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FCC PROMULGATES NEW RULES

The Federal Communications Commission has promulgated general rules and regulations applicable to relay broadcast, international broadcast, visual broadcast, high frequency broadcast, and experimental broadcast stations, effective July 1.

In connection with these new regulations the Commission issued the following statement:

The Broadcast Division on May 21, promulgated new rules and regulations concerning all broadcast stations except regular broadcast stations in the band 550 to 1500 kilocycles. These broadcast stations are as follows:

- Relay broadcast stations (formerly broadcast pickup stations).
- International broadcast stations (formerly experimental relay stations).
- Visual broadcast stations, including television and facsimile.
- High-frequency broadcast stations (formerly general experimental stations authorized to operate as broadcast stations).
- Experimental broadcast stations.
- Special broadcast stations (formerly experimental broadcast stations on the frequencies of 1530, 1550 and 1570 kilocycles).

These new rules provide certain new restrictions and principles of operation that are fully set out in the attached copy of the new rules. All outstanding rules concerning these stations which are in conflict with the new rules are automatically cancelled.

The name "relay" broadcast station now applies to stations which were formerly called broadcast pickup stations. The new name "relay" is considered more in keeping with the actual service rendered by these stations. In the future these stations will be licensed only to the holders of regular broadcast station licenses. Two groups of frequencies are provided, one in the medium frequency band and the other in the very high frequency band. In both groups the licensees are required to notify the Commission two days before each operation for the purpose of relaying programs to be broadcast. Certain of the frequencies in the medium frequency band have been changed by two kilocycles to provide better frequency separation from other services. All licensees of these stations should read the new rules governing these stations carefully as certain other changes have been made.

The name "international" broadcast station now applies to those stations which were formerly called experimental relay stations. These stations are licensed for international service. There are certain new principles set out in the new rules that the licensees of these stations should study carefully.

The frequency bands 2000 to 2100 kilocycles and 2750 to 2850 kilocycles have been dropped for the television service. Experience to date has shown that a satisfactory picture in keeping with the development of the art cannot be transmitted successfully in these narrow bands. The stations now assigned these frequencies which are carrying on active programs of research and experimentation will be assigned specific frequencies in the bands 42,000 to 56,000 kilocycles and 60,000 to 86,000 kilocycles. One license will authorize both the visual and aural broadcast. There are certain other principles of operation involved in the new rules which the licensees of these stations should study carefully.

High-frequency broadcast stations are required to carry on active programs of research to hold a license. Licensees not carrying on this active program cannot be considered as making proper usage

of the assignment and full consideration will be given at the time of the renewal of license.

Experimental broadcast stations are provided for specific experimentation along lines other than those prescribed by other broadcast rules. Certain frequencies throughout the entire useful radio spectrum are made available for this purpose by Rule 229 as modified.

The name "special broadcast station" applies to stations formerly named "experimental" stations licensed to operate on the frequencies of 1530, 1550, and 1570 kilocycles. The new rules provide that all rules that apply to regular broadcast stations (Rules 69 to 181, inclusive) shall apply to special broadcast stations. This means that these stations must have frequency monitors, modulation monitors, protected equipment, etc.

It will be necessary to modify several of the outstanding licenses to comply with the new frequency allocation as provided in Rule 229 as modified by the Commission on May 13, 1936. The Broadcast Division's new rules as discussed above provide an allocation in compliance with the frequencies made available by the action of the Commission. A careful comparison should be made between your existing licenses with respect to the frequencies and class of broadcast service and that provided in the new rules and regulations. It may be necessary to change either or both.

So that these requirements may be discussed thoroughly and understood, an informal engineering conference is scheduled for June 8, 1936, at which all licensees affected should be represented, or should supply information to the Broadcast Division of the Commission as to the new frequencies that they desire in keeping with the new rules. All licensees of television broadcast stations should especially be present so that a definite assignment of a visual and aural frequency can be made in either the 42,000-56,000 kilocycle band or the 60,000-86,000 kilocycle band. If the licensees are not present so that an agreeable change of frequency can be effected, the Commission will, on July 1, 1936, issue a modified license specifying the frequency that it deems best in keeping with public interest, convenience and necessity, as provided in Rule 229 as modified.

The rules themselves are as follows:

"These Rules and Regulations are effective July 1, 1936.

General Rules and Regulations Applicable to Relay Broadcast, International Broadcast, Visual Broadcast, High Frequency Broadcast, and Experimental Broadcast Stations.

980. The operating frequency of the broadcast stations as listed in Table I shall be maintained within plus or minus the percentage of the assigned frequency as given in Table I.

Table I

Station	Tolerance
Relay Broadcast	
(a) 1622 to 2830 kc.	0.04%
(b) 31,100 to 40,600	0.05%
International Broadcast	0.01%
Visual Broadcast	
(a) Television	0.05%
(b) Facsimile	0.05% or less as required
High Frequency Broadcast	0.01%
Experimental Broadcast	0.05% or less as required

FOURTEENTH ANNUAL NAB CONVENTION

STEVENS HOTEL, CHICAGO, ILLINOIS

JULY 5, 6, 7, 8, 1936

981. (a) The licensee of each broadcast station listed in Rule 980, except relay broadcast stations, shall operate at the transmitter a frequency monitor independent of the frequency control of the transmitter.

(b) The frequency monitor shall be designed and constructed in accordance with good engineering practice and shall have an accuracy sufficient to determine that the operating frequency is within the allowed tolerance.

(c) The licensee of each relay broadcast station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance.

(d) The frequency of all stations listed in Rule 980 shall be checked at each time of beginning operation and as often thereafter as necessary to maintain the frequency within the allowed tolerance.

982. (a) Licenses for the following classes of broadcast stations will be normally issued for a period of one year expiring as follows:

<i>Class of Station</i>	<i>Date of Expiration</i>
Relay Broadcast	
(a) 1622 to 2830 kc.	October 1
(b) 31,100 to 40,600 kc.	November 1
International Broadcast	December 1
Visual Broadcast	
(a) Television	February 1
(b) Facsimile	March 1
High Frequency Broadcast	April 1
Experimental Broadcast	May 1

(b) Each licensee shall submit the application for renewal of license at least 60 days prior to the expiration date (Rule 103.15).

(c) A supplemental report shall be submitted with each application for renewal of license of a station operating on frequencies allocated on an experimental basis in accordance with the regulations governing each class of station.

983. (a) No frequency allocated on an experimental basis to broadcast stations listed in Rule 980 will be assigned exclusively to any licensee. In case interference will be caused by simultaneous operation, licensees shall endeavor to arrange satisfactory time division. If such agreement cannot be reached, the Commission will determine and specify the time division.

(b) The Commission may from time to time require the licensee of a station assigned frequencies on an experimental basis to conduct experiments that are deemed desirable and reasonable for the development of the service.

(c) The program of research and experimentation as offered by an applicant in compliance with the requirements for obtaining a license on the experimental frequencies shall be adhered to in the main, unless the licensee is authorized to do otherwise by the Commission.

(d) A licensee of a station assigned a frequency or frequencies on an experimental basis is not required to adhere to a regular schedule of operation but shall actively conduct a program of research and experimentation or transmission of programs, provided, however, licensees of experimental broadcast stations which are licensed to conduct special intermittent experiments, such as to develop and test commercial broadcast equipment, are required to operate only when there is a need therefor.

(e) A supplementary statement shall be filed with and made a part of each application for construction permit for a broadcast station which requests any frequency above 30,000 kilocycles, confirming the applicant's understanding:

1. That all operation upon these frequencies is on an experimental basis.
2. That these frequencies may not be the best suited to the particular service assigned.
3. That they may not be allocated eventually for such service.

984. (a) The licensee of each class of broadcast station listed in Rule 980 shall maintain adequate records of the operation, including:

1. Hours of operation.
2. Program transmitted.
3. Frequency check.
4. Pertinent remarks concerning transmission.
5. Research and experimentation conducted.
6. And any additional information specified in the regulations governing each class of station or for completing the supplemental report as required.

(b) The above information shall be made available upon request by authorized Commission representatives.

985. The licensee of each class of broadcast station listed in Rule 980 may make any changes in the equipment that are deemed desirable or necessary, provided:

1. That the operating frequency is not permitted to deviate more than the allowed tolerance.
2. That the fidelity of transmission is not impaired.
3. And that the power output complies with the regulations governing the same.

986. All classes of broadcast licenses authorize A₃, A₄ and/or special emission. In case A₁, or A₂ emission, or both, is necessary or helpful in carrying on any phases of experimentation, application setting out fully the needs should be made to, and authority therefor received from, the Commission.

987. In case all the general rules and regulations and the specific rules governing each class of broadcast station do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as deemed necessary for operation in the public interest, convenience, and/or necessity.

RELAY BROADCAST STATIONS

1000. The term "relay broadcast station" means a station licensed to transmit over short distances where wire facilities are not available, programs or orders concerning such programs for broadcast by one or more regular broadcast stations in the band 550 to 1600 kilocycles.

1001. (a) A license for a relay broadcast station will be issued only to the licensee of a regular broadcast station; provided, however, in cases where it is impractical, impossible, or prohibited by laws or regulations for the licensee of a regular broadcast station to install, operate or maintain the necessary equipment under its legal control, the Commission may grant special temporary authority for each event to other persons to operate as a relay broadcast station equipment already licensed for another service, or equipment which may be installed under Section 319(b) of the Communications Act of 1934 without a construction permit.

(b) The licensee of a relay broadcast station is authorized to transmit commercial or sustaining programs and orders concerning such programs to its regular broadcast station and other broadcast stations transmitting the same program simultaneously, but is not authorized to transmit programs to be broadcast solely by other regular broadcast stations.

(c) Each application for temporary authority to operate a relay broadcast station from a person other than a licensee of a regular broadcast station shall be accompanied by an application for authority to broadcast the program from the licensee of the regular broadcast station proposing the broadcast.

(d) An application for special temporary authority to operate another class of station as a relay broadcast station shall specify a group of frequencies allocated in Rule 1003; provided, however, in case of events of national interest and importance which cannot be transmitted successfully to the nearest available wire facilities on these frequencies, other frequencies under the jurisdiction of the Commission may be requested, if it is shown that the operation thereon will not cause interference to established stations; and, provided further, that in no case will the Commission authorize the use of the international broadcast frequencies for this purpose.

(c) An application for special temporary authority to operate on frequencies not allocated by Rule 1003 or to operate another class of station as a relay broadcast station must be received by the Commission not less than ten days prior to the actual event to be broadcast, and shall contain complete information concerning the frequencies requested, the license of the station to be used, and the information specified in Rule 1002 (b), (1) (2) (3) (4). In case of emergencies, which shall be fully explained in the application, the Commission may waive the ten-day requirement specified herein.

1002. (a) The license of a relay broadcast station does not authorize operation except as provided in subsections (b), (c) and (d) of this Rule.

(b) An application which may be submitted either by letter or telegram, for authority to operate temporarily a relay broadcast station for each event or series of associated events to be broadcast, must be received at least two days before the first proposed operation, and shall include:

1. A statement as to the period of use desired.
2. Identification and succinct description of the event proposed to be broadcast.
3. A statement concerning the availability of wire facilities.
4. Location of the program transmitter and receiver.

(c) Relay broadcast stations licensed on the experimental frequencies allocated in Rule 1003 (c) may be operated at any time for experimental purposes without notice to the Commission if no interference results to established stations and the program transmitted is not rebroadcast.

(d) In case of events occurring about which the licensee had no means of obtaining information two days in advance, such as earthquakes, aeroplane accidents, fires, etc., the application to and authority from the Commission as required in subsection (b) of this rule will be waived, provided the Commission is advised by telegram sent before the broadcast as to the details of the events and the expected duration of the broadcast.

1003. (a) The following groups of frequencies are allocated for assignment to relay broadcast stations:

<i>Group A</i>	<i>Group B</i>	<i>Group C</i>
1622 kc.	1606 kc.	1646 kc.
2058	2022	2090
2150	2102	2190
2790	2758	2830

(b) One group including four frequencies will be assigned each station. The first application from any metropolitan area shall specify group A, the second group B, and the third group C, the fourth group A again, etc. Outstanding assignments not following this order will not be changed unless a need therefor develops. Additional applications shall specify the next unassigned group in sequence or any other group if it appears interference will be avoided thereby.

(c) The following groups of frequencies are allocated for relay broadcast stations on an experimental basis and may be changed without prior notice or hearing (experimental frequencies):

<i>Group D</i>	<i>Group E</i>
31,100 kc.	Any four frequencies above
34,600	86,000 kc. except in band
37,600	400,000 to 401,000 kc.
40,600	

(d) All four frequencies in Group D will be assigned each station. Applicants may request any four specific frequencies under Group E which appear most suitable for the experimental work to be conducted. The licensee of a station on Group D or E shall carry on research and experimentation for the advancement of relay broadcast art and development of these very high frequencies for relay broadcast services.

(e) Applications for authority to construct a station for operation on the experimental frequencies shall include a statement concerning the research and experiments to be conducted. The research and experiments shall indicate reasonable promise of substantial contribution to the development of the program relay services.

(f) A license authorizes operation on only one of the four assigned frequencies at any one time. In case it is desired to transmit programs and spoken orders concerning such programs simultaneously, two licenses are required though each will specify the same group of frequencies.

1004. In case two or more stations are licensed for the same group of frequencies in the same area and have been authorized to operate under Rule 1002 (b), the licensees shall endeavor to select frequencies to avoid interference. If a mutual agreement to this effect cannot be reached, the Commission shall be notified and it will specify the frequencies on which each station is to be operated.

1005. A relay broadcast station shall be operated with a power output not in excess of that necessary to transmit the program and orders satisfactorily to the receivers, and in no event greater than the licensed power.

1006. The licensee of a relay broadcast station assigned the experimental frequencies under Rule 1003 (c) shall submit a supplemental report with and made a part of each application for renewal of license as follows:

1. Number of hours operated for experimental purposes.
2. Developments in the relay broadcast service.
3. Propagation characteristics of the frequencies assigned with regard to relay broadcast service.
4. All developments or major changes in equipment.
5. Any other pertinent developments.

INTERNATIONAL BROADCAST STATIONS

1010. The term "international broadcast station" means a station licensed for the transmission of broadcast programs for international public reception. Frequencies for these stations are allocated from bands assigned (between 6,000 and 26,600 kilocycles

for broadcasting by Article 7, General Radio Regulations, annexed to the International Telecommunication Convention, Madrid, 1932.

1011. A license for an international broadcast station will be issued only after a satisfactory showing has been made in regard to the following, among others:

1. That the applicant has a program of research and experimentation which indicates reasonable promise of substantial contribution to the development of the international broadcast service.
2. That the station will render an international broadcast service.
3. That the program production and experimentation will be conducted by qualified persons.
4. That the applicant is legally and financially qualified and possesses adequate technical facilities to carry forward the program.
5. That the public interest, convenience and necessity will be served through the operation of the proposed station.

1012. (a) Licensees of international broadcast stations shall not broadcast programs for which they receive directly or indirectly any form of compensation but may transmit the programs of regular broadcast stations, including commercial stations, if the call letters when identifying both stations are given on their respective assigned frequencies only and the statement is made over the international broadcast station that the regular program of a broadcast station (identify by call letters) is being broadcast. In case of the rebroadcast of the program of any broadcast station, Rule 177 applies.

(b) No additional charge, direct or indirect, shall be made by the broadcast licensee for simultaneous transmissions by the international broadcast station and commercial accounts shall not be solicited by licensees of broadcast stations or by others upon representation that the program will also be transmitted by the international broadcast station.

(c) Programs of regular broadcast stations shall be transmitted only when they are of special international service or when programs for international service are not available.

(d) Station identification and program announcements shall be made with international significance suited for the foreign nation or nations for which the service is intended or in which the reception is believed to be best on account of the frequency, season and hour of operation.

1013. (a) The following groups of frequencies are allocated for assignment to international broadcast stations on an experimental basis:

<i>Group A</i>	<i>Group B</i>	<i>Group C</i>	<i>Group D</i>
6020 kc.	9510 kc.	11,710 kc.	15,110 kc.
6040	9530	11,750	15,150
6060	9570	11,770	15,170
6080	9590	11,790	15,190
6100		11,810	15,210
6140		11,830	15,230
		11,850	
		11,870	
		11,890	
<i>Group E</i>	<i>Group F</i>	<i>Group G</i>	<i>Group H</i>
15,250 kc.	17,760 kc.	21,460 kc.	25,625 kc.
15,270	17,780	21,480	25,650
15,290	17,800	21,520	25,675
15,310		21,540	25,725
15,330			25,750
			25,800
			25,825
			25,850
			25,875

(b) A separate license and call letters will be issued for each frequency except where frequencies in two or more groups are required to maintain a particular international broadcast service to certain foreign country or countries, one frequency from each of the groups required will be authorized by one license and call letters. In such cases these frequencies shall be used consecutively during a day as required and they shall not be used simultaneously either on the same transmitter or different transmitters.

(c) Not more than one frequency in any such group in subsection (a) of this rule will be assigned to a licensee unless it is satisfactorily shown that different foreign countries will be served by means of directional antennas.

(d) An applicant shall select the frequency which it is believed is best suited to the experiments to be conducted, for reception in

the foreign country for which the service is intended, and for a minimum of interference to other international broadcast stations.

(e) Applicants shall file a separate application for each frequency or frequencies requested in different groups as provided in subsection (b) of this rule.

1014. (a) No international broadcast station will be licensed for a power output rating less than 5 kilowatts.

(b) While conducting apparatus experiments and in case adequate signal is delivered in the foreign country being served, the operating power output may be less than 5 kilowatts.

1015. A supplemental report shall be filed with and made a part of each application for renewal of license and shall include statements of the following:

1. The number of hours operated on each frequency.
2. A list of programs transmitted of special international interest.
3. Outline of reports of reception and interference and conclusions with regard to propagation characteristics of the frequency assigned.
4. Research and experiments being carried on to improve transmission and to develop international broadcast and the frequencies assigned.
5. All developments or major changes in equipment.
6. Any other pertinent developments.

VISUAL BROADCAST STATIONS

Television and Facsimile Broadcast Stations

1030. The term "visual broadcast station" means a station carrying on the broadcasting of images for general public reception. There are two classes of visual broadcast stations, namely: television broadcast stations and facsimile broadcast stations.

1031. The term "television broadcast station" means a station licensed for the transmission of transient visual images of moving or fixed objects for simultaneous reception and reproduction by the general public. The transmission of the synchronized sound (aural broadcast) is considered an essential phase of television broadcasting and one license will be issued for both visual and aural broadcast as hereinafter set out.

1032. The term "facsimile broadcast station" means a station licensed to transmit images of still objects for record reception by the general public.

1033. Licenses for visual broadcast stations will be issued only after a satisfactory showing has been made in regard to the following, among others:

1. That the applicant has a program of research and experimentation which indicates reasonable promise of substantial contribution to the development of the visual broadcast art.
2. That the program of research and experimentation will be conducted by qualified engineers.
3. That the applicant is legally and financially qualified and possesses adequate technical facilities to carry forward the program.
4. That the public interest, convenience and/or necessity will be served through the operation of the proposed station.

1034. (a) Licensees of visual broadcast stations shall not transmit programs either aural, visual or record, for which they receive directly or indirectly, any form of compensation.

(b) In the case of experimental televising of the production of a commercial broadcast program, all commercial announcements not a part of the entertainment continuity shall be eliminated from the television broadcast except the mere statement of the name of the sponsor or product or the televising of the trade mark, symbol, slogan or product of the sponsor; provided, however, when the program transmission is incidental to the experiments being conducted and not featured and subject to interruptions as the experiments may require, the commercial announcements may be broadcast aurally.

(c) No additional charge, direct or indirect, shall be made by the licensee of a regular broadcast station for simultaneous transmission by a television broadcast station and commercial accounts shall not be solicited by licensees of regular broadcast stations or by others upon the representation that the program will also be transmitted by a television broadcast station.

(d) The synchronized sound (aural) program of a television broadcast station may be broadcast by a regular broadcast station provided:

1. That no announcements or references shall be made over the regular broadcast station regarding the operation of the television broadcast station, except the mere statement that the program being transmitted is the synchronized sound program of a television broadcast station (identify by call letters).
2. That the call letters when identifying the television broadcast station and the broadcast station shall be given on their respective assigned frequencies only.

1035. (a) The following groups of frequencies are allocated by bands for television broadcast stations on an experimental basis and may be changed without prior notice or hearing:

Group A	Group B	Group C
42,000 to 56,000 kc.	60,000 to 86,000 kc.	Any two adjacent frequencies above 110,000 kc. except in the band 400,000 to 401,000 kc.

(b) A license for a television broadcast station will authorize the use of two adjacent frequencies in any one group. The lower carrier frequency shall be for visual broadcast and the higher carrier frequency for the aural broadcast.

(c) A licensee will be granted only one station in each frequency group for operation in the same service area.

(d) An application may be made for two adjacent frequencies (one for the visual and the other for the aural carrier) in any frequency group. However, if it is desired to operate in more than one frequency group, it will be necessary to make separate applications, one for each.

(e) Applicants shall specify the band width required for the proposed transmission.

(f) Carrier frequencies shall be so selected that no emission from any cause will result outside the bands specified in subsection (a) of this rule.

(g) An applicant shall select the frequency which is believed suited for the experiments to be conducted and will cause the least or no interference to established stations.

1036. (a) No frequencies are specifically allocated for facsimile broadcast stations but an applicant may request any frequency specified in Rule 1073 which will cause the least or no interference to established stations.

(b) Each application shall specify the frequency or frequencies desired and the maximum modulating frequencies proposed to be employed.

(c) The operating frequency of a facsimile broadcast station shall be maintained in accordance with the frequency assignments as shown by Rule 980 provided, however, where a more strict adherence to the assigned frequency is necessary to prevent interference, the Commission will specify the tolerance.

(d) A facsimile broadcast station authorized to operate on frequencies regularly allocated to other stations or services shall be required to abide by all rules governing the stations regularly operating thereon, which are applicable to facsimile broadcast stations and are not in conflict with Rules 980 to 986, inclusive, and Rules 1030 to 1039, inclusive, excluding Rule 1035.

1037. The power output rating of a visual broadcast station shall not be in excess of that necessary to carry forward the program of research. The operating power may be maintained at the maximum rating or less, as the conditions of operation may require.

1038. A supplemental report shall be filed with and made a part of each application for renewal of license and shall include statements of the following:

1. Number of hours operated for transmission of visual programs.
2. Comprehensive report of research and experimentation conducted.
3. Conclusions and program for further developments of the visual broadcast service.
4. All developments and major changes in equipment.
5. Any other pertinent developments.

HIGH FREQUENCY BROADCAST STATIONS

1050. The term "high frequency broadcast station" means a station licensed on the very high frequencies for transmission of aural programs for general public reception. The frequencies for these stations are above 25,000 kilocycles and are allocated for this service on an experimental basis subject to change without notice or hearing.

1051. A license for a high frequency broadcast station will be issued only after a satisfactory showing has been made in regard to the following among others:

1. That the applicant has a program of research and experimentation which indicates reasonable promise of substantial contribution to the development of very high frequency broadcasting.
2. That data will be taken on the ground wave propagation characteristics of these frequencies; on the shadows cast by buildings, hills, large bridges, etc.; on the noise level in different parts of the city; on the field intensity necessary to render good broadcast service; and on other allied phases of broadcast coverage.
3. That the research and experimentation will be conducted by qualified engineers.
4. That the applicant is legally and financially qualified and possesses adequate technical facilities to carry forward the program.
5. That the public interest, convenience and necessity will be served through the operation of the proposed station.

1052. (a) Licensees of high frequency broadcast stations shall not broadcast programs for which they receive directly or indirectly any form of compensation but may transmit the programs of regular broadcast stations, including commercial programs, if the call letters when identifying the stations are given on their respective assigned frequencies only and the statement is made on the high frequency broadcast station that the program of a regular broadcast station (identify by call letters) is being broadcast. (In case of the rebroadcast of the program of a broadcast station, see Rule 177.)

(b) No additional charge, direct or indirect, shall be made by the broadcast licensee for simultaneous transmissions by the high frequency broadcast station nor shall commercial accounts be solicited by licensees of regular broadcast stations or others upon representation that the program will also be transmitted by a high frequency broadcast station.

1053. (a) The following groups of frequencies are allocated for high frequency broadcast stations on an experimental basis and may be changed without prior notice or hearing:

<i>Group A</i>	<i>Group B</i>	<i>Group C</i>	<i>Group D</i>
25,950 kc.	26,400 kc.	31,600 kc.	40,300 kc.
26,050	26,450	35,600	41,200
26,100	26,500	38,600	41,600
26,150	26,550	41,000	41,800

Group E

Any four frequencies above 86,000 kc., except in the band 400,000 to 401,000 kc.

(b) Frequencies in groups A and B will be assigned exclusively for amplitude modulation with a band width for high fidelity transmission (30 kilocycles maximum). Frequencies in groups C and E will be assigned for either amplitude modulation with the above band width of frequency modulation with a total band width not greater than 200 kilocycles. Frequencies in group D will be assigned exclusively for frequency modulation with a band width of not greater than 200 kilocycles.

(c) In groups A, B and D only one frequency from each group will be assigned a license for operation in the same service area. A separate license and call letters will be assigned for each frequency. In group C all four frequencies and in group D any four frequencies will be authorized by each license. A license authorizes operation on only one of the four assigned frequencies at any one time.

(d) An applicant shall file separate application for each frequency requested in groups A, B or D. Each application therefor shall specify all four frequencies in group C and any four frequencies in group E.

(e) An applicant shall select the frequency which it is believed is best suited for the experiments to be conducted and which will cause the least or no interference to established stations.

(f) A licensee operating on a frequency in groups A or B shall request reports concerning any reception outside the North American Continent during operation from 10 a. m. to 2 p. m. local standard time. The request for reports shall be made at the time of station identification and at least every thirty minutes.

1054. (a) No high frequency broadcast station will be licensed for an output power rating greater than 1000 watts unless the

applicant can show that greater power is needed to carry on a special program of research.

(b) While conducting apparatus experiments and in case adequate signal for reliable service can be delivered with less power, the operating output may be reduced accordingly.

1055. Each high frequency broadcast station transmitter shall be equipped with automatic frequency control apparatus so designed and constructed that it is capable of maintaining the operating frequency within plus or minus 0.01 percent of the assigned frequency.

1056. A supplemental report shall be filed with each and made a part of the application for renewal of license and shall include statements of the following, among others:

1. The number of hours operated.
2. Data taken in compliance with Rule 1051 (2).
3. Outline of reports of reception and interference and conclusions with regard to propagation characteristics of the frequency assigned.
4. Research and experiments being carried on to improve transmission and to develop broadcasting on the very high frequencies.
5. All developments or major changes in equipment.
6. Any other pertinent developments.
7. Comprehensive summary of all reports received. See Rule 1053 (f).

EXPERIMENTAL BROADCAST STATIONS

1070. The term "experimental broadcast station" means a station licensed to carry on development and research for the advancement of broadcast services along lines other than those prescribed by other broadcast rules.

1071. (a) Licenses for experimental broadcast stations will be issued only after a satisfactory showing has been made in regard to the following, among others:

1. That the applicant has a program of research and development which cannot be successfully carried on under any of the classes of broadcast stations already allocated.
2. That the program of research has reasonable promise of substantial contribution to the development of broadcasting.
3. That the program of research and experimentation will be conducted by qualified persons.
4. That the applicant is legally and financially qualified and possesses adequate technical facilities to carry forward the program.
5. That the public interest, convenience and necessity will be served through the operation of the proposed station.

(b) A separate experimental broadcast station license will be issued for each development proposed to be carried forward. When it is desired to carry on several independent developments, it will be necessary to make a satisfactory showing and obtain a license for each.

1072. (a) A licensee of experimental broadcast stations shall broadcast programs only when they are necessary to the experiments being conducted. No regular, program service shall be broadcast unless specifically authorized by the license.

(b) A licensee of experimental broadcast stations shall not broadcast programs for which it receives, directly or indirectly, any form of compensation but may transmit the programs of regular broadcast stations, including commercial programs, if the call letters when identifying the stations are given on their respective assigned frequencies only and a statement is made on the experimental broadcast station that the program of a regular broadcast station (identify by call letters) is being broadcast in connection with the experimental work. (In case of the rebroadcast of the program of a broadcast station see Rule 177.)

1073. (a) The following frequencies are allocated for assignment to general experimental stations in services other than broadcast and for experimental broadcast stations:

	1,614	23,100
2,396 }		25,700
2,398 }		26,000
2,400 }		27,100
3,490 }		30,100
3,492 }	3,492.5	31,100
3,495 }		31,600

4,795 }		33,100
4,800 }	4,797.5	34,600
		35,600
6,420 }		37,100
6,430 }	6,425	37,600
		38,600
8,650 }		40,100
8,660 }	8,655	40,600
		41,000
12,855 }		86,000 to 400,000
12,870 }	12,862.5	401,000 and above
17,300 }		
17,320 }	17,310	

(b) A license will be issued for more than one of these frequencies upon a satisfactory showing that there is need therefor.

(c) The frequencies suited to the purpose and in which there appears to be the least or no interference to established stations shall be selected.

(d) In cases of important experimentation which cannot be conducted successfully on the frequencies allocated in subsection (a) of this Rule, the Commission may authorize experimental broadcast stations to operate on any frequency allocated for broadcast stations or any frequencies allocated for other services under the jurisdiction of the Commission upon satisfactory showing that such frequencies can be used without causing interference to established services.

1074. (a) The operating frequency of an experimental broadcast station shall be maintained in accordance with the frequency tolerance as shown by Rule 980, provided, however, where a more strict adherence to the assigned frequency is necessary to prevent interference, the Commission will specify the tolerance.

(b) The power output rating of an experimental broadcast station will not be in excess of that necessary to carry on the program of research. The operating power may be maintained at the maximum rating or less, as the conditions of operation may require.

1075. A supplemental report shall be filed with and made a part of each application for renewal of license and shall include statements of the following, among others:

1. The number of hours operated.
2. Comprehensive report on research and experiments conducted.
3. Conclusions and program for further development of the broadcast service.
4. All developments and major changes in equipment.
5. Any other pertinent developments.

1076. An experimental broadcast station authorized to operate on frequencies regularly allocated to other stations or services, shall be required to abide by all rules governing the stations operating regularly thereon which are applicable to experimental broadcast stations and are not in conflict with Rules 980 to 986 inclusive, and Rules 1070 to 1075 inclusive.

SPECIAL BROADCAST STATIONS

970. (a) The following frequencies are allocated for assignment to special broadcast stations on an experimental basis: 1530, 1550 and 1570 kilocycles. Two or more stations may be licensed for simultaneous operation on each frequency.

(b) Licenses for special broadcast stations will be issued only after a satisfactory showing has been made in regard to the following, among others:

1. That the applicant has a program of research and experimentation which indicates reasonable promise of substantial contribution to the development and practical application of high fidelity broadcasting, and will be in addition to and advancement of the work done by regular broadcast stations.
2. That the program of research and experimentation includes a thorough study of advanced antenna design, field intensity surveys and plans for a comprehensive analysis of the response of listeners.
3. That the transmitter and all studios will be equipped so as to be capable of high fidelity transmission.
4. That the operation and experimentation will be under the direct supervision of a qualified engineer with an adequate staff of engineers qualified to carry on the program of research and experimentation.
5. That the programs transmitted, either sponsored or sustaining, will not interfere with the proper prosecution of the program of research and experimentation.
6. That the applicant is legally and financially qualified and possesses adequate technical facilities to carry forward the program of research and experimentation.
7. That the program of research and experimentation will be reasonably independent of the income derived from sponsored programs.
8. That the public interest, convenience and necessity will be served through the operation of the proposed station.

(c) The Commission may require from time to time a licensee of a special broadcast station to conduct experiments that are deemed desirable and reasonable for the development of the service.

(d) The program of research and experimentation as offered in compliance with the requirements of obtaining a license for a special broadcast station, shall be adhered to in the main unless the licensee is authorized to do otherwise by the Commission.

(e) The authorized power of a special broadcast station will not exceed 1 kilowatt. However, the licensee may operate at less than the authorized power where such operation facilitates experimentation.

(f) The licensee of a special broadcast station is not required to adhere to a regular schedule, but shall actively conduct a program of research and experimentation or transmission of programs.

(g) A supplemental report shall be filed with and made a part of each application for a renewal of license of a special broadcast station and shall include statements of the following in the order designated:

1. Comprehensive summary of all research and experimentation conducted.
2. Conclusions and outline of proposed program for further research and development.
3. Number of hours operated, including percentage of sponsored programs.
4. Fidelity characteristics of the equipment, including the transmitter, studio equipment and the telephone lines over which the programs are regularly carried from the studio to the transmitter and the methods used to determine such characteristics.

(h) All rules applying to regular broadcast stations shall apply equally to special broadcast stations, except where in conflict with any term of this rule.