Full Text of North American Regional Broadcasting Agreement

(Allocations Treaty Adopted at Havana, December 13, 1937)

Governments Participating-Canada, Cuba, Dominican Republic, Haiti, Mexico and United States

Purpose and Scope of This Agreement

1. Purpose of Agreement—The purpose of this Agreement is to regulate

1. Purpose of Agreement—The purpose of this Agreement is to regulate and establish principles covering the use of the standard broadcast band in the North American Region so that each country may make the most effective use thereof with the minimum technical interference between broadcast stations.

2. North American Region — The North American Region (hereinafter referred to as "Region") for the purpose of this Agreement shall be deemed to include and to consist of the following co un tries: Canada, Cuba, Dominican Republic, Haiti. Mexico, Newfoundland, and United States of America.

3. Standard broadcast band — The standard broadcast band shall be deemed to be the hand of frequencies extending from 550 to 1600 kc, both inclusive, both 550 kc, and 1600 kc. being the carrier frequencies of broadcasting channels as hereinafter defined. The Governments agree, subject to the provisions of Article 7 of the General Radio Regulations annexed to the International Telecommunications Convention Madrid, 1932, that this band of frequencies shall be allocated exclusively to broadcasting in the Region. exclusively to broadcasting in the Region.

the Region.

4. Sovereign right to use channels—
The sovereign right of all countries, parties to this Agreement, to the use of every channel in the standard broadcast band is recognized. The Governments recognize, bowever, that until technical developments reach a state permitting the elimination of radio interference of international character, a regional arrangement between them is necessary in order to promote standardization and to minimize interference. mize interference.

5. Regional character of Agreement
-The Governments recognize that this Agreement, and each provision thereof, is a regional arrangement within the meaning of, and authorized by the International Telecommunications Convention and the General Radio Regulations annexed thereto.

> Technical A. Definitions

1. Broadcast station—A station the emissions of which are primarily intended to be received by the general public.
2. Broadcast channels—550 to 1600

2. Broadcast channels—550 to 1600
kc.—A broadcast channel is a band
of frequencies ten (10) kc. in width,
with the carrier frequency at the
center. Channels shall be designated
by their assigned carrier frequencies.
Carrier frequencies assigned to broadcast stations shall begin at 550 kc.
and be in successive steps of 10 kc.
No intermediate frequency shall.

cast stations shall begin at 550 kc. and be in successive steps of 10 kc. No intermediate frequency shall be assigned as the carrier frequency of any broadcast station.

3. Service areas:

(a) Primary service area—The primary service area of a broadcast station is the area in which the ground wave is not subject to objectionable interference or objectionable fading.

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

4. Dominant stations — A "dominant" station is a Class I station, as hereinafter defined, operating on a clear channel.

5. Secondary station — A "secondary" station is any station except a Class I station operating on a clear channel.

channel.
6. Objectionable interference jectionable interference is the degree of interference produced when, at a specified boundary or field intensity contour with respect to the desired Following is the complete text of the treaty on distribution of the 106 channels in the broadcast band, ranging from 550 to 1600 kc., reached at the Inter-American Radio Conference in Hawana, Nov. 1 to Dec. 13, 1937. The treaty does not become operative until three of the four principal nations (United States, Canada, Mexico, and Cuba) have ratified it, and the fourth signifies its intention of doing so. Then the treaty becomes effective one year after ratification and remains in force for five years. Cuba ratified Dec. 22, 1937.

station, the field intensity of an undesired station (or the root-menn-square value of field intensities of two or more stations on the same frequency) exceeds for ten (10) percent or more of the time the values hereinsfter set forth in this Agreement.

7. Power — The power of a radio transmitter is the power supplied to the antenna. The power in the antenna of a modulated-wave transmitter shall be expressed in two numbers, one indicating the power of the carrier frequency supplied to the antenna, and the other the actual maximum percentage of modulation.

8. Spurious radiation — A spurious radiation from a transmitter is any

8. Spurious radiation—A spurious radiation from a transmitter is any radiation outside the frequency band of emission normal for the type of transmission employed, including any harmonic modulation products, key clicks, parasitic oscillations and other transfer effects.

transient effects.

9. English, French and Spanish equivalents—It is agreed that, as used in this Agreement, the French and Spanish words below set forth are respectively the equivalent of, and mean the same as, the English terms opposite which they appear:

English French Snanish

Clear channel Frequence libre
Objectionable Brouillage nuisible Canal despejado

Classes of Channels and Allocation Thereof 1. Three classes— The 106 channels in the standard broadcast band are divided into three principal classes—clear, regional and local.

2. Clear channel-A clear channel 2. 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.
3. Regional channel — A regional 3. Regional channel—A regional channel is one on which several stations may operate with powers not in excess of 5 kw. The primary service area of a station operating on any such channel may be limited, as a consequence of interference, to a given field intensity contents.

field intensity contour.

4. Local channel—A local channel 4. Local channel—A local channel is one on which several stations may operate with powers not in excess of 250 watts. The primary service area of a station operating on any such channel may be limited, as a consequence of interference, to a given field interference.

intensity contour.

5. Number of channels of each class

—The number of channels of each class shall be as follows:

Clear channels

Regional channels

41

Level channels

6 Local channels

6. Allocation of specific channels to each class.—The channels are allocated to the several classes as follows: Clear channels. The following channels are designated as clear channels: 640 650 660 670 680 690 700 710 720 730 740 750 760 770 788 800 810 820 830 840 850 860 870 880 890 904 990 1000 1010 1020 1030 1040 1050 1060 1070 1080 1090 1100 1110 1120 1130 1140 1160 1170 1180 1190 1200 1210 1220 1500 1510 520 1530 1540 1550 1560 1570 and 1580.

Regional channels. The following channels are designated as regional channels: 550 560 570 580 590 600 610 620 630 790 190 920 930 950 960 970 980 1150 1250 1260 1270 1280 1290 1300 1310 1320 1330 1360 1360 1370 1380 1390 1410 1420 1430 1440 1450 1470 1480 1590 1600.

Local channels. The following channels are designated as local channels: 1230 1240 1440 1440 1450 local channels: 1230 1240 1340 1450 local channels: 1230

are designated as local channels: 1240 1340 1400 1450 and 1490 kc.

7. Use of regional and local channels by countries—All countries may use all regional and all local channels, subject to the power limitations and standards for prevention of objection-able interference set forth in this Agreement.

8. Priority of use of clear channels by countries-

(a) The clear channels are assigned for priority of use by Class I and II stations in the several countries in accordance with the table set forth in Appendix I.

fries in accordance with the table set forth in Appendix I.

(b) Each such channel shall be used in a manner conforming to the best engineering practice with due regard to the service to be rendered by the dominant stations operating thereon, as set forth elsewhere in this Agreement. If, for one year within the term of this Agreement, a country fails to make any use of a clear channel thus assigned to it, the channel shall be considered open for use by the other countries, parties to this Agreement, pursuant to such arrangement as may be agreed upon by their respective administrations and without any necessity for revision of this Agreement. Agreement.

Agreement.

(c) No country to which a clear channel has been thus assigned shall permit, or agree to permit, any other country to use such channel in a manner par in conformity with this with ner not in conformity with this Agreement without first giving 60 days (calendar days) advance notice of its intention so to do to all other countries, parties to this Agreement. If during this period of 60 days (calendar days) any other country shall present objections to such proposed nee of the channel, the country to which the clear channel has been assigned shall not permit, or agree the permit such proposed use until the ner not in conformity permit, such proposed use until the difference presented by the objection

difference presented by the objection has been amicably resolved.

(d) If within the period of this Agreement the country to which a clear channel has been assigned shall have made use of the channel but not have made use of the channel but not in the manner above prescribed or not to the extent required by the provisions of this Agreement, such country shall be considered as having relinquished that portion of the rights which it has not used and at the expiration of this Agreement the other countries party thereto shall have the right, if they see fit, to withdraw the unused privileges from such country and to reassign them to any or all of and to reassign them to any or all of the other interested countries.

C-Classes of Stations and Use of

The Several Classes of Channels

1. Classes of stations — Broadcast stations are divided into four principal classes, to be designated Class I, Class III, and Class IV.

respectively.

2. Definitions of classes—The four classes of broadcast stations are de-

Class of broadcast stations are defined as follows:

Class I: 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. Class I stations are subdivided into two classes:

Class I-A: A Class I station which operates with power of 50 kw or more and which has its primary service area, within the limits of the country in which the station is located, free from objectionable interference from other stations on the same and adjacent channels, and its secondary service area, within the same limits, free from objectionable interference

from stations on the same channel, in

from stations on the same channel, in accordance with the engineering standards hereinafter set forth.

Class I-B: A Class I station which operates with power of not less than 10 kw or more than 50 kw and which has its primary service area free from objectionable interference from other stations on the same and adjacent channels and its secondary service area free from objectionable interference from on the same channel in the form stations on the same channel in the same channel i from stations on the same channel, in accordance with the engineering standards hereinafter set forth.

aros nerematter set forth.

(a) When two Class I-B stations on the same channel are separated by a distance of 2800 miles or more, neither station shall be required to install a directional antenna.

(b) When two Class I-B stations on the same channel are separated by a distance of more than 1800 miles and less than 2800 miles, it will, in the absence of proof to the contrary, he assumed that each station is free of objectionable interference caused by be assumed that each station is free of objectionable interference caused by the other and neither shall be required to install directional antennae or take other precautions to avoid such interference. In case the existence of objectionable interference is proved, the governments concerned will consult with each other regarding the desirability and practicality of installation of directional antennae or the taking of other precautions to eliminate the interference and will determine by special arrangement the measures, if any, to be taken.

(c) When two Class I-B stations on the same channel are separated by a distance less than 1800 miles, it will, in the absence of proof to the contrary, be assumed that the installation of directional antennae or the taking of other precautions to avoid interference is necessary, and the governments concerned will consult with each other and will take such measures as may be agreed upon between them to the end that the objectionable interference may be reduced or eliminated.

interference may be reduced or elimi-

nated.

Class II: A "secondary" station which operates on a clear channel and is designed to render service over a primary service area which, depending on geographical location and power used, may be relatively large, but which is limited by and subject to such interference as may be received from Class I stations. A station of this class shall operate with power of not less than 0.25 kw. or more than 50 kw. Whenever necessary a Class II station shall use a directional antenna or other means to

power of not less than 0.2 km. or more than 50 kw. Whenever necessary a Class II station shall use a directional antenna or other means to avoid interference, in accordance with the engineering standards hereinafter set forth, with Class I stations and with other Class III stations.

*Class III: A station which operates on a regional channel and is designed to render service primarily to a metropolitan district and the rural area contained therein and contiguous thereto. Class III stations are subdivided into two classes:

*Class III-A: A Class III station which operates with power not less than one kilowatt or more than five kilowatts and the service area of which is subject to interference in accordance with the engineering standards hereinafter set forth.

*Class III-B: A Class III station which operates with a power not less than 0.5 kw or more than 1 kw night and 5 kw daytime and the service area of which is subject to interference in accord with the engineering standards hereinafter set forth:

*Class IV: A station using 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 0.1 kw or more than 0.25 kw and its service area is subject to interference (Continued on page 316)

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in accord with the engineering standards hereinafter set forth.

3. Change of class—If a station or stations in Class III-B located in any country can, through the use of directional antennae or otherwise, so reduce the interference caused or received by such station or stations to the field contour to which interference to stations in Class III-A is allowed, such station or stations shall automatically be classified and included in Class III-A and shall thereafter be so recognized and treated by the Administrations of all countries within the Region.

cluded in Class III-A and sham thereafter be so recognized and treated by
the Administrations of all countries
within the Region.

4. Use of clear channels:

(a) In principle and subject only
to the exception hereinafter set forth,
Class I stations shall be assigned only
to clear channels.

(b) Class II stations may be assigned to clear channels only on condition that objectionable interference
will not be caused to any Class I stations. Where any country has priority
of use of a clear channel for any class
I-A station, no other country shall
assign any Class II station to that
channel for nightime operation (from
sunset to sunrise at the location of
the Class II station) unless such Class
II station is located not less than 650
miles from the nearest border of the
country in which the Class I-A station is located; provided, however,
that where an assignment for a Class
II station is specifically stated in Appendix I, such assignment shall be
deemed as authorized under the limitations therein set forth.

5. Use of regional channels:

(a) In general only Class III-A
and Class III-B stations shall be assigned to regional channels.

(b) On condition that interference
be not caused to any Class III-A or
Class III-B station, and subject to

such interference as may be received from Class III-A or Class III-B stations, Class IV stations may be assigned to regional channels.

(c) Because of their geographical location with respect to the North American continent, special consideration will be given to the use by Cuba, the Dominican Republic, Haiti and Newfoundland of stations of Classes I and II assigned to certain regional channels under certain conditions, with respect to power and precautions to avoid objectionable interference as set forth in Appendix VII.

6. Use of local channels—Only Class IV stations shall be assigned to local channels.

channels.

D. Service and Interference

D. Service and Interference

1. Satisfactory signal—It is recognized that, in the absence of interference from other stations and in regions where the natural electrical noise level is not abnormally high, a signal of 100 microvolts per meter constitutes a usable signal in rural and sparsely settled areas but that, because of the higher electrical noise levels in more thickly populated communities, greater field intensities (ranging as high as 25 millivolts or more in cities) are necessary to render satisfactory service. It is further recognized that it is not possible to accord protection to stations from objectionable interference over the entire areas over which their signals are or may be above the electrical noise level, particularly at night, and that it is necessary to specify boundaries or contours at or within which stations are protected from objectionable interference from other stations.

2. Areas protected from objectionals

2. Areas protected from objectionable interference—The boundaries or contours at and within which the several classes of stations shall be pro-

tected from objectionable interference are as set forth in Appendix II. No station, however, need be protected from objectionable interference at any point outside the boundaries of the country in which such station is lo-cated.

country in which such station is located.

With respect to the root-mean-square values of interfering field intensities referred to herein, it shall be understood to apply in determining the interference between existing stations and no station thereafter assigned the channel shall increase the root-mean-square value of the interfering field intensity above the maximus specified in the attached tables.

3. Objectionable interference on the same channel—Objectionable interference shall be deemed to exist to a station with the state of the same channel—Objectionable interference shall be deemed to exist to a station.

same channel—Objectionable interter-ence shall be deemed to exist to a sta-tion when, at the boundary or field intensity contour specified in Appen-dix II with respect to the class to which the station belongs, the field in-tensity of an interfering station (or the root-mean-square value of the field intensities of two or more interfering

intensities of two or more interfering stations) operating on the same channel, exceeds for ten (10) percent or more of the time the value of the permissible interfering signal set forth opposite such class in Appendix II.

4. Interference to dominant clear channel stations—A station shall be considered as not capable of causing objectionable interference to a Class I clear channel station on the same frequency when it is separated from the dominant clear channel station by a difference of 70 degrees or more of longitude.

longitude.
5. Objectionable interference on adjacent channels—It is recognized, in principle, that objectionable interference may be caused to a desired station when, at or within the specified contours of a desired station, the field intensity of the ground wave of an undesired station operating on an adjacent channel (or the root-menn-square value of the field intensities of two or more such undesired stations operating on the same adjacent channel) exceeds a value determined by the following ratio:

Minimum

Separation between channels	Minimum permissible ratio of desired to undesired signal.
10 kc. 20 kc.	1 to 0.5 1 to 10
30 kg	7 4- 70

30 kc. 1 to 50

For convenient reference, the maximum permissible values of interfering signals on such adjacent channels at specified contours are set forth in Appendix III, Table I.

6. Application of standards to existing stations:

(a) For the purpose of estimating objectionable interference, all stations (other than those of Class II) shall be assumed to use the maximum power permitted to their respective classes. In this connection, the power of Class I-A stations shall be considered to be 50 km, or the actual power, if higher.

Class I-A stations shall be considered to be 50 km. or the actual power, if bigher.

(b) After this agreement has been placed in operation a station thereafter assigned a channel already assigned to other stations shall not be considered as preventing existing stations from increasing their power to the maximum allowed their class, even though such power increase may limit the newly assigned station to a field intensity contour of higher value than that permitted its class.

7. Frequency stability—The operating frequency of each broadcast station shall be maintained to within 50 cycles of the assigned frequency until January 1, 1939, and thereafter the frequency of each new station or each station where a new transmitter is installed shall be maintained within 20 cycles of the assigned frequency and after January 1, 1942, the frequency of all stations shall be maintained within 20 cycles of the assigned frequency.

8. Spurious radiation-The govern-8. Spurious radiation—The governments shall endeavor to reduce and, if possible, eliminate spurious radiations from broadcast stations. Such radiations shall be reduced in all cases until they are not of sufficient intensity to cause interference outside the frequency band required for the type of emission employed. With respect to of emission employed. With respect to type A-3 emissions (radio-telephony) the transmitter should not be modulated in excess of its modulation capability to the extent that interfering spurious radiations occur, and, with respect to amplitude modulation, the operating percentage of modulation should not be less than seventy-five (75) percent on peaks of frequent recurrence. Means should be employed to insure that the transmitter is not modulated in excess of its modulation capability. capability.

E. Determination of Presence of Objection. able Interference

able Interference

1. Antenna performance — For the purpose of calculating the presence and the degree of objectionable interference, stations of the several classes shall be assumed to produce effective field, corrected for absorption, for one kilowatt of input power to the antenna, as follows:

Class of	At One	At One				
Station	Mile	Kilometer				
II and III IV	225 mv/m 175 mv/m 150 mv/m	362 mv/m 282 mv/m 241 mv/m				

In case a directional antenna is employed, the interfering signal of a broadcasting station will vary in dif-ferent directions. To determine the interference in any direction, in the absence of actual interference meaabsence of actual interference measurements, the horizontal and vertical field intensity patterns of the directional antenna must be calculated and by comparing the appropriate vectors in the horizontal or vertical pattern with that of a nondirectional with the same effective field, the interfering signal toward any other station can be expressed in terms of kilowatts. This rating in kilowatts shall be applied in the use of mileage separation tables or in computing distances from

tables or in computing distances from
the propagation curves or tables.

2. Power—The power of a station
shall, for the purposes of notifications
required by this Agreement, be determined in one of the following man-

(a) By taking the product of the square of the antenna current and the antenna resistance (antenna input

(b) By determination of the sta-tion's effective field intensity, cor-rected for absorption, by making suf-ficient field intensity measurements on at least eight radials as nearly equally

at least eight radials as nearly equally spaced as practicable and by relating the field intensity thus determined to the effective field intensity of a station having the antenna efficiency stipulated above for its class.

3. Methods of determining the presence of objectionable interference. The existence or absence of objectionable interference from stations on the same or adjacent channels shall be determined by one of the following methods:

methods:

(a) By actual measurements contained in the method hereinafter prescribed:

scribed; or, with the mutual consent of the countries concerned: (b) By reference to the propaga-tion curves in Appendices IV and V, or

or

(c) By reference to the distance tables set forth in Appendix VI.

4. Actual proof of existence or absence of objectionable interference. The existence or absence of objectionable interference may be proved by field intensity measurements or recordings made with suitable apparatus, duly calibrated, by Government

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PAGE & DAVIS

CONSULTING RADIO ENGINEERS



ALLOCATION STUDIES

Engineering Consultants Before the Federal Communications Commission

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engineers or other engineers as may be mutually acceptable to the Gov-ernments concerned. Such field inten-sity measurements shall be made in the manner and for the periods of time mutually agreed upon by the Governments concerned.

The contracting Governments agree to facilitate the making of the measurements by requiring the stations involved to remain silent or operate in the manner deemed necessary, and at such times as not to interrupt regular schedules.

such times as not to interrupt regular schedules.

5. Proof based on propagation curves and distance tables:

(a) Sky wave curves—In computing the distance to the 50 per cent sky wave field intensity contour of a Class I station of a given power, and also in computing the 10 percent sky-wave field intensity of an alleged interfering station, of any class and given power, at a specified distance, use may be made of the appropriate graphs set forth in Appendix V, entitled "Average Sky Wave Field Intensity Corresponding to the Second Hour after Sunset in the Recording Station, 100 Millivolt per Meter at One Mile (161 at one kilometer)".

(b) Ground wave curves—The distance to any specified ground wave field intensity contour may be determined from appropriate ground wave curves plotted for the frequency underconsideration and the conductivity and dielectric constant of the earth between the station and desired contour. The frequency and the conduction.

between the station and desired contour. The frequency and the conductivity of the earth must be considered in every case and where the distance is great due allowance must be made for loss due to curvature of the earth. A family of curves is necessary for this purpose. A graph for a conductivity of 10-13 is set forth in Appendix IV, entitled "Ground Wave Field vs. Distance for One Kilowatt Radiated From Short Antenna". Three frequencies in the standard broadcast band are given. For other frequencies and soit conditions (conductivity and dielectric constant) other curves are required. A conductivity of 10-13 is considered a verage and is used throughout in determining the ground wave value for computing the mileage separation tables.

(c) Distance tables—Table I shows

wave value for computing the mileage separation tables.

(c) Distance tables—Table I shows the required day separation in miles between broadcast stations on the same channel. Table II gives the required distance in miles from the boundary of a country in which a Class I-A station is located for the daytime operation of a Class II station on the same channel in another country. Table III gives the required separation in miles between broadcast stations on adjacent channels during both daytime and nighttime. Table IV gives the required night separation in miles between broadcast stations operating on the same channel. The assumed conditions of operation are given in Appendix VI. The tables are based upon the use of nondirectional antennas but, in case a directional antenna is employed at a particular station, it will be necessary to consider the radiation distribution of the directional antenna involved and to modify the mileage separation tables for stations on the same frequency are computed from

age separation accordingly. The hight separation tables for stations on the same frequency are computed from the skywave curve given in Appen-dix V. These curves are based on ex-tensive measurements of the skywave produced by broadcasting stations and shall be considered as accurate in all cases unless proof to the contrary is available as set out in Section E 4. The mileage separation tables for the same channel during daytime and for

adjacent channels duy and night are computed from the groundwave curve in Appendix IV. Tables apply only in case the frequency is 1000 ke and the assumed soil conductivity and dielectric constant prevail. Since these values vary in every case the tables for daytime and adjacent channel separation cannot be used except as a general guide. In any case underconsideration an estimate of the mileage separation required may be made from the operating frequency and known or assumed soil conditions. To determine the interference accurately, measurements must be made in accordance with Section E 4 on the frequency under consideration or on another frequency and from the curves the values may be determined for the desired frequency.

F. Miscellaneous

1. Engineering standards—The engineering standards set forth in this Agreement are subject to revision when justified by technical advances in the art, with the mutual consent of the governments parties to this Agreement.

Attachments:
Appendix I — Priority of use of clear channels for Class I and II sta-

Appendix II-Protected service and

interference.
Appendix III-Adjacent channel in-

Appendix IV—Ground wave graphs.
Appendix V—Sky wave graphs.
Appendix VI—Mileage separation

Appendix VII — Engineering requirements for use of regional channels by Class II stations.

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Notification and Effect Thereof

1. Initial notification—Each Government shall, as soon as possible af-

ter ratification of this Agreement, and in any event not later than 180 days prior to the effective date thereof, transmit to the other Governments:

(a) A complete list of all broadcast stations neturally in operation in its country in the standard broadcast band both as of the date of the signing of this Agreement and as of the date of transmitting said list, showing with this Agreement and as of the date of transmitting said list, showing with respect to each station its call signal, location, frequency, power, and an-tenna characteristics together with all changes authorized to be made with respect to said stations on or before the effective date of this Agreement, and the classification claimed for each such station.

(b) A complete list of all changes authorized to be made with respect to said stations after the effective date of this Agreement, the dates on or before which such changes are to be consummated, and the classification chaimed for each such station under this Agreement when the proposed change has been consummated.

(c) A complete list of all new

broadcast stations authorized but not yet in operation, showing with respect to each such station its call signal, location, frequency, power and antenna characteristics, the date and or before which each such station shall commence operation, and the classifi-cation claimed for it under this Agree-

(d) The Governments agree that (d) The Governments agree that prior to the effective date of this Agreement, they will, so far as possible, resolve all conflicts that may arise between them as a result of the foregoing initial listings, and that, not-withstanding some such conflicts may

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Engineering Services for Radio Stations

Allocation Engineering

Frequency Surveys

Antenna Designs of all Types

Particular Consideration to Directional Characteristics

Counsel on Station Construction Location of Station Sites

Equipment Studies

Engineering Advice

Field Intensity Measurements

General Communication Problems

Engineering Consultants Before Federal Communications Commission

McNARY and CHAMBERS

National Press Bldg.

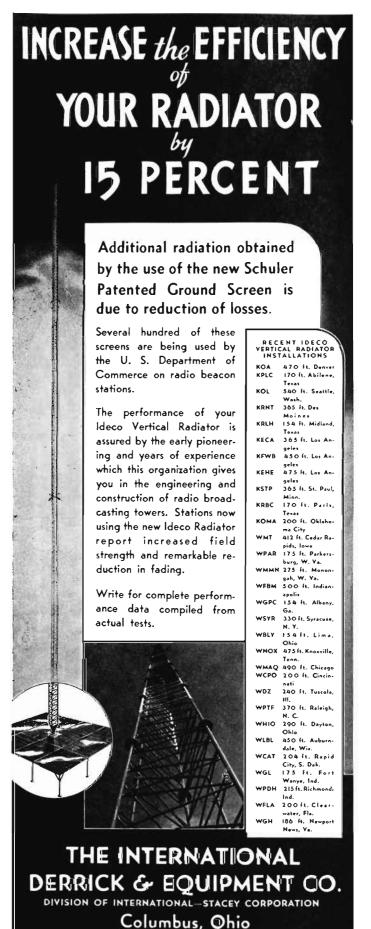
National 4048

WASHINGTON, D. C.

James C. McNary

Joe A. Chambers





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remain unresolved, they will cooperate to the end that there be no de-lay in putting the provisions of this Agreement into full force and effect

lay in putting the provisions of this Agreement into full force and effect on that date.

(e) In resolving conflicts in the use of clear channels, and in the listing of Class I and Class II stations, the provisions of this Agreement and particularly of Appendix I shall be controlling. In resolving conflicts in the use of regional and local channels, and in the listing of Class III and Class IV stations, priority of use shall be recognized in each country with respect to stations which at the time of signing of this Agreement are in actual operation, which in substance conform to the definitions of said classes as set forth in this Agreement, and with respect to which no substantial change is made or proposed; a change of frequency in order to conform to the designation of channels in this Agreement shall not be deemed a substantial change.

2. Subsequent notifications—After the effective date of this Agreement and throughout the period during which it shall remain in effect, each other Governments by registered letter of all further changes in existing broudcast stations and of all further

other Governments by registered letter of all further changes in existing broadcast stations and of all further new broadcast stations, together with smilar information with regard to each such change or new station, and the proposed date on which each such change is to go into effect and on which each such new station is to actually commence operation.

3. Effect of notification—Each governments

actually commence operation.

3. Effect of notification—Euch government may, within 30 days of receiving notification of any proposed change in the assignment of an existing station or of the authorization of a new station in another country, notify the Government of the latter country of any objection it may have thereto under the terms of this Agreement.

to under the terms of this Agreement.

4. Conflict between notifications—
To be valid, notifications of changes in the assignments of existing stations, or of authorizations of new stations, or of authorizations of new stations must be such that the assignments proposed therein are in accordance with this Agreement and are such as not to involve objectionable interference to existing stations in other countries, assigned and operating in accordance with this Agreement. As between two or more notifications of changes or authorizations of new stations proceeding from differof new stations proceeding from different countries, after the effective date

on new stations proceeding from different countries, after the effective date of this Agreement, priority in the date of mailing of notification shall govern.

5. Cessation of effect—(a) A notification of a proposed change in the assignment of an existing station or of an authorization of a new station shall cease to have any force and effect if, within one year of the date thereof such change shall not have been actually consummated or such new station shall not have actually commenced continuous operation.

(b) In special cases in which circumstances beyond the control of the Administration concerned have prevented the completion of the change or the construction of the new station, the term of the original notification may be extended for a period of six months.

cation may be extended for a period of six months.

6. Berne Bureau — The foregoing notifications shall be made independently of and in addition to those which, under current practice, are sent to the Bureau of the International Telecommunications Union.

īν Arbitration

In case of disagreement between two In case of disagreement between two or more contracting Governments concerning the execution of this Agreement the dispute, if it is not settled through diplomatic channels, shall be submitted to arbitration at the request of one of the Governments in disagreement. Unless the parties in disagreement agree to adopt a procedure already established by treaties concluded between them for the settlement of international disputes, the procedure shall be that provided for in Article 15 of the International Telecommunications Convention of Madrid, 1932.

Ratification, Execution and Denunciation

Haiffeation, Execution and Denunciation

1. Ratification—To be valid this Agreement must be ratified by Canda, Cuba, Mexico and the United States of America.

If and when three of said four countries shall have ratified and the fourth shall, through unavoidable circumstances, have been unable to ratify but shall have signified to those countries that have ratified its readiness, pending ratification and as an countries that have ratified its readiness, pending ratification and as an administrative measure, to put the provisions of this Agreement (including the contents of Appendix I) into effect in whole or in part, then such country, together with those countries which shall have ratified, may by administrative agreement between them for a definite date on which the by administrative agreement between them, fix a definite date on which ther shall give effect to such provisions, which date shall preferably be one year from the date of such administrative agreement.

The ratification must be deposited

The ratification must be deposited, as soon as possible, through diplomatic channels, in the archives of the Government of Cuba. This same Government shall, through diplomatic channels, notify the other signatory Governments of the ratifications as soon as they are received.

2. Effect of ratification—This Agreement shall be valid only as between such countries as shall have ratified it.

3. Execution-The contracting Gov. eriments undertake to apply the provisions of this Agreement, and to take steps necessary to enforce said provisions upon the private operating agencies recognized or authorized by them to establish and operate broad-

cast stations within their respective

countries. 4. Denunciation — Euch contracting Government shall have the right to denounce this Agreement by a notification addressed, through diplomatic channels, to the Government of Cuba, and announced by that Government through diplomatic channels, to all the other contracting Governments. This denunciation shall take effect at the expiration of the period of one year from the date on which the notification was received by the Government of Cuba. This effect shall apply only to the author of the denunciation. This Agreement shall remain in force for the other contracting Governments but only as between such Governments. Government shall have the right to Governments. VI

Effective Date and Term of the Agreement

Effective Date and Term of the Agreement 1. Except for the provisions of Section 1 of Part III. Section 1 of Part V. and paragraph 3 of Table VI of Appendix I annexed hereto (which provisions shall go into effect immediately upon this Agreement becoming valid), this Agreement shall become effective one year after the date it shall have heen ratified by the fourth of those Governments whose ratification is requisite to the validity of this Agreement. The Governments will cooperate to the end that, where cation is requisite to the validity of this Agreement. The Governments will cooperate to the end that, wherever possible, the provisions of this Agreement shall be carried out in advance of said effective date.

2. This Agreement shall remain in effect for a period of five years after said effective date.

Adherence

This Agreement shall be open to adherence in the name of Newfound-

In witness whereof the respective plenipotentiaries have signed the Agree ment in triplicate, one copy in English, one in Spanish, and one copy in French, each of which shall remain deposited in the archives of the Government of Cuba and a copy of each of which shall be forwarded to each Government.

Government.
Done at Habana, Cuba, December 13, 1937.

Appendixes and Tables: Allocation Provisions of Havana Agreement

APPENDIX I

Under the provisions of Section II of this Agreement each country may use all the 106 channels when technical conditions with respect to interference to established stations are such as to render such use practicable. However, priority of use on specified clear channels is recognized for the following number of Class I and II stations in each country.

TABLE I

Canada															14
Cuba															9•
Dominican Republic															1
Haiti Mexico		-			٠		٠								1
Newfoundland	•			•	•		Ì	i	ì					•	20
United States .								ì			Ċ				63

^{*}See Table V for special arrangements provided for Cuba and Newfoundland.

These stations and the conditions of their operation are as specified in Tables II, III, IV, V, VI, VII and VIII following herewith.

TABLE II Class I-A Stations

(Canada, Cuba, and Mexico)

			1	,	·	u	•	"	21	ч	u	۰	•	/ 1	•	U	u	,	•	u
Frequence 690	y																			
730																				
740																				
800																				
860																				
900																				
990																				
1010																				
1050																				
1220																				
1540																				
1570																				
1580																	Ċ			

TABLE III

Class I-B Stations

		Power	
	Location	Limitation	Requirements as to
Frequency	of stations	(Kio.)	directional antennas
810	New York, U. S. A.	No.	None
810	California, U. S. A.		To be determined
940	Quebec, Canada	5 kw. min.	Determine from operation
	•	permissible	
940	Mexico, D. F.	-	Determine from operation
1000	Jalisco, Mexico	20	To be determined
1000	Washington, U. S. A.		To be determined
1000	Illinois, U.S.A.		To be determined
1010	Havana, Cuba	_	Determine from operation
1060	Mexico, D. F.		To be determined
1060	Pennsylvania, U. S. A.		To be determined
1070	Maritime Provinces, Can	ลสิล —	None
1070	California, U.S.A.		None
1080	Connecticut, U. S. A.	-	To be determined
1080	Texas, U.S.A.		To be determined
1090	Baja Calif., Mexico	-	To be determined
1090	Maryland, U.S.A.	-	To be determined
1090	Arkansus, U.S.A.		To be determined
1110	North Carolina, U.S.A.	40.000	To be determined
1110	Nebraska, U.S.A.		To be determined
1130	British Columbia.	5 kw. min.	None
1.00	Canada	permissible	None
1130	New York-New Jersey.		None
1140	U.S.A.		To be determined
1140	Chihuahua, Mexico		To be determined
1140	Virginia, U.S.A.		To he determined
1170	Oregon, U. S. A.		To be determined
1170 1170	Oklahoma, U. S. A.		To be determined
1190	West Virginia, U. S. A.		To be determined
1190	Sinaloa, Mexico		To be determined
1550	Indiana, U. S. A.		Determine from operation
1550	Ontario, Canada	20	Determine from operation
1560	Vera Cruz, Mexico	20	
1000	Havana, Cuba		• •

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TABLE IV Class II Stations

Frequency	Location of stations	Power Limitation (Kw.)	Requirements as to directional antenna
640	Newfoundland		None
690	Kansas-Oklahoma, U.S. A.	_	To be determined a
740	Calif., U. S. A.		To be determined b
800	Ontario, Canada	Г.	To be determined
810	Tamaulipas (Tampico) Mexico	50	To be determined
900	Quebec, Canada	5	To be determined
990	Tennessee, U.S.A.		To be determined a
1000	Oriente, Cuba	10	To be determined
1050	New York, U.S. A.	_	To be determined
1060	Alberta, Canada	10	To be determined
1070	Alabama, U.S.A.	_	To be determined
1080	Manitoba, Canada	15	To be determined
1080	Haiti	10	To be determined
1110	Mexico. D. F.	20	To be determined
1130	Louisiana, U.S.A.	_	To be determined
1170	Dominican Republic	10	To be determined
1190	Havana, Cuba	15	To be determined

* Permissible to increase field intensity above 25 nv/m (10% skywave) west of Minnesota on Canadian border.

b Same as * except west of North Dakota.

c Same as * except east of Minnesota. Also 650 miles from border requirement waived.

TARLE V

Class II Stations on Regional Channels

(Cuba and Newfoundland)

		Maximum
Prequency	Location of Stations	Power in kw
560	Newfoundland	10
570	· Santa Clara, Cuba	15
590	Havana, Cuba	25
630	Havana, Cuba	15
1270	Havana, Cuba	10

These stations shall use directional anteunas to prevent objectionable terference to the Class III stations on the channel in accordance with interference Appendix VII.

TABLE VI

Special Conditions Affecting the United States

Special Conditions Affecting the United States

The 24 Class I and II stations in the United States which use clear channels with other countries party to this agreement are given in Tables III and IV. The remaining 39 Class I and II stations of the United States will be assigned the following clear channels:

640 650 660 670 680 700 710 720 750 760 770 780 820 830 840 850 870 880 890 1020 1030 1040 1120 1160 1180 1200 1210 1500 1510 1520 1530. It is recognized that the United States must make extensive adjustments in the assignments of its existing stations in order to make possible the carrying out of this Agreement, that these adjustments will require approximately a year, and that it is not possible for the United States at this time to specify on which of the said 32 channels it will have priority of use for Class I-A stations, Class I-B stations and Class II stations respectively, nor the locations of such stations, power and other information with respect thereto. The United States may assign Class I-A stations to at least 25 of said channels. The United States agrees that ninety days before the effective date of this Agreement it will communicate this information to each of the other countries parties to this Agreement, and such information, when communicated, shall be considered part of this Agreement as if fully set forth herein.

Nothing stated in this Agreement shall be construed to preclude the United States of America from asserting, and enjoying recognition of, priority of use with reference to certain other Class II stations (not included in the 63 stations mentioned in Table I) which are now in actual operation in the band 640-1190 kcs. and which are known under the Regulations of the Federal Communications Commission as "limited time stations" and "daytime stations" (having hours of operation limited to sunset taken either at their respective locations or at the locations of the respective dominant stations on clear channels and in some cases including hours not actually used by said dominant

TABLE VII

Special Conditions Regarding the Use of 1010 kc. by Cuba and Canada With regard to the use of the clear channel of 1010 kc. by Cuba and Canada station in Canada, and by a Class I-B station in Cuba, both countries mutually agree that the interfering signal shall not exceed for 10 per cent of the time or more the value of 50 microvolts per meter at the following points of measurement: in Cuba at any point east of the province of Camaguey, and in Canada at any point west of the province of Manitobs.

TABLE VIII

Special Conditions Affecting Canada

Nothing stated in this Agreement shall be construed to preclude Canada from asserting priority of use with reference to certain Class III and IV stations now in operation in Canada on existing clear and regional channels which through this Agreement will become of a class of channel which may not permit their use by Class III and IV stations.

(Continued on Page 322)

Appendixes and Tables: Allocation Provisions of Havana Agreement

(Continued from Page 321)

PROTECTED SERVICE CONTOURS AND PERMISSIBLE INTERFERENCE SIGNALS FOR BROADCAST STATIONS

APPENDIX II

TABLE I

Class of station	Class of channel used	Permissible power	contour of	r signal intensity area protected objectionable rference a	Pern inter	rissible fering nal b
			Day	Night	Day	Night :
ΙA	Clear	50 kw or more		of country in ation is located	5 uv/m	25 uv/m d
IB	Clear	10 kw to 50 kw	100 uv/m	500 uv/m (50% sky wave)	5 uv/m	25 uv/m
11	Clear d	0.25 kw to 50 kw	500 uv/m 0	2500 uv/m e (Ground wave)	25 uv/m o	125 uv/m o
III A	Regional	1 kw to 5 kw	500 uv/m	2500 uv/m (Ground wave)	25 uv/m	125 uv/m
III B	Regional	0.5 kw to 1 kw night and 5 kw dav	500 uv/m	4000 uv/m (Ground wave)	25 uv/m	200 uv/m
IV	Local	0.1 kw to 0.25 kw	500 uv/m	4000 uv/m (Ground wave)	25 uv/m	200 uv/m

a In accordance with other provisions in this Agreement this freedom of interference does not apply outside the boundaries of the country in which the station is located. b From other stations on same channel only. For adjacent channels see Appendix III,

APPENDIX III TABLE I

ADJACENT CHANNEL INTERFERENCE

Channel separation between desired and undesired stations

10 kc 20 kc 30 kc

Maximum ground wave field intensity of undexired station 0.25 mv/m5.0 mv/m 25.0 mv/m

The undesired ground wave signal shall be measured at or within the 0.5 mv/m ground wave contour of the desired station. These values apply to all classes of stations both day and night and are based on ground waves only. No adjacent channel interference is considered on the basis of an interfering sky wave.

APPENDIX VI

Mileage Separation Tables

The required separations between broadcasting stations as tabulated below are based upon the following conditions:

1. The use of nondirectional antennas.
2. Antenna efficiencies (in mv/m at one mile for one kilowatt).
Class I—225 mv/m
Class II and III—175 mv/m
Class IV—150 mv/m
3. Frequency, 1000 kc.
4. Soil conductivity, s = 10-13.
5. Soil dielectric constant, e = 15.
6. Groundwave transmission as shown on chart in Appendix IV.
7. Skywave transmission as shown on chart in Appendix V.
8. Protection to service areas as shown in Appendix II, Table I.
9. Ratio of desired to undesired signal:

9. Ratio of desired to undesired signal:

	Ratio of
Channel Separation	Desired to Undesired
Same frequency	20:1
10 kc.	2:1
20 kc.	1:10
30 kc.	1:50

TABLE I REQUIRED DAY SEPARATION IN MILES BETWEEN BROADCAST STATIONS ON THE SAME CHANNEL

	Clas	s IV		Classes II and III								Cla	I ea		
Class and Power	100 W.	250 W.	0.25 Kw.	0.5 Kw.	1 Kw.	5 Kw.	10 Kw.	25 Kw.	50 Kw.	10 Kw.	25 Kw.	50 Kw.	100 Kw.	250 Kw.	500 Kw.
Class IV															
100 W. 250 W.	143 165	165 173	172 180	192 200	213 221	265 273	285 293	310 318	335 343	390 415	417 442	437 462	462 487	486 511	513 538
Classes II and III															
0.25 Kw.	172	180	183	208	224	276	296	321	346	418	446	465	490	514	541
0.5 Kw. 1 Kw.	192 213	200 221	203 224	210 231	231 239	283 291	303 311	328 336	353 361	446 467	473 494	493 514	518 539	542 563	569 590
5 Kw.	265	273	276	283	291	313	333	358	383	520	547	567	592	616	643
10 Kw.	285	293	296	303	311	333	345	370	395	540	567	587	612	636	663
25 Kw. 50 Kw.	310 335	318 343	321 346	328 353	336 361	358 383	370 395	389 414	414 430	565 587	592 614	612 634	637 639	661 683	688 710
50 Ew.	330	040	340	000	001	000	330	414	430	001	014	004	009	000	110
Class I															
10 Kw.	390	415	418	446	467	520	540	565	587	556	585	605	620	655	682
25 Kw. 50 Kw.	417 437	442 462	446 465	473 493	494 514	547 567	567 587	592 612	614 634	585 605	612 632	632 652	657 677	682 702	709 729
100 Kw.	462	487	490	618	539	592	612	637	659	628	657	677	697	727	754
250 Kw.	486	511	514	542	563	616	636	661	683	655	682	702	727	751	778
500 Kw.	513	538	541	569	590	643	663	688	710	682	709	729	754	778	805

TABLE II

REQUIRED DISTANCE IN MILES FROM THE BOUNDARY OF A COUNTRY IN WHICH A CLASS I-A STATION IS LOCATED FOR DAYTIME OPERATION OF A CLASS II ON THE SAME CHANNEL

				Class II			
Power of Station Miles from Boundary	0.25 Kw.	0.5 Kw	1 Kw.	5 Kw.	10 Kw.	25 Kw.	50 K₩.
	237	261	282	335	355	380	402

(Continued on Page 324)

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Table I.

c Sky wave field intensity exceeded for 10% of the time.

d No Class II station shall be assigned to the same channel as a Class I-A station for nighttime operation (from sunset to sunrise) less than 650 miles of the nearest border of the country in which the Class I-A station is located.

e These values are with respect to interference from all stations except Class I, which stations may cause interference to a field intensity contour of higher value. However, it is recommended that Class II stations be so located that the interference received from Class I stations will not exceed these values. If the Class II stations are limited by Class I stations to higher values, then such values shall be the standard established with respect to interference from all other classes of stations.

Appendixes and Tables: Allocation Provisions of Havana Agreement

(Continued from Page 322)

TA	RI	Æ	n

									TABL							OPNIT CH	ANNE	a			
		R	EQUIRE	D DAY A	ND NIGH	T SEPAI	RATION	IN MIL	ES BET	WEEN				ONS O	A ADJA	CENT CH	ANNEL	~			
				0 0r W-			0.07 1/					sses II	and III	1 K =			5 K w	·.		10 K	r.
10 Kc.		30 Kc.	10 K		30 Kc.			30 Kc.	10 K			Kc.	10 Kc.		30 Kc.	10 Kc			10 Kc.		
. 73 . 82	37 45	32 40	82 90	45 48	40 41	86 94	47 50	42 48	94 102	55 58	5 5	0	105 113	63 66	58 69	133 141	84 87	79 80	149 157	98 101	98 94
. 86 94	47 55	42 50	94 10 2	50 58	43 51	96 104	51 59	43 51	104 112		ő	2	115 128	67 70	59 60	148 151	88 91	80 81	159 167	102 105	94 95
105 133 149 172 190	68 84 98 115 131	58 79 93 110 126	118 141 157 180 198	66 87 101 118 134	59 80 94 111 127	115 143 159 182 200	67 88 102 119 135	59 80 94 111 127	123 151 167 190 208	91	8 9 11	1 5 2	181 159 175 198 216	73 94 108 125 141	83 97 114 130	180 196 219 237	104 118 136 151	87 101 118 134	196 210 233 251	118 123 140 156	97 101 104 121 137
162 183 203 277	107 126 144 211	102 121 139 206	170 191 211 285	110 129 147 214	103 122 140 107	172 193 218 287	111 130 148 215	103 122 140 207	180 201 221 295	114 188 151 218	12 14	3 1	188 209 229 803	117 136 154 221	106 125 148 210	209 280 250 324	127 146 164 231	118 129 147 214	223 244 264 338	132 151 169 236	113 132 150 217
			CI	ase II											Class I						
and er			30 K.c.	10 K	50 Kw c. 20 Kc.	30 Kc.		10 Ke.	10 Kw. 20 Kc.	30 Kc.		10 Kc.	25 Kw 20 Kc.	30Kc.		10 Kc. 20	0 Kw. 0 Kc. 3	0 Kc.	10 Kc.	500 Kc.	w. 30 Kc.
IV w. Kw.	172 180	115 118	11 0 111	190 198	131 134	126 127		162 170	107 110	102 103		183 191	126 129	121 122				139 140	277 285	211 214	206 207
es III Kw. w.	182 190 198 219 283 260	119 122 125 135 140	111 112 114 118 121 125	208 216 237 251 268	138 141 151 156 166	127 128 130 134 137		172 180 188 209 223 242	111 114 117 127 132 146	108 104 106 110 113 123		193 201 209 230 244 261	130 188 136 146 151 160	122 123 125 129 132 136		221 229 250 264 281	151 154 164 169 178	141 143 147 150 154	287 295 303 324 338 355	215 218 221 231 236 245	207 208 210 214 217 221 225
I	268	165	141	284	172	145		260	161	139		279	163	144		297	185	168	371	252	225
	242 261 281 355	145 160 178 245	123 136 154 221	279 297	168 185	139 144 158 225		232 253 273 347	137 156 174 241	115 134 152 219		253 272 292 366	156 163 181 248	134 139 157 224		292 310	181 190	152 157 161 227	347 366 384 451	241 248 257 291	219 224 227 247
Niah	4 Sana				D.		4 04-4		44.												
lowing	_		Same	Channe	els								-Aa MI		Class	ІП-А			Class I	II-B	_
sses.			_	Not req	uired to	protect	Class	11			1 K	w.		789	•	102	5	58	0	5	53
			TAF			e chant	iei at i	nignt.		aSe chann	е Арре ев.	ndix V	II for p	rotectio	n Class	III statio	ns show	ld give Cl	ass II sta	tions on	regional
Class 1	I-B	Class		Must p	rotect of			3													
Class I-B		5 1	kw.	10 kw.	2.	ī kw.	50	kw.			C	lass l	III B	-			her cla				
10 kw. 25 kw. 50 kw.				2665 3010 3280	3	3243	3	500				.5 kv	w.	1 k 73	w. 5	5 kw. 1020)	Cla .5 kw. 383 550	1 <i>1</i> 5	w. 50	
									TABLE	IV-B											
					CLAS			отест	OTHER	CLAS	SES A	з эн о	WN BE	ELOW					Clear I. A	Station	A
ase II		.25 Kw	v. .5	Kw.	1 Kw.			10 Kw.	25	Kw.	50	Kw.	10				\ V	of Cour	nce from I	Nearest	Border sa I-A
5 Kw. Kw. w. w. w. w.		451 602 732 1018 1136 1271 1529	1	602 606 736 022 140	732 736 739 1025 1143 1280 1535	10: 10: 10: 10: 11: 12:	18 22 25 39 57	1136 1140 1143 1157 1162 1298 1553	1 1 1 1 1 1	271 275 280 292 298 310	1 1 1 1 1	529 633 535 547 553 560	13 15 16 21 24 28	78 08 58 65 50 80	1610 1735 1885 2395 2680 3120		1760 1890 2080 2550 2830 3260		103 118 133 183 212 257	8 60 55 60 22	•
	10 Kc. 73 82 86 94 105 1938 1172 1900 162 1838 2277 162 1838 2277 IV w V. W V. V	78	Class IV 0.1 Kw. 10 Kc. 20 Kc. 38 Kc. 73 37 32 82 45 40 86 47 42 94 55 50 105 63 58 133 84 79 149 98 93 172 115 110 190 131 126 162 107 102 183 126 121 203 144 139 277 211 206 and 25 Kw. 10 Kc. 20 Kc. (V w. 172 115 (w. 180 118 8 111 (w. 182 119 180 122 198 125 219 136 223 140 256 165 I 242 145 261 160 281 178 365 245 Night Separation dowing tables indicases. Class I-A Class Class I-B Class	Class IV 0.1 Kw. 10 Kc. 20 Kc. 38 Kc. 10 K 73 37 32 82 82 45 40 90 86 47 42 94 94 55 50 102 105 63 58 118 133 84 79 141 149 98 93 157 172 115 110 180 190 131 126 198 162 107 102 121 203 144 139 211 277 211 206 285 Class I-8 118 111 12 25 Kw. 10 Kc. 20 Kc. 30 Kc. (V. w. 172 115 110 (w. 180 118 111 w. 190 122 112 198 111 (w. 182 119 111 (w. 182 119 111 (w. 180 118 111 1 242 145 123 261 160 136 281 178 154 281 178 154 281 178 154 385 245 221 TAI Night Separation in Miles Class I-A Class I-B TAE Class I-B Class I-B Class I-B Class I-B Class I-B TAE Class I-B Class I-B Class I-B Class I-B Class I-B Class I-B TAE Class I-B TAE Class I-B TAE Class I-B TAE Class I-B TAE Class I-B TAE Class I-B Class I-B Class I-B Class I-B Class I-B TAE Class I-B Class I-B Class I-B TAE TAE TAE TAE TAE TAE TAE TA	Class IV 0.1 Kw. 10 Kc. 20 Kc. 38 Kc. 10 Kc. 20 Kc. 73 37 32 82 45 82 45 40 90 48 86 47 42 94 50 90 48 86 105 68 58 118 66 133 84 79 141 87 149 98 93 157 101 172 115 110 180 118 190 131 126 198 134 189 190 131 126 198 134 162 107 102 170 110 183 125 121 191 129 203 144 139 211 147 277 211 206 285 214 170 110 190 (w. 180 118 111 196 180 180 180 180 180 180 180 180 180 180	Class IV	Class IV	Class IV	Class IV	Class IV	Class IV	Class IV Class IV	Class IV	Class IV	Class IV O.1 Kr. O.2 Kw. O.25 Kw.	Class V	Class I	REQUIRED DAY AND NIGHT SEPARATION IN MILES DETWEEN BROADCAST STATIONS ON ADJACENT CHANNEL CLABS II CLABS III CLABS	Class IF Class IF IF IF IF IF IF IF	Class 1	Class 1

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TABLE IVE

Class IV-Must protect other classes as shown below.

Class IV	Class III A 1 km 5 km.	Class III B 5 km 1 km	Class IV
.1 kw.	300 300	Daytime	Daytime
.25 kw.	395 407	separation determines	separation determines

ь See Note a, Table IV-с

TABLE IV F

Distance Class H Stations must be from Class I Λ and I B Stations to obtain recommended protection to Class H Station (2.5 mv/m ground wave contour).

Class	II(a)	10 kw.	Class I A an		
			25 kw.	50 km.	500 kw.
.25	kw.	1248	1462	1520	2767
.5	kw.	1252	1470	1523	2771
1.	kw.	1256	1473	1528	$\frac{5}{2775}$
5.	kw.	1270	1484	1541	$\tilde{2}789$
10.	kw.	1275	1490	1546	$\frac{5793}{2793}$
25.	kw.	1285	1498	1743	2803
50.	kw.	1293	1510	1750	2812

Note (a): Must use directional antenna to protect dominant station or stations with these separations.

TABLE IV G

Distance Class IV Stations must be from Class III-A and III-B Station to obtain recommended protection to Class IV Station (4.0 my/m ground wave contour).

Class IV	Class	: 111-1 or 1	II-B
Pawer		1.0	5.0
.10	377	547	847
.25	381	551	851

APPENDIX VII

APPENDIX VII

Engineering Requirements for the Use of Regional Channels by Class II
Station under the Provisions of Section C 5 c.

A Class II station assigned to a regional channel in accordance with Section C 5 c shall use a directional antenna or other means to limit the interfering signal within the protected service area of any Class II station on the channel to the value set forth in Appendix II, Table I. The interfering signal in case of projected operation shall be determined from the characteristics of the antenna and appropriate curve in Appendix V. In case of actual operation the interfering signal shall be determined by the method described in Section E 4.

Class III stations, operating on a channel to which a Class II station is assigned, should limit the interference to the Class II station in conformity with the provisions of Appendix II, Table I.

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Hanover 2-1829. Vice President and General Manager: William A. Winterbottom.

Radiomarine Corporation of America, 75 Varick St., New York City. Telephone: Walker 5-3716. President: Charles J. Pannill. RCA Institutes, Inc., 75 Varick St., New York City. Telephone: Walker 5-2253. Superintendent: William F. Aufenanger.



(FCC Orders Nos. 18 and 19, Promulgated Oct. 13, 1987, to be Effective Oct. 13, 1988)

NOTES

Available for non-government assignments.

Available for non-government assignments in Alaska.

Available for non-government stations for assignment to Merchant Fleet Corporation vessels for communication with government stations.

Available for non-government assignments provided no interference is caused with government assignments.

Not to be used by the government in the vicinity of the Great Lakes.

Available for government use on basis of no interference to any fixed service.

Available for government use provided no interference is caused to any other.

h Available for government use provided no interference is caused to any other existing service.

Available for use by government station provided no interference is caused

Available for use by government station provided no interference is caused to non-government operation.

Not to be used within 300 miles of the Canadian border.

Available for use during daylight hours (2 hours after local sunrisc until 2 hours before local sunset) provided no interference is caused to the

service of any other country.

#Not to be used within 500 miles of the Canadian border.

In use continually for the protection of life and property.

All frequencies allocated as general experimental frequencies are available for assignment to broadcast service on an experimental basis.

Available for assignment in Alaska under Rule 419.

Available for assignment in accordance with Article 7, Paragraph 1 of the General Radio Regulations Annexed to the International Telecommunication Convention, Madrid, 1032, provided no interference is caused to the international mobile service.

Available for assignment in accordance with Article 7, Paragraph 1 of the General Radio Regulations Annexed to the International Telecommunication Convention, Madrid, 1932, provided no interference is caused to the international fixed service.

Assigned for low power fixed service in Hawaii.

ABBREVIATIONS

Exp. Vis. B/C-Experimental Visual Exp. V18. B/C—Ex Broadcasting Exp.—Experimental Gen.—General Govt.—Government Teleg.—Telegraph

Ship Phone—Ship Radiotelephone Int. Broadcast—International Broadcast Emerg. -Emergency Relay B/C—Relay Broadcast Temp.—Temporary

Docket No. 3929; Commission Order No. 18; Effective October 13, 1938.

At a regular meeting of the Federal Communications Commission held at its offices in Washington, D. C., on the 13th day of October, 1937:

The Commission having under consideration the provisions of Section 303(c). (f) and (g) of the Communications Act of 1934, and Rule 229 of its Rules and Regulations; and

A public informal hearing having been conducted at the offices of the Commission from June 15 to June 29, 1936 at which time persons representing the departments of the Federal Government, the agencies of state and municipal governments interested in radio, and persons representing all radio services and all important phases of the radio industry, presented testimony; and

The record of the hearing, having been made available to the interdepartment Radio Advisory Committee, and said Committee having made certain recommendations with respect to the allocation of frequencies to Federal Government agencies; and

The Commission having considered the recommendations of the Interdepartment Radio Advisory Committee, and being fully advised in the premises, found, as a result of its investigation and hearing, that public convenience, interest or necessity require that Rule 229 of its Rules and Regulations be

IT IS ORDERED, That Rule 229 of the Rules and Regulations of the Com-

mission in so far as it allocates the frequencies from 25,000 kc. to 28,000 kc. be and the same is hereby amended, effective at 3:00 a. m., E.S.T., October 13, 1938, in accordance with the table identified as Part I of Rule 229 attached hereto and made a part of this Order; and Provided, however, that the Commission may make assignments in accordance with the allocation given in said table prior to October 13, 1938.

It is further ordered, That any holder of, or applicant for, an instrument of authorization, whose frequency or frequencies heretofore assigned or applied for may be changed by the provisions of this Order, who objects to such change may within ninety (90) days from the date of this Order, file with this Commission his objections in writing and request a hearing.

It is further ordered, That the holder of, or an applicant for, an instrument of authorization who, prior to ninety (90) days from this date, fails to file written objections and a request for hearing as hereinabove set out, shall be deemed to have consented to such change.

It is further ordered, That any applicant who, after the date of this Order requests an instrument of authorization or an authorization renewal for a frequency or frequencies which will be changed after 3:00 a. m., E.S.T., October 13, 1938, will without further notice be deemed to have consented to the effective time and date of such change of the frequency or frequencies requested.

Allocations are indicated for information primates indicated for information primates. Indicated frequencies indicated assessments in the service in the service of the s	Rule 229. Subject to the center frequencies o that will be designated a	the foregoing provisions, of communication bands	Frequency (kilocycles)	Allocation	Frequency (kilocycles)	Allocation	Frequency (kilocycles)	Allocation
Prequency Allocation 18.40	'Allocations are incurpingoses. Indented frements which have been 1937 in accordance with For more detailed instrictions on the use of chapter of the Rules and mission dealing with the	dicated for information quencies indicate assign- made up to October 6, the proviso in Rule 228. ormation regarding re- frequencies, consult the Regulations of this Com-	16.60 16.80 17.00 17.20 17.40 17.60 17.80 18.00	Government	28.00 28.30 28.50 28.60 28.90 29.20 29.50	Government Fixed	47.50 47.70 48.20 48.70 49.20 49.70 50.20	
19.00	Frequency (kilocycles)	Aliocation	18.40 18.60	Government	30.60 31.00	Government	51.68 52.00	"
10.85	10.20	sd.	19.00 19.20 19.40	" "	31.80 32.20	**	53.20 53.80	
10.95	10.50 " 10.65 "		19.80 20.00	Government Fixed	33.00 33.40	Fixed	54.40 55.00 55.36	"
11. 40	10.95 " 11.10 " 11.25 "		20.50 20.75 21.00	"	34.20 34.50	Fixed	56.00 56.20	
12.00	11.55 " 11.70 "		21.50 21.75	"	35.00 35.40 35.80	"	57.40 58.00 58.50)	
12.46	12.00 " 12.15 " 12.80 "		22.00 22.10 22.25	"	36.60 87.00	11 11	59.20 59.80	00 Etvad
18.00	12.60 " 12.75		22.50 22.60	"	37.80 38.00 38.20	Government	60.40 61.20	
13.50	18.05 " 18.20 "		22.90 23.00	Government	39.00 39.39	**	62.80 63.18	"
14.10	18.65 13.80 "		23.50 23.75 24.00	Government	39.80 40.20 40.70	"	64.00 64.40	Government
14.55	14.10 " 14.25 "		24.50 24.75	"	41.70 42.20	"	66.00 66.50 66.80	Government
	14.55 14.70 14.85		25.30 25.60 25.82	"	42.80 43.20 43.70	Fixed	68.40 68.92	
15.20 " 28.10 Government 44.70 " 69.50 15.40 " 26.20 " 46.20 " 70.00 " 70.80 "	15.20 " 15.40 "		26.20	Government	45.20	•	70.00 70.80	"
15.80 " 26.80 " 46.00 Government 71.26 " 16.00 " 71.26 " 46.20 " 72.40 " 46.70 Fixed 73.20 "	15.80 " 16.00 "		26.80 27.10	:	46.00 46.20	Government	71.60 72.40	44 14

requency bilocycles)	Allocation	(kilocycles)	Allocation	(kilocyc	ilas)	Allocation	(kilocycias)	Allocation
4.00	Fixed Government	185 7186	Government	298	100	Government	424	Guard Band
75.00 .60	Fixed	r187	Fixed & Coastal Teleg.	*294 295			a 425	Courtal Teleg., Ship Teleg., Intership Phone, & Govt. Guard Band
.40	"	bfhr188	Govt., Fixed & Coastal Teleg.	297	296		426 428	Government Coastal Teleg.
3.00 3.80	"	r189 a190	Teleg. Fixed & Constal Teleg. State Police & Gvt. Fixed & Constal Teleg.	*298 299			480 482	•
79.82 9.60	"	191 br192	Fixed & Constal Teleg. Govt. & Fixed Fixed & Constal Teleg. Govt., Fixed & Constal	*300		"	484 436	Government Constal Teleg.
.40	"	r193 2194	Fixed & Constal Teleg.	301 +302	302		438 440	Government
80.50 .20		195	Teleg. Government	303 *304			442 444	Coastal Teleg. Government
.00 .80	Government	196 197	"	305			446	"
88.00 .60	Fixed	198 199		*306		"	448 450	Coastal Teleg. Government
83.86 1.40	4	200			308		452 ah454	Coastal Teleg. Coastal Teleg., Ship Teleg.
5.20	"	201 201 202	"	*310			456	& Govt. Guard Band
3.80 3.80	14	h203 204	"	311			457 458	Aircraft Guard Band
.60 3.40	"	205 h206)	Gen. Communication Government	*312			460 462	Coastal Teleg.
0.20	"	207 208	"	*314 3	314	"	4464 466	Government Constal Teleg.
.60	"	hr209 209	"	316			468	Ship Teleg.
.40 92.76	"	br210 211		317			470 472	Government Coastal Teleg.
.20	"	bhr212 218	Gen. Communication	318 319			474 a476	Coastal Teleg., & Govt.
.00 .80	Government Fixed	br214 215	Government	320 321	320	"	478 480	Constal Teleg. Government
95.00 .60	"	216 217		322	000		482	Coastal Teleg.
.40	"	218		324	323		484 486	Guard Band
97.50	"	219 220 221 221	u	325 326	326	"	488 490	**
.00 .80		221 222		327 328			492 494	"
99.00 100	Government	221 222		329 329			496 498	"
01 102	Fixed	223		330			a500	Maritime Calling & Govt.
103	Government Fixed	224 5r225	::	331	332	**	502 504	Guard Band
104 106	Government Coastal Teleg.	226 br227		a333 334		Govt. & Aircrast	506 508	44
106 107	Government Coastal Teleg.	227 228		335			510 512	**
108 109	Government	229	u	335) 336			514	Covernment
110	Coastal Teleg.	230 231 232		337	338	Government	515 516	Government
111 112	"	232 233 233		339 340	000	do remodent	518 520	
118 114	Government Coastal Teleg.	233 234		841			522 524	"
116 116	Covernment	235	**	341 342			526 528	44 44
17	Coastal Teleg.	236 237 238		343 344	244	"	530	"
l 18 l 19	**	238 239 239		345	344		532 534	"
120 121	Coastal Teleg. & Govt. Coastal Teleg.	239) 240		346 347			536 538	
22	Government Coastal Teleg.	241 242 242	Course	347) 348			540 542	4
123 124	Coastal Teleg.	243	Government	349			544	4
25 26	"	244 245		350 S 351	350	Government	545 546	Guard Band
27 28	Government	245) br246		352 353			548 (550)	
129 130	Coastal Teleg.	247 248 }248	**	354		Guard Band	a{to }	Government
131		249 250		d356 356		Government	650 660	Broadcast
182 188	Government Coastal Teleg. & Govt.	251		357 358			570 580	**
1 34 136	Coastal Teleg.	251 br252		359 3 h360	359	"	590	"
186 187	"	253 254 254	"	361 362			600 610	**
138 139	"	255 br256		362)			6 2 0 63 0	"
140 141	"	267 257	**	363 364			640 650	64 64
142	Guard Band	258		366 3	365	"	660 670	"
148 144	Maritime Calling Guard Band	259 260 260		367 368			680	
145 146	Coastal Teleg.	261 br262		369		Guard Band	690 700	Government Broadcast
147 148	"	263 263	"	370 h371		Government	710 720	**
149	"	264 265		372 373		Guard Band	730 740	
150 151	Ship Teleg.	266 266		374		Dissetion Finding	750 760	"
152 158	.1	267 br268		a875 376		Direction Finding Guard Band	770	"
154 155	" Ship Teleg. & Govt.	269) 269)	**	377 378		"	780 790	# #
156 157	Ship Teleg.	270 271		380		Government Guard Band	800 810	**
158		ьг272 273	**	381 382		"	820 830	44
169 160	Government Ship Teleg. Fixed & Coastal Teleg.	br274 275)	**	383 384		"	840 850	**
161 162	"	275		h385		Government	860	"
168 164	**	276 277		386 387		Gen. Communication	870 880	4
165	Court Pived & Constal	a278 278 279	Govt. & Airport	388 389		Government Gen. Communication	890 900	4
166	Govt., Fixed & Coastal Teleg. Fixed & Coastal Teleg.	280 281		390 h 391		Government	910 920	4
167 168		281		392	-	Coastal Teleg.	930 940	2 133
169 170	"	282 283		(394)	200	Coastal Teleg. & Ship Teleg.	950	4
171 172	Cout & Rived	284 284 285	Government	896 \8 398 \	396	Government Guard Band Ship Teleg.	9 6 0 970	- 1
178	Govt. & Fixed Fixed & Coastal Teleg.	*286 287	"	400 402		Ship Teleg. Guard Band	980 990	4 (11)
174	Government	287	4	404 406		Government	1000 1010	
176 176 177	Fixed & Coastal Teleg.	*288 289		408		Coastal Tolog Ship Talog	1020 1030	
178	Govt., Fixed & Coastal Teleg. Fixed & Coastal Teleg. Govt., Fixed & Coastal Teleg.	*290 290 291	"	a410		Coastal Teleg., Ship Teleg., & Govt.	1040	4 147
179	Fixed & Coastal Teleg.	*292 298	"	412 414		Guard Band Aircraft	1050 1060	463
180 181	Govt., Fixed & Coastal Teleg. Fixed & Coastal Teleg.			416 418		Guard Band Coastal Teleg.	1070 1080	as Daniel Hologo
182						Comment Teleg.		

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(Continued from Page 327)

Frequency kilocycles)	Allocation	Frequency (kilocycles)	Allocation	Frequency (kilocycles)	Allocation	Freque (kilocyc	les)	Allocation
1090	Broadcast	1768	Amateur	2172	Ship Harbor	ir2512	514	Coastal Harbor & Govt.
1100 1110	**	1772 1776	::	2176		hi2516 i2520		Government
1120 1130	"	1780 1784		2180 i)2182 2184	Ship Harbor & Govt.	12524	522	Coastal Harbor & Govt.
140 150		1788 1792	"	2188)2190	Relay Broadcast	2528	530	Coastal Harbor
160 1170		1796 1800	::	2192	Government	2532 2536		"
180 190	:	1804 1808		a2196)2198	Ship Harbor	1)2540	538	Government
200 210	:	1812 1816		2200 ik2204 hik)2206	Ship Harbor & Govt.	2544 2548		-
220 280		1820 1824		hik)2206 ik2208 2212	Gen. Communication	2552	550	Coastal Harbor
240 250		1828 1832	**	#2216	Government	2556 hi)2	558	Coastal Harbor & Govt.
1260 1270		1836 1840	**	j2220 #ah)2222 2224	**	2560 i2564		
1280 1290		1844 1848	"	2228	Gen. Communication Government	i2568	566	••
1800 1810	"	1852 1856	::	#2232 2236 j2240	Gen. Communication Government	hi2572 h2576		Government
1320 1330 1340	"	1860 1864		2244	Gen. Communication Government	12580	582	Coastal Harbor & Govt.
1340 1350 1360		1868 1872	11	j2248 a2252	Fixed & Govt.	2584 2588		2376.
1370		1876 1880		k2256 k)2258	Government)2	590	Coactal Harbor
1380 1390	"	1884 1888		k2260 2264	Fixed	2592 2696		
1400 1410	"	1892 1896		j2268 j2272 2276	Government	2600	598	
1420 1430	::	1900 1904	"	j2280	Gen. Communication Government	2604 2608		Government Aviation
440 450	"	1908 1912	"	j2284 j2288 2292	**	2612 ri2616		**
460 470	"	1916 1920		j2296	Gen. Communication Government	(2620)2	2618	Aviation & Govt. Aviation
480 490	"	1924 1928		2300 2304	Gen. Communication Government	h2624 ai2628		A viation & Govt. A viation
500 510	11	1932 1936		ik2308 hik)2310	Police & Govt.	ai 2632	2630	Aviation & Govt. Aviation
520 5 80	**	1940 1944	**	ik2312 2316		2636 2640		"
1540 1550	**	1948 1952	"	ij2320)2318	Police Government	2644 2648		
1 56 0 1570	"	1956 1960	"	2324	Police	hi2652		Aviation & Govt.
580	Government	1964 1968	Amateur	2328 2832		ah2656 2660		Government
584 588 590	Broadcast	1972 1976	"	2336	Government	2664	2662	**
592	Alaska (Rule 419) State Police	1980 1984	"	ij2340)2342	Government Police	2668 h)2	2670	**
	(temp.) Broadcast	1988 1992	**	2344 2348	ronce	2672 2676		
	Geophysical	1996 2000	14 14)2350 2352	**	2680 2684		**
	Relay Broadcast	a2004 h2008	Govt. & Exp. Vis. B/C	2356		h2688 2692		14
)1610 612	Police	2012	Exp. Vis. B/C)2858 i)2360	Government	2696	2698	
*)1614	Gen. Exp. & Govt.	2016	Dalam Back Barrett Back	2364	Police	2700 2704	2030	44
816 620	n la nata	a2024	Relay B/C & Exp. Vis. B/C	2368 i2372	.	ai2708	210	Aviation Aviation & Govt.
)1622 624	Relay Broadcast	2028	Govt. & Exp. Vis. B/C	i)2374 i2376	Police & Govt.	ai2712	2710	Aviation
)1626 628	Police & Govt. Geophysical	i2032 2036	Police & Exp. Vis. B/C	2380	Police	hik2716 2720		Government Aviation
)1630 1632	Marine Fire	2040 2044		h2384 2388	Government	2724	2726	Special Emergency
1686	Police	i2048 a2052	Govt. & Exp. Vis. B/C	2392	Police	2728 2732		Aviation
1636) 1638	Aviation	2056	Relay B/C & Exp. Vis. B/C	2396 **)2398	Gen. Exp.	2736 a):	2738	Coastal Harbor, Ship
1640)1642	Police & Govt.	2060 2064		2400 2404		2740 2744		bor, Intership & Gov Government
)1646	Relay Broadcast	2068	Govt. & Exp. Vis. B/C	2408	Police	2748 2762		Aviation
648 652	Motion Picture. Geophysi-	h2072 i2076	"	2412	"		2754	Government
656	cal & Govt.	2080)2082	"	2416 2420		2760	2758	Relay Broadcast
)1658 660	Police	h2084 2088	**)2422 2424	**	h2764 i2768		Government
664)1666	Police & Govt.	2092	Relay B/C & Exp. Vis. B/C	2428	44	hi):	2770	**
668 672		a2096 2100	Govt. & Exp. Vis. B/C	2432 2436		2776 2780		Fixed
) 1674 .676	Police Geophysical	2104	Relay Broadcast	2440	Government	2784 2788		**
680)1682	Police & Govt.	2108 a)2110	Ship Harbor & Govt.	i)2442 2444	Police & Govt.):	2790	Relay Broadcast
684 688		2112	Ship Harbor & Govt.	2448 h)2450	**	ah2792 a2796		Government
)1690 1692	Police	$i^{2116}i^{2118}$		2452		h2800	2798	**
(696) 1698	Police	2120 2124		2456)2458	Police	2804 2808		Police
1700 1704	Geophysical	2128	Ship Harbor	2460 2464		2812 h2816		Government
)17 06 1708	Police	2132	44	i)2466 2468	Police & Govt.	hi2820	2822	Government
	Police & Govt. Amateur	2136		2472 i)2474	**	i2824	2022	
1720 1724	Amateur "	2140)2142 2144	"	2476 2480		2828	2830	Relay Broadcast
1728 1732		a2148	Government	hi2484	Police Government	2832 2836		Fixed
1786	4)2150 2 152	Relay Broadcast	2488	Government	2840 ahi2844		Fixed Government
1740 1744		2156	Ship Harbor	2492 2492	Police Government	2848		Fixed
1748 1752	:	2160	omp matour	2496 2500	"	h2852	2854	Government Aviation
17 56 1760	,,	2164)2166		2504)2506	Constal ** ·	2856 k2860		
1764	"	2168		2508	Coastal Harbor	k):	2000	Aviation & Govt.

Prequency (kilocycles)	Allocation	Frequency (kilocycles)	Allocation	Proquency (kilocycles)	Allecation	Prognoncy (kilos Pelm)	Allocation
2868		k8806		3850	Amateur	h4425	
)2870 2872	Aviation	k 18307.5 k3810	Fixed & Govt.	3855 8860	. "	h)4427.5	Government
2876)2878	**	8815 8820	Fixed	a3866 3870	Amateur & Govt.	44480 4485	
2880 2884	Government	3825	Avlation	3876 3880	Amateur	4440 4445	
k2888 k)2890	Aviation & Govt.	088844	Fixed	3885		4450 4456	Gen. Communication
2892 2896		hk 13332.5 hk8836 8840	Fixed & Govt.	3890 8896		1460	Ship Phone
2900 2900	Aviation	3845	Government	8900 a3905	Amateur & Govt	A4465 A)4467.5	Government
2904		8850 8865	"	3910 3915	Amateur	84470 84475	•
)2906 2908	"	8360 8865	**	3920 3925		(4480)	Aviation
-2912 2916	Government	3870 3875		3930 439 35	Amateur & Govt.	4485	Government
2920)2922	Aviation	8380 648386		8940 3945	Amateur	A4490 A(4495	Aviation
2924 2928	.,	8390 8895		8950 3955	" •	A)4497.5 A4500	Government
)2930 2932	"	A)3397.5 3400	**	8960 a8965	Amaleur & Govt.	4505 4510	Gen. Communication
2986)2988)8402.5 8405		3970 3975	Amateur	A4515 4520	Government Fixed
2940 2944		8410 e8415	Aviation & Govt.	3980 a3985	" Amateur & Govt.	4525 4580	Government
)2946 2948	**	hk3420 hk)3422.5	"	8990 3995	Amateur	4535 4540	Pixed
A2952 2956	Government Aviation	hk3425 hk3425		4000 44005	Government	4545 4550	**
32960 2964	Government Aviation	ij)8427.5 8430	Aviation & Govt.	A4010 4015	Government.	4555	C Cleetlee
2968 h)2970	Government)3432,5 8485	Aviation	4020		4560 4565	Gen. Communication Government
2972 2976	**		Avlation & Govt.	4025 4030		4570 4575	Fixed
h2980	"	e3445	Government	A4035 A4040	"	λ4580 4585	Government Gen. Communication
2984	Aviation	3450 3450	Aviation	4045 4050		14590 14595	Government
2988 2992)3452.5 3455		4055 4060	**	λ4600 4606	Gen. Communication
aehir)2994 2996	Aviation & Govt.)3457.5 3460		4065 4070		4610 4615	Government
3000)3002.5	Aviation	3465)3467.5		h4075 4080	**	A)4617.5 4620	**
*3005 3010	Government Gen. Communication	3470 e8475	Government	4085 4090	**	ach4625 hk4630	
k3015 k)3017.5	Government	3480 3477.5	Aviation	4095	.5 Fixed	4635 4640	Gen. Communication Gen. Communication
k3020 3025	Fixed	hj3485 3490	Aviation & Govt.	4100 4105	Government	4645 4650	Fixed Aviation
3030 ek3035	Gen. Communication Government	***)3492.5 3495	Gen. Experimental	4110 4115	Aviation	4655 4660	Fixed
ik)3037.5	dovernment.	3497.5 3500	Government Amateur	4120	5 "	4665 4670	"
ik8040 8045	Fixed	a3505 3510	Amateur & Govt.	4125 hi4130	Government	4675 4680	**
3050 3055	Gen. Communication	3515 3520	Amateur	4135 4140	Maritime Calling	4685	"
3060	Aviation	3525		4145	Ship Teleg. Ship Teleg. & Govt.	4690 4695	Aviation Gen. Communication
e3065 a3070	Government	3530 a3585	Amateur & Govt.	4150 4155	Government	4700 4705	Mobil e Press
3075	Aviation	3540 3545	Amateur	hi4160 a4165	Ship Teleg. & Govt.	4710 4715	Fixed
3080 a)3082.5	Aviation & Govt.	3550 3555	**	4170 4176	Ship Teleg.	4720 4725	"
გვ085 3088	Government Aviation	3560 3565	**	4180		4780 4785	"
8090 r)3092.5	••	3570 3 575		4185 4190	Coastal Teleg. Fixed	4740)4742.5	Aviation
¢8095 3100	Government	3580 43585	Amateur & Govt.	4195 4200	Government	4745 4750	
3110 3105	Maritime Calling, Aircraft & Govt.	3590 3595	Amateur	4205 h4210)4752.5 4755	Coastal Phone
3115 ahi3120	Ship Teleg. & Coastal Teleg. Ship Teleg., Coastal Teleg.	3600 3605	**	h4215 h4220		4760 a4765	Gen. Communication Government
3125	Aircraft & Govt.	3610 a3615	" Amateur & Govt.	h4225 4230	**	4770 4775	Gen. Communication
3180 3180	Aviation	3620 3625	Amateur	4235 h4240	**	4780 4785	Coastal Teleg.
3135		3630 3635	**	4245 4250	Agriculture Gen. Communication	4790 4795	"
)3137.5 3140 3145		3640	**	4255 4260	Government Fixed	**)4797.5 4800	Gen. Experimental
)3145 3150	**	3645 3650	**	4265 4270	Government	4805 4810	Fixed Gen. Communication
ehk3155	Aviation & Govt.	3655 3660	Amateur & Govt.	4275 4272	.5 Coastal Phone	4815 4820	"
3160)81 6 2.5	Aviation	a3665 3670	Amateur	hk4280 h)4282	Coastal Phone & Govt. 5 Coastal Phone & Govt.	4825 84830	Government
3165 3170		3675 3680	"	ክል4285 ከት)4287		4835 4840	Gen. Communication
3175	Aviation	3685 8690	**	A£4290 4295	Government	4845 h4850	Government
3180)3182.5		a3695 8700	Amateur & Govt. Amateur	4800 4305	"	4855 4860	Gen. Communication
3185 r3190	Special Emergency	3705 3710	"	4310 4315	"	4865 h4870	Government
ahz3195 3200	Aviation & Govt.	3715 3720		4320	.5 "	4875 4880	Gen. Communication
())8202.5 3205	"	a3725	Amateur & Govt. Amateur	h4825 h)4327	.5 "	4885 hi4890	Government
3210 9)3212.5	*1	3730 3735	A mayeur	A4830 4835	Aviation	4895 4900	Gen. Communication
3215 3220		3740 3745	"	4340	Gen. Communication	4905 64910	Government
jh)8222.5 z8225	Aviation & Govt.	3750 a3755	Amateur & Govt.	4345 4350	"	4915	Aviation
3230)8232.5	Aviation	3760 3765	Amateur	4355 hi4860	Government	4920	100
e3235	Government	3770 3775	"	4365 4370			Government
3240)3242.5	Aviation	3780 a3785	Amateur & Govt.	4375 4380	"	4930 4935	Lilling City
3245 3250	Agriculture	3790 3795	Amateur	4385 4390		4940	Aviation
3255)3257.5	Aviation	3795 3800 3805	**	4395 4400	Gen. Communication	4945	
3260 bohikr3265	Aviation & Govt.	3810 3810 a3815	Amateur & Govt.	4405	.5 Ship Phone	4950	
8270 8275	Fixed	3820 3825	Amateur	4410)4412	.5 "	4950)4952.5	Aviation
3280 3285	"	3830	** **	4415 4420		4955 4960	Gen. Communication
3290 <8295	Fixed & Govt.	3835 3840	Amateur & Govt.	4425	.5 "	(Contin	ued on page \$30)
8800	Fixed	a3845					

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(Continued from Page 329)

Frequency kilocycles)	Allocation	Frequency (kilocycles)	Allocation	Frequency (kilocycles)	Allocation	(kilocycles)	Allocal
4965		5480	Gen. Communication	5970	Gen. Communication	6820 6830	Fixed
)4967.5 4970	Aviation	5485 5490	"	5975 5980	Fixed	6840 6845	11
4975	Government	5495	"	5985 5990	"	6850 6852.5	"
4980 4985	Fixed	5500 a5505	Ship. Teleg. & Govt.	5995 6000	Government	6860	**
4990	() ()	a5505 5510	Ship Teleg.	6000	Guard Band	6870	"
499 5 5000	Government	5515 5520	Maritime Calling	6010 6020 6020	Int. Broadcast	6875 6880	
5000 5005	Gen. Communication	5625 6530	Maritime Calling Ship Teleg.	6030 6030		6890 6900	**
5010 5015	Fixed Gen. Communication	5530 5535	"	6040 6040	"	gh6910	Fixed & Govt.
5020 50 25	Gen. Communication Government Gen. Communication	5535 a5540	Coastal Teleg. & Govt.	6050 6050		6920	Fixed
5030	Government	5545 5550	Coastal Teleg.	6060 6060		6927.5 6930	44
)5032.5	Aviation	5555 5560	14 14	6070) 6070)		6935	7: 10 -
5035 5040		5560 5565		6080 6080	"	h6940 6942.5	Fixed & Govt. Fixed
)5042.5	Aviation	5570		6090 6090		6950	
5045 5050		5575	Aviation	6100 6100	"	6957.5 6960	**
)5052.5 50 55	Fixed	5 580	44	6110 6110		6965	
5060	Gen. Communication)558 2 .5 5585		6120 6120	Government	g6970 6980	Fixed & Govt. Fixed
5065)5067.5	Government Fixed	5590	44	6130 6130		6990	Government
5070	rixed)5592.5 5595		6140 6140	Int. Broadcast	7000 7010	Amateur
5075)5077.5	"	a5600	Government	6150) 6160	Ship. Teleg.	7020	**
5080 5085)5602,5 5605	Aviation	6170		7030 7040	"
5085	Fixed	5610	**	6180		7050	**
090 095	Government Fixed)5612.5 5615		ah6190 6200	Ship Teleg. & Govt. Ship Teleg. Maritime Calling, Aircraft,	7060 7070	"
100 105	44 44	5620	41	h6210		7080	
5110 5110 5115	")5622.5 5625		h6220	Ship Teleg. & Govt.	7090	44
115	Gen. Communication	5630	ı)	h 6225	Government Ship Teleg. & Govt.	7100 7110	a
5120)5122.5	Aviation)5632.5 5635		h6230 h6240	Ship relegion	7120	"
5125 5130	Gen. Communication	5635 5640		a6250	Coastal Teleg. & Govt. Coastal Teleg.	7130 7140	16
135	Police)5642.5 5645		6250 6260 6270 6280	Coastal Teleg.	7150	44
5135)5137.5 5140 5145	Alaska (Rule 419-B) Police	5650	,,	6280	Coastal Teleg. & Govt.	7160 7170	**
	Gen. Communication)5652.5 5655		6290 6300	Coastal Teleg.	7180	"
150 1 5 5	"	5660	,,	6310	:	7190 7200	
160	")5662.5 5665		6320 fh6330	Coastal Teleg. & Govt.	7210	44
5165)5167.5 5170	Aviation	5665 5670		6340	Coastal Teleg. & Govt. Coastal Teleg.	7220 7230	"
170	Alaska (Rule 419-B)	5675		6350 h 6355	Government	7240	44
175 180		5680	"	6360	Coastal Teleg.	7250 7260	**
185	Fixed)5682.5 5685		6370 6380		7270	**
190 195	"Police	568 5 5690	A	e 6385 h6390	Government Coastal Teleg. & Govt. Coastal Teleg.	7280 7290	"
200	Government	5695	Aviation	6400	Coastal Teleg. & Govt.	7300	a
\$205 \K207 K	Alaska (Rule 419-B))5697.5	"	e 6405	Government Coastal Teleg.	9 7305 7310	Government
S210		5700 5705		6410 a6420	Covernment	7310	Fixed
215	Gen. Communication)5707.5 5710	"	a**)6425	Gen. Exp. & Govt. Government	7320 97330 7340	Fixed & Govt
22 5	Fixed	5715	Gen. Communication	a6430 6440	Mobile Press	7340 7350	Fixed
230 285	4	5720 5725	Fixed	h 6445	Mobile Press Government	7355	**
215 220 3226 3230 3235 3240 3245	"	5730	Gen. Communication	6450 a6460	Mobile Press Coastal Phone & Govt.	7360 7370	
5245 5250	u	k5735	Government	e 6465	Government Coastal Phone & Govt.	7380 g 7385 7390	
5250 5255 5260	Gen. Communication	h)5737.5 5740		a6470 e 6475	Government	g 7385	Government Fixed
5260 526 5	Fixed)5742.5	"	h6480	Coastal Phone & Govt.	7400 7407.5	"
270	**	5745 5750	Fixed	6490 e6500	Aviation Aviation & Govt.	7407.5 7410	"
275	Gen. Communication	5750 5755	Gen. Communication	6510	Aviation	7415	**
280 285	Government Fixed	57 60 57 6 5	14	6520 6530	"	7420	44
290	14	5770		h6540	Aviation & Govt.	7430 7437.5	**
295	Fixed & Govt.	h5775 5780	Government Gen. Communication	6550 6560	Aviation	7440	"
5 300 5 3 05	Fixed	5785	16	6570	"	7445 7450	**
810	Aviation	57 9 0 5795		6580 6590	**	g 7455	Government
815 820	Fixed	5800 5805	"	a6600	Aviation & Govt.	97460 7470	Fixed & Govt. Fixed
825		5805 5810	4	h6610 h)6615	Government Aviation & Govt.	7480	"
)5827.5	Government	h5815	Government	h6620	Government	7490 g7500	Fixed & Govt.
380 885	Fixed	5820 5825	Gen. Communication	e 6625 e6630	••	7510	Fixed
840	Fixed	6830	Covernment	e 6635	Aviation & Govt. Government	7520 g7530	Fixed & Govt.
845 350	11 11	hi5835 5840	Government Gen. Communication	e6640 e 6615	Aviation & Govt. Government	g 7535	Government
8 5 5	44	5840 5845	Fixed	a6650	Ship Phone & Govt.	97540 7650	Fixed & Govt.
860	**	5850)5852.5	44	e 6655 a6660	Government	7555	Fixed
865 870	Agriculture Fixed	5855		e 6665	Ship Phone & Govt. Government	7560 7565	44
875	Government	5860 5865	Gen. Communication Government	a6670 6680	Ship Phone & Govt.	7570	"
)5877.5	Aviation	5870	Gen. Communication	6690	Fixed Government	7580 7590	46
880 885	Gen Communication	hi5875 5880	Government Gen. Communication	6700 6710	Fixed	7600	44
390 895	Gen. Communication	5885		6717.5	**	7610	46
895 400	")5887.5 5890	Aviation	6720 6725	"	7615 7620	44
400 405	Aviation	5895	Gen. Communication	6730	:	7625	"
410	Gen. Communication	5900	Gen. Collingingation	6782.5 6740	11	7630 7640	"
415 420	"	5905 5910	"	6745	"	g 7645 7650	Government
5425	4	5915	**	g 6747 6750	Government	7650 7655	Fixed
480 485	"	h5920	Government	6755	Fixed	7660	"
5440	**	5925 5980	"	6760	16	7662.5 7670	
5445	"	5985	"	6770 6777.5	**	g7680	Fixed & Govt.
450 455	4	h5940 5945	**	6780 6785	44	7690 7700	Fixed Aviation
460 465	"	5950	u a	6790	**	7710	Fixed
470	"	5955 h5960	**	6800	"	7715 77 20	44
475	Government	5965		6810	**	7720	**

	ocycles)	Allocation	(kilocycles)	Allocation	Proquency (bilocycles)	Allocation	Prognancy (kilocyclas)	Allocation
774 7 775	40 7745	Fixed	8920 8980	Government Fixed	10040 10050	Fixed	11370 11385	Constal Phone
776	7752.5	44 44	8940 8950	44	10060 10070	"	11400 11415	Fixed
777	70 777 5	"	8960 8970	11 ff	10080 10090		11480 #k11445	Fixed & Govt.
778 779	80	44	8980 8990	"	10100 10110	**	11460 11470	Fixed Aviation
780	00	"	9000 9010	4	10120 10125	Aviation	11475 11490	Government Fixed
781 782 788	ŽŎ RO	44 44	9020 49080	Fixed & Govt.	10180 k10140	Fixed & Govt.	11505 11510	
784 785	40	" "	9040 9050	Government	10150 10160	Fixed	11520 11525	64 64
1786 787	80	Fixed & Govt.	9060 9070	Fixed	10170 10180	"	11585 11550	Government
788 789	30	Fixed	9080 h9090	Government	10190 10200	Aviation Fixed	11565 11580	Fixed Government
790 791	00	11 11	h9100 9110	Fixed & Govt. Fixed	10210 10220	14	11595 (k11610	Fixed Fixed & Govt.
1792 798	20	Fixed & Govt. Fixed	h9120 9130	Fixed & Govt Fixed	10230 10240	"	11625 11640	Fixed
794 795	10	11	9140 9150	 	10250 (10255	Government	11656 11670	44 64 84
796	7 96 5	"	9160 9170	"	10260 10270	Fixed	11680 11685	44
797 798	70	11 11	9180 9190	Fixed & Govt. Fixed	10280 10290	"	11710 111780	Int. Broadcast Government
799 h 7	90	Government	9200 9210		10800 10810		11750 11770	Int. Broadcast
800 4801	90	Fixed Government	9220 9280	 	10320 10380	"	11790 11810	14 14
802)8015	Aviation & Govt.	9240 9250	Government	10340 10850	44	11830 11850	44 44
809 804	30	Government	9260 9270	Fixed	10360 10370	••	11870 11890	**
805 806	50	11 11	9280 h 9285	Government	10380 10390	"	11910 11925	Aviation Fixed
r807		Fixed & Aviation Fixed	9290 h9300	Fixed Fixed & Govt.	10400 10410	H	11940 11950	Government Fixed
#808 809	30	Government	9310 9820	Aviation Government	10420 10430	"	11965 11960	Aviation
810	00	16 46	9880 9340	Fixed	10440 10450	"	11970 11985	Fixed "
811 812	20	44	9850 9855	44	10460 10470	**	12000 h12015	Fixed & Govt.
e813 814	10	Aviation & Govt. Government	9860 9865	11	10480 10490	"	12030 12045	Fixed Government
815 816	30	44	9370 9380	u u	10500 10510	11 14	12060 12075	
817 818	30	"	9390 9400	"	10520 1058 0	"	12090 12105	Fixed
819 k820	00	Fixed Fixed & Govt.	9410 9420	Fixed	10540 10550	44 44	12120 12135	Government
821 822	20	Government Aviation	h 9425 9480	Government Fixed	10560 10570	44	12150 12165	 11
828 824	40	Ship Teleg. Ship Teleg. & Aviation	9440 9450	"	10580 10590	"	12180 12195	**
825 826	50	Ship Teleg.	9460 9470	"	10600 10610	" "	12210 12225	44
827 828	80	Government Maritime Calling	9480 9490	"	10620 10630	**	12240 12255	44
829 a830	00	Ship Teleg. Ship Teleg. & Govt.	9500) 9510}9510	Int. Broadcast	10640 10650	**	12270 12285	Fixed
881 hi882	20	Government Ship Teleg. & Govt.	9520 9520		10660 10670	"	12300 12315	Government
a833 884	10	Ship Teleg.	9530 \9530 9540)	"	10675 10680	" "	h12330 12345 12360	Aviation & Govt. Ship Teleg.
885 886	60	Mobile Press	9540) 19550}9550	Government	10690 10700	41 44	12375	44
887 888	80	Coastal Telegraph	9560 9560		10710 10720	"	h 12380 12390 (12405	Government Ship Teleg. Government
889 840	00	Government	9570 9570 9580	Int. Broadcast	10730 ik10740	" Fixed & Govt.	12420	Maritime Calling
841 842	20	Coastal Teleg.	9580) 9590}9590	"	10750 10760	Fixed	12485 a12450 12465	Ship Teleg. Ship Teleg. & Govt. Government
843 844		"	9600 j 9610	Fixed	10770 10780	**	h(12480	Ship Teleg. & Govt.
845 846	50 60	Government	9620 9630	"	10790 10800	50 84	12495 a12510 12525	Coastal Teleg. & Govt. Coastal Teleg.
847 848	B0	Coastal Teleg.	9640 9650	16	10810 10820	41	12540 12540 12550	Government
849 a850	00		ik9660 9670	Fixed & Govt. Fixed	10830 10840	## ##	12555 12570	Coastal Teleg.
851 k852	20	Coastal Teleg. & Govt. Government Coastal Teleg. & Govt.	9680 9690	44	10850 10855	" A viation	12585 12600	Government
853 854	40	Government Coastal Phone	9700 9710	Government	10860 10870	Fixed	12615 i12630	
855 856	60	64	9720 9730	Fixed	10880 10890	**	12645 12660	Coastal Teleg. & Govt. Coastal Teleg.
857 858	80	Coastal Teleg.	9740 9750	Government Fixed	10900 10910	**	12675 12690	Government
859 860	00	Government	9760 9770	44 44	10920 10930	6	12705 12720	Coastal Teleg.
861 862	20	"	9780 9790	"	10940 10950	" Avietion	12735 12750	"
868 864	40	Coastal Teleg.	9800 9810	 	10955 10960	Aviation	12765 h12780	Government Coastal Teleg. & Govt.
868)8655	Gen. Experimental	9820 9830	 #	10970	Fixed	12795 12810	Government Coastal Phone
866 867	70	Coastal Teleg.	9840 9850	"	10980 10990	44 44	12825 12840	
868 869	90	<i>u</i>	9860 9870	"	11000 a11010	Ship Teleg. & Govt.	12855 +)12862.5	Gen. Experimental
870 871	10	Fixed	9880 9890	u 4	11025 11040	Ship Teleg. Maritime Calling	12870 12885	Government
872 873	30	Government	9900 9905	 41	11055 11070	Ship Teleg.	12900 h12915	Fixed & Govt.
874 878	40 50	11	9910 9920	Government	11085 11100	4	12930 12940	Fixed "
876 87	60 70	14 14	9980 9940	Fixed	11115 11130	Coastal Teleg.	12945 12955	
878 879	80 90	Fixed	9950 9960 9970	44 44	11145 11160	"	12960 12970	a
88 88	10	Ship Phone & Fixed	9980	" "	11175 11190	"	12975 12990	« «
88: 88:	20 80	Ship Phone	9990 10000	Government	11205 11220	"	18000 18005	"
88 88 88	40 50	Ship Phone & Fixed	10010 10020	Fixed	11235 11250	44	18015	
99.	70	Ship Phone & Fixed Fixed & Govt. Government	10080 h 10085	Government	11265 11280	44 44	Available for no International Broad	n-government assignments to least Stations on a temporary
88	80 8885 90	44	Available for I	on-government assignments to adcast Stations on a temporary	11295 11810	1) 44	of the Commission	deast Stations on a temporary cancellation at the discretion without advance notice or
88	90	- 44	International Broad	to cancellation at the discretion on without advance notice or	11325	Coastal Teleg.	hearing.	
89	8905	Fixed	Danie mile surry	n without advance notice or	11840 11355	Mobile Press	// Contin	ued on page 332)

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Frequency (kilocycles)	Allocation	Frequency (kilocycles)	Allocation	(kilocycles)	Allocation	Frequency (kilocycles	Allocation
18020	Fixed	14650	Fixed	16315	Fixed	18520 18540	Fixed
18080 18085	"	14665 14680	"	16320 16380	Government Fixed	18560 18580	
8050	Coastal Teleg.	14695	**	16840	Government	18600	**
8065 8080	#	14710 14725	**	16845 16860	Fixed	18620 18640	
3095	Government	14740	"	16370 16375	"	18660	**
3110 8125	"	14755 14770	**	16390	m.i. m.i	18680 18700	**
8140	**	14785 14800	44	16405 16420	Ship Teleg. Government	18720	**
3155 3170	Coastal Teleg.	14815	"	16440	Aviation	18780 18740	44
8185 8200	Fixed Ship Phone	14830 14845	11 11	16460 16480	Ship Teleg	18760 18780	"
18210	"	14860		16500 16520	"	18800	"
8215 18220	"	14875 14890	**	16540	Government	18820 18840	"
8280 8245	"	14905 14920	**	16560 16580	Maritime Calling Ship Teleg.	18860	"
3260	"	14985	**	a16600	Ship Teleg. Ship Teleg. & Govt.	18880 18900	;
3260 8275 8290	Government	14950 14965	"	16620 i16640	Government Ship Teleg. & Govt.	18920	**
83 05	4	14980		16660	Ship Teleg.	18940 18960	**
8320 8335	"	14995 15000	Government	16680 16700	Mobile Press	18980 19000	**
8335 8850	Fixed	15010	Fixed	16720 16740	Coastal Telex.	19020	**
8860 13870	"	15025 15040	er .	16760	Coastal Teleg.	19040 19060	"
3375 13380	Government	15055 15070	"	16780 16800	"	19080	"
8890	Fixed	15085	**	16820	Government	19100 19120	**
8405	"	15110 15180	Int. Broadcast Government	16840 16860	Coastal Teleg.	19140	**
18410 3420	**	15150	Int. Broadcast	16880	"	19160	**
3485 3450	"	15170 15190	"	16900 a16920	Coastal Teleg. & Govt.	19180 19200	
3465	"	15210	"	16940	Covernment	19220 19240	**
3480 3495	"	15230 15250	::	a16960 16980	Coastal Teleg. & Govt.	19260	**
8510	"	15270	"	17000	Coastal Teleg. & Govt. Coastal Teleg. Coastal Teleg. & Aviation	19280 19300	
8525 8 54 0	44	15290 15810	"	17020 17040	Government Coastal Teleg.	19320	**
13545	Government	15330	Diana.	17060	Government	19340 19360	44
3555 3570	Fixed	15355 15370	Fixed	17080 17100	Coastal Phone	19380	**
18575	Government	15385		17120	"·	19400 19420	
8585 8600	Fixed	15400 15415	**	17140 17160	Fixed	19440	**
8615	"	15480	**	17180	Government	19460 19470	**
8680 8645	**	15445 15460	44	17200 17220	Fixed	19480	**
8660 8675	"	15475 15490	4	17220 17240	Government	19500 19520	**
3690		15505		17260 17280	Fixed	19540	**
3705 3720	"	15520 15535		17300 **)17310	Con Experimental	19560 19580	
8785	**	15550	44	17320	Gen. Experimental	19600	
3750 3765		15565 15580		17340 17360	Fixed	19620 19640	**
3780	"	15595	44 44	17380	"	19660	
18790 3795	**	15610 15625	**	17400 17420	"	19680 19700	
3810 3825	**	15640	**	17440	"	19720	**
8840	•	15655 15670	**	17460 17480	Government	19740 19760	**
3855 3870	"	15675	4	17500	"	19780	
8885	"	15685 15700		17510 17520	Fixed	19800 19820	
8900 891 5	44 46	15715	"	17540	Government	19840	**
.8930	**	15780 15745	"	17560 17580	Fixed	19860 19880	
8945 8960		15760 15775	11	17600	Ship Phone	19900	"
8975	"	15790	**	17610 17620	::	19920 19940	**
3990 4005		15805 15820	**	17640 17660	"	19960	14
4020	Amateur	15835	"	17680	"	19980	Government
40 85 4 050		15850 15865	"	17700 17720	Fixed	20020	Fixed
4065	**	15880	**	17740	Government	h 20025 20040	Government Fixed
4080 4095	44	15895 15910	**	17760 17780	Int. Broadcast	20060	Fixed
4110 4125	"	159 2 5 159 4 0	44	17800	"	20075	Government Fixed
4140	**	15955	**	17820 17840	Fixed	20100	4
4155 4170	"	15970 15985	4	17860	**	20120 20125	Government
4185	44	16000	**	17880 17900	"	20140	Fixed
4200 4215	"	16015	Covernment	17920		20150 20160	Government Fixed
4215 4280 4245	**	h 16020 16030	Government Fixed	17940 17960	"	20180	"
4260	"	16045 16060		17980	**	20200 20220	
4275	**	16075	Government Fixed	18000 18020	"	20225	Government
4275 4290 4805	"	16080 16090	Government Fixed	18040	" · · · · · · · · · · · · · · · · · · ·	20240 20260	Fixed
4320 4335 4350 4365		16100	Government	18060 18080	Fixed & Govt. Fixed	20280	**
4850	"	16105 16120	Fixed Government	18100	Government	20300 20320	
4865	"	16185	Fixed	18120 18140 18160	Fixed	20340	**
4880 4895	"	16150 16160	Government	18160 18180	"	20360 20380	Government
4410 4425	Fixed	16165	Fixed	18200		20400	
4440		16180 16195	Government Fixed	18220 18240	**	20420 20440	Fixed
4455	"	16210		18240 18260 18280	**	20460 20480	**
4470 4485		16210 16225 16240 16255	Government Aviation	18280	"	20480 20500	**
4500 4515	"	16255	Fixed	18300 18320	**	20520	
4580	"	16270 16285	"	18340 18360	4-4	20525 20540	Government Fixed
4580 4545	"	16300	Government	18380	A viation Fixed	20560	Fixed
4560 4575	"	1Available for no		18400	**	20580 20600	
4590 4605	"	International Broad	n-government assignments to cast Stations on a temporary	18420 18440	"	20620	**
4605 4620 4685	"	basis and subject to	cancellation at the discretion without advance notice or	18460 18480	"	20640 20660 20680	"
4020	**						

Frequency (kilocycles)	Allocation	Proquency (kilocycles)	Allocation	Prequency (bilocycles)	Allecation	(kilocycles)	Allemation
20720 20740	Fixed	28475 28500	Gen. Communication	/26275 Broades	ut & Govt.	81100	Police
20760	" Government	28525 28550	11 11	i26800		140 180	Experimental Fixed
20775 20780 20800	Fixed	28575 28600	.,	(26825 (26850	.,	22u 250	Relay Broadcast Coastal and Ship Harbor
20820 20840	"	28625 28650		(26375 (26400		300 340	Government Forestry
20860 20880	"	23675 23700		i26425 i26450		360 420	Fixed Special Emergency
20900 20920	n 4	23725 23750		126475 126500	:	460 500	Fixed Police
20940 20960	"	28775		f26525 f26550	:	540 580	Special Services Forestry Relay Broadcast
20980 21000		28800 28825		i26576 fi26600		630 660	Coastal and Ship Harbor
21020 21025	" Government	28850 28875	<u>;</u>	H26625 H26650		700 740	Government Special Emergency
21040	Fixed	23900 28925		626675 626700	::	780 820	Police Forestry
21060 21080	"	28950 28975	"	626725 626750		860 900	Pixed Police
21100 21120	 	24000 24025	Government	#26775 #26800	:	940 980	Pixed Mobile Press
21140 21160	••	24050 24075	Gen. Communication	ti26825 ti26850		32020	Government
21180 21200	Government Fixed	24090 24100	Government Gen. Communication	626875 626900	::	060 100	
21220 21240	**	h 24120 24125	Government Gen. Communication	626925 626950		140 180	44
21260 21280	"	h24150 24175	Government Gen. Communication	#26975 #27000 Gen.	 Communication	220 260	"
21800 21820	Government	24180 24200	Government Gen. Communication	e27025	Govt	800 340	1.
21840 21860	Fixed	24225 24250	4	e27050 e27075	::	880 420	"
21880 21400		24270 24275	Government Gen. Communication	€27100 €27125		460 500	
21420	0	24300 24825	ii	e27150		540	
21440 21460 21480	Int. Broadcast	24350	 	e27175 e27200		580 620	"
21480 121500	Government	24375 24400		e27225 e27250	::	660 700	"
21520 21540	Int. Broadcast	24425 24450	Government	€27275 €27800	ä	740 780	
21575 21600	Coastal Teleg.	24475 24480	Gen. Communication Government	e27325 e27350	::	820 860	
21625 21650	"	24500 24510	Gen. Communication Government	€27375 €27400		900 940	
21675 21700	u u	24525 24540	Gen. Communication Government	£27425 £27450	24 11	980	**
21725 21750	"	24550 24575	Gen. Communication	¢27475 ¢27500		33020 060	Mobile Press Fixed
21775 21800		24600 24625	"	27525 27550	::	100 140	Police Fixed
21825	"	24630 24650	Government Gen. Communication	e27575	:	180 220	Special Emergency Police
21850 21875	**	24675 24700	dell'. Communication	e27600 e27625		260 300	Mobile Press Government
21900 21925	Government	24725		e27650 e27675	::	340 380	Experimental Relay Broadcast
21950 21975	Coastal Teleg.	24750 24775	**	e27700 e27725		420	Aviation Special Services
22000 22025	Ship Teleg.	24800 24825	Government Gen. Communication	£27750 £27775		460 500	Police
22050 22075	"	24850 24875		e27800 e27825		540	Geophysical and Motion Picture
22080 22100	Maritime Calling Ship Teleg.	24900 24925		e27850 e27875		590 620	Mobile Press Special Services
22125 22150	"	24930 24950	Government Gen. Communication	#27900 #27925		660 700	Marine Fire Government
22175 22200	Government Ship Teleg.	24975 25000	Government	e27950 e27975		740 780	Relay Broadcast Police
22225 22250	Mobile Press	#i25025 #i25050	Broadcast & Govt.	28000) to } Amai	ellr	820 860	Special Emergency Fixed
22275 22300	Coastal Teleg.	si25075 si25100	44	30000		900 940	Police Fixed
22325		#i25125 #i25150	44			980	Mobile Press
22350 22375	"	si25175 si25200	**	Above 30	,000 Kc.	34020	Government
22400 22425		si25225	41			060 100	"
22450 22475		ai 25230 ai25250		2	b. 6	140 180	
22500 22525	"	ai 25275 ai 25800	44	Rule 229. Subject to t the center frequency	ne foregoing provisions, vill be designated as	220 260	"
22550 h22575	Constal Teleg. & Govt.	ai25325 ai25350	"	follows:1 Allocations are for info	rmation purposes only.	300 340	
22600 22625	Coastal Teleg. Government	ai 25375 ai 25400	"	For more detailed info strictions on the use of	f frequencies, consult	380 420	 u
22650 22660	Coastal Teleg. Fixed	ai 25410 ai25425	"	Commission dealing with	the service to which	460 500	
22675 22700	Coastal Phone Coastal Phone & Fixed	si25450 si25475		the frequency is allocated	•	540 580	
22725	Coastal Phone Fixed	si25500 si25525		Frequency (kilocycles)	Allocation	620 660	
22750 22775 22800	44	si 25530 si25550		-	en ment	700 7 4 0	**
22825 22850	"	si25575 si 25590		060	rnment	760 820	"
22875	"	i25600 i25625	u u	100 140	"	860 900	
22900 22925	Ship Phone	i25650 i25675	**	180 220	**	940 980	4
22950 22975	** **	i25700 i25725	"	260 300	**		Dalam Basedonet
28000 28025	Gen. Communication	25750 i 25770	"	340 840	**	35020 060	Relay Broadcast Experimental
28050 28075	44	i25775		380 420	*	100 140	Police Special Emergency Mobile Press
**23100 23125	Gen. Experimental Gen. Communication	i25800 i25825	"	160 500	# # # # # # # # # # # # # # # # # # #	180 220	Police
28150 28175		i25850 i25875	"	540 Coast 580 Polic	tal and Ship Harbor	260 300	Relay Broadcast Government
28200 28225	и 11	(25900 (25925	 	620 Geop	hysical and Motion ture	840 880	Constal and Ship Harbor Fixed
23250 23275	42 41	(25950 (25975	"	660 Expe	rimental e	35 42 0 460	Forestry Special Services
28300 28325	44 14	i26000 i26025	 	740 Speci 780 Fixed	al Services	500 540	Police Geophysical and Motion Picture
28850 28375	"	i26050 i26075	 	· ·	y Broadcast	580	Aviation
23400	11 11	i26100 i26125	e e e e e e e e e e e e e e e e e e e	860 Mobi	le Press	620 660	Relay Broadcast Coastal and Ship Harbor
28425 28450	44	i26150 i26175	44 44 44	940 Fores 980 Polic	itry	700 7 40	Government Forestry
Available for	non-government assignments to	i 26190 i26200	••	1	al Services	780 820	Police Relay Broadcast
basis and subject	badcast Stations on a temporary to cancellation at the discretion	i 26220	# #	060 Geop	hysical and Motion ture		ued on page 334)
of the Commiss hearing.	ion without advance notice or	126250	и	, ,,,	· v		

(FCC Orders Nos. 18 and 19, Promulgated Oct. 13, 1937, to be Effective Oct. 13, 1938)
(Continued from Page 333)

Frequency (kilocycles)	Allocation	Frequency (kilocycles)	Allocation	(kilocycles)	Allocation	Frequency (kilocycles)	Allocatio
15860	Intership	40340	Government	60220	Government	64740 780	Government
900 940	Police Forestry	380 420	"	260 300		820 860	"
980	Mobile Press	460	**	340	11	900	**
6020	Government	500 540	"	380 420	**	940	"
060	+4	580		460	**	980	
100 140	66	620 660	::	500 540	••	65020	Government
180	**	700	**	580	41	060 100	**
220	44	740		620 660	**	140	"
260 300		780 820		700	"	180 220	"
340	**	860 900	**	740 780	••	260	"
380 420	44	940		820	14	300 340	"
460	44	980	**	860 900		380	4
500 5 4 0	**	41020	Broadcasting	940	11	420 460	"
580	"	060	"	980		500	**
620 660	**	100 140	••	61020	Government	540	"
700	41	180	"	060		580 620	"
740 780	**	220 260		100 140	**	660	"
820	**	300	"	180	**	700 740	"
860 900	**	340 380	:	220 260	41	780	"
940	44	420	44	300	**	820	"
980	**	460	**	340 380	4.	860 900	"
7020	Relay Broadcast	500 540	::	420	**	940	
060	Fixed	580	41	460	44	980	"
100 140	Police Special Services	620 660	"	500 540	41	66000	
180	Special Emergency	700		580	4	h	Television
220	Police	740	"	620 660	4	72000	
260 300	Coastal and Ship Harbor Government	780 820		700	41	72040	Government
340	Relay Broadcast	860	**	740	"	120	"
380 ² 420	Police Mobile Press	900 940	•	780 820	16	72200	Government
460	Fixed	980	**	860	64	280	.,
500 540	Police Experimental	42020	Manager described	900 940	41 41	360 440	
580	Coastal and Ship Harbor	060	Broadcasting	980	44	520	**
620	Relay Broadcast	100	**		C	600 680	"
660 700	Intersbip Government	140 180	**	62020 060	Government	760	"
740	Marine Fire	220	**	100	**	840	"
780 820	Police Special Emergency	260 300		140 180	**	920	
860	Aviation	340		220	**	73000	Government
900 940	Police Coastal and Ship Harbor	380 420	**	260 300	66 66	080 160	
980	Relay Broadcast	460	**	340		240	"
8020	Government	500 540		380 420	"	320 400	**
060	**	580	46	460	**	480	"
100 140	"	620	"	500	11	560	"
180	**	660 700	44	540 580		640 720	44
220	44	740	"	620	**	800	"
260 300	"	780 820	::	660 700	**	880 960	"
340	44	860	"	740	"		
380 420	"	900		780	**	74040	Government
460	"	940 42980	Broadcasting	820 860		120 200	"
500 540	44			900	**	280	44
580	**	43020 060	Broadcasting	940 980	46	360 440	"
620	44	100	**			520	"
660 700	46	140 180	"	63020	Government	600	**
740	44	220	**	060 100	**	680 760	"
780 820	44	260	44	140	**	840	
860	**	300 340	4	180 220	## ##	920	
900 940	"	380	**	260	**	75000	Government
980	**	420 460	**	300	64 64	080 160	"
	34.10.5	500	"	340 380	44	240	**
9020 060	Mobile Press	540 580		420	**	320	**
100	Aviation Police	620	**	460 500	e4 11	400 480	**
140	Special Services	660 700	**	540	**	560	"
180 220	Police Coastal and Ship Harbor	740	**	580 620	41 f4	640 720	
260	Relay Broadcast	780	"	660	41	800	41
300 840	Government Special Emergency	820 860	**	700	"	880 960	44
380	Police	900	"	740 780	"	960	
420 460	Forestry Experimental	940 980	:.	820	41	76040	Government
500	Police	1		860 900	66	120 200	
540 580²	Special Services	44000	Television ³	940	**	280	"
620	Coastal and Ship Harbor Relay Broadcast	50000	Y CIEAISION.	980	"	360	14
660	Special Emergency			64020	Government	440 520	44
700 740	Government Forestry	50000	Television	060	44	600	"
7 80	Police	56000		100 140	"	680 760	**
820 860	Relay Broadcast	56000]		180	**	840	**
90 0	Special Emergency Police	1 }	Amateur	220 260	44	920	44
:940	Forestry	60000)		300	44	77000	Coverant
:980	Mobile Press	60020	Government	340	44	77000 080	Government
0020	Government	060	"	380 420	66 66	160	"
100 100	11	100 140	**	460	"	240 320	"
140	**	180	46	500 540	44 44	400	44
'18 0	"	l		580	**	480	"
220	"	Existing author	rizations for low powered fixed ritory of Hawaii to remain un-	620 660		560 64 0	**
:260							44

Frequency (kilocycles)	Allocation	(kilocycles)	Allocation	(kilocycles)	Allocation	(kilocycles)	Allocation
77880 960	Government	110040 120	Government	127980	Government (Airport Traffic	142060	Broadcast
78000)		200 280			Control)	200 840	
84000	Television	860	**	128100 220	Government	480 620	**
		110440	Government	840 460	Government (Airport Traffic	760 900	
84000	Television	520 600	dover an angle		Control)		
90000		680		580 700	Government	143040 180	Broadcast
90040	Government	760 840	::	820 940	Government (Airport Traffic	820	4.0 1.0
120 200	•	920	"	•••	Control)	460 600	**
280 360	"	111000	Government	129060	Guard Band	740 880	
440	"	080 160	"	180 300	Aviation (Airport Traffic		C
520 600	**	240 820	"		Control)	144080 220	Government
680 760	"	400	**	420 540	Guard Band	860 500	**
840	11 11	480 560	::	660 780	Aviation (Airport Traffic	640	"
920		640 720	: 1		Control)	780 92 0	**
91000	Government	800	44	900	Guard Band	145060	Government
080 160	**	880 960	".	130020 160	Guard Band	200	" "
240 820	**	112000)	1	300	Aviation (Airport Traffic	340 480	44
400	"	1 }	Amateur	440	Control) Guard Band	620	44 14
480 560	**	118000]		580 720	::	760 900	44
640 720	44	118060	Government	860	Aviation (Airport Traffic	146040	Government
800	"	180 800	"		Control)	180	44
880 960	"	420 540	::	131000 140	Guard Band	820 460	u
92040	Government	660	st 51	280	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	600 740	64 64
120	Government	780 900	4	420	Aviation (Airport Traffic Control)	880	**
200 280	"	119020	Government	560 700	Guard Band	147020	Government
860	"	140	"	840	Aviation (Airport Traffic	160	41
440 520	**	260 380	**	980	Control) Guard Band	800 440	44
600 680	44	500 620	::			580 720	#4 ##
760	44 44	740	"	132120 260	Aviation Broadcast	860	"
840 920	"	860 980	::	400 540	Special Services Coastal and Ship Harbor	148000	Government
93000	Government	1	C	680	Experimental	140 280	44
080	44	120100 220	Government	820 960	Police Broadcast	420	66 88
160 240	**	840 460	::	133100	Broadcast	560 700	4
320 400	"	580	::	240	Fixed	840	"
480	**	700 820	"	380 520	Special Services Police	980	
560 640	44	940	"	660 800	Special Emergency Fixed	149120 260	Government
720	**	121060	Government	940	Aviation	400	"
800 880	44	180 300	ï.	134080	Broadcast	540 680	e4 11
960	**	420 540	"	220 860	Mobile Press Experimental	820 960	"
94040	Government	660	"	500	Police	150120	Government
120 200	"	780 900	ü	640 780	Fixed Broadcast	280	COAST IIITEDE
280 360	44	122020	Government	920	"	440 600	**
440	et 46	140	"	185060	Police	760	44 44
520 600	"	260 380	"	200 340	Aviation Special Services	920	
680 760	"	500 620	"	480 620	Coastal and Ship Harbor Special Services	151080 240	Government
840	41 44	740	"	760	Broadcast	400 560	18 16
920	••	860 980	"	900	Mobile Press	720	"
95000 080	Government	123100	Government	186040 180	Fixed Police	880	
160	u u	220	44	186320		152040	Government
240 820	44	340 460	"	460	Aviation Special Emergency	200 860	44
400 480	44	580 700	4	600 740	Fixed Broadcast	520 680	(1 #1
560	4	820	44	880	"	840	"
640 720	4	940		187020	Aviation	153000	Government
800 880	44 44	124060 180	Government	160 800	Coastal and Ship Harbor Police	160	"
960	**	800	"	440 580	Special Services Marine Fire	820 4 80	
96000)		420 540	"	720	Fixed	640 800	**
}	Television	660 780	"	860	Special Services	960	**
102000)		900	41	188000 140	Mobile Press Experimental	154120	Government
102000		125020 140	Government	280	Aviation	280 440	"
108000	Television	140 260	"	420 560	Police Broadcast	600 760	"
		380	"	700 840		920	85
108040 120	Government	500 620	"	980	Special Services Aviation	155080	Government
200 280	6.6 6.6	740 860		139120	Police	240	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
860	"	980	"	260 400	Special Emergency Fixed	400 560	44
440 520	ti .	126100	Go vernment	540 680	Special Services Mobile Press	720 880	
600 680	4	180 800	"	820	Aviation		
760	"	420 540	" (Airport traffic	960	Experimental	156000	Broadcast (Television)
840 920	66	L	control)	140100 240	Marine Fire Fixed	162000∫	
		660 780	46	240 380	Special Emergency	162000)	
109000 080	Government	900	"	520 660	Aviation Broadcast	}	Broadcast (Television)
160	"	127020	Government (Airport Traffic	800 940	Special Services Police	168000∫	
820	**	1	Control)			168040	Government
400 480	,	140 260	Government	141080 220	Fixed Aviation	200 860	64 64
160 240 820 400 480 560 640 720 800 880	"	380 500	Government (Airport Traffic	360	Experimental Fixed	520 680	44
720	 «	620	Control) Government	500 640	Special Emergency	840	
				780	Aviation		rued on page \$36)

(FCC Orders Nos. 18 and 19, Promulgated Oct. 13, 1937, to be Effective Oct. 13, 1938)
(Continued from Page 335)

	,		(Continued for	rom Page 335)			
Frequency (kilocycles)	Allocation	Frequency (kilocycles)	Allocation	Frequency (kilocycles)	Allocation	Frequency (kilocycles)	Allocation
169000 160	Government	198140 840	Government	240000	Broadcast (Television)	272260 540 820	Government
320 480 640	: : :	540 740 940		246000) 246120	Government	273100 380	Government
800 960	:	199140 840	Government	360 600 840		660 940	
170140 820	Government	540 740 940	 	247080	Government	274220 500 780	Government
500 680 860	:	200140 340	Government	320 560 800		275060 340	Government
171040 220	Government 	540 740 940		248040 280	Government	620 900	
400 580 760	::	201140 340	Government	520 760		276180 460 740	Government
940 172120 800	Government	540 740 940	::	249000 249240	Government	277020 300	Government
480 660 840		202140 340	Government	480 960	"	580 860	
178020 200	Government	540 740 940		250220 480 740	Government "	278140 420 700	Government
178380	Government	203140 240 340	Government	251000 260	Government "	980 279260	Government
560 740 9 2 0		540 740 940		520 780		540 820 280100	 Government
174100	Government	204000	Broadcast (Television)	252040 800 560	Government	380 660 940	Government
280 460 640 820		210000)		820 253080 340	Government	281220 500	Government
175000 180	Government	216000	Broadcast (Television)	600 860	"	780 282000	
360 540 720		216110 330 550	Government	254120 380 640	Government 	288000	Broadcast (Television)
900 176080	Government	770 990	"	900 255160	". Government	288000	Broadcast (Television)
260 440 620 800		217210 430 650 870	Government 	420 680 940		294150 450 750	Government
980 177160 340	Government	218090 810	Government	25 620 0 460 720	Government	295050 350	Government
520 700 880	" "	530 750 970		980 257240	Government	650 950	:
178060 240	Government	219190 410 630	Government	500 760		296250 550 850	
420 600 780		850 220070	Government	258000 264000	Broadcast (Television)	297150 450	Government
960 179140 820	Government	290 510 780	"	264000	Broadcast (Television)	750 298050	Government
500 680 860	 	950 221170	Government	270000 271140	Government	350 650 950	
180000	Broadcast (Television)	390 610 830	. "	420 700 980	Government "	299250 550	Government
186000∫ 186000)		222050 270	Government	-		850	
192000	Broadcast (Television)	490 710 930	::				
192140 340 540	Government 	223150 370 590	Government				•
740 940 193140	**	810 224000)					
840 540 740	Government 	230000)	Amateur		Dowl E		1
940 194140	 Government	230120 860 600	Government		Paul F.	God	ley
840 540 740	"	840 231080	"Government		Consulting T	Radio Enm	in <i>ee</i> r
940 195 140	Government	820 560 800	Government "		Consuming	Quio Chgi	incei
840 540 740 940		232040 280	Government				
19 6140 8 40 540	Government	520 760			Ph	one	
540	"	1	_	1111			

Broadcast (Television)

Montclair (N. J.) 2-7859

Experimental Television Broadcast Stations in the United States

(Authorized by FOC as of January 1, 1938)

Call Letters	Licensee and Location	Power in Watte	Call Letters	Licensee and Location	Power in Watte
	2	000-2,1	00 Kilocycles		
W9XK 1 W9XG *	University of Iowa, Iowa City, Ia. Purdue University, W. LaFayette, Ind.	100 1,500	W9XAK *	Kannas State College of Agriculture & Applied Science, M hattan, Kan.	1.00
	42,000-56,000	and	60,000-86,000 Ki		
W2XAX W6XAO 3 W9XD 4 W3XE W3XEP W10XX W2XDR 6	Columbia Broadcasting System, Inc., New York City Don Lee Broadcasting System, Los Angeles The Journal Co., Milwaukee, Wis Philico Radio & Television Corp., Philadelphia RCA Mfg. Co., Camden, N. J. RCA Mfg. Co., Camden, N. J. Radio Pictures, Inc., Long Island City, N. Y. 92,000 and 175,000-180,000 Kilocycles	50 150 500 10,000 30,000	W8XAN W9XAT * WIXG W9XAL ' W9XUI ' W2XBS	Sparks-Withington Co., Jackson, Mich. Dr. George W. Young Minneapolis, Minn. General Television Corp., Boston First National Television Corp., Kansse City University of Iowa, Iowa City, Ia. National Broadcasting Co., New York City Farnsworth Television Inc., Philadelphia	500
W2XBT (CP)	National Broadcasting Co., New York City	400	W3XP (CP)	204,000-210,000 Kilocycles Philco Radio & Television Corp., Philadelphia	11,
	Any 6,000 Kc. Band Abov	e 110,0	000 Kc. Excluding	g 400,000-401,000 Kc.	
	W3XAD RCA Mfg. Co., C			500	

CP-Construction Permit only as of Jan. 1, 1938.

- Also licensee of station WSUI, Iowa City, Iowa.
 Also licensee of station KSAC, Manhattan, Kan.
 Also licensee of station KHJ, Los Angeles
 Also licensee of station WTMJ, Milwaukee

U. S. and Foreign Television Laboratories and Experimental Services

(See log of U. S. experimental stations above)

United States
RCA MANUFACTURING Co.—
Camden, N. J. Telephone: Camden
8000. Vice President in Charge of Research and Engineering: L. M. Clement. Director of General Research:
E. W. Engstrom. Television Scientist:
Vladimir Zworykin. (Experimental

PHILCO RADIO & TELEVISION Co.—Tioga & C Streets, Philadelphia, Pa. Telephone: Nebraska 5100. Chief Television Engineer: A. F. Murray. (Experimental station).

FARNSWORTH TELEVISION Inc.

BELL TELEPHONE LABORA-TORIES—463 West St., New York City. (Visual transmission and co-City. (Visual transmission axial cable experimentation).

FIRST NATIONAL TELEVISION Corp.—Fidelity Bldg., Kansas City, Mo. Telephone: Harrison 5818. Direc-tor: Sidney Q. Noel. (Experimental station and school).

DON LEE BROADCASTING SYSTEM—Television division, 7th & Bixel St., Los Angeles, Cal. Telephone: Vandike 7111. Director: Harry Lubcke. (Experimental station).

COLUMBIA BROADCASTING SYSTEM-485 Madison Ave., New York City. Telephone: Wickersbam 2-2000. Executives in Charge: Paul W. Kesten, Adrian Murphy. Chief Television Engineer: Peter C. Goldmark. (Experimental station and research)

NATIONAL BROADCASTING Co.—RCA Bldg., New York City. Telephone: Circle 7-8300. Television Coordinator: C. W. Farrier, Manager. Television Program Division: Thomas H. Hutchinson. Chief Engineer: O. B. Hanson. Development Engineer: Robert M. Morris. (Experimental station). tion).

INTERNATIONAL TELEVISION RADIO Corp.—71 W. 23rd St., New York City. Telephone: Stuyvesant 9-2416, President: William H. Priess.

MIDLAND TELEVISION Inc.—Power & Light Bldg., Kansas City. Telephone: Harrison 5852. President: G. L. Taylor. (School and television research).

THE MILWAUKEE JOURNAL—333 W. State St., Milwaukee, Wis. Telephone: Marquette 6000, Director: Walter J. Damm. (Experimental statistics)

PURDUE UNIVERSITY — West Lafayette, Ind. Telephone: 2917. Di-rectors: Dr. C. F. Harding, Prof. R. H. George, H. J. Heim. (Experi-mental station).

UNIVERSITY OF IOWA—Iowa City, Ia. Directors of Television: Prof. E. B. Kurtz, J. L. Potter. (Experimental station).

KANSAS STATE COLLEGE OF AGRICULTURE — Manhattan, Kan. Director: R. G. Kloeffler. (Experimental station).

DR. GEORGE W. YOUNG—Radio Station WDGY, Minneapolis, Minn. Telephone: Cherry 3377. Technical Director: George K. Jacobson. (Experimental station).

GENERAL ELECTRIC • Co.—Schenectady, N. Y. Telephone: Schenectady 4:2211, Manager of Broadcasting: C. H. Lang, Assistant Manager of Broadcasting: B. W. Bullock. (Television research).

Foreign

BRITISH BROADCASTING Corp.

Broadcasting House, London W-1.
England. Telephone: Welbeck 4468.
Director of Television: Gerald Cock.
Assistant Director of Television: R.
A. Rendall. Television Executive: L.
Schuster. (Operates television broadcasting service, all others either producing, transmitting or receiving
equipment, or both).

ELECTRIC & MUSICAL INDUSTRIES Ltd. (EMI)—Blythe Road. Hayes, Middlesex, England. Telephone: Southall 2468. Technical Director: I. Schoenberg. Affiliated with Marconi-E.M.I. Television Co. Ltd., the Marconiphone Co., and H.M.V. (the Gramophone Co.).

BAIRD TELEVISION Ltd. — 66 Haymarket. London, England. Telephone: Whitehall 5454. Chairman: Sir Harry Greer. Joint Managing Directors: John Logie Baird. H. Clayton. (Associated with Gaumont British Films, which also owns Bush Radio Ltd.).

MARCONIPHONE Co. Ltd. — 210 Tottenham Court Road, London, England. Telephone: Museum 4144. Executive in Charge: J. II. Williams. (Manufacturers HMV receivers).

Also licensee of station WQXR, New York City.
Also licensee of station WDGY, Minneapolis
Also licensee of station KXBY, Kansas City, Mo.
Also licensee of station WBAA, W. LaFuyette, Ind.

THE GRAMOPHONE Co. Ltd.— Hayes, Middlesex, England. Tele-phone: Southall 2468.

EDISON SWAN ELECTRIC Co. Ltd.—155 Charing Cross Road, Lon-don WC-2, England. Telephone: Ger-rard 8660. Manager of Radio Divi-sion: W. W. Burnham.

SCOPHONY Ltd.--Thornwood Lodge, Campbell Hill, London W-8, England.
Telephone: Park 8181. Director: Solomon Sagall. (Television transmitting and receiving apparatus).

BUSH RADIO Ltd.—Woodger Road. Shepberds Bush, London, England. Telephone: Shepherds Bush 5341-4. (Manufacturers Baird receivers).

GENERAL ELECTRIC Co. Ltd.— Magnet House, Kingsway, London. England. Telephone: Temple Bar 8000, Director of Research: C. C.

FERRANTI Ltd. — Radio Works. Moston, Manchester 10, England. Tel-phone: Failsworth 2271. Manager of Television Department: M. K. Taylor.

PYE Ltd.—Radio Works, Cambridge, England, Telephone: Cambridge 3434. General Manager: W. L. Tregonining.

A. C. COSSOR Ltd.—Cossor Works. Highbury Grove, London, England. Telephone: Canonbury 1234. Chief of Television Department: L. H. Bed-

HALCYON RADIO Ltd. — Sterling Works, Dagenham. Essex, England. Telephone: Seven Kings 3466.

FERNSEH A. G.—Berlin Zehlendorf Goerzollee, Berlin, Germany, Tele-phone: 84-00-11. Directors: Dr. Paul Goerz, Dr. Georg Schubert.

TELEFUNKEN G m.b. H.—(Affiliated with RCA), Berlin, Germany. Director: Dr. Rukop.

DR. ARTHUR KORN — Grunewald Wangenheimstrasse, Berlin - Charlottenberg, Germany, Telephone; 97-25-

REICHSPOSTMINISTERIUM-Collaborating with Reichs-Rundfunk-Gesellschaft, Leipziger Strasse, Ber-lin W-66, Germany, Telephone: 12-00-42. Director: Dr. H. Giess.

RADIO AKTIENGESELLSCHEFT
—Weisenwey 10, Berlin, Germany.
Telephone: Berlin Albrecht 1111. Director: Dr. Sigmund Loewe.

REICHS - RUNDFUNK - GESELL-SCHAFT—German Broadcasting Co., Rundfunk Haus, Berlin, Germany, Telephone: Berlin 93-69-51, Director: Dr. H. Glasmeier,

N. V. PHILIPS' GLOEHLAMPEN-FABRIEKEN — (Philips Works) Eindhoven, Holland, President: Dr. A. F. Philips, Director: Dr. Balth van der Pol.

EMYRADIO—19 Rue de l'Ancienne Comedie, Paris, France, Telephone: Danton 49-78, Directors: M. Barthel-eny, M. Jean Genet.

La TELEVISION (SARL)—29 Avenue des Champs Elysees, Paris, Telephone: Balzac 59-48. Directors: M. Jean Genet, M. Barthelemy.

ENTE ITALIANTO AUDIZIONI RADIOFINICHI — (EIAR), Italian Broadcasting Co., Turin, Italy, Direc-tor of Television: Allensandro Banfi.

JAPAN BROADCASTING Corp.-Television laboratory, Kinuta, near Tokyo, Director: Dr. Kenjiro Taka-yanagi, on leave from Hamamatsu En-gineering College.

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Digest of FCC Decisions Involving Broadcast Program Service (Excerpted from FCC Reports, Volume II, July 1935-June 1936)

ADVERTISING.

ADVERTISING.

While the Commission recognizes that United States brondcast stations are for the most part partially supported by advertising, nevertheless privileges granted said stations by the Government are primarily for benefit of the public and benefit derived to advertisers must be incidental and secondary thereto. U. S. Broadcasting Corporation et al., 208 (224). (Second Annual Report of the Federal Radio Commission to the U. S. Congress (1928), at page 168).

ADVERTISING CONTINUITY.

Under the Communications Act of 1934 licensees have duty of examining into propriety of advertising to be broadcast. McGlashan et al., 145 (152).

ADVERTISING MATERIAL.

MISREPRESENTATIONS: Evidence that applicant made careful check of all advertising material broadcast in order to eliminate misrepresentations considered by Commission in determining that granting of application would serve public interest. WCAE, Inc., 72 (73).

IN GENERAL: Held, under Sec. 11 of Radio Act of 1927 the Radio Commission was necessarily called upon to consider the character and quality of the service to be rendered and, in considering an application for renewal, the past conduct of the applicant is an important consideration. McGlashan et al., 145 (149)

Held, a primary consideration in determining the need for additional service in a given area is the nature and extent of the service already rendered therein. The Journal Company, 180 (181).

Held, the question as to the need for additional broadcast service in the area proposed to be served depends in large part on the public need for the particular service the applicant proposes to render. The Journal Co., 180 (182).

Held, the question as to the need for additional broadcast service in the particular service the applicant proposes to render. The Journal Co., 180 (182).

The familiar rule that past conduct may be taken into account in the consideration of applications for broadcasting privileges found to have a cogent application in this case. Yount, 200 (207).

Held, complete supervision of and control over programs, including careful examination of their content, directly affects the rendition of a public service. United States Broadcasting Corp. et al., 208 (225).

Held, the Congress having specifically found by the enactment of the postal fraud statutes that for the protection of our citizens generally the mails may not be used to hoodwink and defraud, affords grounds for this Commission to find that the radio should not be used for such purposes, and any licensee who permits the use of its facilities in that manner acts contrary to the public interest. Hammond-Calumet Broadcasting Corp., 321 (325).

Held, in awarding broadcast facilities, where there are conflicting applications, public interest, convenience, and necessity will best be served by awarding the facilities to those who can or will likely render the best service to the area involved. Glass and Kirkland et al., 365 (372).

Held, it is an essential element in granting applications that the Commission find that there is a need for the particular service proposed, and where the record discloses only a general plan, the Commission cannot determine the question of public interest, convenience, and necessity" that stations will render a needed service and that mere addition to the number of existing stations, when no need is shown, does not serve public interest, convenience and necessity. Bast Texas Broadcasting Co. et al., 402 (409).

Evidence that program service afforded little substance in determining whether the listeners in the area involved would derive benefit from the service proposed, considered, in denying application for new station. Cramer and Anderso

Failure of applicant for new broadcast station to make a sufficient showing as to need for proposed service, not already met by existing facilities, considered by Commission in denying application. Clifford, 573 (575).

The fact that applicant for new station was committed against any station policy that would tend to over-emphasize or advance the private interests of the applicant at the expense of the public service considered in approving proposed program service of applicant. Fountain of Youth Properties, Inc., 1814 the Commissioners

proposed program service of applicant. Foundin of Youth Properties, Inc., 617 (619).

Held, the Commission conceives it to be its duty in the public interest to assist existing licensees, who are making a real effort to render a meritorious service to the listening public, to improve that service wherever possible. Portland Broadcasting System, Inc., et al., 656 (664).

Comparison of services rendered by applicant requesting facilities of an existing station with the services rendered by such existing station found not to warrant depriving existing station of part of the hours of operation now assigned to it. Portland Broadcasting System, Inc., et al., 656 (677-679).

APPLICANT FOR AUTHORITY TO TRANSMIT PROGRAMS TO FOREION STATIONS: Application for authority to transmit programs to foreign radio stations denied when (1) applicant was inextricably tied up with the management of the licensee of a foreign station whose past program service was found to have been highly undesirable; (2) evidence of proposed program service was unsatisfactory; (3) the character of the programs likely to be arranged and transmitted from the proposed studio did not appear to be such as would promote better international relations or to serve the public interest in any of the other ways suggested in the application. Yount, 200.

Evidence that proposed program service appeared to be of the same type as that broadcast by station whose renewal application had been previously denied by Commission because not found to be in public interest, considered, in denying authority to transmit programs to a foreign station. Morris et al.

by Commission because not found to be in public interest, considered, in denying authority to transmit programs to a foreign station. Morris et al., 269 (271).

Applicant for New Broadcast Station: New broadcast station authorized when program service proposed appeared suited to meet the needs of the area to be served and included sustaining programs of civic and religious interest as well as the use of local talent. Welch, Keller, and Frizzell, 107 (108); etc.

Lack of evidence sufficient to enable the Commission to determine with certainty the type of program service which would be offered by the applicant considered, in denying application for new station. U. S. Broadcasting Corp. et al., 208 (231, 232).

Evidence that new broadcast station proposed to conduct a purely local service and applicant, a non-resident, was not shown to be conversant with the needs of the community, the talent available, nor the possibilities of a new station there, considered, in denying application for new station there. Kennett. 273 (275).

New broadcast station authorized when it appeared from the testimony that

New broadcast station authorized when it appeared from the testimony that the plans of the applicant were to provide a regional station which would devote itself to the interests of the area sought to be served with an available outlet for local programs and a need for same was shown. Brackett, Breed and LaPort, 326 (328).

Lack of evidence to show that proposed new station would receive sufficient commercial support to enable it to render a service which would be in the interest of the public considered, in denying application. DeBogory et al., 336 (340) New broadcast station authorized when it appeared from the testimony that

commercial support to enable it to render a service which would be in the interest of the public considered, in denying application. DeBogory et al., 336 (340).

Failure to adduce evidence as to character of the service applicants proposed to offer, further than general offer of establishing a local station, considered, in denying application for new station. East Texas Broadcasting Co. et al., 402 (409).

Application for new broadcast station denied when no sufficient showing was made of the quality and nature of the programs applicant proposed to broadcast and no substantial proof was made of the availability of live talent qualified for broadcasting. Helena Broadcasting Company et al., 507 (510).

Failure of applicant for new station to show adequate program plan, considered, in denying application. Carter, Wolfe, and Knight, 544 (546); Thellman, 548 (550).

Application for new broadcast station denied when no adequate program plan was submitted by the applicant and no conclusive evidence was submitted as to the availability of live talent to produce programs in the public interest. Clifford, 573 (575).

Application for new broadcast station denied when, even though there was some evidence introduced intended to show that the applicant would have the cooperation of certain civic and religious organizations, the record did not disclose how the applicant intended to utilize the organizations in connection with his programs service or that the existing service with respect to civic and religious programs was either inadequate or unsafisfactory. Goff, 585 (587).

New broadcast station authorized when diversified programs were proposed which would be different from those presently broadcast by stations in the same area and a need for same was shown. National Battery Broadcast Co. et al., 594 (400).

New broadcast station authorized when the applicant proposed to broadcast programs of general interest and the facts shown. concerning the programs

et al., 594 (400).

New broadcast station authorized when the applicant proposed to broadcast programs of general interest and the facts shown concerning the applicant's qualifications and character afforded substantial assurance that a meritorious program service of general interest would be provided for the public and a need for same was shown. Fountain of Youth Properties. Inc., 617 (619).

Evidence that applicant proposed to offer a diversified service of particular interest to citizens of the area sought to be served, considered, in granting application for new station. Patterson. 647 (649).

New broadcast station authorized when the record disclosed that applicant

New broadcast station authorized when the record disclosed that applicant proposed to render a service which would cater to local interests, and had made extensive plans for a well-balanced and varied program service which would find interest among all members and classes of the listening public and a need appeared therefor. Portland Broadcasting System, Inc., et al., 656

a need appeared therefor. Portland Broadcasting System, Inc., et al., 656 (870).

Evidence of tentative programs of the proposed station which indicated that applicant expected to render a suitable local broadcast service, considered, in granting application for new broadcast station. Big Spring Herald Broadcasting Co. et al., 694 (697).

Evidence that enough time was available over existing radio facilities for all local programs, both sustaining and commercial, and for the employment of most of the available first-class local talent, considered, in denying application for new station. Florida West-Coast Broadcasting Co., Inc., 728 (730).

Chains: Evidence that there was no other station carrying Columbia programs which rendered consistently satisfactory service to that area served by applicant, considered, in granting increased power to broadcast station. WDRC, Inc., 121 (122).

Commercial, for the financial gain of the business of the organization, ligious talks. United States Broadcasting Corp. et al., 208 (219).

Duplication of Existing Service: Evidence that program service rendered by applicant was duplicated by other stations in that area, considered, in denying increased power to broadcast station. McGlashan, 142 (143).

Evidence that applicant proposed to add another service similar to that already offered; that the program schedule was similar in arrangement to that of an existing station owned by applicant and applicant's failure to show that of view in the community would be made available through the new service, 180 (182).

Evidence that program service proposed by applicants would be largely a

180 (182).

Evidence that program service proposed by applicants would be largely a duplication of existing service, considered, in denying applications for new stations. Hartford Broadcasting Co. et al., 330 (334).

EDUCATIONAL STATION: Evidence that station had been operating solely for the purpose of disseminating knowledge and information to the public, considered, in granting modification of broadcast license. Michigan State College, 302 (303).

(Continued on Page 340)

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Increased facilities granted University station when the Commission was of the opinion that the continuation and enlargement of a program service of the class rendered by applicant was in the public interest. University of Illinois. 511 (513).

EXISTING BROADCAST STATION: Increased facilities granted broadcast station when its program service was found to have been meritorious. Enid Radiophone Co., 61 (62); WJW, Inc., et al., 110 (113); etc.

Renewal of brondcast license granted, when except for certain programs found by the Commission not to be in the public interest, the program service offered by the applicant had been diversified and generally meritorious. Knickerbocker Brondcasting Co., Inc., 76 (77); etc.

Evidence that educational programs of the University which had theretofore been given over the station would continue for a period of three years and at the expiration of that time a new arrangement would be entered into, considered, in approving assignment of brondcast license. Parmer et al., 172 (175) 172 (175).

Evidence that broadcast licensees had been rendering a meritorious service, considered, in granting renewals. Stenger, Jr., et al., 51 (54); Parmer et al., 172 (175); U. S. Broadcasting Corp. et al., 208 (222); Portland Broadcasting System, Inc., et al., 656 (679).

Renewal application of brondcast station denied when applicant failed to establish that it had rendered an acceptable public service. $U.\ S.\ Broadcasting\ Corp.\ et\ al.,\ 208\ (221).$

Evidence that program service which had been rendered by the station in the past had been decidedly mediocre considered in denying application for renewal of broadcast license. U. S. Broadcasting Corp. et al., 208 (228).

Renewal application of broadcast license denied when it was clearly evident that the financial condition of the station was such as to preclude it from rendering a satisfactory service in the public interest. U. S. Broadcasting Corp. et al., 208 (228).

Evidence that station had been used to maintain an open forum for discussion of social and economic questions as well as the encouragement of education generally considered in granting renewal of broadcast license. United States Broadcasting Corp. et al., 208 (232, 233).

Renewal of broadcast licenses granted when it was conceded by counsel for applicant requesting their facilities that the operation of the stations had been in the public interest and the Commission found that their applications for renewal should be granted. United States Broadcasting Corp. et al., 208 (224)

Failure to make a satisfactory showing with regard to program service considered in denying application for change of operating assignment of broadcast station. Pape Broadcasting Corp., Inc., et al., 286 (291); Wynne, 447 (449).

OBJECTIONABLE MATERIAL: Practice of licensee in carefully guarding all classes of programs against objectionable material considered in approving application for increase of broadcast facilities. WCAE, Inc., 72 (73).

REMOVAL OF BROADCAST STATION FROM ONE TOWN TO ANOTHER: Evidence that a well-balanced program schedule would be maintained by the station considered in granting application to remove broadcast station from one town to another. Gillette Rubber Co. et al., 127 (130).

Evidence that the area from which a station requested permission to move would continue to receive service from one local station and several others considered in granting application for removal of broadcast station from one city to another. Lancaster Broadcasting Service, Inc., et al., 164 (167). PROGRAMS.

AGRICULTURAL: Applicant's inclusion of agricultural broadcasts considered by the Commission in approving program service proposed for new broadcast station. Glass and Kirkland et al., 365 (373, 374); Golden Empire Broadcasting Co., 478 (480); Champaign News-Gazette, Inc., 629 (631); Big Spring Herald Broadcasting Co. et al., 656 (697).

Licensee's inclusion of agricultural broadcasts considered by the Commission in approving program service of broadcast station. Stenger, Jr., et al., 51 (53); etc.; Theis, 711 (713).

ALHAMBRA ELECTRONIC INSTITUTE: Certain programs sponsored by the Alhambra Electronic Institute or the California Electronic Institute, being the trade names of one Fred Bezuzi and Stephen T. Mayes, advertising the alleged diagnostic efficacies of an "Electronometer", found to be inimical to public welfare and not in the public interest when (1) they contained false representations as to prices usually charged; (2) one member of the partnership was not a licensed medico of any sort and had been found guilty of violating the California State Medical Act; (3) promises made in broadcast advertisements were not sustained by the advertiser; (4) expert testimony showed the impossibility of the claims made by the broadcaster for the instrument in question. McGlashan et al., 145 (149, 152).

AMERICANIZATION: A Medicant's inclusion of "Approximation" because

AMERICANIZATION: Applicant's inclusion of "Americanization" broadcasts considered by the Commission in approving program service of broadcast station which had a large foreign element in its service area. Johnson-Kennedy Radio Corp., 139 (140).

ASTROLOGICAL: A certain program pertaining to astrology presented by a "Doctor" or "Professor" Rood, under a division of profits arrangement, found not to be in the public interest. Yount, 200 (206).

Certain programs sponsored by one "Koran" consisting of advice on problems of domestic life, love, happiness, employment, buying and selling property, vocations, etc., coupled with an offer of sale of an astrological chart found not to be in the public interest. Farmers and Bankers Life Insurance Co. 455 (458).

BAKER HOSPITAL: Authorization to transmit programs to foreign stations denied when proposed program service included Baker Hospital programs, found not to be in the public interest. Yount, 200 (205).

"BANK NIGHT": Certain programs advertising "Bank Night" found not to be in the public interest and contrary to Section 316 of the Communications Act of 1934, when such scheme was held to be a lottery. WRBL Radio Station, Inc., 687 (692).

BETTER HOUSING EXPOSITION: A certain program sponsored by the Better Housing Exposition held to constitute a lottery in violation of Section 316 of the Communications Act. WRBL Radio Station, Inc., 687 (689, 691).

"BIRCONJEL": Certain programs advertising this product, containing ad-"BIRCONJEL": Certain programs advertising this product, containing advice that through the use of particular medical or chemical compound the consequence either of child birth or moral impropriety might be avoided found not to be in the public interest. Knickerbocker Broadcasting Co., Inc.

76 (77).

"BLOOD AND THUNDER": Licensee's practice in banning "blood and thunder" entertainment for children considered by the Commission in approving the program service of a broadcast station. Hammond-Calumet Broadcasting program service of Corp., 321 (323).

BRINKLEY, DR.: Authority to transmit programs to a foreign station denied when proposed program service included talks by Dr. John R. Brinkley, found not to be in the public interest and it was shown that this applications was a former licensee of broadcast station whose renewal had been denied because of unfavorable program service. Morris et al., 269 (271).

Certain programs, sponsored by one Dr. Brinkley, medical in character, covering discussions of various ailments, including the reading of testimonials and claims of cures, advertising a "Doctor's Book," etc., found not to be in the public interest. Farmers & Bankers Life Insurance Co., 455 (457).

BURRUS MOTOR COMPANY: A certain program sponsored by the Burrus Motor Company held to constitute a lottery in violation of Section 316 of the Communications Act. WRBL Radio Station, Inc., 687 (689, 691).

CANCER CURES: Program service proposed by applicant including programs sponsored by one Norman Baker on "cancer cures" found not to be in the public interest. Yount, 200 (207).

CHAIN: Applicant's plans to carry the programs of a national chain system considered by the Commission in approving program service proposed for new broadcast station. Glass & Kirkland et al., 365 (373, 374).

Evidence that proposed station planned a "three station book-up" to assure diversified programs, considered, in granting application for new station. Head of the Lakes Broadcasting Co., 176 (178).

Licensee's affiliation with a national chain system, programs of which were shown to be meritorious and of interest to the listening public considered in approving program service of broadcast station. Central New York Broad-casting Corp., 263 (265); Pape Broadcasting Corp., Inc., et al., 286 (288); Pittsburgh Radio Supply House, 451 (452); The Outlet Co., 464 (485); Indianapolis Power & Light Co. et al., 469 (471) Tampa Times Co., 613 (1815).

Chancellor Company: A certain program sponsored by the Chancellor Company held to constitute a lottery in violation of Section 316 of the Communications Act. WRBL Radio Station, Inc., 687 (689, 691).

CHARITABLE: Evidence that ample time would be made available for the CHARITABLE: Evidence that ample time would be made available for the broadcast of charitable programs, considered, in granting applications broadcast stations. Daughty & Welch Electric Co., Inc., 243 (244); Georgia School of Technology, 378 (380); East Teras Broadcasting Co. et al 402 (406); Pittsburgh Radio Supply House, 451 (453); Patterson, 647 (649). CHILD WELFARE: Applicant's inclusion of child welfare broadcasts considered by the Commission in approving program service proposed for new broadcast station. Reporter Broadcasting Co. et al., 518 (523); National Battery Broadcast Co. et al., 394 (400).

CHILDREN'S: Licensee's inclusion of children's broadcasts considered by the Commission in approving program service of broadcast station. KID Broadcasting Co., 537 (539).

Civio: Licensee's inclusion of civic broadcasts considered by the Commission in approving program service of broadcast station. Stenger, Jr. et al., 51 (53); etc.

Applicant's inclusion of civic broadcasts considered by the Commission in approving program service proposed for new broadcast station. U. S. Broadcasting Corp. et al., 208 (230); Oklahoma Publishing Co., 317 (319); Harrord Broadcasting Co. et al., 330 (333); North Side Broadcasting Corp., 580 (583); Blye, 732 (733).

Coll, Dr.: Certain programs presented by one Dr. Coll and his associates consisting of "health discussions" containing false and misleading promises of free consultation and examination and cure without pain or surgery found to be contrary to the public interest. Bremer Broadcasting Co., 79 (81, 82).

"COMMANDERS": Certain programs advertising a product known as "Commanders", which, although harmless, had no special beneficiary benefits, containing statements calculated to mislead the public, found to be not in the public interest. The Journal Co., 609 (611, 612).

COMMERCIAL: Licensee's inclusion of commercial broadcasts considered by the Commission in approximg program services of broadcast station. Stanger.

the Commission in approving program service of broadcast station. Stenger. Jr., et al., 51 (54); Racine Broadcasting Corporation, 169 (170); U. S. Broadcasting Corp. et al., 208 (222, 233); Central New York Broadcasting Corp., 263 (265); Rockford Broadcasters. Inc., 384 (386); Arkansas Radio & Equipment Co., 389 (391); Simmons, 605 (607).

Held, when the matters presented over a broadcast station are commercial for the financial gain of the business of the organization, they should be presented as commercial and not cloaked under the guise of religious talks. U. S. Broadcasting Corp. et al., 208 (219).

Applicant's inclusion of commercial broadcasts considered by the Commission in approving program service proposed for new broadcast station. Oklahoma Publishing Co., 317 (319).

"Congoin": Certain programs advertising a product known as "Congoin" falsely claiming its medicinal properties, and against which a fraud order had been issued by the Postal authorities found not to be in the public interest. Don Lee Broadcasting System, 642 (645).

CROP REPORTS: Licensee's inclusion of crop reports considered by the Commission in approving program service of broadcast station. Racine Broadcasting Corporation, 169 (170): May Seed and Nursery Co. et al.

Applicant's inclusion of crop reports considered by the Commission in approving program service proposed for new broadcast station. Big Spring Herald Broadcasting Co. et al., 694 (697).

CULTURAL: Applicant's inclusion of cultural broadcasts considered by the Commission in approving program service proposed for new broadcast station. Brackett, Breed and La Port, 326 (328); Hartford Broadcasting Co. et al., 330 (333).

Licensee's inclusion of cultural broadcasts considered by the Commission in approving program service of broadcast station. al., 208 (232, 233); the Journal Co., 609 (612). U. S. Broadcasting Corp. et

DIVORCE ADVICE: Programs in which were included offers to give divorce advice found not in the public interest. Yount, 200 (207).

DRAMATIC PRESENTATIONS: Licensee's inclusion of dramatic presentations considered by the Commission in approving program service of broadcast station. Stenger, Jr., et al., 51 (54); Evening News Association et al., 185 (190) 185 (190).

EDUCATIONAL: Licensee's inclusion of educational broadcasts considered by the Commission in approving program service of broadcast station. Stenger, Jr., et al., 51 (53); etc.

Applicant's inclusion of educational broadcasts considered by the Commission in approving program service proposed for new broadcast station. U.S. Broadcasting Corp. et al., 208 (230); Blye, 732 (733).

ELECTRICAL TRANSCRIPTIONS: Licensee's use of electrical transcriptions considered by the Commission in approving program service of broadcast station Stenger, Jr, et al., 51 (53).

Applicant's plaus to use electrical transcriptions considered by the Commission in approving program service proposed for new hroadcast station. Brackett, Breed & La Port, 326 (328).

ELECTRO MAGNETIC TREATMENT: Programs sponsored by one Dr. Sbyman advertising free electro magnetic treatments along with an herb tonic found not to be in the public interest. WSBC, Inc., 293 (296).

EMERGENCY ASSISTANCE: Applicant's plans to render emergency assistance through broadcasts of flood warnings, etc., considered by the Commission in approxing program service proposed for new broadcast station. Northside Broadcasting Corp., 580 (583).

Licensee's inclusion of emergency assistance broadcasts considered by the Commission in approxing program service of broadcast station. Redwood Broadcasting Co., 192 (194): Meyer Broadcasting Co., 432 (439): Alaska Radio & Service Co., Inc., 502 (503); KID Broadcasting Co., 537 (539); Tampa Times Co., 613 (615).

Licensee's inclusion of broadcasts of farm news and farm information considered by the Commission in approving program service of broadcast station. Johnson-Kennedy Radio Corp., 139 (140); Evening News Association et al., 185 (188); Oklahoma Publishing Co., 317 (319); Portland Broadcasting System, Inc., et al., 656 (670).

Ford's, Dr., Reducing Teat: Certain programs containing announcements that Dr. Ford's tea would reduce weight without harm to the patient during the course of which listeners were offered free membership in a Reducing Club as an inducement to buy the tea found not to be in the public interest. Farmers and Bankers Life Insurance Co., 455 (458); May Seed and Nursery Co. et al., 559 (569).

FOREIGN LANGUME: Licensee's use of foreign language programs considered by the Commission in approving program service of broadcast station which had a large foreign element among its listening audience. Stenger, Jr., et al., 51 (53); U. S. Broadcasting Corp. et al., 208 (223); Doughty & Welch Electric Co., Inc., 243 (245); Hammond-Calumet Broadcasting Corp., 321 (290). (322).

Evidence that program service had included a large portion of foreign language programs shown to be almost entirely of a commercial nature designed for the purpose of selling merchandise by direct advertising, and were not intended to educate or assist the foreign populace in becoming better citizens or to familiarize them with American principles and ideals considered, in denying renewal of broadcast license. U. S. Broadcasting Corp. et al., 208 (218, 223, 224).

Held, foreign language programs cannot be said to serve public interest merely because they are given in a foreign language. U. S. Broadcasting Corp. et al., 208 (224).

FORTUNE TELLING: Certain programs broadcast by one "Omar" consisting of the reading of questions and answers in connection with an offer of sale of pamphlets and booklets found to be of the ordinary fortune-telling type, and not in the public interest. Farmers and Bankers Life Insurance Co. 455 (457).

FRATERNAL: Licensee's donation of broadcast time to fraternal organizations considered by the Commission in approving program service of broadcast station. Central New York Broadcasting Corp., 263 (265); Tampa Times Co., 613

GBAIN AND LIVESTOCK QUOTATIONS: Licensee's broadcasts of grain and livestock quotations considered by the Commission in approving program service of broadcast station. May Seed and Nursery Co. et al., 559 (563).

GOVERNMENTAL: Applicant's inclusion of governmental broadcasts con-COLEMMENTAL: Applicants inclusion of governmental broadcasts considered by the Commission in approving program service proposed for new broadcast station. Evening News Association et al., 185 (188); Hammond-Valumet Broadcasting Corp., 321 (323); Hartford Broadcasting Co. et al., 330 (333); Pittsburgh Radio Supply House, 451 (453); Don Lee Broadcasting System, 642 (646); Portland Broadcasting System, Inc., et al., 656 (670, 674).

Licensee's inclusion of governmental broadcasts considered by the Commission in approving program service of broadcast station. Farmers & Bankers Life Insurance Co. 455 (457); May Seed & Nursery Company et al., 559

HEALTH BROADCASTS: Licensec's inclusion of health broadcasts by responsible organizations considered by the Commission in approving program service of broadcast station. Doughty & Welch Electric Co., Inc., 243 (245); National Battery Broadcast Co. et al., 394 (400); North Side Broadcasting Corp., 580 (583).

Herb Tea, Z-G Herbs, No. 17.: A certain program advertising the product known as "Herb Tea, Z-G Herbs, No. 17" found not to be in the public interest. Oak Leaves Broadcasting Station, Inc., 298 (299, 301).

Head Tonics: A certain series of programs including continuity advertising products of "Dr. Michael's All Herb Laboratories," sponsored by one convicted of practicing medicine without a license found not to be in the public interest. WBBC, Inc., 293 (295, 296); Oak Leaves Broadcast Station, Inc., 298 (301); Emil Denemark, Inc., 474 (476).

A certain series of programs advertising the Pure Herb Tonic of "Dr. Schyman's" found to be not in the public interest when the sponsor with two associates had pleaded guilty to violation of the Federal Food and Drug Act when prosecuted on charges that the alleged curative effects of products advertised over applicant's station were false and fraudulant; and the sponsor with certain of his companies had been cited by the Post Office Department

to show cause why a fraud order should not be issued against them for using the mails for sale of the products and services advertised over applicant's station. WSBC, Inc., 295 (296): Oak Leaves Broadcasting Station, Inc., 298 (300); Hammond-Calumet Broadcasting Corp., 321 (323, 325).

Home Economics: Licensee's broadcasts of home economics programs considered by the Commission in approving program service of broadcast station. Evening News Association et al., 185 (188); Rockford Broadcasters, Inc., 384 (386); Reporter Broadcasting Co. et al., 518 (523).

Horse Racing Broadcasting Co. et al., 518 (525).

Horse Racing Broadcastis: Certain programs using a code system in broadcasting horse-race results which was intelligible only to a particular group which bad subscribed to a so-called "scratch sheet" found to be a violation of the Commission's Regulations and the station's license, which authorized disseminations to the general public and not particular individuals or classes thereof. Bremer Broadcasting Co., 79 (83).

HOUSEHOLD PROBLEMS: Program Service of broadcast station including three programs each week devoted to household problems, the material for which was obtained from the U. S. Department of Agriculture, the Rhode Island College Extension Service and the local Farm Bureau considered in granting application for modification of broadcast license. The Outlet Co., 464 (466).

"JACK POT" PRIZE SCHEMES: "Jack Pot" prize schemes as evidenced herein held to constitute a lottery, and the broadcasting of advertisements thereof a violation of Section 316 of the Communications Act of 1934. WRBL Radio Station, Inc., 687 (691).

KATBO-LEK: Certain programs advertising a product known as "Katro-Lek" found not to be in the public interest. Oak Leaves Broadcosting Station, Inc., 298 (301).

"KORAN": Certain programs presented by one "Koran" during the course of which the announcer undertook to give advice to members of the listening audience on problems of domestic life, love affairs, employment, buying and selling of property, and the vocation one should choose based upon inquiry by letter and in connection with which a character analysis was offered for sale found not to be in the public interest. Farmers & Bankers Life Insurance Co., 455 (458).

LITTLE ARTIST RADIO SCHOOL: Program known as "Little Artist Radio School" wherein announcement was made that all those who enrolled in the school would be given opportunities to appear in broadcasts although the evidence did not indicate that anyone had ever been permitted to broadcast as a result of enrollment in the school, found, not to be in the public interest. I. S. Broadcasting Corp. et al., 208 (218).

LIVESTOCK REPORTS: Licensee's inclusion of live stock reports considered by the Commission in approving program service of broadcast station. *Evening* News Association et al., 185 (190).

Local: Applicant's inclusion of local broadcasts considered by the Commission in approving program service proposed for new broadcast station. Glass & Kirkland et al., 365 (370); Golden Empire Broadcasting Co., 478

Licensee's inclusion of local broadcasts considered by the Commission in approving program service of broadcast station. Newton. 281 (283): Evening News Association et al., 185 (188); Central New York Broadcasting Corp., 263 (265); Breed and La Port, 326 (328); Tampa Times Co., 613 (615). (Continued on Page 342)



Final quarter . . . Turkey Day classic University of Richmond's ball ... College of William and Mary holding on their ten yard line . . .

Actual words of the quarterback . . . on the air . . . on WRVA . . . from the huddle!

Not missing any bets is what makes WRVA "Virginia's Premier Radio Station."

WRVA

RICHMOND VIRGINIA

Digest of FCC Decisions Involving Broadcast Program Service

(Continued from Page 341)

Lorreries: Broadcasting of certain programs containing information relative to lotteries held to constitute violations of Section 316 of the Communications Act of 1934. WRBL Radio Station, Inc., 687 (689, 691).

MARKET REPORTS: Applicant's inclusion of market reports considered by the Commission in approving program service proposed for new broadcast station. Glass & Kirkland et al., 365 (373, 374); Weiss, 375 (377); Golden Empire Broadcasting Co., 478 (480); Reporter Broadcasting Co. et al., 518 (532); North Side Broadcasting Corp., 580 (583).

Licensee's inclusion of market reports considered by the Commission in approving program service of broadcast station. Pape Broadcasting Corp., Inc., et al., 286 (288); Meyer Broadcasting Co., 482 (438); The Outlet Co., 464 (466); KID Broadcasting Company, 537 (539).

"MARMOLA": Certain programs advertising a product called "Marmola" against which a Cease and Desist Order had been issued by the Federal Trade Commission and claims for which were greatly exaggerated, found not to be in the public interest. The Journal Co., 609 (610, 611); Don Lee Broadcasting Suggesting (644) ing System, 642 (644).

MEDICAL: Practice of licensee in having all medical programs supervised in advance by a responsible physician and following his recommendations with respect to the same considered by the Commission in approving program service of broadcast statiou. Mayer Broadcasting Co., 432 (438).

Program of the licensee of foreign radio station proposed to be broadcast by applicant for studio in the United States describing remedy for cancer cure, cross-eyes, etc., found not to be in the public interest. Yount, 200 (207).

MEDICAL EDUCATIONAL: Licensee's inclusion of medical educational broadcasts considered by the Commission in approving program service of broadcast station. Bremer Broadcasting Co., 79 (80).

MEDICINAL: Held continuities advertising medicinal beverages which, although harmless, contain no useful properties, in connection with which statements calculated to mislead the public are made, are not in the public interest; and it is a duty on the part of broadcast stations diligently to inquire into the representations made as to the product and the reputation and standing of the manufacturers. Don Lee Broadcasting System, 642 (645).

MICHAEL, DR.: A certain series of programs including continuity advertising products of "Dr. Michael's All Herb Laboratories", sponsored by one convicted of practicing medicine without a license found not to be in the public interest. WSBC, Inc., 293 (295, 296); Oak Leaves Broadcasting Station, Inc., 298 (301); Hammond-Calumet Broadcasting Corp., 321 (323, 325); Emil Denemark, Inc., 474 (476).

MILLER, DR. GEORGE R.: Certain advertising programs promoting the sale of stock in extremely questionable business enterprises in which the president of the licensee corporation participated found to be highly detrimental to public interest. May Seed and Nursery Company et al., 559 (569, 572).

"Modern Women's Serenade": Certain programs advertising this product containing advice that through the use of a particular medical or chemical compound the consequence either of childbirth or moral impropriety might be avoided, held not to be in the public interest. Knickerbocker Broadcasting Co., Inc., 76 (77).

MUNICIPAL: Applicant's inclusion of municipal broadcasts considered by the Commission in approving program service proposed for new broadcast station. Patterson, 647 (649).

Licensee's inclusion of municipal broadcasts considered by the Commission in approving program service of broadcast station. Johnson-Kennedy Radio Corp., 139 (140).

News: Applicant's inclusion of news broadcasts considered by the Commission in approving program service proposed for new broadcast station. Oklahoma Publishing Co., 317 (319); Hartford Broadcasting Co. et al., 330 (332).

"OMAB": Certain programs hroadcast by one "Omar", consisting of the reading of questions and answers in connection with an offer of sale of pamphlets and booklets, found to be of the ordinary fortune telling type, and not in the public interest. Farmers and Bankers Life Insurance Co., 455 (457).

PACK, LLOYD: Certain programs, presented by one Lloyd Pack, a public entertainer, who was given free time, consisting in part of representations as to the "cure all" effect of a product known as "Texas Crystals", found to be false, fraudulent, misleading, and not in the public interest. May Seed and Nursery Company et. al., 559 (569).

PAS, Dr. W.: Application for renewal of license designated for hearing to determine whether certain programs sponsored by Dr. W. Pas was in the public interest. Hammond-Calumet Broadcasting Corp., 321 (323).

PATRIOTIC: Licensee's inclusion of patriotic broadcasts considered by the Commission in approving program service of broadcast station. Stenger, Jr., et al., 51 (53); Hammond-Calumet Broadcasting Corp., 321 (323); Hummer and Dec, 411 (413).

PHILANTHROPIC: Licensee's inclusion of philanthropic broadcasts considered by the Commission in approving program service of broadcast station. The Journal Co., 609 (612); Don Lee Broadcasting System, 642 (646).

PHONOGRAPH RECORDS: Licensee's use of phonograph records considered by the Commission in approving program service of broadcast station. Stenger, Jr., et al., 51 (53); Enid Radiophone Co., 61 (62); Evening News Association et al., 185 (190); Burton et al., 247 (248, 249); Hammond-Calumet Broadcasting Corp., 321 (322); Arkansas Radio and Equipment Co., 389 (391).

Expectation of applicant that he would avoid the use of phonograph records and electrical transcriptions considered by the Commission in approving program service proposed for new broadcast station. Hartford Broadcasting Co. gram service propet al., 330 (332).

Evidence that licensee used a substantial portion of its station's time in the broadcasting of recordings considered by the Commission in finding that applicant's showing with respect to program service was not impressive. Pape Broadcasting Corp., Inc., et al., 286 (290).

POLICE: Licensee's inclusion of broadcasts for the Police Department considered by the Commission in approving program service of broadcast station. Rockford Broadcasters, Inc., 384 (386); Farmers and Bankers Life Insurance Co., 455 (457).

POLITICAL (see also GOVERNMENTAL [this title]): Licensee's inclusion of political broadcasts considered by the Commission in approving program service of broadcast station. Stenger, Jr., et al., 51 (53).

record broadcast station. Stenger, at a constant of public forum for the discussions of both social and economic questions as well as the encouragement of education generally, considered by the Commission in approving program service of broadcast station. United States Broadcasting Corp. et al., 208 (232, 233).

Public Service: Licensee's inclusion of public service broadcasts considered by the Commission in approving program service of broadcast station. Tampa Times Co., 613 (615).

PUBLIC WELFARE: Licensee's inclusion of public welfare broadcasts considered by the commission in approving program service of broadcast station. Stenger, Jr., et al., 51 (53).

Stenger, Jr., et al., 51 (53).

PUR-ERB LABORATORIES: A certain program sponsored by Pur-Erb Laboratories containing allegations as to the therapeutic and curative effects of the products advertised found to be not in the public interest, when the 3 persons associated with the sponsor had pleaded guilty to a violation of the Federal Food and Drug Act in connection with the same products advertised over applicant's station, and the sponsor had been cited by the Post Office to show cause why a fraud order should not be issued for using the mails osell and advertise the product advertised over applicant's station, and had entered a stipulation to discontinue the use of the mails. Hammond-Calumet Broadcasting Corp., 321 (323-325); Emil Denemark, Inc., 474 (476, 477).

RITHOLZ OPTICAL CO.: Application for renewal of license designation.

RITHOLZ OPTICAL Co.: Application for renewal of license designated for hearing to determine whether certain programs sponsored by Ritholz Optical Co. was in the public interest. Hammond-Calumet Broadcasting Corp., 321

SINO LABORATORIES: Application for renewal of license designated for hearing to determine whether certain programs sponsored by Sino Laboratories was in the public interest. Hammond-Calumet Broadcasting Corp., 321 (323).

UNION DENTISTS: Application for renewal of license set for hearing to determine whether certain programs sponsored by Union Dentists were in public interest Hammond-Calumet Broadcasting Corp., 321 (323).

VARICUR INSTITUTE: Application for renewal of license set for hearing to determine whether certain programs sponsored by Variour Institute were in public interest. Hammond-Calumet Broadcasting Corp., 321 (323).

QUESTION Box: Proposal of applicant to broadcast a program known as the "question box" in which the sponsor offered to answer three questions of any nature for one dollar, considered by the Commission in disapproving program service proposed by applicant for authority to transmit programs to foreign radio stations. Yount, 200 (207).

RABOID: Program sponsored by one "Raja Raboid" offering mystery books pertaining to astrology to the public, and the sponsor made what he termed "psychological deductions" in answer to questions asked, considered in denying application. Yount, 200 (206).

RAY-DIO SALVE: A certain program advertising a program known as "Ray-Dio Salve" alleged to be a cure for rheumatism, neuralgia and similar pains found not to be in the public interest. Oak Leaves Broadcasting Station, Inc., 298 (299, 301).

Rebroadcasting: Certain programs involving a restating of the broadcast of a world series baseball game found to be deceptive to the public upon the whole, and contrary to the interests thereof. Newton, 281 (284).

RELIGIOUS: Held, when the matters presented over a broadcast station are commercial, for the financial gain of the business of the organization, they should be presented as commercial and not cloaked under the guise of religious talks. U. S. Broadcasting Corp. et al., 208 (219).

Applicant's inclusion of religious programs considered by the Commission in approving program service proposed for new broadcast station. U. S. Broadcasting Corp. et al., 208 (230); Oklahoma Publishing Co., 317 (319); Brackett, Breed and LaPort, 326 (328); National Battery Broadcast Co. et al., 394 (400).

Licensee's inclusion of religious broadcasts considered by the Commission in approving program service of broadcast station. Stenger, Jr., et al., 51 (53, 54).

REMOTE CONTROL: Licensee's inclusion of remote control broadcasts considered by the Commission in approving program service of broadcast station. Racine Broadcasting Corp., 169 (170); Redwood Broadcasting Co., 192 (194); Doughty & Welch Electric Co., Inc., 243 (244).

ROAD INFORMATION: Licensee's inclusion of road information broadcasts con-

Room in approving program service of broadcasts to sidered by the Commission in approving program service of broadcast station. Rockford Broadcasters, Inc., 384 (386).

Rood, "Doctor" or "Professor": A certain program pertaining to astrology presented by a "Doctor" or "Professor" Rood, under a division of profits arrangements, considered in denying application. Yount, 200 (206).

SAFETY: Licensee's inclusion of safety broadcasts considered by the Commission in approving program service of broadcast station. Hammond-Calumet Broadcasting Corp., 321 (323).

SCHOOL: Licensee's inclusion of school broadcasts considered by the Commis

School: Licensee's inclusion of school broadcasts considered by the Commission in approving program service of broadcast station. Johnson-Kennedy Radio Corp., 139 (140); Press Publishing Co., 426 (428).

"School of the Air": Applicant's plans to inaugurate a "school of the air" employing outstanding educators considered by the Commission in approving program service proposed for new broadcast station. North Side Broadcasting Corp., 580 (583). Corp., 580 (583).

SCHYMAN, DR. PETER B.: Certain series of programs advertising the purer tonic of Dr. Schyman found not to be in the public interest. WSBC, Iac., 293 (296); Oak Leaves Broadcasting Station Inc., 298 (300).

SPECIAL FEATURE: Licensee's inclusion of special feature broadcasts considered by the Commission in approving program service of broadcast station. Redwood Broadcasting Co., 192 (194).

Sports: Applicant's inclusion of sports broadcasts considered by the Commission in approxing program service proposed for new broadcast station. Oklahoma Publishing Co., 317 (319); Reporter Broadcasting Co. et al., 518 (523); Portland Broadcasting System, Inc., et al., 656 (670).

Licensee's inclusion of sports broadcasts considered by the Commission in approving program service of broadcast station. WCAE, Inc., 72 (73); Evening News Association et al., 185 (188).

STERLING Co.: In connection with certain programs consisting of announcements regarding a contest being conducted by the Sterling Co. offering prizes to those submitting the best names for a new tooth paste preparation being marketed by the sponsor it was held that the evidence was insufficient to establish the fact that the carrying of this program constituted a departure from the obligations of the station in serving the public interest under the law.

Don Lee Broadcasting System, 642 (645).

STOCK MARKET REPORTS: Licensee's inclusion of stock market reports considered by the Commission in approving program service of broadcast station. Redwood Broadcasting Co., 192 (194): Burton et al., 247 (249).

Sustaining: Licensee's inclusion of sustaining broadcasts considered by the SUSTAINING: Licensees inclusion of sustaining broadcasts considered by the Commission in approving program service of broadcast station. Stenger, Jr., et al., 51 (54); Racine Broadcasting Corp., 169 (170); U. S. Broadcasting Corp., et al., 208 (222, 233); Central New York Broadcasting Corp., 263 (265); Rockford Broadcasters, Inc., 384 (386); Arkansas Radio & Equipment Co., 389 (391); Simmons, 605 (607).

TENAS CRYSTALS: A certain program advertising "Texas Crystals" consisting in part of representations as to the "cure-all" effect of such product found to be false, fraudulent, misleading and not in the public interest. May Seed and Nursery Company et al., 559 (567-571).

TIME SIGNALS: Licensee's inclusion of time signals considered by the Commission in approving program service of broadcast station. Stenger, Jr., et al., 51 (55).

Applicant's inclusion of time signals considered by the Commission in approving program service proposed for new broadcast station. Hughes et al., 85 (87): Redwood Broadcasting Co., 192 (194); North Side Broadcasting Corp., 580 (583).

VAN-NAE HERB TEA: A certain program advertising "Van-Nae Herb Tca" consisting in part of representations as to the "cure-all" effect of such product found to be false, fraudulent, misleading and not in the public interest. May Seed and Nursery Company et al., 559 (567-571).

VAN NAE REDUCING TEA: Certain programs containing announcements that Dr. Ford's tea would reduce weight without harm to the patient, during the course of which listeners were offered free membership in a Reducing Club as an inducement to buy the tea. found not to be in the public interest. Farmers and Bankers Life Insurance Co., 455 (458).

WEATHER REPORTS: Applicant's inclusion of weather reports considered by the Commission in approving program service proposed for new broadcast station. Glass & Kirkland et al., 365 (373, 374); Golden Empire Broadcasting Co., 478 (480); North Side Broadcasting Corp., 580 (583); Big Spring Herald Broadcasting Co. et al., 694 (697).

Licensee's inclusion of weather reports considered by the Commission in approving program service of broadcast station. Hughes et al., 85 (87); Johnson-Kennedy Radio Corp., 139 (140); Racine Broadcasting Corporation, 169 (170); Redwood Broadcasting Co., 192 (194); Pape Broadcasting Corp., Inc., 286 (288); Rockford Broadcasters, Inc., 384 (386); Meyer Broadcasting Co., 432 (438); The Outlet Co., 464 (466); KID Broadcasting Company, 537 (539).

ADDITIONAL DIGESTS

Additional excerpts on broadcast station operations from FCC decisions as digested by its Law Department:

COMMERCIAL SUPPORT FOR BROADCAST STATION.

IN GENERAL: Application for new broadcast station denied when record disclosed that a radio station which had been at one time operating in the same town had not proved successful from a financial viewpoint either while operated by the original licensee or while leased to another party, and it appeared that his station had not received the commercial support of that area. De Bogory et al., 336 (339).

CONTRIBUTION BY LISTENERS.

Application for new broadcast station denied when applicant proposed to support the station, in part, by appeals to his listeners for voluntary contributions. Whitesell, 118 (119).

CONTROL OVER PROGRAMS BROADCAST.

Renewal of broadcast license denied when evidence indicated that licensee, by virtue of certain arrangements, had lost control over its programs. United States Broadcasting Corp. et al., 208 (218).

Authority to transmit programs to a foreign station denied when it appeared that the applicants would have no control over the programs to be transmitted. Morris et al., 269 (272).

Renewal of broadcast license denied when evidence indicated that licensee had completely divested itself of its control over certain programs, in violation of Section 12 of the Rudio Act of 1927. United States Broadcasting Corp. et

Application by broadcast station for experimental authorization to install new equipment, increase power, and change hours of operation on a clear channel frequency denied. Young et al., 704.

FINANCIAL QUALIFICATIONS.

IN GENERAL: Financial showing found to be inacceptable when applicant did not possess the necessary finances to construct the station and he proposed to obtain over 50% of his operating revenues through contributions to he solicited from listeners. Whitesell, 118 (119).

Held, the burden of proof is on the applicant to show that he is in a position financially to make the contemplated changes to operate the station as proposed. Wynne, 447 (448).

Financial showing of applicant for new broadcast station considered insufficient when it was proposed to raise cash through local subscriptions as, when, and if the construction permit were granted. Matthews, 576 (578).

Held, an indispensable requirement upon any application for the construction or operation of a radio broadcast station in the public interest, convenience, and necessity is a competent showing of adequate finances on the part of the applicant. KWII. Broadcasting Co., 625 (627); Heitmeyer et al., 637 (640).

Motion to substitute name of a corporation for the name of an individual who made application for new broadcast station denied on the ground that the proposed change constituted a substantial amendment and it was found that such amendment would be prejudicial since the respondents had come prepared to rebut the showing of finances made as to an individual and not a corporation. Portland Broadcasting System, Inc., 656 (672, 673).

APPLICANT FOR AUTHORITY TO TRANSMIT PROGRAMS TO FOREIGN RADIO STATIONS: Application for authority to transmit programs to foreign radio stations denied when the financial status of the applicant was not disclosed. Yount, 200 (204).

Financial showing of applicant considered sufficient when no detailed statement appeared in the record as to the applicant's financial standing but it appeared they were financially responsible. Morris et al., 269 (270).

APPLICANT FOR CONSENT TO TRANSFER OF CONTROL OF CORPORATION: Application for Commission approval of transfer of control of licensee corporation granted when the price to be paid for the purchase of stock would enable the licensee to continue operation of the station on a sound financial basis. Lancaster Broadcasting Service, Inc., et al., 164 (167).

APPLICANT FOR CONSENT TO VOLUNTARY ASSIGNMENT OF LICENSE: Application for consent to voluntary assignment of license granted when the record disclosed that the proposed assignee was financially capable of operating the station. Gillette Rubber Co., 127 (129).

Application for consent to voluntary assignment of license granted when it appeared that the sole purpose in seeking the transfer was to correct what was asserted by the applicant to be an impracticable capital structure and the consideration which the assignor was to receive was equivalent to the present appraised value of the physical equipment of the station. Lancaster Broadcasting Service, Inc., et al., 164 (166).

Application for consent to voluntary assignment of license granted when it appeared that the commercial operation of the station by the University licensee had become a source of embarrassment and the proposed assignee was amply able financially to operate the station. Parmer et al., 172 (174).

INTERNATIONAL RELATIONS.

Application for authority under Sec. 325 to transmit programs to foreign radio stations denied when the character of the programs likely to be arranged and transmitted from the proposed studio did not appear to be such as would promote better international relations or to serve the public interest in any of the other ways suggested in the application. Yount, 200 (207).

LEASING OF BROADCAST FACILITIES.

Increased power granted broadcast station when the University licensee had entered into a contract with a commercial concern to operate the station and by the terms of the contract the President of the University had the right to approve and/or disapprove any program proposed to be broadcast by the operating agency and also controlled the policy of the station. Georgia School of Technology, 378 (379).

SURVEYS.

Evidence that the applicant had made a survey to determine availability of program service in city to which station was to be moved and that it was indicated there were many programs available designed to serve the proposed area considered in granting application to remove broadcast station from one city to another. Lancaster Broadcasting Service, Inc. et al., 164 (168).

TALENT.

COMMERCIAL: Licensee's use of commercial talent considered in approving program service of broadcast station. Burton et al., 247 (249).

LIVE: Assignee's plans to make increased use of and to develop live talent considered by the Commission in approving assignment of broadcast license. Parmer et al., 172 (175).

Applicant's failure to offer proof as to the availability of live talent qualified for broadcasting considered by the Commission in denying application for new broadcast station. Helena Broadcasting Co. et al., 507 (510); Clifford, 573 (575).

Licensee's use of live talent considered by the Commission in approving program service of broadcast station. Stenger, Jr., et al., 51 (53, 55); Enid Radiophone Co., 61 (62); Knickerbocker Broadcasting Co., Inc., 76 (77); WJW et al., 110 (113); Newton, 281 (283); East Texas Broadcasting Co. et al., 402 (405); Press Publishing Co., 426 (428).

Local: Applicant's plans to use local talent, shown to be available, considered by the Commission in approving program service proposed for new broadcast station. Welch, Keller, and Frizzell, 107 (108).

Evidence that area to which broadcast station desired to move had ample talent support considered by the Commission in approving removal of broadcast station from one town to another. Gillette Rubber Co. 127 (130).

Evidence that a large part of the local talent which applicant mentioned as being "available" was already being heard over existing facilities considered by the Commission in denying application for new broadcast station. Goff, 585 (587); Florida West Coast Broadcasting Co., Inc., 728 (730).

Licensee's use of local talent considered by the Commission in approving program service of broadcast station. Doughty & Welch Electric Co., Inc., 243 (244); Rockford Broadcasters, Inc., 384 (386); Hummer and Dee, 411 (413); Tampa Times Co., 613 (615).

SUSTAINING: Licensee's use of sustaining talent considered by the Commison in approving program service of broadcast station. Burton, et al., 247 (249).

TIME BROKERS.

Evidence that licensee had surrendered control over its programs by means of arrangements whereby payments by sponsors for talent used on programs were made to the salesmen who negotiated the sales of time, arranged programs, selected the artists and paid them, considered, in denying application for renewal of broadcast license. U. S. Broadcasting Corp. et al., 208 (218).

TRANSCRIPTION SERVICE.

Licensee's use of a nationally known transcription service considered by the Commission in approving program service of broadcast station. Arkansas Radio and Equipment Co., 389 (391); Alaska Radio & Service Co., Inc., 502 (504).

UNLAWFUL OPERATION OF RADIO FACILITIES.

Held, operator has duty of acquainting himself with the laws and regulations governing his operations. Wilbur, 306 (307).

USE OF BROADCAST OPERATING ASSIGNMENT. See also Expicient

USE OF BROADCAST OPERATING ASSIGNMENT. See also EFFICIENT USE OF BROADCAST FACILITIES.

IN GENERAL: Held, in view of the limited facilities available for broadcasting in the United States, public interest, convenience and necessity requires that a station make efficient use of the facilities already assigned to it before making application for additional facilities. Florida Broadcasting Company, 49 (50).

(Provisions Relating to Broadcasting and Allied Services, With Sections Dealing Exclusively With Public Utility Common Carriers Omitted)

Passed by 73rd Congress; Approved June 19, 1934; With Amendments

TITLE I—GENERAL PROVISIONS

PURPOSES OF ACT; CREATION OF FEDERAL COMMUNICATIONS COMMISSION

For the purpose of regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges, for the purpose of the national defense, for the purpose of promoting safety of life and property through the use of wire and radio communication, and for the purpose of securing a more effective execution of this policy by centralizing authority heretofore granted by law to several agencies and by granting additional authority with respect to interstate and foreign commerce in wire and radio communication, there is hereby created a commission to be known as the "Federal Communications Commission," which shall be constituted as hereinafter provided, and which shall execute and enforce the provisions of this Act.1

APPLICATION OF ACT

SEC. 2. (a) The provisions of this Act shall apply to all interstate and foreign communication by wire or radio and all interstate and foreign transmission of energy by radio, which originate and/or is received within the United States, and to all persons engaged within the United States, the liganing communication or such transmission of energy by radio, and to the licensing and regulating of all radio stations as hereinafter provided; but it shall not apply to persons engaged in wire or radio communication or transmission in the Philippine Islands or the Canal Zone, or to wire or radio communication or transmission wholly within the Philippine Islands or the Canal Zone.

(b) Subject to the provisions of section 301, nothing in this Act shall be construed to apply or to give the Commission jurisdiction with respect to (1) charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communication service of any carrier, or (2) any carrier engaged in interstate or foreign communication solely physical connection with the facilities of another carrier not directly or indirectly controlling or controlled by, or under direct or indirect common control with, such carrier; except that sections 201 to 205 of this Act, both inclusive, shall, except as otherwise provided therein, apply to carriers described in clause (2).

DEFINITIONS

- SEC. 3. For the purposes of this Act, unless the context otherwise requires—
 (a) "Wire communication" or "communication by wire" means the transmission of writing, signs, signals, pictures, and sounds of all kinds by aid of wire, cable, or other like connection between the points of origin and reception of such transmission, including all instrumentalities, facilities, apparatus, and services (among other things, the receipt, forwarding, and delivery of communications) incidental to such transmission.
- "Radio communication" or "communication by radio" means the transmission by radio of writing, signs, signals, pictures, and sounds of all kinds, including all instrumentalities, facilities, apparatus, and services (among other things, the receipt, forwarding, and delivery of communications) incidental to such transmission.
- (c) "Licensee" means the holder of a radio station license granted or continued in force under authority of this Act.

 (d) "Transmission of energy by radio" or "radio transmission of energy"
- includes both such transmission and all instrumentalities, facilities, and services incidental to such transmission.
- "Interstate communication" or "interstate transmission" means comunication or transmission (1) from any State, Territory, or possession of the United States (other than the Philippine Islands and the Canal Zone), or the District of Columbia, to any other State, Territory, or possession of the United States (other than the Philippine Islands and the Canal Zone), or the District of Columbia, (2) from or to the United States to or from the Philippine Islands of Columbia, (2) from or to the United States to or from the Philippine Islands or the Canal Zone, insofar as such communication or transmission takes place within the United States, or (3) between points within the United States but through a foreign country; but shall not include wire communication between points within the same State, Territory, or possession of the United States, or the District of Columbia, through any place outside thereof, if such communication is regulated by a State commission.

 (f) "Foreign communication" or "foreign transmission" means communica-
- tion or transmission from or to any place in the United States to or from a foreign country, or between a station in the United States and a mobile station located outside the United States.
- (g) "United States" means the several States and Territories, the District of Columbia, and the possessions of the United States, but does not include the Philippine Islands or the Canal Zone.

 (h) "Common carrier" or "carrier" means nay person engaged as a common
- carrier for hire, in interstate or foreign communication by wire or radio or in interstate or foreign radio transmission of energy, except where reference is made to common carriers not subject to this Act; but a person engaged in radio broadcasting shall not, insofar as such person is so engaged, be deemed a common carrier.
- "Person" includes an individual, partnership, association, joint-stock company, trust, or corporation.

"Corporation" includes any corporation, joint-stock company, or

(j) "Corporation" includes any corporation, joint-stock company, or association.

(k) "Radio station" or "station" means a station equipped to engage in radio communication or radio transmission of energy.

(1) "Mobile station" means a radio-communication station capable of being moved and which ordinarily does move.

(m) "Land station" means a station, other than a mobile station, used for radio communication with mobile stations.

(n) "Mobile service" means the radio-communication service carried on between mobile stations and land stations, and by mobile stations communicating among themselves.

(o) "Broadcasting" means the dissemination of radio communications intended to be received by the public, directly or by the intermediary of relay stations.

tended to be received by the stations.

(p) "Chain broadcasting" means simultaneous broadcasting of an identical program by two or more connected stations.

(q) "Amateur station" means a radio station operated by a duly authorized person interested in radio technique solely with a personal aim and without interested.

pecuniary interest.

(r) "Telephone exchange service" means service within a telephone exchange within the same change, or within a connected system of telephone exchanges within the same exchange area operated to furnish to subscribers intercommunicating service of the character ordinarily furnished by a single exchange, and which is covered by the exchange service charge.

(a) "Telephone toll service" means telephone service between stations in

different exchange areas for which there is made a separate charge not included in contracts with subscribers for exchange service.

(t) "State commission" means the commission, board, or official (by what-

ever name designated) which under the laws of any State has regulatory jurisdiction with respect to intrastate operations of carriers.

"Connecting carrier" means a carrier described in clause (2) of section 2 (b).

(v) "State" includes the District of Columbia and the Territories and possessions.

PROVISIONS RELATING TO THE COMMISSION

(a) The Federal Communications Commission (in this Act referred to as the "Commission") shall be composed of seven commissioners appointed by the President, by and with the advice and consent of the Senate. one of whom the President shall designate as chairman.

(h) Each member of the Commission shall be a citizen of the United States. No member of the Commission or person in its employ shall be financially interested in the manufacture or sale of radio apparatus or of apparatus for wire or radio communication; in communication by wire or radio or in radio transmission of energy; in any company furnishing services or such apparatus to any company engaged in communication by wire or radio or to any company manufacturing or selling apparatus used for communication by wire or radio; or in any company owning stocks, bonds, or other securities of any such company; nor be in the employ of or hold any official relation to any person subject to any of the provisions of this Act, nor own stocks, bonds, or other securities of any corporation subject to any of the provisions of this Act. Such commissioners shall not engage in any other business, vocation, or employment. Not more than four commissioners shall be members of the same political party.

(c) The commissioners first appointed under this Act shall continue in office for the terms of one, two, three, four, five, six, and seven years, respectively, from the date of the taking effect of this Act, the term of each to be designated by the President, but their successors shall be appointed for terms of seven years; except that any person chosen to fill a vacancy shall be appointed only for the unexpired term of the commissioner whom he succeeds. No vacancy in the Commission shall impair the right of the remaining commissioners to exercise all the powers of the Commission.

Each commissioner shall receive an annual salary of \$10,000, payable in monthly installments.

(e) The principal office of the Commission shall be in the District of Columbia, where its general sessions shall be beld; but whenever the convenience of the public or of the parties may be promoted or delay or expense prevented thereby, the Commission may bold special sessions in any part of the United States.

(f) Without regard to the civil-service laws or the Classification Act of 1923, as amended, (1) the Commission may appoint and prescribe the duties and fix the salaries of a secretary, a director for each division, a chief engineer and not more than three assistants, a chief accountant and not more than three assistants, a chief accountant and not more than three assistants, and temporary counsel designated by the Commission for the performance of special countries and (2) designated by the Commission for the performance of special countries and (2). services, and (2) each commissioner may appoint and prescribe the duties of services, and (2) each commissioner may appoint and prescribe the duties of a secretary at an annual salary not to exceed \$4,000. The general counsel and the chief engineer and the chief accountant shall each receive an annual salary of not to exceed \$9,000; the secretary shall receive an annual salary of not to exceed \$7,500; the director of each division shall receive an annual salary of not to exceed \$7,500; and no assistant shall receive an annual salary in excess of \$7,500. The Commission shall have authority, subject to the

¹ The provision relating to safety of life and property were added by "An Act to amend the Communications Act of 1934, approved June 19, 1934, for the purpose of grounding safety of life and property at sea through the use of wire and radio communications, to make more effective the International Convention for the Safety of Life at See, 1929, and for other purposes." Public—No. 27—75th Congress, 1st Seesien, approved May 20, 1937.

(Provisions Relating to Broadcasting and Allied Services, With Sections Dealing Exclusively With Public Utility Common Carriers Omitted) Passed by 73rd Congress; Approved June 19, 1934; With Amendments

provisions of the civil-service laws and the Classification Act of 1923, as amended, to appoint such other officers, engineers, accountants," inspectors, attorneys, examiners, and other employees as are necessary in the execution of its functions.

The Commission may make such expenditures (including expenditures for rent and personal services at the seat of government and elsewhere, for office supplies, law books, periodicals, and books of reference, and for printing and binding) as may he necessary for the execution of the functions vested in the Commission and as from time to time may be appropriated for hy Congress. All expenditures of the Commission, including all necessary expenses for transportation incurred by the commissioners or hy their employes, under their orders, in making any investigation or upon any official business in any other places than in the city of Washington, shall be allowed and paid on the presentation of itemized vouchers therefor approved by the chairman of the Commission or by such other member or officer thereof as may be designated by the Commission for that purpose.

Four members of the Commission shall constitute a quorum thereof. The Commission shall have an official seal which shall be judicially noticed. (i) The Commission may perform any and all acts, make such rules and

regulations, and issue such orders, not inconsistent with this Act, as may be necessary in the execution of its functions.

The Commission may conduct its proceedings in such manner as will best conduce to the proper dispatch of business and to the ends of justice. No commissioner shall participate in any hearing or proceeding in which he has a pecuniary interest. Any party may appear before the Commission and be heard in person or by attorncy. Every vote and official act of the Commission shall be entered of record, and its proceedings shall be public upon the request of any party interested. The Commission is authorized to withbold publication of records or proceedings containing secret information affecting the national defense.

The Commission shall make an annual report to Congress, copies of (k) which shall be distributed as are other reports transmitted to Congress. Such report shall contain such information and data collected by the Commission as may be considered of value in the determination of questions connected with the regulation of interstate and foreign wire and radio communication and radio transmission of energy, together with such recommendations as to additional legislation relating thereto as the Commission may deem necessary. Provided, That the Commission shall make a special report not later than February 1, 1935, recommending such amendments to this Act as it deems desirable in the public interest: Provided further, That each year, at the beginning of the session of the Congress, the Commission shall report to the Congress whether or not any new wire or radio communication legislation is required better to insure safety of life and property. If any such new legislation is considered necessary the Commission shall make specific recommendations thereof to the Congress.

(1) All reports of investigations made by the Commission shall be entered of record, and a copy thereof shall be furnished to the party who may have complained, and to any common carrier or licensee that may have been com-

plained of.

(m) The Commission shall provide for the publication of its reports and decisions in such form and manner as may be best adapted for public informa-tion and use, and such authorized publications shall be competent evidence of the reports and decisions of the Commission therein contained in all courts of the United States and of the several States without any further proof or authentication thereof.

Rates of compensation of persons appointed under this section shall (n) be subject to the reduction applicable to officers and employes of the Federal

Government generally.

(o) 'For the purpose of obtaining maximum effectiveness from the use of radio and wire communications in connection with safety of life and property. the Commission shall investigate and study all phases of the problem and the best methods of obtaining the cooperation and coordination of these systems.

DIVISIONS OF THE COMMISSION

SEC. 5. (a) The Commission is hereby authorized by its order to divide the members thereof into not more than three divisions, each to consist of not less than three members. Any commissioner may be assigned to and may serve upon such division or divisions as the Commission may direct, and each division shall choose its own chairman. In case of a vacancy in any division, or of absence or inability to serve thereon of any commissioner thereto assigned, the chairman of the Commission or any commissioner designated by him for that purpose may temporarily serve on said division until the Commission shall otherwise order.

The Commission may by order direct that any of its work, business, or functions arising under this Act, or under any other Act of Congress, or in respect of any matter which has been or may be referred to the Commission by Congress or by either branch thereof, be assigned or referred to any of said divisions for action thereon, and may by order at any time amend, modify, supplement, or rescind supplement, or rescind forthwith and remain in effect, til otherwise ordered by the Commission.

(c) In conformity with and subject to the order or orders of the Commission in the premises, each division so constituted shall have power and authority by a majority thereof to hear and determine, order, certify, report, or otherwise act as to any of said work, business, or functions so assigned or referred to

it for action by the Commission, and in respect thereof the division shall have all the jurisdiction and powers now or then conferred by law upon the Commission, and be subject to the same duties and obligations. Any order, decision, or report made or other action taken by any of said divisions in respect of any matters so assigned or referred to it shall have the same force and effect, and may be made, evidenced, and enforced in the same manner as if made, or taken by the Commission, subject to rehearing by the Commission as provided in section 405 of this Act for rehearing cases decided by the Commission. secretary and seal of the Commission shall be the secretary and seal of each division thereof.

(d) Nothing in this section contained, or done pursuant thereto, shall be

deemed to divest the Commission of any of its powers.

The Commission is hereby authorized by its order to assign or refer (e) any portion of its work, business, or functions arising under this or any other Act of Congress or referred to it by Congress, or either branch thereof, to an individual commissioner, or to a board composed of an employe or employes of the Commission, to be designated by such order, for action thereon, and by its order at any time to amend, modify, supplement, or rescind any such assignment or reference: *Provided, however,* That this authority shall not extend to investigations instituted upon the Commission's own motion or, without the consent of the parties thereto, to contested proceedings involving the taking of testimony at public hearings, or to investigations specifically required by this Act. All such orders shall take effect forthwith and remain in effect until otherwise ordered by the Commission. In case of the absence or inability for any other reason to act of any such individual commissioner or employe designated to serve upon any such board, the chairman of the Commission may designate another commissioner or employe, as the case may be, to serve temporarily until the Commission shall otherwise order. In conformity with subject to the order or orders of the Commission in the premises, any individual commissioner, or board acting by a majority thereof, shall have power and authority to hear and determine, order, certify, report, or otherwise act as to any of said work, husiness, or functions so assigned or referred to him or it for action by the Commission and in respect thereof shall have all the jurisdiction and powers now or then conferred by law npon the Commission and be subject to the same duties and obligations. Any order, decision, or report made or other action taken by any such individual commissioner or board in respect of any matters so assigned or referred shall have the same force and effect, and may be made, evidenced, and enforced in the same manner as if made or taken by the Commission. Any party affected by any order, decision, or report of any such individual commissioner or board may file a petition for rehearing by the Commission or a division thereof and every such petition shall be passed upon by the Commission or a division thereof. Any action by a division upon such a petition shall itself be subject to rehearing by the Commission, as provided in section 405 of this Act and in subsection (c). Commission may make and amend rules for the conduct of proceedings before such individual commissioner or board and for the rehearing of such action before a division of the Commission or the Commission. The secretary and seal of the Commission shall be the secretary and seal of such individual commissioner or board.

TITLE III-PROVISIONS RELATING TO RADIO PART I-GENERAL PROVISIONS

LICENSE FOR RADIO COMMUNICATION OR TRANSMISSION OF ENERGY

SECTION 301. It is the purpose of this Act, among other things, to maintain the control of the United States over all the channels of interstate and foreign radio transmission; and to provide for the use of such channels, but not the ownership thereof, by persons for limited periods of time, under licenses granted by Federal authority, and no such license shall be considered to create any right, heyond the terms, conditions, and periods of the license. No person shall use or operate any apparatus for the transmission of energy or communications or signals by radio (a) from one place in any Territory or possession of the United States or in the District of Columbia to another place in the same Territory, possession, or District; or (h) from any State, Territory, or possession of the United States, or from the District of Columbia to any other State, Territory, or possession of the United States; or (c) from any place in any State, Territory, or possession of the United States, or in the District of Columbia, to any place in any foreign country or to any vessel; or (d) within any State when the effects of such use extend beyond the borders of said State, or when interference is caused by such use or operation with the transmission of such energy, communications, or signals from within said State to any place beyond its borders, or from any place beyond its borders to any place within said State, or with the transmission or reception of such energy, communications, or signals from and/or to places beyond the borders of said State; or (e) upon any vessel or aircraft of the United States; or (f) upon any other mobile stations within the jurisdiction of the United States, except under and in accordance with this Act and with a license in that behalf granted under the provisions of this Act.

ZONES 4

GENERAL POWERS OF COMMISSION

SEC. 303. Except as otherwise provided in this Act, the Commission from time to time, as public convenience, interest, or necessity requires, shall-(a) Classify radio stations;

^{*}The provisions relating to accountants were added by "An Act to amend paragraph (f) of Sec. 4 of the Communications Act of 1934." Public, No. 423, 74th Congress, approved, Jan. 22, 1938.

² The second provise was added by Public—No. 97—75th Congress, 1st Session, approved May 20, 1937.

⁴ Subsection (o) of section 4 was added by "An Act to amend the Communications Act of 1984", Public—No. 97—75th Congress, approved May 20, 1937.

⁶ Sec. 302 was repealed by "AN ACT relating to the allocation of radio facilities." Public—No. 652—74th Congress, approved, June 5, 1938. The text of Sec. 302 was defollows:

(Provisions Relating to Broadcasting and Allied Services, With Sections Dealing Exclusively With Public Utility Common Carriers Omitted)

Passed by 73rd Congress; Approved June 19, 1934; With Amendments

(b) Prescribe the nature of the service to be rendered by each class of licensed stations and each station within any class;

Assign bands of frequencies to the various classes of stations, and

assign frequencies for each individual station and determine the power which each station shall use and the time during which it may operate;

(d) Determine the location of classes of stations or incivious.

(e) Regulate the kind of apparatus to be used with respect to its external effects and the purity and sharpness of the emissions from each station and

from the apparatus therein;

- Make such regulations not inconsistent with law as it may deem necessary to prevent interference between stations and to carry out the provisions of this Act: Provided, however, That changes in the frequencies, authorized power, or in the time of operation of any station, shall not be made without the consent of the station licensee unless, after a public hearing, the Commission shall determine that such changes will promote public convenience or interest or will serve public necessity, or the provisions of this Act will be more fully complied with;
- Study new uses for radio, provide for experimental uses of frequencies, and generally encourage the larger and more effective use of radio in the public interest:
- (h) Have authority to establish areas or zones to be served by any station;
 (i) Have authority to make special regulations applicable to radio stations engaged in chain broadcasting;
- (j) Have authority to make general rules and regulations requiring stations to keep such records of programs, transmissions of energy, communications, or signals as it may deem desirable;
- Have authority to exclude from the requirements of any regulations in whole or in part any radio station upon railroad rolling stock, or to modify such regulations in its discretion;
 (1) Have authority to prescribe the qualifications of station operators, to
- classify them according to the duties to be performed, to fix the forms of such licenses, and to issue them to such citizens of the United States as the Commission finds qualified:

(m) (1) Have authority to suspend the license of any operator upon proof sufficient to satisfy the Commission that the licensee-

- (A) has violated any provision of any Act, treaty, or convention binding on the United States, which the Commission is authorized to administer, or any regulation made by the Commission under any such Act, treaty, or convention: or
- (B) has failed to carry out a lawful order of the master or person lawfully in charge of the ship or aircraft on which he is employed; or
- (C) has willfully damaged or permitted radio apparatus or installations to damaged; or
- (D) has transmitted superfluous radio communications or signals or communications containing profane or obscene words, language, or meaning, or has knowingly transmitted-
 - (1) false or deceptive signals or communications, or
- (2) a call signal or letter which has not been assigned by proper authority to the station he is operating; or
- (E) has willfully or maliciously interfered with any other radio communica-

(F) has obtained or attempted to obtain, or has assisted another to obtain

- or attempt to obtain, an operator's license by fraudulent means.

 (2) No order of suspension of any operator's license shall take effect until fifteen days' notice in writing thereof, stating 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 fifteen days for a hearing upon such order. The notice to the operator licensee sball not be effective until actually received hy him, and from that time he shall have fifteen days in which to mail the said application. In the event that physical conditions prevent mailing of the application at the expiration of the fifteen-day period, the vent mailing of the application at the expiration of the inteen-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 held in abeyance until the conclusion of the hearing which shall be conducted under such rules as the Commission may prescribe. Upon the conclusion of said hearing the Commission may affirm, modify, or revoke said order of suspension.
- (n) Have authority to inspect all radio installations associated with stations required to be licensed by any Act or which are subject to the provisions of any Act, treaty, or convention binding on the United States, to ascertain whether in construction, installation, and operation they conform to the requirements of the rules and regulations of the Commission, the provisions of any Act, the terms of any treaty or convention binding on the United States, conditions of the license or other instrument of authorization under which they are constructed, installed, or operated.6

which they are constructed, installed, or operated.

Sec. 302. (a) For the purposes of this title the United States is divided into five zones, as follows: The first zone shall embrace the States of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York. New Jersey, Delaware, Maryland, and the District of Columbia: the second zone shall embrace the States of Pennsylvania, Virginia, West Virginia, Ohio. Michigan, and Kentucky: the third zone shall embrace the States of North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Mississippi, Arkansas, Louisiana, Texas, and Oklahoma; the fourth zone shall embrace the States of Indiana, Illinois Wisconsin, Minnesota, North Dakota, South Dakota, Jova, Nebraska, Kansas, and Missouri; and the fift zone shall embrace the States of Montana, Idaho, Wyomina, Colorado, New Mexico, Arizona. Utah. Nevada, Washington, Oregon, and California.

(b) The Virgin Islands, Puerto Rico, Alaska, Guam, American Samoa, and the Territory of Hawaii are expressly excluded from the zones herein established.

(c) 'Have authority to designate call letters of all stations;

(p) Have authority to cause to be published such call letters and such

⁶ Subsections (m) and (n) of section 803 were amended and subsection (r) of section 303 was added by Public-No. 97-75th Congress, 1st Session, approved May 20, 1937.

other announcements and data as in the judgment of the Commission may be other announcements and data as in the distations subject to the jurisdiction required for the efficient operation of radio stations subject to the jurisdiction of the United States and for the proper enforcement of this Act;

the United States and to require the painting and/or illumination of radio (q) Have authority to be suggested towers constitute, or there is a towers if and when in its judgment such towers constitute, a menage to six towers if and when in his judgment constitute, a menace to air navigation

asonable possibility that they had a sonable possibility the sonable possibility that they had a sonable possibility the sonable possibility they had a sonable possi (r) Make such rules and regularizations and conditions, not inconsistent with law, as may be necessary to carry out the proconditions, not inconsistent with liw, as any international radio or wire communications treaty visions of this Act. or any international radio or wire communications treaty visions of this Act. or any incommend thereto, including any treaty or convention, or regulations annexed thereto, including any treaty or convention insofar as it relates to the use of radio, to which the United States is or may hereafter become a party.6

WAIVER BY LICENSEE

SEC. 304. No station license shall be granted by the Commission until the applicant therefor shall have signed a waiver of any claim to the use of any particular frequency or of the other as against the regulatory power of the United States because of the previous use of the same, whether by license or GOVERNMENT-OWNED STATIONS otherwise

(a) Radio stations belonging to and operated by the United Sec. 305. States shall not be subject to the provisions of sections 301 and 303 of this States shall not be subject to the provisions of sections 301 and 303 of this Act. All such Government stations shall use such frequencies as shall be assigned to each or to each class by the President. All such stations, except stations on board naval and other Government vessels while at sea or beyond the limits of the continental United States, when transmitting any radio communication or signal other than a communication or signal relating to Government business, shall conform to such rules and regulations designated to prevent interference with other radio stations and the rights of others as the Commission may prescribe.

(b) Radio stations on board vessels of the United States Shipping Board Bureau or the United States Shipping Board Merchant Fleet Corporation or the Inland and Coastwise Waterways Service shall be subject to the provisions

of this title.

(c) All stations owned and operated by the United States, except mobile stations of the Army of the United States, and all other stations on land and sea, shall have special call letters designated by the Commission.

FOREIGN SHIPS

SEC. 306. Section 301 of this Act shall not apply to any person sending radio communications or signals on a foreign ship while the same is within the jurisdiction of the United States, but such communications or signals shall be transmitted only in accordance with such regulations designed to prevent interference as may be promulgated under the authority of this Act.

ALLOCATION OF FACILITIES; TERMS OF LICENSES

SEC. 307. (a) The Commission, if public convenience, interest, or necessity will he served thereby, subject to the limitations of this Act, shall grant to any applicant therefor a station license provided for by this Act.

In considering applications for licenses, and modifications and renewals thereof, when and insofar as there is demand for the same the Commission shall make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient. and equitable distribution of radio service to each of the same.

(c) The Commission shall study the proposal that Congress by statute allocate fixed percentages of radio broadcasting facilities to particular types or kinds of non-profit radio programs or to persons identified with particular types or kinds of non-profit activities, and shall report to Congress, not later than February 1, 1935, its recommendations together with the reasons for the same.

(d) No license granted for the operation of a broadcasting station shall be for a longer term than three years and no license so granted for any other class of station shall be for a longer term than five years, and any license granted may be revoked as hereinafter provided. Upon the expiration of any license, upon application therefor, a renewal of such license may be granted from time to time for a term of not to exceed three years in the case of broadcasting licenses and not to exceed five years in the case of other licenses, but action of the Commission with reference to the granting of such application for the renewal of a license shall be limited to and governed by the same considera-tions and practice which affect the granting of original applications.

(e) No renewal of an existing station license shall be granted more than thirty days prior to the expiration of the original license.

APPLICATIONS FOR LICENSES: CONDITIONS IN LICENSE FOR FOREIGN COMMUNICATION

SEC. 308 (a) The Commission may grant licenses, renewal of licenses and modification of licenses only upon written application therefor received by it: Provided, however, That in cases of emergency found by the Commission, licenses, renewals of licenses. licenses, renewals of licenses, and modifications of licenses, for stations of vessels or aircraft of the United States, may be issued under such conditions as the Commission may impose, without such formal application. Such licenses, however, shall in no case be for a longer term than three months: Provided further, That the Commission may issue by cable, telegraph, or radio a permit for the operation of a station on a vessel of the United States at sea, effective in lieu of a license until seal of the United States at sea, effective than the seal of the United States at sea, effective than the seal of the United States at sea, effective than the seal of the United States at sea, the seal of the United States at in lieu of a license until said vessel of the United States at sea, the United States until said vessel shall return to a port of the continental United States.

Subsection (h) of section 307 was amended by Public-No. 652-74th Congress.

(Provisions Relating to Broadcasting and Allied Services, With Sections Dealing Exclusively With Public Utility Common Carriers Omitted)

Passed by 73rd Congress: Approved June 19, 1934; With Amendments

(b) All such applications shall set forth such facts as the Commission by regulation may prescribe as to the citizenship, character and financial, technical, and other qualifications of the applicant to operate the station; the ownership and location of the proposed station and of the stations, if any, with which it is proposed to communicate; the frequencies and the power desired to be used; the hours of the day or other periods of time during which it is proposed to operate the station; the purposes for which the station is to be used; and such other information as it may require. The Commission, at any time after the filing of such original application and during the term of any such license, may require from an applicant or licensee further written statements of fact to enable it to determine whether such original application should be granted or denied or such license revoked. Such application and/or such statement of fact shall be signed by the applicant and/or licensee under oath or affirmation.

(c) The Commission in granting any license for a station intended or used for commercial communication between the United States or any Territory or possession, continental or insular, subject to the jurisdiction of the United States, and any foreign country, may impose any terms, conditions, or restrictions authorized to be imposed with respect to submarine-cable licenses by section 2 of an Act entitled "An Act relating to the landing and the operation of submarine cables in the United States," approved May 24, 1921.

HEARINGS ON APPLICATIONS FOR LICENSES; FORM OF LICENSES; CONDITIONS ATTACHED TO LICENSES

SEC. 309. (a) If upon examination of any application for a station license or for the renewal or modification of a station license the Commission shall determine that public interest, convenience, or necessity would be served by the granting thereof, it shall authorize the issuance, renewal, or modification thereof in accordance with said finding. In the event the Commission upon examination of any such application does not reach such decision with respect thereto, it shall notify the applicant thereof, shall fix and give notice of a time and place for hearing thereon, and shall afford such applicant an opportunity to be heard under such rules and regulations as it may prescribe.

(b) Such station licenses as the Commission may grant shall be in such general form as it may prescribe, but each license shall contain, in addition to other provisions, a statement of the following conditions to which such

license shall be subject:

(1) The station license shall not vest in the licensee any right to operate

the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized therein.

(2) Neither the license nor the right granted thereunder shall be assigned

(2) Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of this Act.

(3) Every license issued under this Act shall be subject in terms to the right of use or control conferred by section 606 bereof.

LIMITATION ON HOLDING AND TRANSFER OF LICENSES

SEC. 310. (a) The station license required bereby shall not be granted to or held by—

Any alien or the representative of any alien;

(2) Any foreign government or the representative thereof;

(3) Any corporation organized under the laws of any foreign government;
(4) Any corporation of which any officer or director is an alien or of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country;

(5) Any corporation directly or indirectly controlled by any other corporation of which any officer or more than one-fourth of the directors are aliens, or of which more than one-fourth of the capital stock is owned of record or voted, after June 1, 1935, by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country, if the Commission finds that the public interest will be served by the refusal or the revocation of such license.

Nothing in this subsection shall prevent the licensing of radio apparatus on board any vessel, aircraft, or other mobile station of the United States when the installation and use of such apparatus is required by Act of Congress or

any treaty to which the United States is a party.

(b) The station license required hereby, the frequencies authorized to be used by the licensee, and the rights therein granted shall not be transferred. assigned, or in any manner either voluntarily or involuntarily disposed of, or indirectly by transfer of control of any corporation holding such license, to any person, nnless the Commission shall, after securing full information, decide that said transfer is in the public interest, and shall give its consent in writing.

REFUSAL OF LICENSES AND PERMITS IN CERTAIN CASES

SEC. 311. The Commission is hereby directed to refuse a station license and/or the permit hereinafter required for the construction of a station to any person (or to any person directly or indirectly controlled by such person) whose license has been revoked by a court under section 313, and is hereby authorized to refuse such station license and/or permit to any other person (or to any person directly or indirectly controlled by such person) which has been finally adjudged guilty by a Federal court of unlawfully monopolizing or attempting unlawfully to monopolize, radio communication, directly or indirectly, through the control of the manufacture or sale of radio apparatus, through exclusive traffic arrangements, or by any other means, or to have been the United States or any person aggrieved from proceeding against such person for violating the law against unfair methods of competition or for a violation of the law against unlawful restraints and monopolies and/or combinations, contracts, or agreements in restraint of trade, or from instituting proceedings for the dissolution of such corporation.

REVOCATION OF LICENSES

SEC. 312. (a) Any station license may be revoked for false statements either in the application or in the statement of fact which may be required by section 308 hereof, or because of conditions revealed by such statements of fact as may be required from time to time which would warrant the Commission in refusing to grant a license on an original application, or for failure to operate substantially as set forth in the license, or for violation of or failure to observe any of the restrictions and conditions of this Act or of any regulation of the Commission authorized by this Act or by a treaty ratified by the United States: Provided, however, That no such order of revocation shall take effect until fifteen days notice in writing thereof, stating the cause for the proposed revocation, has been given to the licensee. Such licensee may make written application to the Commission at any time within said fifteen days for a hearing upon such order, and upon the filing of such written application said order of revocation shall stand suspended until the conclusion of the hearing conducted under such rules as the Commission may prescribe. Upon the conclusion of said hearing the Commission may affirm, modify, or revoke said order of revocation.

(b) Any station license hereafter granted under the provisions of this Act or the construction permit required hereby and hereafter issued, may be modified by the Commission either for a limited time or for the duration of the term thereof, if in the judgment of the Commission such action will promote the public interest, convenience, and necessity, or the provisions of this Act or of any treaty ratified by the United States will be more fully complied with: Provided, however, That no such order of modification shall become final until the holder of such outstanding license or permit shall have been notified in writing of the proposed action and the grounds or reasons therefor and shall have been given reasonable opportunity to show cause why such an order of

modification should not issue.

APPLICATION OF ANTITRUST LAWS

SEC. 313. All laws of the United States relating to unlawful restraints and monopolies and to combinations, contracts, or agreements in restraint of trade are hereby declared to be applicable to the manufacture and sale of and to trade in radio apparatus and devices entering into or affecting interstate or foreign commerce and to interstate or foreign radio communications. Whenever in any suit, action, or proceeding, civil or criminal, brought under the provisions of any said laws or in any proceedings brought to enforce or to review findings and orders of the Federal Trade Commission or other governmental agency in respect of any matters as to which said Commission or other governmental agency is by law authorized to act, any licensee shall be found guilty of the violation of the provisions of such laws or any of them, the court, in addition to the penalties imposed by said laws, may adjudge, order, and/or decree that the license of such licensee shall, as of the date the decree or judgment becomes finally effective or as of such date as the said decree shall fix, be revoked and that all rights under such license shall thereupon cease: Provided, however, Tbat such licensee shall have the same right of appeal or review as is provided by law in respect of other decrees and judgments of said court.

PRESERVATION OF COMPETITION IN COMMERCE

SEC. 314. After the effective date of this Act no person engaged directly, or indirectly through any person directly or indirectly controlling or controlled by, or under direct or indirect common control with, such person, or through an agent, or otherwise, in the business of transmitting and/or receiving for hire energy, communications, or signals by radio in accordance with the terms of the license issued under this Act, shall by purchase, lease, construction, or otherwise, directly or indirectly, acquire, own, control, or operate any cable or wire telegraph or telephone line or system between any place in any State, Territory, or possession of the United States or in the District of Columbia, and any place in any foreign country, or shall acquire, own, or control any part of the stock or other capital share or any interest in the physical property and/or other assets of any such cable, wire, telegraph, or telephone line or system, if in either case the purpose is and/or the effect thereof may be to substantially lessen competition or to restrain commerce between any place in any State, Territory, or possession of the United States, or in the District of Columbia, and any place in any foreign country, or unlawfully to create monopoly in any line of commerce; nor shall any person engaged directly, or indirectly through any person directly or indirectly controlling or controlled by, or under direct or indirect common control with, such person, or through an agent, otherwise, in the business of transmitting and/or receiving for messages by any cable, wire, telegraph, or telephone line or system (a) between any place in any State, Territory, or possession of the United States, or in the District of Columbia, and any place in any other State, Territory, or possession of the United States; or (b) between any place in any State, Territory, or possession of the United States, or the District of Columbia, and any place in any foreign country, by purchase, lease, construction, or otherwise, directly or indirectly acquire, own, control, or operate any station or the apparatus therein, or any system for transmitting and/or receiving radio communications or signals between any place in any State, Territory, or possession of the United States, or in the District of Columbia, and any place in any foreign country, or shall acquire, own, or control any part of the stock or other capital share or any interest in the physical property and/or other assets of any such radio station, apparatus, or system, if in either case the purpose is and/or the effect thereof may be to substantially lessen competition or to restrain commerce between any place in any State, Territory, or possession of the United States, or in the District of Columbia, and any place in any foreign country, or unlawfully to create monopoly in any line of com-

(Provisions Relating to Broadcasting and Allied Services, With Sections Dealing Exclusively With Public Utility Common Carriers Omitted)

Passed by 73rd Congress: Approved June 10, 1034; With Amendments

FACILITIES FOR CANDIDATES FOR PUBLIC OFFICE

SEC. 315. If any licensee shall permit any person who is a legally qualified candidate for any public office to use a broadcasting station, be shall afford equal opportunities to all other such candidates for that office in the use of such broadcasting station, and the Commission shall make rules and regulations to carry this provision into effect: 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.

LOTTERIES AND OTHER SIMILAR SCHEMES

SEC. 316. No person shall broadcast by means of any radio station for which a license is required by any law of the United States, and no person operating any such station shall knowingly permit 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, or scheme, whether said list contains any part or all of such prizes. Any person violating any provision of this section shall, upon conviction thereof be fined not more than \$1,000 or imprisoned not more than one year, or both for each and every day during which such offense occurs.

ANNOUNCEMENT THAT MATTER IS PAID FOR

SEC. 317. All matter broadcast by any radio station for which service, money, or any other valuable consideration is directly or indirectly paid, or promised to or charged or accepted by, the station so broadcasting, from any person shall, at the time the same is so broadcast, be announced as paid for or furnished, as the case may be, by such person.

OPERATION OF TRANSMITTING APPARATUS

Sec. 318. The actual operation of all transmitting apparatus in any radio station for which a station license is required by this Act shall be carried on only by a person holding an operator's license issued hereunder, and no person shall operate any such apparatus in such station except under and in accordance with an operator's license issued to him by the Commission: Provided. however, That the Commission if it shall find that the public interest, convenience, or necessity will be served thereby may waive or modify the foregoing provisions of this section for the operation of any station except (1) stations for which licensed operators are required by international agreement, (2) stations for which licensed operators are required for safety purposes, (3) stations engaged in broadcasting, and (4) stations operated as common carriers on frequencies below thirty thousand kilocycles: Provided further. That the Commission shall have power to make special regulations governing the granting of licenses for the use of automatic radio devices and for the operation of such devices.

CONSTRUCTION PERMITS

SEC. 319. (a) No license shall be issued under the authority of this Act for the operation of any station the construction of which is begun or is continued after this Act takes effect, unless a permit for its construction has been granted by the Commission upon written application therefor. The Commission may grant such permit if public convenience, interest, or necessity will be served by the construction of the station. This application shall set forth such facts as the Commission by regulation may prescribe as to the citizenship, character, and the financial, technical, and other ability of the applicant to construct and operate the station, the ownership and location of the proposed station and of the station or stations with which it is proposed to communicate, the frequencies desired to he used, the hours of the day or other periods of time during which it is proposed to operate the station, the purpose for which the station is to be used, the type of transmitting apparatus to be used, the power to be used, the date upon which the station is expected to be completed and in operation, and such other information as the Commission may require. Such application shall be signed by the applicant under oath or affirmation.

(b) Such permit for construction shall show specifically the earliest and latest dates between which the actual operation of such station is expected to begin, and shall provide that said permit will be automatically forfeited if the station is not ready for operation within the time specified or within such further time as the Commission may allow, unless prevented by causes not under the control of the grantee. The rights under any such permit shall not be assigned or otherwise transferred to any person without the approval of the Commission. A permit for construction shall not be required for Government stations, amateur stations, or stations upon mobile vessels, railroad rolling stock, or aircraft. Upon the completion of any station for the construction or continued construction of which a permit has been granted, and upon it being made to appear to the Commission that all the terms, conditions, and obligations set forth in the application and permit have been fully met, and that no cause or circumstance arising or first coming to the knowledge of the Commission, make the operation of such station against the public interest, the Commission, make the operation of such station against the public interest, the Commission shall issue a license to the lawful holder of said permit for the operation of said station. Said license shall conform generally to the terms of said permit.

DESIGNATION OF STATIONS LIABLE TO INTERFERE WITH

SEC. 320. The Commission is authorized to designate from time to time radio stations the communications or signals of which, in its opinion, are liable to interfere with the transmission or reception of distress signals of ships. Such stations are required to keep a licensed radio operator listening in on the frequencies designated for signals of distress and radio communications relating thereto during the entire period the transmitter of such station is in operation.

DISTRESS SIGNALS AND COMMUNICATIONS

SEC. 321°. (a) The transmitting set in a radio station on shipboard may be adjusted in such a manner as to produce a maximum of radiation, irrespective of the amount of interference which may thus be caused, when such station is sending radio communications or signals of distress and radio communications relating thereto.

(b) All radio stations, including Government stations and stations on board foreign vessels when within the territorial waters of the United States, shall give absolute priority to radio communications or signals relating to ships in distress; shall cease all sending on frequencies which will interfere with hearing a radio communication or signal of distress, and, except when engaged in answering or aiding the ship in distress, shall refrain from sending any radio communications or signals until there is assurance that no interference will be caused with the radio communications or signals relating thereto, and shall assist the vessel in distress, so far as possible, by complying with its instructions.

INTERCOMMUNICATION IN MOBILE SERVICE

Sec. 322.° Every land station open to general public service between the coast and vessels or aircraft at sea shall, within the scope of its normal operations, be bound to exchange radio communications or signals with any ship or aircraft station at sea; and each station on shipboard or aircraft at sea shall within the scope of its normal operations, be bound to exchange radio communications or signals with any other station on shipboard or aircraft at sea or with any land station open to general public service between the coast and vessels or aircraft at sea: Provided. That such exchange of radio communication shall be without distinction as to radio systems or instruments adopted by each station.

INTERFERENCE BETWEEN GOVERNMENT AND COMMERCIAL STATIONS

SEC. 323. (a) At all places where Government and private or commercial radio stations on land operate in such close proximity that interference with the work of Government stations cannot be avoided when they are operating simultaneously, such private or commercial stations as do interfere with the transmission or reception of radio communications or signals by the Government stations concerned shall not use their transmitters during the first fifteen minutes of each hour, local standard time.

(b) The Government stations for which the above-mentioned division of time is established shall transmit radio communications or signals only during the first fifteen minutes of each hour, local standard time, except in case of signals or radio communications relating to vessels in distress and vessel requests for information as to course, location, or compass direction.

USE OF MINIMUM POWER

SEC. 324. In all circumstances, except in case of radio communications or signals relating to vessels in distress, all radio stations, including those owned and operated by the United States, shall use the minimum amount of power necessary to carry out the communication desired.

FALSE DISTRESS SIGNALS; REBROADCASTING; STUDIOS OF FOREIGN STATIONS

SEC. 325. (a) No person within the jurisdiction of the United States shall knowingly utter or transmit, or cause to be uttered or transmitted, any false or fraudulent signal of distress, or communication relating thereto, nor shall any broadcasting station rebroadcast the program or any part thereof of another broadcasting station without the express authority of the originating station.

(b) 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 therefor.

(c) Such application shall contain such information as the Commission may by regulation prescribe, and the granting or refusal thereof shall be subject to the requirements of section 309 hereof with respect to applications for station licenses or renewal or modification thereof, and the license or permission so granted shall be revocable for false statements in the application so required or when the Commission, after hearings, shall find its continuation no longer in the public interest.

^o Sections 321, 322 and 329 were amended by Public—No. 97—75th Congress, 1st Session, approved May 20, 1937.

^{*} The provisos in section 318 were added by "An Act to amend section 318 of the Communications Act of 1934." Public—No. 26—75th Congress, 1st Session, approved March 29, 1937.

(Provisions Relating to Broadcasting and Allied Services, With Sections Dealing Exclusively With Public Utility Common Carriers Omitted) Passed by 73rd Congress; Approved June 19, 1984; With Amendments

CENSORSHIP: INDECENT LANGUAGE

SEC. 326. 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. No person within the jurisdiction of the United States shall utter any obscene, indecent, or profane language hy means of radio communication.

USE OF NAVAL STATIONS FOR COMMERCIAL MESSAGES

SEC. 327. The Secretary of the Navy is hereby authorized, unless restrained hy international agreement, under the terms and conditions and at rates prescribed by him, which rates shall be just and reasonable, and which, upon complaint, shall be subject to review and revision by the Commission, to use all radio stations and apparatus, wherever located, owned by the United States and under the control of the Navy Department, (a) for the reception and transmission of press messages offered by any newspaper published in the United States, its Territories or possessions, or published by citizens of the United States in foreign countries, or by any press association of the United States, and (b) for the reception and transmission of private commercial messages between sbips, between ship and shore, between localities in Alaska and between Alaska and the continental United States: Provided, That the rates fixed for the reception and transmission of all such messages, other than press messages between the Pacific coast of the United States, Hawaii, Alaska, Guam, American Samoa, the Phillipine Islands, and the Orient, and between the United States and the Virgin Islands, shall not be less than the rates charged by privately owned and operated stations for like messages and service: Provided further, That the right to use such stations for any of the purposes named in this section shall terminate and cease as between any countries or localities or between any locality and privately operated ships whenever privately owned and operated stations are capable of meeting the normal com-munication requirements between such countries or localities or between any locality and privately operated ships, and the Commission shall have notified the Secretary of the Navy thereof.

SPECIAL PROVISION AS TO PHILIPPINE ISLANDS AND CANAL ZONE

SEC. 328. This title shall not apply to the Philippine Islands or to the In international radio matters the Phillipiue Islands and the Canal Zone shall be represented by the Secretary of State.

ADMINISTRATION OF RADIO LAWS IN TERRITORIES AND POSSESSIONS

SEC. 329. The Commission is authorized to designate any officer or employee of any other department of the Government on duty in any Territory or possession of the United States to render therein such service in connection with the administration of this Act as the Commission may prescribe and also to designate any officer or employee of any other department of the Government to render such services at any place within the United States in connection with the administration of title III of this Act as may be necessary: Provided, That such designation shall be approved by the head of the department in which such person is employed.7

TITLE IV-PROCEDURAL AND ADMINISTRATIVE PROVISIONS

JURISDICTION TO ENFORCE ACT AND ORDERS OF COMMISSION

- SECTION 401. (a) The district courts of the United States shall have jurisdiction, upon application of the Attorney General of the United States at the request of the Commission, alleging a failure to comply with or a violation of any of the provisions of this Act by any person, to issue a writ or writs of mandamus commanding such person to comply with the provisions of this
- (b) If any person fails or neglects to obey any order of the Commission other than for the payment of money, while the same is in effect, the Commission or any party injured thereby, or the United States, by its Attorney General, may apply to the appropriate district court of the United States for the enforcement of such order. If after hearing, that court determines that the order was regularly made and duly served, and that the person is in disobedience of the same, the court shall enforce obedience to such order by a writ of injunction or other proper process, mandatory or otherwise, to restrain such person or the officers, agents, or representatives of such person. from further disobedience of such order, or to enjoin upon it or them obedience to the same
- (c) Upon the request of the Commission it shall be the duty of any district attorney of the United States to whom the Commission may apply to institute in the proper court and to prosecute under the direction of the Attorney General of the United States all necessary proceedings for the enforcement of the provisions of this Act and for the punishment of all violations thereof, and the costs and expenses of such prosecutions shall be paid out of the appropriations for the expenses of the courts of the United States.
- (d) The provisions of the Expediting Act, approved February 11, 1903, as amended, and of section 238 (1) of the Judicial Code, as amended, shall be held to apply to any suit in equity arising under Title II of this Act, wherein the United States is complainant.

PROCEEDINGS TO ENFORCE OR SET ASIDE THE COMMISSION'S ORDERS-APPEAL IN CERTAIN CASES

(n) The provisions of the Act of October 22, 1913 (38 Stat. 219), relating to the enforcing or setting aside of the orders of the Interstate Commerce Commission, are hereby made applicable to suits to enforce, enjoin, set aside, annul, or suspend any order of the Commission under this Act (except any order of the Commission granting or refusing an application for a construction permit for a radio station, or for a radio station license, or for renewal of an existing radio station license, or for modification of an existing radio station license, or suspending a radio operator's license 10), and such suits are hereby authorized to be brought as provided in that Act.

(b) An appeal may be taken, in the manner hereinafter provided, from decisions of the Commission to the Court of Appeals of the District of Columbia in any of the following cases:

- (1) By any applicant for a construction permit for a radio station, or for a radio station license, or for renewal of an existing radio station license, or for modification of an existing radio station license, whose application is refused by the Commission.
- (2) By any other person aggrieved or whose interests are adversely affected by any decision of the Commission granting or refusing any such application.
- (3) By any radio operator whose license has been suspended by the Commission.10
- (c) Such appeal shall be taken by filing with said court within twenty days after the decision complained of is effective, notice in writing of said appeal and a statement of the reasons therefor, together with proof of service of a true copy of said notice and statement upon the Commission. Unless a later date is specified by the Commission as part of its decision, the decision complained of shall be considered to be effective as of the date on which public announcement of the decision is made at the office of the Commission in the city of Washington. The Commission shall thereupon immediately, and in any event not later than five days from the date of such service upon it, mail or otherwise deliver a copy of said notice of appeal to each person shown by the records of the Commission to be interested in such appeal and to bave a right to intervene therein under the provisions of this section, and shall at all times thereafter permit any such person to inspect and make copies of the appellant's statement of reasons for said appeal at the office of the Commission in the city of Washington. Within thirty days after the filing of said appeal the Commission shall file with the court the originals or certified copies of all papers and evidence presented to it upon the applica-tion or order involved, and also a like copy of its decision thereon, and shall within thirty days thereafter file a full statement in writing of the facts and grounds for its decision as found and given by it, and a list of all interested persons to whom it has mailed or otherwise delivered a copy of said notice of

Within thirty days after the filing of said appeal any interested person (b) may intervene and participate in the proceedings had upon said appeal by filing with the court a notice of intention to intervene and a verified statement showing the nature of the interest of such party, together with proof of service of true copies of said notice and statement, both upon appellant and upon the Commission. Any person who would be aggrieved or whose interests would be adversely affected by a reversal or modification of the decision of the Commission complained of shall be considered an interested party.

(e) At the earliest convenient time the court shall hear and determine the appeal upon the record before it, and shall have power, upon such record, to enter a judgment affirming or reversing the decision of the Commission, and in event the court shall render a decision and enter an order reversing the decision of the Commission, it shall remand the case of the Commission to carry out the judgment of the court: Provided, however, That the review by the court shall be limited to questions of law and that findings of fact by the Commission, if supported by substantial evidence, shall be conclusive unless it shall clearly appear that the findings of the Commission are arbitrary or The court judgment shall be final, subject, however, to review capricious. by the Supreme Court of the United States upon writ of certiorari on petition therefor under section 240 of the Judicial Code, as amended, by appellant, by the Commission, or by any interested party intervening in the appeal.

The court may, in its discretion, enter judgment for costs in favor of or against an appellant, and/or other interested parties intervening in said appeal, but not against the Commission, depending upon the nature of the issues involved upon said appeal and the outcome thereof.

INQUIRY BY COMMISSION ON ITS OWN MOTION

SEC. 403. The Commission shall have full authority and power at any time to institute an inquiry, on its own motion, in any case and as to any matter or thing concerning which complaint is authorized to be made, to or before the Commission by any provision of this Act, or concerning which any question may arise under any of the provisions of this Act, or relating to the enforcement of any of the provisions of this Act. The Commission shall have the same powers and authority to proceed with any inquiry instituted on its own motion as though it had been appealed to by complaint or petition under any of the provisions of this Act, including the power to make and enforce any order or orders in the case, or relating to the matter or thing concerning which the inquiry is had, excepting orders for the payment of money.

¹⁹ The provisions in sections 402 (a) and (b) (3) relating to suspension of a radio perator's license were added by Public-No. 97-75th Congress, 1st Session, approved "1 The words "or order" were added by Public-No. 97-75th Congress, 1st Session, approved May 20, 1937.

(Provisions Relating to Broadcasting and Allied Services, With Sections Dealing Exclusively With Public Utility Common Carriers Omitted)

Passed by 13rd Congress; Approved June 19, 1934: With Amendments

REPORTS OF INVESTIGATIONS

SEC. 404. Whenever an investigation shall be made by the Commission it shall be its duty to make a report in writing in respect thereto, which shall state the conclusions of the Commission, together with its decision, order, or requirement in the premises; and in case damages are awarded such report shall include the findings of fact on which the award is made.

REHEARING BEFORE COMMISSION

Sec. 405. After a decision, order, or requirement has been made by the Commission in any proceeding, any party thereto may at any time make application for rebearing of the same, or any matter determined therein, and it shall be lawful for the Commission in its discretion to grant such a rebearing if sufficient reason therefor be made to appear: Provided, however, That in the case of a decision, order, or requirement made under Title III, the time within which application for rebearing may be made shall be limited to twenty days after the effective date thereof, and such application may be made by any party or any person aggrieved or whose interests are adversely affected thereby. Applications for rehearing shall be governed by such general rules as the Commission may establish. No such application shall excuse any person from complying with or obeying any decision, order, or requirement of the Commission, or operate in any manner to stay or postpone the enforcement thereof, without the special order of the Commission. In case a rehearing is granted, the proceedings thereupon shall conform as nearly as may be to the proceedin an original bearing, except as the Commission may otherwise direct; and if, in its judgment, after such rehearing and the consideration of all facts, including those arising since the former hearing, it shall appear that the original decision, order, or requirement is in any respect unjust or unwaroriginal decision, order, or requirement is in any respect unjust or unwarranted, the Commission may reverse, change, or modify the same accordingly.

Any decision, order, or requirement made after such rehearing, reversing, changing, or modifying the original determination, shall be subject to the same provisions as an original order.

GENERAL PROVISIONS RELATING TO PROCEEDINGS-WIT-NESSES AND DEPOSITIONS

(a) Any member or examiner of the Commission, or the director of any division, when duly designated by the Commission for such purpose, may hold hearings, sign and issue subpenas, administer oaths, examine witnesses, and receive evidence at any place in the United States designated by the Commission; except that in the administration of Title III an examiner may not be authorized to exercise such powers with respect to a matter involving (1) a change of policy by the Commission, (2) the revocation of a station license, (3) new devices or developments in radio, or (4) a new kind of use of frequencies. In all cases heard by an examiner the Commission shall hear oral arguments on request of either party.

- (b) For the purposes of this Act the Commission shall have the power to require by subpena the attendance and testimony of witnesses and the production of all books, papers, schedules of charges, contracts, agreements, and documents relating to any matter under investigation. Witnesses summoned before the Commission shall be paid the same fees and mileage that are paid witnesses in the court of the United States.
- (c) Such attendance of witnesses, and the production of such documentary evidence, may be required from any place in the United States, at any designated place of hearing. And in case of disobedience to a subpena the Commission, or any party to a proceeding before the Commission, may invoke the aid of any court of the United States in requiring the attendance and testimony of witnesses and the production of books, papers, and documents under the provisions of this section.
- Any of the district courts of the United States within the jurisdiction of which such inquiry is carried on may, in case of contumacy or refusal to obey a subpena issued to any common carrier or licensee or other person, issue an order requiring such common carrier, licensee, or other person to appear before the Commission (and produce books and papers if so ordered) and give evidence touching the matter in question; and any failure to obey such order of the court may be punished by such court as a contempt thereof.
- (e) The testimony of any witness may be taken, at the instance of a party, in any proceeding or investigation pending before the Commission, by deposition, at any time after a cause or proceeding is at issue on petition and answer. The Commission may also order testimony to be taken by deposition proceeding or investigation pending before it, at any stage of such proceeding or investigation. Such depositions may be taken before any judge of any court of the United States, or any United States commissioner, or any clerk of a district court, or any chancellor, justice, or judge of a supreme or superior court, mayor, or chief magistrate of a city, judge of a county court, or court of common pleas of any of the United States, or any notary public, not being of counsel or attorney to either of the parties, nor interested in the event of the proceeding or investigation. Reasonable notice must first be given in writing by the party or his attorney proposing to take such deposition to the opposite party or his attorney of record, as either may be nearest, which notice shall state the name of the witness and the time and place of the taking of his deposition. Any person may be compelled to appear and depose, and to produce documentary evidence, in the same manner as witnesses may be compelled to appear and testify and produce documentary evidence before the Commission, as hereinbefore provided.
 - (f) Every person deposing as herein provided shall be cautioned and

sworn (or affirm, if he so request) to testify the whole truth, and shall be sworn (or amrm, it no so request) to testify the whole truth, and shall be carefully examined. His testimony shall be reduced to writing by the magistrate taking the deposition, or under his direction, and shall, after it has been reduced to writing, he subscribed by the deponent.

reduced to writing, he subscribed by the application (g) If a witness whose testimony may be desired to be taken by deposition be in a foreign country, the deposition may be taken before an officer or person be in a foreign country, the deposition may be taken before an officer or person by the parties by extended upon the parties by the parties by extended upon the pa be in a foreign country, the deposition may be started by stipulation in designated by the Commission, or agreed upon by the parties by stipulation in writing to be filed with the Commission. All depositions must be promptly filed with the Commission.

Witnesses whose depositions are taken as authorized in this Act, and (b) Witnesses whose depositions are taken as activated in this Act, and the magistrate or other officer taking the same, shall severally be entitled to the same fees as are paid for like services in the courts of the United States.

(i) No person shall be excused from attending and testifying or from

producing books, papers, schedules of charges, contracts, agreements, and documents before the Commission, or in obedience to the subpena of the Commission, whether such subpens be signed or issued by one or more commissioners, or in any cause or proceeding, criminal or otherwise, based upon or growing out of any alleged violation of this Act, or of any amendments thereto, on the ground or for the reason that the testimony or evidence, documentary or otherwise, required of bim may tend to incriminate him or subject him to a penalty or forfeiture; but no individual shall be prosecuted or subjected to any penalty or forfeiture for or on account of any transaction. matter, or thing concerning which he is compelled, after having claimed his privilege against self-incrimination, to testify or produce evidence, documentary or otherwise, except that any individual so testifying shall not be exempt from prosecution and punishment for perjury committed in so testifying.

(j) Any person who shall neglect or refuse to attend and testify, or to answer any lawful inquiry, or to produce books, papers, schedules of charges, contracts, agreements, and documents, if in his power to do so, in obedience to the subpena or lawful requirement of the Commission, shall be guilty of a misdemeanor and upon conviction thereof by a court of competent jurisdiction shall be punished by a fine of not less than \$100 nor more than \$5,000, or by imprisonment for not more than one year, or by both such fine and imprison

TITLE V-PENAL PROVISIONS-FORFEITURES

GENERAL PENALTY

SECTION 501. Any person who willfully and knowingly does or causes of suffers to be done any act, matter, or thing, in this Act prohibited or declared to be unlawful, or who willfully and knowingly omits or fails to do any act, matter, or thing in this Act required to be done, or willfully and knowingly causes or suffers such omission or failure, shall, upon conviction thereof. be punished for such offense, for which no penalty (other than a forfeiture) is provided herein, by a fine of not more than \$10,000 or by imprisonment for a term of not more than two years, or botb.

VIOLATIONS OF RULES, REGULATIONS, AND SO FORTH

SEC. 502. Any person who willfully and knowingly violates any rule. regulation, restriction or condition made or imposed by the Commission under authority of this Act, or any rule, regulation, restriction, or condition made or imposed by any international radio or wire communications treaty or convention, or regulations annexed thereto, to which the United States is or may hereafter become a party, shall, in addition to any other penalties provided by law, be punished, upon conviction thereof, by a fine of not more than \$500 for each and every day during which such offense occurs.

VENUE OF OFFENSES

SEC. 505. The trial of any offense under this Act shall be in the district in which it is committed; or if the offense is committed upon the high seas, or out of the jurisdiction of any particular State or district, the trial shall be in the district where the offender may be found or into which he shall be first brought. Whenever the offense is begun in one jurisdiction and completed in another it may be dealt with, inquired of, tried, determined, and punished in either jurisdiction in the same manner as if the offense had been actually and wholly committed therein.

TITLE VI-MISCELLANEOUS PROVISIONS

UNAUTHORIZED PUBLICATION OF COMMUNICATIONS

SEC. 605. No person receiving or assisting in receiving, or transmitting or assisting in transmitting, any interstate or foreign communication by wire or radio shall divulge or publish the existence, contents, substance, purport, effect, or meaning thereof, except through authorized channels of transmission or reception, to any person other than the addressee, his agent, or attorney, or to a person employed or authorized to forward such communication to its destination, or to proper accounting or distributing officers of the various communicating centers over which the communication may be passed, or to the master of a ship under whom he is serving, or in response to a subpens issued by a court of competent jurisdiction or or depends of other lawful issued by a court of competent jurisdiction, or on demand of other lawful authority; and no person not being authorized by the sender shall intercept any communication and divulge or publish the existence, contents, substance purport, effect, or meaning of such intercepted communication to any person and no person not being original. and no person not being entitled thereto shall receive or assist in receiving and interstate or foreign communication by wire or radio and use the same or any information therein contained for his own benefit or for the benefit of another not entitled thereto. another not entitled thereto; and no person having received such intercepted

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Passed by 73rd Congress; Approved June 19, 1934; With Amendments

communication or having become acquainted with the contents, substance, purport, effect, or meaning of the same or any part thereof, knowing that such information was so obtained, shall divulge or publish the existence, contents, substance, purport, effect, or meaning of the same or any part thereof, or use the same or any information therein contained for his own benefit or for the benefit of another not entitled thereto: Provided, That this section shall not apply to the receiving, divulging, publishing, or utilizing the contents of any radio communication broadcast, or transmitted by amateurs or others for the use of the general public, or relating to ships in distress.

WAR EMERGENCY-POWERS OF PRESIDENT

SEC. 606. (a) During the continuance of a war in which the United States is engaged, the President is authorized, if he finds it necessary for the national defense and security, to direct that such communications as in his judgment may be essential to the national defense and security shall have preference or priority with any carrier subject to this Act. He may give these directions at and for such times as he may determine, and may modify, change, suspend, or annul them and for any such purpose he is hereby authorized to issue orders directly, or through such person or persons as he designates for the purpose, or through the Commission. Any carrier complying with any such order or direction for preference or priority herein authorized shall be exempt from any and all provisions in existing law imposing civil or criminal penalties, obligations, or liabilities upon carriers by reason of giving preference or priority in compliance with such order or direction.

(b) It shall be unlawful for any person during any war in which the United States is engaged to knowingly or willfully, by physical force or intimidation by threats of physical force, obstruct or retard or aid in obstructing or retarding interstate or foreign communication by radio or wire. The President is hereby authorized, whenever in his judgment the public interest requires, to employ the armed forces of the United States to prevent any such obstruction or retardation of communication: Provided, That nothing in this section shall be construed to repeal, modify, or affect either section 6 or section 20 of an Act entitled "An Act to supplement existing laws against unlawful

restraints and monopolies, and for other purposes," approved October 15, 1914.

(c) Upon proclamation by the President that there exists war or a threat

(c) Upon proclamation by the President that there exists war or a threat of war or a state of public peril or disaster or other national emergency, or norder to preserve the neutrality of the United States, the President may suspend or amend, for such time as he may see fit, the rules and regulations applicable to any or all stations within the jurisdiction of the United States as prescribed by the Commission, and may cause the closing of any station for radio communication and the removal therefrom of its apparatus and equipment, or he may authorize the use or control of any such station and/or its apparatus and equipment by any department of the Government under such regulations as he may prescribe upon just compression to the owners.

regulations as be may prescribe, upon just compensation to the owners.

(d) The President shall ascertain the just compensation for such use or control and certify the amount ascertained to Congress for appropriation and payment to the person entitled thereto. If the amount so certified is unsatisfactory to the person entitled thereto, such person shall be paid only 75 per centum of the amount and shall be entitled to sue the United States to recover such further sum as added to such payment of 75 per centum will make such amount as will be just compensation for the use and control. Such suit shall be brought in the manner provided hy paragraph 20 of section 24, or by section 145, of the Judicial Code, as amended.

EFFECTIVE DATE OF ACT

SEC. 607. This Act shall take effect upon the organization of the Commission, except that this section and sections 1 and 4 shall take effect July 1, 1934. The Commission shall be deemed to be organized upon such date as four members of the Commission have taken office.

SEPARABILITY CLAUSE

SEC. 608. If any provision of this Act or the application thereof to any person or circumstance is held invalid, the remainder of the Act and the application of such provision to other persons or circumstances shall not be affected thereby.

EDUCATIONAL AND RELIGIOUS STATIONS IN UNITED STATES AND CANADA

College, Church and Publicly Owned Stations

Asterisk (*) Indicates time is sold commercially.

EDUCATIONAL INSTITUTIONS

*WAPI, Birmingham, Ala.—Owned by University of Alabama, Alabama Polytechnic Institute and Alabama College; leased to WAPI Broadcasting Corp. Director: Thad Holt.

WBAA, West Lafayette, Ind. — Purdue University. Program Director: Gilbert D. Williams.

WCAD, Canton, N. Y.—St. Lawrence University; under lease option to Watertown (N. Y.) Times, to be moved to Watertown and operated commercially.

WCAL, Northfield, Minn. — St. Olaf College. Director: M. C. Jensen.

WCAT, Rapid City, S. D. — South Dakota State School of Mines. Director: C. M. Rowe.

*WESG, Elmira, N. Y.—Licensed to Cornell University, Ithaca, N. Y. Operated under lease to Elmira Star-Gazette. Director: Dale Taylor.

*WEW, St. Louis, Mo.—St. Louis University, Director: Rev. W. A Burk, S.J.

*WGST, Atlanta, Ga. — Licensed to Georgia School of Technology; operated commercially under lease. Director: W. H. Summerville.

WHA, Madison, Wis.—University of Wisconsin. Director: H. B. McCarty.

*WHAZ, Troy, N. Y. — Rensselaer Polytechnic Institute. Director: W. J. Williams.

WILL, Urbana, III. — University of Illinois, Director: Joseph F. Wright.

WKAR, East Lansing, Mich.—Michigan State College, Director: Robert J. Coleman.

*WHBY and WTAQ, Green Bay, Wis.—St. Norbert's College, Director: Father James A. Wagner. WLB, Minneapolis, Minn. — University of Minnesota. Program Director: H. B. Gislason.

WLMU, Middlesboro, Ky.—Construction permit issued for new station to Lincoln Memorial University, Harrogate, Tenn.

WNAD, Norman, Okla. — University of Oklabonia, Director: Homer Heck.

WOI. Ames, In.—Iown State College of Agriculture & Mechanic Arts. Director: W. 1. Griffith.

WOSU, Columbus, O.—Ohio State University. Director: R. C. Higgy. *WRUF. Gainesville, Ga.—University of Florida. Director: Gar-land Powell. WSAJ, Grove City, Pa.—Grove City College, Director: Dr. A. J. Calderwood.

WSUI. Iowa City, Ia.—University of Iowa. Director: Carl Menzer.

WSVS, Buffalo, N. Y.—Seneca Vocational High School. Director: Lowell C. Kitchin.

WTAW, College Station, Tex.—Agricultural & Mechanical College of Texas. Director: E. P. Humbert.

*WWL, New Orleans, La. - Loyola University, Director: Vincent F. Callahan.

KBPS, Portland, Ore.—Benson Polytechnic School, Director: William Allingham.

KFDY, Brookings, S. D. - South Dakota State College, Director; S. W.

*KFJM, Grand Forks, N. D. — University of North Dakota. Director: D. LeMasurier.

KFKU, Lawrence, Kan. — University of Kansas, Director: H. G. Ingham. *KFXR, Oklahoma City, Okla.—Exchange Ave. Baptist Church. Director: B. C. Thomason.

KOAC, Corvallis, Ore.—Oregon State System of Higher Education (State Agricultural College, operator). Director: Lake L. Roberts.

*KPAC, Port Arthur, Tex. - Port Arthur College. Director: Glenn Hew-

KSAC, Manhattan, Kan. — Kansas State College of Agriculture & Applied Sciences.

KUSD, Vermillion, S. D.—University of South Dakota. Director: B. B. Brackett.

*KUOA, Siloam Springs, Ark.—John Brown University. Director: C. M. Books.

KWLC, Decorah, Ia. — Luther College. Director: Dr. W. L. Strunk.

KWSC, Pullman, Wash.—Washington State College, Director: Kenneth E. Yeend.

CANADIAN

*CFRC, Kingston, Ont.—Queens University. Director: James Annand.

CKIC, Wolfville, N. S.—Acadia University, Director: Frances M. Patter-

CKUA. Edmonton, Alta.—University of Alberta. Director: Donald Cameron.

RELIGIOUS INSTITUTIONS

WAWZ, Zaraphath, N. J.—Pillar of Fire. Director: Ray B. White.

WBBL, Richmond, Va.—Grace Covenant Presbyterian Church. Director: M. A. Sitton.

WBBR, Brooklyn, N. Y. - Peoples Pulpit Association. Director: M. A. Howlett.

*WBNO, New Orleans, La.—Coliseum Place Raptist Church. Director: Edward R. Musso.

WMBI, Chicago, Ill. — Moody Bible Institute. Director: Henry C. Crowell. WMPC, Lapeer, Mich. — First Methodist Protestant Church. Director: F. S. Hemingway.

KFGQ, Boone, In. — Boone Biblical College, Director: Lois Crawford.

KFSG, Los Angeles, Cal.—Echo Park Evangelical Association. (Aimie Semple McPherson.)

KFUO, St. Louis, Mo. — Evangelical Lutheran Synod of Missouri, Ohio and Other States. Director: H. H. Hohenstein.

KPOF, Denver, Colo.-Pillar of Fire. Director: Arthur K. White.

KPPC, Pasadena, Cal. — Pasadena Presbyterian Church, Director: David Black

*KSL, Salt Lake City — Licensed to Radio Service Corp. of Utah, controlling interest in which is owned by Latter Day Saints (Mormon) Church. Director: Earl J. Glade.

KTW. Seattle, Wash. — First Presbyterian Church. Director: M. A. Matthews.

MUNICIPAL STATIONS

*WCAM, Camden, N. J. — City of Camden. Director: F. S. Caperoom.

*WJAX, Jacksonville, Fla.—City of Jacksonville, Director: Thomas C.

WLBL, Stevens Point, Wis. - State of Wiseonsin. Director: F. R. Calvert.

WNYC, New York City—City of New York. Director: F. J. H. Kracke.

*WPG, Atlantic City, N. J.—City of Atlantic City. Director: Norman Reed.

*WRR, Dallas, Tex.—City of Dallas. Director: John Thorwald.

*WSUN, St. Petersburg, Fla. — St. Petersburg Chamber of Commerce. Director: Harold H. Meyer.

*KTHS, Hot Springs, Ark. — Hot Springs Chamber of Commerce. Director: S. A. Cisler.

REGULATIONS GOVERNING CANADIAN BROADCASTING STATIONS

Made Under Canadian Broadcasting Act, 1936

(As Promulgated by Canadian Broadcasting Corporation, Effective November 1, 1937)

Authority. The attached regulations, numbered 1 to 23, were passed at a meeting of the Canadian Broadcasting Corporation held at Torouto, in the Province of Ontario, on the 8th day of September, 1937, as and for the regulations of the Canadian Broadcasting Corporation, and were made under authority of subsection one of section twenty-two of The Canadian Broadcasting Act, chapter twenty-four of the Statutes of 1936, which reads as

"The Corporation may make regulations
(a) to control the establishment and operation of chains or networks of stations in Canada;
(b) to prescribe the periods to be reserved periodically by any private station for the broadcasting of programs of the Corporation;
(c) to control the character of any and all programs broadcast by Corpora-

tion or private stations:

- (d) to determine the proportion of time which may be devoted to advertising in any programs broadcast by the stations of the Corporation or by private stations and to control the character of such advertising;

 (e) to prescribe the proportion of time which may be devoted to political broadcasts by the stations of the Corporation and by private stations, and to assign such time on an equitable basis to all parties and rival condidates. candidates.

- candidates."

 Definitions. 1. In these regulations, unless the context otherwise requires.

 (a) The "Act" means The Canadian Broadcasting Act, chapter twenty-four of the Statutes of 1936;

 (b) "Corporation" means the Canadian Broadcasting Corporation;

 (c) "licence" means a licence issued to a broadcasting station under the Radiotelegraph Act; and "licensee" means the holder of such licence;

 (d) "private station" means any broadcasting station licensed to a person other than the Corporation;

 (e) "regulations" means these regulations;

 (f) "representatives of the Corporation" means the General Manager of the Corporation, the Assistant General Manager of the Corporation;

 (c) "response authorized in writing by the General Manager of the Corporation; tion;
 (g) "station" refers to stations owned or operated by the Corporation as well
 - as by others and it may also refer to the owner or licensee of a station.

2. These regulations apply to all stations in Canada and to all matter broadcast by such stations.
3. (1) Each station shall maintain a program log in a form acceptable to the Corporation and shall cause entries to be Scope of Regulations. Program Log.

- acceptable to the Corporation and shall cause entries to be made therein as follows:—

 (a) date, call letters, location, frequency;
 (b) the time at which each station identification announcement is made;
 (c) the title and brief description of each program broadcast, with the time of the beginning and ending so as to give a continuous record of each day's broadcast. If a mechanical reproduction is used, that fact shall be noted, together with a statement whether or not announcement thereof was made. In the case of a talk or speech, the name of the speaker and the auspices under which the talk or speech was given shall be entered. If the speech is made by a political candidate or on behalf of of a political candidate or political party, the political affiliation of the candidate or party shall also be entered;
 (d) the duration of each spot or other similar announcement and the broadcast hour during which it was transmitted;
 (e) the name of the sponsor of any program or announcement for which the

cast hour during which it was transmitted:

(e) the name of the sponsor of any program or announcement for which the station is paid.

(2) Key letters or abbreviations may be used if the explanation of each is plainly given in the log. The logs shall be produced for the inspection of the representatives of the Corporation upon the request of such representatives.

(3) Each station shall keep on file a copy of

(a) the continuity used for any program:

(b) all program or other announcements containing advertising matter:

(c) the manuscript of addresses or talks.

(4) In the case of chain broadcasts these records shall be kept by the origi-

- ating station.

 (5) Such records shall be retained by the station for a period of one year and shall be open for inspection by representatives of the Corporation upon request of such representatives.
- Time. 4. The time mentioned in all program logs and contracts used in connection with broadcasting shall be local standard time (or local day-light-saving time if that is in force) unless otherwise specified or agreed.
- Program

 5. Each station shall, each week, file with the Corporation in a schedules. form acceptable to the Corporation an advance copy of its program schedule for the following week, showing the exact hours and how they are to be occupied each day.

Station 6. Each station shall announce its call letters not less than Identification. once nor more than four times an hour, during hours of operation.

Programs

- rograms

 General. *7. No one shall broadcast

 (a) anything contrary to law;

 (b) the actual proceeding at any trial in a Canadian Court;

 (c) abusive comment on any race, religion or creed;

 (d) obscene, indecent or profane language;

 (e) malicious, scandalous, or defamatory matter;

 (f) advertising matter containing false or deceptive statements;

 (g) false or misleading news;

 (h) upon the subject of birth control;

 (i) upon the subject of venereal disease, or other subjects relating to public health which the Corporation may from time to time designate, unless such subjects be presented in a manner and at a time approved by the General Manager as appropriate to the medium of broadcasting;

 (j) (i) programs presenting a person who claims supernatural or psychic powers, or a fortune-teller, character analyst, crystal-gazer or the like, or programs which lead or may lead the listening public to believe that the person presented claims to possess or possesses supernatural or psychic powers or is or claims to be a fortune-teller, character analyst, crystal-gazer or the like.

(ii) programs in which a person answers or solves or purports to answer or solve questions or problems submitted by listeners or members of the public unless such programs prior to being broadcast shall have been approved in writing by a representative of the Corporation.

approved in writing by a representative of the Corporation.

Political 8. (1) Political broadcasts are governed by subsections (3), broadcasts. (4) and (5) of section 22 of The Canadian Broadcasting Act. 1936, which read as follows:

"(3) Dramatized political broadcasts are probibited.

"(4) The names of the sponsor or sponsors and the political party, if any upon whose behalf any political speech or address is broadcast shall be announced immediately preceding and immediately after such broadcasts.

"(5) Political broadcasts on any Dominion, Provincial or Municipal election day and on the two days immediately preceding any such election day are prohibited."

(2) Each station shall allocate time for political broadcasts as fairly as possible between the different parties or candidates desiring to purchase or obtain time for such broadcasts. time for such broadcasts.

time for such broadcasts.

Advertising 9. (1) The advertising content of any program shall not exceed.

Content. in time ten per cent of any program period.

(2) Notwithstanding the provisions of subsection (1) any station shall upon instruction in writing from the Corporation reduce the total daily advertising content of its programs if the said total daily advertising content in the opinion of the Corporation occupies an undue proportion of the daily broadcast time.

(3) Upon notice in writing from the Corporation any station shall change the quality or nature of its advertising broadcasts.

10. Notwithstanding the provisions of these regulations the Corporation may, upon satisfactory evidence being submitted to it of a contract or contracts for the use of mechanical reproductions outstanding on November 1, 1937, which contain more than the advertising content prescribed in section 9 (1) or which relate to the subjects mentioned in section 7 (j) permit the continued use of the said mechanical reproductions until, but not beyond December 31, 1937.

11. (1) In any program no one shall advertise Advertising pro-

(a) any act or thing prohibited by law;

(a) any act or thing prohibited by law;
(b) the prices of goods or services, except the prices of publications auxiliary to the information services of the Corporation;
(c) any insurance corporation not registered to do business in Canada;
(d) bonds, shares, or other securities or mining or oil properties or royalties or other interests in mining or oil properties other than the securities of the Dominion or Provincial governments or municipalities or other public authorities, provided nothing herein shall prevent anyone from sponsoring a program giving quotations of market prices without comment.

ment;
(e) spirituous liquors;
(f) wine and beer in any province of Canada wherein the provincial law prohibits the direct advertisement of wine and heer, nor in any other province unless immediately prior to the coming into force of these Regulations wine and beer have in fact heen directly advertised in such province through the facilities of radio.
(2) Whenever wine and heer are advertised through radio facilities, the following special regulations shall apply:—
(a) no spot announcements shall be used for the direct or indirect advertisement of wine or beer:

ment of wine or beer; l continuities in programs directly or indirectly advertising wine or beer shall, prior to their broadcast, be approved by the Corporation at the the continuity and the form, quantity and quality of the advertising content thereof.

Spot Announcements. 12. (1) "Spot" announcements shall not exceed two minutes for each broadcasting hour, subject always to the provisions of subsection (2) of this regulation.

(2) No "spot" announcement shall be broadcast on week-days between 7:30 p. m. and 11 p. m. nor on Sundays at any time, provided that where exceptional conditions prevail owing to the geographical situation stations may be given permission by the Corporation to broadcast "spot" announcements on week-days during the hours prohibited in this soction.

during the hours prohibited in this section.

(3) Subsections (1) and (2) of this regulation shall not apply to time signals or weather reports, provided that no advertising other than the name of the sponsor is mentioned.

Foods and Drugs;
Proprietary or Patent Medicine Act or the Food and Drugs Act may be broadcast until it has been approved by the Department of Pensions and National Health. Considering the State of th

^{*} Note to Section 7. It is not the intention of the Corporation to restrict freedom of speech nor the fair presentation of controversial material. On the contrary, the policy of the Corporation is to encourage the fair presentation of controversial questions. At the same time, it should be realized that the message of broadcasting is received at the fireside in the relatively unguarded atmosphere of the home, reaching old and young alike. Certain subjects, while meriting discussion elsewhere in the public interest are not necessarily suitable for this intimate medium.

(6) Inspectors of Food and Drugs, Department of Pensions and National (6) Inspectors of Food and Drugs, Department of Pensions and National Health, are authorized to act as representatives of the Corporation for the purpose of enforcing this regulation.

News Broadcasts.

14. Stations shall not transmit any news or information of any kind published in any newspaper or obtained, collected, collated, or coordinated by any newspaper or association of newspapers or any news agency or service, except the following:—

(a) Such news hulleting as are released regularly from the various bureaus

(a) Such news bulletins as are released regularly from the various bureaus of The Canadian Press for the express use of broadcasting stations in

(b) Local news under arrangements to be made by each station individually with its local newspaper or newspapers, or such news as it may collect through its own employees;

(c) News from sources other than those provided for in subsections (a) and (b) herein, shall not be broadcast unless the express permission in writing of the Corporation through its General Manager is secured in

Material to be submitted. 15. Representatives of the Corporation may require the production of material to be broadcast before any broadcast is arranged to take place.

16. Time reserved for the broadcasting of Corporation programs shall be used only for such programs unless approval to the contrary has been received in writing from the Corporation Corporation Programs. in each specific case.

Priority for Programs.

17. Stations shall upon request of the Corporation give right of way to such Corporation or other programs as the Corporation shall designate. In such event neither the station nor the Corporation shall incur any liability for compensation or damages.

of programs.

18. No station shall "pick up" and re-broadcast any program unless permission in writing has first been obtained from the Corporation.

Mechanical 19. (1) No station shall use a mechanical reproduction (exReproductions.

19. (1) No station shall use a mechanical reproduction (except when its use is merely incidental as for an identification
or background) between the hours of 7:30 p. m. and 11:00
p. m. except with the previous consent of the Corporation in writing.

(2) A mechanical reproduction shall be announced as such immediately be fore and after the program concerned, except when its use is menetiately incidental as for an identification or background. The exact form of announcement is not prescribed, but the language shall be clear and in terms commonly used and understood. The following are examples of statements sufficient for the pur-

(a) "This is a recorded program."
(b) "This is a program of electrical transcription."
(13) No program of mechanical reproductions shall contain any reference to the name of any person, firm or corporation connected with the manufacture, sale, hire or ownership of the said mechanical reproductions used in the said program.

Chain Broadcasting. 20. Unless permission in writing is first obtained from the Corporation

the Corporation

(a) no station shall continue to be a part or shall form a part of a chain or network originating outside of Canada;

(b) no chain or network of two or more stations shall continue to be operated within Canada or shall be set up or operated within Canada;

(c) no station shall continue to be or become an outlet for any station, chain or network existing or originating outside of Canada;

(d) no station shall continue to be or become an associate station of or with no station shall continue to be or become an associate station of or with

any station. Chain or network existing or originating outside of Canada.

Station Contracts.

21. Every station shall file with the Corporation a copy of the forms of contract used by it and a statement of its charges. Every such contract shall expressly make the enjoyment of the privilege Station Contracts, to broadcast conditional upon the observance of these regulations. The licensee of each station shall see that a copy of these regulations is available at the station and that the station employees and persons broadcasting are familiar with these conditions.

with them.

Violation of

Regulations.

to the licensee of any station informing him of any alleged violation of these regulations and he shall have a delay of six days within which to answer in writing, giving in full his reply to the notice. The Corporation may make such investigation of the facts as it shall consider appropriate and for this purpose its representatives may examine the records and question the employees of any station.

Repeal.

23. These regulations shall have full force and effect as of the 1st day of November. 1937, and on and after that date all regulations inconsistent therewith shall be deemed to have been repealed.

Note: The penalty for violation of these regulations is provided for under section 22 (6) of the Act which reads:

"(6) In case of any violation or non-observance by a private station of the regulations made by the Corporation under this section, the Corporation may order that the license of such private station be suspended for a period not exceeding three months and any such order shall be forwarded to the

not exceeding three months and any such order shall be forwarded to the Minister who shall forthwith communicate the same to the licensee of the station and shall take such steps as may be necessary to carry out the terms of such carden." of such order.

Code of Ethics of the National Association of Broadcasters

Adopted at 1935 Convention

- Recognizing that the radio audience includes persons of all ages and all types of political, social and religious belief, each member station will endeavor to prevent the broadcasting of any matter which would commonly be regarded as offensive.
- When the facilities of a member station are used by others than the owner, the member shall ascertain the financial responsibility and character of such client, that no dishonest, fraudulent or dangerous person, firm or corporation may gain access to the radio audience.
- Matter which is barred from the mails as fraudulent, deceptive or obscene shall not be broadcast by a member station.
- Each member station shall refuse any advertising matter regarding products or services injurious to health.
- 5. Each member station shall maintain a public record of its current rates charged to advertisers for the use of broadcasting time together with all discounts, rebates, refunds and agency commissions which shall be allowed to the users of such time or to their recognized agents.
 - 6. Each member station shall refuse to accept any business on a cost

per inquiry, contingent, or percentage basis, or to accord free time for commercial use.

- 7. No member station shall permit the broadcasting of advertising statements or claims which he knows or believes to be false, deceptive or grossly exaggerated.
- No member station shall defame or disparage a competitor, directly or indirectly, by words or acts which untruthfully call in question such competitor's business integrity, ability to perform contracts, credit standing or quality of service.
- 9. No member station shall claim for its service a character, scope or quality which cannot be substantiated, nor shall it claim as regular characteristics of its service features which it knows to be purely temporary or accidental.
- Where charges of violation of any article of the code of ethics of 10. the National Association of Broadcasters are filed in writing with the Managing Director, the Board of Directors shall investigate such charges, give opportunity for hearing and afterwards notify the station of its findings.

RUFUS

DARBY PRINTING COMPANY

905 E STREET N.W.

WASHINGTON, D. C.

MAGAZINES-PERIODICALS-BROCHURES-FOLDERS-BRIEFS