

ANTENNA STANDARDS

Frequency (MHz)	Category	Maximum beamwidth to 3 dB points ¹ (included angle in degrees)	Minimum antenna gain (dbi)	Minimum radiation suppression to angle in degrees from centerline of main beam in decibels						
				5° to 10°	10° to 15°	15° to 20°	20° to 30°	30° to 100°	100° to 140°	140° to 180°
1,990 to 2,110	A	5.0	n/a	12	18	22	25	29	33	39
	B	8.0	n/a	5	18	20	20	25	28	36
6,875 to 7,125	A	1.5	n/a	26	29	32	34	38	41	49
	B	2.0	n/a	21	25	29	32	35	39	45
12,700 to 13,250	A	1.0	n/a	23	28	35	39	41	42	50
	B	2.0	n/a	20	25	28	30	32	37	47
17,700 to 19,700	A	2.2	38	25	29	33	36	42	55	55
	B	2.2	38	20	24	28	32	35	36	36

¹ If a licensee chooses to show compliance using maximum beamwidth to 3 dB points, the beamwidth limit shall apply in both the azimuth and the elevation planes.

(2) New periscope antenna systems will be authorized upon a certification that the radiation, in a horizontal plane, from an illuminating antenna and reflector combination meets or exceeds the antenna standards of this section. This provision similarly applies to passive repeaters employed to redirect or repeat the signal from a station's directional antenna system.

(3) The choice of receiving antennas is left to the discretion of the licensee. However, licensees will not be protected from interference which results from the use of antennas with poorer performance than identified in the table of this section.

(4) [Reserved]

(5) Pickup stations are not subject to the performance standards herein stated.

(b) All fixed stations are to use antenna systems in conformance with the standards of this section. TV auxiliary broadcast stations are considered to be located in an area subject to frequency congestion and must employ a Category A antenna when:

(1) A showing by an applicant of a new TV auxiliary broadcast station or Cable Television Relay Service (CARS) station, which shares the 12.7-13.20 GHz band with TV auxiliary broadcast, indicates that use of a category B antenna limits a proposed project because of interference, and

(2) That use of a category A antenna will remedy the interference thus allowing the project to be realized.

(c) As an exception to the provisions of this section, the FCC may approve

requests for use of periscope antenna systems where a persuasive showing is made that no frequency conflicts exist in the area of proposed use. Such approvals shall be conditioned to a standard antenna as required in paragraph (a) of this section when an applicant of a new TV auxiliary broadcast or Cable Television Relay station indicates that the use of the existing antenna system will cause interference and the use of a category A or B antenna will remedy the interference.

(d) As a further exception to the provision of paragraph (a) of this section, the Commission may approve antenna systems not conforming to the technical standards where a persuasive showing is made that:

(1) Indicates in detail why an antenna system complying with the requirements of paragraph (a) of this section cannot be installed, and

(2) Includes a statement indicating that frequency coordination as required in §74.604 (a) was accomplished.

[45 FR 78693, Nov. 26, 1980, as amended at 49 FR 7131, Feb. 27, 1984; 49 FR 37778, Sept. 26, 1984; 50 FR 7342, Feb. 22, 1985; 51 FR 19840, June 3, 1986; 52 FR 7143, Mar. 9, 1987; 55 FR 11587, Mar. 29, 1990; 56 FR 50663, Oct. 8, 1991; 62 FR 4922, Feb. 3, 1997; 68 FR 12771, Mar. 17, 2003]

§ 74.643 Interference to geostationary-satellites.

Applicants and licensees must comply with §101.145 of this chapter to minimize the potential of interference to geostationary-satellites.

[68 FR 12771, Mar. 17, 2003]