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## SUBPART A - GENERAL

§5.1 Basis and purpose.--(a) The rules following in this part are promulgated pursuant to the provisions of Title III of the Communications Act of 1934, as amended, which vests authority in the Federal Communications Commission to regulate radio transmissions and to issue licenses for radio stations.

(b) The purpose of this part is to prescribe the manner in which parts of the radio frequency spectrum may be made available for experimentation as defined in this part and provided for.

5.2 Reserved.

§5.3 Definition of terms.--For the purpose of this part, the following definitions shall be applicable. For other definitions, refer to Part 2 of this chapter (Frequency Allocations and Treaty Matters; General Rules and Regulations).

(a) Authorized frequency.--The frequency assigned to a station by the Commission and specified in the instrument of authorization.

(b) Authorized power.--The power assigned to a radio station by the Commission and specified in the instrument of authorization. The authorized power does not necessarily correspond to the power used by the Commission for purposes of its Master Frequency Record (MFR) and notification to the International Telecommunication Union.

(c) Experimental Radio Service. A service in which Radio waves are employed for purposes of experimentation in the radio art or for purposes of providing essential communications for research projects which could not be conducted without the benefit of such communications.

(d) Experimental Stations. A station utilizing radio waves in experiments with a view to the development of science or technique.

(e) (Reserved)

(f) Fixed service.--A service of radiocommunication between specified fixed points.

(g) Fixed station.--A station in the fixed service.

(h) Harmful interference.--Any radiation or any induction which endangers the functioning of a radionavigation service or of a safety service or obstructs or repeatedly interrupts a radio service operating in accordance with the Table of Frequency Allocations and other provisions of Part 2 of this chapter.

(i) Landing area.--As defined by Title I, section I (22) of the Civil Aeronautics Act of 1938, as amended, landing area means any locality, either of land or water, including airdromes and intermediate landing fields, which is used, or intended to be used, for the landing and take-off of aircraft, whether or not facilities are provided for the shelter, servicing, or repair of aircraft, or for receiving or discharging passengers or cargo.

(j) Land station.-- A station in the mobile service not intended for operation while in motion.

(k) Mobile service.-- A service or radiocommunication between mobile and land stations, or between mobile stations.

(l) Mobile station.--A station in a mobile service intended to be used while in motion or during halts at unspecified points.

(m) Mean power of radio transmitter.--The power supplied to the antenna during normal operation, averaged over a time sufficiently long compared to the period corresponding to the lowest frequency encountered in actual modulation.

(n) Peak power of a radio transmitter.--The mean power supplied to the antenna during one radio frequency cycle at the highest crest of the modulation envelope, taken under conditions of normal operation.

(o) Person.--An individual, partnership, association, joint stock company, trust, or corporation.

(p) Public correspondence.--Any telecommunication which the offices and stations, by reason of their being at the disposal of the public, must accept for transmission.

(q) Radio service.--An administrative subdivision of the field of radiocommunication. In an engineering sense, the subdivisions may be made according to the method of operation as, for example, mobile service and fixed service. In a regulatory sense, the subdivisions may be descriptive of particular groups of licensees, as, for example, the groups of persons licensed under this part.

(r) Station authorization.--Any construction permit, license, or special temporary authorization issued by the Commission.

§ 5.4 General citizenship restrictions.--A station license may not be granted to or held by a foreign government or a representative thereof.

**§5.50 Transfer and assignment of station authorization.** A station authorization, the frequencies authorized to be used by the grantee of such authorization and the rights therein granted by such authorization shall not be transferred, assigned, or in any manner either voluntarily or involuntarily disposed of, or indirectly by transfer of control of any corporation holding such authorization, to any person, unless the Commission shall, after securing full information decide that said transfer is in the public interest, and shall give its consent in writing. Requests for authority to transfer or assign a station authorization shall be submitted on the forms prescribed by §7 75.

**SUBPART B -- APPLICATIONS AND LICENSES**

**§5.51 Station authorization required.**(a) No radio transmitter shall be operated in the Experimental Radio Services except under and in accordance with a proper station authorization granted by the Federal Communications Commission.

(b) Persons desiring to install and operate radio transmitting equipment under this part should first submit an application for a radio station authorization in accordance with 5.55.

5.52 Deleted and Reserved.

**§5.53 Filing of applications.** (a) To assure that necessary information is supplied in a consistent manner by all persons, standard forms are prescribed for use in connection with the majority of applications and reports submitted for Commission consideration. Standard numbered forms applicable to the Experimental Services are discussed in §5.55, and may be obtained from the Washington, D. C. office of the Commission, or from any of its engineering field offices...Concerning matters where no standard form is applicable, the informal application procedure outlined in §5.55(k) should be followed.

(b) Any application for radio station authorization and all correspondence relating thereto shall be submitted to the Commission's office at Washington, D. C.

(c) Unless otherwise specified, an application shall be filed at least sixty days prior to the date on which it is desired that Commission action thereon be completed.

(d) Each application for station authorization shall be specific and complete with regard to station location, proposed equipment, power, antenna height, and operating frequency; and other information required by the application form and this part.

(e) Applications involving operation at temporary locations:

(1) When a land station or a fixed station is to remain at a single location for less than six months, the location is considered to be temporary and the procedure outlined in §5.65 shall apply.

(2) When a land station or fixed station authorized to operate at temporary locations remains at a single location for more than six months, an application for modification of the station authorization to specify the permanent location shall be filed within thirty days after expiration of the six-month period.

(f) Unless otherwise specified in a particular case, only the original signed copy of the application shall be filed. Applications with facimile signatures will not be accepted.

§5.54 Who may sign applications. (a) Except as provided in paragraph (b) of this section, applications, amendments thereto, and related statements of fact required by the Commission shall be personally signed by the applicant, if the applicant is an individual; by one of the partners, if the applicant is a partnership; by an officer or duly authorized employee, if the applicant is a corporation; or by a member who is an officer, if the applicant is an unincorporated association. Applications, amendments, and related statements of fact filed on behalf of eligible government entities, such as states and territories of the United States and political subdivisions thereof, the District of Columbia, and units of local government, including incorporated municipalities, shall be signed by such duly elected or appointed officials as may be competent to do so under the laws of the applicable jurisdiction.

(b) Applications, amendments thereto, and related statements of fact required by the Commission may be signed by the applicant's attorney in case of the applicant's physical disability or of his absence from the United States. The attorney shall in that event separately set forth the reason why the application is not signed by the applicant. In addition, if any matter is stated on the basis of the attorney's belief only (rather than his knowledge), he shall separately set forth his reasons for believing that such statements are true.

(c) Only the original of applications, amendments, or related statements of fact need be signed; copies may be conformed.

(d) Applications, amendments, and related statements of fact need not be submitted under oath. Willful false statements made therein, however, are punishable by fine and imprisonment, U.S. Code, Title 18, section 1001, and by appropriate administrative sanctions, including revocation of station license pursuant to section 312(a)(1) of the Communications Act of 1934, as amended.

5.55 Form to be used. (a) Application for combined construction permit and radio station license for land stations and fixed stations. A separate application shall be submitted on FCC Form 442 for each base station and each fixed station. Whenever the proposed antenna exceeds 6 meters in height above the ground level or more than 6 meters in height above an existing building, the applicant must comply with the requirement of part 17 of this chapter.

(b) Application for combined construction permit and radio station license for mobile stations. An application for each mobile station comprising any specified number of mobile units to be operated in the same service and within the same geographical area, including handcarried or

pack-carried units, may be combined into one application and shall be submitted on FCC Form 442.

**NOTE:** An application for mobile units may be combined with an application for a single base station for each mobile unit as will operate with that base station only.

(c) Application for modification of combined construction permit and station license. An application for modification of station authorization shall be submitted on FCC Form 442. A blanket application for modification of a group of authorizations of the same class where the modifications requested are the same for all stations covered by the application. The individual stations covered by such application shall be clearly identified herein. However, application for modification to change location of a base or fixed station shall be filed as a separate application.

(d) Application for renewal of station authorization. Application for renewal of station licensee shall be submitted on FCC Form 405. A blanket application may be submitted for renewal of a group of station licenses in the same class in those cases where the renewal requested is in exact accordance with the terms of the existing authorization. The individual stations covered by such applications shall be clearly identified thereon. Unless otherwise directed by the Commission, each application for renewal of license shall be filed at least 60 days prior to the expiration date of the license to be renewed.

(2) If the station license sought to be renewed is used for the purpose of fulfilling the requirements of a contract with an agency of the U.S. Government, the application for renewal shall be accompanied by FCC Form 440A in triplicate, Supplemental Information for Applications in the Experimental Radio Service Involving Government Contracts.

(e) Application for consent to assignment of radio station authorization. Application on FCC Form 702 shall be submitted when the legal right to construct or to control the use and operation of a station is to be transferred as a result of a voluntary act (contract or other agreement) or an involuntary act (death or legal disability) of the grantee of a station authorization or by involuntary assignment of the physical property constituting the station under a court decree in bankruptcy proceedings, or other court order, or by operation of law in any other manner. Such applications must be accompanied by the FCC Form 442 of which only the certification need be signed by the proposed assignee. No other information is required to be supplied on this form.

(f) Application for consent to transfer of control of Corporation holding radio station authorization. Application for consent to transfer of control shall be submitted on FCC Form 703 whenever it is proposed to change the control of a corporation holding a station authorization.

(g) Informal application. (1) An application not submitted on a standard form prescribed by the Commission is considered to be an informal application. Each informal application shall be submitted normally in letter form, and with the original signed in accordance with 5.54. Each application shall be clear and complete within itself as to the facts presented and the action desired.

(2) An informal application for authorization to operate transmitting equipment will be accepted only under the conditions set forth in 5.56.

5.56 Procedure for obtaining a special temporary authorization. (a) The Commission may issue a temporary authorization under this part in cases where a need is shown for operation of an authorized station for limited time only, in a manner other than specified in the existing authorization, but not in conflict with the Commission's rules.

(b) An application for special temporary authorization may be filed as an informal application in the manner prescribed by 5.55(g) and shall contain the following information: (1) Name and address, (2) need for special action, (3) type of operation to be conducted, (4) purpose of operation, (5), time and date of proposed operation, (6) Class of station, call sign of station, and nature of service, (7) Location of proposed operation, (8) Equipment to be used, including manufacturer, model and number of units, (9) frequency(ies) desired, (10) plate power input to final radio frequency stage, (11) type of emission, (12) overall height of antenna structure above ground.

(c) No request for special temporary authorization will be considered unless full particulars as to the purpose of the request is made are stated.

5.57 Supplementary statements required. (a) Each applicant for an authorization in the Experimental Radio Service must enclose with the application a narrative statement describing in detail the program of research and experimentation proposed, the specific objectives sought to be accomplished, and how the program of experimentation has a reasonable promise of contribution to the development, extension, or expansion, or utilization of the radio art, or is along lines not already investigated. An applicant may request non-disclosure of proprietary information submitted under this part. These requests should follow the procedures for submission set forth in Section 0.459 of this chapter.

(b) Applications involving government contracts. In addition to the requirement of paragraph (a) of this section, if the authorization is to be used for the purpose of fulfilling the requirements of a contract with an agency of the United States Government, the applicant shall submit the name of the contracting agency and the contract number.

(c) Applications involving development of equipment for export purposes. In addition to the requirements of paragraph (a) of this section, if the authorization is to be used for the purpose of developing equipment for exportation to be employed by stations under the jurisdiction of a foreign government, the applicant shall submit the contract number and the name of the foreign government concerned.

(d) Applications involving communications essential to a research project. The requirements of paragraph (a) of this section shall not be applicable to applications for an authorization in the Experimental radio Service to be used for communications essential to a research project. Applicants in this service shall include as part of the application for an authorization the following:

(1) A description of the nature of the research project being conducted.

(2) A showing that communication facilities are necessary for the research project involved.

(3) A showing that existing communication facilities are inadequate

§ 5.58 Partial grants.--Where the Commission without a hearing grants any application in part, or with any privileges, terms, or conditions other than those requested, or subject to any interference that may result to a station if designated application or applications are subsequently granted, the action of the Commission shall be considered as a grant of such application unless the applicant shall, within 30 days from the date on which such grant is made or from its effective date if a later date is specified, file with the Commission a written request rejecting the grant as made. Upon receipt of such request, the Commission will vacate its original action upon the application and set the application for hearing in the same manner as other applications are set for hearing.

§ 5.59 Defective applications.--(a) Applications which are defective with respect to completeness of answers to required questions, execution or other matters of a purely formal character will not be received for filing by the Commission, and will be returned to the applicant with a brief statement as to the Commissions.

(b) If an applicant is requested by the Commission to file any documents or information not included in the prescribed application form, a failure to comply with such request will constitute a defect in the application.,

(c) Applications which are not in accordance with the Commission's rules, regulations or other requirements will be considered defective unless accompanied either (1) by a petition to amend any rule or regulation with which the application is in conflict, or (2) by a request of the applicant for waiver of, or an exception to, any rule, regulation or requirement with which the application is in conflict. Such request shall show the nature of the waiver or exception desired and set forth the reasons in support thereof.

§5.60 Amendment or dismissal of applications. (a) Any application may be amended or dismissed without prejudice upon request of the applicant prior to the time the application is granted or designated for hearing. Each amendment to, or request for dismissal of an application shall be signed, authenticated, and submitted in the same manner and with the same number of copies as required for the original application. All subsequent correspondence or other material which the applicant desired to have incorporated as a part of an application already filed shall be submitted in the form of an amendment to the application.

(b) Failure to prosecute an application, or failure to respond to official correspondence or request for additional information, will be cause for dismissal. Such dismissal will be without prejudice where an application has not yet been designated for hearing; such dismissal may be made with prejudice after an application has been designated for hearing.

5.61 Deleted and Reserved.

§5.62 Licenses required for separate experimental projects. A separate station license will be required for each class of station in the experimental radio services. Application for a class of station embracing widely divergent and unrelated experimentations normally will require a separate license for each phase of the experimental program: Provided, however, That the Commission may, when circumstances warrant, issue a single license embracing the entire project.

§5.63 License period. (a) The basis license period for stations in the Experimental Radio Services is 2 years.

(b) A license will not be granted for a period longer than that which is required for completion of the experimental project. If such period is estimated to be less than 2 years, a statement to that effect by the applicant may facilitate a grant of the application. See also §5.58.

(c) The expiration dates for licenses in the Experimental Radio Services will be distributed over the 12 calendar months, in accordance with the alphabetical distribution of the names of licensees. Hence, an initial license may be granted for a basic period of 1 1/2 to 2 1/2 years, depending on the date of grant and the alphabetical position of the name of the licensee.

§5.64 Change in equipment. (a) A change may be made in a licensed transmitter without specific authorization from the Commission provided: (1) the change does not result in operation inconsistent with any term of the outstanding authorization for the station involved; and (2) a description of the change is incorporated in the next application for renewal or modification of license.

(b) Prior authorization from the Commission is required before the following antenna changes may be made at a station at a fixed location:

(1) Any change which will either increase the height of a structure supporting the radiating portion of the antenna or decrease the height of a lighted antenna structure.

(2) Any change in the location of an antenna when such relocation involves a change in the geographic coordinates of latitude or longitude by as much as one second, or when such relocation involves a change in street address.

§5.65 Operation at a temporary location.--(a) An application for authority to operate at temporary locations shall specify the general geographical area within which the operation will be confined.

(b) When a station is authorized to operate at temporary locations, the following notification procedure shall be followed:

(1) When the station is placed in operation for the first time, the Engineer in charge of the Radio District(s) involved shall be notified.

(2) When the station is moved from one location to another, the Engineer in charge of the Radio District(s) involved shall be notified.

§5.66 Discontinuance of station operation.--In case of permanent discontinuance of operation of a fixed or land station in the experimental services, or in case of permanent discontinuance of operation of all transmitter units listed in the license for a mobile station in the experimental services, the licensee shall forward the station license to the Washington, D. C., office of the Commission for cancellation. A copy of the request for cancellation of the license shall be forwarded to the Commission's Engineer in Charge of the radio district in which the station is located.

§5.67 Policy governing the assignment of frequencies.--(a) Each frequency or band of frequencies, available for assignment to stations in the experimental radio service is available on a shared basis only, and will not be assigned for the exclusive use of any one applicant, and such use may also be restricted to one or more specified geographical areas. Normally not more than one frequency in a band of frequencies will be assigned for the use of a single applicant unless a showing is made demonstrating that need for the assignment of additional frequencies is essential to the proposed program of experimentation.

(b) Frequency assignments will be made only on the condition that harmful interference will not be caused to any station operating in accordance with the Table of Frequency Allocation of Part 2 of this chapter.

(c) The frequencies available for use in the Experimental Radio Service are set forth in 5.203.

(d) Protection for Federal Communications Commission monitoring stations:

(1) Applicants in the vicinity of an FCC monitoring station for a radio station authorization to operate new transmitting facilities or changed transmitting facilities which would increase the field strength produced over the monitoring station over that previously authorized are advised to give consideration, prior to filing applications, to the possible need to protect the FCC stations from harmful interference. Geographical coordinates of the facilities which require protection are listed in Section 0.121(c) of the Commission's Rules. Applications for stations (except mobile stations) which will produce on any frequency a direct wave fundamental field strength of greater than 10 mV/m in the authorized bandwidth of service ( $-65.8 \text{ dBW/m}^2$  power flux density assuming a free space characteristic impedance of 120 ohms) at the referenced coordinates, may be examined to determine extent of possible interference. Depending on the theoretical field

strength value and existing root-sum-square or other ambient radio field signal levels at the indicated coordinates, a clause protecting the monitoring station may be added to the station authorization.

(2) In the event that calculated value of expected field exceeds 10 mV/M ( $-65.8 \text{ dBW/m}^2$ ) at the reference coordinates, or if there is any question whether field strength levels might exceed the threshold value, advance consultation with the FCC to discuss any protection necessary should be considered. Prospective applicants may communicate with: Chief, Field Operation Bureau, Federal Communications Commission, Washington, D.C. 20554, Telephone (202) 632-6980.

(3) Advance consultation is suggested particularly for those applicants who have no reliable data which indicates whether the field strength or power flux density figure indicated would be exceeded by their proposed radio facilities (except mobile stations). In such instances, the following is a suggested guide for determining whether an applicant should coordinate:

- (i) All stations within 2.4 kilometers (1.5 statute miles);
- (ii) Stations within 4.8 kilometers (3 statute miles) with 50 watts or more average effective radiated power (ERP) in the primary plane or polarization in the azimuthal direction of the Monitoring Stations.
- (iii) Stations within 16 kilometers (10 statute miles) with 1 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station;
- (iv) Stations within 80 kilometers (50 statute miles) with 25 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station.

(4) Advance coordination for stations operating above 1000 MHz is recommended only where the proposed station is in the vicinity of a monitoring station designated as a satellite monitoring facility in Section 0.121(c) of the Commission's Rules and also meets the criteria outlined in paragraphs (2) and (3) above.

(5) The Commission will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Federal Communications Commission or modification of any authorization which will cause harmful interference.

§5.68 Cancellation provisions.-- The applicant for a station in the experimental services accepts the license with the express understanding: (a) That the authority to use the frequency or frequencies assigned is granted upon an experimental basis only and does not confer any right to conduct an activity of a continuing nature; and (b) That said grant is subject to change or cancellation by the Commission at any time without hearing if in its discretion the need for such action arises.

**§ 5.69 Notification to the National Radio Astronomy Observatory.** In order to minimize possible harmful interference at the National Radio Astronomy Observatory site located at Green Bank, Pocahontas County, West Virginia, and at the Naval Radio Research Observatory site at Sugar Grove, Pendleton County, West Virginia, any applicant for a station authorization other than mobile, temporary base, temporary fixed, Citizens Radio, Civil Air Patrol, or Amateur seeking a station license for a new station, a construction permit to construct a new station or to modify an existing station license in a manner which would change either the frequency, power, antenna height or directivity, or location of such a station within the area bounded by 39°15'N on the north, 78°30'W on the east, 37°30'N on the south and 80°30'W on the west shall, at the time of filing such application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, P. O. Box #2, Green Bank, West Virginia, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinates of the antenna, antenna height, antenna directivity if any, proposed frequency, type of emission, and power. In addition, the applicant shall indicate in his application to the Commission the date notification was made to the Observatory. After receipt of such applications, the Commission will allow a period of twenty(20) days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the twenty-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

SUBPART C : -- TECHNICAL STANDARDS

**5.101 Frequency stability.** If an applicant proposes to use a frequency tolerance greater than the tolerance set forth in the rules governing the service to which the frequencies are assigned in the Table of Frequency Allocations of Part 2 of this chapter, the frequency tolerance should be provided as part of the filing in the application for a station license.

**§ 5.102 Types of emission -- (a)** Stations in the Experimental Radio Service may be authorized to use any of the classification of emissions covered in Part 2 of this chapter. A request for a specific type of emission not included in paragraph (b) of this section shall be accompanied by a showing of need therefor, which shall include a statement of the band width required for the proposed operations, a full and complete description of the emission specified and the purpose for which such emission is desired.

(b) The following systems of designating emissions, modulation and transmission may be employed:

Type of modulation or emission	Type of transmission	Supplementary characteristics	Symbol	
1. Amplitude	Absence of any modulation-----	-----	A0	
	Telegraphy without the use of modulating audio frequency (on-off keying).	-----	A1	
	Telegraphy by the keying of a modulating audio frequency or audio frequencies or by the keying of the modulated emission(special case: an unkeyed modulated emission).	-----	A2	
		(Double sideband, full carrier)	A3	
		(Single sideband, reduced carrier)	A3a	
	Telephony-----	(Two independent sidebands, reduced carrier)	A3b	
	Facsimile-----	-----	A4	
	Television-----	-----	A5	
	Composite transmissions and cases not covered by the above.	-----	A9	
	Composite transmissions-----	Reduced carrier-----	A9c	
	2. Frequency (or phase) modulated.	Absence of any modulation-----	-----	F0
Telegraphy without the use of modulating audio frequency(frequency shift keying).		-----	F1	
Telegraphy by the keying of a modulating audio frequency or audio frequencies or by the keying of the modulated emission(special case: an unkeyed emission modulated by audio frequency).		-----	F2	
Telephony-----		-----	F3	
Facsimile-----		-----	F4	
Television-----		-----	F5	
Composite transmissions and cases not covered by the above.		-----	F9	
3. Pulsed-emissions		Absence of any modulation intended to carry information.	-----	P0
		Telegraph without the use of modulating audio frequency.	-----	P1
	Telegraphy by the keying of a modulating audio frequency or audio frequencies, or by the keying of the modulated pulse (special case: an unkeyed modulated pulse).	(Audio frequency or audio frequencies modulating the pulse in amplitude.)	P2d	
		(Audio frequency or audio frequencies modulating the width of the pulse.)	P2c	
		(Audio frequency or audio frequencies modulating the phase (or position) of the pulse.)	P2f	
	Telephony-----	(Amplitude modulated pulse)	P3d	
		(Width modulated pulse)	P3e	
		(Phase (or position) modulated pulse)	P3f	
Composite transmission and cases not covered by the above.	-----	P9		

5.103 Authorized bandwidth. Each authorization issued to a station operating in this service will show, as the prefix to the emission classification, a figure specifying the maximum necessary bandwidth in kilohertz for the emission used. The authorized bandwidth is considered to be the occupied or necessary bandwidth whichever is greater. This bandwidth should be determined in accordance with 2.202 of Part 2 of this Chapter.

5.104 Deleted.

5.105 Deleted.

5.106 Transmitter control requirements. Each licensee shall be responsible for maintaining control of the transmitter authorized under its station authorization. This includes both ensuring that transmissions are in conformance with the operating characteristics prescribed in the station authorization and that the station is operated only by persons duly authorized by the licensee.

5.107 Deleted.

#### SUBPART D --OPERATING REQUIREMENTS

5.151 General limitations of use. (a) The following transmission limitations are applicable to all classes of stations in the Experimental Radio Service:

- (1) Stations may make only such transmissions as are necessary and directly related to the conduct of the licensee's stated program of experimentation as specified in his application for construction permit and license and the related station instrument of authorization, and as governed by the provisions of the rules and regulations contained in this part. All transmissions shall be limited to the minimum practical transmission time.
- (2) When transmitting, the licensee must use every precaution to insure that the radio frequency energy emitted will not cause harmful interference to the services carried on by stations operating in accordance with the Table of Frequency Allocations of Part 2 of this chapter and, further, that the power radiated is reduced to the lowest practical value consistent with the program of experimentation for which the station authorization is granted. If harmful interference to an established radio service develops, the licensee shall cease transmissions and such transmissions shall not be resumed until it is certain that harmful interference will not be caused.

(b) If experimental stations are to be used to retransmit signals of any other station or to transmit programs intended for public reception or render any communications service, a full disclosure of this must be made in the application for license.

§ 5.152 Station identification:--Each class of station in the experimental services shall, unless specifically exempted by the terms of the station authorization, transmit its assigned call sign at the end of each complete transmission: Provided, however, That the transmission of the call sign at the end of each transmission is not required for projects requiring continuous, frequent, or extended use of the transmitting apparatus, if, during such periods and in connection with such use, the call sign is transmitted at least once every thirty minutes.

§ 5.153 Suspension of transmission required.--The radiations of the transmitter shall be suspended immediately upon detection or notification of a deviation from the technical requirements of the station authorization until such deviation is corrected, except for transmissions concerning the immediate safety of life or property, in which case the transmissions shall be suspended as soon as the emergency is terminated.

5.154 Deleted.

5.155 Operator requirements. (a) The licensee shall ensure that all transmitter adjustments which affect the proper operation of a station shall be made by a person qualified to perform such adjustments.

(b) The licensee shall be responsible for ensuring that the person operating the transmitter is qualified to operate said station.

(c) When transmitting radiotelegraphy by any type of Morse Code, the operator shall have proved his ability to transmit by hand and receive by ear texts in Morse Code signals.

(d) The provisions of this section shall not be construed to change or diminish in any respect the responsibility of station licensees to have and to maintain control over the stations licensed to them, or for proper functioning and operation of those stations in accordance with the terms of the licenses of those stations.

5.156 Deleted.

5.157 Posting station licenses. (a) The current original authorization for each station shall be retained as a permanent part of the station records but need not be posted.

(b) A clearly legible copy of the authorization for each station at a fixed location shall be posted at every control point of the station.

§ 5.158 Authorized points of communication.-- Stations in the experimental services may communicate only with other stations licensed in the experimental services: Provided, however, That upon a satisfactory showing that the proposed communications are essential to the conduct of the research project, authority may be granted to communicate with stations in other services and U. S. Government stations.

§ 5.159 Operation during an emergency.-- The licensee of any station in the Experimental Radio Services may, during a period of emergency in which the normal communication facilities are disrupted as a result of hurricane, flood, earthquake, or similar disaster, utilize such station for emergency communication service by communicating in a manner other than that specified in the station license: Provided,

- (1) That as soon as possible after the beginning of such emergency use, notice be sent to the Commission at Washington, D. C., and to the Engineer in Charge of the district in which the station is located, stating the nature of the emergency and the use to which the station is being put, and
- (2) That the emergency use of the station shall be discontinued as soon as substantially normal communication facilities are again available, and
- (3) That the Commission at Washington, D. C., and the Engineer in Charge shall be notified immediately when such special use of the station is terminated: Provided, further,
  - (4) That in no event shall any station engage in emergency transmission on frequencies other than, or with power in excess of, that specified in the instrument of authorization or as otherwise expressly provided by the Commission, or by law: And provided further,
    - (5) That the Commission may, at any time, order the discontinuance of any such emergency communication undertaken under this section.

§5.160 Inspection of stations. All stations and records of stations in the Experimental Services shall be made available for inspection at any time while the station is in operation or shall be made available for inspection upon reasonable request of an authorized representative of the Commission.

§5.161 Inspection and maintenance of tower marking and lighting and associated control equipment. The licensee of any radio station which has an antenna structure required to be painted and illuminated pursuant to the provisions of section 303(q) of the Communications Act of 1934, as amended, and Part 17 of this chapter, shall perform the inspections and maintain the tower marking and lighting, and associated control equipment, in accordance with the requirements of §§17.43 through 17.57 of this chapter.

§5.162 Notice of violation. (a) Any licensee who appears to have violated any provision of the Communications Act or any provision of this chapter, shall be served with a written notice calling the facts to his attention and requesting a statement concerning the matter.

(b) Within 10 days from receipt of notice or such other period as may be specified, the licensee shall send a written answer, in duplicate, direct to the office of the Commission originating the official notice. If an answer cannot be sent nor an acknowledgment made within such 10 day period by reason of illness or other unavoidable circumstances, acknowledgment and answer shall be made at the earliest practicable date with a satisfactory explanation of the delay.

(c) The answer to each notice shall be complete in itself and shall not be abbreviated by reference to other communications or answers to other notices. If the notice relates to violations that may be due to the physical or electrical characteristics of transmitting apparatus, the answer shall state fully what steps, if any, have been taken to prevent future violations, and, if any new apparatus is to be installed, the date such apparatus requires a construction permit, the file number of the application shall be given, or if a file number has not been assigned by the Commission, such identification of the application. If the notice of violation relates to lack of attention to or improper operation of the transmitter, the name and license number of the operator in charge shall be given.

§5.163 Content of station records. (a) The licensee of each station in the experimental services shall maintain adequate records of the station's operations, including:

- (1) Dates and hours of operation.
- (2) All measurements of the frequency(s), including the name of the person making the measurements, the exact frequency measured or the observed deviations from the assigned frequency(s) expressed in **hertz**, **kilo-hertz** or percent plus or minus, and a statement of any corrective action taken.
- (3) Power.
- (4) Types of emission.
- (5) Chronological record of experimentation conducted.
- (6) The name of the operator on duty.

(b) For all stations, when service or maintenance duties are performed which may affect their proper operation, the responsible operator shall sign and date an entry in the station record concerned, giving:

- (1) Pertinent details of all duties performed by the operator or under the operator's supervision; and
- (2) The operator's name and address.

(c) For stations whose antenna structure is required to be illuminated, a record in accordance with the requirements of §17.49 of this chapter.

§ 5.164 Form of station records.-- (a) The records shall be kept in an orderly manner, in suitable form, and in such detail that the data required are readily available. Key letters or abbreviations may be used if proper meaning or explanation is set forth in the record.

(b) Each entry in the record shall be signed by a person having actual knowledge of the facts to be recorded.

(c) No record or portion thereof shall be erased, obliterated, or willfully destroyed within the required retention period. Any necessary correction may be made only by the persons originating the entry, who shall strike out the erroneous portion, initial the correction made and indicate the date of correction.

(d) A copy of this part shall be maintained in the records of each fixed or land station licensed under this part.

§ 5.165 Retention of station records.-- Records required to be kept by this part shall be retained by the licensee for a period of at least one year.

§ 5.166 Adherence to program of research.--(a) The program of experimentation as stated by an applicant in its application for construction permit or license or in the station instrument of authorization, shall be substantially adhered to unless the licensee is authorized to do otherwise by the Commission.

(b) Where some phases of the experimental program are not covered by the general rules of the Commission or by the rules of this part, the Commission may specify supplemental or additional requirements or conditions in each case as deemed necessary in the public interest, convenience, or necessity.

#### SUBPART E--EXPERIMENTAL AUTHORIZATIONS

5.201 (a) Authorizations for stations in the Experimental Radio Service will be issued only to persons qualified to conduct experimentations utilizing hertzian waves for scientific or technical operation data directly related to a use of radio not provided by existing rules; for communications in connection with research projects when existing communications facilities are inadequate.

(b) Applicants eligible for authorizations in an established service, and seeking to develop operational data or techniques directed toward the improvement or extension of that service shall file applications and conduct such projects under the developmental rules of the established service.

5.202 Scope of service. Stations operating in the Experimental Radio Service will be permitted to conduct the following type of operations:

- (a) Experimentations in scientific or technical radio research.
- (b) Experimentations under contractual agreement with the United States Government or for export purposes.
- (c) Communications essential to a research project.
- (d) Technical demonstrations of equipment or techniques.
- (e) Field strength surveys by persons not eligible for authorization in any other service.
- (f) Demonstration of equipment to prospective purchasers for proposed stations in existing services by persons engaged in the business of selling radio equipment.
- (g) Testing of equipment in connection with production of type approval of such equipment.
- (h) Development of radio technique, equipment or engineering data not relating to an existing or proposed service, including field or factory testing or calibration of equipment.
- (i) Development of radio technique, equipment, operational data or engineering data related to an existing or proposed radio service.
- (j) Limited market studies.
- (k) Other types of experiments that are not specifically covered under (a) through (j) above will be considered.

5.203 Frequencies for the Experimental Radio Service. Stations operating in the Experimental Radio Service may be authorized to use any government or non-government frequency designated in the Table of Frequency Allocations set forth in Part 2 of this Chapter as available for assignment to this service. Provided that the need for the specific frequency(ies) requested is fully justified by the applicant.

(Notwithstanding the broad frequency provision for this Service, applicants desiring authorization for the purpose of wildlife or ocean buoy teleretering and/or tracking should to the extent practicable, use frequencies in the bands 40.66-40.70 MHz or 216-220 MHz, in accordance with footnote US210 to the Table of Frequency Allocations, 2.106 of this Chapter.

5.204 Experimental report. (a) Unless specifically stated as a condition of the authorization, licensees are not required to file a report on the results of the experimental program carried on under this subpart.

(b) The commission may, as a condition of authorization, request the licensee to forward periodic reports in order to evaluate the progress of the experimental program.

(c) An applicant may request that the commission withhold from public certain reports and associated material and the Commission will withhold the same unless the public interest requires otherwise.

5.205 Frequencies for field strength surveys or equipment demonstrations.

(a) Authorization issued under 5.202(e) and (f) will normally not have specific frequencies designated in a station license. Prior to the commencement of a survey will request a specific frequency assignment and submit the following information:

- (1) Time, date and duration of survey.
- (2) Frequency to be used.
- (3) Location of transmitter and geographical area to be covered.
- (4) Purpose of survey.
- (5) Method and equipment to be used.

(6) Names and addresses of persons for whom the survey is conducted.

(b) Upon receipt of authority from the Commission to conduct a particular survey, the licensee shall furnish the Engineer-in-Charge of the radio district in which the survey is to be conducted, sufficiently in advance to assure receipt before commencement thereof, the following information: Time, date, duration, frequency, location and purpose of survey.

5.206 Limited market studies. Unless otherwise stated in the instrument of authorization, licenses granted for the purpose of limited market studies pursuant to 5.202(j) are subject to the following conditions:

(a) All transmitting and/or receiving equipment used in the study shall be owned by the licensee.

(b) The licensee is responsible for informing anyone participating in the experiment that the service or device is granted under an experimental authorization and is strictly temporary.

(c) The size and scope of the market study may be subject to limitations on a case-by-case basis as the Commission shall determine.

SUBPART F--RESERVED

SUBPART G--RESERVED

## SUBPART H - STUDENT AUTHORIZATIONS

§ 5.401 Eligibility for license. - The Commission may issue an authorization under this subpart to students for the purpose of presenting experiments or technical demonstrations for school or school approved projects which require the use of radio for a limited period of time. Such authorizations may, in the discretion of the Commission, be granted to students of seventh grade or higher level.

§ 5.402 Filing of applications. - (a) Notwithstanding the requirements in Subpart B of this part, an application for a student authorization may be filed in letter form, in duplicate, with the original signed under oath or affirmation. The application shall contain the information set forth in paragraph (b) of this section.

(b) The application shall contain the following information:

- (1) Name and address of applicant.
- (2) A statement that the applicant is a citizen of the United States.
- (3) Applicant's school and grade.
- (4) A detailed description in narrative form of the project including the type and purpose of operation.
- (5) Place of operation - street address, name of building, or other specific location.
- (6) Date (s) of operation including the exact hours when known, as well as the duration of each period of operation.
- (7) Equipment to be used. If manufactured, list name of manufacturer and type number. For other equipment, describe in detail and furnish a circuit diagram.
- (8) Frequency(ies) desired and range of frequencies which could be employed.
- (9) The method by which the frequency of operation will be determined.
- (10) Frequency tolerance.
- (11) The means by which this tolerance will be maintained.
- (12) DC plate power input to final radio frequency stage. If not known, indicate any known power rating of equipment and state whether this is power output of transmitter or radiated power, and whether average or peak.
- (13) Type of emission including a description of the modulation that will be applied, if modulated.
- (14) Description of the antenna to be used, including height above ground.

## SUBPART H - STUDENT AUTHORIZATIONS (cont'd)

(c) The application shall be accompanied by a signed statement from the principal of the school, or a member of its faculty, on appropriate letterhead, stating that the project has the approval of the school and indicating the person under whose general supervision the project will be conducted.

§ 5.403 Waiver of construction permit. Subject to the requirements of §§ 5.401 and 5.402, the provisions contained in section 319 (d) of the Communications Act are waived insofar as such provisions require the issuance of a construction permit prior to the issuance of the student authorization provided for in this subpart.

§ 5.404 Reserved.

§ 5.405 Power limitation. No authorization under this subpart, will be issued unless the description of the project shows that the dc plate power input to the final radio frequency stage does not exceed 5 watts: Provided, however, That a greater power may be authorized if a satisfactory showing is made that such greater power is necessary and that appropriate measures will be taken to prevent interference.

§ 5.406 Frequencies. (a) Frequencies in the following bands are available for assignment in authorizations issued under this subpart:

27.23-27.28 MHz  
460-461 MHz  
462.525-467.475 MHz  
2450-2500 MHz

(b) In each case, the carrier frequency must be far enough inside the band so as to keep the sideband energy within the band limits specified.

§ 5.407 Measurements required. The frequency of operation must be measured or checked prior to each time of operation.

§ 5.408 Waiver of technical and operating requirements. Subject to the provisions of §§ 5.405, 5.406, and 5.407, the provisions in subparts C and D of this part are waived insofar as such provisions require a station authorized under this subpart to observe the technical and operating requirements set forth therein.

§ 5.409 Non-interference condition. Each authorization issued to a student under this subpart is subject to the condition that no harmful interference, as defined in § 5.4(h), is caused to any authorized station.

§ 5.410 Record of operation. (a) The licensee holding an authorization issued under this subpart shall maintain a record of operation containing the following information:

- (1) The date and time of each period of operation.
- (2) The frequency of operation as measured or checked at the beginning of each period of operation.
- (3) A brief description of the experimentation being conducted.

(b) Each entry shall be signed by the person operating the equipment.

(c) These records shall be retained for one month after the termination of the authorization.

§5.411 Notification. (a) The holder of an authorization issued under this subpart shall notify the Engineer in Charge of the district in which the station will be operated in advance of each scheduled operation.

(b) The notice to the Engineer in Charge shall be in writing and shall contain the following information:

- (1) Place of operation.
- (2) Date(s) of operation, including exact time if known.
- (3) Frequency(ies) to be used.
- (4) Call letters of station.



# COMMERCIAL RADIO OPERATORS

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PART 13

RULES GOVERNING COMMERCIAL RADIO OPERATORS

GENERAL

13.1 Basis and purpose. (a) The basis for the rules contained in this part is the Communications Act of 1934, as amended and applicable treaties and agreements to which the United States is a party.

(b) The purpose of the rules in this part is to prescribe the manner and conditions under which commercial radio operators are licensed by the Commission.

13.2 Classification of operator licenses and endorsements.

(a) Commercial radio operator licenses issued by the Commission are classified in accordance with the Radio Regulations of the International Telecommunications Union.

(b) The following licenses are issued by the Commission, International classification, if different from the license name, is given in parenthesis.

(1) First Class Radiotelegraph Operator's Certificate.

(2) Second Class Radiotelegraph Operator's Certificate.

(3) Third Class Radiotelegraph Operator's Certificate (radiotelegraph operator's special certificate).

(4) General Radiotelephone Operator License (radiotelephone operator's general certificate).

(5) Marine Radio Operator Permit (radiotelephone operator's restricted certificate).

(6) Restricted Radiotelephone Operator Permit (radiotelephone operator's restricted certificate).

(c) The following license endorsements are affixed by the Commission, to provide special authorization or restrictions. Applicable licenses are given in parenthesis.

(1) Ship Radar endorsement (First and Second Class Radiotelegraph Operator's Certificates, General Radiotelephone Operator License).

(2) Six months Service endorsement (First and Second Class Radiotelegraph Operator's Certificates).

(3) Restrictive endorsements; relating to physical handicaps, English language or literacy waivers or other matters (all licenses).

(d) The following former licenses and endorsements are no longer issued; however, those outstanding are valid until expiration. Upon renewal, holders of these former Licenses may be issued one or more of the licenses listed in paragraph (a), in accordance with 13.28.

(1) Radiotelephone First Class Operator License--Last issued December 1981.

(2) Radiotelephone Second Class Operator License-- last issued Dec. 1981.

(3) Radiotelephone Third Class Operator Permit--last issued October 1980.

(4) Broadcast endorsement--last issued February 1979.

13.3 Holding of more than one commercial radio operator license. (a) No person may hold two or more commercial radiotelegraph operator licenses at the same time.

(b) No person may hold two or more commercial radiotelephone operator licenses at the same time, except as provided in paragraphs (c) and (d) of this section.

(c) Each person who is legally eligible for employment in the United States may, if necessary, simultaneously hold: (1) One General Radiotelephone Operator License and one Restricted Radiotelephone Operator Permit; or, (2) One Marine Radio Operator Permit and one Restricted Radiotelephone Operator Permit.

(d) Each person who is not legally eligible for employment in the United States, and certain other persons who were issued permits prior to September 13, 1982, may hold two Restricted Radiotelephone Operator Permits at the same time, as each permit may authorize the operation of a particular station or class of stations.

13.4 Term of licenses. (a) Commercial radio operator licenses are normally valid for a term of five years from the date of issuance except as provided in paragraph (b) of this section.

(b) General Radiotelephone Operator Licenses and Restricted Radiotelephone operator Permits are normally valid for lifetime of the holder. The terms of all Restricted Radiotelephone Operator Permits issued prior to November 15, 1953 and valid on that date, were extended to encompass the lifetime of such operators.

13.5 Eligibility for new license. (a) The following, if found qualified by the Commission, may be issued commercial radio operator licenses:

(1) Any person legally eligible for employment in the United States, including all U.S. citizens, U.S. nationals, and citizens of the Trust Territory of the Pacific Islands.

(2) Any person, for the sole purpose of operating aircraft radio stations, who holds:

(i) A valid United States pilot certificate; or,

(ii) A foreign aircraft pilot certificate valid in the United States, provided that the foreign government involved has entered into a reciprocal agreement under which such foreign government does not impose any similar requirement relating to eligibility for employment upon citizens of the United States.

(3) Any person who holds a Federal Communications Commission radio station license, for the sole purpose of operating that station.

(b) **Notwithstanding any other provisions of the Commission's rules, no person otherwise eligible shall be deemed to be eligible to be examined for or to receive a commercial radio operator license of any class, (1) whose commercial radio operator license is under suspension or is involved in a suspension proceeding, (2) who is involved in any pending litigation based on an alleged violation of the Communications Act of 1934, as amended, or (3) who is afflicted with complete deafness or complete muteness or complete inability for any other reason to transmit correctly and to receive correctly by telephone spoken messages in English.**

(c) **No applicant who is eligible to apply for any commercial radio operator license shall, by reason of any physical handicap other than as set forth in paragraph (b) of this section, be denied the privilege of applying and being permitted to attempt to prove his qualifications (by examination if examination is required) for such commercial radio operator license in accordance with established procedure: nor, subject to the following conditions, shall such applicant be denied the issuance of any commercial radio operator license for which he is found qualified.**

(1) If the applicant is afflicted with uncorrected physical handicap which would clearly prevent the performance of all or any part of the duties of a radio operator, under the license for which application is made, at a station under emergency conditions involving the safety of life or property, he may be issued the license for which he is found qualified: Provided, That any license so received, if of the diploma-form (as distinguished from such document of the card-form), shall bear a restrictive endorsement as follows: This license is not valid for the performance of any operation duties, other than installation, service and maintenance duties, at any station licensed by the Federal Communications Commission which is required, directly or indirectly, by any treaty, statute or rule or regulation pursuant to statute, to be provided for safety purposes.

13.6 Deleted.

§13.8 Provisional Radio Operator Certificate. (a) In circumstances requiring immediate authority to operate a radio station pending submission of proof of eligibility or of qualifications or pending a determination by the Commission as to these matters, an applicant for a radio operator license may be issued a Provisional Radio Operator Certificate

(b) If the Commission finds that the public interest will be served, it may issue such certificates for a period not to exceed 6 months with such additional limitations as may be indicated.

(c) A Provisional Radio Operator Certificate will not be issued if the applicant has not fulfilled the examination requirements for the license applied for.

(d) (Reserved).

(e) A request for a Provisional Radio Operator Certificate for a radiotelephone third-class operator permit endorsed for broadcast use shall be made on FCC Form 756C, which provides for a certification by the holder of a radiotelephone first-class operator license that he is responsible for the technical maintenance of a radio broadcast station, and that he has instructed the applicant in the operation of a broadcast station and believes him to be capable of performing the duties expected of a person holding a radiotelephone third-class operator permit with broadcast endorsement. If the Commission finds that the public interest will be served, it may issue such certificates under the following conditions:

- (1) The certificate is valid for a period not to exceed 12 months.
- (2) The certificate is not renewable.
- (3) The certificate may be issued to a person only once.
- (4) Additional limitation may be specified, as necessary.
- (5) The certificate may be issued prior to the fulfillment of examination requirements for the radiotelephone third-class operator permit endorsed for broadcast use.

13.11 Application filing procedures. (a) Detailed information about applications forms, filing procedures and places to file applications for commercial radio operator licenses is contained in the bulletin "Commercial Radio Operator Licenses and Permits". This bulletin is available from any Commission field office or from the FCC, Washington, D.C. 20554.

(b) Applications for commercial radio operator licenses will be processed in accordance with the rules and regulations in effect on the date filed.

13.12 Additional requirements for First Class Radiotelegraph Operator's Certificate and Six Months Service Endorsement.

(a) First Class Radiotelegraph Operator's Certificate.

(1) Applicant must be at least 21 years old.

(2) Applicant must have one year of experience in sending and receiving public correspondence by radiotelegraph. The experience may be obtained at ship stations, coast stations or both.

(b) Six months Service endorsement.

(1) An endorsement may be placed on a First or Second Class Radiotelegraph Operator's Certificate attesting that the holder has had at least six months satisfactory service in the aggregate as a radio officer in a station on board a ship or ships of the United States.

(2) To qualify for the six month service endorsement, the applicant must submit proof that the service was obtained under the following:

(i) On board a ship or ships of the United States equipped with a radiotelegraph station in compliance with part II of title III of the Communications Act of 1934, as amended.

(ii) Under the authority of a First or Second Class Radiotelegraph Operator's Certificate prescribed and issued by the Federal Communications Commission; and

(iii) While licensed as a radio officer by the U.S. Coast Guard in accordance with the Act of May 12, 1948 (46 U.S.C 229 a-h)

(3) In the event documentary evidence cannot be produced, a statement under oath embodying the following information may be submitted:

(i) Names of ships on which employed.

(ii) Call letters of stations.

(iii) Types of emission employed.

(iv) Whether service was satisfactory or unsatisfactory.

(v) Whether radiotelegraph operation employed.

13.11(b)(1)(i)(a) - 13.11(b)(3)

(a) When there is an immediate need for the permit for safety purposes, submit the application in person or by an agent to the nearest field office of the Field Operations Bureau--Federal Communications Commission. The application must be accompanied by a written showing by the applicant that he has an immediate need for the permit for safety purposes.

(b) When the applicant is located in Alaska, Hawaii, Puerto Rico, or the Virgin Islands of the United States, submit the application in person or by mail to the nearest field office of the Field Operations Bureau--Federal Communications Commission.

(c) All other cases--mail the application to the Federal Communications Commission, Gettysburg, Pennsylvania, 17325.

(ii) Aliens holding a station license--File application FCC Form 755;

(a) When there is an immediate need for the permit for safety purposes; submit the application in person or by an agent to the nearest field office of the Field Operations Bureau--Federal Communications Commission. The application must be accompanied by a written showing by the applicant that he has an immediate need for the permit for safety purposes.

(b) When the applicant is located in Alaska, Puerto Rico, Hawaii, or the Virgin Islands of the United States, submit the application in person or by mail to the nearest field office of the Field Operations Bureau--Federal Communications Commission.

(c) All other cases--mail application to the Federal Communications Commission, Washington, D.C. 20554.

(iii) Alien aircraft pilots holding Federal Aviation Administration pilot certificates--Submit the application FCC Form 755 either in person or by mail to the Federal Communications Commission, Washington, D.C. 20554 (See 13.4(c)).

(2) An application for an operator license or permit of any other class, or for certification cards, shall be submitted in person or in mail to the field office at which the applicant desires his application to be considered and acted upon, and which office will make final arrangements for conducting any required examination. Whenever an examination is required to be taken at a designated examination point away from a field office, the application shall be submitted in advance of the examination to the field office having jurisdiction over the area in which the examination is to be given.

(3) The form entitled "Verification of Operator License or Permit (FCC Form 759) may be obtained from any of the Commission's field offices. The certification under Part B of the form shall be completed by the licensee or general manager of the radio station where the statement is to be posted. When the FCC Form 759 is properly validated, it may be posted in lieu of the original radio operator license or permit when the holder of that license or permit is employed at more than one station.

(c) Restricted radiotelephone operator permit. No oral or written examination is required for this permit. If the application is properly completed and signed, and of the applicant is found to be qualified, the permit may be issued forthwith.

(d) Short term license. A license or permit issued for a term of less than five years (see 13.4), may be renewed without further examination, provided proper application is filed in accordance with paragraph (a) of this section.

(e) Blind applicant. A blind person seeking an examination for a General Radiotelephone Operator License should make a request in writing to the appropriate field office for a time and date to appear for such examination. The examination will be administered only at Field Offices. Requests for examinations must be made at least 2 weeks prior to the date on which the examination is desired.

§13.12 Special provisions, radiotelegraph first-class. An application for a radiotelegraph first-class operator license shall be at least 21 years of age at the time the license is issued and shall have had an aggregate of one year of satisfactory service as an operator manipulating the key of a manually operated public ship or coast station handling correspondence by radiotelegraphy.

§13.13 Age limit, restricted radiotelephone operator permit. An applicant for a restricted radiotelephone operator permit must be at least 14 years of age at the time the permit is issued.

## EXAMINATIONS

13.21 Examination elements. (a) Written examinations will comprise questions from one or more of the following elements:

(1) Basic marine radio law. Provisions of laws, treaties, and regulations, with which every radio operator in the Maritime radio services should be familiar.

(2) Basic marine radio operating. Radio operating procedures and practices generally followed or required in communication by means of radiotelephone stations in the Maritime radio services.

(3) General Radiotelephone. Technical, legal and other matters including basic operating practices and provisions of law, treaties and regulations, applicable to the operation of radiotelephone stations other than broadcast.

4. Reserved.

5. Radiotelegraph operating practice--Radio operating procedures and practices generally followed or required in communicating by means of radiotelegraph stations primarily other than in the maritime mobile service of public correspondence.

6. Advanced radiotelegraph--Technical, legal and other matters applicable to the operation of all classes of radiotelegraph stations, including operating procedures and practices in the maritime mobile services of public correspondence, and associated matters such as radio navigational aids, message traffic routing accounting, etc.

7. Reserved.

8. Ship radar techniques. --Specialized theory and practice applicable to the proper installation, servicing and maintenance of ship radar equipment in general use for marine navigational purposes.

(b) Examination elements of the radiotelegraph Morse Code comprise sending and receiving tests at the following rates:

(1) Sixteen (16) code groups -- per minute.

(2) Twenty (20) plain language words -- per minute.

(3) Twenty (20) code groups -- per minute.

(4) Twenty-five (25) plain language words -- per minute.

13.22 Required qualifications. Commercial radio operator licenses are issued only to eligible applicants found qualified by the Commission, as follows:

(a) To be qualified to hold any commercial radio operator license, an applicant must have the ability to transmit correctly and receive correctly spoken messages in the English language.

(b) To qualify for a new commercial radio operator license other than the restricted Radiotelephone Operator Permit, an applicant must demonstrate Morse code skill, if required and a satisfactory knowledge of the material in one or more of the elements listed in 13.21, by passing all examinations required for the class of license to be issued:

(1) First Class Radiotelegraph Operator's Certificate.

(i) Transmitting and receiving Morse code tests 3 and 4.

(ii) Written examinations covering elements 1 and 2, 5 and 6.

(2) Second Class Radiotelegraph operator's Certificate.

(i) Transmitting and receiving Morse Code tests 1 and 2.

(ii) Written examinations covering elements 1 and 2, 5 and 6.

(3) Third Class Radiotelegraph Operator's Certificate.

(i) Transmitting and receiving Morse Code tests 1 and 2.

(ii) Written examinations covering elements 1 and 2, and 5.

- (4) General Radiotelephone operator license.
- (i) Written examination covering element 3.
- (5) Marine Radio Operator Permit.
- (i) Written examination covering element's 1 and 2.
- (c) No examination is required for the Restricted Radiotelephone Operator Permit. Instead, an applicant must certify that he or she:
  - (1) Is legally eligible for employment in the United States; or, if not so eligible, holds an aircraft pilot certificate valid in the United States or an FCC radio station license in his or her name;
  - (2) Can speak and hear;
  - (3) Can keep at least, a rough written log; and,
  - (4) is familiar with provisions of applicable treaties, laws, rules and regulations which govern the radio station he or she will operate.

13.23 Examination procedures. (a) Applicants, when taking examinations for commercial radio operator licenses, shall comply with the examination instructions printed on the examination booklet.

(b) Written examinations shall be in English, except when waived under authority delegated in 0.314.

(c) In the case of a blind applicant, the examination questions may be read orally by a person chosen by the Commission, and the blind applicant may answer orally. A blind applicant wishing to use this procedure must make arrangements with the appropriate field office at least two weeks prior to the date on which the examination is desired.

13.24 Passing score. To pass a written examination, an applicant must answer at least 75 percent of the questions correctly.

13.25 Examination credit for licenses held. (a) The holder of a valid commercial radio operator license (or a license which could be renewed under the provisions of 13.28) who applies for another class of commercial radio operator license will not be required to retake the written examinations or telegraphy tests which were required to obtain the license held.

(b) The holder of a valid General Radiotelephone Operator License, Radiotelephone First Class Operator License, Radiotelephone Second Class Operator License, or Radiotelephone Third Class Operator Permit will not be required to take the written examination covering examination elements 1 and 2 when applying for a radiotelegraph operator license or permit.

13.26 Cancellation of superfluous licenses. When an applicant is issued a commercial radio operator license, other commercial radio operator licenses held by that applicant will be cancelled in accordance with the following:

License issued	License(s) cancelled
First Class Radiotelegraph Operator's Certificate	Second Class Radiotelegraph Operator's Certif. Third " " " " Radiotelephone Third Class Operator Permit. Marine Radio Operator Permit. Restricted Radiotelephone Operator Permit.
Second Class Radiotelegraph Operator's Certificate	Third Class Radiotelegraph Operator's Certif. Radiotelephone Third Class Operator Permit. Marine Radio Operator Permit. Restricted Radiotelephone Operator Permit.
Third Class Radiotelegraph Operator's Certificate	Radiotelephone Third Class Operator Permit. Marine Radio Operator Permit. Restricted Radiotelephone Operator Permit.
General Radiotelephone Operator License	Radiotelephone First Class Operator License. Radiotelephone Second Class Operator License. Radiotelephone Third Class Operator Permit. Marine Radio Operator Permit.
Marine Radio Operator Permit	Radiotelephone Third Class Operator Permit.

13.27 Re-examination waiting period. An applicant who fails a written examination or code test required for a commercial radio operator license shall not apply for any class of license requiring that examination or test until 60 days after the date the examination or test was failed.

13.28 License Renewals. (a) Commercial radio operator licenses issued for five year terms may be renewed, by proper application, at any time during the last year of the license term or during a five year grace period following expiration. Expired licenses are not valid during the grace period.

(b) There are no service or examination requirements for renewals.

(c) The Radiotelephone Third Class Operator Permit will not be renewed as such. Persons holding this permit may be issued a Marine Radio Operator Permit and a Restricted Radiotelephone Operator Permit.

(d) The Radiotelephone First and Second Class Operator Licenses will not be renewed as such. Persons holding either of these two licenses may be issued a General Radiotelephone Operator License upon renewal.

## CODE TESTS

§13.41 Transmitting speed requirements -- An applicant is requires to transmit correctly in the International Morse Code for 1 minute at the rate of speed prescribed in this part for the class of license desired.

§13.42 Transmitting test procedure -- Transmitting tests shall be performed by the use of the conventional Morse key except that a semi-automatic key, if furnished by the applicant, may be used in transmitting code tests of 25 words per minute.

§13.43 Receiving speed requirements -- An applicant is required to receive the International Morse code by ear, and legibly transcribe, consecutive words or code groups for a period of 1 minute without error at the rate of speed specified in the rules for the class for which the application is made.

§13.44 Receiving test procedure -- Receiving code tests shall be written in longhand either in ink or pencil except that in the case of the 25 words perminute code test a typewriter may be used when furnished by the applicant.

§13.45 Computing words or code groups -- Each five characters shall be counted as one word or code group. Punctuation marks or figures ceunt as two characters.

## SCOPE OF AUTHORITY

13.61 Need for licensed commercial radio operators. Rules which require Commission station licensees to employ licensed commercial radio operators to perform certain transmitter operating, maintenance or repair duties are contained in Parts 73,74,81,83 and 87 of this chapter.

§13.63 Operator's responsibility. The licensed operator responsible for the maintenance of a transmitter may permit other persons to adjust a transmitter in his presence for the purpose of carrying out tests or making adjustments requiring specialized knowledge or skill, provided that he shall not be relieved thereby from responsibility for the proper operation of the equipment.

§13.64-13.69 deleted.

13.70 Fraudulent licenses. No licensed radio operator or other person shall alter, duplicate for fraudulent purposes, or fraudulently obtain or attempt to obtain, or assist another to alter, duplicate for fraudulent purposes, or fraudulently obtain or attempt to obtain an operator license. Nor shall any person use a license issued to another or a license that he or she knows to be altered, duplicated for fraudulent purposes, or fraudulently obtained.

13.71 Duplicate or replacement licenses. (a) The holder of a commercial radio operator license which has been lost, mutilated, or destroyed may obtain a duplicate license document by filing an application, with a written explanation as to the circumstances involved in the loss, mutilation, or destruction of the original license.

(b) The holder of a commercial radio operator license whose name is legally changed, or whose physical description is significantly altered, may obtain a replacement license by filing an application with a written explanation as to the change requested.

**§13.72 Exhibiting signed copy of application.** When a duplicate or replacement operator license or permit has been requested, or request has been made for renewal, or a request has been made for an endorsement, higher class license or permit, or verification card, the operator shall exhibit in lieu of the original document a signed copy of the application which has been submitted to the Commission.

**§13.73 Verification card.** Holder of operator license or permit of the diploma form (as distinguished from card form), may, by filing

13.74 Posting requirements for operator licenses. (a) Licensed commercial radio operators, on duty at a single retransmitting system, shall post their radio operator license or permit in accordance with the rules governing that station when:

- (1) Performing radio operating duties and in charge of the transmitting systems, or
- (2) Supervising or performing service and maintenance or inspection duties at the transmitting systems.

(b) Licensed commercial radio operators, on duty at two or more transmitting systems, which are not co-located, shall post their radio operator license or permit at one of the stations, and a photocopy of the license or permit at each other station in accordance with the rules governing those stations when:

- (1) Performing radio operating duties and in charge of the transmitting systems, or
- (2) Supervising or performing service and maintenance or inspection duties at the transmitting systems.

(c) In stations where rules for that service do not require posting, licensed commercial operators on duty and in charge of transmitting systems or performing service and maintenance or inspection duties of such transmitting systems, shall have on their person their radio operator license or permit, or a valid license verification card (FCC Form 758-F), which shall be available for inspection upon request by a Commission representative.

**§13.75 Record of service and maintenance duties performed.** In every case where a station operating log or service and maintenance log is required, the responsible operator in charge of the station operation or maintenance shall make the required entries in the log for the station concerned. If no station log is required, an operator responsible for service or maintenance duties which may affect the proper operation of the station shall sign and date an entry in the station maintenance records giving:

- (a) Pertinent details of all service and maintenance work performed by him or under his supervision:
- (b) His name and address; and
- (c) The class, serial number and expiration date of his license.

Provided, That the responsible operator shall not be subject to requirements of paragraphs (b) and (c) of this section in relation to a station, or stations of one licensee at a single location, at which he is regularly employed as an operator on a full time basis and at which his license is properly posted.

**13.76 Limitation on certain Restructed Radiotelephone Operator Permits.** (a) A Restricted Radiotelephone Operator Permit issued to an aircraft pilot who is not legally eligible for employment in the United States is valid only for operation of radio stations on aircraft.

(b) A Restricted Radiotelephone Operator Permit issued to a person under the waiver provision of Section 303(1)(2) of the Communications Act of 1934, as amended, is valid only for the operation of radio stations for which that person is the station licensee.

**13.77 Required endorsements.** (a) All marine Operator Permits shall bear the following endorsement:

This permit does not authorize the operation of AM, FM or TV broadcast stations.

(b) All General Radiotelephone Operator Licenses issued after December 31, 1985, shall bear the following endorsement:

This license confers authority to operate licensed radio stations in the Aviation, Marine and Inerenational Fixed Public Radio Services only. This authority is subject to: any endorsement placed upon this license; FCC orders, rules and regulatians; United States statutes; and the provisions of any treaties to which the United States is a party. This license does not confer any authority to operate broadcast stations. It is not assignable or transferable.



PART 17

CONSTRUCTION, MARKING AND LIGHTING  
OF ANTENNA STRUCTURES

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- 17.36 Specifications for the lighting of antenna structures over 1,800 feet up to and including 1,950 feet in height
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SUBPART A - GENERAL INFORMATION

§17.1 Basis and purposes. (a) The rules in this part are issued pursuant to the authority contained in Title III of the Communications Act of 1934, as amended, which vests authority in the Federal Communications Commission to issue licenses for radio stations when it is found that the public interest, convenience, and necessity would be served thereby, and to require the painting, and/or illumination of radio towers if an when in its judgment such towers constitute or there is a reasonable possibility that they may constitute, a menace to air navigation.

(b) The purpose of the rules in this part is to prescribe certain procedures and standards with respect to the Commission's consideration of proposed antenna structures which will serve as a guide to persons intending to apply for radio station licenses. The standards were developed in conjunction with the Federal Aviation Administration (FAA).

§17.2 Definitions. (a) Antenna structure. The term antenna structures includes the radiating and/or receive system, its supporting structures and any appurtenances mounted thereon.

(b) An antenna farm area is defined as a geographical location with established boundaries, designated by the Federal Communication Commission, in which antenna towers with a common impact on aviation may be grouped.

§17.4 Commission consideration of proposed antenna structure with respect to possible hazard to air navigation. (a) All applications are reviewed to determine whether there is a requirement that the applicant file a notice of proposed construction or alteration (FAA Form 7460-1) with the Federal Aviation Administration.

(b) Whenever applications require the filing of a notice of proposed construction or alteration (FAA Form 7460-1) the applicant will be advised to do so unless the application includes an FCC Form 714 certifying that notification has been submitted to FAA or the application form itself specifically supplies all of the information which would be provided on FCC Form 714.

(c) All applications which do not require the filing of FAA Form 7460-1 with the FAA will be deemed not to involve a hazard to air navigation and will be considered by the Commission without further reference to the FAA.

(d) Whenever a "no hazard determination" is received from the FAA concerning any proposed antenna structure, the antenna structure is deemed not to involve a hazard to air navigation and the antenna aspect of the application for radio station authorization will be processed accordingly; provided that the FAA "no hazard determination" has not expired.

(e) Whenever a report is received from the FAA indicating that a proposed antenna structure is a hazard, the Commission will take further appropriate action.

(f) Applications which show on their face that the antenna structure will extend more than 6.10 meters (20 feet) above the ground or natural formation or more than 6.10 meters (20 feet) above an existing manmade structure (other than an antenna structure) shall be accompanied by FCC Form 714 indicating that notification has or has not been submitted to FAA or the application form itself shall specifically supply all of the information which would be provided on the FCC Form 714.

(g) In addition to the other requirements of this part of the rules, each application for the radio station authorization shall include such information regarding proposed antenna construction as may be required by the FCC. Such information is to be supplied on the FCC application form specified in the rules pertaining to the radio service in which application is being made or as may otherwise be required.

**SUBPART B - CRITERIA FOR DETERMINING WHETHER APPLICATIONS FOR RADIO TOWERS REQUIRE NOTIFICATION OF PROPOSED CONSTRUCTION TO THE FEDERAL AVIATION ADMINISTRATION.**

17.7 Antenna structures requiring notification to the FAA. A notification to the FAA is required, except as set forth in 17.14, for any of the following construction or alteration:

(a) Any construction or alteration of more than 60.96 meters (200 feet) in height above ground level at its site.

(b) Any construction or alteration of greater height than an imaginary surface extending outward and upward at one of the following slopes:

(1) 100 to 1 for a horizontal distance of 6.10 kilometers (20,000) feet from the nearest point of the nearest runway of each airport specified in subparagraph (d) of this section with at least one runway more than .98 kilometers (3,200 feet) in actual length, excluding heliports.

(2) 50 to 1 for a horizontal distance of 3.05 kilometers (10,000 feet) from the nearest point of the nearest runway of each airport specified in subparagraph (d) of this section with its longest runway no more than 0.98 kilometers (3,200 feet) in actual length, excluding heliports.

(3) 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport specified in subparagraph (d) of this section.

(c) When requested by the FAA, any construction or alteration that would be in an instrument approach area (defined in the FAA standards governing instrument approach procedures) and available information indicates it might exceed an obstruction standard of the FAA.

(d) Any construction or alteration on any of the following airports (including heliports):

(1) An airport that is available for public use and is listed in the Airport Directory of the current Airmen's Information Manual or in either the Alaska or Pacific Airman's Guide and Chart Supplement.

(2) An Airport under construction, that is the subject of a notice or proposal on file with the Federal Aviation Administration, and except for military airports, it is clearly indicated that the airport will be available for public use.

(3) An airport that is operated by an armed force of the United States.

NOTE: Consideration to aeronautical facilities not in existence at the time of the filing of the application for radio facilities will be given only when proposed airport construction or improvement plans are on file with the FAA as of the filing date of the application for such radio facilities.

§17.8 Establishment of antenna farm areas. (a) Each antenna farm area will be established by an appropriate rule making proceeding, which may be commenced by the Commission on its own motion after consultation with the FAA, upon request of the FAA, or as a result of a petition filed by any interested person. After receipt of a petition from an interested person disclosing reasons to justify institution of a

rule making proceeding, the Commission will request the advice of the FAA with respect to the considerations of menace to air navigation in terms of air safety which may be presented by the proposal. The written communication received from the FAA in response to the Commission's request shall be placed in the Commission's public rule making file containing the petition, and interested persons shall be allowed a period of 30 days within which to file statements with respect thereto. Such statements shall also be filed with the Administrator of the FAA with proof of such filing to be established in accordance with §1.57 of this chapter. The Administrator of the FAA shall have a period of 15 days within which to file responses to such statements. If the Commission, upon consideration of the matters presented to it in accordance with the above procedure, is satisfied that establishment of the proposed antenna farm would constitute a menace to air navigation for reasons of air safety, rule making proceedings will not be instituted. If rule making proceedings are instituted, any person filing comments therein which concern the question of whether the proposed antenna farm will constitute a menace to air navigation shall file a copy of the comments with the Administrator of the FAA. Proof of such filing shall be established in accordance with §1.47 of this chapter.

§17.9 Designated antenna farm areas. The areas described in the following paragraphs of this section are established as antenna farm areas: (appropriate paragraphs will be added as necessary).

17.10 Antenna structures over 304.80 meters (1,000 feet) in height. Where one or more antenna farm areas have been designated for a community or communities (see 17.9), the Commission will not accept for filing an application for a construction permit to construct a new station or to increase height or change antenna location of an existing station proposing the erection of an antenna structure over 304.80 meters (1,000 feet) above ground unless:

(a) It is proposed to locate the antenna structure in a designated antenna farm area, or

(b) It is accompanied by a statement from the Federal Aviation Administration that the proposed structure will not constitute a menace to air navigation, or

(c) It is accompanied by a request for waiver setting forth reasons sufficient, if true, to justify such a waiver.

§17.14 Certain antenna structures exempt from notification to the FAA. A notification to the Federal Aviation Administration is not required for any of the following construction or alteration:

(a) Any object that would be shielded by existing structures of a permanent and substantial character or by natural terrain or topographic features of equal or greater height and would be located in the congested area of a city, town, or settlement where it is evident beyond all reasonable doubt that the structure so shielded will not adversely affect safety in air navigation. Applicants claiming such exemption under §17.14(a) shall submit a statement with their application to the FCC explaining basis in detail for their finding.

(b) Any antenna structure of 6.10 meters (20 feet) or less in height except one that would increase the height of another antenna structure.

(c) Any air navigation facility; airport visual approach or landing aid, aircraft arresting device, or meteorological device, of a type approved by the Administrator of the Federal Aviation Administration, the location and height of which is fixed by its functional purpose.

17.17 Existing structures. (a) Nothing in the criteria in this subpart concerning antenna structures or locations shall apply to those structures prior to September 5, 1967.

(b) No change in any of these criteria or relocation of air ports shall at any time impose a new restriction upon any then existing or authorized antenna structure or structures.

SUBPART C-SPECIFICATIONS FOR OBSTRUCTION MARKING AND LIGHTING  
OF ANTENNA STRUCTURES

17.21 Painting and lighting, when required. Antenna structures shall be painted and lighted when:

(a) They exceed 60.96 meters (200 feet) in height above the ground or they require special aeronautical study.

(b) The Commission may modify the above requirement for painting and/or lighting of antenna structures, when it is shown by the applicant that the absence of such marking would not impair the safety of air navigation, or that a lesser marking requirement would insure the safety thereof.

17.22 Particular specifications to be used. Whenever painting and lighting are required, the Commission will assign painting and lighting specifications pursuant to the provisions of this subpart. If an antenna installation is of such a nature that its painting and lighting in accordance with these specifications are confusing or endangered, rather than assisting air-ment, or are otherwise inadequate, the Commission will specify the type of painting/lighting or other marking to be used in individual situations.

17.23 Specifications for painting of antenna structures in accordance with 17.21. Except for antenna structures lighted in conformance with 17.39, .40, 41 and .42 (High Intensity Obstruction Lighting), antenna structures shall be painted throughout their height with alternate bands of aviation surface orange and white, terminating with aviation surface orange bands at both top and bottom. The width of the bands shall be equal and approximately one-seventh the height of the structure, provided, however, that the bands shall not be more than 30.48 meters (100 feet) nor less than 0.46 meters (1½ feet) in width.

AVIATION RED OBSTRUCTION LIGHTING

17.24 Specifications for the lighting of antenna structures up to and including 45.72 meters (150 feet) in height. Antenna structures up to and including 45.72 meters (150 feet) in height above ground, which are required to be lighted as a result of notification to the FAA under 17.7 shall be lighted as follows:

(a) There shall be installed at the top of the tower at least two 116 or 125 watt lamps (A21/TS) enclosed in aviation red obstruction light gloves. The intensity of each lamp shall not be less than 32.5 candelas. The two lights shall burn simultaneously from sunset to sunrise and shall be positioned so as to insure unobstructed visibility of at least one of the lights from aircraft at any normal angle of approach. A light sensitive control device or an automatic astronomic dial clock and time switch may be used to control the lighting in lieu of manual control. When a light sensitive device is used, it shall be adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of not less than 376.74 lux (35fc) and turned off when the north sky illuminance on a vertical surface rises to a level of not less than 524.31 lux (58fc).

17.25 Specifications for lighting of antenna structures over 45.72 meters (150 feet) and up to and including 91.44 meters (300 feet) in height.

(a) Antenna structures over 45.72 meters (150 feet), up to and including 200 feet in height above ground, which are required to be lighted as a result of notification to the FAA under 17.7 and antenna structures over 60.96 meters (200 feet), up to and including 91.44 meters (300 feet) in height above ground, shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620-, or 700-watt lamps (PS-40 Code Beacon type) both lamps to burn simultaneously, and equipped with aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons position so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the luminous period.

(2) At the approximate mid-point of the overall height of the tower there shall be installed at least two 116 or 125 watt lamps (A21/TS) enclosed in aviation red obstruction light gloves. The intensity of each lamp shall not be less than 32.5 candelas. Each light shall be mounted so as to insure unobstructed visibility of at least one light at each level from aircraft at any normal angle of approach.

(3) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of not less than 376.74 lux (35fc) and turned off when the north sky illuminance on a vertical surface rises to a level of not less than 624.31 lux (58 fc).

17.26 Specifications for the lighting of antenna structures over 91.44 meters (300 feet) up to and including 137.16 meters (450 feet) in height.

(a) Antenna structures over 300 feet up to and including 137.16 meters (450 feet) in height above the ground shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620-, or 700-watt lamps (PS-40 Code Beacon type) both lamps to burn simultaneously and equipped with aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute, nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the luminous period.

(2) On levels at approximately two-thirds and one-third of the overall height of the tower, there shall be installed at least 116 or 125 watt lamps (A21/TS) enclosed in aviation red obstruction light globes. The intensity of each lamp shall not be less than 32.5 candelas. Each light shall be mounted so as to insure unobstructed visibility of at least one light at each level from aircraft at any normal angle of approach.

(3) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of not less than 376.74 lux (35 fc) and turned off when the north key illuminance on a vertical surface rises to a level of not less than 624.31 lux (58 fc).

17.27 Specifications for the lighting of antenna structures over 137.16 meters (450 feet) up to and including 182.88 meters (600 feet) in height.

(a) Antenna structures over 137.16 meters (450 feet) up to and including 182.88 meters (600 feet) in height above the ground shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 n/n electric code beacon equipped with two 620-, or 700-watt lamps (PS-40 Code Beacon type) both lamps to burn simultaneously and equipped with aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the luminous period.

(2) At approximately one-half of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event this beacon cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any normal angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

(3) On levels at approximately three-fourths and one-fourth of the overall height of the tower, at least one 116 or 125 watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level. The intensity of each lamp shall not be less than 32.5 candelas.

(4) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of not less than 376.74 lux (35 fc) and turned off when the north sky illuminance on a vertical surface rises to a level of not less than 624.31 lux (58 fc).

17.28 Specifications for the lighting of antenna structures over 182.88 meters (600 feet) up to and including 228.60 meters (750 feet) in height.

(a) Antenna structures over 182.88 meters (600 feet) up to and including 228.60 meters (750 feet) in height above the ground shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620-, or 700-watt lamps (PS-40 Code Beacon type) both lamps to burn simultaneously, and equipped with

aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the luminous period.

(2) At approximately two-fifths of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event this beacon cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any normal angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

(3) On levels at approximately four-fifths, three-fifths and one-fifth of the overall height of the tower, at least one 116 or 125 watt lamp (A21/TS) shall be installed enclosed in an aviation red obstruction light globe on each outside corner of the tower at each level. The intensity of each lamp shall not be less than 32.5 candelas.

(4) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of not less than 367.74 lux (35 fc) and turned off when the north sky illuminance on a vertical surface rises to a level of not less than 624.31 lux (58 fc).

17.29 Specification for the lighting of antenna structures over 228.60 meters (750 feet) up to and including 274.32 meters (900 feet) in height.

(a) Antenna structures over 228.60 meters (750 feet) up to and including 274.32 meters (900 feet) in height above the ground shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620-, or 700-watt lamps (PS-40 Code Beacon type) both lamps to burn simultaneously, and equipped with aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the luminous period.

(2) On levels at approximately two-thirds and one-third of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

(3) On levels at approximately five-sixths, one-half and one-sixth of the overall height of the tower, at least one 116 or 125 watt lamp (A21/T8) enclosed in an aviation red obstruction light glove shall be installed on each outside corner of the tower at each level. The intensity of each lamp shall not be less than 32.5 candelas.

(4) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of not less than 376.74 lux (35 fc) and turned off when the north sky illuminance on a vertical surface rises to a level of not less than 624.31 lux (58 fc).

17.30 Specifications for the lighting of antenna structures over 274.32 meters (900 feet) up to and including 320.04 meters (1,050 feet) in height.

(a) Antenna structures over 274.32 meters (900 feet) up to and including 320.04 meters (1,050 feet) in height above the ground shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620-, or 700-watt lamps (PS-40 Code Beacon type) both lamps to burn simultaneously, and equipped with aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the luminous period.

(2) On levels at approximately four-sevenths and two-sevenths of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

(3) On levels at approximately six-sevenths, five-sevenths, three-sevenths and one-seventh of the overall height of the tower at least 116 or 125 watt lamp (A21/TS) enclosed in an aviation red obstruction light glove shall be installed on each outside corner of the tower at each level. The intensity of each lamp shall not be less than 32.5 candelas.

(4) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of not less than 376.74 lux (35 fc) and turned off when the north sky illuminance on a vertical surface rises to a level of not less than 524.31 lux (58 fc).

17.31 Specifications for the lighting of antenna structures over 320.04 meters (1,050 feet) up to and including 365.76 meters (1,200 feet) in height. (a) Antenna structures over 320.04 meters (1,050 feet) up to and including 365.76 meters (1,200 feet) in height above the ground shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 500-, 620-, or 700-watt lamps (PS-40 Code Beacon type) both lamps to burn simultaneously, and equipped with aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of support-

ing this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the luminous period.

(2) On levels at approximately three-fourths, one-half and one-fourth of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

(3) On levels at approximately seven-eighths, five-eighths, three-eighths, and one-eighth of the overall height of the tower, at least one 116 or 125 watt lamp (A21-TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level. The intensity of each lamp shall not be less than 32.5 candelas.

(4) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of not less than 376.74 lux (35 fc) and turned off when the north sky illuminance on a vertical surface rises to a level of not less than 624.31 lux (58 fc).

17.32 Specifications for the lighting of antenna structures over 356.76 meters (1,200 feet) up to and including 411.48 meters (1,350 feet) in height. (a) Antenna structures over 356.76 meters (1,200 feet) up to and including 411.48 meters (1,350 feet) in height above the ground shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620-, or 700-watt lamps (PS-40 Code Beacon type) both lamps to burn simultaneously, and equipped with aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the luminous period.

(2) On levels at approximately two-thirds, four-ninths, and two-ninths of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

(3) On levels at approximately eight-ninths, seven-ninths, five-ninths, one-third and one-ninth of the overall height of the tower, at least one 116 or 125 watt lamp (A21/TS) enclosed

in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level. The intensity of each lamp shall not be less than 32.5 candelas.

(4) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of not less than 376.74 lux (35 fc) and turned off when the north sky illuminance on a vertical surface rises to a level of not less than 624.31 lux (58 fc).

17.33 Specifications for the lighting of antenna structures over 411.38 meters (1,350 feet) and up to and including 457.20 meters (1,500 feet) in height. (a) Antenna structures over 411.38 meters (1,350 feet) and up to and including 457.20 meters (1,500 feet) in height above the ground shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620-, or 700-watt lamps (PS-40 Code Beacon type) both lamps to burn simultaneously, and equipped with aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the liminous period.

(2) On levels at approximately four-fifths, three-fifths, two-fifths, and one-fifth of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angles of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

(3) On levels at approximately nine-tenths, seven-tenths, one-half, three-tenths, and one-tenth of the overall height of the tower, at least one 116 or 125 watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level. The intensity of each lamp shall not be less than 32.5 candals.

(4) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of 376.74 lux (35 fc) and turned off when the north sky illuminance level on a vertical surface rises to a level of not less than 624.31 lux (58 fc).

17.34 Specifications for the lighting of antenna structures over 457.20 meters (1,500 feet) up to and including 502.92 meters (1,650 feet) in height above the ground. (a) Antenna structures over 457.20 meters (1,500 feet) up to and including 502.92 meters (1,650 feet) in height above the ground shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620-, or 700-watt lamps (PS-40 Beacon type) both lamps to burn simultaneously, and equipped with aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the luminous period.

(2) On levels at approximately eight-elevenths, six-elevenths, four-elevenths, and two-elevenths of the overall height of the tower, one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from the aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

(3) On levels at approximately ten-elevenths, nine-elevenths, seven-elevenths, five-elevenths, three-elevenths, and one-eleventh of the overall height of the tower at least 116 or 125 watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level. The intensity of each lamp shall not be less than 32.5 candelas.

(4) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of not less than 376.74 lux (35 fc) and turned off when the north sky illuminance on a vertical surface rises to a level of not less than 624.31 lux (58 fc).

17.35 Specifications for the lighting of antenna structures over 502.92 meters (1,650 feet) up to and including 548.64 meters (1,800 feet) in height. (a) Antenna structures over 502.92 meters (1,650 feet) up to and including 548.64 meters (1,800 feet) in height above the ground shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620-, or 700-watt lamps (PS-40 Code Beacon type) both lamps to burn simultaneously, and equipped with aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the luminous period.

(2) On levels at approximately five-sixths, two-thirds, one-half, one-third, and one-sixth of the overall height of the tower one similar flashing 300 m/m electric

code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

(3) On levels at approximately eleven-twelfths, three-fourths, seven-twelfths, five-twelfths, one-fourth and one-twelfth of the overall height of the tower at least one 116 or 125 watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level. The intensity of each lamp shall not be less than 32.5 candelas.

(4) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level not less than 367.74 lux (35 fc) and turned off when the north sky illuminance on a vertical surface rises to a level of not less than 624.31 lux (58 fc).

17.36 Specifications for the lighting of antenna structures over 548.64 meters (1,800 feet) up to and including 594.36 meters (1,950 feet) in height. (a) Antenna structures over 548.64 meters (1,800 feet) up to and including 594.36 meters (1,950 feet) in height above the ground shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620-, or 700-watt lamps (PS-40, Code Beacon type) both lamps to burn simultaneously, and equipped with aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the luminous period.

(2) On levels at approximately ten-thirteenths, eight-thirteenths, six-thirteenths, four-thirteenths, and two-thirteenths of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

(3) One levels at approximately twelve-thirteenths, eleven-thirteenth, nine-thirteenths, seven-thirteenths, five-thirteenths, three-thirteenths, and one-thirteenth of the overall height of the tower at least one 116 or 125 watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level. The intensity of each lamp shall not be less than 32.5 candelas.

(4) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of not less than 376.64 lux (35 fc) and turned off when the north sky illuminance on a vertical surface rises to a level of not less than 624.31 lux (58 fc).

17.37 Specifications for the lighting of antenna structures over 594.36 meters (1,950 feet) up to and including 460.08 meters (2,100 feet) in height. (a) Antenna structures over 594.36 meters (1,950 feet) up to and including 460.08 meters (2,100 feet) in height above the ground shall be lighted as follows:

(1) There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620-, or 700-watt lamps (PS-40, Code Beacon type) both lamps to burn simultaneously, and equipped with aviation red color filters. The steady burning intensity shall not be less than 2,000 candelas (in red). Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute, with a period of darkness equal to approximately one-half of the luminous period.

(2) On levels at approximately six-sevenths, five-sevenths, four-sevenths, three-sevenths, two-sevenths, and one-seventh of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

(3) On levels at approximately thirteen-fourteenths, eleven-fourteenths, nine-fourteenths, one-half, five-fourteenths, three-fourteenths, and one-fourteenth of the overall height of the tower at least one 116 or 125 watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level. The intensity of each lamp shall not be less than 32.5 candelas.

(4) All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on when the north sky illuminance on a vertical surface falls to a level of not less than 367.74 lux (35 fc) and turned off when the north sky illuminance on a vertical surface rises to a level of not less than 624.31 lux (58 fc).

17.38 Specifications for the lighting of antenna structures over 640.08 meters (2,100 feet) in height. Antenna structures over 640.08 meters (2,100 feet) in height above the ground shall be lighted in accordance with specifications to be determined by the Commission after aeronautical study which will include lighting recommendations.

## High Intensity White Obstruction Lighting

NOTE: When authorized by the Commission, high intensity white obstruction lighting will be used in lieu of obstruction marking and lighting specified in 17.23 through 17.37.

In general, the number of levels of high intensity lighting specified is dependent upon the overall height of the skeletal frame or comparable main support structure, excluding antennas or similar appurtenances. A white capacitor discharge omnidirectional lights mounted on or adjacent to the appurtenance, if more than 6.10 meters (20 feet), to complement the lighting system.

Where a dual lighting system is employed, i.e., high intensity white obstruction lighting during daylight and red obstruction lighting at night, the omnidirectional high intensity light, if equipped with an aviation red color filter for nighttime illumination, may be used in lieu of the 300 mm top beacon specified in 17.24(a) and subparagraph (a)(1) in Sections 17.25 through 17.37.

17.39 Specifications for the high intensity lighting of antenna structures having a skeletal tower up to and including 91.44 meters (300 feet) in height. Antenna structures having a skeletal tower or other main support structure up to and including 91.44 meters (300 feet) in height shall be obstruction lighted as follows:

(a) There shall be installed at the top of the skeletal tower or other main support structure three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 4,000 candelas at night. The light units shall be mounted in a manner to insure unobstructed viewing from aircraft at any normal angle of approach and so that the effective intensity of the full beam is not impaired by any structural members of the skeletal framework. The units will normally be adjusted so that the center of the beam is in the horizontal plane.

(b) Where an antenna or similar appurtenance extends more than 6.10 meters (20 feet) above the skeletal tower or other main support structure, a white capacitor discharge omnidirectional light which conforms to FAA/DOD Specification L856, High Intensity Obstruction Lighting Specifications, shall be mounted on the highest point. If the antenna or similar appurtenance is incapable of supporting the omnidirectional light, one or more lights will be installed on a suitable adjacent support with the light(s) mounted no more than 6.10 meters (20 feet) below the tip of the appurtenance. The light(s) shall be positioned so as to permit unobstructed viewing of at least one light from aircraft at any normal angle of approach. The light unit(s) emit a beam peak intensity around its periphery of approximately 20,000 candelas during daytime and twilight operation, and approximately 4,000 candelas at night.

(c) All lights shall be synchronized to flash simultaneously at 40 pulses per minute. The light system shall be equipped with a light sensitive control device which shall face the north sky and cause the intensity steps to change automatically when the north sky illumination on a vertical surface is as follows:

(1) Day to Twilight: T is shall not occur before the illumination drops to 645.84 lux (60 fc), but shall occur before it drops below 322.92 lux (30 fc).

(2) Twilight to Night: This shall not occur before the illumination drops to 53.82 lux (5 fc), but shall occur before it drops below 21.53 lux (2 fc) .

(3) Night to Day: The intensity changes listed in subparagraphs (1) and (2) of this paragraph shall be reversed in transitioning from the night to day modes.

Failure of the intensity step changing circuits shall cause all lights to operate in the high intensity mode, or, the next brighter intensity step above that required for the period of operation.

17.40 Specifications for the high intensity lighting of antenna structures having a skeletal tower over 91.44 meters (300 feet) up to and including 182.88 meters (600 feet) in height. Antenna structures having a skeletal tower or other main support structure over 91.44 meters (300 feet) up to and including 182.88 meters (600 feet) in height shall be obstruction lighted as follows:

(a) There shall be installed at the top of the skeletal tower or other main support structure three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (day-time) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 4,000 candelas at night. The light units shall be mounted in a manner to insure unobstructed viewing from aircraft at any normal angle of approach and so that the effective intensity of the full beam is not impaired by any structural members of the skeletal framework. The units will normally be adjusted so that the center of the beam is in the horizontal plane.

(b) At the approximate 1/2 (midpoint) level of the skeletal tower there shall be installed an additional set of high intensity obstruction lights as in paragraph (a) of this section. The normal angular adjustment of the beam centers above the horizontal shall be 2 degrees. See Table under 17.42.

(c) Where an antenna or similar appurtenance extends more than 6.10 meters (20 feet) above the skeletal tower or other main support structure a white capacitor discharge omnidirectional light which conforms to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems, shall be mounted on the highest point. If the antenna or similar appurtenance is incapable of supporting the omnidirectional light, one or more lights shall be installed on a suitable adjacent support with the light(s) mounted no more than 6.10 meters (20 feet) below the tip of the appurtenance. The light(s) shall be positioned so as to permit unobstructed viewing of at least one light from aircraft at any normal angle of approach. The light unit(s) shall emit a beam peak intensity around its periphery of approximately 20,000 candelas during daytime and twilight operation, and approximately 4,000 candelas at night.

(d) All lights shall be synchronized to flash simultaneously at 40 pulses per minute. The light system shall be equipped with a light sensitive control device which shall face the north sky and cause the intensity steps to change automatically when the north sky illumination on a vertical surface is as follows:

(1) Day to Twilight: This shall not occur before the illumination drops to 645.84 lux (60 fc), but shall occur before it drops below 322.92 lux (30 fc).

(2) Twilight to Night: This shall not occur before the illumination drops to 53.82 lux (5 fc), but shall occur before it drops below 21.53 lux (2 fc).

(3) Night to Day: The intensity changes listed in subparagraph (1) and (2) of this paragraph shall be reversed in transitioning from the night to day modes.

Failure of the intensity step changing circuits shall cause all light to operate in the high intensity mode or the next brighter intensity step above that required for the period of operation.

17.41 Specifications for the high intensity lighting of antenna structures having a skeletal tower over 182.88 meters (600 feet) up to and including 304.80 meters (1000 feet) in height. Antenna structures having a skeletal tower or other main support structures over 182.88 meters (600 feet) up to and including 1000 feet in height shall be obstruction lighted as follows:

(a) There shall be installed at the top of the skeletal tower or other main support structure three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting System. The complement of units shall emit a white high intensity light and produce an effective intensity light of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 4,000 candelas at night. The light units shall be mounted in a manner to insure unobstructed viewing from aircraft at any normal angle of approach so that the effective intensity of the full beam is not impaired by any structural members of the skeletal framework. The units will normally be adjusted so that the center of the beam is in the horizontal plane.

(b) At the approximate 1/3 and 2/3 levels of the skeletal tower there shall be installed additional sets of high intensity obstruction lights as in paragraph (a) of this section. The normal angular adjustment of the beam centers above the horizontal shall be 2 degrees at the 1/3 level and one degree at the 2/3 level. See table under 17.42.

(c) Where a rod or similar appurtenance extends more than 6.10 meters (20 feet) above the skeletal tower or other main support structure, a white capacitor discharge omnidirectional light which conforms to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems, shall be mounted on the highest point. If the antenna or similar appurtenance is incapable of supporting the omnidirectional light, one or more lights shall be mounted on the highest point. If the antenna or similar appurtenance is incapable of supporting the omnidirectional light, one or more lights shall be installed on a suitable adjacent support with the light(s) mounted no more than 6.10 meters (20 feet) below the tip of the appurtenance. The light(s) shall be positioned so as to permit unobstructed viewing of at least one light from aircraft at any normal angle of approach. The light unit(s) shall emit a beam peak intensity around its periphery of approximately 20,000 candelas during daytime and twilight operation, and approximately 4,000 candelas at night.

(d) All lights shall be synchronized to flash simultaneously at 40 pulses per minute. The light system shall be equipped with a light sensitive control device which shall face the north sky and cause the intensity steps to change automatically when the north sky illumination on a vertical surface is as follows:

(1) Day to Twilight: This shall not occur before the illumination drops to 645.84 lux (60 fc), but shall occur before it drops below 322.92 lux (30 fc).

(2) Twolight to Night. This shall not occur before the illumination drops to 53.82 lux (5 fc) but shall occur before it drops to 31.53 lux (2 fc).

(3) Night to Day. The intensity changes listed in (1) and (2) of this paragraph shall be reversed in transitioning from the night to day modes.

Failure of the intensity step changing circuits shall cause all lights to operate in the high intensity mode or the next brighter step above that required for the period of operation.

17.42 Specifications for the high intensity lighting of antenna structures having a skeletal tower over 604.80 meters (1000 feet) in height. Antenna structures having a skeletal tower or other main support structure over 604.80 meters (1000 feet) in height shall be obstruction lighted as follows:

(a) There shall be installed at the top of the skeletal tower or other main support structure three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal position. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 4,000 candelas at night. The light units shall be mounted in a manner to insure unobstructed viewing from aircraft at any normal angle of approach and so that the effective intensity of the full beam is not impaired by any structural members of the skeletal framework. The units will normally be adjusted so that the center of the beam is in the horizontal plane.

(b) In addition, there shall be installed at approximate equi-distant levels along the vertical axis of the skeletal tower three or more sets of high intensity obstruction lights as in paragraph (a) of this section. Three intermediate levels are required for skeletal towers over 304.80 meters (1,000 feet) up to and including 426.72 meters (1,400 feet). For each additional 121.92 meters (400 feet) or fraction thereof, one additional level of lighting shall be installed. The normal angular adjustment of the beam centers at the bottom level shall be 3 degrees above the horizontal and for the second progressive level shall be 2 degrees above the horizontal. For other progressive levels, see Table below.

(c) Where a rod or similar appurtenance extends more than 6.10 meters (20 feet) above the skeletal tower or other main support structure, a white capacitor discharge omnidirectional light which conforms to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems shall be mounted on the highest point. If the antenna or similar appurtenance is incapable of supporting the omnidirectional light, one or more lights shall be installed on a suitable adjacent support with the light(s) mounted no more than 6.10 meters (20 feet) below the tip of the appurtenance. The light(s) shall be positioned so as to permit unobstructed viewing of at least one light from aircraft at any normal angle of approach. The light unit(s) shall emit a beam peak intensity around its periphery of approximately 20,000 candelas during daytime and twilight operation, and approximately 4,000 candelas at night.

(d) All lights shall be synchronized to flash simultaneously at 40 pulses per minute. The light system shall be equipped with a light sensitive control device which shall face the north sky and cause the intensity steps to change automatically when the north sky illumination on a vertical surface is as follows:

(1) Day to Twilight: This shall not occur before the illumination drops to 645.84 lux (60 fc), but shall occur before it drops below 322.92 lux (30 fc).

(2) Twilight to Night: This shall not occur before the illumination drops to 53.82 lux (5 fc), but shall occur before it drops below 21.53 lux (2 fc).

(3) Night to Day. The intensity changes listed in subparagraph (1) and (2) of this paragraph shall be reversed in transitioning from the night to day modes.

Failure of the intensity step changing circuits shall cause all lights to operate in high intensity modes or the next brighter intensity step above that required for the period of operation.

Degrees elevation above horizontal

Light Level	Number of light levels on structure					
	1	2	3	4	5	6
Top -----	0	0	0	0	0	0
5 -----						0
4 -----					0	1
3 -----				1	1	2
2 -----			1	2	2	2
Bottom -----		2	2	3	3	3

§17.43 Painting and lighting of new and existing structures. (a) The provisions of this part of the rules with respect to antenna structures required to be painted and/or lighted, shall be effective November 1, 1970, for any new antenna structure and for any change in the height or location of an existing antenna structure.

(b) All existing antenna structures required to be painted shall be painted in the manner set forth in §17.23 at the time when the antenna structure is repainted (see

Section 17.50) or in no event later than November 1, 1977.

(c) All existing antenna structures required to be illuminated shall be brought into conformity herewith within 6 months after September 5, 1970, at any station for which the authorization is renewable on or prior to that date, and within 3 months following the renewal of an authorization renewable after September 5, 1970.

(d) Nothing in the notification criteria concerning antenna structures or locations, as set forth in Subpart B of this part, shall apply to painting and lighting those structures authorized prior to September 5, 1967, except where lighting and painting requirements are reduced, in which case the lesser requirements may apply upon approval of an application to the Commission for such reduction.

**17.45 Temporary warning lights.** During construction of an antenna structure, for which red obstruction lighting is required, at least two 116 or 125 watt lamps (A21/TS) enclosed in aviation red obstruction light gloves, shall be installed at the uppermost point of the structure. The intensity of each lamp shall not be less than 32.5 candelas. In addition, as the height of the structure exceeds each level at which permanent obstruction lights will be required, two similar lights shall be installed at each level. These temporary warning lights shall be displayed nightly from sunset to sunrise until the permanent obstruction lights have been installed and placed in operation, and shall be positioned so as to insure unobstructed visibility of at least one of the lights at any normal angle of approach. If practical, the permanent obstruction lights may be installed and operated at each required level as construction progresses.

**§17.47 Inspection of tower lights and associated control equipment.** The licensee of any radio station which has an antenna structure requiring illumination pursuant to the provisions of section 303(q) of the Communications Act of 1934, as amended, as outlined elsewhere in this part:

(a)(1) Shall make an observation of the tower lights at least once each 24 hours either visually or by observing an automatic properly maintained indicator designed to register any failure of such lights, to insure that all such lights are functioning properly as required; or alternatively.

(2) Shall provide and properly maintain an automatic alarm system designed to detect any failure of such lights and to provide indication of such failure to the licensee.

(b) Shall inspect at intervals not to exceed 3 months all automatic or mechanical control devices, indicators, and alarm systems associated with the tower lighting to insure that such apparatus is functioning properly.

**§17.48 Notification of extinguishment or improper functioning of lights.** The licensee of any radio station which has an antenna structure requiring illumination pursuant to the provisions of section 303(q) of the Communications Act of 1934, as amended, as outlined elsewhere in this part:

(a) Shall report immediately by telephone or telegraph to the nearest Flight Service Station or Office of the Federal Aviation Administration any observed or otherwise known extinguishment or improper function of any top steady burning light or any flashing obstruction light, regardless of its position on the antenna structure, not corrected within 30 minutes. Such reports shall set forth the condition of the lights or lights, the circumstances which caused the failure, and the probable date for restoration of service. Further notification by telephone or telegraph shall be given

immediately upon resumption of normal operation of the light or lights.

(b) An extinguishment or improper functioning of a steady burning side or intermediate light or lights, shall be corrected as soon as possible, but notification to the FAA of such extinguishment or improper functioning is not required.

17.49 Recording of tower light inspections in the station records. The licensee of any radio station which has an antenna structure requiring illumination must make the following entries in the station records in the event of any observed or otherwise known extinguishment or improper functioning of a tower light:

(a) The nature of such extinguishment or improper functioning.

(b) The date and time the extinguishment or improper operation was observed or otherwise noted.

(c) The date, time and nature of adjustments, repairs or replacements made.

§17.50 Cleaning and repainting. All towers shall be cleaned or repainted as often as necessary to maintain good visibility.

17.51 Time when lights should be exhibited. (a) All red obstruction lighting shall be exhibited from sunset to sunrise unless otherwise specified.

(b) All high intensity obstruction lighting shall be exhibited continuously unless otherwise specified.

17.53 Lighting equipment and paint. The lighting equipment, color of filters, and shade of paint referred to in the specifications are further defined in the following government and/or Army-Navy Aeronautical Specifications, Bulletins, and Drawings:

(Lamps are referred to by standard numbers).

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Outside White .....	TT-P-102 <sup>1</sup> (Color No. 17875, FS-595).
Aviation Surface Orange .....	TT-P-59 <sup>1</sup> (Color No. 12197, FS-595).
Aviation Surface Orange, Enamel ....	TT-E-489 <sup>1</sup> (Color No. 12197, FS-595).
Aviation Red Obstruction Light--	
Color .....	MIL-C-25050 <sup>2</sup> .
Flashing Beacons .....	CAA-446 <sup>3</sup> Code Beacons, 300 mm.
DO .....	MIL-6273 <sup>2</sup> .
Double and Single Obstruction Light.	L-810 <sup>3</sup> (FAA AC No. 150/5345-2 <sup>4</sup> ).
DO .....	MIL-L-7830 <sup>2</sup> .
High Intensity White Obstruction	
Light .....	FAA/DOD L-856 (FAA AC No. 150/5345-43B <sup>4</sup> ).
116 Watt Lamp .....	No. 116 A21/TS (6,000 h).
125 Watt Lamp .....	No. 125 A21/TS (6,000 h).
620 Watt Lamp .....	No. 620 PS-40 (3,000 h).
700 Watt Lamp .....	No. 700 PS-40 (6,000 h).

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<sup>1</sup>Copies of this specification can be obtained from the Specification Activity Building 197, Room 301, Naval Weapons Plant, 1st and N Streets, S.E., Washington, D.C. 20407.

<sup>2</sup>Copies of Military specifications can be obtained by contacting the Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Attention: NPPC-105, Philadelphia, Pa., 19120.

<sup>3</sup>Copies of Federal Aviation Administration specifications may be obtained from the Chief, Configuration Control Branch, AAF-110, Department of Transportation, Federal Aviation Administration, 800 Independence Avenue, S.W., Washington, D.C. 20591.

<sup>4</sup>Copies of Federal Aviation Administration advisory circulars may be obtained from the Department of Transportation, Publications Section, TAD-443.1, 400 7th St., S.W., Washington, D.C., 20590.

17.54 Rated lamp voltage. To insure the necessary lumen output by obstruction lights, the rated voltage of incandescent lamps used shall correspond to be within 3 percent higher than the voltage across the lamp socket during the normal hours of operation.

17.56 Maintenance of lighting equipment. (a) Replacing or repairing of lights, automatic indicators or automatic control or alarm systems shall be accomplished as soon as practicable.

(b) The flash tubes in a high intensity obstruction lighting system shall be replaced whenever the peak effective daytime intensity falls below 200,000 candelas.

§17.57 Report of radio transmitting antenna construction, alteration, and/or removal. Any permittee or licensee who, pursuant to any instrument of authorization from the Commission to erect or make changes affecting antenna height or location of an antenna tower for which obstruction marking or lighting is required shall, prior to start of tower construction and upon completion of such construction or changes, fill out and file with the Aeronautical chart Division of the National Ocean Survey, NOAA Form 76-10 (Report of Radio Transmitting Antenna Construction, Alteration and/or Removal) in order that antenna tower information may be provided promptly for use on aeronautical charts and related publications in the interest of safety in air navigation.

§17.58 Facilities to be located on land under the jurisdiction of the U.S. Forest Service or the Bureau of Land Management. Any application proposing new or modified transmitting facilities to be located on land under the jurisdiction of the U.S. Forest Service or the Bureau of Land Management shall include a statement that the facilities will be so located, and the applicant shall comply with the requirements of 1.70 of this chapter.

PART 73 AM

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AM TECHNICAL STANDARDS

(See under AM STANDARDS)

73.1 Scope. This subpart contains those rules which apply exclusively to the AM broadcast service and are in addition to those rules in Subpart H which are common to all AM, FM and TV broadcast services, commercial and noncommercial.

73.14 AM broadcast definitions.

AM broadcast band: The band of frequencies extending from 535 to 1605 kHz.

AM broadcast channel. The band of frequencies occupied by the carrier and the upper and lower sidebands of an AM broadcast signal with the carrier frequency at the center. Channels are designated by their assigned carrier frequencies. The 107 carrier frequencies assigned to AM broadcast stations begin at 540 kHz and are in successive steps of 10 kHz to 1600 kHz.

NOTE: See 73.21 for the classification of AM broadcast channels.

AM Broadcast station. A broadcast station licensed for the dissemination of radio communications intended to be received by the public and operated on a channel in the band 535-1605 kilohertz (kHz). The term "AM broadcast" is synonymous with the term "standard broadcast" as may appear elsewhere in this Chapter.

Amplitude modulated Stage. The radio-frequency stage to which the modulator is coupled and in which the carrier wave is modulated in accordance with the system of amplitude modulation and the characteristics of the modulating wave.

Amplitude modulator stage. The last amplifier stage of the modulating wave amplitude modulates a radio-frequency stage.

Antenna current. The radio-frequency current in the antenna with no modulation.

Antenna input power. The product of the square of the antenna current and the antenna resistance at the point where the current is measured.

Antenna resistance. The total resistance of the transmitting antenna system at the operating frequency and at the point at which the antenna current is measure.

Blanketing. The interference which is caused by the presence of an AM broadcast signal of one volt per meter (V/m) or greater intensity in the area adjacent to the antenna of the transmitting station. The 1 V/m contour is referred to as the blanket contour and the area within this contour is referred to as the blanket area.

Carrier-amplitude regulation; (Carrier shift). The change in amplitude of the carrier wave in an amplitude-modulated transmitter when modulation is applied under conditions of symmetrical modulation.

Combined audio harmonics. The arithmetical sum of the amplitudes of all the separate harmonic components. Root sum square harmonic readings may be accepted under conditions prescribed by the FCC.

Critical directional antenna. An AM broadcast directional antenna that is required, by the terms of a station authorization, to be operated with the relative currents and phases within the antenna elements at closer tolerance of deviation than those permitted under 73.62 and observed with a high precision monitor capable of measuring these parameters.

Critical hours. The two hour period immediately following local sunrise and the two hour period immediately preceding local sunset.

Daytime. The period of time between local sunrise and local sunset.

Dominant station. A Class I station, as defined in 73.21

Effective field; Effective field strength. The root-mean-square (RMS) value of the inverse distance fields at a distance of 1 kilometer from the antenna in all directions in the horizontal plane. The term "field strength" is synonymous with the term "field intensity" as contained elsewhere in this Part.

Equipment performance measurements. The measurements performed to determine the overall performance characteristics of a broadcast transmission system from point of program origination at main studio to sampling of signal as radiated. (See 73.1590).

Experimental period. The time between 12 midnight local time and local sunrise, used by AM stations for tests, maintenance and experimentation.

Frequency departure. The amount of variation of a carrier frequency or center frequency from its assigned value.

Incidental phase modulation. The peak phase deviation (in radians) resulting from the process of amplitude modulation.

Incidental phase modulation. The peak phase deviation (in radians) resulting from the process of amplitude modulation.

Input power: Means the product of the direct voltage applied to the last radio stage and the total direct current flowing to the last radio stage, measured without modulation.

Intermittent service area. Means the area receiving service from the ground-wave of a broadcast station but beyond the primary service area and subject to some interference and fading.

Last radio stage. The radio-frequency power amplifier stage which supplies power to the antenna.

Left (or right) signal. The electrical output of a microphone or combination of microphones placed so as to convey the intensity, time, and location of sounds originated predominately to the listeners' left (or right) of the center of the performing area.

Left (or right) stereophonic channel. The left (or right) signal as electrically reproduced in reception of AM stereophonic broadcasts.

Main channel. The band of audio frequencies from 50 to 15,000 Hz which amplitude modulates the carrier.

Maximum percentage of modulation. The greatest percentage of modulation that may be obtained by a transmitter without producing in its output harmonics of the modulating frequency in excess of those permitted by these regulations.

Maximum rated carrier power. The maximum power at which the transmitter can be operated satisfactorily and is determined by the design of the transmitter and the type and number of vacuum tubes or other amplifier devices used in the last radio stage.

Nighttime. The period of time between local sunset and local sunrise.

Nominal power. The power of an AM broadcast station, as specified in a system of classifications which includes the following values: 50kW, 25kW, 10kW, 5kW, 2.5kW, 1kW, 0.5kW, and 0.25kW.

Nominal power. The antenna input power less any power loss through a dissipative network and for directional antennas, without consideration of adjustments specified in paragraphs (b)(1) and (b)(2) of §73.51 of the rules. However, for AM broadcast applications granted or filed before June 3, 1983 nominal power is specified in a system of classifications which include the following values: 50kW, 25kW, 10kW, 5kW, 2.5kW, 1kW, 0.5kW and 0.25kW. The specified nominal power for any station in this group of stations will be retained until action is taken on or after June 3, 1985, which involves a change in the technical facilities of the station.

Percentage modulation amplitude: In a positive direction:

$$M = \frac{\text{MAX} - C}{C} \times 100$$

In a negative direction:

$$M = \frac{C - \text{MIN}}{C} \times 100$$

Where:

M = Modulation level in percent.

MAX = Instantaneous maximum level of the modulated radio frequency envelope.

MIN = Instantaneous minimum level of the modulated radio frequency envelope.

C = (Carrier) level of radio frequency envelope without modulation.

Plate modulation. The modulation produced by introduction of the modulating wave into the plate circuit of any tube in which the carrier frequency wave is present.

Primary service area. Means the service area of a broadcast station in which the groundwave is not subject to objectionable interference or objectional fading.

Proof of performance measurements or antenna proof of performance measurements. The measurements of field strengths made to determine the radiation pattern or characteristics of an AM directional antenna system.

Secondary service area. Means the service area of a broadcast station served by the skywave and not subject to objectionable interference and in which the signal is subject to intermittent variations in strength.

Secondary AM station. Any AM station, except a Class I station operating on a Class I frequency.

Stereophonic channel. The band of audio frequencies from 50 to 15,000 Hz containing the stereophonic information which modulates the radio frequency carrier.

Stereophonic crosstalk. An undesired signal occurring in the main channel from modulation of the stereophonic channel or that occurring in the stereophonic channel from modulation of the main channel.

Stereophonic pilot tone. An audio tone of fixed or variable frequency modulating the carrier during the transmission of stereophonic programs.

Stereophonic separation. The ratio of the electrical signal caused in the right (or left) stereophonic channel to the electrical signal caused in the left (or right) stereophonic channel by the transmission of only a right (or left) signal.

Sunrise and sunset. For each particular location and during any particular month, the time of sunrise and sunset as specified in the instrument of authorization (see 73.1209).

"White area". The area or population which does not receive interference-free primary service from an authorized AM station or does not receive a signal strength of at least 1 mV/m from an authorized FM station.

73.15 NARBA and U.S./Mexican Agreement. See 73.1650.

(i) Class 11-a station. A class 11-A station is a unlimited time Class 11 station operating on one of the clear channels listed in 73.22 and assigned to a community within a state specified in the Table contained in that section. A Class 11-A station shall operate with power or not less than 10 kilowatts nighttime nor more than 50 kilowatts at any time.

(ii) Class II-B station. A Class II-B station is an unlimited time Class II station other than those included in Class II-A.

(A) Except as subparagraphs (B) and (C) provide otherwise, a Class II-B station shall operate with power not less than 0.25 kW nor more than 50 kW.

(B) Class II-B station authorized before June 1, 1980, to operate on any of the 25 Class I channels listed in Section 73.25(a) shall operate with the powers authorized as of June 1, 1980, or such other power as the Commission may subsequently authorize.

(C) The nighttime power of Class II-B stations which are authorized after June 1, 1980, to operate in any of the contiguous 48 states on any of the Class I channels listed in Section 73.25(a), and which meet the requirements for primary service set out in Section 73.37(e)(2)(i), shall not exceed 1kW.

(D) Class II-B stations which are authorized after June 1, 1980, to operate in any of the contiguous 48 states on any of the class I channels listed in section 73.25(a) and which meet the requirements for service set out in section 73.37(e)(2)(i), shall operate with power not less than 250 watts nor more than 50 kW.

NOTE: The Class II station operating unlimited time on 760 kc at San Diego, Calif., shall be limited to a power of 5 kw and the Class II station operating unlimited time on 750 kc at Anchorage, Alaska, shall be limited to a power of 10 kw. Both stations shall protect the 1-A station on the same frequency to its 0.5 mv/m 50 percent skywave contour.

(iii) Class 11-D station. - A Class 11-D station is a Class 11 station operating daytime or limited time. A Class 11-D station shall operate with power not less than 0.25 kilowatts nor more than 50 kilowatts.

(b) Regional Channel. A regional channel is one on which several stations may operate with powers set out in subparagraphs (1) and (2) of this paragraph. The service area of a station operating on a regional channel may be limited to a given field strength contour as a result of interference.

(1) Class III stations. A class III station operates on a regional channel and is designed to render service primarily to a principal center of population and the rural area contiguous thereto. Except as provided in paragraph (b)(2) of this section, a Class III station operates with a power not less than 0.5kW and not more than 5 kW.

(2) Class 111 stations in alaska, Hawaii, Puerto Rico and the U.S. Virgin Islands are permitted a maximum power of 50kW day or night. Use of such higher power is subject to amendment of the U.S./Mexican Agreement and final disposition of NARBA. Pending such amendment, the maximum power permitted stations in these localities may not exceed 5kW in accordance with the maximum power permitted by NARBA.

(c) Local channel. A local channel is one on which several stations operate unlimited time with powers no greater than provided in this paragraph. The primary service area of a station operating on a local channel may be reduced as a consequence of interference. Such stations operate with power no greater than 1 kW daytime or nighttime.

(1) Class IV station. A class IV station is a station operating on a local channel and designed to render service primarily to a community and the suburban and rural areas contiguous thereto. The power of a station of this class shall not be less than 0.25kW, nor more than 1kW and its primary service area is subject to interference in accordance with 73.182. Stations which are licensed to operate with 0.1kW may continue to do so.

Note 1 Under NARBA, the power for Class IV stations is 0.25kW daytime as well as nighttime. The U.S./Canadian Agreement and U.S./Mexican Agreement permit such stations to operate with power not in excess of 1kW daytime. Pursuant to these Agreements and informal coordination with the NARBA signatories, the Commission will consider applications for Class IV stations on local channels which daytime powers in excess of 0.25kW, up to 1kW, if no objectionable interference would be caused (under the standards set forth in the pertinent international agreement) to a duly notified station in Canada, Mexico, or any foreign country signatory to NARBA.

Note 2 Class IV stations located within 100 kilometers (62 miles) of the Mexican border and presently authorized to operate with a daytime power of less than 1 kW, may file applications to increase their daytime and/or nighttime power to 1 kW. However, such applications will be granted only after coordination with Mexico, pursuant to the U.S./Mexican Agreement.

NOTE 3: All authorizations of new or changed Class I-B, Class II-B, Class II-D, Class III, or Class IV facilities after October 30, 1961, are subject to whatever interference may be received from, or whatever overlap of 2.0 mv/m and 25 mv/m groundwave contours or overlap of 25 mv/m groundwave contours may be involved with, previously or subsequently authorized Class II-A facilities.

Note 4 The following table indicates the international classes of AM broadcasting stations with which the domestic classes of stations set out in the previous paragraphs of this section correspond:

INTERNATIONAL AND DOMESTIC CLASSIFICATIONS OF STATIONS AND CHANNELS

International classes of AM stations	Corresponding U.S. classes of AM stations	Classes of Channels available in U.S. for each class of station
Class A.....	I-A I-B I-N	Clear channels. Do. Do.
Class B.....	II II-A II-B II-C II-D II-S	Do. Do. Do. Do. Do. Do.
Class C.....	III IV	Regional channels. Local channels.

§73.22(a) - 73.23

§73.22 Assignment of Class 11-A stations. - (a) Table of assignments. One Class 11-A/ station may be assigned on each channel listed in the following table within the designated State or States:

Channel (kHz)	Existing Class 1 station	State(s) in which Class 11-A assignment may be applied for
670-----	Chicago, Illinois	Idaho
720-----	Chicago, Illinois	Nevada or Idaho.
770-----	New York, N.Y.	New Mexico
780-----	Chicago, Illinois	Nevada
880-----	New York, New York	North Dakota, South Dakota, or Nebraska.
890-----	Chicago, Illinois	Utah.
1020-----	Pittsburgh, Pennsylvania	New Mexico
1030-----	Boston, Massachusetts	Wyoming.
1100-----	Cleveland, Ohio	Colorado
1120-----	St. Louis, Missouri	California or Oregon.
1180-----	Rochester, New York	Montana
1210-----	Philadelphia, Pennsylvania	Kansas, Nebraska, or Oklahoma.

(b) Minimum service to "White" areas. - No Class 11-A station shall be assigned unless at least 25 percent of its nighttime interference-free service area or at least 25 percent of the population residing therein receives no other interference-free nighttime primary service.

(c) Power. - Class 11-A stations shall operate with not less than 10 kw power nighttime.

(d) Protection - (1) Protection by Class 11-A stations to other stations.  
 The co-channel class 1-A station shall be protected by the Class 11-A station to its 0.1 mv/m contour daytime and its 0.5 mv/m 50 percent skywave contour nighttime. A co-channel Class I-N station shall be protected to its 0.1mVm contour daytime and its 0.1mVm 50% skywave contour nighttime. The 0.1mVm ground-wave contour of a Class I-N station is to be protected in those azimuths in which the Class I-N station does not develop a 0.1mVm 50% skywave signal. All other stations of any class authorized on or before October 30, 1961, shall normally receive protection from objectionable interference from Class II-A stations as provided in 73.182.

(2) Protection to Class 11-A stations. A Class 11-A station shall normally receive daytime protection to its 0.5 mv/m groundwave contour and nighttime protection to the contour to which it is limited by the co-channel Class 1-A station.

(e) Applications not complying with this section. Applications for Class 11-A stations which do not meet the requirements of paragraphs (b) and (c) of this section will be returned without further consideration.

§73.23 Time of operation of the several classes of stations.-- See 73.1705.

**§73.24 Broadcast facilities; showing required.** An authorization for a new station standard broadcast station or increase in facilities of an existing station will be issued only after a satisfactory showing has been made in regard to the following among others:

(a) That the proposed assignment will tend to effect a fair, efficient, and equitable distribution of radio services among the several states and communities.

(b) (1) That a proposed new station (or a proposed change in the facilities of an authorized station) complies with the pertinent requirements of 73.37 of this chapter.

**NOTE:** The provisions of 73.37 of this chapter shall not be applicable to new Class II-A stations or to stations for which applications were accepted for filing before July 13, 1964. With respect to such stations, the provisions of 73.28(d) of this chapter, and the provisions of Note 1 of 73.37 of this chapter shall apply. Special provisions concerning interference from Class II-A stations of other classes authorized after October 20, 1961, are contained in 73.22(d) of this chapter and Note 3 to 73.21 of this chapter. The level of interference shall be computed pursuant to 73.182 and 73.186 of this chapter.

(2) That a proposed change in daytime facilities (other than a change in frequency or a Class IV station increasing daytime power) does not involve overlap of contours prohibited by 73.37 with any other station in any area where there is not already such overlap between the two stations.

(3) That a proposed new nighttime operation or change in frequency of any existing nighttime operation (except Class IV stations) would (i) not cause objectionable interference to any existing station (see 73.182 (o)); and (ii) provide a first primary AM service to at least 25 percent of the area within the proposed interference-free nighttime service area or at least 25 percent of the population residing therein.

(4) That a proposed change in nighttime facilities (other than a change in frequency) would not cause objectionable interference to any other station (see 73.182) (o).

§ 73.24(c) - § 73.24(g)

(c) That the applicant is financially qualified to construct and operate the proposed station.

(d) That the applicant is legally qualified. That the applicant (or the person or persons in control of an applicant corporation or other organization) is of good character and possesses other qualifications sufficient to provide a satisfactory public service.

(e) That the technical equipment proposed, the location of the transmitter, and other technical phases of operation comply with the regulations governing the same, and the requirements of good engineering practice. (See Technical regulations of this subpart and § 73.188.)

(f) That the facilities sought are subject to assignments as requested under existing international agreements and the rules and regulations of the Commission.

(g) That the population within the 1 v/m contour does not exceed 1.0 percent of the population within the 25 mv/m contour: Provided, however, That where the number of persons within the 1 v/m contour is 300 or less the provisions of this subparagraph are not applicable.

§ 73.24 (b) - 73.25 (a) (2) (iii)

(h) That, in the case of an application for a Class II station, the proposed station would radiate, during two hours following local sunrise and two hours preceding local sunset, in any direction toward the 0.1 mV/m groundwave contour of a co-channel United States Class I-A or I-B station no more than the maximum radiation values permitted under the provisions of 73.187.

(i) That, in the case of an application for a Class II-A (See 73.22), 25 percent or more of the area or population within the nighttime interference free primary service from another station.

(j) That the 5 mV/m contour (or, at night, the interference-free contour, if of a higher field strength) encompasses the entire principal community to be served. For Class II-C and II-S stations on the 14 frequencies listed in 73.25(c) it is not necessary to demonstrate the ability to provide such coverage during nighttime operation.

(k) That the public interest, convenience, and necessity will be served through the operation under the proposed assignment.

§ 73.25 Clear Channels; Classes I and II stations. (a) On each of the following channels, one Class I station will be assigned, operating with power of 50 kW: 640, 650, 660, 670, 700, 720, 750, 760, 770, 780, 820, 830, 840, 870, 880, 890, 1020, 1030, 1040, 1100, 1120, 1160, 1180, 1200, and 1210 kHz. In Alaska, these frequencies can be used by Class I-M stations subject to the conditions set forth in 73.182(a)(i)(iii). In addition, on the channels listed in this paragraph, Class II stations may be assigned as follows:

(1) On 670, 720, 770, 780, 880, 890, 1020, 1030, 1100, 1120, 1180, and 1210 kHz, one Class II-A unlimited time station, assigned and located pursuant to the provisions of Section 73.22, and

(2) On any of the 25 channels listed at the beginning of this paragraph:

(i) the unlimited time, limited time, daytime-only, specified hours, and time-sharing Class II stations authorized prior to June 1, 1980, to operate on those channels; and

(ii) additional unlimited time Class II-B stations authorized after June 1, 1980.

(iii) Additional daytime-only class II stations whose transmitter sites are located inside the 0.5mV/m 50% nighttime contour of the respective co-channel Class I-A stations.

Note 1 See NARBA concerning priority for Canadian Class I-B and Cuban Class I-C assignments on 640 kHz.

Note 2 See the U.S./Mexican Agreement concerning Mexican use of 660, 760, 830, 1020, 1030, and 1180 kHz.

(b) To each of the following channels there may be assigned Class I and Class II stations: 680, 710, 810, 850, 940, 1000, 1060, 1070, 1080, 1090, 1110, 1130, 1140, 1170, 1190, 1500, 1510, 1520, 1530, 1540, 1550, and 1560 kHz.

NOTE. Class I and Class II stations on 1540 kHz shall deliver not over 10 percent time skywave at any point of land in the Bahama Islands, and such stations operating nighttime (i.e. sunset to sunrise at the location of the Class II station) shall be located not less than 650 miles from the nearest point of land in the Bahama Islands.

(c) For Class II stations which will not deliver over 5 microvolts per meter groundwave or 25 microvolts per meter 10 percent time skywave at any point on the Canadian border, and provided that such stations operating nighttime (i.e., sunset to sunrise at the location of the Class II station) are located not less than 650 miles from the nearest point on the Canadian border, 690, 740, 860, 990, 1010, and 1580 kHz.

NOTE. See NARBA concerning priority for Cuban Class I-B assignment on 1010 kHz, Class I-C assignments on 690 and 860 kHz and Class I-D assignment on 740 kHz.

(d) The frequencies 730, 800, 900, 1050, 1220, and 1570 kHz for Class II stations which operate daytime only, which will not deliver at any point on the Mexican border over 5 microvolts per meter groundwave, and which operate with no more than the following powers:

(1) If not located within the areas specified in subparagraph (2) of this paragraph, 5 kilowatts.

(2) If operating on any of the following frequencies within the following specified area, no more than one kilowatt:

(i) 800 kHz: less than 1319 kilometers (820 mi.) from Ciudad, Juarez, Chihuahua.

(ii) 1050 kHz: less than 998 kilometers (620 mi.) from Monterey, Nuevo, Leon, Coahuila.

NOTE. See the U.S./Mexican Agreement concerning specific U.S. unlimited time Class II assignments on each of the following channels: 730, 800, 900, 1050, and 1220 kHz.

(e) The frequency 540 kilocycles, for Class 11 stations which will not deliver a signal of more than 5 microvolts per meter groundwave or 25 microvolts per meter 10 percent skywave at any point on the Canadian border, nor more than 10 microvolts per meter daytime or 50 microvolts per meter nighttime at any point on the Mexican border: Provided, That stations operating at night shall be located:

- (1) Within the continental United States including Alaska; and
- (2) Not less than 650 miles from the nearest point on the Canadian border; and
- (3) North of the parallel 33° N. if west of the meridian 93°W., or north of the parallel 30°N. if east of said meridian.

Note: See U.S./Mexican Agreement concerning a specific U.S. Unlimited time assignment on this channel.

Note 2: See §2.106 of this chapter with respect to use of 540 kc/s.

**73.26 Regional channels; Class III Stations.** (a) The following frequencies are designated as regional channels and are assigned for use by Class III stations: 550, 560, 570, 580, 590, 610, 620, 630, 790, 910, 920, 930, 950, 960, 970, 980, 1150, 1250, 1260, 1280, 1290, 1300, 1310, 1320, 1330, 1350, 1360, 1370, 1380, 1390, 1410, 1420, 1430, 1440, 1460, 1470, 1480, 1590 and 1600kHz.

(b) Additionally, in Alaska, Hawaii, Puerto Rico and the U.S. Virgin Islands the frequencies 1230, 1240, 1340, 1400, 1450 and 1490kHz are designated as Regional channels and are assigned for use by Class III stations. Stations formerly licensed to these channels in those locations as Class IV stations are redesignated as Class III stations.

**73.27 Local channels; Class IV Stations.** Within the conterminous 48 states, the following frequencies are designated as local channels, and are assigned for use there by Class IV stations: 1230, 1240, 1340, 1400, 1450 and 1490kHz.

**§73.28 Assignment of stations to channels.** (a) With respect to applications for new Class II-A stations, and other applications accepted for filing before July 13, 1964, the individual assignments of stations to channels which may cause interference to other United States stations only shall be made in accordance with the provisions of this part for the respective classes of stations involved. (For determining objectionable interference, see §§73.22, and 73.182 through 73.186.

(b) Except as provided in §73.21(c) concerning Class IV stations, no assignment of a standard broadcast station will be made which would be inconsistent with the provisions of NARBA or the U.S./Mexican Agreement. Similarly, as long as protection for U.S. assignments from Haitian assignments continues no U.S. assignment of a standard broadcast station will be made which would cause objectionable interference (under the standards set forth in NARBA) to a duly notified Haitian station. (The Haitian stations considered to be duly notified are those notified and accepted in accordance with past agreements, and those subsequently notified in accordance with the procedures and understandings which have pertained thus far.) In all cases where an individual assignment may cause interference with, or may involve a channel assigned for priority of use by, a station in another North American country, the classifications, allocation requirements, and engineering standards set forth in NARBA and the U.S./Mexican Agreement shall be observed.

NOTE: (a) In general, an application for a standard broadcast station assignment, the grant of which would be consistent with the provisions of NARBA and the U.S./Mexican Agreement and would not cause objectionable interference to a duly notified station in Haiti, will be considered and acted upon by the Commission in accordance with its rules and established procedure for action upon such applications. However, in particular cases such applications may also present considerations of an international nature which require that a different procedure be followed. In such cases the procedure to be followed will be determined by the Commission in the light of the special considerations involved.

(b) With respect to applications for facilities which would involve conflict with NARBA only as to a country which has signed but not completed formal ratification of that agreement, and facilities which would cause objectionable interference to a duly notified Haitian station, special provisions of a procedural nature are contained in § 1.570 of this chapter.

(c) Engineering standards now in force domestically differ in some respects from those specified for international purposes. The engineering standards specified for international purposes (see 73.1650, International Agreements) will be used to determine (1) The extent to which interference might be caused by a proposed station in the United States to a station in another country; and (2) whether the United States should register an objection to any new or changed assignment notified by another country. The domestic standards in effect in the United States will be used to determine the extent to which interference exists or would exist from a foreign station where the value of such interference enters into a calculation of: (i) The service to be rendered by a proposed operation in the United States; or (ii) the permissible interfering signal from one station in the United States to another United States station.

§ 73.29 Class IV stations on regional channels. No license will be granted for the operation of a Class IV station on a regional channel: provided, however, that class IV stations presently authorized to operate on regional channels will not be required to change frequency, or power but will not be protected against interference from Class III stations.

Frequency Separation	Contour of proposed new station (Classes II-B, II-D, III and IV) mv/m	Contour of any other station
Co--Channel	0.005	0.1 mv/m Class I
	0.025	0.5 mv/m (other Classes)
	0.5	0.025 mv/m (All classes)
10 kHz	0.5	0.5 mv/m (all classes)
20 kHz	2	25 mv/m (All classes)
	25	2 mv/m (all classes)
30 kHz	25	25 mv/m (All classes)

(b) An application for a new daytime station or a change in the daytime facilities of an existing station may be granted notwithstanding overlap of the proposed 0.5mV/m contour and the 0.025mV/m contour of another cochannel station, where the applicant station is or would be the first AM broadcast facility in a community of any size wholly outside of an urbanized area or the first AM broadcast facility in a community of 25,000 or more population wholly or partly within an urbanized area (for the purpose of this rule, urbanized area refers to such areas listed by the latest Census provided they also contain and incorporated place of at least 50,000 population) or when the facilities proposed would provide a first primary service to at least 25 percent of the interference-free area within the proposed 0.5mV/m contour, provided that:

(1) The proposal complies with paragraph (a) of this section in all other respects and is consistent with all other provisions of this part: and

(2) No overlap would occur between and 1 mv/m contour of the proposed facilities and the 0.05 mv/m contour of any co-channel station.

(c) In determining overlap received, an application for a new Class IV station with daytime power of 250 watts, or greater, shall be considered on the assumption that both the proposed operation and all existing Class IV stations operate with 250 watts and utilize non-directional antennas. With respect to applications for new Class IV facilities, the proposals and provisions of paragraph (b) of this section shall be applied using the assumption mentioned in this paragraph for determining overlap received.

(d) If other wise consistent with the public interest and subject to section 316 of the Communications Act, an application requesting in increase in the daytime power of an existing Class IV station on a local channel from 250 watts to a maximum of one kilowatt, or from 100 watts to a maximum of 500 watts, may be granted notwithstanding overlap prohibited by paragraph (a) of this section. In the case of a 100 watt Class IV station increasing daytime power, the provisions of this paragraph shall not be construed to permit an increase in power to more than 500 watts, if prohibited overlap would be involved, even if successive applications should be tendered.

(e) In addition to demonstration of compliance with the requirements of paragraph (a), and, as appropriate, paragraphs (b), (c) and (d) of this section, an application for a new AM broadcast station, or for a major change (see §73.3571(a)(1) of this chapter) in an authorized AM broadcast station, as a condition for its acceptance, shall make a satisfactory showing, if new or modified nighttime operation by a Class II or Class III station is proposed, that objectionable interference will not result to any authorized station, as determined pursuant to §73.182(o).

(1) An application for a new daytime station:

(i) That at least 25 percent of area or population which would receive interference-free primary service from the proposed station does not receive such service from an authorized standard broadcast station, or receive service from an authorized FM broadcast station with a signal strength of 1 mV/m or greater, or

(ii) That the proposed station would provide the community designated in the application with a first or second authorized aural transmission service, and that no FM channel is available for use in that com-

(2) Application for a new unlimited-time station or for nighttime facilities by an authorized daytime station or for a major change in facilities resulting in operation on one of the 25 Class I channels listed in 73.25(a) by any authorized station:

(i) That at least 25 percent of the area or population which would receive interference-free primary service at night from the proposed station does not receive such service from an authorized standard broadcast station or service from an authorized FM broadcast station with a signal strength of 1 mv/m or greater, or,

(ii) That the proposed station would provide the community designated in the application with a first or second authorized nighttime aural transmission service, and that no FM channel is available for use in that community, or,

(iii) That at least 20 percent of the area or population of the community designated in the application receives fewer than two aural services at night from authorized stations, and that no FM channel is available for use in that community, or,

(iv) That minority persons hold over 50% of the ownership interests in the applicant for a Class II-B station on one of the 25 Class I channels listed in 73.25(a), or,

(v) That the applicant proposes to operate a Class II-B station noncommercially on one of the 25 Class I channels listed in 73.25(a).

(f) Applications for new or changed facilities in the states of Alaska and Hawaii, in the Commonwealth of Puerto Rico, and in the territories of the Virgin Islands, Guam, and American Samoa will be accepted for filing only if satisfactory showings are submitted with respect to the following:

§73.30 Station location and program origination.

See 73.1120, 73.1125, 73.1130

73.31 Rounding the nominal power specified on applications. (a) An application filed with the FCC for a new station or for an increase in power of an existing station shall specify nominal power rounded to two significant figures as follows:

Nominal power (kW)	Rounded to nearest figure (kW)
0.25 to 0.99 .....	0.01
1 to 9.9 .....	0.1
10 to 50 .....	1

(b) In rounding the nominal power in accordance with paragraph (a) of this section the RMS shall be adjusted accordingly. If rounding upward to the nearest figure would result in objectionable interference, the nominal power specified on the application is to be rounded downward to the next nearest figure and the RMS adjusted accordingly.

§73.32 Special experimental authorizations.

See 73.1510 and 73.1520

§73.33 Antenna systems; showing required. (a) An application for authority to install a broadcast antenna shall specify a definite site and include full details of the antenna design and expected performance.

(b) All data necessary to show compliance with the terms and conditions of the construction permit must be filed with the license application. If the station is using a directional antenna, a proof of performance must also be filed.

73.37 Applications, for broadcast facilities, showing required. (a) Except as indicated in other paragraphs, and except for Class II-A, no application will be accepted for a new station (or change in frequency) if the proposed station operation would involve overlap of signal strength contours with any other station as set forth below in this paragraph; and no application will be accepted for a change (other than change in frequency) of the facilities of an existing station (including the daytime facilities of an existing Class II-A station, if the proposed change would involve such overlap in any area where there is not already such overlap between station involved.

(1) The proposed operation complies with the requirements of paragraphs (a) (b) (c) and (d) of this section.

(2) Unlimited time operation, by other than a Class IV facility, will not cause objectionable skywave interference at night to an existing station, pursuant to 73.182(o). In addition, each proposal for unlimited time operation (including Class IV proposals) shall meet at least one of the following conditions:

(i) Not more than 10 percent of the population included within the normally protected nighttime contour would receive objectionable interference.

(ii) The proposed operation would be the first standard broadcast facility assigned to the community which would provide nighttime service.

(iii) For a proposed new station, that at least 25 percent of the area or population included within the nighttime interference-free primary service contour is without nighttime primary standard broadcast service or, for a proposed change in the nighttime facilities of an authorized station, that at least 25 percent of the area or population which would receive interference-free nighttime primary service from the station for the first time as a result of the change in facilities is without nighttime primary standard broadcast service.

**NOTE 1:** The foregoing provisions of this section shall not be applied to applications for new Class II-A stations or to applications accepted for filing before July 1, 1964. With respect to such applications, the following shall apply: An authorization will not be granted for a station on a frequency of  $\pm 30$  kc/s from that of another station if the area enclosed by the 25 mc/m groundwave contours of the two stations overlap, nor will an authorization be granted for the operation of a station on a frequency  $\pm 20$  kc/s or  $\pm 10$  kc/s from the frequency of another station if the area enclosed by the 25 mv/m from the frequency of another station if the area enclosed by the 25 mv/m groundwave contour of either one overlaps the area enclosed by the 2 mv/m groundwave contour of the other. (As to overlap with Class II-A stations, see 73.21, NOTE 3).

**NOTE 2:** In the case of applications for changes (other than frequency) in the facilities of the standard broadcast stations covered by this section, an application therefor will be accepted even though overlap of signal contours as mentioned in this section would occur with another station in an area where such overlap does not already exist, if: (1) The total area of overlap with any other station would not be increased; (2) There would be no net increase in the area overlap with any other station; and (3) there would be created no area of overlap with any station with which overlap does not now exist.

**NOTE 3:** The provisions of this section concerning prohibited overlap of signal strength contours will not apply where: (1) the area of overlap lies entirely over sea water; or (2) the only overlap involved would be that caused to a foreign station, in which case the provisions of the applicable international agreement, as identified in 73.1650, will apply. When overlap would be received from a foreign station, the provisions of this section will apply, except where there would be overlap with a foreign station with a frequency separation of 20 kHz. In the latter case the provisions of the international agreement will apply in lieu of this section.

**NOTE 4:** All applications for new stations, or for major changes in existing stations tendered for filing after July 18, 1968, for facilities in the conterminous United States, shall be subject to the provisions of paragraph (e) of this section, or for facilities in the States of Alaska and Hawaii, the Commonwealth of Puerto Rico and the territories of the Virgin Islands, Guam, and American Samoa, shall be subject to the provisions of paragraph (f) of this section.

**Note 5:** Where an application for a new unlimited time station proposes to provide a first or second nighttime aural transmission service to the community designated in the application and daytime operation of the station would result in the provision of more than two aural transmission services for that community during daytime hours, the latter fact does not render the application unacceptable for filing.

**NOTE 6:** No FM channel is available for use in the community (see paragraphs (e)(1)(ii) and (e)(2)(ii) of this section) if no channel is assigned to the community for commercial use in the FM Table of assignments (73.202(b)) as amended by Commission action as of the date the application is tendered or, if assigned, is occupied by an authorized facility and no unoccupied channel can be utilized to serve the community pursuant to 73.203(b). For the purpose of determining the availability of a newly designed FM channel when the Commission has recently amended the FM Table of Assignments, the governing date shall be that on which the Report and Order amending the Table is published in the Federal Register.

**NOTE 7:** Where a standard broadcast station and an FM broadcast station authorized to the same community are commonly owned, these stations shall be considered as providing a single aural transmission service to that community for the purpose of determining the acceptability of applications pursuant to (e)(1)(ii) and (e)(2)(ii). Noncommercial educational FM stations and standard broadcast stations authorized to the community shall not be included in this determination.

**NOTE 8:** In determining the number of "authorized" aural transmission facilities in a given community applications for that community in hearing or otherwise having protected status under specified "cut-off" procedures shall be considered as existing stations. In the event that there are two or more mutually exclusive protected applications seeking authorizations for the proposed community it will be assumed that only one is "authorized".

**NOTE 9:** A "transmission facility" for a community is a station licensed to the community. Such a station provides a "transmission service" for that community.

**Note 10:** Where the term "aural service" is used in paragraph (e)(1)(iii) and (e)(2)(iii), it is intended to mean interference-free groundwave service provided by a commercial AM broadcast station with a field strength of 5 mV/m or higher, or service provided by a commercial FM broadcast station with a field strength of 3.16 mV/m (70 dBu) or higher. Stations whose transmitter sites are located more than 80.47 kilometers (50 miles) from the nearest boundary of the community designated in the application shall be excluded from consideration in determining the existence of such aural services.

**73.38 Limited time operation. See 73.1725.**

73.39 Indicating instruments -- specifications. See 73.1215 Subpart H.

73.41 Maximum rated carrier power: tolerance. See 73.1665.

73.42 Maximum rated carrier power; how determined. See 73.1665.

73.43 Modification of transmission systems. See 73.1690.

73.44 AM transmission system emission limitations. (a) Stations using main transmitters type accepted or notified after January 1, 1960 must meet the following emission limitations:

(1) Any emission appearing on a frequency removed from the carrier by between 15 kHz and 30 kHz inclusive, must be attenuated at least 25 DB below the level of the unmodulated carrier. Compliance with the specification will be deemed to show the occupied bandwidth to be no greater than 30 kHz.

(2) Any emission appearing on a frequency removed from the carrier by more than 30 kHz up to and including 75 kHz must be attenuated at least 35 dB below the level of the unmodulated carrier.

(3) Any emission appearing on a frequency removed from the carrier by more than 75 kHz must be attenuated at least  $43 + 10 \log_{10}$  (Power in watts) dB below the level of the unmodulated carrier, or 80 dB, whichever is the lesser attenuation.

(b) Stations using main transmitters installed or type accepted before January 1, 1960, must achieve the highest degree of compliance with the limitations specified in paragraph (a) of this section practicable with the equipment in use as of that date.

(c) Should harmful interference be caused to the reception of other broadcast or non-broadcast stations by out of band emissions, the licensee may be directed to achieve a greater degree of attenuation than specified in paragraphs (a) and (b) of this section.

(d) Measurements to determine compliance with this Section for transmitter type acceptance are to be made using signals sampled at the output terminals of the transmitter when operating into an artificial antenna of substantially zero reactance. Measurements made of the emissions of an operating station are to be made at ground level approximately 1 kilometer from the center of the antenna system. When a directional antenna is used, the carrier frequency reference field strength to be used in order of preference shall be:

(1) The measure nond-rectional field strength.

(2) The RMS field strength determined from the measured directional radiation pattern.

(3) The calculated expected field strength that would be radiated by a non-directional antenna at the station authorized power.

73.45 Antenna systems. (a) All applicants for new, additional, or different AM station facilities and all licensees requesting authority to change the transmitting system site of an existing station must specify an antenna system, the efficiency of which complies with the requirements for the class and power of station. (See 73.186 and 73.189).

(1) An application for authority to install an AM broadcast antenna must specify a definite site and include full details of the antenna system design and expected performance.

(2) All data necessary to show compliance with the terms and conditions of the construction permit must be filed with the application for the station license to cover the construction. If the station has constructed a directional antenna, a directional proof of performance must be filed. See 73.150 - 73.157.

(b) The simultaneous use of a common antenna or antenna structure by more than one AM station or by a station of any other type or service may be authorized provided:

(1) Engineering data are submitted showing that satisfactory operation of each station will be obtained without adversely affecting the operation of the other station(s).

(2) The minimum field strength for each AM station complies with 73.189(b).

(c) Should any changes be made or otherwise occur which would possibly alter the resistance of the antenna system, the licensee must commence the determination of the operating power by a method described in 73.51(a)(1) or (d). (If the changes are due to the construction of FM or TV transmitting facilities,, see 73.316 and 73.685). Upon completion of any necessary repairs or adjustments, or upon completion of authorized construction or modifications, the licensee must make a new determination of the antenna resistance using the procedures described in 73.54. Operating power should then be determined by a direct method as described in 73.51. Notification of the value of resistance of the antenna system must be filed with the FCC in Washington, D.C. as follows.

(1) Whenever the measurements show that the antenna or common point resistance differs from that shown on the station authorization by more than 2%. FCC Form 302 must be filed with the information and measurement data specified in 73.54(d).

(2) Whenever AM stations use direct reading power meters pursuant to 73.51, notification to the FCC in Washington, D. C. must be filed in accordance with 73.54(e).

(d) No AM station licensee or permittee may change the physical height of an antenna, or supporting structure, or make any changes in the antenna system which will measurably alter the radiation characteristics, except upon application to and authority from the FCC.

73.46 Standards of good engineering practice. See 73.1665 and .1670.

73.47 Equipment performance measurements. See 73.1590.

73.48 Acceptability of broadcast transmitters for licensing. See 73.1660.

73.49 AM transmission system fencing requirements. Antenna towers having radio frequency potential at the base (series fed, folded unipole and insulated base antennas) must be enclosed within effective locked fences or other enclosures. Ready access must be provided to each antenna tower base for meter reading and maintenance purpose at all times. However, individual tower fences need not be installed if the towers are contained within a protective property fence.

**TECHNICAL OPERATIONS**

**73.51 Determining operating power.** (a) Except in those circumstances described in paragraph (d) of this section, the operating power shall be determined by the direct method. The direct method consists of either:

- (1) using a suitable instrument for determining the antenna's input power directly from the RF voltage, RF current, and phase angle; or
- (2) calculating the product of the licensed antenna or common point resistance at the operating frequency (see 73.54), and the square of the indicated unmodulated antenna current at that frequency, measured at the point where the resistance has been determined.

(b) The authorized antenna input power for each station shall be equal to the nominal power for such station, with the following exceptions:

(1) For stations with nominal powers of 5 kilowatts, or less, the authorized antenna input power to directional antennas shall exceed the nominal power by 8 percent.

(2) For stations with nominal powers in excess of 5 kilowatts, the authorized antenna input power to directional antennas shall exceed the nominal power by 5.3 percent.

(3) In specific cases, it may be necessary to limit the radiated field to a level below that which would result if nominal power were delivered to the antenna. In such cases, excess power may be dissipated in the antenna feed circuit, the transmitter may be operated with power output at a level which is less than the rated carried power, or a combination of the two methods may be used, subject to the conditions given in paragraph (c) of this section.

(c) Applications for authority to operate with antenna input power which is less than nominal power and/or to employ a dissipative network in the antenna system shall be made on FCC Form 302. The technical information supplied on section II-A of this form shall be that applying to the proposed conditions of operation. In addition, the following information shall be furnished, as pertinent:

(1) For full details of any network employed for the purpose of dissipating radio frequency energy otherwise delivered to the antenna (see section 73.54).

(2) A showing that the transmitter has been type accepted or notified for operation at the proposed output level, or, in lieu thereof.

(i) A full description of the means by which transmitter output power will be reduced.

(ii) Where the proposed transmitter power output level(s) is less than 90% of nominal power, equipment performance measurements, as specified in 73.1590, conducted at each proposed power output level; in addition the measurements and observations required by 73.1590(b)(1)(i), (ii), (iii), (iv) and (v) for power output levels 10% above and 10% below the proposed output level(s), but at a modulation level of 95 to 100% only. Such measurements must demonstrate that, operating at the proposed power output level(s), the transmitter meets the performance requirements of 73.40.

(iii) A showing that, at the proposed power output level, means are provided for varying the transmitter output within a tolerance of  $\pm 10$  percent, to compensate for variations in line voltage or other factors which may affect the power output level.

(d) When it is not possible or appropriate to use the direct method of power determination due to technical reasons, the indirect method of determining operating power ( see paragraph (e) and (f) of this section) may be used on a temporary basis. A notation must be made in the station log indicating the dates of commencement and termination of measurement using the indirect method of power determination.

(e) The antenna input power is determined indirectly by applying an appropriate factor to the input power to the last radio-frequency power amplifier stage of the transmitter, using the following formula:

$$\text{Antenna input power} = E_p \times I_p \times F$$

Where:

$E_p$  = DC input voltage of final radio stage.

$I_p$  = Total DC input current of final radio stage.

F = Efficiency factor.

1. If the above formula is not appropriate for the design of the transmitter final amplifier, use a formula specified by the transmitter manufacturer with other appropriate operating parameters.

(2) The value of F applicable to each mode of operation must be determined and a record kept thereof with a notation as to its derivation. This factor is to be established by one of the methods described in paragraph (f) of this section and retained in the station records.

(f) The value of F is to be determined by one of the following procedures listed in order of preference:

(1) If the station had previously been authorized and operating by determining the antenna input power by the direct method, the factor F is the ratio of the antenna input power (determined by the direct method) to the corresponding final radio frequency power amplifier input power.

(2) If a station has not been previously in regular operation with the power authorized for the period of indirect power determination, if a new transmitter has been installed, or if, for any other reason, the determination of the factor F by the method described in (1) of this paragraph is impracticable:

(i) The factor F as shown in the transmitter manufacturer's test report, if such a test report specifies a unique value of F for the power level and frequently used; or,

(ii) If a station has been authorized to operate with antenna input power which is lower than nominal power, the factor F has the value established when such operation was authorized; or

(iii) The value determined by reference to the following table:

Factor	Method of Modulation	Maximum rated carrier Power	Class of amplifier
0.70	Plate	0.25 to 1.0 kW	
.80	Plate	2.5 kW and over	
.35	Low Level	0.25 kW and over	B
.65	Low Level	0.25 kW and over	BC 1
.35	Grid	0.25 k W and over	

<sup>1</sup> All linear amplifier operation where efficiency approaches that of class C operation

73.52 Operating power. See 73.62 and 73.1560.



73.53 Requirements for authorization of antenna monitors. (a) General requirements.

(1) Antenna monitors shall be type approved or notified by the FCC. Effective March 5, 1984, only grants of notification will be issued for antenna monitors.

(2) Notification can be obtained by following the procedures specified in Subpart J of Part 2 of the FCC Rules.

(b) An antenna monitor eligible for authorization by the FCC shall meet the following specifications:

(1) The monitor shall be designed to operate on a frequency in the band 540 to 1600 kHz.

(2) The monitor shall be capable of indicating any phase difference between two RF voltages of the same frequency over a range of from 0 to 360°.

(3) The monitor shall be capable of indicating the relative amplitude of two RF voltages.

(4) The device used to indicate phase differences shall indicate in degrees, and shall be graduated in increments of 2°, or less. If a digital indicator is provided, the smallest increment shall be 0.5°, or less.

(5) The device used to indicate relative amplitudes shall be graduated in increments which are 1 percent, or less, of the full scale value. If a digital indicator is provided, the smallest increment shall be 0.1 percent, or less, of the full scale value.

(6) The monitor shall be equipped with means, if necessary, to resolve ambiguities in indication.

(7) If the monitor is provided with more than one RF input terminal in addition to a reference input terminal, appropriate switching shall be provided in the monitor so that the signal at each of these RF inputs may be selected separately for comparison with the reference input signal.

(8) Each RF input of the monitor shall provide a termination of such characteristics that, when connected to a sampling line of an impedance specified by the manufacturer, the voltage reflection coefficient shall be 3 percent or less.

(9) The monitor, if intended for use by stations operating directional antenna systems by remote control or using extension meters to observe the monitor indications, shall be designed so that the switching functions required by subparagraph (c)(7) of this Section may be performed from a point external to the monitor and phases and amplitude indications be provided by external meters. The indications of external meters furnished by the manufacturer shall meet the specifications for accuracy and repeatability of the monitor itself and the connection of these meters to the monitor or of other indicating instruments with electrical characteristics meeting the specifications of the monitor manufacturer shall not affect adversely the performance of the monitor in any respect. The type approval or notification designations and the instruction manuals for monitors not designated for external switching of the indications as specified in this Paragraph shall clearly show that the monitors are not acceptable for use at stations using remote control for the operation of directional antennas or extension meters to read and log the monitor indications.

(10) The monitor must be accompanied by complete and correct schematic diagrams and operating instructions when submitted for type approval. When approved under notification, these materials shall be retained by the applicant and not submitted unless otherwise requested by the FCC. For the purpose of the equipment authorization, these diagrams and instructions shall be considered as part of the monitor.

(11) When an RF signal of an amplitude within a range specified by the manufacturer is applied to the reference RF input terminal of the monitor, and another RF signal of the same frequency and of equal or lower amplitude is applied to any other selected RF input terminal, indications shall be provided meeting the following specifications.

(i) The accuracy with which any difference in the phase of the applied signals is indicated shall be  $\pm$ , or better, for the signal amplitude ratios of from 2:1 to 1:1 and  $\pm 2^\circ$ , or better, for signal amplitude ratios in excess of 2:1 and up to 5:1.

(ii) The repeatability of indication of any difference in the phases of the applied signals shall be  $\pm 1^\circ$  or better.

(iii) The accuracy with which the relative amplitudes of the applied signals is indicated, over a range in which the ratio of these amplitudes is between 2:1 and 1:1 shall be  $\pm 2$  percent of the amplitude ratio, or better, and for amplitude ratios in excess of 2:1 and up to 5:1  $\pm$  percent of the ratio, or better.

(iv) The repeatability of indication of the relative amplitudes of the applied signals over a range where the ratio of these amplitudes is between 5:1 and 1:1, shall be  $\pm 2$  percent of the amplitude ratio, or better.

(v) The modulation of the RF signals by a sinusoidal wave of any frequency between 100 and 10,000 Hz, at any amplitude up to 90 percent shall cause no deviation in an indicated phase difference from its value, as determined without modulation, greater than  $\pm 0.5^\circ$ .

(12) The performance specifications set forth in paragraph (c) (13) of this section, shall be met when the monitor is operated and tested under the following conditions.

(i) After continuous operation for 1 hour, the monitor shall be calibrated and adjusted in accordance with the manufacturer's instructions.

(ii) The monitor shall be subjected to variations in ambient temperature between the limits of 10 and 40°C; external meters furnished by the manufacturer will be subjected to variations between 15 and 30°C.

(iii) Powerline supply voltage shall be varied over a range of from 10 percent below to 10 percent above the rated supply voltage.

(iv) The amplitude of the reference signal shall be varied the operating range specified by the manufacturer, and in any case over a range of maximum to minimum values of 3 to 1.

(v) The amplitude of the comparison signal shall be varied from a value which is 0.2 of the amplitude of the reference signal to a value which is equal to amplitude to the reference signal.

(vi) Accuracy shall be determined for the most adverse combination of conditions set forth above.

(vii) Repeatability shall be determined as that which may be achieved under the specified test conditions over a period of 7 days, during which no valibration or adjustment of the instrument, subsequent to the initial calibration, shall be made.

(viii) The effects of modulation of the RF signal shall be separately determined, and shall not be included in establishing values for accuracy and repeatability.

(c) A station determined to have a critical directional antenna must use an antenna monitor having high tolerance characteristics determined on an individual basis, and specified on the station authorization. Such monitors are not subject to the authorization of paragraph (a), however, they may be used only at the station for which they were specified.

73.54 Antenna resistance and reactance measurements. (a) The resistance of an omnidirectional series fed antenna is measured at either the base of the antenna without intervening coupling or tuning networks, or at the output terminals of the transmitter. The resistance of a shunt antenna may be measured at the point the radio frequency energy is transferred to the feed wire circuit or at the output terminals of the transmitter.

(b) The resistance and reactance of a directional antenna shall be measured at the point of common radiofrequency input to the directional antenna system. The following conditions shall obtain:

(1) The antenna shall be finally adjusted for the required radiation pattern.

(2) The reactance at the operating frequency and at the point of measurement shall be adjusted to zero, or as near thereto as practicable.

(c) (1) The resistance of an antenna shall be determined by the following procedure: A series of discrete measurements shall be made over a band of frequencies extending from approximately 25 kHz below the operating frequency to approximately 25 kHz above that frequency, at intervals of approximately 5 kHz. The measured values shall be plotted on a linear graph, with frequency as the abscissa and resistance as the ordinate. A smooth curve shall be drawn through the plotted values. The resistance value corresponding to the point of intersection of the curve and the ordinate representing the operating frequency of the station shall be the resistance of the antenna.

(2) For a directional antenna, the reactance of the antenna shall be determined by a procedure similar to that described in subparagraph (1) of this paragraph.

(d) Notification must be filed with the FCC in Washington, D.C. when determining power by direct method pursuant to 73.51 and must specify the antenna or common point resistance at the operating frequency. The following information must also be kept on file at the station.

(1) A full description of the method used to make measurements.

(2) A schematic diagram showing clearly all components of coupling circuits, the point of resistance measurement, the location of the antenna ammeter, connections to and characteristics of all tower lighting isolation circuits, static drains and any other fixtures connected to and supported by the antenna, including other antennas and associated networks. Any network or circuit component used to dissipate radio frequency power shall be specifically identified and the impedances of all components which control the level of power dissipation and the effective input resistance of the network must be indicated.

(e) AM stations using direct reading power meters in accordance with 73.51, can either submit the information required by paragraph (d) of this section or submit a statement indicating that such a meter is being used. Subsequent station licenses will indicate the use of a direct reading power meter in lieu of the antenna resistance value in such a situation.

§73.55 Modulation. See 73.1570.

73.57 Remote reading antenna and common point ammeters. Remote reading antenna and common point ammeters may be used without further authority according to the following conditions:

(a) Remote reading antenna or common point ammeters may be provided by:

(1) Inserting second radio frequency current sensing device directly in the antenna circuit with remote leads to the indicating instruments.

(2) Inductive coupling to radio frequency current sensing device for providing direct current to indicating instrument.

(3) Capacity coupling to radio frequency sensing device for providing direct current in indicating instruments.

(4) Current transformer connected to radio frequency current sensing device for providing direct current to indicating instrument.

(5) Using transmission line current meter at transmitter as remote reading ammeter. See paragraph (c) of this section.

(5) Using the indications of the antenna (phase) monitor, provided that when the monitor is used to obtain remote reading indication of non-directional antenna base current, the monitor calibration can be independently made and maintained for each mode of operation.

(b) Devices used for obtaining remote reading antenna or common point current indications, except antenna monitor coupling elements, shall be located at the same point as, but below (transmitter side) the associated main ammeter.

(c) In the case of shunt-excited antennas, the transmission line current meter at the transmitter may be considered the transmission line

is terminated directly into the excitation circuit feed line, which shall employ series tuning only (no shunt circuits of any type shall be employed) and insofar as practicable, the type and scale of the transmission line meter should be the same as those of the excitation circuit feed line meter (meter in slant wire feed line or equivalent).

(d) Calibration of remote reading ammeters must be made against their corresponding regular ammeters for each mode of operation as often as necessary to insure their accuracy and:

(1) Deleted and reserved.

(2) In no event shall a remote reading ammeter be calibrated against another remote reading, extension, or remote control meter.

(3) Each remote reading ammeter shall be accurate within 2 percent of the value read on its corresponding regular ammeter.

(e) All remote reading ammeters shall conform with the specifications for regular antenna ammeters.

(f) Meters with arbitrary scale divisions may be used provided that calibration charts or curves are provided at the transmitter control point showing the relationship between the arbitrary scales and the reading of the main meters.

(g) If a malfunction affects the remote reading indicators of the antenna or common point ammeter, the operating power may be determined by a method using alternative procedures as described in 73.51.

73.58 Indicating instruments. (a) Each AM broadcasting station must be equipped with indicating instruments which conform with the specifications described in 73.1215 of determining power by the direct and indirect methods and with such other instruments as are necessary for the proper adjustment, operation and maintenance of the transmitting system. However, auxiliary transmitters with a nominal power rating of 100 watts or less are not required to be equipped with instruments to determine power by the indirect method provided that the licensee can determine the antenna input power at all times.

(b) A thermocouple type ammeter or other device capable of providing an indication of radio frequency current, meeting the requirements of 73.1215, shall be installed at the base of each antenna element.

(c) Since it is usually impractical to measure the actual antenna current of a shunt excited antenna system, the current measured at the input of the excitation circuit feed line is accepted as the antenna circuit.

(d) The function of each instrument shall be clearly and permanently shown on the instrument itself or on the panel immediately adjacent thereto.

(e) In the event that any one of these indicating instruments becomes defective when no substitute which conforms with the required specification is available, the station may be operated without the defective instrument pending the repair or replacement for a period not in excess of 60 days without further authorization of the Commission, Provided, That

(1) Reserved.

(2) If the defective instrument is an antenna base current ammeter of a directional antenna system the indications may be obtained from the antenna monitor pending the return to service of the regular meter, provided other parameters are maintained at their normal values.

(3) If the defective instrument is the antenna current meter of a nondirectional station which does not employ a remote antenna ammeter, or if the defective instrument is the common point meter of a station which employs a directional antenna and does not employ a remote common point meter, the operating power shall be determined by a method described in 73.51(a)(1) or (d) during the entire time the station is operated without the antenna current meter or common point meter. However, if a remote meter is employed and the antenna current ammeter or common point meter becomes defective, the remote meter can be used to determine operating power pending the return to service of the regular meter.

(f) If conditions beyond the control of the licensee prevent the restoration of the meter to service within the above allowed period, information requested in accordance with 1.549 of this chapter may be filed with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

**73.59 Frequency tolerance. See 73.1545.**

**73.60 Frequency measurements. See. 73.1540.**

**§73.61 AM directional antenna field strength measurements.** (a) Each AM station using a directional antenna must make field strength measurements at the monitoring point locations specified in the instrument of authorization, as often as necessary to ensure that the field at those points does not exceed the values specified in the station authorization. Additionally, stations not having an approved sampling system must make the measurements once each calendar quarter at intervals not exceeding 120 days. The provision of this paragraph supersedes any schedule specified on a station license issued prior to January 1, 1986. The results of the measurements are to be entered into the station log pursuant to the provisions of §73.1820.

(b) Partial proof of performance measurements using the procedures described in §73.154 must be made whenever the licensee has reason to believe that the radiated field may be exceeding the limits for which the station was most recently authorized to operate.

(c) A station may be directed to make a partial proof of performance by the FCC whenever there is an indication that the antenna is not operating as authorized.

**73.62 Directional antenna system tolerances.** (a) Each AM station operating a directional antenna must maintain the indicated relative amplitudes of the antenna base currents and antenna monitor currents within 5% of the values specified on the instrument of authorization unless other tolerances are specified therein. Directional antenna relative phase currents must be maintained to within plus or minus 3° of the values specified on the instrument of authorization, unless other tolerances are specified therein.

(b) When periods of inclement weather or severe climatic conditions make it impossible to maintain the operating parameters within the tolerances specified in paragraph (a) of this section, a licensee may operate with parameters at variance from such tolerances for a period up to 10 consecutive days, providing the monitoring point values specified in the station authorization are maintained within authorized limits. If, at the end of this 10 day period, normal operation is not restored, the licensee must request from the FCC in Washington, D.C., special temporary authority (STA) to continue operation of the station at variance from the provisions of this section. Any request for such authority shall be made in accordance with 73.1635 Special Temporary Authorizations (STA), except that the prior notice requirement of 73.1635(a)(1) is waived. Instead, such a request shall be made immediately at the end of the 10 day period of operation allowed by this paragraph.

(c) All other requests for authority to operate with parameters at variance not necessitated by inclement weather or severe climatic conditions must be made in accordance with 73.1635.

- 73.63 Auxiliary transmitter. See 73.1670.
- 73.64 Alternate main transmitter. See 73.1665.
- 73.65 Antenna structure: marking and lighting. See 73.1213.
- 73.66 Remote control authorization. See 73.1400.
- 73.67 Remote control operation. See 73.1410.

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§73.68 Sampling system for antenna monitors. (a) Each AM station per-  
mittee authorized to construct a new directional antenna system must  
install the sampling system in accordance with the following specifications:

(1) Devices used to extract or sample the current and the transmission  
line connecting the sampling elements to the antenna monitor must provide  
accurate and stable signals to the monitor (e.g., rigidly mounted and non-  
rotatable loops and all system components protected from physical and en-  
vironmental disturbances).

(2) Sampling lines for critical directional antennas (see §73.14) must  
be of uniform length. Sampling lines for non-critical directional antennas  
may be of different lengths provided the phase difference of signals at the  
monitor are less than  $0.5^\circ$  between the shortest and longest cable lengths  
due to temperature variations to which the system is exposed.

(3) Other configurations of sampling systems may be used upon demon-  
stration of stable operation to the FCC.

(b) A station having an antenna sampling system constructed according to  
the specifications given in paragraph (a) of this section, may obtain  
approval of that system by submitting an informal request to the FCC in  
Washington, D.C. The request for approval, signed by the licensee or  
authorized representative, must contain sufficient information to show  
that the sampling system is in compliance with all requirements of para-  
graph (a).

Note--A public notice giving additional information on approval of  
antenna sampling systems is available upon request from the FCC's current  
copy contractor.

(c) In the event that the antenna monitor sampling system is temporarily  
out of service for repair or replacement, the station may be operated,  
pending completion of repairs or replacement, for a period not exceeding  
120 days without further authority from the FCC if all other operating  
parameters and the field monitoring point values are within the limits  
specified on the station authorization.

(d) If the antenna sampling system is modified or components of the  
sampling system are replaced, the following procedure shall be followed:

(1) Temporary authority shall be requested and obtained from the Com-  
mission in Washington, D.C. to operate with parameters at variance with  
licensed values pending issuance of a modified license specifying para-  
meters subsequent to modification or replacement of components.

(2) Immediately prior to modification or replacement of com-  
ponents of the sampling system not on the towers, and after a verifica-  
tion that all monitoring point values, base current ratios and operat-  
ing parameters are within the limits or tolerances specified in the  
instrument of authorization or the pertinent rules, the following in-  
dications must be read for each radiation pattern: Final plate current  
and plate voltage, common point current, base currents and their ratios,  
antenna monitor phase and current indications, and field strength at each  
monitoring point. Subsequent to these modifications or changes the above  
procedure must be repeated.

(3) If that portion of the sampling system above the base of  
the towers is modified or components replaced, partial proof of perfor-  
mance shall be executed subsequent to these changes consisting of at  
least 10 field strength measurements on each of the radials established  
in the latest complete proof of performance of the antenna system. These  
measurements shall be made at locations, all within 2 to 10 miles from  
the antenna, which were utilized in such proof, including, on each radial,  
the location, if any, designated as a monitoring point in the station  
authorization. Measurements shall be analyzed in the manner prescribed  
in 73.186. The partial proof of performance shall be accompanied by  
common point impedance measurements made in accordance with 73.54.

(4) Request for modification of license shall be submitted to the Commission in Washington, D.C. within 30 days of the date of sampling system modification or replacement. Such request shall specify the transmitter plate voltage, and plate current, common point current, base currents and their ratios, antenna monitor phase and current indications, and all other data obtained pursuant to this paragraph (e).

(e) If an existing sampling system is found to be patently of marginal construction, or where the performance of a directional antenna is found to be unsatisfactory, and this deficiency reasonably may be attributed, in whole or in part, to inadequacies in the antenna monitoring system, the FCC may require the reconstruction of the sampling system in accordance with requirements specified above.

73.69 Antenna monitors. (a) Each station using a directional antenna must have in operation at the transmitter site an FCC authorized antenna monitor. However, if the station authorization sets specific tolerances within which the phase and amplitude relationships must be maintained or requires the use of a monitor of specified repeatability, resolution or accuracy, the antenna monitor used will be authorized on an individual basis.

(1) Normally, the antenna monitor is to be installed immediately adjacent to the transmitter and antenna phasing equipment. When the phasing equipment is located within the antenna field at a distance from the transmitter, the monitor may be located with the phasing equipment in suitable housing such that the temperature variation is maintained at all times within those limits under which the monitor was type approved. Additionally, remote switching and metering must be installed so that all required monitor indications can be observed at the position(s) where the duty operator is located.

(2) The antenna monitor installed at a station operating a directional antenna by remote control, using extension meters to read and log the monitor indications or when the monitor is installed in the antenna field at a distance from the transmitter, must be designed and authorized for such use in accordance with the provisions of 73.53(b)(9).

(b) In the event that the antenna monitor sampling system is temporarily out of service for repair or replacement, the station may be operated, pending completion of repairs or replacement, for a period not exceeding 120 days without further authority from the FCC if all other operating parameters, and the field monitoring point values are within the limits specified on the station authorization.

(c) If conditions beyond the control of the licensee prevent the restoration of the monitor to service within the allowed period, informal request in accordance with 1.549 of the Commission's rules must be filed with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

(d) If an authorized antenna monitor is replaced by another antenna monitor, the following procedure shall be followed:

(1) Temporary authority shall be requested and obtained from the Commission in Washington to operate with parameters at variance with licensed values, pending issuance of a modified license, specifying new parameters.

(2) Immediately prior to the replacement of the antenna monitor, after a verification that all monitoring point values and base current ratios are within the limits or tolerances specified in the instrument of authorization or the pertinent rules, the following indications must be read for each radiation pattern.

Final plate current and plate voltage, common point current, base currents, antenna monitor phase and current indications, and the field strength at each monitoring point.

(3) With the new monitor substituted for the old, all indications specified in paragraph (d)(2) of this Section, again must be read. If no change has occurred in the indication for any parameter other than the indications of the antenna monitor, the new antenna monitor indications must be deemed to be those reflecting correct array adjustments.

(b) In the event an antenna monitor becomes defective, the station may be operated without the monitor pending its repair or replacement for a period not in excess of 60 days without further authority from the FCC, if

(1) The base currents, their ratios and the deviations of those, in percent, from the values specified in the station authorization are determined for each radiation pattern used, as often as necessary to ensure proper directional antenna system operation and.

(2) Field strength measurements, at each monitoring point specified in the station's authorization, are read at least once each calendar week.

(c) If conditions beyond the control of the licensee prevent the restoration of the monitor to service within the allowed period, informal request in accordance with 1.549 of the Commission's rules must be filed with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

**(d) If an authorized antenna monitor is replaced by another antenna monitor, the following procedure shall be followed:**

**(1) Temporary authority shall be requested and obtained from the Commission in Washington to operate with parameters at variance with licensed values, pending issuance of a modified license, specifying new parameters.**

**(2) Immediately prior to the replacement of the antenna monitor, after a verification that all monitoring point values and base current ratios are within the limits or tolerances specified in the instrument of authorization or the pertinent rules, the following indications must be read for each radiation pattern.**

**Final plate current and plate voltage, common point current, base currents, antenna monitor phase and current indications, and the field strength at each monitoring point.**

**(3) With the new monitor substituted for the old, all indications specified in paragraph (d)(2) of this Section, again must be read. If no change has occurred in the indication for any parameter other than the indications of the antenna monitor, the new antenna monitor indications must be deemed to be those reflecting correct array adjustments.**

(4) If it cannot be established by the observations required in paragraph (c) (2) of this section, that base current ratios and monitoring point values are within the tolerances or limits prescribed by the rules and the instrument of authorization, or if the substitution of the new antenna monitor for the old results in changes in these parameters, a partial proof of performance shall be executed, as described in 73.154 and measurements shall be analyzed in the manner required in 73.186.

(5) An informal request for modification of license shall be submitted to the Commission in Washington, D.C., within 30 days of the date of monitor replacement. Such request shall specify the make, type, and serial number of the replacement monitor, phase and sample current indications, and other data obtained pursuant to this paragraph (c).

NOTE: 7369 (a) shall become effective as follows:

(1) Each new station and each existing station for which major changes (see 1.571(a)(1)) are authorized for after June 1, 1973, shall be equipped with a type approved antenna monitor.

(2) Each station electing to utilize licensed operators other than first-class radiotelephone operators for routine transmitter duty (see 73.93) shall meet this requirement by June 1, 1974. (Supply of type approved antenna monitors has been limited to the extent that not all licensees have been able to obtain delivery and install monitors by the June 1, 1974 deadline. Licensees deciding to use lower grade operators subsequent to June 1, 1974, have likewise been unable to obtain delivery. Therefore, such operator licensees will not be held accountable for failure to install the antenna monitor on evidence that timely efforts have been made to procure a monitor, and failure is due to non-delivery of equipment by suppliers. Each such licensee shall file a copy of the confirmed order with the Commission in Washington and retain a copy in the station file to be made available for inspection by FCC field engineers).

(3) Each station operating by remote control, when adopting the schedule specified in 73.114(a)(9)(iii) for observations at the transmitter, shall install a type-approved antenna monitor and provide phase indications at the remote control point, for observation and logging pursuant to 73.113(a)(3)(ii);

(4) All other stations shall meet the requirements of this rule by June 1, 1977.

(e) The antenna monitor must be calibrated according to the manufacturer's instructions as often as necessary to ensure its proper operation.

§73.70 Extension meters. See 73.1550

73.71 Minimum operating schedule. See 73.1740.

§73.72 Operating during the experimental period. (a) An AM station may operate during the experimental period on its assigned frequency and with its authorized power for the routine testing and maintenance of its transmitting system, and for conducting experimentation under an experimental authorization; provided no interference is caused to other stations maintaining a regular operating schedule within such period..

(b) No station licensed for "daytime" or "specified hours" of operation may broadcast any regular or scheduled program during this period.

(c) The licensee of an AM station shall operate or refrain from operating its station during the experimental period as directed by the FCC to facilitate frequency measurements or for the determination of interference.

73.73 Specified hours. See 73.1730.

73.74 Sharing time. See 73.1730.

73.75 Deleted.

73.76 Sharing time; experimental period. See 73.1715.

73.77 Sharing time; departure from regular schedule. See 73.1715.

73.78 Sharing time stations; notification to Commission. See 73.1715.

73.79 License to specify sunrise and sunset hours. See 73.1720.

73.80 Secondary station; filing of operating schedule. See 73.1725.

73.81 Secondary station; failure to reach agreement. See 73.1725.

73.82 Departure from schedule; material violation. See 73.1725.

73.83 Reference to time. See 73.1209

73.84 .85 and .86 deleted

73.87 Times and modes of program transmission. See 73.1745.

73.88 Blanketing interference. The licensee of each broadcast station is required to satisfy all reasonable complaints of blanketing interference within the 1 v/m contour.

73.89 Deleted.

673.91 Discontinuance of operation. See 73.1750.

73.92 Station and operator licenses; posting of. See 73.1230.

73.93 AM operator requirements.

- (a) Transmitter duty operator requirements: See 73.1860.
- (b) Chief operator requirements: See 73.1870.
- (c) Transmission system inspection requirements: See 73.1480.
- (d) Directional antenna proof of performance requirements: See 73.61

73.94 Deleted.

73.95 Equipment tests. See 73.1610.

73.96 Program tests. See 73.1620.

73.97 Station inspection. See 73.1225.

73.98 Operation during emergency. See 73.1250.

§73.99 Pre-sunrise service authorization (PSRA) and Post-Sunset service authorization (PSSA). (a) To provide the maximum uniformity in early morning operation compatible with interference considerations, and to provide for additional service during early evening hours for daytime-only stations, the provisions are made for pre-sunrise service and post-sunrise service. The permissible power to be assigned in pre-sunrise or post-sunset service authorization will not exceed 500 watts, or the authorized daytime or critical hours power (whichever is less).

(b) Pre-sunrise service authorization (PSRA) will permit:

(1) Class II stations operating on Mexican, Bahamian, and Canadian Class I-A and I-B Clear Channels to commence PSRA operation at 6:00 a.m. local time and to continue such operation until the sunrise times specified in their basic instrument of authorization.

(2) Class II stations situated outside the respective 0.5 mV/m 50% skywave contours of co-channel domestic Class I-A and I-B stations to commence PSRA operation 6:00 a.m. local time, and continue this operation until sunrise times specified in their basic instruments of authorization.

(3) Class II stations located inside a co-channel 0.5 mV/m 50% skywave contours of domestic Class I-A and I-B stations, to commence PSRA operation either at 6:00 a.m. local time, or at the time of sunrise at the nearest Class I station located east of the Class II station (whichever is later), and continue this operation until the sunrise times specified in their basic instruments of authorization.

(4) Class III stations to commence PSRA operation at 6:00 a.m. local time and to continue such operation until local sunrise times specified in their basic instruments of authorization.

(c) Post-sunset service authorization (PSSA) will permit:

(1) Class II-D stations located on Mexican, Bahamian, and Canadian Class I-A and I-B Clear Channels to commence PSSA operation at sunset times specified in their basic instruments of authorization and to continue for two hours after such specified times.

(2) Class II-D station situated outside the respective 0.5 mV/m 50% skywave contours of co-channel domestic Class I-A and I-B stations to commence PSSA operations at sunset times specified in their basic instruments of authorization and to continue up to two hours after such specified times.

(3) Class II-D stations located inside co-channel 0.5 mV/m 50% skywave contours of domestic Class I-A and I-B stations to commence PSSA operation at sunset times specified in their basic instruments of authorization and to continue such operation until two hours past such specified times, or until the time of sunset at the nearest Class I station located west of the Class II station (whichever is earlier). (Those west of the dominant station do not qualify for PSSA operation.)

(4) Class III daytime only stations to commence PSSA on their basic instruments of authorization and to continue such operation until two hours past such specified times.

(d) Procedural Matters. (1) Applications for PSRA and PSSA operation are not required. Instead, the FCC will calculate the periods of such operation and the power to be used pursuant to the provisions of this Section and the protection requirements contained in applicable international agreements. Licensees will be duly notified of permissible power and times of operation. Pre-sunrise and Post-sunset service authority permits operation on a secondary basis and does not confer license rights. No request for such authority need be filed. However, stations intending to operate PSRA or PSSA shall submit by letter, signed as specified in §73.3513, the following information:

(i) Licensee name, station call letters and station location.  
 (ii) Indication as to whether PRSA operation, PSSA operation, or both, is intended by the station.

(iii) A description of the method whereby any necessary power reduction will be achieved.

(2) Upon submission of the required information, such operation may begin without further authority.

(e) Technical Criteria. Calculations to determine whether there is objectionable interference will be determined in accordance with the AM Broadcast Technical Standards, §§73.182 through 73.190, and applicable international agreements. Calculations will be performed using daytime antenna systems, or critical hours antenna systems when specified on the license. In performing calculations to determine assigned power and times for commencement of PSRA and PSSA operation, the following standards and criteria will be used:

(1) Class II stations operating in accordance with (b)(1), (b)(2), (c)(1), and (c)(2) are required to protect the nighttime 0.5 mV/m 50% skywave contours of co-channel Class I stations. Where a 0.5 mV/m 50% skywave signal is not produced, the 0.5 mV/m 50% skywave signal is not produced, the 0.5 mV/m groundwave contour will be protected.

(2) Class II stations are required to fully protect foreign Class II stations when operating PSRA and PSSA and Class II-D station operating PSSA are required to fully protect domestic full time Class II stations. For purposes of determining protection, the existing nighttime RSS limit will be used in the determination of maximum power permissible.

(3) Class II stations operating in accordance with (c)(2) and (c)(3) are required to restrict maximum 10% skywave radiation to any point on the daytime 0.1 mV/m groundwave contour of the co-channel Class I station to 25 uV/m. For purposes of performing these calculations of 0.1 mV/m contour of the Class I station will be determined by use of Figure M3, Estimated Ground Conductivity in the United States. When the 0.1 mV/m contour extends beyond the national boundary the international boundary shall be considered the 0.1 mV/m contour.

(4) Class III stations operating PSRA and PSSA are required to provide full protection to co-channel foreign Class III stations.

(5) Class III daytime-only stations operating PSSA beyond 6:00 P.M. local time are required to fully protect domestic full-time Class III stations.

(6) The protection that Class III daytime-only stations are required to provide when operating PSSA until 6:00 P.M. local time is as follows:

(i) For the first half-hour of PSSA operation, protection will be calculated at sunset plus 30 minutes at the site of the Class III daytime-only station;

(ii) For the second half-hour of PSSA operation, protection will be calculated at sunset plus one hour at the site of the Class III daytime-only station;

(iii) For the second hour of PSSA operation, protection will be calculated at sunset plus two hours at the site of the Class III daytime-only station;

(iv) Minimum powers during the period until 6:00 P.M. local time shall be permitted as follows:

Calculated power	Adjusted minimum power
From 1 to 45 watts. . . .	.50 watts
Above 45 to 70 watts. . . .	.75 watts
Above 70 to 100 watts. . .	100 watts

(7) For the purpose of determining protection, the existing night-time RSS limit will be used in the determination of maximum power permissible.

(f) Calculations made under paragraph (d) of this section may not take outstanding PSRA or PSSA operations into account, nor will the grant of a PSRA or PSSA confer any degree of interference protection on the holder thereof.

(g) Operation under a PSRA or PSSA is not mandatory, and will not be included in determining compliance with the requirements of §73.1740. To the extent actually undertaken, however, pre-sunrise operation will be considered by the FCC in determining overall compliance with past programming representations and station policy concerning commercial matter.

(h) The PSRA or PSSA is secondary to the basic instrument of authorization with which it is to be associated. The PSRA or PSSA may be suspended, modified, or withdrawn by the FCC without prior notice or right to hearing, if necessary to resolve interference conflicts, to implement agreements with foreign governments, or in other circumstances warranting such action. Moreover, the PSRA or PSSA does not extend beyond the term of the basic authorization.

(i) The FCC will periodically recalculate maximum permissible power and times for commencing PSRA and PSSA for each Class II and Class III station. These original notifications and subsequent notifications should be associated with the station authorization. Upon notification of new power and time of commencing operation, affected stations will make necessary adjustments within 30 days.

(j) A PSRA and PSSA does not require compliance with §§73.45, 73.182, 73.188, and 73.1560 where the operation might otherwise be considered as technically substandard. Further, the requirements of paragraphs (a)(5), (b)(2), (c)(2), and (d)(2) of §73.1215 concerning the scale ranges of transmission system indicating instruments are waived for PSRA and PSSA operation except for the radio frequency ammeters used in determining antenna input power.

(k) A station having an antenna monitor incapable of functioning at the authorized PSRA and PSSA power when using a directional antenna shall take the monitor reading using unmodulated carrier at the authorized daytime power immediately prior to commencing PSRA and PSSA operations. Special conditions as the FCC may deem appropriate may be included for PSRA and PSSA to insure operation of the transmitter and associated equipment in accordance with all phases of good engineering practice.

NOTE: Extended hours operations are subject to international agreements governing all operations. These agreements are in the process of revision, but until this process is completed it will not be possible to allow full operation as outlined above.

- 73.111 General requirements relating to logs. See 73.1800.
- 73.112 Program logs. See 73.1810.
- 73.113 Operating logs. See 73.1820.
- 73.114 Maintenance logs. See 73.1830.
- 73.115 Retention of logs. See 73.1840.
- 73.116 Availability of logs and records. See 73.1225 and 73.1850.
- 73.117 Station identification. See 73.1201.
- 73.118 Deleted.
- 73.119 Sponsorship identification. See 73.1212.
- 73.120 Broadcast by candidates for public office. See 73.1940.
- 73.121 Rebroadcast. See 73.1207.
- 73.122 Lotteries. See 73.1211.
- 73.123 Personal attacks; political editorials. See 73.1910, .1920, .1930.
- 73.124 Fraudulent billing practices. See 73.1205.
- 73.125 Equal employment opportunities. See 73.2080
- 73.126 Broadcast of telephone conversation. See 73.1206.
- 73.127 Use of multiplex transmissions. The licensee of an AM broadcast station may use its AM carrier to transmit signals not audible on ordinary consumer receivers, for both broadcast and non-broadcast purposes subject to the following requirements.
- (a) Such use does not disrupt or degrade the station's own programs or the programs of other broadcast stations.
- (b) AM carrier services that are common carrier in nature are subject to common carrier regulation. Licensees operating such services are required to apply to the FCC for the appropriate authorization and to comply with all policies and rules applicable to the service. Responsibility for making the initial determinations of whether a particular activity is common carriage rests with the AM station licensee. Initial determinations by licensees are subject to FCC examination and may be reviewed at the FCC's discretion. SM carrier services that are private carrier in nature must notify the Licensing Division of the Private Radio Bureau at Gettysburg, Pennsylvania 17325, by letter, prior to initiating service certifying compliance with 47 CFR Parts 90 and 94.
- (c) AM carrier services are of a secondary nature under the authority of the AM station authorization, and the authority to provide such communications services may not be retained or transferred in any manner separate from the station's authorization. The grant or renewal of an AM station permit or license is not furthered or promoted by proposed or past service. The permittee or licensee must establish that the broadcast operation is in the public interest wholly apart from the subsidiary communications services provided.
- (d) The station identification, delayed recording, and sponsor identification announcements required by Sections 73.1201, 73.1208, and 73.1212 are not applicable to leased communications services transmitted via services that are not of a general broadcast program nature.

(e) The licensee or permittee must retain control over all material transmitted in a broadcast mode via the station's facilities, with the right to reject any material that it deems inappropriate or undesirable.

(f) Installation of the multiplex transmitting equipment must conform with the requirements of Section 73.1690(e).

**73.128 AM stereophonic broadcasting.** (a) An AM broadcast station may, without specific authority from the FCC, transmit stereophonic programs upon installation of type accepted stereophonic transmitting equipment and the necessary measuring equipment to determine that the stereophonic transmissions conform to the modulation characteristics specified for the stereophonic transmission system in use.

(b) The FCC does not specify the composition of the transmitted stereophonic signal. However, the following limitations on the transmitted wave must be met to insure compliance with the occupied bandwidth limitations, compatibility with AM receivers using envelope detectors, and any applicable international agreements to which the United States is a party:

(1) The transmitted wave must meet the occupied bandwidth specifications of 73.44 under all possible conditions of program modulation. Compliance with requirement shall be demonstrated either by the following specific modulation tests or other documented test procedures that are to be fully described in the application for type acceptance and the transmitting equipment instruction manual. (See 2.983(d)(8) and (j)).

(i) Main channel (L+R) under all conditions of amplitude modulations for the stereophonic system but not exceeding amplitude modulation on negative peaks of 100%.

(ii) Stereophonic subchannel L-R) modulated with audio tones of the same amplitude at the transmitter input terminals as in (i) above but with the phase of either the L or R channel reversed.

(iii) Left and Right Channel only, under all conditions of modulation for the stereophonic system in use but not exceeding amplitude modulation on negative peaks of 100%.

**73.132 Territorial exclusivity.** No licensee of an AM broadcast station shall have any arrangement with a network organization which prevents or hinders another station serving substantially the same area from broadcasting the network's programs not taken by the former station, or which prevents or hinders another station serving a substantially different area from broadcasting any program of the network organization: Provided, however, That this section does not prohibit arrangements under which the station is granted first call within its primary service area upon the network's programs. The term "network organization" means any organization originating program material, with or without commercial messages, and furnishing the same to stations interconnected so as to permit simultaneous broadcast by all or some of them. However, arrangements involving only stations under common ownership, or only the rebroadcast by one station or programming from another with no compensation other than a lump-sum payment by the station rebroadcasting, are not considered arrangements with a network organization. The term "arrangement" means any contract, arrangement or understanding, expressed or implied.

73.133 through 73.138 (Deleted).

## DATA AND MEASUREMENTS

§73.150(a) - §73.150(b)(1)(i)

§73.150 Directional antenna systems. (a) For each station employing a directional antenna, all determinations of service provided and interference caused shall be based on the inverse fields shown on the standard radiation pattern for that station. As applied to nighttime operation the term "standard radiation pattern" shall include the radiation pattern in the horizontal (ground) plane, and radiation patterns at angles above this plane, as required by paragraph (b)(1) of this section. In the event of a discrepancy between the calculated and plotted values of a standard pattern, the calculated values will prevail with respect to protection of domestic stations while the plotted (notified) values will prevail with respect to protection of foreign stations.

(1) Parties submitting directional antenna patterns pursuant to this section and 73.152 (Modified standard pattern) must submit patterns which are tabulated and plotted in units of millivolts per meter at 1 kilometer.

NOTE: Applications for new stations and for changes (both minor and major) in existing stations must use a standard pattern.

(b) The following data shall be submitted with an application for authority to install a directional antenna:

(1) The standard radiation pattern for the proposed antenna in the horizontal plane, and where pertinent, azimuthal radiation patterns for angles of elevation up to and including 60 degrees, with a separate pattern for each increment of 5°.

(i) The standard radiation pattern shall be based on the theoretical radiation pattern. The theoretical radiation pattern shall be calculated in accordance with the following mathematical expression:

$$E(\phi, \theta)_{th} = \left| k \sum_{i=1}^n F_i f_i(\theta) / S_i \cos \theta \cos (\phi_i - \phi) + \psi_i \right| \quad (1)$$

where:

$E(\phi, \theta)_{th}$  Represents the theoretical inverse distance fields at one mile for the given azimuth and elevation.

$k$  Represents the multiplying constant which determines the basic pattern size. It shall be chosen so that the effective field (RMS) of the theoretical pattern in the horizontal plane shall be no greater than the value computed on the assumption that nominal station power (see §73.14(c)) is delivered to the directional array, and that a lumped loss resistance of one ohm exists at the current loop of each element of the array, or at the base of each element of electrical height lower than 0.25 wavelength, and no less than the value required by §73.189(b)(2) of this part for a station of the class and nominal power for which the pattern is designed.

$n$  Represents the number of elements (towers) in the directional array.

$i$  Represents the  $i^{th}$  element in the array.

$F_i$  Represents the field ratio of the  $i^{th}$  element in the array.

$\theta$  Represents the vertical elevation angle measured from the horizontal plane.

$f_i(\theta)$  represents the vertical plane radiation characteristic of the  $i^{th}$  antenna. This value depends on the tower height, as well as whether the tower is top-loaded or sectionalized. The various formulas for computing  $f_i(\theta)$  are given in section 73.160.

$S_i$  Represents the electrical spacing of the  $i^{th}$  tower from the reference point.

$\phi_i$  Represents the orientation (with respect to true north) of the  $i^{th}$  tower.

$\phi$  Represents the azimuth (with respect to true north).

$\psi_i$  Represents the electrical phase angle of the current in the  $i^{th}$  tower.

The standard radiation pattern shall be constructed in accordance with the following mathematical expression:

$$E(\phi, \theta)_{th} = 1.05 \sqrt{|E(\phi, \theta)_{th}|^2 + Q^2} \quad \text{Eq 2}$$

where:

- $E(\phi, \theta)_{th}$  Represents the inverse fields at one mile which are deemed to be produced by the directional antenna in the horizontal and vertical planes.  
 $E(\phi, \theta)_{th}$  Represents the theoretical inverse distance fields at one mile as computed in accordance with Eq. 1, above.

The method of computing Q depends on whether the metric system is being used; see section 73.181(f). For all situations prior to January 4, 1982, Q is the greater of the following quantities:

$$0.025 g(\theta) E_{rss}$$

or

$$6.0 g(\theta) \sqrt{P_{kw}}$$

For all situations on or after January 4, 1982, Q is the greater of the following quantities:

$$0.025 g(\theta) E_{rss}$$

or

$$10.0 g(\theta) \sqrt{P_{kw}}$$

where:

- $g(\theta)$  Is the vertical plane distribution factor,  $f(\theta)$ , for the shortest element in the array (see Eq. 2, above; also see Section 73.190, Figure 5). If the shortest element has an electrical height in excess of 0.5 wavelength,  $g(\theta)$  shall be computed as follows:

$$g(\theta) = \frac{\sqrt{[f(\theta)]^2 + 0.0625}}{1.030776} \quad \text{Eq 3}$$

- $E_{rss}$  Is the root sum square of the amplitudes of the inverse fields of the elements of the array in the horizontal plane, as used in the expression for  $E(\phi, \theta)_{th}$  (see Eq. 1, above), and is computed as follows:

$$E_{rss} = k \sqrt{\sum_{i=1}^n F_i^2} \quad \text{Eq 4}$$

- $P_{kw}$  Is the nominal station power, expressed in kilowatts; see Section 73.14(c). If the nominal power is less than one kilowatt,  $P_{kw} = 1$ .

(ii) Where the orthogonal addition of the factor Q to  $E(\phi, \theta)_{th}$  results in a standard pattern whose minimum fields are lower than those found necessary or desirable, these fields may be increased by appropriate adjustment of the parameters of  $E(\phi, \theta)_{th}$ .

(2) All patterns shall be computed for integral multiples of five degrees, beginning with zero degrees representing true north, and, shall be plotted to the largest scale possible on unglazed letter-size paper (main engraving approximately 7" x 10") using only scale divisions and subdivisions of 1, 2, 2.5, or 5 times 10<sup>nth</sup>. The horizontal plane pattern and other azimuthal patterns shall be plotted on polar coordinate paper, with the zero degree point corresponding to the true north. Patterns for elevation angles above the horizontal plane may be plotted in polar or rectangular coordinates, with the pattern for each angle of elevation on a separate page. Rectangular plots shall begin and end at true north, with all azimuths labelled in increments of not less than 20 degrees. If a rectangular plot is used, the ordinate showing the scale for radiation may be logarithmic. Minor lobe and null detail occurring between successive patterns for specific angles of elevation need not be submitted. Values of field strength on any pattern less than ten percent of the maximum field strength plotted on that pattern shall

be shown on an enlarged scale. Rectangular plots with a logarithmic ordinate need not utilize an expanded scale unless necessary to show clearly the minor lobe and null detail. The direction and distance toward each existing station with which interference may be involved shall be indicated on the horizontal plane pattern, and, as appropriate on patterns for other angles of elevation, with all directions referred to true north.

NOTE: All directions shall be determined by accurate computation or from a Lambert Conformal Conic Projection Map, such as U.S. Coast and Geodetic Survey Map No. 3060, or a map of equal accuracy, and all distances shall be determined by accurate computation or from United States Albers Equal Area Projection Map, scale 1/2,500,000, or a map of equal accuracy. These maps may be obtained from the United States Geological Survey, Department of the Interior, Washington, D.C., 20240, and the United States Coast and Geodetic Survey, Department of Commerce, Washington, D.C., 20235.

(3) The effective (RMS) field intensity in the horizontal plane of  $E(\phi, \theta)_{std}$ ,  $E(\phi, \theta)_{th}$  and the root sum square (RSS) value of the inverse fields of the array elements at 1 mile, derived from the equation for  $E(\phi, \theta)_{th}$ . These values shall be tabulated on the page on which the horizontal plane pattern is plotted, which shall be specifically labeled as the Standard Horizontal Plane Pattern.

(4) Physical description of the array, showing:

(i) Number of elements.  
(ii) Type of each element (i.e., guyed or self-supporting, uniform cross section or tapered (specifying base dimensions), grounded or insulated, etc.)

(iii) Details of top loading, or sectionalizing, if any.

(iv) Height of radiating portion of each element in feet (height above base insulator, or base, if grounded).

(v) Overall height of each element above ground.

(vi) Sketch of antenna site, indicating its dimensions, the location of the antenna elements thereon, their spacing from each other, and their orientation with respect to each other and to true north, the number and length of the radials in the ground system about each element, the dimensions of ground screens, if any, and bonding between towers and between radial systems.

(5) Electrical description of the array, showing:

(i) Relative amplitudes of the fields of the array elements.

(ii) Relative time phasing of the fields of the array elements in degrees leading

(iii) Space phasing between elements in degrees.

(iv) All assumptions made and the basis therefor, particularly with respect to the electrical height of the elements, current distribution along elements, efficiency of each element, and ground conductivity.

(v) Formulas used for computing  $E(\phi, \theta)_{th}$  and  $E(\phi, \theta)_{std}$  together with sample computations.

(vi) Complete tabulation of final computed data used in plotting patterns, including data for the determination of the RMS value of the pattern, and the RSS field of the array.

(6) The values used in specifying the parameters which describe the array must be specified to no greater precision than can be achieved with available monitoring equipment. Use of greater precision raises a rebuttable presumption of instability of the array. Following are acceptable values of precision; greater precision may be used only upon showing that the monitoring equipment to be installed gives accurate readings with the specified precision.

- (i) Field Ratio: 3 significant figures.
- (ii) Phasing: to the nearest 0.1 degree.
- (iii) Orientation (with respect to a common point in the array, or with respect to another tower): to the nearest 0.1 degree.
- (iv) Spacing (with respect to a common point in the array, or with respect to another tower): to the nearest 0.1 degree.
- (v) Electrical Height (for all parameters listed in Section 73.160): to the nearest 0.1 degree.
- (vi) Theoretical RMS (to determine pattern size): 4 significant figures.
- (vii) Additional requirements relating to modified standard patterns appear in section 73.152(b)(5).

(7) Any additional information required by the application form.

(c) Sample calculations for the theoretical and standard radiation follow. Assume a five kilowatt (nominal power) station with a theoretical RMS of 685 mV/m at one kilometer. Assume that it is an in-line array consisting of three towers. Assume the following parameters for the towers:

Tower	Field ratio	Relative phasing	Relative spacing	Relative orientation
1.....	1.0	-128.5	0.0	0.0
2.....	1.89	0.0	110.0	285.0
3.....	1.0	128.5	220.0	285.0

Assume that tower 1 is a typical tower with an electrical height of 120 degrees. Assume that tower 2 is top-loaded in accordance with the method described in section 73.160(b)(2) where A is 120 electrical degrees and B is 21 electrical degrees. Assume that tower 3 is sectionalized in accordance with the method described in section 73.160(b)(3) where A is 120 electrical degrees, B is 20 electrical degrees, C is 220 electrical degrees, and D is 15 electrical degrees.

The multiplying constant will be 323.6.

Following is a tabulation of part of the theoretical pattern.

	0	30	60	Vertical angle
Azimuth				
0	15.98	82.49	68.20	
106	1225.30	819.79	234.54	
236	0.43	18.48	84.56	
247	82.62	51.52	26.98	

If we further assume that the station has a standard pattern, we find that Q, for  $\theta=0$ , is 22.36.

Following is a tabulation of part of the standard pattern:

	0	30	60	Vertical angle
Azimuth				
0	28.88	88.05	72.06	
106	1288.76	888.87	248.41	
236	23.48	28.50	37.18	
247	88.87	57.83	28.87	

The RMS of the standard pattern in the horizontal plane is 719.63 mV/m at one kilometer.

(7) Any additional information required by the application form.

§73.151 Field strength measurements to establish performance of directional antennas.

(a) In addition to the information required by the license application form, the following showing must be submitted to establish for each mode of directional operation, that the effective measured field strength (RMS) at 1 mile is not less than 85 percent of the effective field strength specified for the standard radiation pattern for that mode of directional operation, or less than that specified in §73.189(b) for the class of station involved, whichever is the higher value, and that the measured field strength at 1 miles in any direction does not exceed the field shown in that direction on the standard radiation pattern for that mode of directional operation:

(1) A tabulation of inverse field intensities in the horizontal plane at 1 mile, as determined from field strength measurements taken and analyzed in accordance with §73.186, and a statement of the effective field intensity (RMS), based on these measurements. Measurements shall be made in at least the following directions:

- (i) Those specified in the instrument of authorization.
- (ii) In major lobes. Generally at least three radials are necessary to establish a major lobe; however, additional radials may be required.
- (iii) Along sufficient number of other radials to establish the effective field. In the case of a relatively simple directional antenna pattern, approximately five radials in addition to those in subdivision (i) and (ii) of this subparagraph are sufficient. However, when more complicated patterns are involved, that is, patterns having several or sharp lobes or nulls, measurements shall be taken along as many radials as may be necessary, to definitely establish the pattern(s).

(2) A tabulation of:

(i) The phase difference of the current in each other element with respect to the reference element, and whether the current leads (✓) or lags (-) the current in the reference element, as indicated by the station's phase monitor.

(ii) The ratio of the amplitude of the current in each other element to the current in the reference element, as indicated on the station's antenna monitor.

(iii) The value of the radio frequency current at the base of each element, and the ratio of the current in each other element to the base current in the reference element. If there are substantial differences between the ratios established in subdivision (ii) of this subparagraph and the ratios computed in this subdivision (iii) and/or if there are substantial differences between the parameters established in subdivisions (i) and (ii) of this subparagraph and this subdivision (iii), and those used in the design of the standard radiation pattern, a full explanation of the reasons for these differences shall be given.

(3) Reserved.

(4) The actual field intensity measured at each monitoring point established in the various directions for which a limiting field was specified in the instrument of authorization together with accurate and detailed description of each monitoring point together with ordinary snapshots, clear and sharp, taken with the field intensity meter in its measuring position and with the camera so located that its field of view takes in as many pertinent landmarks as possible. In addition, the directions for proceeding to each monitoring point together with a rough sketch or map upon which has been indicated the most accessible approaches to the monitoring points should be submitted.

73.152 Modification of directional antenna data. (a) If, after construction and final adjustment of a directional antenna, a measured inverse distance field in any direction exceeds the field shown on the standard radiation pattern for the pertinent mode of directional operation, an application shall be filed, specifying a modified standard radiation pattern and/or such changes as may be required in operating parameters so that all measured effective fields will be contained within the modified standard radiation pattern.

(b) Normally, a modified standard pattern is not acceptable at the initial construction permit stage, before a proof-of-performance has been completed. However, in certain cases, where it can be shown that modification is necessary, a modified standard pattern will be acceptable at the initial construction permit stage. Following is a non-inclusive list of items to be considered in determining whether a modification is acceptable at the initial construction permit stage:

(1) When the proposed pattern is essentially the same as an existing pattern at the same antenna site. (e.g., A DA-D station proposing to become a DA-1 station.)

(2) Excessive reradiating structures, which should be shown on a plat of the antenna site and surrounding area.

(3) Other environmental factors; they should be fully described.

(4) Judgment and experience of the engineer preparing the engineering portion of the application. This must be supported with a full discussion of the pertinent factors.

(c) The following general principles shall govern the situations in paragraphs (a) and (b) in this section:

(1) Where a measured field in any direction will exceed the authorized standard pattern, the license application may specify the level at which the input power to the antenna shall be limited to maintain the measured field at a value not in excess of that shown on the standard pattern, and shall specify the common point current corresponding to this power level. This value of common point current will be specified on the license for that station.

(2) Where any excessive measured field does not result in objectionable interference to another station, a modification of construction permit application may be submitted with a modified standard pattern encompassing all measured fields. The modified standard pattern shall supersede the previously submitted standard radiation pattern for that station in the pertinent mode of directional operation. Following are the possible methods of creating a modified standard pattern:

(i) The modified pattern may be computed by making the entire pattern larger than the original pattern (i.e., have a higher RMS value) if the measured fields systematically exceed the confines of the original pattern. The larger pattern shall be computed by using a larger multiplying constant,  $k$ , in the theoretical pattern equation (Eq. 1) in section 73.150(b)(1).

(ii) Where the measured field exceeds the pattern in discrete directions, but objectionable interference does not result, the pattern may be expanded over sectors including these directions. When this "augmentation" is desired, it shall be achieved by application of the following equation:

$$E(\phi, \theta)_{aug} = \sqrt{\{E(\phi, \theta)_{std}\}^2 + A\{g(\theta) \cos(180 \frac{D_A}{S})\}^2}$$

where:

$E(\phi, \theta)_{std}$  is the standard pattern field at some particular azimuth and elevation angle, before augmentation, computed pursuant to Eq. 2, § 73.150(b)(1)(i).  
 $E(\phi, \theta)_{aug}$  is the field in the direction specified above, after augmentation.  
 $A = E(\phi', O)_{aug}^2 - (\phi', O)_{std}^2$  in which  $\phi'$  is the central azimuth of augmentation.  
 $E(\phi', O)_{aug}$  and  $E(\phi', O)_{std}$  are the fields in the horizontal plane at the central azimuth of augmentation.

Note.—"A" must be positive, except during the process of converting non-standard patterns to standard patterns pursuant to the *Report and Order in Docket No. 21473*, and in making minor changes to stations with patterns developed during the conversion. However, even when "A" is negative, "A" cannot be so negative that  $E(\phi, \theta)_{aug}$  is less than  $E(\phi, \theta)_{std}$  at any azimuth or vertical elevation angle.

$g(\theta)$  is defined in § 73.150(b)(1)(i).  
 $S$  is the angular range, or "span", over which augmentation is applied. The span is centered on the central azimuth of augmentation. At the limits of the span, the augmented pattern merges into the unaugmented pattern. Spans may overlap.

$D_A$  is the absolute horizontal angle between the azimuth at which the augmented pattern value is being computed and the central azimuth of augmentation. ( $D_A$  cannot exceed  $1/2 S$ .)

In the case where there are spans which overlap, the above formula shall be applied repeatedly, once for each augmentation, in ascending order of central azimuth of augmentation, beginning with zero degrees representing true North. Note that, when spans overlap, there will be, in effect, an augmentation of an augmentation. And, if the span of an earlier augmentation overlaps the central azimuth of a later augmentation, the value of "A" for the later augmentation will be different than

the value of "A" without the overlap of the earlier span.

(iii) A combination of (i) and (ii), of this section, with (i) being applied before (ii) is applied.

(3) A Modified Standard Pattern shall be specifically labeled as such, and shall be plotted in accordance with the requirements of subparagraph (2) of paragraph (b) of § 73.150. The effective (RMS) field intensity in the horizontal plane of  $E(\phi, \theta)_{std}$ ,  $E(\phi, \theta)_{std}$ , and the root sum square (RSS) value of the inverse fields of the array elements (derived from the equation for  $E(\phi, \theta)_{std}$ ), shall be tabulated on the page on which the horizontal plane pattern is plotted. Where sector augmentation has been employed in designing the modified pattern, the direction of maximum augmentation (i.e., the central azimuth of augmentation) shall be indicated on the horizontal plane pattern for each augmented sector, and the limits of each sector shall also be shown. Field values within an augmented sector, computed prior to augmentation, shall be depicted by a broken line.

(4) There shall be submitted, for each modified standard pattern, complete tabulations of final computed data used in plotting the pattern. In addition, for each augmented sector, the central azimuth of augmentation, span, and radiation at the central azimuth of augmentation ( $E(\phi, \theta)_{aug}$ ) shall be tabulated.

(5) The parameters used in computing the modified standard pattern shall be specified with realistic precision. Following is a list of the maximum acceptable precision:

- (i) Central Azimuth of Augmentation: to the nearest 0.1 degree.
- (ii) Span: to the nearest 0.1 degree.

(iii) Radiation at Central Azimuth of Augmentation: 4 significant figures.

(d) Sample calculations for a modified standard pattern follow. First, assume the existing standard pattern in section 73.150(c). Then, assume the following augmentation parameters:

	Central Azimuth	Span	Radiation at central azimuth
1-----	110	40	1,300
2-----	240	50	52
3-----	250	10	130

Following is a tabulation of part of the modified standard pattern:

Azimuth	0	30	60	Vertical Angle
1-----	26.86	68.05	72.06	-----
105-----	1,299.42	872.14	254.21	-----
235-----	39.00	35.74	38.71	-----
247-----	100.47	66.69	32.78	-----

## Appendix

### METHOD OF CALCULATION OF MULTIPLYING CONSTANTS USED IN COMPUTER PROGRAMS FOR STANDARD BROADCAST DIRECTIONAL ANTENNA CALCULATIONS

The various steps in the calculation of the multiplying constant are:

- (a) Compute the no-loss multiplying constant; that is, the multiplying constant assuming that the nominal power is radiated.
- (b) Compute the no-loss loop currents (base currents if the tower is less than 90 electrical degrees.
- (c) Compute the total power loss using the no-loss currents.
- (d) Adjust the multiplying constant to take account of the power loss; that is, adjust so that the nominal power is the input power to the array rather than the radiated power.

Note - In the following description, the angle  $\theta$  is the vertical elevation angle above the horizontal plane. Also, the term "rms" means the root-mean-square field intensity based on a multiplying constant of one.

The no-loss multiplying constant is computed by the power integrated method:

$$K = \frac{(C1) (\sqrt{P_{nom}})}{rms_{hem}}$$

where:

- $K$  = the no-loss multiplying constant;  
 $C1 = 152.15158$  mV/m; this is the horizontal radiation from a standard hemispherical radiator in millivolts per meter at one mile; this was derived in Constants for Directional Antenna Computer Programs, 43 FCC 2d 544, 28 RR 2d 959 (1973);  
 $P_{nom}$  = the nominal power in kilowatts;  
 $rms_{hem}$  = the root-mean-square effective field intensity over the hemisphere, which may be obtained by integrating the rms at each vertical elevation angle over the hemisphere. The Commission's computer performs the integration using the trapezoidal method of approximation:

$$rms_{hem} \approx \sqrt{\frac{\pi \Delta}{180} \left[ \frac{rms_0^2}{2} + \sum_{m=1}^l rms_{m\Delta}^2 \cos m\Delta \right]}$$

where:

- $\Delta$  = the interval, in degrees, between the equally-spaced sampling points at the different vertical elevation angles  $\theta$ ;  
 $m$  = integers from 1 to  $l$ , which give the elevation angle  $\theta$  in degrees when multiplied by  $\Delta$ ;  
 $l$  = one less than the number of intervals; it is equal to  $90/\Delta - 1$ ;  
 $rms_m$  = the root-mean-square field intensity at the specified elevation angle  $\theta$ :

$$rms_m = \sqrt{\sum_{i=1}^n \sum_{j=1}^n F_i f_i(\theta) F_j f_j(\theta) \cos \psi_{ij} J_0(S_{ij} \cos \theta)}$$

where:

- $i = i^{th}$  tower;  
 $j = j^{th}$  tower;  
 $n$  = number of towers in the array;  
 $F_i$  = field ratio of the  $i^{th}$  tower;  
 $f_i(\theta)$  = vertical radiation characteristic of the  $i^{th}$  tower;  
 $F_j$  = field ratio of the  $j^{th}$  tower;  
 $f_j(\theta)$  = vertical radiation characteristic of the  $j^{th}$  tower;  
 $\psi_{ij}$  = difference in the electrical phase angles of the currents in the  $i^{th}$  and  $j^{th}$  towers in the array;  
 $S_{ij}$  = spacing in degrees between the  $i^{th}$  and  $j^{th}$  towers in the array;  
 $J_0(S_{ij} \cos \theta)$  = Bessel function of the first kind and zero order of the apparent spacing between the  $i^{th}$  and  $j^{th}$  towers.

Next, the no-loss loop current (the current at the current maxima) for a typical tower is computed:

$$I_i = \frac{KF_i}{(C2) (1 - \cos G_i)}$$

where

- $I_i$  = the loop current in amperes in the  $i^{th}$  tower;  
 $K$  = the no-loss multiplying constant computed above;  
 $F_i$  = the field ratio for the  $i^{th}$  tower;  
 $C2 = 37.256479$ ; this was derived in Constants for Directional Antenna Computer Programs, supra;  
 $G_i$  = the height, in electrical degrees, of the  $i^{th}$  tower.

Note.—If non-typical towers are used, different loop current equations may be required.

If the tower is less than 90 electrical degrees in height, the base current is computed by multiplying the sine of the tower height by the loop current.

Using the no-loss currents, the total power loss would be:

$$P_{loss} = \frac{R}{1000} \sum_{i=1}^n I_i^2$$

where:

- $P_{loss}$  = the total power loss in kilowatts;  
 $R$  = the assumed resistance in ohms; for standard pattern calculations, this would be at least one ohm;

- $i$  = the  $i^{th}$  tower;  
 $n$  = the number of towers in the array;  
 $I_i$  = the loop current (or base current if the tower is less than 90 electrical degrees in height) for the  $i^{th}$  tower.

Finally, the multiplying constant must be adjusted to change the assumption from nominal power being radiated to nominal power being the input power to the array prior to taking account of the assumed loss resistance:

$$K_a = K \sqrt{\frac{P_{nom}}{P_{nom} + P_{loss}}}$$

where:

- $K_a$  = the multiplying constant after adjustment for the assumed loss resistance;  
 $K$  = the no-loss multiplying constant computed above;  
 $P_{nom}$  = the nominal power in kilowatts;  
 $P_{loss}$  = the total power loss in kilowatts.

The multiplying constant  $KD$  is then used to compute the theoretical pattern used in generating the standard pattern.

73.153 Field strength measurements in support of application or evidence at hearings. In the determination of interference, groundwave field intensity measurements will take precedence over theoretical values, provided such measurements are properly taken and presented. When measurements of groundwave signal strength are presented, they shall be sufficiently complete in accordance with 73.186 to determine the field strength at 1 mile in the pertinent directions for that station. NOTE: The antenna resistance measurements required by 73.186 need not be taken or submitted.

73.154 Directional antenna partial and skeleton proof of performance field strength measurements.

(a) The partial proof of performance shall consist of at least 10 field strength measurements on each of the radials established in the latest complete proof of performance of the directional antenna system. These measurements shall be made at locations, all within 2 to 10 miles (3 to 16 kilometers) from the antenna, which were utilized in such proof, and include on each radial, the point, if any, designated as a monitoring point in the station authorization. Measurements shall be analyzed in the manner prescribed in 73.186 of the rules.

(b) The skeleton proof of performance shall consist of field strength measurements, at least 3 on each of the radials established in the latest complete proof of performance of the directional antenna system, made at measurement locations utilized in such proof and include, on each radial, the point, if any, designated as a monitoring point in the station authorization.

73.157 Antenna testing-during-daytime. (a) The licensee of a station using a ~~directional antennas~~ daytime or nighttime hours may, without further authority, operate during daytime hours with the licensed nighttime directional facilities or with nondirectional antenna when conducting monitoring point field strength measurements or antenna proof of performance measurements.

(b) Operation pursuant to this section is subject to the following conditions:

(1) No harmful interference will be caused to any other station.

(2) The FCC may notify the licensee to modify or cease such operation to resolve interference complaints or when such action may appear to be in the public interest, convenience and necessity.

(3) Such operation shall be undertaken only for the purpose of taking monitoring points field strength measurements or antenna proof of performance measurements, and shall be restricted to the minimum time required to accomplish the measurements.

(4) Operating power in the nondirectional mode shall be adjusted to the same power as was utilized for the most recent nondirectional proof of performance covering the licensed facilities.

73.158 Directional antenna monitoring points. (a) When a licensee of a station using a directional antenna system finds that a field monitoring point, as specified on the station authorization, is no longer accessible for use or is unsuitable because of nearby construction or other disturbances to the measured field, an informal application to change the monitoring point location is to be promptly submitted to the FCC in Washington, D. C. The application must include the following information:

(1) A partial proof of performance conducted on the radial containing the monitoring point to be changed.

(2) A written description of the routing to the new selected monitoring point.

(3) A map showing the location and routing to the new selected monitoring point.

(4) A photograph showing the new monitoring point in relation to nearby permanent landmarks that can be used in locating the point accurately at all times throughout the year. Do not use seasonal or temporary features in either the written descriptions or photographs as landmarks for locating field points.

(b) When the descriptive routing to reach any of the monitoring points as shown on the station license is no longer correct due to road or building construction or other changes, the licensee must prepare and file with the FCC, in Washington, D. C., a request for a corrected station license showing the new routing description. A copy of the description is to be posted with the existing station license. The notification is to include the information specified in (2) and (3) of paragraph (a) above.

73.160 Vertical plane radiation characteristics,  $f(\theta)$ . (a) The vertical plane radiation characteristics show the relative field being radiated at a given vertical angle, with respect to the horizontal plane. The vertical angle, represented as  $\theta$ , is 0 degrees in the horizontal plane, and 90 degrees when perpendicular to the horizontal plane. The vertical plane radiation characteristic is referred to as  $f(\theta)$ . The generic formula for  $f(\theta)$  is:

$$f(\theta) = E(\theta)/E(O)$$

where:

$E(\theta)$  is the radiation from the tower at angle  $\theta$ .

$E(O)$  is the radiation from the tower in the horizontal plane.

(b) Listed below are formulas for  $f(\theta)$  for several common towers.

(1) For a typical tower, which is not top-loaded or sectionalized, the following formula shall be used:

$$f(\theta) = \frac{\cos(G \sin \theta) - \cos G}{(1 - \cos G) \cos \theta}$$

where:

$G$  is the electrical height of the tower, not including the base insulator and pier. (In the case of a folded unipole tower, the entire radiating structure's electrical height is used.)

(2) For a top-loaded tower, the following formula shall be used:

$$f(\theta) = \frac{\cos B \cos(A \sin \theta) - \sin \theta \sin B \sin(A \sin \theta) - \cos(A+B)}{\cos \theta (\cos B - \cos(A+B))}$$

where:

$A$  is the physical height of the tower, in electrical degrees, and  
 $B$  is the difference, in electrical degrees, between the apparent electrical height ( $G$ , based on current distribution) and the actual physical height.

$G$  is the apparent electrical height: the sum of  $A$  and  $B$ ;  $A+B$ .

See Figure 1 of this section.

(3) For a sectionalized tower, the following formula shall be used:

$$f(\theta) = \frac{\sin B [\cos D \cos(C \sin \theta) - \sin \theta \sin D \sin(C \sin \theta) - \cos \Delta \cos(A \sin \theta)] + \sin A [\cos B \cos(A \sin \theta) - \cos G]}{\cos \theta [\sin A (\cos B - \cos G) + \sin B (\cos D - \cos \Delta)]}$$

where:

$A$  is the physical height, in electrical degrees, of the lower section of the tower.

$B$  is the difference between the apparent electrical height (based on current distribution) of the lower section of the tower and the physical height of the lower section of the tower.

$C$  is the physical height of the entire tower, in electrical degrees.

$D$  is the difference between the apparent electrical height of the tower (based on current distribution of the upper section) and the physical height of the entire tower.  $D$  will be zero if the sectionalized tower is not top-loaded.

$G$  is the sum of  $A$  and  $B$ ;  $A+B$ .

$H$  is the sum of  $C$  and  $D$ ;  $C+D$ .

$\Delta$  is the difference between  $H$  and  $A$ ;

$H-A$ .

See Figure 2 of this section.

(c) One of the above  $f(\theta)$  formulas must be used in computing radiation in the vertical plane, unless the applicant submits a special formula for a particular type of antenna. If a special formula is submitted, it must be accompanied by a complete derivation and sample calculations. Submission of values for  $f(\theta)$  only in a tabular or graphical format (i.e., without a formula) is not acceptable.

(d) Following are sample calculations. (The number of significant figures shown here should *not* be interpreted as a limitation on the number of significant figures used in actual calculations.)

(1) For a typical tower, as described in subsection (b)(1), assume that  $G=120$  electrical degrees:

$\theta$	$f(\theta)$
0.....	1.0000
30.....	0.7698
60.....	0.3458

(2) For a top-loaded tower, as described in subsection (b)(2), assume  $A=120$  electrical degrees,  $B=20$  electrical degrees, and  $G=140$  electrical degrees,  $(120+20)$ :

$\theta$	$f(\theta)$
0.....	1.0000
30.....	0.7364
60.....	0.2960

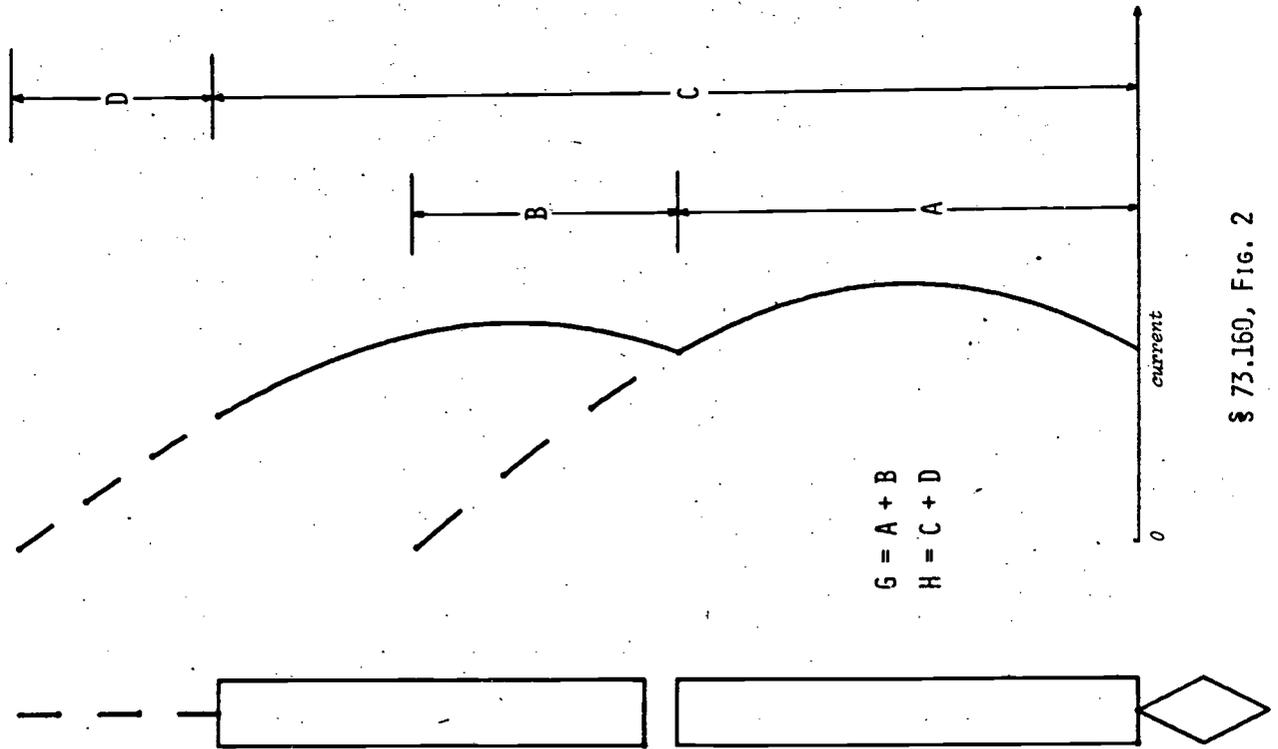
(3) For a sectionalized tower, as described in subsection (b)(3), assume  
 A = 120 electrical degrees, B = 20 electrical degrees, C = 220 electrical degrees, D = 15 electrical degrees, G = 140 electrical degrees (120 + 20), H = 235 electrical degrees (220 + 15), and  $\Delta$  = 115 electrical degrees (235 - 120):

$\theta$	$f(\theta)$
0.....	1.0000
30.....	0.5930
60.....	0.1423

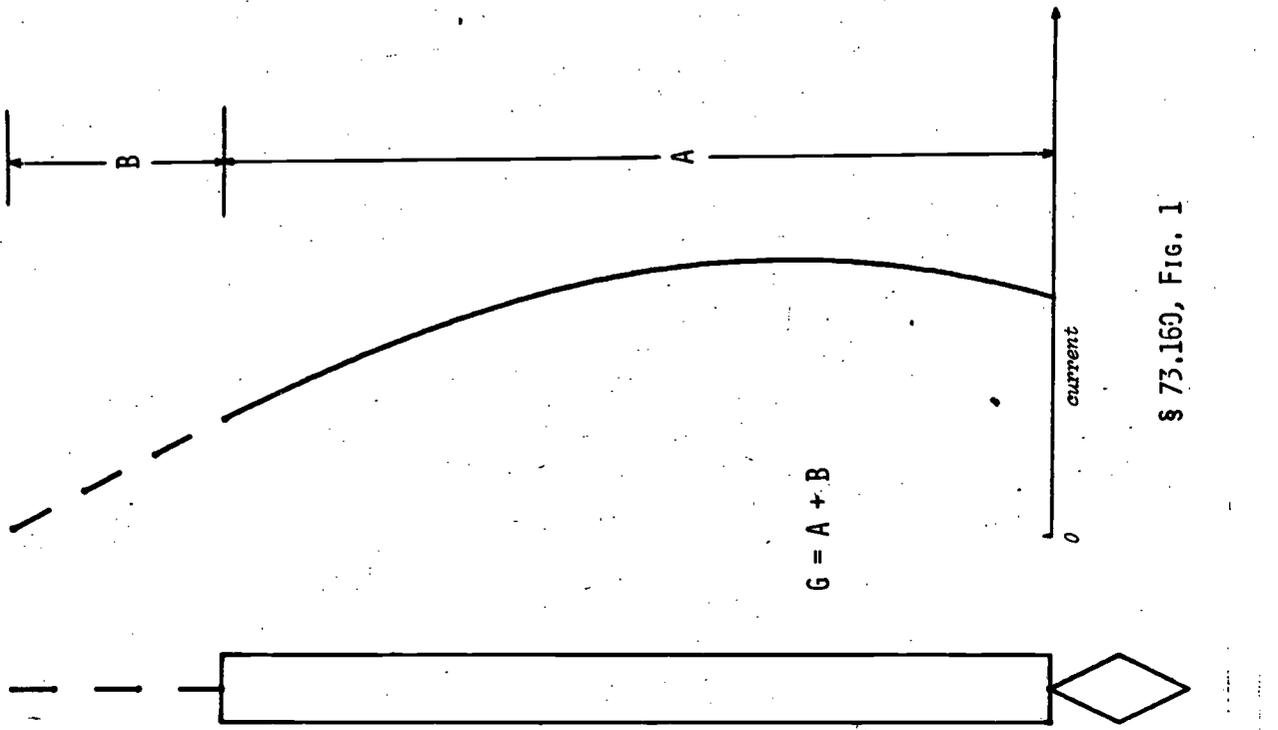
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STANDARD BROADCAST TECHNICAL STANDARDS

73.181 and subsequent sections are placed by BROADCAST SERVICE BUREAU in the STANDARDS binder.



§ 73.160, FIG. 2



§ 73.160, FIG. 1

## APPENDIX I

The following guidelines are to be applied in converting AM broadcast stations to standard patterns.

1. Existing standard and augmented patterns.

A. Convert to metric system, on January 4, 1982, using existing parameters.

2. Other existing patterns.

A. Check parameters such as electrical spacing and height to ensure that they are correct for the authorized frequency. If incorrect, use the physical spacing and height to compute the proper electrical values for the authorized frequency.

B. Compute the standard pattern using the theoretical RMS to determine the pattern size. The normal Z shall be used in computing the standard pattern.

C. Examine the measured pattern, the plotted theoretical pattern with MEOV, and the appropriate construction permit to determine the arcs in which the measured radiation and/or MEOV (including the MEOV on outstanding construction permits) exceeds the standard pattern, as computed in B, above. In these arcs, augmentation shall be applied as follows:

1. The augmented value shall be as great as the measured value at each azimuth, insofar as possible. It is more important that the augmentation cover the measured values on the azimuths at which proof of performance measurements were made; it is less important that the augmentation cover the values on the measured pattern which are the result of "smoothing in" between measured radials.

2. In arcs where the MEOV exceeds the measured and/or standard pattern values, the augmented values shall normally be no greater than the MEOV at any azimuth. However, in those cases where the only MEOV at an azimuth is a value specified on a construction permit, or where the MEOV specified on the construction permit is greater than the MEOV shown on the pattern, the MEOV on all construction permit can be used with a span of 10 degrees.

3. In arcs where the existing MEOV exceeds the measured and/or standard pattern values, the maximum possible value which can be retained at each azimuth is the greater of the following two values:

$$\text{RADI} = (\text{RMS}) \sqrt{\text{T}-0.05} (\text{Meas}/\text{RMS}) + 0.1 \sqrt{\text{T}} + \text{Meas}$$

where:

RMS is the measured pattern RMS, and MEAS is the measured radiation at the desired azimuth.

$$\text{RAD2} = (\text{MEOV}-\text{Meas}) \sqrt{\text{T}.0 - (\text{MEOV}-\text{Meas}) / (2 \text{Meas}) \sqrt{\text{T}} + \text{Meas}$$

where:

MEOV is the MEOV at the desired azimuth, and Meas is the measured radiation at the desired azimuth.

NOTE: In each case, if the part in square brackets is less than zero, use zero.

4. Augmentation shall be used as sparingly as possible.

5. The span for each augmentation shall be at least 10 degrees.

6. The augmented pattern shall be developed so that the measured pattern RMS shall not fall below 85 percent of the augmented pattern RMS.

D. For Class I or Class II stations operating at night, which are co-channel with a U.S. Class I station: in the arcs in the direction of the 0.5 mV/m-50 percent skywave contour of the U.S. Class I station, the standard pattern of the Class I or II station shall be adjusted by use of either a lower Q or "negative augmentation" (or both) to reduce the standard pattern radiation to a value no greater than the MEOV or the measured radiation.

E. This section applies only in the event that we do not reach agreements with Canada and Mexico on the conversion to standard patterns:

For non-Class IV stations operating at night, in the direction of the protected service area of a non-U.S. Class I station, or in the direction of the site (plus and minus five degrees) of a non-U.S. non-Class I station, in which the standard pattern radiation exceeds the notified pattern radiation:

Then, the standard pattern of the non-Class IV station shall be adjusted by use of either a lower Q or "negative augmentation" (or both) to reduce the standard pattern radiation to a value no greater than the notified radiation or the measured radiation, whichever is greater.

F. Convert the standard pattern, as augmented, to the metric system on January 4, 1982.

3. Public Notice of Results.

A. As the patterns are converted, the results will periodically be made available via Public Notices distributed by the Commission's Public Information Office.

B. Any party (licensees, permittees, applicants, or others) may submit proposed corrections to the developed parameters within 30 days after release of the public notice. The proposed corrections should be submitted both to the Commission and to the contractor performing the conversion to standard patterns. In addition, if the request for modification is made by a party other than the licensee, the party must also notify the licensee. All requests for modifications must supply alternative parameters, as well as justification for the use of the alternative parameters.

C. If a modification is requested, the contractor will examine the request and either modify the parameters (with the issuance of another Public Notice) or supply a report to the Commission indicating why the contractor believes the original parameters are correct.

D. In the event that the contractor supplies a report to the Commission, Commission staff will examine both the request for the modified parameters and the contractor's report, and make a decision. (The Commission, not the contractor, will be the final arbiter in the event of a dispute.)

4. Pending applications.

The processing of pending applications will be stopped, individually, while each is converted. The method of conversion will be the same as for an existing operation. After its conversion, each application will be processed using the converted pattern. If interference develops (using the converted pattern) that did not exist prior to conversion, the application will be granted with the converted pattern, notwithstanding the interference. An amendment tendered after conversion of the corresponding application must use a standard pattern.

5. Precision of parameters.

Converted patterns which do not need correction of basis parameters (pursuant to 2(a) above, for example) will continue using these parameters, even if the precision is in excess of the specified precision in sections 73.150(b)(6) and 73.152(b)(5).

If the existing parameters must be corrected or if new parameters must be assigned (adding augmentation, for example), the new and/or adjusted parameters shall have no greater precision than outlined in sections 73.150(b)(6) and 73.152(b)(5).







## SUBPART B - FM BROADCAST STATIONS

### CLASSIFICATION OF FM BROADCAST STATIONS AND ALLOCATION OF FREQUENCIES

- 73.201 Numerical designation of FM broadcast channels.
- 73.202 Table of assignments.
- 73.203 Availability of channels.
- 73.204 International agreement and other restrictions on use of channels.
- 73.205 Zones. See 73.1220 and 73.1650
- 73.206 Classes of commercial channels and stations operation thereon.
- 73.207 Minimum distance separations between stations.
- 73.208 Reference points and distance computations.
- 73.209 Protection from interference.
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## FM TECHNICAL STANDARDS

See FM STANDARDS 73.310 - 73.333

SUBPART B -- FM BROADCAST STATIONS

CLASSIFICATION OF FM BROADCAST STATIONS AND ALLOCATION OF FREQUENCIES

§73.201 Numerical designation of FM broadcast channels. The FM broadcast band consists of that portion of the radio frequency spectrum between 88 Megahertz per second (M/Hz and 108 MH/z) It is divided into 100 channels of 200 kilohertz per second KH/z each. For convenience, the frequencies available for FM broadcasting (including those assigned to noncommercial educational broadcasting) are given numerical designations which are shown in the table below:

Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.
88.1	201	93.1	226	98.1	251	103.1	276
88.3	202	93.3	227	98.3	252	103.3	277
88.5	203	93.5	228	98.5	253	103.5	278
88.7	204	93.7	229	98.7	254	103.7	279
88.9	205	93.9	230	98.9	255	103.9	280
89.1	206	94.1	231	99.1	256	104.1	281
89.3	207	94.3	232	99.3	257	104.3	282
89.5	208	94.5	233	99.5	258	104.5	283
89.7	209	94.7	234	99.7	259	104.7	284
89.9	210	94.9	235	99.9	260	104.9	285
90.1	211	95.1	236	100.1	261	105.1	286
90.3	212	95.3	237	100.3	262	105.3	287
90.5	213	95.5	238	100.5	263	105.5	288
90.7	214	95.7	239	100.7	264	105.7	289
90.9	215	95.9	240	100.9	265	105.9	290
91.1	216	96.1	241	101.1	266	106.1	291
91.3	217	96.3	242	101.3	267	106.3	292
91.5	218	96.5	243	101.5	268	106.5	293
91.7	219	96.7	244	101.7	269	106.7	294
91.9	220	96.9	245	101.9	270	106.9	295
92.1	221	97.1	246	102.1	271	107.1	296
92.3	222	97.3	247	102.3	272	107.3	297
92.5	223	97.5	248	102.5	273	107.5	298
92.7	224	97.7	249	102.7	274	107.7	299
92.9	225	97.9	250	102.9	275	107.9	300

NOTE: The frequency 108.0 MHz may be assigned to VOR test stations subject to the condition that interference is not caused to the reception of FM broadcasting stations, present or future.

73.202 Table of Assignments. (a) General. The following Table of Assignments contains the channels (other than noncommercial educational channels) assigned to the listed communities in the United States, its territories and possessions. Channels designated with an "A" are for Class B stations in Zones I and I-A, and for Class C stations in Zones II. Channels designated with an asterisk (\*) are assigned for use by noncommercial educational broadcast stations only. There are specific noncommercial educational FM assignments (Channels 201-220) for various communities in Arizona, California, New Mexico, and Texas. These are set forth in 73.504.

(b) Table of FM Assignments.

ALABAMA

Abbeville .....	232A	Chickasaw .....	252A	Gadsen .....	279
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		Carthage .....	255	Fort Stockton .....	232A
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		Cleveland .....	295	Fredericksburg .....	266
		Coleman .....	296A	Freeport .....	277
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Giddings .....	269A	Malakoff .....	240A	ReFugio .....	292A
Gilmer .....	237A	Marlin .....	244A	Rio Grande City ...	276A
Gonzales .....	292A	Marshall .....	280A	Roma-Los Baenzsz ....	249A
Graham .....	296A	McAllen .....	245,253	Rosenberg .....	285A
Granbury .....	294	McCamey .....	237A	Rusk .....	249A
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Hillsboro .....	273	Mission .....	221A	Shamrock .....	224A
Hondo .....	221A	Monahans .....	260,271	Sherman .....	244A
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		Nacogdoches .....	221A,277		
		Nederland .....	221A		
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Lake Jackson ...	298	Perryton .....	240A	Temple .....	269A,285A
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U.S. TERRITORIES AND POSSESSIONS

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Leone 266

NOTES

- 1 Any application must specify maximum power and antenna height, or the equivalent considering terrain.
- 2 Any application for this channel must specify an effective radiated power of 75 kW and antenna height of 1,000 feet above average terrain or equivalent.
- 3 A site for this channel must be located at least 7.5 miles southwest of the reference point.
- 4 Any application for this channel must specify an effective radiated power of 75 kW and antenna height of 500 feet above average terrain or equal.
- 5 Any application for this channel must specify an effective radiated power of 100 kW and antenna height of 500 feet above average terrain or equivalent.
- 6 A site located immediately southeast of Chatsworth would be required in order to meet the minimum spacing requirements of the rules for Channel 257A.
- 7 Effective 3 a.m. local time December 1, 1982 (concurrently with the expiration of the outstanding license for FM Station WRHN on Channel 300 Rhinelander, Wisconsin) or such earlier date as FM Station WRHN may consent to operate on Channel 262.
- 8 Any application for this channel must specify an effective radiated power of 100 kW and antenna height of 380 meters (1,250 feet).
- 9 A site at least 7 miles southeast of Station would be required in order to meet the minimum spacing requirements of the rules for Channel 285A.
- 10 Any application for this channel must specify an effective radiated power of at least 25kW.
- 11 Any application for this channel must specify an effective radiated power of 100 kW and antenna height of 183 meters (600 feet) above average terrain or equivalent.
- 12 Any application for this channel must specify an effective radiated power of 100 kW and antenna height of 650 feet above average terrain or equivalent.

§73.203 Availability of channels. Applications may be filed to construct FM broadcast stations only at the communities and on the channels contained in the Table of Allotments (§73.202(b)). Applications that fail to comply with this requirement, whether or not accompanied by a petition to amend the Table, will not be accepted for filing.

§73.204 International agreements and other restrictions on use of channels.  
See §73.207, 73.220, and 73.1650.

§73.205 Zones. For the purpose of allotments and assignments, the United States is divided into three zones as follows:

(a) Zone I consists of that portion of the United States located within the confines of the following lines drawn on the United States Albers Equal Area Projection Map (based on standard parallels 29-1/2° and 45-1/2°; North American datum); Beginning at the most easterly point on the State boundary line between North Carolina and Virginia; thence in a straight line to a point on the Virginia-West Virginia boundary line located at north latitude 37° 49' and west longitude 80° 12' 30"; thence westerly along the southern boundary lines of the States of West Virginia, Ohio, Indiana, and Illinois to a point at the junction of the Illinois, Kentucky, and Missouri State boundary lines; thence northerly along the western boundary line of the State of Illinois to a point at the junction of the Illinois, Iowa, and Wisconsin State boundary lines; thence easterly along the northern State boundary line of Illinois to the 90th meridian; thence north along this meridian to the 43.5° parallel; thence east along this parallel to the United States-Canada border; thence southerly and following that border until it again intersects the 43.5° parallel; thence east along this parallel to the 71st meridian; thence in a straight line to the intersection of the 69th meridian and the 45th parallel; thence east along the 45th parallel to the Atlantic Ocean. When any of the above lines pass through a city, the city shall be considered to be located in Zone I. (See Figure 1 of §73.699.)

(b) Zone I-A consists of Puerto Rico, the Virgin Islands and that portion of the State of California which is located south of the 40th parallel.

(c) Zone II consists of Alaska, Hawaii and the rest of the United State which is not located in either Zone I or Zone I-A.

§73.206 Classes of stations and permissible channels. (a) The following frequencies are reserved for use by Class A stations:

Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.
92.1	221	100.1	261
92.7	224	100.9	266
93.5	228	101.7	269
94.3	232	102.3	272
95.3	237	103.1	276
95.9	240	103.9	280
96.7	244	104.9	285
97.7	249	105.5	288
98.3	252	106.3	292
99.3	257	107.1	296

(b) Stations designated as Class A, B1, and B may be authorized in Zones I and I-A, Classes A, C2, C1, and C may be authorized in Zone II. The facilities for each class of station are listed in §73.211. The 20 channels listed in paragraph (a) of this Section may only be used by Class A stations but the other channels may be used by any class of station.



(c) The rules applicable to a particular station, including minimum and maximum facility requirements, are determined by its class. Class designation is based on the zone in which the station's transmitter is located, or proposed to be located.

§73.207 Minimum distance separation between stations. (a) FM allotments and assignments must be separated from other allotments and assignments on the same channel and five adjacent channels by certain minimum distances. If transmitter sites do not meet the minimum distances listed in paragraph (b) of this Section, the Commission will not accept petitions to amend the Table of Allotments, applications for new stations, or applications to change the channel or location of existing assignments. Class D (secondary) assignments, however, are subject only to the separation distances contained in subparagraph (b)(3). (See. sec. 73.512 for other rules governing the channel and location of Class D (secondary) assignments.)

(b) The distances listed below apply only to allotments and assignments operating on the same channel or one of five critical channels adjacent to the desired channel. The five adjacent channels are the first (200 kHz removed from the main channel), the second (400 kHz removed), the third (600 kHz removed), the fifty-third (10.6 MHz removed), and the fifty-fourth (10.8 MHz removed). The distances shown must be met regardless of which is the proposed station (i.e., distances shown from a new Class A station to an existing Class C station are also the distances between a new Class C station and an existing Class A station).

(1) Allotments and assignments in the United States must be separated from other domestic allotments and assignments by the following minimum distances.

TABLE A.—MINIMUM DISTANCE SEPARATION REQUIREMENTS  
[In kilometers (miles)]

Relation	Co-channel	200 kHz	400/600 kHz	10.6/10.8 MHz
A to A.....	105 (65)	64 (40)	27 (17)	8 (5)
A to B1.....	136 (86)	88 (55)	48 (30)	15 (10)
A to B.....	163 (101)	105 (65)	69 (43)	16 (10)
A to C2.....	163 (101)	105 (65)	55 (34)	16 (10)
A to C1.....	196 (122)	129 (80)	74 (46)	32 (20)
A to C.....	222 (138)	189 (105)	105 (65)	32 (20)
B1 to B1.....	175 (109)	114 (71)	50 (31)	24 (15)
B1 to B.....	211 (131)	145 (90)	71 (44)	24 (15)
B1 to C2.....	200 (124)	134 (83)	56 (35)	24 (15)
B1 to C1.....	233 (145)	181 (100)	77 (48)	40 (25)
B1 to C.....	259 (161)	193 (120)	105 (65)	40 (25)
B to B.....	241 (150)	169 (105)	74 (46)	24 (15)
B to C2.....	241 (150)	169 (105)	74 (46)	24 (15)
B to C1.....	270 (168)	195 (121)	79 (49)	40 (25)
B to C.....	274 (170)	217 (135)	105 (65)	40 (25)
C2 to C2.....	190 (118)	130 (81)	58 (36)	24 (15)
C2 to C1.....	224 (139)	158 (98)	79 (49)	40 (25)
C2 to C.....	249 (155)	188 (117)	105 (65)	40 (25)
C1 to C1.....	245 (152)	177 (110)	82 (51)	48 (30)
C1 to C.....	270 (168)	209 (130)	105 (65)	48 (30)
C to C.....	290 (180)	241 (150)	105 (65)	48 (30)

(2) Under the Canada-United States FM Broadcasting Agreement, domestic U.S. allotments and assignments that are located within 320 kilometers (199 miles) of the common border must be separated from Canadian allotments and assignments by the following distances. Class C2 allotments and assignments must be considered Class B allotments and assignments when using this table.

TABLE B.—MINIMUM DISTANCE SEPARATION REQUIREMENTS IN KILOMETERS

Relation	Co-Channel 0 kHz	Adjacent Channels			I.F. 10.8/10.8 MHz
		200 kHz	400 kHz	600 kHz	
A-A.....	132	85	45	37	8
A-B1.....	180	113	62	54	16
A-B.....	206	132	78	69	16
A-C1.....	239	164	98	90	32
A-C.....	242	177	108	100	32
B1-B1.....	197	131	70	57	24
B1-B.....	223	149	84	71	24
B1-C1.....	256	181	108	92	40
B1-C.....	259	185	118	103	40
B-B.....	237	164	94	74	24
B-C1.....	271	195	115	95	40
B-C.....	274	209	125	106	40
C1-C1.....	292	217	134	101	48
C1-C.....	302	230	144	111	48
C-C.....	306	241	153	113	48

(3) Under the Mexican-United States FM Broadcasting Agreement, U.A. allotments and assignments located within 320 Kilometers (199 miles) of the common border must be separated from Mexican allotments and assignments by the following distances. Class B1 and Class C2 allotments and assignments must be considered Class B and Class C1 allotments and assignments must be considered Class C when using this table.

TABLE C.—MINIMUM DISTANCE SEPARATION REQUIREMENTS

(In kilometers (miles))

Relation	Co-channel	200 kHz	400/600 kHz	10 P. 10.8 MHz
A to A.....	105 (65)	65 (40)	25 (15)	6 (5)
A to B.....	175 (110)	105 (65)	65 (40)	16 (10)
A to C.....	210 (130)	170 (105)	105 (65)	32 (20)
A to D.....	95 (60)	50 (30)	25 (15)	6 (5)
B to B.....	240 (150)	170 (105)	65 (40)	25 (15)
B to C.....	270 (170)	215 (135)	105 (65)	40 (25)
B to D.....	170 (105)	95 (60)	65 (40)	16 (10)
C to C.....	290 (180)	240 (150)	105 (65)	48 (30)
C to D.....	200 (125)	155 (95)	105 (65)	25 (15)
D to D.....	16 (11)	10 (6)	5 (3)	3 (2)

(c) The zone in which the transmitter of an FM station is located or proposed to be located determines the applicable rules with respect to minimum required spacings.

§73.208 Reference points and distance computations. (a)(1) The following reference points must be used to determine distance separation requirements when petitions to amend the Table of Allotments (§73.202(b)) are considered:

First, transmitter sites if authorized;

Second; reference coordinates designated by the FCC;

Third, coordinates listed in the United States Department of Interior publication entitled INDEX TO THE NATIONAL ATLAS OF THE UNITED STATES OF AMERICA; or

Last, coordinates of the main post office. (The community's reference points for which the petition is submitted will normally be the coordinates listed in the above publication.)

(2) When the distance between communities is calculated using community reference points and it does not meet the minimum separation requirements of §73.207, the channel may still be allotted if a transmitter site is available that would meet the minimum separation requirements and still permit the proposed station to meet the minimum field strength requirements of §73.315. A showing indicating the availability of a suitable site should be submitted with the petition. In cases where a station is not authorized in a community or communities and the proposed channel cannot meet the separation requirement a showing should also be made indicating adequate distance between suitable transmitter sites for all communities.

(b) Station separations in licensing proceedings shall be determined by the distance between the coordinates of the proposed transmitter site in one community and

(1) The coordinates of an authorized transmitter site for the pertinent channel in the other community; or, where such transmitter site is not available for use as a reference point,

(2) The coordinates of the other community as listed in the publication listed in paragraph (a) of this section; or, if not contained therein.

(3) The coordinates of the main post office of such other community.

(4) In addition, where there are pending applications in other communities which, if granted, would have to be considered in determining station separations, the coordinates of the transmitter sites proposed in such applications must be used to determine whether the requirements with respect to minimum separations between the proposed stations in the respective cities have been met.

(c) The distance between reference points is considered to be the length of the hypotenuse of a right triangle, one side of which is the difference in latitude of the reference points and the other side the difference in longitude of the two reference points. Distances must be computed by the method given in this paragraph. (This method may be used to accurately determine distances up to 350 kilometers (217 miles)). For these distances, this method will normally be more accurate than calculations using spherical trigonometry that do not correct for the spheroidal shape of the earth. Its accuracy deteriorates rapidly, however, for distances beyond 475 kilometers (295) and it should not be used in those cases.

PROPOSED RULE CHANGE

27. For the questions in (c) (3) and (4) would be revised as follows:

- (c) \*\*\*
- (3) \*\*\*
- LAAT-1113228-0.0.02
- COE(LAAT) + 00013 (LAAT)
- (4) \*\*\*
- LAAT-1113228-0.0.02
- COE(LAAT) + 00013 (LAAT)

Comments and reply comments are due on or before June 13th and  
 June 27, 1986.

For further information contact Kathryn Hoeford or Michael Lewis,  
 Miss Marie Barry (SOS) 633-9250

Docket No: 86-114

- (1) Convert the latitudes and longitudes to degrees and decimal parts of a degree in accordance with Table 1 of §73.698.
- (2) Determine the middle latitude of the two reference points to be nearest second of latitude (average the latitudes of the two points).

$$LAT_m = (LAT_1 + LAT_2) / 2$$

- (3) Determine the number of kilometers per degree of latitude difference for the appropriate middle latitude.

$$LAT_k = 111.108 - .566 \cos(2 LAT_m)$$

- (4) Determine the number of kilometers per degree of longitude difference for the appropriate middle latitude.

$$LONG_k = 111.301 \cos(LAT_m) - .006 \cos(3 LAT_m)$$

- (5) Determine the north-south distance in kilometers.

$$LAT = LAT_k (LAT_1 - LAT_2)$$

- (6) Determine the east-west distance in kilometers.

$$LONG = LONG_k (LONG_1 - LONG_2)$$

- (7) Determine the distance between the reference points by the square root of the sum of the squares of the distance obtained.

$$DIST = (LAT^2 + LONG^2)^{1/2}$$

where:

$LAT_1$  and  $LONG_1$  = coordinates of one location in decimal degrees.

$LAT_2$  and  $LONG_2$  = coordinates of second location in decimal degrees.

$LAT_m$  = middle latitude between points.

$LAT_k$  = kilometers per degree of latitude difference

$LONG_k$  = kilometers per degree of longitude difference.

$LAT$  = north-south distance in kilometers.

$LONG$  = east-west distance in kilometers, and

$DIST$  = distance between two reference points in kilometers.

In computing the above, sufficient decimal figures must be used to determine the distance to the nearest kilometer.

§73.209 Protection from interference. (a) Permittees and licensees of FM broadcast stations are not protected from any interference which may be caused by the grant of a new station, or of authority to modify the facilities of an existing station, in accordance with the provisions of this Subpart. However, they are protected from interference caused by Class D (secondary) noncommercial educational FM stations. See §73.509.

(b) The nature and extent of the protection from interference accorded FM broadcast stations operating on Channels 221-300 is limited solely to the protection that results from the distance separation requirements and the rules governing maximum power and antenna heights. These rules are specified in this Subpart.

(c) When the FCC determines that grant of an application would serve the public interest, convenience, and necessity, an antenna location may be specified in a designated antenna farm area that results in separations less than those specified in this Subpart. All FM allotments and assignments must be afforded protection from interference equivalent to the protection afforded under the minimum separations specified in this Subpart.

§73.210 Station location, main studio location, and program origination.

See 73.1120, 73.1125, 73.1130



§73.211. Power and antenna height requirements. (a) Minimum requirements. (1) Except as provided in paragraph (b)(2) of this Section, the minimum effective radiated power for:

- Class A stations must equal 0.1 kW (-10 dBk);
- Class B1 stations must exceed 3 kW (4.8 dBk);
- Class B stations must exceed 25 kW (14 dBk);
- Class C2 stations must exceed 3 kW (4.8 dBk);
- Class C1 stations must exceed 50 kW (17 dBk); and
- Class C stations must equal 100 kW (20 dBk).

(2) Class C stations must have a minimum antenna height above average terrain of at least 300 meters (984 feet). No minimum antenna height above average terrain is specified for Classes A, B1, B, C2, or C1 stations.

(b) Maximum power and antenna height. (1) The maximum effective radiated power in any direction and maximum antenna height above average terrain (HAAT) for the various classes of stations are listed below:

	Maximum power	Maximum antenna HAAT in meters (feet)
A.....	3kW (4.8dBk)	100 (326)
B1.....	25kW (14.0dBk)	100 (326)
B.....	50kW (17.0dBk)	150 (492)
C2.....	50kW (17.0dBk)	150 (492)
C1.....	100kW (20.0dBk)	300 (984)
C.....	100kW (20.0dBk)	600 (1968)

(2) Antenna heights may exceed that specified in this paragraph if the effective radiated power is reduced so that the distance to the 1 mV/m (60dBu) contour extends no farther than it would if the station were operating with the maximum power and antenna HAAT for its particular class of station. The location of the 1 mV/m (60dBu) contour is determined using Figure 1 of §73.333. The antenna HAAT is determined using the procedure contained in §73.313. When antenna HAAT is less than 30 meters (100 feet), an antenna HAAT of 30 meters (100 feet) must be assumed to determine equivalence. When a station's effective radiated power must be reduced below the normal minimum for its class (specified in paragraph (a)(1) of this Section) the value determined will be the minimum for the particular station involved.

(3) In Puerto Rico and the Virgin Islands:

(i) Class B stations may use antenna heights up to 600 meters (1968 feet) above average terrain with effective radiated powers up to 25.5 kW. For antenna heights above 600 meters (1968 feet), the power must be reduced so that the station's 1mV/m contour (located pursuant to Figure 1 of 73.333) will extend no farther from the station's transmitter than with the facilities of 25.5 kW and an antenna height of 600 meters (1968 feet). For powers above 25.5 kW (up to 50 kW) no antenna height will be authorized which results in greater coverage by the 1 mV/m contour (located pursuant to Figure 1 of 73.333) than that obtained with the facilities of 25.5 kW ERP and an antenna height of 600 meters (1968 feet).

73.211(b)(3)(ii) - 73.212(a)

(ii) Class A stations may use antenna heights up to 335 meters (1100 feet) above average terrain with effective radiated powers up to 3 kW. For antenna heights above 335 meters (1100 feet), the power must be reduced so that the station's 1mV/m contour (located pursuant to Figure 73.333) will extend no farther from the station's transmitter than with the facilities of 3 kW ERP and an antenna height of 335 meters (1100 feet).

(iii) Class B1 stations may use antenna heights up to 335 meters (1100 feet) above average terrain with effective radiated powers up to 5 kW. For antenna heights above 335 meters (1100 feet), the power must be reduced so that the station's mV/m contour (located pursuant to Figure 1 of 73.333) will extend no farther from the facilities of 5 kW and an antenna height of 335 meters (1100 feet). For powers above 5 kW (up to 25.0 kW) no antenna height will be authorized which results in greater coverage by the 1mV/M contour than that obtained with the facilities of 5 kW ERP and antenna height of 335 meters (1100ft.)

(c) Existing stations. Stations authorized prior to (the effective date of the Report and Order in BC Docket 80-90) that do not conform to the requirements of this Section, may continue to operate as authorized. Stations operating with facilities in excess of those specified in paragraph (b) of this Section may not increase their effective radiated powers or extend their 1 mV/m field strength contour beyond the location permitted by their present authorizations. The provisions of this Section will not apply to applications to increase facilities for those stations operating with less than the minimum power specified in paragraph (a) of this Section.

§73.212 Administrative changes in authorizations. (a) In the issuance of FM broadcast station authorizations, the Commission will specify the transmitter output power and effective radiated power in accordance with the following tabulations:



Power (watts or kw)

Rounded out to nearest figure  
(watts or kw)

1 to 3 -----	.05
3 to 10 -----	.1
10 to 30 -----	.5
30 to 100 -----	1
100 to 300 -----	5
300 to 1,000 -----	10

(b) Antenna heights above average terrain will be rounded out to the nearest meter.

§73.213 Stations and spacings below the minimum separations. (a) Stations authorized prior to November 16, 1964, at locations that do not meet the minimum distances specified in §73.207 may apply for changes in facilities if the requested facilities conform to those listed in the following table:

FACILITIES TO BE AUTHORIZED FOR SHORT-SPACED FM STATIONS

Class of station	Separation in kilometers		Facilities authorized	
	Cochannel	First adjacent	Power (kW)	Antenna height (meters)
A to A	72-105		3	100.
A to A	64-71		2	100.
A to A	less than 64		1	100.
A to B		80-105	3	100 Class A.
			50	150 Class B.
A to B		64-79	3	100 Class A.
			20	150 Class B.
A to B		less than 64	3	100 Class A.
			10	150 Class B.
A to C		129-169	3	100 Class A.
			100	600 Class C.
A to C		97-128	3	100 Class A.
			50	600 Class C.
A to C		less than 97	3	100 Class A.
			20	600 Class C.
B to B	201-241	129-169	50	150.
B to B	181-200	105-128	20	150.
B to B	121-180	80-104	10	150.
B to B	less than 121	less than 80	5	150.
B to C	225-274	177-217	50	150 Class B.
			100	600 Class C.
B to C	177-224	137-176	20	150 Class B.
			50	600 Class C.
B to C	145-176	97-136	10	150 Class B.
			20	600 Class C.
B to C	less than 145	less than 97	5	150 Class B.
			10	600 Class C.
C to C	241-290	201-241	100	600.
C to C	193-240	153-200	50	600.
C to C	181-192	121-152	20	600.
C to C	less than 181	less than 121	10	600.

(b) Stations authorized facilities in excess of those specified in this section may continue to operate with such facilities.

(c) Stations may elect to operate omnidirectionally with facilities no greater than the least they should be permitted in any direction under paragraph (a) of this section. Greater facilities (up to the maximum specified in § 73.211(b) for their class) may be used if, by use of a directional antenna, radiation in any direction in which a short separation exists is reduced to no more than that permitted under paragraph (a) of this section. Applications for use of directional antennas must be in conformance with § 73.316(d); in addition, the increase in radiation off the line between the short-spaced stations shall not exceed 2 db per 10 degrees of azimuth; and in no event shall radiation in any direction exceed the maximum permitted under § 73.211(b) for the particular class of station.

(d) Stations will be authorized maximum facilities for their class in those directions in which they are short-spaced to other stations on second or third adjacent channels.

(e) The powers listed in the table are the maximums the FCC will authorize. Antenna heights may exceed those specified in the table if the effective radiated power is reduced so that the 1 mV/m contour extends no further than it would with the maximum power and antenna height. The antenna height value to be used is that above average terrain and not that in any particular direction. When antenna heights are less than 30 meters (100 feet), a value of 30 meters (100 feet) must be assumed for the purposes of this paragraph.

(f) The following provisions will govern applications for move of transmitter site:

(1) No application to move will be accepted which creates short spacing to standard spaced stations and assignments less than the distances specified in §73.207, including second and third adjacent channel separations. This provision applies even if in other respects the application would be acceptable under this paragraphs.

(2) Stations short-spaced with respect to other stations under §73.207 may apply to move transmitter site, even though by the move the separation would be further shortened, under the following conditions and with the following facilities.

(i) Where the short separation is second or third adjacent channel, with any facilities up to the maximum permitted under §73.211.

(ii) When a station does not meet the minimum separation to co-channel or first adjacent channel stations, it may apply for up to the maximum listed facilities for the separations that would exist at the new transmitter site. (See paragraphs (F)(2)(iii) of this section subdivision (iii) for further restrictions on very short-spaced stations).

(iii) The provisions of this subparagraph apply where the resulting separation after the move would be less than: co-channel, 64 kilometers Class A to Class A, 121 kilometers Class B to Class B, 145 kilometers Class B to C or vice versa, or 161 kilometers Class C to Class C; first adjacent channel 64 kilometers Class A to Class B or vice versa; 80 kilometers Class B to Class B, 97 kilometers Class A or B to Class C, or vice versa, and 121 kilometers Class C to Class C. Stations so situated may apply to move and use either their present facilities or no more than those specified for their distance brackets in paragraph (a) of this Section, if the move would not decrease the short distance by more than 5 kilometers. If the move would decrease the short distance a greater amount, a station will be permitted no more than the facilities that would give it, in the critical direction, a 1 mV/m contour located no further out than that which would result from using the former location and the maximum facilities specified for the distance bracket.

NOTE: For the purposes of the above Section, Classes B1 and C2 will be considered Class B and Class C1 will be considered Class C until further notice.

**73.214 Cross reference to rules in other parts.**

See 73.1010.

**73.215 Notification of filing of applications.**

See 73.1030.

**73.216 Equipment tests.**

See 73.1610.

**73.217 Program tests.**

See 73.1620.

**73.218 Station license period.**

See 73.1020.

**73.219 Deleted.**

§73.220 Restrictions on use of channels. (a) The frequency 89.1 MHz (channel 206) is reserved in the New York City metropolitan area for the use of the United Nations with the equivalent of an antenna height of 150 meters (492 feet) above terrain and effective radiated power of 20 kilowatts, and the FCC will make no assignments, which would cause objectionable interference with such use.

(b) In Alaska, FM broadcast stations operating on Channels 221-300 (92.1-107.9 MHz) shall not cause harmful interference to and must accept interference from non-government fixed operations authorized prior to January 1, 1982.

§73.221 DELETED.

§73.223 DELETED.

§73.231 DELETED.

§73.232 Territorial exclusivity. No licensee of an FM broadcast station shall have any arrangement with a network organization which prevents or hinders another station serving substantially the same area from broadcasting the network's programs not taken by the former station, or which prevents or hinders another station serving a substantially different area from broadcasting any program of the network organization. PROVIDED, HOWEVER, That this section does not prohibit arrangements under which the station is granted first call within its primary service area upon the network's programs. The term "network organization" means any organization originating program material, with or without commercial messages, and furnishing the same to stations interconnected so as to permit simultaneous broadcast by all or some of them. However, arrangements involving only stations under common ownership, or only the rebroadcast by one station or programming from another with no compensation other than a lump-sum payment by the station rebroadcasting, are not considered arrangements with a network organization. The term "arrangement" means any contract, arrangement or understanding, express or implied.

§73.233 through §73.238 DELETED.

73.239 Use of common antenna site. No FM broadcast station license or renewal of FM broadcast station license will be granted to any person who owns, leases, or controls a particular site which is peculiarly suitable for FM broadcasting in a particular area and (a) the site is not available for use by other FM broadcast station licensees; and (b) no other comparable site is available in the area; and (c) where the exclusive use of such site by the applicant or licensee would unduly limit the number of FM broadcast stations that can be authorized in a particular area or would unduly restrict competition among FM broadcast stations.

73.250 Acceptability of broadcast transmitters for licensing. See 73.1660  
 73.252 Frequency measurements. See 73.1540  
 73.254 Equipment performance measurements. See 73.1590.

73.255 Auxiliary transmitter. See 73.1670.

73.256 Alternate main transmitters. See 73.1665.

73.257 Modification of transmission systems. See 73.1690.

73.258 Indicating instruments. (a) Each FM broadcast station shall be equipped with indicating instruments which conform with the specifications described in 73.1215 for determining power by the indirect method; for indicating the relative amplitude of the transmission line radio frequency current voltage, or power; and with such other instruments as are necessary for the proper adjustment, operation and maintenance of the transmitting system.

(b) The function of each instrument shall be clearly and permanently shown in the instrument itself or on a panel immediately adjacent thereto.

(c) In the event that any one of these indicating instruments becomes defective when no substitute which conforms with the required specifications is available, the station may be operated without the defective instrument pending its repair or replacement for a period not in excess of 60 days without further authority of the Commission; PROVIDED, That, if the defective instrument is the transmission line meter of a station which determines the output power by the direct method, the operating power shall be determined by the indirect method in accordance with 73.267(c) during the entire time the station is operated without the transmission line meter.

(d) If conditions beyond the control of the licensee prevent the restoration of the meter to service within the above allowed period, informal request in accordance with 73.3549 may be filed with the Engineer in Charge of the radio district in which the station is located for such additional time as may be required to complete repairs of the defective instrument.

#### TECHNICAL OPERATION AND OPERATORS

73.261 Time of operation. See 73.1705 and 73.1740.

73.262 Experimental operation. See 73.1510 and 73.1520.

73.263 Station inspection. See 73.1225.

73.264 Station and operator licenses; posting of. See 73.1230.

73.265 FM operator requirements.

(a) Transmitter duty operator requirements: See 73.1580.

(b) Chief operator requirements: See 73.1870.

(c) Transmission system inspection requirements: See 73.1580.

§73.266 Operating Power.

- (a) Determination. See §73.267.
- (b) Maintenance. See §73.1560.
- (c) Reduced power. See §73.1560.

§73.267 Determining operating power. (a) The operating power of each FM station is to be determined by either the direct or indirect method.

(b) Direct method. The direct method of power determination for an FM station uses the indications of a calibrated transmission line meter (responsive to relative voltage, current, or power) located at the RF output terminals of the transmitter. This meter must be calibrated whenever there is any indication that the calibration is inaccurate or whenever any component of the metering circuit is repaired or replaced. The calibration must cover, as a minimum, the range from 90% to 105% of authorized power. The meter calibration may be checked by measuring the power at the transmitter terminals while either:

(1) operating the transmitter into the transmitting antenna, and determining actual operating power by the indirect method described in §73.267(c); or

(2) operating the transmitter into a load (of substantially zero reactance and a resistance equal to the transmission line characteristic impedance) and using an electrical device (within plus or minus 5% accuracy) or temperature and coolant flow indicator (within plus or minus 4% accuracy) to determine the power.

(c) Indirect method. The operating power is determined by the indirect method by applying an appropriate factor to the input power to the last radio-frequency power amplifier stage of the transmitter, using the following formula:

$$\text{Transmitter output power} = E_p \times I_p \times F$$

Where:

$E_p$  = DC input voltage of final radio stage.

$I_p$  = Total DC input current of final radio stage.

$F$  = Efficiency factor.

(1) If the above formula is not appropriate for the design of the transmitter final amplifier, use a formula specified by the transmitter manufacturer with other appropriate operating parameters.

(2) The value of the efficiency factor,  $F$ , established for the authorized transmitter output power is to be used for maintaining the operating power, even though there may be some variation in  $F$  over the power operating range of the transmitter.

(3) The value of  $F$  is to be determined and a record kept thereof by one of the following procedures listed in order of preference:

(i) Using the most recent measurement data for calibration of the transmission line meter according to the procedures described in paragraph (b) of this Section or the most recent measurements made by the licensee establishing the value of  $F$ . In the case of composite transmitters or those in which the final amplifier stages have been modified pursuant to FCC approval, the licensee must furnish the FCC and also retain with the station records the measurement data used as a basis for determining the value of  $F$ .

(ii) Using measurement data shown on the transmitter manufacturer's test data supplied to the licensee; provided that measurements were made at the authorized frequency and transmitter output power.

(iii) Using the transmitter manufacturer's measurement data submitted to the FCC for type approval and as shown in the instruction book supplied to the licensee.

§73.268 Modulation.  
See §73.1570.

§73.269 Frequency tolerance.  
See §73.1545.

§73.270 Antenna structure, marking and lighting. See 73.1213.

73.271 Discontinuance of operation. See 73.1750.

§73.272 **DELETED**

§73.273 Emergency antenna. See 73.1680.

73.274 Remote control Authorization. See 73.1400.

73.275 Remote Control operation. See 73.1410.

§73.276 Extension meters. See 73.1550.

§73.277 Permissible transmissions. (a) No FM broadcast licensee or permittee shall enter any agreement, or understanding or arrangement, oral or written, whereby it undertakes to supply, or receives consideration for supplying, on its main channel a functional music, background music, or other subscription service (including storecasting) for reception in the place or places of business of any subscriber.

(b) The transmission (or interruption) of radio energy in the FM broadcast band in permissible only pursuant to a station license, program test authority, construction permit or experimental authorization and the provisions of this part of the Rules.

73.278 Special field authorization. See 73.1515.

#### OTHER OPERATING REQUIREMENTS

§73.281 General requirements relating to logs. See 73.1800.

73.282 Program logs. 73.1810.

73.283 Operating logs. 73.1820.

73.284 Maintenance logs. 73.1830.

73.285 Rerention of logs. 73.1840.

73.286 Availability of logs and record. 73.1225 and 73.1850.

73.287 Station identification. 73.1201.

73.288 Fraudulent billing practies. 73.1205

73.289 Sponsorship identification. 73.1212.

73.290 Broadcast by candidates for public office. 73.1940.

73.291 Personal attacks; political editorials. 73.1910, .1920, .1930

73.292 Lotteries. See Subpart H, 73.1211, page 5.

73.293 Use of FM multiplex subcarriers. Licensees of FM broadcast stations may transmit without further authorization, subcarrier communication service in accordance with the provisions of 73.319 and 73.322.

73.295 FM subsidiary communications. (a) Subsidiary communications services are those transmitted on a subcarrier within the FM baseband signal but do not include services which enhance the main program broadcast service (see 73.293(a)(d)) or exclusively relate to station operations (see 73.293(c)). Subsidiary communications include but are not limited to services such as functional music, specialized foreign language programs, radio reading services, utility load management, market and financial data and news, paging and calling traffic control signal switching, biligual television audio and point to point or multi-point messages.

(b) FM subsidiary communications services that are common carrier in nature are subject to common carrier regulation. Licensees operating such services are required to apply to the FCC for the appropriate authorization and to comply with all policies and rules applicable to the service. Responsibility for making the initial determinations of wheather a particular activity is common carriage rests with the FM station licensee. Initial determinations by licensee are subject to FCC examination and may be reviewed at the FCC's discretion.

(c) Subsidiary communications services are of a secondary nature under the authority of the FM station authorization and the authority to provide such communications services may not be retained or transferred in any manner separate from the station's suthorization. The grant or renewal of and FM station permit or license is not furthered or promoted by proposed or past services. The permittee or licensee must establish that the broadcast operation is in the public interest wholly apart from the subsisiary communications services provided.

(d) The station identification, delayed recording and sponsor identificstion announcements required by sections 73.1201, 73.1208, and 73.1212 are not applicable to material trasmitted under an SCA

(e) The licensee or permittee must retain control over all material transmitte in a broadcast mode via the station's facilities, with the right to reject any material that it deems inappropriate or undesirable.

§73.296 Broadcast of telephone conversation. See 73.1206

73.297 FM multichannel sound broadcastig. (a) An FM broadcast station may without specific authority from the FCC transmit stereophonic (biphonic, quadrasonic, etc.) sound programs upon installation of stereophonic sound transmitting equipment under the provisions of 2.1001, 73.322 and 73.1590 of the Rules. Prior to commencement of stereophonic sound broadcasting, equipment performance measurements must be made to ensure that the transmitted signal complies with all applicable rules and standards.

(b) Each licensee or permittee engaging in multichannel broadcasting must measure the pilot subcarrier frequency as often as necessary to ensure that it is kept at all times within 2Hz of the authorized frequency.

§73.298 Operation during emergency. See 73.1250.

73.301 Equal employment opportunities. See 73.2080.

No material missing. §§73.310 - 73.333 filed under FM Standards



SUBPART C - NONCOMMERCIAL EDUCATIONAL  
FM BROADCAST STATIONS

- 73.501 Channels available for assignment.
- 73.502 State-wide plans.
- 73.503 Licensing requirements and service.
- 73.504 Noncommercial education channel assignments under US-Mexico  
FM Broadcast Agreement.
- 73.505 Zones.
- 73.506 Classes of educational channels and stations operating thereon.
- 73.507 Minimum distance separations between stations.
- 73.508 Standards of good engineering practice.
- 73.509 Prohibited overlap.
- 73.510 Antenna systems.
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- 73.512 Special procedures applicable to Class D noncommercial educa-  
tional stations.
- 73.513 Noncommercial educational FM stations operating on unreserved  
channels.
- 73.514 Cross reference. See 73.1010
- 73.515 Notification of filing of applications.
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- 73.525 TV Channel 6 protection.
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of time of sale of a station. 73.1150
- 73.540 Use of automatic transmission systems (ATS)
- 73.542 Use of automatic transmission facilities.
- 73.544 Fail-safe transmitter control for automatic transmission  
systems.
- 73.546 Automatic transmission system monitoring and alarm points.
- 73.550 Acceptability of broadcast transmitters for licensing. 73.1660
- 73.552 Frequency measurements. 73.1540
- 73.553 Deleted.
- 73.554 Equipment performance measurements. 73.1590
- 73.555 Auxiliary transmitter. See 73.1670
- 73.556 Alternate main transmitters. 73.1665
- 73.557 Modification of transmission system. 73.1690
- 73.558 Indicating instruments.
- 73.561 Operating schedule, time sharing.
- 73.562 Experimental operation. See 73.1510 and 73.1520
- 73.563 Station inspection. 73.1225
- 73.564 Station and operator licenses; posting of. 73.1230
- 73.565 Operator requirements.
- 73.566 Operating power.

(continued)

73.567 Determining operating power.  
73.568 Modulation.  
73.569 Frequency tolerance.  
73.570 Antenna structure, marking and lighting. 73.1213  
73.571 Discontinuance of operation. 73.1750  
73.572 Extension meters. 73.1550  
73.573 Emergency antenna. 73.1680  
73.574 Remote control authorization.  
73.575 Remote control operation.  
73.578 Special field test authorizations. 73.1515  
73.581 General requirements relating to logs. See 73.1800  
73.582 Program logs. 73.1810  
73.583 Operating logs. 73.1820  
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73.587 Station identification.  
73.588 Reserved.  
73.589 Reserved.  
73.590 Broadcasts by candidates for public office.  
73.591 Personal attacks. 73.1920  
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73.593 Subsidiary Communications Authorizations.  
73.594 Deleted.  
73.595 Deleted.  
73.596 Broadcast of telephone conversation. 73.1206  
73.597 FM stereophonic sound broadcasting.  
73.598 Operations during emergency. 73.1250  
73.599 Equal employment opportunities. 73.2080

SUBPART C -- NONCOMMERCIAL EDUCATIONAL FM BROADCAST STATIONSClassification of Stations and Allocation of Frequencies

**73.501 Channels available for assignment.** (a) The following frequencies, except as provided in paragraph (b) of this section, are available for noncommercial educational FM broadcasting:

Frequency (MHz)	Channel No.
87.9 -----	<sup>1</sup> 200
88.1 -----	201
88.3 -----	202
88.5 -----	203
88.7 -----	204
88.9 -----	205
89.1 -----	<sup>2</sup> 206
89.3 -----	207
89.5 -----	208
89.7 -----	209
89.9 -----	210
90.1 -----	211
90.3 -----	212
90.5 -----	213
90.7 -----	214
90.9 -----	215
91.1 -----	216
91.3 -----	217
91.5 -----	218
91.7 -----	219
91.9 -----	220

(b) In Alaska, FM broadcast stations operating on Channels 200-220 (87.9-91.9MHz) shall not cause harmful interference to and must accept interference from non-Government fixed operations authorized prior to January 1, 1982.

(c) There are specific noncommercial educational FM assignments (Channels 201-220) for various communities in Arizona, California, New Mexico, and Texas. These are set forth in 73.504.

<sup>1</sup> The frequency 87.9 MHz, Channel 200, is available only for use of existing Class D stations required to change frequency. It is available only on a noninterference basis with respect to TV Channel 6 stations and adjacent channel noncommercial educational FM stations. It is not available at all within 402 kilometers (250 miles) of Canada and 320 kilometers (199 miles) of Mexico. The specific standards governing its use are contained in 73.512.

<sup>2</sup> The frequency 89.1 MHz, Channel 206, in the New York City metropolitan area, is reserved for the use of the United Nations with the equivalent of an antenna height of 500 feet above average terrain and effective radiated power to 20 kW and the Commission will make no assignments which would cause objectionable interference with such use.

73.502 State-wide plans. In considering the assignment of a channel for a non-commercial educational FM broadcast station, the Commission will take into consideration the extent to which each application meets the requirements of any state-wide plan for noncommercial educational FM broadcast stations filed with the Commission, provided that such plans afford fair treatment to public and private educational institutions, urban and rural, at the primary, secondary, higher, and adult educational levels, and appear otherwise fair and equitable.

73.503 Licensing requirements and service. The operation of, and the service furnished by noncommercial educational FM broadcast stations shall be governed by the following:

(a) A noncommercial educational FM broadcast station will be licensed only to a nonprofit educational organization and upon showing that the station will be used for the advancement of an educational program.

(1) In determining the eligibility of publicly supported educational organizations, the accreditation of their respective state departments of education shall be taken into consideration.

(2) In determining the eligibility of privately controlled educational organizations, the accreditation of state departments of education and/or recognized regional and national educational accrediting organizations shall be taken into consideration.

(b) Each station may transmit programs directed to specific schools in a system or systems for use in connection with the regular courses as well as routine and administrative material pertaining thereto and may transmit educational, cultural, and entertainment programs to the public.

(c) A noncommercial educational FM broadcast station may broadcast programs produced by, or at the expense of, or furnished by persons other than the licensee, if no other consideration than the furnishing of the program and the costs incidental to its production and broadcast are received by the licensee. The payment of line charges by another station, network, or someone other than the licensee of a non-commercial educational FM broadcast station, or general contributions to the operating costs of a station, shall not be considered as being prohibited by this paragraph.

(d) Each station shall furnish a nonprofit and noncommercial broadcast service. Noncommercial educational FM broadcast stations are subject to the provisions of 73.1212 to the extent they are applicable to the broadcast of programs produced by, or at the expense of, or furnished by others. No promotional announcement on behalf of for profit entities shall be broadcast at any time in exchange for the receipt, in whole or in part, of consideration to the licensee, its principals, or employees. However, acknowledgements of contributions can be made. The scheduling of any announcements and acknowledgements may not interrupt regular programming.

NOTE -- Commission interpretation of this rule, including the acceptable form of acknowledgements, may be found in the Second Report and Order, (Commission Policy Concerning the Noncommercial Nature of Educational Broadcast Stations), 86 F.C.C. 2d 141 (1982), and the subsequent Commission's Order, Docket No. 21136 (July 15, 1982).

§73.504 Noncommercial educational channel assignments under the United States-Mexico FM Broadcast Agreement. (a) The Governments of Mexico and the United States are parties to an Agreement providing a table of allotments of FM channels in this area within 100 miles (320 kilometers) of the common border. The following table sets forth the assignments of Classes A, B, and C noncommercial educational FM channels (201-220) to communities in the affected portions of Arizona, California, New Mexico and Texas:

<u>ARIZONA</u>	<u>Channel No.</u>	<u>TEXAS</u>	<u>Channel No.</u>	<u>TEXAS (Cont'd)</u>	<u>Cha.No.</u>
Ajo -----	220	Alpine -----	219	Llano -----	203A
Douglas--201, 205A, 211A		Andrews -----	209A	Marfa -----	203A
Globe -----	211A	Austin -- 204A, 208, 213		Midland -----	211A
Kingman -----	211A, 220	Ballinger -----	211A	Monohans -----	210A
Lake Havasu City---	216A	Beeville -----	218A	New Braunfels -----	
McNary -----	201A	Big Lake -----	211A	Odessa -----	213A, 217
Nogales -----	217	Big Spring ---	203, 207A	Ozona -----	213A
Parker -----	211A	Boerne -----		Pearsall -----	
Phoenix --202, 208A, 212A		Bracketville ----	212A	Pecos -----	205A
	218	Brady -----	219A	Port Lavaca ----	201A
Prescott -----	208A, 214	Brownsville ----	202A	Presidio -----	202A
Safford -----	215, 220A	Brownwood ---	205, 212A	Raymondville ----	201A
Tucson -----	213	Carrizo Springs -	201A	Rio Grande City--	201A
Wickenburg -----	209A	Coleman -----	220A	Rockport -----	217A
Yuma -----	201A, 205A	Colorado City ---	211A	Rocksprings ----	210A
		Corpus Christi---	220A	San Angelo -	215, 220A
<u>CALIFORNIA</u>			212	San Antonio--206, 211A	
Avalon-----	204A	Cotulla -----	203A		215A, 219A
Claremont -----	204A	Crane -----	205A	Sanderson -----	207A
Long Beach -----	201A	Crystal City ----	214A	San Marcos -----	218A
Los Angeles 205A, 214, 218		Cuero -----	210A	San Saba -----	210A
Mission Viejo-----	203A	Del Rio -----	204, 214A	Seguin -----	202A
Moorpark -----	216	Eagle Pass --	208, 213A	Seminole -----	205A
Northridge -----	203A	Edinburg -----	208A	Sonora -----	211A
Oxnard -----	212	Eldorado -----	219A	Sweetwater -----	213A
Pasadena -----	207	El Paso -----	203, 208A	Uvulde -----	216A
Redlands -----	206A	Falfurrias -----	218A	Van Horn -----	202A
Riverside -----	209A	Fort Stockton-201, 206A		Victoria -----	203A
San Bernardino ---	220	Fredericksburg --	201A	Zapata -----	202A
San Diego ----	202A, 208	Freer -----	214A		
Santa Barbara --204, 220		Goliad -----	216A		
Santa Monica -----	210	Gonzales -----	220A		
<u>NEW MEXICO</u>		Harlingen -----	205A		
Alamogordo ---	201, 208A	Hebbronville ----	220A		
Artesia -----	219A	Hondo -----	202A		
Carlsbad -----	211A, 215	Junction -----	212A		
Deming -----	218A	Kenedy-Karnes ---	201A		
Hobbs -----	211A	Kermit -----	212A		
Las Cruces ---	209A, 214	Kerrville -----	216A		
Lordsburg -----	220A	Kingsville -----	216A		
Lovington -----	220A	Lamesa -----	210A		
Roswell -----	213, 217A	Loredo -----	201A, 210		
Silver City --	212, 217A				
Socorro -----	208A, 216				
Truth or Conse-					
quences -----	220A				

(b) Anyone applying for a noncommercial educational FM station in the border area of Arizona, California, New Mexico, or Texas, must propose at least Class A minimum facilities (see section 73.211(a)) and apply for a channel set forth in the table in paragraph (a) for use either at the listed community or an unlisted community under the same conditions set forth in 73.203(b) of this chapter; PROVIDED, HOWEVER, That existing Class D noncommercial educational stations may apply to change frequency within the educational portion of the FM band in accordance with the requirements set forth in 73.512.

(c) The minimum distance separations given in Section 73.207 apply to the following:

(1) A petition for rulemaking to amend the table set forth in paragraph (a) and;

(2) Except for Class D stations changing channel pursuant of 73.512, to an application for any class of noncommercial educational FM channel (new station, or change in channel or transmitter site or increase in facilities of an existing station) within the border area referred to in paragraph (a). Any petition to amend which so conflicts will be dismissed. Any application which does not so conform will not be accepted for filing. No authorization will be granted for a station in the United States in the area adjacent to the border area which does not meet the minimum mileage separations set forth in 73.207 to any noncommercial educational allotment of authorization in the border area.

(d) Section 73.208 of this chapter will be complied with as to the determination of reference points and distance computations in considering petitions to amend the table set forth in paragraph (a) and for applications for new or changed facilities. However, if it is necessary to consider a Mexico channel assignment or authorization, the computation of distance will be determined as follows: If a transmitter site has been established, on the basis of the coordinates of the site; if a transmitter site has not been established, on the basis of the reference coordinates of the community, town, or city.

73.505 Zones. For the purpose of assignment of non-commercial educational FM stations, the United States is divided into three zones, Zone I, Zone I-A and Zone II, having the boundaries specified in 73.205.

73.506 Classes of Noncommercial Educational FM stations and Channels. (a) Non-commercial educational stations operating on the channels specified in 73.501 are divided into the following classes:

(1) A Class D educational station is one operating with no more than 10 watts transmitter power output.

(2) A Class D educational (secondary) station is one operating with no more than 10 watts transmitter power output in accordance with the terms of 73.512 or which has elected to follow these requirements before they become applicable under the terms of 73.512.

(3) Noncommercial educational FM stations (NCE-FM) with more than 0.01 kW transmitter power output are classified Class A, B1, B, C2, C1, or C depending on the effective radiated power, antenna height above terrain, and the zone in which the station's transmitter is located, on the same basis as provided for stations on the non-reserved FM channels in 73.205 and 73.206, and the location of its 1 mV/m contour based on the maximum facilities listed in 73.211.

NOTE -- For NCE-FM stations authorized before December 31, 1984, the provisions of this subparagraph (73.506(a)(3)) become effective March 1, 1987.

(b) Any noncommercial educational station except Class D may be assigned to any of the channels listed in Section 73.501. Class D noncommercial educational FM stations applied for or authorized prior to June 1, 1980, may continue to operate on their authorized channels subject to the provisions of Section 73.512.

73.507 Minimum distance separation between co-channel and adjacent-channel stations.

(a) Minimum distance separations. No application for a new station, or change in channel or transmitter site or increase in facilities of an existing station, will be granted unless the proposed facilities will be located so as to meet the adjacent channel distance separations specified in 73.207(a) for the class of station involved with respect to assignment on Channels, 221, 222, and 223 listed in 73.201 (except where in the case of an existing station the proposed facilities fall within the provisions of 73.208(b)), or where a Class D station is changing frequency to comply with the requirements of 73.512.

(b) Stations authorized as of September 10, 1962, which do not meet the requirements of paragraph (a) of this section and 73.511, may continue to operate as authorized; but any application to change facilities will be subject to the provisions of this section.

(c)(1) Stations separated in frequency by 10.6 or 10.8 MHz (53 or 54 channels) from allotments or assignments on non-reserved channels will not be authorized unless they conform to the separation of Table A in 73.207.

Class of stations:	Required spacing	
	Kilometers	Miles
A to A -----	8	5
B to A -----	16	10
B to B -----	24	15
C to A -----	32	20
C to B -----	40	25
C to C -----	48	30

(2) Under the United States-Mexican FM Broadcasting Agreement, for stations and assignments differing in frequency by 10.6 to 10.8 MHz (53 or 54 channels), U.S. noncommercial educational FM allotments and assignments must meet the separations given in Table C of 73.207 to Mexican allotments or assignments in the border area.

Class of station:	Required spacing	
	Kilometers	Miles
C to D -----	24	15
B to D -----	16	10
C to C -----	8	5
D to D -----	3	2

NOTE: For purposes of this Section, Classes B1 and C2 will be considered Class B, and Class C1 will be considered Class C until further notice.

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**73.508 Standards of good engineering practice.** (a) All noncommercial educational stations operating with more than 10 watts transmitter output power shall be subject to all of the provisions of the FM Technical Standards contained in Subpart B of this part. Class D educational stations shall be subject to the definitions contained in 73.310 of Subpart B of this part, and also to those other provisions of the FM Technical Standards which are specifically made applicable to them by the provisions of this subpart.

(b) The transmitter and associated transmitting equipment of each noncommercial educational FM station licensed for transmitter output power above 10 watts must be designated, constructed and operated in accordance with 73.317:

(c) The transmitter and associated transmitting equipment of each noncommercial educational FM station licensed for transmitter power output of 10 watts or less, although not required to meet all requirements of 73.317, must be constructed with the safety provisions of the current national electrical code as approved by the American Standards Association. These stations must be operated, tuned, and adjusted so that emissions are not radiated outside the authorized band causing or which are capable of causing interference to the communications of other stations. The audio distortion, audio frequency range, carrier hum, noise level, and other essential phases of the operation which control the external effects, must be at all times capable of providing satisfactory broadcast service. Studio equipment property covered by an underwriter's certificate will be considered as satisfying safety requirements.

**73.509 Prohibited overlap.**

(a) An application for a new or modified NCE-FM station other than a Class D (secondary) station will not be accepted if the proposed operation would involve overlap of signal strength contours with any other station whose transmitter is located more than 320 kilometers (199 miles) from the U.S.-Mexican border and operating in the reserved band (Channels 200-220, inclusive) as set forth below:

Frequency separation	Contour of proposed station	Contour of other station
Co-channel	0.1 mV/m (40 dBu) 1 mV/m (60 dBu)	1 mV/m (60 dBu) 0.1 mV/m (40 dBu)
200 kHz	0.5 mV/m (54 dBu) 1 mV/m (60 dBu)	1 mV/m (60 dBu) 0.5 mV/m (54 dBu)
400 kHz	10 mV/m (80 dBu) 1 mV/m (60 dBu)	1 mV/m (60 dBu) 10 mV/m (80 dBu)
600 kHz	100 mV/m (100 dBu) 1 mV/m (60 dBu)	1 mV/m (60 dBu) 100 mV/m (100 dBu)

(b) An application by a Class D (secondary) station, other than an application to change class, will not be accepted if the proposed operation would involve overlap of signal strength contours with any other station as set forth below:

Frequency separation	Contour of proposed station	Contour of 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	10 mV/m (80 dBu)	1 mV/m (60 dBu)
600 kHz	100 mV/m (100 dBu)	1 mV/m (60 dBu)

(c) The following standards must be used to compute the distances to the pertinent contours:

(1) The distance of the 60 dBu (1 mV/m) contours are to be computed using Figure 1 of 73.333 (F(50,50) curves) of this Part.

(2) The distance to the other contours are to be computed using Figure 1a of 73.333 (F(50,10) curves). 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) that is the maximum ERP for any elevation plane on any bearing will be used.

(d) An application for a change (other than a change in channel in the facilities of a NCE-FM broadcast station will be accepted even though overlap of signal strength contours, as specified in paragraphs (a) and (b) of this section, 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.

(e) The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water.

**§73.510. Antenna systems.** (a) All noncommercial educational stations operating with more than 10 watts transmitter output power shall be subject to the provisions of 73.316 concerning antenna systems contained in Subpart B of this part.

(b) Directional antenna. No application for a construction permit of a new station, or change in channel, or change in an existing facility on the same channel will be accepted for filing if a directional antenna with a maximum-toOminimum ratio of more than 15 dB is proposed.

**73.511. Power and antenna height requirements.**

(a) No new noncommercial educational station will be authorized with effective radiated power less than 0.1 kW.

(b) No new noncommercial educational FM station will be authorized with facilities greater than Class B in Zones I and I-A or Class C in Zone II, as defined in §73.211.(b)(1).

(c) Stations licensed before December 31, 1984 and operating above 50 kW in Zones I and I-A and above 100 kW and in Zone II may continue to operate as authorized.

**73.512 Special procedures applicable to Class D noncommercial educational stations.**

(a) All Class D stations seeking renewal of license for any term expiring June 1, 1980, or thereafter shall comply with the requirements set forth below and shall simultaneously file an application on FCC Form 340, containing full information regarding such compliance with the provisions set forth below.

(1) To the extent possible, each applicant shall select a commercial FM channel on which it proposes to operate in lieu of the station's present channel. The station may select any commercial channel provided no objectionable interference, as set forth in 73.509(b), would be caused. The application should include the same engineering information as is required to change the frequency of an existing station and any other information necessary to establish the fact that objectionable interference would not result. If no commercial channel is available where the station could operate without causing such interference, the application shall set forth the basis upon which this conclusion was reached.

(2) If a commercial channel is unavailable, to the extent possible each applicant should propose operation on Channel 200 (87.9 MHz) unless the station would be within 402 kilometers (250 miles) of the Canadian border or 320 kilometers (199 miles) of the Mexican border or would cause interference to an FM station operating on Channels 201, 202, or 203 or to TV Channel 6, as provided in 73.509.

(3) If a channel is not available under either paragraph (a) (1) or (2) of this section, the renewal applicant shall study all 20 noncommercial educational FM channels and shall propose operation on the channel which would cause the least preclusion to the establishment of new stations or increases in power by existing stations. Full information regarding the basis for the selection should be provided.

(b) At any time before the requirements of paragraph (a) become effective, any existing Class D station may file a construction permit application on FCC Form 340 to change channel in the manner described above which shall be subject to the same requirements. In either case, any license granted shall specify that the station's license is for a Class D (secondary) station.

(c) Except in Alaska, no new Class D applications nor major change applications by existing Class D stations are acceptable for filing except by existing Class D stations seeking to change frequency. Upon the grant of such application, the station shall become a Class D (secondary) station.

(d) Class D noncommercial educational (secondary) stations (see 73.506(a)(2)) will be permitted to continue to operate only so long as no interference (as defined in 73.509) is caused to any TV or commercial FM broadcast stations. In the event that the Class D (secondary) station would cause interference to a TV or commercial FM broadcast station after that Class D (secondary) station is authorized, the Class D (secondary) station must cease operation when program tests for the TV or commercial FM broadcast station commence. The Class D (secondary) station may apply for a construction permit (see 73.3533) to change to another frequency or antenna site where it would not cause interference (as defined in 73.509). If the Class D (secondary) station must cease operation before the construction permit is granted, an application for temporary authorization (pursuant to 73.3542) to operate with the proposed facilities may be submitted; where appropriate, such temporary authorization can be granted.

**73.513 Noncommercial educational FM stations operating on unreserved channels.** Noncommercial education FM stations other than Class D (secondary) which operate on channels 221 through 300 but which comply with 73.503 as to licensing requirements and the nature of the service rendered, must comply with the provisions of the following sections of subpart B: 73.201 through 73.213 (classification of FM broadcast stations and allocations of frequencies) and such other sections of subpart B as are made specifically applicable by the provisions of this subpart C. Stations in Alaska authorized before August 11, 1982 using Channels 261-300 need not meet the minimum effective radiated power requirement specified in 73.211(a). In all other respects, stations operating on Channels 221 through 300 are to be governed by the provisions of this Subpart and not Subpart B.

**73.514 Cross reference to rules in other parts.**

73.1010 (All in Subpart H)

**73.515 Notification of filing of applications.**

73.1030

**73.516 Equipment tests.**

73.1610

**73.517 Program tests.**

73.1620

**73.518 Station license period.**

73.1020

**73.525 TV Channel 6 protection.** The provisions of this section apply to all applications for construction permits for new or modified facilities for a NCE-FM station on Channels 200-220 unless the application is accompanied by a written agreement between the NCE-FM applicant and each affected TV Channel 6 broadcast station concurring with the proposed NCE-FM facilities.

(a) Affected TV Channel 6 Station.

(1) An affected TV Channel 6 station is a TV broadcast station which is authorized to operate on Channel 6 that is located within the following distances of a NCE-FM station operating on Channels 201-220:

TABLE A

NCE-FM channel	Distance (kilometers)	NCE-FM channel	Distance (kilometers)
201	265	211	196
202	257	212	195
203	246	213	193
204	235	214	187
205	225	215	180
206	211	216	177
207	196	217	174
208	196	218	166
209	196	219	159
210	196	220	154

(2) Where a NCE-FM application has been accepted for filing or granted, the subsequent acceptance of an application filed by a relevant TV Channel 6 station will not require revision of the pending NCE-FM application or the FM station's authorized facilities, unless the provisions of paragraph (e)(3) of this section for TV translator or satellite stations apply.

(b) Existing NCE-FM Stations.

(1) A NCE-FM station license authorized to operate on channels 201-220 as of December 31, 1984, or a permittee, granted a construction permit for a NCE-FM station as of December 31, 1984, are not subject to this section unless they propose either:

(i) To make changes in operating facilities or location which will increase predicted interference as calculated under paragraph (e) of this section to TV Channel 6 reception in all directions; or,

(ii) To decrease its ratio of vertically polarized to horizontally polarized transmissions.

(2) Applicants must comply with the provision of paragraphs (c) or (d) of this section unless the application for modification demonstrates that, for each person predicted to receive new interference as a result of the change, existing predicted interference to two persons will be eliminated. Persons predicted to receive new interference are those located outside the area predicted to receive interference from the station's currently authorized facilities ("existing predicted interference area") but within the area predicted to receive interference from the proposed facilities ("proposed predicted interference area"). Persons for whom predicted interference will be eliminated are those located within the existing predicted interference area and outside the proposed predicted interference area.

(i) In making this calculation, the provisions contained at paragraph (e) will be used except as modified by paragraph (b)(3) of this section.

(ii) The following adjustment to the population calculation may be made: up to 1,000 persons may be subtracted from the population predicted to receive new interference if, for each person subtracted, the applicant effectively installs two filters within 90 days after commencing program tests with the proposed facilities and, no later than 45 days thereafter, provides the affected TV Channel 6 station (as defined in paragraph (a) of this section) with a certification containing sufficient information to permit verification of such installation. The required number of filters will be installed on television receivers located within the predicted interference area; provided that half of the installations are within the area predicted to receive new interference.

(3) Where an NCE-FM applicant wishes to operate with facilities in excess of that permitted under the provisions of paragraphs (c) or (d) of this section, by proposing to use vertically polarized transmissions only, or to increase its ratio of vertically to horizontally polarized transmissions, the affected TV Channel 6 station must be given an option to pay for the required antenna and, if it takes that option, the NCE-FM vertically polarized component of power will be one half (-3 dB) that which would be allowed by the provisions of paragraph (e)(4) of this section.

(4) Applications for modification will include a certification that the applicant has given early written notice of the proposed modification to all affected TV Channel 6 stations (as defined in paragraph (a) of this section).

(5) Where the NCE-FM station demonstrates in its application that it must make an involuntary modification (e.g., due to loss of its transmitter site) that would not otherwise be permitted under this section, its application will be considered on a case-by-case basis. In such cases the provisions of paragraph (b)(3) of this section do not apply.

(c) New NCE-FM Stations. Except as provided for by paragraph (d) of this section, applicants for NCE-FM stations proposing to operate on Channels 201-220 must submit a showing indicating that the predicted interference area resulting from the proposed facility contains no more than 3,000 persons.

(1) In making these calculations, the provisions in paragraph (e) of this section will be used.

(2) The following adjustment to population may be made: up to 1,000 persons may be subtracted from the population within the predicted interference area if, for each person subtracted, the applicant effectively installs one filter within 90 days after commencing program tests and, no later than 45 days thereafter, provides the affected TV Channel 6 station with a certification containing sufficient information to permit verification of such installation. The required number of filters will be installed on television receivers located within the predicted interference area.

(d) Collocated Stations. As an alternative to the provisions contained in paragraphs (b) and (c) of this section, an application for a NCE-FM 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 under the following requirements:

(1) The effective radiated power cannot exceed the following values:

TABLE B

NCE-FM channel	Power (kilowatt)	NCE-FM channel	Power (kilowatt)
201	1.1	211	26.3
202	1.9	212	31.6
203	3.1	213	38.0
204	5.0	214	46.8
205	8.3	215	56.2
206	10.0	216	67.6
207	12.0	217	83.2
208	14.8	218	100.0
209	17.8	219	100.0
210	21.4	220	100.0

d 1 Table B  
NCE 203 & 211 115

(2) The NCE-FM application will include a certification that the applicant has coordinated its antenna with the affected TV station by employing either: the same number of antenna bays with radiation centers separated by no more than 30 meters (approximately 100 feet) vertically; or, the FM vertical pattern not exceeding the TV vertical pattern by more than 2dB.

(e) Calculation of Predicted Interference Area and Population. Predictions of interference required under this section and calculations to determine the number of persons within a predicted interference area for NCE-FM operation on Channels 201-220 are made as follows:

(1) The predicted interference area will be calculated as follows:  
(i) The distances to the TV Channel 6 field strength contours will be predicted according to the procedures specified in 73.684, "Prediction of coverage," using the F(950,50) curves in Figure 9, Sec. 73.699.

(ii) For each TV Channel 6 field strength contour, there will be an associated F(50,10) FM interference contour, the value of which (in units of dBu) is defined as the sum of the TV Channel 6 field strength (in dBu) and the appropriate undesired-to-desired (U/D) signal ratio (in dB) obtained from Figures 1 and 2, 73.599, corresponding to the channel of the NCE-FM applicant and the appropriate F(50,50) field strength contour of the TV Channel 6 station.

(iii) An adjustment of 6 dB for television receiving antenna directivity will be added to each NCE-FM interference contour at all points outside the Grade A field strength contour (73.683) of the TV Channel 6 station and within an arc defined by the range of angles, of which the FM transmitter site is the vertex, from 110° relative to the azimuth from the FM transmitter site to the TV Channel 6 transmitter site, counterclockwise to 250° relative to that azimuth. At all points at and within the Grade A field strength contour of the TV Channel 6 station, the 6 dB adjustment is applicable over the range of angles from 70° clockwise to 110° and from 250° clockwise to 290°.

(iv) The distances to the applicable NCE-FM interference contours will be predicted according to the procedures specified in 73.313, "Prediction of Coverage," using the proposed antenna height and horizontally polarized, or the horizontal equivalent of the vertically polarized, effective radiated power in the pertinent direction and the F(50,10) field strength curves (Figure 1a, 73.333).

(v) The predicted interference area will be defined as the area within the TV Channel 6 station's 47 dBu field strength contour that is bounded by the locus of intersections of a series of TV Channel 6 field strength contours and the applicable NCE-FM interference contours.

(vi) In cases where the terrain in one or more directions departs widely from the surrounding terrain average (for example, an intervening mountain), a supplemental showing may be made. Such supplemental showings must describe the procedure used and should include sample calculations. The application must also include maps indicating the predicted interference area for both the regular method and the supplemental method.

(2) The number of persons contained within the predicted interference area will be based on data contained in the most recently published U.S. Census of Population and will be determined by plotting the predicted interference area on a County Subdivision Map of the state published for the Census, and totalling the number of persons in each County Subdivision (such as, Minor Civil Division (MCD), Census County Division (CCD), or equivalent areas) contained within the predicted interference area. Where only a portion of County Subdivision is contained within the interference area:

(i) The population of all incorporated places or Census designated places **will be subtracted from County Subdivision population.** from the County Subdivision population.

(ii) Uniform distribution of the remaining population over the remaining area of the County Subdivision will be assumed in determining the number of persons within the predicted interference area in proportion to the share of the remaining area of the County Subdivision that lies within the predicted interference area.

(iii) The population of the incorporated places or Census designated places contained within the predicted interference area will then be added to the total, again assuming uniform distribution of the population within the area of each place and adding a share of the population proportional to the share of the area if only a portion of such a place is within the predicted interference area.

(iv) At the option of either the NCE-FM applicant or an affected TV Channel 6 station which provides the appropriate analysis, more detailed population data may be used.

(3) Adjustments to the population calculated pursuant to paragraph (e)(2) of this section may be made as follows:

(i) If any part of the predicted interference area is within the Grade A field strength contour (73.683) of a TV translator station carrying the affected TV Channel 6 station, the number of persons within that overlap area will be subtracted, provided the NCE-FM construction permit and license will contain the following conditions:

(A) When the TV translator station ceases to carry the affected TV Channel 6 station's service and the cessation is not the choice of the affected TV Channel 6 station, the NCE-FM station will modify its facilities, within a reasonable transition period, to meet the requirements of this section which would have applied if no adjustment to population for translator service had been made in its application.

(B) The transition period may not exceed 1 year from the date the NCE-FM station is notified by the TV Channel 6 station's service or 6 months after the translator station ceases to carry the affected TV Channel 6 station's service, whichever is earlier.

(ii) If any part of the interference area is within the Grade B field strength contour (73.683) of a satellite station of the affected TV Channel 6 station, the number of persons within the overlap area will be subtracted, provided the NCE-FM permit and license will contain the following conditions:

(A) If the satellite station ceases to carry the affected TV Channel 6 station, the NCE-FM station will modify its facilities, within a reasonable transition period, to meet the requirements of this rule which would have applied if no adjustment to population for satellite station service had been made in its application.

(B) The transition period may not exceed 1 year from the date the NCE-FM station is notified by the TV Channel 6 station that the satellite station will cease to carry the affected TV Channel 6 station's service or 6 months after the satellite station ceases to carry the affected TV Channel 6 station's service, whichever is earlier.

(iii) If any part of the predicted interference area is located outside the affected TV Channel 6 station's Area of Dominant Influence (ADI), outside the Grade A field strength contour (73.683), and within the predicted city grade field strength contour (73.683(a)) of a TV broadcast station whose only network affiliation is the same as the only network affiliation of the affected TV Channel 6 station, the number of persons within that part will be subtracted. (For purposes of this provision, a network is defined as ABC, CBS, NBC, or their successors.) In addition, the ADI of an affected TV Channel 6 station and the program network affiliations of all relevant TV broadcast stations will be assumed to be as they were on the filing date of the NCE-FM application or June 1, 1985, whichever is later.

(iv) In calculating the population within the predicted interference area, an exception will be permitted upon a showing (e.g., as survey of actual television reception) that the number of persons within the predicted interference area should be reduced to account for persons actually experiencing co-channel or adjacent channel interference to reception of the affected TV Channel 6 station. The area within which such a showing may be made will be limited to the area calculated as follows:

(A) The distances to the field strength contours of the affected TV Channel 6 station will be predicted according to the procedures specified in 73.684, "Prediction of coverage," using the F(50,50) curves in Figure 9, 73.699.

(B) For each field strength contour of the affected TV Channel 6 station, there will be an associated co-channel or adjacent channel TV broadcast station interference contour, the value of which (in units of dBu) is defined as the sum of the affected TV Channel 6 station's field strength (in dBu) and the appropriate undesired-to desired signal ratio (in dB) as follows:

Co-channel, normal offset, -22 dB

Co-channel, no offset, - 39 dB

Adjacent channel, +12 dB

(C) The distances to the associated co-channel or adjacent channel TV broadcast station interference contour will be predicted according to the procedures specified in 73.684, "Prediction of coverage," using the F(50,10) curves in Figure 9a, 73.699.

(D) The area within which the showing of actual interference may be made will be the area bounded by the locus of intersections of a series of the affected TV Channel 6 station's field strength contours and the associated interference contours of the co-channel or adjacent channel TV broadcast station.

(4) The maximum permissible effective radiated power (ERP) and antenna height may be adjusted for vertical polarity as follows:

(i) If the applicant chooses to use vertically polarized transmissions only, the maximum permissible vertically polarized ERP will be the maximum horizontally polarized ERP permissible at the same proposed antenna height, calculated without the adjustment for television receiving antenna directivity specified in paragraph (e)(1)(iii) of this section, multiplied by either: 40 if the predicted interference area lies entirely outside the limits of a city of 50,000 persons or more; or 10 if it does not.

(ii) If the applicant chooses to use mixed polarity, the permissible ERP is as follows:

**[H plus (V/A)] is no greater than P**

Where:

**H is the horizontally polarized ERP in kilowatts for mixed polarity;  
V is the vertically polarized ERP in kilowatts for mixed polarity;  
A is 40 if the predicted interference area lies entirely outside the limits of a city of 50,000 persons or more, or 10 if it does not; &  
P is the maximum permitted horizontally polarized-only power in kilowatts.**

(f) Channel 200 Applications. No application for use of NCE-FM Channel 200 will be accepted if the requested facility would cause objectionable interference to TV Channel 6 operations. Such objectionable interference will be considered to exist whenever the 15 dBu contour based on the F(50,10) curves in 73.333 Figure 1a would overlap the 40 dBu contour based on the F(50,50) curves in 73.699, Figure 9.

73.531 Transferring a station.

73.1150

- 73.550 Acceptability of broadcast transmitters for licensing. See 73.1660
- 73.552 Frequency measurements. See 73.1540
- 73.554 Equipment performance measurement. See 73.1590
- 73.555 Auxiliary transmitters. See 1670
- 73.556 Alternate main transmitters. See 73.1665
- 73.557 Modification of transmission systems. See 73.1690
- 73.558 Indicating instruments. The requirements for indicating instruments described in 73.258 are applicable to all educational FM broadcast stations licensed with a transmitter power greater than 0.01 kw.

73.561 Operating schedule; time sharing. (a) All noncommercial educational FM stations will be licensed for unlimited time operation except those stations operating under a time sharing arrangement. (See 73.1715). All noncommercial educational FM stations are required to operate at least 36 hours per week, consisting of at least 5 hours of operation per day on at least 6 days of the week; however, stations licensed to educational institutions are not required to operate on Saturday or Sunday or to observe the minimum operating requirements during those days designated on the official school calendar as vacation or recess periods.

(b) All noncommercial educational FM stations, including those meeting the requirements of paragraph (a) of this section, but which do not operate 12 hours per day each day of the year, will be required to share use of the frequency upon the grant of an appropriate application proposing such share time arrangement. Such applications shall set forth the intent to share time and shall be filed in the same manner as are applications for new stations. They may be filed at any time, but in cases where the parties are unable to agree on time sharing, action on the application will be taken only in connection with the renewal of application for the existing station. In order to be considered for this purpose, such an application to share time must be filed no later than the deadline for filing applications in conflict with the renewal application of the existing licensee.

(1) The licensee and the prospective licensee(s) shall endeavor to reach an agreement for a definite schedule of periods of time to be used by each. Such agreement shall be in writing and shall set forth which licensee is to operate on each of the hours of the day throughout the year. Such agreement shall not include simultaneous operation of the stations. Each licensee shall file the same in triplicate original with each application to the Commission for initial construction permit or renewal of license. Such written agreements shall become part of the terms of each station's license.

NOTE: For allocations purposes, both (all) stations sharing time will be treated as unlimited time stations.

(2) The Commission desires to facilitate the reaching of agreements on time sharing. However, if the licensees of stations authorized to share time are unable to agree on a division of time, the Commission shall be so notified by statement to that effect filed with the application proposing time sharing. Thereafter the Commission will designate the application for hearing on any qualification issues arising regarding the renewal or new applicants. If no such issues pertain, the Commission will set the matter for expedited hearing limited solely to the issue of the sharing of time. In the event the stations have been operating under a time sharing agreement but cannot agree on its continuation, a hearing will be held, and pending such hearing, the operating schedule previously adhered to shall remain in full force and effect.

(c) A departure from the regular schedule set forth in a time-sharing agreement will be permitted only in cases where an agreement to that effect is reduced to writing, is signed by the licensees of the stations affected thereby and filed in triplicate by each licensee with the Commission prior to the time of the proposed change. If time is of the essence, the actual departure in operating schedule may precede the actual filing of written agreement, provided appropriate notice is sent to the Commission in Washington, D. C.

(d) In the event that causes beyond the control of a permittee or licensee make it impossible to adhere to the operating schedule in paragraphs (a) and (b) of this section or to continue operating, the station may limit or discontinue operation for a period of not more than 30 days without further authority from the Commission, PROVIDED, That notification is sent to the Commission in Washington, D. C., no later than the 10th day of limited or discontinued operation. During such period, the permittee or licensee shall continue to adhere to the requirements of 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 permittee or licensee will so notify the Commission in Washington, D. C., of this date. If the causes beyond the control of the permittee or licensee make it impossible to comply within the allowed period, informal written request shall be made to the Commission in Washington, D. C., no later than the 30th day for such additional time as may be deemed necessary.

Note See 73.1705, .1715 and .1740.

§73.562 - 73.565(a)

§73.562 Experimental operation.

See 73.1510 and 73.1520

§73.563 Station inspection. 73.1225.

§73.564 Station and operator licenses; posting of. 73.1230

73.565 NCE-FM operator requirements.

- (a) Transmission duty operator requirements: See 73.1860.
- (b) Chief operator requirements: See 73.1870.
- (c) Transmission system inspection requirements: See 73.1580.

73.566 Operating Power.

- (a) Determination. See §73.267.
- (b) Maintenance. See §73.1560.
- (c) Reduced power. See §73.1560.

§73.567 Determining operating power. The procedures for determining operating power described in §73.267 are applicable to noncommercial educational FM stations.

- 73.568 Modulation. See 73.1570
- 73.569 Frequency tolerance. See 73.1545
- 73.570 Antenna structure, marking and lighting. See 73.1213
- 73.571 Discontinuance of operation. See 73.1750
- 73.572 Extension meters. See 73.1550
- 73.573 Emergency antenna. See 73.1680
- 73.574 Remote control authorization. See 73.1400
- 73.575 Remote control operation. See 73.1410
- 73.578 Special field test authorization. See 73.1515.
- 73.581 General requirements relating to logs. 73.1800.
- 73.582 Program logs. 73.1810.
- 73.583 Operating logs. 73.1820
- 73.584 Maintenance logs. 73.1830.
- 73.585 Retention of logs. 73.1840.
- 73.586 Availability of logs and records. 73.1225 and 73.1850.
- 73.587 Station identification. 73.1201.
- 73.590 Broadcasts by candidates for public office. 73.1940.
- 73.591 Personal attacks. 73.1920.

73.593 Subsidiary communications services. The licensee of a noncommercial educational FM station is not required to use its subcarrier capacity, but if it chooses to do so, it is governed by 73.293 through 73.295 of the Commission's Rules regarding the types of permissible subcarrier uses and the manner in which subcarrier operations shall be conducted; Provided, however, that remunerative use of a station's subcarrier capacity shall not be detrimental to the provision of existing or potential radio reading services for the blind or otherwise inconsistent with its public broadcasting responsibilities.

73.596 Broadcast of telephone conversation. See 73.1206

73.597 FM stereophonic sound broadcasting. A noncommercial educational FM broadcast station may, without specific authority from the FCC, transmit stereophonic sound programs upon installation of stereophonic sound transmitting equipment under the provisions of 2.977, 2.1001, 73.322 and 73.1590 of the FCC's Rules.

73.598 Operation during emergency. See 73.1250.

73.599 NCE-FM engineering charts. This section consists of the following Figures 1 and 2.

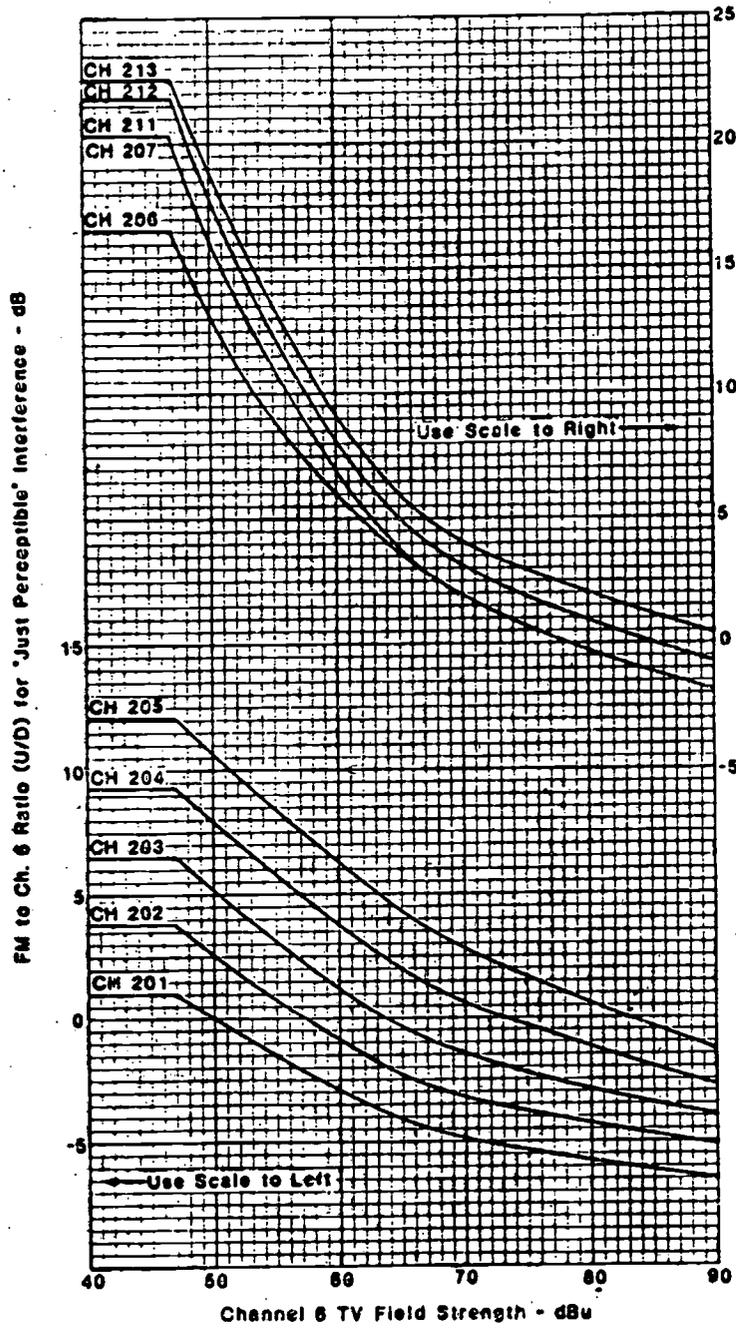


Figure 1  
 FM/TV 6 PROTECTION RATIOS  
 BASED ON MEDIAN RECEIVERS  
 CHANNELS 201-213

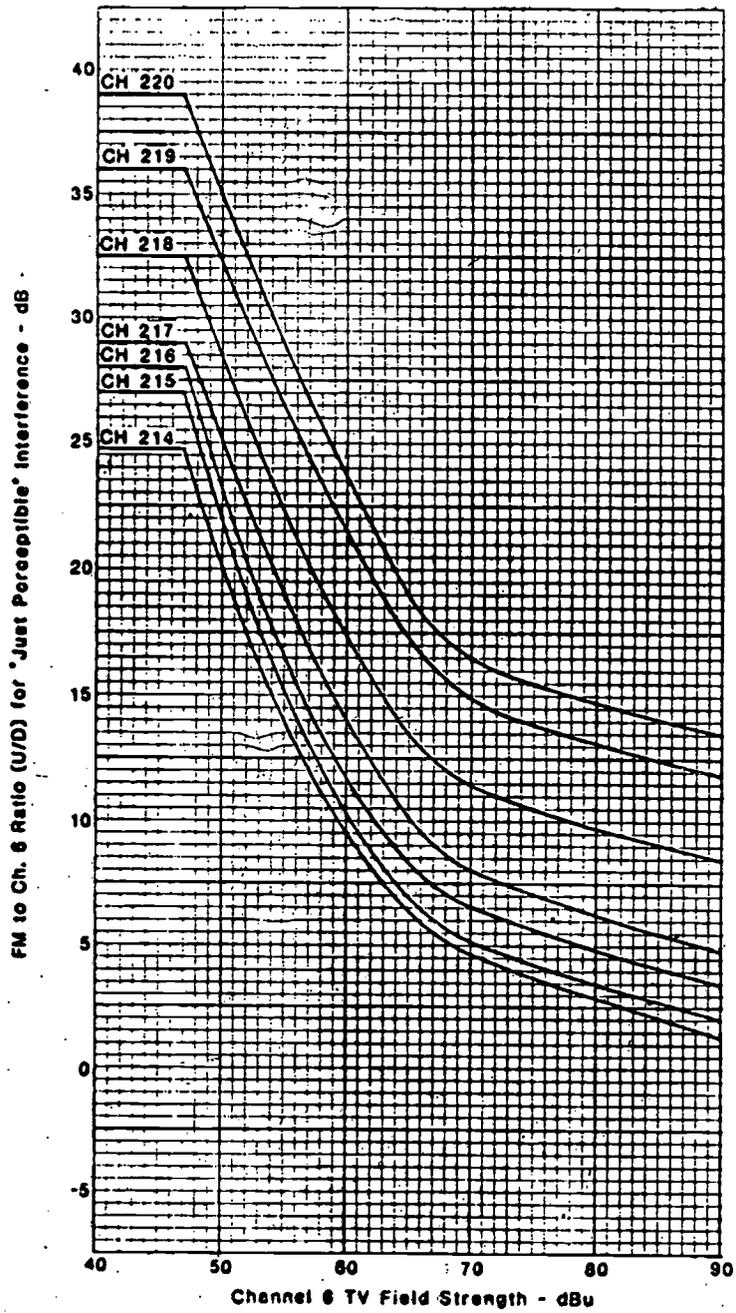


Figure 2  
 FM/TV 6 PROTECTION RATIOS  
 BASED ON MEDIAN RECEIVERS  
 CHANNELS 214-220



## SUBPART E - TELEVISION BROADCAST STATIONS

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- 73.602 Other pertinent rules.
- 73.603 Numerical designation of television channels.

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- 73.607 Availability of channels.
- 73.608 International agreements. See 73.1600
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- 73.611 Reference points and distance computations.
- 73.612 Protection from interference.
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GENERAL OPERATING REQUIREMENTS (continued)

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- 73.671 Operating log. 73.1820
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- 73.673 Retention of logs. 73.1840
- 73.674 Availability of logs and records. 73.1225 and .1850
- 73.675 Operating during emergency. 73.1250
- 73.676 Remote control operation.
- 73.677 Remote control authorization.
- 73.678 Extension meters 73.1550
- 73.679 Political attacks; personal editorials. 73.1910, .1920 and .1930
- 73.680 Equal employment opportunities. 73.2080

TV TECHNICAL STANDARDS

See TV STANDARDS

SUBPART D - ~~RESERVED~~

SUBPART E -- TELEVISION BROADCAST STATIONS

GENERAL

§73.601 Scope of subpart.

This subpart contains the rules and regulations (including engineering standards) governing TV broadcast stations, including noncommercial educational TV broadcast stations and where indicated, low power TV and TV translator stations in the United States, its Territories and possessions, TV broadcast, low power TV and TV translator stations are assigned channels 6 MHz wide, designated as set forth in 73.603(a)

§73.602 Cross reference to rules in other parts.

See 73.1010

73.603 Numerical designation of television channels. (a)

Channel #	Frequency band MHz	Channel #	Frequency band MHz	Channel #	Frequency band MHz
2	54-60	29	560-566	56	722-728
3	60-66	30	566-572	67	728-734
	66-72	31	572-578	58	734-740
	76-82	32	578-584	59	740-746
	82-88	33	584-590	60	746-752
7	174-180	34	590-596	61	752-758
8	180-186	35	596-602	62	758-764
9	186-192	36	602-608	63	764-770
10	192-198	37	608-614	64	770-776
11	198-204	38	614-620	65	776-782
12	204-210	39	620-626	66	782-788
13	210-216	40	626-632	67	788-794
14	470-476	41	632-638	68	794-800
15	476-482	42	638-644	69	800-806
16	482-488	43	644-650		
17	488-494	44	650-656		
18	494-500	45	656-662		
19	500-506	46	662-668		
20	506-512	47	668-674		
21	512-518	48	674-680		
22	518-524	49	680-686		
23	524-530	50	686-692		
24	530-536	51	692-698		
25	536-542	52	698-704		
26	542-548	53	704-710		
27	548-554	54	710-716		
28	554-560	55	716-722		

(b) In Alaska, television broadcast stations operating on Channel 5 (76-82 MHz) and on Channel 6 (82-88 MHz) shall not cause harmful interference to and must accept interference from non-Government fixed operations authorized prior to January 1, 1982.

(c) Channel 37, 608-614 MHz is reserved exclusively for the radio astronomy service.

(d) In Hawaii, the frequency band 488-494 MHz is allocated for non-broadcast use. This frequency band (Channel 17) will not be assigned in Hawaii for use by television broadcast stations.



CALIFORNIA (continued)

Coalinga..... \*27-  
 Concord..... 42  
 Corona..... 52  
 Cotati..... \*22-  
 El Centro..... 7+,9+  
 Eureka... 3-,6-,\*13-,29  
 Fort Bragg..... 8-  
 Fresno.\*18+,24,30+,43,  
 47,53,59  
 Great Bear Lake.... 59+  
 Hanford..... 21  
 Indio..... 1\*19+  
 Los Angeles.2,3,5,7,9,  
 11,13,22,\*28,34,\*58-,  
 \*68-  
 Merced..... 51  
 Modesto..... 19-,\*23+  
 Navato..... 68  
 Oroville..... 28  
 Oxford..... 63+  
 Palm Springs.... 36-,42  
 Paradise..... 46  
 Porterville..... 61  
 Redding..... 7,\*9,116  
 Ridgecrest.....\*25  
 Riverside..... 46,62  
 Sacramento.3,\*6,10,29-,  
 31-,40-  
 Salinas-Monterey.8+,35-  
 46-,\*56,67-  
 San Bernardino.18-,\*24-  
 30  
 San Diego.8,10,\*15,39,  
 51,69

San Francisco.2+,4-,5+,7-  
 \*9+,14+,20-,26\*-,\*32+,38,  
 44-  
 San Jose.11+,36,48-,\*54,  
 65  
 San Luis Obispo.6+,\*15+,  
 33  
 San Mate .....\*60  
 Santa Ana..... 40,\*50  
 Santa Barbara.3-,14,1\*20  
 1\*32,38  
 Santa Cruz.....1\*16-  
 Santa Maria.....12+  
 Santa Rosa..... 50-,\*62  
 Stockton..... 13+,56,64  
 Susanville..... \*14

Tulare..... 26+  
 Vallejo-Fairfield.... 66  
 Ventura..... 41+  
 Verdes..... 44+  
 Wialia..... \*49  
 Watsonville..... \*25+  
 Yreka City..... \*20+

COLORADO

Alamosa..... \*16  
 Boulder..... \*12,14  
 Castle Rock..... 53  
 Colorado Springs.11,13,  
 21  
 Craig..... \*16+  
 Denver.2,4-,\*6-,7,9-,20,  
 31, 41,50,59  
 Durango..... 6+,\*20-,33+

Fort Collins.....22-  
 Glenwood Springs.. 3-,\*19+  
 Grand Junction.5-,8-,\*18+  
 Gunnison.....\*17-  
 LaJunta.....\*22+  
 Lamar..... 12-,\*14-  
 Leadville..... \*15-  
 Longmont..... 25  
 Montrose..... 10+,\*22  
 Pueblo..... 5,\*8,26+,32-  
 Salida..... \*23+  
 Steamboat Springs.... 24+  
 Sterling..... 3,\*18+  
 Trinidad..... \*24

CONNECTICUT

Bridgeport..... 43-,\*49-  
 Hartford... 3+,18-,\*24,61+  
 New Britain..... 30+  
 New Haven..... 8,59+,55  
 New London..... 26+  
 Norwich..... \*53  
 Waterbury..... 20

Delaware

Dover..... \*34  
 Seaford..... 38,\*64-  
 Wilmington..... \*12,61

District of Columbia, Wash-  
 ington.4-,5-,7+,9,14-,20+,  
 \*26-,\*32+,50

FLORIDA

Boca Raton..... \*63  
 Bradenton..... \*19

FLORIDA (continued)

Bunnell..... 68  
 Cape Coral..... 36  
 Clearwater..... 22  
 Clermont..... 68  
 Cocoa..... \*18-,52  
 Daytona Beach.... 2-,26  
 Dustin..... 64+  
 Fort Myers. 11+,20+,\*30  
 Fort Pierce.... \*21-,34  
 Ft Walton Beach35,53,58  
 Gainesville..\*5-,20,61+  
 High Springs..... 53+  
 Hollywood..... 69  
 Inverness..... 64  
 Islamorada..... \*18  
 Jacksonville.4+,\*7,12+,  
 17,30+,47-,\*59  
 Key West..3+,13,16+,22+  
 Lake City..... \*41  
 Lakeland..... 32  
 Lakeworth..... 67  
 Leesburg..... \*45-,55  
 Live Oak..... 57-  
 Madison..... \*36-  
 Marathon..... \*9+  
 Marianna..... \*16+,51  
 Melbourne..... 43+,56  
 Miami.\*2,4,6,7-,10+,\*17-  
 29-,33,35,39,45+  
 Naples..... 26-,46

FLORIDA (continued)

New Smyrna Beach..\*15+  
 Ocala..... \*29,51-  
 Orange Park..... 25-  
 Orlando.6-,9,\*24-,27,  
 35+,65  
 Palatka..... \*42,63+  
 Panama City.7+,13,\*22+,  
 28-  
 Pensicola.3-,\*23,33+,44  
 St.Petersburg10-,38,44+  
 Sarasota..... 40  
 Sebring..... \*48,60  
 Tallahassee. 11-,27+,40+  
 Tampa,\*3,8-,13-,\*16,28,  
 50  
 Tice..... 49  
 Venice..... 62  
GEORGIA  
 Albany.. 10,19-,31-,52-  
 ashburn..... \*23+  
 Athens..... \*8-,34  
 Atlanta.2,5-,11+,17-,  
 \*30,36,46-,\*57+,69  
 Augusta.. 6+,12-,26,54-  
 Bainbridge..... 49  
 Brunswick..... 21+  
 Carnesville..... \*52  
 Carrollton..... \*49-  
 Cedartown..... \*65-  
 Chatsworth..... \*18-  
 Cochran..... \*15  
 Columbus.3,9+,\*28,38+,  
 \*48,54+

GEORGIA (continued)

Dawson.....\*25  
 Dalton..... 23  
 Draketown.....\*27-  
 Elberton.....\*60+  
 Flintstone.....\*51-  
 Lafayette..... \*35  
 Macon.13+,24+,41\_,\*47+,64-  
 Pelham.....\*14-  
 Perry..... 58+  
 Rome..... 14+  
 Royston..... 22+  
 Savannah..... 3,\*9-11,22,28-  
 Thomasville..... 6  
 Toccoa..... 32-,\*68-  
 Valdosta..... \*33,44-  
 Vidalia..... \*18+  
 Waycross..... \*8+  
 Wrens.....\*20-  
 Young Harris.....\*50+  
HAWAII  
 Hilo.2,\*4,9,11,13,14+,26+,\*32+  
 \*38+  
 Honolulu.2+,4-,5,9-,\*11+,13-,  
 14,20,26,32,\*38,\*44  
 Lihue.3+,\*8-,10+,12-,15-,\*21-,  
 \*27-,\*67  
 Wailuku.3,7,\*10,12,15,21,\*27,  
 \*33  
 Kailua-Kone..... 6  
IDAHO  
 Boise..... 2,\*4+,7,14  
 Burley..... \*17+  
 Caldwell..... 9-  
 Coeur d'Alene..... \*26+

IDAHO (Continued)

Grangeville..... \*15-  
 Idaho Falls.3,8+,20,\*33+  
 Filer..... \*19-  
 Lewiston..... 3-  
 Moscow..... \*12-  
 Nampa.....6,12+  
 Preston..... \*28  
 Pocatello.6-,\*10,15,25+,  
 31-  
 Sandpoint.....\*16+  
 Twin Falls..... 11,\*13-  
 Wieser.....\*17

ILLINOIS

Aurora..... 60  
 Bloomington..... 43  
 Carbondale..... \*8  
 Champaign..... 3+,15-  
 Charleston..... \*51+  
 Chicago.2-,5,7,9+,\*11,  
 \*20,26,32,38-,44  
 Danville..... 68  
 Decatur..... 17,23-  
 DeKalb..... \*33  
 East St. Louis..... 46  
 Edwardsville..... \*18-  
 Elgin 466+  
 Freeport..... 23,\*65-  
 Galesburg..... 63  
 Harrisburg..... 3  
 Jacksonville..... \*14  
 Joliet..... 114-,66+  
 Kankakee..... \*54-  
 LaSalle..... 35

ILLINOIS (Continued)

Macomb..... \*22+  
 Marion..... 27  
 Moline..... 8,\*44  
 Mount Bernon... 13+  
 Olney..... \*16-  
 Paris..... 46+  
 Peoria.19,25+,31+,  
 47-,\*59+  
 Pontiac..... 53  
 Quincy.10-,16+,\*27+  
 Rockford. 13,17-,39  
 Rock Island..... 4+  
 Springfield.20+,49-  
 55+,\*65+  
 Streator..... \*64+  
 Urbana..... 12-,27  
 Vandalia..... 21-  
INDIANA  
 Angola..... 63  
 Anderson..... 67+  
 Bloomington.4,\*30-,  
 42+,63+  
 Elkhart..... 28+  
 Evansville.7,\*9+,  
 13-,25-,44  
 Fort Wayne.15+,21+,  
 33-,\*39-,55  
 Gary..... \*50,56+  
 Hammond..... 62+  
 Indianapolis.6,8-,  
 13-,\*20-,40,59-,\*69  
 Kokomo..... 29-  
 Lafayette... 18,\*24  
 Madison..... \*60+

INDIANA (Continued)

Marion..... 23  
 Muncie..... \*17+,49  
 Richmond..... 43+  
 South Bend..... 16,22,\*34-,46  
 Terre Haute..... 2+,10,\*26-,38  
 Vincennes..... \*22-  
IOWA  
 Ames..... 5,23-,\*34+  
 Burlington..... 26-,\*57-  
 Carroll..... \*18-,30+  
 Cedar Rapids..... 2,9-,28+,48-  
 Centerville..... \*31-  
 Council Bluffs..... \*32  
 Davenport..... 6+,18+,30-,\*36+  
 Decorah..... \*14+  
 Des Moines.8-,\*11+,13-,17+,\*43-,  
 63-,69  
 Dubuque..... 16-,\*29-,40-  
 Esterville..... 49+  
 Fort Dodge..... \*21  
 Hampton..... 50-  
 High Point..... \*13-  
 Landsing..... \*41+  
 Iowa City..... 12+,20-  
 Keokuk..... \*44+  
 Keosauqua..... \*54+  
 Mason City..... 3+,\*24+  
 Mount Ayr..... \*25-  
 Newton..... 39+  
 Ottumwa..... 15+,\*33-  
 Red Oak..... \*36  
 Rock Rapids..... \*25+

IOWA (Continued)

Sibley..... \*33  
Sioux City. 4-,9,14,\*27-  
Spirit Lake.....\*38

KANSAS

Chanute..... \*30+  
Colby..... 4  
Columbus.....\*48-  
Dodge City.....\*21-  
Emporia.....\*25+  
Ensign..... 6+  
Ft. Scot..... 20+  
Garden City. 11+,13-,\*18  
Goodland..... 10  
Great Bend..... 2  
Hays..... 7-,\*9,\*14  
Hutchingson... \*8,12,36+  
Junction City..... 6-  
Lakin..... \*3  
Lawrence..... 38  
Liberal..... 5+  
Manhattan..... \*21  
Oakley..... \*15-  
Parsons..... \*39  
Phillipsburg..... \*22-  
Pittsburg..... 7+,14  
Pratt..... \*32+  
Selina..... 18+,34-,44  
Sedan..... \*28  
Topeka. +11,13+,27,43,49  
Wichita.3-,10-,\*15+,24-,  
33,\*42

KENTUCKY

Ashland..... \*25,50-,61+  
Bowling Green13,40+,\*53-  
59+  
Campbellsville..... 34  
Covington.....\*54+  
Danville..... 56  
Elizabethtown..... \*23+  
Harlan..... 44-  
Hazard..... \*35+,57-  
Hopkinsville..... 51  
Lexington.18+,27-36,\*46,  
62  
Louisville.3-,11,\*15,21-  
32-,41+,\*68+  
Madisonville19-,\*35-,57+  
Morehead..... \*38+,67-  
Murray..... \*21+,38  
Owensboro... 31-,48-,61+  
Owenton..... \*52+  
Paducah..... 6+,29,49  
Paintville..... 69+  
Pikeville..... \*22-,51+  
Somerset..... 16,29+  
LOUISIANA  
Alexandria.5,\*25+,31+,41+  
Baton Rouge.2,9-,\*27,33-  
44+  
DeRidder..... \*23-  
Houma..... 11  
Lafayette.. 3+,10,15,\*24  
Lake Charles, 7-,\*18,29-  
Minden..... 21+  
Monroe... 8+,\*13,14-,39+

LOUISIANA (Continued)

Morgan City..... 14+  
Natchitoches..... \*20+  
New Iberia..... 36-  
New Orleans.4+,6,8-,\*12,  
20-,26,\*32+,38+,49  
Shreveport.. 3-,12,\*24-,33  
Tallulah..... \*19  
MAINE  
Augusta..... \*10-  
Bangor..... 2-,5+,7-  
Calais..... \*13-  
Fort Kent..... \*46+  
Fryeburg..... \*18+  
Houlton..... \*25+  
Kittery..... \*39  
Lewiston..... 8-,35-  
Millinocket..... \*44-  
Orono..... \*12-  
Portland... 6-,13+,\*26-,51  
Presque Island. 8,\*10+,62+  
Rumford..... \*43+  
MARYLAND  
Annapolis..... \*22+  
Baltimore.2+,11-,13+,24+,  
45,54,\*67-  
Cumberland..... 52+,65  
Frederick..... \*62  
Hagerstown.... 25-,\*31,68+  
Oakland..... \*36+  
Salisbury.... 16+,\*28-,47-  
Waldorf..... \*58

MASSACHUSETTS

Boston.\*2+,4-,5-,7+,25+,  
38,\*44+,56,68+

Greenfield..... 32+

Middleton..... 62

New Bedford.. 6+,28-,\*34

North Adams..... 19,\*35

Norwell..... 46+

Pittsfield..... 51+

Springfield... 22,40,\*57+

Vineyard Haven..... 58+

Worcester.14,<sup>1</sup>27,\*48+,66

Michigan

Alpena..... \*6,11

Ann Arbor..... 31+,\*58+

Bad Axe..... \*35,\*57

Battle Creek..... 41+,43-

Bay City..... 5-,\*19+,61+

Cadillac..... 9,\*27,33

Calumet..... 5-,\*22-

Cheboygan..... .4+

Detroit.2+,4,7-,20+,50-,  
\*56,62

East Lansing.... 23-,\*69-

Escanaba..... 3+

Flint..... 12-,\*28-,66-

Grand Rapids.8+,13+,17,  
\*35+

Iron Mountain.... 8-,\*17+

Ironwood..... \*15-,24+

Jackson..... 18+

Kalamazoo..... 3-,\*52+,64

Lansing..... 6-,47,53-

MICHIGAN (continued)

Manistee..... \*21

Manistique..... \*15+

Marquette..... 6-,\*13,19

Mount Clemens.....38+

Mount Pleasant..... \*14

Muskegon.....54+

Parma.....10-

Petoskey..... \*23+

Port Huron.....46+

Saginaw..... 25-,49-

Sault Ste Marie.8-,10+,  
\*32-

Traverse City.... 7+,29-

West Branch..... 24

MINNESOTA

Alexandria..... 7,\*24,42

Appleton..... \*10-

Austin..... 6-,\*15-

Bemisji..... \*9,26+

Brainerd..... \*22

Crockston..... \*33

Duluth.3,\*8,10+,21+,27-

Ely.....\*17=

Fairmont.....\*16+

Hibbing..... 13-,\*18-

International Falls.\*35+

Mankato..... 12,\*26-

Marshall..... \*30-

Minneapolis-St. Paul.\*2-  
4,5-,9+,11-,\*17,23+,29+,  
45

Redwood Falls..... 43

MINNESOTA (continued)

Rochester..... 10,47-

St. Cloud..... 19,\*25-,41

St James..... 32+

Thief River Falls..... 10

Wadena.....\*20-

Walker..... 12-

Wilmar..... \*14-

Winona..... \*35+,44+

Worthington..... \*20

MISSISSIPPI

Biloxi..... 13+,\*19-,25-

Booneville..... \*12-

Bude..... \*17+

Clarksdale..... \*21

Cleveland..... \*31-

Columbia..... \*45

Columbus..... 4-,27,\*43

Greenville..... 15-,44

Greenwood..... 6+,\*23+

Hattiesburg..... 22,\*47

Holly Springs..... 40

Houston..... 45+

Jackson.3,12+,16,\*29+,40+,  
51

Laurel..... 7,18+

Magee..... 34+

McComb..... 28-

Meridian.. 11-,\*14,24-,30-

Mississippi State..... \*2+

Natchez..... 48

Oxford..... \*18

MISSISSIPPI (continued)

Senatobia..... \*34-  
Tupelo..... 9-,35+  
Vicksburg..... 35-  
Wiggins..... 43-  
Yazoo City..... \*32-

MISSOURI

Birthtree..... \*20-  
Bowling Green..... \*35-  
Cape Girardeau.12,23,\*39-  
Carrolton..... \*18  
Columbia..... 8+,17-,\*23+  
East St. Louis..... \*46  
Flat River..... \*22  
Jannibal..... 7-  
Jefferson City.13,25,\*36-  
Joplin..... 12+,16,\*26-  
Kansas City.4,5+,9+,\*19+  
41-,50-,62+,\*68-  
King City..... \*28-  
Kirksville..... 3-  
LaPlatta..... \*21+  
Lowry City..... \*15-  
Poplar Bluff. 15+,\*26+,55  
Rolla..... \*28  
Sikeston..... 45  
St. Joseph..... 2-,16-,22  
St. Louis.2,4-,5-,\*9,11,  
24+,30+,\*40-,\*46  
Sedalia..... 6  
Springfield.3+,10,\*21-,  
27-,33-

MONTANA

Anaconda..... 2+  
Billings.2-,6,8,\*11,14,  
20+  
Bozeman..... 7-,\*9  
Butte... \*2+,4,6+,18,24  
Cut Bank..... \*14-  
Dillon..... \*14+  
Glendive... 5+,13+,\*16-  
Great Falls.3+,5+,16,26  
\*32  
Hardin..... 4+  
Havre..... 9+,11-,\*18-  
Helena..... 10+,12,15+  
Joplin..... 35-,48,54-  
Kalispell..... 9-,\*29-  
Lewiston..... 13  
Milest City.... 3-,\*10  
Missoula.8-,\*11-,13-,  
17-,23-  
NEBRASKA  
Albion..... 8+,21+  
Alliance..... \*13-  
Eassett..... \*7-  
Beatrice..... \*23+  
Falls City..... \*24  
Grant Island... 11-,17-  
Hastings..... 5-,\*29+  
Haynes Center..... 6  
Hay Springs-Scottsbluff  
4+  
Kearney..... 13  
Lexington..... \*3+

Lincoln.... 10+,\*12-,45,51  
McCook..... 8-,16+  
Merriman..... \*12  
Norfolk..... \*19+  
North Platte..... 2-,\*9+  
Omaha.3,6+,7,15,\*26,42+,  
\*48-,54  
Orchard..... 16  
Pawnee..... \*33+  
Scotts Bluff..... 10-,16  
Superior..... 4+  
NAVADA  
Boulder City..... 5+  
Elko..... 10-,\*14+  
Ely..... 3-,6+  
Fallon..... \*25  
Goldfield..... 2-  
Las Vegas.3,8-,\*10+,13-,  
15+,21+,33+  
McGill..... \*13  
Paradise..... 39+  
Reno.2,4,\*5,8,11,21+,27+  
Tonopah..... 9-,\*17+  
Winnemucca..... 7+,\*15-  
Yerington..... \*16+  
New Hampshire  
Berlin..... \*40-  
Concord..... 21+  
Durham..... \*11  
Hanover..... \*15+,31  
Keene..... \*52+

NEW HAMPSHIRE (continued)

Littleton..... \*49+

Manchester..... 9-,50-,60+

New Jersey  
Atlantic City.<sup>1</sup>\*18,\*36,53+  
62-

Burlington..... 48-

Camden..... \*23+

Little Falls..... \*50+

Newark..... 13-,68

New Brunswick..... 47+,\*58

Newton..... 63

Paterson..... 41-

Trenton..... \*52-

Vineland..... 59-,56-

West Milford..... \*66-

Wildwood..... 40

NEW MEXICO  
Alamogordo..... \*18-

Albuquerque.4+,\*5+,7+,13+,  
14-,23-,\*32+,41

Carlsbad..... 6-,\*15+,25-

Clayton..... \*17

Clovis..... 12-

Deming..... \*16

Farmington..... 12+,\*15+

Gallup..... 3,\*8-,10

Hatch..... \*12

Hobbs..... 29+

Las Cruces..... \*22,48+

Lovington..... \*19

Portales..... \*3+

Raton..... \*18-

New Mexico (continued)

Roswell.8,10-,21-,27-,\*33+

Santa Fe.. 2+,\*9+,11-,19-

Silver City.... 6,10+,\*12

Socorro..... \*15-

Tucumcari..... \*15

New York  
Albany-Schenectady.6,10-,  
13,\*17+,23-,\*29+,45

Amsterdam..... \*39+,55

Batavia..... 51-

Binghamton.12-,34-,40-,  
\*46+

Buffalo.2,4-,7+,17,\*23,  
29-,49-

Carthage..... 7-

Corning..... \*30

El Mira..... 18+,36-

Glenn Falls..... \*58-

Ithaca..... 52,\*65+

Jamestown..... 26+,\*46

Kingston..... 62+

Lake Placid..... 5,\*34+

Levittown..... \*21-

Massena..... \*18

New York.2,4,5+,7,11+,\*25  
31-

Oneonta..... <sup>1</sup>15,\*42

Patchoque..... 67

Plattsburg..... \*57

Poughkeepsie.....54+

Riverhead.....55+

Rochester.8,10+,13-,\*21,  
31+,\*61+

Secaucus..... 9+

New York (continued)

Syracuse.3-,5-,9-,\*24+,  
43+,56+,62+

Utica..... 2-,20+,33,\*59

Watertown..... \*16,50+

NORTH CAROLINA  
Andrews..... \*59

Ashville.... 13-,21+,\*33

Bay City..... \*67-

Belmont..... 46+

Bryson City..... 67

Burlington..... 16

Canton..... \*27

Chapel Hill..... \*4+

Charlotte.3,9+,18,36,  
\*42+

Columbia..... \*2

Concord..... \*58

Durham..... 11+,28+

Fayetteville..... 40+,62

Forest City..... 66+

Franklin..... \*56+

Goldsboro..... 17-

Greensboro.... 2-,48-,61

Greenville.9-,14,\*25,38+

Hickory..... 14-

High Point... 8-,32+,67+

Jacksonville..... \*19,35

Kannapolis..... 64-

Laurel Hill.....59

Lexington.....20

Linville..... \*17

NORTH CAROLINA (continued)

Lumberton..... \*31  
Manteo..... 4  
Morehead City..... 8+  
Morganton..... 23-  
New Bern..... 12+  
Raleigh..... 5,22,\*34,50+  
Roanoke Rapids..... \*36-  
Rocky Mt. .... 47  
Rockingham..... \*53  
Washington..... 7  
Waynesville..... 59  
Wilmington... 3-,6,26-,\*39-  
Wilson..... 30-  
Windston-Salem.. 12,\*26+,45

NORTH DAKOTA

Bismark... \*3,5,12-,17-,26+  
Devils Lake..... 8+,22+  
Dickinson..... 2+,\*9-,7  
Ellendale..... \*19-  
Fargo..... 6,11+,\*13,15-  
Grand Forks..... \*2,14+,27+  
Jamestown..... 7-,\*23  
Minot... \*6+,10-,13-,14-,24  
Pembina..... 12  
Valley City..... 4-  
Willston..... \*4,8-,11,\*15-

OHIO

Akron..... 23+,\*49+,55-  
Alliance..... \*45+  
Ashtabula..... 1 15  
Athens..... \*20

OHIO (continued)

Bowling Green..... \*27+  
Cambridge..... \*44-  
Canton..... 17-,67  
Chillicothe..... 53  
Cincinnati.5-,9,12,19+,\*48-,64-  
Cleveland.3,5+,8+,19,\*25+,61  
Columbus.4-,6+,28-,\*34,\*56-  
Dayton.. 2,7+,16+,22+,45  
Defiance..... 65+  
Hillsboro..... \*24+,55+  
Lima..... 35-,44+,\*57+  
Lorain..... 43  
Mansfield..... \*47+,68-  
Newark..... \*31-,51  
Oxford..... \*14+  
Portsmouth..... 30,\*42-  
Sandusky..... 52-  
Springfield..... 26+,\*66  
Steubenville.... 9+,\*62+  
Toledo.11-,13,24-,\*30+,36-.40-  
Youngstown.21-,27,33,\*58  
Zaneville..... 18

OKLAHOMA

Ada..... 10+,\*22  
Altus..... \*27  
Ardmore... 12-,1\*17,\*28-  
Bartlesville..... 17+  
Cheyenne..... \*12+

OKLAHOMA (continued)

Claremore..... \*35  
Duncan..... 40+  
Elk City..... 8+,\*15-,31  
Enid..... 20-,\*26+  
Eufaula..... \*3  
Grove..... 45+  
Guymom..... 9+,\*16  
Hugo..... 1 15+,\*48+  
Hugo-Paris(Texas)... 42+  
Lawton.. 7+,\*16-,\*36-,45  
McAlester..... \*32-  
Miami..... \*18-  
Muskogee..... 19  
Norman..... 46  
Oklahoma City.4-,5,9-,\*13,14-,25-,34-,43+,52,62+  
Okmulgee..... 44-  
Shawnee..... 30  
Tulsa.2+,6+,8-,\*11-,23,41+,47,53,\*63  
Woodward..... \*17-

OREGON

Astoria..... \*21  
Bend..... \*3+,\*15,21+  
Brookings..... \*14-  
Burns..... \*18  
Corvalls..... \*7-  
Eugene.9+,13,16+,\*28-,34  
Grants Pass..... \*18+  
Klamath Falls.2-,\*22+,31  
LaGrande..... \*13+,\*16

OREGON (continued)

Medford.. 5,\*8+,10+,12+,27  
North Bend..... 11,\*17+  
Pendleton..... 11-  
Portland.2,6+,8-,\*10,12,  
24+,\*30,40-  
Roseburg..... 4+  
Salem..... 22,32  
The Dalles..... \*17-

PENNSYLVANIA

Allentown..... \*39,69  
Altoona.. 10-,23-,47+,\*57+  
Bethlehem..... 60  
Clearfield..... \*3+  
Erie..... 12,24,35+\*54+,66+  
Greensburg.....40+  
Harrisburg... 21+,27-,\*33+  
Hazleton..... 56  
Johnstown.... 6,8,19+,\*28+  
Lancaster..... 8+,15+  
Lebanon..... 55-  
Philadelphia.3,6-,10,17,  
29,\*35-,57

Pittsburgh.2-,4+,11,\*13-,  
\*16,22,53+  
Redding..... 51  
Scranton.16-,22-,38+,\*44-,  
64  
State College.... 29+,\*59+  
Wilkes Barre..... 28  
Williamsport.....<sup>1</sup>20-

York..... 43,49+

RHODE ISLAND

Providence.10+,12+,16,  
\*36,64+  
Block Island..... 69-

SOUTH CAROLINA

Aiken..... \*44  
Allendale..... \*14  
Anderson..... 40  
Beaufort..... \*16-  
Charleston.2+,4,5+,\*7-,  
24,36+  
Columbia.10-,19+,25-,  
\*35+,57-  
Conway.....\*23+

Florence.13+,15-,21,\*33+  
Georgetown..... \*41-  
Greenville... 4-,16+,\*29  
Greenwood..... \*38,48+  
Myrtle Beach..... 32,43+  
Rock Hill..... 30+,\*55-  
Spartenburg..... 7+,49  
Sumter..... \*27-,63

SOUTH DAKOTA

Aberdeen..... 9-,\*16-  
Allen..... 22+  
Brookings..... \*8  
Charleston..... 24  
Eagle Butte..... \*13  
Huron..... 12+  
Lead..... 5-,11+  
Lowery... \*11-,56,62+,68-  
Martin..... \*8-  
Mitchell..... 5+

SOUTH DAKOTA (continued)

Pierre..... 4,\*10+  
Rapid City.3+,7+,\*9,15-,  
21-  
Reliance..... 6-  
Seneca..... \*2-  
Sioux Falls.11,13+,17-,  
\*23,36+  
Vermillion..... \*2+  
Watertown..... 3-

TENNESSEE

Athens..... \*24  
Chattanooga.3+,9,12+,\*45,  
61-  
Cleveland..... 53  
Cookeville..... \*22,28+  
Crossville..... 20+,\*55+  
Fayetteville..... \*29-  
Greenville..... 39-  
Hendersonville.....<sup>1</sup>50  
Jackson..... 7+,16+,\*32+  
Johnson City..... 11-,\*41  
Kingsport.....19

Knoxville.6,8,10+,\*15-,  
26-,43+  
Lebanon..... 66-  
Lexington..... \*11+  
Livingston..... 60-  
McMinnville..... 33+  
Memphis.3-,5+,\*10+,13+,  
\*14+,24,30,50+  
Murfreesboro..... 39+  
Nashville.2-,4+,5,\*8+,17+,  
30+,\*42,58  
Sneedville..... \*2+

TENNESSEE (continued)

Tullahoma..... 64+

Union City..... 41

Texas  
Abilene... 9+,15,\*26+,32+

Alpine.....12-

Alvin..... 67

Amarillo.. \*2+,4,7,10,14+

Arlington..... 68

Austin.7+,\*18+,24,36,42-,  
54

Bay City..... \*43+

Baytown..... 57+

Beaumont.. 6-,12-,21,\*34-

Big Spring..... 4-,\*14

Blanco..... 62+

Boquillas..... 8-

Brady..... 13

Brownsville..... 23

Bryan..... 3,\*15-

Childress..... \*21

Conroe..... 49+,55+

Corpus Christi.3-,6,10-,  
\*16,28-,38+

Crockett..... 40

Dallas.4+,8,\*13+,27-,33+,  
39,58

Del Rio..... 10,\*24+

Denton..... \*2

Eagle Pass..... 16+

El Paso.4,7,9,\*13,14,26+,  
\*38-,65

Farwell.....18+

Fort Stockton..... 5+

Fort Worth.5+,11-,21,\*31+  
52-

TEXAS (continued)

Frederickburg..... 2+

Galveston..... \*22,48

Greenville..... 47+

Harlingen..... 4+,\*44,60

Houston.2-,\*8-,11+,13-,  
\*14,20,26,39-,61

Irving..... 49

Jacksonville..... 56

Katy..... 51+

Killum..... 62

Kennville.....35+

Lake Dallas..... 55

Laredo..... 8,13,27-\*39

Llano..... 14-

Longview.... 1 16+,51,54+

Lubbock.\*5-,11,13-,16+,  
28,34-

Lufkin.....9

McAllen..... 48

Marfa..... 3

Marshall..... \*22-,35+

Midland..... 2-,18

Monahans-Odessa..... 9-

Nacogdoches..... 19-,\*32

Odessa.7-,24-,30,\*36+,\*42

Paris, Texas.... 36+,\*42+

Port Arthur..... 4-

Presido..... 7+

Richardson..... 23

Rio Grande City..... 40

Rosenburg..... 45

TEXAS (continued)

San Angelo.... 3-,6,8+,\*21+

San Antonio,4,5,\*9-,12+,  
\*23-,29+,\*41+,\*60+

Sherman..... 20-,\*26-

Sonora..... 11+

Sweetwater..... 12

Temple..... 6+,\*46-

Texarkana..... 6,17-,\*34

Tuler..... 7,14+,\*38

Uvalde.....26-

Victoria..... 19+,\*25,31,\*47

Waco..... 10+,\*25+,\*34+,\*44-

Weslaco..... 5-

Wichita Falls.3+,\*6-,18-,\*24

Wolfforth.....22-

Cedar City..... 4,\*16+

Logan..... 12-,\*22

Moab..... \*14+

Monticello..... \*16-

Ogden..... \*9+,\*18-,24,30

Price..... 3+,\*15

Provo..... \*11,16

Richfield..... 8+,\*19

Salt Lake City.2-,4-,5+,  
\*7-,13+,\*14-,20+,\*26-

St. George..... 12,\*18-

Vernal..... 6\*17+

Rutland..... \*28+

St. Johnsbury..... \*20-

Winsor..... \*41

VIRGINIA

Ashland..... 65+  
 Blackburg..... \*43,65-  
 Bluefield..... \*63+  
 Bristol..... 5+,\*28-  
 Charlottesville.29-,\*41-,  
 64+  
 Courtland..... \*52  
 Damville..... 24-,44+,\*56  
 Fairfax..... \*56-  
 Farmville..... \*31-  
 Fredericksburg... \*53,69+  
 Front Royal..... \*42  
 Greendy..... 68  
 Harrisonburg..... 3-  
 Kenbridge..... \*31-  
 Lynchburg.... 13,21-,\*54+  
 Manassas..... 66+  
 Marion..... \*52-  
 Norfolk-Portsmouth-  
 Newport News-Hampton.3+,  
 10+,\*13-,\*15,27,33,49-,  
 \*55+  
 Norton.....\*47-  
 Onancock.....\*25+  
 Petersburg..... 8  
 Richmond.6+,\*12-,\*23,35+,  
 \*57-,63  
 Roanoke.7-,10,\*15+,\*27+,  
 38-,60  
 Staunton.....\*51-  
 Virginia Beach..... 43+  
 West Point..... \*46

WASHINGTON

Anacortes..... 24  
 Bellevue..... 39+,\*51+  
 Belingham... 12+,\*34,64  
 Centralia..... \*15+  
 East Wenatchee.... 249A  
 Everett..... 16-  
 Kennewick..... 42+  
 Morton..... 39  
 Pasco..... 19-  
 Pullman..... \*10-  
 Richland..... 25,\*31  
 Rochester..... 26+  
 Seattle.4,5+,\*7,\*9,22+,  
 45+,\*62  
 Spokane,2-,4-,6-,\*7+,  
 22,28-,34-  
 Tacoma.11+,\*13-,20,\*28,  
 \*56  
 Vancouver..... \*14,49  
 Walla Walla.....14-  
 Wenatchee..... \*18+,\*27  
 Yakima.. 23+,\*29+,\*35,\*47

WEST VIRGINIA

Beckley..... .4  
 Bluefield..... 6-,40-  
 Charleston.8+,\*11+,\*23,29  
 \*49-  
 Clarksburg..... 12+,\*46-  
 Fairmont..... 66-  
 Grandview..... \*9-  
 Huntington.. 3+,\*13+,\*33+  
 Keyser..... \*30+

WEST VIRGINIA (Continued)

Martinsburg..... 60+  
 Morgantown..... \*24-  
 Parkersburg... 15-,39+,\*57  
 Weirton..... \*50+  
 Weston..... 5  
 Williamson..... \*31+  
 Wheeling..... 7,<sup>1</sup>14,\*41  
WISCONSIN  
 Appleton.....32+  
 Bloomington..... \*49  
 Chippewa Falls..... 48  
 Colfax..... \*28-  
 Eau Claire..... 13+,\*18  
 Fond du Lack..... 68  
 Green Bay.2+,\*5+,\*11+,\*26+,  
 \*38,44+  
 Highland.....\*51  
 Janesville.....57+  
 Kenosha.....55-  
 Kieler..... \*46+  
 LaCrosse.... 8+,\*19-,\*25,\*31  
 Madison.,3,15,\*21-,\*27+,\*47+  
 Manitwoc..... 16+  
 Marshfield..... 39-  
 Mayville..... 52  
 Milwaukee.4-,6,\*10+,\*12,18-  
 24+,\*30,\*36,58  
 Oshkosh..... 22+,\*50+  
 Park Falls..... \*36+  
 Racine..... 49+  
 Rhinelander..... 12+

Wisconsin (continued)  
 Rice Lake..... 16  
 Sheboygan..... 28  
 Sturgeon Bay..... 42  
 Superior..... 6+,40  
 Suring..... 14-  
 Tomah..... 43  
 Wausau..... 7-,9,\*20+,33-

WYOMING

Casper.. 2+,\*6+,9+,14-,20-  
 Cheyenna.... 5+\*17,27-,33-  
 Jackson..... 2,11+  
 Lander..... \*4,5  
 Laramie..... \*8+  
 Rawlins..... 11-  
 Riverton..... 10+  
 Rock Springs..... 13  
 Sheridan..... 7,12+

U.S.Territories and Poss.  
 Guam: Agana.... \*4,8,10,\*12

PUERTO RICO

Aguadilla..... \*32,44

PUERTO RICO (contin.)  
 Arecibo-Aguadilla.12+  
 Arecibo..... 54,60  
 Bayamon..... 36  
 Caguas.....11-,\*58  
 Carolina..... 52  
 Fajardo..... 13+,\*40  
 Guayama..... 46  
 Humacoa..... 68  
 Mayaguez.3+,5-,16,22  
 Ponce.7+,9-,14,20,\*26  
 48  
 San Juan.2+,4-,\*6+,18  
 24,30,\*62  
 San Sebastian..... 38  
 Vega Baja..... 64  
 Yauco..... 42

VIRGIN ISLANDS

Charlotte Amalie.10-,  
 17,\*23,43  
 Christiansted.8+,15,  
 \*21,27  
 Charlotte Amalie,  
 Christiansted. \*3,6,12  
 Christiansted.8+,15,  
 \*21,27

Nos. 3 and 5 reserved.

<sup>1</sup>Following the decision in Docket No. 18261, channels so indicated will not be available for television use until further action by the Commission.

<sup>2</sup>Operation on this channel is subject to the conditions, terms, and requirements set out in the Report and Order in Docket No. 19075, RM-1645, adopted January 5, 1972, released January 7, 1972, FCC 72-19.

<sup>4</sup>This channel is not available for use at Elgin unless and until it is determined by the Commission that it is not needed for use at Joliet Illinois.

<sup>6</sup>Stations using these assignments shall limit radiation towards stations on the same channel in Puerto Rico to no more than the effective radiated power which would be radiated by an omnidirectional station using maximum permissible effective radiated power for antenna height above average terrain, at the minimum distances from such stations specified in 73.610(b). The Commission shall consider the status of the negotiations with the appropriate British authorities concerning these assignments when the application for construction permit come before the Commission.

73.607 Availability of channels. Applications may be filed to construct TV broadcast stations only on the channels assigned in the Table of Assignments (73.606(b)) and only in the communities listed therein. Applications which fail to comply with this requirement, whether or not accompanied by a petition to amend the Table, will not be accepted for filing. However, applications specifying channels which accord with publicly announced FCC Orders changing the Table of Assignments will be accepted for filing even though such applications are tendered before the effective dates of such channel changes.

§73.608 International agreements. See 73.1650

§73.609 Zones. (a) For the purpose of allocation and assignment the United States is divided into three zones as follows:

(1) Zone I consists of that portion of the United States located within the confines of the following lines drawn on the U. S. Albers Equal Area Projection Map (based on standard parallels  $29\ 1/2^\circ$  and  $45\ 1/2^\circ$ ; north American datum): Beginning at the most easterly point on the State boundary line between North Carolina and Virginia; thence in a straight line to a point on the Virginia-West Virginia boundary line located at north latitude  $37^\circ\ 49'$  and west longitude  $80^\circ\ 12'\ 30''$ ; thence westerly along the southern boundary lines of the States of West Virginia, Ohio, Indiana, and Illinois to a point at the junction of the Illinois, Kentucky, and Missouri State boundary lines; thence northerly along the western boundary line of the State of Illinois to a point at the junction of the Illinois, Iowa, and Wisconsin State boundary lines; thence easterly along the northern State boundary line of Illinois to the 90th meridian; thence north along this meridian to the  $43.5^\circ$  parallel; thence east along this parallel to the United States-Canada border;

§73.609(a)(1) - §73.610(a)

thence southerly and following that border until it again intersects the 43.5° parallel; thence east along this parallel to the 71st meridian; thence in a straight line to the intersection of the 69th meridian and the 45th parallel; thence east along the 45th parallel to the Atlantic Ocean. When any of the above lines pass through a city, the city shall be considered to be located in Zone I. (See Figure 1 of §73.699.)

(2) Zone II consists of that portion of the United States which is not located in either Zone I or Zone III, and Puerto Rico, Alaska, Hawaiian Islands and the Virgin Islands.

(3) Zone III consists of that portion of the United States located south of a line, drawn on the United States Albers Equal Area Projection Map (based on standard parallels 29 1/2° and 45 1/2°; North American datum), beginning at a point on the east coast of Georgia and the 31st parallel and ending at the United States-Mexican border, consisting of arcs drawn with a 241.4 kilometer (150 mile) radius to the north from the following specified points:

	North Latitude	West Latitude
(a)	29°40'00"	83°24'00"
(b)	30°07'00"	84°12'00"
(c)	30°31'00"	86°30'00"
(d)	30°48'00"	87°58'30"
(e)	30°00'00"	90°38'30"
(f)	30°04'30"	93°19'00"
(g)	29°46'00"	95°05'00"
(h)	28°43'00"	96°39'30"
(i)	27°52'30"	97°32'00"

When any of the above arcs pass through a city, the city shall be considered to be located in Zone II. (See Figure 2 of §73.699.)

§73.610 Minimum distance separation between stations.

(a) The provisions of this section relate to assignment separations and station separations. Petitions to amend the Table of Assignments (§73.606(b)) (other than those also expressly requesting amendment of this section or §73.609) will be dismissed and all applications for new television broadcast stations or for changes in the transmitter sites of existing stations will not be accepted for filing if they fail to comply with the requirements specified in paragraphs (b), (c) and (d) of this section:

NOTE: Licensees and permittees of television broadcast stations which were operating on April 14, 1952 pursuant to one or more separations below those set forth in §73.610 may continue to so operate, but in no event may they further reduce the separation below the minimum. As the existing separations of such stations are increased, the new separations will become the required minimum separations until separations are reached which comply with the requirements of §73.610. Thereafter, the provisions of said section shall be applicable.

(b) Minimum co-channel assignment and station separation:

(1)

Zone	Kilometers	
	Channels 2-13	Channels 14-69
I.....	272.7 (169.5 miles)	248.8 (154.5 miles)
II.....	304.9 (189.5 miles)	280.8 (174.5 miles)
III.....	353.2 (219.5 miles)	329.0 (204.5 miles)

(2) The minimum co-channel distance separation between a station in one zone and a station in another zone shall be that of the zone requiring the lower separation.

(c) Minimum assignment and station adjacent channel separation applicable to all zones:

(1) Channels 2-13

Channels 14-69

95.7 kilometers (59 miles) 87.7 kilometers (54.5 miles)

(2) Due to the frequency spacing which exists between Channels 4 and 5, between Channels 6 and 7 and between Channels 13 and 14, the minimum adjacent channel separation specified above shall not be applicable to these pairs of channels (see §73.603).

(d) In addition to the requirements of paragraphs (a), (b) and (c) of this section, the minimum assignment and station separation between stations on Channels 14-69, inclusive, as set forth in Table II of §73.598 must be met in either rule-making proceeding looking towards the amendment of the Table of Assignments (§73.606(b)) or in licensing proceedings. No channel listed in column (1) of Table II of §73.698 will be assigned to any city and no application for an authorization to operate on such a channel will be granted unless the mileage separations indicated at the top of column (2)-(7), inclusive, are met with respect to each of the channels listed in those columns and parallel with the channel in column (1).

(e) The zone in which the transmitter of a television station is located or proposed to be located determines the applicable rules with respect to co-channel distance separations where the transmitter is located in a different zone from that in which the channel to be employed is located.

§73.611 Reference points and distance computations. To calculate the distance between two reference points see paragraph (c) section §73.208. However, distance shall be rounded to the nearest tenth of a kilometer.

§ 73.612 Protection from interference. (a) Permittees and licensees of television broadcast stations are not protected from any interference which may be caused by a grant of a new station or of authority to modify the facilities of an existing station in accordance with the provisions of this subpart. The nature and extent of the protection from interference accorded to television broadcast stations is limited solely to the protection which results from the minimum assignment and station separation requirements and the rules and regulations with respect to maximum powers and antenna heights set forth in this subpart.

(b) When the Commission determines that grant of an application would serve the public interest, convenience and necessity and the instrument of authorization specifies and antenna location in a designated antenna farm area which results in distance separation less than those specified in this subpart, TV broadcast station permittees and licensees shall be afforded protection from interference equivalent to the protection afforded under the minimum distance separation specified in this subpart.

NOTE: The nature and extent of the protection from interference accorded

to television broadcast stations which were authorized prior to April 14, 1952, and which were operating on said date is limited not only as specified above, but is further limited by any smaller separations existing between such stations on said date. Where, as a result of the adoption of the Table of Assignments, or of changes in transmitter sites made by such stations after said date, separations smaller than the required minimum are increased but still remain lower than the required minimum, protection accorded such stations will be limited to the new separations.

73.613 Main studio location.

See 73.1120, 73.1125, 73.1130

73.614 Power and antenna height requirement. (a) Minimum requirements. Applications will not be accepted for filing if they specify less than -10dbk (100 watts) horizontally polarized visual effective radiated power in any horizontal direction. No minimum antenna height above average terrain is specified.

(b) Maximum power. Applications will not be accepted for filing if they specify a power which exceeds the maximum permitted boundaries specified in the following formulas:

(1) Channels 2-6 in Zone I:

$$ERP_{Max} = 102.54 - 33.33 * \text{Log}_{10} (\text{HAAT})$$

And,

$$-10 \text{ dBk} < ERP_{Max} < 20 \text{ dBk}$$

(2) Channels 2-6 in Zones II and III:

$$ERP_{Max} = 67.57 - 17.08 * \text{Log}_{10} (\text{HAAT})$$

And,

$$10 \text{ dBk} < ERP_{Max} < 20 \text{ dBk}$$

(3) Channels 7-13 in Zone I:

$$ERP_{Max} = 107.57 - 33.24 * \text{Log}_{10} (\text{HAAT})$$

And,

$$-4.0 \text{ dBk} < ERP_{Max} < 25 \text{ dBk}$$

(4) Channels 7-13 in Zones II and III:

$$ERP_{Max} = 72.57 - 17.08 * \text{Log}_{10} (\text{HAAT})$$

And,

$$15 \text{ dBk} < ERP_{Max} < 25 \text{ dBk}$$

(5) Channels 14-69 in Zones I, II, and III:

$$ERP_{Max} = 84.57 - 17.08 * \text{Log}_{10} (\text{HAAT})$$

And,

$$27 \text{ dBk} < ERP_{Max} < 37 \text{ dBk}$$

Where:

$ERP_{Max}$  = Maximum Effective Radiated Power  
measured in decibels above 1 kW (dBk).

HAAT = Height Above Average Terrain  
measured in meters.

The boundaries specified are to be used to determine the maximum possible combination of antenna height and ERP<sub>dBk</sub>. When specifying an ERP<sub>dBk</sub> less than that permitted by the lower boundry, any antenna HAAT can be used. Also, for values of antenna HAAT greater than 2,300 meters the maximum ERP is the lower limit specified for each equation.

(6) The effective radiated power in any horizontal or vertical direction may not exceed the maximum values permitted by this section.

(7) The effective radiated power at any angle above the horizontal shall be as low as the state of the art permits, and in the same vertical plane may not exceed the effective radiated power in either the horizontal direction or below the horizontal, whichever is greater.

(c) Determination of applicable rules.--The zone in which the transmitter of a television station is located or proposed to be located determines the applicable rules with respect to maximum antenna heights and powers for VHF stations when the transmitter is located in Zone I and the channel to be employed is located in Zone II, or the transmitter is located in Zone II and the channel to be employed is located in Zone I.

§73.615 Administrative changes in authorizations.--In the issuance of television broadcast station authorizations, the Commission will specify the transmitter output power and effective radiated power to the nearest 0.1 dBk. Powers specified by kilowatts shall be obtained by converting dBk to kilowatts to 3 significant figures. Antenna heights above average terrain will be specified to the nearest meter. Midway figures will be authorized in the lower alternative.

ADMINISTRATIVE PROCEDURE§ 73.620 Cross reference to rules in other parts.

Other rules applicable to broadcast services are set forth in the following parts of this chapter:

- (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," (§§1.201 to 1.363).
  - (3) Subpart C, "Rule Making Proceedings." (§§1.400 to 1.430).
  - (4) Subpart D, "Broadcast Applications and Proceedings," with subheadings of "General Filing Requirements," "Application Forms and Particular Filing Requirements," "Application Processing Procedures," "Action on Applications," "Forms and Information To Be Filed With The Commission," and "Forfeitures Relating to Broadcast Licensees and Permittees," (§§1.501 to 1.621).
  - (5) Subpart G, "Schedule of Fees." (§§1.1101 to 1.1120).
  - (6) Subpart H, "Ex Parte Presentations," (§§1.1201 to 1.1251).
  - (7) Subpart I, "Procedures Implementing The National Environmental Policy Act of 1969." (§§1.1301 to 1.1319).
- (b) Part 2, "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations," including Subparts on A, "Definitions," B, "Allocation, Assignments, and Use of Radio Frequencies," C, "Emissions," D, "Call Signs and Other Forms of Identifying Radio Transmissions," and G, "Treaties and Other International Agreements."
- (c) Part 13, "Commercial Radio Operators" (Volume).
- (d) Part 17, "Construction, Marking, and Lighting of Antenna Structures."
- (e) Part 74, "Experimental, Auxiliary, and Special Broadcast, and Other Program Distributional Services," including Subparts on the following stations: A, "Experimental Television--," B, "Experimental Facsimile--," C, "Developmental--," D, "Remote Pickup--," E, "Aural STL and Intercity Relay--," F, "Television Auxiliary--," G, "Television Broadcast Translator--," I, "Instructional Television Fixed Service," L, "FM Translator and Booster--."
- (f) Part 76, "Cable Television Service," including Subpart B, "Applications and Certificates of Compliance," Subpart D, "Carriage of Television Broadcast Signals," and Subpart F, "Nonduplication Protection and Syndicated Exclusivity."
- (g) Part 78, "Cable Television Relay Service."

**73.621 Noncommercial educational stations.** -- In addition to the other provisions of this subpart, the following shall be applicable to noncommercial educational television broadcast stations:

(a) Except as provided in paragraph (b) of this section, noncommercial educational broadcast stations will be licensed only to nonprofit educational organizations upon a showing that the proposed stations will be used primarily to serve the educational needs of the community; for the advancement of educational programs; and to furnish a nonprofit and noncommercial television broadcast service.

(1) In determining the eligibility of publicly supported educational organizations, the accreditation of their respective state departments of education shall be taken into consideration.

(2) In determining the eligibility of privately controlled educational organizations, the accreditation of state departments of education or recognized regional and national educational accrediting organizations shall be taken into consideration.

(b) Where a municipality or other political subdivision has no independently constituted educational organization such as, for example, a board of education having autonomy with respect to carrying out the municipality's educational program, such municipality shall be eligible for a noncommercial educational television broadcast station. In such circumstances, a full and detailed showing must be made that a grant of the application will be consistent with the intent and purpose of the Commission's Rules relating to such stations.

(c) Noncommercial educational television broadcast stations may transmit educational, cultural and entertainment programs, and programs designed for use by schools and school systems in connection with regular school courses, as well as routine and administrative material pertaining thereto.

(d) A noncommercial educational television station may broadcast programs produced by or at the expense of, or furnished by persons other than the licensee, if no other consideration than the furnishing of the program and the costs incidental to its production and broadcast are received by the licensee. The payment of line charges by another station, network, or someone other than the licensee of a noncommercial educational television station, or general contributions to the operating costs of a station, shall not be considered as being prohibited by this paragraph.

(e) Each station shall furnish a nonprofit and noncommercial broadcast service. Noncommercial educational television stations shall be subject to the provisions of 73.1212 to the extent that they are applicable to the broadcast of programs produced by, or at the expense of, or furnished by others. No promotional announcements on behalf of for profit entities shall be broadcast at any time in exchange for the receipt, in whole or in part, of consideration to the licensee, its principals, or employees. However, acknowledgements of contributions can be made. The scheduling of any announcements and acknowledgements may not interrupt regular programming.

NOTE -- Commission interpretation of this rule, including the acceptable form of acknowledgements may be found in the Second Report and Order, (Commission Policy Concerning the Noncommercial Nature of Educational Broadcast Stations), 85 F.C.C. 2d 141 (1982), and the subsequent Commission Order, Docket No. 21136 (July 15, 1982).

(f) Telecommunications Service on the Vertical Blanking Interval. The provisions governing VBI telecommunications service in 73.646 are applicable to noncommercial educational TV stations.

(g) Non-program related data signals transmitted on line 21 pursuant to 73.632(a)(22)(ii) may be used for remunerative purposes.

**73.622 Retention of audio recordings. Deleted.**

**73.623 Applications for sharing of television channels. See 73.1715**

**73.624 Notification of filing of applications. See 73.1030**

**73.625 - 73.626 (Reserved).**

73.627 Special field test authorization. See 73.1515.

73.628 Equipment tests. See 73.1610.

73.629 Program tests. See 73.1620.

73.630 Normal license period. See 73.1020.

73.631 Reserved.

73.633 Reserved.

73.634 Reserved.

§73.635 Use of common antenna site. - No television license or renewal of a television license will be granted to any person who owns, leases, or controls a particular site which is peculiarly suitable for television broadcasting in a particular area and (a) which is not available for use by other television licensees; and (b) no other comparable site is available in the area; and (c) where the exclusive use of such site by the applicant or licensee would unduly limit the number of television stations that can be authorized in a particular area or would unduly restrict competition among television stations.

§73.641 Definitions. (a) Subscription television. A system whereby subscription television broadcast programs are transmitted and received.

(b) Subscription television broadcast program. A television broadcast program intended to be received in intelligible form by members of the public only for a fee or charge.

73.642 Subscription TV service. (a) Subscription TV service may be provided by:

- (1) Licensees and permittees of commercial TV broadcast stations, and
- (2) Licensees and permittees of low power TV stations.

(b) A licensee or permittee of a commercial TV broadcast or of a low power TV station may begin subscription TV service upon installation of encoding equipment having advanced FCC approval. However, the licensee or permittee of a TV broadcast station (not applicable to low power TV stations) must send a letter to the FCC in Washington, D.C., that subscription TV service has commencement of such service. In that letter, to be entitled "Notice of Operations," the licensee or permittee is to state that it complies with the provisions of paragraphs (e)(1)-(3) and 73.644(c) of this chapter and identify the make and type of encoding system being used. A similar notice must be submitted if the licensee or permittee commences using another type of encoding system, (See 73.644(h).) A notice must also be submitted to the FCC in Washington, D.C., if encoded subscription TV service is discontinued.

(c) The station proof of system compliance measurement data (See 73.644(c)) need not be submitted to the FCC, however, the measurement data must be available to the FCC upon request.

(d) The use of the visual vertical blanking interval or an aural sub-carrier for transmitting subscriber decoder control code signals during periods of normal non-encoded programming may be used only upon specific FCC authorization. Letter requests to use either the video blanking intervals or aural subcarriers during periods of non-subscription programming are to be sent to the FCC in Washington, D.C.

(e) A licensee or permittee of a commercial TV broadcast or low power TV station may not transmit a subscription service if it has a contract, arrangement, or understanding, expressed or implied, that:

(1) Prevents or hinders it from rejecting or refusing any subscription TV broadcast program that it reasonably believes to be unsatisfactory or unsuitable or contrary to the public interests; or substituting a subscription or conventional program that, in its opinion, is of greater local or national importance; or

(2) Delegates to any other person the right to schedule the hours of transmission of subscription programs. However, this rule does not prevent a licensee or permittee from entering into an agreement or arrangement whereby it agrees to schedule a specific subscription TV broadcast program at a specific time or to schedule a specific number of hours of subscription programs during the broadcast day (or segment thereof) or weeks; or

(3) Deprives it of the right of ultimate decision concerning the maximum amount of any subscription program charge or fee.

(4) Has provisions that do not comply with the following policies of the FCC:

(i) Unless a satisfactory signal is unavailable at the location where service is desired, subscription TV service must be provided to all persons desiring it within the Grade A contour of the station broadcasting subscription programs. Geographic or other reasonable patterns of installation for new subscription services is permitted and, for good cause, service may be terminated.

(ii) Charges, terms and conditions of service to subscribers must be applied uniformly. However, subscribers may be divided into reasonable classifications approved by the FCC and the impositions of different sets of terms and conditions may be applied to subscribers in different classifications. Further, for good cause, within such classification, deposits may be required from some subscribers and not of others; and, also for good cause, if a subscription system generally uses a credit-type decoder, cash operated decoders may be installed for some subscribers.

73.643 Subscription TV operating requirements. The non-technical rules and policies applicable to regular TV broadcast stations are applicable to subscription TV operations, except where specifically exempted in the provisions of those rules and policies.

73.644 Subscription TV transmission systems. (a) Licensees and permittees of commercial TV broadcast and low power TV stations may conduct subscription operations only by using an encoding system that has been approved in advance by the FCC. Such advance approval may be applied for and granted in accordance with the procedures given in Subpart M of Part 2 of the Rules.

(b) The criteria for advance approval of subscription TV transmitting systems by the FCC are as follows:

(1) Spectral energy in the transmitted signal must not exceed the limitations given in 73.687(1).

(2) No increase in width of the television broadcast channel (6MHz) is permitted.

(3) The technical system must enable stations to transmit encoded subscription TV programs without increasing the RMS output power from either the video or audio transmitters over that required to transmit the same program material using normal transmission standards.

(4) Modification of a type accepted TV broadcast or low power TV transmitter for encoded transmissions must not render transmitter incapable of operating in accordance with the operating specifications upon which type acceptance was granted. (See 2.1001 (b), (k)).

(5) Interference to reception of conventional television either of co-channel or adjacent channel stations must not increase over that resulting from the transmission of programming with normal transmission standards.

(6) Subscriber decoder devices must meet the provisions, where required, of Subpart H of Part 15 of the FCC Rules for TV Interface Devices.

(c) Prior to commencing the transmission of encoded subscription programming, the licensee or permittee of a TV broadcast or lowpower TV station must perform such tests and measurements to determine that the transmitted encoded signal conforms to the radiated ratio frequency and demodulated baseband and waveforms, transmitter operating power determination and the

occupied bandwidth limitations specified in the application for advance FCC approval of the system being used. A copy of the measurement data is to be maintained in the station files and made available to the FCC upon request.

(d) The licensee of a station transmitting an encoded subscription service must have at the transmitter control point the technical specifications for the system being used of both the aural and visual baseband signals and the transmitte radiofrequency signals and have the necessary measuring and monitoring equipment, including transmitter output power measuring equipment, to determine that the transmissions conform to the advance approval specifications on file with the FCC. Full operating specifications for the system must be available to representatives of the FCC upon request.

(e) The operating power of the transmitters during encoded operations must be determined and maintained according to the procedures given in the application for advance approval.

(f) A station using an encoding system in accordance with the specifications filed with the application for advance approval is deemed to be exempted from those technical regulations of this Subpart and Subpart H to the extent they are specifically detailed in the application.

(g) No protection from interference of any kind will be afforded to reception of encoded subscription programming over that afforded reception of non-encoded signals.

(h) A licensee or permittee may make no modifications on a subscription encoding system that would alter the characteristics of the transmitted aural or visual signal from those specified in the application for advance approval. A licensee or permittee of a station replacing its encoding system must perform the measurements required by paragraph (c) of this Section. A TV broadcast station licensee or permittee must also send a letter advising the FCC of the new system being used as required by 73.642(b) of this chapter.

(i) The station licensee is fully responsible for all technical operations of the station during transmissions of encoded subscription programming, regardless of the supplier of the encoding uquipment of subscription program service.

Note: Stations transmitting encoded subscription programming prior to October 1, 1983, must comply with all technical and operating requirements of this Section no later than April 1, 1984. Stations not having the information to comply with this Section must obtain such information from the manufacturer of the encoding system being used and if necessary, by measurements of the station's transmission system.

(j) Upon request by an authorized representative of the FCC, the licensee of a TV station transmitting encoded programming must make available a receiving decoder to the Commission to carry out its regulatory responsibilities.

73.646 Telecommunications Service on the Vertical Blanking interval.

(a) Telecommunications services permitted on the vertical blanking interval (VBI) service include the transmission of data, processed information, or any other communication either a digital or analog mode.

(b) Telecommunications service on the VBI is of an ancillary nature and as such is an elective, subsidiary activity. No service guidelines limitations, or performance standards are applied to it. The kinds of service that may be provided include, but are not limited to, teletext, paging, computer software and bulk data distribution and aural messages. Such services may be provided on a broadcast, point-to-point, or point to multipoint basis.

(c) Telecommunications services that are common carrier in nature are subject to common carrier regulation. Licenses operating such services are required to apply to the Commission for the appropriate authorization and to comply with all policies and rules applicable to the particular service.

(d) Television licensees are authorized to lease their VBI telecommunications facilities to outside parties. In all arrangements entered into with outside parties effecting telecommunications service operation, the licensee or permittee must retain control over all material transmitted in a broadcast mode via the station's facilities, with the right to reject any material that it deems is appropriate or undesirable. The licensee or permittee is also responsible for all aspects of technical operation involving VBI telecommunications services.

(e) The grant or renewal of a TV station license or permit will not be furthered or promoted by proposed or past VBI telecommunications service operation; the licensee must establish that its broadcast operation serves the public interest wholly apart from VBI telecommunications service activities. (Violation of rules applicable to VBI telecommunications service could, of course, reflect on a licensee's qualifications to hold its license or permit.)

(f) TV broadcast stations are authorized to transmit VBI telecommunications service signals during any time period, including portions of the day when normal programming is not broadcast. Such transmissions must be in accordance with the technical provisions of 73.682.

## GENERAL OPERATING REQUIREMENTS

§73.651 Time of operation. See 73.653, 73.1705 and 73.1740.

73.652 Station identification. See 73.1201.

73.653 Operation of TV aural and visual transmitters. (a) During the operating hours of a TV station, between its regularly scheduled sign-on and sign-off times, the aural and visual transmitters shall not be operated separately, or to present different or unrelated program material, except in the following cases:

(1) Emergency fills due to either visual or aural equipment failures leaving the licensee with only the audio or video programming to announce the equipment failures to the audience;

(2) For equipment tests or experimentation pursuant to 74.1510 (Experimental authorizations) and 73.1520 (Operation for tests and maintenance).

(b) During the normal non-operating hours of a TV station between sign-off of one broadcast day and sign-on of the next but, in any event, no earlier than 12 Mid-night nor later than 6 A.M., the aural and visual transmitters shall, if the licensee chooses to broadcast, be operated as follows:

(1) As described in paragraphs (a)(1) and (2) of this section, or

(2) Separately, with either (i) no aural transmissions, or (ii) aural transmissions of non-related, different program material.

(3) All rules and all policies of the FCC apply to the operation of stations presenting programs described in this paragraph (b) of this section.

(c) Stations signing on after 6 A.M. may present visual transmissions of a test pattern, still pictures or slides, with aural transmission consisting of a single tone, or series of variable tones, a presentation of the upcoming program schedule, aural news broadcasts, or music. This type program material shall not exceed 15 minutes immediately prior to the start of the station's scheduled sign-on.

(d) During the non-encoded operating hours of a SUBSCRIPTION TV STATION, between the regularly scheduled sign-on and sign-off times in which it presents such non-encoded programming, the aural and visual transmitters shall not be operated separately, or to present different or unrelated program material, except in the following case:

(1) During installation of decoders and orientation of receiving antennas, at subscriber locations, non-integrated, different or unrelated material may be presented to aid installers in their function.

73.654 Sponsorship identification. See Subpart H 73.1 212

73.656 Lotteries. See Subpart H 73.1211

§73.657 Broadcasts by candidates for public office.-

See 73.1940

**73.658** Affiliation agreements. (a) Exclusive affiliation of station. No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization under which the station is prevented or hindered from, or penalized for, broadcasting the programs of any other network organization. (The term "network organization" as used in this section includes national and regional network organizations. See Ch. VII, J, of Report on Chain Broadcasting.)

(b) Territorial exclusivity. No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which prevents or hinders another broadcast station located in the same community from broadcasting the network's programs not taken by the former station, or which prevents or hinders another broadcast station located in the same community from broadcasting the network's programs not taken by the former station, or which prevents or hinders another broadcast station located in a different community from broadcasting any program of the network organization. This section shall not be construed to prohibit any contract, arrangement, or understanding between a station and a network organization pursuant to which the station is granted the first call in its community upon the programs of the network organization. As employed in this paragraph, the term "community" is defined as the community specified in the instrument of authorization as the location of the station.

(c) Term of affiliation. No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which provides, by original terms, provisions for renewal, or otherwise for the affiliation of the station with the network organization for a period longer than 2 years: Provided, That a contract, arrangement, or understanding for a period up to 2 years may be entered into within 6 months prior to the commencement of such period.

(d) Station commitment of broadcast time. No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with any network organization, which provides for optioning of the station's time to the network organization, or which has the same restraining effect as time optioning. As used in this section, time optioning is any contract, arrangement, or understanding, express or implied, between a station and a network organization which prevents or hinders the station from scheduling programs before the network agrees to utilize the time during which such programs are scheduled, or which requires the station to clear time already scheduled when the network organization seeks to utilize the time.

(e) Right to reject programs. No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which, with respect to programs offered or already contracted for pursuant to an affiliation contract, prevents or hinders the station from (1) rejecting or refusing network programs which the station reasonably believes to be unsatisfactory or unsuitable or contrary to the public interest, or (2) substituting a program which, in the station's opinion, is of greater local or national importance.

(f) Network ownership of stations. No license shall be granted to a network organization, or to any person directly or indirectly controlled by or under common control of a network organization, for a television broadcast station in any locality where the existing television broadcast stations are so few or of such unequal desirability (in terms of coverage, power, frequency, or other related matters) that competition would be substantially restrained by such licensing. (The word "control" as used in this section, is not limited to full control but includes such a measure of control as would substantially affect the availability of the station to other networks.)

(g) Dual network operation. No license shall be issued to a television broadcast station affiliated with a network organization which maintains more than one network of television broadcast stations: Provided, That this section shall not be applicable if such networks are not operated simultaneously, or if there is no substantial overlap in the territory served by the group of stations comprising each such network.

(h) Control of networks of station rates. No license shall be granted to a television broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization under which the station is prevented to hindered from, or penalized for, fixing or altering its rates for the sale of broadcast time for other than the network's programs.

(i) No license shall be granted to a television broadcast station which is represented for the sale of non-network time by a network organization or by an organization directly or indirectly controlled by or under common control with a network organization, if the station has any contract, arrangement or understanding, express or implied, which provides for the affiliation of the station with such network organization: Provided, however, That this rule shall not be applicable to stations licensed to a network organization or to a subsidiary of a network organization.

(j) Network syndication and program practices. (1) Except as provided in subparagraph (3) of this paragraph, no television network shall:  
(i) June 1, 1973, sell, license, or distribute television programs to television station licensees within the United States for non-network television exhibition or otherwise engage in the business commonly known as "syndication" within the United States; or sell, license, or distribute television programs of which it is not the sole producer for exhibition outside the United States; or reserve any option or right to share in revenues or profits in connection with such domestic and/or foreign sale, license, or distribution; or

(ii) After August 1, 1972, acquire any financial or proprietary right or interest in the exhibition, distribution, or other commercial use of any television program produced fully or in part by a person other than such television network, except the license or other exclusive right to network exhibition within the United States and on foreign stations regularly included within such television network: Provided, That if such network does not timely avail itself or such license or other exclusive right to network exhibition within the United States, the grantor of such license or right to network exhibition may, upon making a timely offer reasonably to compensate the network, re-acquire such license or other exclusive right to exhibition of the program.

(2) Nothing contained in subparagraphs (1) and (2) of this paragraph shall prevent any television network from selling or distributing programs of which it is the sole producer for television exhibition outside the United States, or from selling or otherwise disposing of any program rights not acquired from another person, including the right to distribute programs for non-network exhibition (as in syndication) within the United States as long as it does not itself engage in such distribution within the United States or retain the right to share the revenues or profits therefrom.

(3) Nothing contained in this paragraph shall be construed to include any television network formed for the purpose of producing, distributing, or syndicating program materials for educational, noncommercial, or public broadcasting exhibition or uses.

(4) For the purposes of this paragraph and paragraph (k) of this section the term network means any person, entity, or corporation which offers an interconnected program service on a regular basis for 15 or more hours per week to at least 25 affiliated television licensees in 10 or more States; and/or any person, entity, or corporation controlling, controlled by, or under common control with such person, entity, or corporation.

(k) Effective September 8, 1975, commercial television stations owned by or affiliated with a national television network in the 50 largest television markets (see Note 1 to this paragraph) shall devote, during the four hours of prime time (7-11 p.m. e.t., 6-10 p.m. c.t. and m.t.), no more than three hours to the presentation of programs from a national network, programs formerly on a national network (off-network programs) other than feature films, or on Saturdays, feature films, provided, however, That the following categories of programs need not be counted toward the three-hour limitation:

(1) On nights other than Saturday, network or off-network programs designed for children, public affairs programs or documentary programs (see Note 2 to this paragraph for definitions).

(2) Special news programs dealing with fast-breaking news events, on the spot coverage of news events or other material related to such coverage, and political broadcasts by or on behalf of legally qualified candidates for public office.

(3) Regular network news broadcasts up to a half hour, when immediately adjacent to a full hour of continuous locally produced news or locally produced public affairs programming.

(4) Runover of live network broadcasts of sporting events, where the event has been reasonably scheduled to conclude before prime time or occupy only a certain amount of prime time but the event has gone beyond its expected duration due to circumstances not reasonably foreseeable by the networks or under their control. This exemption does not apply to post-game material.

(5) In the case of stations in the Mountain and Pacific time zones, on evenings when network prime-time programming consists of a sports events or other program broadcast live and simultaneously throughout the contiguous 48 states, such stations may assume that the network's schedule that evening occupies no more of prime time in these time zones than it does in the Eastern and Central time zone.

(6) Network broadcasts of an international sports events (such as the Olympic Games), New Year's Day college football games, or any other network programming of a special nature other than motion pictures or other sports events, when the network devotes all of its time on the same evening to the same programming, except brief incidental fill material.

NOTE 1: The top 50 markets to which this paragraph applies are the 50 largest markets in terms of average prime time audience for all stations in the market. For broadcast years before fall 1980, the 50 markets are the largest 50 as listed in the Arbitron publication "Television Markets and Rankings Guide," generally published in November, which will apply for the broadcast year starting the following fall, except that, for 1978-79, "Syracuse-Elmira" will not be included and the Salt Lake City market will be included. For broadcast years starting in the fall of 1980 and thereafter, the 50 largest markets to which this paragraph applies will be determined at 3-year intervals, on the basis of the average of two Arbitron February-March audience surveys occurring roughly 2½ years and roughly 3½ years before the start of the 3-year period. The 50 markets to which this paragraph will apply for 3 years from fall 1980 to fall 1983 will be determined by an average of the prime time audience figures (all market stations combined) contained in the reports of Arbitron February/March 1977 and February/March 1978 audience surveys. Shortly after the results of the 1978 survey are available the Commission will issue a list of the 50 largest markets to which this paragraph will apply from fall 1980 to fall 1983. The same procedure will take place, on the basis of February/March 1980 and 1981 surveys, for the 3-year period from fall 1983 to fall 1986.

NOTE 2: As used in this paragraph, the term "programs designed for children" means programs primarily designed for children aged 2 through 12. The term "documentary programs" means programs which are non-fictional and educational or informational, but not including programs where the information is used as part of a contest among participants in the program, and not including programs relating to the visual entertainment arts (stage, motion pictures or television) where more than 50 percent of the program is devoted to the presentation of entertainment material itself. The term "public affairs programs" means talks, commentaries, discussions, speeches, editorials, political programs, documentaries, forums, panels, roundtables, and similar programs primarily concerning local, national, and international public affairs.

(L) Broadcast of the programs or more than one network. The provisions of this paragraph govern and limit the extent to which, after October 1, 1971, commercial television stations in the 50 states of the United States, which are regular affiliates of one of the three national television networks, may broadcast programs of another network, in markets where there are two such affiliated stations and one or more operational VHF or UHF stations having reasonably comparable facilities which are not regular affiliates of any network. Whether or not the stations in a particular market come within the provisions of this paragraph is determined by whether, as of July 1 of each year with respect to programs beginning October 1, or as of January 1 of each year with respect to programs beginning April 1, there are in the market the stations specified in the last sentence.

(1) Definitions. As used in this paragraph, the following terms have the meanings given:

(i) "Station" means a commercial television station in the 50 states of the United States.

(ii) "Operational Station" means a station authorized and operating as of June 10 (with respect to programs beginning October 1) or as of December 10 (with respect to programs beginning April 1), or a station authorized and which gives notice to the Commission by such June 10 or December 10 date that it will be on the air by such October 1 or April 1 date (including request for program test authority if none has previously been given), and commits itself to remain on the air for 6 months after such October 1 or April 1 date. Such notice shall be received at the Commission by the June 10 or December 10 date mentioned, and shall show that copies thereof have been sent to the three national networks and to the licensees of all operating television stations in the market.

(iii) "Affiliated Station" means a station having a regular affiliation with one of the three national television networks, under which it served as that network's primary outlet for the presentation of its programs in a market. It includes any arrangement under which the network looks primarily to this station rather than other stations for the presentation of its programs and the station chiefly presents the programs of this network rather than other networks.

(iv) "Unaffiliated station" means a station not having an affiliation arrangement as defined in this subparagraph with a national television network, even though it may have other types of agreements or per-program arrangements with it.

(v) "Network" means a national organization distributing programs for a substantial part of each broadcast day to television stations in all parts of the United States, generally via interconnection facilities.

(vi) "Unaffiliated network" means a network not having an affiliated station (as defined in this paragraph) in a particular market, even though it may have other types of agreements or per-program arrangements.

(vii) "Market" means the television markets of the United States, and the stations in them, as identified in the latest publication of American Research Bureau (ARB), together with any stations which have since become operational in the same communities.

(viii) "Evening Programming" means programming (regular programs or "specials") starting and conducting on a network between the hours of 7:30 P.M. and 11 P.M. local time (except 6:30 P.M. and 10 P.M. in the Central time zone), plus all programs other than regular newscasts starting on the network between 7 and 7:30 P.M. local time (6 and 6:30 P.M. local time in the Central time zone). It does not include portions broadcast after 7 P.M. of programs starting earlier, or portions broadcast after 11 P.M. of programs starting earlier.

(ix) "Specials" means programs not carried on the network at least as often as once a week. It includes both programs scheduled well in advance and those scheduled very shortly before broadcast on the network.

(x) "Reasonably comparable facilities" means stations transmitting facilities (effective radiated power and effective antenna height above average terrain) such that the station's Grade B coverage area is at least two-thirds as large (in square miles) as the smallest of the market affiliated stations' Grade B coverage areas. Where one or both of the affiliates is licensed to a city different from that of the unaffiliated station, the term "reasonably comparable facilities" also includes the requirement that the unaffiliated station must put a predicted Grade A or better signal over all of the city of license of the other regular (non-satellite) station(s), except that where one of the affiliated stations is licensed to the same city as the unaffiliated station, and puts a Grade B but not a Grade A signal over the other city of license, the unaffiliated station will be considered as having reasonably comparable facilities if it too puts a predicted Grade B signal over all of the other city of license.

(2) Taking programs from unaffiliated networks. No affiliated station, in a market covered by this paragraph, shall take and broadcast, from an unaffiliated network, any programming of the times and types specified in this subparagraph, unless the conditions specified have first been met:

(i) Any evening programming (as defined in this paragraph), unless and until the entire schedule of such programs has been offered by the unaffiliated network to the unaffiliated station as provided in subparagraph (4) of this paragraph, and the unaffiliated station has either accepted 15 hours per week of such programs, plus additional "special" hours when part of the "special" is included in the 15 hours, or has accepted a lesser amount and indicated that it does not wish to carry any more. Such acceptance of this shall be governed by the provisions of subparagraph (4) of this paragraph.

(ii) Any programming beginning on the network between 12 noon and 7 P.M. on Saturdays, Sundays, and holidays, and consisting of sports events (including, without limitation, college football and basketball, professional football, baseball, ice hockey, golf, tennis, horseracing, and autoracing), unless and until the program has first been offered to unaffiliated station and that station has indicated that it does not wish to accept it.

(iii) Any programming broadcast after 11 P.M. local time (except 10 P.M. local time in the central time zone) which is a continuation of programs starting earlier and carried by the unaffiliated station; or any material broadcast after 7 P.M. (6 P.M. in the central time zone) which is a continuation of sports programs beginning earlier and carried by the unaffiliated station.

(iv) Any program presented in the same week by the unaffiliated station.

(3) Carriage of programs of a network which has an affiliate. No affiliated station in a market covered by this paragraph shall broadcast, from another network which has an affiliated station in the market, any evening programming or Saturday, Sunday, or holiday sports programming, unless such programming has first been offered to the unaffiliated station in the market and the latter has indicated that it does not wish to carry it.

(4) Offer and acceptance. (i) The "offer" by a network referred to in this paragraph means an offer to the unaffiliated station of the programs for broadcast. Programs so offered cannot be withdrawn by the network until the following April 1 or October 1, unless the station does not in fact broadcast the program as accepted, in which case the provisions of subdivision (ii) of this subparagraph shall apply, or unless the program is cancelled on the work, in which case the replacement or substitute program shall be offered to the station as a new program under subparagraphs (2) or (3) of this paragraph. If a program accepted by the unaffiliated station is shifted in time, the station may exercise its right of "first call" either with respect to the program at its new time, or the previous time segment, at its option.

(ii) The acceptance referred to in subparagraphs (2) and (3) of this paragraph means that the unaffiliated station agrees to broadcast the program accepted, at its live network time or a delayed time acceptable to the network, unless in its judgment the program is not in the public interest or it wishes to substitute a local, or other live, program for it. The provisions of paragraph (a) of this section, prohibiting agreements which hinder the presentation of the programs of other networks, shall not apply to material covered by this paragraph. If a program is not presented in a particular week live or at a delayed time acceptable to the network, the network may place this particular broadcast of the program on another station; and if this occurs more than 4 times in any 13-week period the network may withdraw the program from the station without obligation to offer it any additional programming. The unaffiliated station is free to seek and obtain other terms of acceptance from the network; but the offer of programming by the network on the foregoing terms satisfies its obligations under this paragraph.

(iii) The offer by the network shall, to the extent possible, be on or before July 15 with respect to programs beginning in the fall season, and by January 15 with respect to programs presented after April 1, or otherwise as soon as possible. The unaffiliated station's acceptance or indication of nonacceptance shall be within 2 weeks after the date of the offer; where any negotiations between the network and the station concerning particular programs are involved, programs not accepted within 30 days of the date of the offer shall be deemed not accepted.

Note 1: If there are in a particular market two affiliated stations and two (or more) operational unaffiliated stations with reasonably comparable facilities, the provisions of this paragraph (1) shall require an offer of programming to each; but the 15-hour-per-week "first call" provision applies to the total programming taken by all such stations.

Note 2: The provisions of this paragraph (1) do not apply to a market in which there are two VHF affiliated U.S. stations, and a foreign VHF station to which a national U.S. television network transmits programs pursuant to authority granted under section 325 of the Communications Act of 1934, as amended, and which served as that network's primary affiliate in the market.

(m) Territorial exclusivity in non-network arrangements. No television station shall enter into any contract, arrangement or understanding, express or implied with a non-network program producer, distributor, or supplier, or other person which prevents or hinders another television station located in a community over 35 miles away, as determined by the reference points contained in 76.53 of this chapter (if reference points for a community are not listed in 76.52, the location of the main post office will be used) from broadcasting any program purchased for the former station from such non-network program producer, distributor, supplier, or other person, except that a television station may secure exclusivity against a television station licensed to another designated community in a hyphenated market specified in the market listing as contained in 76.51 of this chapter for those 100 markets listed and for markets not listed in 76.51 of this chapter, the listing as contained in the ARB Television Market Analysis for the most recent year at the time that the exclusivity contract arrangement or understanding is complete under practices of the industry. As used in this subsection, the term "community" is defined as the community specified in the instrument of authorization as the location of the station.

Note 1: Contracts, arrangements, or understanding that are complete under the practices of the industry prior to August 7, 1973 will not be disturbed. Extensions or renewals of such agreements are not permitted because they would in effect be new agreements without competitive bidding. However, such agreements that were based on the broadcaster's advancing "seed money" for the production of a specific program or series that specify two time periods--a tryout period and period thereafter for general exhibition may be extended or renewal as contemplated in the basic agreement.

Note 2: Deleted and reserved.

Note 3: It is intended that the top 100 major television markets listed in 76.51 of this chapter shall be used for the purposes of this rule and that the listing of the top 100 television markets appearing in the ARB Television Market Analysis shall not be used. The reference in this rule to the listing of markets in the ARB Television Market Analysis refers to hyphenated markets below the top 100 markets contained in the ARB Television Market Analysis. If a community is listed in a hyphenated market in 76.51 and is also listed in one of the markets in the ARB listing, the listing in 76.51 shall govern.

Note 4: The provisions of this paragraph apply only to U.S. commercial television broadcast stations in the 50 states, and not to stations in Puerto Rico or the Virgin Islands, foreign stations or noncommercial educational television or "public" television stations (either by way of restrictions on their exclusivity or on exclusivity against them).

Note 5: New stations authorized in any community of a hyphenated market listed in 76.51 of this chapter or in any community of hyphenated market listed in the ARB listing (for markets below the top 100 markets) are subject to the same rules as previously existing stations therein. New stations authorized in other communities are considered stations in separate markets unless and until 76.51 is amended by Commission action, or the ARB listing is changed.

73.659 Special rules relating to contracts providing for reservation of time upon sale of a station. See 73.1150.

73.660 Station and operator licenses; posting of. See 73.1230.

73.661 TV operator requirements.

- (a) Transmitter duty operator requirements: See 73.1860.
- (b) Chief operator requirements: See 73.1870.
- (c) Transmission system inspection requirements: See 73.1580.

73.662 Antenna structure, marking and lighting. See 73.1213.

§73.663 Determining operating power. (a) The operating power of the visual transmitter of each TV station shall normally be determined by the direct method.

(b) Direct method, visual transmitter. The direct method of power determination for a TV visual transmitter uses the indications of calibrated transmission line meters (responsive to peak power) located at the RF output terminals of the transmitter. The indications of the calibrated meter are used to observe and maintain the authorized operating power of the visual transmitter. This meter must be calibrated whenever any component in the metering circuit is repaired or replaced and as often as necessary to ensure operation in accordance with the provisions of 73.1560 of this Part. The following calibration procedures are to be used:

(1) The transmission line meter is calibrated by measuring the average power at the output terminals of the transmitter, including any vestigial sideband and harmonic filters which may be used in normal operation. For this determination the average power output is measured while operating into a dummy load of substantially zero reactance and a resistance equal to the transmission line characteristic impedance. During this measurement the transmitter is to be modulated only by a standard synchronizing signal with blanking level set at 75% of peak amplitude as observed in an output waveform monitor, and with this blanking level amplitude maintained throughout the time interval between synchronizing pulses.

(2) If electrical devices are used to determine the output power, such devices must permit determination of this power to within an accuracy of  $\pm 5\%$  of the power indicated by the full scale reading of the electrical indicating instrument of the device. If temperature and coolant flow indicating devices are used to determine the power output, such devices must permit determination of this power to within an accuracy of  $\pm 4\%$  of measured average power output. The peak power output is the power so measured in the

dummy load multiplied by the factor 1.68. During this measurement the input voltage and current to the final radio frequency amplifier stage and the transmission line meter are to be read and compared with similar readings taken with the dummy load replaced by the antenna. These readings must be in substantial agreement.

(3) The meter must be calibrated with the transmitter operating at 80%, 100%, and 110% of the authorized power as often as may be necessary to insure compliance with the requirements of this paragraph and in any event at intervals of no more than 6 months. In cases where the transmitter is incapable of operating at 110% of the authorized power output, the calibration may be made at a power output between 100% and 110% of the authorized power output. However, where this is done, the output meter must be marked at the point of calibration of maximum power output, and the station will be deemed to be in violation of this rule if that power is exceeded. The upper and lower limits of permissible power deviation as determined by the prescribed calibration, must be shown upon the meter either by means of adjustable red markers incorporated in the meter scale or glass face. These markings must be checked and changed, if necessary, each time the meter is calibrated.

(c) Indirect method, visual transmitter. The operating power is determined by the indirect method by applying an appropriate factor to the input power to the final radio-frequency amplifier stage of the transmitter using the following formula:

$$\text{Transmitter output power} = E_p \times I_p \times T3F$$

Where:

$E_p$  = DC input voltage of the final radio-frequency amplifier stage.

$I_p$  = DC input current of the final radio-frequency amplifier stage.

F = Efficiency factor.

(1) If the above formula is not appropriate for the design of the transmitter final amplifier, use a formula specified by the transmitter manufacturer with other appropriate operating parameters.

(2) The value of the efficiency factor, F established for the authorized transmitter output power is to be used for maintaining the operating power, even though there may be some variation in F over the power operating range of the transmitter.

(3) The value of F is to be determined and a record kept thereof by one of the following procedures listed in order of preference:

(i) Using the most recent measurement data for calibration of the transmission line meter according to the procedures described in paragraph (b) of this section or the most recent measurements made by the licensee establishing the value of F. In the case of composite transmitters or those in which the final amplifier stages have been modified pursuant to FCC approval, the licensee must furnish the FCC and also retain with the station records the measurement data used as a basis for determining the value of F.

(ii) Using measurement data shown on the transmitter manufacturer's test data supplied to the licensee, provided that measurements were made at the authorized carrier frequency and transmitter output power.

(iii) Using the transmitter manufacturer's measurement data submitted to the FCC for type acceptance as shown in the instruction book supplied to the licensee.

Note: Refer to §73.1560 for aural transmitter output power levels.

73.665 Use of TV aural baseband subcarriers. Licensees of TV broadcast stations may transmit, without further authorization from the FCC, subcarriers and signals within the composite baseband for the following purposes:

(a) Stereophonic (biphonic, quadraphonic, etc.) sound programs under the provisions of 73.667 and 73.669.

(b) Transmission of signals relating to the operation of TV stations, such as relaying broadcast materials to other stations, remote cueing and order messages and control and telemetry signals for the transmitting-system.

(c) Transmission of pilot or control signals to enhance the station's program service such as (but not restricted to) activation of noise reduction decoders in receivers, or for program alerting and program identification.

(d) Subsidiary communications services.

73.667 TV subsidiary communications service. (a) Subsidiary communication services are those transmitted within the TV aural baseband signal but do not include services which enhance the main program broadcast service or exclusively relate to station operations (see 73.665(a), (b) and (c)). Subsidiary communications include but are not limited to, services such as functional music, specialized foreign language programs, radio reading services, utility load management, market and financial data and news, paging and calling, traffic control signal switching, and point-to-point or multipoint messages.

(b) TV subsidiary communications services that are common carrier or private radio in nature are subject to common carrier or private radio regulation. Licensees operating such services are required to apply to the FCC for the appropriate authorization and to comply with all policies and rules applicable to the service. Responsibility for making the initial determinations of whether a particular activity requires separate authority rests with the TV station licensee or permittee. Initial determinations by licensees or permittees are subject to FCC examination and may be reviewed at the FCC's discretion.

(c) Subsidiary communications services are of a secondary nature under the authority of the TV station authorization, and the authority to provide such communications services may not be retained or transferred in any manner separate from the station's authorization. The grant or renewal of a TV station permit or license is not furthered or promoted by proposed or past subsidiary communications services. The permittee or licensee must establish that the broadcast operation is in the interest wholly apart from the subsidiary communications services provided.

(d) The station identification, delayed recording, and sponsor identification announcement required by 73.1201, 73.1208 and 73.1212 are not applicable to leased communications services transmitted via services that are not of a general broadcast nature.

(e) The licensee or permittee must retain control over all material transmitted in a broadcast mode via the station's facilities, with the right to reject any material that it deems inappropriate or undesirable.

73.669 TV stereophonic aural and multiplex subcarrier operation.

(a) A TV broadcast station may without specific authority from the FCC, transmit multichannel aural programs upon installation of multichannel sound equipment. Prior to commencement of multichannel broadcasting, the equipment shall be measured in accordance with 73.1690(e).

(b) Multiplex subcarriers may be used by a TV station pursuant to the provisions of 73.665 and may be transmitted on a secondary, non-interference basis to broadcast programming without specific authority from the FCC. Transmissions must be conducted in accordance with the technical standards given in 73.682(c).

(c) In all arrangements entered into with outside parties affecting non-common carrier subcarrier operation, the licensee or permittee must retain control over all material transmitted over the station's facilities, with the right to reject any material which is deemed inappropriate or undesirable. Subchannel leasing arrangements must be kept in writing at the station and made available to the FCC upon request.

73.676 Remote control authorization. See 73.1400.

73.677 Remote control operation. See 73.1410



SUBPART F--INTERNATIONAL BROADCAST STATIONS  
DEFINITIONS AND ALLOCATION OF FACILITIES

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SUBPART F  
RULES GOVERNING INTERNATIONAL BROADCAST STATIONS  
DEFINITION OF INTERNATIONAL BROADCAST STATIONS  
AND ALLOCATION OF FACILITIES

§73.701 Definitions. The following definitions apply to terminology employed in this subpart:

(a) International broadcasting stations. A broadcasting station employing frequencies allocated to the broadcasting service between 5,950 and 26,100 kHz, the transmissions of which are intended to be received directly by the general public in foreign countries. (A station may be authorized more than one transmitter.) There are both government and non-government international broadcasting stations; only the latter are licensed by the Commission and are subject to the rules of this subpart.

(b) Transmitter-hour. One frequency used on one transmitter for one hour.

(c) Frequency-hour. One frequency used for one hour regardless of the number of transmitters over which it is simultaneously broadcast by a station during that hour.

(d) Multiple operation. Broadcasting by a station on one frequency over two or more transmitters simultaneously. If a station uses the same frequency simultaneously one each of two (three, etc.) transmitters for an hour, it uses one frequency-hour and two (three, etc.) transmitter-hours.

(e) Day. Any twenty-four hour period beginning 0100 G.m.t. and ending 0100 G.m.t.

(f) Sunspot number. The 12-month running average of the number of sunspots for any month as indicated by the U. S. Department of Commerce Telecommunications Research and Engineering Report No. 13--available from the Superintendent of Documents, Washington, D.C. 20402. The sunspot number varies in an approximate 11-year cycle.

(g) March season. That portion of any year commencing 0100 G.m.t. on the first Sunday in March and ending at 0100 G.m.t. on the first Sunday in May.

(h) May season. That portion of any year commencing at 0100 G.m.t. on the first Sunday in May and ending at 0100 G.m.t. on the first Sunday in September.

(i) September season. That portion of any year commencing at 0100 G.m.t. on the first Sunday in September and ending at 010 G.m.t. on the first Sunday in November.

(j) November season. That portion of any year commencing at 0100 G.m.t. on the first Sunday in November and ending at 0100 G.m.t. on the first Sunday in March.

(k) Seasonal schedule. An assignment, for a season, of a frequency or frequencies, and other technical parameters, to be used by a station for transmission to particular zones or areas of reception during specified hours.

(l) Reference month. That month of a season which is used for determining predicted propagation characteristics for the season. The reference month is January, April, July, or October, as related to the season in which it occurs.

(m) Maximum usable frequency (MUF). The highest frequency which is returned to ionospheric radio propagation to the surface of the earth for a particular path and time of day for 50 percent of the days of the reference month.

(n) Optimum working frequency (FOT). The highest frequency which is returned by ionospheric radio propagation to the surface of the earth for a particular path and time of day for 90 percent of the days of the reference month.

Note: The international abbreviation for optimum working frequency, FOT, is formed with the initial letters of the French words for "optimum working frequency" which are "frequence optimum de travail."

(o) Zone of reception. Any geographic zone indicated in 73.703 in which the reception of particular programs is specifically intended and in which broadcast coverage is contemplated.

(p) Area of reception. Any geographic area smaller than a zone of reception in which the reception of particular programs is specifically intended and in which broadcast coverage is contemplated, such areas being indicated by countries or parts of countries.

(q) Delivered median field strength, or field strength. The field strength incident upon the zone or area of reception expressed in microvolts per meter, or decibels above one microvolt per meter, which is exceeded by the hourly median value for 50 percent of the days of the reference month.

(r) Carrier power. The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle under conditions of no modulation.

§73.702 Assignment and use of frequencies. (a) Frequencies will be assigned by the Commission prior to the start of each season to authorized international broadcasting stations for use during the season at specified hours and for transmission to specified power and antenna bearing. Six months prior to the start of each season, licensees and permittees shall by informal written request, submitted to the Commission in triplicate, indicate for the season the frequency or frequencies desired for transmission to each zone or area of reception specified in the license or permit, the specific hours during which it desires to transmit to such zones or areas on each frequency, and the power, antenna gain, and antenna bearing it desires to use. Requests will be honored to the extent that interference and propagation conditions permit and that they are otherwise in accordance with the provisions of this section.

(b) After necessary processing of the requests required by paragraph (a) of this section, the Commission will notify each licensee and permittee of the frequencies, hours of use thereof to specified zones or areas of reception, power, and antenna bearing which it intends to authorize for the season in question. After receipt of such notification, the licensee or permittee shall, in writing, not later than two months before the start of the season in question, inform the Commission either that it plans to operate in accordance with the authorization which the Commission intends to issue, or that it plans to operate in another manner. If the licensee or permittee indicates that it plans to operate in another manner, it shall furnish explanatory details.

(c) If after submitting the request required under the provisions of paragraph (a) of this section, but before receipt of the Commission's notification referred to in paragraph (b) of this section, the licensee or permittee submits a request for changes of its original request, such requests will be accepted for consideration only if accompanied by statements showing good cause therefor and will be honored only if conditions permit. If the information required to be submitted by the licensee or permittee under the provisions of paragraph (b) of this section indicates that operation in another manner is contemplated, and the explanatory details contain a request for change in the originally proposed manner of operation, and requests will be accepted for consideration only if accompanied by statements showing good cause therefor and will be honored only if conditions permit. If after the licensee or permittee submits the information required under the provisions of paragraph (b) of this section, but before the start of the season in question, the licensee or permittee submits a request for changes in the manner of operation for the season in question, the request will be accepted for consideration only if accompanied by statements showing good cause therefor and will be honored only if conditions permit. If, after the start of a season the licensee or permittee submits a request for changes in the manner of operation as authorized, the request will be considered only if accompanied by statements showing good cause therefor, and will be honored only if conditions permit.

(d) The provisions of paragraphs (a), (b) and (c) of the section shall apply to licensees, to permittees, operating under program test authority, and to permittees who anticipate applying for and receiving program test authority for operation during the specified season.

NOTE: Permittees who during the process of construction wish to engage in equipment tests shall by informal written request, submitted to the Commission in triplicate not less than 30 days before they desire to begin such testing, indicate the frequencies they desire to use for testing and the hours they desire to use those frequencies. No equipment testing shall occur until the Commission has authorized frequencies and hours for such testing. Such authorizations shall be only for one season, and if it is desired to continue equipment testing in a following season, new requests for frequencies and hours must be submitted at least 30 days before it is desired to begin testing in the following season.

(e) Within 14 days after the end of each season, a report shall be filed with the Commission by each licensee or permittee operating

under program test authority who has been issued a seasonal schedule for that season. The report shall state whether the licensee or permittee has operated the number of frequency-hours authorized by the seasonal schedule to each of the zones or areas of reception specified in the schedule. If such operation has not occurred, a detailed explanation of that fact that also be submitted which includes specific dates, frequency-hours not used, and reasons for the failure to operate as authorized. The report shall also contain information that has been received by the licensee or permittee as to reception, or interference, and conclusions with regard to propagation characteristics of frequencies that were assigned for the season in question.

(f) Frequencies assigned by the Commission shall be within the following bands which are allocated exclusively to the international broadcasting service: (1)

5,950-6,200 kHz	11,700-11,975 kHz	17,700-17,900 kHz
9,500-9,775 kHz	15,100-15,450 kHz	21,450-21,750 kHz
		25,600-26,100 kHz

(2)

In addition, the following band is allocated exclusively to the international broadcast service in Region 3:

7,100-7,300kHz

Assignments in this frequency band will be limited to international broadcast stations located in the area designated as Region 3 by No. 395 of the international Radio Regulations and authorized only to transmit to zones and areas of reception situated outside Region 2 as defined in No 394 of the International Radio Regulations. In addition, during the hours of 0800-1600 UTC (Coordinated Universal Time) antenna gain with reference to an isotropic radiator in any easterly direction that would intersect any area in Region 2 shall not exceed 2.15dBi, except in the case where a transmitter power of less than 100kW is used. In this case antenna gain on restricted azimuths shall not exceed that which is determined in accordance with equation (1) below. Stations desiring to operate in this band must submit sufficient antenna performance information to ensure compliance with these restrictions.

Permitted Gain for transmitter powers less than 100kW:

$$G_i = 2.15 + 10 \log \left( \frac{100}{P_a} \right) \text{dBi} \quad (1)$$

Where:

$G_i$  equal maximum gain permitted with reference to an isotropic radiator,  $P_a$  equal transmitter power employed in kW.

(3)

The carrier frequencies assignable shall begin 5 kHz above the frequency specified above for the beginning of each band and shall be in successive steps of 5 kHz to and including 5 kHz below the frequency specified as the end of each band.

(g) Frequencies requested for assignment must be as near as practicable to the optimum working frequency (unless otherwise justified) for the zone or area of reception for the period and path of transmission, and should be chosen so that a given frequency will provide the largest period of reliable transmission to the selected zone or area of reception. Moreover, at the zone or area of reception frequencies shall provide protecting to the transmissions of other broadcasting stations which, in the opinion of the Commission, have priority of assignment.

NOTE 1: Requests for frequency-hours shall be accompanied by all pertinent technical data with reference to the frequencies and hours of operation, including calculated field strengths delivered to the zones or areas of reception.

NOTE 2: It is preferable that calculated field strengths delivered to zones or areas of reception be equal to or greater than those required by I.F.R.B., Technical Standards, Series A (and supplements thereto), in order for the I.F.R.B. to afford the notified assignment protection from interference. Nevertheless, calculated field strengths less than those required by the I.F.R.B. standards for protection will be acceptable to the Commission. However, licensees should note that if such lesser field strengths are submitted so protection from interference will be provided by the I.F.R.B. if their technical examination of such notifications show incompatibilities with other notified assignments fully complying with I.F.R.B. technical standards.

NOTE 3: Licensees are permitted to engage in multiple operation as defined in 73.701 (d).

NOTE 4: Seasonal requests for frequency-hours will be only for transmissions to zones or areas of reception specified in the basic instrument of authorization. Changes in such zones or areas will be made only on separate application for modification of such instruments.

(h) Not more than one frequency will be assigned for use at any one time for any one program transmission except in instances where a program is intended for reception in more than one zone or area of reception and the intended zones or areas cannot be served by a single frequency: Provided, However, That on a showing of good cause a licensee may be authorized to operate on more than one frequency at any one time to transmit any one program to a single zone or area of reception.

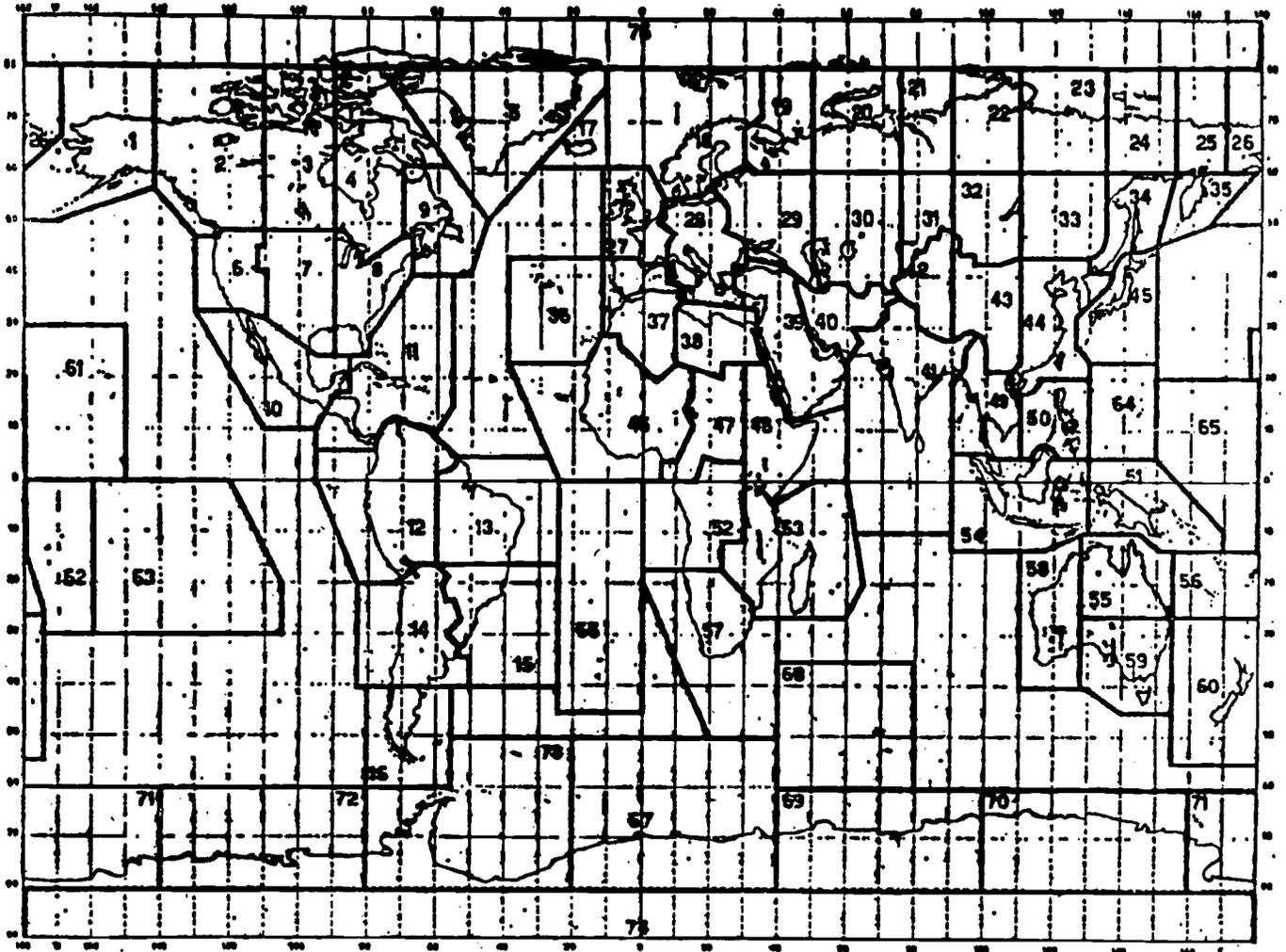
(i) Any frequency assigned to a licensee or permittee shall also be available for assignment to other licensees or permittees.

(j) All assignments of frequencies and the hours during which they will be used will be made with the express understanding that they are subject to immediate cancellation or change without hearing whenever the Commission determines that interference or propagation conditions so require and that each frequency-hour assignment for a given seasonal schedule is unique unto itself and not necessarily available for use during a subsequent season.

(k) The total maximum number of frequency-hours which will be authorized to all licensees of international broadcasting stations during any one day for any season is 100. The number of frequency-hours allocated to any licensee will depend on past usage, availability, and need. If for a forthcoming season the total of the requests for daily frequency-hours of all licensees exceeds 100, all licensees will be notified and each licensee that makes an adequate showing that good cause exists for not having its requested number of frequency-hours reduced and that operation of its station without such reduction would be consistent with the public interest may be authorized the frequency-hours requested.

NOTE: The provisions of this paragraph are not to be construed to mean that a total of 100 (or more) frequency-hours per day is assured licensees. Frequency-hours will only be assigned to the extent that they are available. It is the responsibility of each licensee to make all technical studies to show that frequency-hours requested by it are available and suitable for use as proposed.

73.703 Geographical zones and areas of reception. The zones or areas of reception to be served by international broadcasting stations shall be based on the following map and directive antennas shall be employed to direct transmissions thereto:



§73.712 Equipment tests. (a) During the process of construction of an international broadcasting station, the permittee, having obtained authorization for frequencies and hours as set forth in the Note to 73.702(d) may, without further authority of the Commission, 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, and the rules and regulations. Such tests shall use voice identification and test tones only. No programming shall be conducted during equipment tests.

(b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date for the beginning of equipment tests as and when such action may appear to be in the public interest, and necessity.

(c) Equipment tests may be continued so long as the construction permit shall remain valid: Provided, however, That the procedure set forth in paragraph (a) of this section must be repeated prior to the conducting of such tests in each season after the season in which the testing began.

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

§73.713 Program tests. (a) Upon completion of construction of an international broadcasting station in accordance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations and the applicable engineering standards, and when an application for station license has been filed showing the station to be in satisfactory operating condition, the permittee may request authority to conduct program tests. Such request shall be filed with the FCC at least 10 days prior to the date on which it is desired to begin such operation. All data necessary to show compliance with the terms and conditions of the construction permit must be filed with the license application.

(b) Program tests shall not commence until specific Commission authority is received. The Commission reserves the right to change the date of the beginning of such tests or to suspend or revoke the authority for program tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Unless sooner suspended or revoked, program test authority continues 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 by final determination upon the application for station license.

(d) All operation under program test authority shall be in strict compliance with the rules governing international broadcasting stations and in strict accordance with representations made in the application for license.

(e) The granting of program test authority shall not be construed as approval by the Commission of the application for station license.

## RULES RELATING TO LICENSING POLICIES

§73.731 Licensing requirements(a) A license for an international broadcast station will be issued only after a satisfactory showing has been made in regard to the following, among others:

- (1) A license for an international broadcast station when there is a need for the international broadcasting service proposed to be rendered.
- (2) That the necessary program sources are available to the applicant to render the international service proposed.
- (3) That the production of the program service and the technical operation of the proposed station will be conducted by qualified persons.
- (4) That the applicant is legally, technically and financially qualified and possesses adequate technical facilities to carry forward the service proposed.
- (5) That the public interest, convenience and necessity will be served through the operation of the proposed station.

## RULES RELATING TO EQUIPMENT

§73.732 Authorizations. Authorizations issued to international broadcasting stations by the Commission will be authorizations to permit the construction or use of a particular transmitting equipment combination and related antenna systems for international broadcasting, and to permit broadcasting to zones or areas of reception specified on the instrument of authorization. The authorizations will not specify the frequencies to be used or the hours of use. Requests for frequencies and hours of use will be made as provided in 73.702. Seasonal schedules, when issued pursuant to the provisions of 73.702, will become attachments to and part of the instrument of authorization, replacing any such prior attachments.

§73.733 Normal license period. All international broadcasting station licenses will be issued so as to expire at the hour of 3 a.m. local time and will be issued for normal license period of 7 years expiring November 1.

§73.751 Power requirement. No international broadcasting station will be authorized to install, or be licensed for operation of, transmitter equipment with a rated carrier power of less than 50 kilowatts.

§73.753 Antenna. All international broadcasting stations shall operate with directional antennas. Such antennas shall be designed and operated so that the radiated power in the maximum lobe toward the specific zone or area of reception intended to be served shall be at least 10 times the average power from the antenna in the horizontal plane. Radiation in all other directions shall be suppressed to the maximum extent technically feasible. In order to eliminate or mitigate harmful interference, the direction of the maximum lobe may be adjusted upon approval of the Commission.

§73.754 Frequency monitors. (a) The licensee of each international broadcast station shall operate at the transmitter a frequency monitor independent of the frequency control of the transmitter.

(b) The frequency monitor shall be designed and constructed in accordance with good engineering practice and shall have an accuracy sufficient to determine that the operating frequency is within one-half ( $\frac{1}{2}$ ) of the allowed tolerance.

§73.755 Modulation monitors. The licensee of each international broadcast station shall have in operation at the transmitter a modulation monitor.

§73.756 Required transmitter performance. (a) Design. The construction, installation, operation, and performance of the international broadcasting transmitter system shall be in accordance with good engineering practice.

(b) Spurious emission. (1) Any emission appearing on a frequency removed from the carrier frequency by between 6.4 kHz and 10 kHz, inclusive, shall be attenuated at least 25 decibels below the level of the unmodulated carrier. Compliance with the specification will be deemed to show the occupied bandwidth to be 10 kHz or less.

(2) Any emission appearing on a frequency removed from the carrier frequency by more than 10 kHz and up to and including 25 kHz shall be attenuated at least 35 decibels below the level of the unmodulated carrier.

(3) Any emission appearing on a frequency removed from the carrier frequency by more than 25 kHz shall be attenuated at least 80 db below the level of the unmodulated carrier.

(4) In the event spurious emissions cause harmful interference to other stations or services, such additional steps as may be necessary to eliminate the interference must be taken immediately by the licensee.

(c) Frequency control. The transmitter shall be equipped with automatic frequency control apparatus so designed and constructed that it is capable of maintaining the operating frequency within 0.0015 percent of the assigned frequency.

§73.757 Auxiliary transmitters. Upon showing that a need exists for the use of auxiliary transmitters in addition to the regular transmitters of an international broadcast station, a license therefor may be issued provided that:

(a) Auxiliary transmitters may be installed either at the same location as the main transmitters or at another location.

(b) A licensed operator shall be in control whenever auxiliary transmitters are placed in operation.

(c) The auxiliary transmitters shall be maintained so that they may be put into immediate operation at the time for the following purposes:

(1) The transmission of the regular programs upon the failure of the main transmitters.

(2) The transmission of regular programs during maintenance or modification work on the main transmitter, necessitating discontinuance of its operation for a period not to exceed 5 days. (This includes the equipment changes which may be made without authority as set forth elsewhere in the Rules and Regulations or as authorized by the Commission by letter or by construction permit. Where such operation is required for periods in excess of 5 days, request therefor shall be in accordance with 1.331 of this chapter).

(3) Upon request by a duly authorized representative of the Commission.

(d) The auxiliary transmitters shall be tested at least once each week to determine that they are in proper operating condition and that they are adjusted to the proper frequency, except that in case of operation in accordance with paragraph (c) of this section during any week, the test in that week may be omitted provided the operation under paragraph (c) is satisfactory. A record shall be kept of the time and result of each test operating under paragraph (c).

(e) The auxiliary transmitters shall be equipped with satisfactory control equipment which will enable the maintenance of the frequency emitted by the station within the limits prescribed by the regulations in this part.

(f) The operating power of an auxiliary transmitter may be less than the authorized power of the main transmitters, but in no event shall it be greater than such power.

§73.758 Alternate main transmitters. The licensee of an international broadcast station may be licensed for alternate main transmitters provided that a technical need for such alternate transmitters is shown that the following conditions are met:

- (a) Both transmitters are located at the same place.
- (b) Both transmitters shall have the same power rating.
- (c) Both transmitters shall meet the construction, installation, operation, and performance requirements of good engineering practice.

§73.759 Modification of transmission system. Specific authority, upon filing formal application (FCC Form 309) therefor, is required for any of the following changes:

- (a) Change involving an increase or decrease in the power rating of the transmitters.
- (b) A replacement of the transmitters as a whole.
- (c) Change in the location of the transmitting antenna.
- (d) Change in location of main studio, if it is proposed to move the main studio to a different city from that specified in the license.
- (e) Change in the power delivered to the antenna.
- (f) Change in frequency control and/or modulation system.
- (g) Change in direction or gain of antenna system.

Other changes, not specified above, in this section, may be made at any time without the authority of the Commission: Provided, That the Commission shall be immediately notified thereof and such changes shall be shown in the next application for renewal of license.

#### RULES RELATING TO TECHNICAL OPERATION

§73.761 Time of operation. (a) All international broadcasting stations shall operate in accordance with the times indicated on their seasonal schedules.

(b) In the event that causes beyond a licensee's control make it impossible to adhere to the seasonal schedule or to continue operating, the station may limit or discontinue operation for a period of not more than 10 days, without further authority from the Commission. However, in such cases, the FCC shall be immediately notified in writing of such limitation or discontinuance of operation and shall subsequently be notified when the station resumes regular operation.

(c) In the event that causes beyond a licensee's control make it impossible to adhere to the seasonal schedule or to continue operating for a temporary period of more than ten days, the station may not limit or discontinue operation until it requests and receives specific authority to do so from the Commission. When the station subsequently resumes regular operation after such limited operation or discontinuance of operation, it shall notify the FCC in Washington, D. C.

**73.764 International broadcast station operator requirements.** (a) One or more operators holding a commercial radio operators license or permit (any class, unless otherwise endorsed) must be on duty where the transmitting apparatus of each station is located and in actual charge thereof whenever it is being operated.

(b) The licensed operator on duty and in charge of the transmitter may, at the discretion of the station licensee, be employed for other duties or for the operation of other transmitters if such duties do not interfere with the proper operation of the transmission system.

(c) Operator licenses are to be posted as specified in 73.1230.

**§73.765 Operating power; how determined and maintained.** The operating power specified in 73.751 shall be determined by use of a calibrated dummy load or by any other method specified by the licensee and accepted by the Commission. Such method may subsequently be used by the licensee to maintain the authorized operating power.

**§73.766 Modulation and bandwidth.** The percentage of modulation shall be maintained as high as possible consistent with good quality of transmission and good broadcast practice. In no case shall it exceed 100 percent on positive or negative peaks of frequent recurrence. It should not be less than 85 percent on peaks of frequent recurrence. The range of modulation frequencies shall be so controlled that the authorized bandwidth of the emission shall not be exceeded under all conditions of modulation. The highest frequency shall not exceed kHz.

OTHER RULES RELATING TO OPERATION

§73.781 Logs. The licensee or permittee of each international broadcast station must maintain the station log in the following manner:

(a) In the program log:

(1) An entry of the time each station identification announcement (call letters and location) is made.

(2) An entry briefly describing each program broadcast, such as "music," "drama," "speech," etc., together with the name or title thereof, language, and the sponsor's name, with the time of the beginning and ending of the complete program.

(3) An entry showing, for each program of network origin, the name of the network originating the program.

**§73.782 Logs; retention of.** Logs of international broadcast stations shall be retained by the licensee or permittee for a period of two years; Provided, However, That logs involving communications incident to a disaster or which include communications incident to or involved in an investigation by the Commission and concerning which the licensee or permittee has been notified, shall be retained by the licensee or permittee until he is specifically authorized in writing by the Commission to destroy them; Provided, further, That logs incident to or involved in any claim or complaint of which the licensee or permittee has notice shall be retained by the licensee or permittee until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for the filing of suits upon such claims.

**73.787 Station identification** (a) A licensee of an international broadcast station shall make station identification announcement (call letters and location) at the beginning and ending of each time of operation and during the operation on the hour.

(b) Station identification, program announcements, and oral continuity shall be made with international significance (language particularly) which is designed for the foreign country or countries for which the service is primarily intended.

**73.788 Service; commercial or sponsored program.** (a) A licensee of an international broadcast station shall render only an international broadcast service which will reflect the culture of this country and which will promote international good-will, understanding and cooperation. Any program solely intended for, and directed to an audience in the continental United States does not meet the requirements for this service.

(b) Such international broadcast service may include commercial or sponsored programs; Provided, That --

(1) Commercial program continuities give no more than the name of the sponsor of the program and the name and general character of the commodity, utility or service or attraction advertised.

(2) In case of advertising a commodity, the commodity is regularly sold or is being promoted for sale on the open market in the foreign country or countries to which the program is directed in accordance with paragraph (c) of this section.

(3) In case of advertising an American utility or service to prospective tourists or visitors to the United States, the advertisement continuity is particularly directed to such persons in the foreign country or countries where they reside and to which the program is directed in accordance with paragraph (c) of this section.

(4) In case of advertising an international attraction (such as a world fair, resort, spa, etc.) to prospective tourists or visitors to the United States, the oral continuity concerning such attraction is consistent with the purposes and intent of this section.

(5) In case of any other type of advertising, such advertising is directed to the foreign country or countries to which the program is directed and is consistent with the purpose and intent of this section.

(c) The geographic areas to be served by international broadcasting stations are the zones and areas of reception shown in 73.703.

(d) An international broadcast station may transmit the program of a standard broadcast station or network system: Provided, The conditions in paragraph (b) of this section in regard to any commercial continuities are observed and when station identifications are made, only the call letter designation of the international stations is given on its assigned frequency: And provided further, That in the case of chain broadcasting the program is not carried simultaneously by another international station (except another station owned by the same licensee operated on a frequency in a different group to obtain continuity of signal service), the signals from which are directed to the same area. (See section 3(p) of the Communications Act of 1934 for the definition of "chain broadcasting.")

PART 73 EBS

## Subpart G - Emergency Broadcast System

### Scope and Objectives

#### Section

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73.902 Objectives of subpart

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## EBS ATTENTION SIGNAL EQUIPMENT

### Section

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SCOPE AND OBJECTIVES

§73.901 Scope of subpart. This subpart contains rules and regulations providing for an Emergency Broadcast System (EBS). It applies to all broadcast stations under FCC jurisdiction, and is issued under authority of Sections 1, 4 (i), (o), and 303(r) of the Communications Act of 1934, as amended.

§73.902 Objectives of subpart. The objective of this subpart is to provide a means for the development and implementation of Emergency Broadcast System planning and operation at the National, State, and local levels. Provision is made for operation of participating broadcast stations and other non-government industry entities on a voluntary, organized basis during emergency situations for the purpose of providing the President and the Federal government, as well as heads of State and local government, or their designated representatives, with a means of communicating with the general public. Participation in the EBS at the State and Operation (Local) Area levels is at the discretion of broadcast station management.

DEFINITIONS

73.903 Emergency Broadcast System (EBS). The EBS is composed of AM, FM, and TV broadcast stations; low power TV stations; and non-government industry entities operating on a voluntary organized basis during emergencies at National State or Operational (Local) Area Levels.

73.904 Licensee. The term "licensee" as used in this subpart means the holder of a broadcast station license granted or continuing in force under authority of the Communications Act of 1934, as amended. Such licensee includes any AM, FM, TV or low power TV station holding a valid license, program test authorization or other authorization permitting regular programming operation.

§73.905 Emergency Action Notification (EAN). The Emergency Action Notification (EAN) is the notice to all licensees and regulated services of the FCC, participating non-government industry entities, and to the general public, of the activation of the EBS. The EAN is distributed in accordance with §73.931.

§73.906 Attention Signal. The attention signal to be used by AM, FM, and TV broadcast stations to actuate muted receivers for inter-station receipt of emergency cueing announcements and broadcasts involves the use of two audio tones in the following arrangement: (a) Tone frequencies. The two audio tones shall have fundamental frequencies of 853 and 960 Hertz and shall not vary over  $\pm 0.5$  Hertz. (b) Harmonic distortion. The total harmonic distortion of each of the audio tones shall not exceed 5%. (c) Minimum level of modulation. Each of the two tones shall be calibrated separately to modulate the transmitter at no less than 40%. These two calibrated modulations levels shall have values that are within at least 1 dB of each other. (d) Time period for transmission of tones. The two tones with the characteristics specified above shall automatically modulate the transmitter simultaneously at the resulting level for an automatic time period of not less than 20 seconds nor longer than 25 seconds.

§73.907 Emergency Action Termination. The Emergency Action Termination is the notice to all licensees and regulated services of the FCC, participating nongovernment industry entities and to the general public of the termination of the EBS at the National level. This termination is distributed in the same manner as the dissemination of the EAN at the National level in accordance with §73.931.

§73.908 EBS Checklist. The EBS Checklist states in summary form the actions to be taken by station personnel upon receipt of the Emergency Action Notification, Termination or Test Messages. Two EBS Checklists are available: one for participating stations and the other for non-participating stations. A copy of the appropriate Checklist should be located at normal duty positions where it shall be immediately available to broadcast station staff responsible for: (a) authenticating Emergency Action Notifications, Terminations, and Tests received; and (b) initiating appropriate EBS actions.

§73.909 Standard Operating Procedures (SOP's). The SOP's contain detailed operational instructions which are used for activating, terminating and testing the National level EBS. They are issued by the FCC to specified control points of the national Radio and Television Broadcast Networks (ABC CBS, MBS, NBC, NPR, UPI-Audio, ABC-TV, CBS-TV, NBC-TV, and PBS), participating Communications Common Carrier, the Associated Press (AP) and the United Press International (UPI).

(a) SOP-1, EBS activation and termination procedures. This SOP contains the detailed operational authentication procedures for activation, operation, and termination of the EBS in response to the actual National emergency situation.

(b) SOP-2, EBS test transmissions. This SOP contains the detailed operational and authentication procedures for testing the EBS at the National level.

(c) SOP-3, EBS backup procedures. This SOP contains the detailed operational and authentication procedures to be used in event the procedures in SOP-1 cannot function.

§73.910 Authenticator Word Lists. These lists are issued every six months by the FCC and are used in conjunction with procedures contained in the EBS Checklist and SOP's for tests for actual National emergency situations.

(a) EBS Authenticator List -- Red Envelope. This document is used for authentication purposes in conjunction with the procedures contained in EBS Checklists, SOP-1, SOP-2, and SOP-3. It is issued to all broadcast stations and specified control points (National Radio and TV Broadcast Networks, participating communications common carriers, AP and UPI).

(b) EBS Authenticator List (Voice)-- White Envelope. This document is used for caller identification purposes in conjunction with the procedures in SOP-3 and is issued to the above specified control points.

§73.911 Basic Emergency Broadcast System Plan. The Basic EBS Plan contains guidance to all non-government entities for the distribution of emergency information and instructions covering a broad range of emergency contingencies posing a threat to the safety of life or property.

§73.912 NIAC Order. This is a service order previously filed with participating communications common carrier providing for program origination reconfiguration of the major Radio and Television Networks voluntarily participating in the National level EBS. Participating networks are:

- (a) American Broadcasting Company (ABC and ABC-TV).
- (b) Columbia Broadcasting System (CBS and CBS-TV).
- (c) Intermountain Network (IMN).
- (d) Mutual Broadcasting System (MBS).
- (e) National Broadcasting Company (NBC and NBC-TV).
- (f) National Public Radio (NPR).
- (g) Public Broadcasting Service (PBS).
- (h) United Press International Audio (UPI-Audio).

NIAC Orders must meet White House requirements and will be activated only in accordance with the FCC Rules and Regulations.

§73.913 Emergency Broadcast System Authorization. (a) This authorization is issued by the FCC to licensees of broadcast stations to permit operation on a voluntary, organized basis during a National emergency consistent with the provisions of this subpart of the rules and regulations. This authorization will remain in effect during the period of the initial license and subsequent renewals unless returned by the holder or suspended, modified or withdrawn by the Commission

(b) An EBS Authorization is not required in order to participate on a voluntary, organized basis in State and Operational (Local) Area Emergency Broadcast System operations as set forth in §73.935.

(c) Any non-participating broadcast station may request an EBS authorization by making such request via informal letter to the FCC in Washington, D. C. 20554

§73.914 Primary Station (Primary). A Primary Station broadcasts or rebroadcasts a common emergency program for the duration of the activation of the EBS at the National, State, or Operational (Local) Area Level. The EBS transmissions of such stations are intended for direct public reception as well as inter-station programming.

§73.915 Primary Relay Station (Pri Relay). A Primary Relay Station (an integral part of the State Relay Network) is a broadcast station responsible for the relay of National level and State level common emergency programming into the Operational (Local) Area levels.

§73.916 Common Program Control Station (CPCS). This is a Primary Station in an Operational (Local) Area which preferably has special communication links with appropriate authorities (e.g., National Weather Service, Civil Defense, local or State government authorities, etc.) as specified in the State EBS Operational Plan. A Primary CPCS Station is responsible for coordinating the carriage of a common emergency program for its area. If it is unable to carry out this function, other Primary Stations in the Operational (Local) Area will be assigned the responsibility as indicated in the State EBS Operational Plan.

§73.917 Originating Primary Relay Station (Orig Pri Relay). An Originating Primary Relay Station is a station as defined in §73.915 that acts as the originating station source of a common program from the State capital or State emergency operating center for the State Relay Network, and may be programmed directly by the Governor or a designated representative.

§73.918 Non-participating Station (Non-EBS). This is a broadcast station which has elected not to participate in the National level EBS and does not hold an EBS authorization. Upon activation of the EBS at the National level such stations are required to remove their carriers from the air and monitor for the Emergency Action Termination in accordance with the instructions in the EBS Checklist for Non-Participating Stations.

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§73.919 State Relay Network. A State Relay Network is a relay network, composed of Primary Relay Stations and leased common carrier communications facilities and any other available communication facilities, for disseminating statewide emergency programming originated by the Governor or a designated representative.

§73.920 Operational (Local) Area. This is a geographical area which encompasses a number of contiguous communities as shown in the State EBS Operational Plan.

§73.921 State Emergency Broadcast System Operational Plan. This plan contains the necessary guidance for the voluntary coordination between appropriate authorities (e.g. National Weather Service, Civil Defense, local or State government, etc.) and the broadcast industry to communicate with the general public during a State or local emergency situation. Additional procedural guides, SOP's and other implementing instructions should be developed at the State and local levels to insure effective operation of the EBS at the State and Operational (Local) Area levels.

§73.922 Emergency Broadcast System programming priorities.

(a) Program priorities for EBS are as follows:

Priority One -- Presidential Messages

Priority Two -- Operational (Local) Area Programming

Priority Three -- State Programming

Priority Four -- National Programming and News

(b) Participating stations that remain on the air during a National emergency situation must carry Presidential Messages "live" at the time of transmission. Activation of the National level EBS will preempt operation of the Operational (Local) Area or State level EBS.

(c) During a National emergency the Radio and Television (aural) Broadcast Network program distribution facilities shall be reserved exclusively for distributional Programming and News. National Programming and News which is not broadcast at the time of original transmission shall be recorded locally by the CPCS for broadcast at the earliest opportunity consistent with Operational (Local) Area requirements.

#### PARTICIPATION

§73.926 Participation in the Emergency Broadcast System. (a) The FCC will send the new licensees an EBS authorization and a letter requesting their voluntary participation in the EBS. Stations are requested to accept or decline this authorization within 30 days of receipt. Should the request be declined, the EBS Authorization should be returned to FCC. In either event, an appropriate EBS Checklist and EBS station designation will be forwarded to the station manager.

(b) An existing licensee who is not already a participant and desires to participate voluntarily in the National level EBS must submit a written request to the FCC. The FCC may then issue an EBS Authorization.

(c) Any station may withdraw from EBS participation by giving 30 days written notice and by returning its EBS Authorization to the FCC.

(d) Any station that is denied participation in the National level EBS for any reason may apply to the Commission for review of the staff denial in accordance with §1.115 of this chapter.

(e) Any AM, FM, or TV broadcast station licensee may, at the discretion of management, voluntarily participate in the State level and Operational (Local) Area level EBS in accordance with the provisions of the State EBS Operational Plan. An EBS Authorization is not required.

§73.927 Participation by communications common carriers. (a) Communications common carriers which have facilities available in place may, without charge, connect an independent broadcast station to networks operated by ABC, CBS, IMN, MBS, NBC, NPR, or PBS for the duration of the activation of the National level EBS; provided that the station has in service a local channel from the station's studio or transmitter directly to the broadcast source or a broadcast connection point.

(b) During the activation of the National level EBS, communications common carriers which have facilities in place may, without charge, connect an originating source associated with an appropriate NIAC Order from the nearest Exchange to a selected Test Center and then to the Radio and Television (aural) Broadcast Networks for the duration of the emergency; provided that:

(1) The originating source has in service a local channel from the originating point to the nearest Exchange.

(2) A NIAC Order covering this service is requested by the White House.

(c) Upon receipt of the Emergency Action Termination the communications common carriers shall:

(1) Disconnect the participating independent station.

(2) Disconnect the origination source.

(3) Restore the networks to their original configurations.

(d) During Closed Circuit Tests of the National level EBS using NIAC Orders, communications common carriers which have facilities in place may, without charge, connect an originating source associated with an appropriate NIAC Order from the nearest Exchange to a selected Test Center, and then to the Radio Networks. No participating independent station may be connected during the test unless authorized by the FCC. Upon termination of tests the Radio Networks shall be restored to their original configuration.

(e) Every such carrier rendering any such free service shall make and file, in duplicate, with the FCC, on or before the 31st day of July and on or before the 31st day of January of each year, reports covering the periods of 6 months ending on the 30th day of June and the 31st day of December respectively, next prior to said dates. These reports shall show in detail what free service was rendered pursuant to this rule and the charges in dollars which would have accrued to the carrier for such services rendered if charges therefore had been collected at the published tariff rates.

#### EMERGENCY ACTIONS

§73.931 Dissemination of Emergency Action Notification. (a) National level. The Emergency Action Notification (EAN) will be released at this level upon request of the White House. The EAN message is disseminated from the origination point on a dedicated teletypewriter network to control points of the Radio and TV Broadcast Networks (ABC, CBS, PBS, NBC, NPR, UPI-Audio, ABC-TV, CBS-TV, NBC-TV and PBS), participating Communications Common Carriers, AP and UPI. The EAN is then further disseminated as follows by:

(1) The internal alerting facilities of the Radio and Television Broadcast Networks to all affiliates.

(2) The AP and UPI Radio Wire Teletype Networks to all subscribers (AM, FM, TV broadcast and other stations).

(3) Off-the-air monitoring of AM, FM, and TV broadcast stations and other licensees and regulated services.

Receipt of the EAN via any one of the above arrangements is sufficient to begin emergency actions set forth in §73.933.

(b) State Level. The dissemination arrangements for the EAN at this level originate from State and Federal government authorities to the Originating Primary Relay Station. The management of this station may, at its discretion, activate the EBS at this level under the provisions of §73.935(a). The EBS will be activated in accordance with §73.931(a)(3) and the State EBS Operational Plan.

(c) Operational (Local) Area Level. The dissemination arrangements for the EAN at this level originate from Operational (Local) Area authorities to the Primary Station designated as the CPCS for the area. The management of this Primary Station may, at its discretion, activate the EBS at this level under the provisions of §73.935(a). The EBS will be activated in accordance with §73.931(a)(3) and the State EBS Operational Plan.

(d) Prior to commencing routine operation or originating any emissions under program test, equipment test, experimental, or other authorizations or for any other purpose, licensees or permittees shall first ascertain whether the EBS has been activated by one or all of the following methods:

(1) Monitor the radio and TV network facilities.

(2) Check the Radio Press Wire Service (AP and UPI).

(3) Monitor the Primary CPCS Station and/or the Primary Relay Station for your operational (Local) Area.

If so, operation shall be in accordance with this subpart of the rules.

§73.932 Radio monitoring and Attention Signal transmission requirements.

(a) Monitoring Requirement. To insure effective off-the-air signal monitoring (§73.931(a)(3)) all broadcast station licensees must install and operate, during their hours of broadcast operation, equipment capable of receiving the Attention Signal and emergency programming transmitted by other broadcast stations. This equipment must be maintained in operative condition, including arrangements for human listening watch or automatic alarm devices. This equipment must be installed in the broadcast station, either at the transmitter control point and/or studio location, in such a way that it enables the broadcast station staff, at normal duty locations, to be alerted instantaneously upon the receipt of the attention signal and to immediately monitor the emergency programming. For situations where broadcast stations are co-owned and co-located (e.g., an AM and FM licensed to the same entity at the same location) with a combined studio facility, only one receiver is required if installed in the combined studio facility. The off-the-air signal monitoring assignment of each broadcast station is specified in the State EBS Operational Plan.

(b) Transmission Requirement. All broadcast licensees, except noncommercial educational FM Broadcast Stations of 10 Watts or less, must install, operate, and maintain equipment capable of generating the Attention Signal (§73.906) to modulate the transmitter so that the signal may be broadcast to other broadcast stations. All broadcast station licensee except noncommercial educational FM stations authorized to operate with transmitter output powers of 0.010kW or less and low power TV stations, must install, operate and maintain equipment capable of generating the Attention Signal (see 73.906) to modulate the transmitter

so that the signal may be broadcast to other stations.

It is also used during the Weekly Tests involving the transmission and reception of the Attention Signal and Test Script in accordance with §73.961(c). This equipment must be installed in the broadcast station either at the transmitter control point and/or studio location in such a way that it enables the broadcast station staff at normal duty locations to initiate the two-tone transmission. For situations where broadcast stations are co-owned and co-located (e.g., and AM and FM licensed to the same entity at the same location) with a combined studio facility, only one generator is required if installed in the combined studio facility.

(c) The licensee has the responsibility to insure that the equipment used for off-the-air signal monitoring and generating the EBS Attention Signal is in functioning condition during all times the station is in operation, and to determine the cause of any failure to receive the Weekly Transmission Tests as described in paragraph (c) of §73.961.

(d) In the event that the equipment for receiving the Attention Signal and emergency programming transmitted by other broadcast stations, or the equipment for generating the Attention Signal becomes defective, the station may operate without the defective equipment pending its repair or replacement for a period not in excess of 60 days without further authority of the Commission provided that:

- (1) Appropriate entries must be made in the station log, indicating reasons why Weekly Test Transmissions were not received or conducted and;
- (2) Appropriate entries must be made in the station log showing the date and time the equipment was removed and restored to service.

(e) If conditions beyond the control of the licensee prevent the restoration of the defective equipment to service within the above allowed period, informal request in accordance with Section 1.54<sup>0</sup> of this chapter may be filed with the Engineer in Charge of the radio district in which the station is operating for such additional time as may be required to complete repairs of the defective equipment.

§73.933 Emergency Broadcast System operation during a National Level emergency.

(a) An EBS Checklist will be posted at normal duty positions where it shall be immediately available to broadcast station personnel responsible for EBS actions. This Checklist summarizes the procedures to be followed upon receipt of a National level Emergency Action Notification or Termination Message in accordance with arrangements described in §73.931(a).

(b) Immediately upon receipt of an EAN Message all licensees will proceed as follows:

- (1) Monitor the radio and TV network facilities for further instructions from the network control point.
- (2) Check the Radio Press Wire Service (AP and UPT). Verify the authenticity of message with current EBS Authenticator List (Red Envelope).
- (3) Monitor your EBS monitoring assignment (See State EBS Operational Plan) for the receipt of any further instructions.

(4) Discontinue normal programming and follow the transmission procedures set forth in the appropriate EBS Checklist.

(i) Primary CPCS, Originating Primary Relay, Primary Relay, and Primary stations follow the transmission procedures and make the announcements under the National Level Instructions of the EBS Checklist for Participating Stations.

(ii) Non-participating stations follow the transmission procedures and make the announcements under the National Level Instructions of the EBS Checklist for Non-Participating Stations. Following the announcement, non-participating stations are required to remove their carriers from the air and monitor for the Emergency Action Termination.

(5) Upon completion of the above transmission procedures:

(i) Participating stations will begin broadcast of a common emergency program. All stations shall carry the common emergency program until receipt of the Emergency Action Termination Message. Programming priorities are set forth in §73.922. Feeds will be provided by one or more of the following:

(2) Common Program Control Stations.

(b) Radio and Television Broadcast Networks.

(c) Originating Primary Relay and Primary Relay Stations in the State Relay Network.

(ii) Should it become apparent that the primary CPCS Station or Primary Relay Station of an Operation (Local) Area may not be able to provide an appropriate emergency program feed, other Primary Stations of the area may elect to assume the duties of providing a program feed. This should be done in an organized manner as designated in the State EBS Operational Plans.

(6) The Standby Script shall be used until program material is available. The text of the Standby Script is contained in the EBS Checklist for Participating Stations.

(7) TV broadcast stations shall display an appropriate EBS slide and then transmit all announcements visually and aurally in the manner described in 73.1250(h).

(8) Stations which provide foreign language programming may transmit emergency announcements in the foreign language prior to broadcasting such announcements in English.

(9) Broadcast Stations in the International Broadcast Service will cease broadcasting immediately upon receipt of an Emergency Action Notification and will maintain radio silence. However, under certain conditions they may be issued appropriate emergency authorization by the FCC with concurrence of the Director, Office of Science & Technology Policy, in which event they will transmit only Federal government broadcasts or communications. The Station's carrier must be removed from the air during periods of no broadcasts or communications transmissions.

(10) Stations may broadcast their call letters during an EBS activation. State and Operational (Local) Area identifications shall also be given.

(11) All stations operating and identified with a particular Operational (Local) Area will broadcast a common emergency program until receipt of the Emergency Action Termination.

(12) Broadcast stations holding an EBS Authorization are specifically exempt from complying with §73.52 (pertaining to maintenance of operating power) while operating under this subpart of the rules.

(c) Upon receipt of an Emergency Action Termination Message all stations will follow the termination procedures set forth in the EBS Checklist.

(d) Stations originating emergency communications under this Section shall be deemed to have conferred rebroadcast authority, as required by Section 325(a) of the Communications Act of 1934, as amended, and §73.1207, on other participating stations.

DAY-TO-DAY EMERGENCY OPERATIONS

§73.935 Day-to-day emergencies posing a threat to the safety of life and property; State Level and Operational (Local) Area Level Emergency Action Notification.

(a) State Level or Operational (Local) Area Level. The EBS may be activated at this level by AM, FM, and TV broadcast stations, at management's discretion, in connection with day-to-day emergency situations posing a threat to the safety of life and property. Examples of emergency situations which may warrant either an immediate or delayed response by the licensee are: tornadoes, hurricanes, floods, tidal waves, earthquakes, icing conditions, heavy snows, widespread fires, discharge of toxic gases, widespread power failures, industrial explosions, and civil disorders.

(b) Stations originating emergency communications under this Section shall be deemed to have conferred rebroadcast authority, as required by Section 325(a) of the Communications Act of 1934, as amended, and §73.1207 of this Part, on other participating stations.

§73.936 Emergency Broadcast System operation during a State Level emergency.

(a) An EBS Checklist will be posted at normal duty positions where it shall be immediately available to broadcast station personnel responsible for EBS action.

(b) Operations will be conducted in accordance with the provisions of the State EBS Operational Plan.

(c) An EBS Authorization is not required for a broadcast station to participate in the operation of the State level EBS.

(d) Immediately upon receipt of a State level Emergency Action Notification message all licensees which are voluntarily participating, may, at the discretion of management, proceed as follows:

(1) Monitor the State Relay Network (Primary Relay Stations) for receipt of any further instructions from the Originating Primary Relay Station.

(2) Monitor the Primary Stations designated as the CPCS for your Operational (Local) Area for receipt of any further instructions.

(3) All licensees participating in the State level EBS shall discontinue normal programming and follow the transmission procedures set forth in the appropriate EBS Checklist and State EBS Operational Plan (73.921) under the State and Local Level Instructions. Stations which provide foreign language programming may transmit emergency announcements in foreign language prior to broadcasting such announcements in English. TV

broadcast stations shall display an appropriate EBS slide and then transmit all announcements visually and aurally in the manner described in 73.1250(h).

(4) Upon completion of the above transmission procedures, resume normal programming until receipt of the cue from the CPCS for your Operational (Local) Area, or Primary Relay Station of the State EBS Network. At that time begin broadcasting the State level common emergency program received from one of the following sources:

(i) Common Program Control Station for your Operational (Local) Area.

(ii) Any Primary Relay Station of the State Relay Network.

(5) All licensees may resume normal broadcast operations upon conclusion of the State level EBS broadcast.

§73.937 Emergency Broadcast System operation during an Operational (Local) Area Level emergency.

(a) An EBS Checklist will be posted at normal duty positions where it shall be immediately available to broadcast station personnel responsible for EBS actions.

(b) Operations will be conducted in accordance with the provisions of the State EBS Operational Plan.

(c) An EBS Authorization is not required for a broadcast station to participate in the operation of the local level EBS.

(d) Immediately upon receipt of an Operational (Local) Area level Emergency Action Notification all licensees which are voluntarily participating, may, at the discretion of management, proceed as follows:

(1) Monitor the Primary Station designated as the CPCS for your Operational (Local) Area for the receipt of any further instructions.

(2) Monitor the Primary Relay Station for your Operational (Local) Area for receipt of any further instructions.

(3) All licensees participating in the Operational (Local) Area level EBS shall discontinue normal programming and follow the transmission procedures set forth in the appropriate EBS Checklist and State EBS Operational Plan (§73.921) under State and Local Level Instructions. Stations which provide foreign language programming may transmit emergency announcements in the foreign language prior to broadcasting such announcements in English.

TV broadcast stations shall display an appropriate EBS slide and then transmit all announcements visually and aurally in the manner described in §74.675(b) of this Part.

(4) Upon completion of the above transmission procedures, resume normal programming until receipt of the cue from the CPCS for your Operational (Local) Area. At that time begin broadcasting the common emergency program received from one of the following sources for your Operational (Local) Area:

(i) Common Program Control Station.

(ii) Primary Relay Station.

(5) All licensees may resume normal broadcast operations upon conclusion of the Operational (Local) Area level EBS broadcast.

#### EBS ATTENTION SIGNAL EQUIPMENT

§73.940 Encoder devices. An encoder device shall be used by broadcast stations for the generation of the two-tone Attention Signal. Only non-commercial educational FM broadcast stations of 0.01kW or less and low power TV stations are exempt from the requirements of installing the encoder device. The encoder device shall comply with the following requirements

(a) Tone Frequencies. The two audio signals of the encoder shall have fundamental frequencies of 853 and 960 Hertz. The frequency of each tone shall not vary more than  $\pm 0.5$  Hertz.

(b) Harmonic Distortion. Total harmonic distortion of each of the audio tones shall not exceed 5 percent as measured at the output terminals of the encoder.

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(c) Minimum Level of Output. The encoder shall have an output level capability of at least +8 dBm into a 600 ohm load impedance at each audio tone. (The output level of each tone shall be calibrated individually.) A non-locking switch (or switches) shall be provided in the encoder to permit individual activation of the two tones for calibration of associated systems.

(d) Time Period for Transmission of Tones. The encoder shall have timing circuitry that will automatically allow for the generation of the two tones simultaneously for a period of not less than 20 seconds nor longer than 25 seconds.

(e) Operating Temperature. Encoders shall have the ability to operate with the above specifications of paragraphs (a), (b), (c), and (d) of this section within at least an ambient temperature range of from 0 to +50°C.

(f) Operating Humidity. Encoders shall have the ability to operate with the above specifications of paragraphs (a), (b), (c), and (d) of this section in a range of relative humidity of up to 95 percent.

(g) Primary Supply Voltage Variation. The encoder shall be capable of operation within the tolerances specified in this section during a variation in primary supply voltage of 85 percent to 115 percent of the rated value.

(h) Testing Encoder Units. Encoders not covered by the provision of §73.943 shall be tested in the presence of a minimum RF field of 10 V/m at a frequency in the AM broadcast band and in the presence of a minimum of RF field of .5 V/m at a frequency in either the FM or TV broadcast bands to simulate actual working conditions. At least the parameters specified in paragraphs (a), (b), and (d) of this section shall be tested in the RF fields as specified.

(i) Indicator Device. The encoder shall be provided with a visual and/or aural indicator which clearly shows that the device is activated.

(j) Switch Guard. The switch used for initiating the automatic generation of the simultaneous tones shall be protected in a manner which will prevent accidental operation. This includes switching devices used in a remote control fashion.

§73.941 Decoder devices. Decoder devices shall have detection and activation circuitry that will demute a broadcast receiver only upon the simultaneous detection of the two audio tones of 853 and 960 Hertz.

(a) For the purpose of preventing false responses, decoder devices, designed to utilize the two tones for broadcast receiver demuting, shall contain circuitry designed to meet the following specifications and thereupon be certified by the Commission.

(1) Time Delay. A time delay of a minimum of 8 seconds but not more than 16 seconds of tone reception shall be incorporated into the activation or demuting process to insure that the tones will be audible for a period of from 4 seconds to 17 seconds.

(2) Operation Bandwidth. The decoder circuitry shall not respond to tones which vary more than  $\pm 5$  Hz from each of the frequencies, 853 Hertz and 960 Herz.

(b) Reset Ability. The decoder shall have a switching device which, when operated manually, resets the associated broadcast receiver to a muted state.

(c) Operating Temperature. Decoders shall have the ability to operate with the above specifications of (a) and (b) of this section within at least an ambient temperature range from 0 to +50°C.

§73.942 Acceptability of EBS Attention Signal equipment.

(a) An encoder device used for generating the EBS Attention Signal must be type accepted by following the procedures set forth in Subpart J of Part 2 of the Rules and Regulations. The data and information submitted shall show capability of the equipment to meet the requirements of §73.940.

(b) A decoder device used for the detection of the EBS Attention Signal shall be certified following the applicable procedures set forth in Subpart J, Part 2 and Subpart B of Part 15 of the Rules and Regulations. This requirement shall also apply to combinations which include a receiver subject to certification and an EBS Attention Signal decoder which is an integral part of said receiver. The data and information submitted shall show capability of the equipment to meet the requirements of §73.941.

§73.943 Individual construction of encoders and decoders.

(a) A station licensee who constructs decoders and encoders for use at his station and not for sale need not submit the fees otherwise required with certification and type acceptance applications.

(b) The provisions of §73.942(a) and (b) shall apply to encoders and decoders constructed by individual station licensees.

TESTS

§73.961 Tests of the Emergency Broadcast System procedures. Tests of the EBS procedures will be made at regular intervals as indicated below. Appropriate entries must be made consistently in the station log concerning EBS tests received and transmitted by broadcast stations.

(a) Weekly "500" Net Test Transmissions. Test transmissions of the National level interconnection facilities will be conducted on a random basis once each week. The tests will originate on an alternate basis from one or two origination points over a dedicated government teletypewriter network to the control points of the Radio and Television Broadcast Networks, participating communications common carriers, AP and UPI. A dedicated automatic telephone network will be used for confirmation purposes between the origination points and AP and UPI. These tests will be in accordance with procedures set forth in EBS SOP-2 which is furnished to the non-government entities concerned.

(b) Periodic AP and UPI Test Transmissions. AP and UPI will separately conduct test transmissions to AM, FM, and TV broadcast stations, on their Radio Wire Teletype Network, a maximum of twice a month on a random basis at times of their choice. These tests will be conducted in accordance with procedures set forth in EBS SOP-2 which is furnished to the non-government entities concerned and the EBS Checklist furnished to all broadcast stations.

(c) Weekly Transmission Tests of the Attention Signal and Test Script. Except as provided for in paragraph (d) of this Section, these tests shall be conducted by all AM, FM and TV stations a minimum of once a week at random days and times between the hours of 8:30 a.m. local time and local sunset. These tests will be conducted in accordance with procedures set forth in the EBS Checklist furnished to all broadcast stations, however, Class D non-commercial educational FM stations (those operating with 10 watts or less transmitter output power) need not transmit the two-tone attention signal. However, Class D noncommercial educational FM stations authorized to operate with transmitter output powers of 0.01kW or less and low power TV stations need not transmit the two-tone EBS Attention Signal.

(d) Activation of the EBS at the State or local level by a broadcast station, or coordinated tests of EBS operational procedures for an entire State or Operational(Local) Area may be conducted in lieu of the Weekly Transmission Tests of the Attention Signal and Test Scrip required in paragraph (c) of this section. Tests of implementing procedures developed at the State and local levels maybe conducted on a day-to-day basis as indicated in State EBS Operational Plans.

NOTE Change effective August 1, 1981. Appropriate change material will be sent to all broadcast licensees before that date by the FCC.

(e) Stations originating emergency communications under this section shall be deemed to have conferred rebroadcast authority, as required by Section 325(a) of the Communications Act of 1934 as amended, and §73.1207 of this Part.

§73.962 Closed Circuit Tests of approved National Level interconnecting systems and facilities of the Emergency Broadcast System.

(a) Tests of approved National level interconnecting systems and facilities of non-government entities voluntarily participating in the EBS will be conducted on a random or scheduled basis not more than once a month and not less than once every 3 months only after FCC approval. Time of test will be selected by both White House and National Industry Advisory Committee (NIAC) representatives in coordination with the Defense Commissioner, FCC. Unless a random Closed Circuit Test has been selected, the FCC will notify the Networks, participating communications common carriers and Wire Services of the selected time window, four working days (holidays excluded) prior to the test.

(b) The details of these Closed Circuit Tests procedures are contained in the EBS Checklists issued to all broadcast stations and in SOP-2 issued by the FCC to those non-Government entities concerned.

(c) The radio networks, participating communications common carriers, AP and UPI will receive notification of closed circuit tests by a Closed Circuit Test Activation Message, followed by a NIAC Order Request Message.

(d) The National level EBS will be tested on a closed circuit basis. These test broadcasts will originate from a point selected by the White House with program feed circuitry connected to the Telephone Company Toll Test Center at points indicated by individual NIAC Orders. Participating communications common carriers will interconnect, as required, the facilities of the Radio Broadcast Networks, ABC, CBS, EBS, NBC, NPR, UPI-Audio and the Intermountain (MN) Radio Broadcast Network as authorized by the NIAC Order associated with the Closed Circuit Test. The audio networks associated with the video networks of ABC-TV, CBS-TV, NBC-TV, and PBS shall not be utilized during closed circuit tests. The telephone companies are not authorized to add any of the independent stations participating in the EBS unless authorized by the FCC. Authentication will be provided to the Telephone Company Toll Test Center or other program entry location responsible for the particular NIAC Order to be used as set forth in SOP-2. Authentication used in the Closed Circuit Test Messages will be the test words printed on the outside of the EBS Authenticator List (Red Envelope).

(e) Closed Circuit Test procedures for Radio Network affiliates and AP and UPI subscribers are as follows:

(1) Notification of a Closed Circuit Test will be received in accordance with procedures set forth in §73.931(a) (1) and (2) and the EBS Checklist.

(2) Immediately monitor your radio network (ABC, CBS, IMN, PBS, NBC, NPR and UPI-Audio) and check your AP and UPI Radio Wire Teletype Network machine for the receipt of the Closed Circuit Test Activation Message. Verify authenticity using the test words printed on the outside cover of the current issue of the EBS Authenticator List (Red Envelope). Television networks do not participate in the Closed Circuit Tests.

(3) Continue to monitor your radio network for talkup, and the Closed Circuit Test Program.

(4) Enter the time of receipt of the Closed Circuit Test consistently in your station log.

(5) The Closed Circuit Test will terminate on the following aural Closed Cue as it appears in the text of the test program:

This concludes the Closed Circuit Test of the Emergency Broadcast System

(6) Following the Closing Cue as indicated in paragraph (e)(5) of this section AP and UPI subscribers only will receive a "Closed Circuit Test Termination Message". Record time of receipt of this message as indicated in paragraph (3)(4) of this section.

(f) The Federal Communications Commission may request a report of a Closed Circuit Test as deemed appropriate in a format prescribed by the Commission.

PART 73H

SUBPART H - RULES APPLICABLE TO ALL BROADCAST  
STATIONS

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§73.1001 Scope. (a) The rules in this subpart are common to all AM, FM, and TB broadcast services, commercial and noncommercial.

(b) Rules in Part 73 applying exclusively to a particular broadcast service are contained in the following: AM, subpart A; FM, subpart B; Noncommercial Educational FM, subpart C; and TV, subpart E.

(c) Certain provisions of this subpart apply to International Broadcast Stations (Subpart F, Part 73), TV translator stations and low power TV stations (Subpart G, Part 74) where the rules for those services so provide.

(d) The provisions of this part applying to licensees also apply to holders of construction permits (permittees).

§73.1010 Cross reference to rules in other Parts. Certain rules applicable to broadcast services, some of which are also applicable to other services, are set forth in the following Volumes and Parts of the Commission's Rules and Regulations:

- (a) Part 1 (Volume I), "Practice and Procedure."  
(1) Subpart A, "General Rules of Practice and Procedure" (§§1.1 to 1.120).  
(2) Subpart B, "Hearing Proceedings" (§§1.201 to 1.363).  
(3) Subpart C, "Rule Making Proceedings" (§§1.399 to 1.430).  
(4) Subpart G, "Schedule of Fees" (§§1.1101 to 1.1120).  
(5) Subpart H, "Ex Parte Presentations" (§§1.1201 to 1.1251).  
(6) Subpart I, "Procedures Implementing the National Environmental policy Act of 1969" (§§1.1301 to 1.1319).

(b) Part 2 (volume II), "Frequency Allocations and Radio Treaty Matters: General Rules and Regulations," including subparts A, "Definitions," B, "Allocation, Assignments, and Use of Radio Frequencies," C, "Emissions," D, "Call Signs and Other Forms of Identifying Radio Transmissions," G, "Treaties and Other International Agreements," and J, "Equipment Authorization Procedures - Type Approval; Type Acceptance; Certification."

(c) Part 13 (volume I), "Commercial Radio Operators."

(d) Part 17 (volume I), "Construction, Marking, and Lighting of Antenna Structures."

(e) Part 74 (Volume III), Experimental, Auxiliary and Special Broadcast and Other Program Distributional Services, including:

- (1) Subpart A, Experimental Broadcast Stations;
- (2) Subpart D, Remote Pickup Broadcast Stations;
- (3) Subpart E, Aural Broadcast Auxiliary Stations;
- (4) Subpart F, Television Auxiliary Broadcast Stations;
- (5) Subpart G, Low Power TV and TV Translator Stations;
- (6) Subpart H, Low Power Auxiliary Stations;
- (7) Subpart I, Instructional Television Fixed Service;
- (8) Subpart L, FM Broadcast Translator Stations and FM Broadcast Booster Stations.

73.1015 Truthful written statements and responses to Commission inquires and correspondence. The Commission or its representatives may, in writing, require from any permittee or licensee written statements of fact relevant to a determination whether an application should be granted or denied, or to a determination whether a license should be revoked or to some other matter within the jurisdiction of the Commission. No applicant, permittee or licensee shall in any response to Commission correspondence or inquiry or in any application, pleading, report or any other written statement submitted to the Commission, make any misrepresentation or willful material omission bearing on any matter within the jurisdiction of the Commission.

Note - Section 73.1015 is limited in application to written matter. It implies no change in the Commissions existing policies respecting the obligation of applicants, permittees and licensees in all instances to respond truthfully to requests for information deemed necessary to the proper execution of the Commission's functions.

73.1020 Station license period. (a) Initial licenses for broadcast stations will ordinarily be issued for a period running until the date specified in this section for the state or territory in which the station is located. If issued after such date, it will run to the next renewal date determined in accordance with this section; and, commencing with the licenses scheduled to expire on October 1, 1981 and thereafter, it will normally be renewed for 7 years in the case of radio broadcast stations and for 5 years in the case of television broadcast stations. If the FCC finds that the public interest, convenience, and necessity will be served thereby, it may issue either an initial license or a renewal thereof for a lesser term. The time of expiration of normally issued initial and renewal licenses will be 3 a.m., local time, on the following dates and thereafter at 7 year intervals for radio broadcast stations and at 5 year intervals for television broadcast stations located in:

- (1) Maryland, District of Columbia, Virginia and West Virginia, October 1, 1981.
- (2) North Carolina and South Carolina, December 1, 1981.
- (3) Florida, Puerto Rico and Virgin Islands, February 1, 1982.
- (4) Alabama and Georgia, April 1, 1982.
- (5) Arkansas, Louisiana and Mississippi, June 1, 1982.
- (6) Tennessee, Kentucky and Indiana, August 1, 1982.
- (7) Ohio and Michigan, October 1, 1982.
- (8) Illinois and Wisconsin, December 1, 1982.
- (9) Iowa and Missouri, February 1, 1983.
- (10) Minnesota, North Dakota, South Dakota, Montana and Colorado, April 1, 1983.
- (11) Kansas, Oklahoma and Nebraska, June 1, 1983.
- (12) Texas, August 1, 1983.
- (13) Wyoming, Nevada, Arizona, Utah, New Mexico and Idaho, October 1, 1983.
- (14) California, December 1, 1983.
- (15) Alaska, American Samoa, Guam, Hawaii, Oregon and Washington, February 1, 1984.
- (16) Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont, April 1, 1984.
- (17) New Jersey and New York, June 1, 1984.
- (18) Delaware and Pennsylvania, August 1, 1984.

(b) For the cutoff date for the filing of applications mutually exclusive with, and petitions to deny, renewal applications, see 73.3516(e).

PROPOSED RULE CHANGE

73.1030(b) The following phrase would be revised as follows:

"(in the vicinity of coordinates 40°07'50" N latitude, 105°14'40" W longitude)" to read "(within the area bounded by 40°09'40" N on the north, 105°17'51" W on the east, 40°07'05" N on the south, and 105°15'13" W on the west)."

Comments and reply comments are due on or before June 15th and June 27, 1986.

For further information contact Kathryn Hestford or Michael Lewis, Mass Media Bureau (SOS) 652-9660.

Docket No. 86-144

73.1030 Notifications concerning interference to Radio Astronomy, Research and Receiving Installations. (a) Radio Astronomy and Radio Research Installations. In order to minimize harmful interference at the National Radio Astronomy Observatory site located at Green, Pocahontas County, West Virginia, and at the Naval Radio Research Observatory at Sugar Grove, Pendleton County, West Virginia, a licensee proposing to operate a short-term broadcast auxiliary station pursuant to 74.24, or an applicant for authority to construct a new broadcast station or for authority to make changes in the frequency, power, antenna height, or antenna directivity of an existing station within the area bounded by 39° 15' N on the north, 78° 30' W on the east, 37° 30' N on the south, and 80° 30' W on the west shall, at the time of filing such application with the FCC, simultaneously notify the following: Interference Office, National Radio Astronomy Observatory, P. O. Box 2, Green Bank, West Virginia 24944, Telephone: 304-456-2011.

(b) Radio receiving installations. Protection for Table Mountain Radio Receiving Zone, Bolder County, Colorado: Applicants for a station authorization to operate in the vicinity of Boulder County, Colorado under this part are advised to give due consideration, prior to filing applications, to the need to protect the Table Mountain Radio Receiving Zone from harmful interference. These are the research laboratories of the Department of Commerce, Boulder County, Colorado. To prevent degradation of the present ambient radio signal level at the site, the Department of Commerce seeks to ensure that the field strengths of any radiated signals (excluding reflected signals) received on this 1800 acre site (in the vicinity of coordinates 40° 07' 50" N Latitude, 105° 14; 40" W Longitude) resulting from new assignments (other than mobile stations) or from the modification or relocation of existing facilities do not exceed the following values:

Frequency range	Field strength <sup>1</sup>	Power flux density <sup>* 2</sup>
Below 540 kHz	10	65.8
540 to 1600 kHz	20	59.8
1.6 to 470 MHz	10	**65.8
470 to 890 MHz	30	**56.2
Above 890 MHz	1	**85.8

<sup>1</sup> (mVm is authorized bandwidth of service.

<sup>2</sup> (dBW/M2 is authorized bandwidth of service.

\* Equivalent values of power flux density are calculated assuming free space characteristic impedance of 376.7=120πohms.

\*\* Space stations shall conform to the power flux density limits at the Earth's surface specified in appropriate parts of the FCC rule, but in no case should exceed the above levels in any 4 kHz band for all angles of arrival.

(1) Advance consultation is recommended particularly for those applicants who have no reliable data which indicate whether the field strength or power flux density figures in the above table would be exceeded by their proposed radio facilities (except mobile stations). In such instances, the following is a suggested guide for determining whether coordination is recommended:

- (i) All stations within 2.4 km (1.5 statute miles);
- (ii) Stations within 4.8 km (3 statute miles) with 50 watts or more effective radiated power (ERP) in the primary plane polarization in the azimuthal direction of the Table Mountain Radio Receiving Zone;
- (iii) Stations within 16km (10 statute miles) with 1 kW or more ERP in the primary plane of polarization in the azimuthal direction of Table Mountain Receiving Zone;
- (iv) Stations within 80 km (50 statute miles) with 25 kW or more ERP in the primary plane polarization in the azimuthal direction of Table Mountain Receiving Zone.

(2) Applicants concerned are urged to communicate with the Radio Frequency Management Coordinator, Department of Commerce, Research Support Services, NOAAAR/E5X2, Boulder Laboratories, Boulder, CO 80303; telephone (303) 497-6548, in advance of filing their applications with the Commission.

(3) The FCC will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Department of Commerce of proceedings to modify any authorization which may be granted which, in fact, delivers a signal at the site in excess of the field strength specified herein.

(c) Protection for Federal Communications Commission monitoring stations:

(1) Applicants in the vicinity of an FCC monitoring station for a radio station authorization to operate new transmitting facilities or changed transmitting facilities which would increase the field strength produced over the monitoring station over that previously authorized are advised to give consideration, prior to filing applications, to the possible need to protect the FCC stations from harmful interference. Geographical coordinates of the facilities which require protection are listed in Section 0.121(c) of the Commission's Rules. Applications for stations (except mobile stations) which will produce on any frequency a direct wave fundamental field strength of greater than 10 mV/m in the authorized bandwidth of service ( $-65.8 \text{ dBW/m}^2$  power flux density assuming a free space characteristic impedance of 120 ohms) at the referenced coordinates, may be examined to determine extent of possible interference. Depending on the theoretical field strength value and existing root-sum-square or other ambient radio field signal levels at the indicated coordinates, a clause protecting the monitoring station may be added to the station authorization.

(2) In the event that calculated value of expected field exceeds 10 mV/m ( $-65.8 \text{ dBW/m}^2$ ) at the reference coordinates, or if there is any question whether field strength levels might exceed the threshold value, advance consultation with the FCC to discuss any protection necessary should be considered. Prospective applicants may communicate with: Chief, Field Operation Bureau, Federal Communications Commission, Washington, D.C. 20554, Telephone (202) 632-6980.

(3) Advance consultation is suggested particularly for those applicants who have no reliable data which indicates whether the field strength or power flux density figure indicated would be exceeded by their proposed radio facilities (except mobile stations). In such instances, the following is a suggested guide for determining whether an applicant should coordinate:

- (i) All stations within 2.4 kilometers (1.5 statute miles);



(ii) Stations within 4.8 kilometers (3 statute miles) with 50 watts or more average effective radiated power (EPR) in the primary plane or polarization in the azimuthal direction of the Monitoring Stations.

(iii) Stations within 16 kilometers (10 statute miles) with 1 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station;

(iv) Stations within 80 kilometers (50 statute miles) with 25 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the monitoring Station;

(4) Advance coordination for stations operating above 1000 MHz is recommended only where the proposed station is in the vicinity of a monitoring station designated as a satellite monitoring facility in Section 0.121(c) of the Commission's Rules and also meets the criteria outlined in paragraphs (2) and (3) above.

(5) The Commission will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Federal Communications Commission or modification of any authorization which will cause harmful interference.

73.1120 Station location. (a) Each AM, FM and TV broadcast station will be licensed to the principal community or other political subdivision which it primarily serves. This principal community (city, town or other political subdivision) will be considered to be the geographical station location.

(b) AM and FM stations (not TV stations) will be licensed to serve more than one community or other political subdivision only where a satisfactory showing is made:

(1) That each such place meets all the requirements of 73.1125 with respect to the location of main studios:

(2) That the station can and will originate a substantial number of local live programs from each place; and

(3) That the requirements as to origination of programs in 73.1130 would place an unreasonable burden on the station if it were licensed to serve only one community or other political subdivision.

(c) A station licensed to serve more than one community shall be considered to be located in and shall maintain main studios in each such place.

(1) For such licensed stations, the requirements regarding program origination in 73.1130 shall be fulfilled by originating programs from any, or all, of the main studios or other studios or remote points situated in any or all of the places in which the main studios are located.



73.1125 Station main studio location. (a) Each AM, FM and TV broadcast station shall maintain a main studio in the station's principal community which it is licensed to serve, except:

(1) AM stations licensed as synchronous amplifier transmitters ("AM boosters") or,

(2) AM stations whose main studio is located at the station transmitter which is situated outside the station's principal community of license or, an FM station, commonly owned with such AM station, and licensed to the same principal community, whose main studio may also be co-located at the commonly owned AM station's transmitter or,

(3) AM, FM or TV stations, when good cause exists for locating the main studio outside the principal community to be served and that to do so would be consistent with operation of the station in the public interest.

(b) Relocation of the main studio may be made:

(1) From one point to another within the principal community or from a point outside the principal community to one within it, without specific FCC authority, but notification to the FCC in Washington shall be made promptly; however,

(2) From a point within the principal community to one outside it or from one such point outside the community to another, only by first securing modification of construction permit or license. (FCC Forms 301 for commercial stations and 340 for noncommercial educational stations.)

(3) Two exceptions to paragraph (b)(2) of this section are:

(i) AM stations moving their main studio to their transmitter site wherever it is located; and,

(ii) FM station, commonly owned with an AM station, and licensed to the same community, whose main studio is co-located.

(iii) Notification to the FCC in Washington shall be made promptly of such relocations described in paragraphs (b)(3) and (i) and (ii) of this section.

(c) Where the principal community to be served does not have specifically defined political boundaries, applications will be considered on a case-by-case basis by the FCC to determine if the main studio is located within the principal community to be served.

73.1130 Station program origination. (a) More than 50% of an AM, FM or TV station's non-network programs shall originate from the station's main studio or from points which are remote from the main studio so long as such origination points are situated in the principal community which the station is licensed to serve.

(b) Such originations shall be computed on the basis of total duration or total length of time of programs, and not on the number of separate programs.

§73.1150 Transferring a station. (a) In transferring a broadcast station, the licensee may retain no right of reversion of the license, no right to reassignment of the license in the future, and may not reserve the right to use the facilities of the station for any period whatsoever.

(b) No license, renewal of license, assignment of license or transfer of control of a corporate licensee will be granted or authorized if there is a contract, arrangement or understanding, express or implied, pursuant to which, as consideration or partial consideration for the assignment or transfer, such rights, as stated in paragraph (a) of this section, are retained.

**§73.1201 Station identification.** (a) When regularly required. Broadcast station identification announcements shall be made: (1) At the beginning and ending of each time of operation, and (2) hourly, as close to the hour as feasible, at a natural break in program offerings. Television broadcast stations may make these announcements visually or aurally.

(b) Content. (1) Official station identification shall consist of the station's call letters immediately followed by the community or communities specified in its license as the station's location. Provided, That the name of the licensee or the station's frequency or channel number, or both, as stated on the station's license may be inserted between the call letters and station location. No other insertion is permissible.

(2) A station may include in its official station identification the name of any additional community or communities, but the community to which the station is licensed must be named first.

(c) Channel--(1) Generally. Except as otherwise provided in this paragraph, in making the identification announcement the call letters shall be given only on the channel of the station identified thereby.

(2) Simultaneous AM-FM broadcasts. If the same licensee operates an FM broadcast station and a standard broadcast station and simultaneously broadcasts the same programs over the facilities of both such stations, station identification announcements may be made jointly for both stations for periods of such simultaneous operation. If the call letters of the FM station do not clearly reveal that it is an FM station, the joint announcement shall so identify it.

(3) Satellite operation. When programming of a broadcast simultaneously over the facilities of a satellite station, the originating station may make identification announcements for the satellite station for periods of such simultaneous operation.

(i) In the case of a television broadcast station, such announcements, in addition to the information required by paragraph (b)(1) of this section, shall include the number of the channel on which each station is operating.

(ii) In the case of aural broadcast stations, such announcements, in addition to the information required by paragraph (b)(1) of this section, shall include the frequency on which each station is operating.

(d) Subscription television stations (STV). The requirements for official station identification applicable to TV stations will apply to Subscription TV stations except, during STV-encoded programming such station identification is not required. However, a station identification announcement will be made immediately prior to and following the encoded Subscription TV program period.

73.1202 Retention of letters received from the public.

(a) All written comments and suggestions received from the public regarding operation of the station shall be maintained in the local public inspection file, unless the letter writer has requested that the letter not be made public or when the licensee feels that it should be excluded from public inspection because of the nature of its content, such as a defamatory or obscene letter.

(1) Letters shall be retained in the local public inspection file for three years from the date on which they are received by the licensee.

(2) Letters received by TV licensees only shall be placed in one of the following separated subject categories: programming or non-programming. If comments in a letter relate to both categories, the licensee shall file it under the category to which the writer has given the greater attention.

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§73.1206 Broadcast of telephone conversations. Before recording a telephone conversation for broadcast, or broadcasting such a conversation simultaneously with its occurrence, a licensee shall inform any party to the call of the licensee's intention to broadcast the conversation, except where such party is aware, or may be presumed to be aware from the circumstances of the conversation, that it is being or likely will be broadcast. Such awareness is presumed to exist only when the other party to the call is associated with the station (such as an employee or part-time employee - reporter), or where the other party originates the call and it is obvious that it is in connection with a program in which the station customarily broadcasts telephone conversations.

§73.1207 Rebroadcasts. (a) The term "rebroadcast" means reception by radio of the programs or other transmissions of a broadcast or any other type of radio station, and the simultaneous or subsequent retransmission of such programs or transmissions by a broadcast stations.

(1) As used in this Section, "program" includes any completed programs 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 pickup broadcast station is not considered a rebroadcast.

(b) No broadcast station may retransmit the program, or any part thereof, 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 station retransmitting such program and made available to the FCC upon request.

(1) Stations originating emergency communications under a Detailed State EBS Operation Plan are deemed to have conferred rebroadcast authority to other participating stations.

(2) Permission must be obtained from the originating station to rebroadcast any subsidiary communications transmitted by means of a multiplex subcarrier or the vertical blanking interval of a television signal.

(3) Programs originated by the Voice of America (VOA) and the Armed Forces Radio and Television Services (AFRTS) cannot, in general, be cleared for domestic rebroadcast, and may therefore be retransmitted only by special arrangements among the parties concerned.

(4) Except as otherwise provided by international agreement, programs originated by foreign broadcast stations may be retransmitted without the consent of the originating station.

(c) The transmissions of non-broadcast stations may be rebroadcast under the following conditions:

(1) Messages originated by privately-owned non-broadcast stations other than those in the Amateur and Citizens Band (CB) Radio Service may be broadcast only upon receipt of prior permission from the non-broadcast licensee. Additionally, messages transmitted by common carrier stations may be rebroadcast only upon prior permission of the originator of the message as well as the station licensee.

(2) Except as provided in paragraph (d) of this section, messages originated entirely by non-broadcast stations owned and operated by the Federal Government may be rebroadcast only upon receipt of prior permission from the government agency originating the messages.

(3) Messages originated by stations in the amateur and Citizens Band (CB) Radio Service may be rebroadcast at the discretion of broadcast station licensees.

(d) The rebroadcasting of time signals originated by the Naval Observatory and the National Bureau of Standards and messages from the National Weather Service stations is permitted without specific authorization under the following procedures:

(1) Naval Observatory Time Signals. (i) The time signals rebroadcast must be obtained by direct radio reception from a naval radio station, or by land line circuits.

(ii) Announcement of the time signal must be made without reference to any commercial activity.

(iii) Identification of the Naval Observatory as the source of the time signal must be made by an announcement, substantially as follows: "With the signal, the time will be . . . courtesy of the U. S. Naval Observatory."

(iv) Schedules of time signal broadcasts may be obtained upon request from the Superintendent, U.S. Naval Observatory, Washington, D.C. 20390.

(2) National Bureau of Standards Time Signals. (i) Time signals for rebroadcast must be obtained by direct radio reception from a National Bureau of Standards (NBS) station.

(ii) Use of receiving and rebroadcasting equipment must not delay the signals by more than 0.05 second.

(iii) Signals must be rebroadcast live, not from tape or other recording.

(iv) Voice or code announcements of the call signs of NBS stations are not to be rebroadcast.

(v) Identification of the origin of the service and the source of the signals must be made by an announcement substantially as follows: "At the tone, 11 hours and 25 minutes COORDINATED UNIVERSAL TIME. This is a rebroadcast of a continuous service furnished by the National Bureau of Standards, Ft. Collins, Colo." No commercial sponsorship of this announcement is permitted and none may be implied.

(vi) Schedules of time signal broadcasts may be obtained from, and notice of use of NBS time signals for rebroadcast must be forwarded semiannually to: National Bureau of Standards, Radio Stations WWV/WWVB, 2000 East Country Road 58, Ft. Collins, Colorado 80524.

(vii) In the rebroadcasting of NBS time signals, announcements will not state that they are standard frequency transmissions. Voice announcements of COORDINATED UNIVERSAL TIME are given in voice every minute. Each minute, except the first of the hour, begins with an 0.8 second long tone of 1000 hertz at WWV and 1200 hertz tone at WWVH. The first minute of every hour begins with an 0.8 second long tone of 1500 hertz at both stations. This tone is followed by a 3-second pause, then the announcement, "National Bureau of Standards Time." This is followed by another 3-second pause before station identification. This arrangement allows broadcast stations sufficient time to retransmit the hour time tone and the words "National Bureau of Standards Time" either by manual or automatic switching.

(viii) Time signals or scales made up from integration of standard frequency signals broadcast from NBS stations may not be designated as national standard scales of time or attributed to the NBS as originator. For example, if a broadcasting station transmits time signals obtained from a studio clock which is periodically calibrated against the NBS time signals from WWV or WWVH, such signals may not be announced as NBS standard time or as having been originated by the NBS.

(3) National Weather Service Messages. (i) Messages of the National Weather Service must be rebroadcast within 1 hour of receipt.

(ii) If advertisements are given in connection with weather rebroadcast, these advertisements must not directly or indirectly convey an endorsement by the U.S. Government of the products or services so advertised.

(iii) Credit must be given to indicate that the rebroadcast message originates with the National Weather Service.

(e) A broadcast station may not rebroadcast, live or delayed, the transmissions of a Personal Radio Service station.

**§73.1208 Broadcast of taped, filmed, or recorded material.** (a) Any taped, filmed, or recorded program material in which time is of special significance, or by which an affirmative attempt is made to create the impression that it is occurring simultaneously with the broadcast, shall be announced at the beginning as taped, filmed or recorded. The language of the announcement shall be clear and in terms commonly understood by the public. For television stations, the announcement may be made visually or aurally.

(b) Taped, filmed, or recorded announcements which are of a commercial, promotional or public service nature need not be identified as taped, filmed or recorded.

**73.1209 Reference to time:** Unless specifically designated as "standard (non-advanced)" or "advanced," all references to time contained in this part and in license documents and other authorizations issued there-under shall be understood to mean local time, i.e., the time legally observed in the community.

73.1210 TV/FM dual language broadcasting in Puerto Rico. (a) For the purpose of this Section, dual-language broadcasting shall be understood to mean the telecasting of a program in one language with the simultaneous transmission, on the main channel of a participating FM broadcast station, of companion sound track information in a different language.

(b) Television broadcast licensees in Puerto Rico may enter into dual-language time purchase agreements with FM broadcast licensees, subject to the following:

(1) All such agreements shall be reduced to writing and retained by the licensee for possible Commission inspection, in accordance with 73.3613(d) of this chapter.

(2) All such agreements shall specify that the FM licensee will monitor sound track material with a view to rejecting any material deemed to be inappropriate or objectionable for broadcast exposure.

(3) No television or FM broadcast station may devote more than 15 hours per week to dual-language broadcasting, nor may more than three (3) hours of such programming be presented on any given day.

(4) RESERVED.

(5) Noncommercial educational television broadcast stations using the facilities of commercial broadcast stations shall take all necessary precautions to assure that the entire operation is conducted on a non-commercial basis and otherwise in accordance with 73.621 of this Part.

73.1211 Broadest of lottery information. (a) No license of an AM, FM or television broadcast station, except as in paragraph (c) of this section, shall broadcast any advertisement of or information concerning any lottery, gift enterprise, or similar scheme, offering prizes dependent in whole or in part upon lot or chance, or any list of the prizes drawn or awarded by means of any such lottery, gift enterprise or scheme whether said list contains any part or all of such prizes

(b) The determination whether a particular program comes within the provisions of paragraph (a) of this section depends on the facts of each case. However, the Commission will in any event consider that a program comes within the provisions of paragraph (a) of this section if in connection with such program a prize consisting of money or other thing of value is awarded to any person whose selection is dependent in whole or in part upon lot or chance, if as a condition of winning or competing for such prize, such winner or winners are required to furnish any money or other thing of value or are required to have in their possession any product sold, manufactured, furnished or distributed by a sponsor of a program broadcast on the station in question.

(c) The provisions of paragraphs (a) and (b) of this Section shall not apply to an advertisement, list of prizes or other information concerning:

(1) A lottery conducted by a State acting under authority of State law when such information is broadcast:

(i) By a broadcast station licensed to a location in that State; or

(ii) By a broadcast station licensed to a location in an adjacent State which also conducts such a lottery. (18 U.S. Code 1307; 88 Stat. 1916).

(2) Fishing contests exempted under 18 U.S. Code 1305 (not conducted for profit, i.e., all receipts fully consumed in defraying the actual costs of operation).

(d) For the purposes of paragraph (c) (1) of this Section:

(1) "Lottery" means the pooling of proceeds derived from the sale of tickets or chances and allotting those proceeds or parts thereof by chance to one or more chance takers or ticket purchasers. It does not include the placing or accepting of bets or wagers on sporting events or contests.

(2) A broadcast station licensed to a location in a State that conducts a State lottery may broadcast advertisements of or information concerning such lottery in its State of license and advertisements of or information concerning such lotteries conducted in any adjacent State. (See 18 U.S.C. 1307, FCC 75). The exemption would, for example, permit a broadcast station licensed to a location in New York, which now conducts a lawful State Lottery, to broadcast advertisements of or information concerning the New York State Lottery as well as the lawful State Lotteries of Massachusetts, Connecticut, New Jersey and Pennsylvania, since these States are adjacent to New York, and also conduct a State Lottery. The exemption, however, would not permit a broadcast station licensed to a location in New York to broadcast information concerning the Maine or Michigan State Lotteries since those States are not adjacent States to New York. Nor would the exemption permit a station licensed to a location in Virginia to broadcast information concerning the Maryland State Lottery, since although Virginia is adjacent to Maryland, Virginia does not conduct a State lottery.

**73.1212 Sponsorship identification; list retention; related requirements.**

(a) When a broadcast station transmits any matter for which money, service, or other valuable consideration is either directly or indirectly paid or promised to, or charged or accepted by such station, the station, at the time of the broadcast, shall announce (1) that such matter is sponsored, paid for, or furnished, either in whole or in part, and (2) by whom or on whose behalf such consideration was supplied: Provided, However, That "service or other valuable consideration" shall not include any service/property furnished either without or at a nominal charge for use on, or in connection with, a broadcast unless it is so furnished in consideration for an identification of any person, product, service, trademark, or brand name beyond an identification reasonably related to the use of such service or property on the broadcast.

(i) For the purposes of this section, the term "sponsored" shall be deemed to have the same meaning as "paid for."

(b) The licensee of each broadcast station shall exercise reasonable diligence to obtain from its employees and from other persons with whom it deals directly in connection with any matter for broadcast information to enable such licensee to make the announcement required by this section.

(c) In any case where a report has been made to a broadcast station as required by section 508 of the Communications Act of 1934, as amended, of circumstances which would have required an announcement under this section had the consideration been received by such broadcast station, an appropriate announcement shall be made by such station.

(d) In the case of any political broadcast matter or any broadcast matter involving the discussion of a controversial issue of public importance for which any film, record, transcription, talent, script or other material or service of any kind is furnished, either directly, or indirectly, by a station as an inducement for broadcasting such matter, an announcement shall be made both at the beginning and the conclusion of such broadcast on which such material or service is used that such film, record, transcription, talent, script, or other material or service has been furnished to such station in connection with the transmission of such broadcast matter: Provided, However, That in the case of any broadcast of 5 minutes duration or less, only one such announcement need be made either at the beginning or conclusion of the broadcast.

(e) The announcement required by this section shall, in addition to stating the fact that the broadcast matter was sponsored, paid for or furnished, fully and fairly disclose the true identity of the person or persons, or corporation, committee, association or other entity by whom or on whose behalf such payment is made or promised or from whom or on whose behalf such services or other valuable consideration is received, or by whom the material or services referred to in paragraph (d) of this section are furnished. Where an agent or other person or entity contracts or otherwise makes arrangements with a station on behalf of another, and such fact is known or by the exercise of reasonable diligence, as specified in paragraph (b) of this section, could be known to the station, the announcement shall disclose the identity of the person or persons or entity on whose behalf such agent is acting instead of the name of such agent. Where the material broadcast is political matter or matter involving the discussion of a controversial issue of public importance and a corporation, committee, association or other entity is paying for or furnishing the broadcast matter the station shall in addition to making the announcement required by this section, require that a list of the chief executive officers or members of the executive committee or of the board of directors of the corporation, committee, association

or other unincorporated group, or other entity shall be made available for public inspection at the location specified by the licensee under 1.526 of this Chapter. If the broadcast is originated by a network, the list may, instead, be retained at the headquarters office of the network or at the location where the originating station maintains its public inspection file under 1.526 of this chapter. Such lists shall be kept and made available for a period of two years.

(f) If the case of broadcast matter advertising commercial products or services, an announcement stating the sponsor's corporate or trade name, or the name of the sponsor's product, when it is clear that the mention of the name of the product constitutes a sponsorship identification, shall be deemed sufficient for the purpose of this section and only one such announcement need be made at any time during the course of the broadcast.

(g) The announcement otherwise required by section 317 of the Communications Act of 1934, as amended, is waived with respect to the broadcast of "want ad" or classified advertisements sponsored by an individual. The waiver granted in this paragraph shall not extend to a classified advertisement or want ad sponsorship by any form of business enterprise, corporate or otherwise. Whenever sponsorship announcements are omitted pursuant to this paragraph, the licensee shall observe the following conditions:

(1) Maintain a list showing the name, address, and (where available) the telephone number of each advertiser.

(2) RESERVED.

(3) Make the list available to members of the public who have a legitimate interest in obtaining the information contained in the list. Such list must be retained for a period of two years after broadcast.

(h) Any announcement required by section 317(b) of the Communications Act of 1934, as amended, is waived with respect to feature motion picture film produced initially and primarily for theatre exhibition.

NOTE: The waiver heretofore granted by the Commission in its Report and Order adopted November 16, 1960 (FCC 60-1369; 40 F.C.C. 95), continues to apply to programs filmed or recorded on or before June 20, 1963, when 73.654, the predecessor television rule, went into effect.

(i) Commission interpretations in connection with the provisions of the sponsorship identification rules are contained in the Commission's Public Notice, entitled "Applicability of Sponsorship Identification Rules," dated May 6, 1963 (40 F.C.C. 141), as modified by Public Notice, dated April 21, 1975 (FCC 75-418). Further interpretations are printed in full in various volumes of the FCC Reports.

73.1213 Antenna structure, marking and lighting. (a) The provisions of Part 17 of this Chapter (Construction, Marking and Lighting of Antenna Structures), require certain antenna structures be painted and/or lighted in accordance with the provisions of that Part. (See 17.47 through 17.56).

(b) The licensee or permittee of an AM, FM or TV broadcast station, if the sole occupant of the antenna and/or the antenna supporting structure, is responsible for conforming to the requirements of 17.47 through 17.56 of this Chapter.

(c) If a common tower is used for antenna and/or antenna supporting purposes by more than one licensee or permittee of an AM, FM, or TV station or by one or more such licensees or permittees of any other service, each licensee or permittee shall be responsible for painting and lighting the structure when obstruction marking and lighting are required by FCC rules. However, each such licensee or permittee utilizing a common tower may designate one of the licensees or permittees as responsible for painting and lighting the structure. Such designated licensee or permittee shall be solely responsible for conforming to all FCC requirements of Part 17 of this Chapter regarding obstruction marking and lighting of antenna structures. (See 17.47 through 17.56.) A copy of the agreement between the licensees or permittees must be retained in each licensee's or permittee's station file, available for inspection by FCC representatives. In the event of default by the designated licensee of his responsibility, each of the licensees or permittees shall again be individually responsible for conforming to the requirements of the rules, pending appointment of a new designated licensee responsible for conforming to these rules.

73.1215 Specifications for indicating instruments. The following requirements and specifications shall apply to indicating instruments used by broadcast stations:

(a) Linear scale instruments:

- (1) Length of scale shall not be less than 2.3 inches (5.8 cm).
- (2) Accuracy shall be at least 2 percent of the full scale rating.
- (3) The maximum rating of the meter shall be such that it does not read off scale during modulation or normal operations.
- (4) Scale shall have at least 40 divisions.
- (5) Full scale reading shall not be greater than 5 times the minimum normal indication.

(b) Instruments having square-law scales:

- (1) Meet the requirements of paragraphs (a) (1) to (3) of this section for linear scale instruments.
- (2) Full scale reading shall not be greater than three times the minimum normal indication.
- (3) No scale division above one-third full scale reading shall be greater than one-thirtieth of the full scale reading (Example: an ammeter meeting requirement (1) having full scale reading of 6 amperes is acceptable for reading currents from 2 to 6 amperes is greater than one-thirtieth of 6 amperes, 0.2 ampere.)

(c) Instruments having logarithmic scales:

(1) Meet the requirements of paragraphs (a) (1) to (3) of this section for linear scale instruments.

(2) Full scale reading shall not be greater than 5 times the minimum normal indication.

(3) No scale division above one-fifth full scale reading in watts shall be greater than one-thirtieth of the full scale reading. (Example: A wattmeter meeting requirement (3) having full scale reading of 1500 watts is acceptable for reading power from 300 to 1,500 watts, provided no scale division between 300 and 1,500 watts is greater than one-thirtieth of 1,500 watts or 50 watts.)

(d) Instruments having expanded scales:

(1) Shall meet the requirements of paragraphs (a) (1) to (3) of this section:

(2) Full scale reading shall not be greater than 5 times the minimum normal indication.

(3) No scale division above one-fifth full scale reading shall be greater than one-fiftieth of the full scale reading. (Example: An ammeter meeting the requirement (1) is acceptable for indicating current from 1 to 5 amperes, provided no division between 1 and 5 amperes is greater than one-fiftieth of 5 amperes, 0.1 ampere.)

(e) Digital meters, printers, or other numerical readout devices may be used in addition to or in lieu of indicating instruments, meeting the specifications of paragraphs (a), (b), (c) and (d) of this section. The readout of the device must include at least three digits and must indicate the value of the parameter being read to an accuracy of 2%. The multiplier, if any, to be applied to the reading of each parameter must be indicated at the operating position.

(f) No instrument which has been broken or appears to be damaged or defective, or the accuracy of which is questionable shall be used, until it has been checked, and if necessary repaired and recalibrated by the manufacturer or qualified instrument repair service. Repaired instruments shall not be used unless a certificate of calibration has been provided showing that the instrument conforms to the manufacturer's specifications for accuracy.

73.1216 Licensee-conducted contests. A licensee that broadcasts or advertises information about a contest it conducts shall fully and accurately disclose the material terms of the contest, and shall conduct the contest substantially as announced or advertised. No contest description shall be false, misleading or deceptive with respect to any material term.

73.1216 (a) - 73.1225 (c)(5)

NOTE 1 - For the purposes of this rule:

(a) A contest is a scheme in which a prize is offered or awarded, based upon chance, diligence, knowledge or skill, to members of the public.

(b) Material terms include those factors which define the operation of the contest and which affect participation therein. Although the material terms may vary widely depending upon the exact nature of the contest, they will generally include: how to enter or participate; eligibility restrictions; entry deadline dates; whether prizes can be won; when prizes can be won; the extent nature and value of the prizes; basis for valuation of prizes; time and means of a selection of winners; and/or tie breaking procedures.

NOTE 2

In general, the time and manner of disclosure of the material terms of a contest are within the licensee's discretion. However, the obligation to disclose the material terms arises at the time the audience is first told how to enter or participate and continues thereafter.

The material terms should be disclosed periodically by announcements broadcast on the station conducting the contest, but need not be enumerated each time an announcement promoting the contest is broadcast. Disclosure of material terms in a reasonable number of announcements is sufficient. In addition, to the required broadcast announcements, disclosure of the material terms may be made in a non-broadcast manner.

NOTE (3) This rule is not applicable to licensee-conducted contests not broadcast or advertised to the general public or to a substantial segment thereof, to contests in which the general public is not requested or permitted to participate, to the commercial advertisement of non-licensee-conducted contests or to a contest conducted by a non-broadcast division of the licensee or by a non-broadcast company related to the licensee.

73.1225 Station inspections by FCC. (a) The licensee of a broadcast station shall 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, program tests or operation with nighttime or presunrise facilities during daytime hours pursuant to 0.314, Part 1, of the FCC rules.

(c) The following records shall be made available by all broadcast stations upon request by representatives of the FCC.

- (1) Equipment performance measurements required by 73.1590 & 73.1690.
- (2) The written designations for chief operators and, when applicable, the contracts for chief operators engaged on a contract basis.
- (3) Applications for modification of the transmission system made pursuant to 73.1690(c).
- (4) Informal statements or drawings depicting any transmitter modification made pursuant to 73.1690(e).
- (5) Station logs and special technical records.

(d) Commercial and noncommercial AM stations must make the following information also available upon request by representatives of the FCC.

(1) Copy of the most recent antenna or common-point impedance measurements.

(2) Copy of the most recent field strength measurements made to establish performance of directional antennas required by 73.151.

(3) Copy of the partial directional antenna proofs of performance made in accordance with 73.154 and made pursuant to the following requirements:

(i) Section 73.66, Sampling systems for antenna monitors.

(ii) Section 73.69, Antenna monitors.

(iii) Section 73.61, AM directional antenna field strength and proof of performance measurements.

73.1226 Availability to FCC of station logs and records. The following shall be made available to any authorized representative of the FCC upon request:

(a) Station records and logs shall be made available for inspection or duplication at the request of the FCC or its representative. Such logs or records may be removed from the licensee's possession by an FCC representative or, upon request, shall be mailed by the licensee to the FCC by either registered mail, return receipt requested, or certified mail, return receipt requested. The return receipt shall be retained by the licensee as part of the station records until such records or logs are returned to the licensee. A receipt shall be furnished when the logs or records are removed from the licensee's possession by an FCC representative and this receipt shall be retained by the licensee as part of the station records until such records or logs are returned to the licensee. When the FCC has no further need for such records or logs, they shall be returned to the licensee. The provisions of this rule shall apply solely to those station logs and records which are required to be maintained by the provisions of this Chapter.

(1) Logs and records stored on microfilm, microfiche or other data-storage systems are subject to the requirements pertaining thereto found in 73.1840(b).

(b) Where records or logs are maintained as the official records of a recognized law enforcement agency and the removal of the records from the possession of the law enforcement agency will hinder its law enforcement activities, such records will not be removed pursuant to this section if the chief of the law enforcement agency promptly certifies in writing to the FCC that removal of the logs or records will hinder law enforcement activities of the agency, stating insofar as feasible the basis for his decision and the date when it can reasonably be expected that such records will be released to the

(c) The following contracts, agreements or understandings, which need not be filed with the FCC (per 73.3613, Filing of contracts), must be kept at the station and made available for inspection by any authorized representative of the FCC upon request:

(1) Contracts relating to the sale of broadcast time to "time brokers" for resale.

(2) FM subchannel leasing agreements for subsidiary communications.

(3) Time sales contracts with the same sponsor for 4 or more hours per day, except where the length of the events (such as athletic contests, musical programs and special events) broadcast pursuant to the contract is not under control of the station.

(4) Contracts with chief operators or other engineering personnel.

73.1230 Posting of station and operator licenses. (a) The station license and any other instrument of station authorization shall be posted in a conspicuous place and in such a manner that all terms are visible at the place the licensee considers to be the principal control point of the transmitter. At all other control or ATS monitoring and alarm points a photocopy of the station license and other authorization shall be posted.

(b) The operator license of each station operator employed full-time or part-time or via contract, shall be permanently posted and shall remain posted so long as the operator is employed by the licensee. operators employed at two or more stations, which are not co-located, shall post their operator license or permit at one of the stations and a photocopy of the license or permit at each other station. The operator license shall be posted where the operator is on duty, either:

- (1) At the transmitter; or
- (2) At the extension meter location; or
- (3) At the remote control point, if the station is operated by remote control; or
- (4) At the monitoring and alarm point, if the station is using an automatic transmission system.

(c) Posting of the operator licenses and 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.

73.1250 Broadcasting emergency information. (a) Emergency situations in which the broadcasting of information is considered as furthering the safety of life and property include, but are not limited to the following: Tornadoes, hurricanes, floods, tidal waves, earthquakes, icing conditions, heavy snows, widespread fires, discharge of toxic gasses, widespread power failures, industrial explosions, civil disorders and school closings and changes in school bus schedules resulting from such conditions.

See also 73.3542, Application for Emergency Authorization, for requirements involving emergency situations not covered by this section for which prior operating authority must be requested.

(b) If requested by responsible public officials, a station may, at its discretion, and without further FCC authority, transmit emergency point-to-point messages for the purpose of requesting or dispatching aid and assisting in rescue operations.

(c) If the Emergency Broadcast System (EBS) is activated for a national level emergency while a local or State level emergency operation is in progress, the national level EBS operation shall take precedence. If, during the broadcasting of local or State emergency information, the attention signal described in 73.906 is used, the broadcasts are considered as being carried out under a State level or local level EBS operational plan.

(d) Any emergency operation undertaken in accordance with this section may be terminated by the FCC if required in the public interest.

(e) Immediately upon cessation of an emergency during which broadcast facilities were used for the transmission of point-to-point messages under paragraph (b) of this section, or when daytime facilities were used during night-time hours by an AM station in accordance with paragraph (f) of this section, a report in letter form shall be forwarded to the FCC in Washington, D. C., setting forth the nature of the emergency, the dates and hours of the broadcasting of emergency information, and a brief description of the material carried during the emergency. A certification of compliance with the non-commercialization provision of paragraph (f) of this section must accompany the report where daytime facilities are used during nighttime hours by an AM station, together with a detailed showing, under the provisions of that paragraph, that no other broadcast service existed or was adequate.

(f) AM stations may, without further FCC authority, use their full daytime facilities during nighttime hours to broadcast emergency information (examples listed in paragraph (a) of this section), when necessary to the safety of life and property, in dangerous conditions of a general nature and when adequate advance warning cannot be given with the facilities authorized. Because of skywave interference impact on other stations assigned to the same channel, such operation may be undertaken only if regular, unlimited-time service, is non-existent, inadequate from the standpoint of coverage, or not serving the public need. All operation under this paragraph must be conducted on a non-commercial basis. Recorded music may be used to the extent necessary to provide program continuity.

(g) Broadcasting of emergency information shall be confined to the hours, frequencies, powers and modes of operation specified in the station license, except as otherwise provided for AM stations in paragraph (f) of this section.

(h) Any emergency information transmitted by a TV station in accordance with this section shall be transmitted both aurally and visually or only visually. TV stations may use any method of visual presentation which results in a legible message conveying the essential emergency information. Methods which may be used include, but are not necessarily limited to, slides, electronic captioning, manual methods (e.g., hand printing) or mechanical printing processes. However, when emergency operation is being conducted under a national, State or local level Emergency Broadcast System (EBS) plan, emergency information shall be transmitted both aurally and visually.

73.1400 Remote control authorization. (a) An AM, FM or TV station transmission system may be operated by remote control using the procedures described in 73.1410.

(b) No authorization from the FCC is required to operate the transmission system of an AM station operating with a nondirectional antenna, FM station, or TV station by remote control. Authority to operate an AM station using a directional antenna system by remote control is obtained using the following procedures:

(1) An application for a construction permit to erect a new directional antenna or make modifications in an existing directional antenna, subject to the sampling system requirements of 73.68, may request remote control authorization on the permit application FCC Form 301 (FCC Form 340 for noncommercial educational stations).

(2) A licensee or permittee having a sampling system in compliance with the provisions of 73.68(a) must request remote control authorization on FCC Form 301-A, and submit information showing that the directional antenna sampling system has been constructed according to the specifications of 73.68(a).

(3) A licensee or permittee of a station not having an approved directional sampling system in compliance with the provisions of 73.68(a) must request remote control authorization on FCC Form 301-A, and submit information showing that the directional antenna is in proper adjustment and further showing the stability of the antenna system during the 1-year period specified in Section II of Form 301-A.

(c) Whenever a remote control point is established at a location other than at the main studio or transmitter, notification of that remote location must be sent to the FCC in Washington, D.C., within 3 days of initial use of the point. This notification is not required if responsible station personnel may be contacted at the transmitter or studio site during hours of operation when the remote control operator is elsewhere.

73.1410 Remote control operation. (a) Broadcast stations operated by remote control must provide at remote control points sufficient control and operating parameter monitoring capability to allow technical operation in compliance with the Rules applicable to that station and the terms of the station authorization. AM stations that are required to change modes of operation during the broadcast day must provide sufficient redundancy to assure that such mode changes actually occur.

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

§73.1410(c) - 73.1500(g)

(c) The remote control and monitoring equipment must be calibrated and tested as often as necessary to ensure proper operation.

(d) The remote control system must be designed so that malfunctions in the circuits between the control points and transmitter will not cause the transmitter to be inadvertently activated or to change operating modes or output power.

(e) Whenever a malfunction causes loss of accurate indications of the transmitter operating parameters, use of remote control must be discontinued within 3 hours after the malfunction is first detected. If the station is found to be operating beyond the terms of the station authorization and such malfunction cannot be corrected by remote control, station operation must be immediately terminated.

(f) AM stations may use amplitude or phase modulation of the carrier wave for remote control telemetry and alarm purposes. FM stations may use aural subcarriers and TV stations may use either aural subcarriers or signals within the vertical blanking interval for telemetry and alarm purposes. Use of such remote control signals must be in accordance with the technical standards for the particular class of station.

§73.1500 Automatic transmission system (ATS). An automatic transmission system consists of monitoring devices, control and alarm circuitry, arranged so that they interact automatically to operate a broadcast station's transmitter and maintain technical parameters within licensed values.

(a) Licensees of AM, FM or TV broadcast stations may utilize an automatic transmission system (ATS) in lieu of either direct or remote control of the station transmitting system.

(b) No authorization from the FCC is required to operate the transmitter using an automatic transmission system. Prior to commencing use of the ATS, the station chief operator, technical director or consulting engineer shall certify in writing to the station licensee that the system has been installed, tested and fully complies with all prescribed technical standards of the Rules applicable to the particular class of station.

(c) Broadcast stations operating automatic transmission systems must be provided with one or more ATS duty operator points. Each such point shall have a means to turn the transmitting apparatus off at all times.

(d) Whenever an automatic transmission system duty operator point is established at a location other than at the main studio or transmitter, notification of that location must be sent to the FCC in Washington, D.C., within 3 days of initial use of that point. This notification is not required if responsible station personnel may be contacted at the transmitter or studio site during hours of operation when the ATS duty operator is elsewhere.

(e) The ATS must incorporate circuits that will terminate station transmission within 3 minutes if the adjustment controls do not correct an operating condition which is capable of causing interference.

(f) The transmitting apparatus must be manually activated at the beginning of each broadcast period.

(g) For AM station operation, the ATS may incorporate a means to transmit emergency information under the provisions of §73.1250(f).

§73.1510 Experimental authorizations. (a) Licenses of broadcast stations may obtain experimental authorizations to conduct technical experimentation directed toward improvement of the technical phases of operation and service, and for such purposes may use a signal other than the normal broadcast program signal.

(b) Experimental authorizations may be requested by filing an informal application with the FCC in Washington, D. C., describing the nature and purpose of the experimentation to be conducted, the nature of the experimental signal to be transmitted, and the proposed schedule of hours and duration of the experimentation. Experimental authorizations shall be posted with the station license.

(c) Experimental operations are subject to the following conditions:

(1) The authorized power of the station may not be exceeded, except as specifically authorized for the experimental operations.

(2) Emissions outside the authorized bandwidth must be attenuated to the degree required for the particular type of station.

(3) The experimental operations may be conducted at any time the station is authorized to operate, but the minimum required schedule of programming for the class and type of station must be met. AM stations also may conduct experimental operations during the experimental period (11 midnight local time to local sunrise) and at additional hours if permitted by the experimental authorization provided no interference is caused to other stations maintaining a regular operating schedule within such period(s).

(4) If an experimental authorization permits the use of additional facilities or hours of operations for experimental purposes, no sponsored programs or commercial announcements may be transmitted during such experimentation.

(5) The licensee may transmit regularly scheduled programming concurrently with the experimental transmission if there is no significant impairment of service.

(6) No charges may be made, either directly or indirectly, for the experimentation; however, normal charges may be made for regularly scheduled programming transmitted concurrently with the experimental transmissions.

(d) The FCC may request a report of the research, experimentation and results at the conclusion of the experimental operation.

§73.1515 Special field test authorizations. (a) A special field test authorization may be issued to conduct field strength surveys to aid in the selection of suitable sites for broadcast transmission facilities, determine coverage areas, or to study other factors influencing broadcast signal propagation. The applicant for the authorization must be qualified to hold a license under Section 303(1)(1) of the Communications Act.

(b) Requests for authorizations to operate a transmitter under a Special field test authorization must be in writing using an informal application in letter form, signed by the applicant and including the following information:

(1) Purpose, duration and need for the survey.

(2) Frequency, transmitter output powers and time of operation.

(3) A brief description of the test antenna system, its estimated effective radiated field and height above ground or average terrain, and the geographic coordinates of its proposed location(s).

(c) Operation under a special field test authorization is subject to the following conditions:

(1) No objectionable interference will result to the operation of other authorized radio services; in this connection, the power requested shall not exceed that necessary for the purposes of the test.

(2) The carriers will be unmodulated except for the transmission of a test pattern on a visual TV transmitter, and for hourly voice station identification on aural AM, FM and TV transmitters.

(3) The transmitter output power or antenna input power may not exceed those specified in the test authorization and the operating power must be maintained at a constant value for each phase of the tests.

(4) The input power to the final amplifier stage and the AM antenna current or the FM or TV transmitter output power must be observed and recorded at half hour intervals and at any time the power is adjusted or changed. Copies of these records must be submitted to the FCC with the required report.

(5) The test equipment may not be permanently installed, unless such installation has been separately authorized. Mobile units are not deemed permanent installations.

(6) Test transmitters must be operated by or under the immediate direction of an operator holding a commercial radio operator license (any class, unless otherwise endorsed).

(7) A report, containing the measurements, their analysis and other results of the survey shall be filed with the FCC in Washington, D.C. within sixty (60) days following the termination of the test authorization.

(8) The test transmission equipment, installation and operation thereof need not comply with the requirements of FCC rules and standards except as specified in this Section if the equipment, installation and operation are consistent with good engineering principles and practices.

(d) A special field test authorization may be modified or terminated by notification from the FCC if in its judgment such action will promote the public interest, convenience and necessity.

§73.1520 Operation for tests and maintenance. (a) Broadcast stations may be operated for tests and maintenance of their transmitting systems on their assigned frequencies using their licensed operating power and antennas during their authorized hours of operation without specific authorization from the FCC.

(b) Licensees of AM stations may operate for tests and maintenance during the hours from 11 midnight local time to local sunrise, if no interference is caused to other stations maintaining a regular operating schedule within such period. No AM station licensed for "daytime" or "specified hours" of operation may broadcast any regular or scheduled programs during this period of test and maintenance operation.

(c) Licensees of AM stations may obtain special antenna test authorizations, and operate under the provisions described in §73.157, to operate with nighttime facilities during daytime hours in conducting directional antenna field strength and antenna proof of performance measurements.

§73.1530 Portable test stations, (Definition) A portable test station is one that is moved from place to place for making field strength and ground conductivity measurements, for selecting station transmitter sites, and conducting other specialized propagation tests. Portable test stations are not normally used while in motion, and may not be used for the transmission of programs intended to be received by the public.

§73.1540 Carrier frequency measurements. (a) The carrier frequency of each AM and FM station and the visual carrier frequency and difference between the visual carrier and the aural carrier or center frequency of each TV station shall be measured or determined as often as necessary to insure that they are maintained within the prescribed tolerances.

(b) In measuring the carrier frequency, the licensee may use any method or procedure that has sufficient precision to establish that the carrier frequency is within the prescribed departure limits.

(c) The primary standard of frequency for radio frequency measurements is the standard frequency maintained by the National Bureau of Standards or the standard signals of Stations WWV, WWVB, and WWVH of the National Bureau of Standards.

§73.1545 Carrier frequency departure tolerances. (a) AM stations. The departure of the carrier frequency for monophonic transmissions or center frequency for stereophonic transmissions may not exceed  $\pm 20$  Hz from the assigned frequency.

(b) FM stations. (1) The departure of the carrier or center frequency of an FM station with an authorized transmitter output power more than 10 watts may not exceed  $\pm 2000$  hertz from the assigned frequency.

(2) The departure of the carrier or center frequency of an FM station with an authorized transmitter output power of 10 watts or less may not exceed  $\pm 3000$  hertz from the assigned frequency.

(c) TV stations. (1) The departure of the visual carrier frequency of a TV station may not exceed  $\pm 1000$  hertz from the assigned visual carrier frequency.

(2) The departure of the aural carrier frequency of a TV station may not exceed  $\pm 1000$  hertz from the actual visual carrier frequency plus exactly 4.5 MHz.

(d) International broadcast stations. The departure of the carrier frequency of an International broadcast station may not exceed 0.0015% of the assigned frequency on which the station is transmitting.

73.1550 Extension meters. (a) A broadcast station may, without further authority from the FCC, install and use extension meters and monitoring devices provided:

(1) The transmitter is in the same building as the normal operating location of the station's licensed operator and is no more than one floor above or below the normal operating location.

(2) The path from the normal operating location to the transmitter is no longer than 30.5 meters (100 feet) and provides the operator with ready access to the transmitter.

(3) The required extension meters and monitoring devices are sufficiently close to the operator's normal operating location that deviations from normal indications of such instruments can be observed from that location.

(4) The transmitter is installed and protected so it is not accessible to unauthorized persons.

(5) Each extension meter or monitoring device required for the type of station, pursuant to paragraph (b) of this section, shall continuously sample the parameter for which it is installed and constantly indicate that parameter.

(6) Installation and operation of these meters shall be in accordance with the requirements prescribed for their corresponding regular meters and monitoring devices.

(7) Devices used for obtaining extension meter indications do not affect the accuracy of their corresponding regular meters.

(b) Extension metering and monitoring devices shall be installed as follows:

(1) AM stations. (i) Meters for indicating the DC input power of the last radio frequency power amplifier stage of the transmitter.

(ii) A meter for indicating non-directional antenna current or directional antenna common point current.

(iii) For stations using directional antenna systems, either the antenna monitor or external meters meeting the specifications for accuracy and repeatability prescribed for the monitor itself.

(2) FM stations operating with transmitter output power more than 10 watts. (i) Meters for indicating the DC input power to the last radio frequency power amplifier stage of the transmitter.

(ii) A meter for indicating the relative transmission line voltage, current or power.

(3) FM stations operating with transmitter power of 10 watts or less. (i) An indicator to show when the transmitter is in operation.

(4) TV stations. (i) Meters for indicating the DC input power to the last radio frequency power amplifier stages for the aural and visual transmitters.

(ii) Meters for indicating the relative transmission line voltage, current or power for the aural and visual transmitters.

(iii) Reserved.

(iv) Visual monitoring equipment suitable for monitoring the visual signal so that it may be maintained in accordance with the FCC requirements.

(c) The extension meters required, pursuant to paragraph (b) of this section, must be calibrated against their corresponding regular meters as often as necessary to insure their accuracy. and.

(1) In no event shall an extension meter be calibrated against another remote or extension meter.

(2) Each extension meter shall be accurate to within 2 percent of the value read on its corresponding regular meter.

(3) For AM stations, such calibration shall be made for each mode of operation.

(d) If a malfunction of any component of the extension metering or monitoring system causes inaccurate readings, the following procedures shall apply:

(1) All stations. If the malfunction affects the meters for indication the DC input power to the last radio stage of the transmitter power amplifier, the indications must be read at the transmitter.

(2) AM stations. In addition to (1) above, if the malfunction affects the extension indications of antenna or common point ammeter, the operating power may be determined by the indirect method using the procedures described in §73.51(e) for a period not to exceed 60 days. Alternatively, the operating power may be determined by the direct method on a continued basis by reading the regular antenna or common point ammeter for each mode of operation until the defective extension metering is repaired. If the malfunction affects the extended indications of the directional antenna monitor, the pertinent entries required in the operating log must be obtained at the specified intervals at the monitor location.

(3) FM stations. In addition to subparagraph (1) of this paragraph, if the malfunction affects the transmission line meter, the indications must be read at the transmitter.

(4) TV stations. In addition to subparagraph (1) of this paragraph, if the malfunction affects the transmission line meter(s), indications must be read at the transmitter. If the malfunction affects the indications of the visual monitoring equipment, the licensee must, pending repair or replacement, provide other suitable means for monitoring visual modulation at the extension meter location.

(e) If a malfunctioning component cannot be repaired or replaced within 60 days from the date faulty operation is detected, the Engineer-in-Charge of the radio district in which the station is located must be notified and request made for such additional time as is needed to complete the necessary repairs or replacement.

§73.1560 Operating power/ & mode tolerance. (a)(1) AM stations. Except as provided for in paragraph (d), the antenna input power of an AM station as determined by the procedures specified in §73.51 must be maintained as near as is practicable to the authorized antenna input power and may not be less than 90% nor more than 105% of the authorized power.

(a)(2) Whenever the transmitter of an AM station cannot be placed into the specified operating mode at the time required, transmissions of the station must be immediately terminated. However, if the radiated field at any bearing or elevation does not exceed that permitted for that time of day, operation in the mode with the lesser radiated field may continue under the notification procedures of paragraph (d) of this section.

(b) FM stations. Except as provided in paragraph (d), the transmitter output power of an FM station with power output as determined by the procedures specified in §73.267 (§73.567 for noncommercial educational FM stations) authorized for output power more than 10 watts must be maintained as near as practicable to the authorized transmitter output power and may not be less than 90% nor more than 105% of the authorized power. FM stations operating with authorized transmitter output power of 10 watts or less, may operate at less than the authorized power, but not more than 105% of the authorized power.

(c) TV stations. (1) Except as provided in paragraph (d), the visual output power of a TV transmitter, as determined by the procedures specified in 73.663, must be maintained as near as is practicable to the authorized transmitter output power and may not be less than 80% nor more than 110% of the authorized power.

(2) The output power of the aural transmitter shall be maintained to provide an aural carrier ERP not to exceed 22% of the peak authorized visual ERP.

(3) The FCC may specify deviation from the power of tolerance requirements for subscription television operations to the extent it deems necessary to permit proper operation.

(d) Reduced power operation. In the event it becomes technically impossible to operate with the authorized power, a broadcast station may operate at reduced power for a period of not more than 30 days without specific authority from the FCC. If operation at reduced power will exceed 10 consecutive days, a notification must be sent to the FCC in Washington, D.C., not later than the 10th day of the lower power operation. In the event the normal power is restored prior to the expiration of the 30 day period, the licensee must notify the FCC upon restoration of normal operation. If causes beyond the control of the licensee prevent restoration of authorized power within 30 days, an informal written request must be made to the FCC in Washington, D.C., no later than the 30th day for additional time as may be necessary.

73.1570 Modulation levels: AM, FM, and TV aural. (a) The percentage of modulation is to be maintained at as high a level as is consistent with good quality of transmission and good broadcast service, with maximum levels not to exceed the values specified in paragraph (b). Generally, the modulation should not be less than 95% on peaks of frequent recurrence, but where lower modulation levels may be required to avoid objectionable loudness or to maintain the dynamic range of the program material, the degree of modulation may be reduced to whatever level is necessary for this purpose, even though under such circumstances, the level may be substantially less than that which produces peaks of frequent recurrence at a level of 85%.

(b) Maximum modulation levels must meet the following limitations:

(1) AM stations. In no case shall the amplitude modulation of the carrier wave exceed 100% on negative peaks of frequent recurrence, or 125% on positive peaks at any time.

(i) AM stations transmitting stereophonic programs not exceed the AM maximum stereophonic transmission signal modulation specifications of stereophonic system in use.

(ii) AM stations transmitting telemetry signals for remote control or automatic transmission system operation must meet the modulation limitations of 73.142(i).

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

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

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

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

(i) Stations transmitting aural multiplex subcarriers for authorized services (see 73.665) may increase the modulation deviation to the limits specified in 73.682(c).

(ii) Stations transmitting aural subcarriers as part of encoded subscription programs under the provisions of 73.641-73.644 may modulate the aural carrier in accordance with the specifications stated in the application for advance FCC approval.

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

73.1580 Transmission system inspections. Each AM, FM and TV station licensee or permittee must conduct a complete inspection of the transmitting system and all required monitors as often as necessary to ensure proper station operation.

**73.1590 Equipment performance measurements.** (a) The licensee of each AM, FM and TV station, except licensees of Class D non-commercial educational FM stations authorized to operate with 10 watts or less output power, must make equipment performance measurements for each main transmitter as follows:

- (1) Upon initial installation of a new or replacement main transmitter.
- (2) Upon modification of an existing transmitter made under the provisions of 73.1690. Modification of transmission systems, and specified therein.
- (3) Installation of AM stereophonic transmission equipment pursuant to 73.128.
- (4) Installation of FM subcarrier or stereophonic transmission equipment pursuant to 73.295, 73.297, 73.593 or 73.597.
- (5) Installation of TV stereophonic or subcarrier transmission equipment pursuant to 73.669 and 73.1690.
- (6) Annually, for AM stations, with not more than 14 months between measurements.
- (7) When required by other provisions of the rules or the station license.

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

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

- (1) Field strength or voltage of the lower side-band for a modulating frequency of 1.25 MHz or greater, (including 3.58 MHz for color), and of the upper side-band for a modulating frequency of 4.75 MHz or greater.
- (2) Data showing that the waveform of the transmitted signal conforms to that specified by the standards for TV transmissions.
- (3) Photographs of a test pattern taken from a receiver or monitor connected to the transmitter output.

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

**73.1610 Equipment tests.** (a) During the process of construction of a new broadcast station, The permittee, after notifying the FCC in Washington, D.C. may, without further authority from the FCC, conduct equipment tests for the purpose of making such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefore, the rules and regulations and the applicable engineering standards. For AM stations, equipment tests, including either a directional or nondirectional proof of performance required by the construction permit, may be conducted during daytime hours provided that the antenna system is first substantially tuned during the experimental period. The nondirectional proof shall be conducted with power adjusted to 25% of that specified in the permit for the authorized directional facilities or, if applicable, to such higher power as is specified in the same permit for authorized nondirectional facilities. For licensed stations, see 73.1616, Operation During Modification of Facilities; and 73.157, Antenna Testing during Daytime.

(b) The FCC may notify the permittee not to conduct equipment tests or may modify, cancel, suspend or change the modes of testing or the dates and times for such tests in order to resolve interference complaints or when such action may appear to be in the public interest, convenience and necessity.

(b) The FCC may notify the permittee not to conduct tests or may cancel, suspend, or change the date for the beginning of equipment tests if an when such action may appear to be in the public interest, convenience, and necessity.

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

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

73.1615 Operation during modification of facilities. When the licensee of an existing AM, FM or TV station is in the process of modifying existing facilities as authorized by a construction permit and determines it is necessary to either discontinue operation or to operate with temporary facilities to continue program service, the following procedures apply:

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

(1) Discontinue operation, or

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

(b) Licensees of an AM station holding a construction permit which involves directional facilities and which does not involve a change in operating frequency may, for a period not exceeding 30 days;

(1) Discontinue operation, or

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

(3) Operate in a nondirectional mode during the presently licensed hours of directional operation with power reduced to 25% or less of the nominal licensed power or whatever higher power, not exceeding licensed power, will insure that the radiated field strength specified by the license is not exceeded at any given azimuth for the corresponding hours of directional operation, or

(4) Operate in a nondirectional mode during daytime hours, if not already so licensed, only as necessary to conduct a required nondirectional proof of performance with a power not to exceed 25% of the maximum power authorized by the construction permit for directional operation, or

(5) Operate during daytime hours with either the daytime or nighttime directional pattern and with the power authorized by the construction permit only as necessary to take proof of performance measurements. Operating power shall be promptly reduced to presently licensed level during any significant period of time that these measurements are not being taken. No daytime operation of construction permit directional patterns authorized by this paragraph shall be conducted before such patterns have been substantially tuned during the experimental period.

(6) In the event the directional pattern authorized by the construction permit replaces a licensed directional pattern, the licensee may operate with the substantially adjusted construction permit pattern during the corresponding licensed hours of directional operation with power not exceeding that specified for the licensed pattern.

(c) Such operation or discontinuance of operation in accordance with the provisions of paragraph (a) or (b) of this section may begin upon notification to the FCC in Washington, D.C.

(1) Should it be necessary to continue the procedures in either paragraph (a) or (b) of this section beyond 30 days, an informal letter request signed by the licensee or the licensee's representative must be sent to the FCC in Washington, D.C. prior to the 30th day.

(d) Licensees of an AM station holding a construction permit which authorizes both a change in frequency and directional facilities must request and obtain authority from the FCC in Washington, D.C. prior to using any new installation authorized by the permit or using temporary facilities.

(1) The request is to be made at least 10 days prior to the date on which the temporary operation is to commence. The request is to be made by letter which shall describe the operating modes and facilities to be used. Such letter requests shall be signed by the licensee or the licensee's representative.

(2) Discontinuance of operation is permitted upon notification to the FCC in Washington, D.C. Should it be necessary to discontinue operation longer than 30 days, an informal letter request, signed by the licensee or the licensee's representatives, must be sent to the FCC in Washington, D.C. prior to the 30th day.

(e) The FCC may modify or cancel the temporary operation permitted under the provisions of paragraph (a), (b), (c) or (d) of this section without prior notice or right to hearing.

§73.1620 Program tests. (a) Upon completion of construction of an AM, FM or TV station in accordance with the terms of the construction permit, the technical provisions of the application, the rules and regulations and the applicable engineering standards, program tests may be conducted in accordance with the following:

(1) The permittee of a nondirectional AM or FM station, or a nondirectional or a directional TV station, may begin program tests upon notification to the FCC in Washington, D. C. provided that within 10 days thereafter, an application for a license is filed with the FCC in Washington, D. C.

(2) The permittee of an AM or FM station with a directional antenna system must file an application for licensee requesting test authority with the FCC in Washington, D. C. at least 10 days prior to the date on which it desires to begin program tests. Also an antenna proof of performance must be filed with the request by an AM or FM station with a directional antenna.

(b) The FCC reserves the right to revoke or suspend program tests by any station without right of hearing for failure to comply adequately with all terms of the construction permit or in order to resolve instances of objectionable interference.

(c) Unless sooner suspended or revoked, the program test authority continues valid during FCC 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 by final determination upon the application for station license.

(d) All operation under program test authority shall be in strict compliance with the rules governing broadcast stations and in strict accordance with representations made in the application for license pursuant to which the tests were authorized.

(e) Acceptance by the FCC of notification of the station of program tests, or the granting of program test authority by the FCC, is not to be construed by the permittee as approval by the FCC of the application for station license.

(f) The licensee of a UHF-TV station which is not in operation on, but assigned to, the same allocated channel which a 1000 watt UHF translator station is authorized to use (see §73.3516, "Specification of facilities"), shall notify the licensee of the translator station, in writing, at least 10 days prior to commencing or resuming operation. The TV station licensee shall also certify to the FCC in Washington, D.C. that such advance notice has been given to the translator station licensee.

73.1635 Special temporary authorizations (STA). (a) A special temporary authorization (STA) is the authority granted to a permittee or licensee to permit the operation of a broadcast facility for a limited period at a specified variance from the terms of the station authorization or requirements of the FCC rules applicable to the particular class of station.

(1) A request for a STA should be filed with FCC in Washington, D.C. at least 10 days prior to the date of the proposed operation.

(2) The request is to be made by letter and shall fully describe the proposed operation and the necessity for the requested STA. Such letter requests shall be signed by the licensee or the licensee's representative.

(3) A request for a STA necessitated by unforeseen equipment damage or failure may be made without regard to the procedural requirements of this section (e.g. via telegram or telephone). Any request made pursuant to this paragraph shall be followed by a written confirmation request conforming to the requirements of paragraph (a)(2) of this section. Confirmation requests shall be submitted within 24 hours. (see also 73.1680 Emergency Antennas).

(4) An STA may be granted for an initial period not to exceed 180 days. A limited number of extensions of such authorizations may be granted for additional periods not exceeding 180 days per extension. An STA necessitated by technical or equipment problems, however, may, in practice, be granted for an initial period not to exceed 90 days with a limited number of extensions not to exceed 90 days per extension. The permittee or licensee must demonstrate that any further extensions requested are necessary and that all steps to resume normal operation are being undertaken in an expeditious and timely fashion.

(5) Certain rules permit temporary operation at variance without prior authorization from the FCC when notification is filed as prescribed in the particular rules. See 73.62, Directional Antenna System Tolerance, 73.157 Antenna Testing During Daytime; 73.1250, Broadcasting Emergency information; 73.1615, Operation During Modification of Facilities; and 73.1680, Emergency Antennas.

(b) An STA may be modified or cancelled by the FCC without prior notice or right to hearing.

(c) No request by an AM station for temporary authority to extend its hours of operation beyond those authorized by its regular authorization will be accepted or granted by the FCC except in emergency situations conforming with the requirements of 73.3542, Application for Emergency Authorization. See also 73.1250, Broadcasting Emergency information.



1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is essential for ensuring the integrity of the financial statements and for providing a clear audit trail. The text also mentions that proper record-keeping is crucial for identifying trends and anomalies in the data.

2. The second part of the document focuses on the role of internal controls in preventing fraud and errors. It highlights that a strong internal control system is necessary to ensure that all transactions are properly authorized and recorded. The text also notes that internal controls should be designed to be effective and efficient, and should be regularly reviewed and updated.

3. The third part of the document discusses the importance of transparency and communication in financial reporting. It emphasizes that clear and concise communication is essential for ensuring that all stakeholders have a clear understanding of the company's financial performance. The text also mentions that transparency is crucial for building trust and confidence in the company's financial statements.

4. The fourth part of the document focuses on the role of technology in financial reporting. It highlights that the use of technology can significantly improve the accuracy and efficiency of financial reporting. The text also notes that technology can help to reduce the risk of errors and fraud, and can provide valuable insights into the company's financial performance.

5. The fifth part of the document discusses the importance of ongoing monitoring and evaluation of the financial reporting process. It emphasizes that the financial reporting process should be regularly reviewed and updated to ensure that it remains effective and efficient. The text also mentions that ongoing monitoring and evaluation is crucial for identifying areas for improvement and for ensuring that the company's financial reporting process is always up-to-date and accurate.



73.1650 International broadcasting agreements. (a) AM broadcast station agreements.

(1) The U.S.A. is signatory to the North American Regional Broadcasting Agreement (NARBA) with the Bahama Islands and the Dominican Republic.

(2) The U.S.A. is a signatory to the Regional Agreement for the Medium Frequency Broadcasting Service in Region 2 (Region 2AM Agreement)

(3) The U.S.A. and Canada are signatories to a separate agreement (U.S./Canadian Agreement).

(4) The U.S.A. and Mexico are signatories to a separate agreement (U.S./Mexican Agreement).

(5) The U.S.A. has separate, bilateral agreements with Canada, Mexico and the Bahama Islands pertaining to presunrise authority.

(b) FM broadcast stations agreements. The U.S.A. is a signatory to separate, bilateral agreements concerning FM broadcast stations with the governments of Canada and Mexico.

(c) TV broadcast station agreements. The U.S.A. is signatory to separate, bilateral agreements concerning TV broadcast stations with the governments of Canada and Mexico.

(d) All AM, FM and TV broadcast station agreements to which the U.S.A. is a signatory are available for inspection in the Office of the Chief, Mass Media Bureau, FCC, Washington, D.C.. Copies may be purchased from the FCC copy contractor whose name may be obtained from the FCC Consumer Assistance Office in Washington, D.C.

73.1660 Acceptability of broadcast transmitters. (a) A transmitter may be type accepted or notified upon the request of any manufacture of transmitters following the procedures described in Part 2 of the FCC Rules. If acceptable, the transmitter will be included in the FCC's "Radio Equipment List, Equipment Acceptable for Licensing". Since March 5, 1984, these transmitters shall be authorized under notification.

(b) A permittee or licensee planning to install and use as a main transmitter one not included on the FCC's "Radio Equipment List" must obtain authority to use such a transmitter by filing an application for a construction permit on FCC Form 301 (FCC Form 340 for noncommercial educational stations). The application must include a complete description and circuit diagram of the transmitter, description of the carrier frequency determining circuits, complete operating parameters and measurement data as would be required for a grant of type acceptance. A permittee or licensee planning to modify a transmitter which is included on the FCC's "Radio Equipment List" or for which an FCC Form 301 has been submitted and approved, must follow the requirements contained in 73.1690.

(c) A transmitter which was in use prior to January 30, 1955, may continue to be used by the licensee, and successors or assignees, if it continues to comply with the technical requirements for the type of station at which it is used.

(d) AM stereophonic exciter-generators for interfacing with type accepted or notified AM transmitters may be type accepted upon request from any manufacturer by procedures described in Part 2 of the FCC Rules.

Broadcast licensees may modify their type accepted AM stereophonic exciter-generators in accordance with 73.1690.

(e) Additional rule covering type acceptance and notification, modification of authorized transmitters and withdrawal of a grant of authorization are contained in Part 2 of the FCC Rules.

73.1665 Main transmitters. (a) Each broadcast station must have at least one main transmitter which complies with the provisions of the transmitter technical requirements for the type and class of station. A main transmitter is one which is used for regular program service having power ratings appropriate for the authorized operating power(s).

(b) There is no maximum power rating limit for FM or TV station transmitters, however, the maximum rated transmitter power of a main transmitter installed at an AM station shall be as follows:

Authorized power	Maximum rated transmitter power (kW)
0.25, 0.5, or 1 kW .....	1
2.5 kW .....	5
5 or 10 kW .....	10
25 or 50 kW .....	50

(c) A licensee may, without further authority or notification to the FCC, replace an existing main transmitter or install additional main transmitter(s) for use with the authorized antenna if the replacement or additional transmitter(s) is type accepted or notified as shown in the FCC's "Radio Equipment List". Within 10 days after commencement of regular use of the replacement or additional transmitter(s), equipment performance measurements, as prescribed for the type of station are to be completed.

17.1668 Type approval of modulation monitors. (a) A manufacturer desiring to obtain type approval of a modulation monitor must submit two copies of the full specifications of the monitor with the test data specified in the requirements for the particular type of monitor. (See 73.50 for AM, 73.332 for FM, or 73.694 for TV monitors.) If this information appears to meet the requirements for type approval, the FCC will advise the manufacturer and request that a monitor be shipped to the Laboratory at Gilford, Maryland. Type approval of the monitor will be given only on the basis of data obtained by the FCC in testing the sample monitor supplied by the manufacturer.

(b) In approving the monitor upon the basis of tests conducted by the Laboratory, the FCC merely recognizes that type monitor has the inherent capability of functioning in compliance with the rules if properly constructed, maintained, and operated.

(c) All charges for shipping the sample monitor to and from the FCC Laboratory must be paid for by the manufacturer.

(d) Additional information concerning modification of type approved equipment, withdrawal of type approval, and limitations on findings upon which type approval is based are contained in Part 2, Subpart J of the FCC rules.

73.1670 Auxiliary transmitters. (a) A licensee of a broadcast station may, without further authority from the FCC, install and use with the main antenna system one or more auxiliary transmitters for the following purposes:

(1) The transmission of regular programs upon failure of the main transmitter.

(2) The transmission of regular programs during maintenance or modification of the main transmitter.

(3) Emergency broadcast system operation.

(4) The transmission of regular programs by an AM station authorized for Pre-sunrise (PSRA) and/or Post-sunset (PSSA) operation.

(5) The transmission of tests to determine the operating condition of the auxiliary transmitter or auxiliary antenna.

(6) For testing, upon the request of representatives of the FCC.

(b) Authorization to install an auxiliary transmitter for use with other than the main antenna or authorized auxiliary antenna must be obtained by filing an application for a construction permit on FCC 301 (FCC form 340 for noncommercial educational stations).

(c) The following technical and operating standards apply to auxiliary transmitter:

(1) The auxiliary transmitter may be operated on only the station's authorized frequency and within the required carrier frequency departure tolerance for the type of station.

(2) The carrier frequency of the auxiliary transmitter must be measured as often as necessary to insure that it is maintained within the prescribed tolerance.

(3) When using an auxiliary transmitter, the operating power may be less than the authorized power but may not exceed the authorized power within the permitted tolerance for the type of station. If operation with an auxiliary transmitter at reduced power continues for a period exceeding 10 days, the FCC in Washington, D. C., must be notified. (See 73.51, AM; 73.267, FM; 73.567, NCE-FM; and 73.663 TV.)

(4) Reserved.

(5) Normal operator requirements apply to the operation of the auxiliary transmitter.

NOTE: After January 1, 1979, new licenses will not be issued nor will existing licenses be renewed for auxiliary transmitters that are operated into the main antenna system.

73.1675 Auxiliary antennas. (a) An auxiliary antenna is one that is permanently installed and available for use when the main antenna is out of service for repairs or replacement. An auxiliary antenna may be located at the same transmitter site as the station's main antenna or at a separate site. In either case, however, the coverage area when operating with the auxiliary antenna may not extend beyond the coverage area of the main antenna. An application for an auxiliary antenna authorization filed under the procedures given in paragraphs (b) or (c) of this section must contain a map showing the following contours for both the main and auxiliary antenna radiation:

(1) AM stations: The 0.5 mv/m field strength contours.

(2) FM stations: The 1.0 mv/m field strength contours.

(3) TV stations. The Grade B coverage contours.

(b) An application for a construction permit to install a new auxiliary antenna, or to make changes in an existing auxiliary antenna for which prior FCC authorization is requested (see §73.1690), must be filed on FCC Form 301 (FCC Form 340 for noncommercial educational stations).

(c) Authority to use a formerly licensed main antenna without changes or modifications as an auxiliary antenna may be obtained by filing FCC Form 302.

**73.1680 Emergency antennas.** (a) An emergency antenna is one that is erected for temporary use after the authorized main and auxiliary antennas are damaged and cannot be used.

(b) Prior authority from the FCC is not required to erect and commence using an emergency antenna to restore program service to the public however an informal request to continue operation with the emergency antenna must be made to the FCC in Washington, D.C. within 24 hours after commencement of its use. The request is to include a description of the damage to the authorized antenna, a description of the emergency antenna and the station operating power with the emergency antenna.

(1) AM stations. AM stations may use a horizontal or vertical wire or a nondirectional vertical element of a directional antenna as an emergency antenna. AM stations using an emergency nondirectional antenna or a horizontal or vertical wire pursuant to this section, in lieu of authorized directional facilities, shall operate with power reduced to 25% or less of the nominal licensed power, or, a higher power, not exceeding licensed power, while insuring that the radiated field strength does not exceed that authorized in any given azimuth for the corresponding hours of directional operation.

(2) FM and TV stations. FM and TV stations may erect any suitable radiator, or use operable sections of the authorized antenna(s) as an emergency antenna.

(c) The FCC may prescribe the output power, radiation limits, or other operating conditions when using an emergency antenna, and emergency antenna authorizations may be modified or terminated in the event harmful interference is caused to other stations or services by the use of an emergency antenna.

**73.1690 Modification of transmission systems.** The following procedures and restrictions apply to licensee modifications of authorized broadcast transmission system facilities.

(a) The following changes are prohibited:

(1) Those that would result in the emission of signals outside of the authorized channel exceeding limits prescribed for the class of service.

(2) Those that would cause the transmission system to exceed the equipment performance measurements prescribed for the class of service, (AM, 73.44; FM, 73.317, 73.319, and 73.322; TV, 73.682 and 73.687).

(b) The following changes may be made only upon specific authority of the FCC. Applications requesting authorization must be filed on FCC Form 301 for commercial stations and on FCC Form 340 for noncommercial educational stations.

(1) Any change in the location, overall height of antenna structure, or directional radiation characteristics of a directional antenna system. (See 73.45 and 73.150, AM; 73.316, FM; 73.510, noncommercial educational FM; or 73.685, TV).

(2) Changes in the operating power from that specified on the station authorization.

(3) Change in location of the main studio to a location outside the station's principal community of license, except as provided for in 73.1125.

(c) The following FM and TV station modifications may be made and operation commenced without prior authorization from the FCC, provided that the modifications would not possibly affect the operation of any co-located or nearby AM station. An application for license modification filed on FCC Form 302 must be filed within 10 days following completion of the changes. Equipment performance measurements are not required for applications covering changes described in (c)(1) and (2) of this section.



(1) Replacement of a non-directional antenna with one of the same or different type or number of bays, provided that the height above ground of the center of radiation is within  $\pm 2$  meters of that specified in the station authorization, there is no change in the horizontal effective radiated power, and there is no increase in the radiation at any angle below the horizon in any direction.

(2) Installation of a transmission line with one of a different type or length which requires change in the transmitter output power to maintain the licensed effective radiated power.

(3) Installation of harmonic filters, sideband filters or diplexers of a different type which requires a change in the transmitter output power to maintain the licensed effective radiated power.

(d) The following changes may be made without authorization from the FCC, however informal notification of the changes must be made according to the rule sections specified:

(1) Change in studio location within the community of license. See 73.1125.

(2) Commencement of remote control operation pursuant to 73.1400 and 73.1410.

(3) Modification of an AM directional antenna sampling system. See 73.68.

(e) Any electrical and mechanical modification to authorized transmitting equipment that is not otherwise restricted by the preceding provisions of this section, may be made without FCC notification or authorization. Equipment performance measurements must be made within ten days after completing the modifications (See 73.1590). An informal statement, diagram, etc. describing the modification must be retained at the transmitter site for as long as the equipment is in use.

(1) Installation of a new transmitter which is included as the FCC's "Radio Equipment List" as type accepted or notified for broadcast use.

(2) Replacement of the carrier frequency generator of the transmitter with one of a different type that has been demonstrated to the FCC to be compatible with the transmitter in use.

(3) Replacement of the modulator exciter unit of the FM or TV aural transmitter with one that has been authorized for broadcast service through the FCC's type acceptance or notification procedures and that has been demonstrated compatible with the transmitter in use.

(4) Modification of the AM transmitter for stereophonic broadcasting with a stereophonic exciter unit which has been type accepted and designed for interfacing with the type accepted or notified transmitter with which it is to be used.

(5) Installation or replacement of a stereophonic or subcarrier generator of an FM or TV transmitter with one that has been demonstrated to be both electrically and mechanically compatible with the type accepted or notified transmitter.

(6) Modification of the transmitter for multiplexing of the carrier with an exciter unit that has been designed for interfacing with the type accepted transmitter with which it is to be used in accordance with the following:

(i) The combination of the multiplexing exciter and transmitter meets the minimum specifications given in Sections 73.40 and 73.44.

(ii) The frequency stability requirements of Section 73.1545(a) must be maintained.

(iii) No electrical or mechanical changes in the transmitter circuits are allowed.

(7) DELETED.

(8) Installation of subscription TV program encoding equipment having advance FCC approval. See 2.1001(N) in Part 2 and 73.644(c) in this part of the Rules.

73.1695 Changes in transmission standards. The FCC will consider the question whether a proposed change or modification of transmission standards would be in the public interest, convenience and necessity, upon petition being filed by the person proposing such change or modification, setting forth the following:

(a) The exact character of the change or modification proposed;

(b) The effect of the proposed change or modification upon all other transmission standards that have been adopted by the FCC for broadcast stations;

(c) The experimentation and field tests that have been made to show that the proposed change or modification accomplishes an improvement and is technically feasible;

(d) The effect of the proposed change or modification in the adopted standards upon operation and obsolescence of receivers;

(1) Should a change or modification in the transmission standards be adopted by the FCC, the effective date thereof will be determined in the light of the considerations mentioned in this paragraph;

(e) The change in equipment required in existing broadcast stations for incorporating the proposed change or modification in the adopted standards; and

(f) The facts and reasons upon which the petitioner bases the conclusion that the proposed change or modification would be in the public interest, convenience and necessity.

OPERATING HOURS

73.1700 Broadcast day. The term "broadcast day" means that period of time between the station's sign-on and its sign-off.

73.1705 Time of operation. (a) Commercial and noncommercial educational TV and commercial FM stations will be licensed for unlimited time operation. Application may be made for voluntary share-time operation.

(b) Noncommercial educational FM stations will be licensed for unlimited and share time operation according to the provisions of 73.561.

(c) AM stations will be licensed for unlimited time, limited time, daytime, share time or specified hours.

73.1710 Unlimited time. Operation is permitted 24 hours a day.

73.1715 Share time. Operation is permitted by two or more broadcast stations using the same channel in accordance with a division of hours mutually agreed upon and considered part of their licenses.

(a) If the licenses of stations authorized to share time do not specify hours of operation, the licensees shall endeavor to reach an agreement for a definite schedule of periods of time to be used by each. Such agreement shall be in writing and each licensee shall file it in triplicate original with each application to the FCC in Washington, D.C. for renewal of license. If and when such written agreements are properly filed in conformity with this section, the file mark of the FCC will be affixed thereto, one copy will be retained by the FCC, one copy forwarded to the licensee to be posted with the station license and considered as a part thereof. If the license specifies a proportionate time division, the agreement shall maintain this proportion. If no proportionate time division is specified in the license, the licensees shall agree upon a division of time. Such division of time shall not include simultaneous operation of the stations unless specifically authorized by the terms of the license.

(b) If the licensees of stations authorized to share time are unable to agree on a division of time, the FCC in Washington, D. C. shall be so notified by a statement filed with the applications for renewal of licenses. Upon receipt of such statement, the FCC will designate the applications for a hearing and, pending such hearing, the operating schedule previously adhered to shall remain in full force and effect.

(c) A departure from the regular schedule in a time-sharing agreement will be permitted only in cases where an agreement to that effect is put in writing, is signed by the licensees of the stations affected thereby and filed in triplicate by each licensee with the FCC in Washington, D. C. prior to the time of the proposed change. If time is of the essence, the actual departure in operating schedule may precede the actual filing of written agreement, provided appropriate notice is sent to the FCC.

(d) If the license of an AM station authorized to share time does not specify the hours of operation, the station may be operated for the transmission of regular programs during the experimental period provided an agreement thereto is reached with the other stations with which the broadcast day is shared: AND FURTHER PROVIDED, Such operation is not in conflict with 73.72 (Operating during the experimental period). Time-sharing agreements for operation during the experimental period need not be submitted to the FCC.

(e) Noncommercial educational FM stations are authorized for share time operation according to the provisions of 73.561.

73.1720 Daytime. Operation is permitted during the hours between average monthly local sunrise and average monthly local sunset.

(a) The controlling times for each month of the year are stated in the station's instrument of authorization. Uniform sunrise and sunset times are specified for all of the days of each month, based upon the actual times of sunrise and sunset for the fifteenth day of the month adjusted to the nearest quarter hour. Sunrise and sunset times are derived by using the standardized procedure and the tables in the 1946 American Nautical Almanac issued by the United States Naval Observatory.

73.1725 Limited time. (a) Operation is applicable only to class II (secondary) AM stations on a clear channel with facilities authorized before November 30, 1959. Operation of the secondary station is permitted during daytime and until local sunset if located west of the dominant station on the channel, or until local sunset at the dominant station if located east of that station. Operation is also permitted during nighttime hours not used by the dominant station or stations on the channel.

(b) No authorization will be granted for:

(1) A new limited time station;

(2) A limited time station operating on a changed frequency;

(3) A limited time station with a new transmitter site materially closer to the 0.1 mV/m contour of a co-channel U.S. class I station; or

(4) Modification of the operating facilities of a limited time station resulting in increased radiation toward any point on the 0.1 mV/m contour of a co-channel U.S. class I station during the hours after local sunset in which the limited time station is permitted to operate by reason of location east of the class I station.

(c) The licensee of a secondary station which is authorized to operate limited time and which may resume operation at the time the dominant station (or stations) on the same channel ceases operation shall, with each application for renewal of license, file in triplicate a copy of its regular operating schedule. It shall bear a signed notation by the licensee of the dominant station of its objection or lack of objection thereto. Upon approval of such operating schedule, the FCC will affix its file mark and return one copy to the licensee authorized to operate limited time. This shall be posted with the station license and considered as a part thereof. Departure from said operating schedule will be permitted only pursuant to 73.1715 (Share time).

73.1730 Specified hours. (a) Specified hours stations must operate in accordance with the exact hours specified in their license. However, such stations, operating on local channels, unless sharing time with other stations, may operate at hours beyond those specified in their licenses to carry special events programming. When such programs are carried during nighttime hours, the station's authorized nighttime facilities must be used.

(b) Other exceptions to the adherence to the schedule of specified hours of operation are provided in 73.72 (Operating during the experimental period), 73.1250 (Broadcasting emergency information) and 73.1740 (Minimum operating schedule).

73.1735 Pre-sunrise service authorization (PSRA) and Post-Sunset service authorization (PSSA). Licensees of certain classes of AM stations are eligible to request pre-sunrise authorization and post-sunset service authorization pursuant of the requirements of 73.99.

73.1737 AM station operation pre-sunrise and post-sunset. Certain classes of AM stations are eligible to operate pre-sunrise and/or post-sunset for specified periods with facilities other than those specified on their basic instruments of authorization. Such pre-sunrise and post-sunset operation is authorized pursuant to the provisions of 73.99 of the Rules.

73.1740 Minimum operating schedule. (a) All commercial broadcast stations are required to operate not less than the following minimum hours:

(1) AM and FM stations. Two-thirds of the total hours they are authorized to operate between 6 a.m. and 6 p.m. local time and two-thirds of the total hours they are authorized to operate between 6 p.m. and midnight, local time, each day of the week except Sunday.

(1) Daytime AM stations need comply only with the minimum requirements for operation between 6 a.m. and 6 p.m., local time.

(2) TV stations. (i) During the first 36 months of operation, not less than 2 hours daily in any 5 broadcast days per calendar week and not less than a total of:

(A) 12 hours per week during the first 18 months.

(B) 16 hours per week during the 19th through 24 months.

(C) 20 hours per week during the 25th through 30th months.

(D) 24 hours per week during the 31st through 36th months.

(ii) After 36 months of operation, not less than 2 hours in each day of the week and not less than a total of 28 hours per calendar week.

(iii) Visual transmissions of test patterns, slides, or still pictures accompanied by unrelated aural transmissions may not be counted in computing program service (see 73.653).

(3) "Operation" includes the period during which the station is operated pursuant to temporary authorization or program tests, as well as during the license period.

(4) In the event that causes beyond the control of a licensee make it impossible to adhere to the operating schedule of this section or to continue operating, the station may limit or 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, D.C. not later than the 10th day of limited or 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 licensee will so notify the FCC of this date. If the causes beyond the control of the licensee make it impossible to comply within the allowed period, informal written request shall be made to the FCC no later than the 30th day for such additional time as may be deemed necessary.

(b) Noncommercial educational AM and TV stations are not required to operate on a regular schedule and no minimum hours of operation are specified; but the hours of actual operation during a license period shall be taken into consideration in the renewal of noncommercial educational AM and TV broadcast licenses. Noncommercial educational FM stations are subject to the operating schedule requirements according to the provisions of 73.561.

73.1745 Unauthorized operation. (a) No broadcast station shall operate at times, or with modes or power, other than those specified and made a part of the license, unless otherwise provided in this part.

(b) Any unauthorized departure from an operating schedule which is required to be filed with the FCC in Washington, D.C., will be considered as a violation of a material term of the license.

73.1750 Discontinuance of operation. The licensee of each station shall notify the FCC in Wash.D.C of permanent discontinuance of operation 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 Washington, D.C. office of the FCC for cancellation.

73.1800 General requirements related to the station log. (a) The licensee of each station must maintain a station log as required by Section 73.1820. This log shall be kept by station employees competent to do so, having actual knowledge of the facts required. All entries, whether required or not by the provisions of this Part, must accurately reflect the station operation. Any employee making a log entry shall sign the log, thereby attesting to the fact that the entry, or any correction or addition made thereto, is an accurate representation of what transpired.

(b) The logs shall be kept in an orderly and legible manner, in suitable form and in such detail that the data required for the particular class of station concerned are readily available. Key letters or abbreviations may be used if the proper meaning or explanation is contained elsewhere in the log. Each sheet must be numbered and dated. Time entries must be made in local time and must be indicated as advanced (e.g., EST) or non-advanced (e.g., EST) time.

(c) Any necessary corrections of a manually kept log after it has been signed in accordance with paragraph (a) of this section shall be made only by striking out the erroneous portion and making a corrective explanation on the log or attachment to it. Such corrections shall be dated and signed by the person who kept the log or the station chief operator, the station manager or an officer of the licensee.

(d) No automatically kept log shall be altered in any way after entries have been recorded. When automatic logging processes fail or malfunctions, the log must be kept manually for that period and in accordance with the requirements of this section.

(e) No log, or portion thereof, shall be erased, obliterated or willfully destroyed during the period in which it is required to be retained. (Section 73.1840, Retention of logs.)

(f) RESERVED.

(g) Application forms for licenses and other authorizations may require that certain technical operating data be supplied. These application forms should be kept in mind in connection with the maintenance of the station log.

73.1820 Station logs. (a) Entries shall be made in the operating log either manually by a properly licensed operator in actual charge of the transmitting apparatus, or by automatic devices meeting the requirements of paragraph (b) of this section. Indications of operating parameters that are required to be logged must be logged prior to any adjustment of the equipment. Where adjustments are made to restore parameters to their proper operating values, the corrected indications must be logged and accompanied, if any parameter deviation was beyond a prescribed tolerance, by a notation describing the nature of the corrective action. Indications of all parameters whose values are affected by the modulation of the carrier must be read without modulation. The actual time of observation must be included in each log entry. The following information must be entered:

(1) All stations: (i) Entries required by 17.49 of this chapter concerning any observed or otherwise known extinguishment or improper functioning of a tower light:

(A) The nature of such extinguishment or improper functioning.

(B) The date and time the extinguishment or improper operation was observed or otherwise noted.

(C) The date, time and nature of adjustments, repairs or replacements made.

(ii) Any entries not specifically required in this Section, but required by the instrument of authorization or elsewhere in this part.

(iii) An entry of each test of the Emergency Broadcast System procedures pursuant to the requirements of Subpart G of this Part and the appropriate EBS checklist. All stations may keep EBS test data in a special EBS log which shall be maintained at any convenient location, however, such log should be considered a part of the station log.

(2) Directional AM stations without an FCC-approved antenna sampling system (See 73.68): (i) An entry at the beginning of operations in each mode of operation and thereafter and at intervals not exceeding 3 hours, of the following (actual readings observed prior to making any adjustments to the equipment and an indication of any corrections to restore parameters to normal operating values);

(A) Common point current.

(B) When the operating power is determined by the indirect method, the efficiency factor F and either the product of the final amplifier input voltage and current or the calculated antenna input power See 73.51(e).

(C) Antenna monitor phase of phase deviation indications.

(D) Antenna monitor sample currents, current ratios, or ratio deviation indications.

(ii) Entries required by 73.61 performed in accordance with the schedule specified therein.

(iii) Entries of the results of calibration of automatic logging devices (see paragraph (b) of this section), extension meters (see 73.1550) or indicating instruments (see 73.67) whenever performed.

(b) Automatic devices accurately calibrated and with appropriate time, date and circuit functions may be utilized to record the entries in the station log provided:

(1) The recording devices do not affect the operation of circuits or accuracy of indicating instruments of the equipment being recorded;

(2) The recording devices have an accuracy equivalent to the accuracy of the indicating instruments;

(3) The calibration is checked against the original indicators as often as necessary to ensure recording accuracy.

(4) Provision is made to actuate automatically an aural alarm circuit located near the operator on duty if any of the automatic log readings are not within the tolerances or other requirements specified in the rules of station license;

(5) The alarm circuit operates continuously or the devices which record each parameter in sequence must read each parameter at least once during each 30-minute period;

(6) The automatic logging equipment is located at the remote control point if the transmitter is remotely controlled, or at the transmitter location if the transmitter is manually controlled;

(7) The automatic logging equipment is located in the near vicinity of the operator on duty and is inspected periodically during the broadcast day. In the event of failure of malfunctioning of the automatic equipment, the employee responsible for the log shall make the required entries in the log manually at that time;

(8) The indicating equipment conforms to the requirements of 73.1215 (Indicating instruments -- specifications) except that the scales need not exceed 2 inches in length. Arbitrary scales may not be used.

(c) In preparing the station log, original data may be recorded in rough form and later transcribed into the log.

73.1835 Special technical records. The FCC may require a broadcast station licensee to keep operating and maintenance records as necessary to resolve conditions of actual or potential interference, rule violations, or deficient technical operation.

73.1840 Retention of logs (a) Any log required to be kept by station licensees shall be retained by them for a period of 2 years. However, logs involving communications incident to a disaster or which include communications incident to or involved in an investigation by the FCC and about which the licensee has been notified, shall be retained by the licensee until specifically authorized in writing by the FCC to destroy them. Logs incident to or involved in any claim or complaint of which the licensee has notice shall be retained by the licensee until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for filing of suits upon such claims.

(b) Logs may be retained on microfilm, microfiche or other data storage systems subject to the following conditions:

(1) Suitable viewing -- reading devices shall be available to permit FCC inspection of logs pursuant to Section 73.1226, availability to FCC of station logs and records.

(2) Reproduction of logs, stored on data-storage systems, to full size copies, is required of licensees if requested by the FCC or the public as authorized by FCC rules. Such reproductions must be completed within 2 full work days of the time of the request.

(3) Corrections to logs shall be made:

(i) Prior to converting to a data storage system pursuant to the requirements of Section 73.1800(c) and (d), (Sec. 73.1800, General requirements relating to logs).

(ii) After converting to a data storage system, by separately making such corrections and then associating with the related data stored logs. Such corrections shall contain sufficient information to allow those reviewing the logs to identify where corrections have been made, and when and by whom the corrections were made.

(4) Copies of any log required to be filed with any application; or placed in the station's local public inspection file as part of an application; or filed with reports to the FCC must be reproduced in fullsize form when complying with these requirements.

**73.1860 Transmitter duty operators.** (a) Each AM, FM or TV broadcast station must have at least one person holding a commercial radio operator license or permit (any class, unless otherwise endorsed) on duty in charge of the transmitter during all periods of broadcast operation. The operator must be on duty at the transmitter location, a remote control point, an ATS monitor and alarm point, or a position where extension meters are installed under the provisions of 73.1550.

(b) The transmitter operator must be able to observe the required transmitter and monitor metering to determine deviations from normal indications. The operator must also be able to make the necessary adjustments from the normal operator duty position, except as provided for in 73.1550.

(c) It is the responsibility of the station licensee to ensure that each transmitter operator is fully instructed and capable to perform all necessary observations and adjustments of the transmitting system and other associated operating duties to ensure compliance with the rules and station authorization.

(d) The transmitter duty operator may, at the discretion of the station licensee and chief operator, be employed for other duties or operation of other transmitting stations if such other duties will not interfere with the proper operation of the broadcast transmission system.

**73.1870 Chief operators.** (a) The licensee of each AM, FM, and TV broadcast station must designate a person holding a commercial radio operator license or permit (any class, unless otherwise endorsed) to serve as the station's chief operator. At times when the chief operator is unavailable or unable to act (e.g., vacations, sickness), the licensee shall designate another licensed operator as the acting chief operator on a temporary basis:

(1) The chief operator for an AM station using a directional antenna or operating with greater than 10 kW authorized power, or of a TV station is to be an employee of the station on duty for whatever number of hours each week the station licensee determines is necessary to keep the station's technical operation in compliance with FCC rules and the terms of the station authorization.

(2) Chief operators for non-directional AM stations operating with authorized powers not exceeding 10 kW and FM stations may be either an employee of the station or engaged to serve on a contract basis for whatever number of hours each week the licensee determines is necessary to keep the station's technical operation in compliance with the FCC rules and terms of the station authorization.

(3) The designation of the chief operator must be in writing with a copy of the designation posted with the operator license. Agreements with chief operators serving on a contract basis must be in writing with a copy kept in the station files.

(c) The chief operator is responsible for completion of the following duties specified in this paragraph below. When these duties are delegated to other persons, the chief operator shall maintain supervisory oversight sufficient to know that each requirement has been fulfilled in a timely and correct manner.

(1) Inspections and calibrations of the transmission system, required monitors, metering and control systems; and any necessary repairs or adjustments where indicated. (See §73.1580.)

(2) Make or supervise periodic AM field monitoring point measurements, equipment performance measurements, or other tests as specified in the rules or terms of the station license.

(3) Review of the station records at least once each week to determine if required entries are being made correctly. Additionally, verification must be made that the station has been operated as required by the rules or the station authorization. Upon completion of the review, the chief operator or his designee must date and sign the log, initiate any corrective action which may be necessary and advise the station licensee of any condition which is repetitive.

(4) Any entries which may be required in the station records.  
(See 73.1820.)

73.1910 Fairness Doctrine. The Fairness Doctrine is contained in section 315(a) of the Communications Act of 1934, as amended, which provides that broadcasters have certain obligations to afford reasonable opportunity for the discussion of conflicting views on issues of public importance. See FCC public notice "Fairness Doctrine and the Public Interest Standards," 39 FR 26372. Copies may be obtained from the FCC upon request.

73.1920 Personal attacks. (a) When, during the presentation of views on a controversial issue of public importance, an attack is made upon the honesty, character, integrity or like personal qualities of an identified person or group, the licensee shall, within a reasonable time and in no event later than one week after the attack, transmit to the persons or group attacked:

- (1) Notification of the date, time and identification of the broadcast;
  - (2) A script or tape (or an accurate summary if a script or tape is not available) of the attack; and
  - (3) An offer of a reasonable opportunity to respond over the licensee's facilities.
- (b) The provisions of paragraph (a) of this section shall not be applicable:
- (1) To attacks on foreign groups or foreign public figures;
  - (2) To personal attacks which are made by legally qualified candidates, their authorized spokesmen, or those associated with them in the campaign on other such candidates, their authorized spokesmen or persons associated with the candidates in the campaign; and
  - (3) To bona fide newscasts, bona fide news interviews, and on-the-spot coverage of a bona fide news event, including commentary or analysis contained in the foregoing programs.

(b) The provisions of paragraph (a) of this section shall not apply to broadcast material which falls within one or more of the following categories:

- (1) Personal attacks on foreign groups or foreign public figures;
- (2) Personal attacks occurring during uses by legally qualified candidates;
- (3) Personal attacks made during broadcasts not included in paragraph (b)(2) of this section and made by legally qualified candidates, their authorized spokespersons, or those associated with them in the campaign, on other such candidates, their authorized spokespersons or persons associated with the candidates in the campaign; and
- (4) Bona fide newscasts, bona fide news interviews, and on-the-spot coverage of bona fide news events, including commentary or analysis contained in the foregoing programs.

73.1930 Political editorials. (a) Where a licensee, in an editorial,

- (1) Endorses or,
- (2) Opposes a legally qualified candidate or candidates, the licensee shall, with 24 hours after the editorial, transmit to, respectively,
  - (i) The other qualified candidate or candidates for the same office or;
  - (ii) The candidate opposed in the editorial,
    - (A) Notification of the date and the time of the editorial,
    - (B) A script or tape of the editorial and
    - (C) An offer of reasonable opportunity for the candidate or a spokesman of the candidate to respond over the licensee's facilities. Where such editorials are broadcast on the day of the election or within 72 hours prior to the day of the election, the licensee shall comply with the provisions of this paragraph sufficiently far in advance of the broadcast to enable the candidate or candidates to have a reasonable opportunity to prepare a response and to present it in a timely fashion.

(b) Inasmuch as noncommercial educational stations may not engage in editorializing nor may support nor oppose any candidate for political office (section 399, Communications Act), The provisions of paragraph (a) of this section, do not apply to such stations.

§73.1940 Broadcasts by candidates for public office. (a) Definitions. (a) A legally qualified candidate for public office is any person who

- (i) Has publicly announced his or her intention to run for nomination or office;
- (ii) Is qualified under the applicable local, State or Federal law to hold the office for which he or she is a candidate; and
- (iii) Has met the qualifications set forth in either subparagraphs (2), (3), or (4), below.

(2) A person seeking election to any public office including that of President or Vice President of the United States, or nomination for any public office except that of President or Vice President, by means of a primary, general or special election, shall be considered a legally qualified candidate if, in addition to meeting the criteria set forth in subparagraph (1) above, that person:

- (i) Has qualified for a place on the ballot, or
- (ii) Has publicly committed himself or herself to seeking election by the write-in method and is eligible under applicable law to be voted for by sticker, by writing in his or her name on the ballot or by other method, and makes a substantial showing that he or she is a bona fide candidate for nomination or office.

Persons seeking election to the office of President or Vice President of the United States shall, for the purposes of the Communications Act and the rules thereunder, be considered legally qualified candidates only in those States or territories (or the District of Columbia) in which they have met the requirements set forth in paragraph (a)(1) and (2) of this rule: Except, that any such person who has met the requirements set forth in paragraph (a)(1) and (2) in at least 10 States (or 9 and the District of Columbia) shall be considered a legally qualified candidate for election in all States, territories, and the District of Columbia for purposes of this Act.

(3) A person seeking nomination to any public office, except that of President or Vice President of the United States, by means of a convention, caucus or similar procedure, shall be considered a legally qualified candidate if, in addition to meeting the requirements set forth in paragraph (a)(1) above, that person makes a substantial showing that he or she is a bona fide candidate for such nomination: Except, that no person shall be considered a legally qualified candidate for nomination by the means set forth in this paragraph prior to 90 days before the beginning of the convention, caucus or similar procedure in which he or she seeks nomination.

(4) A person seeking nomination for the office of President or Vice President of the United States shall, for the purposes of the Communications Act and the rules thereunder, be considered a legally qualified candidate only in those States or territories (or the District of Columbia) in which, in addition to meeting the requirements set forth in paragraph (a)(1) above,

- (i) He or she has made a substantial showing of bona fide candidacy for such nomination in that State, territory or the District of Columbia; Except that any such person meeting the requirements set forth in paragraph (a)(1) and (4) in at least 10 States (or nine and the District of Columbia) shall be considered a legally qualified candidate for nomination in all States, territories and the District of Columbia for purposes of this act.

(5) The term "substantial showing" of bona fide candidacy as used in paragraphs (a)(2), (3), and (4) above means evidence that the person claiming to be a candidate has engaged to a substantial degree in activities commonly associated with political campaigning. Such activities normally would include making campaign speeches, distributing campaign literature, issuing press releases, maintaining a campaign committee, and establishing campaign headquarters (even though the headquarters in some instances might be the residence of the candidate or his campaign manager). Not all of the listed activities are necessarily required in each case to demonstrate a substantial showing, and there may be activities not listed herein which would contribute to such a showing.

(b) Charges for use of stations. The charges, if any, made for the use of any broadcasting station by any person who is a legally qualified candidate for any public office in connection with his campaign for nomination for election, or election, to such office shall not exceed

(1) during the 45 days preceding the date of a primary or primary runoff election and during the 60 days preceding the date of a general or special election in which such person is a candidate, the lowest unit charge of the station for the same class and amount of time for the same period, and

(2) at any other time the charges made for comparable use of such station by other users thereof. The rates, if any, charged all such candidates for the same office shall be uniform and shall not be rebated by any means direct or indirect. A candidate shall be charged no more than the rate the station would charge if the candidate were a commercial advertiser whose advertising was directed to promoting its business within the same area as that encompassed by the particular office for which such person is a candidate. All discount privileges otherwise offered by a station to commercial advertisers shall be available upon equal terms to all candidates for public office.

(3) This paragraph shall not apply to any station which is not licensed for commercial operation.

(c) Discrimination between candidates. In making time available for public office, no licensee shall make any discrimination between candidates in practices, regulations, facilities, or services for or in connection with the service rendered pursuant to this part, or make or give any preference to any candidate for public office or subject any such candidate to any prejudice or disadvantage; nor shall any licensee make any contract or other agreement which shall have the effect of permitting any legally qualified candidate for any public office to broadcast to the exclusion of other legally qualified candidates for the same public office.

(d) Records, inspection. Every licensee shall keep and permit public inspection of a complete record (political file) of all requests for broadcast time made by or on behalf of candidates for public office, together with an appropriate notation showing the disposition made by the licensee of such requests, and the charges made, if any, if the request is granted. When free time is provided for use by or on behalf of such candidates, a record of the free time provided shall be placed in the political file. All records required by this paragraph shall be placed in the political file as soon as possible and shall be retained for a period of two years. See 73.3526 and 73.3527.

(e) Time of request. A request for equal opportunities must be submitted to the licensee within 1 week of the day on which the first prior use, giving rise to the right of equal opportunities, occurred: PROVIDED, HOWEVER, That where the person was not a candidate at the time of such first prior use, he shall submit his request within 1 week of the first subsequent use after he has become a legally qualified candidate for the office in question.

(f) Burden of proof. A candidate requesting equal opportunities of the licensee, or complaining of noncompliance to the Commission shall have the burden of proving that he and his opponent are legally qualified candidates for the same public office.

(g) General requirements. (1) Except as otherwise indicated in paragraph (g)(2) of this section, no station licensee is required to permit the use of its facilities by any legally qualified candidate for public office, but if any licensee shall permit any such candidate to use its facilities, it shall afford equal opportunities to all other candidates for that office to use such facilities. Such licensee shall have no power of censorship over the material broadcast by any such candidate. Appearance by a legally qualified candidate on any (i) bona fide newscast, (ii) bona fide interview, (iii) bona fide documentary (if the appearance of the candidate is incidental to the presentation of the subject covered by the news documentary), or (iv) on-the-spot coverage of bona fide news event (including, but not limited to political conventions and activities incidental thereto) shall not be deemed to be use of a broadcasting station. (Section 315(a) of the Communications Act.)

(2) Section 312(a)(7) of the Communications Act provides that the Commission may revoke any station license or construction permit for willful or repeated failure to allow reasonable access to, or to permit purchase of, reasonable amounts of time for the use of a broadcasting station by a legally qualified candidate for Federal elective office on behalf of his candidacy.

(h) Political broadcasting primer. A detailed study of these rules regarding broadcasts by candidates for Federal and non-Federal public office is available in the FCC public notice of July 20, 1978, "The Law of Political Broadcasting and Cablecasting." Copies may be obtained from the FCC upon request.

§73.2080 Equal employment opportunities. (a) General policy. Equal opportunity in employment shall be afforded by all licensees or permittees of commercially or non-commercially operated AM, FM, TV (or international broadcast stations (as defined in this part) to all qualified persons, and no person shall be discriminated against in employment because of race, color, religion, national origin or sex.

(b) Equal employment opportunity program. Each station shall establish, maintain, and carry out, a positive continuing program of specific practices designed to assure equal opportunity in every aspect of station employment policy and practice. Under the terms of its programs, a station shall:

(1) Define the responsibility of each level of management to insure a positive application and vigorous enforcement of the policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance.

(2) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation.

(3) Communicate the station's equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to race, color, religion, national origin or sex, and solicit their recruitment assistance on a continuing basis.

(4) Conduct a continuing campaign to exclude every form of prejudice or discrimination based upon race, color, religion, national origin or sex, from the station's personnel policies and practices and working conditions.

(5) Conduct continuing review of job structure and employment practices and adopt positive recruitment, training, job design, and other measures needed in order to insure genuine equality of opportunity to participate fully in all organizational units, occupations and levels of responsibility in the station.

(c) Applicants for a construction permit for a new facility, for authority to obtain assignment of the construction permit or license of such a station, for authority to acquire control of any entity holding such construction permit or license (other than pro forma or involuntary assignments and transfers), and for renewal of license, shall file with the FCC programs designed to provide equal employment opportunities for American Indians and Alaskan Natives; Asians and Pacific Islanders; Blacks, not of Hispanic Origin; Hispanics; and women, or amendments to such programs. Guidelines for the preparation of such programs are set forth in the relevant Commission application forms. A program need not be filed by any applicant who employs or proposes to employ less than five full-time employees. Additionally, a program for minority group members need not be filed if minorities constitute less than five percent, in the aggregate, of the labor force in the applicant's labor recruitment area. Applicants exempt from the filing requirement should submit a statement of explanation with their applications.

§73.3500 Application and report forms. Following are the FCC broadcast application and report forms, listed by number.

FORM NUMBER	TITLE
301	Application for Authority to Construct or Make Changes in a Commercial Broadcast Station.
301-A	Application for Authority to Operate a Broadcast Station by Remote Control or to Make Changes in a Remote Control Authorization.
302	Application for New Broadcast Station License.
303S	Application for Renewal of License for Commercial and Noncommercial Educational AM, FM and TV Broadcast Sta's
308	Application for Permit to Deliver Programs to Foreign Broadcast Stations.
309	Application for Authority to Construct or Make Changes in an International or Experimental Broadcast Station.
310	Application for an International or Experimental Broadcast Station License.
311	Application for Renewal of an International or Experimental Broadcast Station License.
313	Application for Authorization in the Auxiliary Broadcast Services.
313-R	Application for Renewal of Auxiliary Broadcast License (Short Form).
314	Application for Consent to Assignment of Broadcast Construction Permit or License.
315	Application for Consent to Transfer of Control of Corporation Holding Broadcast Station Construction Permit or License.
316	Application for Consent to Assignment of Broadcast Station Construction Permit or License or Transfer of Control of Corporation Holding Broadcast Station Construction Permit or License.
318	Deleted.
321	Deleted. See 701 page 18.
323	Ownership Report
323-E	Ownership Report for Noncommercial Educational Broadcast Station.
330-L	Application for instructional Television Fixed Station License.
330-P	Application for Authority to Construct or Make Changes in an Instructional TV Fixed Station and/or Response Station(s) and Low Power Relay Station(s).
330-R	Application for Renewal of Instructional TV Fixed Station and/or Response Station(s) and Low Power Relay Station(s) License.
340	Application for Authority to Construct or Make Changes in a Noncommercial Educational Broadcast Station.
345	Application for Consent to Assignment of a TV or FM Translator Station Construction Permit or License.
346	Application for Authority to Construct or Make Changes in a Low Power TV, TV Translator or FM Translator station.

FORM NUMBER	TITLE
347	Application for a Low Power TV, TV Translator or FM Translator Station.
348	Application for Renewal of a Low Power TV, TV Translator, or FM Translator Station License.
349-L	Application for an FM Booster Station License.
349-P	Application for Authority to Construct or Make Changes in an FM Booster Station.
349-R	Application for Renewal of FM Booster Station License.
395	Annual Employment Report and Instructions.
396	Equal Employment Opportunity Program (10 point program)
396-A	Equal Employment Opportunity Program (5 point program)
701	Application for Extension of Construction Permit or to Re-

FILING OF APPLICATIONS

§73.3511 Applications required. (a) "Formal application" means any request for authorization where an FCC form for such request is prescribed. The prescription of an FCC form includes the requirement that the proper edition of the form is used. Formal applications on obsolete forms are subject to the provisions of §73.3564 concerning acceptance of applications and §73.3566 concerning defective applications.

(b) "Informal application" means all other written requests for authorization. All such applications should contain a caption clearly indicating the nature of the request submitted therein.

(c) Formal and informal applications must comply with the requirements as to signing specified herein and in §73.3513.

(d) In cases of emergency found by the FCC involving danger to life or property or due to damage to equipment, or during a national emergency proclaimed by the President or declared by the Congress and during the continuance of any war in which the United States is engaged, and when such action is necessary for the national defense or security or otherwise in furtherance of the war effort, the FCC may grant construction permits and station licenses, or modifications or renewals thereof, without the filing of a formal application; but no authorization so granted shall continue in effect beyond the period of the emergency or war requiring it.

§73.3512 Where to file; number of copies. All applications for authorizations required by §73.3511 shall be filed at the FCC in Washington, D. C. The number of copies required for each application is set forth in the FCC Form which is to be used in filing such application.

§73.3513 Signing of applications. (a) Applications, amendments thereto, and related statements of fact required by the FCC must be signed by the following persons:

- (1) INDIVIDUAL APPLICANT. The applicant, if the applicant is an individual.
- (2) PARTNERSHIP. One of the partners, if the applicant is a partnership.
- (3) CORPORATION. An officer, if the applicant is a corporation.
- (4) UNINCORPORATED ASSOCIATION. A member who is an officer, if the applicant is an unincorporated association.

(4) GOVERNMENTAL ENTITY. Such duly elected or appointed officials as may be competent to do so under the law of the applicable jurisdiction, if the applicant is an eligible governmental entity, such as a State or Territory of the United States and political subdivisions thereof, the District of Columbia, and a unit of local government, including an unincorporated municipality.

(b) Applications, amendments thereto, and related statements of fact required by the FCC may be signed by the applicant's attorney in case of the applicant's physical disability or of his absence from the United States. The attorney shall in that event separately set forth the reason why the application is not signed by the applicant. In addition, if any matter is stated on the basis of the attorney's belief only (rather than his knowledge), he shall separately set forth his reasons for believing that such statements are true.

(c) Only the original of applications, amendments, or related statements of fact, need be signed; copies may be conformed.

(d) Applications, amendments and related statements of fact need not be submitted under oath. Willful false statements made therein however, will be considered a violation of §73.1015, are also punishable by fine and imprisonment, U.S. Code, Title 18, section 1001, and by appropriate administrative sanctions including revocation of station license pursuant to section 312(a)(1) of the Communications Act.

§73.3514 Content of applications. (a) Each application shall include all information called for by the particular form on which the application is required to be filed unless the information called for is inapplicable, in which case this fact shall be indicated.

(b) The FCC may require an applicant to submit such documents and written statements of fact as in its judgment may be necessary. The FCC may also, upon its own motion or upon motion of any party to a proceedings, order the applicant to amend the application so as to make it more definite and certain.

§73.3516 Specification of facilities.(a) An application for facilities in the AM, FM or TV broadcast services or low power TV service shall be limited to one frequency or channel assignment and no application will be accepted for filing if it requests alternate frequency or channel assignments.

(b) An application for facilities in the experimental and auxiliary broadcast services may request the assignment of more than one frequency if consistent with applicable rules in Part 74. Such applications must specify the frequency or frequencies requested and may not request alternate frequencies.

(c) An application for a construction permit for a new broadcast station, the facilities for which are specified in an outstanding construction permit or license, will not be accepted for filing.

(d) An application for facilities in the International broadcast service may be filed without a request for specific frequency, as the FCC will assign frequencies from time to time in accordance with §§73.702 and 73.711.

(e) An application for a construction permit for a new broadcast station or for modification of construction permit or license of a previously authorized broadcast station will not be accepted for filing if it is mutually exclusive with an application for renewal of license of an existing broadcast station unless it is tendered for filing by the end of the first day of the last full calendar month of the expiring license term.

(1) If the license renewal application is not timely filed as prescribed in §73.3539, the deadline for filing applications mutually exclusive therewith is the 90th day after the FCC gives public notice that it has accepted the late-filed renewal application for filing.

(2) If any deadline falls on a nonbusiness day, the cutoff shall be the close of business of the first full business day thereafter.

(3) The dates when the licenses of all broadcast and broadcast auxiliary services regularly expire are listed in §§73.733, 73.1020 and 74.15.

73.3517 Contingent applications. Contingent applications for new stations and for changes in facilities of existing stations are not acceptable for filing. Contingent applications will be accepted for filing under circumstances described below:

(a) Upon the filing of an application for the assignment of a license or construction permit, or for a transfer of control of a licensee or permittee, the proposed assignee or transferee may, upon payment of the filing fee prescribed in §1.1111 of this chapter, file applications in its own name for authorization to make changes in the facilities to be assigned or transferred contingent upon approval and consummation of the assignment or transfer. Any application filed pursuant to this paragraph must be accompanied by a written statement from the existing licensee which specifically grants permission to the assignee or transferee to file such application. The filing fee will not be refundable should the assignment or transfer not be approved. The existing licensee or permittee may also file a contingent application in its own name, but fees in such cases are also not refundable.

(b) Whenever the FCC determines that processing of any application filed pursuant to paragraph (a), of this section, would be contrary to sound administrative practice or would impose an unwarranted burden on its staff and resources, the FCC may defer processing of such application until the assignment or transfer has been granted and consummated.

§73.3518 Inconsistent or conflicting applications. While an application is pending and undecided, no subsequent inconsistent or conflicting application may be filed by or on behalf of or for the benefit of the same applicant, successor or assignee.

§73.3519 Repetitious applications. (a) Where the FCC has denied an application for a new station or for any modification of services or facilities, or dismissed such application with prejudice, no like application involving service of the same kind for substantially the same area by substantially the same applicant, or his successor or assignee, or on behalf of or for the benefit of the original parties in interest, may be filed within 12 months from the effective date of the FCC's action. However, applicants whose applications have been denied in a comparative hearing may apply immediately for another available facility.

(b) Where an appeal has been taken from the action of the FCC in denying a particular application, another application for the same class of broadcast station and for the same area, in whole or in part, filed by the same applicant, or his successor or assignee, on behalf of, or for the benefit of the original parties in interest, will not be considered until final disposition of such appeal.

§73.3520 Multiple applications. Where there is one application for new or additional facilities pending, no other application for new or additional facilities for a station of the same class to serve the same community may be filed by the same applicant, or successor or assignee, or on behalf of, or for the benefit of the original parties in interest. Multiple applications may not be filed simultaneously.

§73.3522 Amendment of applications. (a) PREDESIGNATION AMENDMENT.

(1) Subject to the provisions of §§73.3525, 73.3571, 73.3572, 73.3573 and 73.3580 and except as provided in paragraph (a)(2) of this section, any application, other than an application for a low power TV, TV translator station, or a non-reserved band FM station may be amended as a matter of right prior to the adoption date of an order designating such applications for hearings, merely by filing the appropriate number of copies of the amendments in question duly executed in accordance with §73.3513. If a petition to deny (or to designate for hearing) has been filed, the amendment shall be served on the petitioner.

(2) Subject to the provisions of §§73.3525, 73.3571, 73.3572, 73.3573 and 73.3580 and except for applications for low power TV, TV translator stations or a non-reserved band FM station, mutually exclusive broadcast applications may be amended as a matter of right by the specified (not less than 30 days after issuance) in the FCC's Public Notice announcing the acceptance for filing of the last-filed mutually exclusive application. Subsequent amendments prior to designation of the proceeding for hearing will be considered only upon a showing of a good cause for late filing or pursuant to §1.65 or 73.3514. Unauthorized or untimely amendments are subject to return by the FCC's staff without consideration.

(3) Subject to the provisions of 73.3525, 73.3572 and 73.3580 and except as provided in (4) of this paragraph, any application for low power TV and TV translators may be amended at any time.

(4) No applicant for low power TV and TV translator station which is mutually exclusive can improve its status with respect to §1.1622 by amendment of its application subsequent to the release of the initial Public Notice announcing the public lottery that will resolve the applicant's mutual exclusivity pursuant to §1.1601 et seq., notwithstanding the requirements of §1.65.

(5) Paragraphs (b) and (c) of this section are not applicable to applications for low power TV and TV translator stations.

(6) Subject to the provisions of §§73.3525, .3573 and .3580, applications for non-reserved band FM stations (other than Class D stations) may be amended as a matter of right during the appropriate window filing period of 30 days following the FCC's issuance of a Public Notice announcing the acceptance of the application for tender, minor amendments may be filed as a matter of right; provided, however that such amendments may not correct deficiencies in the tenderability of the underlying application. Subsequent amendments prior to designation for hearing or grant will be considered only upon a showing of good cause for late filing or pursuant to §1.65 or §73.3514. Unauthorized or untimely amendments are subject to return by the Commission. However, an amendment to a non-reserved band application will not be accepted after the close of the appropriate filing window if the effect of such amendment is to alter the proposed facility's coverage area so as to produce a conflict with an applicant who files subsequent to the initial applicant but prior to the amendment application. Similarly, an applicant subject to "first come/first serve" processing will not be permitted to amend its application and retain filing priority if the result of such amendment is to alter the facility's coverage area so as to produce a conflict with an applicant who files subsequent to the initial applicant but prior to the amendment.

(b) POSTDESIGNATION AMENDMENT. (1) Except as provided in paragraph (b) (2) of this section, requests to amend an application after it has been designated for hearing will be considered only upon written petition properly served upon the parties of record in accordance with §1.47 and, where applicable, compliance with the provisions of §73.3525, and will be considered only upon a showing of good cause for late filing. In the case of requests to amend the engineering proposal (other than to make changes with respect to the type of equipment specified), good cause will be considered to have been shown only if, in addition, to the usual good cause consideration, it is demonstrated:

(i) That the amendment is necessitated by events which the applicant could not reasonably have foreseen (e.g. notification of a new foreign station or loss of transmitter site by condemnation); and

(ii) That the amendment does not require an enlargement of issues or the addition of new parties to the proceeding.

(2) In comparative broadcast cases (including comparative renewal proceedings), amendments relating to issues first raised in the designation order may be filed as a matter of right within 30 days after that Order or a summary thereof is published in the Federal Register, or by a date certain to be specified in the Order.

(c) Notwithstanding the provisions of paragraph (b) of this section, and subject to compliance with the provisions of §73.3525, a petition for leave to amend may be granted, provided it is requested that the application as amended be removed from the hearing docket and returned to the processing line. See §73.3571.

NOTE 1: When two or more broadcast applications are tendered for filing which are mutually exclusive with each other but not in conflict with any previously filed applications which have been accepted for filing, the FCC, where appropriate, will announce acceptance of the earliest tendered application and place the later filed application or applications on a subsequent public notice of acceptance for filing in order to establish a deadline for the filing of amendments as a matter of right for all applicants in the group.

73.3525 Agreement for removing application conflicts. (a) Whenever applicants for a construction permit for a broadcast station enter into an agreement to procure the removal of a conflict between applications pending before the FCC by withdrawal or amendment of an application or by its dismissal pursuant to 73.3568, all parties thereto shall, within 5 days after entering into the agreement, file with the FCC a joint request for approval of such agreement. The joint request shall be accompanied by a copy of the agreement and an affidavit of each party to the agreement setting forth:

(1) The reasons why it is considered that such agreement is in the public interest; and

(2) A statement that its application was not filed for the purpose of reaching or carrying out such agreement.

(b) deleted and reserved.

(c) Whenever two or more conflicting applications for construction permits for broadcast stations pending before the FCC involve a determination of fair, efficient and equitable distribution of service pursuant to Section 307(b) of the Communications Act, and an agreement is made to procure the withdrawal (by amendment to specify a different community or by dismissal pursuant to §73.3568) of the only application or applications seeking the same facilities for one of the communities involved, all parties thereto shall file the joint request and affidavits specified in paragraph (a) of this section.

(1) If upon examination of the proposed agreement the FCC finds that withdrawal of one of the applications would unduly impede achievement of a fair, efficient and equitable distribution of radio service among the several States and communities, then the FCC shall order that further opportunity be afforded for other persons to apply for the facilities specified in the application or applications to be withdrawn before acting upon the pending request for approval of the agreement.

(2) Upon release of such order, any party proposing to withdraw its application shall cause to be published a notice of such proposed withdrawal at least twice a week for 2 consecutive weeks within the 3 week period immediately following release of the FCC's order, in a daily newspaper of general circulation published in the community in which it was proposed to locate the station. However, if there is no such daily newspaper published in the community, the notice shall be published as follows:

(i) If one or more weekly newspapers of general circulation are published in the community in which the station was proposed to be located, notice shall be published in such a weekly newspaper once a week for 3 consecutive weeks within the 4 week period immediately following the release of the FCC's order.

(ii) If no weekly newspaper of general circulation is published in the community in which the station was proposed to be located, notice shall be published at least twice a week for 2 consecutive weeks within the 3 week period immediately following the release of the FCC's order in the daily newspaper having the greatest general circulation in the community in which the station was proposed to be located.

(3) The notice shall state the name of the applicant, the location, frequency and power of the facilities proposed in the application; the location of the station or stations proposed in the applications with which it is in conflict; the fact that the applicant proposes to withdraw the application; and the date upon which the last day of publication shall take place.

(4) Such notice shall additionally include a statement that new applications for a broadcast station on the same frequency, in the same community, with substantially the same service area as the application sought to be withdrawn, timely filed pursuant to the FCC's rules, or filed, in any event, within 30 days from the last date of publication of the notice (notwithstanding any provisions normally requiring earlier filing of a competing application), will be entitled to comparative consideration with other pending mutually exclusive affidavits.

(5) Within 7 days of the last day of publication of the notice, the applicant proposing to withdraw shall file a statement in triplicate with the FCC giving the dates on which the notice was published, the text of the notice and the name and location of the newspaper in which the notice was published.

(6) Where the FCC orders that further opportunity be afforded for other persons to apply for the facilities sought to be withdrawn, no application of any party to the agreement will be acted upon by the FCC less than 30 days from the last day of publication of the notice specified in paragraph (c)(2) of this section. Any applications for a broadcast station on the same frequency in the same community, with substantially the same engineering characteristics and proposing to serve substantially the same service area as the application sought to be withdrawn, filed within the 30-day period following the last date of publication of the notice (notwithstanding any provisions normally requiring earlier filing of a competing application), or otherwise timely file, will be entitled to comparative consideration with other pending mutually exclusive applications. If the application of any party to which the new application may be in conflict has been designated for hearing, any such new application will be entitled to consolidation in the proceeding.

(d) Except where a joint request is filed pursuant to paragraph (a) of this section, any applicant filing an amendment pursuant to §73.3522(a) or a request for dismissal pursuant to §73.3568(a) which would remove a conflict with another pending application; or a petition for leave to amend pursuant to §73.3522(b) or (c) which would permit a grant of the amended application or an application previously in conflict with the amended application; or a request for dismissal pursuant to §73.3568(c), shall file with it an affidavit as to whether or not consideration (including an agreement for merger of interests) has been promised to or received by such applicant, directly or indirectly, in connection with the amendment, petition or request.

(e) Upon the filing of a petition for leave to amend or to dismiss an application for broadcast facilities which has been designated for hearing or upon the dismissal of such application on the FCC's own motion pursuant to §73.3568(b), each applicant or party remaining in hearing, as to whom a conflict would be removed by the amendment or dismissal shall submit for inclusion in the record of that proceeding an affidavit stating whether or not he has directly or indirectly paid or promised consideration (including an agreement for merger of interests) in connection with the removal of such conflict.

(f) Where an affidavit filed pursuant to paragraph (d) of this section states that consideration has been paid or promised, the affidavit shall set forth in full all relevant facts, including, but not limited to, the material listed in paragraph (a) of this section for inclusion in affidavits.

(g) Affidavits filed pursuant to this section shall be executed by the applicant, permittee or licensee, if an individual; a partner having personal knowledge of the facts, if a partnership; or an officer having personal knowledge of the facts, if a corporation or association.

(h) Requests and affidavits which relate to an application which has not been designated for hearing shall bear the file number of such application. If the affiant is also an applicant, the affidavit shall also bear the file number of affiant's pending application(s). Requests and affidavits which relate to an application which is designated for hearing shall bear the file number of that application and the hearing docket number and will be acted on by the presiding officer.

(i) For the purposes of this Section an application shall be deemed to be "pending" before the FCC and a party shall be considered to have the status of an "applicant" from the time an application is filed with the FCC until an order of the FCC granting or denying it is no longer subject to reconsideration by the FCC or to review by any court.

73.3526 Local public inspection file of commercial stations.

(a) **RECORDS TO MAINTAIN.** Every applicant for a construction permit for a new station in the commercial broadcast services shall maintain for public inspection a file containing the material described in paragraph (a)(1) of this section. (Every permittee of licensee of and AM, FM or TV station in the commercial broadcast services shall maintain for public inspection a file containing the material described in paragraphs (a)(1), (2), (3), (4), (5), (6), (7), (10) of this section. In addition every permittee or licensee of a TV station shall maintain for public inspection a file containing the material described in paragraphs (a)(8) of this section;) every permittee of licensee of an AM or FM station shall maintain for public inspection a file containing material described in paragraph (a)(9) of this section. The material to be contained in the file is as follows:

(1) A copy of every application tendered for filing, with respect to which local public notice is required to be given under the provisions of §73.3580 or §73.3594; and all exhibits, letters and other documents tendered for filing as part thereof; all amendments thereto, copies of all documents incorporated therein by reference, all correspondence between the FCC and the applicant pertaining to the application after it has been tendered for filing, and copies of Initial Decisions and Final Decisions in hearing cases pertaining thereto, which according to the provisions of §§0.451-0.461 of the rules are open for public inspection at the offices of the FCC. Information incorporated by reference which is already in the local file need not be duplicated if the entry making the reference sufficiently identifies the information so that it may be found in the file, and if there has been no change in the document since the date of filing and the applicant, after making the reference, so states. If petitions to deny are filed against the application, and have been duly served on the applicant, a statement that such a petition has been filed shall appear in the local file together with the name and address of the party filing the petition. The file shall also contain a copy of every written citizen agreement. For purposes of this Section, a citizen agreement is a written agreement between a broadcast applicant, permittee, or licensee, and one or more citizens or citizen groups, entered for primarily noncommercial purposes. The definition includes those agreements that deal with goals or proposed practices directly or indirectly affecting station operation in the public interest, in areas such as -- but not limited to -- community ascertainment, programming, and employment. It excludes common commercial agreements such as advertising contracts; union, employment, and personal services contracts; network affiliation, syndication, program supply contracts and so on. However, the mere inclusion of **commercial terms in a primarily noncommercial agreement--such as a provision for payment of fees for future services of the citizen-parties (see "Report and Order," Docket 19518, 57 FCC 2nd 494 1976)--would not cause the agreement to be considered commercial for purposes of this section.**

**NOTES:** Applications tendered for filing on or before May 13, 1965, which are subsequently designated for hearing after May 13, 1965, with local notice being given pursuant to the provisions of §73.3594, and material related to such applications, need not be placed in the file required to be kept by this Section. Applications tendered for filing after May 13, 1965, which contain major amendments to applications tendered for filing on or before May 13, 1965, with local notice of the amending application being given pursuant to the provisions of §73.3580, need not be placed in the file required to be kept by this section.

(2) A copy of every application tendered for filing by the licensee or permittee for such station which is not included in paragraph (a)(1) of this section and which involves changes in program service, which requests an extension of time in which to complete construction of a new station, or which requests consent to involuntary assignment or transfer, or to voluntary assignment or transfer not resulting in a substantial change in ownership or control and which may be applied for on FCC Form 316; and copies of all exhibits, letters, and other documents filed as part thereof, all amendments thereto, all correspondence between the FCC and the applicant pertaining to the application after it has been tendered for filing, and copies of all documents incorporated therein by reference, which according to the

provisions of §§0.451-0.461 of this rule are open for public inspection at the offices of the FCC. Information incorporated by reference which is already in the local file need not be duplicated if the entry making the reference sufficiently identifies the information so that it may be found in the file, and there has been no change in the document since the date of filing and the licensee, after making the reference, so states. If petitions to deny are filed against the application, and have been duly served on the applicant, a statement that such a petition has been filed shall appear in the local file together with the name and address of the party filing the petition.

**Note--The engineering section of the applications mentioned in paragraphs (a)(1) and (2) of this section and material related to the engineering section, need not be kept in the file required to be maintained by this paragraph. If such engineering section contains service contour maps submitted with that section, copies of such maps and information (State, county, city, street address or other identifying information) showing main studio and transmitter location shall be kept in the file.**

(3) A copy of every ownership report or supplemental ownership report filed by the licensee or permittee for such station after May 13, 1965, pursuant to the provisions of this part; and copies of all exhibits, letters, and other documents filed as part thereof, all amendments thereto, all correspondence between the permittee or licensee and the FCC pertaining to the reports after they have been filed, and all documents incorporated therein by reference, including contracts listed in such reports in accordance with the provisions of §73.3615(a)(4)(i) and which according to the provisions of §§0.451-0.461 of the rules are open for public inspection at the offices of the FCC. Information incorporated by reference which is already in the local file need not be duplicated if the entry making the reference sufficiently identifies the information so that it may be found in the file, and if there has been no change in the document since the date of filing and the licensee or permittee, after making the reference, so states.

(4) Such records as are required to be kept by §73.1940 concerning broadcasts by candidates for public office.

(5) A copy of every annual employment report filed by the licensee or permittee for such station pursuant to the provisions of this part; and copies of all exhibits, letters and other documents filed as part thereof, all amendments thereto, and all correspondence between the permittee or licensee and the FCC pertaining to the reports after they have been filed and all documents incorporated therein by reference and which according to the provisions of §§0.451-0.461 of the rules are open for public inspection at the offices of the FCC.

(6) The Public and Broadcasting -- A Procedure Manual (see FCC 74-942, 39 FR 32288, September 5, 1974).

(7) Letters received from members of the public as are required to be retained by §73.1202.

(8) For commercial TV broadcast stations, every three months a list of programs that have provided the station's most significant treatment of community issues during the preceding three month period. The list for each calendar quarter is to be filed by the tenth day of the succeeding calendar quarter (e.g., January 10 for the quarter October-December, April 10 for the quarter January-March, etc.). The list include a brief narrative describing what issues were given significant treatment and the programming that provided this treatment. The description of the programs should include, but is not limited to, the time, date, duration and title of each program in which the issue was treated.

(9) For commercial AM and FM broadcast stations, every three months a list of programs that have provided the station's most significant treatment of community issues during the preceding three month period. The list for each calendar quarter is to be filed by the tenth of the succeeding calendar quarter (e.g., January 10 for the quarter October-December, April 10 for the quarter January-March, etc.). The list shall include a brief narrative describing what issues were given significant treatment and the programming that provided this treatment. The description of the programs should include, but is not limited to, the time, date, duration and title of each program in which the issue was treated.

(10) Each applicant for renewal of license shall, within 7 days of the last day of broadcast of the local public notice of filing announcements required pursuant to §73.3580(h), place in the station's local public inspection file a statement certifying compliance with this requirement. The dates and times that the pre-filing and post-filing notices were broadcast and the text thereof shall be made part of the certifying statement.

(b) RESPONSIBILITY IN CASE OF ASSIGNMENT OR TRANSFER. (1) In cases involving applications for consent to assignment of broadcast station construction permits or licenses, with respect to which public notice is required to be given under the provisions of §73.3580 or §73.3594, the file mentioned in paragraph (a) of this section shall be maintained by the assignor. If the assignment is consented to by the FCC and consummated, the assignee shall maintain the file commencing with the date on which notice of the consummation of the assignment is filed with the FCC. The file maintained by the assignee shall cover the period both before and after the time when the notice of consummation of assignment was filed. The assignee is responsible for obtaining copies of the necessary documents from the assignor or from the FCC files.

(2) In cases involving applications for consent to transfer of control of a permittee or licensee of a broadcast station, the file mentioned in paragraph (a) of this section shall be maintained by the permittee or licensee.

(c) STATION TO WHICH RECORDS PERTAIN. The file need contain only applications, ownership reports, and related material that concern the station for which the file is kept. Applicants, permittees, and licensees need not keep in the file copies of such applications, reports, and material which pertain to other stations with regard to which they may be applicants, permittees, or licensees, except to the extent that such information is reflected in the materials required to be kept under the provisions of this Section.

(d) LOCATION OF RECORDS. The file shall be maintained at the main studio of the station, or any accessible place (such as a public registry for documents or an attorney's office) in the community to which the station is or is proposed to be licensed, and shall be available for public inspection at any time during regular business hours.

(e) PERIOD OF RETENTION. The records specified in paragraph (a)(4) of this section shall be retained for periods specified in 73.1940 (2 years). The manual specified in paragraph (a)(6) of this section shall be retained indefinitely. The letters specified in paragraph (a)(7) of this section shall be retained for the period specified in 73.1202 (3 years). The "significant treatment in paragraphs (a)(8) and (9) of this section shall be retained for the term of license (5 and 7 years for TV and radio respectively). The certification specified in paragraph (a)(10) of this section shall be retained for the period specified in 73.3580 (for as long as the application to which it refers). The records specified in paragraphs (a)(1), (2), (3) and (5) of this section shall be retained as follows:

(1) The applicant for a construction permit for a new station shall maintain such a file so long as the application is pending before the FCC or any proceeding involving that application is pending before the courts. (If the application is granted, paragraph (e)(2) of this section shall apply.)

(2) The permittee or licensee shall maintain such a file so long as an authorization to operate the station is outstanding, and shall permit public inspection of the material as long as it is retained by the licensee even though the request for inspection is made after the conclusion of the required retention period specified in this subparagraph. However, material which is voluntarily retained after the required retention time may be kept in a form and place convenient to the licensee, and shall be made available to the inquiring party, in good faith after written request, at a time and place convenient to both the party and the licensee. Applications and related material placed in the file shall be retained for a period of 7 years from the date the application is tendered for filing with the FCC with two exceptions: First, engineering material pertaining to a former mode of operation need not be retained longer than 3 years after a station commences operation under a new or modified mode; and second, all of the material shall be retained for whatever longer period is necessary to comply with the following requirements:

(i) Material shall be retained until final FCC action on the second renewal application following the application or other material in question; and

(ii) Material having a substantial bearing on a matter which is the subject of a claim against the licensee, or relating to an FCC investigation or a complaint to the FCC of which the licensee has been advised, shall be retained until the licensee is notified in writing that the material may be discarded, or, if the matter is a private one, the claim has been satisfied or is barred by statute of limitations. Where an application or related material incorporates by reference material in earlier applications and material concerning programming and.....

related matters (Section IV and related materials), the material so referred to shall be retained as long as the application referring to it. If a written agreement is not incorporated in an application tendered for filing with the FCC, the starting date of the retention period for that agreement is the date the agreement is executed.

(f) Copies of any material required to be in the public file of any applicant for a construction permit, or permittee or licensee of any TV or radio station shall be available for machine reproduction upon request made in person, provided the requesting party shall pay the reasonable cost of reproduction. Requests for machine copies shall be fulfilled at a location specified by the applicant, permittee or licensee, within a reasonable period of time which, in no event, shall be longer than seven days unless reproduction facilities are unavailable in the applicant's, permittee's or licensee's community. The applicant, permittee or licensee is not required to honor requests made by mail, but may do so if it chooses.

73.3527 Local public inspection file of noncommercial educational stations.

(a) Records to be maintained. Every applicant for a construction permit for a new station in the noncommercial educational broadcast services shall maintain for public inspection a file containing the material in (a)(1) and (7) of this section. Every permittee or licensee of a station in the noncommercial educational broadcast services shall maintain for public inspection a file containing the material described in (a)(1) through (9) of this section. The material to be contained in the file is as follows:

(1) A copy of every application tendered for filing with respect to which local public notice is required to be given under the provisions of §73.3580 or §73.3594; and all exhibits, letters and other documents tendered for filing as part thereof, all amendments thereto, copies of all documents incorporated therein by reference, all correspondence between the FCC and the applicant pertaining to the application after it has been tendered for filing, and copies of Initial Decisions and Final Decisions in hearing cases pertaining thereto, which according to the provisions of §§0.451-0.461 of the rules are open for public inspection at the offices of the FCC. Information incorporated by reference which is already in the local file need not be duplicated if the entry making the reference sufficiently identifies the information so that it may be found in the file, and if there has been no change in the document since the date of filing and the applicant, after making the reference, so states. If petitions to deny are filed against the application, and have been duly served on the applicant, a statement that such a petition has been filed shall appear in the local file together with the name and address of the party filing the petition.

NOTE. Applications tendered for filing on or before May 13, 1965, which were subsequently designated for hearing after May 13, 1965, with local notice being given pursuant to the provisions of §73.3594, and material related to such applications, need not be placed in the file required to be kept by this section. Materials tendered for filing after May 13, 1965, with local notice of the amending application being given pursuant to the provisions of §73.3580 need not be placed in the file required to be kept by this section.

(2) A copy of every application tendered for filing by the licensee or permittee for such station after May 13, 1965, pursuant to the provisions of this part, which is not included in subparagraph (1) of this paragraph and which involves changes in program service, which requests an extension of time in which to complete construction of a new station, or which requests consent to involuntary assignment or transfer, or to voluntary assignment or transfer not resulting in a substantial change in ownership or control and which may be applied for on FCC Form 316; and copies of all exhibits, letters, and other documents filed as part thereof, all amendments thereto, all correspondence between the FCC and the applicant pertaining to the application after it has been tendered for filing, and copies of all documents incorporated therein by reference, which according to the provisions of §§0.451-0.461 of this chapter are open for public inspection at the offices of the FCC. Information incorporated by reference which is already in the local file need not be duplicated if the entry making the reference sufficiently identifies the information so that it

may be found in the file, and there has been no change in the document since the date of filing and the licensee, after making the reference so states. If petitions to deny are filed against the application, and have been duly served on the applicant, a statement that such a petition has been filed shall appear in the local file together with the name and address of the party filing the petition.

Note--The engineering section of the applications mentioned in paragraphs (a)(1) and (2) of this section and material related to the engineering section, need not be kept in the file required to be maintained by this paragraph. If such engineering section contains service contour maps submitted with that section, copies of such maps and information (State, county, city, street address or other identifying information) showing main studio and transmitter location shall be kept in the file.

(3) A copy of contracts listed in ownership reports filed in accordance with the provisions of §73.3613(e) and which according to the provisions of §§0.451-01461 of the rules are open for public inspection at the offices of the FCC. Information incorporated by reference which is already in the local file need not be duplicated if the entry making the reference sufficiently identifies the information so that it may be found in the file, and if there has been no change in the document since the date of filing and the licensee or permittee, after making the reference, so states.

(4) Such records as are required to be kept by §73.1940, "Broadcasts by candidates for public office."

(5) A copy of every annual employment report filed by the licensee or permittee for such station pursuant to the provisions of this Part; and copies of all exhibits, letters and other documents filed as part thereof, all amendments thereto, all correspondence between the permittee or licensee and the FCC pertaining to the reports after they have been filed and all documents incorporated therein by reference and which, according to the provisions of §§0.451 - 01461 of the rules, are open for public inspection at the office of the FCC.

(6) The Public and Broadcasting: Revised Edition (see FCC 74-942, 39 FR 32288, September 5, 1974).

(7) For noncommercial broadcast stations every three months a list of at least 5 to 10 community issues addressed by the station's programming during the preceding 3 month period. The list is to be filed by the tenth day of each calendar quarter (e.g., July 10, October 10, January 10 and April 10) and should include a record of programming for the 3 preceding calendar months (e.g., the list filed by July 10 would be a record of programming from April 1 through June 30). The list shall include a brief narrative describing how each issue was treated. The description of the program should include, but is not limited to, the time, date and duration of each program, the title, and the type of programming in which the issue was treated (e.g. public service announcements, a call-in program with a public official, etc.). These lists are to be retained for the entire license period.

NOTE.<sup>1</sup> The first quarterly filing is to include at least the past three months of a station's programming performance. If the last annual issues/programs list was filed more than three months prior to October 1, 1984, the licensee must place in its public inspection file an issues/programs list encompassing the period of time between its last annual filing and October 1, 1984.

NOTE 2--For purposes of paragraph (a)(7) of this section, exempt applicants, permittees or licensees include those whose existing or prospective facilities are Class D FM stations or whose programming is wholly "Instructional."

(8) The lists of donors supporting specific programs.

(9) Each applicant for renewal of license shall, within 7 days of the last day of broadcast of the local public notice of filing announcements required pursuant to §73.3580(h), place in the station's public inspection file a statement certifying compliance with this requirement. The dates and times that the pre-filing and post-filing notices were broadcast and the text thereof shall be made part of the certifying statement.

(b) RESPONSIBILITY IN CASE OF ASSIGNMENT OR TRANSFER. (1) In cases involving applications for consent to assignment of broadcast station construction permits or licenses, with respect to which public notice is required to be given under the provisions of §73.3580 or §73.3594, the file mentioned in paragraph (a) of this section shall be maintained by the assignor. If the assignment is consented to by the FCC, and consummated, the assignee shall maintain the file commencing with the date on which notice of the consummation of the assignment is filed with the FCC. The file maintained by the assignee shall cover the period both before and after the time when the notice of consummation of assignment was filed. The assignee is responsible for obtaining copies of the necessary documents from the assignor or from the FCC files.

(2) In cases involving applications for consent to transfer of control of a permittee or licensee of a broadcast station, the file mentioned in paragraph (a) of this section shall be maintained by the permittee or licensee.

(c) STATION TO WHICH RECORDS PERTAIN. The file need contain only applications, ownership reports, and related material that concern the station for which the file is kept. Applicants, permittees and licensees need not keep in the file copies of such applications, reports and material which pertain to other stations with regard to which they may be applicants, permittees, or licensees, except to the extent that such information is reflected in the materials required to be kept under the provisions of this Section.

(d) LOCATION OF RECORDS. The file shall be maintained at the main studio of the station, or at any accessible place (such as a public registry for documents or an attorney's office) in the community to which the station is or is proposed to be licensed, and shall be available for public inspection at any time during regular business hours.

(e) PERIOD OF RETENTION. The records specified in paragraph (a)(4) of this section shall be retained for the period specified in §73.1940 (two years). The manual specified in paragraph (a)(6) of this section shall be retained indefinitely. The issues/programs list specified (a)(7) shall be retained for the term of the license (5 years and 7 years for TV and radio respectively). The donor lists specified in paragraph (a)(8) of this section shall be retained for two years. The certification specified in paragraph (a)(9) of this section shall be retained for the period specified in §73.3580 (for as long as the application to which it refers). The records specified in paragraphs (a)(1),(2),(3) and (5) of this section must be retained as follows:

(1) The applicant for a construction permit for a new station shall maintain such a file so long as the proceeding in which that application was filed is pending before the FCC or any proceeding involving that application is pending before the courts. (If the application is granted, paragraph (2) of this section shall apply).

(2) The permittee or licensee shall maintain a file of such records so long as an authorization to operate the station is outstanding, and shall permit public inspection of the material as long as it is retained by the licensee even though the request for inspection is made after the conclusion of the required retention period specified in this subparagraph. However, material which is voluntarily retained after the required retention time may be kept in a form and place convenient to the licensee, and shall be made available to the inquiring party, in good faith after written request, at a time and place convenient to both the party and the licensee. Applications and related material placed in the file shall be retained for a period of 7 years from the date the application is tendered for filing with the FCC, with two exceptions: First, engineering material pertaining to a former mode of operation need not be retained longer than 3 years after a station commences operation under a new or modified mode; and second, all of the material shall be retained for whatever longer period is necessary to comply with the following requirements:

(i) Material shall be retained until final FCC action on the second renewal application following the application or other material in questions; and

(ii) Material having a substantial bearing on a matter which is the subject of a claim against the licensee, or relating to an FCC investigation or a complaint to the FCC of which the licensee has been advised, shall be retained until the licensee is notified in writing that the material may be discarded, or, if the matter is a private one, the claim has been satisfied or is barred by statutes of limitations. Where an application or related material incorporates by reference material in an earlier application and material concerning programming and related matters (Section IV and related material), the material so referred to shall be retained as long as the application referring to it.

(f) Copies of any material required to be in the public file of any applicant for a construction permit or permittee or licensee of any noncommercial educational TV or radio reproduction upon request made in person, provided the requesting party shall pay the reasonable costs of reproduction. Requests for machine copies shall be fulfilled at a location specified by the applicant, permittee or licensee, within a reasonable period of time which, in no event, shall be longer than seven days unless reproduction facilities are unavailable in the applicant's, permittee's or licensee's community. The applicant, permittee or licensee is not required to honor requests made by mail but may do so if chooses.

73.3533 Application for construction permit or modification of construction permit.

(a) Application for construction permit, or modification of a construction permit, for a new facility or change in an existing facility is to be made on the following forms:

(1) FCC Form 301, "Application for Authority to Construct or Make Changes in an Existing Commercial Broadcast Station."

(2) FCC Form 309, "Application for Authority to Construct or Make Changes in an Existing International or Experimental Broadcast Stations."

(3) FCC Form 313, "Application for Authorization in the Auxiliary Broadcast Services."

(4) Reserved.

(5) FCC Form 330-P, "Application for Authority to Construct or Make Changes in Instructional TV Fixed and/or Response Station(s) and Low Power Relay Station(s)."

(6) FCC Form 340, "Application for Authority to Construct or Make Changes in a Noncommercial Educational Broadcast Station."

(7) FCC Form 246, "Application for Authority to Construct or Make Changes in a TV or FM Broadcast Translator Station."

(8) FCC Form 349-P, "Application for Authority to Construct or Make Changes in an FM Broadcast Booster Station."

§73.3534 Application for extension of construction permit or for construction permit to replace expired construction permit.

(a) Application for extension of time within which to construct a station shall be filed on FCC Form 701, "Application for Extension of Construction Permit or to Replace Expired Construction Permit." The application shall be filed at least 30 days prior to the expiration date of the construction permit if the facts supporting such application for extension are known to the applicant in time to permit such filing. In other cases, an application will be accepted upon a showing satisfactory to the FCC sufficient reason for filing within less than 30 days prior to the expiration date.

(b) Applications for extension of time to construct broadcast stations, with the exception of International Broadcast and Instructional TV Fixed stations, will be granted only if one of the following three circumstances have occurred: (1) Construction is complete and testing is underway looking toward prompt filing of a license application; (2) substantial progress has been made, i.e., demonstration that equipment is on order or on hand, site acquired, site cleared and construction proceeding toward completion; or (3) no progress has been made for reasons clearly beyond the control of the permittee (such as delays caused by governmental budgetary processes and zoning problems) but the permittee has taken all possible steps to expeditiously resolve the problem and proceed with construction.

(c) Applications for extension of time to construct International Broadcast and Instructional TV Fixed stations will be granted upon a specific and detailed showing that the failure to complete was due to causes not under the control of the permittee or upon a specific and detailed showing of other sufficient to justify an extension.

(d) If an application for extension of time within which to construct a station is approved, such an extension will be limited to a period of no more than 6 months except when an assignment or transfer has been approved that provides for a longer period up to a maximum of 12 months from the date of consummation.

(e) Application for a construction permit to replace an expired construction permit shall be filed on FCC Form 701. Such applications must be filed within 30 days of the expiration date of the authorization sought to be replaced. If approved, such authorization shall specify a period of not more than 6 months within which construction shall be completed and application for license filed.

§73.3535 Application to modify authorized but unbuilt facilities, or to assign or transfer control of an unbuilt facility.

(a) If a permittee finds it necessary to file either an application to modify its authorized, but unbuilt facilities, or an assignment/transfer application, such application shall be filed within the first 9 months of the issuance of the original construction permit for radio and other broadcast and auxiliary stations, or within 12 months of the issuance of the original construction permit for television facilities. Before such an application can be granted, the permittee or assignee must certify that it will immediately begin building after the modification is granted or the assignment is consummated.

(b) Modification and assignment applications filed after the time periods stated in paragraph (a) will not be granted absent a showing that one of the following three criteria apply: (1) Construction is complete and testing is underway looking toward prompt filing of a license application: (2) substantial progress has been made i.e. demonstration that equipment is on order or on hand, site acquired, site cleared and construction proceeding toward completion: or (3) no progress has been made for reasons clearly beyond the control of the permittee (such as delays caused by governmental budgetary processes and zoning problems) but the permittee has taken all possible steps to expeditiously resolve the problem and proceed with construction. A certification by the permittee or the assignee that it immediately will begin building after the modification is granted or the assignment is consummated is also necessary. A seller must make the "one of three criteria" showing in an assignment application.

(c) If a modification is granted, the time period allowed for construction will be 6 months from the issuance of the authorization to modify or the remainder of the construction period whichever is longer. Also, in the case of an assignment, the time period allowed for construction will be 12 months from the consummation of the assignment or the remainder of the construction period, whichever is longer. The extension will be given subject to the condition that the modification is completed or the assignment is consummated. Failure to modify or consummate within the time allowed will result in cancellation of the construction permit.

(d) We will not entertain an application for modification of an authorized but unbuilt facility or an application for assignment or transfer of control of an unbuilt facility if filed after the expiration of the initial construction period.

73.3536 Application for license to cover construction permit. (a) The application for station license shall be filed by the permittee pursuant to the requirements of 73.1620 Program tests.

(b) The following application forms shall be used:

- (1) FCC Form 302, "Application for a New Broadcast Station License."
- (2) FCC Form 310, "Application for an International or Experimental Broadcast Station License."
- (3) FCC Form 313, "Application for Authorization in the Auxiliary Broadcast Services."
- (4) FCC Form 318, "Request for Subsidiary Communications Authorization."
- (5) FCC Form 341, "Application for a New Noncommercial Educational Broadcast Station License."
- (6) FCC Form 347, "Application for a TV or FM Broadcast Translator Station License."
- (7) FCC Form 349-L, "Application for FM Broadcast Booster Station License."

73.3537 Application for license to use former main antenna as an auxiliary. A licensee may apply on FCC Form 302 for authority to use a formerly licensed main antenna system as an auxiliary antenna.

§73.3538 Application to make changes in an existing station. Where prior authority from the FCC is required to make changes in an existing station the following procedures shall be used to request that authority:

(a) An application for a construction permit using the forms specified in §73.3533 must be filed for authority to make the following changes:

- (1) Any change involving frequency, power or location of the station.
- (2) A change in the hours of operation of an AM station, where the hours of operation are specified on the station license.

(3) The installation of a transmitter which has not been authorized by the FCC for use by licensed broadcast stations.

(4) Any change in the location, height or directional radiating characteristics of the antenna or antenna system.

(5) To move the main studio location of an AM station to a location outside the principal community or to move the studio from one location outside the principal community to another such location (other than to the authorized transmitter site). See §73.1125.

(6) To remove the main studio of an FM station to a location outside the principal community or to move the studio from one location outside the principal community to another such location (other than to the studio of a commonly-owned AM station licensed to the same community). See §73.1125

(7) To move the main studio of a TV station to a location outside the principal community or to move the studio from one location outside the principal community to another such location. See §73.1125

(b) An informal application filed in accordance with §73.3511 is to be used to obtain authority to make the following changes in the station authorization:

(1) To specify a new AM station directional antenna field monitoring point as a substitute for one that is no longer suitable or available, such as due to construction. The request is to include sufficient measurement data taken at the new monitoring point to establish its reliability in comparison with data taken at the old monitoring point on the same radial, the routing directions to the new point, a location photograph, and such other information as the FCC may request.

(2) To modify or discontinue the obstruction marking or lighting of the antenna supporting structure where that specified on the station authorization either differs from that specified in FCC Rules, Part 17, or is not appropriate for other reasons.

§73.3539 Application for renewal of license. (a) Unless otherwise directed by the FCC, an application for renewal of license shall be filed not later than the first day of the fourth full calendar month prior to the expiration date of the license sought to be renewed, except that applications for renewal of license of an experimental broadcast station shall be filed not later than the first day of the second full calendar month prior to the expiration date of the license sought to be renewed. If any deadline prescribed in this paragraph falls on a non-business day, the cutoff shall be the close of business of the first full business day thereafter.

(b) No application for renewal of license of any broadcast station will be considered unless there is on file with the FCC the information currently required by §§73.3612 - 73.3615, inclusive, for the particular class of station.

(c) Whenever the FCC regards an application for a renewal of license as essential to the proper conduct of a hearing or investigation, and specifically directs that it be filed by a date certain, such application shall be filed within the time thus specified. If the licensee fails to file such application within the prescribed time, the hearing or investigation shall proceed as if such renewal application had been received.

(d) Renewal application forms titles and numbers are listed in 73.3500, Application and Report Forms.

§73.3540 Application for voluntary assignment or transfer of control. (a) Prior consent must be obtained for a voluntary assignment or transfer of control.

(b) Application should be filed with the FCC at least 45 days prior to the contemplated effective date of assignment or transfer of control.

(c) Application for consent to the assignment of construction permit or license must be filed on FCC Form 314 "Assignment of License," FCC Form 316 "Short form" (see paragraph (f) below).

(d) Application for consent to the transfer of control of a corporation holding a construction permit or license must be filed on FCC Form 315 "Transfer of Control" or FCC Form 316 "Short form" (see paragraph (f) of this section).

(e) Application for consent to the assignment of construction permit or license or to the transfer of control of a corporate licensee or permittee for an FM or TV translator station, a low power TV station and any associated auxiliary station such as translator microwave relay stations and UHF translator booster stations, only must be filed on FCC Form 345 "Application for Transfer of Control of Corporate Licensee or Permittee, or Assignment of License or Permit for an FM or TV translator Station, or a Low Power TV Station".

(f) The following assignment or transfer applications may be filed on FCC "Short form" 316:

(1) Assignment from an individual or individuals (including partnerships) to a corporation owned and controlled by such individuals or partnerships without any substantial change in their relative interests:

(2) Assignment from a corporation to its individual stockholders without effecting any substantial change in the disposition of their interests;

(3) Assignment or transfer by which certain stockholders retire and the interest transferred is not a controlling one;

(4) Corporate reorganization which involves no substantial change in the beneficial ownership of the corporation;

(5) Assignment or transfer from a corporation to a wholly owned subsidiary thereof or vice versa, or where there is an assignment from a corporation to a corporation owned or controlled by the assignor stockholders without substantial change in their interests; or

(6) Assignment of less than a controlling interest in a partnership.

§73.3541 Application for involuntary assignment of license or transfer of control.

(a) The FCC shall be notified in writing promptly of the death or legal disability of an individual permittee or licensee, a member of a partnership, or a person directly or indirectly in control of a corporation which is a permittee or licensee.

(b) Within 30 days after the occurrence of such death or legal disability, an application on FCC Form 316 shall be filed requesting consent to involuntary assignment of such permit or license or for involuntary transfer of control of such corporation to a person or entity legally qualified to succeed to the foregoing interests under the laws of the place having jurisdiction over the estate involved.

73.3542 Application for emergency authorizstion. (a) Authority may be granted on a temporary basis, in extraordinary circumstances requiring emergency operation to serve the public interest, such situations include: emergencies involving danger to life and property; a national emergency proclaimed by the President or the Congress of the U.S.A. and; the continuance of any war in which the United States is engaged and where such action is necessary for the national defense or security or otherwise in furtherance of the war effort.

(1) An informal application may be used. The FCC may grant such construction permits, station licenses, modifications or renewals thereof, without the filing of a formal application.

(2) No authorization so granted shall continue to be effective beyond the period of the emergency of war requiring it.

(3) Each individule request submitted under the provisions of this paragraph shall contain, as a minimum requirement, the following information:

(i) Name and address of applicant.

(ii) Location of proposed installation or operation.

(iii) Official call letters of any valid station authorization already held by applicant and the station location.

(iv) Type of service desired (not required for renewal or modification unless class of station is to be modified).

(v) Frequency assignment, authorized class(es) of emission dessred (not required for renewal; required for modification only to the extent such information may be involved).

(vi) Equipment to be used, specifying the manufacture and type or model number (not required for renewal; required for modification only to the extent such information may be involved).

(vii) Statements to the extent necessary for the FCC to determine whether or not the granting of the desires authorization will be in accordance with the citizenship eligibility requirement of section 310 of the Communications Act.

(viii) Statement of facts which, in the opinion of the applicant, constitutes an emergency to be found by the FCC for the purpose of this section. This statement must also include the estimated duration of the emergency and if during an emergency of war declared by the President or Congress, why such action, without formal application, is necessary for the national defense or security or in furtherance of the war effort.

(b) Emergency operating authority issued under this section may be cancelled or modified by the FCC without prior notice or right to hearing. See also 73.1250, Broadcasting Emergency Information, for situations in which emergency operation may be conducted without prior authorization, and 73.1635, Special Temporary Authorization (STA), for temporary operating authorizstion necessitated by circumstances not within the ambit of its section.

§73.3543 Application for renewal of modification of special service authorization.

(a) No new special service authorization will be issued. However, consideration will be given to renewal or modification of a special service authorization which was outstanding on February 3, 1958, providing a satisfactory showing has been made in regard to the following, among others:

(1) That the requested operation may not be granted on a regular basis under the existing rules governing the operation of AM stations;

(2) That experimental operation is not involved as provided for by §73.1510 (Experimental authorizations); and

(3) That public interest, convenience and necessity will be served by the authorization requested.

§73.3544 Application to obtain a modified station license. Where prior authority not required to make certain changes in the station authorization or facilities, but a modified station license must be obtained, the following procedures shall be used to obtain modification of the station license:

(a) An application for a station license using the forms specified in §73.3536 shall be used to cover the following changes:

(1) A change in the type of FM or TV transmitting antenna where prior authority from the FCC is not required to make such a change. See §§73.257, 73.557 or 73.639.

(2) A change in the output power of FM or TV aural or visual transmitters to accommodate a change in the antenna type or transmission line.

(b) An informal application filed according to the procedures specified in §73.3511(b) shall be used to cover the following changes:

(1) Reserved.

(2) A correction of the routing instructions and description of an AM station directional antenna system field monitoring point, when the point itself is not changed.

(3) A change in the type of AM station directional antenna monitor. See §73.69.

(4) A change in the location of the station main studio when prior authority to move the main studio location is not required.

(5) The location of a remote control point of an AM or FM station when prior authority to operate by remote control is not required.

(c) A change in the name of the licensee where no change in ownership or control is involved may be accomplished by written notification by the licensee to the Commission.

§73.3545 Application for permit to deliver programs to foreign stations. Application under Section 325(b) of the Communications Act for authority to locate, use, or maintain a broadcast studio in connection with a foreign station consistently receives in the United States, should be made on FCC Form 308, "Application for Permit to Deliver Programs to Foreign Broadcast Stations." An informal application may be used by applicants holding an AM, FM or TV broadcast station license or construction permit. Informal applications must, however, contain a description of the nature and character of the programming proposed, together with other information requested on Page 4 of Form 308.

§73.3549 Requests for extension of authority to operate without required monitors, indicating instruments, and EBS attention signal devices. Requests for extension of authority to operate without required monitors, transmission system indicating instruments, or devices for off-the-air monitoring and generating of the EBS Attention Signal should be made to the Engineer in Charge of the radio district in which the station is operating. Such requests must contain information as to when and what steps were taken to repair or replace the defective equipment and a brief description of the alternative procedures being used while the defective equipment is out of service.

73.3550 Requests for new or modified call sign assignments. (a) Requests for new or modified call sign assignments for broadcast stations shall be made by letter to the Secretary, FCC, Washington, D.C. 20554. An original and one copy of the letter shall be submitted and shall be accompanied by the filing fee, if required, specified in 1.1111. Incomplete or otherwise defective filings will be returned by the FCC and any filing fee submitted in connection therewith will be forfeited 45 days from the date the application is returned should the applicant fail to submit an acceptable call sign application for the same station within that period. As many as five call sign choices, listed in descending order of preference, may be included in a single request. A call sign may not be reserved.

(b) No request for a new call sign assignment will be accepted from an applicant for a new station until the FCC has granted a construction permit. Failure by the permittee of a new station to request the assignment of a specific call sign within 30 days of grant of the construction permit will result in the FCC, on its own motion, assigning an appropriate call sign.

(c) An applicant for transfer or assignment of an outstanding construction permit or license may, in accordance with this Section, request a new call sign assignment at the time the application for transfer or assignment is filed, or at any time thereafter. In the absence of written consent of the proposed transfer or assignor, no change in call sign assignment will be made effective until such application is granted by the FCC and the transaction consummated.

(d) Where an application is granted by the FCC for transfer or assignment of the construction permit or license of a station whose existing call sign conforms to that of a commonly owned station not part of the transaction, the assignee shall, within 30 days after consummation, request a different call sign in accordance with the provisions of this section. Should a suitable application not be received within that period of time, the FCC will, on its own motion, select an appropriate call sign and effect the change in call sign assignment.

(e) Call signs beginning with the letter "K" will not be assigned to stations east of the Mississippi River, nor will call signs beginning with the letter "W" be assigned to stations located west of the Mississippi River.

(f) Only four-letter call signs (plus FM or TV suffixes, if used) will be assigned. However, subject to the other provisions of this Section, a call sign of a station may be conformed to a commonly owned station holding a three-letter call sign assignment (plus FM or TV suffixes, if used)

(g) Subject to the foregoing limitations, applicants may request call signs of their choice if the combination is available. Objections to the assignment of requested call sign will not be entertained at the FCC. However, this does not hamper any party from asserting such rights as it may have under private law in some other forum. Should it be determined by an appropriate forum that a station should not utilize a particular call sign, the initial assignment of a call sign will not serve as a bar to the making of a different assignment.

(h) Call signs are assigned on a "first-come-first served" basis. Receipt by the FCC of a request for an available call sign blocks the acceptance of competing requests until the first received request is processed to completion. In the case of requests for the same call sign being received on the same date at the FCC the assignment (if otherwise grantable) will be made to the station having the longest continuous record of broadcasting operations under substantially unchanged ownership and control. However, involuntary and pro forma assignments and transfers will not be taken into account in determining priority.

(i) Stations in different broadcast services which are under common control may request that their call signs be conformed by the assignment of the same basic call sign. For the purpose of this paragraph, 50% or greater common ownership shall constitute a prima facie showing of common control.

(j) The provisions of this section shall not apply to International broadcast stations, to stations authorized under Part 74 of the rules, nor to FM or TV stations seeking to modify an existing call sign only to the extent of adding or deleting an "-FM" or "-TV" suffix. The latter additions and deletions may be effective upon notification to the Commission.

(k) Unless subject to a pending transfer or assignment application, a change in call sign assignment will be made effective on the date specified in the telegram authorizing the change. In this regard, the applicant may include with its application a request for a specific effective date to take place within 45 days of the submission of its application for a call sign. Postponement of the effective date will be granted only in response to a timely request and for only the most compelling reasons.

(l) Four-letter combinations commencing with "W" or "K" which are assigned as call signs to ships or to other radio services are not available for assignment to broadcast stations, with or without the "FM" or "TV" suffix.

(m) Users of nonlicensed, low-power devices operating under Part 15 of the FCC rules may use whatever identification is currently desired, so long as propriety is observed and no confusion results with a station for which the FCC issues a license.

73.3555 Multiple ownership. (a) No license for an AM, FM or TV broadcast station shall be granted to any party (including all parties under common control) if such party directly or indirectly owns, operates or controls one or more broadcast stations in the same service and the grant of such license will result in:

(1) Any overlap of the predicted or measured 1 mV/m groundwave contours of the existing and proposed AM stations, computed in accordance with 73.183 or 73.186; or

(2) Any overlap of the predicted 1 mV/m contours of the existing and proposed FM stations, computed in accordance with 73.313; or

(3) Any overlap of the Grade B contours of the existing and proposed TV stations, computed in accordance with 73.684.

(b) No license for an AM, FM, or TV broadcast station shall be granted to any party (including all parties under common control) if such party directly or indirectly owns, operates, or controls one or more such broadcast stations and the grant of such license will result in:

(1) The predicted or measured 2 mV/m groundwave contour of an existing or proposed AM station, computed in accordance with Section 73.183 or 73.186, encompassing the entire community of license of an existing or proposed TV broadcast station(s) or the Grade A contour(s) of the TV broadcast station(s), computed in accordance with 73.684, encompassing the entire community of license of the AM station; or

(2) The predicted 1 mV/m contour of an existing or proposed FM station, computed in accordance with 73.313, encompassing the entire community of license of an existing or proposed TV broadcast station(s) or the Grade A contour(s) of the TV broadcast station(s), computed in accordance with 73.684, encompassing the entire community of license of the FM station.

(c) No license for an AM, FM or TV broadcast station shall be granted to any party (including all parties under common control) if such party directly or indirectly owns, operates or controls a daily newspaper and the grant of such license will result in:

(1) The predicted or measured 2 mV/m contour for an AM station, computed in accordance with 73.183 or 73.186, encompassing the entire community in which such newspaper is published; or

(2) The predicted 1 mV/m contour for an FM station, computed in accordance with 73.313, encompassing the entire community in which such newspaper is published; or

(3) The Grade A contour for a TV station, computed in accordance with 73.684, encompassing the entire community in which newspaper is published.

(d) No license for an AM, FM or TV broadcast station shall be granted to any party (including all parties under common control) if such party or any stockholder, officer or director of such party, directly or indirectly owns, operates, controls or has any interest in, or is an officer or director of any other broadcast station in the same service, if the grant of such license would result in a concentration of control of broadcasting in a manner inconsistent with the public interest, convenience, or necessity. The FCC, however, will in any event consider that there would be such a concentration of control contrary to the public interest, convenience or necessity for any party or any of its stockholders, officers or directors to have a direct or indirect interest in, or be stockholders, officers or directors of, more than seven AM, seven FM or seven TV broadcast stations (no more than five of which may be in the VHF band).

(d)(1) No license for a commercial AM, FM or TV broadcast station shall be granted, transferred or assigned to any party (including all parties under common control) if the grant, transfer or assignment of such license would result in such party or any of its stockholders, partners, members officers or directors, directly or indirectly, owning, operating or controlling or having a cognizable interest in, either:

- (i) more than fourteen (14) stations in the same service, or
- (ii) more than twelve (12) stations in the same service which are not minority-controlled.

(2) No license for a commercial TV broadcast station shall be granted, transferred or assigned to any party (including all parties under common control) if the grant, transfer or assignment of such license would result in such party or any of its stockholders, partners, members, officers or directors, directly or indirectly, owning, operating or controlling or having a cognizable interest in, either:

- (i) TV stations which have an aggregate national audience reach exceeding thirty (30) percent, or
- (ii) TV stations which have an aggregate national audience reach exceeding twenty-five (25) percent and which are not minority-controlled.

(3) For purposes of paragraph (d) of this section:

(i) "national audience reach" means the total number of television households in the Arbitron Area of Dominant Influence (ADI) markets in which the relevant stations are located divided by the total national television households as measured by ADI data at the time of a grant, transfer or assignment of a license. For purpose of making this calculation, UHF television stations shall be attributed with 50 percent of the television households in their ADI market. Where the relevant application forms require a showing with respect to audience reach and the application relates to an area where Arbitron ADI market data are unavailable, then the applicant shall make a showing as to the number of television households in its market. Upon such a showing, the Commission shall make a determination as to the appropriate audience reach to be attributed to the applicant.

(ii) "TV broadcast stations" or "TV stations" exclude stations which are primarily satellite operations.

(iii) "minority-controlled" means more than 50 percent owned by one or more members of a minority group.

(iv) "minority" means Black, Hispanic, American Indian, Alaska Native, Asian and Pacific Islander.

(e) No renewal of license shall be granted for a term extending beyond January 1, 1980, to any party that as of January 1, 1975, directly or indirectly owns, operates or controls the only daily newspaper published in a community and also as of January 1, 1975, directly or indirectly owns, operates or controls the only commercial aural station or stations encompassing the entire community with a city-grade signal during daytime hours (predicted or measured signal for AM, predicted for FM), or the only commercial TV station encompassing the entire community with a city-grade signal. The provisions of this paragraph shall not require divestiture of any interest not in conformity with its provisions earlier than January 1, 1980. Divestiture is not required for aural stations if there is a separately owned, operated or controlled TV broadcast station licensed to serve the community.

(f) This section is not applicable to noncommercial educational FM and noncommercial educational TV stations.

Note 1--The word "control" as used herein is not limited to majority stock ownership but includes actual working control in whatever manner exercised.

Note 2--In applying the provisions of this section, ownership and other interests in broadcast licensees, cable television systems and daily newspaper will be attributed to their holders and deemed cognizable pursuant to the following criteria:

(a)--Except as otherwise provided herein partnership and direct ownership interests and any voting stock interest amounting to 5% or more of the outstanding voting stock of a corporate broadcast licensee, cable television system or daily newspaper will be cognizable;

(b)--No minority voting stock interest will be cognizable if there is a single holder of more than 50% of the outstanding voting stock of the corporate broadcast licensee, cable television system or daily newspaper in which the minority interest is held;

(c)--Investment companies, as defined in 15 U.S.C. 80a-3, insurance companies and banks holding stock through their trust departments in trust accounts will be considered to have a cognizable interest only if they hold 10% or more of the outstanding voting stock of a corporate broadcast licensee, cable television system or daily newspaper, or if any of the officers or directors of the broadcast licensee, cable television system or daily newspaper are representatives of the investment company, insurance company or bank concerned. Holdings by a bank or insurance company will be aggregated if the bank or insurance company has any right to determine how the stock will be voted. Holdings by investment companies will be aggregated if under common management.

(d)--Attribution of ownership in a broadcast licensee, cable television system or daily newspaper that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that wherever the ownership percentage for any link in the chain exceeds 50%, it shall not be included for purposes of this multiplication. (For example, if A owns 10% of company X, which owns 60% of company Y, which owns 25% of "Licensee", then X's interest in "Licensee" would be 25% (the same as Y's interest since X's interest in Y exceeds 50%), and A's interest in "Licensee" would be 2.5% ( $0.1 \times 0.25$ ). Under the 5% attribution benchmark, X's interest in "Licensee" would be cognizable, while A's interest would not be cognizable.)

(e)--Voting stock interests held in trust shall be attributed to any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will. If the trustee has a familial, personal or extra-trust business relationship to the grantor or the beneficiary, the grantor or beneficiary, as appropriate, will be attributed with the stock interests held in trust. An otherwise qualified trust will be ineffective to insulate the grantor or beneficiary from attribution with the trust's assets unless all voting stock interests held by the grantor or beneficiary in the relevant broadcast licensee, cable television system or daily newspaper are subject to said trust.

(f)--Holders of non-voting stock shall not be attributed an interest in the issuing entity. Holders of debt and instruments such as warrants, convertible debentures, options or other non-voting interests with rights of conversion to voting interests shall not be attributed unless and until conversion is effected.

(g)(1) A limited partnership interest shall be attributed to a limited partner unless that partner is not materially involved, directly or indirectly in the management or operation of the media-related activities of the partnership and the licensee or system so certifies.

(2) In order for a licensee or system to make the certification set forth in paragraph (a)(1) of this section, it must verify that the partnership agreement or certificate of limited partnership, with respect to the particular limited partner exempt from attribution, establishes that the exempt limited partner has no material involvement, directly or indirectly, in the management or operation of the media activities of the partnership. The criteria which would assure adequate insulation for purposes of this certification are described in the MEMORANDUM OPINION AND ORDER in MM Docket No. 83-46, FCC 85-252 (released June 24, 1985). Irrespective of the terms of the certificate of limited partnership or partnership agreement, however, no such certification shall be made if the individual or entity making the certification has actual knowledge of any material involvement of the limited partners in the management or operation of the media-related businesses of the partnership.

(h)--Officers and directors of a broadcast licensee, cable television system or daily newspaper are considered to have a cognizable interest in the entity with which they are so associated. If any such entity engages in business in addition to its primary business of broadcasting, cable television service or newspaper publication, it may request the Commission to waive attribution for any officer or director whose duties and responsibilities are wholly unrelated to its primary business. The officers and directors of a parent company of a broadcast licensee, cable television system or daily newspaper, with an attributable interest in any such subsidiary entity, shall be deemed to have a cognizable interest in the subsidiary unless the duties and responsibilities of the officer or director involved are wholly unrelated to the broadcast licensee, cable television system or daily newspaper subsidiary, and a statement properly documenting this fact is submitted to the Commission. (This statement may be included on the appropriate Ownership Report). The officers and directors of a sister corporation of a broadcast licensee, cable television system or daily newspaper shall not be attributed with ownership of these entities by virtue of such status.

(i) Discrete ownership interests will be aggregated in determining whether or not an interest is cognizable under this section. An individual or entity will be deemed to have a cognizable investment if:

(1) The sum of the interests held by or through "passive investors" is equal to or exceeds 10 percent; or

(2) the sum of the interests other than those held by or through "passive investors" is equal to or exceeds 5 percent; or

(3) the sum of the interests computed under paragraph (i)(1) of this section plus the sum of the interests computed under paragraph (i)(2) of this section is equal to or exceeds 10 percent.

Note (3)--In cases where record and beneficial ownership of voting stock is not identical (e.g., bank nominees holding stock as record owners for the benefit of mutual funds, brokerage houses holding stock in street names for the benefit of customers, investment advisors holding stock in their own names for the benefit of clients and insurance companies holding stock), the party having the right to determine how the stock will be voted will be considered to own it for purpose of these rules.

Note 4 - Paragraphs (a)-(d) of this section will not be applied so as to require divestiture, by any licensee, of existing facilities, and will not apply to applications for increased power for Class IV stations, to applications for assignment of license or transfer of control filed in accordance with 73.3540(f) or 73.3541(b) of this part, or to applications for assignment of license or transfer or control to heirs or legatees by will or intestacy if no new or increased overlap would be created between commonly owned, operated or controlled broadcast stations in the same service and if no new encompassment or communities proscribed in paragraphs (b) and (c) of this section as to commonly owned, operated, or controlled broadcast stations or daily newspapers would result. Said paragraphs will apply to all applications for new stations, to all other applications for new stations, to all other applications for assignment or transfer, and to all applications for major changes in existing stations except major changes that will result in overlap of contours of broadcast stations in the same service with each other no greater than already existing. (The resulting areas of overlap of contours of such broadcast stations with each other in such major change cases may consist partly or entirely of new terrain. However, if the population in the resulting overlap areas substantially exceeds that in the previously existing overlap areas, the Commission will not grant the application if it finds that to do so would be against the public interest, convenience, or necessity.) This section will not apply to major changes in UHF television broadcast stations authorized as of September 30, 1964, which will result in Grade B overlap with another television station that was commonly owned, operated, or controlled as of September 30, 1964; or to any broadcast application where grant of such application would result in the Grade A contour of an existing or proposed UHF station encompassing the entire community of license of an existing or proposed AM or FM broadcast station that is commonly owned, operated or controlled or would result in the entire community of license of such UHF station being encompassed by the 2 mV/m contour of such AM broadcast station or the 1 mV/m contour of such FM broadcast station. Such UHF overlap or community encompassment cases will be handled on a case-by-case basis in order to determine whether common ownership, operation, or control of the stations is question would be in the public interest. Commonly owned, operated, or controlled broadcast stations, with overlapping contours or with community-encompassing contours prohibited by this section may not be assigned or transferred to a single person, group, or entity, except as provided above in this note. If a commonly owned, operated, or controlled broadcast station and daily newspaper fall within the encompassing proscription of this section, the station may not be assigned to a single person, group or entity if the newspaper is being simultaneously sold to such single person, group or entity.

Note (5)--Paragraphs (a)-(d) of this section will not be applied to cases involving television stations which are primarily "satellite" operations. Such cases will be considered on a case-by-case basis in order to determine whether common ownership, operation or control of the stations in question would be in the public interest. Whether or not a particular television broadcast station which does not present a substantial amount of locally originated programming is primarily a "satellite" operation will be determined on the facts of the particular case. An authorized and operating "satellite" television station the Grade B contour of which overlaps that of a commonly owned, operated or controlled "non-satellite" parent television broadcast station or the Grade A contour of which completely encompasses the community of publication of a commonly owned, operated or controlled daily newspaper or the community of license of a commonly owned, operated or controlled AM or FM broadcast station or the community of license of which is completely encompassed by the 2mV/m contour of such

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AM broadcast station or the 1mV/m contour of such FM broadcast station may subsequently become a "non-satellite" station with local studios and locally originated programming. However, such common owned, operated or controlled "non-satellite" television stations with Grade B overlap or such commonly owned, operated or controlled "non-satellite" television stations and AM or FM stations with the aforementioned community encompassment, may not be transferred or assigned to a single person, group or entity except as provided in Note 3. Nor shall any application for assignment or transfer concerning such "non-satellite" stations be granted if the assignment of transfer would be to the same person, group or entity to which the commonly owned, operated or controlled newspaper is proposed to be transferred, except as provided in Note 3.

Note 6--For the purposes of this section a daily newspaper in one which is published four or more days per week, which is in the English language and which is circulated generally in the community of publication. A college newspaper is not considered as being circulated generally.

## APPLICATION PROCESSING

§73.3561 Staff consideration of applications requiring Commission action. Upon acceptance of an application, the complete file is reviewed by the staff and, except where the application is acted upon by the staff pursuant to delegation of authority, a report containing the recommendations of the staff and any other documents required is prepared and placed on the Commission's agenda.

73.3562 Staff consideration of applications not requiring action by the Commission. Those applications which do not require action by the Commission but which, pursuant to the delegation of authority set forth in Subpart B of Part O, may be acted upon by the Chief, Mass media Bureau, are forwarded to the Mass Media Bureau for necessary action. If the application is granted, the formal authorization is issued. In any case where it is recommended that the application be set for hearing, where a novel question of policy is presented, or where the Chief, Mass Media Bureau desires instructions from the Commission, the matter is placed on the Commission agenda.

§73.3564 Acceptance of applications. (a) Applications tendered for filing are dated upon receipt and then forwarded to the Mass Media Bureau, where an administrative examination is made to ascertain whether the applications are complete. Except for low power TV, TV translator applications and non-reserved band FM (except for Class D) applications, those found to be complete or substantially complete are accepted for filing and are given file numbers. In the case of minor defects as to completeness, this applicant will be required to supply the missing information. Applications that are not substantially complete will be returned to the applicant. In case of non-reserved band FM applications, those found to be substantially complete at tender are accepted for tender and are given file numbers. Non-reserved band FM applications that are not substantially complete will be returned to the applicant. In the case of low power TV and TV translator applications, those found to be complete are accepted for filing and are given file numbers. Low power TV and TV translator applications that are not complete will be returned to the applicant.

(b) Acceptance of an application for filing merely means that it has been the subject of a preliminary review by the FCC's administrative staff as to completeness. Such acceptance will not preclude the subsequent dismissal of the application if it is found to be patently not in accordance with the FCC's rules.

(c) At regular intervals, the FCC will issue a Public Notice listing all applications and major amendments thereto which have been accepted for filing, except for non-reserved band FM stations and low power TV and TV translator stations. Pursuant to §§73.3571(c), 73.3572(c) and 73.3573(d) such notice shall establish a cut-off-date (not less than 30 days from the date of issuance) for the filing of mutually exclusive applications and petitions to deny. However, no application will be accepted for filing unless certification of compliance with the local notice requirements of §73.3580(h) has been made in the tendered application.

(d) New and major change applications for non-reserved band FM stations (except for Class D stations) and for low power TV and TV translator stations will be accepted only on date(s) specified by the Commission. Low power TV and TV translator station filing period(s) will be designated by the Commission in a Public Notice. Non-reserved band FM facilities and major change applications will have filing dates designated by the Commission in the following manner:

(1) For all vacant non-reserved band FM allocations listed on the FM Table of Allotments §73.202, as of March 14, 1985, a one-time filing period or "window" will open for 30 days, beginning on the 31st day after the date of publication of the Report and Order in MM Docket #84-750 in the Federal Register and will close on the 60th day after such publication. (This filing window does not apply to the 689 FM channels added to the FM Table of Allotments by the Commission's decision in MM Docket #84-231).

(2) The 689 FM allocations added to the FM Table of Allotments by MM Docket #84.231 will be subject to a series of windows. The Audio Services Division of the Mass Media Bureau will establish, by Public Notice, the window filing dates for this group of allotments.

(3) Each Report and Order specifying a new non-reserved FM band allocation will identify the window filing period which will begin upon the effective date of that Order and continue for at least 30 days.

(4) Where no applications are tendered during a window filing period applications may be tendered any time after the window closes. These applications will be processed on a "first come/first serve basis and will be treated as simultaneously filed if filed on the same day. Any applications received after the filing of a dead applicant will be placed in a queue, according to filing date, behind the lead applicant.

(5) If a non-reserved band FM channel allotment is vacant after the grant of a construction permit becomes final, because of a lapsed construction permit or for any other reason, the FCC will by Public Notice, announce a subsequent filing window for the acceptance of new applications for such channels.

(6) However, no application will be accepted for tender unless certification of compliance with the local notice requirements of §73.3580(h) has been made in the tendered application.

73.3566 Defective applications. (a) Applications which are determined to be patently not in accordance with the FCC rules, regulations, or other requirements, unless accompanied by an appropriate request for waiver, will be considered defective and will not be accepted for filing or if inadvertently accepted for filing will be dismissed. Requests for waiver shall show the nature of the waiver or exception desired and shall set forth the reasons in support thereof.

(b) If an applicant is requested by the FCC to file any additional documents or information not included in the prescribed application form, a failure to comply with such request will be deemed to render the application defective, and such application will be dismissed.

§73.3568 Dismissal of applications. (a) Subject to the provisions of §73.3525 (Agreements for removing application conflicts), any application may, upon request of the applicant be dismissed without prejudice as a matter or right prior to the designation of such application for hearing. An applicant's request for the return of an application that has been accepted for filing will be regarded as a request for dismissal.

(b) Failure to prosecute an application, or failure to respond to official correspondence or request for additional information, will be cause for dismissal. Subject to the provisions of §73.3525, such dismissal will be without prejudice where an application has not yet been designated for hearing, but may be made with prejudice after designation for hearing.

(c) Requests to dismiss an application without prejudice after it has been designated for hearing will be considered only upon written petition properly served upon all parties of record and, where applicable, compliance with the provisions of §73.3525. Such requests shall be granted only upon a showing that the request is based on circumstances wholly beyond the applicant's control which preclude further prosecution of his application.

73.3569 Reserved

§73.3570 AM broadcast station applications involving other North American countries.

(a) APPLICATIONS INVOLVING CONFLICTS WITH THE U.S./CANADIAN AGREEMENT, THE U.S./MEXICAN AGREEMENT OR WITH COUNTRIES WHICH HAVE RATIFIED NARBA. Except for applications falling within the provisions of paragraph (b) of this section, no application will be accepted for filing if authorization of the facilities requested would be inconsistent with the provisions of the U.S./Canadian Agreement, the North American Regional Broadcasting Agreement (NARBA), or the Agreement between the United States of America and the United Mexican States Concerning Radio Broadcasting in the Standard (AM) Broadcast Band (the U.S./Mexican Agreement). Any such application which has heretofore been accepted for filing or which is inadvertently accepted for filing will be dismissed.

(b) APPLICATIONS INVOLVING CONFLICTS ONLY WITH RESPECT TO HAITI OR COUNTRIES WHICH HAVE SIGNED BUT NOT RATIFIED NARBA. Applications (regardless of when they were or may be filed) for facilities which would be inconsistent with NARBA only with respect to a country which has signed but not completed formal ratification of that agreement, or which would cause objectionable interference (under the standards set forth in NARBA) to a duly notified Haitian station, will be retained in the pending file without further action, except where they conflict with other applications which do not involve international problems. In the latter situation, the various conflicting applications will be designated for hearing in a consolidated proceeding. Where an application inconsistent with international relationships as specified in this paragraph is designated for hearing, the following procedures will govern:

(1) Where all applications involved in a consolidated hearing proceeding are inconsistent with international relationships as specified in this paragraph, all will be removed from hearing status and returned to the pending file.

(2) Where one or more but not all of the applications involved in a consolidated hearing proceeding are inconsistent with international relationships as specified in this paragraph, the hearing issues will include an issue as to such inconsistency. If necessary, the hearing issues will be enlarged, and if closed, the hearing record will be reopened to include this matter. The initial decision and the final decision will contain findings and conclusions as to this issue, but neither the presiding officer nor the FCC will, in their decisions, take into account such issues in determining whether the public interest would be served by grant of any of the various applications. In the decision in such a proceeding, applications will be:

(i) Granted, where they are not inconsistent with international relationships and the public interest will be served thereby.

(ii) Denied, if denial is required because of grant of other applications or for other reasons independent of the consistency issue; or

(iii) Placed in the pending file without removal from hearing status if grant of the application would be in the public interest except for inconsistency with international relationships as specified in this paragraph, or where denial would be only on the basis of comparative consideration with an application which is being placed in the pending file because of such inconsistency.

(3) Where an application inconsistent with international relationships is designated for hearing because of conflict with another application not involving such inconsistency, and the conflict is later removed by amendment or dismissal of the latter application, the inconsistent application will be removed from hearing status and returned to the pending file.

**NOTE 1.** For the purpose of this Section, an application is not regarded as inconsistent with the provisions of NARBA if it is for Class IV facilities operating with more than 250 watts but no more than 1 KW power, to be located in those portions of the United States where such facilities are not precluded under Note 1 to §73.21(c), and where such facilities would not cause objectionable interference (under the standards set forth in NARBA) to a duly notified station in any other NARBA signatory country or in Haiti.

**NOTE 2.** As to the use of hearings of groundwave field strength measurements involving foreign countries, see the note to §73.183(b).

(c) **AMENDMENT OF APPLICATION DESIGNATED FOR HEARING.** When, in the case of any application which has been designated for hearing on issues not including an issue as to consistency with international relationships and as to which no final decision has been rendered, action under this Section becomes appropriate because of inconsistency with international relationships, the applicant involved shall, notwithstanding the provisions of §§73.3522 and 73.2571, be permitted to amend its application to achieve consistency with such relationships. In such cases the provisions of §73.3605(c) will apply.

(d) **APPLICATIONS NOT INVOLVING CONFLICT WITH THE U.S. CANADIAN AGREEMENT, NARBA OR U.S./MEXICAN AGREEMENT.** As a matter of general practice, applications which are consistent with the U.S./Mexican Agreement and which would not involve objectionable interference to a duly notified Haitian agreement, will be considered and acted upon by the FCC in accordance with its established procedure. In particular cases, involving applications of this character but in which special international considerations require that a different procedure be followed, the applicant involved will be formally advised to this effect.

**§73.3571 Processing of AM broadcast station applications.** (a) **Applications for AM broadcast facilities are divided into three groups.**

(1) In the first group are applications for new stations of for major changes in the facilities of authorized stations. A major change is any increase in power (except for Class IV stations on local channels), or any change in frequency, hours of operation, or station location. However, the FCC may, within 15 days after the acceptance for filing of any other application for modification of facilities, advise the applicant that such application is considered to be one for a major change and therefore is subject to the provisions of 73.3580 and 1.1111 pertaining to major changes.

(2) **The second group consists of applications for licenses and all other changes in the facilities of authorized stations.**

(b) If an application is amended so as to effect a major change as defined in paragraph (a)(1) of this section or so as to result in a situation where the original party or parties to the application do not retain more than 50% ownership interest in the application as originally filed, Section 73.3580 will apply to such amended application.

(c) Applications for new stations or for major changes in the facilities of authorized stations are 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 are drawn by the staff for study, the lowest file number first. Thus, the file number determines the order in which the staff's work is begun on a particular application or group of conflicting applications. 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 applications which have been accepted for filing and announcing a date (not less than 30 days after release) 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.

(d) Applications proposing to increase the power of an AM station are subject to the following requirements:

(1) In order to be acceptable for filing, any application which does not involve a change in site and which is filed before June 3, 1988 must propose at least a 50% increase in the station's nominal power. However, applications proposing at least a 20% increase and which are in conflict with an application proposing a 50% increase are acceptable for filing.

(2) In order to be acceptable for filing any application which does not involve a change in site and which is filed on or after June 3, 1988 must propose at least a 20% increase in the station's nominal power.

(3) Applications involving a change in site are not subject to the requirements in paragraphs (d)(1) or (2) of this section and may include a request for an increase in power of any amount.

(e) The processing and consideration of applications for new stations or major changes on those frequencies specified in §73.3569 are subject to certain restrictions, as set forth therein.

(f) Applications other than those for new stations or for major changes in the facilities of authorized stations are not placed on the processing line but are processed as nearly as possible in the order in which they are filed.

(g) Applications for change of license to change hours of operation of a Class IV station, to decrease hours of operation of any other class of station, or to change station location involving no change in transmitter site will be considered without reference to the processing line.

(h) If, upon examination, the FCC finds that the public interest, convenience and necessity will be served by the granting of an application, the same will be granted. If the FCC is unable to make such a finding and it appears that a hearing may be required, the procedure set forth in §73.3593 will be followed.

(i) When an application which has been designated for hearing has been removed from the hearing docket, the application will be returned to its proper position (as determined by the file number) in the processing line. Whether or not a new file number will be assigned will be determined pursuant to paragraph (j) of this section, after the application has been removed from the hearing docket.

(j)(1) A new file number will be assigned to an application for a new station, or for major changes in the facilities of an authorized station, when it is amended to change frequency, to increase power, to increase hours of operation, or to change station location. Any other amendment modifying the engineering proposal, except an amendment respecting the type of equipment specified, will also result in the assignment of a new file number unless such amendment is accompanied by a complete engineering study showing that the amendment would not involve new or increased interference problems with existing stations or other applications pending at the time the amendment is filed. If, after submission and acceptance of such an engineering amendment, subsequent examination indicates new or increased interference problems with either existing stations or other applications pending at the time the amendment was received at the FCC, the application will then be assigned a new file number and placed in the processing line according to the numerical sequence of the new file number.

(2) A new file number will be assigned where an application for a new station is amended (whether by a single amendment or by a series of amendments) so as to result in a situation where the original party or parties to the application do not retain more than 50% ownership interest in the application as originally filed, and Section 73.3580 will apply to such amended application.

(3) An application for changes in the facilities of an existing station will continue to carry the same file number even though (pursuant to FCC approval) an assignment of license or transfer of control of said licensee or permittee has taken place if, upon consummation, the application is amended to reflect the new ownership.

(k) When an application is reached for processing, and it is necessary to address a letter to the applicant asking further information, the application will not be processed until the information requested is received, and the application will be placed in the pending file to await the applicant's response.

(l) When an application is placed in the pending file, the applicant will be notified on the reason for such action.

73.3572 Processing of TV broadcast, low power TV, and TV translator station applications.

(a) Applications for TV stations are divided into two groups.

(1) In the first group are applications for new stations or major changes in the facilities of authorized stations. A major change for TV broadcast stations authorized under this part is any change in frequency or community of license which is in accord with a present allotment contained in the Table of Assignments (Section 73.606). Other requests for change in frequency or community of license for television stations must first be submitted in the form of a petition for rulemaking to amend the Table of Assignments. In the case of lower power TV and TV translator stations authorized under Part 74 of this chapter, a major change is any change in:

- (i) Frequency (output channel) assignment;
- (ii) Transmitting antenna system including the direction of the radiation, directive antenna pattern or transmission line;
- (iii) Antenna height;
- (iv) Antenna location exceeding 200 meters;
- (v) Authorized operating power; or

However, if the proposed modification of facilities, other than a change in frequency, will not increase the signal range of the low power TV or TV translator station in any horizontal direction, the modification will not be considered a major change. Provided further that the FCC may, within 15 days after the acceptance of any other application for modification of facilities advise the applicant that such application is considered to be one for a major change and therefore subject to the provisions of 73.3580 and 1.1111 pending to major changes.

(2) The second group consists of applications for licenses and all other changes in the facilities of authorized stations.

(b) A new file number will be assigned to an application for a new station or for major changes in the facilities of an authorized station, when it is amended so as to effect a major change, as defined in paragraph (a)(1) of this section, or result in a situation where the original party or parties to the application do not retain more than 50% ownership interest in the application as originally filed and Section 73.3580 will apply to such amended application. An application for change in the facilities of any existing station will continue to carry the same file number even though (pursuant to FCC approval) an assignment of license or transfer of control of such licensee or permittee has taken place if, upon consummation, the application is amended to reflect the new ownership.

(c) Applications for TV stations other than low power TV and TV 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 applications which have been accepted for filing and announcing a date (not less than 30 days after issuance) on which the listed applications will be considered available and ready for processing and by which all mutually exclusive applications and petitions to deny the listed listed applications must be filed.

(d) Regardless of the number of applications filed for channels in a city or the number of assignments available in that city, those applications which are mutually exclusive, i.e., which request the same channel, will be designated for hearing. All other applications for channels will, if the applicants are duly qualified, receive grants. For example, if Channels 6, 13, 47, and 53 have been assigned to City X and there are pending two applications for Channel 6 and one application for each of the remaining channels, the latter three applications will be considered grants without hearing and the two mutually exclusive applications requesting Channel 6 will be designated for hearing. If there are two pending applications for Channel 6 and two applications for Channel 13, separate hearings will be held.

(e) Where applications are mutually exclusive because the distance between the respective proposed transmitter sites is contrary to the station separation requirements set forth in §73.610, such applications will be processed and designated for hearing at the time the application with the lower file number is reached for processing. In order to be considered mutually exclusive with a lower file number application, the higher file number application must have been accepted for filing at least one day before the lower file number application has been acted upon by the FCC.

(f) Processing of applications for low power TV and TV translator stations. (1) Applications for low power TV and TV 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. The FCC will specify, by Public Notice, a period for filing low power TV or TV translator applications. The filing period will open no less than 30 days after release of the Public Notice and remain open for at least five work days.

(2) Subsequently, the FCC will release a Public Notice: (i) Establishing a date, time and place for a public lottery; (ii) accepting for filing mutually exclusive applications which were timely filed during the filing period previously specified by the FCC; (iii) designating the listed mutually exclusive applications for public lottery pursuant to the procedures set forth in 1.1601 et seq.; and (iv) describing each applicant's certified preferences and selection probabilities and assigning to each applicant a number block. (It will be the applicant's responsibility to notify the FCC within 30 days of the release of the Public Notice, or any omissions of applications or clerical or mathematical errors in preferences or probabilities. The FCC will not entertain appeals involving these matters if timely notification to the FCC has not been made.) If necessary, the FCC will release subsequent Public Notices correcting only clerical or mathematical errors and including any previously omitted applications. The public lottery pursuant to the procedures set forth in 1.1601 et seq., will be held no less than 30 days subsequent to the initially released Public Notice announcing the lottery. Subsequent to the lottery, the FCC will release a Public Notice announcing the selection of a tentative selectee resulting from the lottery and providing an opportunity for the filing of Petitions to Deny pursuant to the requirements of 73.3584(c).

If, upon examination, the FCC finds that the public interest, convenience and necessity will be served by the granting of a tentative selectee's application, the same will be granted. Those applications which, due to the lottery, are no longer mutually exclusive with other applications will be announced in a Public Notice proposing the grant of those applications and Petitions of Deny pursuant to 73.3584 (c). Groups of mutually exclusive applicants remaining after a lottery will be designated for lottery. Applications which are not grantable due to mutual exclusivity with the permittee selected by lottery will be dismissed.

(3) The FCC will periodically release a Public Notice accepting for filing and proposing for grant those applications which were timely filed during the filing period specified by the FCC in a Public Notice for filing low power TV or TV translator applications but which are not mutually exclusive with any other application and providing the Petitions to Deny pursuant to 73.3584.

**§73.3573 Processing FM broadcast and FM translator station applications.** (a) Applications 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. A major change for FM stations authorized under this part is any change in frequency or community of license which is in accord with a present allotment contained in the Table of Allotments (Section 73.202). Other requests for change in frequency or community of license for FM stations must first be submitted in the form of a petition for rulemaking to amend the Table of Allotments. In the case of FM translator stations authorized under Part 74, it is any change in frequency (output channel), or authorized principal community or area. For noncommercial educational FM stations, a major change is any change in frequency or community of license or any change in power or antenna location or height above average terrain (or combination thereof) which would result in a change of 50% or more in the area within the station's predicted 1mV/m field strength contour. (A change in area is defined as the sum of the area gained and the area lost as a percentage of the original area). However, the FCC may within 15 days after the acceptance of any other application for modification of facilities, advise the applicant that such application is considered to be one for a major change and therefore subject to the provisions of Sections 73.3580 and 1.1111 pertaining to major changes. Until March 1, 1987, an applicant with authorized facilities in existence as of March 1, 1984, may effectuate a downgrading in class of FM station by filing a minor change application. All other proposals to either upgrade or downgrade the class of an FM station must first be submitted as petitions for rulemaking to amend the Table of Allotments (Section 73.202).

(2) The second group consists of applications for licenses and all other changes in the facilities of authorized stations.

(b) A new file number will be assigned to an application for a new station or for major changes in the facilities of an authorized station, when it is amended so as to effect a major change, as defined in paragraph (a) (1) of this section, or result in a situation where the original party or parties to the application do not retain more than 50% ownership interest in the application as originally filed, and Section 73.3580 will apply to such amended application. An application for changes in the facilities of any existing station will continue to carry the same file number even though (pursuant to FCC approval) an assignment of license or transfer of control of such licensee or permittee has taken place if, upon consummation, the application is amended to reflect the new ownership.

(c) If, upon examination, the FCC finds that the public interest, convenience and necessity will be served by the granting of an application for FM broadcast facilities, the same will be granted. If the FCC is unable to make such a finding and it appears that a hearing may be required, the procedure given in §73.3593 will be followed.

(d) Applications for reserved band and Class D FM broadcast 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 applications which 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.

(e) Where reserved band plus Class D applications are mutually exclusive because the distance between their respective proposed transmitter sites is contrary to the stations separation requirements set forth in §73.507, such applications will be processed and designated for hearing at the time the application with the lower file number is reached for processing. In order to be considered mutually exclusive with a lower file number application, the higher file number application must have been accepted for filing at least on day before the lower file number application has been acted upon by the FCC.

(f) Processing non-reserved FM broadcast station applications.

(1) Applications for non-reserved FM broadcast stations will be processed as nearly as possible in the order in which they are tendered. 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. The FCC will specify, pursuant to §73.3564(d), the filing periods for non-reserved band FM applications.

(2) All applications received during the appropriate filing period or "window" which are found to be mutually exclusive will be designated for hearing. All other applications will, if the applicants are duly qualified, receive grants. The FCC will periodically release a Public Notice listing applications pending hearings or grant and announcing a date (not less than 30 days after issuance) by which petitions to deny must be filed.

(3) If, after the close of the appropriate window filing period a non-reserved FM allotment remains vacant, processing for that channel will be on a "first come/first serve" basis with the first acceptable application cutting off the filing rights of subsequent applicants. All applications received on the same day will be treated as simultaneously tendered and if they are found to be mutually exclusive, will be designated for hearing. Applications received after the tender of a lead application will be grouped, according to filing date, behind the lead application in a queue. The priority rights of the lead applicant as against all other applicants, are determined by the date of filing but the filing date for subsequent applicants for that channel and community 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. If there is no queue or if no queue member is found acceptable, that allotment remains subject to "first come/first serve" processing. The FCC will periodically release a Public Notice listing those pending hearings or grant and announcing a date (not less than 30 days after issuance) by which petitions to deny must be filed.

(g) Resolving processing conflicts between the reserved and non-reserved bands. The reserved bands include Class D stations.

(1) Reserved band applicants applying for a channel on the non-reserved band are subject to the processing procedures in Section (f).

(2) If a reserved band applicant has generated a cut-off list that overlaps a non-reserved band window filing period, the non-reserved band applicant must file within the cut-off if he seeks mutually exclusive status with the reserved band applicant.

(3) Following the close of a non-reserved band application filing window, the non-reserved applicant is subject to the "first come/first serve" rules and would lose to a pre-filed reserved band applicant.

§73.3574 Processing of international broadcast station applications. (a) Applications for International station facilities 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. A major change is any change in or addition to authorized zones or areas of reception, any change in transmitter location other than one in the immediate vicinity of existing antennas of the station, or any change in power, or antenna directivity. However, the FCC may, within 15 days after the acceptance for filing of any other application for modification, advise the applicant that such application is considered to be one for a major change and therefore is subject to §§1.1111 and 73.3580 pertaining to major changes.

(2) The second group consists of applications for licenses and all other changes in the facilities of authorized stations.

(b) If an application is amended so as to effect a major change as defined in paragraph (a)(1) of this section, or so as to result in an assignment or transfer of control which, in the case of an authorized station, would require the filing of an application therefor on FCC Form 314 or 315 (see §73.3540), §73.3580 will apply to such amended application.

(c) Applications for International stations will be processed as nearly as possible in the order in which they are filed.

§73.3578 Amendments to applications for renewal, assignment or transfer of control.

(a) Any amendment to an application for renewal of any instrument of authorization shall be considered to be a minor amendment. However, the FCC may, within 15 days after tender for filing of any other amendment, advise the applicant that the amendment is considered to be a major amendment and therefore is subject to the provisions of §73.3580.

(b) Any amendment to an application for assignment of construction permit or license, or consent to the transfer of control of a corporation holding such a construction permit or license, shall be considered to be a minor amendment, except that any amendment which seeks a change in the ownership interest of the proposed assignee or transferee which would result in a change in control, or any amendment which would require the filing of FCC Forms 314, 315, or 345 (see §73.3540), if the changes sought were made in an original application for assignment or transfer of control, shall be considered to be a major amendment. However, the FCC may, within

15 days after the acceptance for filing of any other amendment, advise the applicant that the amendment is considered to be a major amendment and therefore is subject to the provisions of §73.3580.

§73.3580 Local public notice of filing of broadcast applications. (a) All applications for instruments of authorization in the broadcast service (and major amendments thereto, as indicated in §73.3571, 73.3572, 73.3573, 73.3574 and 73.3578) are subject to the local public notice provisions of this section, except applications for:

(1) A minor change in the facilities of an authorized station, as indicated in §§73.3571, 73.3572, 73.3573 and 73.3574.

(2) Consent to an involuntary assignment or transfer or to a voluntary assignment or transfer which does not result in a change of control and which may be applied for on FCC Form 316 pursuant to the provisions of §73.3540(b).

(3) A license under Section 319(c) of the Communications Act or, pending application for or grant of such license, any special or temporary authorization to permit interim operation to facilitate completion of authorized construction or to provide substantially the same service as would be authorized by such license.

(4) Extension of time to complete construction of authorized facilities.

(5) An authorization of facilities for remote pickup or studio links for use in the operation of a broadcast station.

(6) Authorization pursuant to Section 325(b) of the Communications Act (" \* \* \* studios of foreign station") where the programs to be transmitted are special events not of a continuing nature.

(7) An authorization under any of the proviso clauses of Section 308(a) of the Communications Act concerning applications for and conditions in licenses.

(b) Applications (as originally filed or amended) will be acted upon by the FCC no sooner than 30 days following public notice of acceptance for filing or amendment, except as otherwise permitted in §73.3542, "Application for temporary authorization."

(c) An applicant who files an application of amendment thereto which is subject to the provisions of this section, must give a notice of this filing in a newspaper. Exceptions to this requirement are applications for renewal of AM, FM, TV and International broadcasting stations; low power TV stations; TV and FM translator stations; FM booster stations and applications subject to paragraph (e) of this section. The local public notice must be completed within 30 days of the tendering of the application. In the event the FCC notifies the applicant that a major change is involved, requiring the applicant to file public notice pursuant to 73.3571, 73.3572, 73.3573 or 73.3578, this filing notice shall be given in a newspaper following this notification.

(1) NOTICE REQUIREMENTS FOR THESE APPLICANTS ARE AS FOLLOWS:

(i) In a daily newspaper of general circulation published in the community in which the station is located, or proposed to be located, at least twice a week for two consecutive weeks in a three-week period; or,

(ii) If there is no such daily newspaper, in a weekly newspaper of general circulation published in that community, once a week for 3 consecutive in a 4-week period; or,

(iii) If there is no daily or weekly newspaper published in that community, in the daily newspaper from wherever published, which has the greatest general circulation in that community, twice a week for 2 consecutive weeks within a 3-week period.

(2) NOTICE REQUIREMENTS FOR APPLICANTS FOR A PERMIT PURSUANT TO SECTION 325(b) OF THE COMMUNICATIONS ACT (" \* \* \* STUDIOS OF FOREIGN STATIONS") ARE AS FOLLOWS:

(i) In a daily newspaper of general circulation in the largest city in the principal area to be served in the U.S.A. by the foreign broadcast station, at least twice a week for 2 consecutive weeks within a three-week period.

(3) NOTICE REQUIREMENTS FOR APPLICANTS FOR A CHANGE IN STATION LOCATION ARE AS FOLLOWS:

(i) In the community in which the station is located and the one in which it is proposed to be located, in a newspaper with publishing requirements as in paragraph (c)(1)(i), (ii) or (iii) of this section.

(4) The notice required in paragraph (f)(1), (2) and (3) of this section shall contain the information described in paragraph (f) of this section.

(d) The licensee of an operating broadcast station who files an application or amendment thereto which is subject to the provisions of this section must give notice as follows:

(1) An applicant who files for renewal of a broadcast station license, other than a low power TV station license not locally originating programming as defined by 74.701(h), FM translator station, FM booster station or a TV translator station license, must give notice of this filing by broadcasting announcements on applicant's station. (Sample and schedule of announcements are below.) Newspaper publication is not required. An applicant who files for renewal of a low power TV station license not locally originating programming as defined by 74.701(h), FM translator station, FM booster station or a TV translator station licensee will comply with (g) below.

(2) An applicant who files an amendment of an application for renewal of a broadcast station license will comply with paragraph (d)(1) of this section.

(3) AN APPLICANT WHO FILES FOR MODIFICATION, ASSIGNMENT OR TRANSFER OF A BROADCAST STATION LICENSE (except for International broadcast, low power TV, TV translator, FM translator, and FM booster stations) shall give notice of the filing in a newspaper as described in paragraph (c) of this section, and also broadcast the same notice over the station as follows:

(i) At least once daily on four days in the second week immediately following either the tendering for filing of the application or immediately following notification to the applicant by the FCC that Public Notice is required pursuant to sections 73.3571, 73.3572, 73.3573 or 73.3578. For commercial radio stations these announcements shall be made between 7 a.m. and 9 a.m. and/or 4 p.m. and 6 p.m. For stations which neither operate between 7 a.m. and 9 a.m. nor between 4 p.m. and 6 p.m., these announcements shall be made during the first two hours of broadcast operation. For commercial TV stations, these announcements shall be made between 6 p.m. and 11 p.m. (5 p.m. and 10 p.m. Central and Mountain time).

(4) The broadcast notice requirements for those filing renewal applications and amendments thereto are as follows:

(i) PRE-FILING ANNOUNCEMENTS. During the period and beginning on the first day of the sixth calendar month prior to the expiration of the license, and continuing to the date on which the application is filed, the following announcement shall be broadcast on the 1st and 16th day of each calendar month. Stations broadcasting primarily in a foreign language should broadcast the announcements in that language.

On (date of last renewal grant) (Station's call letters) was granted a license by the Federal Communication Commission to serve the public interest as a public trustee until (expiration date).

Further information concerning the FCC's broadcast license renewal process is available at (address of location of the station's public inspection file) or may be obtained from the FCC, Washington, D. C. 20554.

(A) This announcement shall be made during the following time periods:  
(1) For commercial TV stations—at least two of the required announcements between 6p.m. and 11p.m. (5p.m. and 10p.m. Central and mountain time.

Our license will expire on (date). We must file an application for renewal with the FCC (date four calendar months prior to expiration date). When filed, a copy of this application will be available for public inspection during our regular business hours. It contains information concerning this station's performance during the last (period of time covered by the application).

Individuals who wish to advise the FCC of facts relating to our renewal application and to whether this station has operated in the public interest should file comments and petitions with the FCC by (date first day of last full calendar month prior to the month of expiration).

Further information concerning the FCC's broadcast license renewal process is available at (address of location of the station's public inspection file) or may be obtained from the FCC, Washington, D.C. 20554.

(ii) **POST FILING ANNOUNCEMENTS.** During the period beginning of the date on which the renewal application is filed to the sixteenth day of the next to last full calendar month prior to the expiration of the license, all applications for renewal of broadcast station licenses shall broadcast the following announcement on the 1st and 16th day of each calendar month. Stations broadcasting primarily in a foreign language should broadcast the announcements in that language.

On (date of last renewal grant) (Station's call letters) was granted a license by the Federal Communications Commission to serve the public interest as a public trustee until (expiration date).

Our license will expire on (date). We have filed an application for renewal with the FCC.

A copy of this application is available for public inspection during our regular business hours. It contains information concerning this station's performance during the last (period of time covered by application).

Individuals who wish to advise the FCC of facts relating to our renewal application and to whether this station has operated in the public interest should file comments and petitions with the FCC by (date first day of last full calendar month prior to the month of expiration).

Further information concerning the FCC's broadcast license renewal process is available at (address of location of the station's public inspection file) or may be obtained from the FCC, Washington, D.C. 20554.

(iii) **TV broadcast stations (commercial and noncommercial educational),** in presenting the pre-and post-filing announcements, must use visuals with the licensee's and the FCC's addresses when this information is being orally presented by the announcer.

(iv) Stations which have not received a renewal grant since the filing of their previous renewal application, shall use the following first paragraph for the pre-filing and the post-filing announcements:

(STATION'S CALL LETTERS) is licensed by the Federal Commission to serve the public interest as a public trustee.

(e) When the station in question is the only operating station in its broadcast service which is located in the community involved, or if it is a noncommercial educational station, publication of the notice in a newspaper, as provided in paragraph (c) of this section is not required, and publication by broadcast over that station as provided in paragraph (d) of this section shall be deemed sufficient to meet the notice requirements of this section. Noncommercial educational broadcast stations which do not broadcast during the portion of the year in which the period of broadcast of notice falls must comply with the provisions of paragraph (c) of this section.

(f) The notice required by Paragraphs (c) and (d) of this section shall contain, when applicable, the following information, except as otherwise provided in paragraphs (d)(1) and (2) and (e) of this section in regard to renewal applications:

- (1) The name of the applicant, if the applicant is an individual; the names of all partners, if the applicant is a partnership; or the names of all officers and directors and of those persons holding 10% or more of the capital stock or other ownership interest if the applicant is a corporation or an unincorporated association. (In the case of applications for assignment or transfer of control, information should be included for all parties to the application.)
- (2) The purposes for which the application was or will be filed (such as, construction permit, modification, assignment or transfer of control).
- (3) The date when the application or amendment was tendered for filing with the FCC.
- (4) The call letters, if any, of the station, and the frequency or channel on which the station is operating or proposes to operate.
- (5) In the case of an application for construction permit for a new station, the facilities sought, including type and class of station, power, location of studios, transmitter site and antenna height.
- (6) In the case of an application for modification of a construction permit or license, the exact nature of the modification sought.
- (7) In the case of an amendment to an application, the exact nature of the amendment.
- (8) In the case of applications for a permit pursuant to Section 325(b) of the Communications Act (" \* \* \* studios of foreign stations"), the call letters and location of the foreign radio broadcast station, the frequency or channel on which it operates, and a description of the programs to be transmitted over the station.
- (9) A statement that a copy of the application, amendment(s), and related material are on file for public inspection at a stated address in the community in which the main studio is maintained or is proposed to be located. See §§73.3526 and 73.3627.

(g) An applicant who files for an authorization, major modification, assignment, transfer or renewal or a major amendment thereto, for a low power TV, TV translator, FM translator or FM booster station must give notice of this filing in a daily, weekly or biweekly newspaper of general circulation in the community or area to be served. (An applicant who files for renewal of a low power TV station locally originating programming as defined by 74.701(h) must give notice pursuant to (d)(1) of this section.) The filing notice will be given immediately following the tendering for filing of the application or amendment or immediately following notification to the applicant by the FCC that public notice is required pursuant to 73.3572, 73.3573 or 73.3578.

(1) Notice requirements for these applicants are as follows:

- (i) In a newspaper at least one time; or
- (ii) If there is no newspaper published or having circulation in the community or area to be served, the applicant shall determine an appropriate means of providing the required notice to the general public, such as posting in the local post office or other public place. The notice shall state:

(A) The name of the applicant, the community or area to be served, and the transmitter site.

(B) The purpose for which the application was filed.

(C) The date when the application or amendment was filed with the FCC.

(D) The output channel or channels on which the station is operating or proposed to operate and the power used or proposed to be used.

(E) In the case of an application for changes in authorized facilities, the nature of the changes sought.

(F) In the case of a major amendment to an application, the nature of the amendment.

(G) A statement that the station engages in or intends to engage in broadcasting, and the call letters, location and channel of operation of each station whose signals it is rebroadcasting or intends to rebroadcast.

(h) The applicant may certify in the appropriate application that it has or will comply with the public notice requirements contained in paragraphs (c), (d) or (g) of this Section. However, within 7 days of the last day of broadcast of the required publication announcements, place in its public inspection file a statement certifying compliance with Section 73.3580 along with the dates and times that the pre-filing and post-filing notices were broadcast and the text thereof. This certification need not be filed with the Commission but shall be retained in the public inspection file for as long as the application to which it refers.

§73.3584 Petitions to deny. (a) Any party in interest may file with the Commission a petition to deny any application (whether as originally filed or if amended so as to require a new file number pursuant to §§73.3571(j), 73.3572(b), 73.3573(b), or 73.3578) for which local notice pursuant to Section 73.3580 is required, provided such petitions are filed prior to the day such applications are granted or designated for hearing; but where the FCC issues a public notice pursuant to the provisions of §§73.3571(c), 73.3572(c) or 73.3573(d), establishing a "cut-off" date, such petitions must be filed by the date specified. In the case of applications for transfers and assignments of construction permits or station licenses, petitions to deny must be filed not later than 30 days after issuance of a public notice of the acceptance for filing of the application. In the case of applications for renewal of license, petitions to deny may be filed at any time up to the last day for filing mutually exclusive applications under §73.3516(e). Requests for extension of time to file petitions to deny applications for new broadcast stations or major changes in the facilities of existing stations or applications for renewal of license will not be granted unless all parties concerned, including the applicant, consent to such requests, or unless a compelling showing can be made that unusual circumstances make the filing of a timely petition impossible and the granting of an extension warranted.

(b) The applicant may file an opposition to any petition to deny, and the petitioner a reply to such opposition in which allegations of fact or denials thereof shall be supported by affidavit of a person or persons with personal knowledge thereof. The times for filing such oppositions and replies shall be those provided in §1.45 except that as to a petition to deny an application for renewal of license, an opposition thereto may be filed within 30 days after the petition to deny is filed, and the party that filed the petition to deny may reply to the opposition within 20 days after the opposition is due or within 20 days after the opposition is filed, whichever is longer. The failure to file an opposition or a reply will not necessarily be construed as an admission of any fact or argument contained in a pleading.

(c) In the case of applications for new low power TV or TV translator stations, or for major changes in the existing facilities of such stations, any party in interest may file with the FCC a Petition to Deny any application (whether as originally filed or if amended so as to require a new file number pursuant to 73.3572(b)) for which local notice pursuant to 73.3580 is required, provided such petitions are filed within 30 days of the FCC Public Notice proposing the application for grant (applicants may file oppositions within 15 days after the Petition to Deny is filed), but where the FCC selects a tentative permittee pursuant to 1.1601 et seq., Petitions to Deny shall be accepted only if directed against the tentative selectee and filed after issuance of and within 15 days of FCC Public Notice announcing the tentative selectee. The applicant may file an opposition within 15 days after the Petition to Deny is filed. In cases in which the minimum diversity preference provided for in 1.1623(f)(1) has been applied, an "objection to diversity claim," and opposition thereto may be filed against any applicant receiving a diversity preference within the same time period provided herein for Petitions and Oppositions. In all pleadings, allegations of fact or denials thereof shall be supported by appropriate certification. However, the FCC may announce, by Public Notice announcing the acceptance of the last-filed mutually exclusive application, that a notice of Petition to Deny will be required to be filed no later than 30 days after issuance of the Public Notice.

§73.3587 Procedure for filing informal objections. Before FCC action on any application for an instrument of authorization, any person may file informal objections to the grant. Such objections may be submitted in letter form (without extra copies) and shall be signed. The limitation on pleadings and time for filing pleadings provided for in §1.45 of the rules shall not be applicable to any objections duly filed under this section.

#### ACTION ON APPLICATIONS

§73.3591 Grants without hearing. (a) In the case of any application for an instrument of authorization, other than a license pursuant to a construction permit, the FCC will make the grant if it finds (on the basis of the application, the pleadings filed or other matters which it may officially notice) that the application presents no substantial and material question of fact and meets the following requirements:

- (1) There is not pending a mutually exclusive application filed in accordance with paragraph (b) of this section;
- (2) The applicant is legally, technically, financially, and otherwise qualified;
- (3) The applicant is not in violation of 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.

(b) In making its determinations pursuant to the provisions of paragraph (a) of this section, the FCC will not consider any other application, or any application if amended so as to require a new file number, as being mutually exclusive or in conflict with the application under consideration unless such other application was substantially complete or, in the case of low power TV and TV translator stations, complete and sufficient and tendered for filing by:

(1) The close of business on the day preceding the day designated by Public Notice as the day the listed application is to be available and ready for processing;

(2) The date prescribed in 73.3516(e) in the case of application which are mutually exclusive with applications for renewal of license of Broadcast stations; or

(3) The close of business on the day designated by the FCC pursuant to 73.3564(d) as the date(s) for filing low power TV or TV translator applications.

(c) If a petition to deny the application has been filed in accordance with §73.3584 and the FCC makes the grant in accordance with paragraph (a) of this section, the FCC will deny the petition and issue a concise statement setting forth the reasons for denial and disposing of all substantial issues raised by the petition.

§73.3592 Conditional grant. (a) Where a grant of an application would preclude the grant of any application or applications mutually exclusive with it, the FCC may, if the public interest will be served thereby, make a conditional grant of one of the applications and designate all of the mutually exclusive applications for hearing. Such conditional grant will be made upon the express condition that such grant is subject to being withdrawn if, at the hearing, it is shown that public interest will be better served by a grant of one of the other applications. Such conditional grants will be issued only where it appears:

(1) That some or all of the applications were not filed in good faith but were filed for the purpose of delaying or hindering the grant of another application; or

(2) That public interest requires the prompt establishment of broadcast service in a particular community or area; or

(3) That a grant of one or more applications would be in the public interest, and that a delay in making a grant to any applicant until after the conclusion of a hearing on all applications might jeopardize the rights of the United States under the provisions of international agreement to the use of the frequency in question; or

(4) That a grant of one application would be in the public interest, and that it appears from an examination of the remaining applications that they cannot be granted because they are in violation of provisions of the Communications Act, other statutes, or the provisions of the FCC rules.

(b) When two or more applications for the same AM, FM or TV assignment have been designated for hearing, the FCC may, if the public interest will be served thereby, make a conditional grant to a group composed of any two or more of the competing applicants, such grant to terminate when the successful applicant commences operation under the terms of a regular authorization. No conditional grant will be made unless all of the competing applicants have been afforded a reasonable opportunity to participate in the group seeking the conditional grant. In its application, the group shall include a special showing as to the need for service pending operation by the successful applicant under the terms of a regular authorization; the effect, if any, of a grant on the position of any applicant which is not a member of the group; and any other factors which are deemed pertinent to the public interest judgment.

§73.3593 Designation for hearing. If the FCC is unable, in the case of any application for an instrument of authorization, to make the findings specified in §73.3591(a), it will formally designate the application for hearing on the grounds or reasons then obtaining and will forthwith notify the applicant and all known parties in interest of such action and the grounds and reasons therefor, specifying with particularity the matters and things in issue but not including issues or requirements phrased generally.

73.3594 Local public notice of designation for hearing. (a) Except as otherwise provided in paragraph (c) of this section when an application subject to the provisions of 73.3580 (except for applications for International broadcast, low power TV, TV translator, FM translator, and FM booster stations) is designated for hearing, the applicant shall give notice of such designation as follows: Notice shall be given at least twice a week, for 2 consecutive weeks within the 3-week period immediately following release of the FCC's order, specifying the time and place of the commencement of the hearing, in a daily newspaper of general circulation published in the community in which the station is located or proposed to be located.

(1) However, if there is no such daily newspaper published in the community, the notice shall be given as follows:

(i) If one or more weekly newspapers of general circulation are published in the community in which the station is located or proposed to be located, notice shall be given in such a weekly newspaper once a week for 3 consecutive weeks within the 4-week period immediately following the release of the FCC's order, specifying the time and place of the commencement of the hearing:

(ii) If no weekly newspaper of general circulation is published in the community in which the station is located or proposed to be located, notice shall be given at least twice a week for 2 consecutive weeks within the 3-week period immediately following the release of the FCC's orders, specifying the time and place of the commencement of the hearing in the daily newspaper having the greatest general circulation in the community in which the station is located or proposed to be located.

(2) In the case of an application for a permit pursuant to Section 325(b) of the Communications Act, the notice shall be given at least twice a week for 2 consecutive weeks within the 3-week period immediately following release of the FCC's order, specifying the time and place of the commencement of the hearing in a daily newspaper of general circulation in the largest city in the principal area to be served in the United States by the foreign radio broadcast station.

(3) In the case of an application for change in the location of a station, the notice shall be given both in the community in which the station is located and in the community in which the station is proposed to be located.

(b) When an application which is subject to the provisions of 73.3580 and which seeks modification, assignment, transfer, or renewal of an operating broadcast station is designated for hearing (except for applications for an International broadcast, low power TV, TV translator, FM translator, or FM booster stations), the applicant shall, in addition to giving notice of such designation as provided in paragraph (a) of this section, cause the same notice to be broadcast over that station at least once daily for 4 days in the second week immediately following the release of the FCC's order, specifying the time and place of the commencement of the hearing. In the case of both commercial and noncommercial TV broadcast stations such notice shall be broadcast orally with the camera focused on the announcer. The notice required by this paragraph shall be broadcast during the following periods;

(1) For commercial TV stations, between 7:00 p.m. and 10:00 p.m.

(2) For commercial AM and FM stations, between 7:00 a.m. and 10:00 a.m., but if such stations do not operate during those hours, then between 6:00 p.m. and 9:00 p.m.

(3) For noncommercial educational TV stations, between 7:00 p.m. and 10:00 p.m., but if the period of broadcast of notice falls within a portion of the year during which such stations do not broadcast, then such stations need not comply with the provisions of this paragraph.

(4) For noncommercial educational AM and FM stations, between 3:00 p.m. and 10:00 p.m., but if the period of broadcast of notice falls within a portion of the year during which such stations do not broadcast, then such stations need not comply with the provisions of this paragraph.

(c) If the station in question is the only operation station in its broadcast service which is located in the community involved, or if it is a noncommercial educational station, publication of the notice in a newspaper, as provided in paragraph (a) of this section, is not required, and publication by broadcast over that station as provided in paragraph (b) of this section shall be deemed sufficient to meet the requirements of paragraphs (a) and (b) of this section. However, non-commercial educational stations which do not broadcast during the portion of the year in which the period of broadcast of notice falls must comply with the provisions of paragraph (a) of this section.

(d) The notice required by paragraphs (a) and (b) of this section shall state:

(1) The name of the applicant or applicants designated for hearing.

(2) The call letters, if any, of the stations or stations involved, and the frequencies or channels on which the station or stations are operating or proposed to operate.

(3) The time and place of the hearing.

(4) The issues in the hearing as listed in the FCC's order of designation for hearing.

(5) A statement that a copy of the application, amendment(s), and related material are on file for public inspection at a stated address in the community in which the main studio is maintained or is proposed to be located. See §§73.3526 and 73.3527.

(e) When an application for renewal of license is designed for hearing, the notice shall contain the following additional statements:

(1) Immediately preceding the listing of the issues in the hearing:

The application of this station for a renewal of its license to operate this station in the public interest was tendered for filing with the Federal Communications Commission on (date). After considering this application, the FCC has determined that it is necessary to hold a hearing to decide the following questions:

(2) Immediately following the listing of the issues in the hearing:

The hearing will be held at (place of hearing) commencing at (time), on (date). Members of the public who desire to give evidence concerning the foregoing issues should write to the Federal Communications Commission, Washington, D.C. 20554, not later than (date). Letters should set forth in detail the specific facts concerning which the writer wishes to give evidence. If the FCC believes that the evidence is legally competent, material, and relevant to the issues, it will contact the person in question.

(Here the applicant shall insert, as the date on or before which members of the public who desire to give evidence should write to the FCC, the date 30 days after the date of release of the FCC's order specifying the time and place of the commencement of the hearing.)

(f) When an application for a low power TV, TV translator, FM translator, or FM booster station which is subject to the provisions of 73.3580 is designated for hearing, the applicant shall give notice of such designation as follows: Notice shall be given at least once during the 2-week period immediately following release of the FCC's order, specifying the time and place of the commencement of the hearing in a daily, weekly or biweekly publication having general circulation in the community or area to be served. However, if there is no publication of general circulation in the community or area to be served, the applicant shall determine an appropriate means of providing the required notice to the general public, such as posting in the local post office or other public place. The notice shall state:

(1) The name of the applicant or applicants designated for hearing.

(2) The call letters, if any, of the station or stations involved, the output channel or channels of such stations, and, for any rebroadcasting, the call letters, channel and location of the station or stations being or proposed to be rebroadcast.

(3) The time and place of the hearing.

(4) The issues of the hearing as listed in the FCC's order <sup>of designation</sup> of designation for hearing.

(5) If the application is for renewal of license, the notice shall contain, in addition to the information required by paragraph (1) through (4) of this section, the statements required by paragraph (e) of this section.

(g) Within 7 days of the last day of publication or broadcast of the notice required by paragraphs (a) and (b) of this section, the applicant shall file a statement in triplicate with the FCC setting forth the dates in which the notice was published, the newspaper in which the notice was published, the text of the notice, and/or, where applicable, the date and time the notice was broadcast and the text thereof. When public notice is given by other means, as provided in paragraph (f) of this section, the applicant shall file, within 7 days of the giving of such notice, the text of the notice, the means by which it was accomplished, and the date thereof.

(h) The failure to comply with the provisions of this Section is cause for dismissal of an application with prejudice. However, upon a finding that applicant has complied (or proposes to comply) with the provisions of Section 311(a) (2) of the Communications Act, and that the public interest, convenience and necessity will be served thereby, the presiding officer may authorize an applicant, upon a showing of special circumstances, to publish notice in a manner other than that prescribed by this Section; may accept publication of notice which does not conform strictly in all respects with the provisions of this section; or may extend the time for publishing notice.

73.3597 Procedures on transfer and assignment applications. (a) If, upon the examination of an application for FCC consent to an assignment of a broadcast construction permit or license or for a transfer of control of a corporate permittee or licensee, it appears that the station involved has been operating on-air for less than one year, the application will be designated for hearing on appropriate issues unless the FCC is able to find that:

- (1) The permit or license was not authorized after a comparative hearing;
- (2) The application involves an FM or TV translator station or FM booster station only;
- (3) The application involves a pro forma assignment or transfer of control; or
- (4) The assignor or transferor has made an affirmative factual showing, supported by affidavits of a person or persons with personal knowledge thereof, which establishes that, due to unavailability of capital, to death or disability of station principals, or to other changed circumstances affecting the licensee or permittee occurring subsequent to the acquisition of the license or permit, FCC consent to the proposed assignment or transfer of control will serve the public interest, convenience and necessity.

(b)(1) The commencement date of the one year period set forth in paragraph (a) of this section shall be the date on which the station initiated program tests in accordance with 73.1620.

(2) In determining whether the station has been operating on-air for one year, the FCC will calculate the period between the date of initiation of program tests (as specified in paragraph (b)(1) of this section) and the date the application for transfer or assignment is tendered for filing with the FCC.

(c)(1) As used in paragraphs (c) and (d) of this section:

(i) "Unbuilt station" refers to an AM, FM or TV broadcast station or a low power TV station for which a construction permit is outstanding, and, regardless of the stage of physical completion, as to which program tests have not commenced, or, if required been authorized.

(ii) "Seller" includes the assignor(s) of a construction permit for an unbuilt station, the transferor(s) of control of the holder of such construction permit, and any principal or such assignor(s) or transferor(s) who retains an interest in the permittee or acquires or reacquires such interest within 1 year after the commencement of program tests.

(2) The FCC will not consent to the assignment or transfer of control of the construction permit of an unbuilt station if the agreements or understandings between the parties provide for, or permit, payment to the seller of a sum in excess of the aggregate amount clearly shown to have been legitimately and prudently expended and to be expended by the seller, solely for preparing, filing, and advocating the grant of the construction permit for the station, and for other steps reasonably necessary toward placing the station in operation.

(3) (i) Applications for consent to the assignment of a construction permit or transfer of control shall, in the case of unbuilt stations, be accompanied by declarations both by the assignor (or transferor) and by the assignee (or transferee) that, except as clearly disclosed in detail in the applications, there are no agreements or understandings for reimbursement of the seller's expenses or other payments to the seller, for the seller's retention of any interest in the station, for options or any other means by which the seller may acquire such an interest, or for any other actual or potential benefit to the seller in the form of loans, the subsequent repurchase of the seller's retained interest, or otherwise.

(ii) When the seller is to receive reimbursement of his expenses, the applications of the parties shall include an itemized accounting of such expenses, together with such factual information as the parties rely upon for the requisite showing that those expenses represent legitimate and prudent outlays made solely for the purposes allowable under paragraph (c)(2) of this section.

(d)(1) Whenever an agreement for the assignment of the construction permit of an unbuilt station or for the transfer of control of the permittee of an unbuilt station or for the transfer of control of the permittee of an unbuilt station, or any arrangement or understanding incidental thereto, provides for the retention by the seller of any interest in the station, or for any other actual or potential benefit to the seller in the form of loans or otherwise, the question is raised as to whether the transaction involves actual or potential gain to the seller over and above the legitimate and prudent out-of-pocket expenses allowable under paragraph (c)(2) of this section. In such cases the FCC will designate the assignment or transfer applications for evidentiary hearing. However, a hearing is not mandatory in cases coming within paragraph (d)(2) of this section.

(2) It is not intended to forbid the seller to retain an equity interest in an unbuilt station which he is transferring or assigning if the seller obligates himself, for the period ending 1 year after commencing program tests, to provide that part of the total capital made available to the station, up to end of that period, which is proportionate to the seller's equity share in the permittee, taking into account equity capital, loan capital, and guarantees of interest and amortization payments for loan capital provided by the seller before the transfer or assignment. This condition will be satisfied:

(i) In the case of equity capital: By paid-in cash capital contributions proportionate to the seller's equity share:

(ii) In cases where any person who has an equity interest in the permittee provides loan capital: By the seller's provision of that part of the total loan capital provided by equity holders which is proportionate to the seller's equity share; and

(iii) In cases where any person cosigns or otherwise guarantees payments under notes given for loan capital provided by nonequity holders: By similar guarantees by the seller covering that part of such payments as is proportionate to the seller's equity share. However, this condition shall not be deemed to be met if the guarantees given by persons other than the seller cover, individually or collectively, a larger portion of such payments than the ratio of the combined equities of persons other than the seller to the total equity.

(3) In cases which are subject to the requirements of paragraph (d)(2)(i), (ii) and (iii) of this section:

(i) The assignee's (or transferee's) application shall include a showing of the anticipated capital needs of the station through the first year of its operation and the seller's financial capacity to comply with the above requirements, in the light of such anticipated capital needs.

(ii) The FCC will determine from its review of the applications whether a hearing is necessary to ensure compliance with the above requirements.

(iii) Compliance with the above requirements will be subject to review by the FCC at any time, either when considering subsequently filed applications or whenever the FCC may otherwise find it desirable.

(iv) Within 30 days after any time when a seller is required to provide equity or loan capital or execute guarantess, the permittee shall furnish the FCC a written report containing sufficient details as to the sources and amounts of equity capital paid in, loan capital made available, or guarantees obtained as to enable the FCC to ascertain compliance with the above requirements.

(v) No steps shall be taken by the permittee to effectuate arrangements for the provision of equity or loan capital from sources not previously identified and disclosed to the FCC, until 30 days after the permittee has filed with the FCC a report of such arrangements and of provisions made for the seller's compliance with the above requirement.

(vi) The provisions of paragraph (d)(3)(iv) and (v) of this section shall cease to apply 1 year after commencing program tests.

(4) Applications subject to this paragraph (d) will, in any event, be designated for evidentiary hearing in any case where the agreements, arrangements or understandings with the seller provide for the seller's option to acquire equity in the station or to increase equity interests he retains at the time of the assignment or transfer of control. An evidentiary hearing will similarly be held in any case in which the assignee(s), transferee(s) or any of their principals, or any person in privity therewith, has an option to purchase all or part of the seller's retained or subsequently acquired equity interests in the station.

§73.3598 Period of construction. (a) TV broadcast stations. Each original construction permit for the construction of a new TV broadcast station or to make changes in an existing station shall specify a period of no more than 24 months from the date of issuance of the original construction permit within which construction shall be completed and application for license filed.

(b) Other broadcast auxiliary and Instructional TV Fixed Stations. Each original permit for the construction of a new AM, FM or International Broadcast; low power TV; TV translator; FM translator; FM booster; broadcast auxiliary; or Instructional TV Fixed station or to make changes in such existing stations, shall specify a period of no more than 18 months from the date of issuance of the original construction permit within which construction shall be completed and application for license be filed.

§73.3599 Forfeiture of construction permit. A construction permit shall be automatically forfeited if the station is not ready for operation within the time specified therein or within such further time as the FCC may have allowed for completion, and a notation of the forfeiture of any construction permit under this provision will be placed in the records of the FCC as of the expiration date.

§73.3601 Simultaneous modification and renewal of license. When an application is granted by the FCC necessitating the issuance of a modified license less than 60 days prior to the expiration date of the license sought to be modified, and an application for renewal of the license is granted subsequent or prior thereto (but within 30 days of expiration of the present license), the modified license as well as the renewal license shall be issued to conform to the combined action of the FCC.

§73.3603 Special waiver procedure relative to applications. (a) In the case of any broadcast applications designated for hearing, the parties may request the FCC to grant or deny an application upon the basis of the information contained in the applications and other papers specified in paragraph (b) of this section without the presentation of oral testimony. Any party desiring to follow this procedure should execute and file with the FCC a waiver in accordance with paragraph (e) of this Section, and serve copies on all other parties, or a joint waiver may be filed by all the parties. Upon the receipt of waivers from all parties to a proceeding, the FCC will decide whether the case is an appropriate one for determination without the presentation of oral testimony. If it is determined by the FCC that, notwithstanding the waivers, the presentation of oral testimony is necessary, the parties will be so notified and the case will be retained on the hearing docket. If the FCC concludes that the case can appropriately be decided without the presentation of oral testimony, the record will be considered as closed as of the date the waivers of all the parties were first on file with the FCC.

(b) In all cases considered in accordance with this procedure, the FCC will decide the case on the basis of the information contained in the applications which are open to public inspection and which were on file with the FCC when the record was closed. The FCC may call upon any party to furnish any additional information which the FCC deems necessary to a proper decision. Such information shall be served upon all parties. The waiver previously executed by the parties shall be considered in effect unless within 10 days of the service of such information the waiver is withdrawn.

(c) Any decision by the FCC rendered pursuant to this section will be in the nature of a final decision, unless otherwise ordered by the FCC.

(d) By agreeing to the waiver procedure prescribed in this section, no party shall be deemed to waive the the right to petition for reconsideration or rehearing, or to appeal to the courts from any adverse final decision of the FCC.

(e) The waiver provided for by this section shall be in the following form:

Waiver

Name of application \_\_\_\_\_

Call letters \_\_\_\_\_

Docket No. \_\_\_\_\_

The undersigned hereby requests the FCC to consider its application and grant or deny it in accordance with the procedure prescribed in §73.3603 of the FCC's rules and regulations. It is understood that all the terms and provisions of \_\_\_\_\_ are incorporated in this waiver.

§73.3605 Retention of applications in hearing status after designation for hearing.

(a) After an application for a broadcast facility is designated for hearing, it will be retained in hearing status upon the dismissal or amendment and removal from hearing of any other application or applications with which it has been consolidated for hearing.

(b) Where any applicants for a broadcast facility file a request pursuant to §73.3535(a) for approval of an agreement to remove a conflict between their applications, the applications will be retained in hearing status pending such proceedings on the joint request as may be ordered and such action thereon as may be taken.

(1) If further hearing is not required on issues other than those arising out of the agreement, the proceeding shall be terminated and appropriate disposition shall be made of the applications.

(2) Where further hearing is required on issues unrelated to the agreement, the presiding officer shall continue to conduct the hearing on such other issues pending final action on the agreement, but the record in the proceeding shall not be closed until such final action on the agreement has been taken.

(3) In any case where a conflict between applications will be removed by an agreement for an engineering amendment to an application, the amended application shall be removed from hearing status upon final approval of the agreement and acceptance of the amendment.

(c) An application for a broadcast facility which has been designated for hearing and which is amended so as to eliminate the need for hearing or further hearing on the issues specified, other than as provided for in paragraph (b) of this section, will be removed from hearing status.

FILING OF REPORTS AND CONTRACTS

§73.3610 TV programming report. Deleted.

§73.3611 Financial report. Deleted.

§73.3612 Annual employment report. Each licensee or permittee of a commercially or noncommercially operated AM, FM, TV or International broadcast station with five or more fulltime employees shall file an annual employment report with the FCC on or before May 31 of each year on FCC Form 395.

§73.3613 Filing of contracts. Each licensee or permittee of a commercial or non-commercial AM, FM, TV or International broadcast station shall file with the FCC copies of the following contracts, instruments, and documents together with amendments, supplements, and cancellations (with the substance of oral contracts reported in writing), within 30 days of execution thereof:

(a) Network service: Network affiliation contracts between stations and networks will be reduced to writing and filed as follows:

(1) All network affiliation contracts, agreements or understandings between a TV broadcast or low power TV station and national network. For the purpose of this paragraph the term network means any person, entity or corporation which offers an interconnected program service on a regular basis for 15 or more hours per week to at least 25 affiliated television licensees in 10 or more states; and/or any person, entity or corporation controlling, controlled by, or under common control with such person entity or corp.

(2) Reserved

(3) Each such filing on or after May 1, 1969, initially shall consist of a written instrument containing all of the terms and conditions of such contract, agreement or understanding without reference to any other paper or document by incorporation or otherwise. Subsequent filings may simply set forth renewal, amendment or change, as the case may be, of a particular contract previously filed in accordance herewith.

(4) The FCC shall also be notified of the cancellation or termination of network affiliations, contracts for which are required to be filed by this section.

(5) Reserved.

(6) Reserved.

(b) Ownership or control: Contracts, instruments or documents relating to the present or future ownership or control of the licensee or permittee or of the licensee's or permittee's stock, rights or interests therein, or relating to changes in such ownership or control shall include but are not limited to the following:

(1) Articles of partnership, association, and incorporation, and changes in such instruments;

(2) Bylaws, and any instruments effecting changes in such bylaws;

(3) Any agreement, document or instrument providing for the assignment of a license or permit, or affecting, directly or indirectly, the ownership or voting rights of the licensee's or permittee's stock (common or preferred, voting or nonvoting), such as:

(i) Agreements for transfer of stock;

(ii) Instruments for the issuance of new stock; or

(iii) Agreements for the acquisition of licensee's or permittee's stock by the issuing licensee or permittee corporation. Pledges, trust agreements, options to purchase stock and other executory agreements are required to be filed. However, trust agreements or abstracts thereof are not required to be filed, unless requested specifically by the FCC. Should the FCC request an abstract of the trust agreement in lieu of the trust agreement, the licensee or permittee will submit the following information concerning the trust:

(A) Name of trust;

(B) Duration of trust;

(C) Number of shares of stock owned;

(D) Name of beneficial owner of stock;

(E) Name of record owner of stock;

(F) Name of the party or parties who have the power to vote or control the vote of the shares; and

(G) Any conditions on the powers of voting the stock or any unusual characteristics of the trust.

(4) Proxies with respect to the licensee's or permittee's stock running for a period in excess of 1 year, and all proxies, whether or not running for a period of 1 year, given without full and detailed instructions binding the nominee to act in a specified manner. With respect to proxies given without full and detailed instructions, a statement showing the number of such proxies, by whom given and received and the percentage of outstanding stock represented by each proxy shall be submitted by the licensee or permittee within 30 days after the stockholders' meeting in which the stock covered by such proxies has been voted. However, when the licensee or permittee is a corporation having more than 50 stockholders, such complete information need be filed only with respect to proxies given by stockholders who are officers or directors, or who have 1% or more of the corporation's voting stock. When the licensee or permittee is a corporation having more than 50 stockholders and the stockholders giving the proxies are not officers or directors or do not hold 1% or more of the corporation's stock, the only information required to be filed is the name of any person voting 1% or more of the stock by proxy, the number of shares voted by proxy by such persons, and the total number of shares voted at the particular stockholders' meeting in which the shares were voted by proxy.

(5) Mortgage or loan agreements containing provisions restricting the licensee's or permittee's freedom on operation, such as those affecting voting rights, specifying or limiting the amount of dividends payable, the purchase of new equipment, or the maintenance of current assets.

(6) Any agreement reflecting a change in the officers, directors or stockholders of a corporation, other than the licensee or permittee, having an interest, direct or indirect, in the licensee or permittee as specified by §73.3615.

(c) Personnel: (1) Management consultant agreements with independent contractors; contracts relating to the utilization in a management capacity of any person other than an officer, director, or regular employee of the licensee or permittee; station management contracts with any persons, whether or not officers, directors, or regular employees, which provide for both a percentage of profits and a sharing in losses; or any similar agreements.

(2) The following contracts, agreements, or understandings need not be filed: Agreements with persons regularly employed as general or station managers or salesmen; contracts with program managers or program personnel; contracts with attorneys, accountants or consulting radio engineers, contracts with performers; contracts with station representatives; contracts with labor unions; or any similar agreements.

(d) The following contracts, agreements or understandings need not be filed but shall be kept at the station and made available for inspection upon request by the FCC: Contracts relating to the sale of broadcast time to "time brokers" for resale; subchannel leasing agreements for Subsidiary Communications Authorization operation; franchise/leasing agreements for operation of telecommunications services on the TV vertical blanking interval; time sales contracts with the same sponsor for 4 or more hours per day, except where the length of the events (such as athletic contests, musical programs and special events) broadcast pursuant to the contracts is not under control of the station.

73.3615 Ownership reports. (a) Each licensee of a commercial AM, FM, or TV broadcast station shall file an Ownership Report on FCC Form 323 once a year, on the anniversary of the date that its renewal application is required to be filed. Licensees owning multiple stations with different anniversary dates need file only one Report per year on the anniversary of their choice, provided that their Reports are not more than one year apart. A licensee with a current and unamended Report on file at the Commission may certify that it has reviewed its current Report and that it is accurate, in lieu of filing a new Report. Ownership Reports shall provide the following information as of a date not more than 60 days prior to the filing of the Report:

(1) In the case of an individual, the name of such individual;  
 (2) In the case of a partnership, the name of each partner and the interest of each partner. Except as specifically noted below, the names of limited partners shall be reported. A limited partner need not be reported, regardless of the extent of its ownership, if the limited partner is not materially involved, directly or indirectly, in the management or operation of the licensee and the licensee so certifies.

(i) Any change in partners or in their rights will require prior consent of the FCC upon an application for consent to assignment of license or permit. If such change involves less than a controlling interest, the application for FCC consent to such changes may be made upon FCC Form 316.

(3) In the case of a corporation, association, trust, estate or receivership, the data applicable to each:

(i)(A) The name, residence, citizenship, and stockholding of every officer, director, trustee, executor, administrator, receiver and member of an association, and any stockholder which holds stock accounting for 5 percent or more of the votes of the corporation, except that an investment company, insurance company, or bank trust department need be reported only if it holds stock amounting to 10 percent or more of the votes, provided that the licensee certifies that such entity has made no attempt to influence, directly or indirectly, the management or operation of the licensee, and that there is no representation on the licensee's board or among its officers by any person professionally or otherwise associated with the entity.

(B) A licensee shall report any separate interests known to the licensee to be held ultimately by the same individual or entity, whether those interests are held in custodial accounts, by individual holding corporations or otherwise, if, when aggregated:

(1) The sum of all interests except those held by or through "passive investors" is equal to or exceeds 5 percent; or

(2) The sum of all interests held by or through "passive investors" is equal to or exceeds 10 percent; or

(3) The sum of the interests computed under paragraph (a)(3)(i)(B)(1) of this section plus the sum of the interests computed under paragraph (a)(3)(i)(B)(2) of this section is equal to or exceeds 10 percent.

(C) If the majority of the voting stock of a corporate licensee is held by a single individual or entity, no other stockholding need be reported for that licensee;

(ii) Full information as to family relationship or business association between two or more officials and/or stockholders, trustees, executors, administrators, receivers, and members of any association.

(iii) Capitalization with a description of the classes and voting power of stock authorized by the corporate charter or other appropriate legal instrument and the number of shares of each class issued and outstanding; and

(iv) Full information with respect to the interest and identity of any person having any direct, indirect, fiduciary or beneficial interest in the licensee or in its stock accounting for 5% or more of its votes. For example:

(A) Where A is the trustee of stock held for beneficiary B, A shall be reported if A votes the stock or has the sole or shared power to dispose of the stock; B or any other party shall be reported if B or such party votes the stock or has sole power to dispose of the stock or has the power to revoke the trust or replace the trustee at will;

(B) Where X is not a natural person and has attributable ownership interest in the licensee under 73.3555 of the rules, regardless of its position in the vertical ownership chain, and Ownership Report shall be filed for X which, except as specifically noted below, must contain the same information as required of a licensee. If X has a voting stockholder interest in the licensee, only those voting interests of X that are cognizable after application of the "multiplier" described in Note 2(d) of 73.3555 of the rules, if applicable, shall be reported. If X is a corporation, whether or not its interest in the licensee is by virtue of its ownership of voting stock, the officers and directors shall be reported. With respect to those officers and directors whose duties and responsibilities are wholly unrelated to the licensee, and who wish to be relieved of attribution in the licensee, the name, title and duties of these officers and directors, with statements properly documenting that their duties do not involve the licensee, shall be reported.

(4) In the case of all licensees:

(i) A list of all contracts still in effect required to be filed with the FCC by §73.3613 showing the date of execution and expiration of each contract; and

(ii) Any interest which the licensee may have in any other broadcast station.

(b) Except as specifically noted below, each permittee of a commercial AM, FM or TV broadcast station shall file an Ownership Report on FCC Form 323(1) within 30 days of the date of grant by the FCC of an application for original construction permit and (2) on the date that it applies for a station license. The Ownership Report of the permittee shall give the information required by the applicable portions of paragraph (a) of this section. A permittee with a current unamended Report on file at the Commission may certify that it has reviewed its current Report and it is accurate, in lieu of filing a new Report.

(c) Before any change is made in the organization, capitalization, officers, directors or stockholders of a corporation other than licensee or permittee, which results in a change in the control of the licensee or permittee, prior FCC consent must be received under 73.3540. A transfer of control takes place when an individual or group in privity, gains or loses affirmative or negative (50%) control. See instructions on FCC Form 323 (Ownership Report).

(d) Reserved.

(e) Each licensee of a noncommercial educational AM, FM or TV broadcast station shall file an Ownership Report on FCC Form 323-E at the time the application for renewal of station license is required to be filed. Licensees owning more than one noncommercial educational AM, FM or TV broadcast station need file only one Ownership Report at 3-year intervals. Ownership Reports shall give the following information as of a date not more than 30 days prior to the filing of the Ownership Report:

(1) The following information as to all officers, members of governing board, and holders of 1% or more ownership interest (if any): Name, residence, office held, citizenship, principal profession or occupation, and by whom appointed or elected.

(2) Full information with respect to the interest and identify to any individual, organization, corporation, association, or any other entity which has direct or indirect control over the licensee or permittee.

(3) A list of all contracts still in effect required by §73.3613 to be filed with the FCC, showing the date of execution and expiration of each contract.

(4) Any interest which the licensee or permittee or any of its officers, members of the governing board, and holders of 1% or more ownership interest (if any) held in any other broadcast station.

(f) Each permittee of a noncommercial educational AM, FM or TV broadcast station shall file an Ownership Report on FCC Form 323 E within 30 days of the date of grant by the FCC or an application for original construction permit. The Ownership Report of the permittee shall give the information required by the applicable portions of paragraph (e) of this section.

(g) A supplemental Ownership Report on FCC Form 323-E shall be filed by each licensee or permittee within 30 days after any change occurs in the information required by the Ownership Report from that previously reported. Such report should include, without limitation:

(1) Any change in organization;

(2) Any change in officers or directors;

(3) Any transaction affecting the ownership (direct or indirect) or voting rights with respect to the licensee or permittee (or with respect to any stock interest therein).

(h) A copy of all ownership and supplemental ownership reports and related material filed pursuant to this section shall be maintained and made available for public inspection locally as required by §§73.3526 and 73.3527.



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## PART 74 -- EXPERIMENTAL, AUXILIARY AND SPECIAL BROADCAST SERVICES

## 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 subject, 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 and TV Translator Stations, Subpart G; Low Power Auxiliary Stations, Subpart H; Instructional TV Fixed Service, Subpart I; FM Broadcast Translator Stations and FM Broadcast Booster Stations, Subpart L

**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 a least 5,000,000 subscribers and having distribution facilities or circuits available to such affiliated stations or cable systems.

**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 equipment tests or program tests.

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

**74.5 Cross reference to rules in other parts.** Certain rules applicable to broadcast services, some of which are also applicable to other services, are set forth in the following volumes and parts of the FCC Rules and Regulations: (a) Part 1 (Volume I), "Practice and Procedure".

- (1) Subpart A, "General Rules of Practice and Procedure" (1.1 to 1.120).
  - (2) Subpart B, "Hearing Proceedings" (1.201 to 1.363).
  - (3) Subpart C, "Rule Making Proceedings" (1.399 to 1.430).
  - (4) Subpart G, "Schedule of Fees" (1.1101 to 1.1120).
  - (5) Subpart H, "Ex Parte Presentations" (1.1201 to 1.1251).
  - (6) Subpart I, "Procedures implementing the National Environmental Policy Act of 1969" (1.1301 to 1.1319).
- (b) Part 2 (Volume II), "Frequency Allocations and Radio Treaty Matters, General Rules and Regulations," including Subparts A, "Definitions," B, "Allocation, Assignments and Use of Radio Frequencies," C, "Emissions," D, "Call signs and Other Forms of Identifying Radio Transmissions," G, "Treaties and Other International Agreements," and J, "Equipment Authorization Procedures--Type Approval; Type Acceptance; Certification".
- (c) Part 13 (Volume I), "Commercial Radio Operators".
- (d) Part 17 (Volume I), "Construction, Marking and Lighting of Antenna Structures".
- (e) Part 73 (Volume III), "Radio Broadcast Service".

**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).

**§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.

**§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 of 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.

**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 services to affiliated stations under Subpart D, and by eligible networks, cable television operators, motion picture producers, and television program producers under Subpart H, 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 will be issued for a period running concurrently with the license of the FM radio 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 this section for the State or territory in which the station is located or, if issued after such date, to the next renewal date determined in accordance with this Section. When renewed, low power TV and TV translator station licenses will ordinarily be renewed for 5 years and FM translator station licenses be renewed for 7 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 time of expiration of all licenses will be 3 a.m., local time, on the following dates, and, thereafter, at 5-year intervals for low power TV and TV translator stations and at 7-year intervals for FM translator stations:

- (1) For stations located in Nevada, February 1, 1983.
- (2) For stations located in California, April 1, 1983.
- (3) For stations located in Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, Delaware, West Virginia, Ohio, and the District of Columbia, June 1, 1983.
- (4) For stations located in Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Missouri, Kentucky, Tennessee, Indiana, Illinois, Michigan, Wisconsin, Puerto Rico, and the Virgin Islands, August 1, 1983.
- (5) For stations located in Oklahoma and Texas, October 1, 1983.
- (6) For stations located in Kansas and Nebraska, December 1, 1983.
- (7) For stations located in Iowa and South Dakota, February 1, 1984.
- (8) For stations located in Minnesota and North Dakota, April 1, 1984.
- (9) For stations located in Wyoming, June 1, 1984.
- (10) For stations located in Montana, August 1, 1984.
- (11) For station located in Idaho, October 1, 1978.
- (12) For stations located in Washington, December 1, 1978.
- (13) For stations located in Oregon, February 1, 1979.
- (14) For stations located in Alaska, Hawaii and Guam, April 1,

1979.

- (15) For stations located in Colorado, June 1, 1979.
- (16) For stations located in New Mexico, August 1, 1979.
- (17) For stations located in Utah, October 1, 1979.
- (18) For stations located in Arizona, December 1, 1979.
- (19) For the cutoff date for the filing of applications mutually

exclusive with, and petitions to deny, renewal applications, see 1.516(e) of this chapter.

(e) Licenses for instructional television fixed stations will be issued for a period of 10 years beginning with the date of grant. An application for renewal of license (FCC Form 33-R) shall be filed not later than the first day of the fourth full calendar month prior to the expiration date of the license sought to be renewed. If the prescribed deadline falls on a nonbusiness day, the cutoff shall be the close of business of the first full business day thereafter.

§ 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 may, in its discretion, grant a temporary 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.

74.18 General operator requirements. (a) Except where unattended transmitters are specifically permitted an operator must be on duty and in charge of the transmitter at either the transmitter location or remote control location during operation.

(b) Except as noted in paragraph (e) of this section, stations authorized under the provisions of this Part may be operated by any person designated by the station licensee.

(c) The transmitter duty operator may, at the discretion of the station licensee, be employed for other duties and for the operation of other transmitting stations if such other duties will not interfere with the proper operation of the station transmission

(d) Except as noted in paragraph (e) of this section, installation, adjustment and maintenance of any transmitter licensed under the provisions of this Part may be performed by any person deemed qualified to perform such duties by the licensee.

(e) Persons who perform any operating or transmitter technical duties licensed under Subparts A, G and L must hold a commercial radio operator license (any class, unless otherwise endorsed).

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.

SPECIAL PROVISIONS

§ 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 power used 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 Commission in Washington, D. C., 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.

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 such stations and one or more stations of any other service may be authorized, provided that each licensee or permittee using such structure shall be responsible for painting and lighting of the structure when obstruction marking is required by the FCC. However, each such licensee or permittee utilizing a common structure may designate one of the licensees or permittees as responsible for painting and lighting the structure. Such designated licensee or permittee shall be solely responsible for conforming to all FCC requirements of Part 17 of this Chapter regarding obstruction marking and lighting of antenna structures. (See 17.47 through 17.56.) A copy of the agreement between the licensees or permittees must be retained in each licensee's or permittee's station file, available for inspection by FCC representatives. In the event of default by the designated licensee of his responsibility, each of the licensees or permittees shall again be individually responsible for conforming to all requirements of the rules, pending appointment of a new designated licensee responsible for conforming to these rules.

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.

74.24 Short-term operation. The classes of broadcast auxiliary stations provided for in Subparts D, E, F and H of this Part may be operated on a short-term basis under the authority conveyed by a Part 73 license without prior authorization from the FCC, subject to the following conditions:

(a) The Part 73 licensee of this chapter 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 by a Part 73 licensee shall not exceed 720 hours annually per frequency.

NOTE: Certain frequencies shared with other services which are morally 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 association broadcast station.

(g) The Part 73 licensee of this chapter, prior to operating pursuant to the provisions of this section shall, for the intended location of 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. Information on active frequency coordination committees may be obtained by contacting the FCC's Auxiliary Services Branch at (202) 634-6307 between 8:00 a.m. and 4:30 p.m. Eastern time. Except as provided below, 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.

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

(1) Use a 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.

NOTE: Line A is a line above which frequency assignments made by the Federal Communications Commission are coordinated with the Canadian Department of Communications and which begins at Aberdeen, Washington, running by great circle arc to the intersection of 48°N., 120°W., then along parallel 48°N., to the intersection of 95°W., then by great circle arc through the southernmost point of Duluth, Minnesota, then by great circle arc to 45°N., 85°W., then southward along meridian 85°W., to its intersection with parallel 41°N., then along parallel 41°N., to its intersection with meridian 82°W., then by great circle arc through the southernmost point of Bangor,

NOTE (continued)

Maine, then by great circle arc through the southernmost point of Searsport, Maine, at which point it terminates. Line C is a line east of which frequency assignments are similarly coordinated and which begins at the intersection of 70°N., 144°W., then by great circle arc to the intersection of 60°N., 143°W., then by great circle arc so as to include all of the Asaskan Panhandle.

(2) A broadcast auxiliary service station operating on frequencies between 470MHz & 1GHz must be at least 56.3 kilometers (35 miles) south (or west, as appropriate) of the US-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 section 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 Part 73 licensee of this chapter 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 local Engineer-in-Charge.

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.

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.

**SUBPART A -- EXPERIMENTAL BROADCAST STATIONS.**

**74.101 EXPERIMENTAL BROADCAST STATIONS.**

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

**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).

**§ 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 deed 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.

**ADMINISTRATIVE PROCEDURE**

**§ 74.111 CROSS REFERENCE.**

See §§ 74.11 to 74.16.

§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.

§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 for 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.

§ 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 television 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 for 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 Commission 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.

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.

§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.

74.134 MULTIPLE OWNERSHIP.

No persons (including all persons under common control) shall control, directly or indirectly, two or more experimental broadcast stations unless a showing is made that the program of research requires a licensing of two or more separate stations.

§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.

TECHNICAL OPERATION AND OPERATORS

74.161 FREQUENCY TOLERANCES.

The departure of the carrier frequency of 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.

§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.

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**§ 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 which the station was authorized.

**§ 74.165 STATION AND OPERATOR LICENSES; POSTING OF.**

(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. If the station is licensed for portable-mobile operation, the station license or photocopy thereof shall be affixed to the equipment or kept in the possession of the operator on duty at the transmitter. If a photocopy is used, the original license shall be available for inspection by an authorized representative of the FCC.

(b) The original license of each station operator shall be posted at the place where he is on duty: Provided, however, If the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by an authorized Commission representative, or if the station operated is licensed for portable-mobile operation, a verification card (Form 758-F) is acceptable in lieu of the posting of such license.

(c) Posting of the operator licenses and 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.

- 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.

74.182 Program services 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.

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.

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.

SUBPART B--EXPERIMENTAL FACSIMILE BROADCAST STATIONS - DELETED.

SUBPART C--DEVELOPMENTAL BROADCAST STATIONS - DELETED.

SUBPART D - REMOTE PICKUP AND LOW POWER AUXILIARY  
BROADCAST STATIONS

74.401 Definitions. Associated broadcasting station(s). The broadcasting station(s) 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 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.

Deleted

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 station authorized for operation at a specific 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 relay unit. A vehicular receiver-transmitter repeater used to provide extended communication 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.

System. 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.

**§ 74.402 Authorized frequencies.**

Operation on all channels listed in this section (except: 26.07, 26.11, 26.45, 450.01, 450.02, 450.98, 450.99, 455.01, 455.02, 455.98, 455.99 MHz) 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. The frequencies listed in this section represent the center of the channel or channel segment.

(a) The following channels (except 1606, 1622, and 1646 kHz) may be assigned for us 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. The channels 1606, 1622, and 1646 kHz are limited to A3E emission.

(a) The following frequencies may be assigned for use by remote broadcast pickup stations and broadcast network-entities. Frequencies between 450.025-450.975 and 455.025-455.975 MHz may also be assigned for use by cable network-entities.

(1) MF Channels: 1606, 1622, and 1646 kHz; Maximum authorized channel bandwidth: 10 kHz; The channel 1606 kHz is subject to the condition listed in subparagraph (e)(1) of this Section.

(2) HF Channels: 25.87, 25.91, 25.95, 25.99, 26.03, 26.07, 26.09, 2.611, 26.13, 26.15, 26.17, 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; Maximum authorized channel bandwidth: 20 kHz, except the channels 25.87-26.03 MHz are 40 kHz; The channels 25.87-26.09 MHz are subject to the condition listed in subparagraph (e)(2) of this Section.

(3) VHF Channels: 166.25 and 170.15 MHz; Maximum authorized channel bandwidth: 25 kHz; These channels are subject to the condition listed in subparagraph (e)(8) of this Section.

(4) UHF Channels: 450.01, 450.02, 450.98, 450.99, 455.01, 455.02, 455.98, 455.99 MHz; Maximum authorized channel bandwidth: 10 kHz; These channels are subject to the condition listed in subparagraph (e)(9) of this Section.

(b) One or more of the following 5 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.

(1) VHF segments: 152.8575, 152.8625, 152.8675, 152.8725, 152.8775, 152.8825, 152.9175, 152.9225, 152.9275, 152.9325, 152.9375, 152.9425, 152.9775, 152.9825, 152.9875, 152.9925, 152.9975, 153.0025, 153.0375, 153.0425, 153.0475, 153.0525, 153.0575, 153.0625, 153.0975, 153.1025, 153.1075, 153.1125, 153.1175, 153.1225, 153.1575, 153.1625, 153.1675, 153.1725, 153.1775, 153.1825, 153.2175, 153.2225, 153.2275, 153.2325, 153.2375, 153.2425, 153.2775, 153.2825, 153.2875, 153.2925, 153.2975, 153.3025, 153.3375, 153.3425, 153.3475, 153.3525, 153.3575, and 153.3625 MHz; Maximum authorized channel bandwidth: 30 kHz; These channels are subject to the conditions listed in paragraphs (e) (3), (4), and (5) of this section.

(2) VHF segments: 160.8625, 160.8675, 160.8725, 160.8775, 160.8825, 160.8875, 160.8925, 160.8975, 160.9025, 160.9075, 160.9125, 160.9175, 160.9225, 160.9275, 160.9325, 160.9375, 160.9425, 160.9475, 160.9525, 160.9575, 160.9625, 160.9675, 160.9725, 160.9775, 160.9825, 160.9875, 160.9925, 160.9975, 161.0025, 161.0075, 161.0125, 161.0175, 161.0225, 161.0275, 161.0325, 161.0375, 161.0425, 161.0475, 161.0525, 161.0575, 161.0625, 161.0675, 161.0725, 161.0775, 161.0825, 161.0875, 161.0925, 161.0975, 161.1025, 161.1075, 161.1125, 161.1175, 161.1225, 161.1275, 161.1325, 161.1375, 161.1425, 161.1475, 161.1525, 161.1575, 161.1625, 161.1675, 161.1725, 161.1775, 161.1825, 161.1875, 161.1925, 161.1975, 161.2025, 161.2075, 161.2125, 161.2175, 161.2225, 161.2275, 161.2325, 161.2375, 161.2425, 161.2475, 161.2525, 161.2575, 161.2625, 161.2675, 161.2725, 161.2775, 161.2825, 161.2875, 161.2925, 161.2975, 161.3025, 161.3075, 161.3125, 161.3175, 161.3225, 161.3275, 161.3325, 161.3375, 161.3425, 161.3475, 161.3525, 161.3575, 161.3625, 161.3675, 161.3725, 161.3775, 161.3825, 161.3875, 161.3925, and 161.3975 MHz; Maximum authorized channel bandwidth: 30 kHz; These channels are subject to the condition listed in paragraph (e)(6) of this section.

(3) VHS segments: 161.6275, 161.6325, 161.6375, 161.6425, 161.6475, 161.6525, 161.6575, 161.6625, 161.6675, 161.6725, 161.6775, 161.6825, 161.6875, 161.6925, 161.6975, 161.7025, 161.7075, 161.7125, 161.7175, 161.7225, 161.7275, 161.7325, 161.7375, 161.7425, 161.7475, 161.7525, 161.7575, 161.7625, 161.7675, and 161.7725 MHz; Maximum authorized channel bandwidth: 30 kHz; These channels are subject to the conditions listed in paragraphs (e) (4) and (7) of this section.

(4) UHF segments: 450.0275, 450.0325, 450.0375, 450.0425, 450.0475, 450.0525, 450.0575, 450.0625, 450.0675, 450.0725, 450.0775, 450.0825, 450.0875, 450.0925, 450.0975, 450.1025, 450.1075, 450.1125, 450.1175, 450.1225, 450.1275, 450.1325, 450.1375, 450.1425, 450.1475, 450.1525, 450.1575, 450.1625, 450.1675, 450.1725, 450.1775, 450.1825, 450.1875, 450.1925, 450.1975, 450.2025, 450.2075, 450.2125, 450.2175, 450.2225, 450.2275, 450.2325, 450.2375, 450.2425, 450.2475, 450.2525, 450.2575, 450.2625, 450.2675, 450.2725, 450.2775, 450.2825, 450.2875, 450.2925, 450.2975, 450.3025, 450.3075, 450.3125, 450.3175, 450.3225, 450.3275, 450.3325, 450.3375, 450.3425, 450.3475, 450.3525, 450.3575, 450.3625, 450.3675, 450.3725, 450.3775, 450.3825, 450.3875, 450.3925, 450.3975, 450.4025, 450.4075, 450.4125, 450.4175, 450.4225, 450.4275, 450.4325, 450.4375, 450.4425, 450.4475, 450.4525, 450.4575, 450.4625, 450.4675, 450.4725, 450.4775, 450.4825, 450.4875, 450.4925, 450.4975, 450.5025, 450.5075, 450.5125, 450.5175, 450.5225, 450.5275, 450.5325, 450.5375, 450.5425, 450.5475, 450.5525, 450.5575, 450.5625, 450.5675, 450.5725, 450.5775, 450.5825, 450.5875, 450.5925, 450.5975, 450.6025, 450.6075, 450.6125, 450.6175, 450.6225, 455.0275, 455.0325, 455.0375, 455.0425, 455.0475, 455.0525, 455.0575, 455.0625, 455.0675, 455.0725, 455.0775, 455.0825, 455.0875, 455.0925, 455.0975, 455.1025, 455.1075, 455.1125, 455.1175, 455.1225, 455.1275, 455.1325, 455.1375, 455.1425, 455.1475, 455.1525, 455.1575, 455.1625, 455.1675, 455.1725, 455.1775, 455.1825, 455.1875, 455.1925, 455.1975, 455.2025, 455.2075, 455.2125, 455.2175, 455.2225, 455.2275, 455.2325, 455.2375, 455.2425, 455.2475, 455.2525, 455.2575, 455.2625, 455.2675, 455.2725, 455.2775, 455.2825, 455.2875, 455.2925, 455.2975, 455.3025, 455.3075, 455.3125, 455.3175, 455.3225, 455.3275, 455.3325, 455.3375, 455.3425, 455.3475, 455.3525, 455.3575, 455.3625, 455.3675, 455.3725, 455.3775, 455.3825, 455.3875, 455.3925, 455.3975, 455.4025, 455.4075, 455.4125, 455.4175, 455.4225, 455.4275, 455.4325, 455.4375, 455.4425, 455.4475, 455.4525,

455.4575, 455.4625, 455.4675, 455.4725,  
455.4775, 455.4825, 455.4875, 455.4925,  
455.4975, 455.5025, 455.5075, 455.5125,  
455.5175, 455.5225, 455.5275, 455.5325,  
455.5375, 455.5425, 455.5475, 455.5525,  
455.5575, 455.5625, 455.5675, 455.5725,  
455.5775, 455.5825, 455.5875, 455.5925,  
455.5975, 455.6025, 455.6075, 455.6125,  
455.6175, 455.6225 MHz. Maximum  
authorized channel bandwidth: 50 kHz.

(c) One or 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. Maximum authorized channel bandwidth: 50 kHz.

(d) One or 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 Section 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;  
Maximum authorized channel bandwidth; 100kHz.

(e) Conditions on Broadcast Remote Pickup Service channel usage as referred to in subparagraphs (a) through (d) above;

(1) Operation is subject to the condition that no harmful interference is caused to the reception of AM broadcast stations.

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

(3) Operation is subject to condition that no harmful interference is caused to stations operating in accordance with the Table of Frequency Allocations set forth in Part 2 of the Commission's Rules and Regulations. 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 Radio Services.

(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 These frequencies are shared with Public Safety and Land Transportation Radio Services.

(7) Reserved.

(8) Operation on the frequencies 166.25MHz and 170.15MHz is not authorized: (i) Within the area bounded on the west by the Mississippi River, on the north by the parallel of latitude 37 degrees 30 minutes N., and radius equal to the air-line distance between Springfield, Ill., and Montgomery, Alabama, subtended between the foregoing west and north boundaries; (ii) Within 150 miles (241 KM) of New York City; and (iii) In Alaska or outside the continental United States; and is subject to the condition that no harmful interference is caused radio stations in the band 162-174MHz.

(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.

(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 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.

(h) Each authorization for a new broadcast remote pickup station or system shall require the use of type accepted equipment.

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 transmission shall be observed on all channels except: 26.07, 26.11, 26.45, 450.01, 450.02, 450.99, 450.99, 455.01, 455.02, 455.99 and 455.99MHz:

- (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.

74.431 Special rules applicable to remote pickup stations.

(a) Remote pickup mobile station 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) A broadcast licensee eligible for "short-term operation" under 74.24, may operate RPU base or mobile stations under the authorization of the Part 73 license for an application for auxiliary operation with the Commission and subject to the conditions of 74.24(a),(b),(e),(f), (h),(i) and the conditions set forth below:

(1) The auxiliary station is located within 50 miles (80 km) of the broadcast studio or broadcast transmitter.

(2) The applicant must coordinate the operation with all effected 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) Such operation shall be suspended immediately upon notification from the Commission or by the Engineer in Charge(EIC) of the Commission's local field office and shall not be resumed until specific authority is given by the Commission or EIC. When authorized by the EIC, short test operations may be made.

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

(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 Broadcast System and similar emergency survival communications systems. Drills and tests are also permitted on these stations but the priority requirements of 74.403(b) must be observed in such cases.

74.432 Licensing requirements and procedures. (a) A license for a remote pickup station will be issued to: the licensee of and AM, FM, noncommercial FM, 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(a)(6) and (8) under the provisions of 74.436, however, one licensee may not operate such stations on more than two frequencies 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 Roco 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 operators authorized by the license.

(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 or stations (where more than one broadcasting station is specified, all such broadcasting stations shall be licensed the applicant and the same community) 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 or stations. Mobile stations may be operated outside the licensed area of operation pursuant to 74.431(d). Where the applicant for remote pickup broadcast facilities is the licensee of more than one class of broadcasting station (standard, FM, TV), all licensed to the same community, designation of one or more such stations as the associated broadcasting station or stations 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, However, That 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 required notification to the F.A.A. pursuant to 17.7 of the Commissions 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 operation of a station or system licensed under this Subpart, the licensee shall forward the station or system license to the issuing authority for cancellation. 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.

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 regular authorization should be submitted.

(b) A request for special temporary authority for the operation of a remote pickup broadcast station may be made by informal application, which shall be filed with the Commission at least 10 days prior to the date of the proposed operation: Provided, That, an application filed less than 10 days of the proposed operation may be accepted upon a satisfactory showing of the reasons for the delay in submitting the request.

(c) An informal request for special temporary authority shall be addressed to the Commission in Washington, D.C. and must include full particulars including: Licensee's name, call letters of associated broadcasting station or stations, name and address of individual designated to receive return authorization, call letters of remote pickup station is assigned, type and manufacture of equipment, power output, emission, frequency or frequencies proposed to be used, commencement and termination date and location of proposed operation, and purpose for which request is made including any particular justification. In the event that the proposed antenna installation will increase the height of any natural formation or existing man-made structure by more than 20 feet, a vertical plan sketch showing the height above ground of any existing structure, the elevation of the site above mean sea level, and the geographic coordinates of the proposed site, shall be submitted with the application.

(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 in 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.

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 operators 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.

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 operators authorized by the licensee.

(b) An automatic relay station may accomplish retransmission by 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.

74.451 Type acceptance of equipment. (a) Applications for new remote pickup broadcast stations or systems or for the changing transmitting equipment of an existing station.

will not be accepted unless the equipment specified therein has been type accepted for use pursuant to provisions of this Subpart, or which has been type accepted for licensing by stations under Parts 21, 89, 91 or 93 of this chapter and does 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 type acceptance for such transmitter following the type-acceptance 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 type acceptance.

(c) An applicant for a remot pickup broadcast station or system may also apply for type acceptance for an individual transmitter by following the type acceptance procedure set forth in Part 2 of the Commission's rules and regulations. Individual transmitters which are type accepted will not normally be included in the Commission's "Radio Equipment List".

(d) All transmitters marketed for use under this Subpart shall be type accepted by the Federal Communications Commission. (Refer to Subpart I of Part 2 of the Commissions rules and regulations.

(e) Remote pickup broadcast station transmitting 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 assignee: 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 type accepted will specify the particular transmitting equipment which the licensee is authorized to use.

74.452 Equipment changes. (a) Prior Commission approval is required for any change in the overall height of an antenna structure, except where notice to the FAA is specifically not required under 17.14(b) of the Commission's rules and regulations.

(b) The licensee of a remote pickup broadcast station may, except as set forth in paragraph (d) of this section, make any other changes in the equipment that are deemed desirable or necessary, including replacement with type accepted equipment, without prior Commission approval; PROVIDED, That proposed changes will not depart from any of the terms of the station or system authorization or the Commission's technical rules governing its service: And Provided, further That any changes made to type accepted transmitting equipment shall be in compliance with the provisions of Part 2 of the Commission's rules and regulations concerning modification to type accepted equipment.

(c) The FCC in Washington, D. C. shall be promptly notified of any equipment changes made pursuant to paragraph (b) of this section.

(d) All transmitters installed after November 30, 1977, must be type accepted for use in this service or other services as specified in 74.451(a).

74.461 Transmitter power. (a) Transmitter power is the power at the transmitter output terminals and delivered to any impedance-matched, radio frequency load. For the purpose of this subject, the transmitter power is the unmodulated carrier power except that for SSB or pulse transmissions, peak envelope power shall be used.

(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.

74.462 Authorized bandwidth and emissions. (a) Each authorization for a new remote pickup broadcast station or system issued pursuant to an application accepted after (one year following the effective date of these rules) shall require the use of type accepted equipment and such equipment shall be operated in accordance with emission specifications included in the type acceptance grant 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:

Frequency (MHz)	Authorized bandwidth (kHz)	Maximum frequency deviation <sup>1</sup> (kHz)	Type of emission <sup>2,3</sup>
25.87 to 26.03 .....	40	10	A3E, F3E, G3E, F8W, G8W.
26.07 to 26.47 .....	20	5	A3E, F3E, G3E, F8W, G8W.
152.87 to 153.35 * .....	30 <sup>4</sup>	5 <sup>4</sup>	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
160.89 to 161.37 .....	60	10	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
161.84 to 161.78 .....	30	5	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
166.25 to 170.15 .....	25	5	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
450.01 to 455.99 (10 kHz channels) .....	10	1.5	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
450.0875 to 455.6125 (25 kHz channels) .....	25	5	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
450.05 to 455.85 (50 kHz channels) .....	50	10	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.
450.925 to 455.925 (100 kHz channels) .....	100	35	A1A, A2A, A3E, F1B, J3E, F2B, F3E, G3E, F8W, G8W.

<sup>1</sup> Applies where class F1B, F2B, F3E, G3E, F8W, or G8W emission is used.

<sup>2</sup> Stations operating above 450 MHz shall show a need for employing A1A, A2A, F1B, or F2B emission.

<sup>3</sup> Emission designators shall be established in accordance with provision of Subpart C of Part 2 of the Commission's rules and regulations. For transmitting equipment which is type accepted, emission designators will appear in the Commission's radio equipment list.

<sup>4</sup> 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.

(c) For all emissions except single sideband and pulse, the mean power of emissions shall be attenuated below the mean transmitter power in accordance with the following schedule:

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

(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 decibels.

(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) decibels.

(d) For single sideband and pulse signals, the peak power of emissions shall be attenuated below the transmitter power in accordance with the following schedule:

(1) On any frequency 502Hz inside the channel edge up to and including 2500Hz outside the same edge, the following formula will apply:

$$\text{Attenuation} = 29 \text{ Log} \left[ \frac{25}{11} \left( D + 2.5 - \frac{W}{2} \right) \right] \text{ dB}$$

or 50dB whichever is the lesser attenuation. Where: D is the displacement (kHz) from the center of the authorized bandwidth; and W is the channel bandwidth (kHz).

(2) On any frequency removed from the channel by more than 2500Hz: At least 43 plus 10  $\text{Log} (P)$  dB.

(e) 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.

74.463 Modulation requirements. (a) Each new remote pickup broadcast station authorized to operate with a power 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.

74.464 Frequency tolerance. The licensee of a remote pickup broadcast station or system shall maintain the operating frequency of such each station in accordance with the following:

Frequency Range	Tolerance (percent)	
	Base Station	Mobile Station
1.6 to 2 MHz: 200 W or less	0.01	0.02
Over 200 W <sup>1</sup>	.005	.02
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

<sup>1</sup>The listing of tolerances for power over 200 W is in accordance with treaty values and shall not be construed as a finding that such power will be authorized.

**Note - Deleted.**

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

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 a Part 73-only licensee where operation takes place pursuant to 74.24) 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) Where in cases 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 transmission 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 750 hertz  $\pm$  10 hertz, the level of modulation of the identification signal is maintained at 40%  $\pm$  10%, and that the code transmission rate is maintained between 20 and 25 words per minute.

#### SUBPART E - AURAL BROADCAST, AUXILIARY STATIONS

74.501 Class of stations. (a) Aural broadcast STL, stations. 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.

§74.501(b) - 74.502 (a)

(b) Aural broadcasting intercity relay(ICR) station. A fixed station for the transmission of aural program material between broadcasting stations other than international broadcasting stations.

(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.

74.502 Frequency assignment. (a) The frequency band 944-952 MHz is available for assignment to aural STL and ICR stations. AM and FM broadcast stations shall have primary use of the band; however, TV broadcast stations may be licensed on a secondary, noninterference basis. 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 below. The channel, will be assigned by its center frequency, channel bandwidth and emission designator. The following frequencies are the centers of each segment:

944.0125, 944.0375, 944.0625, 944.0875,	948.1125, 948.1375, 948.1625, 948.1875,*
944.1125, 944.1375, 944.1625, 944.1875,	948.2125, 948.2375, 948.2625, 948.2875,
944.2125, 944.2375, 944.2625, 944.2875,	948.3125, 948.3375, 948.3625, 948.3875,
944.3125, 944.3375, 944.3625, 944.3875,	948.4125, 948.4375, 948.4625, 948.4875,
944.4125, 944.4375, 944.4625, 944.4875,	948.5125, 948.5375, 948.5625, 948.5875,
944.5125, 944.5375, 944.5625, 944.5875,	948.6125, 948.6375, 948.6625, 948.6875,
944.6125, 944.6375, 944.6625, 944.6875,	948.7125, 948.7375, 948.7625, 948.7875,
944.7125, 944.7375, 944.7625, 944.7875,	948.8125, 948.8375, 948.8625, 948.8875,
944.8125, 944.8375, 944.8625, 944.8875,	948.9125, 948.9375, 948.9625, 948.9875,
944.9125, 944.9375, 944.9625, 944.9875,	949.0125, 949.0375, 949.0625, 949.0875,
945.0125, 945.0375, 945.0625, 945.0875,	949.1125, 949.1375, 949.1625, 949.1875,
945.1125, 945.1375, 945.1625, 945.1875,	949.2125, 949.2375, 949.2625, 949.2875,
945.2125, 945.2375, 945.2625, 945.2875,	949.3125, 949.3375, 949.3625, 949.3875,
945.3125, 945.3375, 945.3625, 945.3875,	949.4125, 949.4375, 949.4625, 949.4875,
945.4125, 945.4375, 945.4625, 945.4875,	949.5125, 949.5375, 949.5625, 949.5875,
945.5125, 945.5375, 945.5625, 945.5875,	949.6125, 949.6375, 949.6625, 949.6875,
945.6125, 945.6375, 945.6625, 945.6875,	949.7125, 949.7375, 949.7625, 949.7875,
945.7125, 945.7375, 945.7625, 945.7875,	949.8125, 949.8375, 949.8625, 949.8875,
945.8125, 945.8375, 945.8625, 945.8875,	949.9125, 949.9375, 949.9625, 949.9875,
945.9125, 945.9375, 945.9625, 945.9875,	950.0125, 950.0375, 950.0625, 950.0875,
946.0125, 946.0375, 946.0625, 946.0875,	950.1125, 950.1375, 950.1625, 950.1875,
946.1125, 946.1375, 946.1625, 946.1875,	950.2125, 950.2375, 950.2625, 950.2875,
946.2125, 946.2375, 946.2625, 946.2875,	950.3125, 950.3375, 950.3625, 950.3875,
946.3125, 946.3375, 946.3625, 946.3875,	950.4125, 950.4375, 950.4625, 950.4875,
946.4125, 946.4375, 946.4625, 946.4875,	950.5125, 950.5375, 950.5625, 950.5875,
946.5125, 946.5375, 946.5625, 946.5875,	950.6125, 950.6375, 950.6625, 950.6875,
946.6125, 946.6375, 946.6625, 946.6875,	950.7125, 950.7375, 950.7625, 950.7875,
946.7125, 946.7375, 946.7625, 946.7875,	950.8125, 950.8375, 950.8625, 950.8875,
946.8125, 946.8375, 946.8625, 946.8875,	950.9125, 950.9375, 950.9625, 950.9875,
946.9125, 946.9375, 946.9625, 946.9875,	951.0125, 951.0375, 951.0625, 951.0875,
947.0125, 947.0375, 947.0625, 947.0875,	951.1125, 951.1375, 951.1625, 951.1875,
947.1125, 947.1375, 947.1625, 947.1875,	951.2125, 951.2375, 951.2625, 951.2875,
947.2125, 947.2375, 947.2625, 947.2875,	951.3125, 951.3375, 951.3625, 951.3875,
947.3125, 947.3375, 947.3625, 947.3875,	951.4125, 951.4375, 951.4625, 951.4875,
947.4125, 947.4375, 947.4625, 947.4875,	951.5125, 951.5375, 951.5625, 951.5875,
947.5125, 947.5375, 947.5625, 947.5875,	951.6125, 951.6375, 951.6625, 951.6875,
947.6125, 947.6375, 947.6625, 947.6875,	951.7125, 951.7375, 951.7625, 951.7875,
947.7125, 947.7375, 947.7625, 947.7875,	951.8125, 951.8375, 951.8625, 951.8875,
947.8125, 947.8375, 947.8625, 947.8875,	951.9125, 951.9375, 951.9625, 951.9875,
947.9125, 947.9375, 947.9625, 947.9875,	
948.0125, 948.0375, 948.0625, 948.0875,	

(1) A single broadcast station may be authorized up to a maximum of twenty segments (500kHz 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.

(b) The frequency bands 18.760-18.820 and 19.100-19.160 MHz are available for assignment to aural broadcast STL and intercity relay stations and are shared on a co-primary basis with other fixed services under parts 21,78 and 94 of the Commissions Rules.

(1) 5 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
300 MHz Separation	
18762.5.....	19102.5
18767.5.....	19107.7
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

Applicants may use either a two-way link or one frequency of a frequency pair for a one-way link and shall coordinate proposed operation pursuant to the procedures required in 21.100(d).

(c) deleted and reserved.

(d) Aural broadcast STL, and 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.

**§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.

§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 microwave booster station is authorized to retransmit the signals of an aural broadcast STL or intercity relay station.

(d) 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.

(e) 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.

(f) 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.

§74.532 LICENSING REQUIREMENTS.

(a) An aural broadcast STL or intercity relay station will be licensed only to the licensee or licensees of broadcasting stations other than an international broadcasting station and for use with broadcast stations owned entirely by, or under common control of the licensee or licensees.

(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 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.

Note - Applications for aural broadcast microwave booster stations will not be accepted for filing prior to January 1, 1985.

(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 operation of a station licensed under this Subpart, the licensee shall forward the station license to the FCC, Washington, D.C. 20554, for cancellation. A station which is not operated for a period of one year is considered to have been permanently discontinued.

**§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 operators 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) RESERVED.

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

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

(4) Whenever an unattended aural broadcast station is used, appropriate observations must be made at the receiving end of the circuit as often as necessary to insure proper station operation. However, an aural broadcast STL (and 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.

74.534 Power limitations. (a) For operation in the 944-952 MHz band:

Aural broadcast STL and intercity relay stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these 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.

(b) For stations operating in bands above 17.7GHz, the transmitter output power shall be limited to that necessary to accomplish the function of the system. Further, the output power of a transmitter on any authorized frequency shall not exceed the following:

(1)  
 Frequency band (GHz) Maximum transmitter output power (watts)<sup>1</sup>

17.7 to 19.7.....10.0  
 31.0 to 31.3..... 0.05

<sup>1</sup> Peak envelope power

(2)  
 Frequency band (GHz) Maximum allowable EIRP (dBW)

17.7 to 18.6.....+55.0  
 19.6 to 19.8.....+35.0  
 19.9 to 19.7.....+35.0  
 31.0 to 31.3.....No limit

74.535 Emission and bandwidth. (a) For frequency modulation, the mean power of emissions shall be attenuated below the mean transmitter power (P) in accordance with the following schedule:

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

(2) On any frequency removed from the assigned frequency by more than 100% and up to 150% of the authorized bandwidth: at least 35dB.

(3) On any frequency removed from the assigned frequency by more than 150% of the authorized bandwidth; at least 43 plus 10 Log (P) dB.

(b) For all emissions except frequency modulation, the peak power of emissions shall be attenuated below the peak envelope transmitter power (P) 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:

$$\text{Attenuation} = 29 \text{ Log} \left( \frac{25}{11} \left( D + 2.5 - \frac{W}{2} \right)^2 \right) \text{ dB}$$

or 50 dB whichever is the lesser attenuation. Where; D is the displacement frequency (kHz) from the center of the authorized bandwidth; and W is the channel bandwidth (kHz).

(2) On any frequency removed from the channel edge by more than 2500 Hz: At least 43 plus 10 Log (P) 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 operation in the 18GHz band: Aural broadcast STL, inter-city relay stations and booster stations may be authorized to employ either digital or frequency modulation.

(e) For operation in the 18GHz band: The mean power of emission shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(1) When using frequency modulation:

(i) On any frequency removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: At least 25 decibels: 74

(ii) 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 decibels:

(iii) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 plus  $10 \log_{10}$  (mean output power in watts) decibels, or 80 decibels whichever is the lesser attenuation.

(2) When using a digital modulation:

(i) In any 1 MHz band, 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.

$$A \text{ equal } 11 \text{ plus } 0.4(P-50) \text{ plus } 10 \log 10^{11}$$

Where:

A equal Attenuation (in decibels) below the mean output power level.

P equal Percent removed from the carrier frequency.

B equal Authorized bandwidth in MHz.

Attenuation greater than 56 decibels is not required.

(ii) In any 4kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 plus  $10 \log_{10}$  (mean output power in watts) decibels, or 80 decibels whichever is the lesser attenuation.

(f) For operation in the 18GHz band: When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion require greater attenuation than specified above.

(g) 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 such 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.

**74.536 Directional Antenna.** (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 either the 19 or 31 GHz band shall employ transmitting and receiving antennas meeting the appropriate performance Standard A indicated below, subject to paragraph (c) of this section.

ANTENNA STANDARDS

Frequency (Mhz)	Category	Maximum beam-width to 3 dB points (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°
17,700 to 19,700.....	A	n/a	38.0	25	29	33	36	42	55	55
31,000 to 31,300.....	B	n/a	38.0	20	24	28	32	35	36	36
	n/a	4.0	38.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a

<sup>1</sup>The minimum front-to-back ratio shall be 38 dBi.

Mobile except aeronautical mobile, stations need not comply with these standards.

(c) The Commission may require the replacement, at the licensee's expense, of any antenna or periscope antenna system of a permanent fixed station operating at 2500 MHz or higher which does not meet performance Standard A specified above a showing that said antenna causes or is likely to cause interference to (or receive interference from) any other authorized or proposed station whereas an antenna meeting performance Standard A is not likely to involve such interference.

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 authorization for the operation of an aural broadcast STL or intercity relay station may be made by informal application which shall be filed with the FCC at least 10 days prior to the date of the proposed operation. However, an application filed within less than 10 days of the proposed operation may be accepted upon a satisfactory showing of the reasons for the delay in submitting the request.

(c) An informal request for special temporary authorization shall be addressed to the FCC, Washington, D. C. 20554 and shall set forth full particulars including: licensee's name, call letters of the associated broadcast station(s), name and address of individual designated to receive the return authorization, call letters of the aural broadcast STL or intercity relay station, if assigned, type and manufacturer of equipment, power output, 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. In the event that the proposed antenna installation will increase the height of any man-made antenna supporting structure, or increase by more than 20 feet the height of any other type of man-made structure or natural formation, a vertical plan sketch showing the height above ground of any existing structure, the elevation of the site above mean sea level, and the geographic coordinates of the proposed site, shall be submitted with the application.

(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 or life of 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.

**§74.550 Equipment authorization.** Each authorization for aural broadcast STL, ICR and booster stations shall require the use of notified or type accepted equipment, except that operation of 944-952 MHz equipment which has not been approved under the equipment authorization program may continue until July 1, 1990, after which, equipment must be approved. Requirements for obtaining a grant of equipment authorization are contained in Subpart J of Part 2 of the Rules. Equipment designed exclusively for fixed operation shall be authorized under notification procedure (see 2.904(d) of this chapter.

**§74.551 Equipment changes.** (a) Prior Commission approval, upon appropriate application (FCC Form 313) therefor, is required for any of the following changes:

- (1) A change in the ERP.
- (2) A change in the operating frequency or channel bandwidth.
- (3) A change in the location of the transmitter or transmitting antenna except when relocation of the transmitter is within the same building.
- (4) Any change in the overall height of the antenna structure, except where notice to the FAA is specifically not required under 17.14 of this chapter.
- (5) Any change in the direction of the main radiation lobe of the transmitting antenna.

(b) Other equipment changes not specifically referred to in this section may be made at the discretion of the licensee, provided that the FCC in Washington, D. C. is promptly notified in writing upon the completion of such changes and that the changes are described in the notification. Where such changes include the installation of multiplex equipment to provide additional aural channels, the purpose for which these added channels will be used shall be stated.

**§74.561 Frequency tolerance.**

In the bands above 17.7GHz, the operating frequency of the Transmitter shall be maintained in accordance with the following table:

Frequency band (GHz)	Tolerance as percentage of assigned frequency
17.7 to 19.7.....	0.003
31.0 to 31.3.....	0.03

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.

**§74.564 Posting of Station Licenses.** (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 so that all terms thereof are visible, in a conspicuous place in the room in which the transmitter is located: Provided, That, if the transmitter operator is located at a distance from the transmitter pursuant to §74.533, the station license shall be posted in the above-described manner at the operating position.

(b) Posting of the station license and any other instruments of authorization shall be done by affixing the licenses of 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.

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:

(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.

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 broadcast station studios to TV broadcast or low power TV stations 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 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 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 stations to 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 both TV broadcast and low power TV stations, unless specifically otherwise indicated.

NOTE: Wherever used in this subpart, the term "television broadcast station licensee" includes a television broadcast station permittee.

(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.

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 19,180-19,700 MHz are available for broadcast auxiliary stations as described in paragraph (g) of this section. Additionally, the band 38.6-40.0 GHz is available for assignment without channel bandwidth limitation to TV pickup stations on a secondary basis to fixed stations.

Band A MHz	Band B MHz	Band D <sup>1</sup> GHz			
		Group A channels		Group B channels	
		Designation	Channel boundaries	Designation	Channel boundaries
1990-2008	6425-6450 <sup>2</sup>	A01	12.700-12.725	B01	12.7125-12.7375
2008-2025	6450-6475 <sup>2</sup>	A02	12.725-12.750	B02	12.7375-12.7625
2025-2042	6475-6500 <sup>2</sup>	A03	12.750-12.775	B03	12.7625-12.7875
2042-2059	6500-6525 <sup>2</sup>	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
2467-2484	6975-7000	A09	12.900-12.925	B09	12.9125-12.9375
2484-2500	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	12.9875-13.0125
	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 <sup>3</sup>	13.1375-13.1625
		A19 <sup>2</sup>	13.150-13.175	B19 <sup>3</sup>	13.1625-13.1875
		A20 <sup>2</sup>	13.175-13.200	B20 <sup>3</sup>	13.1875-13.2125
		A21	13.200-13.225	B21	13.2125-13.2375
		A22	13.225-13.250		

<sup>1</sup> 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.

<sup>2</sup> The band 13.15-13.20 GHz is reserved exclusively for the assignment of Television Pickup and CARS Pickup stations on a co-equal basis within a 50 km radius of each of the 100 television markets delineated in Section 76.51. Fixed television auxiliary stations licensed pursuant to applications accepted for filing before Sept. 1, 1979, may continue operation on channels in the 13.15-13.20 GHz band, subject to periodic license renewals.

<sup>3</sup> This frequency may be assigned to TV pickup stations only on a secondary basis to the Local Television Transmission Service licensed under Part 21 of the FCC's rules and is not available for use pursuant to the short-term operating provisions set forth in § 74.24.

3/ This frequency may be assigned to television pickup stations only and on a secondary basis to the Local Television Transmission Service licensed under Part 21 of the Commission's rules and is not available for use pursuant to the short-term operating provisions set forth in 74.24.

(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) and (e) deleted and reserved.

(f) Community antenna relay stations may be assigned channels in Band D between 12,700 and 13,200MHz 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 community antenna 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 community antenna relay 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.

(g) In the event that a TV broadcast station licensee engages a communications common carrier to provide TV pickup or TV STL service may be assigned to the communications common carrier for the purpose of providing such service to that licensee.

(h) 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 community antenna relay 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.

(i) The following frequencies are available for assignment to television STL, TV relay stations and TV translator relay stations. The provisions of Section 74.604 do not apply to the use of these frequencies. These frequencies are shared on a co-equal basis with other stations in the fixed service (see Parts 21,78 and 94). Applicants 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 21.100(d).

(1) 2MHz maximum authorized bandwidth channel:

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

(2) 6MHz 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.....	18404.0
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
19289.0.....	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

Transmit (receive) (MHz)	Receive (transmit) (MHz)
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	19260.0
17780.0	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

(j) 31.0 to 31.3 GHz. The following frequencies are available for assignment to television STL, television relay stations and television translator relay stations. The provisions of 74.604 do not apply to the use of these frequencies. These frequencies are shared on a coequal basis with other stations in the fixed and mobile services see Parts 21, 79, 94 and 95. Applicants may use either a two-way link or one or both frequencies of a frequency pair for one-way links. No interference protection is afforded to fixed or mobile stations operating in this band

(1) 25 MHz authorized bandwidth channels, 150 MHz separation.

Transmit (receive) (MHz)	Receive (transmit) (MHz)
31,012.5	31,162.5
31,037.5	31,187.5
31,062.5	31,212.5
31,087.5	31,237.5
31,112.5	31,262.5
31,137.5	31,287.5

(2) 50 MHz authorized bandwidth channels, 150 MHz separation.

Transmit (receive) (MHz)	Receive (transmit) (MHz)
31,025.0	31,175.0
31,075.0	31,225.0
31,125.0	31,275.0

(k) TV STL and TV relay stations may be authorized, on a secondary basis and subject to the provisions of Subpart G of this chapter, to operate fixed point-to-point service on the UHF-TV channels 14-69. These stations must not interfere with and must accept interference from current and future full-power UHF-TV stations, LPTV stations, translator stations. They will also be secondary to current land mobile stations (in areas where land mobile sharing is currently permitted and contingent on the decision reached in the pending Dockets Nos. 85-172 and 84-902).

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 74.687 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 multiplexing proposed. Multiplexing equipment may be installed on licensed equipment without authority of the FCC, provided the installation of each 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) The aural portion of television broadcast program material may be transmitted over an aural broadcast STL or intercity relay station licensed under the provisions of Subpart E of this part but only on a secondary, non-interference basis to the programming of aural broadcast stations. A TV station licensee may continue such operation until the channel assigned to its Subpart E station is requested by an aural broadcast licensee after a showing that no other vacant channels are available or satisfactory. Upon Commission concurrence with the aural broadcast licensee request, the TV station licensee will be required to discontinue operation on the requested frequency. In areas where only a portion of the Subpart E frequencies used by TV station licensees are required by aural broadcast licensees, the Commission will assist all affected parties in arriving at an equitable solution. The provisions of this paragraph do not preclude continued use of Subpart E facilities relay TV sound where the facilities are authorized to an aural broadcast licensee and the primary purpose of the station is to relay aural broadcast programming.

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

(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.

74.604 Interference avoidance. (a) Because the Commission does not undertake frequency coordination, applicants for new TV broadcast auxiliary authorizations 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 coordination committees, where they exist, for information on frequencies available in the area. In selecting frequencies, consideration should be given to the relative locations of receiving points, normal transmission paths, and the nature of the contemplated operation.

(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.

#### ADMINISTRATIVE PROCEDURE

#### 74.621 CROSS REFERENCE.

See Sections 74.11 to 74.16.

#### LICENSING POLICIES AND GENERAL OPERATING REQUIREMENTS.

#### §74.631 PERMISSIBLE SERVICE.

(a) The license 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 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 sta-

tions may be operated in conjunction with other television broadcast stations not aforementioned 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 manmade structure by more than 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) and (f) 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 coordination 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 station 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 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.

74.632 Licensing requirements. (a) A license for a TV pickup, TV STL, or TV relay station will be issued only to licensees of TV broadcast stations and, on a secondary basis, licensees of low power TV 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. In lieu of specifying specific transmitter types, applicants shall certify that the transmitter used or to be used at the requested facility is type accepted, or was manufactured before October 1, 1981. Applications for consolidation of individual mobile station licensees into system license will be accepted only at the time application is made for renewal of the main (Part 73) station license.

(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 construction permit 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 television translator relay station will be issued only to the licensee of a television broadcast translator station. The application for construction permit shall designate the television broadcast station to be relayed, the source of the television broadcast station's signals, and the television broadcast translator station with which it is to be operated. 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 or relaying signals over a path that cannot be covered with a single station.

Note - Applications for TV microwave booster stations will not be accepted for filing prior to January 1, 1985.

(g) In case of permanent discontinuance of operation of a station licensed under this Subpart, the licensee shall forward the station license to the FCC, Washington, D.C. 20554, for cancellation. A station which is not operated for a period of one year is considered to have been permanently discontinued.

74.633 Temporary authorizations. (a) Special temporary authority may be granted to 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 auxiliary broadcast station may be made by informal application, which shall be filed with the Commission at least 10 days prior to the date of the proposed operation: Provided, That an application filed within less than 10 days of the proposed operation may be accepted upon a satisfactory showing of the reasons for the delay in submitting the request.

(c) An application for special temporary authority shall set forth full particulars of the purpose for which the request is made, and shall show the type of equipment, power output, emission, and frequency or frequencies proposed to be used, as well as the time, date and location of the proposed operation. In the event that the proposed antenna installation will increase the height of any natural formation, or existing manmade structure, by more than 20 feet, a vertical plan sketch showing the height of the structure proposed to be erected, the height above ground of any existing structure, the elevation of the site above mean sea level, and the geographic coordinates of the proposed site shall be submitted with the application.

(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) Deleted.

(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.

74.634 Remote control. A television auxiliary station may be operated by remote control provided that such operation is conducted in accordance with 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 operators 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.

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.

§74.636 **POWER LIMITATIONS.**

(a) Transmitter peak output power shall not be greater than necessary, and in any event, shall not exceed the power listed in the table below:

BAND	POWER LIMIT	CLASS OF STATION
A-----	20 watts -----	Fixed
	12 watts -----	Mobile
B-----	20 watts -----	Fixed
	12 watts -----	Mobile
D-----	5 watts -----	Fixed
	1.5 watts -----	Mobile

(b) For stations operating in bands 17.7-19.7 and 31.0-31.3GHz, the transmitter output power shall be limited to that necessary to accomplish the function of the system. Further, the output power of a transmitter on any authorized frequency shall not exceed the following:

(1)

Frequency band (GHz)	Maximum transmitter output power (watts) <sup>1</sup>
17.7 to 19.7 .....	10.0
31.0 to 31.3 .....	0.05

<sup>1</sup>Peak envelope power.

(2)

Frequency band (GHz)	Maximum allowable EIRP (dBW)
17.7 to 19.7 .....	+55.0
19.8 to 19.8 .....	+35.0
19.8 to 19.7 .....	+55.0
31.0 to 31.3 .....	No limit.

74.637 Emissions and emission limitations. (a) For frequency modulation, the mean power of emissions shall be attenuated below the mean transmitter power (P) in accordance with the following schedule:

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

(2) On any frequency removed from the assigned frequency by more than 100% and up to 150% of the authorized bandwidth: at least 35dB.

(3) On any frequency removed from the assigned frequency by more than 150% of the authorized bandwidth; at least 43 plus 10 Log (P) dB.

(b) For all emissions except frequency modulation, the peak power of emissions shall be attenuated below the peak envelope transmitter power (P) 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:

$$\text{Attenuation} = 29 \text{ Log} \left( \frac{25}{11} \left( D + 2.5 - \frac{W}{2} \right)^2 \right) \text{ dB}$$

or 50 dB which is the lesser attenuation. Where: D is the displacement frequency (kHz) from the center of the authorized bandwidth; and W is the channel bandwidth (kHz).

(2) On any frequency removed from the channel edge by more than 2500 Hz: At least 43 plus 10Log (P) dB.

(c) For operation in the 17,000-19,700MHz and 31,000-31300MHz bands: TV broadcast STL, relay and booster stations may be authorized to employ analog or digital modulation in this band. The mean power of any emission shall be attenuated below the mean output power of the transmitter 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 25dB:

(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 35dB:

(iii) On any frequency removed from the assigned (center) frequency by more than 250% of the authorized bandwidth: At least 43 plus 10 log 10 (mean output power in watts) dB or 80 dB, whichever is the lesser attenuation.

(2) When using digital modulation:

(i) In any 1 MHz band, the center frequency of which is removed from the assigned frequency by more than 50% up to and including 250% of the authorized bandwidth: As specified by the following equation but in no event less than 11dB.

A equal 11 plus 0.4 (P-50) plus  $10 \log_{10} B$  where:

A equal Attenuation (in dB) below the mean output power level

P equal Percent removed from the carrier frequency

B equal Authorized bandwidth in MHz

(Attenuation greater than 56 decibels is not required).

(ii) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250% of the authorized bandwidth: At least 43 equal  $10 \log_{10}$  (mean output power in watts) dB or 80 dB, 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.

(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.

74.638 Frequency coordination above 12.7 GHz. (a) Channels in Band D are shared with certain Private Operational Fixed Stations authorized under Part 94, 94.93 after September 9, 1983. After this date all Broadcast Auxiliary use of these bands is subject to coordination using the following procedure:

(1) Before filing an application under this part the applicant must perform a frequency engineering analysis to ensure that the proposed facilities will not cause interference to existing or previously applied for stations in this band of a magnitude greater than that specified below.

(2) The general criteria for determining allowable adjacent or co-channel interference protection to be afforded, regardless of system length or type of modulation, multiplexing or frequency band, shall be such that the interfering signal shall not produce more than 1.0dB degradation of the practical threshold of the protected receiver. Determined by calculating the ratio in dB between the desired carrier signal and undesired interfering signal (C/I ratio) appearing at the input to the receiver under investigation (the victim receiver). The development of the C/I ratios from the criteria for maximum allowable interference level per exposure and the methods used to perform path calculations shall follow generally acceptable good engineering practices. Procedures may be developed by the Electronics Industries Association (EIA), the Institute of Electrical and Electronic Engineers, Inc. (IEEE) the American National Standards Institute (ANSI) or any other recognized authority will be acceptable to the FCC.

(3) Where the development of the carrier to interference ratio (C/I) is not covered by generally acceptable procedures or where the applicant does not wish to develop the carrier to interference ratio, the applicant shall employ the following C/I protection ratios.

(i) Co-channel interference: For both sideband and carrier-beat, (applicable to all bands), the previously authorized system shall be afforded a carrier to interfering signal protection ratio of at least 90dB.

(ii) Adjacent channel interference: The existing or previously authorized system shall be afforded a carrier to interfering signal protection ratio of at least 56dB.

(b) Coordination of assignment in the 18GHz band will be performed in accordance with the procedure established in 21.100.

74.641 Antenna systems/ (a) For fixed stations operating in the 12.7-13.2 and 17.7-19.7 GHz bands and for fixed and mobile stations operating in the 31.0-31.3GHz bands, 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 transmitter signal. Booster station antennas having narrower beamwidths and reduced sidelobe radiation may be required in congested areas or to resolve interference problems.

ANTENNA STANDARDS

Frequency (MHz)	Category	Maximum beamwidth to 3 dB points (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°
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	n/a	38.0	25	29	33	36	42	55	55
	B	n/a	38.0	20	24	28	32	35	36	36
31,000 to 31,300.....	n/a	14.0	38.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a

The minimum front-to back ratio shall be 38 dBi.

Mobile except aeronautical mobile, stations need not comply with these standards.

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(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.

74.651 EQUIPMENT CHANGES.

(a) Commission authority, upon appropriate formal application (FCC Form 313) therefor, is required for any of the following equipment changes:

(1) Replacement of a specifically authorized transmitter by a transmitter that is not type accepted or notified for operation under this Subpart pursuant to 74.655(c).

(2) A change in the frequency of the operating channel or the transmitter putput power.

(3) A change in the location of the TV broadcast auxiliary station transmitter or transmitting antenna authorized for use at a fixed location except when the relocation of the transmitter is within the same building.

(4) Any change in the overall height of the antenna structure, except where notice to the FAA is specifically not required under 17.14 of this chapter.

(5) Any change in the direction of the main radiation lobe of the transmitting antenna.

(b) Other equipment changes not specifically referred to above may be made at the discretion of the licensee provided that the FCC in Washington, D.C. is notified in writing upon the completion of such changes, and provided that the changes are appropriately reflected in the next application for renewal of license of the television auxiliary broadcast station filed by the licensee.

(c) Multiplexing equipment may be installed on any licensed television broadcast STL, TV relay, or translator relay station without further authority of the FCC.

74.655 Authorization of Equipment. (a) Except as provided in paragraph (b), all transmitting equipment first marketed for use under this subpart or placed into service after October 1, 1981, must be type accepted or notified, as detailed in paragraph (g) of this section. Equipment which is used at a station licensed prior to October 1, 1985, which is not type accepted or notified, as detailed in paragraph (g) 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, 1985. Transmitters designed for use in the 31.0 to 31.3GHz band shall be authorized under the notification procedure.

(b) Type acceptance or notification is not required for transmitters used in conjunction with TV pickup stations operating with a peak output power not greater than 250mW. Pickup stations 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 type accepted or notified equipment, as detailed under paragraph (g) 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 type accepted or modified 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 apply for type acceptance or modification following the procedures set forth in part 2 of the FCC Rules.

(e) An applicant for a TV broadcast auxiliary station may also apply for type acceptance or notification, as specified in paragraph (g) of this Section, for an individual transmitter by following the procedures set forth in Subpart J of Part 2 of the FCC Rules and Regulations. Individual transmitters which are authorized will not normally be included in the FCC's Radio Equipment List.

(f) Reserved.

(g) As of March 5, 1984, 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 the notification procedure. All other transmitters will be authorized under the type acceptance procedure. Transmitters authorized under type acceptance are acceptable for use in all TV broadcast auxiliary stations (see 2.904(d) of this Chapter).

74.661 Frequency tolerance (a) The licensee of a TV auxiliary broadcast station shall maintain the operating frequency of its station so that 99% of the sideband energy shall fall within the assigned channel.

(b) Television STL stations transmitting the aural portion of television broadcast program material over an aural broadcast STL or intercity relay station licensed under the provisions of Subpart E of this part shall maintain the operating frequency of such aural broadcast STL or intercity relay station within 0.005 percent of the assigned frequency.

(c) Television translator relay stations shall maintain their operating frequency within 0.002 percent of the assigned frequencies: PROVIDED, HOWEVER, That frequency modulated television translator relay stations shall maintain their operating frequency within 0.005 percent of the assigned frequencies.

(d) Television Pickup stations operating in the 38.6-40 GHz band shall maintain the carrier frequency of each authorized transmitter within plus or minus 0.005 percent of the operating frequency; as an exception, stations shall maintain the carrier frequency of the transmitter within plus or minus 0.05 percent of the operating frequency provided that the transmitter output power is no greater than 50 milliwatts and a directional antenna is used.

(e) In the bands between 17.7 and 31.3GHz, the operating frequency of the transmitter shall be maintained in accordance with the following table:

Frequency band (GHz)	Tolerance as percentage of assigned frequency
17.7 to 19.7	0.003
31.0 to 31.3	0.03

§74.662 Frequency monitors and measurements. The licensee of a television broadcast station shall provide means for measuring the operating frequency in order to insure that the emissions are confined to the authorized channel.

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

§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 so that all terms thereof are visible in a conspicuous place in the room in which the transmitter is located: Provided:

(1) If the transmitter operator is located at a distance from the transmitter pursuant to §74.634, the station license shall be posted in the above-described manner at the operating position.

(2) If the station is licensed for mobile operation, the station license or a photocopy thereof shall be affixed to the equipment or kept in the possession of the operators on duty at the transmitter. If a photocopy is used, the original license shall be available for inspection by an authorized government representative.

(3) In cases where the transmitter is operated unattended pursuant to the provisions of 74.635 the call sign of the unattended station and the name of the licensee, together with the call sign and location of the TV broadcast station(s) which it operates as an auxiliary, 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 or other easily accessible point. The display shall be prepared so as to withstand normal weathering over a reasonable period of time and shall be maintained in a legible condition at all times. The station license and other documents referred to in this paragraph, shall be kept in the files of the television broadcast station with which it is licensed as a auxiliary.

(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.

74.682 Station Identification.

(a) Each TV 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 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.

SUBPART G -- LOW POWER TV AND TV TRANSLATOR 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 television broadcast station which provides the programs and signals being retransmitted by a television broadcast translator station.

(c) VHF translator. A television broadcast 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 a UHF translator station by amplifying and reradiating such signals which have been received directly through space, without specifically altering any characteristic of the incoming signal other than its amplitude.

(f) Low power TV station. A station authorized under the provisions of the 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 television program signals generated at the transmitter site constitutes local origination. Local origination also includes transmission or programs reaching the transmitter site via television STL stations, but does not include transmission of signals obtained from either terrestrial or satellite microwave feeds or low power TV stations.

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) on Part 73, Channel 37 will not be assigned to such stations.

(3) Application for new low power TV or TV translator stations 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(806-812MHz) through 83(884-890MHz) will be granted only on a secondary basis to land mobile radio operations.

(b) Changes in the TV Table of Assignments (73.606(b) of Part 73 of this chapter), authorizations to construct new TV broadcast stations or to change facilities of existing ones, 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 station, the licensee of the low power TV or TV translator station shall eliminate the interference or file an application for a change in channel assignment.

74.703 Interference (a) An application for a new low power TV or TV translator station or for changes in the facilities of an authorized station will not be granted when it is apparent that interference will be caused. The licensee of a new low power TV or TV translator station shall protect existing low power TV or TV translator stations from interference within the protected contour defined in 74.707.

(b) It shall be the responsibility of the licensee of a low power TV or TV translator station to correct at its expense any condition of interference to the direct reception of the signals of a TV broadcast station operating on the same channel as that used by the low power TV or TV translator station or on an adjacent channel, which occurs as the result of the operation of the low power TV or TV translator 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 or TV translator station, regardless of the quality of such reception or the strength cannot be promptly eliminated by the application of suitable techniques, operation of the offending low power TV or TV translator stations shall be suspended and shall not be resumed until the interference has been eliminated. If the complainant refuses to permit the low power TV or TV translator licensee to apply remedial techniques that demonstrably will eliminate the interference without impairment of the original reception, the licensee of the low power TV or TV translator station is absolved of further responsibility.

(c) It shall be the responsibility of the licensee of a low power TV or TV translator 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 the 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 head-end 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 an MDS of ITFS system by radiations within its assigned channel on the output channel of any system converter located at a receiver, the earlier user, whether MDS 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) In each instance where suspension of operation is required, the licensee shall submit a full report to the FCC in Washington, D.C., 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.

74.705 TV broadcast 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 broadcast 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 station operating on a channel which is the seventh channel above the requested channel.

(5) A UHF low power TV or TV translator construction permit application will not be accepted if it specifies a site less than 32 kilometers from the transmitter site of a UHF TV broadcast station operating on a channel which is the second, third, fourth, or fifth channel above or below the requested channel.

(c) 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) 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 or TV translator applications 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 or TV translator station application will not be accepted if the radio in dB of its field strength to that of the TV broadcast station at its protected contour fails to meet the following:

(1) -45 dB for co-channel operations without offset carrier frequency operation or -28dB 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 or TV translator station's frequencies 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 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.

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 and TV translator 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 (1.6km) from transmitter site.  
Up to 0.001 kW VHF; up to 0.1kW - 2 miles (3.2km) from transmitter site.  
Up to 0.1kW VHF; up to 1kW UHF - 4 miles (6.4km) 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 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 low power TV or TV translator 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 low power TV or TV translator station's protected contour and proposes operation on a channel either 7 channels below or 14 or 15 channels above the channel in use by the low power TV or TV translator station.

(c) The low power TV or TV translator construction permit application 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 92, 10a, or 10c of 73.699 (F (50,10) charts) of Part 73 of this chapter.

(2) For low power TV or TV translator applications that do not specify the same channel as the low power TV or TV translator 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 or TV translator station application will not be accepted if the ratio in dB of its field strength to that of the authorized low power TV or TV translator 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 or TV translator 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) 0 dB when the protected low power TV or TV translator station operates on a UHF channel that is seven channels above the requested channel.

(6) 23 dB when the protected low power TV or TV translator station operates on a UHF channel that is fourteen channels below the requested channel.

(7) 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.

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, Maine	14, 16	42°21'24"	071°03'24"
Chicago, Illinois	14, 15	41°52'28"	087°38'22"
Cleveland, Ohio	14, 15	41°29'51"	081°41'50"
Dallas, Texas	16	32°47'09"	096°47'37"
Detroit, Minnesota	15, 16	42°19'48"	083°02'57"
Houston, Texas	17	29°45'26"	095°21'37"
Los Angeles, Calif.	14, 20	34°03'15"	118°14'28"
Miami, Florida	14	25°46'37"	080°11'32"
New York, New York	14, 15	40°45'46"	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, Calif.	16, 17	37°46'39"	122°24'40"
Washington, D.C.	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 is 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 90 kilometers of the corresponding coordinates from the list below.

City	Channels	Coordinates	
		Latitude	Longitude
San Diego, Calif.	15	32°41'48"	116°56'10"
Waterbury, Connecticut	20	41°31'02"	073°01'00"
Washington, D.C.	14	38°57'17"	077°01'17"
Washington, D.C.	20	38°57'49"	077°06'18"
Champaign, Illinois	15	40°04'11"	087°54'45"
Jacksonville, Illinois	14	39°45'52"	090°30'29"
Ft. Wayne, Indiana	15	41°05'35"	085°10'42"
South Bend, Indiana	16	41°36'20"	086°12'44"
Salisbury, Maryland	16	38°24'15"	075°34'45"
Mt. Pleasant, MI	14	43°34'24"	084°46'21"
Hanover, N.Hamp.	15	43°42'30"	072°09'16"
Canton, Ohio	17	40°51'04"	081°16'37"
Cleveland, Ohio	19	41°21'19"	081°44'24"
Oxford, Ohio	14	39°30'26"	084°44'09"
Zanesville, Ohio	18	39°55'42"	081°59'06"
Elmira-Corning, New York	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°12'30"	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, Wisconsin	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.

(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 may include identification of the contributors, the size and nature of the contribution and advertising messages of contributors. Emergency transmissions shall no longer or more frequent than necessary to protect life and property.

(g) 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 Sections 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.

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 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 73.636 of Part 73 of this chapter, 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 or for changes in facilities of existing stations 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.

## §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 section 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 therefore 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 348, for renewal of license).

74.734 Attended and un attended operation. (a) In all circumstances other than during local origination (see 74.701(h)), during which the operator must be in continuous attendance at the transmitter site, at a remote control point or at the program source, low power TV and TV translator stations may be operated without a licensed radio operator 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) The FCC shall be supplied with 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.

(6) In the case of a low power TV or TV translator station using modulating equipment, observation of the transmitted program signal on a suitable receiver shall be made for at least 10 continuous minutes each day by a person designated by the licensee, who shall institute measures sufficient to assure prompt correction of any condition of improper operation that is observed.

(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.

74.735 Power limitation. (a) The power output of the final radiofrequency amplifier of a VHF low power TV or TV translator station, except as provided for in paragraphs (d) and (f) of this section shall not exceed 0.01 kW peak visual power. A UHF station shall be limited to a maximum of 1 kW peak visual power, except as provided for in paragraph (f) of this section. In no event shall the transmitting apparatus be operated with a power output in excess of the manufacturer's rating.

(b) In individual cases, the FCC may authorize the use of more than one final radio frequency amplifier at a single VHF or UHF station under the following conditions:

(1) For each amplifier shall be used to serve a different community or area. More than one final radiofrequency amplifier will not be authorized to provide service to all or part of the same community or area.

(2) Each final radiofrequency amplifier shall feed a separate transmitting antenna or antenna array. The transmitting antenna(s) arrays shall be so designed and installed that the outputs of the separate radiofrequency amplifiers will not combine to reinforce the signals radiated by the separate antennas or otherwise achieve the effect of radiated power in any direction in excess of that which could be obtained with a single antenna of the same design fed by a radiofrequency amplifier with power output no greater than that authorized pursuant to paragraph (a) of this section.

(3) A translator employing multiple final radiofrequency amplifiers will be licensed as a single station. The separate final radiofrequency amplifiers will not be licensed to different licensees.

(c) No limit is placed upon the effective radiated power that may be obtained by the use of horizontally or vertically polarized directive transmitting antennas, providing the provisions of Sections 74.705, 74.707 and 74.709 are met. 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 (2), above. 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 7" x 10") 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 asre 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.

(d) VHF low power TV and TV translator stations authorized on channels listed in the TV table of allocations (see 73.606(b) of Part 73 of this Chapter) will be authorized a maximum output power of the radio frequency amplifier of 0.1 kW peak visual power.

(e) The power output of the final radio amplifier of a VHF or UHF transmitter may be fed into a single transmitting antenna, or may be divided between two or more transmitting antennas or antenna arrays in any manner found useful or desirable by the licensee.

(f) A station proposing to use antenna(s) designed for circularly polarized radiation may be authorized to use a type accepted transmitter or parallel connected of two type accepted translator amplifiers to operate at peak visual output power of twice that specified under the maximum transmitter power limitations given above in this section.

74.736 EMISSIONS AND BANDWIDTHS. (a) The license of a low power TV or TV translator station authorizes the transmissions of the visual signal by amplitude modulation (AM) & the accompanying aural signal by frequency modulation (F3E) or (G3E)

(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 megacycles above or below the upper and lower edges, respectively, of the assigned channel shall be attenuated no less than:

(i) 30 decibels for transmitters rated at no more than 1 watt power output.

(ii) 50 decibels for transmitters rated at more than 1 watt power output.

(iii) 60 decibels 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.

74.737 Antenna location. (a) An applicant for a new low power TV or TV translator 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.

#### EQUIPMENT

74.750 Transmission system facilities. (a) Application for new low power TV and TV translator stations and for increased transmitter power for previously authorized facilities will not be accepted unless the transmitter is listed in the FCC's list of equipment type accepted for licensing under the provisions of this subpart.

(b) Transmitting antennas, antennas used to receive the signals to be rebroadcast, and transmission lines are not type accepted 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 type accepted 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 decibels: 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 decibels 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 decibels for transmitters rated at no more than 1 watt power output.

(ii) 50 decibels for transmitters rated at more than 1 watt power output.

(iii) 60 decibels 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 decibels when the strength of the input signal is varied over a range of 30 decibels 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 intensities, 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 provided 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) By frequency shift keying; the aural and visual carrier shift shall not be less than 5 kHz or greater than 25 kHz.

(ii) By amplitude modulation of the aural carrier of at least 30 percent 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 and TV translator transmitting equipment using a modulation process for either program origination or rebroadcasting 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) Type acceptance 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 or TV translator stations may request type acceptance by following the procedures set forth in Part 2, Subpart J, of this chapter. Equipment found to be acceptable by the FCC will be listed in the "Radio Equipment List" published by the FCC. These lists are available for inspection at the FCC headquarters in Washington, D.C. or at any of its field offices.

(2) Low power TV and TV translator transmitting apparatus that has been type accepted by the FCC will normally be authorized without additional measurements from the applicant or licensee.

(3) Applications for type acceptance of modulators to be used with existing type accepted 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 type acceptance, including information regarding withdrawal of type acceptance, modification of type accepted equipment and limitations on the findings upon which type acceptance is based, are set forth in Part 2, Subpart F of this chapter.

(f) The transmitting antenna system may be designed to produce horizontal, vertical, or circular polarization.

(g) Low power TV or TV translator stations installing new type accepted 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 to existing low power TV or TV translator transmitting apparatus must have a qualified operator (74.18) examine the transmitting system after installation. This operator must certify in the application for the station license that the transmitting equipment meets the requirement of paragraph (d)(1) of this section. A report of the methods, measurements, and results must be kept in the station records. However, stations using modulating equipment solely for the limited local origination of signals permitted by 74.731 need not comply with the requirements of this paragraph.

74.751 Equipment changes. No change, either mechanical or electrical, may be made in apparatus which has been type accepted by the Commission without prior authority of the Commission. If such prior authority has been given to the manufacturer of type accepted 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 type accepted by the FCC for use by low power TV and TV translator 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 or radiation, directive antenna pattern, antenna gain, transmission line loss characteristics, or height of antenna center of radiation.

74.751(b)(4) - (d)

(4) Any horizontal change of the location of the antenna structure which would (1) be in excess of 500 feet, or (2) require notice to the Federal Aviation Administration pursuant to 17.7 of this Chapter.

(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.

(c) Other equipment changes not specifically referred to in paragraphs (a) or (b) of this section may be made at the discretion of the licensee, provided that the FCC in Washington, D. C. is notified in writing upon 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.

TEHCNICAL OPERATION AND OPERATORS

74.761 Frequency tolerance. The licensee of a low power TV or TV translator 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  $\pm$  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 or TV translator station is authorized with a specified offset designation in order to provide protection under the provisions of 74.705 or 74.707.

74.762 Frequency measurements. (a) The licensee of a low power TV or TV translation station is not required to provide a means for measuring the operating frequencies of the transmitter. However, only equipment having the required stability will be type accepted for use by low power TV or TV translator stations.

(b) In the event that a low power TV or TV translator 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).

74.763 Time of operation. (a) A low power TV or TV translator station is not required to adhere to any regular schedule of operation. However, the licensee of a TV translator 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 station 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, D. C. 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 licensee will so notify the FCC of this date. If the causes beyond the control of the licensee make it impossible to comply within the allowed period, informal written request 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 or TV translator 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.

(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.

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 licensee or permits of operators employed at low power TV stations locally originating programs (as defined by 74.701(h)) shall be posted in accordance with the provisions of 73.1230(b).

(c) 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.

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 and shall make them 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, Wash., D.C.20402.

74.780 Broadcast regulations applicable to TV translator and low power TV stations. The following rules are applicable to TV translator stations and low power TV 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 73.1205, Fraudulent billing practices.
- 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 identification; 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 73.1940, 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 35.7317, Contingent applications.
- Section 73.3518, Inconsistent or conflicting applications.
- Section 73.3519, Repetitious applications.
- Section 73.3522, Amendment of applications.
- Section 73.3525, (a),(b),(d),(f),(g),(h), and (i) Agreements for removing application conflicts.
- Section 73.3533, Application for construction permit or modification of construction permit.
- Section 73.3534 Application for extention 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 or transfer of control.
- Section 73.3541, Application for involuntary assignment or of transfer of control.
- Section 73.3542, Apolication for Temporary authorization.
- Section 73.3544, Application to obtain a modified station license.
- Section 73.3545, Application for permit to deliver programs to foreign stations.
- Section 73.3561, Staff consideration of applications requiring Commission action.
- Section 73.3562, Staff consideration or application 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, Petition 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 applicable 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).

74.781 Station records. (a) The licensee of a low power TV or TV translator station 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 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 2 yrs.  
74.782 Reserved.

Station identification. (a) Each TV translator station and low power TV station not originating local programming as defined by 74.701(h), 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 am and 9 am and 3 pm and 5 pm each broadcast day at approximately one hour intervals during each time period. Television stations which do not begin their broadcast day before 9 am shall make these identifications in the hours closest to these time periods at the specified intervals.

(b) Licensees of television translator 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.

74.784 Rebroadcasts. (a) The term "rebroadcast" means the reception of 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 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 that written consent has been obtained from the licensee of the station whose programs are retransmitted.

(c) A TV translator station may rebroadcast only programs and signals that are simultaneously transmitted by a TV broadcast station.

(d) The provisions of 72.1207 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.

SUBPART H - LOW POWER AUXILIARY STATIONS

§74.801 Definitions. Cable Television system operator. A cable television operator is defined in 76.5(11) of the rules as that local business entity, be it natural person, partnership, corporation or association, which offers for sale services of a cable television system in the system community.

Lower 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 use 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.

74.802 Frequency assignment.

(a) The following frequency bands may be assigned for use by low power auxiliary stations:

26.10 - 26.48 MHz

161.625 - 161.775 MHz (except in Puerto Rico or the Virgin Islands)

174 - 216 MHz

450 - 451 MHz

455 - 456 MHz

944 - 952 MHz

Except for the 174-216 MHz band, transmitting units may be operated on any frequency within the band of frequencies for which the station is licensed.

(b) In the 174-216 MHz band, operations are limited to locations removed from existing co-channel stations by the following distances unless otherwise authorized by the Commission:

Zone I, 97Km (60 miles)

Zone II, and III, 120 Km (75 miles)

NOTE: See 73.609 for a definition of each of the zones.

Specific frequency operation is required in this band and the licensee will select the exact frequency on which operation is desired. Specific assignable frequencies will begin and end on the frequencies shown in the ranges indicated below. Intermediate frequencies must be located within the ranges specified and must be offset from the upper or lower assignable frequencies by 25kHz or an integral multiple thereof.

(1) With television Channel 7 (174-180 MHz):

174.600-176.600 MHz and 177.000-179.400 MHz

(2) Within television Channel 8 (180-186 MHz):

180.600-182.600 MHz and 183.000-185.400 MHz

(3) Within television Channel 9 (186-192 MHz):

186.600-188.600 MHz and 189.000-191.400 MHz

(4) Within television Channel 10 (192-198 MHz):

192.600-194.600 MHz and 195.000-197.400 MHz

(5) Within television Channel 11 (198-204 MHz):

198.600-200.600 MHz and 201.000-203.400 MHz

(6) Within television Channel 12 (204-210 MHz):

204.600-206.600 MHz and 207.000-209.400 MHz

(7) Within television Channel 13 (210-216 MHz):

210.600-212.600 MHz and 213.000-215.400 MHz

(c) A licensee is not limited with respect to the number of low power auxiliary stations which may be licensed.

(d) Low power auxiliary licensees will not be granted exclusive frequency assignments.

**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 174-216MHz band for use in any area shall be guided by the need to avoid interference to television reception. In this band low power auxiliary station usage is secondary to television broadcasting and shall not cause harmful interference to television reception. If interference occurs, low power auxiliary station operation shall cease immediately and shall not resume until the interference problem has been resolved.

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.

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 use with 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 Section 76.5(w) and (x).

(4) Motion picture producers as defined in 74.801.

(5) Television program producers as defined in 74.801.

(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 operators, and motion picture program producers may be authorized to operate low power auxiliary stations only in the 174-216 MHz band.

(e) An application for low power auxiliary stations or for a change in an existing authorization shall specify the broadcast station, combination of such stations, 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 in duplicate on FCC Form 313 may be used in applying for the authority to operate one or more low power auxiliary units. The application must specify the number of units to be operated and 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) are met.

(f) Applications for the use of the 174-216 MHz band 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. Since low power auxiliary station use of this band will only be permitted in areas removed from existing co-channel television broadcast stations, it is the licensee's responsibility to insure operation of these stations does not occur at distances less than those specified in 74.802(b) with respect to existing co-channel TV stations serving part of the specified area of operation.

(g) Low power auxiliary licenses will specify the minimum and maximum number of unites that may be operated as follows: from 1 to 5 stations; from 4 to 12 stations; from 10 to 24 stations; from 20 to 50 stations; 45 or mor stations.

(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 Section 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 Section 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 operation of a station licensed under this Subpart, the licensee shall forward the station license to the Commission in Washington for cancellation. 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.

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 low power auxiliary station may be made by informal application, which shall be filed with the Commission in Washington at least 10 days prior to the date of the proposed operation: Provided, That, an application filed within less than 10 days of the proposed operation may be accepted upon a satisfactory showing of the reasons for the delay in submitting the request.

(c) An informal request for special temporary authority shall be addressed to the Commission in Washington, D. C., and shall include full particulars including: applicant's name, statement of eligibility, call letters of associated broadcasting station or stations, if any, name and address of individual designated to receive return telegram, type and manufacturer of equipment, power output, emission, frequency or frequencies proposed to be used, commencement and termination date and 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.

#### EQUIPMENT

74.851 Type acceptance of equipment.

(a) Applications for new low power auxiliary stations will not be accepted unless the transmitting equipment specified therein has been type accepted for use pursuant to provisions of this Subpart.

(b) Any manufacturer of a transmitter to be used in this service may apply for type acceptance for such transmitter following the type acceptance 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 type acceptance.

(c) An applicant for a low power auxiliary station may also apply for type acceptance for an individual transmitter by following the type acceptance procedure set forth in Part 2 of the Commission's Rules and Regulations. The application for type acceptance must be accompanied by the proper fees as prescribed in Part 1 of the Commission's Rules and Regulations. Individual transmitters which are type accepted will not normally be included in the Commission's "Radio Equipment List."

(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 type accepted will specify the particular transmitting equipment which the licensee is authorized to use.

(f) All transmitters marketed for use under this subpart shall be type accepted by the Federal Communications Commission for use under this Subpart. (Refer to Subpart I of Part 2 of the Commission's Rules and Regulations.)

#### 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 type accepted 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 type accepted transmitting equipment shall be in compliance with the provisions of Part 2 of the Commission's Rules and Regulations concerning modification to type accepted 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.

(c) Deleted

### TECHNICAL OPERATION AND OPERATORS

#### 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.

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(b) Each authorization for a new low power auxiliary station shall require the use of type accepted equipment. Such equipment shall be operated in accordance with the emission specifications included in the type acceptance 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 bands other than the 174-216 MHz band, 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) decibels below the mean output power of the transmitting unit.

(e) For low power auxiliary stations operating in the 174-216 MHz band, the following technical requirements are imposed:

(1) The power of the unmodulated carrier at the transmitter output terminals may not exceed 50mW.

(2) Transmitters shall be crystal controlled, employ frequency modulation with a maximum deviation of +15kHz and a maximum modulating frequency of 15 kHz, and shall have a frequency tolerance of 0.005 percent.

(3) The authorized bandwidth is 100 kHz.

(4) 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 decibels;

(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 decibels;

(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) decibels.

(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.

74.882 Station identification. Call signs will not be assigned to low power auxiliary stations. In lieu thereof, for transmitters used for voice transmissions and having a transmitter output power exceeding 50 mW, and 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 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.

§74.901

SUBPART I -- INSTRUCTIONAL TELEVISION FIXED STATIONS  
DEFINITIONS AND ALLOCATION OF FREQUENCIES

§74.901 Definitions. Attended operation. Operation of a station by a qualified operator on duty at the place where the transmitting apparatus is located with the transmitter in plain view of the operator.

Instructional television fixed station. A fixed station operated by an educational organization and used primarily for the transmission of visual and aural instructional, cultural, and other types of educational material to one or more fixed receiving locations.

ITFS response station. A fixed station operated at an authorized location to provide communication by voice and/or data signals to an associated instructional television fixed station.

Main channel. The main channel is that portion of each authorized channel used for the transmission of visual and aural information as set forth in 73.682 of this Chapter and 74.938 of this Subpart.

Remote control. Operation of a station by a qualified operator on duty at a control position from which the transmitter is not visible but which control position is equipped with suitable control and tel-metering circuits so that the essential functions that could be performed at the transmitter can also be performed from the control point.

Subsidiary channel. A subsidiary channel is any portion of an authorized channel not used for main channel transmissions.

Temporary fixed ITFS stations. An ITFS station used for the transmission of material from temporary unspecified points to an ITFS station.

Unattended operation. Operation of a station by automatic means where by the transmitter is turned on and off and performs its functions without attention by a qualified operator.

§74.902 Frequency assignments. (a) The following frequencies may be assigned to instructional television fixed stations:

Group A		Group B		Group C	
Channel No.	Band Limits Mc/s	Channel No.	Band Limits Mc/s	Channel No.	Band Limits Mc/s
A-1	2500-2506	B-1	2506-2512	C-1	2548-2554
A-2	2512-2518	B-2	2518-2524	C-2	2560-2566
A-3	2524-2530	B-3	2530-2536	C-3	2572-2578
A-4	2536-2542	B-4	2542-2548	C-4	2584-2590

Group D		Group E		Group F	
Channel No.	Band Limits Mc/s	Channel No.	Band Limits Mc/s	Channel No.	Band Limits Mc/s
D-1	2554-2560	E-1	2596-2602	F-1	2602-2608
D-2	2566-2572	E-2	2608-2614	F-2	2614-2620
D-3	2578-2584	E-3	2620-2626	F-3	2626-2632
D-4	2590-2596	E-4	2632-2638	F-4	2638-2644

Group G	
Channel No.	Band Limits Mc/s
G-1	2644-2650
G-2	2656-2662
G-3	2668-2674
G-4	2680-2686

(b) Instructional Television Fixed Stations authorized to operate on Channels 2650-2656, 2662-2668, and 2674-2680 MHz as of July 16, 1971, may continue to operate on a co-equal basis with other stations operating in accordance with the Table of Frequency Allocations. Requests for subsequent renewals of modification of existing licenses will be considered; however, expansion of systems comprised of such stations will not be permitted except on frequency allocated for the service.

(c) Channels 2596-2602, 2602-2608, 2608-2614, 2614-2620, 2620-2626, 2626-2632, 2632-2638, 2638-2644 MHz and the corresponding response channels listed in 74.939(d) are shared with the Multipoint Distribution Service. No new Instructional Television Fixed Service applications for these channels filed after May 25, 1983 will be accepted. In those areas where Multipoint Distribution Service use of these channels is allowed pursuant to 21.902. Instructional Television Fixed Service users of these channels will continue to be afforded protection from harmful cochannel and adjacent channel interference from Multipoint Distribution Service stations.

(d) A license is limited to the assignment of no more than four channels for use in a single area of operation, all of which should be selected from the same Group listed in paragraph (a) of this section. An area of operation is defined as the area in which the use of channels by one licensee precludes their use by other licensees. Applicants shall not apply for more channels than they intend to construct within a reasonable time, simply for the purpose of reserving additional channels. The number of channels authorized to an applicant will be based on the demonstration of need for the number of channels requested. The Commission will take into consideration such factors as the amount of use of any currently assigned channels and the amount of proposed use of each channel requested, the amount of, and justification for, any repetition in the schedules, and the overall demand and availability of ITFS channels in the community. For those applicant organizations formed for the purpose of serving accredited institutional or governmental organizations, evaluation of the need will only consider service to those specified receive sites which submitted supporting documentation pursuant to 74.932(a)(4).

(e) The same channel may be assigned to more than one station or more than one licensee in the same area if the geometric arrangement of the transmitting and receiving points or the times of operation are such that interference is not likely to occur.

(f) A temporary fixed ITFS station may use any available ITFS channel on a secondary basis. Operation of stations located within 35 miles of Canada shall be limited by 74.24(h)(3) of this Subpart.

(g) Where adjacent channel operation is proposed in any area, the preferred location of the proposed station's transmitting antenna is at the site of the adjacent channel transmitting antenna. If this is not practicable, the adjacent channel transmitting antenna should be located as close as reasonably possible.

**74.903 Interference.** (a) Since interference in this service will occur only when an unfavorable desired-to-undesired signal ratio exists at the antenna input terminals of the affected receiver, the directive properties of receiving antennas can be used to minimize the hazard of such interference. Interference may also be controlled through the use of directive transmitting antennas, geometric arrangement of transmitters and receivers, and the use of the minimum power required to provide the needed service. Harmful interference will be considered present when the reference receiving antenna is oriented to receive the maximum desired to undesired signal ratio is less than the value specified for the respective channel under consideration.

(1) Cochannel interference is defined as the ratio of the desired signal to the undesired signal, at the antenna input terminals of the affected receiver, when the ratio is less than 45 dB.

(2) Adjacent channel interference is defined as the ratio of the desired signal to undesired signal present in an adjacent channel, at the antenna input terminals of the affected receiver, when the ratio is less than 0 dB, except in cases where the stations were constructed before May 26, 1983. In such cases, the desired to undesired signal ratio shall not be less than 10 dB unless the individual receive site under consideration has been subsequently upgraded with up-to-date reception equipment. Absent information presented to the contrary, the Commission will assume that reception equipment installation occurred simultaneously with original station construction.

## 76.63 Deleted.

76.64 Carriage of subscription television programs and telecommunications services on the vertical blanking interval. The provisions of 76.55, 76.57, 76.59, 76.61 do not require carriage of any subscription TV program or any telecommunications service transmitted on the vertical blanking interval.

76.65 Determination of signal contours. (a) When, for purpose of ascertaining broadcast station rights to cable carriage, reference is made to Grade B contours 76.57(a), 76.59(a) and 76.61(a), such contours shall be the field intensity contours defined in 73.683(a) of this chapter: Provided however, That such rights as to signals carried or authorized for carriage on or before August 26, 1977, shall be determined by reference to the contour prediction rules adopted in the Sixth Report and Order in Dockets 8736, 8975, 8976 and 9175, 41FCC 148 (1952) as amended by Report and Order in Docket 17253, FCC 70-345, 22 FCC 2d 345 (1970).

76.67 Sports Broadcast. (a) No community unit located in whole or in part within the specified zone of a television broadcast station licensed to a community in which a sports event is taking place, shall, on request of the holder of the broadcast rights to that event, or its agent, carry the live television broadcast of that event if the event is not available live on a television broadcast signal carried by the system pursuant to the mandatory signal carriage rule of this Part. For the purpose of this Section, if there is no television station licensed to the community in which the sports event is taking place, the applicable specified zone shall be that of the television station licensed to the community which the sports event or local team is identified, or, if the event or local team is not identified with any particular community, the nearest community to which the television station is licensed.

(b) Notification of the programming to be deleted pursuant to this section shall include the following information:

(1) As to programming to be deleted from television broadcast signals regularly carried by cable community unit;

(i) The name and address of the party requesting the program deletion;

(ii) The date, time and expected duration of the sports event the television broadcast of which is to be deleted;

(iii) The call letters of the television broadcast station(s) from which the deletion is to be made.

(2) As to programming to be deleted from television broadcast signals not regularly carried by cable community unit;

(i) The name and address of the party requesting the program deletion;

(ii) The date, time and expected duration of the sports event the television broadcast of which is to be deleted.

(c) Notifications given pursuant to this section must be received, as to regularly scheduled events, no later than the Monday preceding the calendar week (Sunday-Saturday) during which the program deletion is to be made. Notifications as to events not regularly scheduled and revisions of notices previously submitted, must be received within twenty-four (24) hours after the time of the telecast to be deleted is known, but in any event no later than twenty-four (24) hours from the time the subject telecast is to take place.

74.910 Part 73 application requirements pertaining to ITFS stations.

The following rules are applicable to ITFS stations.

Sec.

73.3500 Application and report forms.

73.3511 Applications required.

73.3512 Where to file; number of copies.

73.3513 Signing in applications.

73.3514 Content of applications.

73.3519 Repetitious applications.

73.3533 Application for construction permit or modification of Construction permit.

73.3534 Application for extension of construction permit or for construction permit to replace expired construction permit.

73.3536 Application for license to cover construction permit.

73.3542 Application for temporary or emergency authorization.

73.3561 Staff consideration of applications requiring Commission action.

73.3562 Staff consideration of applications not requiring action by the Commission.

73.3564(a),(b) Acceptance of applications.

73.3566 Defective applications.

73.3587 Procedure for filing objections.

73.3598 Period of constructions.

73.3599 Forfeiture of construction permit.

The applicability of other rules in Part 73, where appropriate, is not precluded by this section.

74.911 Processing of ITFS station applications. (a) Applications for ITFS stations are divided into two groups:

(1) In the first group are applications for new stations or major changes in the facilities of authorized stations. These applications are subject to the provisions of paragraph (c) of this section. A major change for an ITFS station will be any proposal to add new channels, change from one channel (or channel group) to another, or increase power. However, the Commission may, within 15 days after the acceptance of any other application for modification of facilities, advise the applicant that such application is considered to be one for a major change, and subject to the provisions of paragraph (c) of this section.

(2) The second group consists of applications for licenses and all other changes in the facilities of authorized stations.

(b) A new file number will be assigned to an application for a new station or for major changes in the facilities of an authorized station, when it is amended so as to effect a major change, as defined in paragraph (a)(1) of this Section, or result in a situation where the original party or parties to the application do not retain control of the applicant as originally filed. An application for change in the facilities of any existing station will continue to carry the same file number even though (pursuant to Commission approval) an assignment of license or transfer of control of such licensee or permittee has taken place if, upon consummation, the application is amended to reflect the new ownership.

(c) Applications for ITFS stations will be processed as nearly as possible in the order in which they are filed. In order that those applications which are mutually exclusive may be grouped and fixed for processing, the Commission will periodically release a public notice listing applications for new facilities or major modifications which have been accepted for filing and announcing a date 60 days after its release on which the listed applications will be considered available and ready for processing and by which all mutually exclusive applications, petitions to deny the listed applications, and major amendments to the listed applications must be filed. A second Public Notice be released, listing applications filed in response to the initial Public Notice, providing 30 days after its release to file petitions to deny against the listed applications or to make minor amendments.

(d) Those applications, other than mutually exclusive applications, which upon examination meet other pertinent requirements and would serve the public interest, convenience and necessity will be granted. mutually exclusive applications will be processed pursuant to the provisions in 74.913.

74.912 Petitions to deny. (a) Any party in interest may file with the Commission a petition to deny any application for new facilities of authorized stations, provided such petitions are filed by the date established pursuant to the cut-off provisions of 74.911(c). In the case of all other applications, except those excluded under section 309(c) of the Communications Act of 1934, as amended, petitions to deny must be filed not later than 30 days after issuance of a public notice of the acceptance for filing of the applications. In the case of applications for renewal of license, petitions to deny may be filed after the issuance of a public notice of acceptance for filing of the applications and up until the first day of the last full calendar month of the expiring license term.

(b) The applicant file an opposition to any petition to deny, and the petitioner a reply to such opposition in which allegations of fact or denials thereof shall be supported by affidavit of a person or persons with personal knowledge thereof. The times for filing such oppositions and replies shall be those provided in 1.45 of this chapter.

(c) Only petitions to deny filed against a tentative selectee (74.913) will be considered. If the petition does not present substantial and material questions of fact warranting a hearing the petition will be denied and the tentative selectee will be granted a licensee where, upon examination, the Mass Media Bureau finds that other pertinent requirements have been met and public interest, convenience and necessity would be served. Where necessary, the points of the application will be modified to comport with any findings made as a result of the review. In the event that the tentative selectee's application is denied or its point total reduced, the point system process will be repeated, where necessary, to determine the tentative selectee or applicants qualifying for the random tie-breaker. If, upon examination, a substantial and material question of fact is found and the Bureau is unable to find that the public interest, convenience and necessity will be served by granting the application of the tentative selectee pursuant to the point system, its application will be designated for hearing pursuant to section 309 of the Communications Act of 1934, as amended. Petitions for reconsideration, motions to stay, or applications for review may be submitted at the time the Bureau grants or denies the application of the tentative selectee pursuant to the filing periods specified in 1.45 of this chapter.

**74.913 Selection procedure for mutually exclusive ITFS applications.**

(a) If timely filed ITFS applications are determined to be mutually exclusive, such applications will be processed and assessed points to determine the tentative selectee for the particular channels. The tentative selectee will be the applicant with the highest point total under the procedure set forth in this section, unless the provisions of paragraph (c) of this section apply and will be awarded the requested channels if the Commission concludes that such an award will serve the public interest, convenience and necessity.

(b) Each application will be awarded a predetermined number of points under the criteria listed:

(1) Four points for applicants that are "local" as defined in 74.932,n.1.

(2) Three points for accredited schools or their governing bodies applying within their jurisdiction.

(3) Two points for applicants whose request, if granted, would result in the acquisition of four or fewer ITFS channels by that applicant within the particular area;

(4) One point for a proposed weekly schedule of twenty-one or more average hours per channel per week of formal educational programming [§74.931(a)] or of forty-one or more average hours per channel per week of other ITFS programming; two points for forty-one or more average hours per channel per week of formal education programming or for sixty-one or more hours per channel per week of ITFS programming where at least twenty-one of those hours are formal educational programming.

(5) One point for an existing E or F channel licensee seeking to relocate and showing an established need for an expanded service that cannot be accommodated on its grandfathered E or F facilities. The applicant must submit a specific request and adequate supporting documentation.

(c) If the best qualified (highest scoring) two or more applicants have the same point accumulation, they will be given thirty days from the date of release of such decision to notify the Commission of any agreement to divide the use of the channels. If no agreement is reached and advanced to the Commission within that time, the tentative selectee will then be determined through a tie-breaker mechanism.

(d) The tie-breaker will use a mechanical random-selection process, under the direction of the Secretary's office, in which each qualifying applicant has an equal chance.

**Note 1** Average hours per channel per week are determined by totaling the number of scheduled hours per week of programming between 8:00 a.m. and 10 p.m. Monday through Saturday in the subject category and dividing that total by the number of channels.

**Note 2** Entities entitled to the accreditation points will include umbrella organizations whose membership is composed of entities which are individually eligible for the points. Also, a state's department of education (or equivalent agency) would qualify, as well as any directly controlled arm of that department if its specific duties include that department's educational function.

**Note 3** Subparagraph (b)(3) above does not apply to applications for modification of facilities other than the addition of channels.

74.931 Purpose and permissible service. (a) Instructional television fixed stations are intended primarily to provide a formal educational and cultural development, in aural and visual form, to students enrolled in accredited public and private schools, colleges and universities. Every channel authorized must be used to transmit formal educational programming offered for credit to enrolled students of accredited schools.

(1) All applicants that do not list accredited schools as receiving sites must name the school(s) and the degree(s) or diploma(s) for which the formal programming will be offered and describe the administration of the course(s). They must submit documentation, written or signed by the authorities responsible for the schools' curricula, verifying each of these points.

(b) Such stations may also be used for the additional purpose of transmitting other visual and aural educational, instructional and cultural material to selected receiving locations, including in-service training and instruction in special skills and safety programs, extension of professional training, informing persons and groups engaged in professional and technical activities of current developments in their particular fields and other similar endeavors.

(c) During periods when the circuits provided by these stations are not being used for the transmission of instructional and cultural material, they may be used for the transmission of material directly related to the administrative activities of the licensee such as the holding of conferences with personnel, distribution of reports and assignments, exchange of data and statistics, and other similar uses. Stations will not be licensed in this service solely for the transmission of administrative traffic.

(d) Stations may be licensed in this service as originating or relay stations to interconnect instructional television fixed stations in adjacent areas, to deliver instructional and cultural material to, and obtain such material from, commercial and noncommercial educational television broadcast stations for use on the instructional television fixed system and to deliver instructional and cultural material to, and obtain such material from, nearby terminals or connection points of closed circuit educational television systems employing wired distribution systems or radio facilities authorized under other parts of this chapter, or to deliver instructional and cultural material to any CATV system serving a receiving site or sites which would be eligible for direct reception of ITFS signals under the provisions of paragraphs (a) and (b) of this section.

(e) A licensee may use excess capacity on each channel to transmit material other than the ITFS subject matter specified in paragraph (a), (b), (c) and (d) of this section, provided it preserves at least 40 hours per week, including at least 6 hours per weekday (Monday through Friday), excluding holidays and vacation days, for ITFS purposes on that channel; and at least 20 hours per week of the preserved time on each channel must be used for ITFS programming, excluding holidays and vacation days. This preservation may consist of airtime strictly reserved for ITFS use and not used for non-ITFS programming, or, of time used for non-ITFS programming but subject to ready recapture by the licensee for ITFS use with no economic or operational detriment to the licensee. Only ITFS programming and preserved airtime scheduled between 8:00a.m. and 10:00 p.m., Monday through Saturday, will qualify to meet this requirement. All of the capacity available on any subsidiary channel of any authorized channel may be used for the retransmission of material to be used by others. When an ITFS licensee makes capacity available on a common carrier basis, it will be subject to common carrier regulation. A licensee operating as a common carrier is required to apply for the appropriate authorization and to comply with all policies and rules applicable to that service. Responsibility for making the initial determination of whether a particular activity is a common carriage rests with the ITFS licensee. Initial determinations by the licensees are subject to Commission examination and may be reviewed at the Commission's discretion. Leasing activity may not cause unacceptable interference to cochannel and adjacent channel operations.

NOTE 1 Any medical service courses offered by hospitals to their staffs or to medical students as training for state or national licenses or certifications will qualify as formal educational programming to satisfy the requirement of paragraph (a) of this section.

(f) Material transmitted by these stations may be intended for simultaneous reception and display or may be recorded by authorized users for use at another time.

(g) On a secondary basis, an ITFS station may be operated as a temporary fixed station from temporary unspecified points to an ITFS station under the provisions of paragraph (a), (b), (d) or (e) of this section.

74.932 Eligibility and licensing requirements. (a) A license for an instructional television fixed station will be issued only to an accredited institution or to a governmental organization engaged in the formal education of enrolled students or to a nonprofit organization whose purposes are educational and include providing educational and instructional television material to such accredited institutions and governmental organizations, and which is otherwise qualified under the statutory provisions of the Communications Act of 1934, as amended.

(1) Only local applicants can file applications and be considered for licenses during the local priority period which extends for one year from the effective date of these rules.

(i) During this local priority period the existing of any outstanding application for ITFS channels by a nonlocal applicant will not prevent the filing and/or grant of an application by a local entity for those same channels.

(2) A publicly supported educational institution must be accredited by the appropriate state department of education.

(3) A privately controlled educational institution must be accredited by the appropriate state department of education or the recognized regional and national accrediting organizations.

(4) Those applicant organizations whose eligibility is established by service to accredited institutional or governmental organizations must submit documentation from proposed receive sites demonstrating they will receive and use the applicant's formal educational programming. In place of this documentation, a state educational television (ETV) commission may demonstrate that the public schools it proposes to serve are required to use its proposed formal educational programming.

(5) Nonlocal applicants in addition to submitting letters from proposed receive sites, must demonstrate the establishment of a local program committee in each community where they apply.

(b) No numerical limit is placed on the number of stations which may be licensed to a single licensee. However, individual licensees will be governed by the limitation of §74.902 as to the number of channels which may be used. A single license may be issued for more than one transmitter if they are to be located at a common site and operated by the same licensee. Applicants are expected to accomplish the proposed operation by the use of the smallest number of channels required to provide the needed service.

(c) An application for a new instructional television fixed station or for changes in the facilities of an existing station shall specify the location of the transmitter, all proposed receiving installations, response transmitters, and any relay transmitters, which will be under the control of or will be equipped for reception by the applicant. If reception is also intended at unspecified locations, i.e., if power is deliberately radiated to locations or areas so that voluntary reception will be possible the applications shall include a complete statement as to the purpose of such additional reception.

(d) In case of permanent discontinuance of operation of a station licensed under this subpart, authority to operate is forfeited and the licensee shall forward the station license to the Commission for cancellation. For the purpose of this Section, a station which is not operated for a period of one year is considered to have been permanently discontinued. If use of a channel(s) is discontinued, authority to operate on such channel(s) is forfeited and an application for modification shall be filed to delete such channel(s).

Note 1 A "local" licensee (or applicant) is an institution or organization that is physically located in the community, or metropolitan area, where service is proposed. For a college or university, this would include any area where it has a campus. An educational organization will generally be regarded as "local" if the address of the organization's headquarters is located within the area where the facility is sought. An entity created by a state or local government for the purpose of serving formal educational needs will be considered "local" throughout the area within the government's jurisdiction over which its authority is intended to extend. An educational entity located within a state and created by affiliated educational institutions within that state, including hospitals, will be considered "local" in those areas where the member institutions are located.

Note 2 Documentation from proposed receive sites which are to establish the eligibility of an entity not serving its own enrolled students for credit should be in letter form, written and signed by an administrator or authority who is responsible for the receive site's curriculum planning. The administrator must indicate that the applicant's program offerings have been viewed and that such programming will be incorporated in the site's curriculum. The letter should discuss the types of programming and hours per week of formal and informal programming expected to be used and the site's involvement in the planning, scheduling and production of programming. If other levels of authority must be obtained before a firm commitment to utilize the service can be made, the nature and extent of such additional authorization(s) must be provided.

Note 3 Letters submitted on behalf of a nonlocal entity that a member of the receive site's staff will serve on the local program committee and demonstrate a recognition of the composition and power of the committee. The letter should show that the staff member will aid in the selection scheduling and production of the programming received over the system.

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§74.933 Remote control operation. (a) An instructional television fixed station may be operated by remote control if the following conditions are met:

(1) The transmitter and associated control system shall be installed and protected in a manner designed to prevent tampering or operation by unauthorized persons.

(2) An operator meeting the requirements of 74.18 shall be on duty at the remote control position and in actual charge thereof at all times when the station is in operation.

(3) Facilities shall be provided at the control position which will permit the operator to turn the transmitter on and off at will. The control position shall also be equipped with devices suitable for observing the overall characteristics of the transmissions and a carrier-operated device which will give a continuous visual indication whenever the transmitting antenna is radiating a signal. The transmitter apparatus shall be inspected as often as may be necessary to insure proper operation.

(4) The control circuits shall be designed so and installed that short circuits, open circuits, other line faults, or any other cause which would result in loss of control of the transmitter, will automatically cause the transmitter to cease radiating.

(b) An application for authority to construct a new station or to make changes in the facilities of an existing station and which proposes operation by remote control shall include an adequate showing of the manner of compliance with the requirements of this section.

§74.934 Unattended operation. (a) Unattended operation of an instructional television fixed station will be permitted only when it is used for relaying the signals of another station which is employing the transmission standards specified for stations operating in this service and then only if the following requirements are met:

(1) The transmitter shall be equipped with automatic circuits which will permit it to radiate only when a signal on the channel which it is intended to retransmit is present at the input terminals of the apparatus. The automatic circuit may be provided with a reasonable time-delay factor to prevent the transmitter from being turned off during momentary failures of the incoming signal. The station, where the transmitter is installed, must be designed, constructed, and protected so that the transmitter can only be activated or controlled by operators authorized by the licensee.

(2) The transmitter shall accomplish retransmission of the incoming signal by either linear amplification, heterodyne frequency conversion or by modulating the transmitter with the demodulated incoming signal. In cases where frequency conversion to a different channel is employed, the electrical characteristics of the incoming signal when retransmitted shall not be significantly altered except as to frequency and amplitude. In cases where linear amplification is employed, the electrical characteristics shall not be significantly altered except as to amplitude when retransmitted. Care shall be taken in the design and installation of an unattended relay station to prevent instability which could result in spurious or other unwanted radiation.

(3) Where the antenna supporting structure of an unattended station is required to have aeronautical hazard markings pursuant to the provisions of Part 17 of this chapter, the licensee shall provide for inspection and logging of observations of such markings as required by §§17.47 and 17.49 of this chapter.

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(b) An application for authority to construct a new station or to make changes in the facilities of an existing station and which proposes unattended operation shall include an adequate showing as to the manner of compliance with the requirements of this section.

§74.935 Power limitations. (a) The power of an instructional television fixed station will be limited to that required to perform the proposed service. Applications are expected to take full advantage of the power-concentrating properties of directive transmitting antennas and the collective properties of directive receiving antennas to provide the needed service.

(b) An application for a new instructional television fixed station or for changes in the facilities of an existing station proposing a peak visual power output from the transmitter in excess of 10 watts shall include a showing as to the distance and direction to each specified receiving point, the elevation above ground and the power gain of each receiving antennas at such receiving points, the vertical and horizontal directive patterns of the proposed transmitting antenna system in terms of power gain, the elevation of the transmitting antenna above ground the nature of significant terrain features over the transmission path or paths.

(c) The operating power (peak visual) of an instructional television fixed station shall not be permitted to exceed the authorized power by more than 10 percent at any time.

(d) The transmitter power output of the aural signal shall not be more than 70 percent nor less than 10 percent of the peak power output of the visual signal.

§74.936 Emissions and bandwidth. (a) An instructional television fixed station shall normally employ amplitude modulation (C3F) for the transmission of the visual signal and frequency modulation (F3E) or (G3E) for the transmission of the aural signal.

(b) The average power of radio frequency harmonics of the visual and aural carriers, measured at the output terminals of the transmitter, shall be attenuated no less than 60 decibels below the peak visual output power within the assigned channel. All other emissions appearing on frequencies more than 3 Mc/s above or below the upper and lower edges, respectively, of the assigned channel shall be attenuated no less than:

- (1) 30 decibels for transmitters rated at less than 10 watts visual peak power output.
- (2) 40 decibels for transmitters rated at 10 watts or more visual peak power output.

(c) Should interference occur as the result of emissions outside the assigned channel, greater attenuation may be required.

74.937 Antennas. (a) In order to minimize the hazard of harmful interference from other stations, directive receiving antennas should be used at all receiving locations. The choice of receiving antennas is left to the discretion of the licensee. However, for the purpose of interference calculations, the general characteristics of the reference receiving antenna shown in Figure 1 of this section (i.e., a 2-foot parabolic reflector antenna) are assumed to be used in accordance with the provisions of 74.903(a)(3) unless pertinent data is submitted of the actual antenna in use at the receive site. Licensees may install receiving antennas with general characteristics superior to those of the reference receive antenna. Nevertheless, should interference occur and it can be demonstrated by an applicant that the existing antenna at the receive site is inappropriate, a more suitable yet practical receiving antenna should be installed. In such cases, the modification of the receive site will be in the discretion, and will be the responsibility, of the licensee serving the site.

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(b) Directive transmitting antennas shall be used whenever feasible so as to minimize interference to other licensees. The radiation pattern shall be designed to minimize radiation in directions where no reception is intended. When an ITFS station is used for point-to-point service, as appropriate directional antenna must be used.

(c) In selecting a location for the transmitting antenna it should be borne in mind that interference to the reception of its transmission is most likely to come from the direction in which receiving antennas must be aimed to receive its transmissions. Whenever possible the location should be chosen so that the receiving antennas in its system are aimed in directions from which interfering signals are least likely to come.

(d) The use of elevated receiving antennas is preferable to the use of elevated transmitting antennas or greater power to provide the desired service.

(e) The use of vertical or horizontal plane polarization or right-hand or left-hand rotating (circular) polarization may be used to minimize the hazard of harmful interference between systems. The Commission reserves the right to specify the polarization to be used.

(f) The power gain compared to an isotropic antenna and the directive properties of the transmitting and receiving antennas proposed to be employed, as well as the geometric distribution of the transmitting and receiving points, shall be supplied with each application for a new ITFS fixed station or for changes in the antenna facilities of an existing station.

74.938 Transmission standards. (a) The width of an ITFS channel is 6 MHz. ITFS transmitters must be type accepted by the Commission for the particular visual and aural signals that will be employed in actual operation. Either the manufacturer or the licensee must obtain transmitter type acceptance for the transmitter by filing a application for type acceptance with appropriate information concerning the signal waveforms and measurements.

(b) Instructional television fixed stations are not required to attenuate the lower sideband by any specified amount unless interference to the reception of another station results from emissions in excess of those permitted television broadcast station, in which case the attenuation specified in §73.687(a)(3) of this chapter shall apply. However, in no case shall the amplitude of any lower sideband component exceed the amplitude of the upper sideband component having the highest amplitude.

§74.939 Special rules governing ITFS response stations. (a) An ITFS response station is authorized to provide communication by voice and/or data signals with its associated instructional television fixed station for use in instructional or computer-assisted communications. Other communications concerning the technical operation of the system may be carried on when necessary.

(b) An ITFS response station may be operated only by the licensee of an instructional television fixed station and only at an authorized receiving location of the instructional television fixed station with which it communicates. More than one ITFS response station may be operated at the same or different locations by the same licensee. An application for authority to operate a new or modified response station shall be filed with the Commission in Washington, D. C., on FCC Form 330P. Section VI of that form shall supply the following information for each response station:

(1) The name of the school or other description of the building in which the ITFS response station will be located, the address, and the geographic coordinates of the ITFS response station transmitting antenna.

(2) The manufacturer's name, type number, operating frequency, and power output of the proposed ITFS response station transmitter.

(3) The type of transmitting antenna, power gain, and azimuthal orientation of the major lobe of radiation in degrees measured clockwise from True North.

(4) A sketch giving pertinent details of the ITFS response station transmitting antenna installation included ground elevation of the transmitter site above mean sea level; overall height above ground, including appurtenances, of any ground-mounted tower or mast on which the transmitting antenna will be mounted or, if the tower or mast is or will be located on an existing building or other man made structure, the separate heights above ground of the building and the tower or mast including appurtenances; the location of the tower or mast on the building; the location of the transmitting antenna on the tower or mast; and the overall height of the transmitting antenna above ground. This can be combined with the sketch for the receiving location if the transmitting antenna is clearly shown.

(c) See Part 17 of this chapter concerning notification to the Federal Aviation Administration of proposed antenna construction or alteration. The provisions of §§74.967 and 74.981(a) (5), concerning antenna painting and lighting requirements, apply to ITFS response stations as well as main ITFS stations.

(d) All ITFS response stations communicating with a single instructional television fixed station shall operate on the same frequency. The specified frequency which may be used is determined by the channel assigned to the instructional television fixed station with which it is communicating, as shown in the following table. Operation on other ITFS response channels is prohibited.

ITFS Channel No.	Response Frequency (MHz)	ITFS Channel No.	Response Frequency (MHz)
A-1	2686.0625	E-1	2686.5625
A-2	2687.0625	E-2	2687.5625
A-3	2688.0625	E-3	2688.5625
A-4	2689.0625	E-4	2689.5625
B-1	2686.1875	F-1	2686.6875
B-2	2687.1875	F-2	2687.6875
B-3	2688.1875	F-3	2688.6875
B-4	2689.1875	F-4	2689.6875
C-1	2686.3125	G-1	2686.8125
C-2	2687.3125	G-2	2687.8125
C-3	2688.3125	G-3	2688.8125
C-4	2689.3125	G-4	2689.8125

(e) Transmitter power output will normally be limited to no more than 250 milliwatts. Upon a special showing of need, transmitter power output of up to 2 watts may be permitted.

(f) The channels assigned to ITFS response stations are 125 kHz in width. The

assigned frequency is at the center of the channel. Either frequency or amplitude modulation may be employed. If amplitude modulation is used, the carrier shall not be modulated in excess of 100 percent. If frequency modulation is employed, the maximum carrier excursion resulting from modulation shall not be greater than 25 kHz above and below the unmodulated carrier frequency. Any excursion appearing outside the authorized channel, including radio frequency harmonics, shall be attenuated no less than 60 decibels below the peak power of the unmodulated carrier. Greater attenuation may be required if interference is caused by out-of-band emissions.

(g) The unmodulated carrier frequency shall be maintained within 35 kHz of the assigned frequency at all times. Adequate means shall be provided to insure compliance with this rule.

(h) A directive transmitting antenna shall be employed, oriented toward the transmitter site of the associated instructional television fixed station. The beamwidth between half power points shall not exceed 15° and radiation in any minor lobe of the antenna radiation pattern shall be at least 20 decibels below the power in the main lobe of radiation.

(i) The transmitter of an ITFS response station may be operated unattended provided that the transmissions are observed by the operator on duty at the associated instructional television fixed station, who shall take such steps as may be necessary to correct any condition of improper operation. The overall performance of the ITFS response station transmitter shall be checked as often as necessary to ensure that it is functioning in accordance with the requirements of the Commission's rules. The licensee of an ITFS response station is responsible for the proper operation of the transmitter at all times. The transmitter shall be installed and protected in such manner as to prevent tampering or operation by unauthorized persons.

(j) After approval by the Commission the original of the authorization shall be posted at the ITFS station and a legible photocopy of the appropriate page of section VI of Form 330P shall be posted at or attached to each response transmitter.

(k) The transmitting apparatus employed at ITFS response stations shall have received type acceptance in accordance with §74.952.

(l) An ITFS response station shall be operated only when engaged in communication with its associated instructional television fixed station or for necessary equipment or system tests and adjustments. Radiation of an unmodulated carrier and other unnecessary transmissions are forbidden.

(m) The requirement of §74.981 apply with regard to logging requirements.

(n) Individual call signs will not be assigned to ITFS response stations. It is assumed that in normal usage the location and identity of an ITFS response station can be determined by the content of its communications. If such is not the case, provision shall be made to announce the location at intervals of no more than one-half hour whenever the transmitter is being operated.

§74.950 Equipment performance and installation. (a) Except as otherwise provided in this section, the requirements of §73.687 of this chapter regarding the installation and performance of television broadcast transmitters and associated equipment shall apply to instructional television fixed stations.

(b) The overall attenuation characteristics of the transmitter may vary from those specified in §73.687 of this chapter to the extent that such variations result from permissible lower sideband radiation. However, care should be exercised in the adjustment of the transmitter to insure correct overall response of the transmitter for proper transmission of the upper and vestigial lower sideband.

(c) The provisions of §74.961 in lieu of §73.687(c) (1) of this chapter apply with respect to the frequency tolerance for the visual carrier.

(d) The provisions of §74.936 in lieu of §73.687(i) (1) of this chapter apply with respect to spurious emissions and radio frequency harmonics.

(e) The requirements of §73.687(c) (2) of this chapter will be considered to be met insofar as measurements of operating power are concerned, if the transmitter is equipped with instruments for determining the combined visual and aural operating power. However, licensees are expected to maintain the operating powers within the limits specified in the rules of this part. Measurements of the separate visual and aural operating powers shall be made at sufficiently frequent intervals to insure a compliance with the rules.

(f) Transmitting apparatus (translators and boosters) used solely for relaying signals received from other ITFS stations and operating the manner described in §74.934(a) (2) shall meet the following requirements before being type accepted by the Commission.

(1) The frequency converter and associated amplifiers shall be so designed that the electrical characteristics of a standard television signal introduced into the input terminals will not be significantly altered by passage through the apparatus except as to frequency and amplitude. 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 decibels: 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) The suppressions of emissions appearing outside of the assigned channel shall comply with §74.936(b) (c).

(3) The local oscillator employed in the frequency converter shall maintain its operating frequency within 0.02 percent of its rated frequency when subjected to variations in ambient temperature between -30 degrees and +50 degree centigrade and variations in powerline voltage between 85 percent and 115 percent of the rated supply voltage.

(4) The apparatus shall contain automatic circuits which will maintain visual power output constant within 2 decibels when the strength of the input signal is varied over a range of 30 decibels and which will not permit the peak visual power output to exceed the maximum rated power output under any conditions. If a manual adjustment is provided to compensate for different average signal intensities, provision shall be made for determining the proper setting for the control. If improper adjustment of the control could result in improper operation a label bearing a suitable warning shall be affixed at the adjustment control: Provided, however, That apparatus with an output of 50 milliwatts peak visual power per channel or less need not comply with this paragraph, provided the equipment is so designed that the rated output power of the transmitter cannot be exceeded by more than 3 dB by an increase in the input signal.

(5) The apparatus shall be equipped with automatic controls which 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 relay transmitter. In the case of equipment (translators or boosters) of 50 milliwatts peak visual power per channel or less relaying more than one channel it shall



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be turned off in the absence of the last signal to be relayed. The automatic control may include a time delay feature to prevent interruptions of the operation of the relay transmitter caused by fading or other momentary failures of the incoming signal.

(6) The tube(s) or transistor(s) employed in the final radio frequency amplifier shall be of the appropriate power rating to provide rated power output of the relay transmitter. 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) Boosters used in this service shall comply with all the provisions of this para except with subpara (3). However, in addition, the isolation between the input and output circuits of the booster, including the receiving and transmitting antenna systems shall be at least 20 decibels greater than the maximum overall gain of the booster amplifier. Boosters may use opposite antenna polarization of the input/output antenna.

74.951 Modification of transmission systems. Formal application on FCC Form 330-P is required for any of the following changes or modifications of the transmission system:

(a) Replacement of the transmitter as a whole, except replacement with a transmitter of identical power rating which has been type accepted by the FCC for use by instructional TV fixed stations, or any change which could result in a change 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.

(b) Any change in the antenna system affecting the direction of radiation, directive radiation pattern, antenna gain, or radiated power.

(c) 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 the FCC Rules.

(d) Any change in the transmitter control system.

(e) Any change in the location of the transmission system except a move within the same building or upon the same antenna supporting structure.

(f) A change in frequency assignment.

(g) A change in the operating power.

(h) Any addition of receiving locations or to modify such a location to a receive and response station.

§74.952 Acceptability of equipment for licensing. (a) Transmitters employed in this service must have type acceptance by Commission. Type acceptance may be given under either of the following conditions:

(1) A transmitter or transistor may be type accepted upon the request of any manufacturer of such equipment built in quantity by following the type acceptance procedure set forth in Part 2 of this chapter, provided that the data and information submitted indicates that equipment meets all technical requirements applicable to this service. If accepted, such transmitting equipment will be included on the Commission's "Radio Equipment List, Equipment Acceptable for Licensing." Applicants specifying equip-



ment included on such a list need not submit detailed descriptions and diagrams where the correct type number is specified, provided that the equipment proposed is identical with that accepted. Copies of the Radio Equipment List, are available for inspection at the Commission's office in Washington, D. C., and at each of its field offices.

(2) An application specifying a transmitter or translator not included on the Radio Equipment List, may be accepted upon the request of a prospective licensee submitting, with the application for construction permit, a complete description of the equipment, including the circuit diagram, listing of all tubes used, function of each, multiplication in each stage, plate current and voltage applied to each tube, and a description of the oscillator circuit together with any devices installed for the purpose of frequency stabilization. However, if this data has been filed with the Commission by a manufacturer in connection with a request for type acceptance, it need not be submitted with the application for construction permit but may be referred to as "on file". Measurement data for type acceptance made in accordance with subparagraph (1) of this paragraph shall be submitted with the license application.

(b) Additional rules with respect to withdrawal of type acceptance, modification of type accepted equipment, and limitations on the findings upon which type acceptance is based are set forth in Part 2 of this chapter.

§74.961 Frequency tolerance. (a) The frequency of the visual carrier shall be maintained within 60 kilocycles of the assigned frequency at all times when the station is in operation.

(b) The frequency of the aural carrier shall be maintained in accordance with the provisions of §73.687(c)(1) of this chapter.

§74.962 Frequency monitors and measurements. (a) Suitable means shall be provided to insure that the operating frequencies of the station are within the prescribed tolerances.

(b) The operating frequencies shall be checked as often as is necessary to insure that they are within the prescribed tolerances at all times.

(c) A determination of the operating frequencies of the visual and aural carriers may be made by measuring any exact submultiple of the actual output frequency. Any crude but suitable device including a roughly calibrated receiver, may be used to determine that the output frequency is the correct multiple of the frequency controlling element in the transmitter.

§74.963 Time of operation. (a) An instructional television fixed station is not required to adhere to any regular schedule of operation. Unless otherwise specified in the license, the hours of operation are not limited.

(b) Except for purposes of tests and adjustments, the transmitter shall not be permitted to radiate unmodulated carriers or otherwise make unnecessary transmissions for extended periods of time.

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

(b) In cases where the transmitter is operated by remote control, the documents referred to in paragraph (a) of this section shall be posted at the control point of the transmitter.

(c) In cases where the transmitter is operated unattended, the name of the licensee and the call sign of the unattended station 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 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 at all times by the licensee. The station license and other documents referred to in paragraph (a) of this section shall be kept at the nearest attended station operated by the licensee of the unattended station or in cases where the licensee of the unattended station does not operate attended stations, at the point of destination of the signals relayed by the unattended station.

(d) 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 them in a binder or folder which is retained at the posting location so that the documents will be readily available and easily accessible.

**74.969 Copies of the rules.** The licensee of an instructional television fixed station shall have current copies of Parts 73 and 74, and in cases where aeronautical hazard marking of antennas is required, Part 17 of this chapter available for use by the operator in charge. Both the licensee and the operator or operators responsible for the proper operation of the station are expected to be familiar with the pertinent rules governing instructional television fixed stations.

**74.970 Modulation limits.** (a) Visual transmitter. The maximum excursion of the luminance signal in the white direction shall not exceed the value specified in 73.682(a)(13) of this chapter for the reference white level.

(b) Aural transmitter. The maximum frequency deviation of the aural carrier shall not be permitted to exceed +7.5 kHz on peaks of frequent occurrence during any transmission. This defined as 100% modulation.

**74.971 Modulation monitors and measurements.** Suitable means shall be provided to insure that the modulation limits specified in 74.970 are observed.

**§74.982 Station identification.** (a) Call signs for instructional television fixed stations will consist of three letters and three digets pursuant to the provisions of § 2.302 of this chapter relating to fixed stations.

(b) Except as otherwise provided in paragraphs (c) and (d) of this section, each instructional television fixed station shall transmit its call sign to the beginning and end of each period of operation and during operation, on the hour, Visual or aural transmissions shall be employed.

(c) The hourly station identification announcement during operation may be deferred if it would interrupt a single consecutive demonstration, lecture, or other similar discourse or otherwise impair the continuity of a program in progress. In such cases the station identification announcement shall be made at the first normal break in the continuity of the program.

(d) In cases where an instructional television fixed station is operating as a relay for signals originating at some other station operated by the same licensee, its call sign shall be announced by the originating station at the times and in the manner prescribed in paragraph (b) of this section.

(e) Where an instructional television fixed station is operating as a relay for signals originating at a station operated by some other licensee, its call sign may be transmitted by the originating station if suitable arrangements can be made with the other licensee or means shall be provided for the transmission of the call sign by the relay transmitter itself. Lower power relay stations authorized by §74.950(f)(4) will not be assigned individual call signs. Station identification will be accomplished by the retransmission of the call sign of the primary station.

(f) Temporary fixed ITFS stations shall identify with the call sign of the primary station and a temporary fixed identifier.

**§74.983 (Reserved)**

**§74.984 Retransmissions.** An instructional television fixed station may not retransmit the signals of any class of station without consent of the station originating the signals to be retransmitted.

SUBPART L - FM BROADCAST TRANSLATOR  
STATIONS AND FM BROADCAST BOOSTER  
STATIONS

Definitions and Allocations of Frequencies

§74.1201 Definitions.

(a) FM translator. A station in the broadcasting service operated for the purpose of retransmitting the signals of an 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 FM broadcast service to the general public.

(b) Commercial FM translator. An FM broadcast translator station which rebroadcasts the signals of a commercial FM radio broadcast station.

(c) Noncommercial FM translator. An FM broadcast translator station which rebroadcasts the signals of a noncommercial educational FM radio broadcast station.

(d) Primary station. The FM radio broadcast station radiating the signals which are retransmitted by an FM broadcast translator station or an FM broadcast booster station.

(e) FM radio broadcast station. When used in this Subpart L, the term FM broadcast station or FM radio broadcast station refers to commercial and noncommercial educational 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, which have been received directly through space from the FM radio broadcast station, without significantly altering any characteristic of the incoming signal other than its amplitude.

§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 Assignments (§73.202(b) of this chapter):

(1) Commercial FM translators: Class A channels so designated in §73.206(a) (1) of this chapter;

(2) Noncommercial FM translators: The channels available for noncommercial use under §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 Jan. 1, 1982.

(c) No minimum distance separation between FM translators operating on the same channel is specified. However, assignments which will obviously result in mutual interference between translators will not be made.

(d) Adjacent channel assignments will not be made to FM translators intended to serve all or part of the same area.

(e) An FM broadcast booster station will be assigned the channel assigned to its primary station.

NOTE: A translator must comply with the mileage separations to Mexican FM channel assignments and authorizations as Class D FM stations set forth in the Note to 73.207 of this chapter.

**74.1203 Interference.** (a) FM translators will be authorized and permitted to continue to operate only where they cause no interference to the direct reception by the public of the off-the-air signals of any authorized broadcast station including Class D (secondary) noncommercial educational FM stations. FM translators shall not cause harmful interference to the transmissions of any other authorized radio station nor shall an FM translator cause interference to reception by a television broadcast translator station of its input signals. FM translator stations which may cause any such interference will not be authorized.

(b) Interference will be considered to occur whenever reception of a regularly used off-the-air signal by viewers or listeners is impaired by the signals radiated by the translator, regardless of the quality of such reception, the strength of the signals so used, or the channel on which the protected signal is transmitted.

(c) If interference can not be promptly eliminated by the application of suitable techniques, operation of the offending translator shall be immediately 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 translator licensee to apply remedial techniques which demonstrably will eliminate the interference without impairment to the original reception, the licensee of the translator is absolved of further responsibility.

(d) It shall be the responsibility of the licensee of an FM translator 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 or operator that such interference is being caused, the operation of the translator station shall be immediately suspended 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 station; Provided, however, That short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

#### Administrative Procedure

**§74.1211 Cross reference.** See 74.11 to 74.16.

#### Licensing Policies and General Operating Requirements

**§74.1231 Purpose and permissible service.** (a) Fm Translators provide a means whereby the signals of FM broadcast stations may be retransmitted to areas in which direct reception of FM broadcast stations is unsatisfactory due to distance or interference of terrain barriers.

(b) Except as provided in paragraphs (f) and (g) of this section, an FM translator may be used only for the purpose of retransmitting the signals of an FM broadcast station or another FM translator station which have been received directly through space, converted, and suitably amplified.

(c) The transmissions of each FM translator shall be intended for direct reception by the general public and any other use shall be incidental thereto. An FM translator shall not be operated solely for the purpose of relaying signals to one or more fixed received 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 FM broadcast receivers.

(e) An FM translator 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 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 re-broadcast. Connection of the locally generated signals shall be made automatically by means of a time-switch when transmitting originations concerning financial support. The connection 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. Accordingly the originations concerning financial support are limited to 30 seconds no more than once an hour and to the solicitation of contributions toward defrayal of the costs of installation, operation, and maintenance of the translator or acknowledgments of financial support for those purposes. Such acknowledgments 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) FM broadcast booster stations provide a means whereby the licensee of an FM radio broadcast station may provide service to areas of low signal intensity in any region within the primary station's predicted 1 mv/m field strength contour. An FM broadcast booster station is authorized to retransmit only the signals of its primary station; it shall not retransmit the signals of any other station nor make independent transmissions: Provided, however, 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 1 mv/m contour as predicted on the basis of the maximum powers and heights set forth in that section for the applicable class of FM radio broadcast station concerned.

(i) The transmissions of an FM broadcast booster station shall be intended for direct reception by the general public. Such stations will not be authorized to establish a point-to-point FM radio relay system.

§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 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 need for such additional stations. FM translators are not counted as FM stations for the purposes of §73.240 of this chapter, concerning multiple ownership.

(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 a commercial FM translator which is intended to provide reception to places which are beyond the predicted 1 mv/m field strength contour of the primary station and within the predicted 1 mv/m field strength contour of another commercial FM radio broadcast station assigned to a different principal community will not be granted to:

- (1) The licensee or permittee of an FM radio broadcast station, or
- (2) An applicant who receives from such FM radio broadcast station licensee or permittee or from any person associated therewith, directly or indirectly, any financial support or contribution toward the costs incurred up to the time such translator commences operation.

NOTE 1: The 1 mv/m field strength contour of an FM radio broadcast station, for the purposes of this subpart, shall be the contour as predicted in accordance with §73.313(a) through (d) of this chapter. See Note, §74.1231(h).

NOTE 2: Financial support prohibited in paragraph (d) includes only support for the preparation, filing and prosecution of applications for new FM translators, for the acquisition and installation of transmitting and other apparatus employed by such FM translators, and for the defrayal of any other costs necessary to placing such FM translators in operation. Paragraph (d) thus will not bar or limit contributions or support, by any station licensee or permittee or any person associated therewith, for the operation or maintenance of an FM translator, whether such support is provided in the form of financial contributions or by providing operation or maintenance services or advice.

(e) 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 predicted 1 mv/m field strength contour of the primary station, subject to Note, §74.1231(h).

(f) 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 §73.240 of this chapter, concerning multiple ownership.

(g) Each application for an FM broadcast booster station shall include a statement concerning the steps which have been taken in the design and location of the equipment to insure that areas of service from the primary FM station will not be degraded by operation of the FM booster station.

(h) Any authorization for an FM translator station issued to an applicant described in paragraph (d) 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.

§74.1234 Unattended operation. (a) A station authorized under this subpart may be operated without a licensed radio operator 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 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 channel (if at a location other than the transmitter site) and the transmitting apparatus, shall be adequately protected against tampering by unauthorized persons.

(4) The Commission shall be supplied 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 section 17.47, 17.48, 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.

(c) Unless the applicant specifically requests unattended operation and makes the showing required by paragraph (b) of this section, a licensed radio operator meeting the requirements of section 74.1266 shall be on duty at the transmitter site whenever the station is operated.

§74.1235 Power limitations. (a) The power output of the final radio-frequency amplifier of a station authorized under this subpart shall not exceed 10 watts, except that FM broadcast translator stations serving areas east of the Mississippi River or in Zone I-A shall be limited to 1 watt. This power may be fed into a single transmitting antenna or may be divided between two or more transmitting antennas or antenna arrays in any manner found useful or desirable by the licensee. In individual cases, the Commission may authorize the use of more than one final radio frequency amplifier at a single station under the following conditions:

(1) Each such amplifier shall be used to serve a different community or area. More than one final radio frequency amplifier shall not be authorized to provide service to all or part of the same community or area, except as provided in subparagraph (2) of this paragraph.

(2) The transmitting antennas or antenna arrays shall be so designed and installed that the radiated fields from the separate antennas shall not combine in any direction in any single plane of polarization to achieve the effect of radiated power in excess of that which would be produced by a single antenna or, antenna array fed by a radio frequency amplifier with power output no greater than authorized pursuant to paragraph (a) of this section. Two radio frequency amplifiers may be used to serve the same community if one is used to feed an antenna designed to produce a horizontally polarized signal, and the other a vertically polarized signal. NOTE: The provisions of 74.1235(a)(1) and (2) will not apply to 1-watt stations serving areas west of the Mississippi River outside of Zone I-A. See 73.205(b) of this chapter.

(3) Stations authorized under this subpart employing multiple radio frequency amplifiers will be licensed as a single station.

(4) No limit is placed upon the effective radiated power which may be obtained by the use of horizontally or vertically or horizontally and vertically polarized directive transmitting antennas.

(b) In no event shall a station authorized under this subpart be operated with a power output in excess of the transmitting type-accepted rating.

74.1236 Emissions and Bandwidth. (a) The licensee of a station authorized under this subpart authorizes the transmission of F3E or other types of frequency modulation upon a showing of need as long as the emission complies with the requirements in paragraphs (b), (c) and (d) of this section.

(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.

74.1237 Antenna location. (a) An applicant for a new station to be authorized under this subpart or for a change in the facilities of such a station shall endeavor to select a site which will provide a line-of-sight transmission path to the entire area intended to be served and at which there is available a suitable signal from the primary station. The transmitting antenna should be placed above growing vegetation and trees lying in the direction of the area intended to be served, to minimize the possibility of signal absorption by foilage.

(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 broadcast booster station shall be located within the predicted 1 mv/m field strength contour of its primary station, subject to note, §74.1231(h).

### Equipment

#### 74.1250 Transmitters and associated equipment.

(a) Applications for new stations authorized under this subpart or for changes in the facilities of existing stations will not be accepted for filing unless the transmitting apparatus to be employed is type accepted.

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

(c) The following requirements must be met before translator or booster equipment will be type accepted by the Commission:

(1) The frequency converter and associated amplifiers of an FM translator shall be so designed that the electrical characteristics of a standard FM signal, including stereophonic subchannel, introduced into the input terminals will not be significantly altered by passage through the apparatus except as to frequency and amplitude. The overall frequency 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 3 decibels.

(2) Radio frequency harmonics of the output carrier frequency measured at the output terminals of the transmitter, shall be attenuated at least 60 decibels below the fundamental output carrier level. All other emissions appearing outside the assigned channel shall conform with the specifications set forth in §74.1236(c).

(3) The local oscillator or oscillators employed in the translator equipment shall, when subjected to variations in ambient temperature between minus 30° and plus 50° centigrade and in primary supply voltage between 85 percent and 115 percent of the rated value, be sufficiently stable to maintain the output carrier frequency of the translator within plus or minus 0.005 percent of its assigned frequency, assuming zero variation of the received primary station signal from its assigned frequency.

(4) The apparatus shall contain automatic circuits which will maintain the power output constant within 2 decibels when the level of the signal at the input terminals is varied over a range of 40 decibels and which will not permit power output to exceed the maximum rated power output under any condition. If a manual adjustment is provided to compensate for different average signal levels, provisions shall be made for determining the proper setting for the control and if improper adjustment of the control could result in improper operations, a label shall be affixed at the adjustment control bearing a suitable warning.

(5) The apparatus shall be equipped with automatic controls which will place it in a nonradiating condition when no signal is being received on the input channel, either due to absence of a transmitter signal or failure of the receiving portion of the translator or booster. The automatic control may include a time delay feature to prevent interruptions in the operation of the station caused by fading or other momentary failures of the incoming signal.

(6) The amplifying devices employed in the final radiofrequency amplifier shall be of the appropriate power rating to provide the rated power output of the translator or booster. 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) Transmitters of FM broadcast translator stations of more than 1 watt transmitter output power shall be equipped with an automatic keying device which will transmit the call sign assigned to the station, in International Morse Code, at least once each 60 minutes during the time the station is in operation unless there is in effect a firm arrangement with the station's primary station as provided in §74.1283(c)(1). Transmission of the call sign can be accomplished in either of the following ways:

(i) By frequency shift keying; the carrier shift shall not be less than 5 kilohertz nor greater than 25 kilohertz;

(ii) By amplitude modulation of the FM carrier of at least 30 percent 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) The exciter employed to provide a locally generated and modulated input signal to the translator pursuant to §74.1231(f) shall be type accepted and shall meet the following specifications for type acceptance by the Commission:

(1) The local oscillator or oscillators employed in the exciter, when subjected to variations in ambient temperature between minus 30° and plus 50° 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 of the exciter within plus or minus 0.005 percent of the frequency assigned to the primary station.

(2) Automatic means shall be provided for limiting the level of the audio frequency voltage applied to the modulator to insure that a frequency swing in excess of 75 kHz will not occur under any condition of modulation.

(3) Wiring, shielding, and construction shall be in accordance with accepted principles of good engineering practice.

(e) Type acceptance 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 by a station authorized under this subpart may request type acceptance by following the procedures set forth in Part 2, Subpart F, of this chapter. Equipment found to be acceptable by the Commission will be listed in the "Radio Equipment List" published by the Commission. These lists are available for inspection at any Field Office of the Commission and at the Washington, D.C., offices of the Commission.

(2) Apparatus for use by stations authorized under this subpart which has been type accepted by the Commission will normally be authorized without additional measurements by the applicant.

(3) Other rules concerning type acceptance, including information regarding withdrawal of type acceptance, modification of type accepted equipment and limitations on the findings upon which type acceptance is based, are set forth in Part 2, Subpart F, of this chapter.

(f), (g) and (h) Reserved.

(i) The transmitting antenna may be designed to produce either horizontal or vertical polarization, or a combination of both. Separate transmitting antennas are permitted if both horizontal and vertical polarization is to be provided.

**74.1251 Modification of transmission systems.** (a) No changes, either mechanical or electrical, except as provided in 2.584 of this chapter, may be made in FM translator or booster apparatus which has been type accepted by the Commission without prior authority of the Commission.

(b) Formal application is requested for any of the following changes, to be made on FCC Form 346 in the case of FM broadcast translator stations and on FCC Form 349P in the case of FM broadcast booster stations:

(1) Replacement of the transmitter as a whole, except replacement with a transmitter of identical power rating which has been type accepted 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 500 feet or (ii) would require notice to the Federal Aviation Administration pursuant to §17.7 of this chapter.

(6) Any change of input or output frequency of a translator.

(7) Any change of authorized transmitter operating power output.

(8) Any change in authorized principal community or area being served.

(c) A proposal to change the primary FM station being retransmitted by an FM translator station will be subject only to a notification requirement.

#### Technical Operation and Operators

§74.1261 Frequency tolerance. The licensee of an FM translator station shall maintain the center frequency at the output of the translator within 0.01 percent of its assigned frequency. The output frequency of an FM booster station shall be the exact frequency of its primary station.

§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) An FM translator is not required to adhere to any regular schedule of operation. However, the licensee of an FM translator 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) Failure of an FM translator 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 discontinuance of operation and the license of the translator station may be cancelled at the discretion of the Commission.

(c) An FM translator shall not be permitted to radiate during extended periods when signals of the primary station are not being retransmitted.

§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 party.

(b) Call sign of the translator or booster together with name, address, & telephone No. of the licensee/local representative of the licensee if the licensee does not reside in community served by translator/booster, and name and address of person and place where station records are kept, shall be displayed at the translator/booster site on the structure supporting the transmitting antenna, so as to be visible by persons standing on the ground at the transmitter site. The display shall be prepared so as to withstand normal weather for reasonable period of time and shall be kept in a legible condition by the licensee.

74.1269 Copies of rules. The licensee or permittee of a station authorized under this subpart shall have a current copy of Volumes I and III of the Commission's rules and shall make the same available for use by the operator in charge. Each such licensee/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, D.C. 20402.

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 documents.

(b) Entries required by 17.49 of the 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 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 2 years.

74.1283 Station identification. (a) Every station authorized under this part with transmitter output power of more than 1 watt shall be identified in accordance with the provisions of this section. Stations with transmitter power of 1 watt or less need not be identified.

(b) FM broadcast booster stations shall be identified by their primary stations by the broadcasting by the primary station of the primary station's call letters and location, in accordance with provisions of 73.287.

(c) FM broadcast translator stations with transmitter output power of more than 1 watt shall be identified by use of methods prescribed herein:

(1) The licensee/permittee of such station may make arrangements with the licensee of primary station for the broadcast by the primary station of the call letters and location of the translator station. Identification in this manner is to be accomplished three times each day. Once between the hours of 7-9 a.m., unless primary station's broadcast day begins after 9 a.m., in which case identification will be made at the beginning of its broadcast day and at the other times specified herein; once between 12:55 p.m. and 1:05 p.m.; and once between the hours of 4-6p.m. Arrangements will be made so that the licensee of the primary station will keep on record, and make available to any responsible person the call letters and location of each translator station rebroadcasting its signals, with the name, address, and telephone number of the licensee or the person designated to be contacted in case of malfunction of the translator. It shall be the responsibility of the translator licensee to furnish data in this respect to the primary station.

(2) Where the licensee or permittee of FM translator station has not made arrangements for station identification in accordance with subparagraph (1) of this

paragraph, such FM translator station shall transmit its call sign in International Morse Code at least once each 60 minutes during the time the station is in operation. The transmission may be accomplished by means of an automatic device as required by §74.1250(c)(7), Call sign transmission shall be made at a code speed not in excess of 20 words per minute. At this speed, the transmission of each individual call sign will require approximately 4 seconds.

(d) The Commission may, in its discretion, specify other methods of identification.

(e) 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.

§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 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 FM broadcast station or another FM translator.



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PART 76

CABLE TELEVISION SERVICE

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Subpart A - General

76.1 Purpose. The rules and regulations set forth in this part provide for the certification of cable television systems and for their operation and conformity with standards for carriage of television broadcast signals, program exclusivity, cablecasting, access channels, and related matters.

76.3 Other pertinent rules. Other pertinent provisions of the Commission's rules and regulations relating to the Cable Television Service are included in the following parts of this chapter:

- Part 0 - Commission Organization.
- Part 1 - Practice and Procedure.
- Part 21 - Domestic Public Radio Services (Other than Maritime Mobile).
- Part 63 - Extension of Lines and Discontinuance of Service by Carriers.
- Part 64 - Miscellaneous Rules Relating to Common Carriers.
- Part 78 - Cable Television Relay Service.
- Part 91 - Industrial Radio Services.

76.5 Definitions. (a) Cable television system. A facility consisting of a set of closed transmission paths and associated signal generation, reception, and control equipment that is designed to provide cable service which includes video programming and which is provided to multiple subscribers within a community, but such term does not include (1) a facility that services only to retransmit the television signals of one or more television broadcast stations; (2) a facility that serves only subscribers in one or more multiple unit dwellings under common ownership, control or management, unless such facility or facilities uses any public right-of-way; (3) a facility of a common carrier which is subject, in whole or in part, to the provisions of Title II of the Communications Act of 1934, as amended, except that such facility shall be considered a cable system to the extent such facility is used in the transmission of video programming directly to subscribers; or (4) any facilities of any electric utility used solely for operating its electric utility systems.

(b) Television station; television broadcast station. Any television broadcast station operating on a channel regularly assigned to its community by §73.606 of this chapter, and any television broadcast station licensed by a foreign government: Provided, however, That a television broadcast station licensed by a foreign government shall not be entitled to assert a claim to carriage or program exclusivity, pursuant to Subpart D or F of this part, but may otherwise be carried if consistent with the rules.

(c) Television translator station. A television broadcast translator station as defined in §74.701 of this chapter.

(d) Principal community contour. The signal contour that a television station is required to place over its entire principal community by §73.685 (a) of this chapter.

(e) Grade A and B contours. The field intensity contours defined in §73.683(a) of this chapter.

(f) Specified zone of a television broadcast station. The area extending 35 air miles from the reference point in the community to which that station is licensed or authorized by the Commission. A list of reference points is contained in §76.53. A television broadcast station that is authorized but not operating has a specified zone that terminates 18 months after the initial grant of its construction permit.

(g) Motor television market. The specified zone of a commercial television station licensed to a community listed in §76.51, or a combination of such specified zones where more than one community is listed.

(h) Designated community in a major television market. A community listed in §76.51.

(i) Smaller television market. The specified zone of a commercial television station licensed to a community that is not listed in §76.51.

(j) Substantially duplicated. Regularly duplicated by the network programming of one or more stations in a week during the hours of 6 to 11 p.m., local time, for a total of 14 or more hours.

(k) Significantly viewed. Viewed in other than cable television households as follows:

(1) For a full or partial network station--a share of viewing hours of at least 3 percent (total week hours), and a net weekly circulation of at least 25 percent; and

(2) For an independent station--a share of viewing hours of at least 2 percent (total week hours), and a net weekly circulation of at least 5 percent. See §76.54.

NOTE: As used in this paragraph, "share of viewing hours" means the total hours that non-cable television households viewed the subject station during the week, expressed as a percentage of the total hours these households viewed all stations during the period, and "net weekly circulation" means the number of non-cable television households that viewed the station for 5 minutes or more during the entire week, expressed as a percentage of the total non-cable television households in the survey area.

(l) Full network station. A commercial television broadcast station that generally carries in weekly prime time hours 85 percent of the hours of programming offered by one of the three major national television networks with which it has a primary affiliation (i.e., right of first refusal or first call).

(m) Partial network station. A commercial television broadcast station that generally carries in prime time more than 10 hours of programming per week offered by the three major national television networks, but less than the amount specified in paragraph (l) above.

(n) Independent station. A commercial television broadcast station that generally carries in prime time not more than 10 hours of programming per week offered by the three major national television networks.

(o) Network programming. The programming supplies by a national or regional television network, commercial or non commercial.

(p)(q)(r)(s)(t) deleted.

(u) Prime time. The five-hour period from 6 to 11 p.m., local time, except that in the Central Time Zone the relevant period shall be between the hours of 5 and 10 p.m., and in the Mountain Time Zone each station shall elect whether the period shall be 6 to 11 p.m. or 5 to 10 p.m.

NOTE: Unless the Commission is notified to the contrary, a station in the mountain time zone shall be presumed to have elected the 6 to 11 p.m. period.

(v) Cablecasting. Programming (exclusive of broadcast signals) carried on a cable television system. See paragraphs (aa), (bb), and (cc) (Classes II, III, and IV cable television channels) of this section.

(w) Origination cablecasting. Programming (exclusive of broadcast signals) carried on a cable television system over one or more channels and subject to the exclusive control of the cable operator.

(x) Access cablecasting. Deleted.

(y) Legally qualified candidate. (1) Any person who

- (i) Has publicly announced his or her intention to run for nomination or office;
- (ii) Is qualified under the applicable local, State or Federal law to hold the office for which he or she is a candidate; and
- (iii) Has met the qualifications set forth in either subparagraph (2), (3) or (4), below.

(2) A person seeking election to any public office including that of President or Vice President of the United States, or nomination for any public office except that of President or Vice President, by means of a primary, general or special election, shall be considered a legally qualified candidate if, in addition to meeting the criteria set forth in subparagraph (1) above, that person:

- (i) Has qualified for a place on the ballot, or
- (ii) Has publicly committed himself or herself to seeking election by the write-in method and is eligible under applicable law to be voted for by sticker, by writing in his or her name on the ballot or by other method, and makes a substantial showing that he or she is a bona fide candidate for nomination or office.

Persons seeking election to the office of President or Vice President of the United States shall, for the purposes of the Communications Act and the rules thereunder, be considered legally qualified candidates only in those States or territories (or the District of Columbia) in which they have met the requirements set forth in paragraph (y) (1) and (2) of this rule; Except, That any such person who has met the requirements set forth in paragraph (y) (1) and (2) in at least 10 States (or nine and the District of Columbia) shall be considered a legally qualified candidate for election in all States, territories and the District of Columbia for purposes of this Act.

(3) A person seeking nomination to any public office except that of President or Vice President of the United States, by means of a convention, caucus or similar procedure, shall be considered a legally qualified candidate if, in addition to meeting the requirements set forth in paragraph (y) (1) above, that person makes a substantial showing that he or she is a bona fide candidate for such nomination: Except, That no person shall be considered a legally qualified candidate for nomination by the means set forth in this paragraph prior to 90 days before the beginning of the convention, caucus or similar procedure in which he or she seeks nomination.

(4) A person seeking nomination for the office of President or Vice President of the United States shall, for the purposes of the Communications Act and the rules thereunder, be considered a legally qualified candidate only in those States or territories (or the District of Columbia) in which, in addition to meeting the requirements set forth in paragraph (y) (1), above.

(i) He or she, or proposed delegates on his or her behalf, have qualified for the primary or Presidential preference ballot in that State, territory or the District of Columbia, or

(ii) He or she has made a substantial showing of bona fide candidacy for nomination in that State, territory or the District of Columbia. Except, That such person meeting the requirements set forth in paragraph (y) (1) and (4) in at least 10 States (or nine and the District of Columbia) shall be considered a legally qualified candidate for nomination in all States, territories and the District of Columbia for purposes of this Act.

(5) The term "substantial showing" of bona fide candidacy as used in paragraphs (y) (2), (3) and (4) above means evidence that the person claiming to be a candidate has engaged to a substantial degree in activities commonly associated with political campaigning. Such activities normally would include making campaign speeches, distributing campaign literature, issuing press releases, maintaining a campaign committee, and establishing campaign headquarters (even though the headquarters in some instances might be the residence of the candidate or his campaign manager). Not all of the listed activities are necessarily required in each case to demonstrate a substantial showing, and there may be activities not listed herein which would contribute to such a showing.

(z) Class I cable television channel. A signaling path provided by a cable television system to relay to subscriber terminals television broadcast programs that are received off-the-air or are obtained by microwave or by direct connection to a television broadcast station.

(aa) Class II cable television channel. A signaling path provided by a cable television system to deliver to subscriber terminals television signals that are intended for reception without the use of an auxiliary decoding device and which signals are not involved in a broadcast transmission path.

(bb) Class III cable television channel. A signal path provided by a cable television system to deliver to subscriber terminals signals that are intended for reception by equipment other than a television broadcast receiver or by a television broadcast receiver only when used with auxiliary decoding equipment.

(cc) Class IV cable television channel. A signaling path provided by a cable television system to transmit signals of any type from a subscriber terminal to another point in the cable television system.

(ee) Subscriber terminal. The cable television system terminal to which a subscriber's equipment is connected. Separate terminals may be provided for delivery of signals or various classes.

(ff) System noise. That combination of undesired and fluctuating disturbances within a cable television channel that degrades the transmission of the desired signal and that is due to modulation processes or thermal or other noise-producing effects, but does not include hum and other undesired signals of discrete frequency. System noise is specified in terms of its rms voltage or its mean power level as measured in the 4 MHz bandwidth between 1.25 and 5.25 MHz above the lower channel boundary of a cable television channel.

(gg) Terminal isolation. The attenuation, at any subscriber terminal between that terminal and any other subscriber terminal in the cable television system.

(hh) Visual signal level. The rms voltage produced by the visual signal during the transmission of synchronizing pulses.

(ii) Affiliate. When used in relation to any person, another person who owns or controls, is owned or controlled by, or is under common ownership or control with, such person.

(jj) Person. An individual, partnership, association, joint stock company, trust, corporation, or governmental entity.

(kk) Significant interest. A cognizable interest for attributing interests in broadcast, cable, and newspaper properties pursuant to 73.3555, 73.3615, and 76.501.

(ll) Cable system operator or operator. Any person or group of persons (1) who provides cable service over a cable system and directly or through one or more affiliates owns a significant interest in such cable system; or (2) who otherwise controls or is responsible for, through any arrangement, the management and operation of such a cable system.

(mm) System community unit; Community unit. A cable television system, or portion of a cable television system, that operates or will operate within a separate and distinct community or municipal entity (including unincorporated communities within unincorporated areas and including single, discrete unincorporated areas).

(oo) Cable service. The one-way transmission to subscribers of video programming, or other programming service; and, subscriber interaction, if any, which is required for the selection of such video programming or other programming service. For the purposes of this definition, "video programming" is programming provided by, or generally considered comparable to programming provided by, a television broadcast station; and "other programming service" is information that a cable operator makes available to all subscribers generally.

(pp) Basic cable service. For the purposes of regulating the rates for the provisions of basic cable service in circumstances in which a cable system is not subject to effective competition, basic cable service is the tier of service regularly provided to all subscribers that includes the public, educational and governmental channels, if required by a franchising authority under Title VI of the Communications Act, and the retransmission of any broadcast television signals in the following categories:

(1) For communities located outside all major and smaller television markets (as defined in the section):

(i) Television broadcast stations within whose Grade B contours the community of the community unit is located, in whole or in part;

(ii) Television translator stations with 100 watts or higher power serving the community of the community unit and for community units that commence operations or expand channel capacity after March 30, 1972, non-commercial educational translator stations with 5 watts or higher power service the community of the community unit;

(iii) Noncommercial educational television broadcast stations within whose specified zone the community of the community unit is located, in whole or in part;

(iv) Commercial television broadcast stations that are significantly viewed in the community of the community unit. See 76.54.

(2) For communities in smaller television markets (as defined in this section):

(i) Television broadcast stations within whole specified zone the community of the community unit is located, in whole or in part;

(ii) Noncommercial educational television broadcast stations within whose Grade B contours the community of the community unit is located, in whole or in part;

(iii) Commercial television broadcast stations licensed to communities in other smaller television markets, within whose Grade B contours the community of the community unit is located, in whole or in part;

(iv) Television broadcast stations licensed to other communities which are generally considered to be part of the same smaller television market (Example: Burlington, Vt-Plattsburgh, N.Y., television market);

(v) Television translator stations with 100 watts or higher power serving the community of the community unit and, for community units that commence operation or expand channel capacity after March 30, 1972, non-commercial educational translator stations with 5 watts of higher power serving the community of the community unit;

(vi) Commercial television broadcast stations that are significantly viewed in the community unit. See 76.54.

(3) For communities in major television markets (as defined in this section) and in communities located both wholly or partially within both major and smaller television markets;

(i) Television broadcast stations within whose specified zone the community of the community unit is located, in whole or in part;

(ii) Noncommercial educational television broadcast stations within whose Grade B contours the community of the community unit is located in whole or in part;

(iii) Television translator stations with 100 watts or higher power serving the community of the community unit and, for those community units that commence operations of expand channel capacity after March 30, 1972, noncommercial educational translator stations with 5 watts or higher power serving the community of the community unit;

(iv) Television broadcast stations licensed to other designated communities of the same major television market (Example: Cincinnati, Ohio-Newport, KY., television market);

(v) Commercial television broadcast stations that are significantly viewed in the community of the community unit. See 76.54.

(4) In the absence of at least three signals in one of the above categories, any unaltered broadcast television signals.

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§76.7 Special relief. (a) On petition by a cable television system, a franchising authority, an applicant, permittee, or licensee of a television broadcast, translator, or microwave relay station, or by any other interested person, the Commission may waive any provision of the rules relating to cable television systems operator impose additional or different requirements, or issue a ruling on a complaint or disputed question.

(b) The petition may be submitted informally, by letter, but shall be accompanied by a certificate of service on any cable television system operator franchising authority, station licensee, permittee, or applicant, or other interested person who may be directly affected if the relief requested in the petition should be granted.

(c) (1) The petition shall state the relief requested and may contain alternative requests. It shall state fully and precisely all pertinent facts and considerations relied on to demonstrate the need for the relief requested and to support a determination that a grant of such relief would serve the public interest. Factual allegations shall be supported by affidavit of a person or persons with actual knowledge of the facts, and exhibits shall be verified by the person who prepared them.

(2) A petition for a ruling on a complaint or disputed question shall set forth all steps taken by the parties or resolve the problem, except where the only relief sought is a clarification or interpretation of the rules.

(3) An original and (2) copies of the petition and all subsequent pleadings shall be filed.

(d) Interested persons may submit comments or opposition to the petition within thirty (30) days after it has been filed. For good cause shown in the petition, the Commission may, by letter or telegram to known interested persons, specify a shorter time for such submissions. Comments or oppositions shall be served on petitioner and on all persons listed in petitioner's certificate of service, and shall contain a detailed full showing, supported by affidavit, of any facts or considerations relied on.

(e) The petitioner may file a reply to the comments or oppositions within twenty (20) days after their submission, which shall be served on all persons who have filed pleadings and shall also contain a detailed full showing, supported by affidavit, of any additional facts or considerations relied on. For good cause shown, the Commission may specify a shorter time for the filing of reply comments.

(f) The Commission, after consideration of the pleadings, may determine whether the public interest would be served by the grant, in whole or in part, or denial of the request, or may issue a ruling on the complaint or dispute. The Commission may specify other procedures, such as oral argument, evidentiary hearing, or further written submissions directed to particular aspects, as it deems appropriate. In the event that an evidentiary hearing is required, the Commission will determine, on the basis of the pleadings and such other procedures as it may specify, whether temporary relief should be afforded any party pending the hearing and the nature of any such temporary relief.

(g) Where a petition for waiver of the provisions of §§76.57(a), 76.59(a), 76.61(a), or 76.63(a), is filed within fifteen (15) days after a request for carriage, a system community unit need not carry the signal of the requesting station pending the Commission's ruling on the petition or on the question of temporary relief pending further proceedings.

(h) On a finding that the public interest so requires, the Commission may determine that a system community unit operating or proposing to operate in a community located outside of the 48 contiguous states shall comply with provisions of Subparts D, F and G of this part in addition to the provisions thereof otherwise applicable.

NOTE: Each party filing a petition, comments, opposition or other pleading pursuant to 76.7 is responsible for the continuing accuracy and completeness of all information in such document. The provisions of 1.65 are wholly applicable to pleadings involving 76.7 except that where specific provisions of the latter conflict with the former, the specific provisions of 76.7 are controlling, e.g., where requirements for service on specified parties of certain information may vary.

76.8 Dismissal of Special Belief Petitions. (a) A petition for special relief may, upon request of the petitioner, be dismissed without prejudice as a matter of right prior to the adoption date of any final action taken by the Commission with respect to the petition. A petitioner's request for the return of a petition will be regarded as a request for dismissal.

(b) Failure to prosecute a petition, or failure to respond to official correspondence or request for additional information, will be cause for dismissal. Such dismissal will be without prejudice if it occurs prior to the adoption date of any final action taken by the Commission with respect to the petition.

76.9 Order to Show Cause; Forfeiture Proceeding. (a) Upon petition by any interested person, the Commission may:

(1) Issue an order requiring a cable television operator to show cause why it should not be directed to cease and desist from violating the Commission's rules;

(2) Initiate a forfeiture proceeding against a cable television operator for violation of the Commission's Rules.

(b) The petition may be submitted informally, be letter, but shall be accompanied by a certificate of service on any interested person who may be directly affected if an order to show cause is issued or a forfeiture proceeding initiated. An original and two copies of the petition and all subsequent pleadings should be filed.

(c) The petition shall state fully and precisely all pertinent facts and considerations relied on to support a determination that issuance of an order to show cause or initiation of a forfeiture proceeding would be in the public interest. Factual allegations shall be supported by affidavit of a person or persons with actual knowledge of the facts, and exhibits shall be verified by the person who prepares them.

(d) Interested persons may submit comments or oppositions to the petition within thirty (30) days after it has been filed. For good cause shown in the petition, the Commission may, by letter of telegram to known interested persons, specify a shorter time for such submissions. Comments or oppositions shall be served on petitioner and on all persons listed in petitioner's certificate of service, and shall contain a detailed full showing, supported by affidavit, of any facts or circumstances relied on.

(e) The petitioner may file a reply to the comments or oppositions within twenty (20) days after the time for filing such comments or oppositions has ended. A reply shall be served on all persons who have filed pleadings and shall also contain a detailed full showing, supported by affidavit, of any additional facts or considerations relied on. For good cause shown, the Commission may specify a shorter time for the filing of reply comments.

(f) The Commission, after consideration of the pleadings, shall determine whether the public interest requires the issuance of an order to show cause or the initiation of a forfeiture proceeding.

NOTE 1. After issuance of an order to show cause, the rules of procedure in Title 47, Part 1, Subpart A, Sections 1.91 - 1.95 shall apply.

NOTE 2. Nothing in this Section is intended to prevent the Commission from initiating show cause or forfeiture proceedings on its own motion; PROVIDED, HOWEVER, That show cause proceedings and forfeiture proceedings pursuant to 1.80(g) of the rules will not be initiated by such motion until the affected parties are given an opportunity to respond to the Commission's charges.

NOTE 3. Forfeiture proceedings are generally nonhearing matters conducted pursuant to the provisions of 1.80(f) of the rules (Notice of Apparent Liability). Petitioners who contend that the alternative hearing procedures of 1.80(g) of the rules should be followed in a particular case must support this contention with a specific showing of the facts and considerations relied on.

76.10 Channel access enforcement. (a) Any person aggrieved by the failure or refusal of a cable operator to make commercial channel capacity available in accordance with the the provisions of Title VU of the Communications Act may bring an action in the district court of the United States for the Judicial district in which the cable system is located to compel that such capacity be made available.

(b) Any person aggrieved by the failure or refusal of a cable operator to make commercial channel capacity available in accordance with the provisions of Title VI of the Communications Act may petition the Commission for relief upon a showing of three prior adjudicated violations. Records of previous adjudications resulting in a court determination that the operator has violated the provisions of the Communications Act concerning commercial channel access shall be considered as sufficient for the showing necessary under this section.

(c) Petitions filed with the Commission in response to paragraph (b) shall be made in accordance with the provisions and procedures set forth in 76.7 for petitions for special relief.

76.11 Lockbox enforcement. Any party aggrieved by the failure or refusal of a cable operator to provide a lockbox as provided for in Title VI of the Communications Act may petition the Commission for relief in accordance with the provisions and procedures set forth in 76.7 for petitions for special relief.

SUBPART B      REGISTRATION STATEMENTS

76.12 Registration statement required. A system community unit shall be authorized to commence operation only after filing with the Commission the following information:

(a) The legal name of the operator, entity identification or social security number, and whether the operator is an individual, private association, partnership, or corporation. If the operator is a partnership, the legal name of the partner responsible for communications with the Commission shall be supplied;

(b) The assumed name (if any) used for doing business in the community;

(c) The mail address, including ZIP code, and the telephone number to which all communications are to be directed;

(d) The date the system provided service to 50 subscribers;

(e) The name of the community or area served and the county in which it is located;

(f) The television broadcast signals to be carried which, previously have not been certified or registered; and

76.14 Who may sign registration statements. (a) Registration statements shall be personally signed by the operator; by one of the partners, if the operator is a partnership; by an officer, if the operator is a corporation; by a member who is an officer, if the operator is an unincorporated association; or by any duly authorized employee of the operator.

(b) Registration statements may be signed by the operator's attorney in case of the operator's physical disability or of his absence from the United States. The attorney shall in that event separately set forth the reasons why the registration statement was not signed by the operator. In addition, if any matter is stated on the basis of the attorney's belief only (rather than his knowledge), he shall separately set forth his reasons for believing that such statements are true.

76.17 Public notice. The Commission will give public notice of the filing of registration statements.

**76.29 Special temporary authority.** (a) In circumstances requiring the temporary use of community unit facilities for operation not authorized by the Commission rules, a cable television system may request special temporary authority to operate. The Commission may grant special temporary authority, upon a finding that the public interest would be served thereby, for a period not to exceed ninety (90) days, and may extend such authorization, upon a like finding, for one additional period, not to exceed ninety (90) days.

(b) Requests for special temporary authority may be submitted informally, by letter, and shall contain the following:

- (1) Name and address of the applicant cable system.
- (2) Community in which the community unit is located.
- (3) Type of operation to be conducted.
- (4) Date of commencement of proposed operations.
- (5) Duration of time for which temporary authority is required.
- (6) All pertinent facts and considerations relied on to demonstrate the need for special temporary authority and to support a determination that a grant of such authority would serve the public interest.
- (7) A certificate of service on all interested parties.

(c) A request for special temporary authority shall be filed at least 10 (10) days prior to the date of commencement of the proposed operations, or shall be accompanied by a statement of reasons for the delay in submitting such request.

(d) A grant of special temporary authority may be rescinded by the Commission at any time upon a finding of facts which warrant such action.

#### Subpart C - Federal-State/Local Regulatory Relationships

**76.33 Standards for rate regulation.** (a) A franchising authority may regulate the rates of a cable system granted a franchise after December 29, 1984, and any cable system after December 29, 1986, subject to the following conditions:

- (1) Only basic cable service as defined in 76.5(pp) may be regulated;
- (2) Only cable systems that are not subject to effective competition may be rate regulated. A cable system will be determined to have effective competition whenever at least three unduplicated signals serve the cable community. Signals shall be counted if they place a Grade B contour (as defined in 73.683 of our rules) over any portion of the cable community, are significantly viewed within the cable community (as defined by 76.54 of our rules) or are translator stations licensed to serve the cable community provided that the translators are not used to retransmit stations already providing Grade B contour or significantly viewed signals within the cable community. The Commission may grant exceptions to this standard where the franchising authority demonstrates with engineering studies in accordance with 73.686 of the Commission's rules and other showings that such signals are not in fact available within the community.

(3) A cable system once determined to be subject to effective competition shall not be subject to regulation for one year after any change in market conditions which would cause it to be determined not to be subject to effective competition.

(4) A cable system may automatically pass through to the basic service rate without franchising authority approval cost increases that are readily identifiable and entirely attributable to the provision of basic service. Rate increases of this type may be taken in addition to the automatic 5% annual rate increase to which the cable system may be entitled under the Title VI of the Communications Act.

(b) For franchises granted on or before December 29, 1984, a franchising authority may, until December 29, 1986, to the extent provided in the franchise agreement:

(1) Regulate the rates for the provision of basic cable service;

(2) Require the provision of any tier of service without charge (disregarding any installation or rental charge for equipment necessary for receipt of such tier); and

(3) Regulate the rates for the initial installation or the rental of one set of the minimum equipment necessary to receive basic cable service.

(c) Any state or local law in existence on December 29, 1984, which limits or preempts regulation of rates for cable service by any franchising authority shall remain in effect until December 29, 1986, to the extent that it provides for such limitation or preemption.

(d) In establishing any rate for the provision of basic cable service by cable systems subject to paragraph (a) of this section, the franchising authority shall: (1) Give formal notice to the public; (2) provide an opportunity for interested parties to make their views known, at least through written submissions; and (3) make a formal statement (including summary explanation) when a decision on a rate matter is made.

(e) Any party may petition the Commission for relief of the provisions in this section in accordance with the provisions and procedures set forth in 76.6 for petitions for special relief.

Subpart D - Carriage of Television Broadcast Signals

§76.51 Major television markets. For purposes of cable television rules, the following is a list of the major television markets and their designated communities: (a) First 50 major television markets:

- |   |   |
|---|---|
| (1) New York, N.Y.--Linden-Paterson-Newark, New Jersey. | (36) Charleston--Huntington--West Va.                       |
| (2) Los Angeles--San Bernardino-Corona--Fontana--Calif. | (37) Kalamazoo--Grand Rapids--Battle Creek, Michigan        |
| (3) Chicago, Ill.                                       | (38) Louisville, Ky.  |
| (4) Philadelphia, Pa.--Burlington, N.J.                 | (39) Oklahoma City, Okla.                                   |
| (5) Detroit, Michigan                                   | (40) Birmingham, Ala.                                       |
| (6) Boston--Cambridge--Worcester, Mass.                 | (41) Dayton--Kettering, Ohio                                |
| (7) San Francisco--Oakland--San Jose, Calif.            | (42) Charlotte, N. C.                                       |
| (8) Cleveland--Lorain--Akron, Ohio                      | (43) Phoenix--Mesa, Arizona                                 |
| (9) Washington, D.C.                                    | (44) Norfolk--Newport News--Portsmouth--Hampton, Va.        |
| (10) Pittsburgh, Pa.                                    | (45) San Antonio, Texas                                     |
| (11) St. Louis, Mo.                                     | (46) Greenville--Spartanburg--Anderson, S. C.--Ashville, NC |
| (12) Dallas--Fort Worth, Texas                          | (47) Greensboro--High Point--Winston-Salemn, N.C.           |
| (13) Minneapolis--St. Paul., Minn.                      | (48) Salt Lake City, Utah                                   |
| (14) Baltimore, Md.                                     | (49) Wilkes-Barre--Scranton, Pa.                            |
| (15) Houston, Texas                                     | (50) Little Rock, Arkansas                                  |
| (16) Indianapolis--Bloomington, Indiana                 | (b) Second 50 television markets:                           |
| (17) Cincinnati, Ohio--Newport, Ky.                     | (51) San Diego, Calif.                                      |
| (18) Atlanta, Ga.                                       | (52) Toledo, Ohio   |
| (19) Hartford--New Haven--New Britain--Waterbury, Conn. | (53) Omaha, Neb.  |
| (20) Seattle--Tacoma, Wash.                             | (54) Tulsa, Okla  |
| (21) Miami, Fla.  | (55) Orlando--Dayton Beach, Fla.                            |
| (22) Kansas City, Mo.                                   | (56) Rochester, N.Y.  |
| (23) Milwaukee, Wisc.                                   | (57) Harrisburg--Lancaster--York--Pa.                       |
| (24) Buffalo, N.Y.                                      | (58) Texarkana--Tex--Shreveport, La.                        |
| (25) Sacramento--Stockton--Modesto, California          | (59) Mobile, Ala--Pensacola, Fla.                           |
| (26) Memphis, Tenn.                                     | (60) Davenport, Iowa--Rock Island--Moline, Ill.             |
| (27) Columbus, Ohio                                     | (61) Flint--Bay City--Saginaw, Mich.                        |
| (28) Tampa--St. Petersburg, Fla.                        | (62) Green Bay, Wisc.                                       |
| (29) Portland, Oregon                                   | (63) Richmond--Petersburg, Va.                              |
| (30) Nashville, Tenn.                                   | (64) Springfield--Decatur--Champaign--Jacksonville, Ill.    |
| (31) New Orleans, La.                                   | (65) Cedar Rapids--Waterloo, Iowa                           |
| (32) Denver, Colo.                                      | (66) Des Moines--Ames, Iowa                                 |
| (33) Providence, R.I.--New Bedford, Mass.               | (67) Wichita--Hutchinson, Kansas                            |
| (34) Albany--Schenectady--Troy, N.Y.                    | (68) Jacksonville, Fla                                      |
| (35) Syracuse, New York                                 | (69) Cape Girardeau, Mo.--Paducah, Ky.--Harrisburg, Ill.    |
|   | (70) Roanoke--Lynchburg, Va.                                |
|   | (71) Knoxville, Tenn.                                       |
|   | (72) Fresno, California                                     |

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|---|--|
| (73) Raleigh--Durham, N. C.                 | (90) Wheeling, West. Va.--Steubenville, Ohio |
| (74) Johnstown--Altoona--Pa.                | (91) Lincoln--Hastings--Kearney, Nebr.       |
| (75) Portland--Poland--Spring, Me.          | (92) Lansing--Ondaga, Mich.                  |
| (76) Spokane, Wash.                         | (93) Madison, Wisc.                          |
| (77) Jackson, Mississippi                   | (94) Columbus, Ga.                           |
| (78) Chattanooga, Tenn.                     | (95) Amarillo, Texas                         |
| (79) Youngstown, Ohio                       | (96) Huntsville--Decatur, Alabama            |
| (80) South Bend--Elkhart, Ind.              | (97) Rockford--Freeport, Illinois            |
| (81) Albuquerque, N. Mex.                   | (98) Fargo--Valley City, N. Dak.             |
| (82) Fort Wayne--Roanoke, Ind.              | (99) Monroe, Louisiana--El Dorado, Arkansas  |
| (83) Peoria, Illinois                       | (100) Columbia, South Carolina               |
| (84) Greenville--Washington--New Bern, N.C. |  |
| (85) Sioux Falls--Mitchell, S. Dak.         |  |
| (86) Evansville, Indiana                    |  |
| (87) Baton Rouge, La.                       |  |
| (88) Beaumont--Port Arthur, Texas           |  |
| (89) Duluth--Minn.--Superior, Wis.          |  |

§76.53 Reference points. To determine the boundaries of the major and smaller television markets (defined in §76.5), the following list of reference points for communities having licensed television broadcast stations and/or outstanding construction permits shall be used. Where a communities reference point is not given the geographic coordinates of the main post office in the community shall be used.

<u>State and Community</u>	<u>Latitude</u> o ' "	<u>Longitude</u> o ' "	<u>State and Community</u>	<u>Latitude</u> o ' "	<u>Longitude</u> o ' "
<u>ALABAMA</u>			<u>ARKANSAS</u>		
Anniston -----	33 39 49	87 49 47	El Dorado -----	33 12 39	92 39 40
Birmingham ---	33 31 01	86 48 36	Fayetteville---	36 03 41	94 09 38
Decatur -----	34 36 35	86 58 45	Ft. Smith -----	35 23 10	94 25 36
Demopolis ----	32 30 56	87 50 07	Jonesboro -----	35 50 14	90 42 11
Dotham -----	31 13 27	85 23 35	Little Rock----	34 44 42	92 16 37
Dozier -----	31 29 30	86 21 59	<u>CALIFORNIA</u>		
Florence -----	34 48 05	87 40 31	Bakersfield----	35 22 31	119 01 16
Huntsville----	34 44 18	86 35 19	Cheico -----	39 44 07	121 49 57
Louisville ---	31 47 00	85 33 09	Concord -----	37 58 46	122 01 51
Mobile -----	30 41 36	88 02 33	Corona -----	33 52 35	117 33 56
Montgomery----	32 22 33	86 18 31	El Centro -----	32 47 25	115 32 45
Mt. Cheaha			Eureka -----	40 48 08	124 09 46
State Park---	32 29 06	85 48 30	Fontana -----	34 06 45	117 26 29
Selma -----	24 24 26	87 01 15	Fresno -----	36 44 12	119 47 11
Tuscaloosa ---	33 12 05	87 33 44	Guasti -----	34 03 48	117 35 10
<u>ALASKA</u>			Hanford -----	36 19 51	119 38 48
Anchorage ----	61 13 09	149 53 29	Los Angeles ---	34 03 15	119 14 28
College -----	64 51 22	147 48 38	Modesto -----	37 38 26	120 59 44
Fairbanks ----	64 50 35	147 41 31	Monterey -----	36 35 44	121 53 39
Juneau -----	58 18 06	134 25 09	Oakland -----	37 48 03	122 15 54
Sitka -----	57 02 58	135 20 12	Palm Springs---	33 49 22	116 32 46
<u>ARIZONA</u>			Redding -----	40 34 57	122 23 34
Flagstaff ----	35 11 54	111 39 02	Sacramento ----	38 34 57	121 29 41
Mesa -----	33 24 54	111 49 41	Salinas -----	36 40 24	121 39 25
Nogales -----	31 20 14	110 56 12	San Bernardino-	34 06 30	117 17 28
Phoenix -----	33 27 12	112 04 28	San Diego-----	32 42 53	117 09 21
Tucson -----	32 13 15	110 58 08	San Francisco--	37 46 39	122 24 40
Yuma -----	32 43 16	114 37 01	San Jose -----	37 20 16	121 53 24

State and Community	Latitude			Longitude		
	o	'	"	o	'	"
<u>CALIFORNIA</u>						
San Luis Obispo	35	16	49	120	39	34
San Mateo	37	34	08	122	19	16
Santa Barbara	34	25	18	119	41	55
Santa Maria	34	57	02	120	26	10
Stockton	37	57	30	121	17	16
Tulare	36	12	31	119	20	35
Ventura	34	16	47	119	17	22
Visalia	36	19	46	119	17	30

<u>COLORADO</u>						
Colorado Springs	38	50	07	104	49	16
Denver	39	44	58	104	59	22
Durango	37	16	29	107	52	25
Grand Junction	39	04	06	108	33	54
Montrose	38	28	44	107	52	31
Pueblo	38	16	17	104	36	33
Sterling	40	37	29	103	12	25

<u>CONNECTICUT</u>						
Bridgeport	41	10	49	73	11	22
Harford	41	46	12	72	40	49
New Britain	41	40	02	72	47	08
New Haven	41	18	25	72	55	30
Norwich	41	31	36	72	04	31
Waterbury	41	33	13	73	02	31

<u>DELAWARE</u>						
Wilmington	39	44	46	75	32	51

<u>DISTRICT OF COLUMBIA</u>						
Washington D.C.	38	53	51	77	00	33

<u>FLORIDA</u>						
Clearwater	27	57	56	82	47	51
Daytona Beach	29	12	44	81	01	10
Fort Lauderdale	26	07	11	80	08	34
Fort Myers	26	38	42	81	52	06
Fort Pierce	27	26	48	80	19	38
Gainesville	29	38	56	82	19	19
Jacksonville	30	19	44	81	39	42
Largo	27	54	54	82	47	32
Leesburg	28	48	43	81	52	30
Melbourne	28	04	41	80	36	39
Miami	25	46	37	80	11	32
Ocala	29	11	34	82	08	14
Orlando	28	32	42	81	22	38
Panama City	30	09	24	85	39	46
Pensacola	30	24	51	87	12	56
St. Petersburg	27	46	18	82	38	19
Sarasota	27	20	05	82	32	20
Tallahassee	30	26	30	84	16	56
Tampa	27	56	58	82	27	25
West Palm Beach	26	42	36	80	03	07

State and Community	Latitude			Longitude		
	o	'	"	o	'	"
<u>GEORGIA</u>						
Albany	31	34	36	84	09	22
Athens	33	57	34	83	22	39
Atlanta	33	45	10	84	23	37
Augusta	33	28	20	81	58	00
Chatsworth	34	46	08	84	46	10
Cochran	32	23	18	83	21	18
Columbus	32	28	07	84	59	24
Dawson	31	46	33	84	26	20
Macon	32	50	12	83	37	36
Pelham	31	07	42	84	09	02
Savannah	32	04	42	81	05	37
Thomasville	30	50	25	83	58	59
Waycross	31	12	19	82	21	47
Wrens	33	12	21	82	23	23

<u>GUAM</u>						
Agana	13	28	23	144	45	00

<u>HAWAII</u>						
Hilo	19	43	42	155	05	30
Honolulu	21	18	36	157	51	48
Wailuku	20	53	21	156	30	27

<u>IDAHO</u>						
Boise	43	37	07	116	11	58
Idaho Falls	43	29	39	112	02	28
Lewiston	46	25	05	117	01	10
Moscow	46	43	58	116	59	54
Pocatello	42	51	38	112	27	01
Twin Falls	42	33	25	114	28	21

<u>ILLINOIS</u>						
Aurora	41	45	22	88	18	56
Bloomington	40	45	58	88	59	32
Carbondale	37	43	38	89	13	00
Champaign	40	07	05	88	14	48
Chicago	41	52	28	87	38	22
Decatur	39	50	37	88	57	11
Elgin	42	02	14	88	16	53
Freeport	42	17	57	89	37	07
Harrisburg	37	44	20	88	32	25
Jacksonville	39	44	03	90	13	44
Joliet	41	31	37	88	04	52
LaSalle	41	19	49	89	05	44
Moline	41	30	31	90	30	49
Mt. Vernon	38	18	29	88	54	26
Olney	38	43	47	88	05	00
Peoria	40	41	42	89	35	33
Quincy	39	55	59	91	24	12
Rockford	42	16	07	89	05	48
Rock Island	41	30	40	90	34	24
Springfield	39	47	58	89	38	51
Urbana	40	06	41	88	13	13

(Indiana) - (Michigan)

State and Community	Latitude o ' "	Longitude o ' "	State and Community	Latitude o ' "	Longitude o ' "
<u>INDIANA</u>			<u>KENTUCKY (Continued)</u>		
Bloomington	---39 09 56	86 31 52	Pikesville	---- 37 28 49	82 31 09
Elkhart	-----41 40 56	85 58 15	Somerset	----- 37 05 35	84 36 17
Evansville	----37 58 20	87 34 21	<u>LOUISIANA</u>		
Fort Wayne	----41 04 21	85 08 26	Alexandria	---- 31 18 33	92 26 47
Gary	-----41 35 59	87 20 07	Baton Rouge	--- 30 26 58	91 11 00
Hammond	-----41 35 13	87 27 43	Houma	----- 29 35 34	90 43 09
Indianapolis	--39 46 07	86 09 46	Lafayette	----- 30 13 24	92 01 06
Lafayette	----40 25 11	86 53 39	Lake Charles	--- 30 13 45	93 12 52
Marion	-----40 33 17	85 39 49	Monroe	----- 32 30 02	92 06 55
Muncie	-----40 11 28	85 23 16	New Orleans	--- 29 56 53	90 04 10
Richmond	-----39 49 49	86 53 26	Shreveport	---- 32 30 46	93 44 58
Roanoke	-----40 57 50	85 22 30	West Monroe	---- 33 30 51	92 08 13
St. John	-----41 27 00	87 28 13	<u>MAINE</u>		
South Bend	----41 40 33	86 15 01	Augusta	----- 44 18 53	69 46 29
Terre Haute	---39 28 03	87 24 26	Bangor	----- 44 48 13	68 46 18
Vincennes	-----38 40 52	87 31 12	Calais	----- 45 11 04	67 16 43
<u>IOWA</u>			Orono	----- 44 53 15	68 40 12
Ames	-----42 01 36	93 36 44	Poland Spring	-- 44 01 42	70 21 40
Cedar Rapids	---41 58 48	91 39 28	Portland	----- 43 39 33	70 15 19
Davenport	-----41 31 24	90 34 21	Presque Isle	--- 46 40 57	68 00 52
Des Moines	----41 35 14	93 37 00	<u>MARYLAND</u>		
Dubuque	-----42 29 55	90 40 08	Baltimore	----- 39 17 26	76 36 45
Ft. Dodge	-----42 30 12	94 11 05	Cumberland	----- 39 39 01	78 45 45
Iowa City	-----41 39 37	91 31 52	Hagerstown	---- 39 38 39	77 43 15
Mason City	----43 09 15	93 12 00	Salisbury	----- 38 21 56	75 35 56
Sioux City	----42 29 46	96 24 30	<u>MASSACHUSETTS</u>		
Waterloo	-----42 29 40	92 20 20	Adams	----- 42 37 30	73 07 05
<u>KANSAS</u>			Boston	----- 42 21 24	71 03 25
Ensign	-----37 38 48	100 14 00	Cambridge	----- 42 21 58	71 06 24
Garden City	---37 57 54	100 52 20	Greenfield	----- 42 35 15	72 35 54
Goodland	-----39 20 53	101 42 35	New Bedford	---- 41 38 13	70 55 41
Great Bend	----38 22 04	98 45 58	Springfield	---- 42 06 21	72 35 32
Hays	-----38 52 16	99 19 57	Worcester	----- 42 15 37	71 48 17
Hutchinson	----38 03 11	97 55 20	<u>MICHIGAN</u>		
Pittsburg	-----37 24 50	94 42 11	Allen Park	----- 42 15 12	83 12 57
Salina	-----38 50 36	97 36 46	Battle Creek	--- 42 18 58	85 10 48
Topeka	-----39 03 16	95 40 23	Bay City	----- 43 36 04	83 53 15
Wichita	-----37 41 30	97 20 16	Cadillac	----- 44 15 10	85 23 52
<u>KENTUCKY</u>			Cheboygan	----- 45 38 38	84 28 38
Ashland	-----38 28 36	82 38 23	Detroit	----- 42 19 48	83 02 57
Bowling Green	--36 59 41	86 26 33	Escanaba	----- 45 44 45	87 03 18
Convington	----39 05 00	84 30 29	Flint	----- 43 00 50	83 41 33
Elizabethtown	--38 41 38	85 51 35	Grand Rapids	--- 42 58 03	85 40 13
Hazard	-----37 14 54	87 11 31	Jackson	----- 42 14 43	84 24 22
Lexington	-----38 02 50	84 29 46	Kalamazoo	----- 42 17 29	85 35 14
Louisville	-----38 14 47	85 45 49	Lansing	----- 42 44 01	84 33 15
Madisonville	---37 19 45	87 29 54	Marquette	----- 46 32 37	87 23 43
Morehead	-----38 10 53	83 26 08	Mt. Pleasant	--- 43 16 12	84 46 31
Murray	-----36 36 35	88 18 39	Muskegon	----- 43 14 17	86 15 02
Newport	----39 05 28	84 29 20	Onondaga	----- 42 26 41	84 33 43
Owensboro	----37 46 27	87 06 46	Saginaw	----- 43 25 52	83 56 05
Owenton	-----38 32 11	84 50 16			
Paducah	-----37 05 13	88 35 56			

State and Community Latitude Longitude

State and Community Latitude Longitude

MICHIGAN (Cont.)

Sault Ste. Marie, Traverse City, University Center

MINNESOTA

Alexandria, Appleton, Austin, Duluth, Hibbing, Mankato, Minneapolis, Rochester, St. Cloud, St. Paul, Walker

MISSISSIPPI

Biloxi, Bude, Columbus, Greenwood, Gulfport, Jackson, Laurel, Meridian, Oxford, St. College, Tupelo

MISSOURI

Cape Girardeau, Columbia, Hannibal, Jefferson City, Joplin, Kansas City, Kirksville, Poplar Bluff, St. Joseph, St. Louis, Sedalia, Springfield

MONTANA

Anaconda, Billings, Butte, Glendive, Great Falls, Helena, Kalispell, Miles City, Missoula

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Part 76

NEBRASKA

Albion, Alliance, Bassett, Grand Island, Hastings, Hayes Center, Hayes Spring, Kearney, Lexington, Lincoln, McCook, Merriman, Norfolk, North Platte, Omaha, Scottsbluff, Superior

NEVADA

Elko, Henderson, Las Vegas, Reno

NEW HAMPSHIRE

Berlin, Durham, Hanover, Keene, Lebanon, Littleton, Manchester

NEW JERSEY

Atlantic City, Burlington, Camden, Glen Ridge, Linden, Newark, New Brunswick, Patterson, Trenton, Vineland, Wildwood

NEW MEXICO

Albuquerque, Carlsbad, Clovis, Portales, Roswell

NEW YORK

Albany, Binghamton

State and Community	Latitude o ' "	Longitude o ' "	State and Community	Latitude o ' "	Longitude o ' "
<u>NEW YORK (Cont)</u>			Cleveland-----	41 29 51	81 41 50
Buffalo -----	42 52 52	78 52 21	Columbis -----	39 57 47	83 00 17
Carthage -----	43 58 50	75 36 26	Dayton -----	39 45 32	84 11 43
Elmira -----	42 05 26	76 48 22	Kettering -----	39 41 22	84 10 07
Garden City----	40 43 26	73 38 03	Lima -----	40 44 29	84 06 34
Ithaca -----	42 26 33	76 29 42	Lorain -----	41 27 48	81 10 23
Jamestown -----	42 05 45	79 14 40	Marion -----	40 35 14	83 07 36
New York-----	40 45 06	73 59 39	Newark -----	40 03 35	82 24 15
North Pole ----	44 23 59	73 51 00	Oxford -----	39 30 28	84 44 26
Norwood -----	44 45 00	75 59 39	Portsmouth ----	39 44 06	82 59 39
Oneonta -----	42 27 21	75 03 42	Springfield----	39 55 38	83 48 29
Patchogue -----	40 45 56	73 00 42	Steubenville---	40 21 42	80 36 53
Plattsburg ----	44 42 03	73 27 07	Toledo -----	41 39 14	83 32 39
Riverhead -----	40 55 06	72 39 51	Youngstown ----	41 05 57	80 39 02
Rochester -----	43 09 41	77 36 21	Zanesville-----	39 56 59	82 00 56
Schenectady----	42 48 52	73 56 24			
Syracuse -----	43 03 04	76 09 14	<u>OKLAHOMA</u>		
Utica -----	43 06 12	75 13 33	Ada -----	34 46 24	96 40 36
Watertown -----	43 58 30	75 54 48	Ardmore -----	34 10 18	97 07 50
			Lawton -----	34 36 27	98 23 41
<u>NORTH CAROLINA</u>			Oklahoma City--	35 28 26	97 31 04
Asheville-----	35 35 42	82 33 26	Sayre -----	35 17 34	99 38 23
Chapel Hill----	35 54 51	79 03 11	Tulsa -----	36 09 12	95 59 34
Charlotte -----	35 13 44	80 50 45			
Columbia -----	35 55 06	76 15 04	<u>OREGON</u>		
Concord -----	35 24 29	80 34 45	Coos Bay -----	43 22 02	124 13 09
Durham -----	35 59 48	78 54 00	Corvallis -----	44 34 10	123 16 12
Fayetteville---	35 03 12	78 52 54	Eugene -----	44 03 16	123 05 30
Greensboro ----	36 04 17	79 47 25	Klamath Falls--	42 13 32	121 46 32
Greenville ----	35 36 49	77 22 22	La Grande -----	45 19 47	118 05 45
Hickory -----	35 42 54	81 20 20	Medford -----	42 19 33	122 52 31
High Point ----	35 57 14	80 00 15	Portland -----	45 31 06	122 40 35
Jacksonville --	34 45 00	77 25 54	Roseburg -----	43 12 34	123 20 26
Linville -----	36 04 06	81 52 16	Salem -----	44 56 21	123 01 59
New Bern -----	35 06 33	77 02 23			
Raleigh -----	35 46 38	78 38 21	<u>PENNSYLVANIA</u>		
Washington ----	35 32 35	77 03 16	Allentown -----	40 36 11	75 28 06
Wilmington ----	34 14 14	77 56 58	Altoona -----	40 30 55	78 24 03
Winston-Salem--	36 05 52	80 14 42	Bethlehem-----	40 37 57	75 21 36
			Clearfield-----	41 01 20	78 26 10
<u>NORTH DAKOTA</u>			Erie-----	42 07 15	80 04 57
Bismark -----	46 48 23	100 47 17	Harrisburg ----	40 15 43	76 52 59
Devil's Lake---	48 06 42	98 51 29	Hershey -----	40 17 04	76 39 01
Dickinson-----	46 52 55	102 47 06	Johnston -----	40 19 35	78 55 03
Fargo-----	46 52 30	96 47 18	Lancaster -----	40 02 25	76 18 29
Minot -----	48 14 09	101 17 38	Philadelphia---	39 56 58	75 09 21
Pembina -----	48 58 00	97 14 37	Pittsburgh-----	40 26 19	80 00 00
Valley City ---	46 55 31	98 00 04	Redding-----	40 20 09	75 55 40
Williston-----	48 08 47	103 36 59	Scranton-----	41 24 32	75 39 46
			Wilkes-Berre---	41 14 32	75 53 17
<u>OHIO</u>			York-----	39 57 35	76 43 36
Akron-----	41 05 00	81 30 44			
Athens -----	39 19 38	82 06 09	<u>PUERTO RICO</u>		
Bowling Green--	41 22 37	83 39 03	Aguadilla -----	18 25 53	67 09 18
Canton -----	40 47 50	81 22 37	Arecibo-----	18 28 26	66 43 39
Cincinnati ----	39 06 07	84 30 35	Caguas -----	18 13 59	66 02 06

## (Puerto Rico) - (Virgin Islands)

State and Community	Latitude ° ' "	Longitude ° ' "	State and Community	Latitude ° ' "	Longitude ° ' "
<u>PUERTO RICO (Cont.)</u>			Harlingen-----	26 11 29	97 41 35
Fajardo -----	18 19 35	65 39 21	Houston-----	29 45 26	95 21 37
Mayaguez -----	18 12 16	67 08 36	Laredo -----	27 30 22	99 30 30
Ponce -----	18 00 51	66 36 58	Longview -----	32 28 24	94 43 45
San Juan -----	18 26 55	66 03 55	Lubbock -----	33 35 05	101 50 33
<u>RHODE ISLAND</u>			Lufkin-----	31 20 14	94 43 21
Providence -----	41 49 32	71 24 41	Midland-----	31 59 54	102 04 31
<u>SOUTH CAROLINA</u>			Monahans -----	31 35 16	102 53 26
Allendale -----	33 00 30	81 18 26	Nacogdoches---	31 36 13	94 39 20
Anderson-----	34 30 06	82 38 54	Odessa -----	31 50 49	102 22 01
Charlestown ---	32 46 35	79 55 53	Port Arthur---	29 52 09	93 56 01
Columbia-----	34 00 02	81 02 00	Richardson----	32 57 06	96 44 05
Florence -----	34 11 40	79 46 06	Rosenberg ----	29 33 30	95 48 15
Greenville-----	34 50 50	82 24 01	San Angelo ---	31 27 39	100 26 03
Spartenburg ---	34 57 03	81 56 06	San Antonio---	29 25 37	98 29 06
<u>SOUTH DAKOTA</u>			Sweetwater----	32 28 24	100 24 18
Aberdeen -----	45 27 31	98 29 03	Temple-----	31 06 02	87 20 22
Brookings -----	44 18 38	96 47 53	Texarkana-----	33 25 29	94 02 34
Florence -----	45 03 14	97 19 35	Tyler -----	32 21 21	95 17 52
Lead -----	44 21 07	103 46 03	Victoria-----	28 48 01	97 00 06
Mitchell -----	43 42 48	98 01 36	Waco-----	31 33 12	97 08 00
Pierre -----	44 22 06	100 20 57	Weslaco-----	26 09 24	97 59 33
Rapid City ----	44 04 52	103 13 11	Wichita Falls-	33 54 34	98 29 28
Reliance -----	43 52 45	99 36 18	<u>UTAH</u>		
Sioux Falls ---	43 32 35	96 43 35	Logan-----	41 44 03	111 50 11
Vermillion ----	42 46 52	96 55 35	Ogden-----	41 13 31	111 58 21
<u>TENNESSEE</u>			Provo-----	40 14 07	111 39 44
Chattanooga ---	35 02 41	85 18 32	Salt Lake City	40 45 23	111 53 26
Jackson-----	35 36 48	88 49 15	<u>VERMONT</u>		
Johnson City---	36 19 04	82 20 56	Burlington----	44 28 34	73 12 46
Kingsport -----	36 32 57	82 33 44	Rutland-----	43 36 29	72 58 56
Knoxville -----	35 57 39	83 55 07	St. Johnsbury-	44 25 16	72 01 13
Lexington-----	35 38 58	88 23 31	Windsor -----	44 28 38	72 23 32
Memphis -----	35 08 46	90 03 13	<u>VIRGINIA</u>		
Nashville-----	36 09 33	86 46 55	Bristol -----	36 35 48	82 11 04
Sneedville-----	36 31 46	83 13 04	Charlottesville	38 01 52	78 28 50
<u>TEXAS</u>			Goldvein-----	38 26 54	77 39 19
Abilene -----	32 27 05	99 43 51	Hampton -----	37 01 32	76 20 32
Amarillo -----	35 12 27	101 50 04	Harrisonburg--	38 27 01	78 52 07
Austin-----	30 16 09	97 44 37	Lynchburg-----	37 24 51	79 08 37
Beaumont-----	30 05 20	94 06 09	Norfolk -----	36 51 10	76 17 21
Belton-----	31 03 31	97 27 39	Norton-----	36 56 05	82 37 31
Big Spring-----	32 15 03	101 28 38	Petersburg ---	37 13 40	77 24 15
Bryan -----	30 38 48	96 21 31	Portsmouth----	36 50 12	76 17 54
College Station	30 37 05	96 20 41	Richmond-----	37 32 15	77 26 09
Corpus Christi-	27 47 51	97 23 45	Roanoke-----	37 16 13	79 56 44
Dallas -----	32 47 09	96 47 37	Staunton-----	38 09 02	79 04 34
El Paso -----	31 45 36	106 29 11	<u>VIRGIN ISLANDS</u>		
Fort Worth-----	32 44 55	97 19 44	Charlotte		
Galveston-----	29 18 10	94 47 43	Amalie -----	18 20 36	64 55 53
			Christiansted-	17 44 44	64 42 21

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Part 76

Washington

<u>State and Community</u>	<u>Latitude</u> ° ' "	<u>Longitude</u> ° ' "	<u>State and Community</u>	<u>Latitude</u> ° ' "	<u>Longitude</u> ° ' "
<u>WASHINGTON</u>			<u>WISCONSIN</u>		
Bellingham -----	48 45 02	122 28 36	Eau Claire -----	44 48 31	91 29 49
Kennewick -----	46 12 28	119 08 32	Fond Du Lac -----	43 46 35	88 26 52
Lakewood			Green Bay -----	44 30 48	88 00 50
Center -----	47 07 37	122 31 15	Jamesville -----	42 40 52	89 01 39
Pasco -----	46 13 50	119 05 27	Kenosha -----	42 35 04	87 49 14
Pulliman -----	46 43 42	117 10 46	La Crosse -----	43 48 48	91 15 02
Richland -----	46 16 36	119 16 21	Madison -----	43 04 23	89 22 55
Seattle -----	47 36 32	122 20 12	Milwaukee -----	43 02 19	87 54 15
Spokane -----	47 39 32	117 25 33	Rhinelanders -----	45 38 09	89 24 30
Tacoma -----	47 14 59	122 26 15	Superior -----	46 43 14	92 06 07
Yakima -----	46 36 09	120 30 39	Wausau -----	44 57 30	80 37 40
<u>WEST VIRGINIA</u>			<u>WYOMING</u>		
Bluefield -----	37 15 29	81 13 20	Casper -----	42 51 00	106 19 22
Charleston -----	38 21 01	81 37 52	Cheyenne -----	41 08 09	104 49 07
Clarksburg -----	39 16 50	80 20 38	Rawlins -----	41 47 23	107 14 37
Grandview -----	37 49 28	81 04 20	Riverton -----	43 01 29	108 23 03
Huntington -----	38 25 12	82 26 33			
Morgantown -----	39 37 41	79 57 28			
Oak Hill -----	37 58 31	81 08 45			
Parkersburg -----	39 15 57	81 33 46			
Weston -----	39 02 19	80 28 05			
Wheeling -----	40 04 03	80 43 20			

76.54 Significantly viewed signals; methods to be followed for special showings. (a) Signals that are significantly viewed in a county (and thus are deemed to be significantly viewed within all communities within the county) are those that are listed in Appendix B of the memo opinion and order on reconsideration of the Cable Television Report and Order (Docket 18397 et al), FCC 72-530.

NOTE: The relevant information from these surveys is available from the Commission.

(b) Significant viewing in a cable television community for signals not shown as significantly viewed under paragraphs (a) or (d) of this section may be demonstrated by an independent professional audience survey of non-cable television homes that covers at least 2 weekly periods separately by at least 30 days but no more than one of which shall be a week between the months of April and September. If two surveys are taken they shall include samples sufficient to assure that the combined survey results in an average figure of at least one standard error above the required viewing level. If surveys are taken for more than 2 weekly periods in any 12 months, all such surveys must result in an average figure at least one standard error above the required viewing level. If a cable television system serves more than one community, a single survey may be taken, provided that the homes from each community that are proportional to the population.

(c) Notice of a survey to be made pursuant to paragraph (b) of this section shall be served on all licensees or permittees of television broadcast stations within whose predicted Grade B contours the cable community or communities are located in whole or in part, and on all other system community units, franchisees, and franchise applicants in the cable community, or communities at least 30 days prior to the initial survey period. Such notice shall include the name of the survey organization and a description of the procedures to be used. Objections shall be served on the party sponsoring the survey within 20 days after receipt of such notice.

NOTE: With respect to those counties designated by an \* in Appendix B of the memorandum opinion and order on reconsideration of the Cable Television Report and Order (Docket 18397 et al), FCC 72-530, surveys of significant viewing made pursuant to 76.54(b) may be submitted prior to 3/31/73.

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(d) Signals of television broadcast stations not encompassed by the surveys (for the periods May 1970, November, 1970 and February/March, 1971) used in establishing Appendix B of the Memorandum Opinion and Order on Reconsideration of Cable Television Report and Order FCC 72-530, 36 FCC 2d 326 (1972), may be demonstrated as significantly viewed on a county-wide basis by independent professional audience surveys which cover three separate, consecutive four-week periods and are otherwise comparable to the surveys used in compiling the above-referenced Appendix B: Provided, However, That such demonstration shall be based upon audience survey data for the first three years of the subject station's broadcast operations.

76.55 Manner of carriage. (a) Where a television broadcast signal is required to be carried by a community unit, pursuant to the rules in this subpart:

(1) The signal shall be carried without material degradation in quality (within the limitations imposed by the technical state of the art), and, where applicable, in accordance with the technical standards of Subpart K of this part;

(2) The signal shall, on request of the station licensee or permittee, be carried on the community unit on the channel number on which the station is transmitting except where technically infeasible;

(3) The signal shall, on request of the station licensee or permittee, be carried on the community unit no more than on one channel. Provided, however, That this provision shall not apply to a signal protected pursuant to 76.92 and 76.94 during periods when network nonduplication protection is provided.

(b) Where a television broadcast signal is carried by a community unit pursuant to the rules of this subpart, the programs broadcast shall be carried in full, without detention or alteration of any portion except as required by this part.

(c) A community unit need not carry the signal of any television translator station if (1) the community unit is carrying the signal of an originating station, or (2) the community of the community unit is located, in whole or in part, within the Grade B contour of a station carried on the system whose programming is substantially duplicated by the translator station.

(d) If the community of a community unit is located, in whole or in part, within the Grade B contour of both a satellite and its parent television station, and if the community unit would otherwise be required to carry both of them pursuant to the rules in this subpart, the community unit need carry only one of these signals, and may select between them.

76.57 Provisions for community units operating in communities outside of all major and smaller television markets. A community unit operating in a community located wholly outside all major and smaller television markets, as defined in 76.5 shall carry television broadcast signals in accordance with the following provisions.

(a) Any community unit may carry or, on request of the station licensee or permittee, carry signals of:

(1) Television stations within whose Grade B contours the community of the community unit is located, in whole or in part;

(2) Television translator stations with 100 watts or higher power serving the community or the community unit, as to cable community units that commence operations or expand channel capacity after March 30, 1972, noncommercial educational translator stations with 5 watts or higher power serving the community of the community unit. In addition, any cable community unit may elect to carry the signal of any noncommercial educational translator station;

(3) Noncommercial educational television stations within whose specified zone the community of the community unit is located, in whole or in part;

(4) Commercial television broadcast stations that are significantly viewed in the community of the community unit. See 76.54.

(b) In addition to the signals carried pursuant to paragraph (a) of this section, any community unit may carry additional television signals.

76.59 Provisions for smaller television markets. A community unit operating in a community located in whole or part within a smaller television market, as defined in 76.5, shall carry television broadcast signals only in accordance with the following provisions:

(a) Any such community unit may carry or, on request of the relevant station licensee or permittee, shall carry the signals of:

(1) Television broadcast stations within whose specified zone the community of the community unit is located, in whole or in part;

(2) Noncommercial educational television broadcast stations within whose Grade B contours the community of the community unit is located, in whole or in part;

(3) Commercial television broadcast stations licensed to communities in other smaller television markets, within whose Grade B contours the community of the community unit is located, in whole or in part;

(4) Television broadcast stations licensed to other communities which are generally considered to be part of the same smaller television market (Example: Burlington, Vt.--Plattsburgh, N.Y., television market);

(5) Television translator stations with 100 watts or higher power serving the community of the community unit, as to cable community units that commence operations or expand channel capacity after March 30, 1972, noncommercial educational translator stations with 5 watts or higher power serving the community of the community unit. In addition, any cable community unit may elect to carry the signal of any noncommercial educational translator station;

(6) Commercial television broadcast stations that are significantly viewed in the community of the community unit. See 76.54.

(b) In addition to the television broadcast signals carried pursuant to paragraph (a) of this section, any such community unit may carry any additional television signals.

(c) Where the community is located wholly or partially within one of the major television markets listed in 76.51(a) and also wholly or partially within a smaller television market, the carriage provisions for the major markets shall apply.

76.61 Provisions for the major television markets. Where a system serves a community that is located in whole or in part within a major television market, that community unit shall carry television broadcast signals only in accordance with the following provisions:

(a) Any such community unit may carry, or on request of the relevant station licensee or permittee, shall carry the signals of:

76.61(a)(1) - 76.61(b)

(1) Television broadcast stations within whose specified zone the community of the community unit is located, in whole or in part; Provided, however, That where a community unit is located in designated community of major television markets, it shall not carry the signal of television stations licensed to designated communities in another major television market, unless the community in which the cable community unit is located is wholly within the zone (see 76.5(f)) of station, except as provided in this section ;

(2) Noncommercial educational television broadcast stations within whose Grade B contours the community of community unit is located, in whole or in part;

(3) Television translator stations with 100 watts or higher power serving the community of the community unit, as to cable community units that commence operations or expand channel capacity after 3/30/72, noncommercial educational translator stations with 5 watts or higher power serving the community of the community unit. In addition, any cable community unit may elect to carry the signal of any noncommercial educational translator station;

(4) Television broadcast stations licensed to other designated communities of the same major television market (Example: Cincinnati, Ohio-Newport, Ky., television market);

(5) Commercial television broadcast stations that are significantly viewed in the community of the community unit. See 76.54.

(b) In addition to the television broadcast signals carried pursuant to paragraph (a) of this section, any such community unit may carry any additional television signals.

## 76.63 Deleted.

76.64 Carriage of subscription television programs and telecommunications services on the vertical blanking interval. The provisions of 76.55, 76.57, 76.59, 76.61 do not require carriage of any subscription TV program or any telecommunications service transmitted on the vertical blanking interval.

76.65 Determination of signal contours. (a) When, for purpose of ascertaining broadcast station rights to cable carriage, reference is made to Grade B contours 76.57(a), 76.59(a) and 76.61(a), such contours shall be the field intensity contours defined in 73.683(a) of this chapter: Provided however, That such rights as to signals carried or authorized for carriage on or before August 26, 1977, shall be determined by reference to the contour prediction rules adopted in the Sixth Report and Order in Dockets 8736, 8975, 8976 and 9175, 41FCC 148 (1952) as amended by Report and Order in Docket 17253, FCC 70-345, 22 FCC 2d 345 (1970).

76.67 Sports Broadcast. (a) No community unit located in whole or in part within the specified zone of a television broadcast station licensed to a community in which a sports event is taking place, shall, on request of the holder of the broadcast rights to that event, or its agent, carry the live television broadcast of that event if the event is not available live on a television broadcast signal carried by the system pursuant to the mandatory signal carriage rule of this Part. For the purpose of this Section, if there is no television station licensed to the community in which the sports event is taking place, the applicable specified zone shall be that of the television station licensed to the community which the sports event or local team is identified, or, if the event or local team is not identified with any particular community, the nearest community to which the television station is licensed.

(b) Notification of the programming to be deleted pursuant to this section shall include the following information:

(1) As to programming to be deleted from television broadcast signals regularly carried by cable community unit;

(i) The name and address of the party requesting the program deletion;

(ii) The date, time and expected duration of the sports event the television broadcast of which is to be deleted;

(iii) The call letters of the television broadcast station(s) from which the deletion is to be made.

(2) As to programming to be deleted from television broadcast signals not regularly carried by cable community unit;

(i) The name and address of the party requesting the program deletion;

(ii) The date, time and expected duration of the sports event the television broadcast of which is to be deleted.

(c) Notifications given pursuant to this section must be received, as to regularly scheduled events, no later than the Monday preceding the calendar week (Sunday-Saturday) during which the program deletion is to be made. Notifications as to events not regularly scheduled and revisions of notices previously submitted, must be received within twenty-four- (24) hours after the time of the telecast to be deleted is known, but in any event no later than twenty-four (24) hours from the time the subject telecast is to take place.

(d) Whenever, pursuant to this section, a community unit is required to delete a program (TV) on a signal regularly carried by the community unit; such community unit may, consistent with the rules contained in Subpart F of this part, substitute a program from any other television broadcast station. A program substituted may be carried to its completion, and the cable community unit need not return to its regularly carried signal until it can do so without interrupting a program already in progress.

(e) The provisions of this section shall not be deemed to require the deletion of any portion of a television signal which a community unit was lawfully carrying prior to March 31, 1972.

(f) The provisions of this section shall not apply to any cable television system having fewer than 1000 subscribers.

Subpart E - Equal Employment Opportunity Requirements.

§76.71 Scope of applications. (a) The provisions of this subpart shall apply to any corporation, partnership, association, joint-stock company or trust engaged primarily in the management or operation of any cable system. Cable entities subject to these provisions include those systems defined in §76.5(a) of the rules and all satellite master antenna television systems serving 50 or more subscribers.

(b) Employment units. The provisions of this subpart shall apply to cable entities as employment units. Each cable entity may be considered a separate employment unit; however, where two or more cable entities are under common ownership or control and are interrelated in their local management, operation, and utilization of employees, they shall constitute a single employment unit.

(c) Headquarters office. A multiple cable operator shall treat as a separate employment unit each headquarters office to the extent the work of that office is primarily related to the operation of more than one employment unit as described in paragraph (b) of this section.

§76.73 General EEO policy. (a) Equal opportunity in employment shall be afforded by each cable entity to all qualified persons and no person shall be discriminated against in employment by such entity because of race, religion, national origin, age or sex.

(b) Each employment unit shall establish, maintain and carry out a positive continuing program of specific practices designed to assure equal opportunity to every aspect of cable system employment policy and practice. Under the terms of its program, an employment unit shall:

(1) Define the responsibility of each level of management to ensure a positive application and vigorous enforcement of its policy of equal opportunity and establish a procedure to review and control managerial and supervisory performance;

(2) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation;

(3) Communicate its equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to race, color, religion, national origin, age or sex and solicit their recruitment assistance on continuing basis;

(4) Conduct a continuing program to exclude every form of prejudice or discrimination based upon race, color, religion, national origin, age or sex from its personnel policies and practices and working conditions; and

(5) Conduct a continuing review of job structure and employment practices and adopt positive recruitment, training, job design, and other measures needed to ensure genuine equality of opportunity to participate fully in all organizational units, occupations, and levels of responsibility.

§76.75 EEO program requirements. An employment unit's equal employment opportunity program should reasonably address itself to the specific areas set forth below, to the extent possible and to the extent that they are appropriate in terms of employment unit size, location, etc.:

(a) Disseminate its equal employment opportunity program to job applicants, employees, and those with whom it regularly does business. For example, this requirement may be met by:

(1) Posting notices in the employment unit's office and places of employment informing employees, and applicants for employment, of their equal employment opportunity rights, and their right to notify the Equal Employment Opportunity Commission, the Federal Communications Commission, or other appropriate agency, if they believe they have been discriminated against. Where a significant percentage of employees, employment applicants, or a cable television system of the relevant labor area are Hispanic, such notices should be posted in Spanish and English. Similar use should be made of other languages in such posted equal employment opportunity notices, where appropriate;

(2) Placing a notice in bold type on the employment application informing prospective employees that discrimination because of race, color, religion, national origin, age or sex is prohibited and that they may notify the Equal Employment Opportunity Commission, the Federal Communications Commission, or other appropriate agency if they believe they have been discriminated against.

(b) Use minority organizations, organizations for women, medical, educational institutions and other potential sources of minority and female applicants, to supply referrals whenever job vacancies are available in its operation. For example, this requirement may be met by:

(1) Placing employment advertisements in media that have significant circulation among minority-group people in the recruiting area;

(2) Recruiting through schools and colleges with significant minority-group enrollments;

(3) Maintaining systematic contacts with minority and human relations organizations, leaders, and spokesmen to encourage referral of qualified minority or female applicants;

(4) Encouraging current employees to refer minority or female applicants;

(5) Making known to the appropriate recruitment sources in the employer's immediate area that qualified minority members and females are being sought for consideration whenever the employment unit hires.

(c) Evaluate its employment profile and job turnover against the availability of minorities and women in its franchise area. For example, this requirement may be met by:

(1) Comparing composition of relevant labor area with the composition of the entity's employees;

(2) Comparing its employees, within each job category, with the people available for such positions;

(3) Where there is underrepresentation of either minorities and/or women, examining the company's personnel policies and practices to assure that they do not inadvertently screen out any protected group and take appropriate action where necessary.

NOTE These data are generally available on a metropolitan statistical area (MSA), primary metropolitan statistical area (PMSA) or county basis.

(d) Undertake to offer promotions of minorities and women in a non-discriminatory fashion to positions of greater responsibility may be met by:

(1) Instructing those who make decisions on placement and promotion that minority employees and females are to be considered without discrimination, and that job areas in which there is little or no minority or female representation should be reviewed to determine whether this results from discrimination;

(2) Giving minority groups and female employees equal opportunity for positions which lead to higher positions. Inquiring as to the interest and skills of all lower paid employees with respect to any of the higher paid positions, followed by assistance, counselling, and effective measures to enable employees with interest and potential to qualify themselves for such positions;

(3) Providing opportunity to perform overtime work on a basis that does not discriminate against qualified minority group or female employees.

(e) Encourage minority and female entrepreneurs to conduct business with all parts of its operation. For example, this requirement may be met by:

(1) Recruiting as wide as possible a pool of qualified entrepreneurs from sources such as employee referrals, community groups, contractors, associations, and other sources likely to be representative of minority and female interests.

(f) Analyze the results of its efforts to recruit, hire, promote and use the services of minorities and women and explain any difficulties encountered implementing its equal employment opportunity program. For example, this requirement may be met by:

(1) Where union agreements exist, cooperating with the union or unions in the development of programs to assure qualified minority persons or females of equal opportunity for employment, and including an effective nondiscrimination clause in new or renegotiated union agreements;

(2) Avoiding use of selection techniques or tests that have the effect of discriminating against qualified minority groups or females;

(3) Reviewing seniority practices to ensure that such practices are non-discriminatory;

(4) Examining rates of pay and fringe benefits for employees having the same duties, and eliminating any inequities based upon race or sex discrimination.

§76.77 Reporting Requirements. (a) Annual employment report. Each employment unit with six or more full-time employees shall file an annual employment report (FCC Form 395A) with the Commission on or before May 1 of each year. Employment data on the annual employment report shall reflect the figures from any one payroll period in January, February or March of the year during which the report is filed. Unless instructed otherwise by the FCC, the same payroll period shall be used for each successive annual employment reports.

(b) Certification of Compliance. The Commission will use the information submitted on Form 395A to determine whether cable systems are in compliance with the provisions of this subpart. Cable systems found to be in compliance with these rules will receive a Certificate of Compliance.

(c) Investigations. The Commission will investigate each cable system at least once every five years. Cable systems are required to submit supplemental investigation information with their regular Form 395A reports in the years they are investigated.

§76.79 Records available for public inspection. (a) A copy of every report and any other employment report filed with the Commission, and complaint report that has been filed with the Commission, and copies of all exhibits, letters and other documents filed as part thereof, all amendments thereto, all correspondence between the cable entity and the Commission pertaining to the reports after they have been filed in all documents incorporated therein by reference, unless specifically exempted from the requirement, are open for public inspection at the office of the Commission in Washington, D.C.

(b) Every employment unit shall maintain for public inspection a file containing copies of all annual employment reports. Each document shall be retained for a period of five years. The file shall be maintained at the central office and at every location with more than five full-time employees. A headquarters employment unit file and a file containing a consolidated set of all documents pertaining to the other employment units of a multiple cable operator shall be maintained at the central office of the headquarters employment unit. The cable entity shall provide reasonable accommodations at these locations for undisturbed inspection of his equal employment opportunity records by members of the public during regular business hours.

76.92 Stations entitled to network program nonduplication protection. (a) Any community unit which operates in a community located in whole or in part within the 35 mile specified zone of any commercial television broadcast station or within the secondary zone which extends 20 miles beyond the specified zone of a smaller market television broadcast station (55 miles altogether), and which carries the signal of such station, shall, except as provided in paragraphs (e) and (f) of this section, delete, upon request of the station licensee or permittee, the duplicating network programming of lower priority signals in the manner and to the extent specified in 76.94 and 76.95.

(b) For purpose of this section, the order of nonduplication priority of television signals carried by a community unit is as follows:

(1) First, all television broadcast stations within whose specified zone the community of the community unit is located, in whole or in part;

(2) Second, all smaller market television broadcast stations within whose secondary zone the community of the community unit is located, in whole or in part;

(c) For purposes of this section, all noncommercial educational television broadcast stations licensed to a community located in whole or in part within a major television market as specified in 76.51 shall be treated in the same manner as a major television market commercial television broadcast station, and all non-commercial educational television broadcast stations not licensed to a community located in whole or in part within a major television market shall be treated in the same manner as a smaller market television broadcast station.

(d) Any community unit operating in a community to which a 100-watt or higher power translator station is licensed, which translator is located within the predicted Grade B signal contour or the television station that the translator station retransmits, and which translator is carried by the cable community unit, upon the request of such translator station licensee or permittee, delete the duplicating network programming of any television broadcast station whose reference point (see 76.53) is more than 55 miles from the community of the community unit.

(e) Any community unit which operates in a community located in whole or in part within the specified zone of any television broadcast station or within the secondary zone of a smaller market television broadcast station is not required to delete the duplicating network programming of any 100 watt or higher power television translator station which is licensed to the community of the community unit.

(f) Any cable television system which operates in a community located in whole or in part within the secondary zone of a smaller market television broadcast station is not required to delete the duplicating network programming of any major market television broadcast station whose reference point (See 76.53) is also within 55 miles of the community of the system.

(g) A community unit is not required to delete the duplicating network programming of any television broadcast station which is significantly viewed in the cable television community pursuant to 76.54.

76.93 RESERVED

76.94 Notification requirements and extent of protection. (a) Where the network programming of a television station is entitled to nonduplicating protection, a community unit shall, upon request of the station licensee or permittee, refrain from simultaneously duplicating any network program broadcast by such station only if the community unit has received the information required in paragraph (a)(1) and (2) of this section.

(1) Notification of the date and time of the programming to be protected and date and time of the programming to be deleted must, at a minimum, be received on a monthly basis. If the station licensee or permittee elects to provide such notification on a monthly basis, it must be submitted no later than six days preceding the calendar month during which nonduplication is requested. If the station licensee or permittee elects to provide such notification on a weekly basis, notice shall be given no later than the Monday preceding the calendar week (Sunday-Saturday) during which nonduplication protection is sought.

(2) Changes in the monthly notification request required by paragraph (a) (1) must be submitted six days preceding the broadcast of the programming to be protected: Provided, However, that the licensee or permittee of the television station otherwise entitled to nonduplication protection must notify the affected community unit as soon as possible, and without regard to the time limits prescribed in paragraph (a)(1) of any programming change which would render unnecessary the deletion of a lower priority television broadcast signal.

(b) Where a community unit is required to provide same-day network programs nonduplication protection, either pursuant to specific Commission order or pending Commission action on a broadcast station petition for special relief filed pursuant to the procedures described in paragraph 25 of the Second Report and Order in Docket 19995, FCC 75-820, FCC 2d (1975), the following provisions shall be applicable:

(1) A community unit need not delete reception of a network program if, in so doing, it would leave available for reception by subscribers, at any time, less than the programs of two networks (including those broadcast by any stations whose signals are being carried and whose programming is being protected pursuant to the requirements of this section):

(2) A community unit need not delete reception of a network program which is scheduled by the network between the hours of 6 and 11 p.m. eastern time, but is broadcast by the station requesting deletion, in whole or in part, outside of the period which would normally be considered prime time for network programming in the same time zone involved.

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76.95 Exceptions. (a) Notwithstanding the requirements of 76.92 and 76.94; a community unit need not delete reception of any program which would be carried on the community unit in color but will be broadcast in black and white by the station requesting deletion.

(b) The provisions of 76.92 and 76.94 shall not apply to a cable television system having fewer than 1000 subscribers. Within 60 days following the provision of service to 1000 subscribers, each such system shall file a notice to that effect with the Commission and shall send a copy thereof to all television broadcast and translator stations carried by the system..

(c) Network nonduplicating protection need not be extended to a higher priority station for one hour following the scheduled time of completion of the broadcast of a live sports event by that station or by a lower priority station against which a cable community unit would otherwise be required to provide nonduplication protection following the scheduled time of completion.

(d) The Commission will give full effect to private agreements between operators of community units and local television stations which provide for a type or degree of network program nonduplication protection which differs from the requirements of 76.92 and 76.94. A copy of any such private agreement entered into effect 8/22/75 shall be filed with the Commission and a copy shall also be placed in the community unit's public inspection file (see 76.305) and retained in such file for as long as the contract remains in force.

76.97 Waiver petitions, (a) Subject to the provisions of paragraph (b) of this section, where a petition for waiver of the provisions of 76.92 and 76.94 is filed within 15 days after a request for network program nonduplication protection is received from a television broadcast or translator station licensee or permittee by the operator of a community unit, such unit need not provide nonduplication protection pending the Commission's ruling on the petition or on the question of temporary relief pending further proceedings.

(b) The 15 day period specified in paragraph (a) shall not commence until the television broadcast station requesting exclusivity has initiated service pursuant to program test authority as provided in 73.629 of this chapter, and until the cable television system serves more than 1000 subscribers.

76.99 Grandfathering. The provisions of 76.92, 76.94 shall not be deemed to deprive a television station whose signal was carried by a community unit prior to 3/31/72, of the non network program exclusivity rights that such station had on 3/30/72; provided, however, such exclusivity rights shall extend only to simultaneously duplicated programming by lower priority television stations, unless the station whose exclusivity rights are at issue is entitled to same-day network program nonduplication protection pursuant to 76.94(b), in which case that station shall also be entitled to continued same-day non network program exclusivity.

Subpart G - Cablecasting

76.201 RESERVED.

76.205 Origination cablecasts by candidates for public office. (a) General requirements. If a cable television system operator shall permit any legally qualified candidate for public office to use the system's cablecasting channel(s) and facilities therefor, the system operator shall afford equal opportunities to all other such candidates for that office: Provided, However, That such cable television system operator shall have no power of censorship over the material cablecast by any such candidate: And, Provided, Further, That an appearance be a legally qualified candidate on any:

- (1) Bona fide newscast,
- (2) Bona fide interview,
- (3) Bona fide news documentary (if the appearance of the candidate is incidental to the presentation of the subject or subjects covered by the news documentary), or
- (4) On-the-spot coverage of bona fide news events (including but not limited to political conventions and activities incidental thereto). shall not be deemed to be use of the facilities of the system within the meaning of this paragraph.

NOTE: The Fairness Doctrine is applicable to these exempt categories. See §76.209.

(h) Charges for use of cable systems. The charges, if any, made for the use of any cable television system by any person who is a legally qualified candidate for any public office in connection with his campaign for nomination for election, or election, to such office shall not exceed:

- (1) During the 45 days preceding the date of a primary or primary runoff election and during the 60 days preceding the date of a general or special election in which such person is a candidate, the lowest unit charge of the cable television system for the same class and amount of time for the same period, and
- (2) At any other time, the charges made for comparable use of such system by other users thereof. The rates, if any, charged all such candidates for the same office shall be uniform and shall not be rebated by any means direct or indirect. A candidate shall be charged no more than the rate the cable television system would charge if the candidate were a commercial advertiser whose advertising was directed to promoting its business within the same area as that encompassed by the particular office for which such person is a candidate. All discount privileges otherwise offered by a cable television system to commercial advertisers shall be available upon equal terms to candidates for public office.

(c) Discrimination between candidates. In making time available to candidates for public office, no cable television system operator shall make any discrimination between candidates in practices, regulations, facilities, or services for or in connection with the service rendered pursuant to this part, or make or give any preference to any candidate for public office or subject any such candidate to any prejudice or disadvantage; nor shall any cable television system operator make any contract or other agreement which shall have the effect of permitting any legally qualified candidate for any public office to cablecast to the exclusion of other legally qualified candidates for the same public office.

(d) Records, inspection. Every cable television system operator shall keep and permit public inspection of a complete record (political file) of all requests for cablecast time made by or on behalf of candidates for public office, together with an appropriate notation showing the disposition made by the cable television system operator of such requests, and the charges made, if any, if the request is granted. When free time is provided for use by or on behalf of such candidates, a record of the free time provided shall be placed in the political file. All records required by this paragraph shall be placed in the political file as soon as possible and shall be retained for a period of 2 years.

(e) Time of request. A request for equal opportunities for use of the origination channel(s) must be submitted to the cable television system operator within one (1) week of the day on which the first prior use, giving rise to the right of equal opportunities occurred: Provided, however, That where a person was not a candidate at the time of such first prior use, he shall submit his request within one (1) week of the first subsequent use after he has become a legally qualified candidate for the office in question.

(f) Burden of proof. A candidate requesting such equal opportunities of the cable television system operator, or complaining of noncompliance to the Commission, shall have the burden of proving that he and his opponent are legally qualified candidates for the same public office.

76.209 Fairness doctrine; personal attacks; political editorials. (a) A cable television system operator engaging in origination cablecasting shall afford reasonable opportunity for the discussion of conflicting views on issues of public importance.

NOTE: See public notice, "Applicability of the Fairness Doctrine in the Handling of Controversial Issues of Public Importance" 29 F.R. 10415.

(b) When, during such origination cablecasting, an attack is made upon the honesty, character, integrity, or like personal qualities of an identified person or group, the cable television system operator shall, within a reasonable time and in no event later than one (1) week after the attack, transmit to the person or group attacked: (1) Notification of the date, time, and identification of the cablecast; (2) a script or tape is not available (or an accurate summary if a script or tape is not available), of the attack; and (3) an offer of a reasonable opportunity to respond over the system's facilities.

(c) The provisions of paragraph (b) of this section shall not apply to cablecast material which falls within one or more of the following categories:

- (1) Personal attacks on foreign groups or foreign public figures;
- (2) Personal attacks occurring during uses by legally qualified candidates.
- (3) Personal attacks made during cablecasts not included in paragraph (b) (2) of this section and made by legally qualified candidates, their authorized spokespersons or those associated with them in the campaign, on other such candidates, their authorized spokespersons or persons associated with the candidates in the campaign; and

(4) Bona fide newscasts, bona fide news interviews, and on-the-spot coverage of bona fide news events (including commentary or analysis contained in the foregoing programs, but, the provisions of paragraph (b) of this section shall be applicable to editorials of the cable television system operator).

(d) Where a cable television system operator, in an editorial (1) endorses, or (2) opposes a legally qualified candidate(s), the system operator shall, within 24 hours after the editorial, transmit to respectively (i) the other qualified candidate or candidates for the same office, or (ii) the candidate opposed in the editorial, (2) notification of the date, time, and channel of the editorial; (b) a script or tape of the editorial; and (c) an offer of a reasonable opportunity for a candidate or spokesman of the candidate to respond over the system's facilities; provided, however, that where such candidate editorials are cablecast within 72 hours prior to the day of the election, the system operator shall comply with the requirements of this paragraph sufficiently far in advance of the broadcast to enable the candidate(s) to have a reasonable opportunity to enable them to prepare a response and to present it in fashion.

76.213 Lotteries. (a) No cable television system operator, except as in paragraph (c), when engaged in origination cablecasting shall transmit or permit to be transmitted on the origination cablecasting channel or channels any advertisement of or information concerning any lottery, gift enterprise, or similar scheme, offering prizes depending in whole or in part upon lot or change, or any list of the prizes drawn or awarded by means of any such lottery, gift enterprise, or scheme, whether said list contains any part or all of such prizes.

(b) The determination whether a particular program comes within the provisions of paragraph (a) of this section depends on the facts of each case. However, the Commission will in any event consider that a program comes within the provisions of paragraph (a) of this section if value is awarded to any person whose selection is dependent in whole or in part upon lot or change, if as a condition of winning or competing for such prize, such winner or winners are required to furnish any money or thing of value or are required to have in their possession any product sold, manufactured, furnished, or distributed by a sponsor of a program cablecast on the system in question.

(c) The provisions of paragraphs (a) and (b) of this section shall not apply to advertisements or lists of prizes or information concerning a lottery conducted by a State acting under the authority of State law when such information is transmitted:

- (1) by a cable system located in that State
- (2) by a cable system located in an adjacent State which also conducts such a lottery, or
- (3) by a cable system located in another State which is integrated with a cable system described in (1) or (2) herein, if termination of the receipt of such transmission by the cable system in such other State would be technically infeasible.

(d) For the purposes of paragraph (c) lottery means the pooling of proceeds derived from the sale of tickets or chances and allotting those proceeds or parts thereof by change to one or more chance takers or ticket purchasers. It does not include the placing of accepting of bets or wagers on sporting events or contests.

76.215 Reserved.

76.217 RESERVED

76.221 Sponsorship identification; list retention; related requirements.

(a) When a cable TV system operator engaged in origination cablecasting presents matter for which money, service, or other valuable consideration is either directly or indirectly paid or promised to, or charged

or accepted by such cable television system operator, the cable television system operator, at the time of the cablecast, shall announce (i) that each matter is sponsored, paid for, or furnished either in whole or in part, and (ii) by whom or on whose behalf such consideration was supplied; provided, however, that "service or other valuable consideration" shall not include any service or property furnished either without or at a nominal charge for use in, or on connection with, a cablecast unless it is so furnished in consideration for an identification of any person, product, service, trademark, or brandname beyond an identification reasonable related to the use of such service or property on the cablecast.

(1) The purposes of this section the term "sponsored" shall be deemed to have the same meaning as "paid for."

(b) Each cable television system operator engaged in origination cablecasting shall exercise reasonable diligence to obtain from its employees and from other persons with whom the system operator deals directly in connection with any matter for cablecasting, information to enable such system operator to make the announcement required by this section.

(c) In the case of any political origination cablecast matter or any origination cablecast matter involving the discussion of public controversial matters for which any film, record, transcription, talent, script, or other material or service of any kind is furnished, either directly or indirectly to a cable television system operator as an inducement for cablecasting such matter, an announcement shall be made both at the beginning and conclusion of such cablecast on which such material or service is used that such film, record, transcription, talent, script, or other material or service has been furnished to such system operator in connection with the transmission of such cablecast matter; Provided, However, That in the case of any cablecast of 5 minutes or less, only one such announcement need be made either at the beginning or conclusion of the cablecast.

(d) The announcement required by this section, shall, in addition to stating that the origination cablecasting matter was sponsored, paid for or furnished, fully and fairly disclose the true identity of the person(s), or corporation, committee, association, or other unincorporated group, or other entity by whom or on whose behalf such payment is made or promised, or from whom or on whose behalf such services or other valuable consideration is received, or by whom the material or services referred to in paragraph (c) of this section are furnished. Where an agent or other person or entity contracts or otherwise makes arrangements with a cable television system operator on behalf of another, and such fact is known or by the exercise of reasonable diligence, as specified in paragraph (b) of this section, could be known to the systems operator the announcement shall disclose the identity of the person(s) or entity on whose behalf such agent is acting instead of the name of the agent. Where the origination cablecasting material is political matter or matter involving the discussion of a controversial issue of public importance and a corporation, committee, association or other unincorporated group, or other entity is paying for or furnishing of the matter, the system operator shall, in addition to making the announcement required by this section, require that a list of the chief executive officers or members of the executive committee or of the board of directors of the corporation, committee, association or other unincorporated group, or other entity shall be made available for public inspection at the local office of the system. Such lists shall be kept and made available for a period of two years.

(e) In the case of origination cablecast matter advertising commercial products, or services, an announcement stating the sponsor's corporate or trade name, or the name of the product, when it is clear that the mention of the name of the product constitutes a sponsorship identification, shall be deemed sufficient for the purposes of this section and only one such announcement need be made at any time during the course of the cablecast.

(f) The announcement otherwise required by this section is waived with respect to the origination cablecast of "want ad" or classified advertisements sponsored in this paragraph shall not extend to a classified advertisement or want ad sponsorship by any form of business enterprise, corporate or otherwise. Whenever sponsorship announcements are omitted pursuant to this paragraph, the cable television system operator shall observe the following conditions:

- (1) Maintain a list showing the name, address, and (where applicable) the telephone number of each advertiser;
- (2) Make this list available to members of the public who have a legitimate interest in obtaining the information contained in the list.

(g) The announcements required by this section are waived with respect to feature motion picture film produced initially and primarily for theater exhibition.

NOTE: The waiver heretofore granted by the Commission in its Report and Order, adopted November 16, 1960 (FCC 60-1369; 40 F.C.C. 95), continues to apply to programs filmed or recorded on or before June 20, 1963, when 73.654(e), the predecessor television rule, went into effect.

(h) The Commission interpretations in connection with the provisions of the sponsorship identification rules for the broadcasting services are contained in the Commission's Public Notice, entitled "Applicability of Sponsorship Identification Rules," dated May 6, 1963 (40 F.C.C. 141), as modified by public notice dated April 21, 1975 (FCC 75-418). Further interpretations are printed in full in various volumes of the FCC Reports. The interpretations made for the broadcasting services are equally applicable to origination cablecasting.

Subpart H - General Operating Requirements

76.300 Scope of application. (a) The provisions of 76.306, 76.307, and 76.311 are applicable to all cable television systems.

(b) The provisions of 76.301 and 76.305 are not applicable to any cable television system serving fewer than 1000 subscribers.

76.305 Records to be maintained locally by cable system operators for public inspection. (a) Records to be maintained. The operator of every cable television system having 1000 or more subscribers shall maintain for public inspection a file containing a copy of all records which are required to be kept by 76.205(d) (origination cablecasts by candidates for public office); 76.221(f) (sponsorship identification); and 76.79, (EEO records available for public inspection).

(b) Location of records. The public inspection file shall be maintained at the office which the system operator maintains for ordinary collection of subscriber charges, resolution of subscriber complaints, and other business or any accessible place in the community served by the system unit(s) (such as a public registry for documents or an attorney's office). The public inspection file shall be available for public inspection at any time during regular business hours.

(c) The records specified in paragraph (a) of this section shall be retained for the periods specified in 76.205(d), 76.221(f) and 76.311(j).

(d) Reproduction of records. Copies of any material in the public inspection file shall be available for machine reproduction upon request made in person, provided the requesting party shall pay the reasonable cost of reproduction. Requests for machine copies shall be fulfilled at a location specified by the system operator within a reasonable period of time, which in no event shall be longer than 7 days. The system operator is not required to honor requests made by mail but may do so if he chooses.

Subpart I - Forms and Reports

76.306 Deleted.

76.307 System inspection. The operator of a cable television system shall make the system, its public inspection file (if required by 76.305) and its records of subscribers available for inspection upon request by any authorized representative of the Commission at any reasonable hour.

76.400 Operator, mail address, and operational status changes. Within 30 days following a change of Cable Television System Operator, and/or change of the operator's mail address, and/or change in the operational status of a cable television system, the Operator shall inform the Commission in writing of the following, as appropriate:

(a) The legal name of the operator and whether the operator is an individual, private association, partnership or corporation. See 76.5(11). If the operator is a partnership, the legal name of the partner responsible for communications with the Commission shall be supplied;

(b) The assumed name (if any) used for doing business in each community;

(c) The new mail address, including zip code, to which all communications are to be directed;

(d) The nature of the operational status change (e.g., became operational on (year) (month), exceeded 49 subscribers, exceeded 499 subscribers, operation terminated temporarily, operation terminated permanently);

(e) The names and FCC identifiers (e.g., CA0001) of the system communities affected.

NOTE: FCC system community identifiers are routinely assigned upon registration. They have been assigned to all reported system communities based on previous Form 325 data. If a system community in operation prior to March 31, 1972, has not previously been assigned a system community identifier, the operator shall provide the following information in lieu of the identifier: Community Name, Community Type (i.e., incorporated town, unincorporated settlement, etc), County Name, State, Operator Legal Name, Operator Assumed Name for Doing Business in the Community, Operator Mail Address, and Year and Month service was first provided by the physical system.

§76.403 Cable television system reports. The operator of every operational cable television system shall correct and/or furnish information in response to forms, encompassing each **community unit**, mailed to said operator by the Commission. These include:

Community unit data. "Annual report of cable television system," form 325, schedule 1.

Physical system data. "Annual report of cable television system," form 325, schedule 2.

Operator ownership data. "Annual report of cable television system," form 325, schedules 3 and 4.

These forms shall be completed and returned to the Commission within 60 days after the date of mailing by the Commission.

NOTE: The operator of a cable television system having fewer than 1000 subscribers shall only be required to file schedules 1 and 2 of Form 325 for each community unit.

Subpart J - Diversification of Control

**§76.501 Cross-ownership.** (a) No cable television system (including all parties under common control) shall carry the signal of any television broadcast station if such system directly or indirectly owns, operates, controls, or has an interest in:

- (1) A national television network (CBS, ABC, NBC); or
- (2) A television broadcast station whose predicted Grade B contour, computed in accordance with 73.684 of this chapter, overlaps in whole or in part the service area of such system (i.e., the area within which the system is serving subscribers); or
- (3) A television translator station licensed to the community of system.

Note 1--The word "control" as used herein is not limited to majority stock ownership, but includes actual working control in whatever manner exercised.

Note 2--In applying the provisions of this section, ownership and other interests in broadcast licensees and cable television systems will be attributed to their holders and deemed cognizable pursuant to the following criteria:

(a) Except as otherwise provided herein, partnership and direct ownership interests and any voting stock interest amounting to 5% or more of the outstanding voting stock of a corporate broadcasting licensee or cable television system will be cognizable;

(b) No minority voting stock interest will be cognizable if there is a single holder of more than 50% of the outstanding voting stock of the corporate broadcast licensee or cable television system in which the minority interest is held;

(c) Investment companies, as defined in 15 U.S.C. 80a-3, insurance companies and banks holding stock through their trust departments in trust accounts will be considered to have a cognizable interest only if they hold 10% or more of the outstanding voting stock of a corporate broadcast licensee or cable television system, or if any of officers or directors of the broadcast licensee or cable television system are representatives of the investment company, insurance company or bank concerned. Holdings by a bank or insurance company will be aggregated if the bank or insurance company has any right to determine how the stock will be voted. Holdings by investment companies will be aggregated if under common management.

(d) Attribution of ownership interests in a broadcast licensee or cable television system that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that wherever the ownership percentage for any link in the chain exceeds 50%, it shall not be included for purposes of this multiplication. (For example, if A owns 10% of company X, which owns 60% of company Y, which owns 25% of "Licensee", then X's interest in "Licensee", would be 25% (the same as Y's interest since X's interest in Y exceeds 50%), and A's interest in "Licensee" would be 2.5% (0.1 x 0.25). Under the 5% attribution benchmark X's interest in "Licensee" would be cognizable, while A's interest would not be cognizable.)

(e) Voting stock interests held in trust shall be attributed to any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will. If the trustee has a familiar, personal or extra-trust business relationship to the grantor or the beneficiary, the grantor or beneficiary, as appropriate, will be attributed with the stock interests held in trust. An otherwise qualified trust will be ineffective to insulate the grantor or beneficiary from attribution with the trust's assets unless all voting stock interests held by the grantor or beneficiary in the relevant broadcast licensee or cable television system are subject to said trust.

(f) Holders of non-voting stock shall not be attributed an interest in the issuing entity. Holders of debt and instruments such as warrants, convertible debentures, options or other non-voting interests shall not be attributed unless and until conversion is effected.

(g)(1) A limited partnership interest shall be attributed to a limited partner unless that partner is not materially involved, directly or indirectly, in the management or operation of the media-related activities of the partnership and the licensee or system so certifies.

(2) In order for a licensee or system to make the certification set forth in paragraph (g)(1) of this section, it must verify that the partnership agreement or certificate of limited partnership, with respect to the particular limited partner exempt from attribution, establishes that the exempt limited partner has no material involvement, directly or indirectly, in the management or operation of the media activities of the partnership. The criteria which would assure adequate insulation for purposes of this certification are described in the MEMORANDUM OPINION AND ORDER in MM Docket No 83-46, FCC 85-252 (released June 24, 1985). Irrespective of the terms of the certificate of limited partnership or partnership agreement, however, no such certification shall be made if the individual or entity making the certification has actual knowledge of any material involvement of the limited partners in the management or operation of the media-related businesses of the partnership.

(h) Officers and directors of a broadcast licensee or cable television system are considered to have a cognizable interest in the entity with which they are so associated. If any such entity engages in business in addition to its primary business of broadcasting or cable television service, it may request the Commission to waive attribution for any officer or director whose duties and responsibilities are wholly unrelated to its primary business. The officers and directors of a parent company of a broadcast licensee or cable television system, with an attributable interest in any such subsidiary entity, shall be deemed to have a cognizable interest in the subsidiary unless the duties and responsibilities of the officer or director involved are wholly unrelated to the broadcast licensee or cable television system subsidiary, and a statement properly documenting this fact is submitted to the Commission. (This statement may be included on the appropriate Ownership Report). The officers and directors of a sister corporation of a broadcast licensee or cable television system shall not be attributed with ownership of these entities by virtue of such status.

76.501 note 2 (i) - (b)(2)

(i) Discrete ownership interests will be aggregated in determining whether or not an interest is cognizable under this section. An individual or entity will be deemed to have a cognizable investment if:

(1) The sum of the interests held by or through "passive investors" is equal to or exceeds 10 percent; or

(2) The sum of the interests other than those held by or through "passive investors" is equal to or exceeds 5 percent; or

(3) The sum of the interests computed under paragraph (i)(1) of this section plus the sum of the interests computed under paragraph (i)(2) of this section is equal to or exceeds 10 percent.

Note 3 In cases where record and beneficial ownership of voting stock is not identical (e.g., bank nominees holding stock as record owners for the benefit of mutual funds, brokerage houses holding stock in street names for the benefit of customers, investment advisors holding stock in their own names for the benefit of clients and insurance companies holding stock), the party having the right to determine how the stock will be voted will be considered to own it for purpose of these rules.

NOTE 4 -- Paragraph (a)(2) of this section will not be applied so as to require the divestiture of ownership interests proscribed herein solely because of the transfer of such interests to heirs or legatees by will or intestacy, provided that the degree or extent of the proscribed cross-ownership is not increased by such transfer.

(b) Effective date. (1) The provisions of subparagraphs (1) and (3) of paragraph (a) of this section are not effective until August 10, 1975, as to ownership interests proscribed herein if such interests were in existence on or before July 1, 1979 (e.g., if a franchise were in existence on or before July 1, 1970); Provided, however, That the provisions of paragraph (a) of this section are effective on August 10, 1970, as to such interests acquired after July 1, 1970.

(2) The provisions of subparagraph (2) of paragraph (a) of this section are not effective until November 8, 1987, as to ownership interests proscribed herein if such interests were in existence on or before July 1, 1970 (e.g., if a franchise were in existence on or before July 1, 1970), and will be applied to cause divestiture as to ownership interests proscribed herein only where the cable system is, directly or indirectly, owned, operated, controlled by, or has an interest in a non-statellite television broadcast station which places a principal community contour encompassing the entire community and there is no other commercial non-stellite television broadcast station placing a principal community contour encompassing the entire community.

Subpart K - Technical Standards

§76.601 Signal leakage measurements. (a) The operator of each cable television system shall be responsible for insuring that such system is designed installed and operated in a manner that fully complies with the provisions of this subpart. Each system operator shall be prepared to show, on request by an authorized representative of the Commission, that the system does, in fact, comply with the rules.

(b) All cable television systems serving 1,000 or more subscribers and all cable television systems serving less than 1,000 subscribers that use any frequency spectrum other than that allocated to over-the-air broadcasting (as described in §§73.603 and 73.201) shall conduct all tests, measurements, and monitoring of radiation and signal leakage to demonstrate compliance with the radiation limits set forth in §76.605 (a)(11) as follows:

(1) The Cable system operator shall conduct signal leakage measurements in accordance with §76.609(h) at least once each calendar year (at intervals not to exceed 14 months) and shall maintain the resulting test data on file at the operator's local business office for at least five (5) years. It shall be made available for inspection by the Commission on request. This data shall include a description of instruments and procedure and a statement of the qualification of the person performing the tests.

(2) Successful completion of the performance tests does not relieve the system of the obligation to comply with all other pertinent technical standards set forth in this subpart. Additional or repeat tests may be required by the Commission in order to secure compliance with these standards.

76.605 Technical standards. (a) The following requirements apply to the performance of a cable television system as measured at any subscriber terminal with a matched termination, and to each of the Class I cable television channels in the system:

(1) The frequency boundaries of a cable television channel delivered to subscriber terminals shall conform to those set forth in 76.603(a) of this chapter: Provided, however, that on special application including an adequate showing of public interest, other arrangements may be approved.

(2) If no frequency converter is supplied to the subscriber the visual carrier frequency shall be maintained 1.25 MHz  $\pm$ 25 kHz above the lower frequency boundary of the cable television channel. If a frequency converter is supplied to the subscriber by the cable television system, the following requirement shall be applied at the interface between the converter and the subscriber's terminal equipment: when the visual carrier at the output of the converter has been tuned to a frequency 1.25 MHz above the lower frequency boundary of a cable television channel with the converter stabilized at an ambient temperature between 20°C and 25°C, the frequency of the visual carrier shall not vary more than  $\pm$ 250 KHZ for a period of at least three hours, during which period the ambient temperature may vary  $\pm$ 5°C about the initial ambient temperature.

NOTE: A relaxed frequency tolerance will be permitted when both the following conditions are met: (a) the signal is received by means of a television broadcast translator station, and (b) the cable television system carries signals on neither an upper nor a lower channel adjacent in frequency to the channel on which the translator signal is carried. In such cases, the visual carrier frequency shall be maintained 1.25 MHz  $\pm$ (25+T) kHz above the lower frequency boundary of the cable television channel, where T is the frequency tolerance in kHz allowed the television broadcast translator station pursuant to 74.761 of this chapter.

(3) The aural center frequency of the aural carrier shall be 4.5 MHz  $\pm$ 5 kHz above the frequency of the visual carrier.

(4) The visual signal level, across a terminating impedance which correctly matches the internal impedance of the cable system as viewed from the subscriber terminals, shall not be less than the following appropriate values:

Internal impedance: 75 ohms, 300 ohms.

Visual signal level: 1 millivolt, 2 millivolts.

(At other impedance values, the minimum visual signal level shall be  $\sqrt{0.0133Z}$  millivolts, where Z is the appropriate impedance value).

(5) The visual signal level on each channel shall not vary more than 12 decibels within any 24-hour period, and shall be maintained within:

(i) 3 decibels, of the visual signal level of any visual carrier within 6 MHz nominal frequency separation, and

(ii) 12 decibels of the visual signal level on any other channel, and

(iii) A maximum level such that signal degradation due to overload in the subscriber's receiver does not occur.

(6) The peak-to-peak variation in visual signal level caused undesired low frequency disturbance (hum or repetitive transients) generated within the system, or by inadequate low frequency response shall not exceed 5 percent of the visual signal level.

(7) The amplitude characteristic shall be within a range of +2 decibels from 0.75 to 5.0 MHz above the lower boundary frequency of the cable television channel, referenced to the average of the highest and lowest amplitudes within these frequency boundaries.

(8) The ratio of visual signal level to system noise, and of visual signal level to any undesired co-channel television signal operating on proper offset assignment, shall not be less than 36 decibels. This requirement is applicable to:

(i) Each signal which is delivered by a cable television system to subscribers within the predicted Grade B contour for that signal, or

(ii) Each signal which is first picked up within its predicated Grade B contour, or

(iii) Each signal which is first received by the cable television system by direct video feed from a television broadcast station or a low power TV station.

(9) The ratio of visual signal level to the rms amplitude of any coherent disturbances such as intermodulation products or discrete-frequency interfering signals not operating on proper offset assignments shall not be less than 46 decibels.

(10) The terminal isolation provided each subscriber shall be not less than 18 decibels, but in any event, shall be sufficient to prevent reflections caused by open-circuited or short-circuited subscriber terminals from producing visible picture impairments at any other subscriber terminal.

(11) As an exception to the general provision requiring measurements to be made at subscriber terminals, and without regard to the class of cable television channel involved, radiation from a cable television shall be measured in accordance with procedures outlined in §76.609(h), and shall be limited as follows:

Frequencies	Radiation Limit (microvolts/meter)	Distance (feet)
Up to and including 54 MHz -----	15	100
Over 54 up to and including 216 MHz -----	20	10
Over 216 MHz -----	15	100

NOTE - The requirements of §§76.605(a)(1) through 76.605(a)(10) do not apply directly to cable systems. These rule sections or less stringent versions of them may be used as standards by state or local regulatory authorities. No technical parameter in excess of the above rule sections may be required.

(b) Cable television systems distributing signals by using multiple cable techniques or specialized receiving devices, and which, because of their basic design, cannot comply with one or more of the technical standards set forth in paragraph (a) of this section, may be permitted to operate provided that an adequate showing is made which establishes that the public interest is benefited. In such instances the Commission may prescribe special technical requirements to ensure that subscribers to such systems are provided with a good quality of service.

§76.609 Measurements. (a) Measurements made to demonstrate conformity with the performance requirements set forth in §§76.601 and 76.605 shall be made under conditions which reflect system performance during normal operations, including the effect of any microwave relay operated in the Cable Television Relay (CAR) Service intervening between pickup antenna and the cable distribution network. Amplifiers shall be operated at normal gains, either by the insertion of appropriate signals or by manual adjustment. Special signals inserted in a cable television channel for measurement purposes should be operated at levels approximating those used for normal operation. Pilot tones, auxiliary or substitute signals, and nontelevision signals normally carried on the cable television system should be operated at normal levels to the extent possible. Some exemplary, but not mandatory, measurement procedures are set forth in this section.

(b) When it may be necessary to remove the television signal normally carried on a cable television channel in order to facilitate a performance measurement, it will be permissible to disconnect the antenna which serves the channel under measurement and to substitute therefore a matching resistance termination. Other antennas and inputs should remain connected and normal signal levels should be maintained on other channels.

(c) As may be necessary to ensure satisfactory service to a subscriber, the Commission may require additional tests to demonstrate system performance or may specify the use of different test procedures.

(d) The frequency response of a cable television channel may be determined by one of the following methods, as appropriate:

(1) By using the swept frequency or a manually variable signal generator at the sending end and a calibrated attenuator and frequency-selective voltmeter at the subscriber terminal; or

(2) By using a multiburst generator and modulator at the sending end and a demodulator and oscilloscope display at the subscriber terminal.

(e) System noise may be measured using a frequency-selective voltmeter (field strength meter) which has been suitably calibrated to indicate rms noise or average power level and which has a known bandwidth. With the system operating at normal level and with a properly matched resistive termination substituted for the antenna, noise power indications at the subscriber terminal are taken in successive increments of frequency equal to the bandwidth of the frequency-selective voltmeter, summing the power indications to obtain the total noise power present over a 4 MHz band centered within the cable television channel. If it is established that the noise level is constant within this bandwidth, a single measurement may be taken which is corrected by an appropriate factor representing the ratio of 4 MHz to the noise bandwidth of the frequency-selective voltmeter. If an amplifier is inserted between the frequency-selective voltmeter and the subscriber terminal in order to facilitate this measurement, it should have a bandwidth of at least 4 MHz and appropriate corrections must be made to account for its gain and noise figure. Alternatively, measurements made in accordance with the NCTA standard on noise measurement (NCTA Standard 005-0669) may be employed.

(f) The amplitude of discrete frequency interfering signals within a cable television channel may be determined with either a spectrum analyzer or with a frequency-selective voltmeter (field strength meter), which instruments have been calibrated for adequate accuracy. If calibration accuracy is in doubt, measurements may be referenced to a calibrated signal generator, or a calibrated variable attenuator, substituted at the point of measurement. If an amplifier is used between the subscriber terminal and the measuring instrument, appropriate corrections must be made to account for its gains.

(g) The terminal isolation between any two terminals in the system may be measured by applying a signal of known amplitude to one and measuring the amplitude of that signal at the other terminal. The frequency of the signal should be close to the midfrequency of the channel being tested. Annual measurements of terminal isolation are not required when either (1) the manufacturer's specifications for coupler directivity or (2) laboratory measurements on a representative sample of the couplers, plus an allowance for the attenuation of drop cables, indicate that the requirements of 76.605(a)(11) are met.

(h) Measurements to determine the field strength of radio frequency energy radiated by cable television systems shall be made in accordance with standard engineering procedures. Measurements made on frequencies above 25 MHz shall include the following:

(1) A field strength meter of adequate accuracy using a horizontal dipole antenna shall be employed.

(2) Field strength shall be expressed in terms of the rms value of synchronizing peak for each cable television channel for which radiation can be measured.

(3) The resonant half wave dipole antenna shall be placed 3 meters from and positioned directly below the system components and at 3 meters above ground. Where such placement results in a separation of less than 3 meters between the center of the dipole antenna and the system components, or less than 3 meters between the dipole and ground level, the dipole shall be repositioned to provide a separation of 3 meters from the system components at a height of 3 meters or more above ground.

(4) The horizontal dipole antenna shall be rotated about a vertical axis and the maximum meter reading shall be used.

(5) Measurements shall be made where other conductors are 10 or more feet away from the measuring antenna.

(1) Annual measurements of frequency stability of set top converters, when such converters are supplied by the cable television operator, are not required when either of the following indicates that the requirements of 76.605 (a) (2) are met: (1) manufacturer's specifications based on a representative sample of the converters, or (2) laboratory tests performed by or for the cable television system operator on a representative sample of the converters. Proof of performance tests for frequency stability will not be required for converters ordered from the manufacturer prior to September 6, 1977.

**§76.610 Operation in the frequency bands 108-137 and 225-400MHz-scope of application.** The provisions of §§76.611 (effective July 1, 1990), 76.612, 76.613, 76.614 and 76.615 are applicable to all cable television systems transmitting carriers or other signal components carried at an average power level equal to or greater than 10<sup>4</sup> watts across a 25 KHz bandwidth in any 160 microsecond period, at any point in the cable distribution system in the frequency bands 108-137 and 225-400 MHz for any purpose. For grandfathered systems, refer to §§76.618 and 76.619.

Note 1 - See the provisions of §76.616 for cable operation near certain aeronautical and marine emergency radio frequencies.

Note 2 - Until January 1, 1990, the band 136-137 MHz is allocated as an alternative allocation to the space operation, meteorological-satellite service and the space research service on a primary basis. After January 1, 1990, the space service will become secondary to aeronautical mobile service radio. Until January 1, 1990, the band 136-137 MHz is excluded from the rule sections regarding protection of aeronautical frequencies.

The below §76.611 becomes effective July 1, 1990.

**76.611 Cable television basic signal leakage performance criteria.**

(a) No cable television system shall commence or provide service in the frequency bands 108-137 and 225-400 MHz unless such system is in compliance with one of the following cable television basic signal leakage performance criteria:

(1) Prior to carriage of signals in the aeronautical radio bands and at least once each calendar year, with no more than 12 months between successive tests thereafter, based on a sampling of at least 75% of the cable stand, and including any portions of the cable system which are known to have or can reasonably be expected to have less leakage integrity than the average of the system, the cable operator demonstrates compliance with a cumulative signal leakage index by showing either that:

(i)

10 log  $I_{3000}$  is equal to or less than -7 or

(ii) 10 log  $I_{\infty}$  is equal to or less than 64.

using one of the following formula:

$$I_{3000} = \frac{1}{\phi} \sum_{i=1}^n \frac{E_i^2}{R_i^2}$$

$$I_{\infty} = \frac{1}{\phi} \sum_{i=1}^n E_i^2$$

where:

$$R_i^2 = r_i^2 + (3000)^2$$

$r_i$  is the distance (in meters) between the leakage source and the center of the cable television system;

$\phi$  is the fraction of the system cable length actually examined for leakage sources and is equal to the strand miles of plant tested divided by the total strand miles in the plant;

$R_i$  is the slant height distance (in meters) from leakage source  $i$  to a point 3000 meters above the center of the cable television system;

$E_i$  is the electric field strength in microvolts per meter (uV/m) measured pursuant to § 76.609(h) 3 meters from the leak  $i$ ; and

$n$  is the number of leaks found of field strength equal to or greater than 50 uV/m pursuant to Section 76.609(h).

The sum is carried over all leaks  $i$  detected in the cable examined; or

## 76.611(a)(2) - (f)

(2) prior to carriage of signals in the aeronautical radio bands and at least once each calendar year, with no more than 12 months between successive tests thereafter, the cable operator demonstrates by measurement in the airspace that at no point does the field strength generated by the cable system exceed 10 microvolts per meter ( $\mu\text{V}/\text{m}$ ) RMS at an altitude of 450 meters above the average terrain of the cable system. The measurement system (including the receiving antenna) shall be calibrated against a known field of 10  $\mu\text{V}/\text{m}$  RMS produced by a well characterized antenna consisting of orthogonal resonant dipoles, both parallel to and one quarter wavelength above ground plane of a diameter of two meters or more at ground level. The dipoles shall have centers collocated and be excited 90 degrees apart. The half-power bandwidth of the detector shall be 25 kHz. If an aeronautical receiver is used for this purpose it shall meet the standards of the Radio Technical Commission for Aeronautics (RTCA) for aeronautical communications receivers. The aircraft antenna shall be horizontally polarized. Calibration shall be made in the community unit or, if more than one, in any of the community units of the physical system within a reasonable time period to performing the measurements. If data is recorded digitally the 90th percentile level of points recorded over the cable system shall not exceed 10  $\mu\text{V}/\text{m}$  RMS; if analog recording is used the peak values of the curves, when smoothed according to good engineering practices, shall not exceed 10  $\mu\text{V}/\text{m}$  RMS.

(b) In paragraphs (a)(1) and (a)(2) of this section the unmodulated test signal used on the cable plant shall: (1) Be within the VHF aeronautical band 108-137 MHz or any other frequency in which the results can be correlate to the VHF aeronautical band and (2) have an average power level equal to the average power level of the strongest cable television carrier on the system.

(c) In paragraph (a)(1) and (2) of this section, if a modulated test signal is used, the signal and detector technique must, when considered together, yield the same result as though an unmodulated test signal were used in conjunction with a detection technique which would yield the RMS value of said unmodulated carrier.

(d) If a sampling of at least 75% of the cable strand (and including any portions of the cable system which are known to have or can reasonably be expected to have less leakage integrity than the average of the system) as described in paragraph (a)(1) cannot be obtained by the cable operator or is otherwise not reasonably feasible, the cable operator shall perform the airspace measurements described in paragraph (a)(2).

(e) Prior to providing service to any subscriber on a new section of cable plant, the operator shall show compliance with either: (1) The basic signal leakage criteria in accordance with paragraph (a)(1) or (a)(2) of this section for the entire plant in operation or (2) a showing shall be made indicating that no individual leak in the new section of the plant exceeds 20  $\mu\text{V}/\text{m}$  at 3 meters in accordance with 76.609 of the Rules

(f) Notwithstanding paragraph (a) of this section, a cable operator shall be permitted to operate on any frequency which is offset pursuant to 76.612 in the frequency band 108-137 MHz for the purpose of demonstrating compliance with the cable television basic signal leakage performance criteria.

§76.612 Cable television frequency separation standards. All cable television systems which operate in the frequency bands 108-137 and 225-400 MHz shall comply with the following frequency separation standards:

(a) In the aeronautical radiocommunication bands 118-137, 225-328.6 and 335.4-400 MHz, the frequency of all carrier signals or signal components carried at an average power level equal to or greater than  $10^{-4}$  watts in a 25 kHz bandwidth in any 160 microsecond period must operate at frequencies offset from certain frequencies which may be used by Commission licensees or by the United States Government or its Agencies. The aeronautical frequencies from which offsets must be maintained are those frequencies which are within one of the aeronautical bands defined in this subparagraph and when expressed in MHz and divided by 0.025 yield an integer. The offset must meet one of the following two criteria:

- (1) All such cable carriers or signal components shall be offset by 12.5kHz with a frequency tolerance of plus or minus 5 kHz or
- (2) The fundamental frequency from which the visual carrier frequencies are derived by multiplication by integer number which shall be 6.0003 MHz with a tolerance of plus or minus 1 Hz (Harmonically Related Carrier (HRC) comb generators only).

(b) In the aeronautical radionavigation bands 108-118 and 328.6-335.4 MHz, the frequency of all carrier signals or signal components carried at an average power level equal to or greater than  $10^{-4}$  watts in a 25 kHz bandwidth in any 160 microsecond period shall be offset by 25kHz with a tolerance of plus or minus 5 kHz. The aeronautical radionavigation frequencies from which offsets must be maintained are defined as follows:

- (1) Within the aeronautical band 108-118 MHz when expressed in MHz and divided by 0.025 yield an even integer.
- (2) Within the band 328.6-335.4 MHz, the radionavigation glide path channels are listed in Section 87.501 of the Rules.

Note --- The HRC system, as described above, will meet this requirement in the 328.6-335.4 MHz navigation glide path band. Those Incrementally Related Carriers IRC system, with comb generator reference frequencies set at certain odd multiples equal to or greater than 3 times the 0.0125MHz aeronautical communications band offset, e.g. (6n plus 0.0375) MHz, may also meet the 25 kHz offset requirement in the navigation glide path band.

76.613 Interference from a cable television system. (a) Harmful interference is any emission, radiation or induction which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radiocommunication service operating in accordance with this chapter.

(b) The operator of a cable television system that causes harmful interference shall promptly take appropriate measures to eliminate the harmful interference.

(c) If harmful interference to radio communications involving the safety of life and protection of property cannot be promptly eliminated by the application of suitable techniques, operation of the offending cable television system or appropriate elements thereof shall immediately be suspended upon notification by the Engineer in Charge (EIC) of the Commission's local field office, and shall not be resumed until the interference has been eliminated to the satisfaction of the EIC. When authorized by the EIC, short test operations may be made during the period of suspended operating to check the efficacy of remedial measures.

76.614 Cable television system regular monitoring. Cable television operators transmitting carriers in the frequency bands 108-137 and 225-400 MHz shall provide for a program of regular monitoring for signal leakage by substantially covering the plant every three months. The incorporation of this monitoring program into the daily activities of existing service personnel in the discharge of their normal duties will generally cover all portions of the system and will therefore meet this requirement. Monitoring equipment and procedures utilized by a cable operator shall be adequate to detect a leakage source which produces a field strength in these bands of 20uV/m or greater at a distance of 3 meters. During regular monitoring, any leakage source which produces a field strength of 20 uV/m or greater at a distance of 3 meters in the aeronautical radio frequency bands shall be noted and such leakage sources shall be reported within a reasonable period of time. The operator shall maintain a log showing the date and location of each leakage source identified, the date on which the leakage was repaired and the probable cause of the leakage. The log shall be kept on file for a period of (2) two years and shall be made available to authorized representatives of the Commission upon request.

76.615 Notification requirements. All cable television operators shall comply with each of the following notification requirements:

(a) The operator of the cable system shall notify the Commission annually of all signals carried in the aeronautical radio frequency bands, noting the type of information carried by the signal (television picture, aural, pilot carrier, or system control, etc.) The timely filing of FCC Form 325, Schedule 2, will meet this requirement.

(b) The operator of a cable system shall notify the Commission before transmitting any carrier or other signal component with an average power level across a 25 kHz bandwidth in any 160 microsecond time period equal to or greater than  $10^{-4}$  watts at any point in the cable distribution system on any new frequency or frequencies in the aeronautical radio frequency bands. Such notification shall include:

(1) Legal name and local address of the cable television operator;  
 (2) The names and FCC identifiers (e.g. CA0001) of the system communities affected;

(3) The names and telephone numbers of local system officials who are responsible for compliance with §§76.610, 76.611 (effective July 1, 1990), and 76.616 of the Rules;

(4) Carrier and subcarrier frequencies and tolerance types of modulation and the maximum average power levels of all carriers and subcarriers occurring at any location in the cable distribution system.

(5) The geographical coordinates of a point near the center of the cable system, together with the distance (in kilometers) from the designated point to the most remote point of the cable plant, existing or planned, which defines a circle enclosing the entire cable plant;

(6) A description of the routine monitoring procedure to be used; and

(7) For cable operation subject to §76.611 (effective July 1, 1990), the cumulative signal leakage index derived under §76.611(a)(1), effective July 1, 1990) or the results of airspace measurements derived under §76.611(a)(2) (effective July 1, 1990), including a description of the method by which compliance with basic signal leakage criteria is achieved and the method of calibrating the measurement equipment. This information shall be provided to the Commission prior to July 1, 1990 and each calendar year thereafter.

§76.616 Operation near certain aeronautical and marine emergency radio frequencies. The transmission of carriers or other signal components capable of delivering peak power levels to or greater than  $10^{-5}$  watts at any point in a cable television system is prohibited within 100kHz of the frequency 121.5 MHz and is prohibited within 50 kHz of two frequencies 156.8 MHz and 243.0 MHz.

§76.617 Responsibility for receiver-generated interference. Interference generated by a radio or television receiver shall be the responsibility of the receiver operator in accordance with the provisions of Part 15, Subpart C, of this chapter: Provided, however, That the operator of a cable television system to which the receiver is connected shall be responsible for the suppression of receiver-generated interference that is distributed by the system when the interfering signals are introduced into the system at the receiver.

§76.618 Grandfathering. Cable television systems are permitted to use aeronautical frequencies which were requested or granted for use by November 30, 1984, under Section 76.619 of the Rules until 7/1/90.

§76.619 Grandfathered Operation in the frequency bands 108-136 and 225-400 MHz. All cable television systems operating in a grandfathered status under §76.618 of the Rules and transmitting carriers or other signal components capable of delivering peak power equal to or greater than  $10^{-5}$  watts at any point in the frequency bands 108-136 and 225-400 MHz for any purpose are subject to the following requirements:

(a) The operator of the cable system shall notify the Commission annually of all signals carried in these bands, noting the type of information carried by the signal (television, aural, or pilot carrier and system control, etc.). The timely filing of FCC Form 325 Schedule 2, will meet the requirements.

(b) The operator of the cable system shall notify the Commission of the proposed extension of the system radius in these bands. notification shall include carrier and subcarrier frequencies, types of modulation, the previously notified geographical coordinates, the new system radius and the maximum peak power occurring at any location in the cable distribution system. No system shall extend its radius in these bands without prior Commission authorization.

(c) The operator of the cable system shall maintain at its local office a current listing of all signals carried in these bands, noting carrier and subcarrier frequencies, types of modulation and maximum peak power which occurs at any location within the cable distribution system.

(d) The operator of the system shall provide for regular monitoring of the cable system for signal leakage covering all portions of the cable system at least once each calendar year. Monitoring equipment and procedures shall be adequate to detect leakage sources which produce field strengths in these bands of 20 microvolts per meter at a distance of 3 meters. The operator shall maintain a log showing the date and location of each leakage source identified, the date on which the leakage was eliminated and the probable cause of the leakage. The log shall be kept on file for a period of two (2) years and shall be made available to authorized representatives of the Commission on request.

(e) All carrier signals or signal components capable of delivering peak power equal to or greater than  $10^{-5}$  watts must be operated at frequencies offset from aeronautical radio services operated by Commission licenses or by the United States Government or its agencies within 111km (60 nautical miles) of any portion of the cable system as given in paragraph (f) of this section. (the limit of 111 km may be increased by the Commission in cases of "extended service volumes" as defined by the Federal Aviation Administration or other federal government agency for low altitude radio navigation or services). If an operator of a cable system is notified by the Commission that a change in operation of an aeronautical radio service will place the cable system in conflict with any of the offset criteria, the cable system operator is responsible for eliminating such conflict within 30 days of notification.

(f) A minimum frequency offset between the nominal carrier frequency of an aeronautical radio service qualifying under paragraph (d) of this Section and the nominal frequency of any cable system carrier or signal component capable of delivering peak power equal to or greater than  $10^{-5}$  watts shall be maintained or exceeded at all times. The minimum frequency offsets are as follows:

Frequencies	Minimum frequency offsets
108-118 MHz.....	(50 plus T) kHz
328.6-335.4 MHz.....	
108-138 MHz.....	
225-328.6MHz.....	(100 plus T) kHz
335.4-400MHz.....	

In this table, T is the absolute value of the frequency tolerance of the cable television signal. The actual frequency tolerance will depend on the equipment and operating procedures of the cable system, but in no case shall the frequency tolerance T exceed plus or minus 25kHz in the bands 108-136 and 225-400 MHz.



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PART 78--CABLE TELEVISION RELAY SERVICE

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Subpart A -- General

78.1 Purpose. The rules and regulations set forth in this part provide for the licensing and operation of fixed or mobile cable television relay stations used for the transmission of television and related audio signals of standard and FM broadcast stations, signals of instructional television fixed stations, and cablecasting from the point of reception to a terminal point from which the signals are distributed to the public by cable. In addition CARS stations may be used to transmit television and related audio signals to TV translator and low power TV stations.

78.3 Other pertinent rules. Other pertinent provisions of the Commission's rules and regulations relating to the Cable Television Relay Service are included in the following parts of this chapter:

Part 0 - Commission Organization.

Part 1 - Practice and Procedure.

Part 2 - Frequency allocations and radio treaty matters; general rules and regulations.

Part 17- Construction marking and lighting of antenna structures.

Part 74- Experimental, Auxiliary, and Special Broadcast, and other Program Distribution Services.

Part 76- Cable television service.

78.5 Definitions. For purposes of this part, the following definitions are applicable. For other definitions, see Part 76 (Cable Television Service) of this chapter.

(a) Cable television relay service (CARS) station. A fixed or mobile station used for the transmission of television and related audio signals, signals of standard and FM broadcast stations, signals of instructional television fixed stations, and cablecasting from the point of reception to a terminal point from the point of reception to a terminal point from which the signals are distributed to the public.

NOTE: Except where the rules contained in this part make separate provision, the term "cable television relay" or "CAR" includes the term, "Local distribution service" or "LDS," the term "cable television relay studio to headend link", or "SHL," and the term "cable television relay pickup," as defined in paragraphs (b), (c), and (d) of this section.

(b) Local distribution service (LDS) station. A fixed CARS station used within a cable television system or systems for the transmission of television signals and related audio signals, signals of standard and FM broadcast stations, signals of instructional television fixed stations, and cablecasting from a local transmission point to one or more receiving points, from which the communications are distributed to the public. LDS stations may also engage in repeater operation.

(c) Cable television relay studio to headend link (SHL) station. A fixed CAR station used for the transmission of television program material and related communications from a cable television studio to the headend of a cable television system.

(d) Cable television relay pickup station. A land mobile CAR station used for the transmission of television signals and related communications from the scenes of events occurring at points removed from cable television studios to cable television studios or headends.

(e) Remote control operation. Operation of a station by a qualified operator on duty at a control position from which the transmitter is not visible but which control position is equipped with suitable control and telemetering circuits so that the essential functions that could be performed from the control point.

(f) Attended operation. Operation of a station by a qualified operator on duty at the place where the transmitting apparatus is located with the transmitter in plain view of the operator.

(g) Unattended operation. Operation of a station by automatic means whereby the transmitter is turned on and off and performs its functions without attention by a qualified operator.

(h) Authorized bandwidth. The maximum bandwidth authorized to be used by a station as specified in the station license. (See 2.202 and 78.104.)

### Subpart B -- Applications and Licenses

§78.11 Permissible service. (a) CARS stations are authorized to relay TV broadcast and low power TV and related audio signals, the signals of AM and FM stations, signals of instructional TV fixed stations and cablecasting intended for use by one or more cable television systems.

LDS stations are authorized to relay television broadcast and related audio signals, the signals of AM and FM broadcast stations signals of instructional television fixed stations, cablecasting, and such other communications as may be authorized by the Commission. Relaying includes retransmission of signals by intermediate relay stations in the system. CARS licensees may interconnect their facilities with those of other CARS, common carrier, or television auxiliary licensees, and may also retransmit the signals of such CARS, common carrier, or television auxiliary stations, provided that the program material retransmitted meets the requirements of this paragraph.

(b) The transmitter of a cable television relay station using FM transmission may be multiplexed to provide additional communication channels for the transmission of standard and FM broadcast station programs and operational communications directly related to the technical operation of the relay system (including voice communications, telemetry signals, altering, signals, fault reporting signals, and control signals). A cable television relay station will be authorized only where the principal use is the transmission of television broadcast program material or cablecasting; PROVIDED, HOWEVER, That this requirement shall not apply to LDS stations.

(c) CARS station licensees may be issued to cable television owners or operators and to cooperative enterprises owned by cable television owners or operators. Television translator licensees may be members of such cooperative enterprises.

(d) CARS systems shall supply program material to cable television systems and translator stations only in the following circumstances:

(1) Where the licensee of the CAR station or system is owner or operator of the cable television systems supplied with program material; or

(2) Where the licensee of the CARS station or system supplies program material to cable television systems or television translator stations either without charge or on a non-profit, cost-sharing basis pursuant to a written contract between the parties involved which provides that the CARS licensee shall have exclusive control over the operation of the CARS stations licensed to him and that contributions to capital and operating expenses are accepted only on a costsharing, non-profit basis, prorated on an equitable basis among all cable television systems being supplied with program material in whole or in part. Records showing the cost of the service and its nonprofit, cost-sharing nature shall be maintained by the CARS licensee and held available for inspection by the Commission.

(e) The license of a CAR pickup station authorizes the transmission of program material, and related communications necessary to the accomplishment of such transmission, from the scenes of events occurring in places other than a cable television studio, to the studio or headend of its associated cable television system, or to such other cable television systems as are carrying the same program material. CAR pickup stations may be used to provide temporary CAR studio-to-headend links or CAR circuits consistent with this part 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 20 feet and will be in existence for a period of more than 2 consecutive days: And Provided, further, That if the transmitting equipment is to be operated for more than 1 day outside of the area to which the CAR station has been licensed, the Commission, the engineer in charge of the district in which the station is licensed, and the engineer in charge of the district in which the equipment will be temporarily operated shall be notified at least 1 day prior to such operation. If the decision to continue operation for more than 1 day is not made until the operation has begun, notice shall be given to the Commission and the relevant engineers in charge within 1 day after such decision. In all instances, the Commission and the relevant engineers in charge shall be notified when the transmitting equipment has been returned to its licensed area.

(f) Deleted and reserved.

(g) The provisions of paragraph (d) of this section and 78.13 shall not apply to a licensee who has been licensed in the CAR service pursuant to 21.709 of this chapter, except that paragraph (d) of this section shall apply with respect to facilities added or cable television systems first served after February 1, 1966.

(h) Deleted and reserved.

**878.13 Eligibility for license.** A license for a cable television relay station will be issued to the owner for a cable television system or to a cooperative enterprise wholly owned by a cable television owner or operator upon a showing that applicant is qualified under the Communications Act of 1934, that frequencies are available for the proposed operation, and that the public interest, convenience, and necessity will be served by a grant thereof.

Note: The provisions of this section shall apply to any facility holding a license or other authorization on or before April 28, 1985.

**78.15 Contents of applications.** (a) Applications for authorization in Cable Television Relay Service shall be submitted on FCC Form 327, and shall contain the information requested therein.

(b) An application for a CARS studio to headend link or LDS station license shall contain a statement that the application has investigated the possibility of using cable rather than microwave and the reasons why it was decided to use microwave rather than cable.

**NOTE** Each applicant filing pursuant to 78.15 is responsible for the continuing accuracy and completeness of all information in such applications. The provisions of 1.65 are wholly applicable to applications pursuant to 78.15, as well as to amendments filed pursuant to 78.17, and objections filed pursuant to 78.22 except that where the specific provisions of 78.15, 78.17, or 78.22 conflict with the provisions of 1.65 the specific provisions are controlling, e.g., where requirements for service on specified parties of certain information may vary.

(c) CARS applicants must follow the procedures prescribed in Subpart I of Part 1 of this chapter (Sections 1.1301 through 1.1319) regarding the filing of environmental impact narrative statements, unless Commission action authorizing construction of a CARS station would be a minor action within the meaning of Subpart I of Part 1 of this chapter.

§78.16 - 78.17

§78.16 Who may sign applications. (a) Applications, amendments thereto, and related statements of fact required by the Commission shall be personally signed by the applicant, if the applicant is an individual; by one of the partners, if the applicant is a partnership; by an officer, if the applicant is a corporation; or by a member who is an officer, if the applicant is an unincorporated association. Applications, amendments, and related statement of fact on behalf of government entities shall be signed by such duly elected or appointed officials as may be competent to do so under the laws of the applicable jurisdiction.

(b) Applications, amendments thereto, and related statements of fact required by the Commission may be signed by the applicant's attorney in case of the applicant's physical disability or of his absence from the United States. The attorney shall in that event separately set forth the reasons why the application is not signed by the applicant. In addition, if any matter is stated on the basis of the attorney's belief only (rather than his knowledge), he shall separately set forth his reasons for believing that such statements are true.

(c) Only the original of applications, amendments, or related statements of fact need be signed; copies may be conformed.

(d) Applications, amendments, and related statements of fact need not be submitted under oath. Willful false statements made therein, however, are punishable by fine and imprisonment, United States Code, title 18, section 1001, and by appropriate administrative sanctions, including revocation of station license pursuant to section 312(a) of the Communications Act of 1934, as amended.

§78.17 Amendment of applications. Any application may be amended as a matter of right prior to the adoption date of any final action taken by the Commission with respect to the application, merely by filing the appropriate number of copies of the amendment in question duly executed in accordance with §78.16. If a petition to deny has been filed, the amendment shall be served on the petitioner.

78.18 Frequency assignments. (a) The cable television relay service is assigned the band of frequencies from 12.70 to 13.20 GHz. This band is shared with the fixed-satellite service (earth-to-space) from 12.70 to 12.75 GHz, and the television auxiliary broadcast service from 12.70 to 13.20 GHz. The following channels may be assigned to CARS stations for the propagation of radio waves with the indicated polarization:

(1) For CARS stations using FM transmission:

<u>GROUP A CHANNELS</u>		<u>GROUP B CHANNELS</u>	
<u>Designation</u>	<u>Channel boundaries (GHz)</u>	<u>Designation</u>	<u>Channel boundaries (GHz)</u>
AØ1--1-----	12.700-12.725	BØ1--1-----	12.7125-12.7375
AØ2--1-----	12.725-12.750	BØ2--1-----	12.7375-12.7625
AØ3--1-----	12.750-12.775	BØ3--1-----	12.7625-12.7875
AØ4--1-----	12.775-12.800	BØ4--1-----	12.7875-12.8125
AØ5--1-----	12.800-12.825	BØ5--1-----	12.8125-12.8375
AØ6--1-----	12.825-12.850	BØ6--1-----	12.8375-12.8625
AØ7--1-----	12.850-12.875	BØ7--1-----	12.8625-12.8875
AØ8--1-----	12.875-12.900	BØ8--1-----	12.8875-12.9125
AØ9--1-----	12.900-12.925	BØ9--1-----	12.9125-12.9375
A1Ø--1-----	12.925-12.950	B1Ø--1-----	12.9375-12.9625
A11--1-----	12.950-12.975	B11--1-----	12.9625-13.9975
A12--1-----	12.975-13.000	B12--1-----	13.9875-13.0125
A13--1-----	13.000-13.025	B13--1-----	13.0125-13.0375
A14--1-----	13.025-13.050	B14--1-----	13.0375-13.0625
A15--1-----	13.050-13.075	B15--1-----	13.0625-13.0875
A16--1-----	13.075-13.100	B16--1-----	13.0875-13.1125
A17--1-----	13.100-13.125	B17--1-----	13.1125-13.1375
A18--1-----	13.125-13.150	B18--1-----	2--13.1375-13.1625
A19--1-----	2 13.150-13.175	B19--1-----	2--13.1625-13.1875
A2Ø--1-----	2 13.170-13.200		

<sup>1</sup> Appropriate polarization designation:

H=Horizontally polarized propagated radio wave.

V=Vertically polarized propagated radio wave.

R=Right-handed (clockwise) elliptically polarized propagated radio wave.

L= Left-handed (counter-clockwise) elliptically polarized propagated radio wave.

<sup>2</sup> See paragraph m of this section.

NOTE: Polarization designations shall be in accordance with IEEE standard 100-1972 as amended.

(2) CARS stations using vestigial sideband AM transmission and FM transmission requiring a necessary bandwidth of no more than 6 MHz.

<u>GROUP C CHANNELS</u>		<u>GROUP D CHANNELS</u>	
<u>Designation</u>	<u>Channel boundaries (GHz)</u>	<u>Designation</u>	<u>Channel boundaries (GHz)</u>
C01--1-----	12.7005-12.7065	D01--1-----	12.7597-12.7657
C02--1-----	12.7065-12.7125	D02--1-----	12.7657-12.7717
C03--1-----	12.7125-12.7185	D03--1-----	12.7717-12.7777
C04--1-----	12.7185-12.7225	D04--1-----	12.7777-12.7817
C05--1-----	12.7225-12.7285	D05--1-----	12.7817-12.7887
C06--1-----	12.7285-12.7345	D06--1-----	12.7887-12.7937
C07--1-----	12.7345-12.7405	D07--1-----	12.7937-12.7997
C08--1-----	12.7405-12.7465	D08--1-----	12.7997-12.8057
C09--1-----	12.7465-12.7525	D09--1-----	12.8057-12.8117
C10--1-----	12.7525-12.7545	D10--1-----	12.8117-12.8137
C11--1-----	12.7545-12.7605	D11--1-----	12.8137-12.8197
C12--1-----	12.7605-12.7665	D12--1-----	12.8197-12.8257
C13--1-----	12.7665-12.7725	D13--1-----	12.8257-12.8317
C14--1-----	12.7725-12.7785	D14--1-----	12.8317-12.8377
C15--1-----	12.7785-12.7845	D15--1-----	12.8377-12.8437
C16--1-----	12.7845-12.7905	D16--1-----	12.8437-12.8497
C17--1-----	12.7905-12.7965	D17--1-----	12.8497-12.8557
C18--1-----	12.7965-12.8025	D18--1-----	12.8557-12.8617
C19--1-----	12.8025-12.8085	D19--1-----	12.8617-12.8677
C20--1-----	12.8085-12.8145	D20--1-----	12.8677-12.8737
C21--1-----	12.8145-12.8205	D21--1-----	12.8737-12.8797
C22--1-----	12.8205-12.8265	D22--1-----	12.8797-12.8857
C23--1-----	12.8265-12.8325	D23--1-----	12.8857-12.8917
C24--1-----	12.8325-12.8385	D24--1-----	12.8917-12.8977
C25--1-----	12.8385-12.8445	D25--1-----	12.8977-12.9037
C26--1-----	12.8445-12.8505	D26--1-----	12.9037-12.9097
C27--1-----	12.8505-12.8565	D27--1-----	12.9097-12.9157
C28--1-----	12.8565-12.8625	D28--1-----	12.9157-12.9217
C29--1-----	12.8625-12.8685	D29--1-----	12.9217-12.9277
C30--1-----	12.8685-12.8745	D30--1-----	12.9277-12.9337
C31--1-----	12.8745-12.8805	D31--1-----	12.9337-12.9397
C32--1-----	12.8805-12.8865	D32--1-----	12.9397-12.9457
C33--1-----	12.8865-12.8925	D33--1-----	12.9457-12.9517
C34--1-----	12.8925-12.8985	D34--1-----	12.9517-12.9577
C34--1-----	12.8985-12.9045	D35--1-----	12.9577-12.9637
C36--1-----	12.9045-12.9105	D36--1-----	12.9637-12.9697
C37--1-----	12.9105-12.9165	D37--1-----	12.9697-12.9757
C38--1-----	12.9165-12.9225	D38--1-----	12.9757-12.9817
C39--1-----	12.9225-12.9285	D39--1-----	12.9817-12.9877
C40--1-----	12.9285-12.9345	D40--1-----	12.9877-12.9937
C41--1-----	12.9345-12.9405	D41--1-----	12.9937-12.9997
C42--1-----	12.9405-12.9465	D42--1-----	12.9997-13.0057

GROUP E CHANNELS

<u>Designation</u>	<u>Channel Boundaries (GHz)</u>
E01--1 . . . . .	12.9525-12.9585
E02--1 . . . . .	12.9585-12.9645
E03--1 . . . . .	12.9645-12.9705
E04--1 . . . . . 2	12.9705-12.9745
E05--1 . . . . .	12.9745-12.9805
E06--1 . . . . .	12.9805-12.9865
E07--1 . . . . .	12.9865-12.9925
E08--1 . . . . .	12.9925-12.9985
E09--1 . . . . .	12.9985-13.0045
E10--1 . . . . . 2	13.0045-13.0065
E11--1 . . . . .	13.0065-13.0125
E12--1 . . . . .	13.0125-13.0185
E13--1 . . . . .	13.0185-13.0245
E14--1 . . . . .	12.0245-13.0305
E15--1 . . . . .	13.0305-13.0365
E16--1 . . . . .	13.0365-13.0425
E17--1 . . . . .	13.0425-13.0485
E18--1 . . . . .	13.0485-13.0545
E19--1 . . . . .	13.0545-13.0605
E20--1 . . . . .	13.0605-13.0665
E21--1 . . . . .	13.0665-13.0725
E22--1 . . . . .	13.0725-13.0785
E23--1 . . . . .	13.0785-13.0845
E24--1 . . . . .	13.0845-13.0905
E25--1 . . . . .	13.0905-13.0965
E26--1 . . . . .	13.0965-13.1025
E27--1 . . . . .	13.1025-13.1085
E28--1 . . . . .	13.1085-13.1145
E29--1 . . . . .	13.1145-13.1205
E30--1 . . . . .	13.1205-13.1265
E31--1 . . . . .	13.1265-13.1325
E32--1 . . . . .	13.1325-13.1385
E33--1 . . . . .	13.1385-13.1445
E34--1 . . . . . 3	13.1445-13.1505
E35--1 . . . . . 3	13.1505-13.1565
E36--1 . . . . . 3	13.1565-13.1625
E37--1 . . . . . 3	13.1625-13.1685
E38--1 . . . . . 3	13.1685-13.1745
E39--1 . . . . . 3	13.1745-13.1805
E40--1 . . . . . 3	13.1805-13.1865
E41--1 . . . . . 3	13.1865-13.1925
E42--1 . . . . . 3	13.1925-13.1985

GROUP F CHANNELS

<u>Designation</u>	<u>Channel Boundaries (GHz)</u>
F01--1 . . . . .	13.0125-13.0185
F02--1 . . . . .	13.0185-13.0245
F03--1 . . . . .	12.0245-13.0305
F04--1 . . . . . 2	13.0305-13.0345
F05--1 . . . . .	13.0345-13.0405
F06--1 . . . . .	13.0405-13.0465
F07--1 . . . . .	13.0465-13.0525
F08--1 . . . . .	13.0525-13.0585
F09--1 . . . . .	13.0585-13.0645
F10--1 . . . . . 2	13.0665-13.0725
F11--1 2 . . . . .	13.0645-13.0665
F12--1 . . . . .	13.0725-13.0785
F13--1 . . . . .	13.0785-13.0845
F14--1 . . . . .	13.0845-13.0905
F15--1 . . . . .	13.0905-13.0965
F16--1 . . . . .	13.0965-13.1025
F17--1 . . . . .	13.1025-13.1085
F18--1 . . . . .	13.1085-13.1145
F19--1 . . . . .	13.1145-13.1205
F20--1 . . . . .	12.1205-13.1265
F21--1 . . . . .	12.1265-13.1325
F22--1 . . . . .	13.1325-13.1385
F23--1 . . . . .	13.1385-13.1445
F24--1 . . . . . 3	13.1445-13.1505
F25--1 . . . . . 3	13.1505-13.1565
F26--1 . . . . . 3	13.1565-13.1625
F27--1 . . . . . 3	13.1625-13.1685
F28--1 . . . . . 3	13.1685-13.1745
F29--1 . . . . . 3	13.1745-13.1805
F30--1 . . . . . 3	13.1805-13.1865
F31--1 . . . . . 3	13.1865-13.1925
F32--1 . . . . . 3	13.1925-13.1985

1 See paragraph (a)(1) of this section.

2 For transmission of pilot subcarriers or other authorized narrow band signals.

3 See paragraph m of this section.

(3) For CARS stations using AM and FM transmission requiring a necessary bandwidth of no more than 12.5 MHz.

GROUP K CHANNEL

<u>DESIGNATION</u>	<u>CHANNEL BOUNDARIES (GAZ)</u>
K01--1-----	12.7000-12.7125
K02--1-----	12.7125-12.7250
K03--1-----	12.7250-12.7375
K04--1-----	12.7375-12.7500
K05--1-----	12.7500-12.7625
K06--1-----	12.7625-12.7750
K07--1-----	12.7750-12.7875
K08--1-----	12.7875-12.8000
K09--1-----	12.8000-12.8125
K10--1-----	12.8125-12.8250
K11--1-----	12.8250-12.8375
K12--1-----	12.8375-12.8500
K13--1-----	12.8500-12.8625
K14--1-----	12.8625-12.8750
K15--1-----	12.8750-12.8875
K16--1-----	12.8875-12.9000
K17--1-----	12.9000-12.9125
K18--1-----	12.9125-12.9250
K19--1-----	12.9250-12.9375
K20--1-----	12.9375-12.9500
K21--1-----	12.9500-12.9625
K22--1-----	12.9625-12.9750
K23--1-----	12.9750-12.9875
K24--1-----	12.9875-13.0000
K25--1-----	13.0000-13.0125
K26--1-----	13.0125-13.0250
K27--1-----	13.0250-13.0375
K28--1-----	13.0375-13.0500
K29--1-----	13.0500-13.0625
K30--1-----	13.0625-13.0750
K31--1-----	13.0750-13.0875
K32--1-----	13.0875-13.1000
K33--1-----	13.1000-13.1125
K34--1-----	13.1125-13.1250
K35--1-----	13.1250-13.1375
K36--1-----	13.1375-13.1500
K37--12-----	13.1500-13.1625
K38--12-----	13.1625-13.1750
K39--12-----	13.1750-13.1875
K40--12-----	13.1875-13.2000

1 See paragraph (a) (1) of this section.

2 See paragraph m of this section.

(4) The Cable Television Relay Service is also assigned the following frequencies in the 17,700 to 19,700MHz band. These frequencies are co-equally shared with stations in fixed service under Parts 21, 74 and 94 of the Commissions Rules. Applicants 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 21,100(d). The bands may be used for analog or digital modulation.

(i) 2 MHz maximum authorized bandwidth channel:

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

(ii) 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

(iii) 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

(iv) 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

(v) 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

(vi) 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

(5) 31.0 to 31.3GHz. These frequencies are shared on a co-equal basis with other stations in the fixed and mobile services (see Parts 21,74,94 and 95). No interference protection is afforded to fixed or mobile stations operating in this band.

**(1) 25 MHz authorized bandwidth channels, 150 MHz separation.**

Transmit (receive) (MHz)	Receive (transmit) (MHz)
31,012.5.....	31,162.5
31,037.5.....	31,187.5
31,062.5.....	31,212.5
31,087.5.....	31,237.5
31,112.5.....	31,262.5
31,137.5.....	31,287.5

**(2) 50 MHz authorized bandwidth channels, 150 MHz separation.**

Transmit (receive) (MHz)	Receive (transmit) (MHz)
31,025.0.....	31,175.0
31,075.0.....	31,225.0
31,125.0.....	31,275.0

(b) Television Auxiliary Broadcast Service stations may be assigned channels in the band 12.70-13.0 GHz subject to the condition that no harmful interference is caused to fixed CARS stations authorized at the time of such grants. Translator Relay stations are assigned on a secondary basis. New CARS stations shall not cause harmful interference to television STL and intercity relay stations authorized at the time of such grants. Television pickup stations and CARS pickup stations will be assigned channels in the band on a co-equal basis subject to the conditions that they accept interference from and cause no interference to existing or subsequently authorized television STL, television intercity relay, or fixed CARS stations. Channels in the 13.150-13.200 GHz band will be assigned exclusively to television pickup and CARS pickup stations on a co-equal basis. A cable television system operator will normally be limited in any one area to the assignment of not more than three channels for CARS pickup use: PROVIDED, HOWEVER, That additional channels may be assigned upon a satisfactory showing that additional channels are necessary and are available.

(c) An application for a cable television relay station shall be specific with regard to the channel or channels requested. Channels shall be identified by the appropriate designations listed in paragraph (a) of this section.

(d) For CARS Fixed stations using FM transmission with an authorized bandwidth per channel of 25 MHz, to conserve spectrum 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 in the CARS, relaying several channels, would use A01, B01, A02, B02, A03, etc.

(e) For CARS stations using vestigial sideband AM transmissions, channels from only the Groups C, D, E or F normally will be assigned a station, although upon adequate showing variations in the use of channels in Groups C, D, E or F may be authorized on a case-by-case basis in order to avoid potential interference or to permit a more efficient use. In situations where the number or the arrangement of channels available in these groups is not adequate, or in order to avoid potential interference, or in order to achieve the required VHF channelization arrangement on the cable television system or for repeated operations, or for two way transmission, or upon the showing of other good cause, the use of channels in the Groups C, D, E or F may be authorized. Applicants are encouraged to apply for adjacent channels within each group of channels, except that different channel arrangements may be authorized when required to conform to the required channelization arrangement at VHF on the cable television system, when it is necessary to transmit non-adjacent off-the-air channels or signals intended to fill non-adjacent slots in the spectrum, or to avoid potential interference, or upon other showing of good cause.

(f) For vestigial sideband AM transmission, the assigned visual carrier frequency for each channel listed in Groups C, D, E and F shall be 1.25 MHz above the lower channel-edge frequency. The center frequency for the accompanying FM aural carrier in each channel shall be 4.5 MHz above the corresponding visual carrier frequency.

(g) For CARS stations using double sideband AM transmission or FM transmission with authorized bandwidth of no more than 12.5 MHz channels from only group I or group J normally will be assigned a station, although upon adequate showing variations in the use of channels in group K may be authorized on a case-by-case basis in order to avoid potential interference or to permit a more efficient use.  
the

(h) For double sideband AM transmission, the assigned carrier frequency for each channel listed in group K shall be 6.25 MHz above the lower boundary frequency for each channel, and the sideband frequencies corresponding to the carrier frequency of the accompanying FM aural signal shall be 4.5 MHz above and below the visual carrier frequency.

(i) All stations shall employ no more than a 12.5 MHz authorized bandwidth per channel except in any one or more of the following circumstances:

(1) The station is a CARS pickup station;

(2) The transmission path is more than 19 miles in length

(3) The station was authorized or an application was on file therefor prior to July 26, 1973.

(4) Other good cause has been shown that use of a bandwidth of 12.5 MHz or less per channel would be inefficient, impractical, or otherwise contrary to the public interest.

(j) RESERVED.

(k) Should any conflict arise among applications for stations in this band, priority will be based on the filing date of an application completed in accordance with the instructions thereon.

(l) Applicants for Group K channels shall apply for adjacent channels and the requested channels shall overlap the least possible number of Group A channels, except that different channel arrangements may be authorized upon an adequate showing that the foregoing arrangement cannot be used or would be contrary to the public interest, or in order to avoid potential interference or to permit a more efficient use.

(m) The band 13.15-13.20 GHz is reserved exclusively for the assignment of CARS Pickup and Television Pickup stations on a co-equal basis within a 50 km radius of each of the 100 television markets delineated in Section 76.51 Fixed Television Auxiliary stations accepted for filing before September 1, 1979, may continue operation on channels in the 13.15-13.20 GHz band, subject to periodic license renewals.

78.19 Interference. (a) Applications for CARS stations shall endeavor to select an assignable frequency or frequencies which will be least likely to result in interference to other licensees in the same area since the FCC itself does not undertake frequency coordination.

(b) Applicants for cable television relay stations shall take full advantage of all known techniques, such as the geometric arrangement of transmitters and receivers, the use of minimum power required to provide the needed service, and the use of highly directive transmitting and receiving antenna systems, to prevent interference to the reception of television STL, television intercity relay and other CAR stations.

(c) Radio Astronomy and Radio Research Installations. In order to minimize harmful interference at the National Radio Astronomy Observatory site located at Green Bank, Pocahontas County, W. Va., and at the Naval Radio Research Observatory at Sugar Grove, Pendleton County, W. Va., an applicant for authority to construct a cable television relay station, except a CAR pickup station, or for authority to make changes in the frequency, power, antenna height, or antenna directivity of an existing station, within the area bounded by 39°15'N. on the north, 78°30'W. on the east, 37°30'N on the south and 80°30'W. on the west shall, at the time of filing such application with the Commission, simultaneously notify the Director, National Radio Astronomy Observatory, P. O. Box 2, Green Park, W. Va., 24944, in writing, of the technical particulars of the proposed station. Such notification shall include the geographical coordinates of the antenna, antenna height, antenna directivity, if any, proposed frequency, type of emission, and power. In addition, the applicant shall indicate in his application to the Commission the date notification was made to the Observatory. After receipt of such application, the Commission will allow a period of 20 days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the 20-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

(d) Protection for Table Mountain Radio Receiving Zone, Boulder County, Colorado: Applicants for a station authorization to operate in the vicinity of Boulder County, Colorado under this part are advised to give due consideration, prior to filing applications, to the need to protect the Table Mountain Radio Receiving Zone from harmful interference. These are the research laboratories of the Department of Commerce, Boulder County, Colorado. To prevent degradation of the present ambient radio signal level at the site, the Department of Commerce seeks to ensure that the field strengths of any radiated signals (excluding reflected signals) received on this 1800 acre site (in the vicinity of coordinates 40° 07' 50" N Latitude, 105° 14' 40" W Longitude) resulting from new assignments (other than mobile stations) or from the modification or relocation of existing facilities do not exceed the following values:

Frequency range	Field strength (mV/M)	Power flux density <sup>1</sup> (dBW/m <sup>2</sup> )
Below 540 kHz.....	10.....	-65.8
540 to 1600 kHz.....	20.....	-59.8
1.6 to 470 MHz.....	10.....	2-65.8
470 to 890 MHz.....	30.....	2-56.2
Above 890 MHz.....	1.....	2-85.8

<sup>1</sup>Equivalent values of power flux density are calculated assuming a free space characteristic impedance of  $376.7 = 120\pi$  ohms.

<sup>2</sup>Space stations shall conform to the power flux density limits at the earth's surface specified in appropriate parts of the FCC rules, but in no case should exceed the above levels in any 4-kHz band for all angles of arrival.

(1) Advance consultation is recommended particularly for those applicants who have no reliable data which indicates whether the field strength or power flux density figures in the above table would be exceeded by their proposed radio facilities (except mobile stations). In such instances, the following is a suggested guide for determining whether coordination is recommended:

- (i) All stations within 1.5 statute miles;
- (ii) Stations within 3 statute miles with 50 watts or more effective radiated power (ERP) in the primary plane of polarization in the azimuthal direction of the Table Mountain Radio Receiving Zone;
- (iii) Stations within 10 statute miles with 1 KW or more ERP in the primary plane of polarization in the azimuthal direction of Table Mountain Receiving Zone;
- (iv) Stations within 50 statute miles with 25 KW or more ERP in the primary plane of polarization in the azimuthal direction of Table Mountain Receiving Zone.

(2) Applicants concerned are urged to communicate with the Radio Frequency Management Coordinator, Department of Commerce, Research Support Services, NOAA/E5X2, Boulder Laboratories, Boulder, CO 80303; telephone (303) 497-6548, in advance of filing their applications with the Commission.

(3) The Commission will not screen applications to determine whether the advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Department of Commerce of proceedings to modify any authorization which may be granted which, in fact, delivers a signal at the site of the field strength specified herein.

(e) Protection for Federal Communications Commission monitoring stations:

(1) Applicants in the vicinity of an FCC monitoring station for a radio station authorization to operate new transmitting facilities or changed transmitting facilities which would increase the field strength produced over the monitoring station over that previously authorized are advised to give consideration, prior to filing applications, to the possible need to protect the FCC stations from harmful interference. Geographical coordinates of the facilities which require protection are listed in Section 0.121(c) of the Commission's Rules. Applications for stations (except mobile stations) which will produce on any frequency a direct wave fundamental field strength of greater than 10 mV/M in the authorized bandwidth of service ( $-65.8$  dBW/m<sup>2</sup> power flux density assuming a free space characteristic impedance of 120 ohms) at the referenced coordinates, may be examined to determine extent of possible interference. Depending on the theoretical field strength value and existing root-sum-square or other ambient radio field signal levels at the indicated coordinates, a clause protecting the monitoring station may be added to the station authorization.

(2) In the event that calculated value of expected field exceeds 10 mV/m ( $-65.8$  dBW/m<sup>2</sup> at the reference coordinates, or if there is any question whether field strength levels might exceed the threshold value, advance consultation with the FCC to discuss any protection necessary should be considered. Prospective applicants may communicate with: Chief, Field Operation Bureau, Federal Communications Commission, Washington, D.C. 20554, Telephone (202) 632-6980.

(3) Advance consultation is suggested particularly for those applicants who have no reliable data which indicates whether the field strength or power flux density figure indicated would be exceeded by their proposed radio facilities (except mobile stations). In such instances, the following is a suggested guide for determining whether an applicant should coordinate.

- (i) All stations within 2.4 kilometers (1.5 statute miles);
- (ii) Stations within 4.8 kilometers (3 statute miles) with 50 watts or more average effective radiated power (EPR) in the primary plane or polarization in the azimuthal direction of the Monitoring Stations.
- (iii) Stations within 16 kilometers (10 statute miles) with 1kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station;
- (iv) Stations within 80 kilometers (50 statute miles) with 25 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station;

(4) Advance coordination for stations operating above 1000 MHz is recommended only where the proposed station is in the vicinity of a monitoring station designated as a satellite monitoring facility in Section 0.121(c) of the Commission's Rules and also meets the criteria outlined in paragraphs (2) and (3) above.

(5) The Commission will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Federal Communications Commission or modification of any authorization which will cause harmful interference.

**§78.20 Acceptance of applications; public notice.** (a) Applications which are tendered for filing in Wash D.C., are dated upon receipt and then forwarded to the Cable Television Bureau, where an administrative examination is made to ascertain whether the applications are complete. Applications found to be complete or substantially complete are accepted for filing and are given a file number. In case of minor defects as to completeness, the applicant will be required to supply the missing information. Applications which are not substantially complete will be returned to the applicant.

(b) Acceptance of the application for filing means only that it has been the subject of a preliminary review by the Commission's administrative staff as to completeness. Applications which are determined to be clearly not in accordance with the Commission's rules or other requirements, unless accompanied by an appropriate request for waiver, will be considered defective and will not be accepted for filing, or if inadvertently accepted for filing, will be dismissed. Requests for waiver shall show the nature of the waiver or exception desired and shall set forth the reasons in support thereof.

(c) The Commission will give public notice of all applications and major amendments thereto which have been accepted for filing. No application shall be acted upon less than thirty days from the date of public notice.

78.21 Dismissal of applications. (a) Any application may, on request of the applicant, be dismissed without prejudice as a matter of right prior to the adoption date of any final action taken by the Commission with respect to the application. An applicant's request for the return of an application will be regarded as a request for dismissal.

(b) Failure to prosecute an application, or failure to respond to official correspondence or request for additional information, will be cause for dismissal. Such dismissal will be without prejudice if it occurs prior to the adoption of any final action taken by the Commission with respect to the application.

78.22 Objections to applications. (a) Any party in interest may file a petition to deny any application (whether as originally filed or as amended) no later than 30 days after issuance of a public notice of the acceptance for filing of any such application or amendment thereto. Petitions to deny shall contain specific allegations of fact sufficient to show that the petitioner is a party in interest and that a grant of the application would be prima facie inconsistent with the public interest, convenience, and necessity. Such allegations of fact shall, except for those of which official notice may be taken, supported by affidavit of a person or persons with personal knowledge thereof.

(b) The applicant may file an opposition to any petition to deny, and the petitioner may file a reply to such opposition (see 1.45 of this chapter), in which allegations of facts or denials thereof shall be supported by affidavit of a person or persons with personal knowledge thereof.

(c) Notwithstanding the provisions of paragraph (a) of this section, before Commission action of any application for an instrument of authorization, any person may file informal objections to the grant. Such objections may be submitted in letter form (without extra copies) and shall be signed by the objector. The limitation on pleadings and time for filing pleadings provided for in 1.45 of this chapter shall not be applicable to any objections duly filed pursuant to this paragraph.

78.23 Equipment tests. (a) Following the grant of a CARS license, the licensee, during the process of construction of the station, may, without further authority from the Commission, conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the authorization, the technical provisions of the application therefore, the rules and regulations, and the applicable engineering standards.

(b) The Commission may notify the licensee to conduct no tests or may cancel, suspend, or change the date for the beginning of equipment tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) The test authorized in this section shall be conducted only as a necessary part of construction.

78.27 License conditions. (s) Authorizations (including initial grants, modifications, assignments or transfers of control, and renewals) in the Cable Television Relay Service to serve cable television systems, shall contain the condition that such cable television systems shall operate in compliance with the provisions of Part 76 (Cable Television Service) of this chapter.

(b) CARS stations licensed under this subpart are required to commence operation within one year of the date of the license grant.

(1) The licensee of a CARS station shall notify the Commission in writing when the station commences operation. Such notification shall be submitted on or before the last day of the authorized one year construction period; otherwise, the station license shall be automatically forfeited.

(2) CARS licensees needing additional time to complete construction of the station and commence operation shall request an extension of time 30 days before the expiration of the one year construction period. Exceptions to the 30-day advance filing requirement may be granted where unanticipated delays occur.

**§78.29 License period.** Licenses for cable television relay stations will be issued for a period not to exceed five (5) years. On and after February 1, 1966, licenses for CAR stations ordinarily will be issued for a period expiring on February 1, 1971, and, when regularly renewed, at 5-year intervals thereafter. When a license is granted subsequent to the last renewal date for CAR stations, the license will be issued only for the unexpired period of the current license term of such stations. The license renewal date applicable to CAR stations may be varied as necessary to permit the orderly processing of renewal applications, and individual station licenses may be granted or renewed for a shorter period of time than that generally prescribed for CAR stations, if the Commission finds that the public interest, convenience, and necessity would be served by such action.

**§78.31 Temporary extension of license.** 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 cable television relay station license, the Commission will grant a temporary 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 CAR station thereunder will serve the 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 nowise affect or limit the action of the Commission with respect to any pending application or proceeding.

**§78.33 Special temporary authority.** (a) Notwithstanding the requirements of §§78.15 and 78.20, in circumstances requiring immediate or temporary use of facilities, a request may be made for special temporary authority to install and operate new equipment or to operate licensed equipment in a manner different from that authorized in a station license. Any such request may be in letter form, and shall be submitted in duplicate: Provided, however, That in cases of emergency involving danger of life or property or due to damage to equipment, such request may be made by telephone or telegraph with the understanding that a written request shall be submitted within ten (10) days thereafter.

(b) Special temporary authority may also be requested to conduct a field survey to determine necessary data in connection with the preparation of a formal application for installation of a radio system under this part. Such authority may be granted to equipment suppliers and others who are not operators of cable television systems, as well as to cable operators, to conduct equipment, program, service, and path tests.

(c) Any request for special temporary authority shall be clear and complete within itself as to the authority requested. In addition, such requests shall contain the following information:

- (1) Name, address, and citizenship of applicant;
- (2) Grounds for special action, including a description of any emergency or damage to equipment;
- (3) Type of operation to be conducted;
- (4) Purpose of operation;
- (5) Time and date of proposed operation;
- (6) Class of station and nature of service;
- (7) Location of station;
- (8) Equipment to be used, specifying manufacturer, model number, and number of units;
- (9) Frequency or frequencies desired, consistent with §78.18: Provided, however, That in the case of events of widespread interest and importance that cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested on a showing that operation thereon will not cause interference to established stations: And provided, further, That in no case will a cable television relay operation be authorized on frequencies employed for the safety of life and property;
- (10) Plate power input to final radio frequency stage;
- (11) Type of emission;
- (12) Description of antenna to be used, including height. In the event that the proposed antenna installations will increase the height of any natural formation, or existing manmade structure, by more than twenty (20) feet, a vertical plan sketch showing the height of the structures proposed to be erected, the height above ground of any existing structure, the elevation of the site above mean sea level, and the geographic coordinates of the proposed sites shall be submitted with the application.

(d) Except in emergencies involving safety of life or property or due to damage to equipment, a request for special temporary authority shall be filed at least ten (10) days prior to the date of proposed operation, or shall be accompanied by a statement of reasons for the delay.

§78.33(e) - 78.36(b)

(e) If the Commission finds that special temporary authority is in the public interest, it may grant such authority for a period not exceeding ninety (90) days, and, on a like finding, may extend such authority for one additional period not to exceed ninety (90) days.

78.35 Assignment or transfer of control. (a) No assignment of the license of a cable television relay station or transfer of control of a CARS licensee shall occur without prior FCC authorization.

(b) If an assignment or transfer of control does not involve a substantial change of interests, the provisions of §§78.20(c) and 78.22, concerning public notice and objections, shall be waived.

(c) Licensees of CARS stations are not required to submit applications for assignment or transfer of control or otherwise notify the FCC in cases where the change in ownership does not affect the identity or controlling interest of the licensee.

78.36 Frequency coordination. (a) Channels in the 12.7-13.25GHz band are shared with certain Private Operational-Fixed stations authorized under Part 94, 94.93 after September 9, 1983. After this date all CARS use of this band is subject to coordination using the following procedure:

(1) Before filing an application for new or modified facilities under this part the applicant must perform a frequency engineering analysis to ensure that the proposed facilities will not cause interference to existing or previously applied for stations in this band of a magnitude greater than that specified below.

(2) The general criteria for determining allowable or co-channel, regardless of system length or type of modulation, multiplexing or frequency band shall be such that the interfering signal shall not produce more than 1.0dB degradation of the practical threshold of the protected receiver. The degradation is determined by calculating the ratio in dB between the desired carrier signal and undesired interfering signal (C/I ratio) appearing at the input to the receiver under investigation (the victim receiver). The development of the C/I ratios from the criteria for maximum allowable interference level per exposure and the methods used to perform path calculations shall follow generally acceptable good engineering practices. Procedures as may be developed by the Electronics Industries Assoc. (EIA), the Institute of Electrical and Electronics Engineers, Inc. (IEEE), the American National Standards Institute (ANSI) or any other recognized authority will be acceptable to the Commission.

(3) Where the development of the carrier to interference ratio (C/I) is not covered by generally acceptable procedures or where the applicant does not wish to develop the carrier to interference ratio, the applicant shall employ the following C/I protection ratios:

(i) Co-channel interference: For both sideband and carrier-beat, (applicable to all bands) the previously authorized system shall be afforded a carrier to interfering signal protection ratio of at least 90dB.

(ii) Adjacent channel interference: The existing or previously authorized system shall be afforded a carrier to interfering signal protection ratio of at least 56dB.

(b) Coordination of assignments in the 18GHz band will be performed in accordance with the procedure established in 21.100.

Subpart C -- General Operating Requirements

78.51 Remote control operation. (a) A CARS station may be operated by remote control: Provided, That such operation is conducted in accordance with the conditions listed below: And provided further, That the Commission, in Washington, D.C., is notified at least 10 days prior to the beginning of such operation and that such notification is accompanied by a detailed description showing the manner of compliance with the following:

(1) The transmitter and associated control system shall be installed and protected in a manner designed to prevent tampering or operation by unauthorized persons.

(2) An operator shall be on duty at the remote control position and in actual charge thereof at all times when the station is in operation.

(3) Facilities shall be provided at the control position which will permit the operator to turn the transmitter on and off at will. The control position shall also be equipped with suitable devices for observing the overall characteristics of the transmissions and a carrier operated device which will give a continuous visual indication whenever the transmitting antenna is radiating a signal. The transmitting apparatus shall be inspected as often as may be necessary to insure proper operation.

(4) The control circuits shall be so designed and installed that short circuits, open circuits, other line faults, or any other cause which would result in loss of control of the transmitter will automatically cause the transmitter to cease radiating.

(b) An application for authority to construct a new station or to make changes in the facilities of an existing station and which proposes operation by remote control shall include an adequate showing of the manner of compliance with the requirements of this section.

(c) The Commission may notify the licensee or permittee not to commence remote control operation, or to cancel, suspend, or change the date of the beginning of such operation as and when such action may appear to be in the public interest, convenience, or necessity.

78.53 Unattended operation. (a) A CARS station may be operated unattended: PROVIDED, That such operation is conducted in accordance with the conditions listed below; AND PROVIDED FURTHER, That the Commission, in Washington, D.C., is notified at least 10 days prior to the beginning of unattended operation if such operation is not indicated on the station authorization.

(1) The transmitter and associated control circuits shall be installed and protected in a manner designed to prevent tampering or operation by unauthorized persons.

(2) Deleted and reserved.

(3) If the transmitting apparatus is located at a site which is not readily accessible at all hours and in all seasons, means shall be provided for turning the transmitter on and off at will from a location which can be reached promptly at all hours and in all seasons.

(4) Personnel responsible for the maintenance of the station shall be available on call at a location which will assure expeditious performance of such technical servicing and maintenance as may be necessary whenever the station is operating. In lieu thereof, arrangements may be made to have a person or persons available at all times when the transmitter is operating, to turn the transmitter off in the event that it is operating improperly. The transmitter may not be restored to operation until the malfunction has been corrected by a technically qualified person.

(5) The station licensee shall be responsible for the proper operation of the station at all times and is expected to provide for observations, servicing and maintenance as often as may be necessary to ensure proper operation. All adjustments or tests during or coincident with the installation, servicing or maintenance of the station which may affect its operation shall be performed by or under the immediate supervision of a technically qualified person.

(b) Reserved

(c) The Commission may notify the licensee or permittee not to commence, unattended operation, or to cancel, suspend, or change the date of the beginning of such operation as and when such action may appear to be in the public interest, convenience, or necessity.

§78.55 Time of operation. (a) A CARS station is not expected to adhere to any prescribed schedule of operation. Continuous radiation of the carrier without modulation is permitted provided harmful interference is not caused to other authorized stations.

§78.57 Station inspection. The station and all records required to be kept by the licensee shall be made available for inspection upon request by any authorized representative of the Commission.

§78.59 Posting of station and operator licenses. (a) The station license and any other instrument of authorization or individual order concerning the construction or the equipment or manner of operation shall be posted at the place where the transmitter is located, so that all terms thereof are visible except as otherwise provided to paragraphs (b) and (c) of this section.

(b) In cases where the transmitter is operated by remote control the documents referred to in paragraph (a) of this section shall be posted in the manner described at the control point of the transmitter.

(c) In cases where the transmitter is operated unattended, the name of the licensee and the call sign of the unattended station 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 at the transmitter site. The display will be prepared so as to withstand normal weathering for a reasonable period of time and shall be maintained in a legible condition at all times by the licensee. The station license and other documents referred to in paragraph (a) of this section shall be kept at the nearest attended station, or, in cases where the licensee of the unattended station does not operate attended stations, at the point of destination of the signals relayed by the unattended station.

78.61 Operator requirements. (a) Except in cases where a CARS station is operated unattended in accordance with 78.53 or except as provided in other paragraphs of this section, a person shall be on duty at the place where the transmitting apparatus is located, in plain view and in actual charge of its operation or at a remote control point established pursuant to the provisions of 78.51, at all times when the station is in operation. Control and monitoring equipment at a remote control point shall be readily accessible and clearly visible to the operator at that position.

(b) Reserved.

(c) Any transmitter tests, adjustments, or repairs during or coincident with the installation, servicing, operation or maintenance of a CARS station which may affect the proper operation of such station shall be made by or under the immediate supervision and responsibility of a person responsible for proper functioning of the station equipment.

(d) The operator on duty and in charge of a CARS station may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the rules governing such stations. However, such duties shall in no way impair or impede the required supervision of the CARS station.

(e) CARS stations operating with nominal transmitter power of 250 milliwatts or less may be operated by any person whom the licensee shall designate. Pursuant to this provision, the designated person shall perform as the licensee's agent and proper operation of the station shall remain the licensee's responsibility.

(f) Mobile CARS stations operating with nominal transmitter power in excess of 250 milliwatts may be operated by any person whom the licensee shall designate: Provided that a person is on duty at a receiving end of the circuit to supervise operation and to immediately institute measures sufficient to assure prompt correction of any condition of improper operation that may be observed.

(e) CARS stations operating with nominal transmitter power of 250 milliwatts or less may be operated by any person whom the licensee shall designate. Pursuant to this provision, the designated person shall perform as the licensee's agent and proper operation of the station shall remain the licensee's responsibility.

(f) Mobile CARS stations operating with nominal transmitter power in excess of 250 milliwatts may be operated by any person whom the licensee shall designate: PROVIDED, That a person holding a valid first-or-second-class radiotelephone license is on duty at the receiving end of the circuit to supervise operation and to immediately institute measures sufficient to assure prompt correction of any condition of improper operation that may be observed.

**78.63 Inspection and maintenance of tower marking and associated control equipment.** The licensee or permittee of any CARS station which has an antenna structure required to be painted or illuminated pursuant to the provisions of section 303(q) of the Communications Act of 1934, as amended, and/or Part 17 of this chapter, shall operate and maintain the tower marking and associated control equipment in accordance with the following:

(a) The tower lights shall be observed at least once each 24 hours, either visually or by observing an automatic and properly maintained indicator designed to register any failure of such lights, to insure that all such lights are functioning properly as required; or alternatively, there shall be provided and properly maintained an automatic alarm system designed to detect any failure of the tower lights and to provide indication of such failure to the licensee.

(b) Any observed or otherwise known failure of a code or rotating beacon light or top light not corrected within 30 minutes; regardless of the cause of such failure shall be reported immediately to the nearest Flight Service Station or office of the FAA by telephone or telegraph. Further notification by the same means shall be given immediately upon resumption of the required illumination.

(c) All automatic or mechanical control devices, indicators, and alarm systems associated with the tower lights shall be inspected at intervals not to exceed three months, to insure that such apparatus is functioning properly.

(d) Red observation lighting shall be exhibited from sunset to sunrise unless otherwise specified in the instrument of station authorization.

(e) All towers shall be cleaned or repainted as often as is necessary to maintain good visibility.

**§78.65 Additional orders.** In case the rules of this part do not cover all phases of operation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

**§78.67 Copies of rules.** The licensee of a cable television relay station shall have a current copy of this Part 78, and, in cases where aeronautical obstruction marking of antennas is required. Part 17 of this chapter shall be available for use by the operator in charge. Both the licensee and the operator or operators responsible for the proper operation of the station are expected to be familiar with the rules governing cable television relay stations. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at nominal cost.

**78.69 Station records.** Each licensee or permittee of a CARS station shall maintain records showing the following:

(a) For all attended or remotely controlled stations, the date and time of the beginning and end of each period of transmission of each channel;

(b) For all stations, the date and time of any unscheduled interruptions to the transmissions of the station, the duration of such interruptions and the causes thereof;

(c) For all stations, the results and date of the frequency measurements made pursuant to 78.113 and the name of the person(s) making the measurements;

(d) For all stations, when service or maintenance duties are performed which may affect a station's proper operation, the responsible operator shall sign and date an entry in the station's records giving:

(1) Pertinent details of all transmitter adjustments performed by the operator or under the operator's supervision;

(e) When a station in this service has an antenna structure which is required to be illuminated, appropriate entries shall be made as follows:

(1) The time the tower lights are turned off and on each day, if manually controlled;

(2) The time the daily check of proper operation of the tower lights was made, if an automatic alarm system is not employed,

(3) In the event of any observed or otherwise known failure of a tower light:

(i) Nature of such failure

(ii) Date and time of failure as observed or otherwise noted,

(iii) Date, time, and nature of the adjustments, repairs, or replacements,

(iv) Identification of Flight Service Station (FAA) notified of the failure of any code or rotating beacon light not corrected within 30 minutes, and the date and time such notice was given.

(v) Date and time notice was given to the Flight Service Station (FAA) and that the required illumination was resumed.

(4) Upon completion of the 3-month periodic inspection required by 78.63 (c):

(i) The date of the inspection and the condition of all tower lights and associated tower lighting control devices, indicators, and alarm systems.

(ii) Any adjustments, replacements, or repairs made to insure compliance with the lighting requirements and the date such adjustments, replacements, or repairs were made.

(f) For all stations, station record entries shall be made in an orderly and legible manner by the person or persons competent to do so, having actual knowledge of the facts required, who shall sign the station record when starting duty and again when going off duty.

(g) For all stations, no station record or portion thereof shall be erased, obliterated, or willfully destroyed within the period of the retention required by rule. Any necessary correction may be made only by the person who made the original entry who shall strike out the erroneous portion, initial the correction made, and show the date the correction was made.

(h) For all stations, station records shall be retained for a period of not less than 2 years. The Commission reserves the right to order retention of station records for a longer period of time. In cases where the licensee or permittee has notice of any claim or complaint, the station record shall be retained until such claim or complaint has been fully satisfied or until the same has been barred by statute limiting the time for filing of suits upon such claims.

78.75 Equal employment opportunities. See Subpart E, Part 76 of this Chapter.

Subpart D -- Technical Regulations

78.101 Power limitations. (a) With the exception of pickup stations, transmitter peak output power shall not be greater than necessary, and in no event, shall exceed 5 watts on any channel. For CARS pickup stations, the transmitter peak output power shall not exceed 1.5 watts.

(b) LDS stations shall use for the visual signal-vestigial sideband AM transmission. When vestigial sideband AM transmission is used the peak power of the visual signal on all channels shall be maintained within 2 dB of equality. The mean power of the aural signal on each channel shall not exceed a level of 7 dB below the peak power of the visual signal.

(c) For CARS stations operating in the 17.7 to 19.7 GHz band transmitter output power shall not be greater than necessary to accomplish the function of the system and in any case shall not be greater than 100 watts (peak); the maximum EIRP shall be limited to 50 dBW.

(d) For stations operating in bands above 17.7 GHz, the transmitter output shall be limited to that necessary to accomplish the function of the system. Further, the output power of a transmitter on any authorized frequency shall not exceed the following:

(1)

Frequency band (GHz)	Maximum transmitter output power (watts) <sup>1</sup>
17.7 to 19.7	10.0
31.0 to 31.3	0.05

<sup>1</sup> Peak envelope power.

(2)

Frequency band (GHz)	Maximum allowable EIRP (dBW)
17.7 to 18.6	+55.0
18.6 to 18.8	+35.0
18.8 to 19.7	+55.0
31.0 to 31.3	no limit

§78.103 Emissions and emission limitations. (a) A CARS station may be authorized to employ any type of emission, for which there are technical standards incorporated in Subpart D of this part, suitable for the simultaneous transmission of visual and aural television signals.

(b) Any emission appearing on a frequency outside of the channel authorized for a transmitter shall be attenuated below the power of the emission in accordance with the following schedule:

(1) For stations using FM or double sideband AM transmission:

(i) On any frequency above the upper channel limit or below the lower channel limit by between zero and 50 percent of the authorized channel width: At least 25 decibels below the mean power of the emission:

(ii) On any frequency above the upper channel limit or below the lower channel limit by more than 50 percent and up to 150 percent of the authorized channel width: At least 35 decibels below the mean power of the emission; and

§78.103(b) (iii) - 78.104(a)

(iii) On any frequency above the upper channel limit or below the lower channel limit by more than 150 percent of the authorized channel width: At least  $43 + 10 \log_{10}$  (power in watts) decibels below the mean power of the emission.

(2) For CAR stations using vestigial sideband AM transmission; At least 50 decibels below the peak power of the emission.

(c) For operation in the 17.7-19.7 GHz band: The mean power of any emission shall be attenuated below the mean output power of the transmitter 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;

(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;

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

(2) When using digital modulation:

(i) In any 1 MHz band, the center frequency of which is removed from the assigned frequency by more than 50% up to and including 250% of the authorized bandwidth: As specified by the following equation but in no event less than 11 dB. (Attenuation greater than 56 decibels is not required.

A equal Attenuation (in dB) below the output power level.

P equal Percent removed from the carrier frequency.

B equal Authorized bandwidth in MHz.

(ii) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250% of the authorized bandwidth: At least  $43 + 10 \log_{10}$  (mean output power in watts) dB or 80 dB, 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.

(d) If interference to stations is caused by emissions outside authorized channels, the Commission may require more attenuation than that specified in paragraph (b) of this section.

§78.104 Authorized bandwidth and emission designator. (a) The authorized bandwidth permitted to be used by a cable television relay station and specified in the station license shall be the occupied or necessary bandwidth, whichever is greater, except when otherwise authorized by the Commission in accordance with paragraph (b) of this section.

(b) As an exception to the provision of paragraph (a) above, the Commission may approve requests to base the authorized bandwidth for the station on the lesser of the occupied or necessary bandwidth where a persuasive showing is made that:

(1) The frequency stability of the transmitting equipment to be used will permit compliance with 78.103(b)(1) and, additionally, will permit 99 percent of the total radiated power to be kept within the frequency limits of the assigned channel.

(2) (RESERVED).

(c) The emission designator shall be specified in terms of the necessary bandwidth. See 2.201(a) of this chapter.

78.105 Antenna systems. (a) For fixed stations operating in the 12.7-13.2 and 17.7-19.07GHz bands, and for fixed and mobile stations operating in the 31.0-31.3GHz bands, the following standards apply:

ANTENNA STANDARDS

Frequency (MHz)	Category	Maximum beam-width to 3 dB points (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°
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	n/a	38.0	25	29	33	36	42	55	55
	B	n/a	38.0	20	24	28	32	35	36	36
31,000 to 31,300	n/a	1.0	38.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	A	n/a	38.0	25	29	33	36	42	55	55
38,600 to 40,000	A	n/a	38.0	25	29	33	36	42	55	55
	B	n/a	38.0	20	24	28	32	35	36	36

<sup>1</sup>The minimum front-to-back ratio shall be 38 dBi.

Mobile except aeronautical mobile, stations need not comply with these standards.

NOTE: Stations in this service must 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. Note, however, that the Commission may require the use of a high performance antenna where interference problems can be resolved by the use of such antennas.

(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. The 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 defined in paragraph (a) of this section.

(4) The transmitting antenna system of stations employing maximum equivalent isotropically radiated power exceeding 45 dBW in the frequency band between 12.70 and 12.75 GHz shall be oriented so that the direction of maximum radiation of any antenna shall be at least 1.5° away from the geostationary satellite orbit, taking into account the effect of atmospheric refractions.<sup>1</sup>

(5) Pickup stations are not subject to the performance standards herein stated. The provisions of this paragraph are effective for all new applications accepted for filing after October 1, 1981.

(b) Any fixed station licensed pursuant to applications accepted for filing prior to October 1, 1981, may continue to use its existing antenna system, subject to periodic renewal until October 1, 1991. After October 1, 1991, all licensees are to use antenna systems in conformance to the standards of this Section. CARS stations located in areas subject to frequency congestion are to employ a category A antenna when:

(1) A showing by an applicant of a new CAR service or TV auxiliary broadcast, which shares the 12.7 - 13.20 GHz band with CARS, 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 require conversion 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 78.18a was accomplished.

<sup>1</sup> See Chapter I, Article 1, Section III of the (International) Radio Regulations (Geneva, 1959), as amended, for Technical Characteristics Terms and Definitions. Additional information and methods for calculating azimuths to be avoided may be found in the following: Report 393, International Radio Consultative Committee (C.C.I.R.); "Geostationary Orbit Avoidance Computer Program," Report CC-7720, Federal Communications Commission, available from the National Technical Information Service, Springfield, Virginia 22151, in printed form (PB-211 500) or source card deck (PB-211 501).

78.107 Equipment and installation. (a) From time to time the Commission publishes a revised list of type approved, type accepted and certain notified equipment entitled "Radio Equipment List". Copies of this list are available for inspection at the Commission's office in Washington, D.C. and at each of its field offices.

(b) Applications for new cable television relay stations, other than fixed stations, will not be accepted unless the equipment specified therein has been type accepted. In the case of fixed stations, the equipment must be either type accepted or notified for use pursuant to the provisions of this subpart. As of March 5, 1984, transmitters designed to be used exclusively with fixed stations shall be approved under notification (see 2.004(d) of this chapter. Transmitter designed for use in the 31.0 to 31.3 GHz band shall be authorized under the notification procedure.

(1) All transmitters first licensed or marketed shall comply with technical standards of this subpart. This paragraph (b)(1) is effective October 1, 1981.

(2) Neither type acceptance nor notification is required for the following transmitters:

(i) Those which have an output power not greater than 250mW and which are used in a CARS pickup station operating in the 12.7-13.2 GHz band; and

(ii) Those used under a developmental authorization.

(c) Cable television relay station transmitting equipment authorized to be used pursuant to an application accepted for filing prior to October 1, 1981, may continue to be used, 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 Commission may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

(d) The installation of a CARS station shall be made by or under the immediate supervision of a qualified engineer. Any tests or adjustments requiring the radiation of signals and which could result in improper operation shall be conducted by or under the immediate supervision of a person with required knowledge and skill to perform such tasks.

(e) Simple repairs such as the replacement of tubes, fuses, or other plug-in components which require no particular skill may be made by an unskilled person. Repairs requiring replacement of attached components or the adjustment of critical circuits or corroborative measurements shall be made only by a person with required knowledge and skill to perform such tasks.

§78.109 Equipment Changes. (a) Formal application is required for any of the following changes:

(1) Any increase in emission bandwidth beyond that authorized;

(2) Any change in the transmitting antenna system of a station (other than a CAR pickup station), including the direction of the main radiation lobe, directive pattern, antenna gain or transmission line;

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

(4) Any horizontal change in the location of the antenna (other than a CAR pickup station transmitter).

(5) Any change in the type of modulation;

(6) Any change in the location of a station transmitter (other than a CAR pickup station transmitter), except a move within the same building or upon the tower or mast or a change in the area of operation of a CAR pickup station.

(7) Any change in frequency assignment, including polarization;

(8) Any change in authorized operating power.

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(b) Other equipment changes not specifically referred to in paragraph (a) of this section may be made at the discretion of the licensee, provided that the Engineer in Charge of the radio district in which the station is located and the Commission in Washington, D.C., are notified in writing upon the completion of such changes and provided further, that the changes are appropriately reflected in the next application for renewal of licenses of the station.

78.111 Frequency tolerance. (a) Cable television relay stations shall maintain the operation frequency so that 99% of the sideband energy shall fall within the assigned channels.

(b) Cable television relay stations shall maintain the carrier frequency of each authorized transmitter within 0.005% of the operating frequency.

(c) Cable television relay stations that employ vestigial sideband AM transmission shall maintain their operating frequency within 0.005% of the visual carrier, and the aural carrier shall be 4.5 MHz±1 kHz above the visual carrier frequency.

(d) Cable Television Relay stations authorized in the 17.7 to 19.7 GHz band shall maintain a frequency tolerance of 003%

**§78.113 Frequency monitors and measurements.** (a) The licensee of each CARS station shall employ a suitable procedure to determine that the carrier frequency of each transmitter is maintained within the tolerance prescribed in 87.111 at all times. This determination shall be made and the results thereof entered in the station records: when a transmitter is initially installed; when any change is made in a transmitter which may affect the carrier frequency or the stability thereof; or in any case at intervals not exceeding one year.

(b) The choice of apparatus to measure the operating frequency is left to the discretion of the licensee. However, failure of the apparatus to detect departures of the operating frequency in excess of the prescribed tolerance will not be deemed an acceptable excuse for the violation.

**§78.115 Modulation limits.** (a) If amplitude modulation is employed, negative modulation peaks shall not exceed 100 percent modulation.