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PART 74—EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES

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ALPHABETICAL INDEX—PART 74

AUTHORITY: 47 U.S.C. 154, 303, 307, 309, 336 and 554.

EDITORIAL NOTE: Nomenclature changes to part 74 appear at 64 FR 4055, Jan. 27, 1999.

Subpart—General; Rules Applicable to All Services in Part 74

§ 74.1 Scope.

(a) The rules in this subpart are applicable to the Experimental, Auxiliary and Special Broadcast, and Other Program Distributional Services.

(b) Rules in part 74 which apply exclusively to a particular service are contained in that service subpart, as follows: Experimental Broadcast Stations, Subpart A; Remote Pickup Broadcast Stations, Subpart D; Aural Broadcast STL and Intercity Relay Stations, Subpart E; TV Auxiliary Broadcast Stations, Subpart F; Low-power TV, TV Translator and TV Booster Stations, Subpart G; Low-power Auxiliary Stations, Subpart H; FM Broadcast Translator Stations and FM Broadcast Booster Stations, subpart L.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[47 FR 53022, Nov. 24, 1982, and 49 FR 32583, Aug. 15, 1984, as amended at 52 FR 31402, Aug. 20, 1987; 69 FR 72045, Dec. 10, 2004]

§ 74.2 General definitions.

Broadcast network-entity. A broadcast network-entity is an organization which produces programs available for simultaneous transmission by 10 or more affiliated broadcast stations and having distribution facilities or circuits available to such affiliated stations at least 12 hours each day.

Cable network-entity. A cable network-entity is an organization which produces programs available for simultaneous transmission by cable systems serving a combined total of at least 5,000,000 subscribers and having distribution facilities or circuits available to such affiliated stations or cable systems.

[51 FR 4601, Feb. 6, 1986]

§ 74.3 FCC inspections of stations.

(a) The licensee of a station authorized under this part must make the station available for inspection by representatives of the FCC during the station's business hours, or at any time it is in operation.

(b) In the course of an inspection or investigation, an FCC representative may require special equipment tests or program tests.

(c) The logs and records required by this part for the particular class or type of station must be made available upon request to representatives of the FCC.

[47 FR 53022, Nov. 24, 1982]

§ 74.5 Cross reference to rules in other parts.

Certain rules applicable to Experimental, Auxiliary, Special Broadcast and other Program Distribution services, some of which are also applicable to other services, are set forth in the following Parts of the FCC Rules and Regulations:

(a) Part 1, ''Practice and procedure''.

(1) Subpart A, ''General Rules of Practice and Procedure''. (§§ 1.1 to 1.120).

(2) Subpart B, ''Hearing Proceedings''. (§§ 1.120 to 1.364).

(3) Subpart C, ''Rulemaking Proceedings''. (§§ 1.399 to 1.430).

(4) Subpart F, ''Wireless Telecommunications Services Applications and Proceedings''. (§§ 1.901 to 1.981).

(5) Subpart G, ''Schedule of Statutory Charges and Procedures for Payment''. (§§ 1.1101 to 1.1120).

(6) Subpart H, ''Ex Parte Presentations''. (§§ 1.1200 to 1.1216).

(7) Subpart I, ''Procedures Implementing the National Environmental Policy Act of 1969''. (§§ 1.1301 to 1.1319).

(8) Part 1, Subpart W of this chapter, ''FCC Registration Number''. (§§ 1.8001–1.8005.)

(b) Part 2, ''Frequency Allocations and Radio Treaty Matters, General

Rules and Regulations'', including subparts A, ''Terminology''; B, ''Allocation, Assignments and Use of Radio Frequencies''; C, ''Emissions''; D, ''Call Signs and Other Forms of Identifying Radio Transmissions''; and J, ''Equipment Authorization Proceedings''.

(c) [Reserved]

(d) Part 17, ''Construction, Marking and Lighting of Antenna Structures''.

(e) Part 73, ''Radio Broadcast Services''.

(f) Part 101, ''Fixed Microwave Services''.

[53 FR 2499, Jan. 28, 1988, as amended at 60 FR 55482, Nov. 1, 1995; 66 FR 47896, Sept. 14, 2001; 68 FR 12761, Mar. 17, 2003]

§ 74.6 Licensing of broadcast auxiliary and low power auxiliary stations.

Applicants for and licensees of remote pickup broadcast stations, aural broadcast auxiliary stations, television broadcast auxiliary stations, and low power auxiliary stations authorized under subparts D, E, F, and H of this part are subject to the application and procedural rules for wireless telecommunications services contained in part 1, subpart F of this chapter. Applicants for these stations may file either manually or electronically as specified in § 1.913(b) and (d) of this chapter.

[68 FR 12761, Mar. 17, 2003]

§ 74.12 Notification of filing of applications.

The provisions of § 73.1030 ''Notification concerning interference to Radio Astronomy, Research, and Receiving Installations'' apply to all stations authorized under this part of the FCC Rules except the following:

(a) Mobile remote pickup stations (subpart D).

(b) TV pickup stations (subpart F).

(c) Low power auxiliary stations (subpart H).

[44 FR 58735, Oct. 11, 1979, as amended at 44 FR 77167, Dec. 31, 1979; 47 FR 28388, June 30, 1982]

§ 74.13 Equipment tests.

(a) During the process of construction of any class of radio station listed in this part, the permittee, without further authority of the Commission, may conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefor, the technical requirements of this chapter, and the applicable engineering standards.

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

(c) The authorization for tests embodied in this section shall not be construed as constituting a license to operate.

[38 FR 18378, July 10, 1973]

§ 74.14 Service or program tests.

(a) Upon completion of construction of a radio station in accordance with the terms of the construction permit, the technical provisions of the application therefor, technical requirements of this chapter, and applicable engineering standards, and when an application for station license has been filed showing the station to be in satisfactory operating condition, the permittee or any class of station listed in this part may, without further authority of the Commission, conduct service or program tests.

(b) Program test authority for stations authorized under this part will continue valid during Commission consideration of the application for license and during this period further extension of the construction permit is not required. Program test authority shall be automatically terminated with final action on the application for station license.

(c) The authorization for tests embodied in this section shall not be construed as approval by the Commission of the application for station license.

[38 FR 18378, July 10, 1973]

§ 74.15 Station license period.

(a) Licenses for experimental broadcast stations will be issued for a one year period.

(b) Licenses for stations or systems in the Auxiliary Broadcast Service held by a licensee of a broadcast station will be issued for a period running concurrently with the license of the associated broadcast station with which it is

licensed. Licenses held by eligible networks for the purpose of providing program service to affiliated stations under subpart D of this part, and by eligible networks, cable television operators, motion picture producers and television program producers under subpart H of this part will be issued for a period running concurrently with the normal licensing period for broadcast stations located in the same area of operation.

(c) The license of an FM broadcast booster station or a TV broadcast booster station will be issued for a period running concurrently with the license of the FM radio broadcast station or TV broadcast station (primary station) with which it is used.

(d) Initial licenses for low power TV, TV translator, and FM translator stations will ordinarily be issued for a period running until the date specified in § 73.1020 of this chapter for full service stations operating in their State or Territory, or if issued after such date, to the next renewal date determined in accordance with § 73.1020 of this chapter. Lower power TV and TV translator station and FM translator station licenses will ordinarily be renewed for 8 years. However, if the FCC finds that the public interest, convenience or necessity will be served, it may issue either an initial license or a renewal thereof for a lesser term. The FCC may also issue a license renewal for a shorter term if requested by the applicant. The time of expiration of all licenses will be 3 a.m. local time, on the following dates, and thereafter to the schedule for full service stations in their states as reflected in § 73.1020 of this chapter:

(1) Nevada:

(i) FM translators, February 1, 1997.

(ii) LPTV and TV translator, February 1, 1998.

(2) California:

(i) FM translators, April 1, 1997.

(ii) LPTV and TV translators, April 1, 1998

(3) Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhodes Island, New York, New Jersey, Pennsylvania, Maryland, Delaware, West Virginia, Ohio and the District of Colbumia:

(i) FM translators, June 1, 1997

(ii) LPTV and TV translators, June 1, 1998

(4) Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Missouri, Kentucky, Tennessee, Indiana, Illinois, Michigan, Wisconsin, Pureto Rico and the Virgin Islands:

(i) FM translators, August 1, 1997

(ii) LPTV and TV translators, August 1, 1998

(5) Oklahoma and Texas:

(i) FM translators, October 1, 1997

(ii) LPTV and TV translators, October 1, 1998

(6) Kansas and Nebraska:

(i) FM translators, December 1, 1997

(ii) LPTV and TV translators, December 1, 1998

(7) Iowa and South Dakota:

(i) FM translators, February 1, 1998

(ii) LPTV and TV translators, February 1, 1999

(8) Minnesota and North Dakota:

(i) FM translators, April 1, 1998

(ii) LPTV and TV translators, April 1, 1999

(9) Wyoming:

(i) FM translators, June 1, 1998

(ii) LPTV and TV translators, June 1, 1999

(10) Montana:

(i) FM translators, August 1, 1998

(ii) LPTV and TV translators, August 1, 1999

(11) Idaho:

(i) FM translators, October 1, 1995

(ii) LPTV and TV translators, October 1, 1996

(12) Washington:

(i) FM translators, December 1, 1995

(ii) LPTV and TV translators, December 1, 1996

(13) Oregon:

(i) FM translators, February 1, 1996

(ii) LPTV and TV translators, February 1, 1997

(14) Alaska, American Samoa, Guam, Mariana Islands and Hawaii:

(i) FM translators, April 1, 1996

(ii) LPTV and TV translators, April 1, 1997

(15) Colorado:

(i) FM translators, June 1, 1996

(ii) LPTV and TV translators, June 1, 1997

(16) New Mexico:

(i) FM translators, August 1, 1996

(ii) LPTV and TV translators, August 1, 1997

(17) Utah:

(i) FM translators, October 1, 1996

(ii) LPTV and TV translators, October 1, 1997

(18) Arizona:

(i) FM translators, December 1, 1996

(ii) LPTV and TV translators, December 1, 1997

(e) Licenses held by broadcast network-entities under Subpart F will ordinarily be issued for a period of 8 years running concurrently with the normal licensing period for broadcast stations located in the same area of operation. An application for renewal of license shall be filed in accordance with the provisions of § 1.949.

(f) The license of an experimental broadcast station, FM translator or FM broadcast booster, TV translator or TV broadcast booster, or low power TV station will expire as a matter of law upon failure to transmit broadcast signals for any consecutive 12-month period notwithstanding any provision, term, or condition of the license to the contrary. Further, if the license of any AM, FM, or TV broadcasting station licensed under part 73 of this chapter expires for failure to transmit signals for any consecutive 12-month period, the licensee's authorizations under part 74, subparts D, E, F, and H in connection with the operation of that AM, FM, or TV broadcasting station will also expire notwithstanding any provision, term, or condition to the contrary.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13706, Dec. 14, 1963, as amended at 49 FR 32583, Aug. 15, 1984; 50 FR 26758, June 28, 1985; 52 FR 7142, Mar. 9, 1987; 52 FR 25604, July 8, 1987; 52 FR 31402, Aug. 20, 1987; 59 FR 63052, Dec. 7, 1994; 61 FR 28767, June 6, 1996; 62 FR 5347, Feb. 5, 1997; 68 FR 12761, Mar. 17, 2003; 69 FR 72045, Dec. 10, 2004]

§ 74.16 Temporary extension of station licenses.

Where there is pending before the Commission any application, investigation, or proceeding which, after hearing, might lead to or make necessary the modification of, revocation of, or the refusal to renew an existing auxiliary or experimental broadcast station license or a television broadcast translator station license, the Commission in its discretion, may grant a temorary extension of such license: *Provided, however*, That no such temporary extension shall be construed as a finding by the Commission that the operation of any radio station thereunder will serve public interest, convenience, and necessity beyond the express terms of such temporary extension of license: *And provided further*, That such temporary extension of license will in no wise affect or limit the action of the Commission with respect to any pending application or proceeding.

[28 FR 13706, Dec. 14, 1963, as amended at 37 FR 25843, Dec. 5, 1972]

§ 74.18 Transmitter control and operation.

Except where unattended operation is specifically permitted, the licensee of each station authorized under the provisions of this part shall designate a person or persons to activate and control its transmitter. At the discretion of the station licensee, persons so designated may be employed for other duties and for operation of other transmitting stations if such other duties will not interfere with the proper operation of the station transmission systems.

[60 FR 55482, Nov. 1, 1995]

§ 74.19 Special technical records.

The FCC may require a broadcast auxiliary station licensee to keep operating and maintenance records necessary to resolve conditions of actual or potential interference, rule violations, or deficient technical operation.

[48 FR 38482, Aug. 24, 1983]

§ 74.21 Broadcasting emergency information.

(a) In an emergency where normal communication facilities have been disrupted or destroyed by storms, floods or other disasters, the stations licensed under this part may be operated for the purpose of transmitting essential communications intended to alleviate distress, dispatch aid, assist in rescue operations, maintain order, or otherwise promote the safety of life and property. In the course of such operation, a station of any class may communicate with stations of other classes and in other services. However,

such operation shall be conducted only on the frequency or frequencies for which the station is licensed and the used power shall not exceed the maximum authorized in the station license. When such operation involves the use of frequencies shared with other stations, licensees are expected to cooperate fully to avoid unnecessary or disruptive interference.

(b) Whenever such operation involves communications of a nature other than those for which the station is licensed to perform, the licensee shall, at the earliest practicable time, notify the FCC in Washington, DC of the nature of the emergency and the use to which the station is being put and shall subsequently notify the same offices when the emergency operation has been terminated.

(c) Emergency operation undertaken pursuant to the provisions of this section shall be discontinued as soon as substantially normal communications facilities have been restored. The Commission may at any time order discontinuance of such operation.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13706, Dec. 14, 1963, as amended at 37 FR 25843, Dec. 5, 1972; 44 FR 65765, Nov. 15, 1979; 47 FR 40175, Sept. 13, 1982]

§ 74.22 Use of common antenna structure.

The simultaneous use of a common antenna structure by more than one station authorized under this part, or by one or more stations of any other service may be authorized. The owner of each antenna structure is responsible for ensuring that the structure, if required, is painted and/or illuminated in accordance with part 17 of this chapter. In the event of default by the owner, each licensee or permittee shall be responsible for ensuring that the structure complies with applicable painting and lighting requirements.

[61 FR 4368, Feb. 6, 1996]

§ 74.23 Interference jeopardizing safety of life or protection of property.

(a) The licensee of any station authorized under this part that causes harmful interference, as defined in § 2.1 of the Commission's rules, to radio communications involving the safety of life or protection of property shall promptly eliminate the interference.

(b) If harmful interference to radio communications involving the safety of life or protection of property cannot be promptly eliminated and the Commission finds that there exists an imminent danger to safety of life or protection of property, pursuant to 47 U.S.C. 312 (b) and (e) and 5 U.S.C. 558, operation of the offending equipment shall temporarily be suspended and shall not be resumed until the harmful interference has been eliminated or the threat to the safety of life or property has passed. In situations where the protection of property alone is jeopardized, before taking any action under this paragraph, the Commission shall balance the nature and extent of the possible property damage against the potential harm to a licensee or the public caused by suspending part 74 operations. When specifically authorized, short test operations may be made during the period of suspended operation to check the efficacy of remedial measures.

[47 FR 1395, Jan. 13, 1982]

§ 74.24 Short-term operation.

All classes of broadcast auxiliary stations provided for in subparts D, E, F and H of this part, except wireless video assist devices, may be operated on a short-term basis under the authority conveyed by a part 73 license or a broadcast auxiliary license without prior authorization from the FCC, subject to the following conditions:

(a) Licensees operating under this provision must be eligible to operate the particular class of broadcast auxiliary station.

(b) The short-term broadcast auxiliary station shall be operated in conformance with all normally applicable regulations to the extent they are not superceded by specific provisions of this section.

(c) Short-term operation is on a secondary, non-interference basis to regularly authorized stations and shall be discontinued immediately upon notification that perceptible interference is being caused to the operation of a regularly authorized station. Short-term station operators shall, to the extent

practicable, use only the effective radiated power and antenna height necessary for satisfactory system performance.

(d) Short-term operation under this section shall not exceed 720 hours annually per frequency.

NOTE TO PARAGRAPH (d): Certain frequencies shared with other services which are normally available for permanent broadcast auxiliary station assignment may not be available for short-term operation. Refer to any note(s) which may be applicable to the use of a specific frequency prior to initiating operation.

(e) The antenna height of a station operated pursuant to this section shall not increase the height of any man-made antenna supporting structure, or increase by more than 6.1 meters (20 feet) the height of any other type of man-made structure or natural formation. However, the facilities of an authorized broadcast auxiliary station belonging to another licensee may be operated in accordance with the terms of its outstanding authorization.

(f) Stations operated pursuant to this section shall be identified by the transmission of the call sign of the associated part 73 broadcast station or broadcast auxiliary station, or, in the case of stations operated by broadcast network and cable network entities, by the network or cable entity's name and base of operations city.

(g) Prior to operating pursuant to the provisions of this section, licensees shall, for the intended location or area-of-operation, notify the appropriate frequency coordination committee or any licensee(s) assigned the use of the proposed operating frequency, concerning the particulars of the intended operation and shall provide the name and telephone number of a person who may be contacted in the event of interference. Except as provided herein, this notification provision shall not apply where an unanticipated need for immediate short-term mobile station operation would render compliance with the provisions of this paragraph impractical.

(1) A CARS licensee shall always be given advance notification prior to the commencement of short-term operation on or adjacent to an assigned frequency.

(2) The Commission may designate a frequency coordinator as the single point of contact under this section for advance coordination of major national and international events. Once designated, all short-term auxiliary broadcast use under this section must be coordinated in advance through the designated coordinator.

(i) Coordinators under this provision will not be designated unless the Commission receives an initial request, in writing, to designate a coordinator.

(ii) The Commission will issue a Public Notice with information regarding the designation of such a coordinator.

(iii) All coordination must be done on a non-discriminatory basis.

(iv) All licensees must abide by the decision of the coordinator. The Commission will be the final arbiter of any disputes.

(3) An unanticipated need will never be deemed to exist for a scheduled event, such as a convention, sporting event, etc.

(h) Short-term operation is limited to areas south or west of the United States-Canada border as follows:

(1) Use of broadcast auxiliary service frequencies below 470 MHz is limited to areas of the United States south of Line A or west of Line C unless the effective radiated power of the station is 5 watts or less. *See* §1.928(e) of this chapter for a definition of Line A and Line C.

(2) A broadcast auxiliary service station operating on frequencies between 470 MHz and 1 GHz must be at least 56.3 kilometers (35 miles) south (or west, as appropriate of the United States-Canada border if the antenna looks within a 200° sector toward the border; or, the station must be at least 8.1 kilometers (5 miles) south (or west, as appropriate) if the antenna looks within a 160° sector away from the border. However, operation is not permitted in either of these two situations if the station would be within the coordination distance of a receiving earth station in Canada which uses the same frequency band. (The coordination distance is the distance, calculated for any station, according to Appendix 28 of the International Radio Regulations.)

(3) A broadcast auxiliary service station operating on frequencies above 1

GHz shall not be located within the coordination distance of a receiving earth station in Canada which uses the same frequency band. (The coordination distance is the distance, calculated for any station, according to Appendix 28 of the international Radio Regulations.)

(i) Short-term operation of a remote pickup broadcast base station, a remote pickup automatic relay station, an aural broadcast STL station, an aural broadcast intercity relay station, a TV STL station, a TV intercity relay station or a TV translator relay station in the National Radio Quiet Zone, the Table Mountain Radio Receiving Zone, or near FCC monitoring stations is subject to the same advance notification procedures applicable to regular applications as provided for in §§ 73.1030 and 74.12, except that inasmuch as short-term operation does not involve an application process, the provisions relating to agency objection procedures shall not apply. It shall simply be necessary for the licensee to contact the potentially affected agency and obtain advance approval for the proposed short-term operation. Where protection to FCC monitoring stations is concerned, approval for short-term operation may be given by the District Director of a Commission field facility.

(j)(1) This paragraph applies only to operations which will transmit on frequencies under 15 GHz. Prior to commencing short-term operation of a remote pickup broadcast station, a remote pickup automatic relay station, an aural broadcast STL station, an aural broadcast intercity relay station, a TV STL station, a TV intercity relay station, a TV translator relay station, a TV pickup station, or a TV microwave booster station within the 4-mile (6.4 kilometer) radius Commonwealth of Puerto Rico Protection Zone (centered on NAD–83 Geographical Coordinates North Latitude 18°20′38.28″, West Longitude 66°45′09.42″), an applicant must notify the Arecibo Observatory, located near Arecibo, Puerto Rico. Operations within the Puerto Rico Coordination Zone (*i.e.*, on the islands of Puerto Rico, Desecheo, Mona, Vieques, or Culebra), but outside the Protection Zone, whether short term or long term, shall provide notification to the Arecibo Observatory prior to commencing operation. Notification should be directed to the following: Interference Office, Arecibo Observatory, HC3 Box 53995, Arecibo, Puerto Rico 00612, Tel. (809) 878–2612, Fax (809) 878–1861, E-mail *prcz@naic.edu*.

(2) Notification of short-term operations may be provided by telephone, fax, or electronic mail. The notification for long-term operations shall be written or electronic, and shall set forth the technical parameters of the proposed station, including the geographical coordinates of the antenna (NAD–83 datum), antenna height above ground, ground elevation at the antenna, antenna directivity and gain, proposed frequency and FCC Rule Part, type of emission, effective radiated power, and whether the proposed use is itinerant. Applicants may wish to consult interference guidelines, which will be provided by Cornell University. In addition, the applicant shall indicate in its application to the Commission the date notification was made to the Observatory. Generally, submission of the information in the technical portion of the FCC license application is adequate notification. After receipt of such applications in non-emergency situations, the Commission will allow the Arecibo Observatory a period of 20 days for comments or objections in response to the notification indicated. The applicant will be required to make reasonable efforts in order to resolve or mitigate any potential interference problem with the Arecibo Observatory and to file either an amendment to the application or a modification application, as appropriate. If the Commission determines that an applicant has satisfied its responsibility to make reasonable efforts to protect the Observatory from interference, its application may be granted. In emergency situations in which prior notification or approval is not practicable, notification or approval must be accomplished as soon as possible after operations begin.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[47 FR 9219, Mar. 4, 1982, as amended at 49 FR 34356, Aug. 30, 1984; 50 FR 23709, June 5, 1985; 62 FR 55532, Oct. 27, 1997; 68 FR 12762, Mar. 17, 2003; 70 FR 31373, June 1, 2005]

§ 74.25 Temporary conditional operating authority.

An applicant for a new broadcast auxiliary radio service station or a modification of an existing station under subparts D, E, F, or H of this part may operate the proposed station during the pendency of its applications upon the filing of a properly completed formal application that complies with the rules for the particular class of station, provided that the conditions set forth are satisfied.

(a) *Conditions applicable to all broadcast auxiliary stations.* (1) Stations operated pursuant to this section shall be identified by the transmission of the call sign of the associated part 73 of this chapter broadcast station, if one exists, or the prefix ''WT'' followed by the applicant's local business telephone number for broadcast or cable network entities.

(2) The antenna structure(s) has been previously studied by the Federal Aviation Administration and determined to pose no hazard to aviation safety as required by subpart B of part 17 of this chapter; or the antenna or tower structure does not exceed 6.1 meters above ground level or above an existing man-made structure (other than an antenna structure), if the antenna or tower has not been previously studied by the Federal Aviation Administration and cleared by the FCC;

(3) The grant of the application(s) does not require a waiver of the Commission's rules;

(4) The applicant has determined that the facility(ies) will not significantly affect the environment as defined in § 1.1307 of this chapter;

(5) The station site does not lie within an area identified in § 1.924 of this chapter.

(b) *Conditions applicable to remote pickup broadcast auxiliary stations.* (1) The auxiliary station must be located within 80 km (50 mi) of the broadcast studio or broadcast transmitter.

(2) The applicant must coordinate the operation with all affected co-channel and adjacent channel licensees in the area of operation. This requirement can be satisfied by coordination with the local frequency committee if one exists.

(3) Operation under this provision is not permitted between 152.87 MHz and 153.35 MHz.

(c) *Conditions applicable to aural and television broadcast auxiliary stations.* (1) The applicable frequency coordination procedures have been successfully completed and the filed application is consistent with that coordination.

(2) The station site does not lie within an area requiring international coordination.

(3) If operated on frequencies in the 17.8–19.7 GHz band for any services or on frequencies in the 17.7–17.8 GHz band for MVPD operations, the station site does not lie within any of the areas identified in § 1.924 of this chapter.

(d) Operation under this section shall be suspended immediately upon notification from the Commission or by the District Director of a Commission field facility, and shall not be resumed until specific authority is given by the Commission or District Director. When authorized by the District Director, short test operations may be made.

(e) Conditional authority ceases immediately if the application(s) is returned by the Commission because it is not acceptable for filing.

(f) Conditional authorization does not prejudice any action the Commission may take on the subject application(s). Conditional authority is accepted with the express understanding that such authority may be modified or cancelled by the Commission at any time without hearing if, in the Commission's discretion, the need for such action arises. An applicant operating pursuant to this conditional authority assumes all risks associated with such operation, the termination or modification of the conditional authority, or the subsequent dismissal or denial of its application(s).

[68 FR 12762, Mar. 17, 2003, as amended at 69 FR 17958, Apr. 6, 2004; 71 FR 69048, Nov. 29, 2006]

§ 74.28 Additional orders.

In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the FCC may make

supplemental or additional orders in each case as may be deemed necessary.

[47 FR 53022, Nov. 24, 1982]

§ 74.30 Antenna structure, marking and lighting.

The provisions of part 17 of the FCC rules (Construction, Marking, and Lighting of Antenna Structures) require certain antenna structures to be painted and/or lighted in accordance with the provisions of §§ 17.47 through 17.56 of the FCC rules.

[47 FR 53022, Nov. 24, 1982]

§ 74.32 Operation in the 17.7–17.8 GHz and 17.8–19.7 GHz bands.

(a) To minimize or avoid harmful interference to Federal Government Satellite Earth Stations located in the Denver, Colorado and Washington, DC areas, any application for a new station license to provide MVPD operations in the 17.7–17.8 GHz band or to operate in the 17.8–19.7 GHz band for any service, or for modification of an existing station license in these bands which would change the frequency, power, emission, modulation, polarization, antenna height or directivity, or location of such a station, must be coordinated with the Federal Government by the Commission before an authorization will be issued, if the station or proposed station is located in whole or in part within any of the areas defined by the following rectangles or circles:

DENVER, CO AREA

Rectangle 1:
41°30′00″ N. Lat. on the north
103°10′00″ W. Long. on the east
38°30′00″ N. Lat. on the south
106°30′00″ W. Long. on the west
Rectangle 2:
38°30′00″ N. Lat. on the north
105°00′00″ W. Long. on the east
37°30′00″ N. Lat. on the south
105°50′00″ W. Long. on the west
Rectangle 3:
40°08′00″ N. Lat. on the north
107°00′00″ W. Long. on the east
39°56′00″ N. Lat. on the south
107°15′00″ W. Long. on the west

WASHINGTON, DC AREA

Rectangle:
38°40′00″ N. Lat. on the north
78°50′00″ W. Long. on the east
38°10′00″ N. Lat. on the south
79°20′00″ W. Long. on the west

or

(b) Within a radius of 178 km of 38°48′00″ N. Lat./76°52′00″ W. Long.

(c) In addition, no application seeking authority for MVPD operations in the 17.7–17.8 GHz band or to operate in the 17.8–19.7 GHz band for any service will be accepted for filing if the proposed station is located within 20 km of the following coordinates:

Denver, CO area: 39°43′00″ N. Lat./104°46′00″ W. Long.

Washington, DC area: 38°48′00″ N. Lat./76°52′00″ W. Long.

Note to § 74.32: The coordinates cited in this section are specified in terms of the ''North American Datum of 1983 (NAD 83)'' with an accuracy of ±30 meters with respect to the ''National Spacial Reference System''.

[71 FR 69048, Nov. 29, 2006; 71 FR 75614, Dec. 15, 2006]

§ 74.34 Period of construction; certification of completion of construction.

(a) Each aural and television broadcast auxiliary station authorized under subparts E and F of this part must be in operation within 18 months from the initial date of grant.

(b) Each remote pickup broadcast auxiliary station authorized under subpart D of this part must be in operation within 12 months from the initial date of grant.

(c) Failure to timely begin operation means the authorization terminates automatically.

(d) Requests for extension of time may be granted upon a showing of good cause pursuant to § 1.946(e) of this chapter.

(e) Construction of any authorized facility or frequency must be completed by the date specified in the license and the Commission must be notified pursuant to § 1.946 of this chapter.

[68 FR 12763, Mar. 17, 2003]

Subpart A—Experimental Broadcast Stations

§ 74.101 Experimental broadcast station.

The term *experimental broadcast station* means a station licensed for experimental or developmental transmission of radio telephony, television, facsimile, or other types of telecommunication services intended for reception and use by the general public.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32583, Aug. 15, 1984]

§ 74.102 Uses of experimental broadcast stations.

A license for an experimental broadcast station will be issued for the purposes of carrying on research and experimentation for the development and advancement of new broadcast technology, equipment, systems or services which are more extensive or require other modes of transmission than can be accomplished by using a licensed broadcast station under an experimental authorization (see § 73.1510).

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32583, Aug. 15, 1984]

§ 74.103 Frequency assignment.

(a) Frequencies allocated to broadcasting and the various categories of auxiliary stations, in the FCC's Table of Frequency Allocations (Part 2 of this chapter), may be assigned respectively to experimental broadcast and experimental auxiliary stations.

(b) More than one frequency may be assigned upon a satisfactory showing of the need therefor.

(c) Frequencies best suited to the purpose of the experimentation and on which there appears to be the least likelihood of interference to established stations shall be selected.

(d) In a case of important experimentation which cannot be feasibly conducted on frequencies allocated to broadcasting or the various categories of auxiliary stations, the FCC may authorize an experimental station of any class to operate on other frequencies upon a satisfactory showing of the need therefore and a showing that the proposed operation can be conducted without causing harmful interference to established services. However, experimental operation which looks toward the development of radio transmitting apparatus or the rendition of any type of regular service using such frequencies will not be authorized prior to a determination by the FCC that the development of such apparatus or the rendition of such service would serve the public interest.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[28 FR 13706, Dec. 14, 1963, as amended at 49 FR 32583, Aug. 15, 1984]

§ 74.112 Supplementary statement with application for construction permit.

A supplementary statement shall be filed with, and made a part of, each application for construction permit for any experimental broadcast station confirming the applicant's understanding:

(a) That all operation upon the frequency requested is for experimental purposes only.

(b) That the frequency requested may not be the best suited to the particular experimental work to be carried on.

(c) That the frequency requested need not be allocated for any service that may be developed as a result of the experimental operation.

(d) That any frequency which may be assigned is subject to change without advance notice or hearing.

(e) That any authorization issued pursuant to the application may be cancelled at any time without notice or hearing, and will expire as a matter of law if the station fails to transmit broadcast signals for any consecutive 12-month period, notwithstanding any provision, term, or condition of the license to the contrary.

(f) That if approval of the experimental broadcast station may have a significant environmental impact, see § 1.1307 of this chapter, submission of an environmental assessment, under § 1.1311 of this chapter, and compliance with the Commission's environmental

rules contained in part 1 of this chapter is required.

(Sec. 319, 48 Stat. 1089, as amended; 47 U.S.C. 319; secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[28 FR 13706, Dec. 14, 1963, as amended at 49 FR 32583, Aug. 15, 1984; 55 FR 20398, May 16, 1990; 61 FR 28767, June 6, 1996]

§ 74.113 Supplementary reports with application for renewal of license.

(a) A report shall be filed with each application for renewal of experimental broadcast station license which shall include a statement of each of the following:

(1) Number of hours operated.

(2) Full data on research and experimentation conducted including the types of transmitting and studio equipment used and their mode of operation.

(3) Data on expense of research and operation during the period covered.

(4) Power employed, field intensity measurements and visual and aural observations and the types of instruments and receivers utilized to determine the station service area and the efficiency of the respective types of transmissions.

(5) Estimated degree of public participation in reception and the results of observations as to the effectiveness of types of transmission.

(6) Conclusions, tentative and final.

(7) Program of further developments in broadcasting.

(8) All developments and major changes in equipment.

(9) Any other pertinent developments.

(b) Special or progress reports shall be submitted from time to time as the Commission shall direct.

(Sec. 308, 48 Stat. 1084, as amended; 47 U.S.C. 308; secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[28 FR 13706, Dec. 14, 1963, as amended at 49 FR 32583, Aug. 15, 1984]

§ 74.131 Licensing requirements, necessary showing.

(a) An applicant for a new experimental broadcast station, change in facilities of any existing station, or modification of license is required to make a satisfactory showing of compliance with the general requirements of the Communications Act of 1934, as amended, as well as the following:

(1) That the applicant has a definite program of research and experimentation in the technical phases of broadcasting which indicates reasonable promise of substantial contribution to the developments of the broadcasting art.

(2) That upon the authorization of the proposed station the applicant can and will proceed immediately with its program of research and experimentation.

(3) That the transmission of signals by radio is essential to the proposed program of research and experimentation.

(4) That the program of research and experimentation will be conducted by qualified personnel.

(b) A license of an experimental broadcast station will not authorize exclusive use of any frequency. In case interference would be caused by simultaneous operation of stations licensed experimentally, such licensees shall endeavor to arrange satisfactory time division. If such agreement cannot be reached, the FCC will determine and specify the time division.

(c) A license for an experimental broadcast station will be issued only on the condition that no objectionable interference to the regular program transmissions of broadcast stations will result from the transmissions of the experimental stations.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[28 FR 13706, Dec. 14, 1963, as amended at 49 FR 32583, Aug. 15, 1984]

§ 74.132 Power limitations.

The license for experimental broadcast stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general

agreement with values normally employed for similar equipment operated within the frequency range authorized.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32583, Aug. 15, 1984]

§ 74.133 Emission authorized.

In case emission of a different type than that specified in the license is necessary or desirable in carrying on any phases of experimentation, application setting out fully the needs shall be made by informal application.

[28 FR 13706, Dec. 14, 1963]

§ 74.151 Equipment changes.

The licensee of an experimental broadcast station may make any changes in the equipment that are deemed desirable or necessary provided:

(a) That the operating frequency is not permitted to deviate more than the allowed tolerance;

(b) That the emissions are not permitted outside the authorized band;

(c) That the power output complies with the license and the regulations governing the same; and

(d) That the transmitter as a whole or output power rating of the transmitter is not changed.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[28 FR 13706, Dec. 14, 1963, as amended at 49 FR 32584, Aug. 15, 1984]

TECHNICAL OPERATION AND OPERATORS

§ 74.161 Frequency tolerances.

The departure of the carrier frequency or frequencies of an experimental broadcast station must not exceed the tolerance specified in the instrument of authorization. For modes of transmission that do not have a resting or center carrier frequency, the occupied bandwidth of the station transmissions may not exceed that specified in the instrument of authorization.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

§ 74.162 Frequency monitors and measurements.

The licensee of an experimental broadcast station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance. The date and time of each frequency check, the frequency as measured, and a description or identification of the method employed shall be entered in the station log. Sufficient observations shall be made to insure that the assigned carrier frequency is maintained within the prescribed tolerance.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

§ 74.163 Time of operation.

(a) Unless specified or restricted hours of operation are shown in the station authorization, experimental broadcast stations may be operated at any time and are not required to adhere to a regular schedule of operation.

(b) The FCC may limit or restrict the periods of station operation in the event interference is caused to other broadcast or nonbroadcast stations.

(c) The FCC may require that an experimental broadcast station conduct such experiments as are deemed desirable and reasonable for development of the type of service for which the station was authorized.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

§ 74.165 Posting of station license.

The instrument of authorization or a clearly legible photocopy thereof shall be available at the transmitter site.

[60 FR 55482, Nov. 1, 1995]

§ 74.181 Station records.

(a) The licensee of each experimental broadcast station must maintain adequate records of the operation, including:

(1) Information concerning the nature of the experimental operation and the periods in which it is being conducted.

(2) Information concerning any specific data requested by the FCC.

(b) Station records must be retained for a period of two years.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

§ 74.182 Program service and charges.

(a) The licensee of an experimental broadcast station may transmit program material only when necessary to the experiments being conducted, and no regular program service may be broadcast unless specifically authorized.

(b) The licensee of an experimental broadcast station may make no charges nor ask for any payment, directly or indirectly, for the production or transmission of any programming or information used for experimental broadcast purposes.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

§ 74.183 Station identification.

Each experimental broadcast station shall make aural or visual announcements of its call letters and location at the beginning and end of each period of operation, and at least once every hour during operation.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

§ 74.184 Rebroadcasts.

(a) The term *rebroadcast* means reception by radio of the programs or other transmissions of a broadcast station, and the simultaneous or subsequent retransmission of such programs or transmissions by a broadcast station.

(1) As used in this section, the word ''program'' includes any complete program or part thereof.

(2) The transmission of a program from its point of origin to a broadcast station entirely by common carrier facilities, whether by wire line or radio, is not considered a rebroadcast.

(3) The broadcasting of a program relayed by a remote broadcast pickup station is not considered a rebroadcast.

(b) No licensee of an experimental broadcast station may retransmit the program of another U.S. broadcast station without the express authority of the originating station. A copy of the written consent of the licensee originating the program must be kept by the licensee of the experimental broadcast station retransmitting such program and made available to the FCC upon request.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303)

[49 FR 32584, Aug. 15, 1984]

Subparts B–C [Reserved]

Subpart D—Remote Pickup Broadcast Stations

§ 74.401 Definitions.

Associated broadcasting station(s). The broadcasting station or stations with which a remote pickup broadcast station or system is licensed as an auxiliary and with which it is principally used.

Authorized bandwidth. The occupied or necessary bandwidth, whichever is greater, authorized to be used by a station.

Automatic relay station. A remote pickup broadcast base station which is actuated by automatic means and is used to relay transmissions between remote pickup broadcast base and mobile stations, between remote pickup broadcast mobile stations and from remote pickup broadcast mobile stations to broadcasting stations. (Automatic operation is not operation by remote control.)

Carrier power. The average power at the output terminals of a transmitter (other than a transmitter having a suppressed, reduced or controlled carrier) during one radio frequency cycle under conditions of no modulation.

Mean power. The power at the output terminals of a transmitter during normal operation, averaged over a time sufficiently long compared with the period of the lowest frequency encountered in the modulation. A time of 1/10 second during which the mean power is greatest will be selected normally.

Necessary bandwidth. For a given class of emission, the minimum value of the occupied bandwidth sufficient to ensure the transmission of information

at the rate and with the quality required for the system employed, under specified conditions. Emissions useful for the good functioning of the receiving equipment, as for example, the emission corresponding to the carrier of reduced carrier systems, shall be included in the necessary bandwidth.

Occupied bandwidth. The frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Operational communications. Communications concerning the technical and programming operation of a broadcast station and its auxiliaries.

Remote control operation. Operation of a base station by a properly designated person on duty at a control position from which the transmitter is not visible but that position is equipped with suitable controls so that essential functions can be performed therefrom.

Remote pickup broadcast base station. A remote pickup broadcast station authorized for operation at a specified location.

Remote pickup broadcast mobile station. A remote pickup broadcast station authorized for use while in motion or during halts at unspecified locations. (As used in this subpart, mobile stations include hand-carried, pack-carried and other portable transmitters.)

Remote pickup broadcast stations. A term used in this subpart to include both remote pickup broadcast base stations and remote pickup broadcast mobile stations.

Remote pickup mobile repeater unit. A vehicular receiver-transmitter repeater used to provide extended communications range for a low-power hand-carried or pack-carried transmitter.

Station. As used in this subpart, each remote pickup broadcast transmitter, and its associated accessory equipment necessary to the radio communication function, constitutes a separate station.

Studio. Any room or series of rooms equipped for the regular production of broadcast programs of various kinds. A broadcasting booth at a stadium, convention hall, church, or other similar place is not considered to be a studio.

Systems. A complete remote pickup broadcast facility consisting of one or more mobile stations and/or one or more base stations authorized pursuant to a single license.

[41 FR 29686, July 19, 1976, as amended at 42 FR 14728, Mar. 16, 1977; 47 FR 28388, June 30, 1982; 47 FR 54448, Dec. 3, 1982; 51 FR 4601, Feb. 6, 1986]

§ 74.402 Frequency assignment.

Operation on all channels listed in this section (except: frequencies 26.07 MHz, 26.11 MHz, and 26.45 MHz, and frequencies listed in paragraphs (a)(4) and (c)(1) of this section shall be in accordance with the ''priority of use'' provisions in § 74.403(b)). The channel will be assigned by its center frequency, channel bandwidth, and emission designator. In general, the frequencies listed in this section represent the center of the channel or channel segment. When an even number of channels are stacked in those sections stacking is permitted, channel assignments may be made for the frequency halfway between those listed.

(a) The following channels may be assigned for use by broadcast remote pickup stations using any emission (other than single sideband or pulse) that will be in accordance with the provisions of § 74.462.

(1) [Reserved]

(2) HF Channels: 25.87, 25.91, 25.95, 25.99, 26.03, 26.07, 26.09, 26.11, 26.13, 26.15, 26.17, 26.19, 26.21, 26.23, 26.25, 26.27, 26.29, 26.31, 26.33, 26.35, 26.37, 26.39, 26.41, 26.43, 26.45, and 26.47 MHz. The channels 25.87–26.09 MHz are subject to the condition listed in paragraph (e)(2) of this section.

(3) VHF Channels: 166.25 and 170.15 MHz. These channels are subject to the condition listed in paragraph (e)(8) of this section.

(4) UHF Channels: Up to two of the following 6.25 kHz segments may be stacked to form a channel which may be assigned for use by broadcast remote pickup stations using any emission contained within the resultant channel in accordance with the provisions of § 74.462: 450.00625 MHz, 450.0125 MHz, 450.01875 MHz, 450.025 MHz, 450.98125 MHz, 450.9875 MHz, 450.99375 MHz, 455.00625 MHz, 455.0125 MHz, 455.01875 MHz, 455.025 MHz, 455.98125

MHz, 455.9875 MHz, and 455.99375 MHz. These channels are subject to the condition listed in paragraph (e)(9) of this section.

(b) Up to four of the following 7.5 kHz VHF segments and up to eight of the following 6.25 kHz UHF segments may be stacked to form a channel which may be assigned for use by broadcast remote pickup stations using any emission contained within the resultant channel in accordance with the provisions of § 74.462.

(1) VHF segments: 152.8625, 152.870, 152.8775, 152.885, 152.8925, 152.900, 152.9075, 152.915, 152.9225, 152.930, 152.9375, 152.945, 152.9525, 152.960, 152.9675, 152.975, 152.9825, 152.990, 152.9975, 153.005, 153.0125, 153.020, 153.0275, 153.035, 153.0425, 153.050, 153.0575, 153.065, 153.0725, 153.080, 153.0875, 153.095, 153.1025, 153.110, 153.1175, 153.125, 153.1325, 153.140, 153.1475, 153.155, 153.1625, 153.170, 153.1775, 153.185, 153.1925, 153.200, 153.2075, 153.215, 153.2225, 153.230, 153.2375, 153.245, 153.2525, 153.260, 153.2675, 153.275, 153.2825, 153.290, 153.2975, 153.305, 153.3125, 153.320, 153.3275, 153.335, 153.3425, 153.350, and 153.3575. These channels are subject to the conditions listed in paragraphs (e)(3), (4), (5), and (10) of this section.

(2) VHF segments: 160.860, 160.8675, 160.875, 160.8825, 160.890, 160.8975, 160.905, 160.9125, 160.920, 160.9275, 160.935, 160.9425, 160.950, 160.9575, 160.965, 160.9725, 160.980, 160.9875, 160.995, 161.0025, 161.010, 161.0175, 161.025, 161.0325, 161.040, 161.0475, 161.055, 161.0625, 161.070, 161.0775, 161.085, 161.0925, 161.100, 161.1075, 161.115, 161.1225, 161.130, 161.1375, 161.145, 161.1525, 161.160, 161.1675, 161.175, 161.1825, 161.190, 161.1975, 161.205, 161.2125, 161.220, 161.2275, 161.235, 161.2425, 161.250, 161.2575, 161.265, 161.2725, 161.280, 161.2875, 161.295, 161.3025, 161.310, 161.3175, 161.325, 161.3325, 161.340, 161.3475, 161.355, 161.3625, 161.370, 161.3775, 161.385, 161.3925, 161.400. These channels are subject to the condition listed in paragraph (e)(6) and (10) of this section.

(3) VHF segments: 161.625, 161.6325, 161.640, 161.6475, 161.655, 161.6625, 161.670, 161.6775, 161.685, 161.6925, 161.700, 161.7075, 161.715, 161.7225, 161.730, 161.7375, 161.745, 161.7525, 161.760, 161.7675, 161.775. These channels are subject to the conditions listed in paragraphs (e)(4), (7), and (10) of this section.

(4) UHF segments: 450.03125, 450.0375, 450.04375, 450.050, 450.05625, 450.0625, 450.06875, 450.075, 450.08125, 450.0875, 450.09375, 450.100, 450.10625, 450.1125, 450.11875, 450.125, 450.13125, 450.1375, 450.14375, 450.150, 450.15625, 450.1625, 450.16875, 450.175, 450.18125, 450.1875, 450.19375, 450.200, 450.20625, 450.2125, 450.21875, 450.225, 450.23125, 450.2375, 450.24375, 450.250, 450.25625, 450.2625, 450.26875, 450.275, 450.28125, 450.2875, 450.29375, 450.300, 450.30625, 450.3125, 450.31875, 450.325, 450.33125, 450.3375, 450.34375, 450.350, 450.35625, 450.3625, 450.36875, 450.375, 450.38125, 450.3875, 450.39375, 450.400, 450.40625, 450.4125, 450.41875, 450.425, 450.43125, 450.4375, 450.44375, 450.450, 450.45625, 450.4625, 450.46875, 450.475, 450.48125, 450.4875, 450.49375, 450.500, 450.50625, 450.5125, 450.51875, 450.525, 450.53125, 450.5375, 450.54375, 450.550, 450.55625, 450.5625, 450.56875, 450.575, 450.58125, 450.5875, 450.59375, 450.600, 450.60625, 450.6125, 450.61875, 455.03125, 455.0375, 455.04375, 455.050, 455.05625, 455.0625, 455.06875, 455.075, 455.08125, 455.0875, 455.09375, 455.100, 455.10625, 455.1125, 455.11875, 455.125, 455.13125, 455.1375, 455.14375, 455.150, 455.15625, 455.1625, 455.16875, 455.175, 455.18125, 455.1875, 455.19375, 455.200, 455.20625, 455.2125, 455.21875, 455.225, 455.23125, 455.2375, 455.24375, 455.250, 455.25625, 455.2625, 455.26875, 455.275, 455.28125, 455.2875, 455.29375, 455.300, 455.30625, 455.3125, 455.31875, 455.325, 455.33125, 455.3375, 455.34375, 455.350, 455.35625, 455.3625, 455.36875, 455.375, 455.38125, 455.3875, 455.39375, 455.400, 455.40625, 455.4125, 455.41875, 455.425, 455.43125, 455.4375, 455.44375, 455.450, 455.45625, 455.4625, 455.46875, 455.475, 455.48125, 455.4875, 455.49375, 455.500, 455.50625, 455.5125, 455.51875, 455.525, 455.53125, 455.5375, 455.54375, 455.550, 455.55625, 455.5625, 455.56875, 455.575, 455.58125, 455.5875, 455.59375, 455.600, 455.60625, 455.6125, 455.61875.

(c) Up to two of the following 25 kHz segments may be stacked to form a channel which may be assigned for use by broadcast remote pickup stations using any emission contained within the resultant channel in accordance with the provisions of § 74.462. Users

committed to 50 kHz bandwidths and transmitting program material will have primary use of these channels.

(1) UHF segments: 450.6375, 450.6625, 450.6875, 450.7125, 450.7375, 450.7625, 450.7875, 450.8125, 450.8375, 450.8625, 455.6375, 455.6625, 455.6875, 455.7125, 455.7375, 455.7625, 455.7875, 455.8125, 455.8375, 455.8625 MHz.

(2) [Reserved]

(d) Up to two of the following 50 kHz segments may be stacked to form a channel which may be assigned for use by broadcast remote pickup stations using any emission contained within the resultant channel in accordance with the provisions of § 74.462. Users committed to 100 kHz bandwidths and transmitting program material will have primary use of these channels.

(1) UHF segments: 450.900, 450.950, 455.900, and 455.950 MHz.

(2) [Reserved]

(e) Conditions on Broadcast Remote Pickup Service channel usage as referred to in paragraphs (a) through (d) of this section:

(1) [Reserved]

(2) Operation is subject to the condition that no harmful interference is caused to stations in the broadcast service.

(3) Operation is subject to the condition that no harmful interference is caused to stations operating in accordance with the Table of Frequency Allocations set forth in part 2 of this chapter. Applications for licenses to use frequencies in this band must include statements showing what procedures will be taken to ensure that interference will not be caused to stations in the Industrial/Business Pool (Part 90).

(4) These frequencies will not be licensed to network entities.

(5) These frequencies will not be authorized to new stations for use on board aircraft.

(6) These frequencies are allocated for assignment to broadcast remote pickup stations in Puerto Rico or the Virgin Islands only.

NOTE TO PARAGRAPH (e)(6): These frequencies are shared with Public Safety and Industrial/Business Pools (Part 90).

(7) These frequencies may not be used by broadcast remote pickup stations in Puerto Rico or the Virgin Islands. In other areas, certain existing stations in the Public Safety and Industrial/Business Pools (Part 90) have been permitted to continue operation on these frequencies on the condition that no harmful interference is caused to broadcast remote pickup stations.

(8) Operation on frequencies 166.25 MHz and 170.15 MHz is subject to the condition that harmful interference shall not be caused to present or future Government stations in the band 162–174 MHz and is also subject to the bandwidth and tolerance limitations and compliance deadlines listed in § 74.462 of this part. Authorization on these frequencies shall be in the lower 48 contiguous States only, except within the area bounded on the west by the Mississippi River, on the north by the parallel of latitude 37°30′ N., and on the east and south by that arc of the circle with center at Springfield, Illinois, and radius equal to the airline distance between Springfield, Illinois, and Montgomery, Alabama, subtended between the foregoing west and north boundaries, or within 150 miles (241.4 km) of New York City.

(9) The use of these frequencies is limited to operational communications, including tones for signaling and for remote control and automatic transmission system control and telemetry. Stations licensed or applied for before April 16, 2003, must comply with the channel plan by March 17, 2006, or may continue to operate on a secondary, non-interference basis.

(10) Stations licensed or applied for before April 16, 2003, must comply with the channel plan by March 17, 2006, or may continue to operate on a secondary, non-interference basis.

(f) License applicants shall request assignment of only those channels, both in number and bandwidth, necessary for satisfactory operation and for which the system is equipped to operate. However, it is not necessary that each transmitter within a system be equipped to operate on all frequencies authorized to that licensee.

(g) Remote pickup stations or systems will not be granted exclusive channel assignments. The same channel or channels may be assigned to other licensees in the same area. When

such sharing is necessary, the provisions of § 74.403 shall apply.

[68 FR 12763, Mar. 17, 2003, as amended at 68 FR 25540, May 13, 2003]

§ 74.403 Frequency selection to avoid interference.

(a) Where two or more remote pickup broadcast station licensees are authorized to operate on the same frequency or group of frequencies in the same area and when simultaneous operation is contemplated, the licensees shall endeavor to select frequencies or schedule operation in such manner as to avoid mutual interference. If mutual agreement to this effect cannot be reached the Commission shall be notified and it will specify the frequency or frequencies on which each station is to be operated.

(b) The following order of priority of transmissions shall be observed on all frequencies except frequencies 26.07 MHz, 26.11 MHz, and 26.45 MHz, and frequencies listed in § 74.402(a)(4) and (c)(1):

(1) Communications during an emergency or pending emergency directly related to the safety of life and property.

(2) Program material to be broadcast.

(3) Cues, orders, and other related communications immediately necessary to the accomplishment of a broadcast.

(4) Operational communications.

(5) Tests or drills to check the performance of stand-by or emergency circuits.

[41 FR 29686, July 19, 1976, as amended at 68 FR 12764, Mar. 17, 2003]

§ 74.431 Special rules applicable to remote pickup stations.

(a) Remote pickup mobile stations may be used for the transmission of material from the scene of events which occur outside the studio back to studio or production center. The transmitted material shall be intended for the licensee's own use and may be made available for use by any other broadcast station or cable system.

(b) Remote pickup mobile or base stations may be used for communications related to production and technical support of the remote program. This includes cues, orders, dispatch instructions, frequency coordination, establishing microwave links, and operational communications. Operational communications are alerting tones and special signals of short duration used for telemetry or control.

(c) Remote pickup mobile or base stations may communicate with any other station licensed under this subpart.

(d) Remote pickup mobile stations may be operated as a vehicular repeater to relay program material and communications between stations licensed under this subpart. Precautions shall be taken to avoid interference to other stations and the vehicular repeater shall only be activated by hand-carried or pack-carried units.

(e) The output of hand-carried or pack-carried transmitter units used with a vehicular repeater is limited to 2.5 watts. The output of a vehicular repeater transmitter used as a talkback unit on an additional frequency is limited to 2.5 watts.

(f) Remote pickup base and mobile stations in Alaska, Guam, Hawaii, Puerto Rico, and the Virgin Islands may be used for any purpose related to the programming or technical operation of a broadcasting station, except for transmission intended for direct reception by the general public.

(g) [Reserved]

(h) In the event that normal aural studio to transmitter circuits are damaged, stations licensed under Subpart D may be used to provide temporary circuits for a period not exceeding 30 days without further authority from the Commission necessary to continue broadcasting.

(i) Remote pickup mobile or base stations may be used for activities associated with the Emergency Alert System (EAS) and similar emergency survival communications systems. Drills and test are also permitted on these stations, but the priority requirements of § 74.403(b) must be observed in such cases.

[51 FR 4602, Feb. 6, 1986, as amended at 68 FR 12764, Mar. 17, 2003]

§ 74.432 Licensing requirements and procedures.

(a) A license for a remote pickup station will be issued to: the licensee of an

AM, FM, noncommercial FM, low power FM, TV, Class A TV, international broadcast or low power TV station; broadcast network-entity; or cable network-entity.

(b) Base stations may operate as automatic relay stations on the frequencies listed in § 74.402(b)(4) and (c)(1) under the provisions of § 74.436, however, one licensee may not operate such stations on more than two frequency pairs in a single area.

(c) Base stations may use voice communications between the studio and transmitter or points of any intercity relay system on frequencies in Groups I and J.

(d) Base stations may be authorized to establish standby circuits from places where official broadcasts may be made during times of emergency and circuits to interconnect an emergency survival communications system.

(e) In Alaska, Guam, Hawaii, Puerto Rico, and the Virgin Islands, base stations may provide program circuits between the studio and transmitter or to relay programs between broadcasting stations. A base station may be operated unattended in accordance with the following:

(1) The station must be designed, installed, and protected so that the transmitter can only be activated or controlled by persons authorized by the licensee.

(2) The station must be equipped with circuits to prevent transmitter operation when no signal is received from the station which it is relaying.

(f) Remote pickup stations may use only those frequencies and bandwidths which are necessary for operation.

(g) An application for a remote pickup broadcast station or system shall specify the broadcasting station with which the remote pickup broadcast facility is to be principally used and the licensed area of operation for a system which includes mobile stations shall be the area considered to be served by the associated broadcasting station. Mobile stations may be operated outside the licensed area of operation pursuant to § 74.24 of this part. Where the applicant for remote pickup broadcast facilities is the licensee of more than one class of broadcasting station (AM, FM, TV), all licensed to the same community, designation of one such station as the associated broadcasting station will not preclude use of the remote pickup broadcast facilities with those broadcasting stations not included in the designation and such additional use shall be at the discretion of the licensee.

(h) In cases where a series of broadcasts are to be made from the same location, portable or mobile transmitters may be left at such location for the duration of the series of broadcasts: *Provided,* The transmitting apparatus is properly secured so that it may not be operated by unauthorized persons when unattended. Prior Commission authority shall be obtained for the installation of any transmitting antenna which requires notification to the FAA, pursuant to § 17.7 of the Commission's rules and regulations, and which will be in existence for more than 2 days.

(i) The location of each remote pickup broadcast base station will be specified in the station or system license and such stations may not be operated at any other location without prior authority of the Commission.

(j) The license shall be retained in the licensee's files at the address shown on the authorization, posted at the transmitter, or posted at the control point of the station.

(k) In case of permanent discontinuance of operations of a station licensed under this subpart, the licensee shall cancel the station license using FCC Form 601. For purposes of this section, a station which is not operated for a period of one year is considered to have been permanently discontinued.

NOTE: Licensees of remote pickup broadcast stations licensed prior to August 31, 1976, should not file applications to consolidate individually licensed transmitters under a single system license until the renewal application of the associated broadcast station is filed. Applications filed between August 31, 1976, and the date of filing of the renewal applications to obtain authorization to use additional transmitters or modification of existing stations shall be restricted to a single system application necessary to accomplish the desired change, but may include consolidation of previously-licensed transmitters within the system license. Applications submitted for system licensing prior to the time when renewal applications would normally be filed which are

unnecessary for either administrative or operational purposes will be returned as unacceptable for filing.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 42 FR 2071, Jan. 10, 1977; 47 FR 21496, May 18, 1982; 49 FR 14509, Apr. 12, 1984; 51 FR 4602, Feb. 6, 1986; 58 FR 19775, Apr. 16, 1993; 60 FR 55482, Nov. 1, 1995; 65 FR 30011, May 10, 2000; 68 FR 12764, Mar. 17, 2003]

§ 74.433 Temporary authorizations.

(a) Special temporary authority may be granted for remote pickup station operation which cannot be conducted in accordance with § 74.24. Such authority will normally be granted only for operations of a temporary nature. Where operation is seen as likely on a continuing annual basis, an application for a regular authorization should be submitted.

(b) A request for special temporary authority for the operation of a remote pickup broadcast station must be made in accordance with the procedures of § 1.931(b) of this chapter.

(c) All requests for special temporary authority of a remote pickup broadcast station must include full particulars including: licensee's name and address, facility identification number of the associated broadcast station or stations, call letters of remote pickup station (if assigned), type and manufacturer of equipment, power output, emission, frequency or frequencies proposed to be used, commencement and termination date, location of operation and purpose for which request is made including any particular justification.

(d) A request for special temporary authority shall specify a frequency or frequencies consistent with the provisions of § 74.402: *Provided*, That, in the case of events of wide-spread interest and importance which cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested upon a showing that operation thereon will not cause interference to established stations: *And provided further*, In no case will operation of a remote pickup broadcast station be authorized on frequencies employed for the safety of life and property.

(e) The user shall have full control over the transmitting equipment during the period it is operated.

(f) Special temporary authority to permit operation of remote pickup broadcast stations or systems pending Commission action on an application for regular authority will not normally be granted.

[41 FR 29686, July 19, 1976, as amended at 47 FR 9220, Mar. 4, 1982; 47 FR 55936, Dec. 14, 1982; 50 FR 23709, June 5, 1985; 58 FR 19775, Apr. 16, 1993; 68 FR 12765, Mar. 17, 2003]

§ 74.434 Remote control operation.

(a) A remote control system must provide adequate monitoring and control functions to permit proper operation of the station.

(b) A remote control system must be designed, installed, and protected so that the transmitter can only be activated or controlled by persons authorized by the licensee.

(c) A remote control system must prevent inadvertent transmitter operation caused by malfunctions in the circuits between the control point and transmitter.

[51 FR 4602, Feb. 6, 1986, as amended at 60 FR 55482, Nov. 1, 1995]

§ 74.436 Special requirements for automatic relay stations.

(a) An automatic relay station must be designed, installed, and protected so that the transmitter can only be activated or controlled by persons authorized by the licensee.

(b) An automatic relay station may accomplish retransmission of the incoming signals by either heterodyne frequency conversion or by modulating the transmitter with the demodulated incoming signals.

(c) An automatic relay station transmitter may relay the demodulated incoming signals from one or more receivers.

[51 FR 4602, Feb. 6, 1986, as amended at 60 FR 55483, Nov. 1, 1995]

§ 74.451 Certification of equipment.

(a) Applications for new remote pickup broadcast stations or systems or for changing transmitting equipment of an existing station will not be accepted unless the transmitters to be used have

been certificated by the FCC pursuant to the provisions of this subpart, or have been certificated for licensing under part 90 of this chapter and do not exceed the output power limits specified in § 74.461(b).

(b) Any manufacturer of a transmitter to be used in this service may apply for certification for such transmitter following the certification procedure set forth in part 2 of the Commission's rules and regulations. Attention is also directed to part 1 of the Commission's rules and regulations which specifies the fees required when filing an application for certification.

(c) An applicant for a remote pickup broadcast station or system may also apply for certification for an individual transmitter by following the certification procedure set forth in part 2 of the Commission's rules and regulations.

(d) All transmitters marketed for use under this subpart shall be certificated by the Federal Communications Commission. (Refer to subpart J of part 2 of the Commission's Rules and Regulations.)

(e) Remote pickup broadcast station equipment authorized to be used pursuant to an application accepted for filing prior to December 1, 1977, may continue to be used by the licensee or its successors or assignees: *Provided, however,* If operation of such equipment causes harmful interference due to its failure to comply with the technical standards set forth in this subpart, the Commission may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

(f) Each instrument of authority which permits operation of a remote pickup broadcast station or system using equipment which has not been certificated will specify the particular transmitting equipment which the licensee is authorized to use.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 42 FR 14728, Mar. 16, 1977; 42 FR 43636, Aug. 30, 1977; 43 FR 14661, Apr. 7, 1978; 45 FR 28142, Apr. 28, 1980; 63 FR 36604, July 7, 1998; 68 FR 12765, Mar. 17, 2003]

§ 74.452 Equipment changes.

(a) Modifications may be made to an existing authorization in accordance with §§ 1.929 and 1.947 of this chapter.

(b) All transmitters initially installed after November 30, 1977, must be certificated for use in this service or other service as specified in § 74.451(a).

[68 FR 12765, Mar. 17, 2003]

§ 74.461 Transmitter power.

(a) Transmitter power is the power at the transmitter output terminals and delivered to the antenna, antenna transmission line, or any other impedance-matched, radio frequency load. For the purpose of this Subpart, the transmitter power is the carrier power.

(b) The authorized transmitter power for a remote pickup broadcast station shall be limited to that necessary for satisfactory service and, in any event, shall not be greater than 100 watts, except that a station to be operated aboard an aircraft shall normally be limited to a maximum authorized power of 15 watts. Specific authorization to operate stations on board aircraft with an output power exceeding 15 watts will be issued only upon an adequate engineering showing of need, and of the procedures that will be taken to avoid harmful interference to other licensees.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 43 FR 14662, Apr. 7, 1978]

§ 74.462 Authorized bandwidth and emissions.

(a) Each authorization for a new remote pickup broadcast station or system shall require the use of certificated equipment and such equipment shall be operated in accordance with emission specifications included in the grant of certification and as prescribed in paragraphs (b), (c), and (d) of this section.

(b) The maximum authorized bandwidth of emissions corresponding to the types of emissions specified below, and the maximum authorized frequency deviation in the case of frequency or phase modulated emission, shall be as follows:

Frequencies	Authorized bandwidth (kHz)	Maximum frequency deviation [1] (kHz)	Type of emission [2]
MHz:			
25.87 to 26.03	40	10	Frequencies 25.87 to 153.3575 MHz: A3E, F1E, F3E, F9E.
26.07 to 26.47	20	5	
152.8625 to 153.3575 [3]	30/60	5/10	
160.860 to 161.400	60	10	
161.625 to 161.775	30	5	
166.25 and 170.15 [4]	12.5/25	5	
450.00625 to 450.025 450.98125 to 450.99375 455.00625 to 455.025 455.98125 to 455.99375 .... Up to 12.5 .... 1.5	Frequencies 160.860 to 455.950 MHz: A1A, A1B, A1D, A1E, A2A, A2B, A2D, A2E, A3E, F1A, F1B, F1D, F1E, F2A, F2B, F2D, F2E, F3E, F9E.		
450.03125 to 450.61875 455.03125 to 455.61875	Up to 25	5	
450.6375 to 450.8625 455.6375 to 455.8625	25–50	10	
450.900, 450.950 455.900, 455.950	50–100	35	

[1] Applies where F1A, F1B, F1D, F1E, F2A, F2B, F2D, F2E, F3E, or F9E emissions are used.
[2] Stations operating above 450 MHz shall show a need for employing A1A, A1B, A1D, A1E, A2A, A2B, A2D, A2E, F1A, F1B, F1D, F1E, F2A, F2B, F2D, or F2E emission.
[3] New or modified licenses for use of the frequencies will not be granted to utilize transmitters on board aircraft, or to use a bandwidth in excess of 30 kHz and maximum deviation exceeding 5 kHz
[4] For stations licensed or applied for before April 16, 2003, the sum of the bandwidth of emission and tolerance on frequencies 166.25 MHz or 170.15 MHz shall not exceed 25 kHz, and such operation may continue until January 1, 2005. For new stations licensed or applied for on or after April 16, 2003, the sum of the bandwidth of emission and tolerance on these frequencies shall not exceed 12.5 kHz. For all remote pickup broadcast stations, the sum of the bandwidth of emission and tolerance on these frequencies shall not exceed 12.5 kHz on or after January 1, 2005.

(c) For emissions on frequencies above 25 MHz with authorized bandwidths up to 30 kHz, the emissions shall comply with the emission mask and transient frequency behavior requirements of §§ 90.210 and 90.214 of this chapter. For all other emissions, the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(1) On any frequency removed from the assignment frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB:

(2) On any frequency removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB;

(3) On any frequency removed from the assigned frequency by more than 250 percent on the authorized bandwidth; at least 43 plus 10 $\log^{10}$ (mean output power, in watts) dB.

(d) In the event a station's emissions outside its authorized channel cause harmful interference, the Commission may, at its discretion, require the licensee to take such further steps as may be necessary to eliminate the interference.

NOTE: The measurements of emission power can be expressed in peak or mean values provided they are expressed in the same parameters as the unmodulated transmitter carrier power.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 41 FR 32429, Aug. 3, 1976; 41 FR 35068, Aug. 19, 1976; 43 FR 14662, Apr. 7, 1978; 43 FR 38391, Aug. 28, 1978; 44 FR 65765, Nov. 15, 1979; 56 FR 28498, June 21, 1991; 63 FR 36604, July 7, 1998; 68 FR 12765, Mar. 17, 2003; 68 FR 25540, May 13, 2003]

§ 74.463 Modulation requirements.

(a) Each new remote pickup broadcast station authorized to operate with a power output in excess of 3 watts shall be equipped with a device which will automatically prevent modulation in excess of the limits set forth in this subpart.

(b) If amplitude modulation is employed, modulation shall not exceed 100 percent on negative peaks.

(c) If frequency modulation is employed, emission shall conform to the requirements specified in § 74.462.

[41 FR 29686, July 19, 1976, as amended at 47 FR 54448, Dec. 3, 1982]

§ 74.464 Frequency tolerance.

For operations on frequencies above 25 MHz using authorized bandwidths up to 30 kHz, the licensee of a remote pickup broadcast station or system shall maintain the operating frequency of each station in compliance with the frequency tolerance requirements of § 90.213 of this chapter. For all other operations, the licensee of a remote pickup broadcast station or system shall maintain the operating frequency of each station in accordance with the following:

Frequency range	Tolerance (percent)	
	Base station	Mobile station
25 to 30 MHz:		
3 W or less	.002	.005
Over 3 W	.002	.002
30 to 300 MHz:		
3 W or less	.0005	.005
Over 3 W	.0005	.0005
300 to 500 MHz, all powers	.00025	.0005

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[41 FR 29686, July 19, 1976, as amended at 42 FR 2071, Jan. 10, 1977; 43 FR 38391, Aug. 28, 1978; 44 FR 65765, Nov. 15, 1979; 68 FR 12766, Mar. 17, 2003; 68 FR 25540, May 13, 2003]

§ 74.465 Frequency monitors and measurements.

The licensee of a remote pickup station or system shall provide the necessary means to assure that all operating frequencies are maintained within the allowed tolerances.

[51 FR 4603, Feb. 6, 1986]

§ 74.482 Station identification.

(a) Each remote pickup broadcast station shall be identified by the transmission of the assigned station or system call sign, or by the call sign of the associated broadcast station. For systems, the licensee (including those operating pursuant to § 74.24 of this part) shall assign a unit designator to each station in the system. The call sign (and unit designator, where appropriate) shall be transmitted at the beginning and end of each period of operation. A period of operation may consist of a single continuous transmission, or a series of intermittent transmissions pertaining to a single event.

(b) In cases where a period of operation is of more than one hour duration identification of remote pickup broadcast stations participating in the operation shall be made at approximately one-hour intervals. Identification transmissions during operation need not be made when to make such transmissions would interrupt a single consecutive speech, play, religious service, symphony, concert, or any type of production. In such cases, the identification transmissions shall be made at the first interruption in the program continuity and at the conclusion thereof. Hourly identification may be accomplished either by transmission of the station or system call sign and unit designator assigned to the individual station or identification of an associated broadcasting station or network with which the remote pickup broadcast station is being used.

(c) In cases where an automatic relay station is a part of the circuit, the call sign of the relay transmitter may be transmitted automatically by the relay transmitter or by the remote pickup broadcast base or mobile station that actuates the automatic relay station.

(d) Automatically activated equipment may be used to transmit station identification in International Morse Code, provided that the modulation tone is 1200 Hz±800 Hz, the level of modulation of the identification signal is maintained at 40%±10%, and that the code transmission rate is maintained between 20 and 25 words per minute.

(e) For stations using F1E or G1E emissions, identification shall be transmitted in the unscrambled analog (F3E) mode or in International Morse Code pursuant to the provisions of paragraph (d) of this section at intervals not to exceed 15 minutes. For purposes of rule enforcement, all licensees using F1E or G1E emissions shall provide, upon request by the Commission,

a full and complete description of the encoding methodology they currently use.

NOTE: Stations are encouraged to identify using their associated part 73 station call sign.

[41 FR 29686, July 19, 1976, as amended at 47 FR 9220, Mar. 4, 1982; 52 FR 47569, Dec. 15, 1987; 56 FR 28499, June 21, 1991; 68 FR 12766, Mar. 17, 2003]

Subpart E—Aural Broadcast Auxiliary Stations

§ 74.501 Classes of aural broadcast auxiliary stations.

(a) *Aural broadcast STL station.* A fixed station for the transmission of aural program material between the studio and the transmitter of a broadcasting station other than an international broadcasting station.

(b) *Aural broadcast intercity relay (ICR) station.* A fixed station for the transmission of aural program material between radio broadcast stations, other than international broadcast stations, between FM radio broadcast stations and their co-owned FM booster stations, between noncommercial educational FM radio stations and their co-owned noncommercial educational FM translator stations assigned to reserved channels (Channels 201 to 220), between FM radio stations and FM translator stations operating within the coverage contour of their primary stations, or for such other purposes as authorized in § 74.531.

(c) *Aural broadcast microwave booster station.* A fixed station in the broadcast auxiliary service that receives and amplifies signals of an aural broadcast STL or intercity relay station and retransmits them on the same frequency.

[28 FR 13716, Dec. 14, 1963, as amended at 49 FR 7129, Feb. 27, 1984; 53 FR 4169, Feb. 12, 1988; 55 FR 50692, Dec. 10, 1990; 57 FR 41111, Sept. 9, 1992]

§ 74.502 Frequency assignment.

(a) Except as provided in NG30, broadcast auxiliary stations licensed as of November 21, 1984, to operate in the band 942–944 MHz[1] may continue to operate on a co-equal, primary basis to other stations and services operating in the band in accordance with the Table of Frequency Allocations. These stations will be protected from possible interference caused by new users of the band by the technical standards specified in § 101.105(c)(2).

(b) The frequency band 944–952 MHz is available for assignment to aural STL and ICR stations. One or more of the following 25 kHz segments may be stacked to form a channel which may be assigned with a maximum authorized bandwidth of 300 kHz except as noted in the following Table. The channel, will be assigned by its center frequency, channel bandwidth, and emission designator. The following frequencies are the centers of individual segments. When stacking an even number of segments, the center frequency specified will deviate from the following frequencies in that it should correspond to the actual center of stacked channels. When stacking an odd number of channels, the center frequency specified will correspond to one of the following frequencies.

944.0125, 944.0375, 944.0625, 944.0875, 944.1125,
944.1375, 944.1625, 944.1875, 944.2125, 944.2375,
944.2625, 944.2875, 944.3125, 944.3375, 944.3625,
944.3875, 944.4125, 944.4375, 944.4625, 944.4875,
944.5125, 944.5375, 944.5625, 944.5875, 944.6125,
944.6375, 944.6625, 944.6875, 944.7125, 944.7375,
944.7625, 944.7875, 944.8125, 944.8375, 944.8625,
944.8875, 944.9125, 944.9375, 944.9625, 944.9875,
945.0125, 945.0375, 945.0625, 945.0875, 945.1125,
945.1375, 945.1625, 945.1875, 945.2125, 945.2375,
945.2625, 945.2875, 945.3125, 945.3375, 945.3625,
945.3875, 945.4125, 945.4375, 945.4625, 945.4875,
945.5125, 945.5375, 945.5625, 945.5875, 945.6125,
945.6375, 945.6625, 945.6875, 945.7125, 945.7375,
945.7625, 945.7875, 945.8125, 945.8375, 945.8625,
945.8875, 945.9125, 945.9375, 945.9625, 945.9875,
946.0125, 946.0375, 946.0625, 946.0875, 946.1125,
946.1375, 946.1625, 946.1875, 946.2125, 946.2375,
946.2625, 946.2875, 946.3125, 946.3375, 946.3625,
946.3875, 946.4125, 946.4375, 946.4625, 946.4875,
946.5125, 946.5375, 946.5625, 946.5875, 946.6125,
946.6375, 946.6625, 946.6875, 946.7125, 946.7375,
946.7625, 946.7875, 946.8125, 946.8375, 946.8625,
946.8875, 946.9125, 946.9375, 946.9625, 946.9875,
947.0125, 947.0375, 947.0625, 947.0875, 947.1125,
947.1375, 947.1625, 947.1875, 947.2125, 947.2375,
947.2625, 947.2875, 947.3125, 947.3375, 947.3625,
947.3875, 947.4125, 947.4375, 947.4625, 947.4875,
947.5125, 947.5375, 947.5625, 947.5875, 947.6125,

[1] NOTE: In addition to this band, stations in Puerto Rico may continue to be authorized on 942.5, 943.0, 943.5, 944.0 MHz in the band 942–944 MHz on a primary basis to stations and services operating in accordance with the Table of Frequency Allocations.

947.6375, 947.6625, 947.6875, 947.7125, 947.7375, 947.7625, 947.7875, 947.8125, 947.8375, 947.8625, 947.8875, 947.9125, 947.9375, 947.9625, 947.9875, 948.0125, 948.0375, 948.0625, 948.0875, 948.1125, 948.1375, 948.1625, 948.1875, 948.2125, 948.2375, 948.2625, 948.2875, 948.3125, 948.3375, 948.3625, 948.3875, 948.4125, 948.4375, 948.4625, 948.4875, 948.5125, 948.5375, 948.5625, 948.5875, 948.6125, 948.6375, 948.6625, 948.6875, 948.7125, 948.7375, 948.7625, 948.7875, 948.8125, 948.8375, 948.8625, 948.8875, 948.9125, 948.9375, 948.9625, 948.9875, 949.0125, 949.0375, 949.0625, 949.0875, 949.1125, 949.1375, 949.1625, 949.1875, 949.2125, 949.2375, 949.2625, 949.2875, 949.3125, 949.3375, 949.3625, 949.3875, 949.4125, 949.4375, 949.4625, 949.4875, 949.5125, 949.5375, 949.5625, 949.5875, 949.6125, 949.6375, 949.6625, 949.6875, 949.7125, 949.7375, 949.7625, 949.7875, 949.8125, 949.8375, 949.8625, 949.8875, 949.9125, 949.9375, 949.9625, 949.9875, 950.0125, 950.0375, 950.0625, 950.0875, 950.1125, 950.1375, 950.1625, 950.1875, 950.2125, 950.2375, 950.2625, 950.2875, 950.3125, 950.3375, 950.3625, 950.3875, 950.4125, 950.4375, 950.4625, 950.4875, 950.5125, 950.5375, 950.5625, 950.5875, 950.6125, 950.6375, 950.6625, 950.6875, 950.7125, 950.7375, 950.7625, 950.7875, 950.8125, 950.8375, 950.8625, 950.8875, 950.9125, 950.9375, 950.9625, 950.9875, 951.0125, 951.0375, 951.0625, 951.0875, 951.1125, 951.1375, 951.1625, 951.1875, 951.2125, 951.2375, 951.2625, 951.2875, 951.3125, 951.3375, 951.3625, 951.3875, 951.4125, 951.4375, 951.4625, 951.4875, 951.5125, 951.5375, 951.5625, 951.5875, 951.6125, 951.6375, 951.6625, 951.6875, 951.7125, 951.7375, 951.7625, 951.7875, 951.8125, 951.8375, 951.8625, 951.8875, 951.9125, 951.9375, 951.9625, 951.9875.

(1) A single broadcast station may be authorized up to a maximum of twenty segments (500 kHz total bandwidth) for transmission of program material between a single origin and one or more designations. The station may lease excess capacity for broadcast and other uses on a secondary basis, subject to availability of spectrum for broadcast use. However, an FM station licensed for twelve or fewer segments (300 kHz total bandwidth) or an AM station licensed for eight or fewer segments (200 kHz total bandwidth) may lease excess capacity for broadcast and other uses on a primary basis.

(2) An applicant (new or modification of existing license) may assume the cost of replacement of one or more existing licensees equipment with narrowband equipment of comparable capabilities and quality in order to make available spectrum for its facilities. Existing licensees must accept such replacement without cost to them except upon a showing that the replacement equipment does not meet the capability or quality requirements.

(c) Aural broadcast STL and intercity relay stations that were licensed or had applications pending before the Commission as of September 18, 1998 may continue those operations in the band 18,760–18,820 and 19,100–19,160 MHz on a shared co-primary basis with other services under parts 21, 25, and 101 of this chapter until June 8, 2010. Prior to June 8, 2010, such stations are subject to relocation by licensees in the fixed-satellite service. Such relocation is subject to the provisions of §§ 101.85 through 101.97 of this chapter. After June 8, 2010, such operations are not entitled to protection from fixed-satellite service operations and must not cause unacceptable interference to fixed-satellite service station operations. No applications for new licenses will be accepted in these bands after June 8, 2000.

(1)(i) 5 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
340 MHz Separation	
18762.5	19102.5
18767.5	19107.5
18772.5	19112.5
18777.5	19117.5
18782.5	19122.5
18787.5	19127.5
18792.5	19132.5
18797.5	19137.5
18802.5	19142.5
18807.5	19147.5
18812.5	19152.5
18817.5	19157.5

(ii) Licensees may use either a two-way link or one frequency of a frequency pair for a one-way link.

(2) [Reserved]

(d) For the coordination of all frequency assignments for fixed stations above 944 MHz, for each frequency authorized under this part, the interference protection criteria in § 101.105(a), (b), and (c) of this chapter and the frequency usage coordination procedures of § 101.103(d) of this chapter will apply.

(e) The use of the frequencies listed in paragraph (b) of this section by aural broadcast intercity relay stations is subject to the condition that no harmful interference is caused to other classes of stations operating in

accordance with the Table of Frequency Allocations contained in § 2.106 of this chapter.

[28 FR 13716, Dec. 14, 1963, as amended at 48 FR 50332, Nov. 1, 1983; 49 FR 37777, Sept. 26, 1984; 50 FR 4658, Feb. 1, 1985; 50 FR 7341, Feb. 22, 1985; 50 FR 34150, Aug. 23, 1985; 50 FR 48600, Nov. 26, 1985; 54 FR 10329, Mar. 13, 1989; 54 FR 24905, June 12, 1989; 54 FR 30043, July 18, 1989; 65 FR 38325, June 20, 2000; 65 FR 54172, Sept. 7, 2000; 68 FR 12766, Mar. 17, 2003; 68 FR 16967, Apr. 8, 2003; 73 FR 25496, May 6, 2008]

§ 74.503 Frequency selection.

(a) Each application for a new station or change in an existing station shall be specific with regard to frequency. In general, the lowest suitable frequency will be assigned which, on an engineering basis, will not cause harmful interference to other stations operating in accordance with existing frequency allocations.

(b) Where it appears that interference may result from the operation of a new station or a change in the facilities of an existing station, the Commission may require a showing that harmful interference will not be caused to existing stations or that if interference will be caused the need for the proposed service outweighs the loss of service due to the interference.

[28 FR 13716, Dec. 14, 1963]

§ 74.531 Permissible service.

(a) An aural broadcast STL station is authorized to transmit aural program material between the studio and transmitter location of a broadcasting station, except an international broadcasting station, for simultaneous or delayed broadcast.

(b) An aural broadcast intercity relay station is authorized to transmit aural program material between broadcasting stations, except international broadcasting stations, for simultaneous or delayed broadcast.

(c) An aural broadcast intercity relay station is authorized to transmit aural program material between noncommercial educational FM radio stations and their co-owned noncommercial educational FM translator stations assigned to reserved channels (Channels 201 to 220) and between FM radio stations and FM translator stations operating within the coverage contour of their primary stations. This use shall not interfere with or otherwise preclude use of these broadcast auxiliary facilities by broadcast auxiliary stations transmitting aural programming between broadcast stations as provided in paragraph (b) of this section.

(d) An aural broadcast STL or intercity relay may be used to transmit material between an FM broadcast radio station and an FM booster station owned, operated, and controlled by the licensee of the originating FM radio station. This use shall not interfere with or otherwise preclude use of these broadcast auxiliary facilities by broadcast auxiliary stations transmitting aural programming between the studio and transmitter location of a broadcast station or between broadcast stations as provided in paragraphs (a) and (b) of this section.

(e) An aural broadcast microwave booster station is authorized to retransmit the signals of an aural broadcast STL or intercity relay station.

(f) Multiplexing of the STL or intercity relay transmitter may be employed to provide additional communication channels for the transmission of aural program material, news-wire teleprinter signals relaying news to be associated with main channel programming, operational communications, and material authorized to be transmitted over an FM station under a valid Subsidiary Communications Authorization (SCA). An aural broadcast STL or intercity relay station may not be operated solely for the transmission of operational, teleprinter or subsidiary communications. Operational communications include cues, orders, and other communications directly related to the operation of the broadcast station as well as special signals used for telemetry or the control of apparatus used in conjunction with the broadcasting operations.

(g) All program material, including subsidiary communications, transmitted over an aural broadcast STL or intercity relay station shall be intended for use by broadcast stations owned or under common control of the licensee or licensees of the STL or

intercity relay station. Other broadcast stations may simultaneously utilize such program material with permission of the STL or intercity relay station licensee.

(h) In any case where multiplexing, is employed on an aural broadcast STL station for the simultaneous transmission of more than one aural channel, the STL transmitter must be capable of transmitting the multiple channels within the channel on which the STL station is authorized to operate and with adequate technical quality so that each broadcast station utilizing the circuit can meet the technical performance standards stipulated in the rules governing that class of broadcasting station. If multiplex operation is employed during the regular operation of the STL station, the additional circuits shall be in operation at the time that the required periodic performance measurements are made of the overall broadcasting system from the studio microphone input circuit to the broadcast transmitter output circuit.

[28 FR 13716, Dec. 14, 1963, as amended at 45 FR 51564, Aug. 4, 1980; 52 FR 31403, Aug. 20, 1987; 55 FR 50693, Dec. 10, 1990; 57 FR 41111, Sept. 9, 1992]

§ 74.532 Licensing requirements.

(a) An aural broadcast STL or an aural broadcast intercity relay station will be licensed only to the licensee or licensees of broadcast stations, including low power FM stations, other than international broadcast stations, and for use with broadcast stations owned entirely by or under common control of the licensee or licensees. An aural broadcast intercity relay station also will be licensed for use by low power FM stations, noncommercial educational FM translator stations assigned to reserved channels (Channels 201–220) and owned and operated by their primary station, by FM translator stations operating within the coverage contour of their primary stations, and by FM booster stations. Aural auxiliary stations licensed to low power FM stations will be assigned on a secondary basis; *i.e.*, subject to the condition that no harmful interference is caused to other aural auxiliary stations assigned to radio broadcast stations. Auxiliary stations licensed to low power FM stations must accept any interference caused by stations having primary use of aural auxiliary frequencies.

(b) More than one aural broadcast STL or intercity relay station may be licensed to a single licensee upon a satisfactory showing that the additional stations are needed to provide different program circuits to more than one broadcast station, to provide program circuits from other studios, or to provide one or more intermediate relay stations over a path which cannot be covered with a single station due to terrain or distance.

(c) If more than one broadcast station or class of broadcast station is to be served by a single aural broadcast auxiliary station, this information must be stated in the application for construction permit or license.

(d) Licensees of aural broadcast STL and intercity relay stations may be authorized to operate one or more aural broadcast microwave booster stations for the purpose of relaying signals over a path that cannot be covered with a single station.

(e) Each aural broadcast auxiliary station will be licensed at a specified transmitter location to communicate with a specified receiving location, and the direction of the main radiation lobe of the transmitting antenna will be a term of the station authorization.

(f) In case of permanent discontinuance of operations of a station licensed under this subpart, the licensee shall cancel the station license using FCC Form 601. For purposes of this section, a station which is not operated for a period of one year is considered to have been permanently discontinued.

[28 FR 13716, Dec. 14, 1963, as amended at 49 FR 7129, Feb. 27, 1984; 49 FR 10930, Mar. 23, 1984; 52 FR 31403, Aug. 20, 1987; 55 FR 50693, Dec. 10, 1990; 57 FR 41111, Sept. 9, 1992; 58 FR 19775, Apr. 16, 1993; 65 FR 7649, Feb. 15, 2000; 68 FR 12766, Mar. 17, 2003]

§ 74.533 Remote control and unattended operation.

(a) Aural broadcast STL and intercity relay stations may be operated by remote control provided that such operation is conducted in accordance with the conditions listed below:

(1) The remote control system must provide adequate monitoring and control functions to permit proper operation of the station.

(2) The remote control system must be designed, installed, and protected so that the transmitter can only be activated or controlled by persons authorized by the licensee.

(3) The remote control system must prevent inadvertent transmitter operation due to malfunctions in circuits between the control point and transmitter.

(b) Aural broadcast auxiliary stations may be operated unattended subject to the following provisions:

(1) The transmitter shall be provided with adequate safeguards to prevent improper operation of the equipment.

(2) The transmitter installation shall be adequately protected against tampering by unauthorized persons.

(3) Whenever an unattended aural broadcast auxiliary station is used, appropriate observations must be made at the receiving end of the circuit as often as necessary to ensure proper station operation. However, an aural broadcast STL (and any aural broadcast microwave booster station) associated with a radio or TV broadcast station operated by remote control may be observed by monitoring the broadcast station's transmitted signal at the remote control or ATS monitoring point.

(c) The FCC may notify the licensee to cease or modify operation in the case of frequency usage disputes, interference or similar situations where such action appears to be in the public interest, convenience and necessity.

(Sec. 318, 48 Stat. 1089, as amended by sec. 1, 74 Stat. 363; 47 U.S.C. 318)

[28 FR 13716, Dec. 14, 1963, as amended at 47 FR 55936, Dec. 14, 1982; 49 FR 7130, Feb. 27, 1984; 50 FR 32417, Aug. 12, 1985; 50 FR 48599, Nov. 26, 1985; 60 FR 55483, Nov. 1, 1995]

§ 74.534 Power limitations.

(a) *Transmitter output power*. (1) Transmitter output power shall be limited to that necessary to accomplish the function of the system.

(2) In the 17,700 to 19,700 MHz band, transmitter output power shall not exceed 10 watts.

(b) In no event shall the average equivalent isotropically radiated power (EIRP), as referenced to an isotropic radiator, exceed the values specified in the following table. In cases of harmful interference, the Commission may, after notice and opportunity for hearing, order a change in the equivalent isotropically radiated power of this station.

Frequency band (MHz)	Maximum Allowable [1] EIRP (dBW)
944 to 952	+40
17,700 to 18,600	+55
18,600 to 19,700	+35

[1] Stations licensed based on an application filed before April 16, 2003, for EIRP values exceeding those specified above, may continue to operate indefinitely in accordance with the terms of their current authorizations, subject to periodic renewal.

(c) The EIRP of transmitters that use Automatic Transmitter Power Control (ATPC) shall not exceed the EIRP specified on the station authorization. The EIRP of non-ATPC transmitters shall be maintained as near as practicable to the EIRP specified on the station authorization.

[68 FR 12766, Mar. 17, 2003]

§ 74.535 Emission and bandwidth.

(a) The mean power of emissions shall be attenuated below the mean transmitter power (P_{MEAN}) in accordance with the following schedule:

(1) When using frequency modulation:

(i) On any frequency removed from the assigned (center) frequency by more than 50% up to and including 100% of the authorized bandwidth: At least 25 dB in any 100 kHz reference bandwidth (B_{REF});

(ii) On any frequency removed from the assigned (center) frequency by more than 100% up to and including 250% of the authorized bandwidth: At least 35 dB in any 100 kHz reference bandwidth;

(iii) On any frequency removed from the assigned (center) frequency by more than 250% of the authorized bandwidth: At least 43+10 $\log_{10}$ (P_{MEAN} in watts) dB, or 80 dB, whichever is the lesser attenuation, in any 100 kHz reference bandwidth.

(2) When using transmissions employing digital modulation techniques:

(i) For operating frequencies below 15 GHz, in any 4 kHz reference bandwidth (B_{REF}), the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 250 percent of the authorized bandwidth: As specified by the following equation but in no event less than 50 decibels:

$$A = 35 + 0.8(G - 50) + 10 \text{ Log}_{10} B.$$

(Attenuation greater than 80 decibels is not required.)

Where:

A = Attenuation (in decibels) below the mean output power level.
G = Percent removed from the carrier frequency.
B = Authorized bandwidth in megahertz.

(ii) For operating frequencies above 15 GHz, in any 1 MHz reference bandwidth (B_{REF}), the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 250 percent of the authorized bandwidth: As specified by the following equation but in no event less than 11 decibels:

$$A = 11 + 0.4(G - 50) + 10 \text{ Log}_{10} B.$$

(Attenuation greater than 56 decibels is not required.)

(iii) In any 4 kHz reference bandwidth (B_{REF}), the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 +10 Log_{10} (P_{MEAN} in watts) decibels, or 80 decibels, whichever is the lesser attenuation.

(b) For all emissions not covered in paragraph (a) of this section, the peak power of emissions shall be attenuated below the peak envelope transmitter power (P_{PEAK}) in accordance with the following schedule:

(1) On any frequency 500 Hz inside the channel edge up to and including 2500 Hz outside the same edge, the following formula will apply:

$$A = 29 \text{ Log}_{10} [(25/11)[(D + 2.5 - (W/2)]^2] \text{ dB}$$

(Attenuation greater than 50 decibels is not required.)

Where:

A = Attenuation (in dB) below the peak envelope transmitter power.
D = the displacement frequency (kHz) from the center of the authorized bandwidth.
W = the channel bandwidth (kHz).

(2) On any frequency removed from the channel edge by more than 2500 Hz: At least 43+10 Log_{10} (P_{PEAK} in watts) dB.

(c) In the event a station's emissions outside its authorized channel cause harmful interference, the Commission may require the licensee to take such further steps as may be necessary to eliminate the interference.

(d) For purposes of compliance with the emission limitation requirements of this section:

(1) If the transmitter modulates a single carrier, digital modulation techniques are considered as being employed when digital modulation occupies 50 percent or more of the total peak frequency deviation of a transmitted radio frequency carrier. The total peak frequency deviation will be determined by adding the deviation produced by the digital modulation signal and the deviation produced by any frequency division multiplex (FDM) modulation used. The deviation (D) produced by the FDM signal must be determined in accordance with § 2.202(f) of this chapter.

(2) If the transmitter modulates two or more carriers, with at least one using digital modulation and one using frequency or other analog modulation, digital modulation techniques are considered as being employed when the necessary bandwidth of the digital signal(s) is 50 percent or more of the aggregate bandwidth of the system, comprising the digital necessary bandwidth(s), the analog necessary bandwidth(s), and any bandwidth(s) between the digital and analog necessary bandwidths. In this case, the aggregate bandwidth shall be used for the authorized bandwidth (B) in paragraph (a) of this section, and for purposes of compliance with the bandwidth limitations in § 74.502 of this subpart; and the sum of the powers of the analog and digital signals shall be used for mean transmitter power (P_{MEAN}) in paragraph (a) or the peak envelope transmitter power (P_{PEAK}) in paragraph (b) of this section, and for purposes of compliance with the power limitations in § 74.534 of this subpart.

(3) For demonstrating compliance with the attenuation requirements for frequency modulation and digital modulation in paragraph (a) of this section, the resolution bandwidth (B_{RES}) of the measuring equipment used for measurements removed from the center frequency by more than 250 percent of the authorized bandwidth shall be 100 kHz for operating frequencies below 1 GHz, and 1 MHz for operating frequencies above 1 GHz. The resolution bandwidth for frequencies removed from the center frequency by less than 250 percent of the authorized bandwidth shall be the reference bandwidth (B_{REF}) specified in the individual emission limitations, but may be reduced to not less than one percent of the authorized bandwidth (B), adjusted upward to the nearest greater resolution bandwidth available on the measuring equipment. In all cases, if B_{RES} and B_{REF} are not equal, then the attenuation requirement must be increased (or decreased) as determined by a factor of 10 $\log_{10}$ [(B_{REF} in megahertz)/(B_{RES} in megahertz)] decibels, where a positive factor indicates an increase in the attenuation requirement and a negative factor indicates a decrease in the attenuation requirement.

(4) Stations licensed pursuant to an application filed before March 17, 2005, using equipment not conforming with the emission limitations specified above, may continue to operate indefinitely in accordance with the terms of their current authorizations, subject to periodic renewal. Existing equipment and equipment of product lines in production before April 16, 2003, authorized via certification or verification before March 17, 2005, for equipment not conforming to the emission limitations requirements specified above, may continue to be manufactured and/or marketed, but may not be authorized for use under a station license except at stations licensed pursuant to an application filed before March 17, 2005. Any non-conforming equipment authorized under a station license, and replaced on or after March 17, 2005, must be replaced by conforming equipment.

(e) The following limitations apply to the operation of aural broadcast microwave booster stations:

(1) The booster station must receive and amplify the signals of the originating station and retransmit them on the same frequency without significantly altering them in any way. The characteristics of the booster transmitter output signal shall meet the requirements applicable to the signal of the originating station.

(2) The licensee is responsible for correcting any condition of interference that results from the radiation of radio frequency energy outside the assigned channel. Upon notice by the FCC to the station licensee that interference is being caused, operation of the apparatus must be immediately suspended and may not be resumed until the interference has been eliminated or it can be demonstrated that the interference is not due to spurious emissions. However, short term test transmissions may be made during the period of suspended operation to determine the efficacy of remedial measures.

(3) In each instance where suspension of operation is required, the licensee must submit a full report to the FCC after operation is resumed. The report must contain details of the nature of the interference, the source of interfering signals, and the remedial steps taken to eliminate the interference.

[28 FR 13716, Dec. 14, 1963, as amended at 48 FR 50332, Nov. 1, 1983; 49 FR 7130, Feb. 27, 1984; 49 FR 37777, Sept. 26, 1984; 50 FR 48599, Nov. 26, 1985; 68 FR 12766, March 17, 2003.]

§ 74.536 Directional antenna required.

(a) Aural broadcast STL and ICR stations are required to use a directional antenna with the minimum beamwidth necessary, consistent with good engineering practice, to establish the link.

(b) An aural broadcast STL or intercity relay station operating in the 17.7–19.7 GHz band shall employ an antenna that meets the performance standards for Category A, except that in areas not subject to frequency congestion, antennas meeting standards for Category B may be employed. However, the Commission may require the replacement, at the licensee's expense, of any antenna or periscope antenna system of a permanent fixed station that does not meet performance Standard A,

which is specified in the table in paragraph (c) of this section, upon a showing that said antenna causes or is likely to cause interference to (or receive interference from) any other authorized or proposed station; provided that an antenna meeting performance Standard A is unlikely to involve such interference.

(c) Licensees shall comply with the antenna standards table shown in this paragraph in the following manner:

(1) With either the maximum beamwidth to 3 dB points requirement or with the minimum antenna gain requirement; and

(2) With the minimum radiation suppression to angle requirement.

ANTENNA STANDARDS

Frequency (GHz)	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°
17.7 to 19.7	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.

[48 FR 50333, Nov. 1, 1983, as amended at 49 FR 7130, Feb. 27, 1984; 50 FR 48599, Nov. 26, 1985; 51 FR 19840, June 3, 1986; 62 FR 4922, Feb. 3, 1997; 68 FR 12767, Mar. 17, 2003]

§ 74.537 Temporary authorizations.

(a) Special temporary authority may be granted for aural broadcast STL or intercity relay station operation which cannot be conducted in accordance with § 74.24. Such authority will normally be granted only for operations of a temporary nature. Where operation is seen as likely on a continuing annual basis, an application for a regular authorization should be submitted.

(b) A request for special temporary authority for the operation of an aural broadcast STL or an intercity relay station must be made in accordance with the procedures of § 1.931(b) of this chapter.

(c) All requests for special temporary authority of an aural broadcast auxiliary stations must include full particulars including: licensee's name and address, facility identification number of the associated broadcast station(s), call letters of the aural broadcast STL or intercity relay station, if assigned, type and manufacturer of equipment, effective isotropic radiated power, emission, frequency or frequencies proposed for use, commencement and termination date and location of the proposed operation, and purpose for which request is made including any particular justification.

(d) A request for special temporary authorization shall specify a frequency or frequencies consistent with the provisions of § 74.502. However, in the case of events of widespread interest and importance which cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested upon a showing that operation thereon will not cause interference to established stations. In no case will operation of an aural broadcast STL or intercity relay station be authorized on frequencies employed for the safety of life or property.

(e) When the transmitting equipment utilized is not licensed to the user, the user shall nevertheless have full control over the use of the equipment during the period it is operated.

(f) Special temporary authorization to permit operation of aural broadcast STL or intercity relay stations or systems pending FCC action on an application for regular authority will normally not be granted.

[47 FR 9220, Mar. 4, 1982, as amended at 50 FR 23709, June 5, 1985; 58 FR 19775, Apr. 16, 1993; 68 FR 12767, Mar. 17, 2003]

§ 74.550 Equipment authorization.

Each authorization for aural broadcast STL, ICR, and booster stations shall require the use of equipment which has been certificated or verified. Equipment which has not been approved under the equipment authorization program and which was in service prior to July 1, 1993, may be retained solely for temporary uses necessary to restore or maintain regular service provided by approved equipment, because the main or primary unit has failed or requires servicing. Such temporary uses may not interfere with or impede the establishment of other aural broadcast auxiliary links and may not occur during more than 720 cumulative hours per year. Should interference occur, the licensee must take all steps necessary to eliminate it, up to and including cessation of operation of the auxiliary transmitter. All unapproved equipment retained for temporary use must have been in the possession of the licensee prior to July 1, 1993, and may not be obtained from other sources. Equipment designed exclusively for fixed operation shall be authorized under the verification procedure. The equipment authorization procedures are contained in subpart J of part 2 of the rules.

NOTE TO § 74.550: Consistent with the note to § 74.502(a), grandfathered equipment in the 942–944 MHz band and STL/ICR users of these frequencies in Puerto Rico are also required to come into compliance by July 1, 1993. The backup provisions described above apply to these stations also.

[63 FR 36604, July 7, 1998]

§ 74.551 Equipment changes.

(a) Modifications may be made to an existing authorization in accordance with §§ 1.929 and 1.947 of this chapter.

(b) Permissible changes in equipment operating in the bands 18.3–18.58, 18.76–18.82 GHz and 19.1–19.16 GHz. Notwithstanding other provisions of this section, licensees of stations that remain co-primary under the provisions of § 74.502(c) may not make modifications to their systems that increase interference to satellite earth stations, or result in a facility that would be more costly to relocate.

[28 FR 13716, Dec. 14, 1963, as amended at 38 FR 6827, Mar. 13, 1973; 47 FR 54448, Dec. 3, 1982; 49 FR 7130, Feb. 27, 1984; 50 FR 48599, Nov. 26, 1985; 58 FR 19775, Apr. 16, 1993; 61 FR 4368, Feb. 6, 1996; 65 FR 54172, Sept. 7, 2000; 68 FR 12768, Mar. 17, 2003; 68 FR 16967, Apr. 8, 2003; 68 FR 20225, Apr. 24, 2003; 69 FR 43772, July 22, 2004]

§ 74.561 Frequency tolerance.

In the bands above 944 MHz, the operating frequency of the transmitter shall be maintained in accordance with the following table:

Frequency band (MHz)	Tolerance as percentage of assigned frequency
944 to 952	0.005
17,700 to 19,700	0.003

[54 FR 30043, July 18, 1989, as amended at 68 FR 12768, Mar. 17, 2003]

§ 74.562 Frequency monitors and measurements.

The licensee shall ensure that the STL, ICR, TVP, or booster transmitter does not exceed the emission limitations of § 74.535. This may be accomplished by appropriate frequency measurement techniques and consideration of the transmitter emissions.

[50 FR 48599, Nov. 26, 1985]

§ 74.564 Posting of station license.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted in the room in which the transmitter is located, provided that if the station is operated by remote control pursuant to § 74.533, the station license shall be posted at the operating position.

(b) Posting of the station license and any other instruments of authorization shall be done by affixing the licenses to the wall at the posting location, or by enclosing them in a binder or folder which is retained at the posting location so that the documents will be readily available and easily accessible.

[48 FR 24385, June 1, 1983, as amended at 60 FR 55483, Nov. 1, 1995]

§ 74.582 Station identification.

(a) Each aural broadcast STL or intercity relay station, when transmitting program material or information shall transmit station identification at the beginning and end of each period of operation, and hourly, as close to the hour as feasible, at a natural break in program offerings by one of the following means:

(1) Transmission of its own call sign by aural means or by automatic transmission of international Morse telegraphy.

(2) Aural transmission of the call sign of the radio broadcast station with which it is licensed as an STL or intercity relay station.

(3) Aural transmission of the call sign of the radio broadcast station whose signals are being relayed, or, when programs are obtained directly from network lines and relayed, the network identification.

(b) Station identification transmissions during operation need not be made when to make such transmission would interrupt a single consecutive speech, play, religious service, symphony concert, or other such productions. In such cases, the identification transmission shall be made at the first interruption of the entertainment continuity and at the conclusion thereof.

(c) Where more than one aural broadcast STL or intercity relay station is employed in an integrated relay system, the station at the point of origination may originate the transmission of the call signs of all of the stations in the relay system.

(d) Aural broadcast microwave booster stations will be assigned individual call signs. However, station identification will be accomplished by the retransmission of identification as provided in paragraph (a) of this section.

(e) Voice transmissions shall normally be employed for station identification. However, other methods of station identification may be permitted or required by the Commission.

[28 FR 13716, Dec. 14, 1963, as amended at 42 FR 36830, July 18, 1977; 42 FR 38178, July 27, 1977; 45 FR 26067, Apr. 17, 1980; 49 FR 7130, Feb. 27, 1984]

Subpart F—Television Broadcast Auxiliary Stations

§ 74.600 Eligibility for license.

A license for a station in this subpart will be issued only to a television broadcast station, a Class A TV station, a television broadcast network-entity, a low power TV station, or a TV translator station.

[65 FR 30011, May 10, 2000]

§ 74.601 Classes of TV broadcast auxiliary stations.

(a) *TV pickup stations.* A land mobile station used for the transmission of TV program material and related communications from scenes of events occurring at points removed from TV station studios to a TV broadcast, Class A TV or low power TV station or other purposes as authorized in § 74.631.

(b) *TV STL station (studio-transmitter link).* A fixed station used for the transmission of TV program material and related communications from the studio to the transmitter of a TV broadcast, Class A TV or low power TV station or other purposes as authorized in § 74.631.

(c) *TV relay station.* A fixed station used for transmission of TV program material and related communications for use by TV broadcast, Class A TV and low power TV stations or other purposes as authorized in § 74.631.

(d) *TV translator relay station.* A fixed station used for relaying programs and signals of TV broadcast or Class A TV stations to Class A TV, LPTV, TV translator, and to other communications facilities that the Commission may authorize or for other purposes as permitted by § 74.631.

(e) *TV broadcast licensee.* Licensees and permittees of TV broadcast, Class A TV and low power TV stations, unless specifically otherwise indicated.

(f) *TV microwave booster station.* A fixed station in the TV broadcast auxiliary service that receives and amplifies signals of a TV pickup, TV STL, TV relay, or TV translator relay station and retransmits them on the same frequency.

[65 FR 30012, May 10, 2000]

§ 74.602 Frequency assignment.

(a) The following frequencies are available for assignment to television pickup, television STL, television relay and television translator relay stations. The band segments 17,700–18,580 and 19,260–19,700 MHz are available for broadcast auxiliary stations as described in paragraph (g) of this section. The band segment 6425–6525 MHz is available for broadcast auxiliary stations as described in paragraph (i) of this section. Broadcast network-entities may also use the 1990–2110, 6425–6525 and 6875–7125 MHz bands for mobile television pickup only.

Band A MHz	Band B MHz	Band D [1] GHz			
		Group A channels		Group B channels	
		Designation	Channel boundaries	Designation	Channel boundaries
1990–2008		A01	12.700–12.725	B01	12.7125–12.7375
2008–2025		A02	12.725–12.750	B02	12.7375–12.7625
2025–2042		A03	12.750–12.775	B03	12.7625–12.7875
2042–2059		A04	12.775–12.800	B04	12.7875–12.8125
2059–2076	6875–6900	A05	12.800–12.825	B05	12.8125–12.8375
2076–2093	6900–6925	A06	12.825–12.850	B06	12.8375–12.8625
2093–2110	6925–6950	A07	12.850–12.875	B07	12.8625–12.8875
2450–2467	6950–6975	A08	12.875–12.900	B08	12.8875–12.9125
2467–2483.5	6975–7000	A09	12.900–12.925	B09	12.9125–12.9375
	7000–7025	A10	12.925–12.950	B10	12.9375–12.9625
	7025–7050	A11	12.950–12.975	B11	12.9625–12.9875
	7050–7075	A12	12.975–13.000	B12	12.9875–12.0125
	7075–7100	A13	13.000–13.025	B13	13.0125–13.0375
	7100–7125	A14	13.025–13.050	B14	13.0375–13.0625
		A15	13.050–13.075	B15	13.0625–13.0875
		A16	13.075–13.100	B16	13.0875–13.1125
		A17	13.100–13.125	B17	13.1125–13.1375
		A18	13.125–13.150	B18 [2]	13.1375–13.1625
		A19 [2]	13.150–13.175	B19 [2]	13.1625–13.1875
		A20 [2]	13.175–13.200	B20 [2]	13.1875–13.2125
		A21	13.200–13.225	B21	13.2125–13.2375
		A22	13.225–13.250		

[1] For fixed stations using Band D Channels, applicants are encouraged to use alternate A and B channels such that adjacent R.F. carriers are spaced 12.5 MHz. As example, a fixed station, relaying several channels, would use A01, B01, A02, B02, A03, etc.

[2] The band 13.15–13.20 GHz is reserved for television pickup and CARS pickup stations inside a 50 km radius of the 100 television markets delineated in § 76.51 of this chapter. Outside a 50 km radius of the 100 television markets delineated in § 76.51 of this chapter, television pickup stations, CARS stations and NGSO FSS gateway earth stations shall operate on a primary co-equal basis. The band 13.20–13.2125 GHz is reserved for television pickup stations on a primary basis and CARS pickup stations on a secondary basis inside a 50 km radius of the 100 television markets delineated in § 76.51 of this chapter. Outside a 50 km radius of the 100 markets delineated in § 76.51 of this chapter, television pickup stations and NGSO FSS gateway earth stations shall operate on a co-primary basis, CARS stations shall operate on a secondary basis. Fixed television auxiliary stations licensed pursuant to applications accepted for filing before September 1, 1979, may continue operation on channels in the 13.15–13.25 GHz band, subject to periodic license renewals. NGSO FSS gateway uplink transmissions in the 13.15–13.2125 GHz segment shall be limited to a maximum EIRP of 3.2 dBW towards 0 degrees on the radio horizon. These provisions shall not apply to GSO FSS operations in the 12.75–13.25 GHz band.

(1) Frequencies shown above between 2450 and 2500 MHz in Band A are allocated to accommodate the incidental radiations of industrial, scientific, and medical (ISM) equipment, and stations operating therein must accept any interference that may be caused by the operation of such equipment. Frequencies between 2450 and 2500 MHz are also shared with other communication services and exclusive channel assignments will not be made, nor is the channeling shown above necessarily that which will be employed by such other services.

(2) In the band 2483.5–2500 MHz, no applications for new stations or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, and licensees whose initial applications were filed on or before July 25, 1985, are grandfathered and their operations are on a co-primary basis with the mobile-satellite and radiodetermination-satellite services, and in the segment 2495–2500 MHz, their operations are also on a co-primary basis with part 27 fixed and mobile except aeronautical mobile service operations.

(3)(i) After January 7, 2004, stations may adhere to the channel plan specified in paragraph (a) of this section, or the following channel plan in Band A:

Channel A1r—2025.5–2037.5 MHz
Channel A2r—2037.5–2049.5 MHz
Channel A3r—2049.5–2061.5 MHz
Channel A4—2061.5–2073.5 MHz
Channel A5r—2073.5–2085.5 MHz
Channel A6r—2085.5–2097.5 MHz
Channel A7r—2097.5–2109.5 MHz

(ii) Stations adhering to the channel plan specified in paragraph (a)(3)(i) of this section may also use the following 40 data return link (DRL) channels to facilitate their operations in the 2025.5–2109.5 MHz band:

Lower band DRL channels

2025.000–2025.025 MHz
2025.025–2025.050 MHz
2025.050–2025.075 MHz
2025.075–2025.100 MHz
2025.100–2025.125 MHz
2025.125–2025.150 MHz
2025.150–2025.175 MHz
2025.175–2025.200 MHz
2025.200–2025.225 MHz
2025.225–2025.250 MHz
2025.250–2025.275 MHz
2025.275–2025.300 MHz
2025.300–2025.325 MHz
2025.325–2025.350 MHz
2025.350–2025.375 MHz
2025.375–2025.400 MHz
2025.400–2025.425 MHz
2025.425–2025.450 MHz
2025.450–2025.475 MHz
2025.475–2025.500 MHz

Upper band DRL channels

2109.500–2109.525 MHz
2109.525–2109.550 MHz
2109.550–2109.575 MHz
2109.575–2109.600 MHz
2109.600–2109.625 MHz
2109.625–2109.650 MHz
2109.650–2109.675 MHz
2109.675–2109.700 MHz
2109.700–2109.725 MHz
2109.725–2109.750 MHz
2109.750–2109.775 MHz
2109.775–2109.800 MHz
2109.800–2109.825 MHz
2109.825–2109.850 MHz
2109.850–2109.875 MHz
2109.875–2109.900 MHz
2109.900–2109.925 MHz
2109.925–2109.950 MHz
2109.950–2109.975 MHz
2109.975–2110.000 MHz

(iii) Broadcast Auxiliary Service, Cable Television Remote Pickup Service, and Local Television Transmission Service licensees will be required to use the Band A channel plan in paragraph (a)(3)(i) of this section after completion of relocation by an Emerging Technologies licensee in accordance with § 74.690 or § 78.40. Licensees declining relocation may continue to use their existing channel plan but must discontinue use of the 1990–2025 MHz band when they indicate to an Emerging Technologies licensee, acting pursuant to § 74.690 or § 78.40 of this chapter, that they decline to be relocated.

(4) [Reserved]

(b) Subject to the conditions of paragraph (a) of this section, frequency assignments will normally be made as requested, provided that the frequency selection provisions of § 74.604 have been followed and that the frequency requested will cause no interference to existing users in the area. The Commission reserves the right to assign frequencies other than those requested if, in its opinion, such action is warranted.

(c) Fixed link stations will be authorized to operate on one channel only.

(d) Cable Television Relay Service stations may be assigned channels in Band D between 12,700 and 13,200 MHz subject to the condition that no harmful interference is caused to TV STL and TV relay stations authorized at the time of such grants. Similarly, new TV STL and TV relay stations must not cause harmful interference to cable television relay stations authorized at the time of such grants. The use of channels between 12,700 and 13,200 MHz by TV pickup stations is subject to the condition that no harmful interference is caused to Cable Television Relay Service stations, TV STL and TV relay stations, except as provided for in § 74.602(a) Note 2. Band D channels are also shared with certain Private Operational Fixed Stations, see § 74.638.

(e) Communication common carriers in the Local Television Transmission Service (Part 101) may be assigned frequencies available to television broadcast station licensees and broadcast network entities for the purpose of providing service to television broadcast stations and broadcast network entities, respectively.

(f) TV auxiliary stations licensed to low power TV stations and translator relay stations will be assigned on a secondary basis, *i.e.*, subject to the condition that no harmful interference is caused to other TV auxiliary stations assigned to TV broadcast stations, or to cable television relay service stations (CARS) operating between 12,700 and 13,200 MHz. Auxiliary stations licensed to low power TV stations and translator relay stations must accept any interference caused by stations having primary use of TV auxiliary frequencies.

(g) The following frequencies are available for assignment to television STL, television relay stations and television translator relay stations. Stations operating on frequencies in the sub-bands 18.3–18.58 GHz and 19.26–19.3 GHz that were licensed or had applications pending before the Commission as of September 18, 1998 may continue those operations on a shared co-primary basis with other services under parts 21, 25, 78, and 101 of this chapter. Such stations, however, are subject to relocation by licensees in the fixed-satellite service. Such relocation is subject to the provisions of §§ 101.85 through 101.97 of this chapter. No new applications for new licenses will be accepted in the 19.26–19.3 GHz band after June 8, 2000, and no new applications for new licenses will be accepted in the 18.3–18.58 GHz band after November 19, 2002. The provisions of § 74.604 do not apply to the use of these frequencies. Licensees may use either a two-way link or one or both frequencies of a frequency pair for a one-way link and shall coordinate proposed operations pursuant to procedures required in § 101.103(d) of this chapter.

(1) 2 MHz maximum authorized bandwidth channel:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
18141.0	n/a

(2) 6 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
216 MHz Separation	
18145.0	n/a
18151.0	18367.0
18157.0	18373.0
18163.0	18379.0
18169.0	18385.0
18175.0	18391.0
18181.0	18397.0
18187.0	18403.0
18193.0	18409.0
18199.0	18415.0
18205.0	18421.0
18211.0	18427.0
18217.0	18433.0
18223.0	18439.0
18229.0	18445.0
18235.0	18451.0
18241.0	18457.0
18247.0	18463.0
18253.0	18469.0
18259.0	18475.0
18265.0	18481.0
18271.0	18487.0
18277.0	18493.0
18283.0	18499.0
18289.0	18505.0
18295.0	18511.0
18301.0	18517.0
18307.0	18523.0
18313.0	18529.0
18319.0	18535.0
18325.0	18541.0
18331.0	18547.0
18337.0	18553.0
18343.0	18559.0
18349.0	18565.0
18355.0	18571.0
18361.0	18577.0

(3) 10 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17705.0	19265.0
17715.0	19275.0
17725.0	19285.0
17735.0	19295.0
17745.0	19305.0
17755.0	19315.0
17765.0	19325.0
17775.0	19335.0
17785.0	19345.0
17795.0	19355.0
17805.0	19365.0
17815.0	19375.0
17825.0	19385.0
17835.0	19395.0
17845.0	19405.0
17855.0	19415.0
17865.0	19425.0
17875.0	19435.0
17885.0	19445.0
17895.0	19455.0
17905.0	19465.0
17915.0	19475.0
17925.0	19485.0
17935.0	19495.0
17945.0	19505.0
17955.0	19515.0
17965.0	19525.0
17975.0	19535.0
17985.0	19545.0
17995.0	19555.0
18005.0	19565.0
18015.0	19575.0
18025.0	19585.0
18035.0	19595.0
18045.0	19605.0
18055.0	19615.0
18065.0	19625.0
18075.0	19635.0
18085.0	19645.0
18095.0	19655.0
18105.0	19665.0
18115.0	19675.0
18125.0	19685.0
18135.0	19695.0

(4) 20 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17710.0	19270.0
17730.0	19290.0
17750.0	19310.0
17770.0	19330.0
17790.0	19350.0
17810.0	19370.0
17830.0	19390.0
17850.0	19410.0
17870.0	19430.0
17890.0	19450.0
17910.0	19470.0
17930.0	19490.0
17950.0	19510.0
17970.0	19530.0
17990.0	19550.0
18010.0	19570.0
18030.0	19590.0
18050.0	19610.0
18070.0	19630.0
18090.0	19650.0
18110.0	19670.0
18130.0	19690.0

(5) 40 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17720.0	19280.0
17760.0	19320.0
17800.0	19360.0
17840.0	19400.0
17880.0	19440.0
17920.0	19480.0
17960.0	19520.0
18000.0	19560.0
18040.0	19600.0
18080.0	19640.0
18120.0	19680.0

(6) 80 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17740.0	19300.0
17820.0	19380.0
17900.0	19460.0
17980.0	19540.0
18060.0	19620.0

(h) TV STL, TV relay stations, and TV translator relay stations may be authorized to operate fixed point-to-point service on the UHF TV channels 14–69 on a secondary basis and subject to the provisions of subpart G of this part:

(1) Applications for authorization in accordance with this paragraph must comply with the following technical limits or be accompanied by an engineering analysis demonstrating why these limits must be exceeded:

(i) Maximum EIRP is limited to 35 dBW;

(ii) Transmitting antenna beamwidth is limited to 25 degrees (measured at the 3 dB points); and

(iii) Vertical polarization is used.

(2) These stations must not interfere with and must accept interference from current and future full-power UHF-TV stations, LPTV stations, and translator stations. They will also be secondary to land mobile stations in areas where land mobile sharing is currently permitted.

(3) TV STL and TV relay stations licensed for operation on UHF TV channels 52–69 based on applications filed before April 16, 2003, may continue to operate under the terms of their current authorizations until the end of transition to digital television in their market (DTV Transition), as set forth in §§ 73.622 through 73.625 of this chapter. Applications for TV STL and TV relay stations operating on UHF TV channels 52–69 will not be accepted for filing on or after April 16, 2003.

(4) TV translator relay stations licensed for operation on UHF TV channels 52–59 based on applications filed before the end of DTV transition may continue to operate under the terms of their current authorizations indefinitely. TV translator relay stations licensed for operation on UHF TV channels 60–69 based on applications filed before the end of DTV transition may continue to operate under the terms of their current authorizations until the end of DTV Transition. Applications for TV translator relay stations operating on UHF TV channels 52–69 will not be accepted for filing on or after the end of DTV Transition.

(i) *6425 to 6525 MHz—Mobile Only*. Paired and un-paired operations permitted. Use of this spectrum for direct delivery of video programs to the general public or multi-channel cable distribution is not permitted. This band is co-equally shared with mobile stations licensed pursuant to parts 78 and 101 of this chapter. The following channel plans apply.

(1) 1 MHz maximum authorized bandwidth channels.

Transmit (or receive MHz)	Receive (or transmit) (MHz)
6425.5	6475.5
6450.5	6500.5

(2) 8 MHz maximum authorized bandwidth channels.

Transmit (or receive MHz)	Receive (or transmit) (MHz)
6430.0	6480.0
6438.0	6488.0
6446.0	6596.0
6455.0	6505.0
6463.0	6513.0
6471.0	6521.0

(3) 25 MHz maximum authorized bandwidth channels.

Transmit (or receive MHz)	Receive (or transmit (MHz)
6437.5	6487.5
6462.5	6512.5

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082; 47 U.S.C. 154, 155, 303)

[28 FR 13718, Dec. 14, 1963]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 74.602, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.fdsys.gov.

EFFECTIVE DATE NOTE: At 76 FR 59571, Sept. 27, 2011, § 74.602 was amended by revising paragraph (a) introductory text, effective Oct. 27, 2011. For the convenience of the user, the revised text is set forth as follows:

§ 74.602 Frequency assignment.

(a) The following frequencies are available for assignment to television pickup, television STL, television relay and television translator relay stations. The band segments 17,700–18,580 and 19,260–19,700 MHz are available for broadcast auxiliary stations as described in paragraph (g) of this section. The band segment 6425–6525 MHz is available for broadcast auxiliary stations as described in paragraph (i) of this section. The bands 6875–7125 MHz and 12700–13200 MHz are co-equally shared with stations licensed pursuant to Parts 78 and 101 of the Commission's Rules. Broadcast network-entities may also use the 1990–2110, 6425–6525 and 6875–7125 MHz bands for mobile television pickup only.

* * * * *

§ 74.603 Sound channels.

(a) The frequencies listed in § 74.602(a) may be used for the simultaneous transmission of the picture and sound portions of TV broadcast programs and for cue and order circuits, either by means of multiplexing or by the use of a separate transmitter within the same channel. When multiplexing of a TV

STL station is contemplated, consideration should be given to the requirements of § 73.687 of this Chapter regarding the overall system performance requirements. Applications for new TV pickup, TV STL, TV relay and TV translator relay stations shall clearly indicate the nature of any mutliplexing proposed. Multiplexing equipment may be installed on licensed equipment without authority of the FCC, provided the installation of such apparatus on a TV STL station shall not result in degradation of the overall system performance of the TV broadcast station below that permitted by § 73.687 of this chapter.

(b) [Reserved]

(c) Aural STL or intercity relay stations licensed as of July 10, 1970, to operate in the frequency band 942–947 MHz, may continue to so operate pending a decision as to their disposition through a future rule making proceeding.

(d) Remote pickup broadcast stations may be used in conjunction with television pickup stations for the transmission of the aural portion of television programs or events that occur outside a television studio and for the transmission of cues, orders, and other related communications necessary thereto. The rules governing remote pickup broadcast stations are contained in Subpart D of this part.

[28 FR 13718, Dec. 14, 1963, as amended at 47 FR 55936, Dec. 14, 1982; 48 FR 24385, June 1, 1983; 68 FR 12769, Mar. 17, 2003]

§ 74.604 Interference avoidance.

(a) [Reserved]

(b) Where two or more licensees are assigned a common channel for TV pickup, TV STL, or TV relay purposes in the same area and simultaneous operation is contemplated, they shall take such steps as may be necessary to avoid mutual interference, including consultation with the local coordination committee, if one exists. If a mutual agreement to this effect cannot be reached, the Commission must be notified and it will take such action as may be necessary, including time sharing arrangements, to assure an equitable distribution of available frequencies.

(c) For those interference disputes brought to the Commission for resolution, TV broadcast auxiliary channels will have the following priority for purposes of interference protection:

(1) All fixed links for full service broadcast stations and cable systems.

(2) TV and CARS pickup stations.

(3) Fixed or mobile stations serving translator or low power TV stations.

(4) Backup facilities; TV pickup stations used outside a licensee's local service area.

(5) Any transmission, pursuant to § 74.631(f), that does not involve the delivery of program material to a licensee's associated TV broadcast station.

(d) Interference between two stations having the same priority shall be resolved in favor of the station licensed first on a particular path.

[48 FR 17091, Apr. 21, 1983, as amended at 68 FR 12769, Mar. 17, 2003]

§ 74.605 Registration of stationary television pickup receive sites.

Licensees of TV pickup stations in the 6875–7125 MHz and 12700–13200 MHz bands shall register their stationary receive sites using the Commission's Universal Licensing System.

[76 FR 59571, Sept. 27, 2011]

EFFECTIVE DATE NOTE: At 76 FR 59571, Sept. 27, 2011, § 74.605 was added, effective Oct. 27, 2011. This section contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

§ 74.631 Permissible service.

(a) The licensee of a television pickup station authorizes the transmission of program material, orders concerning such program material, and related communications necessary to the accomplishment of such transmissions, from the scenes of events occurring in places other than a television studio, to its associated television broadcast station, to an associated television relay station, to such other stations as are broadcasting the same program material, or to the network or networks with which the television broadcast station is affiliated. Television pickup stations may be operated in conjunction with other television broadcast stations not aformentioned in this paragraph: *Provided*, That the transmissions by the television pickup

station are under the control of the licensee of the television pickup station and that such operation shall not exceed a total of 10 days in any 30-day period. Television pickup stations may be used to provide temporary studio-transmitter links or intercity relay circuits consistent with § 74.632 without further authority of the Commission: *Provided, however*, That prior Commission authority shall be obtained if the transmitting antenna to be installed will increase the height of any natural formation or man-made structure by more than 6.1 meters (20 feet) and will be in existence for a period of more than 2 consecutive days.

NOTE: As used in this subpart, ''associated television broadcast station'' means a television broadcast station licensed to the licensee of the television auxiliary broadcast station and with which the television auxiliary station is licensed as an auxiliary facility.

(b) A television broadcast STL station is authorized to transmit visual program material between the studio and the transmitter of a television broadcast station for simultaneous or delayed broadcast.

(c) A TV relay station is authorized to transmit visual program material between TV broadcast stations for simultaneous or delayed broadcast, or may be used to transmit visual program material from a remote pickup receiver site of a single station.

(d) The transmitter of an STL, TV relay station or TV translator relay station may be multiplexed to provide additional communication channels. A TV broadcast STL or TV relay station will be authorized only in those cases where the principal use is the transmission of television broadcast program material for use by its associated TV broadcast station. However, STL or TV relay stations so licensed may be operated at any time for the transmission of multiplexed communications whether or not visual program material is being transmitted, provided that such operation does not cause harmful interference to TV broadcast pickup, STL or TV relay stations transmitting television broadcast program material.

(e) Except as provided in paragraphs (a), (d), (f) and (j) of this section, all program material transmitted over a TV pickup, STL, or TV relay station shall be used by or intended for use by a TV broadcast station owned by or under the common control of the licensee of the TV pickup, STL, or TV relay station. Program material transmitted over a TV pickup, STL or TV relay station and so used by the licensee of such facility may, with the permission of the licensee of the broadcast auxiliary facility, be used by other TV broadcast stations and by non-broadcast closed circuit educational TV systems operated by educational institutions.

(f) A TV broadcast pickup, STL, or TV relay station may be used for the transmission of material to be used by others, including but not limited to other broadcast stations, cable television systems, and educational institutions. This use shall not interfere with the use of these broadcast auxiliary facilities for the transmission of programs and associated material intended to be used by the television station or stations licensed to or under common control of the licensee of the TV pickup, STL, or TV relay station. This use of the broadcast auxiliary facilities must not cause harmful interference to broadcast auxiliary stations operating in accordance with the basic frequency allocation, and the licensee of the TV pickup, STL, or TV relay station must retain exclusive control over the operation of the facilities. Prior to operating pursuant to the provisions of this section, the licensee shall, for the intended location or area-of-operation, notify the appropriate frequency coordinatioin committee or any licensee(s) assigned the use of the proposed operating frequency, concerning the particulars of the intended operation and must provide the name and telephone number of a person who may be contacted in the event of interference.

(g) Except as provided in paragraph (d) of this section, a television translator relay station is authorized for the purpose of relaying the programs and signals of a television broadcast station to television broadcast translator stations for simultaneous retransmission.

(h) A TV microwave booster station is authorized to retransmit the signals of a TV pickup, TV STL, TV relay, or TV translator relay station.

(i) TV broadcast auxiliary stations authorized pursuant to this subpart may additionally be authorized to supply programs and signals of TV broadcast stations to cable television systems or CARS stations. Where the licensee of a TV broadcast auxiliary station supplies programs and signals to cable television systems or CARS stations, the TV auxiliary licensee must have exclusive control over the operation of the TV auxiliary stations licensed to it. Contributions to capital and operating expenses may be accepted only on a cost-sharing, non-profit basis, prorated on an equitable basis among all parties being supplied with program material.

(j) A broadcast network-entity may use television auxiliary service stations to transmit their own television program materials to broadcast stations, other broadcast network-entities, cable systems and cable network-entities: *Provided*, *however*, that the bands 1990–2110 MHz, 6425–6525 MHz and 6875–7125 MHz may be used by broadcast network-entities only for television pick-up stations.

[28 FR 13718, Dec. 14, 1963, as amended at 29 FR 15524, Nov. 19, 1964; 43 FR 1950, Jan. 13, 1978; 44 FR 32381, June 6, 1979; 47 FR 55937, Dec. 14, 1982; 48 FR 17092, Apr. 21, 1983; 49 FR 7130, Feb. 27, 1984; 52 FR 7142, Mar. 9, 1987; 68 FR 12769, Mar. 17, 2003]

§ 74.632 Licensing requirements.

(a) Licenses for television pickup, television STL, television microwave booster, or television relay stations will be issued only to licensees of television broadcast stations, and broadcast network-entities and, further, on a secondary basis, to licensees of low power television stations. A separate application is required for each fixed station and the application shall be specific with regard to the frequency requested. A mobile station license may be issued for any number of mobile transmitters to operate in a specific area or frequency band and the applicant shall be specific with regard to the frequencies requested.

(b) A license for a TV relay station may be issued in any case where the circuit will operate between TV broadcast stations either by means of ''off-the-air'' pickup and relay or location of the initial relay station at the studio or transmitter of a TV broadcast station.

(c) An application for a new TV pickup station shall designate the TV broadcast station with which it is to be operated and specify the area in which the proposed operation is intended. The maximum permissible area of operation will generally be that of a standard metropolitan area, unless a special showing is made that a larger area is necessary.

(d) Licensees who have two or more TV broadcast stations located in different cities shall, in applying for a new TV pickup station, designate the TV broadcast station in conjunction with which it is to be operated principally. Operation in a city which is not the city of license of the associated TV broadcast station is on a secondary, non-interference basis to home-city users.

(e) A license for a TV translator relay station will be issued only to licensees of low power TV and TV translator stations. *However*, a television translator relay station license may be issued to a cooperative enterprise wholly owned by licensees of television broadcast translators or licensees of television broadcast translators and cable television owners or operators upon a showing that the applicant is qualified under the Communication Act of 1934, as amended.

(f) Licensees of TV pickup, TV STL, TV relay, and TV translator relay stations may be authorized to operate one or more TV microwave booster stations for the purpose of relaying signals over a path that cannot be covered with a single station.

(g) In case of permanent discontinuance of operations of a station licensed under this subpart, the licensee shall cancel the station license using FCC Form 601. For purposes of this section, a station which is not operated for a

period of one year is considered to have been permanently discontinued.

[28 FR 13718, Dec. 14, 1963, as amended at 44 FR 32382, June 6, 1979; 47 FR 55937, Dec. 14, 1982; 48 FR 9012, Mar. 3, 1983; 48 FR 17092, Apr. 21, 1983; 48 FR 21486, May 12, 1983; 49 FR 7130, Feb. 27, 1984; 49 FR 10930, Mar. 23, 1984; 52 FR 7142, Mar. 9, 1987; 58 FR 19775, Apr. 16, 1993; 63 FR 36605, July 7, 1998; 68 FR 12769, Mar. 17, 2003]

§ 74.633 Temporary authorizations.

(a) Special temporary authority may be granted for TV broadcast auxiliary station operation which cannot be conducted in accordance with § 74.24. Such authority will normally be granted only for operations of a temporary nature. Where operation is seen as likely on a continuing annual basis, an application for a regular authorization should be submitted.

(b) A request for special temporary authority for the operation of a television broadcast auxiliary station must be made in accordance with the procedures of § 1.931(b) of this chapter.

(c) All requests for special temporary authority of a television broadcast auxiliary station must include full particulars including: licensee's name and address, facility identification number of the associated broadcast station(s) (if any), call letters of the television broadcast STL or intercity relay station (if assigned), type and manufacturer of equipment, effective isotropic radiated power, emission, frequency or frequencies proposed for use, commencement and termination date and location of the proposed operation, and purpose for which request is made including any particular justification.

(d) A request for special temporary authority shall specify a channel or channels consistent with the provisions of § 74.602: *Provided,* That in the case of events of wide-spread interest and importance which cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested upon a showing that operation thereon will not cause interference to established stations: *And provided further,* That in no case will a television auxiliary broadcast operation be authorized on frequencies employed for the safety of life and property.

(e) When the transmitting equipment utilized is not licensed to the user, the user shall nevertheless have full control over the use of the equipment during the period it is operated.

(f) Special temporary authority to permit operation of a TV auxiliary broadcast station of any class pending FCC action on an application for regular authority will not normally be granted.

(Sec. 318, 48 Stat. 1089, as amended; 47 U.S.C. 318)

[28 FR 13720, Dec. 14, 1963, as amended at 47 FR 9221, Mar. 4, 1982; 47 FR 55937, Dec. 14, 1982; 50 FR 23710, June 5, 1985; 52 FR 10570, Apr. 2, 1987; 58 FR 19775, Apr. 16, 1993; 68 FR 12769, Mar. 17, 2003]

§ 74.634 Remote control operation.

(a) A TV auxiliary station may be operated by remote control provided that such operation is conducted in accordance with the conditions listed below:

(1) The remote control system must be designed, installed, and protected so that the transmitter can only be activated or controlled by persons authorized by the licensee.

(2) The remote control equipment must be maintained to ensure proper operation.

(3) The remote control system must be designed to prevent inadvertent transmitter operation caused by malfunctions in the circuits between the control point and transmitter.

(b) The FCC may notify the licensee to cease or modify operation in the case of frequency usage disputes. interference or similar situations where such action appears to be in the public interest, convenience and necessity.

[28 FR 13718, Dec. 14, 1963, as amended at, 47 FR 55937, Dec. 14, 1982; 50 FR 48600, Nov. 26, 1985; 60 FR 55483, Nov. 1, 1995]

§ 74.635 Unattended operation.

(a) TV relay stations, TV translator relay stations, TV STL stations, and TV microwave booster stations may be operated unattended under the following conditions:

(1) The transmitter must be provided with adequate safeguards to prevent improper operation.

(2) The transmitter shall be so installed and protected that it is not accessible to other than duly authorized persons;

(3) TV relay stations, TV STL stations, TV translator relay stations, and TV microwave booster stations used with these stations, shall be observed at the receiving end of the microwave circuit as often as necessary to ensure proper station operation by a person designated by the licensee, who must institute measures sufficient to ensure prompt correction of any condition of improper operation. However, an STL station (and any TV microwave booster station) associated with a TV broadcast station operated by remote control may be observed by monitoring the TV station's transmitted signal at the remote control point. Additionally, a TV translator relay station (and any associated TV microwave booster station) may be observed by monitoring the associated TV translator station's transmitted signal.

(b) The FCC may notify the licensee to cease or modify operation in the case of frequency usage disputes, interference or similar situations where such action appears to be in the public interest, convenience and necessity.

[28 FR 13718, Dec. 14, 1963, as amended at 31 FR 15314, Dec. 7, 1966; 43 FR 1950, Jan. 13, 1978; 47 FR 55937, Dec. 14, 1982; 49 FR 7131, Feb. 27, 1984; 50 FR 32417, Aug. 12, 1985]

§ 74.636 Power limitations.

(a) On any authorized frequency, transmitter peak output power and the average power delivered to an antenna in this service must be the minimum amount of power necessary to carry out the communications desired and shall not exceed the values listed in the following table. Application of this principle includes, but is not to be limited to, requiring a licensee who replaces one or more of its antennas with larger antennas to reduce its antenna input power by an amount appropriate to compensate for the increased primary lobe gain of the replacement antenna(s). In no event shall the average equivalent isotropically radiated power (EIRP), as referenced to an isotropic radiator, exceed the values specified in the following table. In cases of harmful interference, the Commission may, after notice and opportunity for hearing, order a change in the effective radiated power of this station. The table follows:

Frequency band (MHz)	Maximum allowable transmitter power	Maximum allowable EIRP [2]	
	Mobile (W)	Fixed (dBW)	Mobile (dBW)
2,025 to 2,110	12.0	+45	+35
2,450 to 2,483.5	12.0	+45	+35
6,425 to 6,525	12.0	.....	+35
6,875 to 7,125	12.0	+55	+35
12,700 to 13,250	1.5	+55	+45
17,700 to 18,600	.....	+55	.....
18,600 to 18,800 [1]	.....	+35	.....
18,800 to 19,700	.....	+55	.....

[1] The power delivered to the antenna is limited to −3 dBW.

[2] Stations licensed based on an application filed before April 16, 2003, for EIRP values exceeding those specified above, may continue to operate indefinitely in accordance with the terms of their current authorizations, subject to periodic renewal.

(b) The EIRP of transmitters that use Automatic Transmitter Power Control (ATPC) shall not exceed the EIRP specified on the station authorization. The EIRP of non-ATPC transmitters shall be maintained as near as practicable to the EIRP specified on the station authorization.

[68 FR 12769, Mar. 17, 2003]

§ 74.637 Emissions and emission limitations.

(a) The mean power of emissions shall be attenuated below the mean transmitter power (P_{MEAN}) in accordance with the following schedule:

(1) When using frequency modulation:

(i) On any frequency removed from the assigned (center) frequency by more than 50% up to and including 100% of the authorized bandwidth: At least 25 dB in any 100 kHz reference bandwidth (B_{REF});

(ii) On any frequency removed from the assigned (center) frequency by more than 100% up to and including 250% of the authorized bandwidth: At least 35 dB in any 100 kHz reference bandwidth;

(iii) On any frequency removed from the assigned (center) frequency by more than 250% of the authorized bandwidth: At least $43+10 \log_{10}$ (P_{MEAN} in watts) dB, or 80 dB, whichever is the

lesser attenuation, in any 100 kHz reference bandwidth.

(2) When using transmissions employing digital modulation techniques:

(i) For operating frequencies below 15 GHz, in any 4 kHz reference bandwidth (B_{REF}), the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 250 percent of the authorized bandwidth: As specified by the following equation but in no event less than 50 decibels:

$$A = 35 + 0.8\,(G - 50) + 10\,\mathrm{Log}_{10}\,B.$$

(Attenuation greater than 80 decibels is not required.)

Where:

A = Attenuation (in decibels) below the mean output power level.
G = Percent removed from the carrier frequency.
B = Authorized bandwidth in megahertz.

(ii) For operating frequencies above 15 GHz, in any 1 MHz reference bandwidth (B_{REF}), the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 250 percent of the authorized bandwidth: As specified by the following equation but in no event less than 11 decibels:

$$A = 11 + 0.4\,(G - 50) + 10\,\mathrm{Log}_{10}\,B.$$

(Attenuation greater than 56 decibels is not required.)

(iii) In any 4 kHz reference bandwidth (B_{REF}), the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 +10 Log_{10} (P_{MEAN} in watts) decibels, or 80 decibels, whichever is the lesser attenuation.

(3) Amplitude Modulation. For vestigial sideband AM video: On any frequency removed from the center frequency of the authorized band by more than 50%: at least 50 dB below peak power of the emission.

(b) For all emissions not covered in paragraph (a) of this section, the peak power of emissions shall be attenuated below the peak envelope transmitter power (P_{PEAK}) in accordance with the following schedule:

(1) On any frequency 500 Hz inside the channel edge up to and including 2500 Hz outside the same edge, the following formula will apply:

$$A = 29\,\mathrm{Log}_{10}\,[(25/11)[(D + 2.5 - (W/2)]^2]\ \mathrm{dB}$$

(Attenuation greater than 50 decibels is not required.)

Where:

A = Attenuation (in dB) below the peak envelope transmitter power.
D = The displacement frequency (kHz) from the center of the authorized bandwidth.
W = the channel bandwidth (kHz).

(2) On any frequency removed from the channel edge by more than 2500 Hz: At least 43 + 10 Log_{10} (P_{PEAK} in watts) dB.

(c) For purposes of compliance with the emission limitation requirements of this section:

(1) If the transmitter modulates a single carrier, digital modulation techniques are considered as being employed when digital modulation occupies 50 percent or more of the total peak frequency deviation of a transmitted radio frequency carrier. The total peak frequency deviation will be determined by adding the deviation produced by the digital modulation signal and the deviation produced by any frequency division multiplex (FDM) modulation used. The deviation (D) produced by the FDM signal must be determined in accordance with § 2.202(f) of this chapter.

(2) If the transmitter modulates two or more carriers, with at least one using digital modulation and one using frequency or other analog modulation, digital modulation techniques are considered as being employed when the necessary bandwidth of the digital signal(s) is 50 percent or more of the aggregate bandwidth of the system, comprising the digital necessary bandwidth(s), the analog necessary bandwidth(s), and any bandwidth(s) between the digital and analog necessary bandwidths. In this case, the aggregate bandwidth shall be used for the authorized bandwidth (B) in paragraph (a) of this section, and for purposes of compliance with the bandwidth limitations in paragraph (g) of this section and in § 74.602 of this subpart; and the sum of the powers of the analog and digital signals shall be used for mean transmitter power (P_{MEAN}) in paragraph (a)

or the peak envelope transmitter power (P_{PEAK}) in paragraph (b) of this section, and for purposes of compliance with the power limitations in § 74.636 of this subpart.

(3) For demonstrating compliance with the attenuation requirements for frequency modulation and digital modulation in paragraph (a) of this section, the resolution bandwidth (B_{RES}) of the measuring equipment used for measurements removed from the center frequency by more than 250 percent of the authorized bandwidth shall be 100 kHz for operating frequencies below 1 GHz, and 1 MHz for operating frequencies above 1 GHz. The resolution bandwidth for frequencies removed from the center frequency by less than 250 percent of the authorized bandwidth shall be the reference bandwidth (B_{REF}) specified in the individual emission limitations, but may be reduced to not less than one percent of the authorized bandwidth (B), adjusted upward to the nearest greater resolution bandwidth available on the measuring equipment. In all cases, if B_{RES} and B_{REF} are not equal, then the attenuation requirement must be increased (or decreased) as determined by a factor of 10 $\log_{10}$ [(B_{REF} in megahertz)/(B_{RES} in megahertz)] decibels, where a positive factor indicates an increase in the attenuation requirement and a negative factor indicates a decrease in the attenuation requirement.

(4) Stations licensed pursuant to an application filed before March 17, 2005, using equipment not conforming with the emission limitations specified above, may continue to operate indefinitely in accordance with the terms of their current authorizations, subject to periodic renewal. Existing equipment and equipment of product lines in production before April 16, 2003, authorized via certification or verification before March 17, 2005, for equipment not conforming to the emission limitations requirements specified above, may continue to be manufactured and/or marketed, but may not be authorized for use under a station license except at stations licensed pursuant to an application filed before March 17, 2005. Any non-conforming equipment authorized under a station license, and replaced on or after March 17, 2005, must be replaced by conforming equipment.

(d) In the event that interference to other stations is caused by emissions outside the authorized channel, the FCC may require greater attenuation than that specified in paragraph (b) of this section.

(e) The following limitations also apply to the operation of TV microwave booster stations:

(1) The booster station must receive and amplify the signals of the originating station and retransmit them on the same frequency without significantly altering them in any way. The characteristics of the booster transmitter output signal shall meet the requirements applicable to the signal of the originating station.

(2) The licensee is responsible for correcting any condition of interference that results from the radiation of radio frequency energy outside the assigned channel. Upon notice by the FCC to the station licensee that interference is being caused, operation of the apparatus must be immediately suspended and may not be resumed until the interference has been eliminated or it can be demonstrated that the interference is not due to spurious emissions. However, short term test transmissions may be made during the period of suspended operation to determine the efficacy of remedial measures.

(3) In each instance where suspension of operation is required, the licensee must submit a full report to the FCC after operation is resumed. The report must contain details of the nature of the interference, the source of interfering signals, and the remedial steps taken to eliminate the interference.

(f) In the event a station's emissions outside its authorized channel cause harmful interference, the Commission may require the licensee to take such further steps as may be necessary to eliminate the interference.

(g) The maximum bandwidth which will be authorized per frequency assignment is set out in the table which follows. Regardless of the maximum authorized bandwidth specified for each frequency band, the Commission reserves the right to issue a license for less than the maximum bandwidth if it

appears that less bandwidth would be sufficient to support an applicant's intended communications.

Frequency Band (MHz)	Maximum authorized bandwidth (MHz)
1,990 to 2,110	18
6,425 to 6,525	25
6,875 to 7,125	25
12,700 to 13,250	25
17,700 to 19,700	80

[45 FR 78692, Nov. 26, 1980, as amended at 48 FR 50734, Nov. 3, 1983; 49 FR 7131, Feb. 27, 1984; 49 FR 37778, Sept. 26, 1984; 50 FR 7342, Feb. 22, 1985; 50 FR 34150, Aug. 23, 1985; 50 FR 48600, Nov. 26, 1985; 52 FR 7142, Mar. 9, 1987; 58 FR 51251, Oct. 1, 1993; 68 FR 12769, Mar. 17, 2003.]

§ 74.638 Frequency coordination.

(a) Coordination of all frequency assignments for fixed stations in all bands above 2110 MHz, and for mobile (temporary fixed) stations in the bands 6425–6525 MHz and 17.7–19.7 GHz, will be in accordance with the procedure established in paragraph (b) of this section, except that the prior coordination process for mobile (temporary fixed) assignments may be completed orally and the period allowed for response to a coordination notification may be less than 30 days if the parties agree. Coordination of all frequency assignments for all mobile (temporary fixed) stations in all bands above 2110 MHz, except the bands 6425–6525 MHz and 17.7–19.7 GHz, will be conducted in accordance with the procedure established in paragraph (b) of this section or with the procedure in paragraph (d) of this section. Coordination of all frequency assignments for all fixed stations in the band 1990–2110 MHz will be in accordance with the procedure established in paragraph (c) of this section. Coordination of all frequency assignments for all mobile (temporary fixed) stations in the band 1990–2110 MHz will be conducted in accordance with the procedure in paragraph (d) of this section.

(b) For each frequency coordinated under this paragraph, the interference protection criteria in 47 CFR 101.105(a), (b), and (c) and the frequency usage coordination procedures in 47 CFR 101.103(d) will apply.

(c) For each frequency coordinated under this paragraph, the following frequency usage coordination procedures will apply:

(1) *General requirements.* Applicants are responsible for selecting the frequency assignments that are least likely to result in mutual interference with other licensees in the same area. Applicants may consult local frequency coordination committees, where they exist, for information on frequencies available in the area. Proposed frequency usage must be coordinated with existing licensees and applicants in the area whose facilities could affect or be affected by the new proposal in terms of frequency interference on active channels, applied-for channels, or channels coordinated for future growth. Coordination must be completed prior to filing an application for regular authorization, for major amendment to a pending application, or for major modification to a license.

(2) To be acceptable for filing, all applications for regular authorization, or major amendment to a pending application, or major modification to a license, must include a certification attesting that all co-channel and adjacent-channel licensees and applicants potentially affected by the proposed fixed use of the frequency(ies) have been notified and are in agreement that the proposed facilities can be installed without causing harmful interference to those other licensees and applicants.

(d) For each frequency coordinated under this paragraph, applicants are responsible for selecting the frequency assignments that are least likely to result in mutual interference with other licensees in the same area. Applicants may consult local frequency coordination committees, where they exist, for information on frequencies available in the area. In selecting frequencies, consideration should be given to the relative location of receive points, normal transmission paths, and the nature of the contemplated operation.

[68 FR 12770, Mar. 17, 2003, as amended at 75 FR 17061, Apr. 5, 2010]

§ 74.641 Antenna systems.

(a) For fixed stations operating above 2025 MHz, the following standards apply:

(1) Fixed TV broadcast auxiliary stations shall use directional antennas that meet the performance standards indicated in the following table. Upon adequate showing of need to serve a larger sector, or more than a single sector, greater beamwidth or multiple antennas may be authorized. Applicants shall request, and authorization for stations in this service will specify, the polarization of each transmitted signal. Booster station antennas having narrower beamwidths and reduced sidelobe radiation may be required in congested areas, or to resolve interference problems.

(i) Stations must employ an antenna that meets the performance standards for Category B. In areas subject to frequency congestion, where proposed facilities would be precluded by continued use of a Category B antenna, a Category A antenna must be employed. The Commission may require the use of a high performance antenna where interference problems can be resolved by the use of such antennas.

(ii) Licensees shall comply with the antenna standards table shown in this paragraph in the following manner:

(A) With either the maximum beamwith to 3 dB points requirement or with the minimum antenna gain requirement; and

(B) With the minimum radiation suppression to angle requirement.

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 beamwith 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]

§ 74.644 Minimum path lengths for fixed links.

(a) The distance between end points of a fixed link must equal or exceed the value set forth in the table below or the EIRP must be reduced in accordance with the equation set forth below.

Frequency band (MHz)	Minimum path length (km)
Below 1,990	n/a
1,990–7,125	17
12,200–13,250	5
Above 17,700	n/a

(b) For paths shorter than those specified in the Table, the EIRP shall not exceed the value derived from the following equation.

$$EIRP = MAXEIRP - 40 \log(A/B) \text{ dBW}$$

Where:

EIRP = The new maximum EIRP (equivalent isotropically radiated power) in dBW.

MAXEIRP = Maximum EIRP as set forth in the Table in § 74.636 of this part.

A = Minimum path length from the Table above for the frequency band in kilometers.

B = The actual path length in kilometers.

NOTE 1 TO PARAGRAPH (b): For transmitters using Automatic Transmitter Power Control, EIRP corresponds to the maximum transmitter power available, not the coordinated transmit power or the nominal transmit power.

NOTE 2 TO PARAGRAPH (b): Stations licensed based on an application filed before April 16, 2003, in the 2450–2483.5 MHz band, for EIRP values exceeding those specified above, may continue to operate indefinitely in accordance with the terms of their current authorizations, subject to periodic renewal.

(c) Upon an appropriate technical showing, applicants and licensees unable to meet the minimum path length requirement may be granted an exception to these requirements.

NOTE: Links authorized prior to April 1, 1987, are excluded from this requirement, except that, effective April 1, 1992, the Commission will require compliance with the criteria where an existing link would otherwise preclude establishment of a new link.

[52 FR 7143, Mar. 9, 1987, as amended at 68 FR 12771, Mar. 17, 2003]

§ 74.651 Equipment changes.

(a) Modifications may be made to an existing authorization in accordance with §§ 1.929 and 1.947 of this chapter.

(b) Multiplexing equipment may be installed on any licensed TV broadcast STL, TV relay or translator relay station without authority from the Commission.

(c) Permissible changes in equipment operating in the bands 18.3–18.58 GHz

and 19.26–19.3 GHz. Notwithstanding other provisions of this section, licensees of stations that remain co-primary under the provisions of § 74.602(g) may not make modifications to their systems that increase interference to satellite earth stations, or result in a facility that would be more costly to relocate.

[28 FR 13718, Dec. 14, 1963, as amended at 38 FR 6827, Mar. 13, 1973; 47 FR 55938, Dec. 14, 1982; 49 FR 7131, Feb. 27, 1984; 58 FR 19776, Apr. 16, 1993; 61 FR 4368, Feb. 6, 1996; 63 FR 36605, July 7, 1998; 65 FR 54173, Sept. 7, 2000; 68 FR 12771, Mar. 17, 2003; 68 FR 16967, Apr. 8, 2003]

§ 74.655 Authorization of equipment.

(a) Except as provided in paragraph (b) of this section, all transmitting equipment first marketed for use under this subpart or placed into service after October 1, 1981, must be authorized under the certification or verification procedure, as detailed in paragraph (f) of this section. Equipment which is used at a station licensed prior to October 1, 1985, which has not been authorized as detailed in paragraph (f) of this section, may continue to be used by the licensee or its successors or assignees, provided that if operation of such equipment causes harmful interference due to its failure to comply with the technical standards set forth in this subpart, the FCC may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference. However, such equipment may not be further marketed or reused under part 74 after October 1, 1985.

(b) Certification or verification is not required for transmitters used in conjunction with TV pickup stations operating with a peak output power not greater than 250 mW. Pickup stations operating in excess of 250 mW licensed pursuant to applications accepted for filing prior to October 1, 1980 may continue operation subject to periodic renewal. If operation of such equipment causes harmful interference the FCC may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

(c) The license of a TV auxiliary station may replace transmitting equipment with authorized equipment, as detailed under paragraph (f) of this section, without prior FCC approval, provided the proposed changes will not depart from any of the terms of the station or system authorization or the Commission's technical rules governing this service, and also provided that any changes made to authorized transmitting equipment is in compliance with the provisions of part 2 of the FCC rules concerning modifications to authorized equipment.

(d) Any manufacturer of a transmitter to be used in this service may authorize the equipment under the certification or verification procedure, as appropriate, following the procedures set forth in subpart J of part 2 of the FCC rules.

(e) An applicant for a TV broadcast auxiliary station may also authorize an individual transmitter, as specified in paragraph (f) of this section, by following the procedures set forth in subpart J of part 2 of the FCC rules and regulations.

(f) Transmitters designed to be used exclusively for a TV STL station, a TV intercity relay station, a TV translator relay station, or a TV microwave booster station, shall be authorized under verification. All other transmitters will be authorized under the certification procedure.

[63 FR 36605, July 7, 1998, as amended at 68 FR 12772, Mar. 17, 2003]

§ 74.661 Frequency tolerance.

Stations in this service shall maintain the carrier frequency of each authorized transmitter to within the following percentage of the assigned frequency.

Frequency band (MHz)	Frequency tolerance (%)
2,025 to 2,110	[1] 0.005
2,450 to 2,483.5	[2] 0.001
6,425 to 6,525	0.005
6,875 to 7,125	[1] 0.005
12,700 to 13,250	[1] 0.005
17,700 to 18,820	0.003
18,920 to 19,700	0.003

[1] Television translator relay stations shall maintain a frequency tolerance of 0.002%.

[2] Stations licensed pursuant to an application filed before March 17, 2005, for tolerance values exceeding those specified above, may continue to operate indefinitely in accordance with the terms of their current authorizations, subject to periodic renewal. Existing equipment and equipment of product lines in production before April 16, 2003, authorized via certification or verification before March 17, 2005, for tolerance values exceeding those specified above, may continue to be manufactured and/or marketed, but may not be authorized for use under station license except at stations licensed pursuant to an application filed before March 17, 2005. Any non-conforming equipment authorized under a station license, and replaced on or after March 17, 2005, must be replaced by conforming equipment.

[52 FR 7143, Mar. 9, 1987, as amended at 68 FR 12772, Mar. 17, 2003]

§ 74.662 Frequency monitors and measurements.

The licensee of a television broadcast auxiliary station must provide means for measuring the operating frequency in order to ensure that the emissions are confined to the authorized channel.

[48 FR 38482, Aug. 24, 1983]

§ 74.663 Modulation limits.

If amplitude modulation is employed, negative modulation peaks shall not exceed 100%.

[45 FR 78694, Nov. 26, 1980]

§ 74.664 Posting of station license.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted in the room in which the transmitter is located.

(b) Posting of the station license and any other instruments of authorization shall be done by affixing the license to the wall at the posting location, or by enclosing it in a binder or folder which is retained at the posting location so that the document will be readily available and easily accessible.

[28 FR 13718, Dec. 14, 1963, as amended at 48 FR 24385, June 1, 1983; 49 FR 29070, July 18, 1984; 50 FR 40015, Oct. 1, 1985]

§ 74.682 Station identification.

(a) Each television broadcast auxiliary station operating with a transmitter output power of 1 watt or more must, when actually transmitting programs, transmit station identification at the beginning and end of each period of operation, and hourly, as close to the hour as feasible, at a natural break in program offerings by one of the following means:

(1) Transmission of its own call sign by visual or aural means or by automatic transmission in international Morse telegraphy.

(2) Visual or aural transmission of the call sign of the TV broadcast station with which it is licensed as an auxiliary.

(3) Visual or aural transmission of the call sign of the TV broadcast station whose signals are being relayed or, where programs are obtained directly from network lines and relayed, the network identification.

(b) Identification transmissions during operation need not be made when to make such transmission would interrupt a single consecutive speech, play, religious service, symphony concert, or any type of production. In such cases, the identification transmission shall be made at the first interruption of the entertainment continuity and at the conclusion thereof.

(c) During occasions when a television pickup station is being used to deliver program material for network distribution it may transmit the network identification in lieu of its own or associated TV station call sign during the actual program pickup. However, if it is providing the network feed through its own associated TV broadcast station it shall perform the station identification required by paragraph (a) of this section at the beginning and end of each period of operation.

(d) A period of operation is defined as a single uninterrupted transmission or a series of intermittent transmissions from a single location or continuous or intermittent transmission from a television pickup station covering a single event from various locations, within a single broadcast day.

(e) Regardless of the method used for station identification it shall be performed in a manner conducive to prompt association of the signal source with the responsible licensee. In exercising the discretion provided by this rule, licensees are expected to act in a responsible manner to assure that result.

(f) TV microwave boosters stations will be assigned individual call signs.

However, station identification will be accomplished by the retransmission of identification as provided in paragraph (a) of this section.

[31 FR 15488, Dec. 8, 1966; 32 FR 452, Jan. 17, 1967, as amended at 42 FR 36830, July 18, 1977; 43 FR 1951, Jan. 13, 1978; 44 FR 36041, June 20, 1979; 49 FR 7131, Feb. 27, 1984]

§ 74.690 Transition of the 1990–2025 MHz band from the Broadcast Auxiliary Service to emerging technologies.

(a) New Entrants are collectively defined as those licensees proposing to use emerging technologies to implement Mobile Satellite Services in the 2000–2020 MHz band (MSS licensees), those licensees authorized after July 1, 2004 to implement new Fixed and Mobile services in the 1990–1995 MHz band, and those licensees authorized after September 9, 2004 in the 1995–2000 MHz and 2020–2025 MHz bands. New entrants may negotiate with Broadcast Auxiliary Service licensees operating on a primary basis and fixed service licensees operating on a primary basis in the 1990–2025 MHz band (Existing Licensees) for the purpose of agreeing to terms under which the Existing Licensees would relocate their operations to the 2025–2110 MHz band, to other authorized bands, or to other media; or, alternatively, would discontinue use of the 1990–2025 MHz band. New licensees in the 1995–2000 MHz and 2020–2025 MHz bands are subject to the specific relocation procedures adopted in WT Docket 04–356.

(b) An Existing Licensee in the 1990–2025 MHz band allocated for licensed emerging technology services will maintain primary status in the band until the Existing Licensee's operations are relocated by a New Entrant, are discontinued under the terms of paragraph (a) of this section, or become secondary under the terms of paragraph (e)(6) of this section or the Existing Licensee indicates to a New Entrant that it declines to be relocated.

(c) The Commission will amend the operating license of the Existing Licensee to secondary status only if the following requirements are met:

(1) The service applicant, provider, licensee, or representative using an emerging technology guarantees payment of all relocation costs, including all engineering, equipment, site and FCC fees, as well as any reasonable additional costs that the relocated Existing Licensee might incur as a result of operation in another authorized band or migration to another medium;

(2) The New Entrant completes all activities necessary for implementing the replacement facilities, including engineering and cost analysis of the relocation procedure and, if radio facilities are used, identifying and obtaining, on the incumbents' behalf, new microwave or Local Television Transmission Service frequencies and frequency coordination.

(3) The New Entrant builds the replacement system and tests it for comparability with the existing system.

(d) The Existing Licensee is not required to relocate until the alternative facilities are available to it for a reasonable time to make adjustments, determine comparability, and ensure a seamless handoff. If, within one year after the relocation to new facilities the Existing Licensee demonstrates that the new facilities are not comparable to the former facilities, the New Entrant must remedy the defects.

(e) Subject to the terms of this paragraph (e), the relocation of Existing Licensees will be carried out by MSS licensees in the following manner:

(1) Existing Licensees and MSS licensees may negotiate individually or collectively for relocation of Existing Licensees to one of the channel plans specified in § 74.602(a)(3) of this chapter. Parties may not decline to negotiate, though Existing Licensees may decline to be relocated.

(i) MSS licensees may relocate all Existing Licensees in Nielsen Designated Market Areas (DMAs) 1–30, as such DMAs existed on September 6, 2000, and all fixed stations operating in the 1990–2025 MHz band on a primary basis, except those Existing Licensees that decline relocation. Such relocation negotiations shall be conducted as ''mandatory negotiations,'' as that term is used in § 101.73 of this chapter. If these parties are unable to reach a negotiated agreement, MSS Licensees may involuntarily relocate such Existing Licensees and fixed stations after December 8, 2004.

(ii) [Reserved]

(iii) On the date that the first MSS licensee begins operations in the 2000–2020 MHz band, a one-year mandatory negotiation period begins between MSS licensees and Existing Licensees in Nielsen DMAs 31–210, as such DMAs existed on September 6, 2000. After the end of the mandatory negotiation period, MSS licensees may involuntary relocate any Existing Licensees with which they have been unable to reach a negotiated agreement. As described elsewhere in this paragraph (e), MSS Licensees are obligated to relocate these Existing Licensees within the specified three- and five-year time periods.

(2) Before negotiating with MSS licensees, Existing Licensees in Nielsen Designated Market Areas where there is a BAS frequency coordinator must coordinate and select a band plan for the market area. If an Existing Licensee wishes to operate in the 2025–2110 MHz band using the channels A03-A07 as specified in the Table in § 74.602(a) of this part, then all licensees within that Existing Licensee's market must agree to such operation and all must operate on a secondary basis to any licensee operating on the channel plan specified in § 74.602(a)(3) of this part. All negotiations must produce solutions that adhere to the market area's band plan.

(3)–(4) [Reserved]

(5) As of the date the first MSS licensee begins operations in the 1990–2025 MHz band, MSS Licensees must relocate Existing Licensees in DMAs 31–100, as they existed as of September 6, 2000, within three years, and in the remaining DMAs, as they existed as of September 6, 2000, within five years.

(6) On December 9, 2013, all Existing Licensees will become secondary in the 1990–2025 MHz band. Upon written demand by any MSS licensee, Existing Licensees must cease operations in the 1990–2025 MHz band within six months.

[65 FR 48180, Aug. 7, 2000, as amended at 67 FR 53756, Aug. 19, 2002; 68 FR 68252, Dec. 8, 2003; 69 FR 62621, Oct. 27, 2004; 69 FR 67836, Nov. 22, 2004; 74 FR 29613, June 23, 2009]

Subpart G—Low Power TV, TV Translator, and TV Booster Stations

§ 74.701 Definitions.

(a) *Television broadcast translator station.* A station in the broadcast service operated for the purpose of retransmitting the programs and signals of a television broadcast station, without significantly altering any characteristic of the original signal other than its frequency and amplitude, for the purpose of providing television reception to the general public.

(b) *Primary station.* The analog television broadcast station (TV broadcast) or digital television station (DTV) which provides the programs and signals being retransmitted by a television broadcast translator station.

(c) *VHF translator.* A television broacast translator station operating on a VHF television broadcast channel.

(d) *UHF translator.* A television broadcast translator station operating on a UHF television broadcast channel.

(e) *UHF translator signal booster.* A station in the broadcasting service operated for the sole purpose of retransmitting the signals of the UHF translator station by amplifying and reradiating such signals which have been received directly through space, without significantly altering any characteristic of the incoming signal other than its amplitude.

(f) *Low power TV station.* A station authorized under the provisions of this subpart that may retransmit the programs and signals of a TV broadcast station and that may originate programming in any amount greater than 30 seconds per hour and/or operates a subscription service. (See § 73.641 of part 73 of this chapter.)

(g) *Program origination.* For purposes of this part, program origination shall be any transmissions other than the simultaneous retransmission of the programs and signals of a TV broadcast station. Origination shall include locally generated television program signals and program signals obtained via video recordings (tapes and discs), microwave, common carrier circuits, or other sources.

(h) *Local origination.* Program origination if the parameters of the program source signal, as it reaches the

transmitter site, are under the control of the low power TV station licensee. Transmission of TV program signals generated at the transmitter site constitutes local origination. Local origination also includes transmission of programs reaching the transmitter site via TV STL stations, but does not include transmission of signals obtained from either terrestrial or satellite microwave feeds or low power TV stations.

(i) *Television broadcast booster station.* A station in the broadcast service operated by the licensee or permittee of a full service television broadcast station for the purpose of retransmitting the programs and signals of such primary station without significantly altering any characteristic of the original signal other than its amplitude. A television broadcast booster station may only be located such that its entire service area is located within the protected contour of the primary station it retransmits. For purposes of this paragraph, the service area of the booster and the protected contour of the primary station will be determined by the methods prescribed in § 74.705(c).

(j) *Digital television broadcast translator station (''digital TV translator station'').* A station operated for the purpose of retransmitting the programs and signals of a digital television (DTV) broadcast station, without significantly altering any characteristic of the original signal other than its frequency and amplitude, for the purpose of providing DTV reception to the general public.

(k) *Digital low power TV station (''digital LPTV station'').* A station authorized under the provisions of this subpart that may retransmit the programs and signals of a DTV broadcast station, may originate programming in any amount greater than 30 seconds per hour for the purpose of providing digital television (DTV) reception to the general public and, subject to a minimum video program service requirement, may offer services of an ancillary or supplementary nature, including subscription-based services. (*See* § 74.790).

(l) *Digital program origination.* For purposes of this part, digital program origination shall be any transmissions other than the simultaneous retransmission of the programs and signals of a TV or DTV broadcast station or transmissions related to service offerings of an ancillary or supplementary nature. Origination shall include locally generated television program signals and program signals obtained via video recordings (tapes and discs), microwave, common carrier circuits, or other sources.

(m) *Existing low power television or television translator station.* When used in subpart G of this part, the terms existing low power television and existing television translator station refer to an analog or digital low power television station or television translator station that is either licensed or has a valid construction permit.

(n) *Suitable in core channel.* When used in subpart G of this part, the term ''suitable in core channel'' refers to a channel that would enable a digital low power television or television translator station to produce a protected service area comparable to that of its associated analog LPTV or TV translator station.

(o) *Companion digital channel.* When used in subpart G of this part, the term ''companion digital channel'' refers to a digital channel authorized to an existing low power television or television translator station to be associated with the station's analog channel.

(p) *Digital conversion channel.* When used in subpart G of this part, the term ''digital conversion channel'' refers to a channel previously authorized to an existing low power television or television translator station that has been converted to digital operation.

[28 FR 13722, Dec. 14, 1963, as amended at 43 FR 1951, Jan. 13, 1978; 47 FR 21497, May 18, 1982; 48 FR 21486, May 12, 1983; 52 FR 7422, Mar. 11, 1987; 52 FR 31403, Aug. 20, 1987; 62 FR 26720, May 14, 1997; 69 FR 69331, Nov. 29, 2004]

§ 74.702 Channel assignments.

(a) An applicant for a new low power TV or TV translator station or for changes in the facilities of an authorized station shall endeavor to select a channel on which its operation is not likely to cause interference. The applications must be specific with regard to the channel requested. Only one channel will be assigned to each station.

(1) Any one of the 12 standard VHF Channels (2 to 13 inclusive) may be assigned to a VHF low power TV or TV translator station. Channels 5 and 6 assigned in Alaska shall not cause harmful interference to and must accept interference from non-Government fixed operation authorized prior to January 1, 1982.

(2) Any one of the UHF Channels from 14 to 69, inclusive, may be assigned to a UHF low power TV or TV translator station. In accordance with § 73.603(c) of part 73, Channel 37 will not be assigned to such stations.

(3) Application for new low power TV or TV translator stations or for changes in existing stations, specifying operation above 806 MHz will not be accepted for filing. License renewals for existing TV translator stations operating on channels 70 (806–812 MHz) through 83 (884–890 MHz) will be granted only on a secondary basis to land mobile radio operations.

(b) Changes in the TV Table of Allotments or Digital Television Table of Allotments (§§ 73.606(b) and 73.622(a), respectively, of part 73 of this chapter), authorizations to construct new TV broadcast analog or DTV stations or to authorizations to change facilities of existing such stations, may be made without regard to existing or proposed low power TV or TV translator stations. Where such a change results in a low power TV or TV translator station causing actual interference to reception of the TV broadcast analog or DTV station, the licensee or permittee of the low power TV or TV translator station shall eliminate the interference or file an application for a change in channel assignment pursuant to § 73.3572 of this chapter.

(c) A television broadcast booster station will be authorized on the channel assigned to its primary station.

[47 FR 21497, May 18, 1982, as amended at 47 FR 30068, July 12, 1982; 47 FR 35590, Aug. 18, 1982; 52 FR 7423, Mar. 11, 1987; 52 FR 31403, Aug. 20, 1987; 62 FR 26721, May 14, 1997]

§ 74.703 Interference.

(a) An application for a new low power TV, TV translator, or TV booster station or for a change in the facilities of such an authorized station will not be granted when it is apparent that interference will be caused. Except where there is a written agreement between the affected parties to accept interference, or where it can be shown that interference will not occur due to terrain shielding and/or Longley-Rice terrain dependent propagation methods, the licensee of a new low power TV, TV translator, or TV booster shall protect existing low power TV and TV translator stations from interference within the protected contour defined in § 74.707 and shall protect existing Class A TV and digital Class A TV stations within the protected contours defined in § 73.6010 of this chapter. Such written agreement shall accompany the application. Guidance on using the Longley-Rice methodology is provided in OET Bulletin No. 69. Copies of OET Bulletin No. 69 may be inspected during normal business hours at the: Federal Communications Commission, 445 12th Street, S.W., Reference Information Center (Room CY-A257), Washington, DC 20554. This document is also available through the Internet on the FCC Home Page at *http://www.fcc.gov/oet/info/documents/bulletins/#69*.

(b) It shall be the responsibility of the licensee of a low power TV, TV translator, or TV booster station to correct at its expense any condition of interference to the direct reception of the signal of any other TV broadcast analog station and DTV station operating on the same channel as that used by the low power TV, TV translator, or TV booster station or an adjacent channel which occurs as a result of the operation of the low power TV, TV translator, or TV booster station. Interference will be considered to occur whenever reception of a regularly used signal is impaired by the signals radiated by the low power TV, TV translator, or TV booster station, regardless of the quality of the reception or the strength of the signal so used. If the interference cannot be promptly eliminated by the application of suitable techniques, operation of the offending low power TV, TV translator, or TV booster station shall be suspended and shall not be resumed until the interference has been eliminated. If the complainant refuses to permit the low Power TV, TV translator, or TV booster station to apply remedial techniques

that demonstrably will eliminate the interference without impairment of the original reception, the licensee of the low power TV, TV translator, or TV booster station is absolved of further responsibility. TV booster stations will be exempt from the provisions of this paragraph to the extent that they may cause limited interference to their primary stations' signal subject to the conditions of paragraph (g) of this section.

(c) It shall be the responsibility of the licensee of a low power TV, TV translator, or TV booster station to correct any condition of interference which results from the radiation of radio frequency energy outside its assigned channel. Upon notice by the FCC to the station licensee or operator that such interference is caused by spurious emissions of the station, operation of the station shall be immediately suspended and not resumed until the interference has been eliminated. However, short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

(d) When a low-power TV or TV translator station causes interference to a CATV system by radiations within its assigned channel at the cable headend or on the output channel of any system converter located at a receiver, the earlier user, whether cable system or low-power TV or TV translator station, will be given priority on the channel, and the later user will be responsible for correction of the interference. When a low-power TV or TV translator station causes interference to a BRS or EBS system by radiations within its assigned channel on the output channel of any system converter located at a receiver, the earlier user, whether BRS system or low-power TV or TV translator station, will be given priority on the channel, and the later user will be responsible for correction of the interference.

(e) Low power TV and TV translator stations are being authorized on a secondary basis to existing land mobile uses and must correct whatever interference they cause to land mobile stations or cease operation.

(f) It shall be the responsibility of a digital low power TV or TV translator station operating on a channel from channel 52–69 to eliminate at its expense any condition of interference caused to the operation of or services provided by existing and future commercial or public safety wireless licensees in the 700 MHz bands. The offending digital LPTV or translator station must cease operations immediately upon notification by any primary wireless licensee, once it has been established that the digital low power TV or translator station is causing the interference.

(g) An existing or future wireless licensee in the 700 MHz bands may notify (certified mail, return receipt requested), a digital low power TV or TV translator operating on the same channel or first adjacent channel of its intention to initiate or change wireless operations and the likelihood of interference from the low power TV or translator station within its licensed geographic service area. The notice should describe the facilities, associated service area and operations of the wireless licensee with sufficient detail to permit an evaluation of the likelihood of interference. Upon receipt of such notice, the digital LPTV or TV translator licensee must cease operation within 120 days unless:

(1) It obtains the agreement of the wireless licensee to continue operations;

(2) The commencement or modification of wireless service is delayed beyond that period (in which case the period will be extended); or

(3) The Commission stays the effect of the interference notification, upon request.

(h) In each instance where suspension of operation is required, the licensee shall submit a full report to the FCC in Washington, DC, after operation is resumed, containing details of the nature of the interference, the source of the interfering signals, and the remedial steps taken to eliminate the interference.

(i) A TV booster station may not disrupt the existing service of its primary station nor may it cause interference to the signal provided by the primary

station within the principal community to be served.

[47 FR 21497, May 18, 1982, as amended at 48 FR 21487, May 12, 1983; 52 FR 31403, Aug. 20, 1987; 53 FR 4169, Feb. 12, 1988; 60 FR 55483, Nov. 1, 1995; 62 FR 26721, May 14, 1997; 65 FR 30012, May 10, 2000; 69 FR 69331, Nov. 29, 2004; 69 FR 72045, Dec. 10, 2004]

§ 74.705 TV broadcast analog station protection.

(a) The TV broadcast station protected contour will be its Grade B contour signal level as defined in § 73.683 and calculated from the authorized maximum radiated power (without depression angle correction), the horizontal radiation pattern, height above average terrain in the pertinent direction, and the appropriate chart from § 73.699.

(b)(1) An application to construct a new low power TV or TV translator station or change the facilities of an existing station will not be accepted if it specifies a site which is within the protected contour of a co-channel or first adjacent channel TV broadast station.

(2) Due to the frequency spacing which exists between TV Channels 4 and 5, between Channels 6 and 7, and between Channels 13 and 14, adjacent channel protection standards shall not be applicable to these pairs of channels. (See § 73.603(a) of part 73 of this chapter.)

(3) A UHF low power TV or TV translator construction permit application will not be accepted if it specifies a site within the UHF TV broadcast station's protected contour and proposes operation on a channel either 14 or 15 channels above the channel in use by the TV broadcast station.

(4) A UHF low power TV or TV translator construction permit application will not be accepted if it specifies a site less than 100 kilometers from the transmitter site of a UHF TV broadcast analog station operating on a channel which is the seventh channel above the requested channel, unless it can demonstrate that the service area of the low power TV or TV translator station as established in § 74.707(a) is not located in an area where the TV broadcast analog station is regularly viewed.

(5) An application for a new UHF low power TV or TV translator construction permit, a change of channel, or a major change in facilities pursuant to § 73.3572 of this chapter proposing a maximum effective radiated power of more than 50 kilowatts will not be accepted if it specifies a site less than 32 kilometers from the transmitter site of a UHF TV broadcast analog station operating on a channel which is the second, third, or fourth channel above or below the requested channel.

(c) The low power TV, TV translator, or TV booster station field strength is calculated from the proposed effective radiated power (ERP) and the antenna height above average terrain (HAAT) in pertinent directions.

(1) For co-channel protection, the field strength is calculated using Figure 9a, 10a, or 10c of § 73.699 (F(50,10) charts) of Part 73 of this chapter.

(2) For low power TV, TV translator, and TV boosters that do not specify the same channel as the TV broadcast station to be protected, the field strength is calculated using Figure 9, 10, or 10b of § 73.699 (F(50,50) charts) of Part 73 of this chapter.

(d) A low power TV, TV translator, or TV booster station application will not be accepted if the ratio in dB of its field strength to that of the TV broadcast station at the protected contour fails to meet the following:

(1) −45 dB for co-channel operations without offset carrier frequency operation or −28 dB for offset carrier frequency operation. An application requesting offset carrier frequency operation must include the following:

(i) A requested offset designation (zero, plus, or minus) identifying the proposed direction of the 10 kHz offset from the standard carrier frequencies of the requested channel. If the offset designation is not different from that of the station being protected, the −45 dB ratio must be used.

(ii) A description of the means by which the low power TV, TV translator, or TV booster station will be maintained within the tolerances specified in § 74.761 for offset operation.

(2) 6 dB when the protected TV broadcast station operates on a VHF channel that is one channel above the requested channel.

(3) 12 dB when the protected TV broadcast station operates on a VHF channel that is one channel below the requested channel.

(4) 15 dB when the protected TV broadcast station operates on a UHF channel that is one channel above or below the requested channel.

(5) 23 dB when the protected TV broadcast station operates on a UHF channel that is fourteen channels below the requested channel.

(6) 6 dB when the protected TV broadcast station operates a UHF channel that is fifteen channels below the requested channel.

(e) As an alternative to the preceding paragraphs of 74.705, an applicant for a low power TV, TV translator or TV booster may make full use of terrain shielding and Longley-Rice terrain dependent propagation prediction methods to demonstrate that the proposed facility would not be likely to cause interference to TV broadcast stations. Guidance on using the Longley-Rice methodology is provided in *OET Bulletin No. 69* (but also *see* § 74.793(d)). Copies of *OET Bulletin No. 69* may be inspected during normal business hours at the: Federal Communications Commission, CY–C203, 445 12th Street, SW., Reference Information Center, Washington, DC 20554. This document is also available through the Internet on the *FCC Home Page* at *http://www.fcc.gov*.

[47 FR 21497, May 18, 1982, as amended at 48 FR 21487, May 12, 1983; 52 FR 31403, Aug. 20, 1987; 62 FR 26721, May 14, 1997; 65 FR 58467, Sept. 29, 2000; 69 FR 69332, Nov. 29, 2004]

§ 74.706 Digital TV (DTV) station protection.

(a) For purposes of this section, the DTV station protected service area is the geographic-area in which the field strength of the station's signal exceeds the noise-limited service levels specified in § 73.622(e) of this chapter. The extremity of this area (noise-limited perimeter) is calculated from the authorized maximum radiated power (without depression angle correction), the horizontal radiation pattern, and height above average terrain in the pertinent direction, using the signal propagation method specified in § 73.625(b) of this chapter.

(b)(1) An application to construct a new low power TV or TV translator station or change the facilities of an existing station will not be accepted if it specifies a site which is located within the noise-limited service perimeter of a co-channel DTV station.

(2) Due to the frequency spacing which exists between TV channels 4 and 5, between Channels 6 and 7, and between Channels 13 and 14, adjacent channel protection standards shall not be applicable to these pairs of channels.

(c) The low power TV, TV translator or TV booster station field strength is calculated from the proposed effective radiated power (ERP) and the antenna height above average terrain (HAAT) in pertinent directions.

(1) For co-channel protection, the field strength is calculated using Figure 9a, 10a, or 10c of § 73.699 (F(50,10) charts) of part 73 of this chapter.

(2) For adjacent channel protection, the field strength is calculated using Figure 9, 10, or 10b of § 73.699 (F(50,50) charts) of part 73 of this chapter.

(d) A low power TV, TV translator or TV booster station application will not be accepted if the ratio in dB of its field strength to that of the DTV station (L/D ratio) fails to meet the following:

(1) −2 dB or less for co-channel operations. This maximum L/D ratio for co-channel interference to DTV service is only valid at locations where the signal-to-noise (S/N) ratio is 25 dB or greater. At the edge of the noise-limited service area, where the S/N ratio is 16 dB, the maximum L/D ratio for co-channel interference from analog low power TV, TV translator or TV booster service into DTV service is −21 dB. At locations where the S/N ratio is greater than 16 dB but less than 25 dB, the maximum L/D field strength ratios are found from the following Table (for values between measured values, linear interpolation can be used):

Signal-to-noise ratio(dB)	DTV-to-low power ratio (dB)
16.00	21.00
16.35	19.94
17.35	17.69
18.35	16.44
19.35	7.19
20.35	4.69

Signal-to-noise ratio(dB)	DTV-to-low power ratio (dB)
21.35	3.69
22.35	2.94
23.35	2.44
25.00	2.00

(2) + 48 dB for adjacent channel operations at:

(i) The DTV noise-limited perimeter if a low power TV, TV translator or TV booster station is located outside that perimeter.

(ii) At all points within the DTV noise-limited area if a low power TV or TV translator is located within the DTV noise-limited perimeter, as demonstrated by the applicant.

[62 FR 26721, May 14, 1997, as amended at 63 FR 13563, Mar. 20, 1998; 64 FR 4327, Jan. 28, 1999]

§ 74.707 Low power TV and TV translator station protection.

(a)(1) A low power TV or TV translator will be protected from interference from other low power TV or TV translator stations, or TV booster stations within the following predicted contours:

(i) 62 dBu for stations on Channels 2 through 6;

(ii) 68 dBu for stations on Channels 7 through 13; and

(iii) 74 dBu for stations on Channels 14 through 69.

Existing licensees and permittees that did not furnish sufficient data required to calculate the above contours by April 15, 1983 are assigned protected contours having the following radii:

Up to 0.001 kW VHF/UHF—1 mile (1.6 km) from transmitter site

Up to 0.01 kW VHF; up to 0.1 k/W UHF—2 miles (3.2 km) from transmitter site

Up to 0.1 kW VHF; up to 1 kW UHF—4 miles (6.4 km) from transmitter site

New applicants must submit the required information; they cannot rely on this table.

(2) The low power TV or TV translator station protected contour is calculated from the authorized effective radiated power and antenna height above average terrain, using Figure 9, 10, or 10b of § 73.699 (F(50,50) charts) of Part 73 of this chapter.

(b)(1) An application to construct a new low power TV, TV translator, or TV booster station or change the facilities of an existing station will not be accepted if it specifies a site which is within the protected contour of a co-channel or first adjacent channel low power TV, TV translator, or TV booster station, except that a TV booster station may be located within the protected contour of its co-channel primary station.

(2) Due to the frequency spacing which exists between TV Channels 4 and 5, between Channels 6 and 7, and between Channels 13 and 14, adjacent channel protection standards shall not be applicable to these pairs of channels. (See § 73.603(a) of Part 73 of this chapter.)

(3) A UHF low power TV, TV translator, or TV booster construction permit application will not be accepted if it specifies a site within the UHF low power TV, TV translator, or TV booster station's protected contour and proposes operation on a channel that is 15 channels above the channel in use by the low power TV, TV translator, or TV booster station.

(c) The low power TV, TV translator, or TV booster construction permit application field strength is calculated from the proposed effective radiated power (ERP) and the antenna above average terrain (HAAT) in pertinent directions.

(1) For co-channel protection, the field strength is calculated using Figure 9a, 10a, or 10c of § 73.699 (F(50,10) charts) of Part 73 of this chapter.

(2) For low power TV, TV translator, or TV booster applications that do not specify the same channel as the low power TV, TV translator, or TV booster station to be protected, the field strength is calculated using Figure 9, 10, or 10b of § 73.699 (F(50,50) charts) of Part 73 of this chapter.

(d) A low power TV, TV translator, or TV booster station application will not be accepted if the ratio in dB of its field strength to that of the authorized low power TV, TV translator, or TV booster station at its protected contour fails to meet the following:

(1) −45 dB for co-channel operations without offset carrier frequency operation or −28 dB for offset carrier frequency operation. An application requesting offset carrier frequency operation must include the following:

(i) A requested offset designation (zero, plus, or minus) identifying the proposed direction of the 10 kHz offset from the standard carrier frequencies of the requested channel. If the offset designation is not different from that of the station being protected, or if the station being protected is not maintaining its frequencies within the tolerance specified in § 74.761 for offset operation, the −45 dB ratio must be used.

(ii) A description of the means by which the low power TV, TV translator, or TV booster station's frequencies will be maintained within the tolerances specified in § 74.761 for offset operation.

(2) 6 dB when the protected low power TV or TV translator station operates on a VHF channel that is one channel above the requested channel.

(3) 12 dB when the protected low power TV or TV translator station operates on a VHF channel that is one channel below the requested channel.

(4) 15 dB when the protected low power TV or TV translator station operates on a UHF channel that is one channel above or below the requested channel.

(5) 6 dB when the protected low power TV or TV translator station operates on a UHF channel that is fifteen channels below the requested channel.

(e) As an alternative to the preceding paragraphs of § 74.707, an applicant for a low power TV or TV translator station may make full use of terrain shielding and Longley-Rice terrain dependent propagation prediction methods to demonstrate that the proposed facility would not be likely to cause interference to low power TV, TV translator and TV booster stations. Guidance on using the Longley-Rice methodology is provided in *OET Bulletin No. 69* (but also *see* § 74.793(d)). Copies of *OET Bulletin No. 69* may be inspected during normal business hours at the: Federal Communications Commission, Room CY–C203, 445 12th Street, SW., Reference Information Center, Washington, DC 20554. This document is also available through the Internet on the FCC Home Page at *http://www.fcc.gov*.

[47 FR 21498, May 18, 1982, as amended at 47 FR 35990, Aug. 18, 1982; 48 FR 21487, May 12, 1983; 52 FR 31403, Aug. 20, 1987; 62 FR 26722, May 14, 1997; 65 FR 58467, Sept. 29, 2000; 69 FR 69332, Nov. 29, 2004]

§ 74.708 Class A TV and digital Class A TV station protection.

(a) The Class A TV and digital Class A TV station protected contours are specified in § 73.6010 of this chapter.

(b) An application to construct a new low power TV, TV translator, or TV booster station or change the facilities of an existing station will not be accepted if it fails to protect an authorized Class A TV or digital Class A TV station or an application for such a station filed prior to the date the low power TV, TV translator, or TV booster application is filed.

(c) Applications for low power TV, TV translator and TV booster stations shall protect Class A TV stations pursuant to the requirements specified in paragraphs (b) through (e) of § 74.707.

(d) Applications for low power TV, TV translator and TV booster stations shall protect digital Class A TV stations pursuant to the following requirements:

(i) An application must not specify an antenna site within the protected contour of a co-channel digital Class A TV station.

(ii) The ratio in dB of the field strength of the low power TV, TV translator or TV booster station to that of the digital Class A TV station must meet the requirements specified in paragraph (d) of § 74.706, calculated using the propagation methods specified in paragraph (c) of that section.

[65 FR 30012, May 10, 2000]

§ 74.709 Land mobile station protection.

(a) Stations in the Land Mobile Radio Service, using the following channels in the indicated cities will be protected from interference caused by low power TV or TV translator stations, and low power TV and TV translator stations must accept any interference from stations in the land mobile service operating on the following channels:

City	Channels	Coordinates	
		Latitude	Longitude
Boston, MA	14, 16	42°21′24″	071°03′24″
Chicago, IL	14, 15	41°52′28″	087°38′22″
Cleveland, OH	14, 15	41°29′51″	081°41′50″
Dallas, TX	16	32°47′09″	096°47′37″
Detroit, MI	15, 16	42°19′48″	083°02′57″
Houston, TX	17	29°45′26″	095°21′37″
Los Angeles, CA	14, 16, 20	34°03′15″	118°18′28″
Miami, FL	14	25°46′37″	080°11′32″
New York, NY	14, 15, 16	40°45′06″	073°59′39″
Philadelphia, PA	19, 20	39°56′58″	075°09′21″
Pittsburgh, PA	14, 18	40°26′19″	080°00′00″
San Francisco, CA	16, 17	37°46′39″	122°24′40″
Washington, DC	17, 18	38°53′51″	077°00′33″

(b) The protected contours for the land mobile radio service are 130 kilometers from the above coordinates, except where limited by the following:

(1) If the land mobile channel is the same as the channel in the following list, the land mobile protected contour excludes the area within 145 kilometers of the corresponding coordinates from list below. Except if the land mobile channel is 15 in New York or Cleveland or 16 in Detroit, the land mobile protected contour excludes the area within 95 kilometers of the corresponding coordinates from the list below.

(2) If the land mobile channel is one channel above or below the channel in the following list, the land mobile protected contour excludes the area within 95 kilometers of the corresponding coordinates from the list below.

City	Channel	Coordinates	
		Latitude	Longitude
San Diego, CA	15	32°41′48″	116°56′10″
Waterbury, CT	20	41°31′02″	073°01′00″
Washington, DC	14	38°57′17″	077°00′17″
Washington, DC	20	38°57′49″	077°06′18″
Champaign, IL	15	40°04′11″	087°54′45″
Jacksonville, IL	14	39°45′52″	090°30′29″
Ft. Wayne, IN	15	41°05′35″	085°10′42″
South Bend, IN	16	41°36′20″	086°12′44″
Salisbury, MD	16	38°24′15″	075°34′45″
Mt. Pleasant, MI	14	43°34′24″	084°46′21″
Hanover, NH	15	43°42′30″	072°09′16″
Canton, OH	17	40°51′04″	081°16′37″
Cleveland, OH	19	41°21′19″	081°44′24″
Oxford, OH	14	39°30′26″	084°44′09″
Zanesville, OH	18	39°55′42″	081°59′06″
Elmira-Corning, NY	18	42°06′20″	076°52′17″
Harrisburg, PA	21	40°20′44″	076°52′09″
Johnstown, PA	19	40°19′47″	078°53′45″
Lancaster, PA	15	40°15′45″	076°27′49″
Philadelphia, PA	17	40°02′30″	075°14′24″
Pittsburgh, PA	16	40°26′46″	079°57′51″
Scranton, PA	16	41°10′58″	075°52′21″
Parkersburg, WV	15	39°20′50″	081°33′56″
Madison, WI	15	43°03′01″	089°29′15″

(c) A low power TV or TV translator station application will not be accepted if it specifies a site that is within the protected contour of a co-channel or first adjacent channel land mobile assignment.

(d) The low power TV or TV translator station field strength is calculated from the proposed effective radiated power (ERP) and the antenna height above average terrain (HAAT) in pertinent directions.

(1) The field strength is calculated using Figure 10c of § 73.699 (F(50, 10) charts) of Part 73 of this chapter.

(2) A low power TV or TV translator station application will not be accepted if it specifies the same channel as one of the land mobile assignments and its field strength at the land mobile protected contour exceeds 52 dBu.

(3) A low power TV or TV translator station application will not be accepted if it specifies a channel that is one channel above or below one of the land mobile assignments and its field strength at the land mobile protected contour exceeds 76 dBu.

(e) To protect stations in the Offshore Radio Service, a low power TV or TV translator station construction permit application will not be accepted if it specifies operation on channels 15, 16, 17 or 18 in the following areas. West Longitude and North Latitude are abbreviated as W.L. and N.L. respectively.

(1) On Channel 15: west of 92°00′ W.L.; east of 98°30′ W.L.; and south of a line extending due west from 30°30′ N.L., 92°00′ W.L. to 30°30′ N.L., 96°00′ W.L.; and then due southwest to 28°00′ N.L., 98°30′ W.L.

(2) On Channel 16: west of 86°40′ W.L.; east of 96°30′ W.L.; and south of a line extending due west from 31°00′ N.L., 86°40′ W.L. to 31°00′ N.L., 95°00′ W.L. and then due southwest to 29°30′ N.L., 96°30′ W.L.

(3) On Channel 17: west of 86°30′ W.L.; east of 96°00′ W.L.; and south of a line extending due west from 31°00′ N.L., 86°30′ W.L. to 31°30′ N.L., 94°00′ W.L. and then due southwest to 29°30′ N.L., 96°00′ W.L.

(4) On Channel 18: west of 87°00′ W.L.; east of 95°00′ W.L.; and south of 31°00′ N.L.

[47 FR 21499, May 18, 1982, as amended at 50 FR 12027, Mar. 27, 1985; 50 FR 33942, Aug. 22, 1985; 69 FR 31906, June 8, 2004]

§ 74.710 Digital low power TV and TV translator station protection.

(a) An application to construct a new low power TV, TV translator, or TV booster station or change the facilities of an existing station will not be accepted if it fails to protect an authorized digital low power TV or TV translator station or an application for such station filed prior to the date the low power TV, TV translator, or TV booster application is filed.

(b) Applications for low power TV, TV translator and TV booster stations shall protect digital low power TV and TV translator stations pursuant to the following requirements:

(1) An application must not specify an antenna site within the protected contour of a co-channel or adjacent channel digital low power TV or TV translator station, as defined in § 74.792.

(2) The ratio in dB of the field strength of the low power TV, TV translator or TV booster station at the protected contour of a co-channel digital TV or TV translator station must meet the requirements specified in § 74.706(d)(1).

(3) The ratio in dB of the field strength of the low power TV, TV translator or TV booster station at the protected contour of a digital low power TV or TV translator station on the lower and upper adjacent channels must not exceed 49 dB and 48 dB, respectively.

(4) The analysis used in 74.710 should use the propagation methods specified in § 74.706(c).

(c) As an alternative to the requirements of paragraph (b) of this section, an applicant for a low power TV, TV translator or TV booster may make full use of terrain shielding and Longley-Rice terrain dependent propagation prediction methods to demonstrate that the proposed facility would not be likely to cause interference to digital low power TV or TV translator stations, as described in § 74.707(e) (*i.e.*, reduce the service population by no more than 0.5% within the station's protected contour based on the interference thresholds of § 73.623(c) of this chapter).

[69 FR 69332, Nov. 29, 2004]

§ 74.731 Purpose and permissible service.

(a) Television broadcast translator stations and television broadcast booster stations provide a means whereby the signals of television broadcast stations may be retransmitted to areas in which direct reception of such television broadcast stations is unsatisfactory due to distance or intervening terrain barriers.

(b) Except as provided in paragraph (f) of this section, a television broadcast translator station or television broadcast booster station may be used only to receive the signals of a television broadcast station, another television broadcast translator station, a television translator relay station, a television intercity relay station, a television STL station, or other suitable source such as a CARS or common carrier microwave station, for the simultaneous retransmission of the programs and signals of a television broadcast station. Such retransmissions may be accomplished by either:

(1) Reception of the television programs and signals of a television broadcast station directly through space, conversion to a different channel by simple heterodyne frequency conversion and suitable amplification; or,

(2) Modulation and amplification of a video and audio feed, in which case modulating equipment meeting the requirements of § 74.750(d) shall be used.

(c) The transmissions of each television broadcast translator station shall be intended for direct reception by the general public and any other use shall be incidental thereto. A television broadcast translator station shall not be operated solely for the purpose of relaying signals to one or more fixed receiving points for retransmission, distribution, or further relaying.

(d) The technical characteristics of the retransmitted signals shall not be deliberately altered so as to hinder reception on conventional television broadcast receivers.

(e) A television broadcast translator station shall not deliberately retransmit the signals of any station other than the station it is authorized by license to retransmit. Precautions shall be taken to avoid unintentional retransmission of such other signals.

(f) A locally generated radio frequency signal similar to that of a TV broadcast station and modulated with visual and aural information may be connected to the input terminals of a television broadcast translator or low power station for the purposes of transmitting still photographs, slides and voice announcements. The radio frequency signals shall be on the same channel as the normally used off-the-air signal being rebroadcast. When transmitting originations concerning financial support or public service announcements, connection of the locally generated signals shall be made automatically either by means of a time switch or upon receipt of a control signal from the TV station being rebroadcast designed to actuate the switching circuit. The switching circuit will be so designed that the input circuit will be returned to the off-the-air signal within 30 seconds. The connection for emergency transmissions may be made manually. The apparatus used to generate the local signal which is used to modulate the translator or low power station must be capable of producing a visual or aural signal or both which will provide acceptable reception on television receivers designed for the transmission standards employed by TV broadcast stations. The visual and aural materials so transmitted shall be limited to emergency warnings of imminent danger, to local public service announcements and to seeking or acknowledging financial support deemed necessary to the continued operation of the station. Accordingly, the originations concerning financial support and PSAs are limited to 30 seconds each, no more than once per hour. Acknowledgements of financial support may include identification of the contributors, the size and nature of the contribution and advertising messages of contributors. Emergency transmissions shall be no longer or more frequent than necessary to protect life and property.

(g) Low power TV stations may operate under the following modes of service:

(1) As a TV translator station, subject to the requirements of this part;

(2) For origination of programming and commercial matter as defined in § 74.701(f);

(3) For the transmission of subscription television broadcast (STV) programs, intended to be received in intelligible form by members of the public for a fee or charge subject to the provisions of §§ 73.642(e) and 73.644.

(h) A low power TV station may not be operated solely for the purpose of relaying signals to one or more fixed receiving points for retransmission, distribution or relaying.

(i) Low power TV stations are subject to no minimum required hours of operation and may operate in any of the 3 modes described in paragraph (g) of this section for any number of hours.

(j) Television broadcast booster stations provide a means whereby the licensee of a television broadcast station may provide service to areas of low signal strength in any region within the primary station's Grade B contour. The booster station may not be located outside the predicted Grade B of its primary station nor may the predicted Grade B signal of the television booster station extend beyond the predicted Grade B contour of the primary station. A television broadcast booster station is authorized to retransmit only the signals of its primary station; it shall not retransmit the signals of any other stations nor make independent transmissions. However, locally generated signals may be used to excite the booster apparatus for the purpose of conducting tests and measurements essential to the proper installation and maintenance of the apparatus.

(k) The transmissions of a television broadcast booster station shall be intended for direct reception by the general public. Such stations will not be permitted to establish a point-to-point television relay system.

(l) After 11:59 pm local time on September 1, 2015, low power television, TV translators and Class A television

stations may no longer operate any facility in analog (NTSC) mode.

[28 FR 13722, Dec. 14, 1963, as amended at 43 FR 1951, Jan. 13, 1978; 47 FR 21499, May 18, 1982; 47 FR 40172, Sept. 13, 1982; 48 FR 21487, May 12, 1983; 52 FR 31404, Aug. 20, 1987; 76 FR 44827, July 27, 2011]

§ 74.732 Eligibility and licensing requirements.

(a) A license for a low power TV or TV translator station may be issued to any qualified individual, organized group of individuals, broadcast station licensee, or local civil governmental body.

(b) More than one low power TV or TV translator station may be licensed to the same applicant whether or not such stations serve substantially the same area. Low power TV and TV translator stations are not counted for purposes of § 73.3555, concerning multiple ownership.

(c) Only one channel will be assigned to each low power TV or TV translator station. Additional low power or translator stations may be authorized to provide additional reception. A separate application is required for each station and each application must be complete in all respects.

(d) The FCC will not act on applications for new low power TV or TV translator stations, for changes in facilities of existing stations, or for changes in output channel tendered by displaced stations pursuant to § 73.3572(a)(1), when such changes will result in a major change until the applicable time for filing a petition to deny has passed pursuant to § 73.3584(c).

(e) A proposal to change the primary TV station being retransmitted or an application of a licensed translator station to include low power TV station operation, *i.e.*, program origination or subscription service will be subject only to a notification requirement.

(f) Applications for transfer of ownership or control of a low power TV or TV translator station will be subject to petitions to deny.

(g) A television broadcast booster station will be authorized only to the licensee or permittee of the television station whose signals the booster will rebroadcast, to areas within the Grade B contour of the primary station.

(h) No numerical limit is placed on the number of booster stations that may be licensed to a single licensee. A separate license is required for each television broadcast booster station.

[47 FR 21499, May 18, 1982, as amended at 48 FR 21487, May 12, 1983; 49 FR 20504, May 15, 1984; 52 FR 7423, Mar. 11, 1987; 52 FR 10571, Apr. 2, 1987; 52 FR 31404, Aug. 20, 1987]

§ 74.733 UHF translator signal boosters.

(a) The licensee of a UHF television broadcast translator station may be authorized to operate one or more signal boosters for the purpose of providing reception to small shadowed areas within the area intended to be served by the translator.

(b) The transmitting apparatus shall consist of a simple linear radio frequency amplifier, with one or more amplifying stages, which is capable of receiving, amplifying, and retransmitting the signals of the parent translator without significantly altering any electrical characteristic of the received signal other than its amplitude. The maximum power input to the plate of the final radio frequency amplifier shall not exceed 5 watts.

(c) The amplifier shall be equipped with suitable circuits which will automatically cause it to cease radiating if no signal is being received from the parent translator station. Care shall be taken in the design of the apparatus to insure that out-of-band radiation is not excessive and that adequate isolation is maintained between the input and output circuits to prevent unstable operation.

(d) The installation of the apparatus and its associated receiving and transmitting antennas shall be in accordance with accepted principles of good engineering practice. Either horizontal, vertical, or circular polarization of the electric field of the radiated signal may be employed. If the isolation between the input and output circuits depends in part upon the polarization or directive properties of the transmitting and receiving antennas, the installation shall be sufficiently rugged to withstand the normal hazards of the environment.

(e) The operation of a UHF translator signal booster is subject to the condition that no harmful interference is caused to the reception of any station, broadcast or non-broadcast, other than the parent translator. The licensee of the UHF translator signal booster is expected to use reasonable diligence to minimize interference to the direct reception of the parent translator station.

(f) UHF translator signal boosters may be operated unattended. Repairs and adjustments shall be made by a qualified person. The required qualifications are set forth in § 74.750 (g) and (h).

(g) An individual call sign will not be assigned to a UHF translator booster station. The retransmission of the call sign of the parent translator will serve as station identification.

(h) Applications for authority to construct and operate a UHF translator signal booster shall be submitted on FCC Form 346A. No construction of facilities or installation of apparatus at the proposed transmitter site shall be made until a construction permit therefor has been issued by the Commission.

(i) The provisions of § 74.765 concerning posting of station license shall apply to a UHF translator signal booster except that the parent UHF translator call sign, followed by the word ''Booster'', shall be displayed at the signal booster site.

(j) The provisions of §§ 74.767 and 74.781 concerning marking and lighting of antenna structures and station records, respectively, apply to UHF translator signal boosters.

NOTE: Effective July 11, 1975, no new UHF signal boosters will be authorized. Licensees of such existing boosters may make application for renewal of license or change in facilities on the applicable FCC forms for Television Broadcast Translator Stations (Form 346, for construction permits; 347, for license to cover construction permit; and 303-S, for renewal of license). Report and Order, Docket No. 20372. May 28, 1975.

[28 FR 13722, Dec. 14, 1963, as amended at 40 FR 25022, June 12, 1975; 59 FR 63052, Dec. 7, 1994]

§ 74.734 Attended and unattended operation.

(a) Low power TV, TV translator, and TV booster stations may be operated without a designated person in attendance if the following requirements are met:

(1) If the transmitter site cannot be promptly reached at all hours and in all seasons, means shall be provided so that the transmitting apparatus can be turned on and off at will from a point that readily is accessible at all hours and in all seasons.

(2) The transmitter also shall be equipped with suitable automatic circuits that will place it in a nonradiating condition in the absence of a signal on the input channel or circuit.

(3) The transmitting and the ON/OFF control, if at a location other than the transmitter site, shall be adequately protected against tampering by unauthorized persons.

(4) A letter notification must be filed with the FCC in Washington, DC, Attention: Video Division, Media Bureau, providing the name, address, and telephone number of a person or persons who may be called to secure suspension of operation of the transmitter promptly should such action be deemed necessary by the FCC. Such information shall be kept current by the licensee.

(5) In cases where the antenna and supporting structure are considered to be a hazard to air navigation and are required to be painted and lighted under the provisions of part 17 of the Rules, the licensee shall make suitable arrangements for the daily observations, when required, and lighting equipment inspections required by §§ 17.37 and 17.38 of the FCC rules.

(b) An application for authority to construct a new low power TV station (when rebroadcasting the programs of another station) or TV translator station or to make changes in the facilities of an authorized station, and that proposes unattended operation, shall include an adequate showing as to the manner of compliance with this section.

[47 FR 21500, May 18, 1982, as amended at 48 FR 21487, May 12, 1983; 60 FR 55483, Nov. 1, 1995; 63 FR 33878, June 22, 1998; 67 FR 13233, Mar. 21, 2002]

§ 74.735 Power limitations.

(a) The maximum peak effective radiated power (ERP) of an analog low power TV, TV translator, or TV booster station shall not exceed:

(1) 3 kW for VHF channels 2–13; and

(2) 150 kW for UHF channels 14–69.

(b) The maximum ERP of a digital low power TV, TV translator, or TV booster station (average power) shall not exceed:

(1) 3 kW for VHF channels 2–13; and

(2) 15 kW for UHF channels 14–69.

(c) The limits in paragraphs (a) and (b) apply separately to the effective radiated powers that may be obtained by the use of horizontally or vertically polarized transmitting antennas, providing the applicable provisions of §§ 74.705, 74.706, 74.707 and 74.709 are met. For either omnidirectional or directional antennas, where the ERP values of the vertically and horizontally polarized components are not of equal strength, the ERP limits shall apply to the polarization with the larger ERP. Applications proposing the use of directional antenna systems must be accompanied by the following:

(1) Complete description of the proposed antenna system, including the manufacturer and model number of the proposed directional antenna. It is *not* acceptable to label the antenna with only a generic term such as ''Yagi'' or ''Dipole''. A specific model number must be provided. In the case of individually designed antennas with no model number, or in the case of a composite antenna composed of two or more individual antennas, the antenna should be described as a ''custom'' or ''composite'' antenna, as appropriate. A full description of the design of the antenna should also be submitted.

(2) Relative field horizontal plane pattern (horizontal polarization only) of the proposed directional antenna. A value of 1.0 should be used for the maximum radiation. The plot of the pattern should be oriented so that 0° corresponds to the maximum radiation of the directional antenna or, alternatively in the case of a symmetrical pattern, to the line of symmetry. The 0° on the plot should be referenced to the actual azimuth with respect to true North.

(3) A tabulation of the relative field pattern required in paragraph (c)(2), of this section. The tabulation should use the same zero degree reference as the plotted pattern, and be tabulated at least every 10°. In addition, tabulated values of all maximas and minimas, with their corresponding azimuths, should be submitted.

(4) All horizontal plane patterns must be plotted to the largest scale possible on unglazed letter-size polar coordinate paper (main engraving approximately 18 cm × 25 cm (7 inches × 10 inches)) using only scale divisions and subdivisions of 1, 2, 2.5 or 5 times 10-nth. Values of field strength on any pattern less than 10% of the maximum field strength plotted on that pattern must be shown on an enlarged scale.

(5) The horizontal plane patterns that are required are the patterns for the complete directional antenna system. In the case of a composite antenna composed of two or more individual antennas, this means that the patterns for the composite antenna composed of two or more individual antennas, not the patterns for each of the individual antennas, must be submitted.

[30 FR 8847, July 14, 1965, as amended at 41 FR 28267, July 9, 1976; 47 FR 21500, May 18, 1982; 48 FR 21487, May 12, 1983; 52 FR 7423, Mar. 11, 1987; 52 FR 31404, Aug. 20, 1987; 58 FR 44951, Aug. 25, 1993; 62 FR 26722, May 14, 1997; 76 FR 44828, July 27, 2011]

§ 74.736 Emissions and bandwidth.

(a) The license of a low power TV, TV translator, or TV booster station authorizes the transmission of the visual signal by amplitude modulation (A5) and the accompanying aural signal by frequency modulation (F3).

(b) Standard width television 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 picture and sound information shall be considered to be spurious emissions.

(c) Any emissions appearing on frequencies more than 3 MHz above or

below the upper and lower edges, respectively, of the assigned channel shall be attenuated no less than:

(1) 30 dB for transmitters rated at no more than 1 watt power output.

(2) 50 dB for transmitters rated at more than 1 watt power output.

(3) 60 dB for transmitters rated at more than 100 watts power output.

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

[28 FR 13722, Dec. 14, 1963, as amended at 33 FR 8677, June 13, 1968; 36 FR 19592, Oct. 8, 1971; 47 FR 21500, May 18, 1982; 52 FR 31404, Aug. 20, 1987]

§ 74.737 Antenna location.

(a) An applicant for a new low power TV, TV translator, or TV booster station or for a change in the facilities of an authorized station shall endeavor to select a site that 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, if any, that will be retransmitted.

(b) 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.

(c) A site within 8 kilometers of the area intended to be served is to be preferred if the conditions in paragraph (a) of this section can be met.

(d) Consideration should be given to the accessibility of the site at all seasons of the year and to the availability of facilities for the maintenance and operation of the transmitting equipment.

(e) The transmitting antenna should be located as near as is practical to the transmitter to avoid the use of long transmission lines and the associated power losses.

(f) Consideration should be given to the existence of strong radio frequency fields from other transmitters at the site of the transmitting equipment and the possibility that such fields may result in the retransmissions of signals originating on frequencies other than that of the primary station being rebroadcast.

[47 FR 21500, May 18, 1982, as amended at 52 FR 31404, Aug. 20, 1987]

§ 74.750 Transmission system facilities.

(a) A low power TV, TV translator, or TV booster station shall operate with a transmitter that is either certificated for licensing under the provisions of this subpart or type notified for use under part 73 of this chapter.

(b) Transmitting antennas, antennas used to receive the signals to be rebroadcast, and transmission lines are not certificated by the FCC. External preamplifiers also may be used provided that they do not cause improper operation of the transmitting equipment, and use of such preamplifiers is not necessary to meet the provisions of paragraph (c) of this section.

(c) The following requirements must be met before low power TV and TV translator transmitters will be certificated by the FCC:

(1) The equipment shall be so designed that the electrical characteristics of a standard television signal introduced into the input terminals will be maintained at the output. The overall response of the apparatus within its assigned channel, when operating at its rated power output and measured at the output terminals, shall provide a smooth curve, varying within limits separated by no more than 4 dB: *Provided, however,* That means may be provided to reduce the amplitude of the aural carrier below those limits, if necessary to prevent intermodulation which would mar the quality of the retransmitted picture or result in emissions outside of the assigned channel.

(2) Radio frequency harmonics of the visual and aural carriers, measured at the output terminals of the transmitter, shall be attenuated no less than 60 dB below the peak visual output power within the assigned channel. All other emissions appearing on frequencies more than 3 megacycles above or below the upper and lower edges, respectively, of the assigned channel shall be attenuated no less than:

(i) 30 dB for transmitters rated at no more than 1 watt power output.

(ii) 50 dB for transmitters rated at more than 1 watt power output.

(iii) 60 dB for transmitters rated at more than 100 watts power output.

(3) When subjected to variations in ambient temperature between minus 30 degrees and plus 50 degrees Centigrade and variations in power main voltage between 85 percent and 115 percent of rated power supply voltage, the local oscillator frequency stability shall maintain the operating frequency within:

(i) 0.02 percent of its rated frequency for transmitters rated at no more than 100 watts peak visual power.

(ii) 0.002 percent of the rated frequency for transmitters rated at more than 100 watts peak visual power.

(iii) Plus or minus 1 kHz of its rated frequency for transmitters to be used at stations employing offset carrier frequency operation.

(4) The apparatus shall contain automatic circuits which will maintain the peak visual power output constant within 2 dB when the strength of the input signal is varied over a range of 30 dB and which will not permit the peak visual power output to exceed the maximum rated power output under any condition. If a manual adjustment is provided to compensate for different average signal strengths, provision shall be made for determining the proper setting for the control, and if improper adjustment of the control could result in improper operation, a label shall be affixed at the adjustment control bearing a suitable warning.

(5) The apparatus must be equipped with automatic controls that will place it in a non-radiating condition when no signal is being received on the input channel, either due to absence of a transmitted signal or failure of the receiving portion of the facilities used for rebroadcasting the signal of another station. The automatic control may include a time delay feature to prevent interruptions caused by fading or other momentary failures of the incoming signal.

(6) The tube or tubes employed in the final radio frequency amplifier shall be of the appropriate power rating to provide the rated power output of the translator. The normal operating constants for operation at the rated power output shall be specified. The apparatus shall be equipped with suitable meters or meter jacks so that appropriate voltage and current measurements may be made while the apparatus is in operation.

(7) The transmitters of over 0.001 kW peak visual power (0.002 kW when circularly polarized antennas are used) shall be equipped with an automatic keying device that will transmit the call sign of the station, in International Morse Code, at least once each hour during the time the station is in operation when operating in the translator mode retransmitting the programming of a TV broadcast station. However, the identification by Morse Code is not required if the licensee of the low power TV or TV translator station has an agreement with the TV broadcast station being rebroadcast to transmit aurally or visually the low power TV or TV translator station call as provided for in § 74.783. Transmission of the call sign can be accomplished by:

(i) Frequency shift keying; the aural and visual carrier shift shall not be less than 5 kHz or greater than 25 kHz.

(ii) Amplitude modulation of the aural carrier of at least 30% modulation. The audio frequency tone used shall not be within 200 hertz of the Emergency Broadcast System Attention Signal alerting frequencies.

(8) Wiring, shielding, and construction shall be in accordance with accepted principles of good engineering practice.

(d) Low power TV, TV translator and transmitting equipment using a modulation process for either program origination or rebroadcasting TV booster transmitting equipment using a modulation process must meet the following requirements:

(1) The equipment shall meet the requirements of paragraphs (a)(1) and (b)(3) of § 73.687.

(2) The stability of the equipment shall be sufficient to maintain the operating frequency of the aural carrier to 4.5 MHz ± 1kHz above the visual carrier when subjected to variations in ambient temperature between 30° and +50° centigrade and variations in power main voltage between 85 and 115 percent of rated power supply voltage.

(e) Certification will be granted only upon a satisfactory showing that the

apparatus is capable of meeting the requirements of paragraphs (c) and (d) of this section. The following procedures shall apply:

(1) Any manufacturer of apparatus intended for use at low power TV, TV translator, or TV booster stations may request certification by following the procedures set forth in part 2, subpart J, of this chapter.

(2) Low power TV, TV translator, and TV booster transmitting apparatus that has been certificated by the FCC will normally be authorized without additional measurements from the applicant or licensee.

(3) Applications for certification of modulators to be used with existing certificated TV translator apparatus must include the specifications electrical and mechanical interconnecting requirements for the apparatus with which it is designed to be used.

(4) Other rules concerning certification, including information regarding withdrawal of type acceptance, modification of certificated equipment and limitations on the findings upon which certification is based, are set forth in part 2, subpart J, of this chapter.

(f) The transmitting antenna system may be designed to produce horizontal, vertical, or circular polarization.

(g) Low power TV, TV translator, or TV booster stations installing new certificated transmitting apparatus incorporating modulating equipment need not make equipment performance measurements and shall so indicate on the station license application. Stations adding new or replacing modulating equipment in existing low power TV, TV translator, or TV booster station transmitting apparatus must have a qualified person examine the transmitting system after installation. This person must certify in the application for the station license that the transmitting equipment meets the requirements of paragraph (d)(1) of this section. A report of the methods, measurements, and results must be kept in the station records. However, stations installing modulating equipment solely for the limited local origination of signals permitted by § 74.731 need not comply with the requirements of this paragraph.

[28 FR 13722, Dec. 14, 1963, as amended at 33 FR 8677, June 13, 1968; 36 FR 19592, Oct. 8, 1971; 37 FR 25844, Dec. 5, 1972; 41 FR 17552, Apr. 27, 1976; 43 FR 1951, Jan. 13, 1978; 46 FR 35465, July 8, 1981; 47 FR 21500, May 18, 1982; 47 FR 30496, July 14, 1982; 52 FR 31404, Aug. 20, 1987; 60 FR 55483, Nov. 1, 1995; 62 FR 26722, May 14, 1997; 63 FR 36605, July 7, 1998]

§ 74.751 Modification of transmission systems.

(a) No change, either mechanical or electrical, may be made in apparatus which has been certificated by the Commission without prior authority of the Commission. If such prior authority has been given to the manufacturer of certificated equipment, the manufacturer may issue instructions for such changes citing its authority. In such cases, individual licensees are not required to secure prior Commission approval but shall notify the Commission when such changes are completed.

(b) Formal application (FCC Form 346) is required 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 low power TV, TV translator, and TV booster stations, or any change which could result in a change in the electrical characteristics or performance of the station.

(2) Any change in the transmitting antenna system, including the direction of radiation, directive antenna pattern, antenna gain, transmission line loss characteristics, or height of antenna center of radiation.

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

(5) A change in frequency assignment.

(6) Any changes in the location of the transmitter except within the same

building or upon the same pole or tower.

(7) A change of authorized operating power.

(c) Other equipment changes not specifically referred to in paragraphs (a) and (b) of this section may be made at the discretion of the licensee, provided that the FCC in Washington, DC, Attention: Video Division, Media Bureau, is notified in writing upon the completion of such changes.

(d) Upon installation of new or replacement transmitting equipment for which prior FCC authority is not required under the provisions of this section, the licensee must place in the station records a certification that the new installation complies in all respects with the technical requirements of this part and the station authorization.

[28 FR 13722, Dec. 14, 1963, as amended at 38 FR 6827, Mar. 13, 1973; 39 FR 38652, Nov. 1, 1974; 45 FR 26067, Apr. 17, 1980; 47 FR 21501, May 18, 1982; 48 FR 41423, Sept. 15, 1983; 50 FR 23710, June 5, 1985; 52 FR 31405, Aug. 20, 1987; 63 FR 33879, June 22, 1998; 63 FR 36605, July 7, 1998; 67 FR 13233, Mar. 21, 2002]

§ 74.761 Frequency tolerance.

The licensee of a low power TV, TV translator, or TV booster station shall maintain the transmitter output frequencies as set forth below. The frequency tolerance of stations using direct frequency conversion of a received signal and not engaging in offset carrier operation as set forth in paragraph (d) of this section will be referenced to the authorized plus or minus 10 kHz offset, if any, of the primary station.

(a) The visual carrier shall be maintained to within 0.02 percent of the assigned visual carrier frequency for transmitters rated at not more than 100 watts peak visual power.

(b) The visual carrier shall be maintained to within 0.002 percent of the assigned visual carrier frequency for transmitters rated at more than 100 watts peak visual power.

(c) The aural carrier of stations employing modulating equipment shall be maintained at 4.5 MHz ±1 kHz above the visual carrier frequency.

(d) The visual carrier shall be maintained to within 1 kHz of the assigned channel carrier frequency if the low power TV, TV translator, or TV booster station is authorized with a specified offset designation in order to provide protection under the provisions of § 74.705 or § 74.707.

[43 FR 1952, Jan. 13, 1978, as amended at 52 FR 31405, Aug. 20, 1987]

§ 74.762 Frequency measurements.

(a) The licensee of a low power TV station, a TV translator, or a TV booster station must measure the carrier frequencies of its output channel as often as necessary to ensure operation within the specified tolerances, and at least once each calendar year at intervals not exceeding 14 months.

(b) In the event that a low power TV, TV translator, or TV booster station is found to be operating beyond the frequency tolerance prescribed in § 74.761, the licensee promptly shall suspend operation of the transmitter and shall not resume operation until transmitter has been restored to its assigned frequencies. Adjustment of the frequency determining circuits of the transmitter shall be made only by a qualified person in accordance with § 74.750(g).

[52 FR 31405, Aug. 20, 1987]

§ 74.763 Time of operation.

(a) A low power TV, TV translator, or TV booster station is not required to adhere to any regular schedule of operation. However, the licensee of a TV translator or TV booster station is expected to provide service to the extent that such is within its control and to avoid unwarranted interruptions in the service provided.

(b) In the event that causes beyond the control of the low power TV or TV translator station licensee make it impossible to continue operating, the licensee may discontinue operation for a period of not more than 30 days without further authority from the FCC. Notification must be sent to the FCC in Washington, DC, Attention: Video Division, Media Bureau, not later than the 10th day of discontinued operation. During such period, the licensee shall continue to adhere to the requirements in the station license pertaining to the lighting of antenna structures. In the event normal operation is restored

prior to the expiration of the 30 day period, the FCC in Washington, DC, Attention: Video Division, Media Bureau, shall be notified in writing of the date normal operations resumed. If causes beyond the control of the licensee make it impossible to comply within the allowed period, a request for Special Temporary Authority (see § 73.1635 of this chapter) shall be made to the FCC no later than the 30th day for such additional time as may be deemed necessary.

(c) Failure of a low power TV, TV translator, or TV booster station to operate for a period of 30 days or more, except for causes beyond the control of the licensee, shall be deemed evidence of discontinuation of operation and the license of the station may be cancelled at the discretion of the FCC. Furthermore, the station's license will expire as a matter of law, without regard to any causes beyond control of the licensee, if the station fails to transmit broadcast signals for any consecutive 12-month period, notwithstanding any provision, term, or condition of the license to the contrary.

(d) A television broadcast translator station shall not be permitted to radiate during extended periods when signals of the primary station are not being retransmitted.

[28 FR 13722, Dec. 14, 1963, as amended at 52 FR 7423, Mar. 11, 1987; 52 FR 31405, Aug. 20, 1987; 61 FR 28768, June 6, 1996; 63 FR 33879, June 22, 1998; 67 FR 13233, Mar. 21, 2002]

§ 74.765 Posting of station and operator licenses.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the station or manner of operation shall be kept in the station record file so as to be available for inspection upon request of authorized representatives of the FCC.

(b) The call sign of the station, together with the name, address, and telephone number of the licensee or local representative of the licensee, if the licensee does not reside in the community served by the station, and the name and address of the person and place where the station records are maintained, shall be displayed at the transmitter site on the structure supporting the transmitting antenna, so as to be visible to a person standing on the ground. The display shall be maintained in legible condition by the licensee.

[47 FR 21502, May 18, 1982, as amended at 52 FR 7423, Mar. 11, 1987; 60 FR 55483, Nov. 1, 1995]

§ 74.769 Copies of rules.

The licensee or permittee of a station authorized under this subpart shall have a current copy of Volume I and Volume III of the Commission's Rules. Each such licensee or permittee shall be familiar with those rules relating to stations authorized under this subpart. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington, DC 20402.

[60 FR 55483, Nov. 1, 1995]

§ 74.780 Broadcast regulations applicable to translators, low power, and booster stations.

The following rules are applicable to TV translator, low power TV, and TV booster stations:

Section 73.653—Operation of TV aural and visual transmitters.
Section 73.658—Affiliation agreements and network program practices; territorial exclusivity in non-network program arrangements.
Part 73, Subpart G—Emergency Broadcast System (for low power TV stations locally originating programming as defined by § 74.701(h)).
Section 73.1201—Station identification (for low power TV stations locally originating programming as defined by § 74.701(h)).
Section 73.1206—Broadcast of telephone conversations.
Section 73.1207—Rebroadcasts.
Section 73.1208—Broadcast of taped, filmed or recorded material.
Section 73.1211—Broadcast of lottery information.
Section 73.1212—Sponsorship identifications; list retention, related requirements.
Section 73.1216—Licensee conducted contests.
Section 73.1510—Experimental authorizations.
Section 73.1515—Special field test authorizations.
Section 73.1615—Operation during modifications of facilities.
Section 73.1635—Special temporary authorizations (STA).

Section 73.1650—International broadcasting agreements.
Section 73.1680—Emergency antennas.
Section 73.1692—Construction near or installations on an AM broadcast tower.
Section 73.1940—Broadcasts by candidates for public office.
Section 73.2080—Equal employment opportunities (for low power TV stations only).
Section 73.3500—Application and report forms.
Section 73.3511—Applications required.
Section 73.3512—Where to file; number of copies.
Section 73.3513—Signing of applications.
Section 73.3514—Content of applications.
Section 73.3516—Specification of facilities.
Section 73.3517—Contingent applications.
Section 73.3518—Inconsistent or conflicting applications.
Section 73.3519—Repetitious applications.
Section 73.3521—Mutually exclusive applications for low power TV and TV translator stations.
Section 73.3522—Amendment of applications.
Section 73.3525—Agreements for removing application conflicts.
Section 73.3533—Application for construction permit or modification of construction permit.
Section 73.3534—Application for extension of construction permit or for construction permit to replace expired construction permit.
Section 73.3536—Application for license to cover construction permit.
Section 73.3538 (a)(1)(3)(4), (b)(2)—Application to make changes in existing station.
Section 73.3539—Application for renewal of license.
Section 73.3540—Application for voluntary assignment of transfer of control.
Section 73.3541—Application for involuntary assignment or transfer of control.
Section 73.3542—Application for emergency authorization.
Section 73.3544—Application to obtain a modified station license.
Section 73.3545—Application for permit to deliver programs to foreign stations.
Section 73.3550—Requests for new or modified call sign assignments.
Section 73.3561—Staff consideration of applications requiring Commission action.
Section 73.3562—Staff consideration of applications not requiring action by the Commission.
Section 73.3564—Acceptance of applications.
Section 73.3566—Defective applications.
Section 73.3568—Dismissal of applications.
Section 73.3572—Processing of TV broadcast, low power TV, and TV translator station applications.
Section 73.3580—Local public notice of filing of broadcast applications.
Section 73.3584—Petitions to deny.
Section 73.3587—Informal objections.
Section 73.3591—Grants without hearing.
Section 73.3593—Designation for hearing.
Section 73.3594—Local public notice of designation for hearing.
Section 73.3597—Procedures on transfer and assignment applications.
Section 73.3598—Period of construction.
Section 73.3599—Forfeiture of construction permit.
Section 73.3601—Simultaneous modification and renewal of license.
Section 73.3603—Special waiver procedure relative to applications.
Section 73.3612—Annual employment report (for low power TV stations only).
Section 73.3613—Filing of contracts (network affiliation contracts for low power TV stations only).

[52 FR 7423, Mar. 11, 1987, as amended at 52 FR 25867, July 9, 1987; 52 FR 31405, Aug. 20, 1987; 56 FR 28099, June 19, 1991; 59 FR 31557, June 20, 1994; 62 FR 51063, Sept. 30, 1997]

§ 74.781 Station records.

(a) The licensee of a low power TV, TV translator, or TV booster station shall maintain adequate station records, including the current instrument of authorization, official correspondence with the FCC, contracts, permission for rebroadcasts, and other pertinent documents.

(b) Entries required by § 17.49 of this Chapter concerning any observed or otherwise known extinguishment or improper functioning of a tower light:

(1) The nature of such extinguishment or improper functioning.

(2) The date and time the extinguishment or improper operation was observed or otherwise noted.

(3) The date, time and nature of adjustments, repairs or replacements made.

(c) The station records shall be maintained for inspection at a residence, office, or public building, place of business, or other suitable place, in one of the communities of license of the translator or booster, except that the station records of a booster or translator licensed to the licensee of the primary station may be kept at the same place where the primary station records are kept. The name of the person keeping station records, together with the address of the place where the records are kept, shall be posted in accordance with § 74.765(c) of the rules. The station records shall be made

available upon request to any authorized representative of the Commission.

(d) Station logs and records shall be retained for a period of two years.

[48 FR 44806, Sept. 30, 1983, as amended at 52 FR 31405, Aug. 20, 1987]

§ 74.783 Station identification.

(a) Each low power TV and TV translator station not originating local programming as defined by § 74.701(h) operating over 0.001 kw peak visual power (0.002 kw when using circularly polarized antennas) must transmit its station identification as follows:

(1) By transmitting the call sign in International Morse Code at least once each hour. This transmission may be accomplished by means of an automatic device as required by § 74.750(c)(7). Call sign transmission shall be made at a code speed not in excess of 20 words per minute; or

(2) By arranging for the primary station, whose signal is being rebroadcast, to identify the translator station by transmitting an easily readable visual presentation or a clearly understandable aural presentation of the translator station's call letters and location. Two such identifications shall be made between 7 a.m. and 9 a.m. and 3 p.m. and 5 p.m. each broadcast day at approximately one hour intervals during each time period. Television stations which do not begin their broadcast day before 9 a.m. shall make these identifications in the hours closest to these time periods at the specified intervals.

(b) Licensees of television translators whose station identification is made by the television station whose signals are being rebroadcast by the translator, must secure agreement with this television station licensee to keep in its file, and available to FCC personnel, the translator's call letters and location, giving the name, address and telephone number of the licensee or his service representative to be contacted in the event of malfunction of the translator. It shall be the responsibility of the translator licensee to furnish current information to the television station licensee for this purpose.

(c) A low power TV station shall comply with the station identification procedures given in § 73.1201 when locally originating programming, as defined by § 74.701(h). The identification procedures given in paragraphs (a) and (b) are to be used at all other times.

(d) Call signs for low power TV and TV translator stations will be made up of the initial letter K or W followed by the channel number assigned to the station and two additional letters. The use of the initial letter generally will follow the pattern used in the broadcast service, *i.e.*, stations west of the Mississippi River will be assigned an initial letter K and those east, the letter W. The two letter combinations following the channel number will be assigned in order and requests for the assignment of the particular combinations of letters will not be considered. The channel number designator for Channels 2 through 9 will be incorporated in the call sign as a 2-digit number, *i.e.*, 02, 03, ..., so as to avoid similarities with call signs assigned to amateur radio stations.

(e) Low power TV permittees or licensees may request that they be assigned four-letter call signs in lieu of the five-character alpha-numeric call signs described in paragraph (d) of this section. Parties requesting four-letter call signs are to follow the procedures delineated in § 73.3550 of this chapter. Such four-letter call signs shall begin with K or W; stations west of the Mississippi River will be assigned an initial letter K and stations east of the Mississippi River will be assigned an initial letter W. The four-letter call sign will be followed by the suffix "-LP."

(f) TV broadcast booster station shall be identified by their primary stations by broadcasting of the primary station's call letters and location in accordance with the provisions of § 73.1201 of this chapter.

[41 FR 17552, Apr. 27, 1976, as amended at 47 FR 21502, May 18, 1982; 52 FR 7424, Mar. 11, 1987; 52 FR 31405, Aug. 20, 1987; 59 FR 31557, June 20, 1994; 63 FR 71604, Dec. 29, 1998]

§ 74.784 Rebroadcasts.

(a) The term *rebroadcast* means the reception by radio of the programs or other signals of a radio or television station and the simultaneous or subsequent retransmission of such programs or signals for direct reception by the general public.

(b) The licensee of a low power TV or TV translator station shall not rebroadcast the programs of any other TV broadcast station or other station authorized under the provisions of this Subpart without obtaining prior consent of the station whose signals or programs are proposed to be retransmitted. The FCC, Attention: Video Division, Media Bureau, shall be notified of the call letters of each station rebroadcast, and the licensee of the low power TV or TV broadcast translator station shall certify it has obtained written consent from the licensee of the station whose programs are being retransmitted.

(c) A TV translator station may rebroadcast only programs and signals that are simultaneously transmitted by a TV broadcast station.

(d) A TV booster station may rebroadcast only programs and signals that are simultaneously transmitted by the primary station to which it is authorized.

(e) The provisions of § 73.1207 of part 73 of this chapter apply to low power TV stations in transmitting any material during periods of program origination obtained from the transmissions of any other type of station.

(Sec. 325, 48 Stat. 1091; 47 U.S.C. 325)

[28 FR 13722, Dec. 14, 1963, as amended at 47 FR 21502, May 18, 1982; 52 FR 31405, Aug. 20, 1987; 63 FR 33879, June 22, 1998; 67 FR 13234, Mar. 21, 2002]

§ 74.785 Low power TV digital data service pilot project.

Low power TV stations authorized pursuant to the LPTV Digital Data Services Act (Public Law 106–554, 114 Stat. 4577, December 1, 2000) to participate in a digital data service pilot project shall be subject to the provisions of the Commission *Order* implementing that Act. FCC 01–137, adopted April 19, 2001, as modified by the Commission *Order on Reconsideration,* FCC 02–40, adopted February 12, 2002.

[67 FR 9621, Mar. 4, 2002]

§ 74.786 Digital channel assignments.

(a) An applicant for a new low power television or television translator digital station or for changes in the facilities of an authorized digital station shall endeavor to select a channel on which its operation is not likely to cause interference. The applications must be specific with regard to the channel requested. Only one channel will be assigned each station.

(b) Any one of the 12 standard VHF Channels (2 to 13 inclusive) may be assigned to a VHF digital low power television or television translator station. Channels 5 and 6 assigned in Alaska shall not cause harmful interference to and must accept interference from non-Government fixed operation authorized prior to January 1, 1982.

(c) UHF channels 14 to 36 and 38 to 51 may be assigned to a UHF digital low power television or television translator station. In accordance with § 73.603(c) of this chapter, Channel 37 will not be assigned to such stations.

(d) UHF Channels 52–59 may be assigned to a digital low power television or television translator station for use as *a digital conversion channel*. These channels may also be assigned as a *companion digital channel* if the applicant is able to demonstrate that a *suitable in core channel* is not available. Stations proposing use of such channels shall notify all potentially affected 700 MHz wireless licensees not later than 30 days prior to the submission of their application (FCC Form 346). Applicants shall notify wireless licensees of the 700 MHz spectrum comprising the same TV channel and the adjacent channel within whose licensed geographic boundaries the digital LPTV or translator station is proposed to be located, and also notify licensees of co-channel and adjacent channel spectrum whose service boundaries lie within 75 miles and 50 miles, respectively, of their proposed station location. Specific information for this purpose can be obtained from the Commission's auction Web site at *http://www.fcc.gov/auctions*.

(e) UHF Channels 60–69 may be assigned to a digital low power television or television translator station for use as a *digital conversion channel* only. Stations proposing use of such channels shall notify all potentially affect 700 MHz commercial licensees not later than 30 days prior to the submission of their application (FCC Form 346) in the manner provided in paragraph of this

section. Stations proposing use of channels 63, 64, 68 and 69 must secure a coordinated spectrum use agreement with the pertinent 700 MHz public safety regional planning committee and state administrator prior to the submission of their application (FCC Form 346). Coordination shall be undertaken with regional planning committee and state administrator of the region and state within which the digital LPTV or translator station is proposed to be located, and those of adjoining regions and states with boundaries within 75 miles of the proposed station location. Stations proposing use of channels 62, 65, and 67 must notify the pertinent regional planning committee and state administrator not later than 30 days prior to the submission of their application (FCC Form 346). Notification shall be made to the regional and state administrators of region and state within which the digital LPTV or translator station is proposed to be located, and those of adjoining regions and states with boundaries within 50 miles of the proposed station location. Information for this purpose is available at the above web site and also at the following internet sites: *http://wireless.fcc.gov/publicsafety700MHzregional.html*, *http://wireless.fcc.gov/publicsafety/700MHz/state.html*, and *http://wireless.fcc.gov/publicsafety/700MHz/interop-contacts.html*.

(f) Application for new analog low power television or television translator stations specifying operation above Channel 51 will not be accepted for filing. Applications for displacement relief on channels above 51 will continue to be accepted.

(g) After 11:59 pm local time on December 31, 2011, low power television and TV translator stations may no longer operate any analog (NTSC) or digital facilities above Channel 51.

[69 FR 69332, Nov. 29, 2004, as amended at 76 FR 44828, July 27, 2011]

§ 74.787 Digital licensing.

(a) *Applications for digital low power television and television translator stations*—(1) *Applications for digital conversion.* Applications for *digital conversion channels* may be filed at any time. Such applications shall be filed on FCC Form 346 and will be treated as a minor change application. There will be no application fee.

(2) *Applications for companion digital channel.* (i) A public notice will specify a time period or ''window'' for filing applications for companion digital channels. During this window, only existing low power television or television translator stations or licensees and permittees of Class A TV stations may submit applications for companion digital channels. Applications submitted prior to the initial window identified in the public notice will be returned as premature. At a subsequent time, a public notice will announcement the commencement of a filing procedure in which applications will accepted on a first-come, first-served basis not restricted to existing station licensees and permittees;

(ii) Applications for companion digital channels filed during the initial window shall be filed in accordance with the provisions of §§1.2105 and 73.5002 of this chapter regarding the submission of the short-form application, FCC Form 175, and all appropriate certifications, information and exhibits contained therein. To determine which applicants are mutually exclusive, applicants must submit the engineering data contained in FCC Form 346 as a supplement to its short-form application. Such engineering data will not be studied for technical acceptability, but will be protected from subsequently filed applications as of the close of the initial window period. Determinations as to the acceptability or grantability of an applicant's proposal will not be made prior to an auction;

(iii) After the close of the initial window, a public notice will identify the short-form applications received during the window filing period which are found to be mutually exclusive. Such short-form applications will be resolved via the Commission's Part 1 and broadcast competitive bidding rules, §§1.2100 *et seq.*, and §§73.5000 *et seq.* of this chapter. Such applicants shall be afforded an opportunity to submit settlements and engineering solutions to resolve mutual exclusivity pursuant to §73.5002(d) of this chapter;

(iv) After the close of the window, a public notice will identify short-form

applications received that are found to be non-mutually exclusive. All non-mutually exclusive applicants will be required to submit an FCC Form 346 pursuant to § 73.5005 of this chapter. Such applications shall be processed pursuant to § 73.5006 of this chapter; and

(v) With regard to fees, an application (FCC Form 346) for companion digital channels shall be treated as a minor change application and there will be no application fee.

(3) *Construction permit applications for new stations, major changes to existing stations in the low power television service.* A public notice will specify the date upon which interested parties may begin to file applications for new stations and major facilities changes to existing stations in the low power television service. It will specify parameters for any applications that may be filed. Applications submitted prior to date announced by the public notice will be returned as premature. Such applications shall be accepted on a first-come, first-served basis, and shall be filed on FCC Form 346. Applications for new or major change shall be subject to the appropriate application fee. Mutually exclusive applications shall be resolved via the Commission's part 1 and broadcast competitive bidding rules, § 1.2100 *et seq.*, and § 73.5000 *et seq.* of this chapter. Such applicants shall be afforded an opportunity to submit settlements and engineering solutions to resolve mutual exclusivity pursuant to § 73.5002(d) of this chapter.

(4) *Displacement applications.* A digital low power television or television translator station which is causing or receiving interference or is predicted to cause or receive interference to or from an authorized TV broadcast station, DTV station or allotment or other protected station or service, may at any time file a displacement relief application for change in channel, together with technical modifications that are necessary to avoid interference or continue serving the station's protected service area, provided the proposed transmitter site is not located more than 30 miles from the reference coordinates of the existing station's community of license. *See* § 76.53 of this chapter. A displacement relief application shall be filed on FCC Form 346 and will be considered a minor change and will be placed on public notice for a period of not less than 30 days to permit the filing of petitions to deny. These applications will not be subject to the filing of competing applications. Where a displacement relief application for a digital low power television or television translator station becomes mutually exclusive the application(s) for new analog or digital low power television or television translator stations, with a displacement relief application for an analog low power television or television translator station, or with other non-displacement relief applications for facilities modifications of analog or digital low power television or television translator stations, priority will be afforded to the displacement application for the digital low power television or television translator station to the exclusion of other applications. Mutually exclusive displacement relief applications for digital low power television and television translator stations shall be resolved via the Commission's part 1 and broadcast competitive bidding rules, § 1.2100 *et seq.*, and § 73.5000 *et seq.* of this chapter. Such applicants shall be afforded an opportunity to submit settlements and engineering solutions to resolve mutual exclusivity pursuant to § 73.5002(d) of this chapter.

(5) *Application for replacement digital television translator.* (i) An application for a replacement digital television translator may be filed at any time. A license for a replacement digital television translator will be issued only to a television broadcast station licensee that demonstrates in its application that a portion of the station's pre-transition analog service area will not be served by its full, post-transition digital facilities and that the proposed translator will be used to provide service to the area where service has been lost.'' Replacement digital television translators may operate on channels 2–51. Applications for replacement digital television translator shall be given processing priority over all other low power television and TV translator applications except displacement applications (with which they shall have co-equal priority) as set forth in 47 CFR

73.3572(a)(4)(ii). The service area of the replacement translator shall be limited to only a demonstrated loss area within the full-service station's pre-transition analog service area. ''Analog service area'' is defined as the existing, authorized, protected service area actually served by the analog signal prior to analog termination for the DTV transition. An applicant for a replacement digital television translator may propose a *de minimis* expansion of its full-service pre-transition analog service area upon demonstrating that the expansion is necessary to replace its analog loss area. The license for the replacement digital television translator will be associated with the full power station's main license, will be assigned the same call sign, may not be separately assigned or transferred, and will be renewed with the full-service station's main license.

(ii) Each original construction permit for the construction of a replacement digital television translator station shall specify a period of three years from the date of issuance of the original construction permit within which construction shall be completed and application for license filed. The provisions of § 74.788(c) of this chapter shall apply for stations seeking additional time to complete construction of their replacement digital television translator station.

(iii) A public notice will specify the date upon which interested parties may begin to file applications for replacement digital television translators. Such applications shall be filed on FCC Form 346, shall be treated as an application for minor change and shall be accepted on a first-come, first-served basis. Mutually exclusive applications shall be resolved via the Commission's part 1 and broadcast competitive bidding rules, § 1.2100 *et seq.* and § 73.5000 *et seq.* of this chapter.

(iv) The following sections are applicable to replacement digital television translator stations:

§ 73.1030 Notifications concerning interference to radio astronomy, research and receiving installations.
§ 74.703 Interference.
§ 74.709 Land mobile station protection.
§ 74.734 Attended and unattended operation.
§ 74.735 Power Limitations.
§ 74.751 Modification of transmission systems.
§ 74.763 Time of Operation.
§ 74.765 Posting of station and operator licenses.
§ 74.769 Copies of rules.
§ 74.780 Broadcast regulations applicable to translators, low power, and booster stations (except § 73.653—Operation of TV aural and visual transmitters and § 73.1201—Station identification).
§ 74.781 Station records.
§ 74.784 Rebroadcasts.

(b) *Definitions of ''major'' and ''minor'' changes to digital low power television and television translator stations.* (1) Applications for major changes in digital low power television and television translator stations include:

(i) Any change in the frequency (output channel) not related to displacement relief;

(ii) Any change in transmitting antenna location where the protected contour resulting from the change does not overlap some portion of the protected contour of the authorized facilities of the existing station; or

(iii) Any change in transmitting antenna location of greater than 30 miles (48 kilometers) from the reference coordinates of the existing station's antenna location.

(2) Other facilities changes will be considered minor.

(c) Not later than 11:59 pm local time on September 1, 2011, low power television or TV translator stations operating analog (NTSC) or digital facilities above Channel 51, that have not already done so, must file a digital displacement application for a channel below Channel 52 pursuant to the procedures in subsection (a)(4) of this rule. Low power television and TV translator stations operating analog (NTSC) or digital facilities above Channel 51 that have not submitted a digital displacement application by 11:59 pm local time on September 1, 2011 will be required to cease operations altogether by December 31, 2011. These stations' authorization for facilities above Channel 51 shall be cancelled. Any digital displacement application submitted by a low power television or TV translator station operating analog (NTSC) or digital facilities above Channel 51 that is submitted after 11:59 pm local time on September 1, 2011 will be dismissed.

In addition, any outstanding construction permit (analog or digital) for an channel above Channel 51 will be rescinded on December 31, 2011, and any pending application (analog or digital) for a channel above Channel 51 will be dismissed on December 31, 2011, if the permittee has not submitted a digital displacement application by 11:59 pm local on September 1, 2011.

[69 FR 69333, Nov. 29, 2004, as amended at 74 FR 23655, May 20, 2009; 76 FR 44828, July 27, 2011]

§ 74.788 Digital construction period.

(a) Each original construction permit for the construction of a new digital low power television or television translator station shall specify a period of three years from the date of issuance of the original construction permit within which construction shall be completed and application for license filed.

(b) Any construction permit for which construction has not been completed and for which an application for license or extension of time has not been filed, shall be automatically forfeited upon expiration without any further affirmative cancellation by the Commission.

(c) *Authority delegated.* (1) For the September 1, 2015 digital construction deadline, authority is delegated to the Chief, Media Bureau to grant an extension of time of up to six months beyond September 1, 2015 upon demonstration by the digital licensee or permittee that failure to meet the construction deadline is due to circumstances that are either unforeseeable or beyond the licensee's control where the licensee has take all reasonable steps to resolve the problem expeditiously.

(2) Such circumstances shall include, but shall not be limited to:

(i) Inability to construct and place in operation a facility necessary for transmitting digital television, such as a tower, because of delays in obtaining zoning or FAA approvals, or similar constraints;

(ii) The lack of equipment necessary to obtain a digital television signal; or

(iii) Where the cost of construction exceeds the station's financial resources.

(3) Applications for extension of time shall be filed not later than May 1, 2015, absent a showing of sufficient reasons for late filing.

(d) For construction deadlines occurring after September 1, 2015, the tolling provisions of § 73.3598 of this chapter shall apply.

(e) A low power television, TV translator or Class A television station that holds a construction permit for an unbuilt analog and corresponding unbuilt digital station and fails to complete construction of the analog station by the expiration date on the analog construction permit shall forfeit both the analog and digital construction permits notwithstanding a later expiration date on the digital construction permit.

(f) A low power television, TV translator or Class A television station that holds a construction permit for an unbuilt analog and corresponding unbuilt digital station and completes construction of the digital station by the expiration date on the analog construction permit, begins operating and files a license application for the digital station may forego construction of the unbuilt analog station.

[69 FR 69334, Nov. 29, 2004, as amended at 76 FR 44828, July 27, 2011]

§ 74.789 Broadcast regulations applicable to digital low power television and television translator stations.

The following sections are applicable to digital low power television and television translator stations:

§ 73.1030 Notifications concerning interference to radio astronomy, research and receiving installations.
§ 74.600 Eligibility for license.
§ 74.703 Interference.
§ 74.709 Land mobile station protection.
§ 74.732 Eligibility and licensing requirements.
§ 74.734 Attended and unattended operation.
§ 74.735 Power limitations.
§ 74.751 Modification of transmission systems.
§ 74.763 Time of operation.
§ 74.765 Posting of station and operator licenses.
§ 74.769 Copies of rules.

§ 74.780 Broadcast regulations applicable to translators, low power, and booster stations (except § 73.653—Operation of TV aural and visual transmitters and § 73.1201—Station identification).
§ 74.781 Station records.
§ 74.784 Rebroadcasts.

[69 FR 69334, Nov. 29, 2004]

§ 74.790 Permissible service of digital TV translator and LPTV stations.

(a) Digital TV translator stations provide a means whereby the signals of DTV broadcast stations may be retransmitted to areas in which direct reception of such DTV stations is unsatisfactory due to distance or intervening terrain barriers.

(b) Except as provided in paragraph (f) of this section, a digital TV translator station may be used only to receive the signals of a TV broadcast or DTV broadcast station, another digital TV translator station, a TV translator relay station, a television intercity relay station, a television STL station, or other suitable sources such as a CARS or common carrier microwave station, for the simultaneous retransmission of the programs and signals of a TV or DTV broadcast station. Such retransmissions may be accomplished by any of the following means:

(1) Reception of TV broadcast or DTV broadcast station programs and signals directly through space and conversion to a different channel by one of the following transmission modes:

(i) Heterodyne frequency conversion and suitable amplification, subject to a digital output power limit of 30 watts for transmitters operating on channels 14–69 and 3 watts for transmitters operating on channels 2–13; or

(ii) Digital signal regeneration (*i.e.*, DTV signal demodulation, decoding, error processing, encoding, remodulation, and frequency upconversion) and suitable amplification; or,

(2) Demodulation, remodulation and amplification of TV broadcast or DTV broadcast station programs and signals received through a microwave transport.

(c) The transmissions of each digital TV translator station shall be intended for direct reception by the general public, and any other use shall be incidental thereto. A digital TV translator station shall not be operated solely for the purpose of relaying signals to one or more fixed receiving points for retransmission, distribution, or further relaying.

(d) Except as provided in (e) and (f) of this section, the technical characteristics of the retransmitted signals shall not be deliberately altered so as to hinder reception on consumer DTV broadcast receiving equipment.

(e) A digital TV translator station shall not retransmit the programs and signals of any TV broadcast or DTV broadcast station(s) without the prior written consent of such station(s). A digital TV translator may multiplex on its output channel the video program services of two or more TV broadcast and/or DTV broadcast stations, pursuant to arrangements with all affected stations, and for this limited purpose, is permitted to alter a TV broadcast and/or DTV broadcast signal.

(f) A digital TV translator station may transmit locally originated visual and/or aural messages limited to emergency warnings of imminent danger, to local public service announcements (PSAs) and to seeking or acknowledging financial support deemed necessary to the continued operation of the station. Acknowledgments of financial support may include identification of the contributors, the size and nature of the contribution and the advertising messages of the contributors. The originations concerning financial support and PSAs are limited to 30 seconds each, no more than once per hour. Emergency transmissions shall be no longer or more frequent than necessary to protect life and property. Such originations may be accomplished by any technical means agreed upon between the TV translator and DTV station whose signal is being retransmitted, but must be capable of being received on consumer DTV broadcast reception equipment. A digital TV translator shall modify, as necessary to avoid DTV reception tuning conflicts, the Program System and Information Protocol (PSIP) information in the DTV broadcast signal being retransmitted.

(g) A digital LPTV station may operate under the following modes of service:

(1) For the retransmission of programming of a TV broadcast or DTV broadcast station, subject to the prior written consent of the station whose signal is being retransmitted;

(2) For the origination of programming and commercial matter as defined in § 74.701(l).

(3) Whenever operating, a digital LPTV station must transmit an over-the-air video program signal at no direct charge to viewers at least comparable in resolution to that of its associated analog (NTSC) LPTV station or, in the case of an on-channel digital conversion, that of its former analog LPTV station.

(4) A digital LPTV station may dynamically alter the bit stream of its signal to transmit one or more video program services in any established DTV video format.

(h) A digital LPTV station is not subject to minimum required hours of operation and may operate in either of the two modes described in paragraph (g) of this section for any number of hours.

(i) Upon transmitting a signal that meets the requirements of paragraph (g)(3) of this section, a digital LPTV station may offer services of any nature, consistent with the public interest, convenience, and necessity, on an ancillary or supplementary basis in accordance with the provisions of § 73.624(c) and (g) of this chapter.

(j) A digital LPTV station may not be operated solely for the purpose of relaying signals to one or more fixed receiving points for retransmission, distribution or relaying.

(k) A digital LPTV station may receive input signals for transmission or retransmission by any technical means, including those specified in paragraph (b) of this section.

[69 FR 69334, Nov. 29, 2004]

§ 74.791 Digital call signs.

(a) *Digital low power stations.* Call signs for digital low power stations will be made up of a prefix consisting of the initial letter K or W followed by the channel number assigned to the station and two additional letters and a suffix consisting of the letters −D.

(b) *Digital television translator stations.* Call signs for digital television translator stations will be made up of a prefix consisting of the initial letter K or W followed by the channel number assigned to the station and two additional letters and a suffix consisting of the letter −D.

(c) *Digital low power television stations* and *Class A television stations.* Digital low power television and Class A television stations may be assigned a call sign with a four-letter prefix pursuant to § 73.3550 of the Commission's rules. Digital low power stations with four-letter prefixes will be assigned the suffix −LD and digital Class A stations with four-letter prefixes will be assigned the suffix −CD.

[69 FR 69335, Nov. 29, 2004]

§ 74.792 Digital low power TV and TV translator station protected contour.

(a) A digital low power TV or TV translator will be protected from interference from other low power TV, TV translator, Class A TV or TV booster stations or digital low power TV, TV translator or Class A TV stations within the following predicted contours:

(1) 43 dBu for stations on Channels 2 through 6;

(2) 48 dBu for stations on Channels 7 through 13; and

(3) 51 dBu for stations on Channels 14 through 69.

(b) The digital low power TV or TV translator protected contour is calculated from the authorized effective radiated power and antenna height above average terrain, using the F(50,90) signal propagation method specified in § 73.625(b)(1) of this chapter.

[69 FR 69335, Nov. 29, 2004]

§ 74.793 Digital low power TV and TV translator station protection of broadcast stations.

(a) An application to construct a new digital low power TV or TV translator station or change the facilities of an existing station will not be accepted if it fails to meet the interference protection requirements in this section.

(b) Except as provided in this section, interference prediction analysis is

based on the interference thresholds (D/U signal strength ratios) and other criteria and methods specified in § 73.623(c)(2) through (c)(4) of this chapter. Predictions of interference to co-channel DTV broadcast, digital Class A TV, digital LPTV and digital TV translator stations will be based on the interference thresholds specified therein for ''DTV-into-DTV.'' Predictions of interference to co-channel TV broadcast, Class A TV, LPTV and TV translator stations will be based on the interference threshold specified for ''DTV-into-analog TV.'' Predictions of interference to TV broadcast, Class A TV, LPTV and TV translator stations with the following channel relationships to a digital channel will be based on the threshold values specified for ''Other Adjacent Channels (Channels 14–69 only),'' where N is the analog channel: N–2, N+2, N–3, N+3, N–4, N+4, N–7 , N+7, N–8, N+8, N+14, and N+15.

(c) The following D/U signal strength ratio (db) shall apply to the protection of stations on the first adjacent channel. The D/U ratios for ''Digital TV-into-analog TV'' shall apply to the protection of Class A TV, LPTV and TV translator stations. The D/U ratios for ''Digital TV-into-digital TV'' shall apply to the protection of DTV, digital Class A TV, digital LPTV and digital TV translator stations. The D/U ratios correspond to the digital LPTV or TV translator station's specified out-of-channel emission mask.

	Simple mask	Stringent mask	Full service mask
Digital TV-into-analog TV	10	0	Lower (−14)/Upper (−17)
Digital TV-into-digital TV	−7	−12	Lower (−28)/Upper (−26)

(d) For analysis of predicted interference from digital low power TV and TV translator stations, the relative field strength values of the antenna vertical radiation pattern if provided by the applicant will be used instead of the doubled values in Table 8 in OET Bulletin 69 up to a value of 1.0.

(e) Protection to the authorized facilities of DTV broadcast stations shall be based on not causing predicted interference to the population within the service area defined and described in § 73.622(e) of this chapter, except that a digital low power TV or TV translator station must not cause a loss of service to 0.5 percent or more of the population predicted to receive service from the authorized DTV facilities.

(f) Protection to the authorized facilities of TV broadcast stations shall be based on not causing predicted interference to the population within the Grade B field strength contours defined and described in § 73.683 of this chapter, except that a digital low power TV or TV translator station must not cause a loss of service to 0.5 percent or more of the population predicted to receive service from the authorized TV broadcast facilities.

(g) Protection to the authorized facilities of Class A and digital Class A TV stations shall be based on not causing predicted interference to the population within the service area defined and described in § 73.6010 (a) through (d) of this chapter, respectively, except that a digital low power TV or TV translator station must not cause a loss of service to 0.5 percent or more of the population predicted to receive service from the authorized Class A TV or digital Class A TV facilities.

(h) Protection to the authorized facilities of low power TV and TV translator stations and digital low power TV and TV translator stations shall be based on not causing predicted interference to the population within the service area defined and described in §§ 74.707(a) and 74.792, respectively, except that a digital low power TV or TV translator station must not cause a loss of service to 2.0 percent or more of the population predicted to receive service from the authorized low power TV, TV translator, digital low power TV or digital TV translator station.

[69 FR 69335, Nov. 29, 2004, as amended at 76 FR 44828, July 27, 2011]

§ 74.794 Digital emissions.

(a)(1) An applicant for a digital LPTV or TV translator station construction permit shall specify that the station

will be constructed to confine out-of-channel emissions within one of the following emission masks: Simple, stringent or full service.

(2) The power level of emissions on frequencies outside the authorized channel of operation must be attenuated no less than following amounts below the average transmitted power within the authorized 6 MHz channel. In the mask specifications listed in § 74.794(a)(2) and (a)(3), A is the attenuation in dB and Δf is the frequency difference in MHz from the edge of the channel.

(i) *Simple mask.* At the channel edges, emissions must be attenuated no less than 46 dB. More than 6 MHz from the channel edges, emissions must be attenuated no less than 71 dB. At any frequency between 0 and 6 MHz from the channel edges, emissions must be attenuated no less than the value determined by the following formula:

$$A\ (dB) = 46 + (\Delta f^2 / 1.44)$$

(ii) *Stringent mask.* In the first 500 kHz from the channel edges, emissions must be attenuated no less than 47 dB. More than 3 MHz from the channel edges, emissions must be attenuated no less than 76 dB. At any frequency between 0.5 and 3 MHz from the channel edges, emissions must be attenuated no less than the value determined by the following formula:

$$A(dB) = 47 + 11.5\ (\Delta f – 0.5)$$

(iii) *Full service mask:* (A) The power level of emissions on frequencies outside the authorized channel of operation must be attenuated no less than the following amounts below the average transmitted power within the authorized channel. In the first 500 kHz from the channel edge the emissions must be attenuated no less than 47 dB. More than 6 MHz from the channel edge, emissions must be attenuated no less than 110 dB. At any frequency between 0.5 and 6 MHz from the channel edge, emissions must be attenuated no less than the value determined by the following formula:

Attenuation in dB = -11.5([Delta]f + 3.6);

Where:

[Delta] f = frequency difference in MHz from the edge of the channel.

(B) This attenuation is based on a measurement bandwidth of 500 kHz. Other measurement bandwidths may be used as long as appropriate correction factors are applied. Measurements need not be made any closer to the band edge than one half of the resolution bandwidth of the measuring instrument. Emissions include sidebands, spurious emissions and radio frequency harmonics. Attenuation is to be measured at the output terminals of the transmitter (including any filters that may be employed). In the event of interference caused to any service, greater attenuation may be required.

(3) The attenuation values for the simple and stringent emission masks are based on a measurement bandwidth of 500 kHz. Other measurement bandwidths may be used and converted to the reference 500 kHz value by the following formula:

$$A(dB) = A_{alternate} + 10 \log (BW_{alternate} / 500)$$

where A(dB) is the measured or calculated attenuation value for the reference 500 kHz bandwidth, and $A_{alternate}$ is the measured or calculated attenuation for a bandwidth $BW_{alternate}$. Emissions include sidebands, spurious emissions and radio harmonics. Attenuation is to be measured at the output terminals of the transmitter (including any filters that may be employed). In the event of interference caused to any service by out-of-channel emissions, greater attenuation may be required.

(b) In addition to meeting the emission attenuation requirements of the simple or stringent mask (including attenuation of radio frequency harmonics), digital low power TV and TV translator stations authorized to operate on TV channels 22–24, (518–536 MHz), 32–36 (578–608 MHz), 38 (614–620 MHz), and 65–69 (776–806 MHz) must provide specific ''out of band'' protection to Radio Navigation Satellite Services in the bands: L5 (1164–1215 MHz); L2 (1215–1240 MHz) and L1 (1559–1610 MHz).

(1) An FCC-certificated transmitter specifically certified for use on one or more of the above channels must include filtering with an attenuation of not less than 85 dB in the GPS bands, which will have the effect of reducing harmonics in the GPS bands from what is produced by the digital transmitter,

and this attenuation must be demonstrated as part of the certification application to the Commission.

(2) For an installation on one of the above channels with a digital transmitter not specifically FCC-certificated for the channel, a low pass filter or equivalent device rated by its manufacturer to have an attenuation of at least 85 dB in the GPS bands, which will have the effect of reducing harmonics in the GPS bands from what is produced by the digital transmitter, and must be installed in a manner that will prevent the harmonic emission content from reaching the antenna. A description of the low pass filter or equivalent device with the manufacturer's rating or a report of measurements by a qualified individual shall be retained with the station license. Field measurements of the second or third harmonic output of a transmitter so equipped are not required.

[69 FR 69336, Nov. 29, 2004, as amended at 76 FR 44828, July 27, 2011]

§ 74.795 Digital low power TV and TV translator transmission system facilities.

(a) A digital low power TV or TV translator station shall operate with a transmitter that is either certificated for licensing based on the following provisions or has been modified for digital operation pursuant to § 74.796.

(b) The following requirements must be met before digital low power TV and TV translator transmitter will be certificated by the FCC:

(1) The transmitter shall be designed to produce digital television signals that can be satisfactorily viewed on consumer receiving equipment based on the digital broadcast television transmission standard in § 73.682(d) of this chapter;

(2) Emissions on frequencies outside the authorized channel, measured at the output terminals of the transmitter (including any filters that may be employed), shall meet the requirements of § 74.794, as applicable;

(3) The transmitter shall be equipped to display the digital power output (*i.e.*, average power over a 6 MHz channel) and shall be designed to prevent the power output from exceeding the maximum rated power output under any condition;

(4) When subjected to variations in ambient temperature between 0 and 40 degrees Centigrade and variations in power main voltage between 85% and 115% of the rated power supply voltage, the frequency stability of the local oscillator in the RF channel upconverter shall be maintained within 10 kHz of the nominal value; and

(5) The transmitter shall be equipped with suitable meters and jacks so that appropriate voltage and current measurements may be made while the transmitter is in operation.

(c) The following additional requirements apply to digital heterodyne translators:

(1) The maximum rated power output (digital average power over a 6 MHz channel) shall not exceed 30 watts for transmitters operating on channels 14–69 and 3 watts for transmitters operating on channels 2–13; and

(2) The transmitter shall contain circuits which will maintain the digital average power output constant within 1 dB when the strength of the input signal is varied over a range of 30 dB.

(d) Certification will be granted only upon a satisfactory showing that the transmitter is capable of meeting the requirements of paragraph (b) of this section, pursuant to the procedures described in § 74.750(e).

[69 FR 69336, Nov. 29, 2004]

§ 74.796 Modification of digital transmission systems and analog transmission systems for digital operation.

(a) The provisions of § 74.751 shall apply to the modification of digital low power TV and TV translator transmission systems and the modification of existing analog transmission systems for digital operation.

(b) The following additional provisions shall apply to the modification of existing analog transmissions systems for digital operation, including installation of manufacturers' certificated equipment (''field modification kits'') and custom modifications.

(1) The modifications and related performance-testing shall be undertaken by a person or persons qualified to perform such work.

(2) The final amplifier stage of an analog transmitter modified for digital operation shall not have an ''average digital power'' output greater than 25 percent of its previous NTSC peak sync power output, unless the amplifier has been specifically refitted or replaced to operate at a higher power.

(3) Analog heterodyne translators, when modified for digital operation, will produce a power output (digital average power over the 6 MHz channel) not exceeding 30 watts for transmitters operating on channels 14–69 and 3 watts for transmitters operating on channels 2–13.

(4) After completion of the modification, suitable tests and measurements shall be made to demonstrate compliance with the applicable requirements in this section including those in § 74.795. Upon installation of a field modification kit, the transmitter shall be performance-tested in accordance with the manufacturer's instructions.

(5) The station licensee shall notify the Commission upon completion of the transmitter modifications. In the case of custom modifications (those not related to installation of manufacturer-supplied and FCC-certificated equipment), the licensee shall certify compliance with all applicable transmission system requirements.

(6) The licensee shall maintain with the station's records for a period of not less than two years the following information and make this information to the Commission upon request:

(i) A description of the modifications performed and performance tests or, in the case of installation of a manufacturer-supplied modification kit, a description of the nature of the modifications, installation and test instructions and other material provided by the manufacturer;

(ii) Results of performance-tests and measurements on the modified transmitter; and

(iii) Copies of related correspondence with the Commission.

(c) In connection with the on-channel conversion of existing analog transmitters for digital operation, a limited allowance is made for transmitters with final amplifiers that do not meet the attenuation of the Simple emission mask at the channel edges. Station licensees may obtain equivalent compliance with this attenuation requirement in the following manner:

(1) Measure the level of attenuation of emissions below the average digital power output at the channel edges in a 500 kHz bandwidth; measurements made over a different measurement bandwidth should be corrected to the equivalent attenuation level for a 500 kHz bandwidth using the formula given in § 74.794;

(2) Calculate the difference in dB between the 46 dB channel-edge attenuation requirement of the Simple mask;

(3) Subtract the value determined in the previous step from the authorized effective radiated power (''ERP'') of the analog station being converted to digital operation. Then subtract an additional 6 dB to account for the approximate difference between analog peak and digital average power. For this purpose, the ERP must be expressed in decibels above one kilowatt: ERP(dBk) = 10 log ERP(kW);

(4) Convert the ERP calculated in the previous step to units of kilowatts; and

(5) The ERP value determined through the above procedure will produce equivalent compliance with the attenuation requirement of the simple emission mask at the channel edges and should be specified as the digital ERP in the minor change application for an on-channel digital conversion. The transmitter may not be operated to produce a higher digital ERP than this value.

[69 FR 69336, Nov. 29, 2004]

§ 74.797 Biennial Ownership Reports.

The Ownership Report FCC Form 323 must be electronically filed no later than November 1, 2009, and every two years thereafter by each licensee of a low power television station or Respondent (as defined in § 73.3615(a) of this chapter). Beginning with the 2011 filing, a licensee or Respondent with a current and unamended Report on file at the Commission may certify electronically that it has reviewed its current Report and that it is accurate, in lieu of filing a new Report. Ownership Reports shall provide information as of October 1 of the year in which the report is filed. For information on filing

requirements, filers should refer to § 73.3615(a) of this chapter.

[74 FR 25168, May 27, 2009]

§ 74.798 Digital television transition notices by broadcasters.

(a) Each low power television, TV translator and Class A television station licensee or permittee must air an educational campaign about the transition from analog broadcasting to digital television (DTV).

(b) Stations that have already terminated analog service and begun operating in digital prior to effective date of this rule shall not be subject to this requirement.

(c) Stations with the technical ability to locally-originate programming must air viewer notifications at a time when the highest number of viewers is watching. Stations have the discretion as to the form of these notifications.

(d) Stations that lack the technical ability to locally-originate programming, or find that airing of viewer notifications would pose some sort of a hardship, may notify their viewers by some other reasonable means, e.g. publication of a notification in a local newspaper. Stations have discretion as to the format and time-frame of such local notification.

[76 FR 44829, July 27, 2011]

Subpart H—Low Power Auxiliary Stations

§ 74.801 Definitions.

Cable television system operator. A cable television operator is defined in § 76.5(cc) of the rules.

Low power auxiliary station. An auxiliary station authorized and operated pursuant to the provisions set forth in this subpart. Devices authorized as low power auxiliary stations are intended to transmit over distances of approximately 100 meters for uses such as wireless microphones, cue and control communications, and synchronization of TV camera signals.

Motion picture producer. Motion picture producer refers to a person or organization engaged in the production or filming of motion pictures.

Television program producer. Television program producer refers to a person or organization engaged in the production of television programs.

Wireless assist video device. An auxiliary station authorized and operated by motion picture and television program producers pursuant to the provisions of this subpart. These stations are intended to transmit over distances of approximately 300 meters for use as an aid in composing camera shots on motion picture and television sets.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[42 FR 14729, March 16, 1977, as amended at 43 FR 14662, Apr. 7, 1978; 51 FR 4603, Feb. 6, 1986; 51 FR 9966, Mar. 24, 1986; 54 FR 41842, Oct. 12, 1989; 68 FR 12772, Mar. 17, 2003]

§ 74.802 Frequency assignment.

(a) Frequencies within the following bands may be assigned for use by low power auxiliary stations:

26.100–26.480 MHz
54.000–72.000 MHz
76.000–88.000 MHz
161.625–161.775 MHz (except in Puerto Rico or the Virgin Islands)
174.000–216.000 MHz
450.000–451.000 MHz
455.000–456.000 MHz
470.000–488.000 MHz
488.000–494.000 MHz (except Hawaii)
494.000–608.000 MHz
614.000–698.000 MHz
944.000–952.000 MHz

(b) Operations in the bands allocated for TV broadcasting, listed below, are limited to locations removed from existing co-channel TV broadcast stations by not less than the following distances unless otherwise authorized by the FCC. (See § 73.609 for zone definitions.)

(1) 54.000–72.000 MHz and 76.000–88.000 MHz:

Zone I 105 km (65 miles)
Zones II and III 129 km (80 miles)

(2) 174.000–216.000 MHz

Zone I 97 km (60 miles)
Zones II and III 129 km (80 miles)

(3) 470.000–608.000 MHz and 614.000–698.000 MHz.

All zones 113 km (70 miles)

(c) Specific frequency operation is required when operating within the bands allocated for TV broadcasting.

(1) The frequency selection shall be offset from the upper or lower band

limits by 25 kHz or an integral multiple thereof.

(2) One or more adjacent 25 kHz segments within the assignable frequencies may be combined to form a channel whose maximum bandwidth shall not exceed 200 kHz.

(d) Low power auxiliary licensees will not be granted exclusive frequency assignments.

(e) *Clearing mechanisms for the 700 MHz Band.* This section sets forth provisions relating to the transition of low power auxiliary stations operating at 698–806 MHz (700 MHz band).

(1) Any low power auxiliary station that operates at frequencies in the 700 MHz band while transitioning its operations out of that band must not cause harmful interference and must accept interference from any commercial or public safety wireless licensees in the 700 MHz band.

(2) Any low power auxiliary station that operates at frequencies in the 700 MHz band will have until no later than June 12, 2010 to transition its operations completely out of the 700 MHz band, subject to the following. During this transition period, any commercial or public safety licensee in the 700 MHz band may choose one or both of the following voluntary methods to notify low power auxiliary stations:

(i) Any commercial or public safety licensee in the 700 MHz band may notify the Commission that it has initiated or will be initiating operations on specified frequencies in a particular market(s) in the 700 MHz band. The wireless operations initiated by the commercial or public safety 700 MHz licensees may include system testing or trials. Following receipt of the notification, the Commission will issue a public notice providing that operators of low power auxiliary stations, including wireless microphones, in the 700 MHz band in those market(s) will be required to cease operations within 60 days after the Commission's notice is released.

(ii) Any commercial or public safety licensee in the 700 MHz band may notify any low power auxiliary station users operating in the 700 MHz band that it has initiated or will be initiating operations on specified frequencies in the market in which the low power auxiliary station is operating. The wireless operations initiated by the commercial or public safety 700 MHz licensees may include system testing or trials. Upon receipt of such notice, the low power auxiliary station in the affected market area must cease operation within 60 days.

(iii) In the event that both of these notice provisions in paragraphs (e)(2)(i) and (ii) of this section are used with respect to a particular low power auxiliary station, the low power auxiliary station will have to cease operations in the market(s) in accordance with whichever notice provides for earlier termination of its operations.

(3) Notwithstanding this 60 day notice requirement, any low power auxiliary station that causes harmful interference to any commercial or public safety 700 MHz licensee must cease operations immediately, consistent with the rules for secondary use.

[52 FR 2535, Jan. 23, 1987, as amended at 68 FR 12772, Mar. 17, 2003; 75 FR 3638, Jan. 22, 2010]

§ 74.803 Frequency selection to avoid interference.

(a) Where two or more low power auxiliary licensees need to operate in the same area, the licensees shall endeavor to select frequencies or schedule operation in such manner as to avoid mutual interference. If a mutually satisfactory arrangement cannot be reached, the Commission shall be notified and it will specify the frequency or frequencies to be employed by each licensee.

(b) The selection of frequencies in the bands allocated for TV broadcasting for use in any area shall be guided by the need to avoid interference to TV broadcast reception. In these bands, low power auxiliary station usage is secondary to TV broadcasting and land mobile stations operating in the UHF-TV spectrum and must not cause harmful interference. If such interference occurs, low power auxiliary station operation must immediately cease and may not be resumed until the interference problem has been resolved.

[42 FR 14729, Mar. 16, 1977, as amended at 52 FR 2535, Jan. 23, 1987]

§ 74.831 Scope of service and permissible transmissions.

The license for a low power auxiliary station authorizes the transmission of cues and orders to production personnel and participants in broadcast programs and motion pictures and in the preparation therefor, the transmission of program material by means of a wireless microphone worn by a performer and other participants in a program or motion picture during rehearsal and during the actual broadcast, filming, or recording, or the transmission of comments, interviews, and reports from the scene of a remote broadcast. Low power auxiliary stations operating in the 944–952 MHz band may, in addition, transmit synchronizing signals and various control signals to portable or hand-carried TV cameras which employ low power radio signals in lieu of cable to deliver picture signals to the control point at the scene of a remote broadcast.

[42 FR 14729, Mar. 16, 1977, as amended at 51 FR 4603, Feb. 6, 1986]

§ 74.832 Licensing requirements and procedures.

(a) A license authorizing operation of one or more low power auxiliary stations will be issued only to the following:

(1) A licensee of an AM, FM, TV, or International broadcast station or low power TV station. Low power auxiliary stations will be licensed for used with a specific broadcast or low power TV station or combination of stations licensed to the same licensee within the same community.

(2) A broadcast network entity.

(3) A cable television system operator who operates a cable system that produces program material for origination or access cablecasting, as defined in § 76.5(r).

(4) Motion picture producers as defined in § 74.801.

(5) Television program producers as defined in § 74.801.

(6) Licensees and conditional licensees of stations in the Service and Multichannel Multipoint Distribution Service as defined in § 21.2 of this chapter, or entities that hold an executed lease agreement with an MDS or MMDS licensee or conditional licensee or with an Instructional Television Fixed Service licensee or permittee.

(b) An application for a new or renewal of low power auxiliary license shall specify the frequency band or bands desired. Only those frequency bands necessary for satisfactory operation shall be requested.

(c) Licensees of AM, FM, TV, and International broadcast stations; low power TV stations; and broadcast network entities may be authorized to operate low power auxiliary stations in the frequency bands set forth in § 74.802(a).

(d) Cable television operations, motion picture and television program producers may be authorized to operate low power auxiliary stations only in the bands allocated for TV broadcasting.

(e) An application for low power auxiliary stations or for a change in an existing authorization shall specify the broadcast station, or the network with which the low power broadcast auxiliary facilities are to be principally used as given in paragraph (h) of this section; or it shall specify the motion picture or television production company or the cable television operator with which the low power broadcast auxiliary facilities are to be solely used. A single application, filed on FCC Form 601 may be used in applying for the authority to operate one or more low power auxiliary units. The application must specify the frequency bands which will be used. Motion picture producers, television program producers, and cable television operators are required to attach a single sheet to their application form explaining in detail the manner in which the eligibility requirements given in paragraph (a) of this section are met.

(f) Applications for the use of the bands allocated for TV broadcasting must specify the usual area of operation within which the low power auxiliary station will be used. This area of operation may, for example, be specified as the metropolitan area in which the broadcast licensee serves, or the usual area within which motion picture and television producers are operating. Because low power auxiliary stations operating in these bands will only be

permitted in areas removed from existing co-channel TV broadcast stations, licensees have full responsibility to ensure that operation of their stations does not occur at distances less than those specified in § 74.802(b).

(g) Low power auxiliary licensees shall specify the maximum number of units that will be operated.

(h) For broadcast licensees, low power auxiliary stations will be licensed for use with a specific broadcast station or combination of broadcast stations licensed to the same licensee and to the same community. Licensing of low power auxiliary stations for use with a specific broadcast station or combination of such stations does not preclude their use with other broadcast stations of the same or a different licensee at any location. Operation of low power auxiliary stations outside the area of operation specified in the authorization, or in other bands is permitted without further authority of the Commission. However, operation of low power auxiliary stations shall, at all times, be in accordance with the requirements of § 74.882 of this subpart. Also, a low power auxiliary station that is being used with a broadcast station or network other than one with which it is licensed, must, in addition to meeting the requirements of § 74.861 of this subpart, not cause harmful interference to another low power auxiliary station which is being used with the broadcast station(s) or network with which it is licensed.

(i) In case of permanent discontinuance of operations of a station licensed under this subpart, the licensee shall cancel the station license using FCC Form 601. For purposes of this section, a station which is not operated for a period of one year is considered to have been permanently discontinued.

(j) The license shall be retained in the licensee's files at the address shown on the authorization, posted at the transmitter, or posted at the control point of the station.

[42 FR 14729, Mar. 16, 1977, as amended at 47 FR 9221, Mar. 4, 1982; 47 FR 21503, May 18, 1982; 47 FR 55938, Dec. 14, 1982; 51 FR 4603, Feb. 6, 1986; 51 FR 9966, Mar. 24, 1986; 52 FR 2535, Jan. 23, 1987; 55 FR 46012, Oct. 31, 1990; 58 FR 19776, Apr. 16, 1993; 68 FR 12772, Mar. 17, 2003; 69 FR 72045, Dec. 10, 2004]

§ 74.833 Temporary authorizations.

(a) Special temporary authority may be granted for low power auxiliary station operation which cannot be conducted in accordance with § 74.24. Such authority will normally be granted only for operations of a temporary nature. Where operation is seen as likely on a continuing annual basis, an application for a regular authorization should be submitted.

(b) A request for special temporary authority for the operation of a remote pickup broadcast station must be made in accordance with the procedures of § 1.931(b) of this chapter.

(c) All requests for special temporary authority of a low power auxiliary station must include full particulars including: licensees name and address, statement of eligibility, facility identification number of the associated broadcast station (if any), type and manufacturer of equipment, power output, emission, frequency or frequencies proposed to be used, commencement and termination date, location of proposed operation, and purpose for which request is made including any particular justification.

(d) A request for special temporary authority shall specify a frequency band consistent with the provisions of § 74.802: *Provided*, That, in the case of events of wide-spread interest and importance which cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested upon a showing that operation thereon will not cause interference to established stations: *And provided further*, In no case will operation of a low power auxiliary broadcast station be authorized on frequencies employed for the safety of life and property.

(e) The user shall have full control over the transmitting equipment during the period it is operated.

(f) Special temporary authority to permit operation of low power auxiliary stations pending Commission action on an application for regular authority will not normally be granted.

[42 FR 14729, Mar. 16, 1977, as amended at 47 FR 9221, Mar. 4, 1982; 47 FR 55939, Dec. 14, 1982; 58 FR 19776, Apr. 16, 1993; 68 FR 12772, Mar. 17, 2003]

§ 74.851 Certification of equipment; prohibition on manufacture, import, sale, lease, offer for sale or lease, or shipment of devices that operate in the 700 MHz Band; labeling for 700 MHz band equipment destined for non-U.S. markets; disclosure for the core TV bands.

(a) Applications for new low power auxiliary stations will not be accepted unless the transmitting equipment specified therein has been certificated for use pursuant to provisions of this subpart.

(b) Any manufacturer of a transmitter to be used in this service may apply for certification for such transmitter following the certification procedure set forth in part 2 of the Commission's Rules and Regulations. Attention is also directed to part 1 of the Commission's Rules and Regulations which specifies the fees required when filing an application for certification.

(c) An applicant for a low power auxiliary station may also apply for certification for an individual transmitter by following the certification procedure set forth in part 2 of the Commission's Rules and Regulations. The application for certification must be accompanied by the proper fees as prescribed in part 1 of the Commission's Rules and Regulations.

(d) Low power auxiliary station equipment authorized to be used pursuant to an application accepted for filing prior to December 1, 1977 may continue to be used by the licensee or its successors or assignees: *Provided, however,* If operation of such equipment causes harmful interference due to its failure to comply with the technical standards set forth in this subpart, the Commission may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

(e) Each instrument of authority which permits operation of a low power auxiliary station using equipment which has not been certificated will specify the particular transmitting equipment which the licensee is authorized to use.

(f) All transmitters marketed for use under this subpart shall be certificated by the Federal Communications Commission for this purpose. (Refer to subpart I of part 2 of the Commission's rules and regulations.)

(g) No person shall manufacture, import, sell, lease, offer for sale or lease, or ship low power auxiliary stations that are capable of operating in the 700 MHz band (698–806 MHz). This prohibition does not apply to devices manufactured solely for export.

(h) Any person who manufactures, sells, leases, or offers for sale or lease low power auxiliary stations, including wireless microphones, that are destined for non-U.S. markets and that are capable of operating in the 700 MHz band shall include labeling and make clear in all sales, marketing, and packaging materials, including online materials, relating to such devices that the devices cannot be operated in the U.S.

(i) Any person, whether such person is a wholesaler or a retailer, who manufactures, sells, leases, or offers for sale or lease low power auxiliary stations that operate in the core TV bands (channels 2–51, excluding channel 37) is subject to the disclosure requirements in § 15.216 of this chapter.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[42 FR 14729, Mar. 16, 1977, as amended at 42 FR 43637, Aug. 22, 1977; 43 FR 13576, Mar. 31, 1978; 63 FR 36605, July 7, 1998; 75 FR 3639, Jan. 22, 2010]

§ 74.852 Equipment changes.

(a) The licensee of a low power auxiliary station may make any changes in the equipment that are deemed desirable or necessary, including replacement with certificated equipment, without prior Commission approval: *Provided,* The proposed changes will not depart from any of the terms of the station authorization or the Commission's technical rules governing this service: *And provided further,* That any changes made to certificated transmitted equipment shall be in compliance with the provisions of part 2 of the Commission's rules and regulations concerning modification of certificated equipment.

(b) Any equipment changes made pursuant to paragraph (a) of this section

shall be set forth in the next application for renewal of license.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[42 FR 14729, Mar. 16, 1977, as amended at 43 FR 13576, Mar. 31, 1978; 63 FR 36605, July 7, 1998]

§ 74.861 Technical requirements.

(a) Transmitter power is the power at the transmitter output terminals and delivered to the antenna, antenna transmission line, or any other impedance-matched, radio frequency load. For the purpose of this subpart, the transmitter power is the carrier power.

(b) Each authorization for a new low power auxiliary station shall require the use of certificated equipment. Such equipment shall be operated in accordance with the emission specifications included in the certification grant and as prescribed in paragraphs (c) through (e) of this section.

(c) Low power auxiliary transmitters not required to operate on specific carrier frequencies shall operate sufficiently within the authorized frequency band edges to insure the emission bandwidth falls entirely within the authorized band.

(d) For low power auxiliary stations operating in the bands other than those allocated for TV broadcasting, the following technical requirements are imposed.

(1) The maximum transmitter power which will be authorized is 1 watt. Licensees may accept the manufacturer's power rating; however, it is the licensee's responsibility to observe specified power limits.

(2) If a low power auxiliary station employs amplitude modulation, modulation shall not exceed 100 percent on positive or negative peaks.

(3) The occupied bandwidth shall not be greater than that necessary for satisfactory transmission and, in any event, an emission appearing on any discrete frequency outside the authorized band shall be attenuated, at least, $43+10 \log^{10}$ (mean output power, in watts) dB below the mean output power of the transmitting unit.

(e) For low power auxiliary stations operating in the bands allocated for TV broadcasting, the following technical requirements apply:

(1) The power of the measured unmodulated carrier power at the output of the transmitter power amplifier (antenna input power) may not exceed the following:

(i) 54–72, 76–88, and 174–216 MHz bands—50 mW

(ii) 470–608 and 614–698 MHz bands—250 mW

(2) Transmitters may be either crystal controlled or frequency synthesized.

(3) Any form of modulation may be used. A maximum deviation of ±75 kHz is permitted when frequency modulation is employed.

(4) The frequency tolerance of the transmitter shall be 0.005 percent.

(5) The operating bandwidth shall not exceed 200 kHz.

(6) The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(i) On any frequency removed from the operating frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB;

(ii) On any frequency removed from the operating frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB;

(iii) On any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth: at least $43+10\log_{10}$ (mean output power in watts) dB.

(f) Unusual transmitting antennas or antenna elevations shall not be used to deliberately extend the range of low power auxiliary stations beyond the limited areas defined in § 74.831.

(g) Low power auxiliary stations shall be operated so that no harmful interference is caused to any other class of station operating in accordance with Commission's rules and regulations and with the Table of Frequency Allocations in part 2 thereof.

(h) In the event a station's emissions outside its authorized frequency band causes harmful interference, the Commission may, at its discretion, require the licensee to take such further steps

as may be necessary to eliminate the interference.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[43 FR 13576, Mar. 31, 1978, as amended at 52 FR 2535, Jan. 23, 1987; 63 FR 36605, July 7, 1998; 75 FR 3639, Jan. 22, 2010]

§ 74.870 Wireless video assist devices.

Television broadcast auxiliary licensees and motion picture and television producers, as defined in § 74.801 may operate wireless video assist devices on a non-interference basis on VHF and UHF television channels to assist with production activities.

(a) The use of wireless video assist devices must comply with all provisions of this subpart, except as indicated in paragraphs (b) through (i) of this section.

(b) Wireless video assist devices may only be used for scheduled productions. They may not be used to produce live events and may not be used for electronic news gathering purposes.

(c) Wireless video assist devices may operate with a bandwidth not to exceed 6 MHz on frequencies in the bands 180–210 MHz (TV channels 8–12) and 470–698 MHz (TV channels 14–51) subject to the following restrictions:

(1) The bandwidth may only occupy a single TV channel.

(2) Operation is prohibited within the 608–614 MHz (TV channel 37) band.

(3) Operation is prohibited within 129 km of a television broadcasting station, including Class A television stations, low power television stations and translator stations.

(4) For the area and frequency combinations listed in the table below, operation is prohibited within the distances indicated from the listed geographic coordinates.

NOTE TO THE FOLLOWING TABLE: All coordinates are referenced to the North American Datum of 1983.

Area	North latitude	West longitude	Excluded frequencies (MHz)	Excluded channels		
				200 km	128 km	52 km
Boston, MA	42°21′24.4″	71°03′23.2″	470–476	14	.....	.....
			476–482	.....	15	.....
			482–488	16	.....	.....
			488–494	.....	17	.....
Chicago, IL	41°52′28.1″	87°38′ 22.2″	470–476	14	.....	.....
			476–482	15	.....	.....
			482–488	.....	16	.....
Cleveland, OH[1]	41°29′51.2″	81°41′49.5″	470–476	14	.....	.....
			476–482	.....	15	.....
			482–488	16	.....	.....
			488–494	.....	17	.....
Dallas/Fort Worth, TX	32°47′09.5″	96°47′38.0″	476–482	.....	15	.....
			482–488	16	.....	.....
			488–494	.....	17	.....
Detroit, MI[1]	42°19′48.1″	83°02′56.7″	470–476	.....	14	.....
			476–482	15	.....	.....
			482–488	.....	16	.....
			488–494	17	.....	.....
Gulf of Mexico			476–494	.....	.....	15, 16, 17
Hawaii			488–494	.....	.....	17
Houston, TX	29°45′26.8″	95°21′37.8″	482–488	.....	16	.....
			488–494	17	.....	.....
			494–500	.....	18	.....
Los Angeles, CA	34°03′15.0″	118°14′31.3″	470–476	14	.....	.....
			476–482	.....	15	.....
			482–488	16	.....	.....
			488–494	.....	17	.....
			500–506	.....	19	.....
			506–512	20	.....	.....
			512–518	.....	21	.....
Miami, Fl	25°46′38.4″	80°11′31.2″	470–476	14	.....	
			476–482	.....	15	.....
New York/NE New Jersey	40°45′	73°59′37.5″	470–476	14	.....	.....
			476–482	15	.....	.....
			482–488	16	.....	.....
			488–494	.....	17	.....
			494–500	.....	18	.....
			500–506	19	.....	.....
			506–512	.....	20	.....

Area	North latitude	West longitude	Excluded frequencies (MHz)	Excluded channels		
				200 km	128 km	52 km
Philadelphia, PA	39°56′58.4″	75°09′19.6″	494–500	.....	18	.....
			500–506	19	.....	.....
			506–512	20	.....	.....
			512–518	.....	21	.....
Pittsburgh, PA	40°26′19.2″	79°59′59.2″	470–476	14	.....	.....
			476–482	.....	15	.....
			488–494	.....	17	.....
			494–500	18	.....	.....
			500–506	.....	19	.....
San Francisco/Oakland, CA	37°46′38.7″	122°24′43.9″	476–482	.....	15	.....
			482–488	16	.....	.....
			488–494	17	.....	.....
			494–500	.....	18	.....
Washington D.C./MD/VA	38°53′51.4″	77°00′31.9″	482–488	.....	16	.....
			488–494	17	.....	.....
			494–500	18	.....	.....
			500–506	.....	19	.....

[1] The distance separation requirements are not applicable in these cities until further order from the Commission.

(d) Wireless video assist devices are limited to a maximum of 250 milliwatts ERP and must limit power to that necessary to reliably receive a signal at a distance of 300 meters. Wireless video assist devices must comply with the emission limitations of § 74.637.

(e) The antenna of a wireless video assist device must be attached to the transmitter either permanently, or by means of a unique connector designed to allow replacement of authorized antennas but prevent the use of unauthorized antennas. When transmitting, the antenna must not be more that 10 meters above ground level.

(f)(1) A license for a wireless video assist device will authorize the license holder to use all frequencies available for wireless video assist devices, subject to the limitations specified in this section.

(2) Licensees may operate as many wireless video assist devices as necessary, subject to the notification procedures of this section.

(g) *Notification procedure*. Prior to the commencement of transmitting, licensees must notify the local broadcasting coordinator of their intent to transmit. If there is no local coordinator in the intended area of operation, licensees must notify all adjacent channel TV stations within 161 km (100 mi) of the proposed operating area.

(1) Notification must be made at least 10 working days prior to the date of intended transmission.

(2) Notifications must include:

(i) Frequency or frequencies.

(ii) Location.

(iii) Antenna height.

(iv) Emission type(s).

(v) Effective radiated power.

(vi) Intended dates of operation.

(vii) Licensee contact information.

(3)(i) Failure of a local coordinator to respond to a notification request prior to the intended dates of operation indicated on the request will be considered as having the approval of the coordinator. In this case, licensees must in addition notify all co-channel and adjacent channel TV stations within 161 km (100 mi) of the proposed operating area. This notification is for information purposes only and will not enable TV stations to prevent a WAVD from operating, but is intended to help identify the source of interference if any is experienced after a WAVD begins operation.

(ii) If there is no local coordinator in the intended area of operation, failure of any adjacent channel TV station to respond to a notification request prior to the intended dates of operation indicated on the request will be considered as having the approval of the TV station.

(4) Licensees must operate in a manner consistent with the response of the local coordinator, or, if there is no local coordinator in the intended area of operation, the responses of the adjacent channel TV stations. Disagreements may be appealed to the Commission. However, in those instances, the licensee will bear the burden of proof

and proceeding to overturn the recommendation of the local coordinator or the co-channel or adjacent channel TV station.

(h) Licenses for wireless video assist devices may not be transferred or assigned.

(i) The product literature that manufacturers include with a wireless assist video device must contain information regarding the requirement for users to obtain an FCC license, the requirement that stations must locate at least 129 kilometers away from a co-channel TV station, the limited class of users that may operate these devices, the authorized uses, the need for users to obtain a license, and the requirement that a local coordinator (or adjacent channel TV stations, if there is no local coordinator) must be notified prior to operation.

[68 FR 12772, Mar. 17, 2003, as amended at 68 FR 69331, Dec. 12, 2003]

§ 74.882 Station identification.

(a) For transmitters used for voice transmissions and having a transmitter output power exceeding 50 mW, an announcement shall be made at the beginning and end of each period of operation at a single location, over the transmitting unit being operated, identifying the transmitting unit's call sign or designator, its location, and the call sign of the broadcasting station or name of the licensee with which it is being used. A period of operation may consist of a continuous transmission or intermittent transmissions pertaining to a single event.

(b) Each wireless video assist device, when transmitting, must transmit station identification at the beginning and end of each period of operation. Identification may be made by transmitting the station call sign by visual or aural means or by automatic transmission in international Morse telegraphy.

(1) A period of operation is defined as a single uninterrupted transmission or a series of intermittent transmissions from a single location.

(2) Station identification shall be performed in a manner conducive to prompt association of the signal source with the responsible licensee. In exercising the discretion provide by this rule, licensees are expected too act in a responsible manner to assure that result.

[68 FR 12774, Mar. 17, 2003]

Subparts I–K [Reserved]

Subpart L—FM Broadcast Translator Stations and FM Broadcast Booster Stations

SOURCE: 35 FR 15388, Oct. 2, 1970, unless otherwise noted.

§ 74.1201 Definitions.

(a) *FM translator*. A station in the broadcasting service operated for the purpose of retransmitting the signals of an AM or FM radio broadcast station or another FM broadcast translator station without significantly altering any characteristics of the incoming signal other than its frequency and amplitude, in order to provide radio broadcast service to the general public.

(b) *Commercial FM translator*. An FM broadcast translator station which rebroadcasts the signals of a commercial AM or FM radio broadcast station.

(c) *Noncommercial FM translator*. An FM broadcast translator station which rebroadcasts the signals of a noncommercial educational AM or FM radio broadcast station.

(d) *Primary station*. The AM or FM radio broadcast station radiating the signals which are retransmitted by an FM broadcast translator station or an FM broadcast booster station.

(e) *AM or FM radio broadcast station*. When used in this Subpart L, the term AM broadcast station or AM radio broadcast station or FM broadcast station or FM radio broadcast station refers to commercial and noncommercial educational AM or FM radio broadcast stations as defined in § 2.1 of this chapter, unless the context indicates otherwise.

(f) *FM broadcast booster station*. A station in the broadcasting service operated for the sole purpose of retransmitting the signals of an FM radio broadcast station, by amplifying and reradiating such signals, without significantly altering any characteristic of

the incoming signal other than its amplitude.

(g) *Translator coverage contour*. For a fill-in FM translator rebroadcasting an FM radio broadcast station as its primary station, the FM translator's coverage contour must be contained within the primary station's coverage contour. For purposes of this rule section, the coverage contour of the FM translator has the same field strength value as the protected contour of the primary FM station (*i.e.*, for a commercial Class B FM station it is the predicted 0.5 mV/m field strength contour, for a commercial Class B1 FM station it is the predicted 0.7 mV/m field strength contour, and for all other classes of FM stations it is the predicted 1 mV/m field strength contour). The coverage contour of an FM translator rebroadcasting an AM radio broadcast station as its primary station must be contained within the lesser of the 2 mV/m daytime contour of the AM station and a 25-mile (40 km) radius centered at the AM transmitter site. The protected contour for an FM translator station is its predicted 1 mV/m contour.

(h) *Fill-in area*. The area where the coverage contour of an FM translator or booster station is within the protected contour of the associated primary station (*i.e.*, predicted 0.5 mV/m contour for commercial Class B stations, predicted 0.7 mV/m contour for commercial Class B1 stations, and predicted 1 mV/m contour for all other classes of stations).

(i) *Other area*. The area where the coverage contour of an FM translator station extends beyond the protected contour of the primary station (*i.e.*, predicted 0.5 mV/m contour for commercial Class B stations, predicted 0.7 mV/m contour for commercial Class B1 stations, and predicted 1 mV/m contour for all other classes of stations).

(j) *AM Fill-in area*. The area within the lesser of the 2 mV/m daytime contour of the AM radio broadcast station being rebroadcast and a 25-mile (40 km) radius centered at the AM transmitter site.

[35 FR 15388, Oct. 2, 1970, as amended at 45 FR 37842, June 5, 1980; 52 FR 31405, Aug. 20, 1987; 55 FR 50693, Dec. 10, 1990; 74 FR 45129, Sept. 1, 2009]

§ 74.1202 Frequency assignment.

(a) An applicant for a new FM broadcast translator station or for changes in the facilities of an authorized translator station shall endeavor to select a channel on which its operation is not likely to cause interference to the reception of other stations. The application must be specific with regard to the frequency requested. Only one output channel will be assigned to each translator station.

(b) Subject to compliance with all the requirements of this subpart, FM broadcast translators may be authorized to operate on the following FM channels, regardless of whether they are assigned for local use in the FM Table of Allotments (§ 73.202(b) of this chapter):

(1) *Commercial FM translators:* Channels 221–300 as identified in § 73.201 of this chapter.

(2) *Noncommercial FM translators:* Channels 201–300 as identified in § 73.201 of this chapter. Use of reserved channels 201–220 is subject to the restrictions specified in § 73.501 of this chapter.

(3) In Alaska, FM translators operating on Channels 201–260 (88.1–99.9 MHz) shall not cause harmful interference to and must accept interference from non-Government fixed operations authorized prior to January 1, 1982.

(c) An FM broadcast booster station will be assigned the channel assigned to its primary station.

[35 FR 15388, Oct. 2, 1970, as amended at 39 FR 12990, Apr. 10, 1974; 47 FR 30068, July 12, 1982; 52 FR 8260, Mar. 17, 1987; 55 FR 50693, Dec. 10, 1990]

§ 74.1203 Interference.

(a) An authorized FM translator or booster station will not be permitted to continue to operate if it causes any actual interference to:

(1) The transmission of any authorized broadcast station; or

(2) The reception of the input signal of any TV translator, TV booster, FM translator or FM booster station; or

(3) The direct reception by the public of the off-the-air signals of any authorized broadcast station including TV Channel 6 stations, Class D (secondary)

noncommercial educational FM stations, and previously authorized and operating FM translators and FM booster stations. Interference will be considered to occur whenever reception of a regularly used signal is impaired by the signals radiated by the FM translator or booster station, regardless of the quality of such reception, the strength of the signal so used, or the channel on which the protected signal is transmitted.

(b) If interference cannot be properly eliminated by the application of suitable techniques, operation of the offending FM translator or booster station shall be suspended and shall not be resumed until the interference has been eliminated. Short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures. If a complainant refuses to permit the FM translator or booster licensee to apply remedial techniques which demonstrably will eliminate the interference without impairment to the original reception, the licensee of the FM translator or booster station is absolved of further responsibility for that complaint.

(c) An FM booster station will be exempted from the provisions of paragraphs (a) and (b) of this section to the extent that it may cause limited interference to its primary station's signal, *provided* it does not disrupt the existing service of its primary station or cause such interference within the boundaries of the principal community of its primary station.

(d) A fill-in FM translator operating on the first, second or third adjacent channel to its primary station's channel will be exempt from the provisions of paragraphs (a) and (b) of this section to the extent that it may cause limited interference to its primary station's signal, *provided* it does not disrupt the existing service of its primary station or cause such interference within the boundaries of the principal community of its primary station.

(e) It shall be the responsibility of the licensee of an FM translator or FM booster station to correct any condition of interference which results from the radiation of radio frequency energy by its equipment on any frequency outside the assigned channel. Upon notice by the Commission to the station licensee that such interference is being caused, the operation of the FM translator or FM booster station shall be suspended within three minutes and shall not be resumed until the interference has been eliminated or it can be demonstrated that the interference is not due to spurious emissions by the FM translator or FM booster station; *provided, however,* that short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

[55 FR 50693, Dec. 10, 1990, as amended at 60 FR 55484, Nov. 1, 1995]

§ 74.1204 Protection of FM broadcast, FM Translator and LP100 stations.

(a) An application for an FM translator station will not be accepted for filing if the proposed operation would involve overlap of predicted field contours with any other authorized commercial or noncommercial educational FM broadcast stations, FM translators, and Class D (secondary) noncommercial educational FM stations; or if it would result in new or increased overlap with an LP100 station, as set forth:

(1) Commercial Class B FM Stations (Protected Contour: 0.5 mV/m)

Frequency separation	Interference contour of proposed translator station	Protected contour of commercial Class B station
Co-channel.	0.05 mV/m (34 dBu)	0.5 mV/m (54 dBu)
200 kHz	0.25 mV/m (48 dBu)	0.5 mV/m (54 dBu)
400 kHz/600 kHz.	50.0 mV/m (94 dBu)	0.5 mV/m (54 dBu)

(2) Commercial Class B1 FM Stations (Protected Contour: 0.7 mV/m)

Frequency separation	Interference contour of proposed translator station	Protected contour of commercial Class B1 station
Co-channel.	0.07 mV/m (37 dBu)	0.7 mV/m (57 dBu)
200 kHz	0.35 mV/m (51 dBu)	0.5 mV/m (57 dBu)
400 kHz/600 kHz.	70.0 mV/m (97 dBu)	0.7 mV/m (57 dBu)

(3) All Other Classes of FM Stations (Protected Contour: 1 mV/m)

Frequency separation	Interference contour of proposed translator	Protected contour of any other station
Co-channel.	0.1 mV/m (40 dBu)	1 mV/m (60 dBu)
200 kHz	0.5 mV/m (54 dBu)	1 mV/m (60 dBu)
400 kHz/600 kHz.	100 mV/m (100 dBu)	1 mV/m (60 dBu)

(4) LP100 stations (Protected Contour: 1 mV/m)

Frequency separation	Interference contour of proposed translator station	Protected contour of LP100 LPFM station
Co-channel.	0.1 mV/m (40 dBu)	1 mV/m (60 dBu)
200 kHz	0.5 mV/m (54 dBu)	1 mV/m (60 dBu)

NOTE TO PARAGRAPH (a)(4): LP100 stations, to the purposes of determining overlap pursuant to this paragraph, LPFM applications and permits that have not yet been licensed must be considered as operating with the maximum permitted facilities. All LPFM TIS stations must be protected on the basis of a nondirectional antenna.

(b) The following standards must be used to compute the distances to the pertinent contours:

(1) The distances to the protected contours are computed using Figure 1 of § 73.333 [F(50,50) curves] of this chapter.

(2) The distances to the interference contours are computed using Figure 1a of § 73.333 [F(50,10) curves] of this chapter. In the event that the distance to the contour is below 16 kilometers (approximately 10 miles), and therefore not covered by Figure 1a, curves in Figure 1 must be used.

(3) The effective radiated power (ERP) to be used is the maximum ERP of the main radiated lobe in the pertinent azimuthal direction. If the transmitting antenna is not horizontally polarized only, either the vertical component or the horizontal component of the ERP should be used, whichever is greater in the pertinent azimuthal direction.

(4) The antenna height to be used is the height of the radiation center above the average terrain along each pertinent radial, determined in accordance with § 73.313(d) of this chapter.

(c) An application for a change (other than a change in channel) in the authorized facilities of an FM translator station will be accepted even though overlap of field strength contours would occur with another station in an area where such overlap does not already exist, if:

(1) The total area of overlap with that station would not be increased:

(2) The area of overlap with any other station would not increase;

(3) The area of overlap does not move significantly closer to the station receiving the overlap; and,

(4) No area of overlap would be created with any station with which the overlap does not now exist.

(d) The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.

(e) The provisions of this section will not apply to overlap between a proposed fill-in FM translator station and its primary station operating on a first, second or third adjacent channel, *provided* That such operation may not result in interference to the primary station within its principal community.

(f) An application for an FM translator station will not be accepted for filing even though the proposed operation would not involve overlap of field strength contours with any other station, as set forth in paragraph (a) of this section, if the predicted 1 mV/m field strength contour of the FM translator station will overlap a populated area already receiving a regularly used, off-the-air signal of any authorized co-channel, first, second or third adjacent channel broadcast station, including Class D (secondary) noncommercial educational FM stations and grant of the authorization will result in interference to the reception of such signal.

(g) An application for an FM translator or an FM booster station that is 53 or 54 channels removed from an FM radio broadcast station will not be accepted for filing if it fails to meet the

required separation distances set out in § 73.207 of this chapter. For purposes of determining compliance with § 73.207 of this chapter, translator stations will be treated as Class A stations and booster stations will be treated the same as their FM radio broadcast station equivalents. FM radio broadcast station equivalents will be determined in accordance with §§ 73.210 and 73.211 of this chapter, based on the booster station's ERP and HAAT. Provided, however, that FM translator stations and booster stations operating with less than 100 watts ERP will be treated as class D stations and will not be subject to intermediate frequency separation requirements.

(h) An application for an FM translator station will not be accepted for filing if it specifies a location within 320 kilometers (approximately 199 miles) of either the Canadian or Mexican borders and it does not comply with § 74.1235(d) of this part.

(i) FM booster stations shall be subject to the requirement that the signal of any first adjacent channel station must exceed the signal of the booster station by 6 dB at all points within the protected contour of any first adjacent channel station, except that in the case of FM stations on adjacent channels at spacings that do not meet the minimum distance separations specified in § 73.207 of this chapter, the signal of any first adjacent channel station must exceed the signal of the booster by 6 dB at any point within the predicted interference free contour of the adjacent channel station.

(j) FM translator stations authorized prior to June 1, 1991 with facilities that do not comply with the predicted interference protection provisions of this section, may continue to operate, provided that operation is in conformance with § 74.1203 regarding actual interference. Applications for major changes in FM translator stations must specify facilities that comply with provisions of this section.

[55 FR 50694, Dec. 10, 1990, as amended at 56 FR 56170, Nov. 1, 1991; 58 FR 42025, Aug. 6, 1993; 65 FR 7649, Feb. 15, 2000; 65 FR 67304, Nov. 9, 2000; 65 FR 79780, Dec. 20, 2000]

§ 74.1205 Protection of channel 6 TV broadcast stations.

The provisions of this section apply to all applications for construction permits for new or modified facilities for a noncommercial educational FM translator station on Channels 201–220, unless the application is accompanied by a written agreement between the NCE-FM translator applicant and each affected TV Channel 6 broadcast station licensee or permittee concurring with the proposed NCE-FM translator facility.

(a) An application for a construction permit for new or modified facilities for a noncommercial educational FM translator station operating on Channels 201–220 must include a showing that demonstrates compliance with paragraph (b), (c) or (d) of this section if it is within the following distances of a TV broadcast station which is authorized to operate on Channel 6.

FM Channel	Distance (kilometers)
201	148
202	146
203	143
204	141
205	140
206	137
207	135
208	135
209	135
210	135
211	135
212	135
213	135
214	134
215	134
216	133
217	133
218	132
219	132
220	131

(b) *Collocated stations.* An application for a noncommercial educational FM translator station operating on Channels 201–220 and located at 0.4 kilometer (approximately 0.25 mile) or less from a TV Channel 6 station will be accepted if it includes a certification that the applicant has coordinated its antenna with the affected TV station.

(c) *Contour overlap.* Except as provided in paragraph (b) of this section, an application for a noncommercial educational FM translator station operating on Channels 201–220 will not be accepted if the proposed operation

would involve overlap of its interference field strength contour with any TV Channel 6 station's Grade B contour, as set forth below.

(1) The distances to the TV Channel 6 station Grade B (47 dBu) field strength contour will be predicted according to the procedures specified in § 73.684 of this chapter, using the F(50,50) curves in § 73.699, Figure 9 of this chapter.

(2) The distances to the applicable noncommercial educational FM translator interference contour will be predicted according to the procedures specified in § 74.1204(b) of this part.

(3) The applicable noncommercial educational FM translator interference contours are as follows:

FM channel	Interference Contour F(50,10) curves (dBu)
201	54
202	56
203	59
204	62
205	64
206	69
207	73
208	73
209	73
210	73
211	73
212	74
213	75
214	77
215	78
216	80
217	81
218	85
219	88
220	90

(d) FM translator stations authorized prior to June 1, 1991 with facilities that do not comply with the predicted interference protection provisions of this section, may continue to operate, provided that operation is in conformance with § 74.1203 regarding actual interference. Applications for major changes in FM translator stations must specify facilities that comply with the provisions of this section.

[55 FR 50695, Dec. 10, 1990, as amended at 58 FR 42025, Aug. 6, 1993]

§ 74.1231 Purpose and permissible service.

(a) FM translators provide a means whereby the signals of AM or FM broadcast stations may be retransmitted to areas in which direct reception of such AM or FM broadcast stations is unsatisfactory due to distance or intervening terrain barriers, and a means for AM Class D stations to continue operating at night.

(b) An FM translator may be used for the purpose of retransmitting the signals of a primary AM or FM radio broadcast station or another translator station the signal of which is received directly through space, converted, and suitably amplified, and originating programming to the extent authorized in paragraphs (f), (g), and (h) of this section. However, an FM translator providing fill-in service may use any terrestrial facilities to receive the signal that is being rebroadcast. An FM booster station or a noncommercial educational FM translator station that is operating on a reserved channel (Channels 201–220) and is owned and operated by the licensee of the primary noncommercial educational station it rebroadcasts may use alternative signal delivery means, including, but not limited to, satellite and terrestrial microwave facilities. Provided, however, that an applicant for a noncommercial educational translator operating on a reserved channel (Channel 201–220) and owned and operated by the licensee of the primary noncommercial educational AM or FM station it rebroadcasts complies with either paragraph (b)(1) or (b)(2) of this section:

(1) The applicant demonstrates that:

(i) The transmitter site of the proposed FM translator station is within 80 kilometers of the predicted 1 mV/m contour of the primary station to be rebroadcast; or,

(ii) The transmitter site of the proposed FM translator station is more than 160 kilometers from the transmitter site of any authorized full service noncommercial educational FM station; or,

(iii) The application is mutually exclusive with an application containing the showing as required by paragraph 74.1231(b)(2) (i) or (ii) of this section; or,

(iv) The application is filed after October 1, 1992.

(2) If the transmitter site of the proposed FM translator station is more than 80 kilometers from the predicted 1 mV/m contour of the primary station

to be rebroadcast or is within 160 kilometers of the transmitter site of any authorized full service noncommercial educational FM station, the applicant must show that:

(i) An alternative frequency can be used at the same site as the proposed FM translator's transmitter location and can provide signal coverage to the same area encompassed by the applicant's proposed 1 mV/m contour; or,

(ii) An alternative frequency can be used at a different site and can provide signal coverage to the same area encompassed by the applicant's proposed 1 mV/m contour.

NOTE: For paragraphs 74.1231(b) and 74.1231(i) of this section, auxiliary intercity relay station frequencies may be used to deliver signals to FM translator and booster stations on a secondary basis only. Such use shall not interfere with or otherwise preclude use of these frequencies for transmitting aural programming between the studio and transmitter location of a broadcast station, or between broadcast stations, as provided in paragraphs 74.531 (a) and (b) of this part. Prior to filing an application for an auxiliary intercity relay microwave frequency, the applicant shall notify the local frequency coordination committee, or, in the absence of a local frequency coordination committee, any licensees assigned the use of the proposed operating frequency in the intended location or area of operation.

(c) The transmissions of each FM translator or booster station shall be intended only for direct reception by the general public. An FM translator or booster shall not be operated solely for the purpose of relaying signals to one or more fixed received points for retransmission, distribution, or further relaying in order to establish a point-to-point FM radio relay system.

(d) The technical characteristics of the retransmitted signals shall not be deliberately altered so as to hinder reception on conventional FM broadcast receivers.

(e) An FM translator shall not deliberately retransmit the signals of any station other than the station it is authorized to retransmit. Precautions shall be taken to avoid unintentional retransmission of such other signals.

(f) A locally generated radio frequency signal similar to that of an FM broadcast station and modulated with aural information may be connected to the input terminals of an FM translator for the purpose of transmitting voice announcements. The radio frequency signals shall be on the same channel as the normally used off-the-air signal being rebroadcast. Connection of the locally generated signals shall be made by any automatic means when transmitting originations concerning financial support. The connections for emergency transmissions may be made manually. The apparatus used to generate the local signal that is used to modulate the FM translator must be capable of producing an aural signal which will provide acceptable reception on FM receivers designed for the transmission standards employed by FM broadcast stations.

(g) The aural material transmitted as permitted in paragraph (f) of this section shall be limited to emergency warnings of imminent danger and to seeking or acknowledging financial support deemed necessary to the continued operation of the translator. Originations concerning financial support are limited to a total of 30 seconds an hour. Within this limitation the length of any particular announcement will be left to the discretion of the translator station licensee. Solicitations of contributions shall be limited to the defrayal of the costs of installation, operation and maintenance of the translator or acknowledgements of financial support for those purposes. Such acknowledgements may include identification of the contributors, the size or nature of the contributions and advertising messages of contributors. Emergency transmissions shall be no longer or more frequent than necessary to protect life and property.

(h) An FM translator station that rebroadcasts a Class D AM radio broadcast station as its primary station may originate programming during the hours the primary station is not operating, subject to the provisions of § 74.1263(b) of this part.

(i) FM broadcast booster stations provide a means whereby the licensee of an FM broadcast station may provide service to areas in any region within the primary station's predicted, authorized service contours. An FM broadcast booster station is authorized to retransmit only the signals of its

primary station which have been received directly through space and suitably amplified, or received by alternative signal delivery means including, but not limited to, satellite and terrestrial microwave facilities. The FM booster station shall not retransmit the signals of any other station nor make independent transmissions, except that locally generated signals may be used to excite the booster apparatus for the purpose of conducting tests and measurements essential to the proper installation and maintenance of the apparatus.

NOTE: In the case of an FM broadcast station authorized with facilities in excess of those specified by § 73.211 of this chapter, an FM booster station will only be authorized within the protected contour of the class of station being rebroadcast as predicted on the basis of the maximum powers and heights set forth in that section for the applicable class of FM broadcast station concerned.

[35 FR 15388, Oct. 2, 1970, as amended at 45 FR 37842, June 5, 1980; 52 FR 31406, Aug. 20, 1987; 53 FR 14803, Apr. 26, 1988; 54 FR 35342, Aug. 25, 1989; 55 FR 50695, Dec. 10, 1990; 57 FR 41111, Sept. 9, 1992; 58 FR 42026, Aug. 6, 1993; 63 FR 33879, June 22, 1998; 74 FR 45130, Sept. 1, 2009]

§ 74.1232 Eligibility and licensing requirements.

(a) Subject to the restrictions set forth in paragraph (d) of this section, a license for an FM broadcast translator station may be issued to any qualified individual, organized group of individuals, broadcast station licensee, or local civil governmental body, upon an appropriate showing that plans for financing the installation and operation of the translator are sufficiently sound to assure prompt construction of the translator and dependable service.

(b) More than one FM translator may be licensed to the same applicant, whether or not such translators serve substantially the same area, upon an appropriate showing of technical need for such additional stations. FM translators are not counted as FM stations for the purpose of § 73.3555 of this chapter concerning multiple ownership.

NOTE: As used in this section need refers to the quality of the signal received and not to the programming content, format, or transmission needs of an area.

(c) Only one input and one output channel will be assigned to each FM translator. Additional FM translators may be authorized to provide additional reception. A separate application is required for each FM translator and each application shall be complete in all respects.

(d) An authorization for an FM translator whose coverage contour extends beyond the protected contour of the commercial primary station will not be granted to the licensee or permittee of a commercial FM radio broadcast station. Similarly, such authorization will not be granted to any person or entity having any interest whatsoever, or any connection with a primary FM station. Interested and connected parties extend to group owners, corporate parents, shareholders, officers, directors, employees, general and limited partners, family members and business associates. For the purposes of this paragraph, the protected contour of the primary station shall be defined as follows: the predicted 0.5mV/m contour for commercial Class B stations, the predicted 0.7 mV/m contour for commercial Class B1 stations and the predicted 1 mV/m field strength contour for all other FM radio broadcast stations. The contours shall be as predicted in accordance with § 73.313(a) through (d) of this chapter. In the case of an FM radio broadcast station authorized with facilities in excess of those specified by § 73.211 of this chapter, a co-owned commercial FM translator will only be authorized within the protected contour of the class of station being rebroadcast, as predicted on the basis of the maximum powers and heights set forth in that section for the applicable class of FM broadcast station concerned. An FM translator station in operation prior to March 1, 1991, which is owned by a commercial FM (primary) station and whose coverage contour extends beyond the protected contour of the primary station, may continue to be owned by such primary station until March 1, 1994. Thereafter, any such FM translator station must be owned by independent parties. An FM translator station in operation prior to June 1, 1991, which is owned by

a commercial FM radio broadcast station and whose coverage contour extends beyond the protected contour of the primary station, may continue to be owned by a commercial FM radio broadcast station until June 1, 1994. Thereafter, any such FM translator station must be owned by independent parties. An FM translator providing service to an AM fill-in area will be authorized only to the permittee or licensee of the AM radio broadcast station being rebroadcast, or, in the case of an FM translator authorized to operate on an unreserved channel, to a party with a valid rebroadcast consent agreement with such a permittee or licensee to rebroadcast that station as the translator's primary station. In addition, any FM translator providing service to an AM fill-in area must have been authorized by a license or construction permit in effect as of May 1, 2009. A subsequent modification of any such FM translator will not affect its eligibility to rebroadcast an AM signal.

(e) An FM translator station whose coverage contour goes beyond the protected contour of the commercial primary station shall not receive any support, before or after construction, either directly or indirectly, from the commercial primary FM radio broadcast station. Such support also may not be received from any person or entity having any interest whatsoever, or any connection with the primary FM station. Interested and connected parties extend to group owners, corporate parents, shareholders, officers, directors, employees, general and limited partners, family members and business associates. Such an FM translator station may, however, receive technical assistance from the primary station to the extent of installing or repairing equipment or making adjustments to equipment to assure compliance with the terms of the translator station's construction permit and license. FM translator stations in operation prior to March 1, 1991 may continue to receive contributions or support from the commercial primary station for the operation and maintenance of the translator station until March, 1, 1994. Thereafter, any such FM translator station shall be subject to the prohibitions on support contained in this section. Such an FM translator station may, however, receive technical assistance from the primary station to the extent of installing or repairing equipment or making adjustments to equipment to assure compliance with the terms of the translator station's construction permit and license. FM translator stations in operation prior to June 1, 1991 may continue to receive contributions or support from a commercial FM radio broadcast station for the operation and maintenance of the translator station until June 1, 1994. Thereafter, any such FM translator station shall be subject to the prohibitions on support contained in this section.

NOTE: ''Technical assistance'' refers to actual services provided by the primary station's technical staff or compensation for the time and services provided by independent engineering personnel. Conversely, such support must not include the supply of equipment or direct funding for the translator's discretionary use. ''Technical assistance'' must occur after the issuance of the translator's construction permit or license in order to meet expenses incurred by installing, repairing, or making adjustments to equipment.

(f) An FM broadcast booster station will be authorized only to the licensee or permittee of the FM radio broadcast station whose signals the booster station will retransmit, to serve areas within the protected contour of the primary station, subject to Note, § 74.1231(h) of this part.

(g) No numerical limit is placed upon the number of FM booster stations which may be licensed to a single licensee. A separate application is required for each FM booster station. FM broadcast booster stations are not counted as FM broadcast stations for the purposes of § 73.5555 of this chapter concerning multiple ownership.

(h) Any authorization for an FM translator station issued to an applicant described in paragraphs (d) and (e) of this section will be issued subject to the condition that it may be terminated at any time, upon not less than sixty (60) days written notice, where the circumstances in the community or area served are so altered as to have prohibited grant of the application had

such circumstances existed at the time of its filing.

[35 FR 15388, Oct. 2, 1970, as amended at 43 FR 14660, Apr. 7, 1978; 52 FR 10571, Apr. 2, 1987; 52 FR 31406, Aug. 20, 1987; 55 FR 50696, Dec. 10, 1990; 58 FR 42026, Aug. 6, 1993; 74 FR 45130, Sept. 1, 2009]

§ 74.1233 Processing FM translator and booster station applications.

(a) Applications for FM translator and booster stations are divided into two groups:

(1) In the first group are applications for new stations or for major changes in the facilities of authorized stations. For FM translator stations, a major change is any change in frequency (output channel) except changes to first, second or third adjacent channels, or intermediate frequency channels, and any change in antenna location where the station would not continue to provide 1 mV/m service to some portion of its previously authorized 1 mV/m service area. In addition, any change in frequency relocating an unbuilt station from the non-reserved band to the reserved band, or from the reserved band to the non-reserved band, will be considered major. All other changes will be considered minor. All major changes are subject to the provisions of §§ 73.3580 and 1.1104 of this chapter pertaining to major changes.

(2) In the second group are applications for licenses and all other changes in the facilities of the authorized station.

(b) Processing booster and reserved band FM translator applications.

(1) Applications for minor modifications for reserved band FM translator stations, as defined in paragraph (a)(2) of this section, may be filed at any time, unless restricted by the FCC, and will be processed on a ''first come/first served'' basis, with the first acceptable application cutting off the filing rights of subsequent, conflicting applicants. The FCC will periodically release a Public Notice listing those applications accepted for filing. Conflicting applications received on the same day will be treated as simultaneously filed and mutually exclusive. Conflicting applications received after the filing of a first acceptable application will be grouped, according to filing date, behind the lead application in a queue. The priority rights of the lead applicant, against all other applicants, are determined by the date of filing, but the filing date for subsequent, conflicting applicants only reserves a place in the queue. The rights of an applicant in a queue ripen only upon a final determination that the lead applicant is unacceptable and if the queue member is reached and found acceptable. The queue will remain behind the lead applicant until a construction permit is finally granted, at which time the queue dissolves.

(2) All other applications for booster stations and reserved band FM translator stations will be processed as nearly as possible in the order in which they are filed. Such applications will be placed in the processing line in numerical sequence, and will be drawn by the staff for study, the lowest file number first. In order that those applications which are entitled to be grouped for processing may be fixed prior to the time processing of the earliest filed application is begun, the FCC will periodically release a Public Notice listing reserved band applications that have been accepted for filing and announcing a date (not less than 30 days after publication) on which the listed applications will be considered available and ready for processing and by which all mutually exclusive applications and/or petitions to deny the listed applications must be filed.

(3) Applications for reserved band FM translator stations will be processed using filing window procedures. The FCC will specify by Public Notice, a period for filing reserved band FM translator applications for a new station or for major modifications in the facilities of an authorized station. FM translator applications for new facilities or for major modifications will be accepted only during these specified periods. Applications submitted prior to the window opening date identified in the Public Notice will be returned as premature. Applications submitted after the specified deadline will be dismissed with prejudice as untimely.

(4) Timely filed applications for new facilities or for major modifications for reserved band FM Translators will be processed pursuant to the procedures

set forth in subpart K of Part 73 (§ 73.7000 *et seq.*) Subsequently, the FCC will release Public Notices identifying: mutually exclusive groups of applications; applications received during the window filing period which are found to be non-mutually exclusive; tentative selectees determined pursuant to the point system procedures set forth in § 73.7003 of this chapter; and acceptable applications. The Public Notices will also announce: additional procedures to be followed for certain groups of applications; deadlines for filing additional information; and dates by which petitions to deny must be filed in accordance with the provisions of § 73.7004 of this chapter. If the applicant is duly qualified, and upon examination, the FCC finds that the public interest, convenience and necessity will be served by the granting of the application, it will be granted. If an application is found not to be acceptable for filing, the application will be returned, and subject to the amendment requirements of § 73.3522 of this chapter.

(c) In the case of an application for an instrument of authorization, other than a license pursuant to a construction permit, grant will be based on the application, the pleadings filed, and such other matters that may be officially noticed. Before a grant can be made it must be determined that:

(1) There is not pending a mutually exclusive application.

(2) The applicant is legally, technically, financially and otherwise qualified;

(3) The applicant is not in violation of any provisions of law, the FCC rules, or established policies of the FCC; and

(4) A grant of the application would otherwise serve the public interest, convenience and necessity.

(d) Processing non-reserved band FM translator applications.

(1) Applications for minor modifications for non-reserved band FM translator stations, as defined in paragraph (a)(2) of this section, may be filed at any time, unless restricted by the FCC, and will be processed on a ''first come/first served'' basis, with the first acceptable application cutting off the filing rights of subsequent, conflicting applicants. The FCC will periodically release a Public Notice listing those applications accepted for filing. Applications received on the same day will be treated as simultaneously filed and, if they are found to be mutually exclusive, must be resolved through settlement or technical amendment. Conflicting applications received after the filing of a first acceptable application will be grouped, according to filing date, behind the lead application in a queue. The priority rights of the lead applicant, against all other applicants, are determined by the date of filing, but the filing date for subsequent, conflicting applicants only reserves a place in the queue. The rights of an applicant in a queue ripen only upon a final determination that the lead applicant is unacceptable and if the queue member is reached and found acceptable. The queue will remain behind the lead applicant until a construction permit is finally granted, at which time the queue dissolves.

(2)(i) The FCC will specify by Public Notice, pursuant to § 73.5002(a) of this chapter, a period for filing non-reserved band FM translator applications for a new station or for major modifications in the facilities of an authorized station. FM translator applications for new facilities or for major modifications, whether for commercial broadcast stations or noncommercial educational broadcast stations, as described in 47 U.S.C. 397(6), will be accepted only during these specified periods. Applications submitted prior to the window opening date identified in the Public Notice will be returned as premature. Applications submitted after the specified deadline will be dismissed with prejudice as untimely.

(ii) Such FM translator applicants will be subject to the provisions of §§ 1.2105 and 73.5002(a) regarding the submission of the short-form application, FCC Form 175, and all appropriate certifications, information and exhibits contained therein. To determine which FM translator applications are mutually exclusive, FM translator applicants must submit the engineering data contained in FCC Form 349 as a supplement to the short-form application. Such engineering data will not be studied for technical acceptability, but will be protected from subsequently filed applications as of the close of the

window filing period. Determinations as to the acceptability or grantability of an applicant's proposal will not be made prior to an auction.

(iii) FM translator applicants will be subject to the provisions of § 1.2105 regarding the modification and dismissal of their short-form applications.

(iv) Consistent with § 1.2105(a), beginning January 1, 1999, all short-form applications must be filed electronically.

(3) Subsequently, the FCC will release Public Notices:

(i) Identifying the short-form applications received during the appropriate filing period or ''window'' which are found to be mutually exclusive, including any applications for noncommercial educational broadcast stations, as defined in 47 U.S.C. 397(6), as well as the procedures the FCC will use to resolve the mutually exclusive applications;

(ii) Establishing a date, time and place for an auction;

(iii)Providing information regarding the methodology of competitive bidding to be used in the upcoming auction, bid submission and payment procedures, upfront payment procedures, upfront payment deadlines, minimum opening bid requirements and applicable reserve prices in accordance with the provisions of § 73.5002;

(iv) Identifying applicants who have submitted timely upfront payments and, thus, are qualified to bid in the auction.

(4) After the close of the filing window, the FCC will also release a Public Notice identifying any short-form applications which are found to be nonmutually exclusive, including any applications for noncommercial educational broadcast stations, as described in 47 U.S.C. 397(6). These nonmutually exclusive applicants will be required to submit the appropriate long form application within 30 days of the Public Notice and, for applicants for commercial broadcast stations, pursuant to the provisions of § 73.5005 of this chapter. Non-mutually exclusive applications for commercial broadcast stations will be processed and the FCC will periodically release a Public Notice listing such non-mutually exclusive applications determined to be acceptable for filing and announcing a date by which petitions to deny must be filed in accordance with the provisions of §§ 73.5006 and 73.3584 of this chapter. Non-mutually exclusive applications for noncommercial educational broadcast stations, as described by 47 U.S.C. 397(6), will be processed and the FCC will periodically release a Public Notice listing such non-mutually exclusive applications determined to be acceptable for filing and announcing a date by which petitions to deny must be filed in accordance with the provisions of §§ 73.7004 and 73.3584 of this chapter. If the applicants are duly qualified, and upon examination, the FCC finds that the public interest, convenience and necessity will be served by the granting of the non-mutually exclusive long-form application, the same will be granted.

(5)(i) Pursuant to § 1.2107 of this chapter, a winning bidder that meets its down payment obligations in a timely manner must, within 30 days of the release of the public notice announcing the close of the auction, submit the appropriate long-form application for each construction permit for which it was the winning bidder. Long-form applications filed by winning bidders shall include the exhibits identified in § 73.5005 of this chapter.

(ii) Winning bidders are required to pay the balance of their winning bids in a lump sum prior to the deadline established by the Commission pursuant to § 1.2109(a) of this chapter. Long-form construction permit applications will be processed and the FCC will periodically release a Public Notice listing such applications that have been accepted for filing and announcing a date by which petitions to deny must be filed in accordance with the provisions of §§ 73.5006 and 73.3584. Construction permits will be granted by the Commission only after full and timely payment of winning bids and any applicable late fees, and if the applicant is duly qualified, and upon examination, the FCC finds that the public interest, convenience and necessity will be served. If a winning bidder fails to pay the balance of its winning bid in a lump sum by the applicable deadline as specified by the Commission, it will be allowed to make payment within ten (10) business days after the payment deadline, provided

that it also pays a late fee equal to five (5) percent of the amount due in accordance with § 1.2109(a) of this chapter. Construction of the FM translator station shall not commence until the grant of such permit to the winning bidder and only after full and timely payment of winning bids and any applicable late fees.

(iii) All long-form applications will be cut-off as of the date of filing with the FCC and will be protected from subsequently filed long-form translator applications. Applications will be required to protect all previously filed applications. Winning bidders filing long-form applications may change the technical proposals specified in their previously submitted short-form applications, but such change may not constitute a major change. If the submitted long-form application would constitute a major change from the proposal submitted in the short-form application or the allotment, the long-form application will be returned pursuant to paragraph (d)(2)(i) of this section.

(e) Selection of mutually exclusive reserved band FM translator applications.

(1) Applications for FM translator stations proposing to provide fill-in service (within the primary station's protected contour) of the commonly owned primary station will be given priority over all other applications.

(2) Where applications for FM translator stations are mutually exclusive and do not involve a proposal to provide fill-in service of commonly owned primary stations, the FCC may stipulate different frequencies as necessary for the applicants.

(3) Where there are no available frequencies to substitute for a mutually exclusive application, the FCC will apply the same point system identified for full service reserved band FM stations in § 73.7003(b) of this chapter. In the event of a tie, the FCC will consider:

(i) *Existing authorizations*. Each applicant's number of existing radio authorizations (licenses and construction permits for AM, FM, and FM-translators but excluding fill-in translators) as of the time of application shall be compared, and the applicant with the fewest authorizations will be chosen as tentative selectee. If each applicant is applying for a fill-in translator only, and consideration of its other radio stations is not dispositive, its number of existing fill-in translator authorizations will also be considered, and the fill-in applicant with the fewest fill-in authorizations will be chosen as tentative selectee.

(ii) *Existing applications*. If a tie remains, after the tie breaker in paragraph (e)(3)(i) of this section, the remaining applicant with the fewest pending radio new and major change applications (AM, FM, and non fill-in FM translators) will be chosen as tentative selectee. If each applicant is applying for a fill-in translator only, and consideration of its other radio stations is not dispositive, its number of existing fill-in translator applications will also be considered, and the fill-in applicant with the fewest fill-in authorizations will be chosen as tentative selectee.

(iii) Where the procedures in paragraphs (e)(1), (e)(2) and (e)(3)(i) and (e)(3)(ii) of this section fail to resolve the mutual exclusivity, the applications will be processed on a first-come-first-served basis.

[63 FR 48632, Sept. 11, 1998, as amended at 64 FR 19502, Apr. 21, 1999; 65 FR 36382, June 8, 2000; 66 FR 15357, Mar. 19, 2001; 67 FR 45375, July 9, 2002; 68 FR 26229, May 15, 2003; 71 FR 6229, Feb. 7, 2006; 76 FR 18953, Apr. 6, 2011]

§ 74.1234 Unattended operation.

(a) A station authorized under this subpart may be operated without a designated person in attendance if the following requirements are met:

(1) If the transmitter site cannot be reached promptly at all hours and in all seasons, means shall be provided so that the transmitting apparatus can be turned on and off at will from a point which is readily accessible at all hours and in all seasons.

(2) The transmitter shall also be equipped with suitable automatic circuits which will place it in a nonradiating condition in the absence of a signal on the input channel.

(3) The on-and-off control (if at a location other than the transmitter site) and the transmitting apparatus, shall

be adequately protected against tampering by unauthorized persons.

(4) The FCC in Washington, DC, Attention: Audio Division, Media Bureau, shall be supplied by letter with the name, address, and telephone number of a person or persons who may be contacted to secure suspension of operation of the translator promptly should such action be deemed necessary by the Commission. Such information shall be kept current by the licensee.

(5) Where the antenna and supporting structure are required to be painted and lighted under the provisions of Part 17 of this chapter, the licensee shall make suitable arrangements for the daily inspection and logging of the obstruction lighting and associated control equipment as required by §§ 17.47, 17.48, and 17.49 of this chapter.

(b) An application for authority to construct a new station pursuant to this subpart or to make changes in the facilities of such a station, which proposes unattended operation shall include an adequate showing as to the manner of compliance with this section.

[35 FR 15388, Oct. 2, 1970, as amended at 37 FR 18540, Sept. 13, 1972; 38 FR 25992, Sept. 17, 1973; 60 FR 55484, Nov. 1, 1995; 63 FR 33879, June 22, 1998; 67 FR 13234, Mar. 21, 2002]

§ 74.1235 Power limitations and antenna systems.

(a) An application for an FM translator station filed by the licensee or permittee of the primary station to provide fill-in service within the primary station's coverage area will not be accepted for filing if it specifies an effective radiated power (ERP) which exceeds 250 watts.

(b) An application for an FM translator station, other than one for fill-in service which is covered in paragraph (a) of this section, will not be accepted for filing if it specifies an effective radiated power (ERP) which exceeds the maximum ERP (MERP) value determined in accordance with this paragraph. The antenna height above average terrain (HAAT) shall be determined in accordance with § 73.313(d) of this chapter for each of 12 distinct radials, with each radial spaced 30 degrees apart and with the bearing of the first radial bearing true north. Each raidal HAAT value shall be rounded to the nearest meter. For each of the 12 radial directions, the MERP is the value corresponding to the calculated HAAT in the following tables that is appropriate for the location of the translator. For an application specifying a nondirectional transmitting antenna, the specified ERP must not exceed the smallest of the 12 MERP's. For an application specifying a directional transmitting antenna, the ERP in each azimuthal direction must not exceed the MERP for the closest of the 12 radial directions.

(1) For FM translators located east of the Mississippi River or in Zone I-A as described in § 73.205(b) of this chapter:

Radial HAAT (meters)	Maximum ERP (MERP in watts)
Less than or equal to 32	250
33 to 39	170
40 to 47	120
48 to 57	80
58 to 68	55
69 to 82	38
83 to 96	27
97 to 115	19
116 to 140	13
Greater than or equal to 141	10

(2) For FM translators located in all other areas:

Radial HAAT (meters)	Maximum ERP (MERP in watts)
Less than or equal to 107	250
108 to 118	205
119 to 130	170
131 to 144	140
145 to 157	115
158 to 173	92
174 to 192	75
193 to 212	62
213 to 235	50
236 to 260	41
261 to 285	34
286 to 310	28
311 to 345	23
346 to 380	19
381 to 425	15.5
426 to 480	13
481 to 540	11
Greater than or equal to 541	10

(c) The effective radiated power of FM booster stations shall be limited such that the predicted service contour of the booster station, computed in accordance with § 73.313 paragraphs (a) through (d) of this chapter, may not extend beyond the corresponding service contour of the primary FM station that the booster rebroadcasts. In no

event shall the ERP of the booster station exceed 20% of the maximum allowable ERP for the primary station's class.

(d) Applications for FM translator stations located within 320 km of the Canadian border will not be accepted if they specify more than 50 watts effective radiated power in any direction or have a 34 dBu interference contour, calculated in accordance with § 74.1204 of this part, that exceeds 32 km. FM translator stations located within 320 kilometers of the Mexican border must be separated from Mexican allotments and assignments in accordance with § 73.207(b)(3) of this chapter and are limited to a transmitter power output of 10 watts or less. For purposes of compliance with that section, FM translators will be considered as Class D FM stations.

(1) Translator stations located within 125 kilometers of the Mexican border may operate with an ERP up to 50 watts (0.050 kW) ERP. A booster station may not produce a 34 dBu interfering contour in excess of 32 km from the transmitter site in the direction of the Mexican border, nor may the 60 dBu service contour of the booster station exceed 8.7 km from the transmitter site in the direction of the Mexican border.

(2) Translator stations located between 125 kilometers and 320 kilometers from the Mexican border may operate with an ERP in excess of 50 watts, up to the maximum permitted ERP of 250 watts per § 74.1235(b)(2). 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 facility, 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]

§ 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 radiofrequency 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 possiblity 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) A translator or booster station to be located on an AM antenna tower or located within 3.2 km of an AM antenna tower must comply with § 73.1692 of this chapter.

[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]

§ 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:

(i) The license application may not propose to eliminate the authorized horizontally polarized ERP, if a horizontally polarized ERP is currently authorized;

(ii) The installed height of the antenna radiation center is not increased by more than two meters nor decreased by more than four meters from the authorized height for the antenna radiation center; and

(iii) The station is not presently authorized with separate horizontal and vertical antennas mounted at different heights. Use of separate horizontal and vertical antennas requires a construction permit before implementation or changes.

(8) Any change in area being served.

(c) Changes in the primary FM station being retransmitted must be submitted to the FCC in writing.

(d) Any application proposing a change in the height of the antenna structure or its location must also include the Antenna Structure Registration Number (FCC Form 854R) of the antenna structure upon which it proposes to locate its antenna. In the event the antenna structure does not have a Registration Number, either the antenna structure owner shall file FCC Form 854 (''Application for Antenna Structure Registration'') in accordance with part 17 of this chapter or the applicant shall provide a detailed explanation why registration and clearance are not required.

[35 FR 15388, Oct. 2, 1970, as amended at 45 FR 26068, Apr. 17, 1980; 47 FR 24580, June 7, 1982; 50 FR 3525, Jan. 25, 1985; 50 FR 23710, June 5, 1985; 55 FR 50698, Dec. 10, 1990; 61 FR 4368, Feb. 6, 1996; 63 FR 33879, June 22, 1998; 63 FR 36606, July 7, 1998; 65 FR 79780, Dec. 20, 2000]

§ 74.1261 Frequency tolerance.

(a) The licensee of an FM translator or booster station with an authorized transmitter power output of 10 watts or less shall maintain the center frequency at the output of the translator within 0.01 percent of its assigned frequency.

(b) The licensee of an FM translator or booster station with an authorized transmitter power output greater than 10 watts shall maintain the center frequency at the output of the translator or booster station in compliance with the requirement of § 73.1545(b)(1) of this chapter.

[55 FR 50699, Dec. 10, 1990]

§ 74.1262 Frequency monitors and measurements.

(a) The licensee of a station authorized under this subpart is not required to provide means for measuring the operating frequency of the transmitter. However, only equipment having the required stability will be approved for use by an FM translator or booster.

(b) In the event that a station authorized under this subpart is found to be operating beyond the frequency tolerance prescribed in § 74.1261, the licensee shall promptly suspend operation of the station and shall not resume operation until the station has been restored to its assigned frequency. Adjustment of the frequency determining circuits of an FM translator or booster shall be made by a qualified person in accordance with § 74.1250(g).

§ 74.1263 Time of operation.

(a) The licensee of an FM translator or booster station is not required to adhere to any regular schedule of operation. However, the licensee of an FM translator or booster station is expected to provide a dependable service to the extent that such is within its control and to avoid unwarranted interruptions to the service provided.

(b) An FM booster or FM translator station rebroadcasting the signal of an AM or FM primary station shall not be permitted to radiate during extended periods when signals of the primary station are not being retransmitted. Notwithstanding the foregoing, FM translators rebroadcasting Class D AM

stations may continue to operate during nighttime hours only if the AM station has operated within the last 24 hours.

(c) The licensee of an FM translator or booster station must notify the Commission of its intent to discontinue operations for 30 or more consecutive days. Notification must be made within 10 days of the time the station first discontinues operation and Commission approval must be obtained for such discontinued operation to continue beyond 30 days. The notification shall specify the causes of the discontinued operation and a projected date for the station's return to operation, substantiated by supporting documentation. If the projected date for the station's return to operation cannot be met, another notification and further request for discontinued operations must be submitted in conformance with the requirements of this section. Within 48 hours of the station's return to operation, the licensee must notify the Commission of such fact. All notification must be in writing.

(d) The licensee of an FM translator or booster station must notify the Commission of its intent to permanently discontinue operations at least two days before operation is discontinued. Immediately after discontinuance of operation, the licensee shall forward the station license and other instruments of authorization to the FCC, Washington, DC for cancellation.

(e) Failure of an FM translator or booster station to operate for a period of 30 or more consecutive days, except for causes beyond the control of the licensee or authorized pursuant to paragraph (c) of this section, shall be deemed evidence of discontinuation of operation and the license of the station may be cancelled at the discretion of the Commission. Furthermore, the station's license will expire as a matter of law, without regard to any causes beyond control of the licensee or to any authorization pursuant to paragraph (c) of this section, if the station fails to transmit broadcast signals for any consecutive 12-month period, notwithstanding any provision, term, or condition of the license to the contrary.

[55 FR 50699, Dec. 10, 1990, as amended at 61 FR 28768, June 6, 1996; 74 FR 45130, Sept. 1, 2009]

§ 74.1265 Posting of station license.

(a) The station license and any other instrument of authorization or individual order concerning the construction of the station or the manner of operation shall be kept in the station record file maintained by the licensee so as to be available for inspection upon request to any authorized representative of the Commission.

(b) The call sign of the translator or booster together with the name, address, and telephone number of the licensee or local representative of the licensee if the licensee does not reside in the community served by the translator or booster, and the name and address of a person and place where station records are maintained, shall be displayed at the translator or booster site on the structure supporting the transmitting antenna, so as to be visible to a person standing on the ground at the transmitter site. The display shall be prepared so as to withstand normal weathering for a reasonable period of time and shall be maintained in a legible condition by the licensee.

[35 FR 15388, Oct. 2, 1970, as amended at 40 FR 24901, June 11, 1975]

§ 74.1269 Copies of rules.

The licensee or permittee of a station authorized under this subpart shall have a current copy of Volumes I (parts 0, 1, 2 and 17) and III (parts 73 & 74) of the Commission's Rules and shall make the same available for use by the operator in charge. Each such licensee or permittee shall be familiar with those rules relating to stations authorized under this subpart. Copies of the Commission's Rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington, DC 20402.

[55 FR 50699, Dec. 10, 1990]

§ 74.1281 Station records.

(a) The licensee of a station authorized under this Subpart shall maintain adequate station records, including the

current instrument of authorization, official correspondence with the FCC, maintenance records, contracts, permission for rebroadcasts, and other pertinent documents.

(b) Entries required by § 17.49 of this chapter concerning any observed or otherwise known extinguishment or improper functioning of a tower light:

(1) The nature of such extinguishment or improper functioning.

(2) The date and time the extinguishment of improper operation was observed or otherwise noted.

(3) The date, time and nature of adjustments, repairs or replacements made.

(c) The station records shall be maintained for inspection at a residence, office, or public building, place of business, or other suitable place, in one of the communities of license of the translator or booster, except that the station records of a booster or translator licensed to the licensee of the primary station may be kept at the same place where the primary station records are kept. The name of the person keeping station records, together with the address of the place where the records are kept, shall be posted in accordance with § 74.1265(b) of the rules. The station records shall be made available upon request to any authorized representative of the Commission.

(d) Station logs and records shall be retained for a period of two years.

[48 FR 44807, Sept. 30, 1983]

§ 74.1283 Station identification.

(a) The call sign of an FM broadcast translator station will consist of the initial letter K or W followed by the channel number assigned to the translator and two letters. The use of the initial letter will generally conform to the pattern used in the broadcast service. The two letter combinations following the channel number will be assigned in order and requests for the assignment of particular combinations of letters will not be considered.

(b) The call sign of an FM booster station will consist of the call sign of the primary station followed by the letters ''FM'' and the number of the booster station being authorized, e.g., WFCCFM–1.

(c) A translator station authorized under this subpart shall be identified by one of the following methods.

(1) By arranging for the primary station whose station is being rebroadcast to identify the translator station by call sign and location. Three such identifications shall be made during each day: once between 7 a.m. and 9 a.m., once between 12:55 p.m. and 1:05 p.m. and once between 4 p.m. and 6 p.m. Stations which do not begin their broadcast before 9 a.m. shall make their first identification at the beginning of their broadcast days. The licensee of an FM translator whose station identification is made by the primary station must arrange for the primary station licensee to keep in its file, and to make available to FCC personnel, the translator's call letters and location, giving the name, address and telephone number of the licensee or his service representative to be contacted in the event of malfunction of the translator. It shall be the responsibility of the translator licensee to furnish current information to the primary station licensee for this purpose.

(2) By transmitting the call sign in International Morse Code at least once each hour. Transmitters of FM broadcast translator stations of more than 1 watt transmitter output power must be equipped with an automatic keying device that will transmit the call sign at least once each hour, unless there is in effect a firm agreement with the translator's primary station as provided in § 74.1283(c)(1) of this section. Transmission of the call sign can be accomplished by:

(i) Frequency shifting key; the carrier shift shall not be less than 5 kHz nor greater than 25 kHz.

(ii) Amplitude modulation of the FM carrier of at least 30 percent modulation. The audio frequency tone use shall not be within 200 hertz of the Emergency Broadcast System Attention signal alerting frequencies.

(d) FM broadcast booster stations shall be identified by their primary stations, by the broadcasting of the primary station's call signs and location, in accordance with the provisions of § 73.1201 of this chapter.

(e) The Commission may, in its discretion, specify other methods of identification.

[55 FR 50699, Dec. 10, 1990]

§ 74.1284 Rebroadcasts.

(a) The term *rebroadcast* means the reception by radio of the programs or other signals of a radio station and the simultaneous retransmission of such programs or signals for direct reception by the general public.

(b) The licensee of an FM translator shall not rebroadcast the programs of any AM or FM broadcast station or other FM translator without obtaining prior consent of the primary station whose programs are proposed to be retransmitted. The Commission shall be notified of the call letters of each station rebroadcast and the licensee of the FM translator shall certify that written consent has been received from the licensee of the station whose programs are retransmitted.

(c) An FM translator is not authorized to rebroadcast the transmissions of any class of station other than an AM or FM broadcast station or another FM translator.

[35 FR 15388, Oct. 2, 1970, as amended at 74 FR 45130, Sept. 1, 2009]

§ 74.1290 FM translator and booster station information available on the Internet.

The Media Bureau's Audio Division provides information on the Internet regarding FM translator and booster stations, rules, and policies at *http://www.fcc.gov/mb/audio*.

[67 FR 13234, Mar. 21, 2002]

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[50 FR 38535, Sept. 23, 1985, as amended at 51 FR 34622, Sept. 30, 1986; 52 FR 37316, Oct. 6, 1987; 52 FR 47569, Dec. 15, 1987; 63 FR 33879, June 22, 1998; 63 FR 65127, Nov. 25, 1998; 64 FR 63744, Nov. 22, 1999]

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