

Commercial Aural Broadcast Stations in Operation

Year	AM	FM
1945	884	46
1950	2,051	733
1955	2,635	533
1960	3,416	678
1965	4,012	1,270
1966	4,050	1,446
1967	4,146	1,694
1968	4,218	1,879
1969	4,261	2,053

AM-FM Financial Data 1952-1968

(\$ Millions)			
Year	Revenues	Expenses	Income ¹
1952	\$468.6	\$407.5	\$ 61.1
1953	474.6	418.8	55.8
1954	448.8	406.3	42.5
1955	452.3	406.0	46.3
1956	479.2	429.0	49.6
1957	515.2	460.9	54.3
1958	520.6	482.0	38.0
1959	555.7	511.7	44.0
1960	591.9	543.0	48.3
1961	583.6	551.0	32.0
1962	626.8	580.1	46.7
1963	669.7	611.6	58.1
1964	719.2	645.4	73.8
1965	776.8	695.7	81.1
1966	852.7	752.1	100.6
1967	884.7	799.7	85.0
1968	994.7	877.4	117.3

¹ Before Federal income tax.

Noncommercial TV Stations in Operation

Year	Total	VHF	UHF
1955	10	8	2
1960	45	34	11
1965	88	54	34
1966	105	61	44
1967	129	67	62
1968	157	74	83
1969	188	81	107

Noncommercial FM Stations in Operation

Year	Number
1945	—
1950	48
1955	122
1960	162
1965	255
1966	269
1967	315
1968	354
1969	382

REFERENCE MATERIAL

The following additional broadcast reference material is obtainable from the commission on request:

"Broadcast Application and Hearing Procedures" (1967), which also notes the filing fees for different types of broadcast applications;

FCC report and statement of policy concerning broadcast programming (1960);

"Applicability of the Fairness Doctrine in the Handling of Controversial Issues of Public Importance (1964);

"Community Antenna Television (CATV) Systems" (1966), relating to applicable FCC rules;

"Applicability of Sponsorship Identification Rules" (1963);

"Educational Television" (1966), dealing with its development and encouragement;

"Radio Station, Frequency and Equipment Lists" (1966), noting commercial sources since the FCC does not furnish such lists;

"Publications and Services" (1965), listing media in the broadcast and other communication fields;

A list of printed FCC publications sold by the Government Printing Office (1966), which notes that Volume III of the Commission's rules and regulations governing broadcasting can there be purchased for \$4.50 a copy.

FCC Rules Regulating Radio-Television

(Selected sections amended to Sept. 1, 1969. Compiled with the cooperation of Pike & Fisher Inc., publisher of Pike & Fisher Radio Regulation.)

ALLOCATIONS AND DEFINITIONS

In AM rules . . .
§73.1 Standard broadcast station.—The term "standard broadcast station" means a broadcasting station licensed for the transmission of radio-telephone emissions primarily intended to be received by the general public and operated on a channel in the band 535-1605 kilocycles per second (kc).

§73.2 Standard broadcast band.—The term "standard broadcast band" means the band of frequencies extending from 535-1605 kc.

§73.3 Standard broadcast channel.—The term "standard broadcast channel" means the band of frequencies occupied by the carrier and two side bands of a broadcast signal with the carrier frequency at the center. Channels shall be designated by their assigned carrier frequencies. The 107 carrier frequencies assigned to standard broadcast stations shall begin at 540 kc and be in successive steps of 10 kc.

§73.4 Dominant station.—The term "dominant station" means a Class I station, as defined in §73.21, operating on a clear channel.

§73.5 Secondary station.—The term "secondary station" means any station, except a Class I station, operating on a clear channel.

§73.6 Daytime.—The term "daytime" means that period of time between local sunrise and local sunset.

§73.7 Nighttime.—The term "nighttime" means that period of time between local sunset and local sunrise.

§73.8 Sunrise and sunset.—The terms "sunrise" and "sunset" mean, for each particular location and during any particular month, the time of sunrise and sunset as specified in the instrument of authorization. See §73.83.

§73.9 Broadcast day.—The term "broadcast day" means that period of time between local sunrise and 12 midnight local time.

§73.10 Experimental period.—The term "experimental period" means that time between 12 midnight local time and local sunrise. This period may be used for experimental purposes in testing and maintaining apparatus by the licensee of any standard broadcast station on its assigned frequency and with its authorized power, provided no interference is caused to other stations maintaining a regular operating schedule within such period. No station licensed for "daytime" or "specified hours" of operation may broadcast any regular or scheduled program during this period.

§73.11 Service areas.—(a) The term "primary service area" of a broadcast station means the area in which the ground wave is not subject to objectionable interference or objectionable fading.

(b) The term "secondary service area" of a broadcast station means the area served of the sky wave and not subject to objectionable interference. The signal is subject to intermittent variations in intensity.

(c) The term "intermittent service area" of a broadcast station means the area receiving service from the ground wave but beyond the primary service area and subject to some interference and fading.

§73.12 Portable transmitter.—The term "portable transmitter" means a transmitter so constructed that it may be moved about conveniently from place to place, and is in fact so moved about from time to time, but not ordinarily used while in motion. In the standard broadcast band, such a transmitter is used in making field intensity measurements for locating a transmitter site for a standard broadcast station. A portable broadcast station will not be licensed in the standard broadcast band for regular transmission of programs intended to be received by the public.

Allocations—(AM)

§73.21 Classes of standard broadcast channels and stations.

(a) Clear channel. A clear channel is one on which the dominant station or stations render service over wide areas, and which are cleared of objectionable interference within their primary service areas and over all or a substantial portion of their secondary service areas. Stations operating on these channels are classified as follows:

(1) Class I station. A Class I station is a dominant station operating on a clear channel and designed to render primary and secondary service over an extended area and

at relatively long distances. Its primary service area is free from objectionable interference from other stations on the same and adjacent channels, and its secondary service area free from interference except from stations on adjacent channels, and from stations on the same channel in accordance with the channel designation in §§73.25 or 73.182. The operating power shall not be less than 10 kilowatts nor more than 50 kilowatts. (Also see §73.25[a] for further power limitation.)

(2) Class II station. A Class II station is a secondary station which operates on a clear channel (see §73.25) and is designed to render service over a primary service area which is limited by and subject to such interference as may be received from Class I stations. Whenever necessary a Class II station shall use a directional antenna or other means to avoid interference with Class I stations and with other Class II stations, in accordance with §73.182 (and §73.22 in the case of Class II-A stations). Class II stations are divided into three groups:

(i) Class II-A station. A Class II-A station is an unlimited time Class II 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 II-A station shall operate with power of 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 Class II-B station shall operate with power not less than 0.25 kilowatts nor more than 50 kilowatts.

NOTE: The Class II station operating unlimited time on 760 kc at San Diego 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 I-A station on the same frequency to its 0.5 mv/m 50% skywave contour.

(iii) Class II-D station. A Class II-D station is a Class II station operating daytime or limited time. A Class II-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 not in excess of 5 kilowatts. The primary service area of a station operating on any such channel may be limited to a given field intensity contour as a consequence of interference.

(1) Class III station. A Class III station is a station which operates on a regional channel and is designed to render service primarily to a principal center of population and the rural area contiguous thereto. Class III stations are subdivided into two classes.

(i) Class III-A station. A Class III-A station is a Class III station which operates with power not less than 1 kilowatt nor more than 5 kilowatts and the service area of which is subject to interference in accordance with §73.182.

(ii) Class III-B station. A Class III-B station is a Class III station which operates with power not less than 0.5 kilowatt, nor more than 1 kilowatt night and 5 kilowatts daytime, and the service area of which is subject to interference in accordance with §73.182.

(c) Local channel. A local channel is one on which several stations operate with powers no greater than provided in this paragraph. The primary service area of a station operating on any such channel may be limited to a given field intensity contour as a consequence of interference. Such stations operate with power no greater than 250 watts nighttime, and power daytime no greater than 1 kilowatt (or no greater than 250 watts if the station is located 100 kilometers [62 miles] or closer to the Mexican border, or in the area of the state of Florida south of 28 degrees north latitude and between 80 and 82 degrees west longitude).

(1) Class IV station. A Class IV station is a station operating on a local channel and designed to render service primarily to a city or town and the suburban and rural areas contiguous thereto. The power of a station of this class shall not be less than 0.25 kilowatt, and not more than 0.25 kilowatt nighttime and 1 kilowatt daytime, and its service area is subject to interference in accordance with §73.182. Stations which are licensed to operate with 100 watts day or night may continue to do so.

NOTE 1: Under NARBA the power ceiling for Class IV stations is 250 watt daytime as

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well as nighttime. The U.S.-Mexican Agreement permits such stations to operate with up to 1 kilowatt power daytime if they are located further than 100 kilometers [62 miles] from the Mexican border. Pursuant to the U.S.-Mexican Agreement and informal coordination with the other NARBA signatories, the Commission will consider applications for Class IV stations on local channels with daytime powers more than 250 watts, up to 1 kilowatt, if such station is to be located outside of the areas specified in paragraph (c) of this section, and if no objectionable interference would be caused (under the standards set forth in the pertinent international agreement) to a duly notified station in Mexico, Haiti, or any foreign country signatory to NARBA.

NOTE 2: 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 ground-wave contours or overlap of 25 mv/m groundwave, contours may be involved with previously or subsequently authorized Class II-A facilities.

§73.22 Assignment of Class II-A stations.

(a) Table of assignments. One Class II-A station may be assigned on each channel listed in the following table within the designated state or states:

Channel (kc)	Existing Class I Station	State(s) in which Class II-A Assignment may be Applied for
670	WMAQ Chicago	Idaho
720	WGN Chicago	Nevada or Idaho
780	BBBM Chicago	Nevada
880	WCBS New York	No. Dakota, So. Dakota or Nebraska
890	WLS Chicago	Utah
1920	KDKA Pittsburgh	New Mexico
1030	WBZ Boston	Wyoming
1100	KYW Cleveland	Colorado
1120	KMOX St. Louis	California or Oregon
1180	WHAM Rochester	Montana
1210	WCAU Philadelphia	Kansas, Nebraska or Oklahoma

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

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

(d) Protection. (1) Protection by Class II-A stations to other stations. The co-channel Class I-A station shall be protected by the Class II-A station to its 0.1 mv/m contour daytime and its 0.5 mv/m 50% skywave contour nighttime. 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 II-A stations. A Class II-A station shall normally receive daytime protection to its 0.5 mv/m ground-wave contour and nighttime protection to the contour to which it is limited by the co-channel Class I-A station.

(e) Applications not complying with this section. Applications for Class II-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.—The several classes of standard broadcast stations may be licensed to operate in accordance with the following:

(a) "Unlimited time" permits operation without a maximum limit as to time.

(b) "Limited time" is applicable to class II (secondary) stations operating on a clear channel with facilities authorized before Nov. 30, 1959. It permits operation of the secondary station during daytime, and until local sunset if located west of the dominant station on the channel, or if located east thereof, until sunset at the dominant station; and in addition during night hours, if any, not used by the dominant station or stations on the channel.

(c) Daytime permits operation during the hours between average monthly local sunrise and average monthly local sunset.

Daytime stations operating on local channels with a power of 0.25 kw may, upon notification to the Commission and to the Engineer in Charge of the radio district in which they are located, operate at hours beyond those specified in their license.

(d) "Sharing time" permits operation during hours which are so restricted by the station license as to require a division of time with one or more other stations using the same channel.

(e) Specified hours means that the exact operating hours are specified in the license. (The minimum hours that any station shall operate are specified in §73.71.) Specified hours stations operating on local channels with a power of 0.25 kw, except those sharing time with other stations may, upon notification to the Commission and the Engineer in Charge of the radio district in which they are located, operate at hours beyond those specified in their license.

§73.24 Broadcast facilities; showing required. An authorization for a new 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 service among the several states and communities.

(b) (1) That a proposed new daytime station (or change in frequency of an existing daytime station) complies with the standards of station separation set forth in §73.37.

(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 §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)).

NOTE: The preceding provisions of this paragraph (b) shall not be applied to applications for new Class II-A stations or to applications accepted for filing before July 13, 1964. With respect to such applications, a showing must be made that:

(a) Objectionable interference will not be caused to existing stations or that, if interference will be caused, the need for the proposed service outweighs the need for the proposed service which will be lost by reason of such interference. (For special provisions concerning interference from Class II-A stations to stations of other classes authorized after October 30, 1961, see Note 2 to §73.21 and §73.22(d)). For determining objectionable interference, see §§73.182 and 73.186.

(b) The proposed station will not suffer interference to such an extent that its service would be reduced to an unsatisfactory degree (see §73.28(d)).

(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 assignment as requested under existing international agreements and the rules and regulations of the Commission.

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

(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 ground-wave contour of a co-channel United States Class I 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 station (see §73.22), 25% or more of the area or population within the nighttime interference-free service contour of the proposed station receives no nighttime interference-free primary service from another station.

(j) 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.—The frequencies in the following tabulations are designated as clear channels and assigned for use by the classes of stations given:

(a) On each of the following channels, one Class I station will be assigned, operating with power of 50kw: 640, 650, 660, 670, 700, 720, 750, 760, 780, 820, 830, 840, 870, 880, 890, 1020, 1030, 1040, 1100, 1120, 1160, 1180, 1200 and 1210 kc. In addition, on the channels listed in this paragraph, Class II stations may be assigned as follows:

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

(2) On the channel 750 kc, an unlimited time Class II station located at Anchorage.

(3) On the channel 760 kc, an unlimited time Class II station located at San Diego, Calif.

(4) On any of the channels listed in this paragraph (to the extent consistent with the assignments provided in subparagraphs [1], [2], and [3] of this paragraph), unlimited time Class II stations located in Alaska, Hawaii, Virgin Islands, or Puerto Rico, which will not deliver more than 5 microvolts per meter groundwave day or night or microvolts per meter 10 percent time skywave at night at any point within the continental limits of the United States excluding Alaska.

(5) On any of the channels listed in this paragraph (to the extent consistent with the Class I, Class II-A, and Anchorage and San Diego Class II assignments provided in this paragraph, and, in the case of limited time stations, subject to the restrictions contained in §73.38), limited time and daytime only stations, as follows:

(i) In Alaska, Hawaii, Puerto Rico and Virgin Islands.

(ii) Within the continental United States excluding Alaska, where the station would operate with facilities authorized as of October 30, 1961.

NOTE 1: In view of special circumstances arising from the provision of presunrise broadcast service on 640 kc at Ames, Iowa, applications will be accepted for broadcast operations on 640 kc between 6:00 a.m. central standard time and local sunrise at Ames, Iowa, with not to exceed 1 kw power: provided, that such applications will be acted upon only after and in light of the decision reached in Docket No. 11290.

NOTE 2: In view of special circumstances arising from the provision of a service during some nighttime hours by a Class II station operating on 830 kc at New York, N. Y., (i.e. from 6:00 a.m. to local sunrise and from sunset at Minneapolis to 10:00 p.m. E.S.T.), applications will be accepted for such operation: Provided, that they will be acted upon only after and in light of the decision reached in Docket No. 11227.

NOTE 3: The question of whether two Class I stations should be assigned to 770 kcs, and if so how they should operate, has not been determined.

NOTE 4: See NARBA concerning priority for Canadian Class I-B and Cuban I-C assignments on 640 kc.

NOTE 5: NARBA concerning Cuban Class II-E assignments on 660, 670, 760, 780, 830, 1020, 1030 and 1120 kc.

NOTE 6: See U.S.-Mexican Agreement concerning Mexican use of 660, 760 and 830 kc.

(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 kc.

NOTE 1: See NARBA and the U.S.-Mexican Agreement concerning a Cuban Class II-E assignment on, and Mexican use of, 1030 kc.

NOTE 2: Class I and Class II stations on 1540 kc shall deliver not over 5 microvolts per meter groundwave or 25 microvolts per meter 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 ground-wave or 25 microvolts per meter 10 percent time skywave at any point on the Canadian

border, and provided that such station 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 kc.

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

(d) The frequencies 730, 800, 900, 1050, 1220 and 1570 kc, 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.

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

(i) 800 kc; less than 1319 kilometers (820 miles) from Ciudad Juarez, Chihuahua.

(ii) 1050 kc; less than 998 kilometers (620 miles) from Monterrey, Nuevo Leon.

(iii) 1570 kc; less than 998 kilometers (620 miles) from Ciudad Acuna, 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 kc.

(e) The frequency 540 kc, for Class II stations which will not deliver a signal of more than 5 microvolts per meter groundwave or 25 microvolts per meter 10% 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 35°N, if west of the meridian 93°W., or north of the parallel 30°N, if east of said meridian.

NOTE: See §2.106 (a) of this chapter with respect to use of 540 kc.

§73.26 Regional channels: Classes III-A and III-B stations.—The following frequencies are designated as regional channels and are assigned for use by class III-A and III-B stations: 550, 560, 570, 580, 590, 600, 610, 620, 630, 790, 910, 920, 930, 950, 960, 970, 980, 1150, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1350, 1360, 1370, 1380, 1390, 1410, 1420, 1430, 1440, 1460, 1470, 1480, 1590, and 1600 kc.

NOTE: See NARBA concerning Cuban Class I-C assignment on 550 kc, Class I-D assignments on 570, 590, 630, 920, 950 and 980 kc, and Class III-E assignments on 790, 910, and 1150 kc.

§73.27 Local channels: Class IV stations.—The following frequencies are designated as local channels and are assigned for use by class IV stations: 1230, 1240, 1400, 1450, and 1490 kc.

NOTE: See NARBA concerning Cuban Class IV-E assignments on 1240 and 1340 kc.

§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: 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.

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 §1.352 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 (in NARBA and the U.S.-Mexican Agreement) 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 of the North American Region; and (2) whether the United States should register an objection to any new or changed assignment notified by another country of the North American Region. 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: (1) the service to be rendered by a proposed operation in the United States; or (2) the permissible interfering signal from one station in the United States to another United States station.

(d) With respect to applications for new Class II-A stations, and other applications accepted for filing before July 13, 1964, the following shall apply: Upon showing that a need exists, a Class II, III, or IV station may be assigned to a channel available for such class, even though interference will be received within its normally protected contour, subject to the following conditions:

(1) No objectionable interference will be caused by the proposed station to existing stations or that if interference will be caused, the need for the proposed service outweighs the need for the service which will be lost by reason of such interference; (2) Primary service will be provided to the community in which the proposed station is to be located; (3) The interference received does not affect more than 10 percent of the population in the proposed station's normally protected primary service area; however, in the event that the nighttime interference received by a proposed Class II or III station would exceed this amount, then an assignment may be made if the proposed station would provide either a standard broadcast night-time facility to a community not having such a facility or if 25 percent or more of the nighttime primary service area of the proposed station is without primary nighttime service. This subparagraph (3) shall not apply to existing Class IV stations on local channels applying for an increase in power above 250 watts, nor to new Class IV stations proposing power in excess of 250 watts with respect to population in the primary service area outside the equivalent 250 watt, 0.5 mv/m contour.

§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.

In FM rules . . .

§73.201. Numerical designation of FM broadcast channels.—The FM broadcast band consists of that portion of the radio frequency spectrum between 88 mc/s and 108 mc/s. It is divided into 100 channels of 200 kc/s 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:

EDITOR'S NOTE: [The band is 88-108 mc. Noncommercial educational FM occupies 88-92 mc.]

§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 A FM stations. All other listed channels are for Class B stations in Zones I and I-A and for Class C stations in Zone II. Channels designated with an asterisk are assigned for use by noncommercial educational broadcast stations only.

[EDITOR'S NOTE: Channel assignments by cities are reprinted in the AM-FM directory and are not repeated here.]

§73.203. Availability of Channels.—(a) Subject to the provisions of paragraph (b) of this section, applications may be filed to construct FM broadcast stations only on the channels assigned in the Table of Assignments (§73.202(b)) and only in 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; provided, however, that applications specifying channels which accord with publicly announced Commission 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.

(b) A channel assigned to a community listed in the Table of Assignments is available upon application in any listed community which is located within 10 miles of the listed community if the channel requested is a Class A channel and 15 miles if the channel is a Class B/C channel, provided no other channel in the listed community has been similarly assigned to another community and provided further that the unlisted community has not already removed a channel from any other listed community. Where channels are assigned to two or more communities listed in combination in the Table of Assignments the provisions of this paragraph shall apply separately to each community so listed. The distance between communities shall be determined by the distance between the respective coordinates thereof as set forth in the publication of the United States Department of Commerce entitled "Air Line Distance Between Cities in the United States." (This publication may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402). If said publication does not contain the coordinates of either or both communities, the coordinates of the main post office in either or both of the communities shall be used. The method to be followed in making the measurements is set forth in §73.208(c).

§73.204. International agreements and other restrictions on use of channels.

(a) Authorizations issued by the Commission for FM broadcast facilities will be subject to the provisions of any agreements entered into by the United States with Canada concerning FM assignments and authorizations. The Commission may decide after consultation with Canada that an application should not be granted; or if, pursuant to an agreement providing for timely objection after grant, Canada files such objection, the Commission may on its own motion set aside the grant pending consideration. The Commission will give notice of the filing of such objections.

(b) The frequency 89.1 mcs (ch. 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 500 feet above average terrain and effective radiated power of 20 kilowatts, and the Commission will make no assignments which would cause objectionable interference with such use.

(c) In Alaska, the frequency band 88-100 mcs is allocated exclusively to government radio services and the nongovernment fixed service. The frequencies 88.1 through 99.9 mcs (chs. 201 through 260) will not be assigned in Alaska for use by FM broadcast stations.

(d) In Hawaii, the frequency band 98-108 mcs is allocated for nonbroadcast use. The frequencies 98.1 through 107.9 mcs (chs. 251 through 300) will not be assigned in Hawaii for use by FM broadcast stations.

§73.205. Zones.

For the purpose of allocation and assignment, 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 29½° and

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45½°; 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 the 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 [in complete copy of Rules])

(b) Zone IA 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 States which is not located in either Zone I or Zone IA.

§73.206. Classes of commercial channels, and stations operating thereon.

(a) **Class A channels and stations.**
(1) Except as provided in §73.202, the following frequencies are designated as Class A channels and are assigned for use, in all zones, by Class A stations only:

Frequency (mc)	Channel No.	Frequency (mc)	Channel No.
92.1	221	100.1	261
92.7	224	100.9	265
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

(2) A Class A station is a station which operates on a Class A channel, and is designed to render service to a relatively small community, city, or town, and the surrounding rural area.

(3) A Class A station will not be authorized to operate with effective radiated power greater than 3 kilowatts (4.8 dbk), and the coverage of a Class A station shall not exceed that obtained from 3 kilowatts effective radiated power and antenna height above average terrain of 300 feet. For provisions concerning minimum facilities, and concerning reduction in power where antenna height above average terrain exceeds 300 feet, see §73.211.

(b) Class B-C channels and Class B and Class C stations.

(1) Except for the channels specified in paragraph (a) (1) of this section all of the channels listed in §73.201 from 222 through 300 (92.3 through 107.9 mcs) are classified as Class B-C channels, and (subject to the restrictions set forth in §73.204) are assigned for use in Zones I and I-A by Class B stations only, and for use in Zone II by Class C stations only (there are no Class C stations in Zones I or I-A and no Class B stations in Zone II).

(2) A Class B station is a station which operates on a Class B-C channel in Zone I or Zone I-A, and is designed to render service to a sizeable community, city, or town, or to the principal city or cities of an urbanized area, and to the surrounding area.

(3) With respect to Class B stations authorized after September 10, 1962, no such station will be authorized with effective radiated power greater than 50 kilowatts (17 dbk), and the coverage of a Class B station authorized after that date shall not exceed that obtained from 50 kilowatts effective radiated power and 500 feet antenna height above average terrain. For provisions concerning minimum power, and concerning reduction in power where antenna height above average terrain exceeds 500 feet, see §73.211.

(4) A Class C station is a station which operates on a Class B-C channel in Zone II, and is designed to render service to a

community, city, or town, and large surrounding area.

(5) With respect to Class C stations authorized after September 10, 1962, no such station will be authorized with effective radiated power greater than 100 kilowatts (20 dbk), and the coverage of a Class C station authorized after that date shall not exceed that obtained from 100 kilowatts effective radiated power and antenna height above average terrain of 2,000 feet. For provisions concerning minimum power, and reduction in power where antenna height above average terrain exceeds 2,000 feet, see §73.211.

§73.207. Minimum mileage separations between co-channel and adjacent-channel stations on commercial channels.

(a) Petitions to amend the Table of Assignments (§73.202(b)) (other than those expressly requesting amendment of this section or §73.205) will be dismissed and no application for a new station, change in the channel of an existing station, or increase in antenna height or effective radiated power, or change in location of an existing station will be accepted for filing unless the proposed facilities will be located at least as far from the transmitter sites of other co-channel and adjacent-channel stations (both existing and proposed) as the distances specified in this paragraph. Proposed stations of the respective classes shown in the left-hand column of the table (below) shall be located no less than the distance shown from co-channel stations and first adjacent-channel stations (200 kc removed and second and third adjacent channel stations (400 and 600 kc removed) of the classes shown in the remaining columns of the table. The distances shown between stations of different classes apply regardless of which is the proposed station under consideration (e.g., distances shown from a new Class A station to an existing Class C station are also the distances between a new Class C and an existing Class A station.) The distances between Class B and Class C stations apply only across zone lines. The adjacent-channel spacings listed also apply: (1) To applications for noncommercial educational facilities on channels 218, 219, or 220, with respect to other stations on channels 221, 222, or 223; (2) to applications for facilities on channels 221, 222, or 223 with respect to noncommercial educational stations on channels 218, 219, or 220 (for classification of noncommercial educational stations, see §73.504).

Class of Sta.	Class of Station and Frequency Separation (kc/)														
	Class A			Class B			Class C			10-watt educational					
	Co-ch.	200	400 600	Co-ch.	200	400 600	Co-ch.	200	400 600	Co-ch.	200	400 600			
Class A	65	40	15 15	—	65	40	40	—	105	65	65	—	30	15	15
Class B	—	—	—	150	105	40	40	170	135	65	65	—	—	40	40
Class C	—	—	—	—	—	—	—	180	150	65	65	—	—	65	65
10-watt educational	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

NOTE: Stations or assignments separated in frequency by 10.6 or 10.8 mc/s (53 or 54 channels) will not be authorized unless they conform to the following separation table:

Class of Stations	Required Spacing in Miles
A to A	5
B to A	10
B to B	15
C to A	20
C to B	25
C to C	30

(b) 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.

§73.209. 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 the subpart.

(b) The nature and extent of the protection from interference accorded to FM broadcast stations is limited solely to the protection which results from the minimum assignment and station separation requirements and the rules with respect to maximum powers and antenna heights set forth in this subpart.

(c) When the Commission determines that grant of an application would serve the public interest, convenience and necessity and the instrument of authorization specifies an antenna location in a designated antenna farm area which results in mileage separations less than those specified in this subpart, FM broadcast station permittees and licensees shall be afforded protection from interference equivalent to the protection afforded under the minimum mileage separations specified in this subpart.

§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 shall be:

Class A	100 watts (—10 dbk)
Class B	5 kw (7 dbk)
Class C	25 kw (14 dbk)

(2) No minimum antenna height above average height is specified.

(b) Maximum power and antenna height.
(1) The maximum effective radiated power in any direction, and maximum antenna height for equivalence purposes, shall be as follows for the various classes of stations:

	Maximum power	Maximum antenna height (feet above average terrain)
Class A	3 kw (4.8 dbk)	300
Class B	50 kw (17.0 dbk)	500
Class C	100 kw (20.0 dbk)	2,000

(2) Antenna heights may be used exceeding those specified in this paragraph for equivalence purposes, provided effective radiated power is reduced in the amount determined by use of the appropriate curves in Figure 3 of §73.333. Where, under Figure 3 of §73.333, effective radiated power must be reduced to an amount less than the normal minimum specified in paragraph (a) (1) of this section for the class of station involved, the effective radiated power determined by Figure 3 of §73.333 shall be the minimum for the station involved.

(3) In Puerto Rico and the Virgin Islands Class B stations may use antenna heights up to 2000 feet above average terrain with effective radiated powers up to 25 kw. For antenna heights above 2000 feet the power shall be reduced so that the station's 1 mv/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 kw and antenna height of 2000 feet. For powers above 25 kw (up to 50 kw) no antenna heights will be authorized which result in greater coverage by the 1 mv/m contour than that obtained with the facilities of 25 kw and antenna height of 2000 feet.

(c) Determination of applicable rules.

The zone in which the transmitter of an FM station is located or proposed to be located determines the applicable rules with respect to the class of station, and thus the minimum and maximum requirements as to facilities.

(d) Existing stations. Stations authorized as of September 10, 1962 which do not conform to the requirements of this section, may continue to operate as authorized. For stations operating with facilities in excess of those specified in Paragraph (b) of this section no changes in facilities will be authorized which either increases the effective radiated power or extends the location of the 1 mv/m field strength contour beyond that of its present authorization in any direction. The provisions of this section shall not apply to applications to increase facilities for those stations operating with powers less than the minimum powers specified in paragraph (a) of this section.

In TV rules . . . §73.603. Numerical designation of television channels—(a)

Chan-	Frequency	41 632-638
nel	band	42 638-644
No.	(Mega-	43 644-650
	cycles)	44 650-656
2	54-60	45 656-662
3	60-66	46 662-668

4..... 66-72	47.....668-674
5..... 76-82	48..... 674-680
6..... 82-88	49..... 680-686
7.....174-180	50.....686-692
8.....180-186	51.....692-698
9.....186-192	52.....698-704
10.....192-198	53.....704-710
11.....198-204	54.....710-716
12.....204-210	55.....716-722
13.....210-216	56.....722-728
14.....470-476	57.....728-734
15.....476-482	58.....734-740
16.....482-488	59.....740-746
17.....488-494	60.....746-752
18.....494-500	61.....752-758
19.....500-506	62.....758-764
20.....506-512	63.....764-770
21.....512-518	64.....770-776
22.....518-524	65.....776-782
23.....524-530	66.....782-788
24.....530-536	67.....788-794
25.....536-542	68.....794-800
26.....542-548	69.....800-806
27.....548-554	70.....806-812
28.....554-560	71.....812-818
29.....560-566	72.....818-824
30.....566-572	73.....824-830
31.....572-578	74.....830-836
32.....578-584	75.....836-842
33.....584-590	76.....842-848
34.....590-596	77.....848-854
35.....596-602	78.....854-860
36.....602-608	79.....860-866
37.....608-614	80.....866-872
38.....614-620	81.....872-878
39.....620-626	82.....878-884
40.....626-632	83.....884-890

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 United States Albers Equal Area Projection Map (based on standard parallels 29½° and 45½°; 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).

(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 29½° and 45½°; 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 150 mile radius to the north from the following specified points:

North Latitude	West Longitude
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°30'30"
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. Separations.—(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 separations 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 separations:

(1) Zone	Channels 2-13	Channels 14-83
I	170 miles	155 miles
II	190 miles	175 miles
III	220 miles	205 miles

(2) The minimum co-channel mileage 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 separations applicable to all zones:

(1) Channels 2-13	Channels 14-83
60 miles	55 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 separations 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 separations between stations on channels 14-83, inclusive, as set forth in Table IV of §73.698 must be met in either rule making proceedings looking towards the amendment of the Table of Assignments (§73.606(b)) or in licensing proceedings. No channel listed in column (1) of Table IV of §73.698 [see below] 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 mileage separations where the transmitter is located in a different zone from that in which the channel to be employed is located.

§73.614. Power and antenna height requirements.—(a) Minimum requirements. Applications will not be accepted for filing if they specify less than—10 dbk (100 watts) 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 in excess of that provided in this paragraph. Except as provided in subparagraph (1) below, the maximum effective radiated powers of television broadcast stations operating on the channels set forth below with antenna heights not in excess of 2000 feet above average terrain shall be as follows:

Channel Nos.	Maximum visual effective radiated power in db above one kilowatt (dbk)
2-6	20 dbk (100 kw)
7-13	25 dbk (316 kw)
14-83	37 dbk (5000 kw)

(1) In Zone I, on Channels 2-13 inclusive, the maximum powers specified above for these channels may be used only with antenna heights not in excess of 1000 feet above average terrain. Where antenna heights exceeding 1000 feet above average terrain are used on Channels 2-13, or antenna heights exceeding 2000 feet above average terrain are used on Channels 14-83, the maximum power shall be based on the chart designated as Figure 3 of §73.699.

NOTE: This limitation shall not apply to any licensee or permittee in Zone I who received an authorization after March 22, 1951 to relocate its transmitter site and construct a new tower and antenna to a height in excess of 1000 feet above average terrain and who constructed or who had substantially completed construction of said tower and antenna prior to April 14, 1952. In such case, maximum power may be utilized at the height above average terrain specified in the authorization. The limitation shall apply, however, where the tower of other principal supporting structure had been constructed prior to the date of such authorization.

(2) In Zones II and III, the maximum powers which may be used by television broadcast stations operating on the respective channels set forth in the above table with antenna heights exceeding 2000 feet above average terrain shall be based on the chart designated as Figure 4 of §73.699.

(3) The effective radiated power in any horizontal or vertical direction may not exceed the maximum values permitted by this section and Figure 3 and 4 of §73.699.

(4) The maximum effective radiated power in any direction above the horizontal plane shall be as low as the state of the art permits and may not exceed the effective radiated power in the horizontal direction in the same vertical plane.

(c) 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

(b) In Alaska and Hawaii the frequency bands 76-82 mc and 82-88 mc are allocated for nonbroadcast use. These frequency bands (Channels 5 and 6) will not be assigned in Alaska and Hawaii for use by television broadcast stations.

(c) Channel 37, 678-614 mc, is not available for assignment prior to January 1, 1974.

[EDITOR'S NOTE—Subsection (d) withdraws Channel 4 from television broadcast use in Guam.]

§73.606. Table of Assignments.—(a) The following Table of Assignments contains the channels assigned to the listed communities in the United States, its territories, and possessions. Channels designated with an asterisk are assigned for use by noncommercial educational broadcast stations only. A station on a channel identified by a plus or minus mark is required to operate with its carrier frequencies offset 10 kc above or below, respectively, the normal carrier frequencies.

[EDITOR'S NOTE: Channel assignments by cities are reprinted in the TV station directory and are not repeated here.]

§73.607. Availability of channels.—(a) Subject to the provisions of paragraph (b) of this section, applications may be filed to construct television broadcast stations only on the channels assigned in the Table of Assignments 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 provided, however, that applications specifying channels which accord with publicly announced Commission 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.

(b) A channel assigned to a community listed in the Table of Assignments is available upon application in any unlisted community which is located within 15 miles of the listed community. In addition, a channel assigned to a community listed in the Table of Assignments and not designated for use by noncommercial educational stations only, is available upon application in any other community within 15 miles thereof which, although listed in the table, is assigned only a channel designed for use only by noncommercial educational stations. Where channels are assigned to two or more communities listed in combination in the Table of Assignments the provisions of this paragraph shall apply separately to each community so listed. The distance between communities shall be determined by the distance between the respective coordinates thereof as set forth in the publication of the United States Department of Commerce entitled "Air Line Distances Between Cities in the United States." (This publication may be purchased from the Government Printing Office, Washington, D.C.) If said publication does not contain the coordinates of either or both communities, the coordinates of the main post office in either or both of such communities shall be used. The method to be followed in making the measurements is set forth in §73.611(d).

§73.609. Zones.—(a) For the purpose of allocation and assignment, the United States

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and the channel to be employed is located in Zone I.

[NOTE: The maximum visual effective radiated power of television broadcast stations operating on channels 14-83 within 250 miles of the Canadian-U.S. border may not be in excess of 30 dbk (1,000 kw.)]

MULTIPLE OWNERSHIP

In AM rules . . .

§73.35. Multiple ownership.—No license for a standard broadcast station shall be granted to any party (including all parties under common control) if:

(a) Such party directly or indirectly owns, operates, or controls one or more standard broadcast stations and the grant of such license will result in any overlap of the predicted or measured 1 mv/m groundwave contours of the existing and proposed stations computed in accordance with §73.183 or §73.186; or

(b) 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 standard broadcast station if the grant of such license would result in a concentration of control of standard broadcasting in a manner inconsistent with public interest, convenience, or necessity. In determining whether there is such a concentration of control, consideration will be given to the facts of each case with particular reference to such factors as the size, extent

and location of area served, the number of people served, classes of stations involved and the extent of other competitive service to the areas in question. The Commission, 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 standard broadcast 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 paragraph (a) of this section, partial (as well as total) ownership interests in corporate broadcast licensees represented by ownership of voting stock of such corporations will be considered.

NOTE 3: Except as provided in NOTE 4 of this section, in applying the provisions of paragraphs (a) and (b) of this section to the stockholders of a corporation which has more than 50 voting stockholders, only those stockholders need be considered who are officers or directors or who directly or indirectly own 1 percent or more of the outstanding voting stock.

NOTE 4: In applying the provisions of paragraphs (a) and (b) of this section to the stockholders of a corporation which has more than 50 voting stockholders, an investment company, as defined in 15 USC §80a-3 (commonly called a mutual fund), need be considered only if it directly or indirectly owns 3 percent or more of the outstanding

voting stock or if officers or directors of the corporation are representatives of the investment company. Holdings by investment companies under common managements shall be aggregated.

NOTE 5: In calculating the percentage of ownership of voting stock under the provisions of NOTE 4, if an investment company directly or indirectly owns voting stock in a company which in turn directly or indirectly owns 50% or more of the voting stock of a corporate broadcast licensee, the investment company shall be considered to own the same percentage of outstanding shares of the corporate broadcast station licensee as it owns of the outstanding voting shares of the company standing between it and the licensee corporation. If the intermediate company owns less than 50% of the voting stock of a corporate broadcast station licensee, the holding of the investment company need not be considered under the 3 percent rule, but, officer or directors of the licensee corporation who are representatives of the intermediate company shall be deemed to be representatives of the investment company.

NOTE 6: In cases where record and beneficial ownership of voting stock of a corporate broadcast station licensee which has more than 50 voting stockholders are not identical, e.g., bank nominees holding stock as record owners for the benefit of mutual funds, brokerage houses holding stock in street name for the benefit of customers, trusts holding stock as record owners for the benefit of designated parties, the party having the right to determine how the stock will be voted will be considered to own it for the purposes of these rules.

NOTE 7: Paragraph (a) of this section will not be applied so as to require divestiture, by any licensee, of existing facilities. Said paragraph 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 §1.540(b) or 1.541(b) of this chapter, or to applications for assignment of license or transfer of control to heirs or legatees by will or intestacy where no new or increased overlap would be created between commonly owned stations. Said paragraph will apply to all 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 no greater than that already existing. (The resulting overlap areas 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, and necessity.) Commonly owned stations with overlapping contours prohibited by paragraph (a) of this section may not be assigned or transferred to a single person, group, or entity, except as provided in this Note.

In FM rules . . .

§73.240. Multiple ownership.—(A) No license for an FM broadcast station shall be granted to any party (including all parties under common control) if:

(1) Such party directly or indirectly owns, operates, or controls one or more FM broadcast stations and the grant of such license will result in any overlap of the predicted 1 mv/m contours of the existing and proposed stations, computed in accordance with §73.313; or

(2) 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 FM broadcast station if the grant of such license would result in a concentration of control of FM broadcasting in a manner inconsistent with the public interest, convenience or necessity. In determining whether there is such a concentration of control, consideration will be given to the facts of each case with particular reference to such factors as the size, extent and location of areas served, the number of people served, classes of stations involved and the extent of other competitive service to the areas in question. The Commission, 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 FM broadcast stations.

(b) Paragraph (a) of this section is not applicable to non-commercial educational FM 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.

(1) Channel	(2) 20 miles (I.F. beat)	(3) 20 miles (Intermod- ulation)	(4) 55 miles (Adjacent channel)	(5) 60 miles (Oscil- lator)	(6) 60 miles (Sound image)	(7) 75 miles (Picture image)
14	22	16-19	15	21	29	30
15	23	17-20	14,16	22	29	30
16	24	14,18-21	15,17	23	30	31
17	25	14-15,19-22	16,18	24	31	32
18	26	14-16,20-23	17,19	25	32	33
19	27	14-17,21-24	18,20	26	33	34
20	28	15-18,22-25	19,21	27	34	35
21	29	16-19,23-26	20,22	28,14	35	36
22	30,14	17-20,24-27	21,23	29,15	36	37
23	31,15	18-21,25-28	22,24	30,16	37	38
24	32,16	19-22,26-29	23,25	31,17	38	39
25	33,17	20-23,27-30	24,26	32,18	39	40
26	34,18	21-24,28-31	25,27	33,19	40	41
27	35,19	22-25,29-32	26,28	34,20	41	42
28	36,20	23-26,30-33	27,29	35,21	42,14	43
29	37,21	24-27,31-34	28,30	36,22	43,15	44,14
30	38,22	25-28,32-35	29,31	37,23	44,16	45,15
31	39,23	26-29,33-36	30,32	38,24	45,17	46,16
32	40,24	27-30,34-37	31,33	39,25	46,18	47,17
33	41,25	28-31,35-38	32,34	40,26	47,19	48,18
34	42,26	29-32,36-39	33,35	41,27	48,20	49,19
35	43,27	30-33,37-40	34,36	42,28	49,21	50,20
36	44,28	31-34,38-41	35,37	43,29	50,22	51,21
37	45,29	32-35,39-42	36,38	44,30	51,23	52,22
38	46,30	33-36,40-43	37,39	45,31	52,24	53,23
39	47,31	34-37,41-44	38,40	46,32	53,25	54,24
40	48,32	35-38,42-45	39,41	47,33	54,26	55,25
41	49,33	36-39,43-46	40,42	48,34	55,27	56,26
42	50,34	37-40,44-47	41,43	49,35	56,28	57,27
43	51,35	38-41,45-48	42,44	50,36	57,29	58,28
44	52,36	39-42,46-49	43,45	51,37	58,30	59,29
45	53,37	40-43,47-50	44,46	52,38	59,31	60,30
46	54,38	41-44,48-51	45,47	53,39	60,32	61,31
47	55,39	42-45,49-52	46,48	54,40	61,33	62,32
48	56,40	43-46,50-53	47,49	55,41	62,34	63,33
49	57,41	44-47,51-54	48,50	56,42	63,35	64,34
50	58,42	45-48,52-55	49,51	57,43	64,36	65,35
51	59,43	46-49,53-56	50,52	58,44	65,37	66,36
52	60,44	47-50,54-57	51,53	59,45	66,38	67,37
53	61,45	48-51,55-58	52,54	60,46	67,39	68,38
54	62,46	49-52,56-59	53,55	61,47	68,40	69,39
55	63,47	50-53,57-60	54,56	62,48	69,41	70,40
56	64,48	51-54,58-61	55,57	63,49	70,42	71,41
57	65,49	52-55,59-62	56,58	64,50	71,43	72,42
58	66,50	53-56,60-63	57,59	65,51	72,44	73,43
59	67,51	54-57,61-64	58,60	66,52	73,45	74,44
60	68,52	55-58,62-65	59,61	67,53	74,46	75,45
61	69,53	56-59,63-66	60,62	68,54	75,47	76,46
62	70,54	57-60,64-67	61,63	69,55	76,48	77,47
63	71,55	58-61,65-68	62,64	70,56	77,49	78,48
64	72,56	59-62,66-69	63,65	71,57	78,50	79,49
65	73,57	60-63,67-70	64,66	72,58	79,51	80,50
66	74,58	61-64,68-71	65,67	73,59	80,52	81,51
67	75,59	62-65,69-72	66,68	74,60	81,53	82,52
68	76,60	63-66,70-73	67,69	75,61	82,54	83,53
69	77,61	64-67,71-74	68,70	76,62	83,55	55
70	78,62	65-68,72-75	69,71	77,63	56	56
71	19,63	66-69,73-76	70,72	78,64	57	57
72	80,64	67-70,74-77	71,73	79,65	58	58
73	81,65	68-71,75-78	72,74	80,66	59	59
74	82,66	69-72,76-79	73,75	81,67	60	60
75	83,67	70-73,77-80	74,76	82,68	61	61
76	68	71-74,78-81	75,77	83,69	62	62
77	69	72-75,79-82	76,78	70	63	63
79	70	73-76,80-83	77,79	71	64	64
79	71	74-77,81-83	78,80	72	65	65
80	72	75-78,82-83	79,81	73	66	66
81	73	76-79,83	80,82	74	67	67
82	74	77-80	81,83	75	68	68
83	75	78-81	82	76	69	69

* UHF mileage separations, see Sec 76.610(d).

NOTE 2: In applying the provisions of paragraph (a) (1) of this section, partial (as well as total) ownership interests in corporate broadcast licensees represented by ownership of voting stock of such corporations will be considered.

NOTE 3: Except as provided in NOTE 4 of this section, in applying the provisions of paragraphs (a) (1) and (a) (2) of this section to the stockholders of a corporation which has more than 50 voting stockholders, only those stockholders need be considered who are officers or directors or who directly or indirectly own 1 percent or more of the outstanding voting stock.

NOTE 4: In applying the provisions of paragraphs (a) (1) and (a) (2) of this section to the stockholders of a corporation which has more than 50 voting stockholders, an investment company, as defined in 15 USC §80a-3 (commonly called a mutual fund), need be considered only if it directly or indirectly owns 3 percent or more of the outstanding voting stock or if officers or directors of the corporation are representatives of the investment company. Holdings by investment companies under common management shall be aggregated.

NOTE 5: In calculating the percentage of ownership of voting stock under the provisions of NOTE 4, if an investment company directly or indirectly owns voting stock in a company which in turn directly or indirectly owns 50% or more of the voting stock of a corporate broadcast licensee, the investment company shall be considered to own the same percentage of outstanding shares of the corporate broadcast station licensee as it owns of the outstanding voting shares of the company standing between it and the licensee corporation. If the intermediate company owns less than 50% of the voting stock of a corporate broadcast station licensee, the holding of the investment company need not be considered under the 3 percent rule, but, officers or directors of the licensee corporation who are representatives of the intermediate company shall be deemed to be representatives of the investment company.

NOTE 6: In cases where record and beneficial ownership of voting stock of a corporate broadcast station licensee which has more than 50 voting stockholders are not identical, e.g., bank nominees holding mutual funds, brokerage houses holding stock as record owners for the benefit of owners for the benefit of designated customers, trusts holding stock as record parties, the party having the right to determine how the stock will be voted will be considered to own it.

NOTE 7: Paragraph (a) (1) of this section will not be applied so as to require divestiture, by any licensee, of existing facilities. Said paragraph will not apply to applications for assignment of license or transfer of control filed in accordance with §§1.540(b) or 1.541(b) of this chapter, or to applications for assignment of license or transfer of control to heirs or legatees by will or intestacy where no new or increased overlap would be created between commonly owned stations. Said paragraph will apply to all 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 no greater than that already existing. (The resulting overlap areas 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, and necessity.) Commonly owned stations with overlapping contours prohibited by paragraph (a) (1) of this section may not be assigned, or transferred to a single person, group, or entity, except as provided in this Note.

In TV rules . . .

§73.636. Multiple ownership.—(a) No license for a television broadcast station shall be granted to any party (including all parties under common control) if:

(1) Such party directly or indirectly owns, operates, or controls one or more television broadcast stations and the grant of such license will result in overlap of the Grade B contours of the existing and proposed stations, computed in accordance with §73.684; or

(2) 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 television broadcast station if the grant of such license would result in a concentration of control of television broadcasting in a manner inconsistent with public interest, convenience, or necessity. In determining whether there is such a concentra-

tion of control, consideration will be given to the facts of each case with particular reference to such factors as the size, extent and location of areas served, the number of people served, and the extent of other competitive service in the areas in question. The Commission, 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 television broadcast stations, no more than five of which may be in the VHF band.

(b) Paragraph (a) of this section is not applicable to non-commercial educational 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 paragraph (a) (1) of this section, partial (as well as total) ownership interests in corporate broadcast licensees represented by ownership of voting stock of such corporations will be considered.

NOTE 3: Except as provided in NOTE 4 of this section, in applying the provisions of paragraph (a) (1) and (a) (2) of this section to the stockholders of a corporation which has more than 50 voting stockholders, only those stockholders need be considered who are officers or directors or who directly or indirectly own 1 percent or more of the outstanding voting stock.

NOTE 4: In applying the provisions of paragraphs (a) (1) and (a) (2) of this section to the stockholders of a corporation which has more than 50 voting stockholders, an investment company, as defined in 15 USC §80a-3 (commonly called a mutual fund), need be considered only if it directly or indirectly owns 3 percent or more of the outstanding voting stock or if officers or directors of the corporation are representatives of the investment company. Holdings by investment companies under common management shall be aggregated.

NOTE 5: In calculating the percentage of ownership of voting stock under the provisions of NOTE 4, if an investment company directly or indirectly owns 50% or more of the voting stock in a corporate broadcast licensee, the investment company shall be considered to own the same percentage of outstanding shares of the corporate broadcast station licensee as it owns of the outstanding voting shares of the company standing between it and the licensee corporation. If the intermediate company owns less than 50% of the voting stock of a corporate broadcast station licensee, the holding of the investment company need not be considered under the 3 percent rule, but, officers or directors of the licensee corporation who are representatives of the intermediate company shall be deemed to be representatives of the investment company.

NOTE 6: In cases where record and beneficial ownership of voting stock of a corporate broadcast station licensee which has more than 50 voting stockholders are not identical, e.g., bank nominees holding stock as record owners for the benefit of mutual funds, brokerage houses holding stock in street name for the benefit of customers, trusts holding stock as record owners for the benefit of designated parties, the party having the right to determine how the stock will be voted will be considered to own it for the purposes of these rules.

NOTE 7: Paragraph (a) (1) of this section will not be applied so as to require divestiture, by any licensee, of existing facilities. Said paragraph will not apply to applications for assignment of license or transfer of control filed in accordance with §§1.540(b) or 1.541(b) of this chapter, or to applications for assignment of license or transfer of control to heirs or legatees by will or intestacy where no new or increased overlap would be created between commonly owned stations. Said paragraph 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 broadcast station that was commonly owned, operated, or controlled as of September 30, 1964. Such major changes will be considered on a case-by-case basis to determine whether such overlap exists with a commonly owned, operated, or controlled station as to be against the public interest. Said paragraph will apply to all applications for new stations, to all other applications for assignment or transfer, and to all other applications for major changes in existing stations except major changes that will result in overlap no greater than that already existing. (The resulting overlap areas 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, and necessity.) Commonly owned stations with overlapping contours prohibited by paragraph (a) (1) of this section may not be assigned or transferred to a single person, group, or entity, except as provided in this Note.

NOTE 8: Paragraph (a) (1) of this section will not be applied to television stations which are primarily "satellite" operations. Television "satellite" operations will be considered on a case-by-case basis in order to determine whether such overlap exists with a commonly owned, operated, or controlled station as to be against the public interest. Whether or not a particular 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 station, may subsequently become a "non-satellite" station with local studios and locally originated programming. However, such commonly owned "non-satellite" stations with Grade B overlap may not be transferred or assigned to a single person, group, or entity.

STUDIO LOCATION ORIGINATIONS

In AM rules . . .

§73.30 Station location and program origination.—(a) (1) Except as provided in paragraph (b) of this section, each standard broadcast station will be licensed to serve primarily a particular city, town, political subdivision, or community which will be specified in the station license and the station will be considered to be located in such place. (2) Unless licensed as a synchronous amplifier transmitter, each station shall maintain a studio, which will be known as the main studio, in the place where the station is located provided that the main studio may be located at the transmitter site whether or not the transmitter site is in the place where the station is located. (3) A majority (computed on the basis of duration and not number) of a station's programs or in the case of a station affiliated with a network two-thirds of such station's non-network programs, whichever is smaller, shall originate from the main studio or from other studios or remote points situated in the place where the station is located.

(b) (1) Stations will be licensed to serve more than one city, town, political subdivision, or community only where a satisfactory showing is made that each such place meets all the requirements of the rules and regulations of this subpart with respect to the location of main studios; that the station can and will originate a substantial number of local live programs from each such place; and that the requirements as to origination of programs contained in paragraph (a) of this section would place an unreasonable burden on the station if it were licensed to serve only one city, town, political subdivision or community. (2) A station licensed to serve more than one place shall be considered to be located in and shall maintain main studios in each such place. With respect to such station and requirements as to origination of programs contained in paragraph (a) of this section shall be satisfied by the origination of programs from any or all of the main studios or from other studios and remote points situated in any or all of the places in which the main studios are located.

(c) The transmitter of each standard broadcast station shall be so located that primary service is delivered to the borough or city in which the main studio is located in accordance with the rules and regulations of this subpart.

§73.31. Authority to move main studio.—The licensee of a station shall not move its main studio outside the borders of the borough or city, state, district, territory, or possession in which it is located, unless such move is to the location of the station's transmitter, without first securing a modification of construction permit or license. The licensee shall promptly notify the Commission of any other change in location of the main studio.

In FM rules . . .

§73.210.—[EDITOR'S NOTE: In substance the same as §73.30. above].

FCC Rules

In TV rules ...

§73.613 Main studio location.—(a) The main studio of a television broadcast station shall be located in the principal community to be served. Where the principal community to be served is a city, town, village or other political subdivision, the main studio shall be located within the corporate boundaries of such city, town, village or other political subdivision. Where the principal community to be served does not have specifically defined political boundaries, applications will be considered on a case-to-case basis in the light of the particular facts involved to determine whether the main studio is located within the principal community to be served.

(b) In case where an adequate showing is made that there is good cause for locating a main studio outside the principal community to be served and that to do so would not be inconsistent with the operation of the station in the public interest, the Commission will permit the use of a main studio location other than that specified in paragraph (a) of this section. The licensee or permittee of a television broadcast station shall not move his main studio outside the principal community in which it is located without first securing a modification of construction permit or license. Such a licensee or permittee shall notify the Commission promptly of any change of the location of the main studio within the community. In any case where the main studio is located outside the principal community to be served, the licensee or permittee of a television broadcast station shall not move his main studio without first securing a modification of construction permit or license.

OPERATING SCHEDULES

For AM stations ...

§73.71 Minimum operating schedule.—(a) All standard broadcast stations are required to maintain an operating schedule of not less than 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. Provided, however, that stations authorized for daytime operation only need comply only with the minimum requirement for operation between 6 a.m. and 6 p.m.

(b) In the event that causes beyond the licensee's control make it impossible to adhere to the operating schedule in paragraph (a) of this section or to continue operating, the station may limit or discontinue operation for a period of not more than 10 days, without further authority of the Commission. However, the Commission and the Engineer in Charge of the radio district in which the station is located shall be immediately notified in writing if the station is unable to maintain the minimum operating schedule and shall be subsequently notified when the station resumes regular operation.

§73.72 Operation during experimental period.—The licensee of each standard broadcast station shall operate or refrain from operating its station during the experimental period as directed by the Commission in order to facilitate frequency measurement or for the determination of interference.

§73.73 Specified hours.—If the license of a station specifies the hours of operation, the schedule so specified shall be adhered to except as provided in §§73.71 and 73.72.

§73.79 License to specify sunrise and sunset hours.—If the licensee of a broadcast station is required to commence or cease operation, or to change the mode of operation of the station at the times of sunrise and sunset at any particular location, the controlling times of each month of the year are set forth 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 that month adjusted to the nearest quarter hour. In accordance with a standardized procedure described therein, actual sunrise and sunset time are derived by interpolation in the tables of the 1946 American Nautical Almanac, issued by the Nautical Almanac Office of the United States Naval Observatory.

§73.80 Secondary station; filing of operating schedule.—The license of a secondary station 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, bearing 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 Commission will affix its file mark and return one copy to the licensee authorized to operate limited time, which shall be posted with the station license and considered as a part thereof. Departure from said operating schedule will be permitted only in accordance with the procedure set forth in §73.77.

§73.81 Secondary station; failure to reach agreement.—If the licensee of a secondary station authorized to operate limited time and a dominant station on a channel are unable to agree upon a definite time for resumption of operation by the station authorized limited time, the Commission shall be so notified by the licensee of the station authorized limited time. After receipt of such statement the Commission will designate for hearing the applications of both stations for renewal of license, and pending the hearing the schedule previously adhered to shall remain in full force and effect.

§73.82 Departure from schedule; material violation.—In all cases where a station licensee is required to prepare and file an operating schedule, any deviation of departure from such schedule, except as herein authorized, shall be considered as a violation of a material term of the license.

§73.83 References to time.—Where used in Commission authorizations to specify average times of sunrise and sunset, or to specify other times at which stations commence operation or change modes of operation and which vary with local sunrise and local sunset, "standard time" means standard time (as determined by the Department of Transportation for the various areas of the United States) as that term has been used prior to the Uniform Time Act of 1966, i.e., time sometimes referred to as "nonadvanced" or "winter-based" time, without the 1-hour advancement provided for in that Act from late April until late October. In all other time references in Commission authorizations (including times for specified hours and shared hours stations and the expiration times of licenses) "standard time" means local time. The term "local time," where used in this part and in Part 74, of this chapter, means the time (advanced or non-advanced) prevailing in the community of station location at the particular time of the year. Where used in this part or in Part 74, the term "advanced time" means time from the last Sunday in April until the last Sunday in October with the 1-hour advancement contemplated by the Uniform Time Act of 1966 and sometimes called "daylight saving time"; and the term "nonadvanced time" means time from the last Sunday in October until the last Sunday in April, and time during the remainder of the year in jurisdictions not adopting "advanced time."

§73.87 Times and modes of program transmission.—Except as provided in §73.98 and §73.99, no standard broadcast station shall operate at times, or with modes or powers, other than those specified in the basic instrument of authorization.

§73.88 Blanketing interference.—The licensee of each broadcast station is required to satisfy all reasonable complaints of blanketing interference with the 1 mV contour.

§73.98 Operation during emergency.—(a) When necessary to the safety of life and property and in response to dangerous conditions of a general nature, standard broadcast stations may, at the discretion of the licensee and without further Commission authority, transmit emergency weather warnings and other emergency information. 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. Transmission of information concerning school closings and changes in school bus schedules resulting from any of these conditions is appropriate. In addition, and if requested by responsible public officials, emergency point-to-point messages may be transmitted for the purpose of requesting or dispatching aid and assisting in rescue operations.

(b) When emergency operation is conducted utilizing the facilities, systems, and procedures of a Detailed State EBS Operational Plan as provided in §73.971 of this part, the attention signal described in §73.906 may be employed.

(c) Except as provided in paragraph (d) of this section, emergency operation shall be confined to the hours, frequencies, powers, and modes of operation specified in the license documents of the stations concerned.

(d) When adequate advance warning cannot be given with the facilities or hours authorized, stations may employ their full daytime facilities during nighttime hours to carry weather warnings and other types of

emergency information connected with the examples listed in paragraph (a) of this section. 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 nonexistent, inadequate from the standpoint of coverage, or not serving public need. All operation under this paragraph must be conducted on a noncommercial basis. Recorded music may be used to the extent necessary to provide program continuity.

(e) Any emergency operation undertaken in accordance with this section may be terminated by the Commission, if required in the public interest.

(f) Immediately upon cessation of an emergency during which broadcast facilities were used for the transmission of point-to-point messages under paragraph (a) of this section, or when daytime facilities were used during nighttime hours in accordance with paragraph (d) of this section, a report in letter form shall be forwarded to the Commission and the Engineer in Charge of the radio district in which the station is located, setting forth the nature of the emergency, the dates and hours of emergency operation, and a brief description of the material carried during the emergency period. A certification of compliance with the noncommercialization provision of paragraph (d) of this section must accompany the report where daytime facilities are used during nighttime hours, together with a detailed showing concerning the alternate service provisions of that paragraph.

(g) If an Emergency Action Condition is declared while emergency operation under this section is in progress, the Emergency Action Notification shall take precedence.

§73.99 Pre-sunrise Service Authority.—(a) In order to afford the maximum uniformity in early morning operations compatible with interference considerations, the following classes of standard broadcast permittees and licensees are eligible to request Pre-sunrise Service Authority (PSA):

(1) Class II stations except those operating on Class I-A Clear Channels not assigned to the United States under the North American Regional Broadcasting Agreement (NARBA) or the US/Mexican Agreement, and those assigned to U.S. I-A clear channels and located east of the co-channel I-A station.

(2) Class III stations.

(b) When issued, AFSA will permit:

(1) Class II stations to commence operation with their daytime antenna systems either at 6:00 a.m. local time or at sunrise at the westernmost Class I station located east of the Class II station (whichever is later), and to continue such operation until local sunrise; Provided, that the permissible power, to be specified in the PSA, shall not exceed 500 watts (or the authorized daytime or critical hours power, if less than 500 watts), or such lesser power as may be determined on the basis of calculations made pursuant to paragraph (c) of this section.

(2) Class III stations to commence operation with their daytime antenna systems at 6:00 a.m. local time, and to continue such operation until local sunrise; Provided, that the permissible power, to be specified in the PSA, shall not exceed 500 watts or such lesser power as may be determined on the basis of calculations made pursuant to paragraph (c) of this section.

(c) Notwithstanding the provisions of §§1.571 and 1.580 of this chapter, requests for PSA's shall be treated as proposals for minor change in existing facilities and, as such, are not subject to the procedural requirements or remedies applicable to applications for new facilities and major changes therein. PSA requests shall be submitted by letter, signed in the manner specified in §1.513 of this chapter, with the following information:

(1) Name, call letters and station location.

(2) For Class II stations, a showing that objectionable interference, as determined by the Standard Broadcast Technical Standards of this subpart or by the engineering standards of the NARBA or the US/Mexican Agreement (whichever is controlling), will not be caused within the 0.5 mV/m 50 percent skywave contour of any domestic or foreign Class I-B clear Channel station located west of the Class II station. In addition, the applicant must show that foreign Class II stations (if any) assigned to the same channel will receive full treaty protection. If the foregoing protections cannot be achieved on the basis of 500-watt operation, calculations may be submitted to establish the level to which power must be reduced to preclude objectionable interference; Provided, that with respect to Canadian Class II stations, permissible radiation may be established by the use of Figure 12 of §73.190, in the manner described in

paragraph (c) (3) of this section.

(3) For Class III stations, a showing that co-channel stations in foreign countries will receive full treaty protection. If such protection cannot be achieved on the basis of 500-watt operation, calculations may be submitted to establish the level to which power must be reduced to preclude objectionable interference: Provided, that with respect to Canadian Class III stations, such power level may be established by a showing that the radiation at the pertinent vertical angle toward co-channel Canadian stations does not exceed that defined in Figure 12 of §73.190. If the latter showing cannot be made on the basis of 500-watt operation, calculations may be submitted to establish the level to which power must be reduced in order to limit radiation at the pertinent vertical angle to the values specified in Figure 12 of §73.190.

(4) A description of the method whereby any proposed power reduction will be achieved.

(d) Calculations made under paragraph (c) of this section shall not take outstanding PSA's into account, nor shall the grant of a PSA confer any degree of interference protection on the holder thereof.

(e) Operation under a PSA is not mandatory, and will not be included in determining compliance with the requirements of §73.71. To the extent actually undertaken, however, pre-sunrise operation will be considered by the Commission in determining overall compliance with past programing representations and station policy concerning commercial matter.

(f) The PSA is secondary to the basic instrument of authorization and may be suspended, modified, or withdrawn by the Commission 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.

(g) The PSA will be issued for a term coinciding with the current basic instrument of authorization and, unless surrendered by the holder or suspended, modified or withdrawn by the Commission, will have continuing or renewed effect under succeeding instruments.

(h) The issuance of a PSA is intended to include the waiver of §§73.45, 73.182, and 73.188 in situations where the operation might otherwise be considered as technically sub-standard. However, such special conditions as the Commission may deem appropriate may be included in the PSA to insure the operation of the transmitter and associated equipment in accordance with all phases of good engineering practice.

(i) In the event of permanent discontinuance of pre-sunrise operation, the PSA shall be forwarded to the Commission's Washington office for cancellation, and the Engineer in Charge of the radio district in which the station is located shall be notified accordingly.

For FM Stations . . .

§73.242 Duplication of AM and FM programming.—(a) After October 15, 1965, licensees of FM stations in cities of over 100,000 population (as listed in the latest regular U. S. Census Reports) shall operate so as to devote no more than 50 percent of the average FM broadcast week to programs duplicated from an AM station owned by the same licensee in the same local area. For the purposes of this paragraph duplication is defined to mean simultaneous broadcasting of a particular program over both the AM and FM station or the broadcast of a particular FM program within 24 hours before or after the identical program is broadcast over the AM station.

(b) Compliance with the non-duplication requirement shall be evidenced by such showing in connection with renewal applications as the Commission may require.

(c) Upon a substantial showing that continued program duplication over a particular station would better serve the public interest than immediate non-duplication, a licensee may be granted a temporary exemption from the requirements of paragraph (a) of this section. Requests for such exemption must be submitted to the Commission, accompanied by supporting data, at least 6 months prior to the time the non-duplication requirement of paragraph (a) of this section is to become effective as to a particular station. Such exemption, if granted, will ordinarily run to the end of the station's current license period, or if granted near the end of the license period, for some other reasonable period not to exceed 3 years.

§73.261 Time of operation.—(A) All FM broadcast stations will be licensed for unlimited time operation. A minimum of 36 hours per week during the hours of 6 a.m. to midnight, consisting of not less than 5 hours in any one day, except Sunday, must

be devoted to the FM broadcast operation.

(b) In the event that causes beyond a licensee's control make it impossible to adhere to the operating schedule in paragraph (a) of this section or to continue operating, the station may limit or discontinue operation for a period of not more than 10 days, without further authority of the Commission. However, the Commission and the Engineer in Charge of the radio district in which the station is located shall be immediately notified in writing if the station is unable to maintain the minimum operating schedule and shall be subsequently notified when the station resumes regular operation.

§73.262 Experimental operation.—(a) The period between 12 midnight and 6 a.m., prevailing local time, may be used for experimental purposes in testing and maintaining apparatus by the licensee of any FM broadcast station on its assigned frequency and not in excess of its authorized power without specific authorization from the Commission.

(b) FM broadcast stations may (with prior notification to the Commission and the Engineer in Charge of the radio district in which the station is located) test, maintain, and adjust the apparatus at the station during other time periods; and may (upon informal application) conduct technical experimentation directed to the improvement of technical phases of operation during other time periods and for such purposes may utilize a signal other than the standard FM signal, subject to the following conditions:

(1) That the licensee complies with the provisions of §73.261 with regard to the minimum number of hours of operation.

(2) That emissions outside the authorized bandwidth shall comply with §73.317 (a) and that no interference is caused to the transmissions of other FM broadcast stations.

(3) No charges either direct or indirect shall be made by the licensee of an FM broadcast station for the production or transmission of programs when conducting technical experimentation.

For TV Stations . . .

§73.651 Time of operation.—(a) (1) All television broadcast stations will be licensed for unlimited time operation. Each such station shall maintain a regular program operating schedule as follows: not less than 2 hours daily in any five broadcast days per week and not less than a total of 12 hours per week during the first 18 months of the stations operation; not less than 2 hours daily in any 5 broadcast days per week and not less than a total of 16 hours, 20 hours and 24 hours per week for each successive 6-month period of operation, respectively; and not less than a total of 28 hours per week thereafter.

(2) "Operation" includes the period during which a station is operated pursuant to temporary authorization or during program tests, as well as during the license period. Time devoted to test patterns, or to aural presentations accompanied by the incidental use of fixed visual images which have no substantial relationship to the subject matter of such aural presentations, shall not be considered in computing periods of program service.

(3) In the event that causes beyond a licensee's control make it impossible to adhere to the operating schedule in paragraph (a) (1) of this section or to continue operating, the station may limit or discontinue operation for a period of not more than 10 days, without further authority of the Commission. However, the Commission and the engineer in charge of the radio district in which the station is located shall be immediately notified in writing if the station is unable to maintain the minimum operating schedule and shall be subsequently notified when the station resumes regular operation.

(b) Noncommercial educational television broadcast stations are not required to operate on a regular schedule and no minimum number of hours of operation is specified; but the hours of actual operation during a license period shall be taken into account when considering the renewal of noncommercial educational television broadcast licenses.

(c) (1) The aural transmitter of a television station shall not be operated separately from the visual transmitter except for the following purposes:

(i) For actual tests of station equipment or actual experimentation in accordance with §73.666; and

(ii) For emergency "fills" in case of visual equipment failure or unscheduled and unavoidable delays in presenting visual programs. In such situations the aural transmitter may be used to advise the audience of difficulties and to transmit for a short period program material of such nature that

the audience will be enabled to remain tuned to the station; for example, music or news accompanying a test pattern or other visual presentation.

(2) During periods of transmission of a test pattern on the visual transmitter of a television station, aural transmission shall consist only of a single tone or series of variable tones. During periods when still pictures or slides are employed to produce visual transmissions which are accompanied by aural transmissions, the aural and visual transmission shall be integral parts of a program or announcement and shall have a substantial relationship to each other; Provided: That nothing herein shall preclude the transmission of a test pattern, still picture or slides for the following purposes and periods:

(1) To accompany aural announcements of the station's program schedule and aural news broadcasts or news commentaries, for a total period not to exceed one hour in any broadcast day.

(ii) To accompany aural transmissions for a period of time not to exceed fifteen minutes immediately prior to the commencement of a programing schedule.

Examples: (1) Duplication of AM or FM programs on the aural transmitter of a television station while the same program is broadcast on the visual transmitter (i.e., a "simulcast") is consistent with this paragraph.

(2) Duplication of AM or FM programs on the aural transmitter of a television station while a test pattern is broadcast on the visual transmitter is not consistent with this paragraph, except for the specific purposes and periods specified in paragraph (c) (2).

(3) A travel lecture in which the words of the lecturer are broadcast simultaneously with still pictures or slides of scenes illustrating the lecture and a newscast in which the words of the newscaster are broadcast simultaneously with still pictures or slides of the news events, are examples of programs in which the aural and visual transmission are integral parts of the same program having a substantial relationship to each other, within the meaning of paragraph (c) (2). Mood music unrelated to the visual transmission is not consistent with this paragraph.

(4) The broadcast of a test pattern accompanied by a musical composition for the purpose of demonstration, sale, installation or orientation of television receivers, or receiving antennas is not consistent with this paragraph.

(5) Music accompanying the transmission of a test pattern upon which is visually imposed a moving test consisting of continuous program material, such as a running newscast or news commentary, is consistent with this paragraph.

(6) Music accompanying the transmission of a test pattern upon which is visually imposed a clock indicating the time of day, or a text that is changed at spaced intervals, is not consistent with this paragraph.

OPERATOR REQUIREMENTS

In AM rules

§73.93 Operator requirements.—(a) One or more radio operators holding a valid radiotelephone first-class operator license, except as provided in paragraph (b) of this section, shall be in actual charge of the transmitting apparatus and shall be on duty either at the transmitter location or remote control point. If operation by remote control has not been authorized, the transmitter shall be readily accessible and clearly visible to the operator at his normal operating position. If operation by remote control is authorized, the control and monitoring equipment shall be readily accessible and clearly visible to the operator at his normal operating position.

(b) In the cases where a station is authorized for non-directional operation with power not in excess of 10 kilowatts, the routine operation of the transmitter may be performed by an operator holding a valid first-class or second-class radiotelephone or radiotelegraph operator license or a radiotelephone third-class operator permit which has been endorsed for broadcast station operation. The operator shall be on duty at the transmitter or authorized remote control point and in actual charge thereof. Except at times when the operation of the station is under the immediate supervision of an operator holding a valid radiotelephone first-class operator license, adjustments of the transmitting equipment shall be limited to the following:

(1) Those necessary to turn the transmitter on and off.

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(2) Adjustments of external controls as may be required to compensate for voltage fluctuations in the power supply.

(3) Adjustments of external controls to maintain modulation of the transmitter within the prescribed limits.

(4) Adjustments of external controls necessary to effect routine changes in operating power which are required by the station's instrument of authorization.

(5) Adjustments of external control necessary to effect operation in accordance with a National Defense Emergency Authorization during an Emergency Action Condition.

It shall be the responsibility of the licensee to insure that the person who may be required to perform these tasks as well as to perform other duties (such as reading meters and making log entries), is properly instructed so as to be capable of performing the duties required of him at times when not under the immediate supervision of a radiotelephone first-class operator. Where necessary, printed step-by-step instructions shall be posted for those transmitter adjustments which the lesser grade operator is authorized to make. Should the transmitting apparatus be observed to be operating in any manner inconsistent with this subpart or the current instrument of authorization for the station at any time when an operator holding a valid radiotelephone first-class operator license is not immediately available and none of the above adjustments is effective in correcting the condition of improper operation, the emissions of the station shall be immediately terminated.

(c) If the routine operation of the transmitting apparatus at a standard broadcast station with power of 10 kw or less and non-directional antenna is performed by an operator other than a radio-telephone first-class operator pursuant to the provisions of paragraph (b) of this section, the licensee shall either employ one or more operators holding a valid radiotelephone first-class operator license as a full-time member of the station staff or, in the alternative contract in writing for the services on a part-time basis of one or more such operators. The radiotelephone first-class operator or operators shall perform transmitter maintenance and shall be promptly available at all times to correct conditions of improper operation beyond the scope of authority of the lesser grade operator on duty. If such services are on a contract part-time basis, a signed copy of the agreement shall be kept in the files of the station and at the transmitter or control point and shall be made available for inspection upon request by any authorized representative of the Commission. A signed copy of the agreement shall also be forwarded to the Commission and to the Engineer in Charge of the radio district in which the station is located within 3 days after the agreement is signed.

NOTE: During the period prior to April 19, 1964, the alternative of contracting in writing for the services of radiotelephone first-class operators on a part-time basis may not be followed unless the routine transmitter operation under the provisions of paragraph (b) of this section is performed by operators holding at least valid radiotelephone third-class operator permits which have been endorsed for broadcast station operation. Information concerning examinations for such operator permits is available to all applicants through the Commission's field offices.

(d) The licensed operator on duty and in charge of a standard broadcast transmitter may, at the discretion of the licensee, be employed for other duties or for the operation of another radio station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such other stations: Provided, however, that such duties shall in no wise interfere with the proper operation of the standard broadcast transmitter.

(e) At all standard broadcast stations, a complete inspection of all transmitting equipment in use shall be made by an operator holding a valid radiotelephone first-class operator license at least once each day, 5 days each week, with an interval of not less than 12 hours between successive inspections. This inspection shall include such tests, adjustments, and repairs as may be necessary to insure operation in conformance with the provisions of this subpart and the current instrument of authorization for the station.

In FM rules . . .

§73.265 Operator requirements.

[EDITOR'S NOTE: Substantially the same as §73.93.]

In TV rules . . .

§73.661 Operator requirements.—One or more operators holding a valid radiotelephone first class operator license shall be on duty at the place where the transmitting apparatus is located or at a remote control point established pursuant to the provisions of §73.676, and in actual charge thereof whenever the transmitter is delivering power to the transmitting antenna. The original license (or FCC Form 759) of each station operator shall be posted at the place where he is on duty. The licensed operator on duty and in charge of a television broadcast transmitter 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 class of license which he holds and the rules and regulations governing such other stations. However, such other duties shall in no wise impair or impede the required supervision of the television broadcast transmitter. If operation by remote control has not been authorized, the transmitter shall be readily accessible and clearly visible to the operator at his normal operating position. If operation by remote control is authorized, the control and monitoring equipment shall be readily accessible and clearly visible to the operator at his normal operating position.

FACSIMILE

§73.266 Facsimile broadcasting and multiplex transmission.—(a) FM broadcast stations may transmit simplex facsimile in accordance with transmission standards set forth in §73.318 during periods not devoted to FM aural broadcasting. Such transmissions may not exceed one hour during the period between 7 a.m. and midnight (no limit for the hours between midnight and 7 a.m.) and may not be counted toward the minimum operation required by §73.261. The Commission shall be notified by the licensee of the FM broadcast station of its intent to transmit such facsimile.

(b) FM broadcast stations may, upon securing authorization from the Commission, transmit multiplex facsimile in accordance with transmission standards set forth in §73.318: provided that the transmission of such facsimile does not reduce the quality of aural programs simultaneously transmitted by the licensee below that required by the technical standards of this subpart and that no degradation of such aural programs will result from such facsimile transmissions when received on FM receivers not equipped with filter or other additional equipment.

PERSONAL ATTACK AND POLITICAL BROADCASTING

In AM rules . . .

§73.123 Personal attacks; political editorials.—(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 person 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 (i) to attacks on foreign groups or foreign public figures; (ii) 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 (iii) to bona fide news-casts, bona fide news interviews, and on-the-spot coverage of a bona fide news event (including commentary or analysis contained in the foregoing programs, but the provisions of paragraph (a) shall be applicable to editorials of the licensee).

NOTE: The fairness doctrine is applicable to situations coming within (iii), above, and, in a specific factual situation, may be applicable in the general area of political broadcasts (ii), above. See, Section 315(a) of the Act, 47 USC §315(a); Public Notice: Applicability of the Fairness Doctrine in the Handling of Controversial Issues of Public Importance, 29 Fed. Reg. 10415. The categories listed in (iii) are the same as those specified in Section 315(a) of the Act.

(c) Where a licensee, in an editorial, (i) endorses or (ii) opposes a legally qualified candidate or candidates, the licensee 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 (1) notification of the date and the time of the editorial; (2) a script or tape of the editorial; and (3) an offer of a reasonable opportunity for a candidate or a spokesman of the

candidate to respond over the licensee's facilities: provided, however, that where such editorials are broadcast within 72 hours prior to the day of the election, the licensee shall comply with the provisions of this subsection 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.

§73.125 Equal employment opportunities.

(a) General policy: Equal opportunity in employment shall be afforded by all licensees or permittees of commercially or non-commercially operated standard, FM, television 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, or national origin.

(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 program, 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 or national origin, 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 or national origin 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.

In FM rules . . .

§73.300—[EDITOR'S NOTE: In substance, the same as §73.123 above.]

§73.301—[EDITOR'S NOTE: In substance the same as §73.125 above.]

In TV rules . . .

§73.679—[In substance, the same as §73.123 above.]

§73.680—[In substance, the same as §73.125 above.]

NETWORK AFFILIATION

In AM rules . . .

§73.131 Exclusive affiliation of station.—No license shall be granted to a standard 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 herein includes national and regional network organizations. See Chapter VII, J of Report on Chain Broadcasting.)

§73.132 Territorial exclusivity.—No license shall be granted to a standard broadcast station having any contract arrangement, or understanding, express or implied, 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. 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 primary organization.

§73.133 Term of affiliation.—No license shall be granted to a standard broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which provides, by original term, provisions for renewal, or otherwise for the affiliation of the station with the network organization for a period longer than two years; provided, that a contract, arrangement, or understanding for a period up to two years, may be entered into within six months prior to the commencement of such period.

§73.134 Option time.—No license shall be granted to a standard broadcast station

which options for network programs any time subject to call on less than 56 days' notice, or more time than a total of 3 hours within each of four segments of the broadcast day, as herein described. The broadcast day is divided into four segments, as follows: 8 a.m. to 1 p.m.; 1 p.m. to 6 p.m.; 6 p.m. to 11 p.m.; 11 p.m. to 8 a.m. (These segments are to be determined for each station in terms of local time at the location of the station but may remain constant throughout the year regardless of shifts from nonadvanced to advanced time or vice versa.) Such option may not be exclusive as against other network organizations and may not prevent or hinder the station from obtaining or selling any or all of the time covered by the option, or other time, to other network organizations.

NOTE 1: As used in this section, an option is any contract, arrangement, or understanding, expressed 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.

NOTE 2: All time options permitted under this section must be for specific clock hours, expressed in terms of any time system set forth in the contract agreed upon by the station and network organization. Shifts from advanced to nonadvanced time or vice versa may or may not shift the specified hours correspondingly as agreed by the station and network organization.

§73.135 Right to reject programs.—No license shall be granted to a standard broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which (a) with respect to programs offered pursuant to an affiliation contract, prevents or hinders the station from rejecting or refusing network programs which the station reasonably believes to be unsatisfactory or unsuitable; or which (b) with respect to network programs so offered or already contracted for, prevents the station from rejecting or refusing any program which, in its opinion, is contrary to the public interest, or from substituting a program of outstanding local or national importance.

§73.136 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 with a network organization, for more than one standard broadcast station where one of the stations covers substantially the service area of the other station, or for any standard broadcast station in any locality where the existing standard 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 herein, 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.)

NOTE: Effective date of this section with respect to any station may be extended from time to time in order to permit the orderly disposition of properties; and it shall be suspended indefinitely with respect to regional network organizations.

§73.137 Dual network operation.—No license shall be issued to a standard broadcast station affiliated with a network organization which maintains more than one network; 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.

§73.138 Control by networks of station rates.—No license shall be granted to a standard 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, fixing or altering its rates for the sale of broadcast time for other than the network's programs.

In FM rules . . .

§73.231-73.238, inclusive.

[EDITOR'S NOTE: Same as §§73.131-13138, above with the following exceptions: (1) references are to FM rather than standard stations and networks; and (2) the section on "Network Ownership of Stations" is changed to read as follows:

§73.236 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 with a network organization, for an FM broadcast station in any locality where

the existing FM 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 herein, is not limited to majority stock ownership but includes actual working control in whatever manner exercised.)

In TV rules . . .

§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 herein includes national and regional network organizations. See chapter 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 in the same community from broadcasting the network's programs not taken by the former stations, or which prevents or hinders another broadcast station located in a different community from broadcasting any program of the network organization. This regulation 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 program 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 of up to two years may be entered into within 6 months prior to take 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 substan-

tial overlap in the territory served by the group of stations comprising each such network.

(h) **Control by 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 or 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.

COMMON ANTENNA SITE

§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.

REPORTS TO BE FILED

All broadcast stations . . .

§1.611 Financial report.—Each licensee or permittee of a commercially operated standard, FM, television, or international broadcast station (as defined in Part 73 of this chapter) shall file with the Commission on or before April 1 of each year, on FCC Form 324, an annual financial report.

§1.613 Filing of contracts.—Each licensee or permittee of a standard, FM, television, or international broadcast station (as defined in Part 73 of this chapter), whether operating or intending to operate on a commercial or non-commercial basis, shall file with the Commission copies of the following contracts, instruments, and documents together with amendments, supplements, and cancellations, within 30 days of execution thereof. The substance of oral contracts shall be reported in writing.

(a) **Contracts relating to network service:** All network affiliation contracts, agreements or understandings between a station and a national, regional or other network shall be reduced to writing and filed. Each such filing in or after May 1, 1969 initially shall consist of a written instrument containing all 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, extension, amendment, or change, as the case may be, of particular contract previously filed in accordance herewith. Transcription agreements or contracts for the supplying of film for the television stations which specify option time must be filed. This section does not require the filing of transcription agreements or contracts for the supplying of film for television stations which do not specify option time, nor contracts granting the right to broadcast music such as ASCAP, BMI, or SESAC agreements.

(b) **Contracts relating to 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. This paragraph shall include but is 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 (i) providing for the assignment of a license or permit or (ii) affecting, directly or indirectly, the ownership of voting rights of the licensee's or permittee's stock (common or preferred, voting or nonvoting), such as: (a) agreements for transfer of stock; (b) instruments for the issuance of

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new stock; or (c) 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: Provided, however, that trust agreements are not required to be filed, unless requested specifically by the Commission; in lieu of the trust agreement, the licensee or permittee may submit the following information concerning the trust: (1) name of trust; (2) duration of trust; (3) number of shares of stock owned; (4) name of beneficial owner of stock; (5) name of record owner of stock; (6) name of the party or parties who have the power to vote or control the vote of the shares; and (7) 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 one year; and all proxies, whether or not running for a period of one 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. Provided, however, that 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, of who have 1% or more of the corporation's voting stock; in cases where the licensee or permittee is a corporation having more than 50 stockholders and the stockholders giving the proxies are neither officers or directors nor 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 person, 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 of operation, such as those affecting voting rights, specifying or limiting the amount of dividends payable, the purchase of new equipment, the maintenance of current assets, etc.; or

(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 §1.615.

(c) Contracts relating to the sale of broadcast time to "time brokers" for resale.

(d) Contracts relating to Subsidiary Communications Authorization Operation, except contracts granting licensees or permittees engaged in SCA the right to broadcast copyright music.

(e) Time sales contracts. 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.

(f) Contracts relating to personnel.

(1) The following contracts, agreements, or understandings shall be filed: 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 or profits and a sharing in losses, of 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 chief engineers or other engineering personnel except those contracts required to be filed under the provisions of §§73.93(c), 73.265(c), and 73.565(c); contracts with attorneys, accountants, or consulting radio engineers; contracts with performers; contracts with station representatives; contracts with labor unions; or any similar agreements.

§1.615 Ownership reports.—(a) Each licensee of a TV, FM or standard broadcast

station (as defined in Part 73 of this chapter), other than noncommercial educational stations, shall file an Ownership Report (FCC Form 323) at the time the application for renewal of station license is required to be filed: Provided, however, the licensees owning more than one TV, FM, or standard 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) In the case of an individual, the name of such individual;

(2) In the case of a partnership, the names of the partners and the interest of each partner;

NOTE: Any change in partners or in their rights will require prior consent of the Commission upon an application for consent to assignment of license or permit. If such change involves less than a controlling interest, the application for Commission consent to such change may be made upon FCC Form 316 (Short Form).

(3) In the case of a corporation, association, trust, estate, or receivership, the data applicable to each:

(i) The name, residence, citizenship and stock-holdings of officers, directors, stockholders, trustees, executors, administrators, receivers, and members of any association;

(ii) Full information as to family relationship of 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 on FCC Form 323 with respect to the interest, and identity of any person having any direct, indirect, fiduciary, or beneficiary interest in the licensee or any of its stock:

For example:

(a) Where A is the beneficial owner or votes stock held by B, the same information should be furnished for A as is required for B

(b) Where X corporation controls the licensee, or holds 25% or more of the number of issued and outstanding shares of either voting or non-voting stock of the licensee, the same information should be furnished with respect to X corporation (its capitalization, officers, directors, and stockholders and the amount of stock [by class] in X held by each) as is required in the case of the licensee, together with full information as to the identity and citizenship of the person authorized to vote licensee's stock, in case of voting stock.

(c) The same information should be furnished as to Y corporation if it controls X corporation or holds 25% or more of the number of issued and outstanding shares of either voting or non-voting stock of X, and as to Z corporation if it controls Y corporation or holds 25% or more of the number of issued and outstanding shares of either voting or non-voting stock of Y and so on back to natural persons.

(4) In the case of licensees:

(i) A list of all contracts still in effect required to be filed with the Commission by §1.342 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) A permittee shall file an Ownership Report (FCC Form 323) within 30 days of the date of grant by the Commission of an application for original construction permit. The Ownership Report of the permittee shall give the information required by the applicable portions of paragraph (a) of this section.

(c) A supplemental Ownership Report (FCC Form 323) 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 shall include without limitation:

(1) Any change in capitalization or organization;

(2) Any change in officers and directors;

(3) Any transaction affecting the ownership, direct or indirect, or voting rights of licensee's or permittee's stock, such as:

(i) A transfer of stock;

(ii) Issuance of new stock or disposition of treasury stock; or

(iii) Acquisition of licensee's or permittee's stock by the issuing corporation; or

(4) Any change in the officers, directors, or stockholders of a corporation other than the licensee or permittee such as X, Y, or Z corporation described in the example in

paragraph (a) (3) of this section.

NOTE: 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 Commission consent must be received under Section 310(b) of the Communications Act and §1.329. A transfer of control takes place when an individual, or group in privity, gains or loses affirmation or negative (50%) control. See instruction on FCC Form 323, "Ownership Report."

(d) Exceptions: Where information is required under paragraphs (a), (b), or (c) of this section with respect to a corporation or association having more than 50 stockholders or members, such information need be filed only with respect to stockholders or members who are officers or directors of the corporation or association, or to other stockholders or members who have 1 percent or more of either the voting or nonvoting stock of the corporation or voting rights in the association regardless of whether the stockholder or member is an investment company as defined in NOTE 4 to §§73.35, 73.240, and 73.636 of this chapter: Provided, however, that such information with respect to stock held by stockbrokers need be filed only if the stock is held by the stockbroker in its name (either for itself or for customers) for a period exceeding 30 days.

(e) The provisions of this paragraph apply to all licensees and permittees of noncommercial educational TV, FM, or standard broadcast stations.

(1) Each licensee covered by this paragraph shall file an Ownership Report (FCC Form 323E): Provided, however, that licensees owning more than one noncommercial educational TV, FM, or standard 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:

(i) The following information as to all officers, members of governing board, and holders of 1 percent or more ownership interest (if any): Name, residence, office held, citizenship, principal profession or occupation, and by whom appointed or elected.

(ii) Full information on FCC form 323E with respect to the interest and identity of any individual, organization, corporation, association, or any other entity which has direct or indirect control over the licensee or permittee.

(iii) A list of all contracts still in effect required by §1.342 to be filed with the Commission, showing the date of execution and expiration of each contract.

(iv) Any interest which the licensee or permittee or any of its officers, members of the governing board, and holders of 1 percent or more ownership interest (if any) hold in any other broadcast station.

(2) A permittee shall file an Ownership Report (FCC Form 323E) within 30 days of the date of grant by the Commission of an application for original construction permit. The Ownership Report of the permittee shall give the information required by the applicable portions of this paragraph.

(3) A supplemental Ownership Report (FCC Form 323E) shall be filed by each licensee or permittee within 30 days after any change occurs in the information required by Ownership Report from that previously reported. Such report should include, without limitation:

(i) Any change in organization;

(ii) Any change in officers or directors;

(iii) 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).

(f) 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 §1.526.

§1.526 Records to be maintained locally for public inspection by applicants, permittees, and licensees.

(a) Records to be maintained. Every applicant for a construction permit for a new station in the broadcast services shall maintain for public inspection a file for such station containing the material in subparagraph (1) of this paragraph, and every permittee or licensee of a station in the broadcast services shall maintain for public inspection a file for such station containing the material in subparagraphs (1), (2), (3), and (4) of this paragraph: Provided, however, that the foregoing requirements shall not apply to applicants for or permittees or licensees of television broadcast translator stations. The material to be contained in the file is as follows:

(1) A copy of every application tendered for filing by the applicant for such station

after May 13, 1965, pursuant to the provisions of this part, with respect to which local public notice is required to be given under the provisions of §§1.580 or 1.594; 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 Commission 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 §0.417 of this chapter are open for public inspection at the offices of the Commission. 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 are subsequently designated for hearing after May 13, 1965, with local notice being given pursuant to the provisions of §1.594, 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 §1.580, 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 Commission 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 §0.417 of this chapter are open for public inspection at the offices of the Commission. 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.

(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 Commission 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 §1.615(a)(4)(i) and which according to the provisions of §0.417 of this chapter are open for public inspection at the offices of the Commission. 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 §§73.120(d), 73.290(d), 73.590(d), and 73.657(d) of this chapter, concerning broadcasts by candidates for public office.

NOTE: The engineering section of applications mentioned in subparagraphs (1) and (2) of this paragraph, 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.

(b) (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 §1.580 or 1.594, the file mentioned in paragraph (a) of this section shall be maintained by the assignor. If the assignment is consented to by the Commission 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 Commission. 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 Commission 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) 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) 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) The records specified in paragraph (a) (4) of this section shall be retained for the periods specified in §§73.120(d), 73.290(d), 73.590(d) and 73.657(d) of this chapter (2 years). The records specified in paragraph (a) (1), (2), and (3) 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 Commission or any proceeding involving that application is pending before the courts. (If the application is granted, subparagraph (2) of this paragraph shall apply.)

(2) The permittee or licensee shall maintain such a file so long as an authorization to operate the station is outstanding.

LICENSE RENEWALS
General . . .

§1.539 Application for renewal of license.—(a) Unless otherwise directed by the Commission, an application for renewal of license shall be filed at least 90 days prior to the expiration date of the license sought to be renewed except that applications for renewal of license of an experimental or developmental broadcast station shall be filed at least 60 days prior to the expiration date of the license sought to be renewed.

(b) No application for renewal of license of any broadcast station will be considered unless there is on file with the Commission, the information, if any, currently required by §§1.611-1.615, inclusive, for the particular class of station. The renewal application shall include a reference by date and file number to such information on file.

(c) Whenever the Commission 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 certain date, 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 has been received.

(d) The following application forms shall be used:

[EDITOR'S NOTE: There follows a list of forms to be used in filing for license renewals.]

In AM rules . . .

§73.34 Normal license period.—(a) Initial licenses for standard broadcast stations will ordinarily be issued for a period running until the dates specified in this section for the state or territory in which the station is located or, if issued after such date, to the next triennial renewal date determined in accordance with this section; and, when renewed, will normally be renewed for

three years; provided, however, that if the Commission finds that the public interest, convenience or 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 at three year intervals thereafter:

[EDITOR'S NOTE: For list of expiration dates for licenses see TV rules below.]

In FM rules . . .

§73.218 Normal license period.—(a) Initial licenses for FM 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 or, if issued after such date, to the next triennial renewal date determined in accordance with this section; and, when renewed, will normally be renewed for three years; provided, however, that, if the Commission finds that the public interest, convenience, or 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 renewed licenses will be 3 a.m., local time, on the following dates, and at three-year intervals thereafter:

[EDITOR'S NOTE: For list of expiration dates for licenses see TV rules below.]

In TV rules . . .

§76.630 Normal license period.—(a) Initial licenses for television 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 or, if issued after such date, to the next triennial renewal date determined in accordance with this section; and, when renewed, will normally be renewed for three years; provided, however, that, if the Commission finds that the public interest, convenience or 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 renewed licenses will be 3 a.m., local time, on the following dates, and at three-year intervals thereafter:

(1) For stations located in Iowa and Missouri, Feb. 1, 1968.

(2) For stations located in Minnesota, North Dakota, South Dakota, Montana, and Colorado, April 1, 1968.

(3) For stations located in Kansas, Oklahoma, and Nebraska, June 1, 1968.

(4) For stations located in Texas, Aug. 1, 1968.

(5) For stations located in Wyoming, Nevada, Arizona, Utah, New Mexico, and Idaho, October 1, 1968.

(6) For stations located in California, December 1, 1968.

(7) For stations located in Washington, Oregon, Alaska, Guam, and Hawaii, Feb. 1, 1969.

(8) For stations located in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, April 1, 1969.

(9) For stations located in New Jersey and New York, June 1, 1969.

(10) For stations located in Delaware and Pennsylvania, Aug. 1, 1969.

(11) For stations located in Maryland, District of Columbia, Virginia, and West Virginia, Oct. 1, 1969.

(12) For stations located in North Carolina and South Carolina, Dec. 1, 1969.

(13) For stations located in Florida, Puerto Rico, and Virgin Islands, Feb. 1, 1970.

(14) For stations located in Alabama and Georgia, April 1, 1970.

(15) For stations located in Arkansas, Louisiana, and Mississippi, June 1, 1970.

(16) For stations located in Tennessee, Kentucky, and Indiana, August 1, 1970.

(17) For stations located in Ohio and Michigan, Oct. 1, 1970.

(18) For stations located in Illinois and Wisconsin, Dec. 1, 1970.

NOTE: For the cutoff date for the filing of applications mutually exclusive with, and petitions to deny, renewal applications, see §1.516(e).

STATION IDENTIFICATION

In AM rules . . .

§73.117 Station identification.—(a) A licensee of a standard broadcast station shall make station identification announcements (call letters and location) at the beginning and ending of each time of operation and during operation (1) on the hour and (2) either on the half hour or at the quarter hour preceding the next hour; Provided:

(b) Such identification announcement need not be made on the hour when to make such announcement would interrupt a single consecutive speech, play, religious service,

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symphony concert, operatic production or forum of longer duration than 30 minutes. In such cases the identification announcement shall be made at the beginning of the program, at the first interruption of the entertainment continuity, and at the conclusion of the program.

(c) Such identification announcement need not be made on the half hour or quarter hours when to make such an announcement would interrupt a single consecutive speech, play, religious service, symphony concert, or operatic production. In such cases an identification announcement shall be made at the first interruption of the entertainment continuity and at the conclusion of the program. Provided: that an announcement within 5 minutes of the time specified in paragraph (a) (2) of this section will satisfy the requirements of identification announcements.

(d) In the case of variety show programs of longer duration than 30 minutes the identification announcement shall be made within 5 minutes of the hour and of the times specified in paragraph (a) (2) of this section.

(e) In the case of all other programs the identification announcement shall be made within 2 minutes of the hour and of the times specified in paragraph (a) (2) of this section.

(f) In making the identification announcement the call letters shall be given only on the channel of the station identified thereby, except as otherwise provided in §73.287 of the Commission's Rules Governing FM Broadcast Stations.

(g) A license shall not in station identification announcements, promotional announcements or any other broadcast matter either lead or attempt to lead the station's listeners to believe that the station has been assigned to a city other than that specified in its license.

NOTE: Commission interpretations in connection with this Rule may be found in a separate public notice issued Oct. 30, 1967, entitled "Applicability of Rule Regarding the Broadcast of Misleading Statements Regarding a Station's Licensed Location." (FCC 61-1132).

In FM rules . . .

§73.287 Station identification.—(a) A licensee of an FM broadcast station shall make separate station identification announcement (call letters and location), for such station; provided, however, that if the same licensee operates an FM radio broadcasting 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 state that one of the stations is an FM station. Station identification announcements shall be made at the beginning and ending of each time of operation and during operation (1) on the hour and (2) either on the half hour or at the quarter hour following the hour and at the quarter hour preceding the next hour, Provided:

[EDITOR'S NOTE: Remainder is identical with paragraphs (b), (c), (d), (e), (f) and (g) of §73.117 above.]

In TV rules . . .

§73.652 Station identification.—(a) A licensee of a television broadcast station shall make station identification announcements (call letters and location) at the beginning and ending of each time of operation and during the operation on the hour. The announcement at the beginning and ending of each time of operation shall be by both aural and visual means. Other announcements may be by either aural or visual means.

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

(c) A licensee shall not in station identification announcements, promotional announcements or any other broadcast matter either lead or attempt to lead its audience to believe that the station has been assigned to a city other than that specified in its license.

NOTE: Commission interpretations in connection with this Rule may be found in a separate public notice issued Oct. 30, 1967,

entitled "Applicability of Rule Regarding the Broadcast of Misleading Statements Regarding a Station's Licensed Location." (FCC 67-1132).

SPONSORED PROGRAMS (Announcement of)

In AM rules . . .

§73.119 Sponsored programs, announcement of.—(a) When a standard broadcast station transmits any matter for which money, services, or other valuable consideration is either directly or indirectly paid or promised to, or charged or received by, such station, the station shall broadcast an announcement that such matter is sponsored, paid for, or furnished, either in whole or in part, and 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 without charge or at a nominal charge for use on, or in connection with, a broadcast unless it is so furnished in consideration for an identification in a broadcast of any person, product, service, trademark, or brand name, beyond an identification which is reasonably related to the use of such service or property on the broadcast.

(b) The licensee of each standard broadcast station shall exercise reasonable diligence to obtain from its employees, and from other persons with whom it deals directly in connection with any program matter for broadcast, information to enable such licensee to make the announcement required by this section.

(c) In any case where a report (concerning the providing or accepting of valuable consideration by any person for inclusion of any matter in a program intended for broadcasting) has been made to a standard 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 standard broadcast station, an appropriate announcement shall be made by such station.

(d) In the case of any political program or any program involving the discussion of public controversial issues for which any records, transcriptions, talent, scripts, or other material or services of any kind are furnished, either directly or indirectly, to a station as an inducement to the broadcasting of such program, an announcement shall be made both at the beginning and conclusion of such program on which such material or services are used that such records, transcriptions, talent, scripts, or other material or services have been furnished to such station in connection with the broadcasting of such program: Provided, however, that only one such announcement need be made in the case of any such program of 5 minutes' duration or less, which announcement may be made either at the beginning or conclusion of the program.

(e) The announcement required by this section shall fully and fairly disclose the true identity of the person or persons by whom or in whose behalf such payment is made or promised, or from whom or in 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 contracts or otherwise makes arrangements with a station on behalf of another, and such fact is known to the station, the announcement shall disclose the identity of the person or persons in whose behalf such agent is acting instead of the name of such agent.

(f) In the case of any program, other than a program advertising commercial products or services, which is sponsored, paid for, or furnished, either in whole or in part, or for which material or services referred to in paragraph (d) of this section are furnished, by a corporation, committee, association, or other unincorporated group, the announcement required by this section shall disclose the name of such corporation, committee, association, or other unincorporated group. In each such case the station shall 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 shall be made available for public inspection at the studios or general offices of one of the standard broadcast stations carrying the program in each community in which the program is broadcast. Such lists shall be kept and made available for a period of 2 years.

(g) In 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 purposes of this section and only one such announcement need be made at any time during the course of the program.

(h) The announcements required by Section 317(a) of the Communications Act of 1934, as amended, are waived with respect to the broadcast of "want ad" or classified advertisements sponsored by individuals. The waiver granted in this paragraph shall not extend to classified advertisements or want ads sponsored by any form of business enterprise, corporate or otherwise. Whenever sponsorship announcements are omitted pursuant to this paragraph the following conditions shall be observed:

(1) The licensee shall maintain a list showing the name, address and (where available) the telephone number of each advertiser and shall attach this list to the program log for each day's operation; and

(2) shall make this list available to members of the public who have a legitimate interest in obtaining the information contained in the list.

(i) Commission interpretations in connection with the foregoing rules may be found in the Commission's Public Notice entitled "Applicability of Sponsorship Identification Rules" and such supplements thereto as are issued from time to time.

In FM rules . . .

§73.289 [EDITOR'S NOTE: Identical with §73.119 above.]

In TV rules . . .

§73.654 [EDITOR'S NOTE: Identical with §73.119 above.]

[EDITOR'S NOTE. In a statement issued in 1950, the FCC warned that the sponsor or his product must be identified by a distinctive name and not by one merely descriptive of the type of business or product. The following are acceptable, the Commission said: "Henry Smith offers you . . ." or "Smith Stove Co. offers you . . ." or "Ajax Pens brings you . . ." The following are not acceptable: "Write to the Comb Man . . ." or "Send your money to Nylons, Box . . ." or "This program is sponsored by your Sink man . . ."]

PERSONAL ATTACKS; POLITICAL EDITORIALS

§73.123 Personal attacks; political editorials.—(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 person 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 (i) to attacks on foreign groups or foreign public figures; (ii) 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 (iii) to bona fide news-casts, bona fide news interviews, and on-the-spot coverage of a bona fide news event (including commentary or analysis contained in the foregoing programs, but the provisions of paragraph (a) shall be applicable to editorials of the licensee).

NOTE: The fairness doctrine is applicable to situations coming within (iii), above, and, in a specific factual situation, may be applicable in the general area of political broadcasts (ii), above. See Section 315(a) of the Act, 47 USC §315(a); Public Notice: Applicability of the Fairness Doctrine in the Handling of Controversial Issues of Public Importance, 29 Fed. Reg. 10415. The categories listed in (iii) are the same as those specified in Section 315(a) of the Act.

(c) Where a licensee, in an editorial, (i) endorses or (ii) opposes a legally qualified candidate or candidates, the licensee 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 (1) notification of the date and the time of the editorial; (2) a script or tape of the editorial; and (3) an offer of a reasonable opportunity for a candidate or a spokesman of the candidate to respond over the licensee's facilities: Provided, however, that where such editorials are broadcast within 72 hours prior to the day of the election, the licensee shall comply with the provisions of this subsection 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.

In FM rules . . .

§73.300 [EDITOR'S NOTE: Identical with §73.123 above.]

In TV rules . . .

§73.679 [EDITOR'S NOTE: Identical with §73.123 above.]

RECORDINGS AND TRANSCRIPTIONS
(Identification of)

In AM rules . . .

§73.118 Mechanical reproductions.—(a) No mechanically reproduced program consisting of a speech, news event, news commentator, forum, panel discussion, or special event in which the element of time is of special significance, or any other program in which the element of time is of special significance and presentation of which would create, either intentionally or otherwise, the impression or belief on the part of the listening audience that the event or program being broadcast is in fact occurring simultaneously with the broadcast, shall be broadcast without an appropriate announcement being made either at the beginning or end of such reproduction or at the beginning or end of the program in which such reproduction is used that it is a mechanical reproduction or a mechanically reproduced program: Provided, however, that each such program of one minute or less need not be announced as such.

(b) The exact form of identifying announcement is not prescribed, but the language shall be clear and in terms commonly used and understood. Any other program mechanically reproduced or series of mechanical reproductions, including a mechanical reproduction used for background music, sound effects, station identification, program identification (theme music of short duration) or identification of sponsorship of the program proper, need not be announced as provided in subsection (a), but the licensee shall not attempt affirmatively to create the impression that any program being broadcast by mechanical reproduction consists of live talent.

(c) The requirements of subsection (a) are waived with respect to network programs, transcribed and rebroadcast at a later hour because of the time zone differentials between the place where the program originates and where it is rebroadcast, this waiver being applicable whether the off-the-line recording is made by the network itself at one of its key stations or by an individual station, but only when the off-the-line recording is for broadcast at an hour not exceeding the time zone differential between the place where the program originates and where it is rebroadcast. Each station which broadcasts network programs at a later hour in accordance with this waiver shall make an appropriate announcement at least once each day between the hours of 10:00 a.m. and 10:00 p.m., stating that some or all of the network programs which are broadcast by that station are delayed broadcasts by means of transcription. This waiver provision also applies during the annual periods in which advanced time is effective with respect to network programs transcribed and rebroadcast one hour later because of the time differential resulting from the adoption or non-adoption of advanced time in some areas.

In FM rules . . .

§73.288—[EDITOR'S NOTE: Identical with §73.118 above.]

In TV rules . . .

§73.653—[EDITOR'S NOTE: Identical with §73.118 above.]

POLITICAL BROADCASTS

For AM, FM and TV

§73.120 Definitions.—(a) A "legally qualified candidate" means any person who has publicly announced that he is a candidate for nomination by a convention of a political party or for nomination or election in a primary, special, or general election, municipal, county, state or national, and who meets the qualifications prescribed by the applicable laws to hold the office for which he is a candidate, so that he may be voted for by the electorate directly or by means of delegates or electors, and who

(1) has qualified for a place on the ballot or

(2) is eligible under the applicable law to be voted by sticker, by writing in his name on the ballot, or other method, and (1) has been duly nominated by a political party which is commonly known and regarded as such, or (2) make a substantial showing that he is a bona fide candidate for nomination or office as the case may be.

(b) General requirements.—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 such facilities: Provided, that such licensee shall have no power of censorship over the material broadcast by any such candidate.

(c) Rates and practices.—(1) 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, in each case, 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.

(2) In making time available to candidates for public office no licensee shall make any discrimination between candidates in charges, 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: inspections.—Every licensee shall keep and permit public inspection of a complete record 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 request, and the charges made, if any, if request is granted. Such records shall be retained for a period of two years.

NOTE: See §1.526 of this chapter.

(e) A request for equal opportunities must be submitted to the licensee within one week of the day on which the prior use occurred.

(f) A candidate requesting such equal opportunities of the licensee, or complaining of non-compliance to the Commission, shall have the burden of providing that he and his opponent are legally qualified candidates for the same public office.

[EDITOR'S NOTE: In FM this is §73.290; in TV, §73.657.]

REBROADCASTS

In AM rules . . .

§73.121 Rebroadcast.—(a) The term "rebroadcast" means reception by radio of the program of a radio station, and the simultaneous or subsequent retransmission of such program by a broadcast station.

NOTE: As used in §73.121, program includes any complete program or part thereof, or any signals if other than A-3 emission. In case a program is transmitted from its point of origin to a broadcast station entirely by telephone facilities in which a section of such transmission is by radio, the broadcasting of this program is not considered a rebroadcast.

(b) Standard broadcast stations may, without further authority from the Commission, rebroadcast programs originated by other United States standard and FM broadcast stations, provided that the Commission is notified in writing of the call letters of each station rebroadcast, together with certification that the originating station(s) has consented to the rebroadcast(s). However, the requirements of this paragraph do not apply to emergency rebroadcasting conducted pursuant to §73.971(b) of this part, which provides unrestricted AM/FM/TV rebroadcast privileges for stations utilizing the facilities, systems, and procedures of a Detailed State EBS Operational Plan.

NOTE: The notice and certification of consent shall be given within three (3) days of any single rebroadcast, but in case of the programs of a standard broadcast station several times during a license period, notice and certification of consent shall be given for the ensuing license period with the application for renewal of license, or at the beginning of such rebroadcast practice if begun during a license period.

(c) (1) The licensee of a standard broadcast station located within a state or the District of Columbia may, without further authority of the Commission, rebroadcast on a noncommercial basis a noncommercial program of a United States international broadcast station.

(2) The licensee of a standard broadcast station located in any territory or insular possession of the United States may, without further authority of the Commission, rebroadcast any program of a United States international broadcast station.

(3) In the case of any rebroadcast under the provisions of this paragraph (c), the Commission shall be notified of the call letters of each station whose programs are rebroadcast, and the licensee shall certify that express authority has been received from the licensee of the station originating the program.

(d) No licensee of a standard or high frequency broadcast station shall rebroadcast the program of any other class of United States radio station without written authority having first been obtained from the Commission upon application accompanied by written consent or certification of consent of the licensee of the station originating the program.

NOTE 1: The broadcasting of a program relayed by a remote pick-up broadcast station (§74.401 of this chapter) is not considered a rebroadcast.

NOTE 2: Informal applications may be employed.

NOTE 3: By order No. 82, dated and effective June 24, 1941, until further order of the Commission, §73.121(d) is suspended only insofar as it requires prior written authority of the Commission for the rebroadcasting of programs originated for that express purpose by United States Government radio stations.

(e) In case of a program rebroadcast by several standard broadcast stations, such as a chain broadcast, the person legally responsible for distributing the program or the network facilities may obtain the necessary authorization for the entire rebroadcasts both from the Commission and from the person or licensee of the station originating the program.

(f) Attention is directed to section 325 (b) of the Communications Act of 1934, which reads as follows (see also §1.545 of this chapter):

No person shall be permitted to locate, use, or maintain a radio broadcast studio or other place or apparatus from which or whereby sound waves are converted into electrical energy, or mechanical or physical reproduction of sound waves produced, and caused to be transmitted or delivered to a radio station in a foreign country for the purpose of being broadcast from any radio station there, having a power output of sufficient intensity, and/or being so located geographically that its emissions may be received consistently in the United States, without first obtaining a permit from the Commission, upon proper application therefore.

§73.124 Fraudulent billing practices.—No licensee of a standard broadcast station shall knowingly issue to any local, regional or national advertiser, advertising agency, station representative, manufacturer, distributor, jobber or any other party, any bill, invoice, affidavit or other document which contains false information concerning the amount actually charged by the licensee for the broadcast advertising for which such bill, invoice, affidavit or other document is issued, or which misrepresents the nature, content or quantity of such advertising. Licensees shall exercise reasonable diligence to see that their agents and employees do not issue any documents which would violate this section if issued by the licensee.

NOTE: Commission interpretations in connection with this Rule may be found in a separate Public Notice issued October 22, 1965 entitled "Applicability of Fraudulent Billing Rule" (FCC 65-952).

[EDITOR'S NOTE: Substantially identical rules apply to FM licensees (§73.299) and television licensees (§73.678).]

In TV rules . . .

§73.655 Rebroadcast.—(a) The term "rebroadcast" as used below means reception by radio of the program of a television broadcast station, and the simultaneous or subsequent retransmission of such programs by a broadcast station. The broadcasting of a program relayed by an auxiliary broadcast station licensed to the television broadcast station is not considered rebroadcast. (As used in this section, program includes any complete program or part thereof.)

(b) Television broadcast stations may, without further authority from the Commission, rebroadcast programs originated by other United States television stations, provided that the Commission is notified in writing of the call letters of each station rebroadcast, together with certification that the originating station(s) has consented to the rebroadcast(s). However, the requirements of this paragraph do not apply to emergency rebroadcasting conducted pursuant to §73.971(b) of this part, which pro-

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vides unrestricted AM/FM/TV rebroadcast privileges for stations utilizing the facilities, systems, and procedures of a Detailed State EBS Operational Plan.

NOTE: The notice and certification of consent shall be given within 3 days of any single rebroadcast, but in case of the regular practice of rebroadcasting certain programs of a television broadcast station several times during a license period, notice and certification of consent shall be given for the ensuing license period with the application for renewal of license, or at the beginning of such rebroadcast practice, if begun during a license period.

(c) No licensee of a television broadcast station shall rebroadcast the program of any United States radio station not designated in paragraph (b) of this section without written authority having first been obtained from the Commission upon application (informal) accompanied by written consent or certification of consent of the licensee of the station originating the program. The foregoing requirements concerning notification of call letters and certification of authority shall not apply to a station when rebroadcasting Defense Network (FM) programs. Blanket authorizations for the rebroadcast of such programs have been filed with the Commission by all Defense Network (FM) stations.

REVOCATIONS, MODIFICATIONS, SUSPENSIONS

(All Classes of Station Licenses)

§1.87 Modification of license or construction permit on motion of the Commission.—

(a) Whenever it appears that a station license or construction permit should be modified, the Commission will notify the licensee or permittee in writing of the proposed action and the grounds and reasons therefore and direct him to show cause why an order modifying the license or construction permit in the manner proposed by the Commission should not be issued.

(b) Any order to show cause issued in accordance with paragraph (a) of this section will notify the licensee or permittee that he may request within a period of time to be stated in the order to show cause, that a hearing be held on the proposed modification. In case of timely request, a hearing will be held on the proposed modification, in no event less than 30 days after the receipt of the order to show cause, unless the Commission finds that safety of life or property require the fixing of a shorter period.

(c) In order to avail himself of the right to request a hearing and of the opportunity to appear and give evidence upon the matters specified in the order to show cause, the licensee or permittee, in person or by his attorney shall, within the period of time as may be specified in the order to show cause, file with the Commission a written statement stating that he request a hearing and will appear at the hearing and present evidence on the matter specified in the order to show cause. Such written statement must contain a detailed response to the matter specified in the order to show cause and the permittee or licensee shall be limited in the hearing to matters fairly encompassed within the issues raised by the response.

(d) The right to request a hearing shall, unless a good cause is shown in a petition to be filed not later than 5 days before the lapse of the time specified in paragraph (c) of this section, be deemed waived:

- (1) In case of failure to timely file a written statement as required by paragraph (c) of this section.
- (2) In case of filing the written statement provided for in paragraph (c) of this section but failure to appear at the hearing, either in person or by counsel.

(e) Where the right to request a hearing is waived and no written statement has been filed within the period of time specified in the order to show cause, the licensee or permittee will be deemed to consent to the modification as proposed in the order to show cause and a final decision will be issued by the Commission accordingly.

(f) Where the right to request a hearing has been waived, a written statement may be filed within the period of time to be specified in the order to show cause, showing with particularity why the license or construction permit should not be modified or not so modified as proposed in the order to show cause. In this case, the Commission may, depending upon the facts alleged and proof offered, either call upon the submitting party to furnish additional information under oath, designate the proceeding for hearing, or issue without further proceedings an order modifying the

construction permit or license as proposed in the order to show cause or in said written statement. The order to show cause will advise the person against whom it is directed of procedure set forth in this paragraph.

(g) Any order of modification issued pursuant to this section shall include a statement of the findings and the grounds and reasons therefore, shall specify the effective date of the order and shall be served on the licensee or permittee.

§1.89 Notice of violations.—(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. FCC Form 793 may be used for this purpose.

(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 acknowledgement made within such 10-day period by reason of illness or other unavoidable circumstances, acknowledgement 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. In every instance the answer shall contain a statement of action taken to correct the condition or omission complained of and to preclude its recurrence. In addition:

(1) If the notice relates to violations that may be due to the physical or electrical characteristics of transmitting apparatus and any new apparatus is to be installed, the answer shall state the date such apparatus was ordered, the name of the manufacturer, and the promised date of delivery. If the installation of 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 shall be given as will permit ready identification of the application.

(2) 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.

§1.91 Revocation and/or cease and desist proceedings: hearings.—(a) If it appears that a station license or construction permit should be revoked and/or that a cease and desist order should be issued, the Commission will issue an order directing the person to show cause why an order of revocation and/or a cease and desist order, as the facts may warrant, should not be issued.

(b) An order to show cause why an order of revocation and/or a cease and desist order should not be issued will contain a statement of the matters with respect to which the Commission is inquiring and will call upon the person to whom it is directed (the respondent) to appear before the Commission at a hearing, at a time and place stated in the order, but not less than thirty days after the receipt of such order, and give evidence upon the matters specified in the order to show cause. However, if safety of life or property is involved, the order to show cause may specify a hearing date less than thirty days from the receipt of such order.

(c) To avail himself of such opportunity for hearing, the respondent, personally or by his attorney, shall file with the Commission, within thirty days of the service of the order or such shorter period as may be specified therein, a written appearance stating that he will appear at the hearing and present evidence on the matters specified in the order. The Commission in its discretion may accept a late appearance. However, an appearance tendered after the specified time has expired will not be accepted unless accompanied by a petition stating with particularity the facts and reasons relied on to justify such late filing. Such petition for acceptance of late appearance will be granted only if the Commission determines that the facts and reasons stated therein constitute good cause for failure to file on time.

(d) Hearings on the matters specified in such orders to show cause shall accord with the practice and procedure prescribed in this subpart and Subpart B of this part, with the following exceptions: (1) In all such revocation and/or cease and desist hearings, the burden of proceeding with the introduction of evidence and the burden of proof shall be upon the Commission; and (2) the Commission may specify in a show cause order, when the circumstances of the pro-

ceeding require expedition, a time less than that prescribed in §§1.276 and 1.277 within which the initial decision in the proceeding shall become effective, exceptions to such initial decision must be filed, parties must file requests for oral argument, and parties must file notice of intention to participate in oral argument.

(e) Correction or promise to correct the conditions or matters complained of in a show cause order shall not preclude the issuance of a cease and desist order. Corrections or promises to correct the conditions or matters complained of, and the past record of the licensee, may, however, be considered in determining whether a revocation and/or cease and desist order should be issued.

(f) Any order of revocation and/or cease and desist order issued after hearing pursuant to this section shall include a statement of findings and the grounds therefor, shall specify the effective date of the order, and shall be served on the person to whom such order is directed.

§1.92 Revocation and/or cease and desist proceedings: after waiver of hearing.—(a)

After the issuance of an order to show cause, pursuant to §1.91, calling upon a person to appear at a hearing before the Commission, the occurrence of any one of the following events or circumstances will constitute a waiver of such hearing and the proceeding thereafter will be conducted in accordance with the provisions of this section.

(1) The respondent fails to file a timely written appearance as prescribed in §1.91(c) indicating that he will appear at a hearing and present evidence on the matters specified in the order.

(2) The respondent, having filed a timely written appearance as prescribed in §1.91(c), fails in fact to appear in person or by his attorney at the time and place of the duly scheduled hearing.

(3) The respondent files with the Commission, within the time specified for a written appearance in §1.91(c), a written statement expressly waiving his rights to a hearing.

(b) When a hearing is waived under the provisions of paragraph (a) (1) or (3) of this section, a written statement signed by the respondent denying or seeking to mitigate or justify the circumstances or conduct complained of in the order to show cause may be submitted within the time specified in §1.91(c). The Commission in its discretion may accept a late statement. However, a statement tendered after the specified time has expired will not be accepted unless accompanied by a petition stating with particularity the facts and reasons relied on to justify such late filing. Such petitions for acceptance of a late statement will be granted only if the Commission determines that the facts and reasons stated therein constitute good cause for failure to file on time.

(c) Whenever a hearing is waived by the occurrence of any of the events or circumstances listed in paragraph (a) of this section, the Chief Hearing Examiner (or the presiding officer if one has been designated) shall, at the earliest practicable date, issue an order reciting the events or circumstances constituting a waiver of hearing, terminating the hearing proceeding, and certifying the case to the Commission. Such order shall be served upon the respondent.

(d) After a hearing proceeding has been terminated pursuant to paragraph (c) of this section, the Commission will act upon the matters specified in the order to show cause in the regular course of business. The Commission will determine on the basis of all the information available to it from any source, including such further proceedings as may be warranted, if a revocation order and/or a cease and desist order should issue, and if so, will issue such order. Otherwise, the Commission will issue an order dismissing the proceeding. All orders specified in this paragraph will include a statement of the findings of the Commission and the grounds and reasons therefore, will specify the effective date thereof, and will be served upon the respondent.

(e) Corrections or promise to correct the conditions or matters complained of in a show cause order shall not preclude the issuance of a cease and desist order. Corrections or promises to correct the conditions or matters complained of, and the past record of the licensee, may, however, be considered in determining whether a revocation and/or cease and desist order should be issued.

(Of Operator Licenses)

§1.85 Suspension of operator licenses.—Whenever grounds exist for suspension of an operator license, as provided in Section 303(m) of the Communications Act, the Chief of the Safety and Special Radio Services Bureau, with respect to amateur

operator licenses, or the Chief of the Field Engineering and Monitoring Bureau, with respect to commercial operator licenses, may issue an order suspending the operator license. No order of suspension in any operators' license shall take effect until 15 days' notice in writing of the cause for the proposed suspension has been given to the operator licensee, who may make written application to the Commission at any time within said 15 days for a hearing upon such order. The notice to the operator licensee shall not be effective until actually received by him, and from that time he shall have 15 days in which to mail the said application. In the event that physical conditions prevent mailing of the application before the expiration of the 15-day period, the application shall then be mailed as soon as possible thereafter, accompanied by a satisfactory explanation of the delay. Upon receipt by the Commission of such application for hearing, said order of suspension shall be designated for hearing by the Chief, Safety and Special Radio Services Bureau or the Chief, Field Engineering Bureau, as the case may be, and said order of suspension shall be held in abeyance until the conclusion of the hearing. Upon the conclusion of said hearing, the Commission may affirm, modify or revoke said order of suspension. If the license is ordered suspended, the operator shall send his operator license to the office of the Commission in Washington, D.C. on or before the effective date of the order, or, if the effective date has passed at the time notice is received, the license shall be sent to the Commission forthwith.

LOGS AND RECORDS

§1.6 Availability of station logs and records for Commission inspection.—(a) Station records and logs shall be made available for inspection or duplication at the request of the Commission or its representative. Such logs or records may be removed from the licensee's possession by a Commission representative or, upon request, shall be mailed by the licensee to the Commission 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 a Commission 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 Commission 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.

(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 shall promptly certify in writing to the Federal Communications Commission that the removal of the logs or records will hinder law enforcement activities of the agency, and stating insofar as feasible the basis for his decision and the date when it can reasonably be expected that such records may be released to the Federal Communications Commission.

LOTTERIES

§3.122 Lotteries.—(a) An application for construction permit, license, renewal of license, or any other authorization for the operation of a broadcast station, will not be granted where the applicant proposes to follow or continue to follow a policy or practice of broadcasting or permitting "the broadcasting of any advertisement or of 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 such prizes." (See 18 U.S.C. §1304.)

(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 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 thing of value or are re-

quired to have in their possession any product sold, manufactured, furnished or distributed by a sponsor of a program broadcast on the station in question.

§1304 (of U.S. Criminal Code) Broadcast Lottery Information.—Whoever broadcasts by means of any radio station for which a license is required by any law of the U.S. or whoever, operating any such station, knowingly permits the broadcasting of 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 of scheme, whether said list contains any part or all of such prizes, shall be fined not more than \$1,000 or imprisoned not more than one year, or both.

Each day's broadcasting shall constitute a separate offense.

CENSORSHIP

§326 (of Communications Act.)—Nothing in this Act shall be understood to give the Commission the power of censorship over the radio communications or signals transmitted by any radio station, and no regulation or condition shall be promulgated or fixed by the Commission which shall interfere with the right of free speech by means of radio communication.

INDECENT LANGUAGE

§1464 (of U.S. Criminal Code) Broadcast obscene language.—Whoever utters any obscene, indecent, or profane language by means of radio communication shall be fined not more than \$10,000 or imprisoned not more than two years, or both.

TRANSFERS AND ASSIGNMENTS

§1.540 Application for voluntary assignment or transfer of control.—(a) Application for consent to the assignment of construction permit or license, or for consent to the transfer, of control or a corporation holding such a construction permit or license, shall be filed with the Commission on FCC Form 314 (Assignment of License), FCC Form 315 (Transfer of Control), or FCC Form 316 (Short Form). Such application should be filed with the commission at least 45 days prior to the contemplated effective date of assignment or transfer of control.

(b) The following assignment or transfer applications may be filed on Form 316.

(1) Assignment from 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 interest transferred is not a controlling one; (4) Corporate reorganization which involves no substantial change in beneficial ownership; (5) Assignment or transfer from corporation to wholly owned subsidiary thereof or vice versa, or where there is assignment owned or controlled by assignor stockholders without substantial change in their interests; or (6) Assignment of less than a controlling interest in a partnership.

§1.541 Application for involuntary assignment of license or transfer of control.—(a) The Commission 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.

that operation of the proposed station would be in the public interest.

The licensing procedure is detailed in Part 1 of the commission's rules of "Practice and Procedure." Station operation is covered by Part 73 (formerly Part 3) "Radio Broadcast Services." The latter includes technical standards for AM, FM and TV stations, and TV and FM channel (frequency) assignments by states and communities. Copies of these rules are not supplied by the commission but are available from the Government Printing Office.

Most applicants employ engineering and legal services in preparing their applications. The commission does not make technical or other special studies for prospective applicants nor does it recommend individual lawyers or engineers. Names of firms and individuals practicing before the commission are listed in various trade publications.

Following is a summary of the consecutive steps to be followed in applying for authorization to build and operate a broadcast station. The application procedure is substantially the same whether the facility sought is AM, FM or TV.

Selecting a Facility

An AM applicant must make his own search for a frequency on which he could operate without causing or receiving interference from existing stations and stations proposed in pending applications. AM broadcast stations operate on "local," "regional," or "clear" channels. Stations of 250 watts power nighttime and up to 1 kilowatt daytime serve small communities; stations of 500 watts to 5 kilowatts power cover centers of population and surrounding areas; stations of 10 to 50 kilowatts power are for large area coverage, particularly at night.

An FM station applicant must request an FM channel assigned to the community in which he proposes to operate, or a place within a 10-mile radius (for Class A FM stations) or a 15-mile radius (for Class B or Class C FM stations), which has no FM channel assignment. Power, antenna height and station separation are governed by which of three zones the station is to be located. There are three classes of commercial FM stations. Class A stations use power of from 100 watts to 3 kilowatts to cover a radius of about 15 miles; Class B stations, 5 kilowatts to 50 kilowatts for 40-mile service and Class C, 25 kilowatts to 100 kilowatts for 65-mile range. Noncommercial educational FM stations are in a separate category and may operate with power as low as 10 watts. Commercial and educational FM stations may apply for a "Subsidiary Communications Authorization" (Form 318) to furnish certain supplemental services. FM stations may engage in stereophonic broadcasting for which no special application is required.

An applicant for a TV station must request a VHF (very high frequency) or a UHF (ultra high frequency) channel assigned to the community in which he proposes to operate, or a place having no channel assignment within 15 miles of that community. Power depends upon the kind of channels used (VHF or UHF) and station separation is determined by three zones. TV "translator" stations serve remote communities by picking up and rebroadcasting the programs of outside stations, with latter's permission. They operate on VHF or the upper 14 UHF channels. Booster stations fill in the shadows of UHF station service areas. Certain channels are assigned for noncommercial, educational TV operation. There is a "Community Antenna Relay Service" for non-common carrier microwave facilities to relay TV signals to community antenna television (CATV) systems.

Applying for a Construction Permit

After a prospective broadcaster has decided upon the type of station he desires, and the place where it would be located, he should ascertain and plan to meet the programming needs of the locality he intends to serve. The next step is to apply for a construction permit. This is done on FCC Form 301, "Application for Authority to Construct a New Broadcast Station or Make Changes in an Existing Broadcast Station," which covers AM, FM, or TV broadcast, except educational applicants who use FCC Form 340, TV translators (Form 346), and booster stations (Form 343). These forms require information about the citizenship and character of the applicant, as well as his financial, technical and other qualifications, plus details about the transmitting apparatus to be used, antenna and studio locations, and the service proposed. Commercial broadcast applicants are required to show their financial ability to operate for one year after construction of the station. Triplicate copies are required. Nonprofit educational institutions apply for new or changed instructional fixed TV stations on

Station Application Procedure

How to Apply for a Broadcasting Station (AM/FM/TV)

(Updated to October 1968)

Any qualified citizen, firm, or group may apply to the Federal Communications Commission for authority to construct a standard (AM), frequency modulation (FM), or television (TV) broadcast station.

Licensing of these facilities is prescribed by the Communications Act of 1934, as amended, which sets up certain basic requirements. In general, applicants must satisfy the commission that they are legally, technically and financially qualified, and

Form 330P.

Applicants Must Give Local Notice

Applicants for new broadcast stations, license renewals, station sales or major changes in existing stations must give local public notice of such intent and also of any subsequent designation of their applications for hearing. This is done over the applicant's local station (if any) and by advertising in the local newspaper. It affords interested persons an opportunity to comment on these applications to the commission. Applicants and stations must also maintain public reference files in their respective localities.

Application Processing

All broadcast applications are reported twice by the commission—when first tendered (received) and, again, when formally accepted for filing. An application is not acted upon until at least 30 days after the commission gives public notice of its acceptance. During that time objecting petitions may be filed.

Competing AM applications may be filed up to a date specified (about 30 days subsequent to) in a notice of AM applications ready for processing. Competing FM and TV applications may be filed up to the day the initial application is ready for commission consideration.

Applications are, in general, processed in the order in which accepted. They are reviewed in their engineering, legal and financial aspects by the Broadcast Bureau, which, under delegated authority, can act on routine applications and report to the commission applications involving policy or other particular considerations. If an application has no engineering or other conflicts, has no valid protests, the applicant is found qualified. Assuming all other requirements are met, the application may be granted without hearing and a construction permit is issued. All such grants are announced by the commission. Petitions for reconsideration of grants without hearing made without hearing can be filed within 30 days thereafter but must show good cause why the objections were not raised before the grant.

Hearing Procedure

Where it appears that an application does not conform to the commission's rules and regulations, that serious interference would be caused, if there is protest of merit, or if other serious questions of a technical, legal or financial character develop, a hearing is usually required. The commission must accord a hearing to competing applications filed within specified time limits.

In designating an application for hearing, the commission gives public notice of the issues for the information of the applicant and others concerned. The hearing notice generally allows the applicant 60 days or more in which to prepare. Even after the hearing has been set, an applicant may amend his application to resolve engineering or other problems. (Commission approval is required for all mergers or situations in which a competing applicant withdraws on payment of expenses.)

Hearings on competing applications are normally held at the commission's Washington offices. Hearings on license revocations and renewals are held in the communities affected.

Hearings are customarily conducted by an examiner. He has authority to administer oaths, examine witnesses and rule upon the admission of evidence. A prehearing conference is held to reach agreement on procedural matters.

Within 20 days after the close of a record by the hearing examiner, each party and the chief of the Broadcast Bureau of the commission can file proposed findings of fact and conclusions to support their contentions. After review of the evidence and statements, the hearing examiner issues an initial decision.

If he wishes to contest the initial decision, the applicant or any other party in interest has 30 days from the date on which the initial decision was issued to file exceptions. In all cases heard by an examiner, the commission or its review board may hear oral argument on timely request of any party. After oral argument, the commission or the review board, as the case may be, may adopt, modify or reverse the hearing examiner's initial decision. In cases where the review board has acted on the exceptions, an appeal from its decision may be taken to the commission within 30 days. The commission may, however, deny the appeal for review without stating reasons for such action.

Court appeals can be taken within 30 days following release of the final decision, in which case the commission's action is stayed pending court determination.

Construction Permit

When an application is granted, a construction permit is issued. The new permittee may then request call letters which, if

available and conforming to the rules, are issued. A period of 60 days from date of the construction permit is provided in which construction shall begin, and a maximum of six months thereafter as the time for completion (or eight months in all). Application to make changes in an existing station is made on the same form used in seeking initial construction authorization (Form 301). Application to modify a broadcast construction authorization or to modify a license is made on form 301-A, "Request for Modification of Broadcast Station Authorization." If the permittee is unable to build his station within the time specified, he must apply for extension of time on Form 701 ("Application for Additional Time to Construct a Radio Station"), giving reasons. Upon completion of construction the permittee conducts equipment tests.

License

The final step is to apply for the actual license on Form 302 ("Application for New Broadcast Station License"), or Form 341 (for noncommercial educational FM stations), Form 344 (for TV boosters), or Form 347 (for TV translators). Applicants must show compliance with all terms, conditions and obligations set forth in the original application and the construction permit. Not until he applies for a license can the holder of a construction permit request authority to conduct program tests. The license application form provides a space for program test request, or it can be made separately. A station license and program test authority are issued if no new cause or circumstance has come to the attention of the commission that would make operation of the station contrary to public interest.

Applicants for renewal of station licenses must show that they have operated according to the terms of their authorizations and the promises they made in obtaining them. Most renewal applications are made on Form 303 ("Application for Renewal of Broadcast Station License"). Noncommercial educational licensees use Form 342; and TV translators Form 348. Pending the disposition of any commission hearing or other proceeding involving license renewal or revocation, the station continues to operate even though its license term may have expired.

Sales and Transfers

If the holder of a construction permit or license desires to assign it to someone else, he makes application on Form 314 ("Application for Consent to Assignment of Radio Broadcast Station Construction Permit or License"). Should the permittee or licensee wish to transfer corporate control, he applies on Form 315 ("Application for Consent to Transfer Control of Corporation Holding Radio Broadcast Station Construction Permit or License"). Form 316 ("Application for Assignment or Transfer—Short Form") may be used when the transfer or assignment involves no substantial change in interest. Sales of stations held less than three years are subject to hearing except in case of death, hardship or other mitigating circumstances beyond the licensee's control.

Construction Changes

Applicants for authority to make construction changes in existing stations apply on the same form used for a construction permit for the type of station involved.

Application Fees

Since March 17, 1964, the commission has exacted fees for most application filings to comply with government policy to charge for certain federal services. The application fee for new station construction permits, major changes in existing stations, license renewals, assignment of license or transfer of control (exclusive of FCC Form 316), is \$75 for AM and FM stations, \$150 for TV stations, and \$10 for translators. Applicants using FCC Form 316 (the short form for transfer or assignment involving no substantial change in interest) pay \$30. There is no fee for translators and auxiliaries. A charge of \$30 is made for applications to change broadcast station call letters. The fee for other broadcast applications is \$30. Fees are not required for applications filed by tax-exempt organizations for operating noncommercial educational broadcast stations, whether or not such operation is on frequencies reserved for that use.

Printed Rules

FCC rules may be obtained only through the Government Printing Office, Washington, D. C. 20402. The rules on FCC practice and procedure are contained in Volume I, which is available at the Government Printing Office for \$4 a copy; the broadcast rules are contained in Volume III, for \$7. Orders should be sent to the Government Printing Office direct (not through the FCC). The printed rules are sold on a subscription basis, which entitles the purchaser to receive subsequent amendments to the rule part purchased.

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Equipment

Visual Electronics Corp. 356 West 40th St., New York 10018. (212) 736-5840. James B. Tharpe, pres; George H. Wagner, VP; Charles E. Spicer, VP; Philip Silberberg, VP; James A. Phillips, VP; Newland F. Smith, asst to pres; Hendrik J. Antonisse, Visual Electronics International, sls mgr. Sunnyvale, Calif.: 365 San Aleso Ave. (408) 738-4000. Charles L. Martin. Hollywood: 6464 Sunset Blvd. (213) 466-6417. Keith Tindall, Dallas Barnard. Wheatridge, Colo.: 3225 Garland St. (303) 237-4745. Barry Holland. Atlanta: 2381 John Glenn Drive. (404) 457-2244. Lewis C. Radford. O. G. "Bud" Mills. Prairie Village, Kan.: 8121 Dearborn Drive. (913) 649-4941. Forest Eckhoff. Chicago: 20 North Wacker Drive, Room 1837. (312) 372-3383. Felix D. Bonvouloir, Richard Daker. Willoughby, Ohio: 34350 Ridge Road, Apt. D14. (216) 946-2999. Jim Billingsley. Bethesda, Md. 5940 Avon Drive. (301) 537-2860. Edward S. Clammer. Silver Spring, Md.: Twin Tower Apts., Apt. 1205. 1110 Fidler Lane. (301) 587-5972. Carl Hayworth. Newton, Mass.: 55 Chapel St., P.O. Box 65. (617) 244-7730. Morris Mayers. Lansing, Mich.: 3507 Ronald St. (517) 485-2633. Bill Keiser. Moorhead, Minn.: Route #2. (218) 233-1231. C. D. Kittleson. New York: 356 West 40th St. (212) 736-5840. Morris Mayers, John Camarda. Greensboro, N. C.: 219 Homewood Ave. (919) 292-1791. A. W. Greeson. Winston-Salem, N. C.: 2550 Weymouth Road. (919) 765-3157. P. D. Thompson. Lebanon, Pa.: 1107 Cathedral St. (717) 273-5691. Chester A. Siegrist. Dallas: 328 Braniff Building. (214) 357-9461. G. Wayne Bradbury, Linton Har- graves. Houston: 4007 Bellaire. (713) 668-4896. Wayne Marcy. Richmond, Va.: 311 D. Kirkland Drive. (703) 262-3217. James A. Howard. Seattle: 19001 40th Place N.E. (206) 363-8844. Donald Rose. See Adv. page C-41

Vital Industries Inc. 3614 S.W. Archer Rd.,

Gainesville, Fla. 32601. (904) 378-1581. Nubar Donoyan, pres; Dale Buzan, VP. Atlanta 30327: 3620 Ridgewood Rd. N.W. (404) 233-9459.

Vitro Electronics—Division of Vitro Corp. of America. 919 Jesup-Blair Drive, Silver Spring, Md. 20910. JUniper 5-1000. V. M. Satterholm, pres; G. M. Exten, mgr of sls; B. S. Parmet, mgr of engrg. Los Angeles: 2301 Pontius Ave. GRanite 7-6717.

W

Waber Electronics Inc. 2000 N. 2nd St., Philadelphia 19122. (215) Nebraska 4-3200. Isadore Waber, pres.

Wallach & Assoc. Inc. 5701 Euclid Ave., Cleveland 44103. (216) 361-7616. Charles D. Wallach.

Ward Electronic Industries. 142 Central Ave., Clark, N. J. 07066. (201) 382-3700. R. J. Rainey, pres; B. V. Munzelle, sls mgr.

Ward Leonard Electric Co. 17 South St., Mount Vernon, N. Y. Mount Vernon 4-1000. B. M. Gilligan, pres; W. J. Robbins, senior VP, sec-treas; F. Weymouth, mgr dimmer div. Phoenix 85013: Gramer & Company. 110 W. Camelback Road, Suite 201. (602) 279-1221. Arcadia, Calif. 91006: Ward Leonard Electric Co., 9 Morlan Place. (213) 446-6516. Cromwell, Conn. 06416: Ward Leonard Electric Co., 544 Main St. (203) 374-7443. Washington 20036: Irving M. Day Co. Suite 102, 2000 N. St., N.W. (202) 296-2975. Jupiter, Fla. 33458: Massey Associates, P.O. Box 877. (305) 746-4591. St. Petersburg, Fla. 33707: Massey Associates Inc., 801 79th St. So., P.O. Box 13577. (813) 347-6183. Winter Park, Fla. 32790: Massey Associates Inc., P.O. Box 1201. (305) 855-4510. Atlanta 30309: Roger W. Allen. 1055 Stovall Blvd N.E. (404) 233-2361. Metairie, La. 70003: S.E. Morgan & Associates, 7000 Hastings. (504) 888-5627. Minneapolis 55405: Kirkeby & Associates Inc., 821 Second Ave. N. (612) 377-3239. Albuquerque, N. M. 87108: Data Handling Co., 209 San Pablo St. (505) 268-0928. Cleveland 44141: Ward Leonard Electric Co., 1463 Warrensville Center Rd. (216) 382-8444. Philadelphia 19107: J. Vetter Associates Inc., 260 South 12th St. (215) KI 6-6373. Memphis 38104: Hal Beard & Associates.

2160 York Ave. (901) 274-1744. Addison, Tex. 75001: Lynn Elliott Co., 701 N. Dooley Rd. (214) 239-8533. Missouri City, Tex. 77459: Lynn Elliott Co., Pike Road., P.O. Box 428. (713) 224-9173. Seattle 98108: Seatronics Inc., 5931 4th S. (206) 767-4330.

Westbury CATV Corp. (a division of Electronics, Missiles & Communications Inc.) 212 South Fulton Ave., Mount Vernon, N. Y. 10550. (914) Owens 9-5225. J. P. Gallagher, pres; Robert F. Romero, and Garr Johnson, VPs.

Westel Co. 298 Fuller St., Redwood City, Calif. 94063. (415) 365-3440. Frederick Waiss, chmn; Peter Jackson, gen mgr; A. Maxey, tech dir-mechanical; A. Grace, tech dir-electronic.

Western Tonelics. Black Hawk, S. D. 57718. 787-4224. Keith V. Anderson, pres (manufacturing and marketing division of Keith Anderson Co.). Rushcutters Bay, N.S.W., Australia: 110 Bays Water Rd., Sydney 310-995. L. D. Stewart, mgr.

Western Tower Co. 12806 Black Diamond Rd., Kent, Wash. Ulrick 2-7225. Earl Griffin, owner.

Westinghouse Electric Corp., Semiconductor Division. Youngwood, Pa. (412) WA 5-7272. Ozzie Jaeger.

Westrex Co. Ltd. 152 Coles Green Road, Cricklewood, London N.W. 2. 01-452-5401.

Whistler Electronics Inc. 8613 Yolanda Ave., Northridge, Calif. 91324. (213) 349-7100. George Krug, pres; Carol A. Schmitt, sec-treas; Evelyn Krug, VP.

Wilkinson Electronics Inc. 1937 W. MacDade Blvd., Woodlyn, Pa. 19094. TRemont 4-5236. Guffy P. Wilkinson; William H. Johnson; Paul Moffitt.

Winegard Co. 3000 Kirkwood, Burlington, Iowa. 52602. (319) 754-6595.

Woerns Tower Construction. 1563 Benning Ave., Grand Rapids, Mich. (616) 453-0058. Karl Woerns, pres.

Z

Zolomatic Corp. 941 N. Highland Ave., Hollywood 90038. (213) 463-2181. Willi H. Zolle, pres; Charles Stenning, sec.

Zoomar Inc. TV Division. 55 Sea Cliff Ave., Glen Cove, N. Y. 11542. (516) ORiole 6-1900. Dr. Frank G. Back, pres; Walter Steuer, VP & gen sls mgr.

Broadcast Primer

Evolution of Broadcasting

By George Gillingham
Former Chief, Office of Reports
and Information, FCC

Radio communications was born of many minds and developments. In the 1860's Maxwell predicted the existence of radio waves. Hertz later demonstrated that rapid variations of electric current can be projected into space in the form of waves similar to those of light and heat. In 1895, Marconi transmitted radio signals for a short distance and, at the turn of the century, conducted successful transatlantic tests.

The first practical application of radio was for ship-to-ship and ship-to-shore telegraphic communication. Marine disasters early demonstrated the speed and effectiveness of radiotelegraphy for safeguarding life and property at sea.

This new communication medium was first known as "wireless." American use of the term "radio" is traced to about 1912 when the Navy, feeling that "wireless" was too inclusive, adopted the word "radiotelegraph." Though the British still cling to the older term, "radio" continues to be the American designation except in referring to television. The word "broadcast" stems from early U.S. naval reference to "broadcast" or orders to the fleet.

The first voice broadcast is a subject for debate. Claims to that distinction range from "Hello, Rainey," said to have been sent by Stubblefield to a partner in a demonstration near Murray, Ky., in 1892, to an impromptu program from Brant Rock, Mass. by Fessenden in 1906, which was picked up by nearby ships.

There were other early experimental audio transmissions—such as De Forest putting the singer Caruso on the air in 1910 and transatlantic voice tests by the Navy station at Arlington, Va., in 1915—but it was not until after World War I that regular broadcasting began. The "first" broadcasting station is likewise a matter of conflicting claims. This is due largely to the fact that some pioneer AM broadcast stations developed from experimental operations, Al-

though KDKA Pittsburgh did not receive a regular broadcasting license until November 7, 1921, it furnished programs experimentally prior to that date. Records of the Department of Commerce, which then supervised radio, indicate that the first station issued a regular broadcasting license was WBZ Springfield, Mass. on September 15, 1921.

There was experimental network operation over telephone lines as early as 1922. In that year WJZ now New York and WGY Schenectady, broadcast the World Series. Early in 1923 WEAJ New York and WNAC Boston picked up a football game from Chicago, later that same year WEAJ and WGY were connected with KDKA Pittsburgh, and KYW Chicago, to carry talks made at a dinner in New York. President Coolidge's message to Congress was broadcast by six stations in 1923. In 1926 the National Broadcasting Co. started the first regular network with 24 stations. Its first coast-to-coast hookup, in 1927, broadcast a football game. In the latter year, the Columbia Broadcasting System was organized. The first round-the-world broadcast was made from Schenectady in 1930.

FM (frequency modulation) and TV (television) broadcast emerged from their experimental stage just before U.S. entry into World War II. Wartime restrictions retarded normal expansion of radio facilities but that emergency produced new techniques and apparatus which, with subsequent developments, have invaluable present-day application. International TV and radio program relay is now furthered by communication satellites.

Regulation of Broadcasting

There was a Wireless Ship Act of 1910 which applied to use of radio by ships, but the Radio Act of 1912 was the first domestic law for the control of radio in general. It made the then secretary of commerce and labor responsible for licensing radio stations and operators.

Early broadcasting was experimental and, therefore, noncommercial. In 1919 broadcasters were enabled to operate as "limited commercial stations." In 1922 the "wavelength" of 360 meters (approximately 830 kilocycles) was assigned for the transmis-

sion of "important news items, entertainment, lectures, sermons, and similar matter."

Recommendations of the first National Radio Conference in 1922 resulted in further regulations by the secretary of commerce. A new type of AM broadcast station came into being, with minimum power of 500 watts and maximum of 1000 watts (1 kilowatt). Two frequencies (750 and 833 kilocycles) were assigned for program transmission.

So rapid was the development of aural broadcasting that, upon recommendation of subsequent National Radio Conferences (1923 and 1924), the Department of Commerce allocated 550 to 1500 kilocycles for standard broadcast (AM being the only regular broadcast at that time), and authorized operating power up to 5000 watts (5 kilowatts).

Increase in the number of AM stations caused so much interference that, in 1925, a fourth National Radio Conference asked for a limitation on broadcast time and power. The secretary of commerce was unable to deal with the situation because court decisions held that the Radio Act of 1912 did not give him this authority. As a result, many broadcasters jumped their frequencies and increased their power and operating time at will, regardless of the effect on other stations. This caused bedlam on the air.

In 1926 President Coolidge urged Congress to remedy matters. The result was the Dill-White Radio Act of 1927.

Federal Radio Commission

The Radio Act of 1927 created a five-member Federal Radio Commission with certain regulatory powers over radio, including the issuance of station licenses, the allocation of frequency bands to various services, assignment of specified frequencies to individual stations and control of station power. The same act also delegated to the secretary of commerce authority to inspect radio stations, to examine and license radio operators and to assign radio call signals.

Much of the early effort of the Federal Radio Commission was required to straighten out the confusion in the broadcast band. It was impossible to care for the 732 broadcast stations then operating. New rules and

Broadcast Primer

regulations caused about 150 of them to surrender their licenses.

Communications Act of 1934

At the request of President Roosevelt, the secretary of commerce in 1933 appointed an interdepartmental committee to study the overall interstate and international electrical communications situation. The committee reported that "the communications service, as far as congressional action is involved, should be regulated by a single body." Accordingly, it recommended the establishment of a new agency which would regulate all interstate and foreign communication by wire and radio, including telegraph, telephone and broadcast. The resultant Communications Act of 1934 created the present Federal Communications Commission for this unified regulation.

Federal Communications Commission

The Federal Communications Commission, an independent federal agency composed of seven commissioners appointed by the President, by and with the advice and consent of the Senate, began operating on July 11, 1934. Its organization and functions are set forth in a separate fact sheet titled "An ABC of the FCC" which is available from the commission on request.

FCC Broadcast Regulation

One of the FCC's major activities is the general regulation of broadcasting—now visual as well as aural. This regulation has two phases.

The first phase deals with the allocation of spectrum space to the different types of broadcast services in accordance with commission policies and rules to carry out the intent of international agreements, the Communications Act and other domestic laws affecting broadcasting.

The second phase more directly concerns individual stations. It embraces consideration of applications to build and operate; the assignment of specific frequencies, power, operating time and call letters; the periodic inspection of equipment and the engineering aspects of operation; passing upon transfers and assignments of facilities; also changes in existing authorizations; modifying construction permits and renewing licenses; reviewing the general service of each particular station to determine whether it has been operating in the public interest; licensing operators of transmitters, and otherwise discharging domestic regulatory responsibilities.

Broadcast stations are licensed to serve the public interest, convenience and necessity. Because radio channels are limited and are a part of the public domain, it is important that they be entrusted to licensees who have a high sense of public responsibility. The normal broadcast license period is three years.

The Communications Act sets up certain basic requirements which must be met by broadcast applicants. In general, applicants must be legally, technically and financially qualified, and show that their proposed operation will be in the public interest. The broadcast license privilege is limited by law to citizens of the United States. It is denied to corporations wherein any officer or director is an alien or of which more than one-fifth of the capital stock is controlled by foreign interests.

Penalties for broadcast station violations, depending upon their degree of seriousness, range from reprimands, fines up to \$10,000, and short-term (probationary) licenses, to denials of license renewals or revocation of licenses. Cease and desist orders can also be issued.

In 1965 the commission provided for public inspection of certain records of broadcast stations in the communities they serve, mainly duplicate copies of their records in the public files at the commission's Washington offices.

Programs.—Under the Communications Act, it is the responsibility of each broadcast station licensee to arrange his program structure so that his operations will be in the public interest. The commission does not prescribe any percentages of time which should be devoted to particular subjects, such as news, education, religion, music, public issues, etc. That is something which can vary with the locality and accordingly, is at the discretion of the individual station licensee. However, the commission does periodically review the overall performance of a station—engineering and otherwise—usually when it applies for renewal of its license to determine whether it has lived up to its obligations and the promises it made in obtaining permission to use the public airwaves.

Broadcast obligations.—In 1960 the commission issued a report and statement of policy in connection with its programing inquiry. As to the obligations of a station licensee, it said:

"In the fulfillment of his obligation the broadcaster should consider the tastes, needs and desires of the public he is licensed to serve in developing his programing and should exercise conscientious efforts not only to ascertain them but also to carry them out as well as he reasonably can. He should reasonably attempt to meet all such needs and interests on an equitable basis. Particular areas of interest and types of appropriate service may, of course, differ from community to community, and from time to time. However, the commission does expect its broadcast licensees to take the necessary steps to inform themselves of the real needs and interests of the areas they serve and to provide programing which in fact constitutes a diligent effort, in good faith, to provide for those needs and interests.

"The major elements usually necessary to meet the public interest, needs and desires of the community in which the station is located as developed by the industry, and recognized by the commission, have included: (1) Opportunity for local self-expression, (2) the development and use of local talent, (3) programs for children, (4) religious programs, (5) educational programs, (6) public affairs programs, (7) editorialization by licensees, (8) political broadcasts, (9) agricultural programs, (10) news programs, (11) weather and market reports, (12) sports programs, (13) service to minority groups, (14) entertainment programing.

"The elements set out above are neither all-embracing nor constant. We re-emphasize that they do not serve and have never been intended as a rigid mold or fixed formula for station operation. The ascertainment of the needed elements of the broadcast matter to be provided by a particular licensee for the audience he is obligated to serve remains primarily the function of the licensee. His honest and prudent judgments will be accorded great weight by the commission. Indeed, any other course would tend to substitute the judgment of the commission for that of the licensee."

Censorship and free speech.—The Communications Act states: "Nothing in this act shall be understood or construed to give the commission the power of censorship over the radio communications or signals transmitted by any radio station, and no regulation or condition shall be promulgated or fixed by the commission which shall interfere with the right of free speech by means of radio communication" (Sec. 326). The commission has held that freedom of speech on the air must be broad enough to give equal opportunity for the presentation of both sides of public issues. This is known as the commission's "fairness doctrine" which stems from an editorializing policy announced in 1949 and supported by a 1959 amendment to the Communications Act which obligates broadcasters "to afford reasonable opportunity for the discussion of conflicting views of public importance."

Advertising.—The commission does not pass upon individual broadcast commercials. However, it does consider whether over-commercialization contrary to the public interest may be involved in considering applications for new stations, renewals and transfers. Also, under a cooperative arrangement with the Federal Trade Commission, which has jurisdiction over false and misleading advertising on the air, the commission notifies stations of broadcast advertising cited by the FTC so that so that these stations may take any necessary action consistent with their obligation to operate in the public interest. In 1965 the commission adopted a policy which expects broadcast stations and producers of their advertising to cooperate in controlling the volume (loudness) of commercials.

Political broadcasts.—The Communications Act (Sect. 315) expressly provides: "If any licensee shall permit any person who is a legally qualified candidate for any public office to use a broadcasting station, he shall afford equal opportunities to all other such candidates for that office in the use of such broadcasting station; provided, that such licensee shall have no power of censorship over the material broadcast under the provisions of this section. No obligation is hereby imposed upon any licensee to allow the use of its station by any such candidate. The charges made for the use of any broadcast station for any of the purposes set forth in this section shall not exceed the charges made for comparable use of such station for other purposes." In 1959 the act was amend-

ed to exempt from the equal-time requirement appearances by candidates on "bonafide" newscasts, news interviews and other news coverage.

"Payola" and "fixed quiz" show revelations resulted in the Communications Act being amended in 1960 to make it illegal to "plug" records and other commercial services over the air without identifying those instances in which money or other consideration is received for so doing. Also penalties are provided for those who broadcast deceptive contests purporting to be based upon knowledge, skill or chance.

Lotteries, obscenity and fraud.—The United States Criminal Code prohibits broadcast of information concerning "any lottery, gift, enterprise, or similar scheme," also utterance of obscene, indecent or profane language, and fraud by wire, radio or television. A 1954 Supreme Court decision on a particular give-away program did not hold it to be a lottery.

Time charges and station management.—The Communications Act declares that broadcasting is not a common carrier operation; consequently a broadcast station is not required to sell or to give time to all who seek to go on the air. Because programing is primarily the responsibility of broadcast station licensees, the commission does not ordinarily monitor or pass upon individual programs, or require the filing of scripts. However, broadcast stations are required to keep a program log and a technical log, and a record of all requests for political broadcast time. The commission does not maintain surveillance of the day-by-day internal management of broadcast stations, or regulate their time charges, profits, artists' salaries or employee relations. It licenses only the stations and their transmitter operators; not announcers, disk jockeys or other personnel.

Radio and TV "codes" are issued by the National Association of Broadcasters for the guidance and voluntary compliance of its member stations. They concern programing and advertising practices.

Networks.—The commission does not license networks as such, only individual stations. However, its licensees are subject to the chain broadcasting regulations adopted by the commission in 1941 to further competition in broadcasting. These rules have been supplemented by regulations stemming from its special study of TV network broadcasting initiated in 1955. The commission has endorsed proposed legislation which would enable it to regulate networks directly to a degree short of licensing.

Monopoly.—There is commission prohibition against the same interest or group from operating more than one network, or more than one AM, FM or TV station in the same locality, or more than seven AM, seven FM or seven TV commercial stations throughout the country as a whole. Not more than five of these TV stations may be in the VHF band.

Receivers.—The commission does not license sets that are used for reception only. However, it does impose limitations on their radiation which may interfere with radio or TV service. The advent of wireless prompted the use of receiving sets by amateurs and others interested in listening-in on Morse code radiotelegraph transmission. Inexpensive crystal detectors boomed the production of home-made and manufactured receivers. The advent of broadcasting aroused public interest in sets (at first battery operated) to receive regular programs. Receiving sets operated by house current came on the market about 1928. A 1948 development called the "transistor" replaced tubes in sets. (See "TV Broadcast" for all-channel reception requirement.)

Call letters.—International agreement provides for the national identification of a radio station by the first letter or first two letters of its assigned call signal, and for this purpose apportions the alphabet among nations. United States broadcast stations use call letters beginning with K or W. Generally speaking, those beginning with K are assigned to stations west of the Mississippi River and in the territories and possessions, while W is assigned to broadcast stations east of the Mississippi.

During radio's infancy, most of the broadcast stations were in the East. As inland stations developed, the Mississippi river was made the dividing line of K and W calls. KDKA Pittsburgh was assigned the K letter before the present system was put into effect. Most of the early broadcast assignments were three letters. This combination became exhausted, making it necessary to add a fourth letter.

Since many AM broadcast licensees also operate FM and TV stations, a common practice is to use the call letters of the AM station followed by the dash and "FM" or

"TV" as the case may be.

National defense.—In cooperating with military and civil defense agencies, the Commission, has with the assistance of the broadcast industry, established an Emergency Broadcast System, which includes FM State Defense Networks. These facilities are for the prime purpose of giving emergency warning and advice to the public in event of armed attack but, meanwhile, are put to peacetime use in alerting localities and regions to serious storm and other weather threats to life and property.

Broadcast Operation Frequencies

Since radio frequencies differ, the particular qualities of each radio band must be considered in determining the type of service which can best operate on it. Consequently, that portion of the radio spectrum between 535 and 1605 kilocycles is occupied by AM broadcast, FM broadcast is allocated 88 to 108 megacycles, and TV is provided for in 54-216 megacycles (VHF) and 470-890 megacycles (UHF). (A "kilocycle" denotes a thousand wave-transmissions a second, while a "megacycle" is a short way of indicating a thousand kilocycles.)

FM broadcast requires a channel 20 times wider than that used for AM but TV transmission of combined picture and sound needs about 6 times the spectrum space occupied by the entire AM broadcast band.

The same aural or video broadcast channel can be used in different places if the using stations are far enough apart so as to not interfere with one another or with stations on adjacent or technically related channels. A TV station may be required to operate "offset" 10 kilocycles above or below its normal carrier frequency. The channel assigned to such a station is, in consequence, designated "plus" or "minus" as the case may be. This makes more TV assignments possible and reduces the probability of interference.

AM and FM Operation

Without being too technical, here is how an aural (AM or FM) broadcast station works:

A person talks into a microphone as if it were a telephone. His voice sets up vibrations of varying intensity and frequency. The lower the pitch the slower the vibration.

In the microphone these vibrations are converted into electrical impulses like those in the originating sound. At the transmitting station they are greatly amplified—sometimes millions of times—before being put on the "carrier" wave. The intensity and frequency of the carrier wave are constant and this wave, by itself, does not transmit music or speech. So it is varied to correspond with the fluctuations of the speech or music received at the microphone. This is called "modulation".

In AM broadcast the audio waves are impressed on the carrier wave in a manner to cause its amplitude (or power) to vary with the audio waves. The frequency of the carrier remains constant. This is known as "amplitude modulation." In "frequency modulation" (FM), the amplitude remains unchanged but the frequency is varied in a manner corresponding to the voice or music to be transmitted. (Television is discussed elsewhere in this primer.)

These modulated waves radiate from the antenna tower at approximately 186,000 miles per second (the speed of light). Some of them follow the contour of the ground and are called "ground-waves." Others dart upward and are called "skywaves." Skywaves are often forced back to earth by a ceiling of electrical particles known as the ionosphere. This rebound gives the listener a choice of more distant AM stations at night. Daytime reception is largely dependent upon groundwaves.

Radio waves may pass through buildings and other objects but are subject to absorption and interference. As in the case of ripples on water, radio vibrations weaken with distance. Seasonal disturbances and sunspot periods can throw them off their course and cause "freak" reception.

AM broadcast stations use "medium waves." That is to say, they transmit 540,000 to 1,600,000 waves a second. At 540,000 waves a second, the distance between the crests is approximately 1,800 feet. This is known as "wave length." A station transmitting 540,000 waves a second is said to have a "frequency" of 540,000 cycles or 540 kilocycles.

The so-called "short-wave" (long-distance) broadcast stations transmit from 6,000,000 to 25,000,000 waves per second. These waves are sent out one after another so rapidly that the distance between their crests (wave-length) is only about 37 to 150 feet.

The modulated radio wave from the radio station is picked up by the home receiving antenna (exterior or set-enclosed). In

other words, the wave sets up in the receiving antenna a current having the same frequency characteristics as one one transmitted. In the receiver the audio and carrier waves are separated by a device called a detector or demodulator. The carrier wave, no longer needed, is dissipated while the audio wave is relayed to the loud speaker where it is transformed back into the sound that you hear.

Relay Broadcast

Relay Broadcast depends upon common carrier or private interconnecting facilities. Most live-talent AM network programs are sent over telephone circuits, many across the continent, for rebroadcast. AM and FM stations also use transcriptions (recording) and TV stations show films, kinescope and tape recordings. Broadcast stations usually employ wire connections between studios and transmitters, but some use radio (see "Auxiliary Broadcast Services").

Besides being transmitted over wire, cable or microwave facilities, broadcast programs can be picked out of the air for rebroadcast. Because of its characteristics, TV cannot be sent over ordinary wire lines but depends upon coaxial cable or microwave relay, which can also handle AM and FM transmission as well as telephone and telegraph communication.

Transmitting antennas

In the interest of safety to air navigation, broadcast transmitting antennas must be approved by the Federal Aviation Agency before they can be constructed. All transmitting antennas exceeding 170 feet in height must be painted and lighted. The advent of TV (which, roughly, goes as far as can be seen from the top of the transmitting antenna) has produced many towering shafts. (To further minimize hazard to air traffic, the commission in 1967 adopted a rule providing for the establishment of antenna farms for new antennas of more than 1,000 feet. The farms may be set up through rulemaking proceedings initiated by the commission or proposed by the FAA or "any interested party.")

Directional Antennas

Directional antennas enable radio stations to control their service patterns. As AM broadcast stations began to multiply on shared channels, it became necessary to employ directional antennas to prevent interference. Since 1937, directional antennas have helped new stations squeeze into the congested AM broadcast band. Directional antenna arrays can produce "figure 8" and more complicated service patterns. One complex array includes nine towers. Directional antennas are used also in international communication and microwave relay to beam transmission to particular points. Some FM and TV stations now use directional antennas.

AM Broadcast

Amplitude modulation (AM) is the oldest system of program transmission. Besides being used in the standard broadcast band, it is also employed in most long-distance shortwave broadcasts as well as for the visual part of TV programs.

The 535 to 1605 kilocycles portion of the radio spectrum is now used for AM broadcast. This pioneer service started operation on these lower frequencies and, as a result, has continued to occupy the band in which it developed.

The AM broadcast band consists of 107 channels, each 10 kilocycles wide. Individual stations are assigned frequencies in the center of each channel, such as 540 kilocycles, 550 kilocycles, etc.

AM broadcast stations use power of from 250 watts to 50 kilowatts (50,000 watts). The latter is the present maximum power prescribed by the commission for this service.

Classes of AM Stations

There are four major classes of AM stations.

A Class I station operates on a "clear" channel and employs 10,000, 25,000 or 50,000 watts power to serve remote rural areas as well as a large center of population.

A Class II station is a secondary station which operates on a clear channel with a power of 250, 500, 1,000, 5,000, 10,000, 25,000 or 50,000 watts. It serves a population center and an adjacent rural area, and is operated so as to not interfere with the extensive services rendered by major clear channel stations.

A Class III station, which shares a "regional" channel with several similar stations, uses power of 500, 1,000 or 5,000 watts and serves a center of population and an adjacent rural area.

A Class IV station operates on a "local" channel (shared by many similar stations elsewhere) and employs a minimum of 250 watts.

"Clear channels" are set apart by international agreement for the operation of max-

imum-power AM stations to serve remote rural areas at night. People living outside populous communities depend largely upon the strong skywave signals of distant clear channel stations which are protected against nighttime interference.

An AM broadcast station transmits two types of signals—a groundwave and a skywave signal. Since the former is more reliable, the service provided by skywave signals is considered secondary. Skywave service varies in effectiveness with changes in such factors as time of day, weather, latitude, and atmospheric noise. It is chiefly effective at night, when it can provide a useful service to a much larger area than can be reached by ground-wave signals.

Almost half of all AM stations are licensed to operate daytime only (sunrise to sunset).

Growing congestion in the AM band caused the commission in 1964 to curb overlap of service by new AM stations or major changes in existing AM stations. The object is to use the now limited assignment potential to bring AM service to communities and areas still lacking it. Also steps were taken to limit dual service by mutually owned AM and FM stations in large cities, looking toward future divorcement of such combination programming (see "FM Broadcast"). (In July 1968 the commission imposed another freeze on AM applications and announced it was considering tightening up still further its AM allocations rules. Proposed rules that would have the effect of diverting growth of radio into FM were announced on Sept. 5, 1969.)

FM Broadcast

FM (frequency modulation) broadcast has several advantages over the older AM (amplitude modulation) method. FM has higher fidelity characteristics and is more free of static, fading and background overlapping of other stations' programs.

FM's greater tonal range capability is due primarily to the fact that it uses a wider channel than that employed for AM broadcast. Then, too, FM occupies a higher portion of the radio spectrum where there is less static and other noise than at lower frequencies. FM receivers have the particular ability to suppress weaker stations and other interference.

Since the frequencies on which FM operates do not ordinarily reflect back to earth from ionospheric layers (skywaves), it is possible for many scattered FM stations to use the same frequency without interfering with one another.

FM and AM broadcast do not interfere with each other since they are on widely separated bands. Because of the difference in their spectrum locations and the systems used, FM cannot be heard on AM receivers without special adapters. Likewise, AM broadcast cannot be heard on sets made to receive FM exclusively. However, combination sets cover both bands and systems.

FM History

The principle of frequency modulation has long been known but its advantages for broadcasting were not realized until shortly before World War II. Largely as a result of interest evoked by extensive FM development work by Edwin H. Armstrong in the 1930's, the commission authorized increased FM experimentation and in 1940, after extensive public hearings, provided for commercial FM operation to start January 1, 1941. It set apart 35 channels for commercial FM and 5 channels for noncommercial educational FM use.

There was no "first" individual commercial FM grant because, on October 31, 1940, the commission granted construction permits to 15 such stations simultaneously. By the end of 1940 the number of authorizations had increased to 25. The first commercial FM station licensed by the commission was WSM-FM Nashville (May 29, 1941), which operated until 1951.

FM stations were initially assigned call letters with added numerals, but in 1943 the present letter system was adopted. There is optional use of the suffix "FM" to distinguish FM stations from AM stations under joint operation.

Though all radio construction was frozen by World War II, more than 40 prewar FM stations continued to serve some 400,000 receivers.

Because of skywave interference experienced on the then FM band of 42-50 megacycles, the commission in 1945, after public hearing, moved FM to its present higher and less vulnerable position in the radio spectrum—88 to 108 megacycles—and at the same time increased the number of channels to 100. This provided 80 channels for commercial FM and 20 channels for non-commercial educational broadcast (see "Ed-

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ucational Broadcast").

FM Stations and Services

In 1962, the commission revised its FM broadcast rules, among other things, to:

Divide the country into three zones (instead of the previous two) for FM broadcast operation. Zone I (like TV Zone I) includes part or all of 18 northeastern states, plus the District of Columbia; Zone I-A is limited to the Southern portion of California, and Zone II includes the remainder of the United States (excluding Alaska and Hawaii).

Create three classes of commercial FM stations (instead of the previous two). Class A stations are assigned to all zones; Class B stations are assigned to Zones I and I-A, and Class C stations are assigned to Zone II.

Class A stations use power of from 100 watts to 3 kilowatts to serve an area of about 15 miles; Class B stations, with power of from 5 kilowatts to 50 kilowatts, have a range of some 40 miles, and Class C stations, employing 25-to-100 kilowatts power, reach approximately 65 miles.

Maximum equivalent antenna height above average terrain is 300 feet for Class A stations, 500 feet for Class B and 2,000 feet for Class C. Where these figures are exceeded power must be correspondingly reduced. Minimum co-channel separations are 65 miles for Class A stations; 150 miles for Class B and 180 miles for Class C.

In 1963, the commission adopted a table assigning the 80 commercial FM channels to states and communities, similar to the method of making TV channel assignments. Nearly 3,000 FM channel assignments were made to nearly 2,000 communities in states exclusive of Alaska and Hawaii.

The previously mentioned new AM broadcast rules, adopted in 1964, required that, effective October 15, 1965, FM stations owned jointly with AM stations in cities of over 100,000 population reduce duplication of AM programs over their FM stations to not more than half of the FM station's broadcast week. Temporary exemption was granted in particular cases. The commission believes that separate ownership of AM and FM stations is a desirable long-range goal.

Subsidiary FM service.—To aid FM broadcasters, the commission in 1955 enabled them to apply for subsidiary authorizations to render supplemental service such as "functional (background) music" operations. This specialized service is tailored to business and other subscribers. Multiplexed operation permits the transmission of a different program at the same time as the regular program. The former is received on special sets in stores, factories, etc., of subscribers.

The first subsidiary grants were made simultaneously on October 12, 1955 to WPEN-FM Philadelphia, and WWDC-FM Washington.

Stereophonic FM service.—In 1961 the commission adopted standards for FM stereophonic broadcast. Effective June 1 of that year, FM stations were permitted to transmit "stereo" programs on a multiplex basis without further FCC authorization. "Stereo" involves a dual transmission and reception to enable music and other sound to be heard with more realistic effect.

On the day the "stereo" rules became effective (June 1, 1961), the commission received, at the same time, its first notifications that two FM stations had started such regular operation. They were WGFM Schenectady, N. Y., and WEFM Chicago. Both stations had previously experimented with "stereo" under FCC authority, as had some other FM stations.

TV Broadcast

Television (TV) broadcasting involves transmission of visual and aural programs so synchronized that at the receiving set they are seen and heard in a manner resembling talking motion pictures.

The picture phase is accomplished by sending a rapid succession of electrical impulses which the receiver transforms into scenes and images. The method is complex, but the following is a brief explanation of monochrome (black-and-white) video operation.

The scene to be televised is focused on a special tube in the television camera which has a small "screen" covered with approximately 367,000 microscopic dots of a special substance. This "screen" can be likened to a tiny motion picture screen and is called a "mosaic." The varying light from each part of the scene being televised falls upon these dots and gives them an electrical charge the strength of which depends upon the amount

of light falling upon the individual dots. Thus each dot becomes a tiny storage battery and the scene is formed in a pattern of electrical charges on the mosaic.

The mosaic is "scanned" by a tiny beam of electrons no larger than the head of a pin, moving from left to right and progressing downward (just as the printed page is read by the human eye). This complete process is repeated 60 times per second, and the horizontal lines of alternate scanning are interlaced so that 30 complete pictures or "frames" composed of 525 horizontal lines are produced each second. As the electron beam strikes each dot on the mosaic, the dot is discharged through the electron beam and the electrical impulses produced are used to modulate the signals of the TV transmitter. Each time the dots are discharged by the electron beam they are recharged by the light produced by the succeeding scene falling upon them. The succession of individual "still" scenes creates the illusion of motion just as in the case of motion pictures made on film.

The reproduction by the TV receiver of the pictures transmitted is just the reverse of the transmission. The incoming succession of electrical impulses are separate from the "carrier" and, after amplification, impressed on the picture tube grid. The picture tube also has an electron "gun" which shoots out a tiny beam of electrons which moves from left to right and progresses downward on the face of the picture tube.

The face of the tube is coated with a material which fluoresces or gives off light at the point where it is struck by the electron beam. In the absence of a television signal the whole face of the picture tube is illuminated equally by a series of closely spaced horizontal lines. When a TV signal is placed on the grid of the picture tube it controls the strength of the electron beam and hence the amount of light on the face of the tube. If the scanning of the electron beam in the picture tube is kept in perfect step with the scanning of the electron beam in the TV camera, the picture tube will reproduce the lights and shadows of the subject scene and the succession of such scenes produces the illusion of motion.

In brief, the picture seen by the viewer is actually produced by a flickering spot of light moving rapidly across and down the face of the picture tube. The viewer sees the "whole" picture because the screen continues to glow for a tiny fraction of a second after the electron beam has passed, which coupled with the retentive ability of the eye creates the illusion that the picture is there all the time. The high rate of repetition minimizes flicker and lends smoothness to motion.

The TV transmitter is, in effect, two separate units. One sends out the picture and the other the sound. Visual transmission is by amplitude modulation (AM). The sound portion employs frequency modulation (FM) and operates much like the regular FM broadcast described elsewhere in this primer.

TV History

Many persons in many lands contributed to the development of television. Like radio, TV was made possible by electronic discoveries in the late 19th century and early 20th century. In 1884 Nipkow, a German, patented a scanning disk for transmitting pictures by wireless. In our own country, Jenkins began his study of the subject about 1890. Rignoux and Fournier conducted "television" experiments in France in the 1900's. In 1915 Marconi predicted "visible telephone." In 1923 Zworykin applied for a patent on the iconoscope (TV camera tube). Two years later Jenkins demonstrated mechanical TV apparatus. There were experiments by Alexanderson, Farnsworth and Baird in 1926-27. An experimental TV program was sent by wire between New York and Washington by the Bell Telephone Laboratories in 1927, in which Secretary of Commerce Hoover participated. The next year the same laboratories experimentally televised outdoor programs.

The Federal Radio Commission (predecessor of the Federal Communications Commission) reported that "a few" broadcast stations were experimenting with video in 1928. In that year, WGY Schenectady, N. Y., experimentally broadcast the first drama by TV. Large-screen TV was demonstrated by RCA at a New York theater in 1930, and RCA tested outdoor TV pickup at Camden, N. J., in 1936.

Seventeen experimental TV stations were operating in 1937. An experimental mobile TV station was placed in operation that year. The first United States President seen on TV was Franklin D. Roosevelt, when he opened the New York World's Fair in 1939. That year also saw the first telecast major

league baseball game, college football game and professional boxing match. In 1940 the Republican and Democratic conventions were first televised, that of the former making pioneer use of coaxial cable for long-distance TV relay purposes. Previously, in the same year, WNBT New York, and WRGB Schenectady, N. Y., were joined by radio relay for a rebroadcast test. The first President's message to Congress over network TV was that of Truman in 1950. The first TV debate between presidential candidates was in 1960 between Kennedy and Nixon. The first presidential message to Congress televised in color was that of President Johnson in 1966.

Meanwhile, in 1939, the Milwaukee Journal filed the first application to broadcast TV programs on a commercial basis. At a hearing in 1940, the FCC found industry divided on the question of whether TV was ready for commercial use and at odds on engineering standards. At that time various TV systems required different receivers. A National Television Systems Committee considered standardization and reported in 1941. Subsequent commission hearings showed the industry to be in substantial agreement on commercialization and standards. The latter fixed the present line and frame frequencies at 525 and 30 respectively. On April 30, 1941, the commission authorized commercial TV operation to start July 1 of that year.

A number of TV stations which had been operating experimentally applied for commercial authorization. The first grant looking to regular TV operation was issued to WNBT New York, on June 17, 1941, effective July 1 of that year. On June 24, 1941, WCBW New York, was authorized to commence program tests July 1 thereafter. By May of 1942 ten commercial TV stations were on the air. Six of these continued to provide service during the war.

In 1945 the commission allocated 13 VHF (very high frequency) channels between 44 and 216 megacycles for commercial television. In doing so, it pointed out that there was insufficient spectrum space below 300 megacycles for an adequate nationwide and competitive TV broadcasting system. Twelve of these channels were to be shared with certain nonbroadcast (fixed and mobile) services. At the time, that portion of the UHF (ultra high frequency) spectrum between 480 and 920 megacycles was made available for experimental TV operation looking to future TV expansion, and between 1245 and 1325 megacycles for TV relay.

In 1948, because of interference to commercial TV operation, the commission stopped the sharing of television VHF channels with other services, and deleted TV Channel No. 1 (44-50 MC) by assigning it to the nonbroadcast services affected.

TV Proceedings 1948-1951

As predicted by the commission in 1945, it became increasingly evident that the few available VHF channels were inadequate to provide a truly nationwide competitive TV service. Also, operating stations developed interference which had not been anticipated when TV broadcasting began. As a result, the commission on September 30, 1948 stopped granting new TV authorizations pending a study of the situation. This was the so-called TV "freeze" order.

The resultant study showed that, before additional stations could be authorized, it was necessary to determine various engineering and other questions which would govern future TV operation. Consequently, on July 11, 1949 the commission proposed comprehensive changes looking to the improvement and extension of TV service. These included new engineering standards; opening UHF channels for TV broadcasting; consideration of color systems; reservation of channels for non-commercial educational use; and a national assignment plan incorporating VHF and UHF channels.

The color question was the first subject considered because up to the actual hearing it had not been determined if color could operate in the same channel width (six megacycles) used for black-and-white TV transmission.

Color TV.—In color TV a brightness component is transmitted in much the same manner as the back-and-white picture signal is sent in monochrome and, in addition, a color component is transmitted at the same time on a "subcarrier" frequency which is located between the visual and aural carrier frequencies.

Color TV had been the subject of study and experimentation for a quarter of a century. In 1928 Baird, in England, demonstrated an early system. The next year color pictures were sent over wire in a test at the Bell Telephone Laboratories in New York.

RCA gave an experimental color TV demonstration in February 1940 and CBS tested color TV broadcast the following August.

The question of color TV was considered initially by the FCC in 1941, when it proposed alternative standards for monochrome and color. In 1945 it allocated certain UHF frequencies for experimentation in developing color and high definition black-and-white TV. It was not until 1946 that it received a formal proposal for the adoption of color. In denying that CBS petition in 1947, the commission urged further experimentation with particular reference to making color transmission possible in the 6-megacycle band width used by monochrome TV.

Three competitive color systems were offered for commission consideration in the general TV proceedings which started in 1949. They were the CBS "field sequential" system, the RCA "dot sequential" system, and the Color Television, Inc. "line sequential" system. Each of these systems required special or converted sets to receive color. The CBS system could not be received in black-and-white on existing receivers without adapters; the two others claimed they could.

On the basis of testimony and demonstrations, the commission on September 1, 1950 found that the field sequential system was the only system then presented which met its criteria for color operation. However, in view of the fact that this system could not be received in monochrome on existing receivers, and the possibility of improvements in TV color systems generally, the commission proposed postponing a color decision and adopting monochrome "bracket standards" which would enable future black-and-white TV sets incorporating those standards to receive color transmissions in black-and-white. This proposal was conditioned upon receiver manufacturers agreeing to equip new TV sets with a switch and an appropriate circuit for that purpose.

But the response from manufacturers was insufficient and, in accordance with its September announcement, the commission on October 11, 1950 adopted the CBS field sequential system for color TV broadcasting to become effective November 20 thereafter. In so doing, it held the door open for consideration of development of a better system on the basis of practical tests and actual demonstrations.

Start of commercial color broadcasting was delayed when RCA obtained a preliminary injunction in the United States District Court at Chicago. On May 28, 1951 the Supreme Court of the United States upheld the validity of the commission's action and CBS began limited color broadcasts on June 25 of that year. Because of the materials shortage, the National Production Authority on the following November 20 prohibited the manufacture of color TV sets or attachments for general public use, and interest in the field sequential system lagged.

Thereafter, new TV color standards were developed and advocated by the industry through its National Television Systems Committee. They were adopted by the commission on December 17, 1953.

These present standards are based on the "simultaneous" system, which transmits three primary colors (red, green and blue) at one and the same time. They are "compatible" in that they enable existing TV sets to receive color broadcasts in black and white. Color sets are necessary to receive colorcasts in color. Color sets also receive monochrome transmissions.

TV "Freeze" Lifted—1952

On April 14, 1952, the commission announced the lifting of the TV "freeze," the addition of 70 UHF channels (between 470-890 megacycles) to the 12 VHF channels (between 54-216 megacycles) then in use, and the adoption of a table making more than 2,000 channel assignments (over 1,400 UHF and over 500 VHF) to nearly 1,300 communities throughout the United States and its territories, including 242 assignments for non-commercial educational use.

The minimum effective radiated visual power of TV stations is fixed at 100 watts. No minimum antenna height above average terrain is specified. TV stations operate in accordance with tables of maximum power which varies with antenna height. Maximum effective radiated power on VHF channels 2-6 is fixed at 100 kilowatts, on VHF channels 7-13 at 316 kilowatts, and on UHF channels 14-83 at 5000 kilowatts; with very high antennas these powers are reduced.

Station separations are determined by three geographic zones. Minimum co-channel separations are 170 miles for VHF channels, and 155 miles for UHF channels in Zone I, which encompasses the entire states of Massachusetts, Rhode Island, Connecticut, New Jersey, Maryland, Pennsylvania, Delaware, District of Columbia, Ohio, Indi-

ana, Illinois, and parts of Maine, New Hampshire, Vermont, New York, Virginia, West Virginia, Michigan, and Wisconsin.

Minimum co-channel separations are 190 miles for VHF channels, and 175 miles for UHF channels in Zone II, which includes the entire states of Kentucky, Tennessee, North Carolina, South Carolina, Missouri, Iowa, Minnesota, Arkansas, Kansas, Nebraska, Oklahoma, North Dakota, South Dakota, Utah, Idaho, Arizona, New Mexico, Montana, Wyoming, Nevada, Colorado, Oregon, Washington, California, Alaska and Hawaii, and parts of Maine, New Hampshire, Vermont, New York, Virginia, West Virginia, Georgia, Alabama, Mississippi, Louisiana, Michigan, Wisconsin, and Texas.

Minimum co-channel separations are 220 miles for VHF channels, and 205 miles for UHF channels in Zone III, which includes Florida and parts of Georgia, Alabama, Louisiana, Mississippi, and Texas.

The first commercial TV grants following the lifting of the freeze were made on July 11, 1952, simultaneously, to three Denver, Colo., stations—KFEL-TV, K DEN, and KBTV. KFEL-TV began program operation on July 19 thereafter. The first UHF commercial TV station to go on the air was KPTV Portland, Ore., on September 20, 1952.

The initial commercial grant to the territories and possessions was made on July 23, 1952, to WKAQ-TV San Juan, Puerto Rico.

TV Service

Being in a higher part of the spectrum, UHF broadcasts cannot be received on VHF sets without changes in the set or the addition of a converter. Combination sets, however, receive both VHF and UHF stations. In some cases, UHF reception requires some slight changes in home antennas which were installed for VHF use, or may require a new antenna and a more efficient type of antenna lead in.

TV stations engaged in commercial operation are required normally to broadcast a minimum of 28 hours a week except in their initial stages when there is a graduated scale of operation starting with 12 hours.

Steps taken by the commission to bring TV service to additional areas include authorizing "satellite" stations on VHF and UHF channels to rebroadcast the programs of mother stations, "boosters" for UHF stations to fill in shadows in their service areas, and "translators" (low power on VHF channels and higher power on the top 14 UHF channels) to pick up and rebroadcast the programs of outside stations. Any rebroadcasting requires the consent of the station whose programs are picked up. Rules adopted in 1965 permit translators up to 100 watts power to apply for operation on VHF and UHF channels assigned to communities but unused.

Unlike AM networking, which is possible over ordinary telephone wires, TV requires special relay adjuncts. Network TV operation is made possible in large measure by the development of coaxial cable and microwave relay facilities. As early as 1937 motion pictures were televised and sent over the coaxial cable link between New York and Philadelphia. Network operation was begun by WNET New York, WRGB Schenectady, N. Y., and WPTZ Philadelphia in 1944. Regular coaxial cable TV relay service was inaugurated between Washington and New York in 1946. The following year, microwave relay extended this service to Boston. A midwestern relay system, opened in 1948, was joined with the eastern system in 1949. The first link in the transcontinental relay system was opened between New York and Chicago in 1950. It was extended to San Francisco the following year and, on September 4, 1951, carried telecasts of the Japanese peace treaty conference. Most live TV network relay is over the coaxial cable and microwave facilities of commercial communication common carriers. There is some private microwave TV relay.

UHF Development

Economic and technical problems long impeded more utilization of the UHF channels. In addition to the normal TV cost factor, they were caused, chiefly, by the large number of VHF-only receivers in use, and the consequent preference for VHF stations for advertising revenue sources.

In 1956 the commission outlined a long-range and interim plan to promote comparable TV facilities as a means of extending TV service throughout the nation. It invited comments on the possibility of ultimately shifting all or a major portion of TV operation to the UHF band and, at the same time, sought to enlist the cooperation of industry in a research and development study to increase the range and coverage of UHF stations. Meanwhile, it increased the

maximum power of UHF stations, made certain areas all-UHF and increased TV competition in others, and took other steps to put UHF and VHF operation on a more competitive basis. In 1966, it revised the TV channel assignment table to make additional UHF assignments.

On two occasions the commission sought the release of government VHF space to augment the VHF broadcast channels but national defense considerations prevented any action.

At the commission's request, Congress appropriated money for a test in New York City which demonstrated the ability of UHF to provide service comparable with VHF in a large canyon-type metropolitan locality.

Also at FCC request, Congress in 1962 adopted a requirement that TV receivers shipped in interstate commerce, or imported, be able to receive all UHF as well as VHF channels. The commission gave the industry until April 30, 1964 to convert to all channel set production. This is giving substantial impetus to UHF expansion, the only door now open for TV growth. Continued use of VHF-only receivers is not affected.

CATV Systems

CATV (community antenna TV) systems pick up programs of outside TV broadcast stations by means of a receiving antenna or bring them in by microwave radio relay. These signals are sent from the local CATV distributing point by multipurpose coaxial cable (which can simultaneously carry up to a dozen or more signals on different channels to the homes of subscribers linked to the cable system).

CATV systems started about 1950 as a means of bringing TV service to small communities unable to support a local TV station and beyond the range of outside TV stations. They have since spread to communities served by TV stations and constitute a large and fast-growing business.

In April 1965, the commission adopted rules to require a microwave-served CATV system to carry the signals of local stations on request and refrain from duplicating the programs of local commercial stations within a period of 15 days before or after the local broadcast.

In October 1965, the commission provided certain frequencies for use by non-common carrier microwave stations to relay signals to CATV systems and established a new Community Antenna Relay Service (CARS) to absorb CATV-serving microwave relay services in the Business Radio Service.

In March 1966, the commission asserted jurisdiction over all CATV systems regardless of whether they use microwave, and adopted rules to fit them into the TV transmission system. The rules require the systems, upon request and within the limits of their channel capacity, to carry all TV stations placing a Grade B or better signal over the community served by the system and of all 100-watt or higher power TV translators operating in the community, according to an order of priority. The non-duplication requirement of 1965 was reduced to the day of local broadcast.

The new rules provide that no CATV system located within the Grade A (primary service) contour of a TV station in the 100 largest TV markets shall provide new service to subscribers which would extend the signal of any TV station beyond its Grade B (secondary service) contour except upon a showing, made in evidentiary hearing and approved by the Commission, that the extension would be in the public interest and not be detrimental to TV broadcast service in the area.

The commission proposed legislation recommending, in the main, that Congress clarify and confirm FCC jurisdiction in the CATV field. (The commission's jurisdiction to regulate the CATV industry was upheld in a Supreme Court decision in June 1968.)

The commission on Dec. 13, 1968, issued new proposals aimed at revising its CATV rules.

Subscription TV

Subscription TV involves furnishing special programs to viewers who pay charge for this service. Generally speaking, there are two kinds of subscription TV—that which transmits programs from studio to sets of subscribers entirely by wire or cable (closed-circuit pay TV), and that which sends scrambled audio and video signals over the air which may be seen in intelligible form only by subscribers who have unscrambling devices attached to their TV sets.

The commission authorized over-the-air pay-TV experimentation as early as 1950. Five years later it proposed trial of such a

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service and, in 1957, invited comments on various proposed systems. They differ mainly in how the transmissions are sent in scrambled form and then decoded by the special apparatus attached to a subscriber's TV set, and whether coin boxes, punch cards or tape record is used for billing purposes. Later in 1957 the commission looked toward considering applications by TV stations to test this service under certain conditions. But, in view of resolutions by two congressional committees, it deferred further action until 1959 when it invited applications by commercial TV stations to test pay-TV under revised requirements.

The latter specify three-year trial authorizations limited to markets in which there are at least four existing commercial TV services, to the trial of any system in only one market, to one system per market, and to subscription programs being broadcast over only one local TV station at a time. Also, until the commission has decided whether toll-TV service should be authorized on a regular basis, it ruled that the public should not be called upon to buy special equipment.

On February 24, 1961 the commission, after a hearing, granted the only conforming toll-TV application then pending (WHCT Hartford, Conn.). That station started pay-TV programming on June 29, 1962. Data concerning that trial was submitted in March 1965 to the commission together with a request that the FCC consider whether over-the-air subscription TV should be authorized on a permanent nationwide basis. The commission in March 1966 invited comments on this proposal, also as to what its role should be with regard to closed-circuit pay TV. The commission on Dec. 13, 1968, adopted rules providing for a nationwide system of pay television. And on Sept. 15, 1969, it invited applications for pay-TV authorizations. The commission's decision was affirmed by the U.S. Court of Appeals in Washington, but the nation's theatre owners, who have long opposed pay TV, are taking the case to the Supreme Court.

Educational Broadcast AM Educational Stations

Educational institutions were among the pioneers in experimental broadcast, and held many early AM licenses.

By 1925 educational groups had 171 such licenses. For various reasons, notably the increased competition from commercial broadcasting, most of these stations were off the air when the FCC was created. However, about 40 educational stations still operate in the AM broadcast band, a score of them on a voluntary noncommercial basis.

As directed by Section 307(c) of the Communications Act, the commission made a study of the proposal that Congress should allocate fixed percentages of radio facilities for particular types of non-profit radio programs and activities, including education. On January 22, 1935, the commission recommended that no such statutory allocation be made at that time. It held that there was "no need for a change in the existing law to accomplish the helpful purposes of the proposal," but recognized the need for extending broadcasting to education and expressed its intention "actively to assist the determination of the rightful place of broadcasting in education and to see that it is used in that place."

To further the development of non-commercial educational broadcasting, the commission in 1938 set aside certain AM channels between 41 and 42 megacycles for the exclusive use of educational institutions. Because of the inability of the normal radio set to receive broadcasts on these frequencies, only a few educational institutions secured licenses for such operation. They later changed to frequency modulation operation when provision was made for FM educational broadcasting.

FM Educational Stations

When regular FM broadcasting was authorized to start in 1941, five channels between 42 and 43 megacycles were allocated for noncommercial educational use, in lieu of the educational AM facilities previously provided.

In 1945, as part of an extensive revision of frequency allocations, the commission reserved 20 FM channels between 88 and 92 megacycles for noncommercial educational FM stations. This educational portion of the FM band is contiguous to that containing the commercial FM stations and FM receivers are capable of tuning in both noncommercial and commercial FM stations within range. The number of these noncom-

mercial educational FM stations has grown slowly but steadily.

In 1948 the commission authorized low power (10 watt) operation on educational FM channels. With such low power equipment easily installed and operated, schools may begin broadcasting to a limited area of from two to five miles in radius for an outlay of a few thousand dollars. Higher power equipment may be added when desired. In 1951, as a further aid, the commission authorized remote control operation of low power educational FM stations.

Stations in the educational FM broadcast service are licensed principally to school systems, colleges and universities for furnishing educational programs to teachers and students, as well as for public educational and informational purposes. FM educational stations are of two classes—low power and high power.

TV Educational Stations

The commission, for the first time, allocated TV facilities for exclusive noncommercial educational use as a result of its lengthy study of this question in the general television proceedings (discussed under "TV Broadcast"). The commission determined therein that "the need for noncommercial educational stations has been amply demonstrated"; that "the record shows the desire and ability of education to make a substantial contribution to the use of television"; that "the actual process of formulating plans and of enacting necessary legislation or of making adequate financing available is one which will generally require more time for educational organizations than for commercial interests *** and that to insure an extensive rather than a sparse and haphazard development of educational television, channels must be reserved by the Commission at this time." Consequently, in its Sixth Report and Order of April 14, 1952, the commission made channel assignments to 242 communities exclusively for noncommercial educational purposes. Forty-six of these were made to "primarily educational centers." Of the total of 242 channels then assigned, 80 were VHF and 162 were UHF. There have since been additional assignments.

The commission further aided educational TV by, in 1963, establishing a supplemental service for using channels in a nonbroadcast band to transmit instructional and cultural material to schools and other selected receiver locations.

The commission expects educational TV licensees to make their station facilities available to other local educational institutions, since such assignments are made to serve the educational and cultural needs of the community. Except in particular cases, TV educational eligibility is not extended to municipal authorities in places where an independent educational authority—such as a board of education—is established. Although there is no requirement that non-commercial educational stations broadcast a specified minimum number of hours, commercial and educational TV stations are both subject to the same service requirements, such as station separation, antenna height and power, etc.

A 1962 law enables the Department of Health, Education, and Welfare to make matching Federal grants of money to construct noncommercial educational TV stations.

The first noncommercial educational TV grant was made July 23, 1952, to the Kansas State College of Agriculture and Applied Sciences (KSAC-TV), at Manhattan, Kans., but the station was never built. The first such station to go on the air was KUHT Houston, May 25, 1953; and the first one licensed was WCET Cincinnati, Ohio, March 11, 1955. The first state educational TV network was established in Alabama on April 28, 1955.

Several colleges and universities hold commercial TV authorizations and operate on a profit or nonprofit basis. Many schools have closed-circuit TV systems to link classrooms for instructional purposes.

International Broadcast

Under international agreement, certain high frequency bands are allocated for broadcast between nations.

Authorizations for non-government international broadcast stations located in the United States are issued by the FCC. A single grant usually authorizes use of a number of frequencies between 5950 and 26,100 kilocycles as well as several transmitters. This is because of seasonal and other considerations in broadcasting different programs to different parts of the world at the same time. The minimum power for international broadcast stations under commission jurisdiction is 50 kilowatts.

During World War II, international broadcast stations in the United States were taken over by the Office of War Information and the Office of Inter-American Affairs of the Department of State which operated and programmed them in the interest of the war effort.

The "Voice of America" is the title given to the programs now sent out daily, in many languages, to various parts of the world by shortwave transmitters under the auspices of the United States Information Agency. Transmission is by amplitude modulation.

Broadcast Relay by Satellites

Satellite communication is, in effect, an extension into space of international telephone and telegraph services. It relays communication over greater distances than possible with earth-bound radio and cable. Communication common carriers engaged in space communication offer a variety of for-hire services to the inclusion of video broadcast relay.

The first live transatlantic telecast by satellite—from the United States to Europe—was relayed by "Telesat I" on July 10, 1962. The initial picture was an American flag fluttering in the breeze in front of the sending station at Andover, Me. Still pictures in color were received from England six days later. Live telecasts were exchanged between the two continents on July 23. The pioneer live color test was on September 12 of the same year.

Auxiliary Broadcast

The commission authorizes several classes of auxiliary broadcast stations for live "pick up" and speeding programs of outside origin to studios, or from studios to transmitters. A brief description of these adjuncts follows:

Remote pickup stations are employed by aural and video stations for "on-the-spot" coverage of news and other events.

Studio-transmitter links are used to transmit aural and TV programs from studios to remote transmitters. Because a TV station's coverage depends to a large extent upon the height of its antenna, the latter is often located on a mountain some distance from the studio.

Intercity relay stations are utilized by some TV carrier facilities, to carry programs between stations by microwave.

Also, cueing transmitters are used in broadcast studios to direct performers who wear hidden miniature receivers.

EXPERIMENTAL BROADCAST

Experimental broadcast stations test new techniques and develop broadcast equipment. Information obtained from this experimentation and research helps the industry to evolve and improve equipment and methods and also provides the commission with useful information about new developments. Because of their temporary nature, the number of these authorizations fluctuates.

GROWTH OF BROADCAST SERVICES

The following tables reflect the development of both commercial and noncommercial broadcasting (number of stations as of January 1 of the year noted):

Year	Total	VHF	UHF
1945	6	6	—
1950	97	97	—
1955	411	294	117
1960	517	441	76
1965	586	487	99
1966	598	491	107
1967	626	500	126
1968	655	508	149
1969	675	502	173

Year	(\$ Millions)		
	Revenues	Expenses	Income ¹
1952	\$ 324.2	\$ 268.7	\$ 55.5
1953	431.8	360.5	71.3
1954	592.9	502.6	90.3
1955	744.7	594.5	150.2
1956	896.9	707.3	189.6
1957	943.2	783.2	160.0
1958	1,030.0	858.1	171.9
1959	1,163.9	941.6	222.3
1960	1,268.6	1,024.5	244.1
1961	1,318.3	1,081.3	237.0
1962	1,486.2	1,174.6	311.6
1963	1,597.2	1,254.0	343.2
1964	1,793.3	1,377.7	415.6
1965	1,964.8	1,516.9	447.9
1966	2,203.0	1,710.1	492.9
1967	2,275.4	1,860.8	414.6
1968	2,520.9	2,026.1	494.8

¹ Before Federal income tax.