



FEDERAL COMMUNICATIONS COMMISSION



Personnel

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Rules and Regulations Regarding Broadcasting Applications

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Chain Broadcasting Rules

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National Defense Rules

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FCC Bar Association



FEDERAL COMMUNICATIONS COMMISSION



Headquarters: New Post Office Building, Washington, D. C.

Personnel as of January 1, 1943

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NORMAN S. CASE

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Assistants to General Counsel

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NATHAN DAVID

ROSEL H. HYDE

Special Counsel

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EWELL K. JETT

Assistants to Chief Engineer

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GEORGE P. ADAIR

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Assistant Chief Accountant

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Chief, License Division

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ROBERT HODSON

Chief, Technical Division

L. P. WHEELER

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CHARLES W. WORTHY

Information Office

RUSSELL R. CLEVINGER

Director of Information

EDGAR JONES

Assistant to Director of Information

MARY O'LESON

Senior Information Clerk

FIELD FORCE

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. CHARLES C. KOLSTER
Customhouse, Boston, Mass. 2. ARTHUR BATCHELLER
748 Federal Bldg.,
641 Washington St., New York, N. Y. 3. FOREST F. REDFERN
1200 U. S. Customhouse,
2nd & Chestnut Sts., Philadelphia, Pa. 4. EDWARD W. CHAPIN
508 Old Town Bank Bldg.,
Gay St. & Falsway, Baltimore, Md. 5. NATHAN A. HALLENSTEIN
402 New P. O. Bldg., Norfolk, Va. 6. PAUL HERNDON
411 Federal Annex., Atlanta, Ga. EDWARD JACKMAN
208 Post Office Bldg., Savannah, Ga. 7. ARTHUR S. FISH
312 Federal Bldg., Miami, Fla. MILTON W. GRINNELL
203 Post Office Bldg., Tampa, Fla. 8. THEODORE G. DEILER
Customhouse, New Orleans, La. 9. W. I. ABBOTT (acting inspector-in-charge)
404 Federal Bldg., Galveston, Texas. WILLIAM E. CLYNE
329 Post Office Bldg., Beaumont, Texas 10. LOUIS L. McCABE
500 U. S. Terminal Annex, Dallas, Texas 11. BERNARD H. LINDEN
539 U. S. Post Office & Courthouse Bldg.,
Los Angeles, Calif. | <ol style="list-style-type: none"> ALFRED L. RITTER
307 U. S. Customs & Courthouse Bldg.
Union & "F" Sts., San Diego, Calif. 12. FRANCIS V. SLOAN
Customhouse, San Francisco, Calif. 13. KENNETH G. CLARK
805 Terminal Sales Bldg., Portland, Ore. 14. L. C. HERNDON
808 Federal Bldg., Seattle, Wash. 15. DONALD A. MURRAY
504 Customhouse, Denver, Colo. 16. EDWIN S. HEISER
208 U. S. Post Office & Courthouse Bldg.,
St. Paul, Minn. 17. WM. J. McDONELL
809 U. S. Court House, Kansas City, Mo. 18. H. D. HAYES
246 U. S. Courthouse Bldg., Chicago, Ill. 19. EMERY H. LEE
1029 New Federal Bldg., Detroit, Mich. CHARLES F. KOCHER
541 Old Post Office Bldg., Cleveland, Ohio 20. WALTER L. DAVIS
526 Federal Bldg., Buffalo, N. Y. 21. JOHN H. HOMSY
609 Stangenwald Bldg., Honolulu, T. H. 22. WILLIAM R. FOLEY
322-323 Federal Bldg., San Juan, Puerto Rico. 23. HERBERT H. ARLOWE
78 Shattuck Bldg., Juneau, Alaska. |
|---|--|

MONITORING STATIONS

BENJAMIN E. WOLF
Grand Island, Nebr.

IRL D. BALL
Allegan, Mich.

IVER A. ROCKMAN (acting inspector-in-charge)
Kingsville, Texas

LEGAL STAFF

Head Attorneys
WILLIAM H. BAUER
HARRY M. PLOTKIN

Principal Attorneys

HAROLD J. COHEN
JEREMIAH COURTNEY
D. H. DEIBLER
DONALD M. HARRIS
J. FRED JOHNSON, JR.
FANNEY NEYMAN
P. W. SEWARD
HILDA D. SHEA

Attorneys

PHILIP M. BAKER
EUGENE L. BURKE
OMAR L. CROOK
BENITO GAGUINE
ARTHUR A. GLADSTONE
DANIEL W. MEYER
ANNIE PERRY NEAL
ULRIC B. PHILLIPS
ALLAN A. RUBIN

Junior Attorneys

OLIVIA J. SACHS
RICHARD A. SOLOMON
MAURICE WITTON

Senior Attorneys

DAVID C. ADAMS
TYLER BERRY
MARCUS COHN
GEORGE H. HILL
HUGH B. HUTCHINSON
ROBERT L. IRWIN
DARYAL A. MYSE
LEO RESNICK
HARRISON T. SLAUGHTER
ELIZABETH C. SMITH

Associate Attorneys

MAX H. ARONSON
ROBERT M. FENTON
MAX GOLDMAN
VIOLET L. HALEY
GEORGE M. HARRINGTON
JOHN P. SOUTHWAY, JR.
JEROME H. SPINGARN
JOHN E. WICKER

Assistant Attorney

MARGARET H. MC MAHON

FIELD LAW OFFICES

JAMES L. MC DOWELL
311 South Spring St.
Los Angeles, Calif.

LESTER SPILLANE
805 Terminal Sales Bldg.
Portland, Ore.

A. HARRY BECKER
110 S. Dearborn St.
Chicago, Ill.

J. ALFORD GUEST
36 West 44th St.
New York, N. Y.

ENGINEERING STAFF

Head Engineers

MANFRED K. TOEPPEN
LEWIS T. HAYNER
WILLIAM N. KREBS
PHILIP F. SILING
WILLIAM D. TERRELL

Principal Engineers

ALEXANDER T. JENKINS
R. D. JONES
PAUL LION
WAYNE MASON
GLEN E. NIELSEN
STACY W. NORMAN
GEORGE S. TURNER
LYNDE P. WHEELER
JOHN A. WILLOUGHBY
MARION H. WOODWARD

Engineers

WILLIAM F. BRADLEY
HART S. COWPERTHWAIT
THOMAS E. DANIELS
RALPH V. DE COURCEY
JOHN E. DOANE
GEORGE B. DONOHUE
EARL M. JOHNSON
J. BOWKER LEWIS
ALPHONSUS L. O'TOOLE
CURTIS B. PLUMMER
MARVIN A. PRICE
JOHN C. QUINN
RALPH J. RENTON
HAROLD R. WOODYARD

Associate Engineers

JOHN C. CURRIE
DANIEL H. ARNOLD
ELTON D. DAVIS
F. BANKS DUNCAN
HOWARD P. DUCKWORTH
JOHN R. EVANS
CHARLES E. GOEKING
IRVING J. SHEPPERD
DONALD C. KANODF
CHALMER H. NEEB
TAFT NICHOLSON
RAYMOND M. OBERMILLER
JOHN C. PETERSEN
CHARLES O. WILSON
JOSEPH H. WOFFORD

Senior Engineers

EDWARD W. ALLEN, JR.
RAYMOND ASSERSON
JAMES E. BARR
LESLIE R. BRADY
CYRIL M. BRAUM
HOWARD A. BURROUGHS
GEORGE J. DEMPSEY
JOSEPH H. HALLOCK
CECIL G. HARRISON
HERRICK JOHNSON
LOUIS E. KEARNEY
ALBERT L. KREIS
HOWARD C. LOONEY
ALBERT L. MC INTOSH
WILLIAM L. NORTH
CLURE H. OWEN
LELAND C. QUAINANCE
GEORGE K. ROLLINS
JOHN A. RUSS
NOBLE C. SHUMWAY, JR.
VIRGIL R. SIMPSON
LAWRENCE W. SMELTZER
JAMES P. VEATCH
GLENN E. WEST

Engineer Draftsman

BRAXTON L. PEELE
BERNARD CARPENTER

Assistant Engineers

MERLE L. BALLOU
JAMES E. MOFFATT
JAMES RUBERTICCHIO
GEORGE R. STEWART

Engineering Aides

HERBERT L. BEURY
GEORGE L. GADEA

ACCOUNTING STAFF

Head, Accounting Regulations Division

HENRY M. LONG

Head, Field Division

MARK S. McCOY

Head, Statistical Division

ALEXANDER UELAND

Head, Rates and Traffic Division

WILLIAM G. BUTTS

Head Accountants

HENRY F. BUCHANAN
JAMES E. HUFFMAN
CHARLES R. MAKELA
HARRY TENNYSON

Principal Accountants

ROBERT F. BRADEN
EDWARD C. HARTUNG
FRANCIS P. HEARTSILL
EMERY E. HENSINGER
JAMES B. LOWELL
HARLAND R. MORRIS
JOHN J. NORDBERG
VIRGIL P. RUSSELL
ELBERT B. WEST

ACCOUNTING OFFICES

MAX KRUMHOLZ
713 Atlanta National Bldg., Atlanta, Ga.

LON A. CEARLEY
45 Broadway, New York, N. Y.

CURTIS M. BUSHNELL
1860 Railway Exchange Bldg., St. Louis, Mo.

PAUL SUMMERHAYS
605 Market St., San Francisco, Calif.

SECRETARIAL STAFF

PETER SHUEBRUK
Assistant to Chairman Fly
CHARLOTTA GALLAP
Private Secty. to Chairman Fly
EDWARD F. McKAY...Secty. to Comm. Walker
HELEN HADLEY...Asst. Secty. to Comm. Walker
HENRY M. BARRY...Secty. to Comm. Case
MINNIE SPARKS...Asst. Secty. to Comm. Case
MARGARET L. PRESTON,
Secty. to Comm. Craven
MIRIAM K. LOVELESS,
Asst. Secty. to Comm. Craven
ABRAHAM MILLER...Secty. to Comm. Payne
RUTH T. KOPPIALKY,
Asst. Secty. to Comm. Payne
WALTER E. JAMES...Secty. to Comm. Durr
MADGE B. WARNER, Asst. Secty. to Comm. Durr
SAMUEL MILLER... Secty. to Comm. Wakefield
ROWENA G. ROCKHOLD,
Asst. Secty. to Comm. Wakefield
LAURA L. HOLLINGSWORTH,
Secty. to Mr. Slowie

SALLY LINDO, Secty. to Director of Information
RUTH RICHTER...Secty. to Chief, License Div.
THAIS O'BRIEN...Secty. to Genl. Counsel Denny
GRACE H. BRICKER,
Secty. to Asst. Genl. Counsel Hyde
L. GRACE ALBIEN
Secty. to Asst. Genl. Counsel Cottone
MARGARET L. HERRELL,
Secty. to Head Attorney Plotkin
VIOLA SLATTERY,
Secretary to Chief Engineer Jett
ROSE E. STOUGH,
Secty. to Asst. Chief Engineer Gross
JEAN K. WEISSMAN
Secty. to Asst. Chief Engineer Adair
EVA E. HOCUTT
Secty. to Head Engineer Krebs
LILLIAN M. CONLEY,
Secty. to Chief, International Division
EUNICE W. KIRKLAND
Secty. to Chief, Field Division
RUTH H. DRISCOLL,
Secty. to Chief, Technical Division
FRANCES GROOM...Secty. to Chief Accountant

F. C. C. REGULATIONS REGARDING BROADCASTING APPLICATIONS

As of January 1, 1943

PLACE of filing; number of copies. Each application for construction permit or station license, and all papers incorporated therein and made a part thereof, with respect to the number of copies and place of filing, shall be submitted as follows:

Three copies direct to Washington, D. C.

Contents. Each application shall be specific with regard to frequency or frequencies, power, hours of operation, equipment, location of the station, and other information required by the application forms. An application for broadcast facilities in the band 550 kilocycles to 1600 kilocycles shall be limited to one specific frequency. An application for radio station construction permit or license requesting alternate facilities will not be accepted.

Full disclosures. Each application shall contain full and complete disclosures with regard to the real party or parties in interest, and their legal, technical, financial and other qualifications, and as to all matters and things required to be disclosed by the application forms.

Additional statements. In addition the Commission may require an applicant to submit such documents and written statements of fact, under oath, as in its judgment may be necessary.

Installation or removal of apparatus. Applications for construction permit or modification thereof, involving removal of existing transmitting apparatus and/or installation of new transmitting apparatus, shall be filed at least sixty days prior to the contemplated removal and/or installation.

Forfeiture of construction permits; extensions of time.—(a) A construction permit shall be automatically forfeited if the station is not ready for operation within the time specified therein or within such further time as the Commission may have allowed for completion, and a notation of the forfeiture of any construction permit under this provision will be placed in the records of the Commission as of the expiration date.

(b) Any application (FCC Form No. 701) for extension of time within which to construct a station shall be filed at least thirty days prior to the expiration date of such permit if the facts supporting such application for extension are known to the applicant in time to permit such filing. In other cases such applications will be accepted upon a showing satisfactory to the Commission of sufficient reasons for filing within less than thirty days prior to the expiration date. Such applications will be granted upon a specific and detailed showing that the failure to complete was due to causes not under the control of the grantee, or upon a specific and detailed showing of other matters sufficient to justify the extension.

License following construction permit. In all cases where a construction permit is required by Section 319 of the Act for the construction of a station, the application for station license (or for station license or modification thereof, if for station other than broadcast) shall be filed by permittee prior to service or program tests.

Where construction permit not required. Each application for new license, except amateur, where a construction permit is not a prerequisite thereto, shall be filed at least sixty days prior to the contemplated operation of the station: *Provided, however,* That in emergency and for good cause shown, the Commission may waive the requirements of this rule.

Modification of license. An application for modification of license, except amateur, and except as otherwise provided by these rules, may be filed for change in frequency, change in operating power where no construction is necessary, change in hours of operation, and for change in name of licensee where no change in ownership or control is involved. In case of a broadcast station, an application for modification of license may be filed for change in location of main studio. In case of all stations other than broadcast, an application for modification of license may be filed for change in points of communication, change in nature of authorized service,

and to cover an outstanding construction permit where the station is already licensed. Except when filed to cover construction permit, each application for modification of license shall be filed at least sixty days prior to the contemplated modification of license; *Provided, however*, that in emergencies and for good cause shown, the requirements hereof may be waived in so far as time for filing is concerned.

Renewal of license. Unless otherwise directed by the Commission, each application for renewal of license shall be filed at least sixty days prior to the expiration date of the license sought to be renewed. No application for renewal of license of a standard broadcast station will be considered unless there is on file with the Commission, the balance sheet and income statement currently required by the rules of practice and procedure of the Commission, reference to which by date and file number shall be included in the application.

Financial statements. Each licensee of a standard broadcast station shall file with the Commission on or before March 1 of each year on Forms 705 and 706, or such other forms as may be prescribed by the Commission, a balance sheet showing the financial condition of a licensee as of December 31 of the preceding year and an income statement for the preceding calendar year. Each such form shall be subscribed and verified by: (1) the parties or party filing the statement; (2) in the case of a corporation, an officer of the corporation. (An attorney for either is allowed with sufficient reason.)

Filing directed by Commission. Whenever the Commission regards an application for a renewal of license as essential to the proper conduct of a hearing or investigation, and specifically directs that it be filed by a certain date, such application shall be filed within the time thus specified. If the licensee fails to file such application within the prescribed time, the hearing or investigation shall proceed as if such renewal application had been received.

Temporary extension of station licenses. Where there is pending before the Commission any application, investigation, or proceeding which, after hearing might lead to or make necessary the modification of, revocation of, or the refusal to renew an existing license, the Commis-

sion may, in its discretion, grant a temporary extension of such license; *Provided, however*, That no such temporary extension shall be construed as a finding by the Commission that the operation of any radio station thereunder will serve public interest, convenience, and necessity beyond the express terms of such temporary extension of license; *And provided further*, That such temporary extension of license will in no wise affect or limit the action of the Commission with respect to any pending application or proceeding.

Assignment or transfer of control. (a) *General.* An application for consent to assignment of a construction permit or license, or for consent to transfer of control of a corporation holding a construction permit or license, shall be filed with the Commission at least sixty days prior to the contemplated effective date of assignment or transfer of control. If the assignment or transfer is voluntary, the appropriate application shall be fully executed by all parties and, if involuntary, by assignee or transferee only.

(b) *Broadcast.* With each such application, involving any standard broadcast station construction permit or license, there shall be submitted under oath or affirmation all information required to be disclosed by the application forms prescribed by the Commission, together with such other information under oath or affirmation as the Commission may require.

(c) *Other than broadcast.* In all classes of applications for consent to assignment of construction permit or license or for consent to transfer of control of a corporation holding a construction permit or license, other than those prescribed in paragraph (b), the Commission may require the furnishing of such information as in its discretion is deemed necessary.

Special temporary authorizations. (a) Special temporary authority may be granted for the operation of a station for a limited time, or in a manner and to an extent or for service other or beyond that authorized in an existing license upon proper application therefor; *Provided, however*, That no such request will be considered unless:

1. It is received by the Commission at least ten days previous to the date of proposed operation: *Provided, however*, That any such request received within less than

ten days may be accepted upon due showing of sufficient reasons for the delay in submitting such request.

2. Full particulars as to the purpose for which the request is made are stated.

(b) If the request is for operation of a standard broadcast station, the following additional requirements shall apply:

1. No such authority may be granted to a person other than the licensee of an existing standard broadcast station.

2. The request shall be limited to a definite or temporary period or periods for the transmission of programs or events which are not recurrent, and approval thereof will not be granted for a period in excess of thirty days.

3. The request shall show that it has been seasonably submitted to other stations whose operations may be affected (to be determined as indicated below), and the date on which such request was so submitted, which such stations shall submit direct to the Commission waiver of objection to the granting thereof or a statement of the nature of any objections that such stations may desire to interpose:

4. If the request is for operation upon a clear channel, showing required above shall be made with respect to the Class I station or stations on the channel.

5. If the request is made by time sharing station, the showing required above shall be made with respect to the station or stations with which time is shared.

6. In any case, the showing required above must be made with respect to any station on the same or adjacent channels when any such station is located within the interference range of the station making the request to be determined by the "Standards of Good Engineering Practice Concerning Standard Broadcast Stations."

7. Waiver of objections, or statement of objections, when furnished under this rule, shall be forwarded direct to the Commission by the responding station, and in the case of waiver shall show whether the waiver covers simultaneous operation or whether the station is giving up the time sought by the applicant. Where it appears that the proposed operation has been seasonably submitted to the station or stations referred to in sub-paragraphs (4), (5), and (6), above, and no reply has been received, it will be considered that such stations have waived any objections to the granting of the request.

Special Service Authorizations. Special Service Authority may be issued to the licensee of a radio station for a service other or beyond that authorized in its

existing license for a period not exceeding that of its existing license upon proper application therefor*; and satisfactory showing in regard to the following, among others:

(a) That the requested operation may not be granted on a regular basis under the existing rules governing the operation of the class of stations to which the applicant belongs;

(b) That in the event the application is on behalf of a standard broadcast station that experimental operation is not involved as provided for by Part 3, Section 3.22, of the Rules and Regulations;

(c) That public interest, convenience, and necessity will be served by granting the authorization requested.

Inconsistent or conflicting applications. When an applicant has an application pending and undecided, no other inconsistent or conflicting application filed by the same applicant, his successor or assignee, or on behalf or for the benefit of said applicant, will be accepted for consideration.

Multiple applications; broadcast service. In the broadcast service, while there is one application for new or additional facilities pending for a standard, international, television, facsimile, high frequency or experimental broadcast station, the Commission will not consider another application for new or additional facilities for a station of the same class (as given above) to serve in whole or in part the same area, by the same applicant or by his successor or assignee, or on behalf or for the benefit of the original parties in interest. Two such applications may not be filed simultaneously.

Repetitious applications. (a) *Broadcast services.* In the broadcast service, where an applicant has been afforded an opportunity to be heard with respect to a particular application for a new standard, international, television, facsimile, high frequency, or developmental broadcast station, or for an extension or enlargement of existing service or facilities, and the Commission has, after hearing or default, denied the application or dismissed it with prejudice, the Commission will not consider another application for a station of the same class (as given above) to serve in whole or in part the same area, by the same applicant or his successor or assignee, or on behalf of or for the benefit of the original parties in interest, until after the lapse of twelve months from the effective date of the Commission's order.

Applications for authorizations to use frequencies assigned to the international broadcast service may be made on an informal basis; formal application must be made for other authorizations.

(b) *Other radio services.* In any other radio service, where an applicant has been afforded an opportunity to be heard with respect to a particular application for a new station, or for an extension or enlargement of service or facilities, and the Commission has, after hearing or default, denied the application or dismissed it with prejudice, the Commission will not consider a like application involving service of the same kind to the same area by the same applicant, or by his successor or assignee, or on behalf of or for the benefit of the original parties in interest, until after the lapse of twelve months from the effective date of the Commission's order: Provided, however, That the Commission may waive the requirements of this rule in situations affecting safety of life or property.

Pending appeals. Where an appeal has been taken from the action of the Commission in denying a particular applicant another application for the same class of broadcast station and for the same area, in whole or in part, filed by the same applicant or by his successor or assignee, or on behalf of or for the benefit of the original parties in interest, will not be considered until the final disposition of such appeal.

Action on Applications

Partial grants. Where any application is granted in part, or with any privileges, terms, or conditions other than those requested, without a hearing thereon, the action of the Commission shall be considered as granting such application unless the applicant shall, within twenty days from the date on which public announcement of such grant is made, or from its effective date if a later date is specified, file with the Commission a written request for a hearing with respect to the part, or with respect to the privileges, terms, or conditions, not granted. Upon receipt of such request, the Commission will vacate its original action upon the application and set the application for hearing in the same manner as other applications are set for hearing, and the applicant and other parties in interest will be notified thereof.

Designation for hearing. In cases where an application for radio facilities is proper upon its face but the Commission is unable to determine upon examination of the same that the granting of such application either in whole or in part, would serve public interest, con-

venience or necessity, the Commission will designate the same for hearing and the following procedure will govern it:

(a) The Secretary shall forthwith mail a written notice to the applicant setting forth the action of the Commission designating the application for hearing, together with such statement of the Commission's reasons therefor as shall be appropriate to the nature of the application.

(b) In order to avail himself of the opportunity to be heard the applicant in person or by his attorney shall, within fifteen days of the mailing of the notice of designation for hearing by the Secretary, file with the Commission a written appearance stating that he will appear and present evidence on the issues specified in the statement of reasons furnished by the Commission on such date as may be fixed for the hearing. In cases other than standard broadcast, high frequency broadcast, international broadcast and television, the applicant will accompany his appearance with an additional copy of his application and supporting documents.

Answers to Notices of Violation

Under Title III of the Act. Any licensee receiving official notice of a violation of the terms of the Communications Act of 1934, any legislative act, Executive Order, treaty to which the United States is a party, or the Rules and Regulations of the Federal Communications Commission, shall, within three days from such receipt, send a written answer direct to the Federal Communications Commission at Washington, D. C., and a copy thereof to the office of the Commission originating the official notice when the originating office is other than the office of the Commission in Washington, D. C.; *Provided, however,* That if an answer cannot be sent nor an acknowledgment made within such three-day period by reason of illness or other unavoidable circumstances, acknowledgment and answer shall be made at the earliest practicable date with a satisfactory explanation of the delay. The answer to each notice shall be complete in itself and shall not be abbreviated by reference to other communications or answers to other notices. If the notice relates to some violation that may be due to the physical or electrical characteristics of transmitting apparatus, the answer shall state fully what steps, if any, are taken to prevent future violations,

and if any new apparatus is to be installed, the date such apparatus was ordered, the name of the manufacturer, and promised date of delivery. If the installation of such apparatus requires a construction permit, the file number of the application shall be given, or if a file number has not been assigned by the Commission, such identification as will permit of ready reference. If the notice of violation relates to some lack of attention or improper operation of the transmitter, the name and license number of the operator in charge shall be given.

Revocation and Modification of Station Licenses

Revocation. Whenever the Commission shall institute a revocation proceeding against the holder of any radio station construction permit or license under Section 312 (a), it shall initiate said proceeding by serving upon said licensee an order of revocation effective not less than fifteen days after written notice thereof is given the licensee. The order of revocation shall contain a statement of the grounds and reasons for such proposed revocation and a notice of the licensee's right to be heard by filing with the Commission a written request for hearing within fifteen days after receipt of said order. Upon the filing of such written request for hearing by said licensee the order of revocation shall stand suspended and the Commission will set a time and place for hearing and shall give the licensee and other interested parties notice thereof. If no request for hearing on any order of revocation is made by the licensee against whom such an order is directed within the time hereinabove set forth, the order of revocation shall become final and effective, without further action of the Commission. When any order of revocation has become final, the person whose license has been revoked shall forthwith deliver the station license in question to the inspector in charge of the district in which the licensee resides.

Modification. (a) *Order to show cause.* Whenever the Commission shall determine that public interest, convenience, and necessity would be served, or any treaty ratified by the United States will be more fully complied with, by the modification of any radio station construction permit or license either for a limited time, or for the duration of the term thereof, it shall issue an order for such licensee to show cause why such construction permit or license should not be modified.

(b) *Contents of order to show cause.* Such order to show cause shall contain a

statement of the grounds and reasons for such proposed modification, and shall specify wherein the said construction permit or license is required to be modified. It shall require the licensee against whom it is directed, to be and appear at a place and time therein named, in no event to be less than thirty days from the date of receipt of the order to show cause why the proposed modification should not be made and the order of modification issued.

(c) *Failure to appear.* If the licensee against whom the order to show cause is directed does not appear at the time and place provided in said order, a final order of modification shall issue forthwith.

Suspension of Operator Licenses

Order of suspension. 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 shall not be effective until actually received by 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 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, shall deem appropriate. Upon the conclusion of said hearing the Commission may affirm, modify, or revoke said order of suspension.

Proceedings. Proceedings for the suspension of an operator's license shall in all cases be initiated by the entry of an order of suspension. Respondent will be given notice thereof together with notice of his right to be heard and to contest the proceeding. The effective date of the suspension will not be specified in the original order but will be fixed by subsequent motion of the Commission in accordance with the conditions specified above. Notice of the effective date of suspension will be given respondent, who shall send his operator license to the office of the Commission in Washington, D. C., on or before the said effective date, or, if the effective date has passed at the time notice is received, the license shall be sent to the Commission forthwith.

RULES APPLICABLE TO STATIONS ENGAGED IN CHAIN BROADCASTING

Licensing Requirements

No license shall be granted to a standard broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization¹ under which the station is prevented or hindered from, or penalized for, broadcasting the programs of any other network organization.

No license shall be granted to a standard broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization which prevents or hinders another station serving substantially the same area from broadcasting the network's programs not taken by the former station, or which prevents or hinders another station serving a substantially different area from broadcasting any program of the network organization. This regulation shall not be construed to prohibit any contract, arrangement, or understanding between a station and a network organization pursuant to which the station is granted the first call in its primary service area upon the programs of the network organization.

No license shall be granted to a standard broadcast station having any contract, arrangement, or understanding express or implied, with a network organization which provides, by original term, provisions for renewal, or otherwise for the affiliation of the station with the network organization for a period longer than two years: *Provided*, That a contract, arrangement, or understanding for a period up to two years, may be entered into within 120 days prior to the commencement of such period.

No license shall be granted to a standard broadcast station which options² for network programs any time subject to call on less than 56 days' notice, or more time than a total of three hours³ within each of four segments of the broadcast day, as herein described. The broadcast day is divided into four segments, as follows: 8:00 a.m. to 1:00 p.m.; 1:00 p.m. to 6:00 p.m.; 6:00 p.m. to 11:00 p.m.; 11:00 p.m. to 8:00 a.m.⁴ Such options

may not be exclusive as against other network organizations and may not prevent or hinder the station from optioning or selling any or all of the time covered by the option, or other time, to other network organizations.

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

No license shall be granted to a network organization, or to any person directly or indirectly controlled by or under common control⁵ with a network organization, for more than one standard broadcast station where one of the stations covers substantially the service area

¹ The term "network organization" as used herein includes national and regional network organizations. See Chapter VII, J, of Report on Chain Broadcasting.

² As used in this section, an option is any contract, arrangement, or understanding, express or implied, between a station and a network organization which prevents or hinders the station from scheduling programs before the network agrees to utilize the time during which such programs are scheduled, or which requires the station to clear time already scheduled when the network organization seeks to utilize the time.

³ All time options permitted under this section must be for specified clock hours, expressed in terms of any time system set forth in the contract agreed upon by the station and network organization. Shifts from daylight saving to standard time or vice versa may or may not shift the specified hours correspondingly as agreed by the station and network organization.

⁴ These segments are to be determined for each station in terms of local time at the location of the station but may remain constant throughout the year regardless of shifts from standard to daylight saving time or vice versa.

⁵ The word "control" as used herein, is not limited to full control but includes such a measure of control as would substantially affect the availability of the station to other networks.

of the other station, or for any standard broadcast station in any locality where the existing standard broadcast stations are so few or of such unequal desirability (in terms of coverage, power, frequency, or other related matters) that competition would be substantially restrained by such licensing. (Effective date of this section may be extended from time to time with respect to any station in order to permit the orderly disposition of properties.)

No license shall be issued to a standard broadcast station affiliated with a network organization which maintains more than one network: *Provided*, That this regulation shall not be extended from time to time if such networks are not operated simultaneously, or if there is no substantial overlap in

the territory served by the group of stations comprising each such network. (Effective date of this section shall be suspended indefinitely and any further order of the Commission placing said section in effect shall provide for not less than six months' notice and for further extension of the effective date from time to time in order to permit the orderly disposition of properties.)

No license shall be granted to a standard broadcast station having any contract, arrangement, or understanding, express or implied, with a network organization under which the station is prevented or hindered from, or penalized for, fixing or altering its rates for the sale of broadcast time for other than the network's programs.

FCC REGULATIONS REGARDING NATIONAL DEFENSE

Any common carrier or the licensee of any radio station subject to the Communications Act may utilize its facilities to render free service to the government for military or naval communications in preparation for national defense. The government agency concerned will keep the Commission generally informed of the services of this kind accepted. Nothing herein or in any other regulation of the Commission shall be construed to require any such carrier or station to participate in any such communication.

The Federal Communications Commission may authorize the licensee of any radio station during a period of national emergency to

operate its facilities upon such frequencies with such power and points of communication, and in such a manner beyond that specified in the station license as may be requested by the Army or Navy.

No provision of the Commission's Rules and Regulations shall, in time of war, prevent the master of any vessel of the United States from taking any action whatsoever in regard to the radio installation, the operators, the transmission and receipt of messages, and the radio service of the ship whenever in his discretion such action is necessary to carry out the instructions of the United States naval control officers and other instructions issued by the Navy Department.



RULES GOVERNING ST BROADCAST STATIONS

The term "ST" broadcast station" means a station used to transmit programs from the main studio to the transmitter of a high frequency broadcast station, or an international broadcast station.

An ST broadcast station will be licensed only to the licensee of a high frequency broadcast station or of an international broadcast station. Only one ST broadcast station will be authorized in connection with the license for any high frequency broadcast station. Not more than two ST broadcast stations will be authorized in connection with the license for any international broadcast station. Each such ST station shall be at a fixed location.

The license of an ST broadcast station authorizes the transmission of program material, including commercial programs, from the main studio to the transmitter of the high frequency broadcast station or international broadcast station in connection with which it is authorized.

Frequency Assignment

The following frequencies are allocated for assignment to ST broadcast stations upon an experimental basis:

kc	kc	kc	kc	kc
330,400	333,400	335,800	338,200	340,600
331,000	334,000	336,400	338,800	341,200
331,600	334,600	337,000	339,400	341,800
332,200	335,200	337,600	340,000	342,400
332,800				343,000
				343,600

ST broadcast stations will be authorized to employ frequency modulation only.

The maximum frequency swing employed by ST broadcast stations shall not be in excess of 200 kilocycles.

The licensee of each ST broadcast station shall install and operate a directional antenna designed so that the gain in power toward the receiver shall be 10

(field gain 3.16) times the free space field from a doublet (137.6 mv/m for 1 kw at one mile). In all other directions 30° or more off the line to receiver, the power gain shall not exceed ¼ of the free space field gain from a doublet.

ST broadcast stations will be licensed with a power output not in excess of that necessary to render a satisfactory service.

The licensee of each ST broadcast station is required to conduct experimentation with regard to the following:

- (a) Design of equipment and power required to render a satisfactory service.
- (b) Design and adjustment of directional transmitting antennas.
- (c) Design and location of receiving antennas.

Supplemental Report

A supplemental report shall be filed with and made a part of each application for renewal of application and shall include statements as to the following items:

- (a) Total hours of operation.
- (b) Continuity of service, causes and duration of any interruptions.
- (c) Power required to deliver satisfactory signal at receiver.
- (d) Data on design, adjustments and operation of directional receiving and transmitting antennas.
- (e) Interference to service resulting from other stations or other sources.
- (f) Cost of transmitter and receiver installation and expense of operation.
- (g) Overall fidelity of equipment, frequency and amplitude.

Each ST broadcast station shall announce its call letters at the beginning and end of each period of operation, and during operation, at least once every hour it either shall announce its call letters or shall make an announcement which will permit it to be identified.

¹The abbreviation "ST" is derived from "studio-transmitter."

FCC Regulations

Regarding High Frequency Broadcast Stations

As of January 1, 1943

The term "high frequency broadcast station" means a station licensed primarily for the transmission of radiotelephone emissions intended to be received by the general public and operated on a channel in the High Frequency broadcast band. High frequency broadcast stations must use frequency modulation.

Definitions

High Frequency Broadcast Band. The term "high frequency broadcast band" means the band of frequencies extending from 43,000 to 50,000 kilocycles, both inclusive.

Frequency Modulation. The term "frequency modulation" means a system of modulation of a radio signal in which the frequency of the carrier wave is varied in accordance with the signal to be transmitted while the amplitude of the carrier remains constant.

Center Frequency. The term "center frequency" means the frequency of the carrier wave with no modulation. (With modulation the instantaneous operating frequency swings above and below the center frequency. The operating frequency with no modulation shall be the center frequency within the frequency tolerance).

High Frequency Broadcast Channel. The term "high frequency broadcast channel" means a band of frequencies 200 kilocycles wide and is designated by its center frequency. Channels for high frequency broadcast stations begin at 43,100 kilocycles and continue in successive steps of 200 kilocycles to and including the frequency of 49,900 kilocycles.

Service Area. The term "service area" of a high frequency broadcast station means the area in which the signal is not subject to objectionable interference or objectionable fading. (High frequency broadcast stations are considered to have only one service area; for determination of such area see *Standards of Good Engineering Practice for High Frequency Broadcast Stations.*)

Antenna Field Gain. The term "antenna field gain" of a high frequency broadcast antenna means the ratio of the effective free space field intensity produced at one mile in the horizontal plane expressed in millivolts per meter for 1 kilowatt antenna input power to 137.6.

Free Space Field Intensity. The term "free space field intensity" means the field intensity that would exist at a point in the absence of waves reflected from the earth or from reflecting objects.

Frequency Swing. The term "frequency swing" is used only with respect to frequency modulation and means the instantaneous departure of the carrier frequency from the center frequency resulting from modulation.

Multiplex Transmission. The term "multiplex transmission" means the simultaneous transmission of two or more signals by means of a common carrier wave. (Multiplex transmission as applied to high frequency broadcast stations means the transmission of facsimile or other aural signals in addition to the regular broadcast signals.)

Percentage Modulation. The term "percentage modulation" with respect to frequency modulation means the ratio of the actual frequency swing to the frequency swing required for 100 per cent modulation expressed in percentage. (For high frequency broadcast stations, a frequency swing of 75 kilocycles is standard for 100 per cent modulation.)

Experimental Period. The term "experimental period" means that period of time between 12 midnight and sunrise. This period may be used for experimental purposes in testing and maintaining apparatus by the licensee of any high fre-

quency broadcast station, on its assigned frequency and with its authorized power, provided no interference is caused to other stations maintaining a regular operating schedule within such period.

Main Studio. The term "main studio" means, as to any station, the studio from which the majority of its local programs originate and/or from which a majority of its station announcements are made of programs originating at remote points.

Allocation of Facilities¹

Basis of Licensing High Frequency Broadcast Stations. High frequency broadcast stations shall be licensed to serve a specified area in square miles. The contour bounding the service area and the radii of the contour shall be determined in accordance with the *Standards of Good Engineering Practice for High Frequency Broadcast Stations.*

Service Areas (Definitions)

For the purpose of determining the areas to be served by high frequency broadcast stations, the following definitions apply:

(a) "Basic trade areas" and "limited trade areas" consist of areas the boundaries of which are determined by the Commission on the basis of showings made in applications as to retail trading areas or consumer trading areas and from government data². Each basic trade area includes one "principal city." The boundaries of the basic trade areas are adjoining and the aggregate of all such areas is the total area of the United States. Each "limited trade area" includes one city. The boundaries of limited trade areas are not necessarily adjoining. Such areas may include portions of other limited trade areas and may extend into more than one basic trade area.

(b) "Principal city" means the largest city or the city or cities designated as "principal city" by the Commission, within a basic trade area. "City" means any city, town, or borough in a basic trade area except the principal city. Each "city" has a limited trade area.

¹The rules relating to allocation of facilities are intended primarily for the information of applicants. Nothing contained in said rules shall be regarded as any recognition of any legal right on behalf of any person to a grant or denial of any application.

²There are several current and recognized authorities on retail trading areas or consumer trading areas from which the applicant may prepare its showing and to which the Commission will give consideration in making its determination.

(c) "Rural area" means all land area outside incorporated towns or cities with population greater than 2500 and where the density of population is less than 150 per square mile. Incorporated towns or cities with population from 2500 to 5000 without a high frequency broadcast station and not adjacent to larger cities may be considered rural area.

Service Areas—Established

The Commission in considering applications for high frequency broadcast stations will establish service areas. Such stations will be licensed to serve areas having the following characteristics:

(a) An area comprising a limited trade area and a city. The station shall render good service to the city and its service area shall conform generally with the limited trade area.

(b) An area comprising a basic trade area and a principal city. The station shall render good service to the principal city and its service area shall conform generally with the basic trade area; *Provided, however,* That the station may be licensed to serve temporarily an area less than the basic trade area, subject to the following conditions: (1) that an applicant for authority to serve temporarily less than the basic trade area show substantial reason for relaxation of the requirement to serve the basic trade area and for specification of the proposed service area; (2) that the area to be served include as much of the basic trade area as reasonably may be required in the public interest to be served and in no event less than the principal city and the metropolitan district in which it is located; (3) that such an applicant show compliance with the section of these rules regarding similarity of service areas for all stations in the same established area except that such sections shall apply only in relation to other stations established under this proviso; (4) that the Commission may condition the granting of any application for renewal of license of such station upon the rendering of service by such station to an area conforming generally with the basic trade area.

(c) An area of at least 15,000 square miles comprising primarily a large rural area, and particularly that part of basic trade areas which cannot be served by stations assigned basic trade areas due to economical and technical limitations.

The service area may include one or more principal city or cities, provided that in rendering service to such cities, the service to rural areas which the station is designated to serve is not impaired. The transmitter of such a station shall be located in such a manner that the service area, (1) shall extend into two or more basic trade areas, (2) shall not conform generally with a basic trade area, and (3) shall not merely extend beyond a basic trade area.

(d) An area having substantially different characteristics (social, cultural, or economic) from those areas specified in subsections (a), (b) and (c) of this section where, by reason of special conditions, it is shown that a need (which cannot be supplied by a station serving areas under subsections (a), (b) or (c) of this section) for the proposed service both program and technical exists which makes the establishment of the service area in the public interest, convenience or necessity. The Commission will give particular consideration in this connection to competitive advantages which such stations would have over other stations established under other provisions.

(e) In case it is not economically and technically feasible for a station assigned a basic or limited trade area to serve substantially all such area, the Commission will establish the service area on the basis of conditions which obtain in the trade area.

(f) In case an applicant proposes a change in an established service area, the applicant shall make a full showing as to need for such change and the effect on other stations serving the area.

Time of Operation. All high frequency broadcast stations shall be licensed for unlimited time operation.

Showing Required. Authorization for a new high frequency broadcast station or increase in facilities of an existing station will be issued only after a satisfactory showing has been made in regard to the following matters:

(a) That the area which the applicant proposes to serve has the characteristics of an area described in subparagraphs (a), (b), or (c) of the section on *Service Areas* stated above.

(b) Where a service area has been established in which one or more existing high frequency broadcast stations are in operation, that the contours of any new station proposed to serve such area will compare with those of the existing station or stations as nearly as possible, or that the service area already established should be modified.

(c) That objectionable interference will not be caused to existing stations or that if interference will be caused the need for the proposed service outweigh the need for the service which will be lost by reason of such interference.

(d) That the proposed station will not suffer interference to such an extent that its service would be reduced to an unsatisfactory degree.

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

(f) That the applicant is financially qualified to construct and operate the proposed station; and, if the proposed station is to serve substantially the same area as an existing station, that applicant will be able to compete effectively with the existing station or stations.

(g) That the program service will include a portion of programs particularly adapted to a service utilizing the full fidelity capability of the system, as set forth in the Standards of Good Engineering Practice for High Frequency Broadcast Stations.

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

(i) That the applicant is legally qualified, is of good character, and possesses other qualifications sufficient to provide a satisfactory public service.

(j) That the facilities sought are subject to assignment as requested under existing international agreements and the Rules and Regulations of the Commission.

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

Channel Assignments

The channels set forth below with the indicated center frequencies are available for assignment to high frequency broadcast stations to serve the areas provided in the section on *Service Areas Established* stated above:

(a) An applicant for a station to serve an area specified in paragraphs (a) or (b) of that section to be located in a principal city or city which has a popu-

• • • **FM STATION REGULATIONS** • • •

lation less than 25,000 (city only) shall apply for one of the following channels:

48900	49300	49500	49700
49100		49900	

(b) An applicant for a station to serve an area specified in paragraph (a) or (b) of that section to be located in a principal city or city which has a population greater than 25,000 (city only) shall apply for one of the following channels:

44500	45700	46700	47900
44700	45900	46900	48100
44900	46100	47100	48300
45100	46300	47300	48500
45300	46500	47500	48700
45500		47700	

(c) An applicant for a station to serve primarily a large rural area, specified in paragraph (c) or an area specified in paragraph (d) of that section shall apply for one of the following channels:

43100	43500	43900	44300
43300	43700	44100	

(d) Notwithstanding the provisions of subsection (a) of this section, an applicant for a station to serve an area specified in section of these rules defining the establishment of "an area comprising a limited trade area and city," to be located in a city having a population greater than 25,000, in or adjacent to any metropolitan district having a population greater than 1,000,000, may apply for one of the following channels:

49100	49500	49900
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Special Provisions Concerning Assignments

(a) Stations located in the same city shall have substantially the same service area.

(b) High frequency broadcast stations shall use frequency modulation exclusively.

(c) Stations serving a substantial part of the same area shall not be assigned adjacent channels.

(d) One channel only will be assigned to a station.

Multiple Transmission

Facsimile Broadcasting and Multiplex Transmission. The Commission may

grant authority to a high frequency broadcast station for the multiplex transmission of facsimile and aural broadcast programs provided the facsimile transmission is incidental to the aural broadcast and does not either reduce the quality of or the frequency swing required for the transmission of the aural program. The frequency swing for the modulation of the aural program should be maintained at 75 kc and the facsimile signal added thereto. No transmission outside the authorized band of 200 kc shall result from such multiplex operation nor shall interference be caused to other stations operating on adjacent channels. The transmission of multiplex signals may also be authorized on an experimental basis in accordance with the standard broadcast station rule on special experimental authorizations.

Proof of Performance Required. Within one year of the date of first regular operation of a high frequency broadcast station, continuous field intensity records along several radials shall be submitted to the Commission which will establish the actual field contours, and from which operating constants required to deliver service to the area specified in the license are determined. The Commission may grant extensions of time upon showing of reasonable need therefor.

Multiple Ownership. (a) No person (including all persons under common control¹) shall, directly or indirectly, own, operate, or control more than one high frequency broadcast station that would serve substantially the same service area as another high frequency broadcast station owned, operated, or controlled by such person.

(b) No person (including all persons under common control) shall, directly or indirectly, own, operate, or control more than one high frequency broadcast station, except upon a showing (1) that such ownership, operation, or control would foster competition among high frequency broadcast stations or provide a high frequency broadcasting service distinct and separate from existing services; and (2) that such ownership, operation, or control would not result in the concentration of control of high frequency broadcasting facilities in a manner inconsistent with public interest,

¹The word "control" as used herein is not limited to majority stock ownership but includes actual working control in whatever manner exercised.

convenience, or necessity; *provided, however*, that the Commission will consider the ownership, operation, or control of more than six high frequency broadcast stations to constitute the concentration of control of high frequency broadcasting facilities in a manner inconsistent with public interest, convenience, or necessity.

Normal License Period. All high frequency broadcast station licenses will be issued so as to expire at the hour of 3 a.m., Eastern Standard Time, and will be issued for a normal license period of one year, expiring as follows:

(a) For stations operating on the frequencies 48900, 49100, 49300, 49500, 49700, and 49900, April 1.

(b) For stations operating on the frequencies 44500, 44700, 44900, 45100, 45300, 45500, 45700, 45900, 46100, 46300, and 46500, May 1.

(c) For stations operating on the frequencies 46700, 46900, 47100, 47300, 47500, 47700, 47900, 48100, 48300, 48500, and 48700, June 1.

(d) For stations operating on the frequencies 43100, 43300, 43500, 43700, 43900, 44100, and 44300, July 1.

Equipment

Maximum Power Rating. The Commission will not authorize the installation of a transmitter having a maximum rated power more than twice the operating power of the station.

Maximum Rated Carrier Power; How Determined. (a) The maximum rated carrier power of a standard transmitter shall be determined by the manufacturer's rating of the equipment.

(b) The maximum rated carried power of a composite transmitter shall be determined by the sum of the applicable commercial ratings of the vacuum tubes employed in the last radio stage.

Frequency Monitor. The licensee of each high frequency broadcast station shall have in operation at the transmitter a frequency monitor independent of the frequency control of the transmitter. It shall have a stability of 20 parts per million.

Modulation Monitor. The licensee of each high frequency broadcast station shall have in operation at the transmitter an approved modulation monitor.

Required Transmitter Performance. (a) The external performance of high frequency broadcast transmitters shall be within the minimum requirement pre-

scribed by the Commission contained in the Standards of Good Engineering Practice for High Frequency Broadcast Stations.

(b) The transmitter center frequency shall be controlled directly by automatic means which do not depend on inductances and capacities for inherent stability.

(c) The transmitter shall be wired and shielded in accordance with good engineering practice and shall be provided with safety features in accordance with the specifications of article 810 of the current National Electrical Code as approved by the American Standards Association.

Indicating Instruments. The direct plate circuit current and voltage shall be measured by instruments having an acceptable accuracy.

Changes in Equipment and Antenna System. Licensees of high frequency broadcast stations shall observe the following provisions with regard to change in equipment and antenna system:

(a) No changes in equipment shall be made:

1. That would result in the emission of signals outside of the authorized channel.

2. That would result in the external performance of the transmitter being in disagreement with that prescribed in the Standards of Good Engineering Practice for High Frequency Broadcast Stations.

(b) Specific authority, upon filing formal application¹ therefor, is required for a change in service area or for any of the following changes:

1. Changes involving an increase in the maximum power rating of the transmitter.

2. A replacement of the transmitter as a whole.

3. Change in the location of the transmitter antenna.

4. Change in antenna system, including transmission line, which would result in a measurable change in service or which would affect the determination of the operating power by direct method. If any change is made in the antenna system or any change made which may affect the antenna system, the method of determining operating power shall be changed immediately to the indirect method.

¹See Standards of Good Engineering Practice for High Frequency Broadcast Stations for specific application form required.

5. Change in location of main studio to outside of the borders of the city, state, district, territory, or possession.

6. Change in the power delivered to the antenna.

(c) Specific authority, upon filing *informal* request therefor, is required for the following change in equipment and antenna:

1. Change in the indicating instruments installed to measure the antenna current or transmission line, direct place circuit voltage and the direct current of the last radio stage, except by instruments of the same type, maximum scale reading and accuracy.

2. Minor changes in the antenna system and/or transmission line which would not result in an increase of service area.

3. Changes in the location of the main studio except as provided for in subsection (b) 5, stated above.

(d) Other changes, except as above provided for in this section or in Standards of Good Engineering Practice for High Frequency Broadcast Stations prescribed by the Commission may be made at any time without the authority of the Commission, provided that the Commission shall be promptly notified thereof, and such changes shall be shown in the next application for renewal of license.

Operating Power; How Determined. The operating power, and the requirements for maintenance thereof, of each high frequency broadcast station shall be determined by the Standards of Good Engineering Practice for High Frequency Broadcast Stations.

Modulation. (a) The percentage of modulation of all stations shall be maintained as high as possible consistent with good quality of transmission and good broadcast practice and in no case less than 85 per cent on peaks of frequent recurrence during any selection which normally is transmitted at the highest level of the program under consideration.

Frequency Tolerance. The operating frequency without modulation of each broadcast station shall be maintained

within 2000 cycles of the assigned center frequency.

Operation

Minimum Operating Schedule; Service.

(a) Except Sundays, the licensee of each high frequency broadcast station shall maintain a regular daily operating schedule which shall consist of at least three hours of operation during the period 6 a.m. to 6 p.m., local standard time, and three hours of operation during the period 6 p.m. to midnight, local standard time. In an emergency, however, when due to causes beyond the control of the licensee, it becomes impossible to continue operating, the station may cease operation for a period not to exceed ten days, provided that the Commission and the Inspector in Charge of the radio district in which the station is located shall be notified in writing immediately after the emergency develops.

(b) Such stations shall devote a minimum of one hour each day during the period 6 a.m. to 6 p.m., and one hour each day during the period 6 p.m. to midnight, to programs not duplicated simultaneously as primary service in the same area by an standard broadcast station or by any high frequency broadcast station. During said one hour periods, a service utilizing the full fidelity capability of the system, as set forth in the Standards of Good Engineering Practice for High Frequency Broadcast Stations, shall be rendered. However, the Commission may, upon request accompanied by a showing of reasons therefor, grant exemption from the foregoing requirements, in whole or in part, for periods not in excess of three months.

(c) In addition to the foregoing minimum requirements, the Commission will consider, in determining whether public interest, convenience, and necessity has been or will be served by the operation of the station, the extent to which the station has made or will make use of the facility to develop a distinct and separate service from that otherwise available in the service area.

— FCC REGULATIONS REGARDING — DEVELOPMENTAL BROADCAST STATIONS

The term "developmental 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 or a combination of closely related developments that can be better carried on under one license.

Licenses for developmental 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, or is distinctive from those classes, or combination of closely related developments that involve different phases of broadcasting which can be pursued better under one license.

(2) That the program of research has reasonable promise of substantial contribution to the development of broadcasting, or is along lines not already thoroughly investigated.

(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.

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

A licensee of developmental broadcast stations shall broadcast programs when they are necessary to the experiments being conducted. No regular program service shall be broadcast unless specifically authorized by the license.

A licensee of a developmental broadcast station shall not make any charge, directly or indirectly, for the transmission of programs, but may transmit the

programs of a standard broadcast station or network including commercial programs, if the call letter designation when identifying the developmental broadcast station is given on its assigned frequency only and the statement is made over the developmental broadcast station that the program of a broadcast station or network (identify by call letters or name of network) is being broadcast in connection with the developmental work. In case of the rebroadcast of the program of any broadcast station, the FCC Regulation on rebroadcasting applies.

Frequency Allotted

The following frequencies are allocated for assignment to developmental broadcast stations:*

	1,614				
2,396 } 2,398	12,855 }	12,862.5	37,140	37,540	39,140
2,400 } 3,490	12,870 }	17,310	39,140	39,460	39,540
3,490 } 3,495	17,300 }	17,310	116,050	116,250	116,450
3,495 } 4,795	17,320 }	23,100	116,250	116,450	116,850
4,795 } 4,800	23,100 }	30,660	117,050	117,250	117,650
4,800 } 6,420	30,660 }	31,020	117,250	117,650	118,050
6,420 } 6,430	31,180 }	31,140	118,050	118,450	118,550
6,430 } 9,130	31,540 }	33,340	118,450	118,650	118,850
9,130 } 9,140	33,340 }	33,620	118,850	156,525	156,975
9,140 } 9,135	35,060 }	35,460	156,525	156,975	157,425
	37,060 }		157,425	157,725	158,175
			157,725	159,075	160,425
			160,425	161,325	161,775
			161,325	161,775	162,000-168,000
			161,775	162,000-216,000	264,000-270,000
			162,000-168,000	264,000-270,000	300,000-400,000
			264,000-270,000	300,000-400,000	401,000 and above
			300,000-400,000	401,000 and above	
			401,000 and above		

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

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

In cases of important experimentation which cannot be conducted successfully on the frequencies allocated herein, the Commission may authorize developmental broadcast stations to operate on any

* Also available for assignment to all other stations in the experimental service.

FCC REGULATIONS REGARDING BROADCAST STATIONS FOR TELEVISION AND FACSIMILE

As of January 1, 1943

The term "visual broadcast service" means a service rendered by stations broadcasting images for general public reception. There are two classes of stations recognized in the visual broadcast service, namely: Television broadcast stations and Facsimile broadcast stations.

COMMERCIAL TELEVISION BROADCAST STATIONS

Definitions

"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.

"Television broadcast band" means the bands of frequencies allocated for television broadcast stations.

"Television channel" means a band of frequencies 6,000 kilocycles wide and which may be designated by channel numbers as in section on channel assignments in these rules or by the extreme lower and upper frequencies.

"Television transmission standards" means the standards which determine the characteristics of the television signal as radiated by a television broadcast station.

"Standard television signal" means a television signal conforming with the television transmission standards set forth in the Standards of Good Engineering Practice for television stations.

"Television transmitter" means the radio transmitter or transmitters for the transmission of both visual and aural signals.

"Visual transmitter" means the radio equipment for the transmission of the visual signal only.

"Aural transmitter" means the radio equipment for the transmission of the aural signal only.

"Visual transmitter power" means the peak power output when transmitting a standard television signal.

"Service area" means the area in which the signal is not subject to objectionable interference or objectionable

fading. (Television broadcast stations are considered to have only one service area; for determination of such area see *Standards of Good Engineering Practice for Television Broadcast Stations.*)

"Main studio" as to any television broadcast station means the studio from which the majority of the local programs originate, or from which a majority of the station identification announcements are made.

Allocation of Facilities

Basis for license.—Television broadcast stations will be licensed on the basis of the effective signal radiated (ESR) from the visual transmitter in accordance with the following:

ESR is equal to the square root of the power times the antenna field gain times the height of the antenna above the surrounding area. The power is measured in kilowatts, the gain in voltage ratio, the antenna height in feet above surrounding area.

Time of operation.—Television broadcast stations will be licensed only for unlimited time operation.

Showing required.—Authorization for a new television broadcast station or increase in facilities of an existing station will be issued only after a satisfactory showing has been made in regard to the following matters:

(a) That the service area and population which the applicant proposes to serve are computed in accordance with the Standards of Good Engineering Practice for Television Broadcast Stations. (The service area shall be consistent with and serve adequately the city or community proposed to serve in keeping with technical feasibility of coverage. The application shall be accomplished by an analysis of the computation of the

¹The transmission of synchronized sound (aural broadcast) is considered to be an essential phase of television broadcast and one license will authorize both visual and aural broadcasts.

service area as set forth in the application. No application for construction permit for a new station or change in service area of an existing station will be accepted unless a definite site, details of proposed antenna and other data required by the application form are supplied.)

(b) That objectionable interference will not be caused to existing stations or that if interference will be caused the need for the proposed service outweighs the need for the service which will be lost by reason of such interference.

(c) That the proposed station will not suffer interference to such an extent that its service would be reduced to an unsatisfactory degree. (For determining objectionable interference, see *Standards of Good Engineering Practice for Television Broadcast Stations*.)

(d) That the technical equipment proposed, the location of the transmitter, and other technical phases of operation comply with the regulations governing the same, and the requirements of good engineering practice. (See technical regulations herein and *Standards of Good Engineering Practice for Television Broadcast Stations*.)

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

(f) That the applicant has available adequate sources of program material for the rendition of satisfactory television broadcast service.

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

(h) That the applicant is legally qualified, is of good character, and possesses other qualifications sufficient to provide a satisfactory public service.

(i) That the facilities sought are subject to assignment as requested under existing international agreements and the Rules and Regulations of the Commission.

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

Channel assignments.—The channels or frequency bands set forth below are available for assignment to television broadcast stations.

(a) Channel

No.	
1	57,000- 56,000 kc
2	60,000- 66,000 kc
3	66,000- 72,000 kc
4	78,000- 84,000 kc
5	84,000- 90,000 kc
6	96,000-102,000 kc
7	102,000-108,000 kc

8	162,000-168,000 kc
9	180,000-186,000 kc
10	186,000-192,000 kc
11	204,000-210,000 kc
12	210,000-216,000 kc
13	230,000-236,000 kc
14	236,000-242,000 kc
15	258,000-264,000 kc
16	264,000-270,000 kc
17	282,000-288,000 kc
18	288,000-294,000 kc

(b) Stations serving the same area will not be assigned channels adjacent in frequency.

(c) One channel only will be assigned to a television broadcast station.

Experimental operation.—Television broadcast stations may conduct technical experimentation directed to the improvement of technical phases of operation and for such purposes may utilize a signal other than the standard television signal subject to the following conditions:

(a) That the licensee complies with the provisions of these rules with regard to the minimum number of hours of transmission with a standard television signal.

(b) That no transmissions are radiated outside of the authorized channel and subject to the condition that no interference is caused to the transmissions of a standard television signal by other television broadcast stations.

(c) If objectionable interference would result from the simultaneous operation of a television broadcast station operating experimentally and an experimental broadcast station, the licensees shall make arrangements for operation to avoid interference.

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

Multiple ownership.—No person (including all persons under common control)² shall, directly or indirectly, own, operate, or control more than one television broadcast station, except upon a showing (1) that such ownership, operation, or control would foster competition among television broadcast stations or provide a television broadcast service distinct and separate from existing services, and (2) that such ownership, operation or control would not result in the concentration of control of television broadcasting facilities in a manner inconsistent with public interest, convenience, or necessity; *Provided, however,* That no person (including all persons under common control), shall directly or indirectly, own, operate, or control more

² The word "control," as used herein, is not limited to majority stock ownership, but includes actual working control in whatever manner exercised.

than one television broadcast station that would serve substantially the same service area; and provided, further, That the Commission will regard the ownership, operation, or control of more than three television broadcast stations as constituting a concentration of control of television broadcasting facilities in a manner inconsistent with public interest, convenience, or necessity.

Normal license period.—All television broadcast station licenses shall be issued so as to expire at the hour of 3 a.m., Eastern Standard Time, and will be issued for a normal license period of one year, expiring February 1.

Equipment

Maximum rated power; how determined.—(a) The maximum rated carrier power of standard television transmitters shall be the same as the manufacturer's rating of the equipment.

(b) The maximum rated carrier power of composite television transmitters shall be the sum of the applicable commercial ratings of the vacuum tubes employed in the last radio stage.

Maximum power rating and operating power.—The Commission will authorize the installation of a television transmitter having maximum power rating equal to the operating output power in accordance with the table set out in the section of these rules titled "Basis for License."

Monitors.—The licensee of each television broadcast station shall operate at the transmitter:

(a) A frequency monitor independent of the frequency control of the transmitter. The monitor shall meet the requirements set forth in the Standards of Good Engineering Practice for Television Broadcast Stations;

(b) A modulation monitor to determine that the radiated television signal complies with the television transmission standards set forth in the Standards of Good Engineering Practice for Television Broadcast Stations.

Required transmitter performance.—The external performance of television broadcast transmitters shall be capable of radiating a standard television signal meeting the minimum requirements prescribed by the Commission contained in the Standards of Good Engineering Practice. The transmitters shall be wired and shielded in accordance with the good engineering practice and shall be provided with safety features in accordance with the specifications of Article 810 of the current National Electrical Code as approved by the American Standards Association.

Indicating instruments.—The operating output power of television broadcast stations shall be measured by instruments having an acceptable accuracy.

Auxiliary and duplicate transmitters.—The provisions of the rules governing standard and high frequency broadcast stations shall also govern the use of auxiliary and duplicate transmitters for television broadcast stations

Changes in equipment and antenna system.—(a) No changes in equipment shall be made.

(1) That would result in emission of signals outside of the authorized television channel.

(2) That would result in the external performance of the transmitter being in disagreement with that prescribed by the Commission in the Standards of Good Engineering Practice provided that for experimental transmissions equipment changes may be made which would not render the transmitters incapable of radiating a standard television signal for the required minimum number of hours. (See section titled "Minimum Operating Schedule.)

(b) Specific authority³ is required for a change in any of the following:

(1) Increase in the maximum power rating of the transmitter.

(2) Replacement of the transmitter as a whole.

(3) Location of the transmitter antenna.

(4) Antenna system, including transmission line, which would result in a measurable change in service area or which would affect the determination of the operating power by the direct method. If any change is made in the antenna system or any change made which may affect the antenna system, the method of determining operating power shall be changed immediately to the indirect method.

(5) Relocation of main studio if new location is outside of the borders of the city, state, District of Columbia, territory, or possession.

(6) Operating output power delivered to the antenna.

(c) Specific authority,⁴ upon filing informal request therefor, is required for the following change in equipment and antenna:

(1) Indicating instruments installed to measure the antenna current or transmission line, except by an instrument of the

³ Formal application required. See Standards of Good Engineering practice for Television Broadcast Stations for specific application form.

⁴ Informal application by letter may be made.

same type, maximum scale reading and accuracy.

(2) Minor changes in the antenna system or transmission line which would not result in an increase of service area.

(3) Changes in the location of the main studio except as provided for in subsection (b) (5).

(d) Other changes, except as above provided for in this section or in Standards of Good Engineering Practice for Television Broadcast Stations prescribed by the Commission may be made at any time without the authority of the Commission, provided that the Commission shall be promptly notified thereof, and such changes shall be shown in the next application for renewal of license.

Operating output power; how determined.—The operating output power, and the requirements for maintenance thereof, of each television broadcast station shall be determined by the Standards of Good Engineering Practice for Television Broadcast Stations.

Operation

Minimum operating schedule.—(a) The licensee of each television broadcast station shall maintain a regular program operating schedule transmitting a standard television signal for a total of 4 hours per week.

(b) The aural transmitter of a television broadcast station shall not be operated separately from the visual transmitter except for experimental or test purposes, and for purposes incidental to or connected with the operation of the visual transmitter.

Station identification.—(a) A licensee of a television broadcast station shall make station identification announcement, aurally and visually, (all letters and location), at the beginning and ending of each time of operation and during operation on the hour.

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

Motion picture film.—All motion picture film employed in the broadcasts of a television broadcast station must be briefly described as such either at the beginning of the program in which such film is used, or immediately prior to the broadcast of the film. Where the film broadcast is of more than 15 minutes

duration, it shall also be briefly described as such either at the end of the program or immediately following the broadcast of the film.

Logs.—The licensee of each television broadcast station shall maintain program and operating logs and shall require entries to be made as follows:

(a) Program log.

(1) Entry of the time each station identification is made.

(2) Entry briefly describing each program broadcast under the heading 'outside pickup,' 'studio production,' and motion picture film,' or combination thereof.

(3) Entry showing that each sponsored program has been announced as sponsored, paid for or furnished by the sponsor.

(4) Entry showing name of each sponsor and commodity advertised.

(b) Operating log (when transmitting a standard television signal).

(1) Entry of the time the station begins to supply power to the antenna and the time it stops.

(2) Entry of the time the program begins and ends.

(3) Entry of each interruption to the carrier waves, cause and duration.

(4) Entry of the following each thirty minutes:

i) Operating constants of the last radio stages.

ii) Frequency monitor readings.

(c) Log of experimental operation when transmitting other than a standard television signal.

(1) Entry of the time the station begins to supply power to the antenna and the time it stops.

(2) Short description of the broadcast made and its technical purpose.

Logs; retention of.—Logs of a television broadcast station shall be retained by the licensee for a period of 2 years, except when required to be retained for a longer period in accordance with the provisions of section 2.51 (FCC General Rules and Regulations; in this volume see Rules and Regulations regarding production by Radio Broadcast stations).

Broadcasts by Candidates for Public Office

The provisions of sections on political broadcasts of the Rules and Regulations Governing Standard and High Frequency Broadcast Stations shall also govern television broadcast stations.

EXPERIMENTAL TELEVISION BROADCAST STATIONS

The term "experimental television broadcast station" means a station licensed for experimental 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 authorize both visual and aural broadcast as herein set forth.

Under these rules for experimental television broadcast stations, the Commission will authorize experimental television relay broadcast stations for transmitting from points where suitable wire facilities are not available, programs for broadcast by one or more television broadcast stations. Such authorization will be granted only to the licensee of a television broadcast station.

A license for an experimental television broadcast station will be issued for the purpose of carrying on research and experimentation for the advancement of television broadcasting which may include tests of equipment, training of personnel, and experimental programs as are necessary for the experimentation.

Licensing Requirements

A license for a television broadcast station will be issued only after a satisfactory showing has been made in regard to the following:

1. That the applicant has a definite program of research and experimentation in the technical phases of television broadcasting, which indicates reasonable promise of substantial contributions to the developments of the television art.
2. That upon the authorization of the proposed station the applicant can and will proceed immediately with its program of research and experimentation.
3. That the transmission of signals by radio is essential to the proposed program of research and experimentation.
4. That the program of research and experimentation will be conducted by qualified personnel.
5. That the applicant is legally, financially, technically, and otherwise qualified to carry forward the program.
6. That the public interest, convenience or necessity will be served through the operation of the proposed station.

Charges

No charges either direct or indirect shall be made by the licensee of an ex-

perimental television station for the production or transmission of either aural or visual programs transmitted by such station except that this section shall not apply to the transmission of commercial programs by an experimental television relay broadcast station for retransmission by a television broadcast station.

Announcements

A licensee of a television broadcast station shall make station identification announcement aurally and visually (call letters and location) at the beginning and ending of each time of operation and during operation on the hour.

At the time station identification announcements are made, there shall be added the following:

This is a special television broadcast made by authority of the Federal Communications Commission for experimental purposes.

Operating Requirements

Each licensee of a television broadcast station shall diligently prosecute its program of research from the time its station is authorized.

Each licensee of a television station will from time to time make such changes in its operation as may be directed by the Commission for the purpose of promoting worthwhile experimentation and improvement in the art of television broadcasting.

Frequency Assignment

(a) The following groups of channels are available for assignment to television broadcast stations licensed experimentally:

Group A	Group B
Channel	Channel
No. 1 50,000-56,000 kc	No. 8 162,000-168,000 kc
2 60,000-66,000	9 180,000-186,000
3 66,000-72,000	10 186,000-192,000
4 78,000-84,000	11 204,000-210,000
5 84,000-90,000	12 210,000-216,000
6 96,000-102,000	13 230,000-236,000
7 102,000-108,000	14 236,000-242,000
Group C	15 258,000-264,000
Any 6000 kc band	16 264,000-270,000
above 300,000 kc	17 282,000-288,000
excluding band	18 288,000-294,000
400,000-401,000 kc.	

No experimental television broadcast station will be authorized to use more than one channel in Group A except for good cause shown. Both aural and visual carriers with side bands for modulation

are authorized but no emission shall result outside the authorized channel.

No persons (including all persons under common control) shall control directly or indirectly, two or more experimental television broadcast stations (other than television relay broadcast stations) unless a showing is made that the character of the programs of research require a licensing of two or more separate stations.

A license for an experimental television broadcast station will be issued only on the condition that no objectionable interference will result from the transmissions of the station to the regular program transmissions of television broadcast stations. It shall at all times be the duty of the licensee of an experimental television broadcast station to ascertain that no interference will result from the transmissions of its station. With regard to interference with the transmissions of an experimental television broadcast station or the experimental or test transmissions of a television broadcast station, the licensee shall make arrangements for operations to avoid interference.

Channels in Groups B and C may be assigned to experimental television stations to serve auxiliary purposes such as television relay stations. No mobile or portable station will be licensed for the purpose of transmitting television programs to the public directly.

Power

The operating power of a television station shall be adequate for but not in

excess of that necessary to carry forward the program of research and in no case in excess of the power specified in its license.

Reports

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

1. Number of hours operated.
2. Full data on research and experimentation conducted including the type of transmitting and studio equipment used and their mode of operation.
3. Data on expense of research and operation during the period covered.
4. Power employed, field intensity measurements and visual and aural observations and the types of instruments and receivers utilized to determine the service area of the station and the efficiency of respective types of transmissions.
5. Estimated degree of public participation in reception, and the results of public observation as to the effectiveness of types of transmission.
6. Conclusions, tentative and final.
7. Program for further developments in television broadcasting.
8. All developments and major changes in equipment.
9. Any other pertinent developments.

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

— FACSIMILE BROADCAST STATIONS —

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

A license for a facsimile 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 facsimile broadcast service.
2. That sufficient facsimile recorders will be distributed to accomplish the experimental program proposed.
3. That the program of research and experimentation will be conducted by qualified engineers.
4. That the applicant is legally and financially qualified and possesses ade-

quate technical facilities to carry forward the program.

5. That the public interest, convenience and/or necessity will be served through the operation of the proposed station.

Conditions of Licensing

(a) A licensee of a facsimile broadcast station shall not make any charge, directly or indirectly, for the transmission of programs.

(b) No licensee of any standard broadcast station or network shall make any additional charge, directly or indirectly, for the transmission of some phase of the programs by a facsimile broadcast station, nor shall commercial accounts be solicited by any licensee of a standard broadcast station or network, or others acting in their behalf, upon representa-

FACSIMILE

tion that images concerning that commercial program will be transmitted by a facsimile station.

Frequencies Allotted

a. The following groups of frequencies are allocated for assignment to facsimile broadcast stations which will be licensed experimentally only:

<i>Group A</i>	<i>Group B</i>	<i>Group C</i>
25,025 kc	43,540 kc	Any frequency above 300,000 kc excluding band 400,000 to 401,000 kc.
25,050	43,580	
25,075	43,620	
25,100	43,660	
25,125	43,700	
25,150	43,740	
25,175	43,780	
25,200	43,820	
25,225	43,860	
25,250	43,900	
	43,940	

b. Other broadcast or experimental frequencies may be assigned for the operation of facsimile broadcast stations on an experimental basis provided a sufficient need therefor is shown and no interference will be caused to established radio stations.

c. One frequency only will be assigned to a facsimile station from the Groups in subsection (a) of these rules. More than one frequency may be assigned under provisions of subsections (b) of these rules if a need therefor is shown.

d. Each applicant shall specify the maximum modulating frequencies proposed to be employed.

e. The operating frequency of a facsimile broadcast station shall be main-

tained in accordance with the frequency tolerance of 0.05 per cent or less as required, provided, however, where a lesser tolerance is necessary to prevent interference, the Commission will specify the tolerance.

f. 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 other FCC rules which apply to all stations generally.

Power Limitations

The operating power of a facsimile broadcast station shall not be in excess of that necessary to carry forward the program of research, provided, however, not more than 1000 watts will be authorized on a frequency in Group A. The operating power may be maintained at the maximum rating or less, as the conditions of operation may require.

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

FACSIMILE BROADCAST STATIONS

<i>Licensee and Location</i>	<i>Call Letters</i>	<i>Frequency Kilocycles</i>	<i>Power Watts</i>	<i>Emission</i>
Courier-Journal & Louisville Times Co. N. E. of Eastwood, Ky.....	W9XWT	25250	500	A3 & A4
WBNS, Inc. Columbus, Ohio	W8XUM	25200	100	A4
WOKO, Inc. Albany, N. Y.....	W2XWE	25050	500	A3 & A4