miles)) of the DTV station.

(2) The minimum D/U ratio for adjacent channel stations is 0 dB at the hypothetical Grade B contour (64 dB $\mu$ V/m)