

## § 73.1580

automatic transmission system operation, the amplitude of modulation of the carrier by the use of subaudible tones must not be higher than necessary to effect reliable and accurate data transmission and may not, in any case, exceed 6%.

(2) *FM stations.* The total modulation must not exceed 100 percent on peaks of frequent reoccurrence referenced to 75 kHz deviation. However, stations providing subsidiary communications services using subcarriers under provisions of § 73.319 concurrently with the broadcasting of stereophonic or monophonic programs may increase the peak modulation deviation as follows:

(i) The total peak modulation may be increased 0.5 percent for each 1.0 percent subcarrier injection modulation.

(ii) In no event may the modulation of the carrier exceed 110 percent (82.5 kHz peak deviation).

(3) *TV and Class A TV stations.* In no case shall the total modulation of the aural carrier exceed 100% on peaks of frequent recurrence, unless some other peak modulation level is specified in an instrument of authorization. For monophonic transmissions, 100% modulation is defined as  $\pm 25$  kHz.

(c) If a limiting or compression amplifier is employed to maintain modulation levels, precaution must be taken so as not to substantially alter the dynamic characteristics of programs.

[44 FR 58735, Oct. 11, 1979, as amended at 47 FR 13165, Mar. 29, 1982; 49 FR 14508, Apr. 12, 1984; 49 FR 15081, Apr. 17, 1984; 49 FR 27147, July 2, 1984; 49 FR 47610, Dec. 6, 1984; 49 FR 48312, Dec. 12, 1984; 51 FR 26251, July 22, 1986; 56 FR 64872, Dec. 12, 1991; 65 FR 30004, May 10, 2000]

## § 73.1580 Transmission system inspections.

Each AM, FM, TV and Class A TV station licensee or permittee must conduct periodic complete inspections of the transmitting system and all required monitors to ensure proper station operation.

[65 FR 30004, May 10, 2000]

## § 73.1590 Equipment performance measurements.

(a) The licensee of each AM, FM, TV and Class A TV station, except licens-

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ees of Class D non-commercial educational FM stations authorized to operate with 10 watts or less output power, must make equipment performance measurements for each main transmitter as follows:

(1) Upon initial installation of a new or replacement main transmitter.

(2) Upon modification of an existing transmitter made under the provisions of § 73.1690, Modification of transmission systems, and specified therein.

(3) Installation of AM stereophonic transmission equipment pursuant to § 73.128.

(4) Installation of FM subcarrier or stereophonic transmission equipment pursuant to § 73.295, § 73.297, § 73.593 or § 73.597.

(5) Installation of TV stereophonic or subcarrier transmission equipment pursuant to §§ 73.669 and 73.1690.

(6) Annually, for AM stations, with not more than 14 months between measurements.

(7) When required by other provisions of the rules or the station license.

(b) Measurements for spurious and harmonic emissions must be made to show compliance with the transmission system requirements of § 73.44 for AM stations; § 73.317 for FM stations and § 73.687 for TV stations. Measurements must be made under all conditions of modulation expected to be encountered by the station whether transmitting monophonic or stereophonic programs and providing subsidiary communications services.

(c) TV visual equipment performance measurements must be made with the equipment adjusted for normal program operation at the transmitter antenna sampling port to yield the following information:

(1) Field strength or voltage of the lower side-band for a modulating frequency of 1.25 MHz or greater, (including 3.58 MHz for color), and of the upper side-band for a modulating frequency of 4.75 MHz or greater.

(2) Data showing that the waveform of the transmitted signal conforms to that specified by the standards for TV transmissions.

(3) Photographs of a test pattern taken from a receiver or monitor connected to the transmitter output.

(4) Data showing envelope delay characteristics of the radiated signal.

(5) Data showing the attenuation of spurious and harmonic radiation, if, after type acceptance, any changes have been made in the transmitter or associated equipment (filters, multiplexer, etc.) which could cause changes in its radiation products.

(d) The data required by paragraphs (b) and (c) of this section, together with a description of the equipment and procedure used in making the measurements, signed and dated by the qualified person(s) making the measurements, must be kept on file at the transmitter or remote control point for a period of 2 years, and on request must be made available during that time to duly authorized representatives of the FCC.

[47 FR 8589, Mar. 1, 1982, as amended at 51 FR 18450, May 20, 1986; 65 FR 30004, May 10, 2000]

#### §73.1610 Equipment tests.

(a) During the process of construction of a new broadcast station, the permittee, after notifying the FCC in Washington, D.C. may, without further authority from the FCC, conduct equipment tests for the purpose of making such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefore, the rules and regulations and the applicable engineering standards. For AM stations, equipment tests, including either a directional or nondirectional proof of performance required by the construction permit, may be conducted during daytime hours provided that the antenna system is first substantially tuned during the experimental period. The nondirectional proof shall be conducted with power adjusted to 25% of that specified in the permit for the authorized directional facilities or, if applicable, to such higher power as is specified in the same permit for authorized nondirectional facilities. For licensed stations, see §73.1615, Operation During Modification of Facilities; and §73.157, Antenna Testing During Daytime.

(b) The FCC may notify the permittee not to conduct equipment tests or may modify, cancel, suspend, or

change the modes of testing or the dates and times for such tests in order to resolve interference complaints or when such action may appear to be in the public interest, convenience, and necessity.

(c) Equipment tests may be continued so long as the construction permit shall remain valid.

(d) The authorization for tests embodied in this section shall not be construed as constituting a license to operate but as a necessary part of construction.

[43 FR 32783, July 28, 1978, as amended at 47 FR 40174, Sept. 13, 1982; 50 FR 30947, July 31, 1985]

#### §73.1615 Operation during modification of facilities.

When the licensee of an existing AM, FM, TV or Class A TV station is in the process of modifying existing facilities as authorized by a construction permit and determines it is necessary to either discontinue operation or to operate with temporary facilities to continue program service, the following procedures apply:

(a) Licensees holding a construction permit for modification of directional or nondirectional FM, TV or Class A TV or nondirectional AM station facilities may, without specific FCC authority, for a period not exceeding 30 days:

(1) Discontinue operation, or

(2) Operate with temporary facilities to maintain, as nearly as possible, but not exceed, the size of the presently licensed coverage area.

(b) Licensees of an AM station holding a construction permit which involves directional facilities and which does not involve a change in operating frequency may, without specific FCC authority, for a period not exceeding 30 days:

(1) Discontinue operation, or

(2) Operate with reduced power or with parameters at variance from licensed tolerances while maintaining monitoring point field strengths within licensed limits during the period subsequent to the commencement of modifications authorized by the construction permit, or

(3) Operate in a nondirectional mode during the presently licensed hours of