

**§ 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.

(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 certificated 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 verified or approved under the provisions of part 73 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 certificated 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 to provide a locally generated and modulated input signal to a translator or booster, when subjected to variations in ambient temperature between minus 30 degrees and plus 50 degrees centigrade, and in primary supply voltage between 85 percent and 115 percent of the rated value, shall be sufficiently stable to maintain the output center frequency within plus or minus 0.005 percent of the operating frequency and to enable conformance with the specifications of § 74.1261 of this part.

(3) The apparatus shall contain automatic circuits to maintain the power output in conformance with § 74.1235(e) of this part. If provision is included for adjusting the power output, then the normal operating constants shall be specified for operation at both the rated power output and the minimum power output at which the apparatus is designed to operate. The apparatus shall be equipped with suitable meters or meter jacks so that the operating constants can be measured while the apparatus is in operation.

(4) Apparatus rated for transmitter power output of more than 1 watt shall be equipped with automatic circuits to place it in a nonradiating condition when no input signal is being received in conformance with § 74.1263(b) of this part and to transmit the call sign in conformance with § 74.1283(c)(2) of this part.

(5) For exciters, automatic means shall be provided for limiting the level of the audio frequency voltage applied to the modulator to ensure that a frequency swing in excess of 75 kHz will not occur under any condition of the modulation.

[55 FR 50698, Dec. 10, 1990, as amended at 63 FR 36606, July 7, 1998]

**§ 74.1251 Technical and equipment modifications.**

(a) No change, either mechanical or electrical, except as provided in part 2 of this chapter, may be made in FM translator or booster apparatus which has been certificated by the Commission without prior authority of the Commission.

(b) Formal application on FCC Form 349 is required of all permittees and licensees for any of the following changes:

(1) Replacement of the transmitter as a whole, except replacement with a transmitter of identical power rating which has been certificated by the FCC for use by FM translator or FM booster stations, or any change which could result in the electrical characteristics or performance of the station. Upon the installation or modification of the transmitting equipment for which prior FCC authority is not required under the provisions of this paragraph, the licensee shall place in the station records a certification that the new installation complies in all respects with the technical requirements of this part and the terms of the station authorization.

(2) A change in the transmitting antenna system, including the direction of radiation or directive antenna pattern.

(3) Any change in the overall height of the antenna structure except where notice to the Federal Aviation Administration is specifically not required under § 17.14(b) of this chapter.

(4) Any change in the location of the translator or booster except a move within the same building or upon the same pole or tower.

(5) Any horizontal change in the location of the antenna structure which would (i) be in excess of 152.4 meters (500 feet), or (ii) would require notice to the Federal Aviation Administration pursuant to § 17.7 of the FCC's rules.

(6) Any change in the output frequency of a translator.

(7) Any increase of authorized effective radiated power. FM translator and booster stations may decrease ERP on a modification of license application provided that exhibits are included to demonstrate that the following requirements are met: