

the transmitter site in the direction of the Mexican border.

(2) Translator or booster stations located between 125 kilometers and 320 kilometers from the Mexican border may operate with an ERP in excess of 50 watts. However, in no event shall the location of the 60 dBu contour lie within 116.3 km of the Mexican border.

(3) Applications for translator or booster stations within 320 km of the Canadian border may employ an ERP up to a maximum of 250 watts, as specified in § 74.1235(a) and (b). The distance to the 34 dBu interfering contour may not exceed 60 km in any direction.

(e) In no event shall a station authorized under this subpart be operated with a transmitter power output (TPO) in excess of the transmitter certificated rating. A station authorized under this subpart for a TPO that is less than its transmitter certificated rating shall determine its TPO in accordance with § 73.267 of this chapter and its TPO shall not be more than 105 percent of the authorized TPO.

(f) Composite antennas and antenna arrays may be used where the total ERP does not exceed the maximum determined in accordance with paragraphs (a), (b) or (c) of this section.

(g) Either horizontal, vertical, circular or elliptical polarization may be used provided that the supplemental vertically polarized ERP required for circular or elliptical polarization does not exceed the ERP otherwise authorized. Either clockwise or counterclockwise rotation may be used. Separate transmitting antennas are permitted if both horizontal and vertical polarization is to be provided.

(h) All applications must comply with § 73.316, paragraphs (d) and (e) of this chapter.

(i) An application that specifies use of a directional antenna must comply with § 73.316, paragraphs (c)(1) through (c)(3) of this chapter. Prior to issuance of a license, the applicant must: (1) Certify that the antenna is mounted in accordance with the specific instructions provided by the antenna manufacturer; and (2) certify that the antenna is mounted in the proper orientation. In instances where a directional antenna is proposed for the purpose of providing protection to another facil-

ity, a condition may be included in the construction permit requiring that before program tests are authorized, a permittee: (1) Must submit the results of a complete proof-of-performance to establish the horizontal plane radiation patterns for both the horizontally and vertically polarized radiation components; and, (2) must certify that the relative field strength of neither the measured horizontally nor vertically polarized radiation component shall exceed at any azimuth the value indicated on the composite radiation pattern authorized by the construction permit.

NOTE: Existing licensees and permittees that do not furnish data sufficient to calculate the contours in conformance with § 74.1204 will be assigned protected contours having the following radii:

Up to 10 watts—1 mile (1.6 km) from transmitter site.

Up to 100 watts—2 miles (3.2 km) from transmitter site.

Up to 250 watts—4 miles (6.5 km) from transmitter site.

(j) FM translator stations authorized prior to June 1, 1991, with facilities that do not comply with the ERP limitation of paragraph (a) or (b) of this section, as appropriate, may continue to operate, provided that operation is in conformance with § 74.1203 regarding interference. Applications for major changes in FM translator stations must specify facilities that comply with paragraph (a) or (b) of this section, as appropriate.

[55 FR 50697, Dec. 10, 1990, as amended at 56 FR 56170, Nov. 1, 1991; 58 FR 42026, Aug. 6, 1993; 62 FR 51063, Sept. 30, 1997; 63 FR 33879, June 22, 1998; 63 FR 36605, July 7, 1998; 87 FR 15344, Mar. 18, 2022]

#### § 74.1236 Emission and bandwidth.

(a) The license of a station authorized under this subpart allows the transmission of either F3 or other types of frequency modulation (see § 2.201 of this chapter) upon a showing of need, as long as the emission complies with the following:

(1) For transmitter output powers no greater than 10 watts, paragraphs (b), (c), and (d) of this section apply.

(2) For transmitter output powers greater than 10 watts, § 73.317 (a), (b), (c), and (d) apply.

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(b) Standard width FM channels will be assigned and the transmitting apparatus shall be operated so as to limit spurious emissions to the lowest practicable value. Any emissions including intermodulation products and radio-frequency harmonics which are not essential for the transmission of the desired aural information shall be considered to be spurious emissions.

(c) The power of emissions appearing outside the assigned channel shall be attenuated below the total power of the emission as follows:

Distance of emission from center frequency	Minimum attenuation below unmodulated carrier
120 to 240 kHz .....	25 dB
Over 240 and up to 600 kHz .....	35 dB
Over 600 kHz .....	60 dB

(d) Greater attenuation than that specified in paragraph (c) of this section may be required if interference results outside the assigned channel.

[35 FR 15388, Oct. 2, 1970, as amended at 52 FR 31406, Aug. 20, 1987; 55 FR 50698, Dec. 10, 1990]

### § 74.1237 Antenna location.

(a) An applicant for a new station to be authorized under this subpart or for a change in the facilities of such a station shall endeavor to select a site which will provide a line-of-sight transmission path to the entire area intended to be served and at which there is available a suitable signal from the primary station. The transmitting antenna should be placed above growing vegetation and trees lying in the direction of the area intended to be served, to minimize the possibility of signal absorption by foliage.

(b) Consideration should be given to accessibility of the site at all seasons of the year and to the availability of facilities for the maintenance and operation of the FM translator.

(c) Consideration should be given to the existence of strong radiofrequency fields from other transmitters at the translator site and the possibility that such fields may result in the retransmission of signals originating on frequencies other than that of the primary station.

(d) The transmitting antenna of an FM booster station shall be located within the protected contour of its primary station, subject to Note, § 74.1231 (h). The transmitting antenna of a commonly owned commercial FM translator station shall be located within the protected contour of its commercial primary FM station.

(e) Where an FM translator or booster licensee or permittee proposes to mount its antenna on or near an AM tower, as defined in § 1.30002, the FM translator or booster licensee or permittee must comply with § 1.30003 or § 1.30002.

[35 FR 15388, Oct. 2, 1970, as amended at 55 FR 50698, Dec. 10, 1990; 58 FR 42026, Aug. 6, 1993; 62 FR 51063, Sept. 30, 1997; 78 FR 66298, Nov. 5, 2013]

### § 74.1250 Transmitters and associated equipment.

(a) FM translator and booster transmitting apparatus, and exciters employed to provide a locally generated and modulated input signal to translator and booster equipment, used by stations authorized under the provisions of this subpart must be certified upon the request of any manufacturer of transmitters in accordance with this section and subpart J of part 2 of this chapter. In addition, FM translator and booster stations may use FM broadcast transmitting apparatus authorized via Supplier's Declaration of Conformity or approved under the provisions of part 73 of this chapter.

NOTE 1 TO PARAGRAPH (a): The Declaration of Conformity procedure has been replaced by Supplier's Declaration of Conformity. Equipment previously authorized under subpart J of part 2 of this chapter may remain in use. See § 2.950 of this chapter.

(b) Transmitting antennas, antennas used to receive signals to be rebroadcast, and transmission lines are not subject to the requirement for certification.

(c) The following requirements must be met before translator, booster or exciter equipment will be certified in accordance with this section:

(1) Radio frequency harmonics and spurious emissions must conform with the specifications of § 74.1236 of this part.

(2) The local oscillator or oscillators, including those in an exciter employed