

**TELEVISION STATIONS**

Licensee and Location	Call Letters	Frequency (kc)	POWER	
			Visual	Aural
Metropolitan Television, Inc. New York, N. Y.....	W2MT	162000-168000	250 w	250 w (CP only)
Don Lee Broadcasting System Los Angeles, Calif.....	W6XAO	50000-56000	1000 w	150 w
Don Lee Broadcasting System San Francisco, Calif.....	W6XDL	50000-56000	1000 w	1000 w (CP only)
Don Lee Broadcasting System Portable-area of Los Angeles, Calif. ....	W6XDU	318000-330000	6.5 w	
(CP 50w, Special television relay station with W6XAO)				
National Broadcasting Co., Inc. New York, N. Y.....	W2XBS	50000-56000	12000 w	15000 w
National Broadcasting Co., Inc. Portable—Camden, N. J. and New York, N. Y.....	W2XBT	162000-168000	400 w	
(Television relay station with W2XBS)				
National Broadcasting Co., Inc. Portable-area of New York.....	W2XBU	282000-294000	15 w	
(Television relay station with W2XBS)				
National Broadcasting Co., Inc. Washington, D. C.....	W3XNB	60000-66000	1000 w	1000 w (CP only)
National Broadcasting Co., Inc. Philadelphia, Pa. ....	W3XPP	102000-108000	1000 w	1000 w (CP only)
Philco Radio & Television Corp. Philadelphia, Pa. ....	W3XE	66000-72000	10000 w	10000 w
Philco Radio & Television Corp. Philadelphia, Pa. ....	W3XP	230000-242000	15 w	15 w (CP 125 Watts)
(Television relay station with W3XE)				
Philco Radio & Television Corp. Portable-area of Philadelphia, Pa.	W3XPR	230000-242000	60 w (peak)	
(Television relay station with WPTZ)				
Purdue University West Lafayette, Ind. ....	W9XG	66000-72000	750 w	750 w (CP only)
RCA Mfg. Co., Inc. (Portable) Bldg. No. 8 of Camden Plant, Camden, N. J.....	W3XAD	321000-327000	500 w	500 w
RCA Mfg. Co., Inc. Camden, N. J.....	W3XEP	84000-90000	30000 w	30000 w
State University of Iowa Iowa City, Iowa.....	W9XUI	50000-56000 210000-216000	100 w	
Television Productions, Inc. Los Angeles, Calif.....	W6XLA	234000-246000	250 w	
(CP only, television relay station with W6XYZ)				
Television Productions, Inc. Los Angeles, Calif.....	W6XYZ	78000-84000	1000 w	1000 w (CP only)
WCAU Broadcasting Co. Philadelphia, Pa. ....	W3XAU	84000-90000	1000 w	1000 w (CP only)
Zenith Radio Corp. Chicago, Ill. ....	W9XZV	50000-56000	1000 w	1000 w

# COMMERCIAL TELEVISION STATIONS

PERSONNEL—FACILITIES—ACTIVITIES

## K S E E\* LOS ANGELES

Frequency: 96000-102000 Kc.  
Power: Sight, 1000 Watts; Sound, 2000  
Watts  
Effective Signal Radiated.....1850  
Owned-Operated By.....Earle C. Anthony,  
Inc.  
Business Address.....141 N. Vermont Ave.

## W C B W\*\* NEW YORK

Frequency: 60000-68000 Kc. (Sight, 61250;  
Sound, 65750); Power: Sight, 15000 Watts.  
Sound, 7500 Watts  
Effective Signal Radiated.....2400  
Owned-Operated By....Columbia Broadcast-  
ing System  
Business Address.....485 Madison Ave.  
Phone Number.....Wickersham 2-2000  
Studio Address.....15 Vanderbilt Ave.  
Transmitter and Antenna Location,  
Chrysler Building  
Time on the Air: 15 hours (or more) weekly

### Personnel

Executive Director.....Adrian Murphy  
Manager of Operations.....Leonard Hole  
Program Director.....Gilbert Seldes  
Production Manager-  
Director..... Worthington Miner  
Publicity Director..... Wil Marcus  
Casting Director..... Ruth Norman  
Musical Clearance..... Steve Marvin  
Chief Engineer .....Dr. Peter C. Goldmark

### 1941-1942 ACTIVITIES

In January, 1941, CBS demonstrated both live and film pick-up of color television to the Federal Communications Commission and the National Television System Committee in New York. This demonstration employed the color

television system developed by CBS during 1940.

As soon as the CBS transmitter in the Chrysler Building had been converted for operation on the new frequency in June, daily experimental color broadcasts were conducted, and have been continued ever since.

The color development of the Columbia Broadcasting Television has proceeded throughout 1941 and has resulted in basic technical data looking toward the setting of standards. New equipment for both pick-up and receiving, based on commercially practical designs, was constructed.

On July 1, 1941, station WCBW began a regular weekly program schedule of 15 hours per week under the rules of the Federal Communications Commission. The following people in the field of public affairs have appeared before the Columbia Broadcasting System television cameras:

Governor Philip LaFollette, Admiral Yates Sterling, Norman Thomas, Harper Sibley, Mrs. Preston Davie, William L. Shirer, Rex Stout, Morris L. Ernst, Clark Eichelberger, Quincy Howe, Linton Wells, Robert K. Straus, Major George Fielding Elliot, Mrs. Harold V. Milligan, Judge Dorothy Kenyon, Emmet S. Conely, Father Talbot, Helen Parkhurst, Janet Flanner, Michael Strange.

In the field of sports, Arthur Donovan, Johnny Vandermeer, Ruth Aarons, Sandor Glancy, Billy Soose, Lefty Gomez and others.

Third, in the general field of entertainment. The great dancers Paul Draper, Paul Haakon, Patricia Bowman, Eric Hawkins, Estelle and LeRoy, Betty Jane Smith, Harland Dixon and Victor. Singers: Joan Edwards, Tamara, Kuznetzoff, Tana, Burl Ives, Mary Sutherland. Comedians: Al Bernie, Hal Sherman, Gus Van, Jack Gilford, John Hoysradt.

In the arts, Francis Henry Taylor, the Direc-

\*Station has special authority to operate experimentally with a commercial license at press-time.

\*\*Station had construction permit at press-time.

tor of the Metropolitan Museum of Art and members of the Metropolitan staff; Thomas Craven the famous art critic; Sidney Janis, authority on modern art; also among architects and designers, Buckminster Fuller and Donald Deskey.

In the great field of country and folk dancing, May Gadd, the head of the Country Dance Society, and the folk dances of a dozen nations.

The lack of mobile equipment because of priorities, hampered the operation of the station because of the pressure it put on the studio. Nevertheless, a new ease of movement, sense of space and sense of real life were developed in the technique of handling the camera and the participants in the programs. These constitute a major contribution in the art of producing television programs.

WCBW, since the start of its operations in July, has presented programs dealing with the National Defense and War Efforts, has shown the workings of many branches of the services of the United States Government, including the Navy, Coast Guard, Marine Corps; also, the Red Cross, Boy Scouts and Civilian Defense organizations. The station developed a technique for the direct sale of Defense Bonds to the television audience by inviting members of the audience to telephone in their Defense Bond orders. In three programs, a total of 100,000 dollars worth of bonds were sold.

## • K T S L

**LOS ANGELES (HOLLYWOOD) —**

**EST. 1931**

Frequency: Sight, 51250 Kc.; Sound, 55750 Kc.  
Power: Sight, 4000 Watts; Sound, 2000 Watts  
Effective Signal Radiated..... 5600

Owned-Operated By.....Don Lee Broadcasting System

Business-Studio Address...3800 Mount Lee Drive

Phone Number..... Hollywood 8255  
Transmitter & Antenna Location...3800 Mount Lee Drive

Time on the Air: 4 to 5 p.m.; 8 to 11 p.m.

### **Personnel**

President .....Thomas S. Lee  
Vice-President and General Manager,

Lewis Allen Weiss

Director of Television.....Harry R. Lubcke  
Assistant Director of Television,

Wilbur E. Thorp

Television Engineer.....William S. Klein

Television Engineer.....Harold W. Jury

Television Engineer.....Robert L. Pitzer

Television Engineer.....Thornton Chew

Television Cameraman.....Dwight Warren

Television Cameraman.....James Palmer

Television Producer.....Jack Stewart

Building Superintendent.....Paul Marshall

## FACILITIES

**SYSTEM IN USE:** 525 line 30-60 frame F.C.C., Standard, all electronic cathode-ray. Horizontal Polarization. Studio Cameras and film equipment. Complete 100 ft. square two story television building housing one 100 ft. x 60 ft x 30 ft. television stage, one 46 ft. x 26 ft. x 16 ft. stage, monitor, film, transmitter, makeup, and lounge rooms, offices, shop, transformer vaults, etc. Three hundred foot tower, antenna elevation 2000 ft.

**W6XDU** (experimental television relay station operating with KTSL) operates on 324 megacycles and is a beam relay type television transmitter used for outside pickups.

**DEVELOPMENTS OF 1941:** W6XAO (experimental call letters of KTSL) operated 590 hours. Sixty-seven remote programs scheduled and broadcast.

Studio shows have included vaudeville by Maury Amsterdam, Mabel Todd, Tony Romano, the Montez ballet dancers, news telecasts featuring Maxine Gray, and an enlistment and instructional group of acts by the U. S. Navy.

Film presentations included educational items and instruction on and promotion of interest in National Defense. Comedies also were shown, and exceptionally fine films from the Hancock Expedition's travels on the western coast of North and South America. Newsreels also played an important part in the television program, several being prepared especially for television station W6XAO.

Remote television pickups included the professional boxing and wrestling matches from the Hollywood American Legion Stadium twice weekly until November, 1941; thereafter, the same program from the Olympic Auditorium in downtown Los Angeles. The pickup of the Hollywood Stars Coast Baseball League twice weekly was also another remote of great interest to our television lookers. The Easter Sunrise service at the Hollywood Bowl, the Easter Promenade and auto races from Southern Ascot speedway were also telecast.

**RECEIVERS:** There are between 400 and 500 television receivers in the service area of W6XAO, some as far as Pomona at 35 miles away, a number in Long Beach at 25 miles away and many in cities at lesser distances. The predominant commercially manufactured television receiver is the TRK12 or 120 of RCA. There are some RCA TRK9, and approximately 50 TT5 RCA television receivers. A number of the latter are operating satisfactorily in Long Beach at 25 miles from W6XAO. Other commercially manufactured television receivers are the local Gilfillan G12 which is an equivalent to the RCA TRK12 and utilizes a 12-inch cathode ray tube, some Dumont 12 and 20-inch tube television receivers, the General Electric 12's and 9-inch

receivers, and the Stromberg-Carlson and Stewart-Warner 12 and 9-inch receivers.

There are over a hundred owner constructed television receivers fabricated from Meissner and other kits, as well as completely according to the owners' design. A number of the latter give excellent operation, some utilizing 12-inch cathode ray tubes giving actually superior images at 15 and 20 miles from W6XAO than would be expected from commercially manufactured models.

**PUBLIC DEMONSTRATIONS:** Television receivers have been maintained by the Don Lee Broadcasting System at the following public places: Wilshire Brown Derby, Kiefer's Pine Knot Drive-In, Vine Brown Derby, Griffith Planetarium, Miramar Hotel, Hollywood Roosevelt Hotel, The Town House. Various radio stores have also held public demonstrations.

**PATENTS & RESEARCH:** In addition to regularly scheduled programs, research work on television in all of its branches has continued at W6XAO. Membership on NTSC committees and testimony at F.C.C. hearings assisted in setting the commercial standards for television.

## W A B D\*

### NEW YORK CITY

Frequency: 78000-84000 Kc. (Sight, 79250 Kc.; Sound, 83750 Kc.); Power: Sight, 1000 Watts; Sound, 1000 Watts

Owned-Operated By...Allen B. Du Mont Laboratories, Inc.  
Business-Studio Address...515 Madison Ave.  
Phone ..... Plaza 3-9037  
Transmitter & Antenna Location...515 Madison Ave.

#### Personnel

President ..... Allen B. Du Mont

## W R G B\*

### SCHENECTADY, N. Y.

Frequency: 66000-72000 Kc.; Power: Sight, 10000 Watts; Sound, 3000 Watts

Effective Signal Radiated.....1200  
Owned-Operated By.....General Electric Co.  
Business Address .....1 River Road  
Phone Number ..... 4-2211  
Transmitter & Antenna Location.....New Scotland, N. Y.

## W M J T\*

### MILWAUKEE

Frequency: 66000-72000 Kc.; Power: Sight, 4180 Watts; Sound, 3350 Watts  
Effective Radiated Signal.....1200

Owned-Operated By.....The Journal Co.  
Business-Studio Address.....720 East Capitol Drive  
Phone Number ..... Marquette 6000  
Transmitter & Antenna Location...720 East Capitol Drive

## W N B T

### NEW YORK

Frequency: 50000-56000 Kc. (Sight, 51250; Sound, 55750); Power: Sight, 12000 Watts; Sound, 15000 Watts

Effective Signal Radiated.....1800  
Owned-Operated By.....National Broadcasting Co.  
Business Address.....30 Rockefeller Plaza  
Phone Number ..... Circle 7-8300  
Studio Address.....30 Rockefeller Plaza  
Transmitter and Antenna Location... Empire State Bldg.  
Time on the Air: Full time commercial license

#### Personnel

Manager of Television Department.

Noran E. Kersta  
Executive Program Director... Warren Wade  
Chief Television Engineer... Robert E. Shelby

#### FACILITIES

Technical facilities of Station WNBT include a direct pickup studio for live talent productions, a mobile television unit and transportable equipment. All facilities operate under technical standards established in 1941 by the Federal Communications Commission.

The live talent studio, located in Radio City, is fitted with three camera chains. The cameras are of the Iconoscope type. A film scanning room has two cameras and specially adapted motion picture projectors for both 35 mm. and 16 mm. films.

The mobile unit, mounted in two motor vans, is equipped with two cameras for direct pickup of a wide variety of outdoor and indoor programs at points remote from NBC's Radio City sight-sound studios. It has successfully relayed outdoor programs over a distance of 27 miles. Its video transmitter has an output of 400 watts; an associated sound transmitter is rated at 100 watts. The two operate in the relay channel of 162,000-168,000 Kc. Cable carried with the unit enables the field crew to operate cameras at distances up to 800 feet from the motor vans.

The transportable equipment used by NBC television for remote pickups is a compact unit, weighing less than 1,000 pounds and divided into carrying cases, none of which weighs more than 90 pounds. The equipment

\*Station had construction permit at press-time.

• • • **COMMERCIAL TELEVISION STATIONS** • • •

is used for remote pickups where operation of the larger mobile unit is impracticable. It includes a 15-watt video transmitter, two cameras and associated monitoring and control apparatus. A typical instance of its use was in relay of the 1941 New Year's Eve celebration at the Rainbow Room in New York City. The unit is licensed to operate in the channel 162,000-168,000 Kc.

Signals from the WNBT transmitter, located in the Empire State Building tower, are received over a service area with a radius of approximately 60 miles. Under favorable conditions the NBC television programs are seen and heard over considerably greater distances. The General Electric Company's Station W2XB, located 129 miles from the NBC transmitter, has in the past rebroadcast NBC programs originating in New York City. Station WPTZ, Philadelphia, undertook regular rebroadcast of NBC programs in 1941. A single relay link, located at Wyndmoor, eight miles from the Philco station's transmitter, shunts NBC programs to the WPTZ transmitter in North Philadelphia.

The National Broadcasting Company maintains a television staff of nearly 80 persons at Radio City. These are engaged in technical, programming, sales and research activities. A minimum weekly program service of 15 hours is offered to televiewers in the New York City area.

Experimental facilities associated with the station include studio equipment for color television. This is of the mechanical, three-color scanning disc type. Experimental broadcasts in color have been made; also frequency modulated transmissions in black-and-white images.

Station WNBT, the world's first commercial television station, was formerly operated as experimental station W2XBS. Originally an RCA station, it was first licensed April 4, 1928. W2XBS was successively located in Fifth Avenue and the Times Square Studio of the National Broadcasting Company. It passed under NBC management in 1930. Since 1931 NBC has conducted television transmissions from the present location of WNBT, in the Empire State Building tower.

The all-electronic system of television was introduced by NBC in a series of test transmissions in 1936. Images were first in 343 horizontal scanning lines. Later the standard was raised to 441 lines, then to 525 lines.

Regular public service in television programs was inaugurated April 30, 1939, when opening ceremonies of the New York World's Fair were broadcast to New York televiewers.

The first commercial license issued under the rules of the F.C.C. was granted to NBC in June, 1941. On July 1 the station, as WNBT, went on the air with four commercial pro-

grams. The station's commercial record for the first six months of commercial operation included thirteen sponsors, representing eight different industries. The percentage of sponsored time in December, 1941, was slightly less than ten per cent.

Outstanding programs transmitted by the NBC station have included the complete floor proceedings of the 1940 Republican National Convention at Philadelphia; National League baseball games at Ebbets Field, professional and college football games, numerous Madison Square Garden sports events, supper club floor shows and a wide range of dramatic, variety, educational and personality presentations from the Radio City television studios.

●  
**W N B W\***

**WASHINGTON, D. C.**

Frequency: 60000-66000 Kc.; Power: Sight, 1000 Watts; Sound, 1000 Watts  
Effective Signal Radiated .....1200  
Owned-Operated By..... National Broadcasting Co.  
Business-Studio Address.....Wardman Park Hotel

●  
**W P T Z\***

**PHILADELPHIA, PA.**

Frequency: 66000-72000 Kc.; Power: Sight, 10000 Watts; Sound, 10000 Watts  
Owned-Operated By.....Philco Radio & Television Corp.  
Effective Signal Radiated .....680  
Business Address.....Tioga & C Streets

●  
**W T Z R\***

**CHICAGO**

Frequency: 50000-56000 Kc.; Power: Sight and Sound, 4500 Watts  
Effective Radiated Signal .....1270  
Owned-Operated By.....Zenith Radio Corp.  
Business-Studio Address.....6001 Dickens Ave.  
Phone Number .....Berkshire 7500  
Transmitter & Antenna Location....135 S. La Salle St.  
Time on the Air.....Unlimited license

**Personnel**

President .....E. F. McDonald, Jr.  
Station Manager.....J. E. Brown

\*Station had construction permit at press-time.

# F. C. C. REGULATIONS REGARDING BROADCAST STATIONS FOR TELEVISION AND FACSIMILE

As of January 1, 1942

*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<sup>1</sup>.

"*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

<sup>1</sup> The 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	50,000- 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 ks
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 section 4.261 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)<sup>2</sup> 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

<sup>2</sup>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 section 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 authority<sup>3</sup> 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,<sup>4</sup> 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 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).

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

<sup>4</sup> Informal application by letter may be made.



(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 15 hours per week. On each day, except Sunday, there shall be at least 2 hours program transmission between 2 p.m. and 11 p.m., including at least 1 hour program transmission on five week days between 7.30 p.m. and 10.30 p.m.

(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, (call 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 or immediately following the broadcast of as such either at the end of the program 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 2.54 (FCC General Rules and Regulations).

### 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 "television broadcast station" means a station licensed for the transmission of transient visual images of moving or fixed objects for simultaneous reception and reproduction by the general public. The transmission

of the synchronized sound (aural broadcast) is considered an essential phase of television broadcasting and one license will be authorized for 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.
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 a 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 an-

nouncements 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 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
<b>Group C</b>		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 licensees 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 efficiency 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 adequate 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 representation 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
25,050	43,580	3 0 0,0 0 0
25,075	43,620	kc excluding band
25,100	43,660	400,000 to
25,125	43,700	4 0 1,0 0 0
25,150	43,740	kc.
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 this rule. More than one frequency may be assigned under provisions of subsection (b) of this rule 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 maintained 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.

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# EXPERIMENTAL FACSIMILE BROADCAST STATIONS

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<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
The Pulitzer Publishing Co. St. Louis, Mo.....	W9XZY	25100	100	A4
WBNS, Inc. Columbus, Ohio .....	W8XUM	25200	100	A4
WOKO, Inc. Albany, N. Y.....	W2XWE	25050	500	A3 & A4

## BROADCAST STATIONS LICENSED FOR EXPERIMENTAL TRANSMISSION OF FACSIMILE SIGNALS

<i>Call Letters</i>	<i>Licensee and Location</i>	<i>Frequency Kilocycles</i>	<i>Power Authorized Watts</i>
WGN . .	WGN, Inc. .... Chicago, Ill.	720	50000
WLW . .	Crosley Corp. .... Cincinnati, Ohio	700	50000
WOR . .	Bamberger Broadcasting Service, Inc..... Newark, N. J.	710	50000

# FM MAKING RAPID PROGRESS

*By Dick Dorrance, General Manager, FM Broadcasters, Inc.*

**I**T is doubtful whether any single medium in the history of radio has ever made quite so much progress in the space of one year as frequency modulation (FM) broadcasting did during 1941. And yet, when analyzed, there is nothing unduly surprising about it. FM has had the ingredients of success which appeal to both broadcasters and public. It can provide improved and expanded service beyond the technical limitations of ordinary broadcasting; it has the enthusiastic support of some of the biggest broadcasters and engineering groups in the country.

When 1941 started there were, according to the most optimistic estimates, about 15,000 receivers in the nation equipped for FM reception. By the end of the year, the FM listening audience had grown to approximately a quarter of a million sets, with close to 50,000 being sold each month. These figures, accurately compiled by FM Broadcasters, Inc., with the cooperation of manufacturers, indicate an increase of 1400 per cent during the twelve-month period.

## **Commercial FM**

Officially, FM assumed its commercial status on January 1, 1941, but it was not until March 1 that the first commercial FM station actually began operating. By the end of 1941, the Federal Communications Commission had authorized the construction of 62 such transmitters, 24 of which had already gone on the air. The rest are pushing installation of equipment as fast as war-time exigencies will permit.

The increased coverage of FM stations now on the air contrasts sharply with the limited reception available from the handful of low-power experimental stations operating at the close of 1940. Although these had an average range of about 30 miles, it is not uncommon to find commercial outlets serving a radius of 70 to 100 miles and more. Some 40,000,000 persons live within the assigned service areas of the 24 transmitters on the air at the end of 1941.

Another interesting development of the past year has been the organization of The American Network, Inc., FM's first chain with coast-to-coast ambitions. Ultimate plans call for outlets in the 42 largest U. S. markets, providing maximum coverage with a pre-planned network.

## **Time Sales**

Time sales over FM stations in 1941, while not epochal, have at least been promising. There was great variation from city to city in the amount of business secured, but local accounts far out-totaled national business. Toward the close of the year agency interest appeared to be growing as the FM audience reached appreciable proportions. Many stations began to set up special FM sales staffs.

The public today has a selection of over 125 different set models to pick from, produced by 20 manufacturers. The year brought noticeable reductions in price, with table receivers capable of both FM and AM reception selling for as little as \$67.50. Practically all sets now on the market are of the FM-AM type, and extensive improvements in circuit design have taken place in the 1942 models.

## **Future**

It cannot be denied that the war will place formidable obstacles in the path of FM development in the coming year—a situation now being faced by almost every civilian industry. Curtailment of set production, however, is expected proportionately to wreak no more havoc on FM than on ordinary broadcasting, with the likelihood that manufacturers, confronted by shortages of raw material, will use their limited allotments to make FM-AM sets, thus compensating with quality for revenue normally brought in by the sale of low-priced AM midget receivers.

There can be no question that further FM development during 1941 was held up by the FCC investigation of newspaper-controlled radio stations. Some three dozen of the ungranted FM applications pending have been filed by newspapers, anxious to enter the FM field. These, however, have been kept in abeyance by the Commission until definite policies with respect to such ownership are determined.

Active throughout the year, and an important factor in coordinating the growth of FM, has been FM Broadcasters, Inc., the young industry's trade association to which all leading FM groups belong. Its promotional work, public education, liaison with manufacturers, and trade representation has served FM well, and will continue to do so in 1942.

# HIGH FREQUENCY—FREQUENCY MODULATION BROADCAST STATIONS

*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. Commercial high frequency broadcast stations must use frequency modulation.*

LOCATION	Call Letters	Licensee	Frequency Kilocycles	Service Area Sq. Mi
<b>COMMERCIAL</b>				
Alpine, N. J.	W31NY	Edwin H. Armstrong	43100	15600
Baltimore, Md.	W59BM	Baltimore Radio Show, Inc.	45900	5500
Baton Rouge, La.	W45RG	Baton Rouge Broadcasting Co.	44500	8100
Binghamton, N. Y.	W49BN	Wylie B. Jones Advertising Agency	44900	6500
Boston, Mass.	W67B	Westinghouse Radio Stations, Inc.	46700	6700
Boston, Mass.	W39B	The Yankee Network, Inc.	43900	31000
Chicago, Ill.	W67C	Columbia Broadcasting System, Inc.	46700	10800
Chicago, Ill.	W75C	Moody Bible Institute of Chicago	47500	10800
Chicago, Ill.	W63C	National Broadcasting Co.	46300	10800
Chicago, Ill.	W79C	Oak Park Realty & Amusement Co.	47900	10800
Chicago, Ill.	W59C	WGN, Inc.	45900	10800
Chicago, Ill.	W47C	WJJD, Inc.	44700	10800
Chicago, Ill.	W51C	Zenith Radio Corp.	45100	10800
Columbus, Ohio	W45CM	WBNS, Inc.	44500	12400
Detroit, Mich.	W49D	John Lord Booth	44900	6800
Detroit, Mich.	W45D	The Evening News Association	44500	6800
Detroit, Mich.	W73D	King-Trendle Broadcasting Corp.	47300	6800
Detroit, Mich.	W53D	WJR, The Goodwill Station	45300	6800
Evansville, Ind.	W45V	Evansville On the Air, Inc.	44500	8400
Fort Wayne, Ind.	W49FW	Westinghouse Radio Stations, Inc.	44900	6100
Hartford, Conn.	W53H	Travelers Broadcasting Service Corp.	45300	6100
Hartford, Conn.	W65H	WDRG, Inc.	46500	6100
Hollywood, Calif.	K31LA	Columbia Broadcasting System	43100	38000
Kansas City, Mo.	K49KC	Everett L. Dillard, d/b as Commercial Radio Equipment Co.	44900	4400
Lansing, Mich.	W77XL	WJIM, Inc.	47700	3800
Lexington, Ky.	W51SL	American Broadcasting Corp. of Kentucky	45100	6300
Los Angeles, Calif.	K37LA	Earle C. Anthony, Inc.	43700	28000
Los Angeles, Calif.	K45LA	Don Lee Broadcasting System	44500	7000
Los Angeles, Calif.	K49LA	Hughes Tool Co.	44900	7000
Los Angeles, Calif.	K61LA	Metro-Goldwyn-Mayer Studios, Inc.	46100	7000
Los Angeles, Calif.	K53LA	Standard Broadcasting Co.	45300	7000
Milwaukee, Wisc.	W55M	The Journal Co.	44500	8500
Nashville, Tenn.	W47NV	National Life & Accident Insurance Co.	44700	16000
New York, N. Y.	W71NY	Bamberger Broadcasting Service, Inc.	47100	8500

<i>LOCATION</i>	<i>Letters Call</i>	<i>Licensee</i>	<i>Frequency Kilocycles</i>	<i>Service Area Sq. Mi.</i>
New York, N. Y.....	W39NY	City of New York Municipal Broadcasting System .....	43900	3900
New York, N. Y.....	W67NY	Columbia Broadcasting System, Inc.	46700	8500
New York, N. Y.....	W55NY	William G. H. Finch.....	45500	8500
New York, N. Y.....	W59NY	Interstate Broadcasting Co.....	45900	8500
New York, N. Y.....	W63NY	Marcus Loew Booking Agency.....	46300	8500
New York, N. Y.....	W75NY	Metropolitan Television, Inc.....	47500	8500
New York, N. Y.....	W47NY	Muzak Corp. ....	44700	8500
New York, N. Y.....	W51NY	National Broadcasting Co.....	45100	8500
Paxton, Mass. ....	W43B	The Yankee Network, Inc.....	44300	....
Philadelphia, Pa. ....	W49PH	Pennsylvania Broadcasting Co.....	44900	9300
Philadelphia, Pa. ....	W81PH	Seaboard Radio Broadcasting Corp..	48100	9300
Philadelphia, Pa. ....	W69PH	WCAU Broadcasting Co.....	46900	9300
Philadelphia, Pa. ....	W53PH	WFIL Broadcasting Co.....	45300	9300
Philadelphia, Pa. ....	W57PH	Westinghouse Radio Stations, Inc...	45700	9300
Philadelphia, Pa. ....	W73PH	William Penn Broadcasting Co....	47300	9300
Pittsburgh, Pa. ....	W47P	Walker & Downing Radio Corp....	44700	8400
Pittsburgh, Pa. ....	W75P	Westinghouse Radio Stations, Inc...	47500	8400
Rochester, N. Y. ....	W51R	Stromberg Carlson Telephone Mfg. Co. ....	45100	3200
Rockford, Ill. ....	W71RF	Rockford Broadcasters, Inc.....	47100	3900
St. Louis, Mo. ....	K59L	Columbia Broadcasting System.....	45900	13000
St. Louis, Mo. ....	K51L	St. Louis University .....	45100	13000
Salt Lake City, Utah.....	K47SL	Radio Service Corp. of Utah.....	44700	700
San Francisco, Calif.....	K45SF	Hughes Tool Company .....	44500	10800
Schenectady, N. Y.....	W47A	Capitol Broadcasting Co.....	44700	6600
Schenectady, N. Y.....	W57A	General Electric Co.....	45700	6600
South Bend, Ind.....	W71SB	South Bend Tribune.....	47100	7100
Springfield, Mass. ....	W81SP	Westinghouse Radio Stations, Inc...	48100	2500
Syracuse, N. Y.....	W63SY	Central New York Broadcasting Corp. ....	46300	6800
Winston-Salem, N. C.....	W41MM	Gordon Gray .....	44100	69400

## EXPERIMENTAL

<i>Licensee and Location</i>	<i>Call Letters</i>	<i>Frequency Kilocycles</i>	<i>Power Watts</i>
Edwin H. Armstrong, Alpine, N. J.....	W2XMN	42800, 43000, 117430	40000
City of New York Municipal Broadcasting System, New York, N. Y.....	W2XVP	26100	1000
General Electric Co., New Scotland, N. Y.....	W2XOY	43200	2500
Head of Lakes Broadcasting Co., Superior, Wisc....	W9XYH	43000	1000
John V. L. Hogan, Long Island City, N. Y.....	W2XQR	48700	1000
C. M. Jansky, Jr. and Stuart L. Bailey, d/b as Jansky & Bailey, Georgetown, D. C.....	W3XO	43200	1000
KLZ Broadcasting Co., Denver, Colo.....	W9XLA	25400	100
National Broadcasting Co., New York, N. Y.....	W2XWG	45100	1000
Carman R. Runyon, Jr., Yonkers, N. Y.....	W2XAG	117190	5000
WBNS, Inc., Columbus, Ohio.....	W8XVH	43000	250
Westinghouse Radio Stations, Inc., Hull, Mass....	W1XK	42600	1000
Westinghouse Radio Stations, Inc., East Springfield, Mass.....	W1XSN	42600	1000
WHEC, Inc., Rochester, N. Y.....	W8XAD	42600	1000
WKY Radiophone Co., Oklahoma City, Okla.....	W5XAU	26125	100
Worcester Telegram Publishing Co., Worcester, Mass. ....	W1XTG	43400	1000

## Pending Applications

LOCATION	Licensee	Frequency Kilocycles	Service Area Sq. Mi.
Albany, N. Y.	WOKO, Inc.	45100	7164
Amarillo, Texas	Amarillo Broadcasting Co.	45100	5628
Ashland, Ky.	Ashland Broadcasting Co.	46100	4160
Baltimore, Md.	The A. S. Abell Co.	46300	6040
Battle Creek, Mich.	Federated Publications, Inc.	48100	4100
Boston, Mass.	Columbia Broadcasting System, Inc.	43500	20200
Boston, Mass.	Boston Edison Co.	44700	6930
Boston, Mass.	The Yankee Network, Inc.	44300	19230
Cedar Rapids, Ia.	The Gazette Company	44700	7400
Chicago, Ill.	Chicago Federation of Labor	47900	10800
Cicero, Ill.	WHFC, Inc.	48300	10800
Cicero, Ill.	WHFC, Inc.	44700	3200
Cleveland, Ohio	United Broadcasting Co.	48500	8420
Detroit, Mich.	James F. Hopkins, Inc.	46500	6790
Detroit, Mich.	James F. Hopkins, Inc.	46500	6790
Duluth, Minn.	Head of Lakes Broadcasting Co.	44500	2754
Duluth, Minn.	Head of Lakes Broadcasting Co.	44500	2754
Grand Rapids, Mich.	Federated Publications, Inc.	46100	5300
Indianapolis, Ind.	Associated Broadcasters, Inc.	47300	6665
Indianapolis, Ind.	Indianapolis Broadcasting Co.	45300	13640
LaCrosse, Wisc.	The LaCrosse Tribune Co.	46500	7040
Lansing, Mich.	Federated Publications, Inc.	47100	3820
Los Angeles, Calif.	Don Lee Broadcasting Co.	43500	18050
Louisville, Ky.	Courier Journal & Louisville Times Co.	45700	13200
Manchester, N. H.	The Radio Voice of New Hampshire, Inc.	43500	20290
New Bedford, Mass.	E. Anthony & Sons, Inc.	45700	1787
New York, N. Y.	Debs Memorial Radio Fund, Inc.	48700	8600
New York, N. Y.	FM Radio Broadcasting Co.	48300	8600
New York, N. Y.	Greater New York Broadcasting Corp.	48700	8500
New York, N. Y.	Knickerbocker Broadcasting Co.	48300	6800
New York, N. Y.	News Syndicate Co.	47900	8500
New York, N. Y.	Woodaam Corp.	46700	8500
New York, N. Y.	WBNX Broadcasting Co.	48300	8730
Oakland, Calif.	Tribune Building Co.	46500	1216
Philadelphia, Pa.	Gibraltar Service Corp.	46100	9318
Pittsburgh, Pa.	Pittsburgh Radio Supply House	43900	11488
Portland, Maine	Portland Broadcasting System	47100	3980
Providence, R. I.	Cherry & Webb Broadcasting Co.	47500	6207
Providence, R. I.	The Outlet Co.	48500	4840
Rochester, N. Y.	WHEC, Inc.	44700	3200
St. Louis, Mo.	Globe Democrat Publishing Co.	44700	13083
St. Louis, Mo.	The Pulitzer Publishing Co.	45550	13391
St. Louis, Mo.	Star-Times Publishing Co.	44700	12480
San Bernardino, Calif.	The Sun Co. of San Bernardino, Calif.	44100	17101
Trenton, N. J.	Mercer Broadcasting Co.	44700	3200
Washington, D. C.	M. A. Leese Radio Corp.	47100	5600
Winston-Salem, N. C.	Piedmont Publishing Co.	46700	4600
Worcester, Mass.	Worcester Telegram Publishing Co.	46100	10000



# F. C. C. Regulations

## Regarding High Frequency Broadcast Stations

As of January 1, 1942

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 programs originating at remote points.

### Allocation of Facilities<sup>1</sup>

*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 data<sup>2</sup>. 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.

<sup>1</sup>The 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.

<sup>2</sup>There 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 population 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 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 control<sup>1</sup>) 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,

<sup>1</sup>The 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

(a) For stations operating on the frequency issued for a normal license period of one year, expiring as follows:

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 prescribed 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 application<sup>1</sup> 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

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

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.

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.

(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 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.

# 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.*

Licensee and Location	Call Letters	Frequency (kc)	Power	Emission
Bell Telephone Labs., Inc. Whippany, N. J.....	W3XDD	560, 900, 1340	50000 w	A3
Bell Telephone Labs., Inc. Whippany, N. J.....	W3XPY	43500, 49100	5000 w	Special
Central Broadcasting Co. Mitchellville, Iowa .....	W9XC	1040	150 w	A3 (C.P. only)
The Crosley Corp. Near Mason, Ohio.....	W8XO	700	100 kw-500-kw	A3
Midland Broadcasting Co., Kansas City, Mo.....	W9XER	46500	1500 w	Special
Muzak Corporation New York, N. Y.....	W2XMC	117650	1000 w	Special (C.P. only)

### Pending Developmental Stations

McNary & Chambers Washington, D. C. (portable)	W10XMC	550 to 1600	100 w	A-0
Natl. Broadcasting Co., Inc. Area of New York, N. Y....	W10XF	1614, 2398, 3492.5, 4797.5, 6425, 9135, 12862.5, 17310, 23100, 30660, 31020, 31140, 31180, 31540, 33340, 33460, 33620, 35060, 35460, 37060, 37140, 37540, 39140, 39460, 39540, 116050, 116250, 116450, 116850, 117050, 117250, 117650, 118050, 118250, 118450, 118650, 118850, 156525, 156975, 157425, 157725, 158175, 159075, 160425, 161325, 161775, 162000-168000, 210000-216000, 264000-270000, 300000-400000, 401000 and above	25 w	A1, A-2, A3, A4, A5 & Special A5 on frequencies above 162000 kcs.
Natl. Broadcasting Co., Inc. Area of New York, N. Y....	W10XR	Same as above	100 w	A1, A2, A3, A4, A5 & Special A5 on frequencies above 162000 kcs.

# — F. C. C. 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 holds.

## 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
2,400		12,870	17,310		37,540	
3,490	}	3,492.5	17,300	}	17,310	39,140
3,495		17,320	116,050		39,460	
4,795	}	4,797.5	23,100	}	23,100	116,250
4,800		30,660	116,450		116,850	
6,420	}	6,425	31,020	}	31,140	117,050
6,430		31,140	117,250		117,650	
9,130	}	9,135	31,180	}	31,540	118,050
9,140		33,340	118,250		118,450	
			33,460		33,460	118,650
			35,060		35,060	118,850
			35,460		35,460	156,525
			37,060		37,060	156,975
						157,425
						157,725
						158,175
						159,075
						160,425
						161,325
						161,775
						162,000-168,000
						210,000-216,000
						264,000-270,000
						300,000-400,000
						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 frequency allocated for broadcast stations or any frequencies allocated for other services under the jurisdiction of the Commission upon satisfactory showing that such frequencies can be used without causing interference to established services.

The operating frequency of a developmental broadcast station shall be main-

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



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

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

**Supplemental Report**

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

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

A developmental broadcast station authorized to operate on frequencies regularly allocated to other stations or services, shall be required to abide by all rules governing the stations operating regularly thereon which are applicable to developmental broadcast and are not in conflict with rules of the Commission for stations in general or for rules for developmental broadcast stations.

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# ST BROADCAST STATIONS

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

Licensee and Location	Call Letters	Frequency Kilocycles	Power Watts	Emission
Capitol Broadcasting Co. Schenectady, N. Y.....	W2XEO	331000	50	Special (CP only)
Columbia Broadcasting System, Inc. New York, N. Y.....	W2XYN	330400, 333400, 336400	25	Special (CP only)
Columbia Broadcasting System, Inc. New York, N. Y.....	W2XYO	330400, 333400 336400	25	Special (CP only)
Columbia Broadcasting System, Inc. New York, N. Y.....	W2XYP	330400, 333400 336400	25	Special (CP only)
Gordon Gray Winston-Salem, N. C.....	—	337000	25	Special (CP only)
The Journal Co. Milwaukee, Wisc. ....	W9XJC	331000	50	Special (CP only)
The Moody Bible Institute of Chicago Chicago, Ill. ....	W9XMB	333400	25	Special (CP only)
Standard Broadcasting Co. Los Angeles, Calif.....	—	333400	25	Special (CP only)

### Pending ST Stations

Boston Edison Co. Boston, Mass. ....	—	330400	25	Special
Radio Service Corp. of Utah Salt Lake City, Utah.....	—	331000	25	Special
WOKO, Inc. Albany, N. Y.....	—	337000	25	Special

# RULES GOVERNING ST BROADCAST STATIONS

The term "ST<sup>1</sup> 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 connect 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

<sup>1</sup> The abbreviation "ST" is derived from "studio-transmitter."

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:

- Design of equipment and power required to render a satisfactory service.
- Design and adjustment of directional transmitting antennas.
- 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:

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



# ORGANIZATIONS



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# NATIONAL ASSOCIATION OF BROADCASTERS



Headquarters: 1626 K. St., N.W., Washington, D. C.

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## BOARD OF DIRECTORS

Director	Number	States Comprising District
Paul W. Morency..... WTIC, Hartford, Conn.	1	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
*Clarence Wheeler..... WHEC, Rochester, N. Y.	2	New York, New Jersey.
Isaac D. Levy..... WCAU, Philadelphia, Pa.	3	Delaware, Pennsylvania.
*John A. Kennedy..... WCHS, Charleston, W. Va.	4	District of Columbia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.
Frank King..... WMBR, Jacksonville, Fla.	5	Alabama, Florida, Georgia, Puerto Rico.
*Edwin W. Craig..... WSM, Nashville, Tenn.	6	Arkansas, Louisiana, Mississippi, Tennessee.
J. Harold Ryan..... WSPD, Toledo, Ohio	7	Kentucky, Ohio.
*John E. Fetzner..... WKZO, Kalamazoo, Mich.	8	Indiana, Michigan, excluding the counties of Ontonagon and Gogebic.
Edgar L. Bill..... WMBD, Peoria, Ill.	9	Illinois; Wisconsin, excluding the counties of LaCrosse, Monroe, Juneau, Adams, Marquette, Waushara, Portage, Wood, Jackson, Trempealeau, Buffalo, Pepin, Pierce, St. Croix, Dunn, Chippewa, Eau Claire, Clark, Marathon, Lincoln, Taylor, Rusk, Barron, Polk, Burnett, Washburn, Sawyer, Price Oneida, Vilas, Iron, Ashland, Bayfield and Douglas.
*John J. Gillen, Jr..... WOW, Omaha, Neb.	10	Iowa, Missouri, Nebraska.

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Director	Number	States Comprising District
Earl H. Gammons WCCO, Minneapolis, Minn.	11	Minnesota; North Dakota; South Dakota, excluding the counties of Fall River, Shannon, Bennett, Todd, Mellette, Waushabaugh, Washington, Custer, Pennington, Jackson, Jones, Stanley, Haakon, Meade, Lawrence, Butte, Harding, Perkins, Ziebach, Armstrong, Dewey and Corson; Wisconsin, including the counties of LaCrosse, Monroe, Juneau, Adams, Marquette, Waushara, Portage, Wood, Jackson, Trempealeau, Buffalo, Pepin, Pierce, St. Croix, Dunn, Chipewa, Eau Claire, Clark, Marathon, Lincoln, Taylor, Rusk, Barron, Polk, Burnett, Washburn, Sawyer, Price, Oneida, Vilas, Iron, Ashland, Bayfield and Douglas; Michigan, including the counties of Ontonagon and Gogebic.
*Herbert Hollister KANS, Wichita, Kans.	12	Kansas, Oklahoma.
O. L. Taylor KGNC, Amarillo, Texas	13	Texas.
*Eugene P. O'Fallon KFEL, Denver, Colo.	14	Colorado, Idaho, Utah, Wyoming, Montana, South Dakota, including the counties of Fall River, Shannon, Bennett, Todd, Mellette, Waushabaugh, Washington, Custer, Pennington, Jackson, Jones, Stanley, Haakon, Meade, Lawrence, Butte, Harding, Perkins, Ziebach, Armstrong, Dewey and Corson.
Howard Lane KFBK, Sacramento, Calif.	15	California, excluding the counties of San Luis Obispo, Kern, San Bernardino, Santa Barbara, Ventura, Los Angeles, Orange, Riverside, San Diego and Imperial; Nevada and Hawaii.
*Harrison Holliway KECA-KFI, Los Angeles, Calif.	16	Arizona; California, including the counties excepted in District 15; New Mexico.
Harry R. Spence KXRO, Aberdeen, Wash.	17	Alaska, Oregon, Washington.

\* Term expires in 1942.

**DIRECTORS-AT-LARGE\***

**Large Stations**

James D. Shouse  
WLW, Cincinnati, Ohio

J. O. Maland  
WHO, Des Moines

**Medium Stations**

George W. Norton, Jr.  
WAVE, Louisville, Ky.

Don S. Elias  
WWNC, Asheville, N. C.

**Small Stations**

John Elmer  
WCBM, Baltimore, Md.

James W. Woodruff, Jr.  
WRBL, Columbus, Ga.

**Networks**

Edward Klauber  
CBS, New York, N. Y.

Frank M. Russell  
NBC, Washington, D. C.

## COMMITTEES

### Executive

Chairman—Neville Miller, NAB, Washington, D. C.

James D. Shouse, WLW, Cincinnati, Ohio.

Paul W. Morency, WTIC, Hartford, Conn.

Don S. Elias, WWNC, Asheville, N. C.

John J. Gillin, Jr., WOW, Omaha, Nebr.

John Elmer, WCBM, Baltimore, Md.

O. L. Taylor, KGNC, Amarillo, Texas.

### Accounting

Chairman—Harold Wheelahan, WSMB, New Orleans, La.

S. R. Dean, CBS, New York, N. Y.

Virgil J. Hasche, WGY, Schenectady, N. Y.

Leslie Johnson, WHBF, Rock Island, Ill.

Ray Jordan, WDBJ, Roanoke, Va.

Harry F. McKeon, NBC, New York, N. Y.

### Advisory

Walter J. Brown, WORD-WSPA, Spartanburg, S. C.

Gardner Cowles, Jr., KRNT, Des Moines, Ia.

Edward Klauber, CBS, New York, N. Y.

Paul W. Morency, WTIC, Hartford, Conn.

George W. Norton, Jr., WAVE, Louisville, Ky.

Niles Trammell, NBC, New York, N.Y.

### Code

Chairman—Earl J. Glade, KSL, Salt Lake City, Utah.

Edgar L. Bill, WMBD, Peoria, Ill.

Gilson Gray, CBS, New York, N. Y.

Hugh A. L. Half, WOAI, San Antonio, Texas.

Henry P. Johnston, WSGN, Birmingham, Ala.

Janet MacRorie, NBC, New York, N. Y.

William B. Quarton, WMT, Cedar Rapids, Ia.

Edney Ridge, WBIG, Greensboro, N. C.

Calvin J. Smith, KFAC, Los Angeles, Calif.

### Engineering

Chairman—Paul A. Loyet, WHO, Des Moines, Ia.

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#### District 2

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#### District 3

James Schultz, WCAE, Pittsburgh, Pa.

#### District 4

Scott Helt, WIS, Columbia, S. C.

#### District 5

John C. Bell, WBRC, Birmingham, Ala.

#### District 6

J. H. DeWitt, WSM, Nashville, Tenn.

#### District 7

R. Morris Pierce, WGAR, Cleveland, Ohio.

#### District 8

Walter Hoffman, WWJ, Detroit, Mich.

#### District 9

Thomas L. Rowe, WLS, Chicago, Ill.

#### District 10

Paul A. Loyet, WHO, Des Moines, Ia.

#### District 11

Julius Hetland, WDAY, Fargo, N. D.

#### District 12

Karl Troeglen, WIBW, Topeka, Kans.

#### District 13

William G. Edgerton, KTSA, San Antonio, Texas.

#### District 14

Eugene G. Pack, KSL, Salt Lake City, Utah.

#### District 15

R. V. Howard, KSFO, San Francisco, Calif.

#### District 16

L. H. Bowman, KNX, Los Angeles, Calif.

#### District 17

James B. Hatfield, KIRO, Seattle, Wash.

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O. B. Hanson, NBC, New York, N. Y.

G. Porter Huston, WCBM, Baltimore, Md.

Paul A. DeMars, Yankee Network, Boston, Mass.

### Insurance

Chairman—William I. Moore, WBNX, New York, N. Y.

S. R. Dean, CBS, New York, N. Y.

Charles A. Wall, NBC, New York, N. Y.

### Labor

#### District 1

J. J. Boyle, WJAR, Providence, R. I.

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• • •      **National Association of Broadcasters**      • • •

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District 2

I. R. Lounsberry, WGR, Buffalo, N. Y.

District 3

Samuel R. Rosenbaum, WFIL, Philadelphia, Pa.

District 4

George W. Smith, WWVA, Wheeling, W. Va.

District 5

Fred Borton, WQAM, Miami, Fla.

District 6

H. W. Slavick, WMC, Memphis, Tenn.

District 7

Gilmore N. Nunn, WLAP, Lexington, Ky.

District 8

Leo J. Fitzpatrick, WJR, Detroit, Mich.

District 9

W. E. Hutchinson, WAAF, Chicago, Ill.

District 10

Vernon H. Smith, KOWH, Omaha, Nebr.

District 11

Clarence T. Hagman, WTCN, Minneapolis, Minn.

District 12

R. J. Laubengayer, KSAL, Salina, Kans.

District 13

Kern Tips, KPRC, Houston, Texas.

District 14

Earl J. Glade, KSL, Salt Lake City, Utah.

District 15

Ralph R. Brunton, KJBS, San Francisco, Calif.

District 16

L. A. Schamblin, KPMC, Bakersfield, Calif.

District 17

Edward J. Jansen, KTBI, Tacoma, Wash.

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Ralph R. Brunton, Gilmore N. Nunn, W. E. Hutchinson, George W. Smith.

**Legislative**

Chairman—John A. Kennedy, WCHS, Charleston, W. Va.

Campbell Arnoux, WTAR, Norfolk, Va.

Walter J. Brown, WSPA-WORD, Spartanburg, S. C.

Harry C. Butcher, WJSV, Washington, D. C.

Edwin W. Craig, WSM, Nashville, Tenn.

John Elmer, WCBM, Baltimore, Md.

Mark Ethridge, WHAS, Louisville, Ky.

Frank M. Russell, WRC, Washington, D. C.

**National Defense District  
Representatives**

District 1

E. E. Hill, WTAG, Worcester, Mass.

District 2

Harry C. Wilder, WSYR, Syracuse, N. Y.

District 3

George D. Coleman, WGBI, Scranton, Pa.

District 4

Howard Chernoff, WCHS, Charleston, W. Va.

District 5

Red Cross, WMAZ, Macon, Ga.

District 6

Howard Summerville, WWL, New Orleans, La.

District 7

Nathan Lord, WAVE, Louisville, Ky.

District 8

Franklin Schurz, WSBT, South Bend, Ind.

District 9

Leslie C. Johnson, WHBF, Rock Island, Ill.

District 10

George M. Burbach, KSD, St. Louis, Mo.

District 11

Morgan Murphy, Head of Lakes Broadcasting Co., Duluth, Minn.

District 12

William C. Gillespie, KTUL, Tulsa, Okla.

District 13

George Cranston, KGKO, Fort Worth, Texas.

**District 14**

Ed Yocum, KGHL, Billings, Mont.

**District 15**

Lincoln Dellar, KSFO, San Francisco, Calif.

**District 16**

Thomas E. Sharp, KSFD, San Diego, Calif.

**District 17**

Paul Connet, KEX, Portland, Ore.

**National Defense Committee**

Chairman—John E. Fetzer, WKZO, Kalamazoo, Mich.

H. Vernon Anderson, WJBO, Baton Rouge, La.

Harry C. Butcher, CBS, Washington, D. C.

Leo J. Fitzpatrick, WJR, Detroit, Mich.

A. J. Fletcher, WRAL, Raleigh, N. C.

Ben Ludy, WIBW, Topeka, Kans.

Frank Russell, NBC, Washington, D. C.

**Research**

Chairman—Roger W. Clipp, WFIL, Philadelphia, Pa.

Hugh M. Beville, Jr., NBC, New York, N. Y.

C. Glover DeLaney, WTHT, Hartford, Conn.

John C. McCormack, KWKH, Shreveport, La.

Dr. Frank N. Stanton, CBS, New York, N. Y.

**Sales Managers**

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**District 2**

Charles Phillips, WFBL, Syracuse, N. Y.

**District 3**

John E. Surrick, WFIL, Philadelphia, Pa.

**District 4**

John H. Field, Jr., WPTF, Raleigh, N. C.

**District 5**

John M. Outler, Jr., WSB, Atlanta, Ga.

**District 6**

H. Vernon Anderson, WJBO, Baton Rouge, La.

**District 7**

William I. Orr, WBNS, Columbus, Ohio.

**District 8**

Lester Lindow, WFBM, Indianapolis, Ind.

**District 9**

William Cline, WLS, Chicago, Ill.

**District 10**

Sam H. Bennett, KMBC, Kansas City, Mo.

**District 11**

Thomas G. Gavin, Head of Lakes Broadcasting Co., Duluth, Minn.

**District 12**

Ellis Atteberry, KCKN, Kansas City, Kans.

**District 13**

Jack Keasler, WOAI, San Antonio, Texas.

**District 14**

W. E. Wagstaff, KDYL, Salt Lake City, Utah.

**District 15**

Wilt Gunzendorfer, KSRO, Santa Rosa, Calif.

**District 16**

Charles A. Storke, KTMS, Santa Barbara, Calif.

**District 17**

Harvey Wixson, KHQ-KGA, Spokane, Wash.

**Sales Managers Executive Committee**

Chairman — Eugene Carr, WGAR, Cleveland, Ohio.

Dietrich Dirks, KTRI, Sioux City, Ia.

E. Y. Flanigan, WSPD, Toledo, Ohio.

John M. Outler, Jr., WSB, Atlanta, Ga.

Arthur Hull Hayes, CBS, New York, N. Y.

Linus Travers, WAAB, Boston, Mass.

George H. Frey, NBC, New York, N. Y.

**Wage and Hour Committee**

Chairman—C. T. Lucy, WRVA, Richmond, Va.

A. K. Redmond, WHP, Harrisburg, Pa.

Joseph C. Burwell, WMBS, Uniontown, Pa.

Robert Priebe, KRSC, Seattle, Wash.

Robert Laubengayer, KSAL, Salina, Kans.

Harry R. LePoidevin, WRJN, Racine, Wisc.



# BROADCASTING AND THE WAR

*By Neville Miller, President, National Association of Broadcasters*

**R**ADIO broadcasting in the United States is just entering upon a period of what promises to be its greatest effectiveness. While it is not possible to form definite conclusions as to the effect of this long, hard war upon the industry, it is gratifying to note that the first impact of the war found the broadcasters measurably prepared to fulfill their responsibility.

Radio was ready because there has been many months of careful planning and more than two years of experience in news handling under war conditions abroad and radio had been consistently performing a notable service in the national defense effort which preceded the actual declaration of war. The groundwork to meet just such a contingency as arose out of the Pearl Harbor incident had been laid. Within two days after the attack upon Hawaii a voluntary set of rules and regulations for the handling of news and other types of programs, easily accessible to subversive interests, had been formulated. Within ten days after our entry into the war an almost complete set of rules and regulations had been perfected and the industry was voluntarily following it closely.

As the nation's most important single means of mass communication, unique in its ability to secure and hold the attention of a vast majority of the people of the nation simultaneously, radio will undoubtedly play a major role in the prosecution of the war. Probably the most favorable development thus far affecting broadcasting is the evidence that our government has decided not to take over and operate radio, but to leave it in the hands of experienced private operators who, through the years, have demonstrated an appreciation of their responsibilities to serve the national interest. With the advent of radio, Congress wisely determined that in America this medium of mass communication should remain free of government operation and control. As a consequence the American system of broadcasting has developed along lines that have made of it a most effective instrument for the preservation of liberty and freedom of thought and expression. In this, America is singularly fortunate for it has been the sad experience of all too many people that the establishment of government control over radio has been the stepping stone

to the elimination of free speech and finally of freedom itself. This must not, and I am convinced will not, happen in America.

## **Radio's War Purposes**

On the other hand, radio will undoubtedly be used to a constantly greater extent for war purposes. The Defense Communications Board has been designated by the President to coordinate the physical facilities of the industry to the end that they may most adequately serve the war effort. The President has delegated to the Office of Censorship the responsibility of eliminating from programs any material which might serve to aid the enemy. The broadcasters have cooperated wholeheartedly in devising reasonable rules and regulations that would make these two important functions effective.

For many months prior to the actual advent of war, broadcasters had devoted a substantial portion of their time and facilities on a gratis basis to promote the national defense program. While the responsibilities of radio have been increased by the advent of war, the demands of the armed services have exacted their toll from the industry. The need of the military for trained radio men together with the operation of the Selective Service System, has produced a dangerous shortage of trained technicians. As a service to the armed forces, as well as for its own needs, the industry set out, even prior to the declaration of war, to establish courses for the training of radio technicians. This activity has received enthusiastic cooperation from the educational institutions of the country and is now well under way in all areas.

In addition, lack of critical materials, many of which are essential to the proper technical operation of radio broadcasting, will hamper normal operations and in some cases retard developments. Television and frequency modulation have made great strides in the past year and the industry will assuredly devote as much of its time and effort as possible to continue the development in these new fields consistent with the large demands upon its facilities and the handicaps of the emergency period.

## **"Business as Usual"**

From the commercial standpoint, while broadcasters do not hope for a "business as usual" program, there is every reason

to believe that radio will continue to be used as a major advertising medium. Radio listening is at its peak and there has even been an increase in the sale of radio receiving sets. With a peak audience and a higher degree of sustained listening audience it is felt that advertisers and agencies will not abandon radio to any great extent. There is, of course, the probability that some commodities heretofore widely advertised by radio will be affected by material shortage and compelled to discontinue all advertising. Experienced operators feel, however, that these losses will be more than offset by advertising of substitute commodities coming into the field.

In the early stages of the war when commercial programs were interrupted by war announcements and when occa-

sional black-outs were required, sponsors of commercial programs cooperated heartily and for this the broadcasters are grateful. It is my belief that the officers of government appreciate the importance of keeping broadcasting at its job. I also believe that they appreciate the fact that in performing its normal duties radio can pay its own way and at the same time render a most essential service to the country.

Despite all the uncertainties of what may develop the broadcasting industry faces 1942 with confidence and a determination to render an even greater service to the country in this time of crisis and to carry on our normal job in an orderly and efficient manner. No industry, no individual citizen, can be expected to do more.

# 1941 RESEARCH ACTIVITIES

*By Paul F. Peter, NAB Director of Research*

**T**HIS Department materially expanded its activities during the past year, continues to grow in usefulness to the industry. In January, the NAB Broadcast Advertising Record was inaugurated. This is a monthly report on the nature and extent of the use of radio by advertisers throughout the country. This service to all stations has received widespread commendation as one of the most valuable sales-building tools at the disposal of the individual station, and it serves as basic material for the NAB Department of Broadcast Advertising.

The monthly publication of the "Broadcast Advertising Record" contains a tabulation in terms of time units of advertising placed by advertisers on the station and networks cooperating in the service. Advertisers are classified as to type of business in sufficient detail to permit of quite specific examination. Separate consideration is given Local, National, Spot, Regional Network and National Network business. Averages are presented for Local and National Spot business to provide a direct comparison of an individual station's business to serve station management.

## Urban Radio Survey

Early in 1941, the NAB published its "Survey of Urban Radio Listening in the United States," a companion study to the "Rural Radio Ownership Study" made public in 1939. Heralded as a major contribution to knowledge of the broadcasting industry, this survey of radio owner-

ship and listening habits in urban areas was made in collaboration with the National Broadcasting Company and the Columbia Broadcasting System. It has been widely distributed among radio broadcast stations, advertisers and advertising agencies.

Pursuing its studies of methods used in program audience measurement, the NAB Research Committee invited the C. E. Hooper organization to present to it an analysis of the method employed in preparing the monthly "telephone coincidental" reports which this organization furnishes to its subscribers. A similar invitation was extended to the Co-operative Analysis of Broadcasting (Crossley) services who employ the "telephone recall" system. Both of these services furnished exceedingly interesting reports on their respective methods. It is the intention of the Research Committee to hear further reports on methods used in audience measurement, and to prepare a Research Manual for the use of NAB membership in placing or conducting audience measurement research.

A considerable amount of the Research Director's time during the year was devoted to work on various committees engaged in drafting standard forms of contracts and invoices for use by broadcast stations and agencies in connection with the purchase and sale of broadcasting time.

# LEGAL—LEGISLATIVE ACTIVITIES

*By Russell P. Place, NAB Counsel*

**O**F the bills affecting the broadcasting industry which have been introduced during the first session of the 77th Congress, undoubtedly the bills to amend the Communications Act introduced respectively by Senator White of Maine and Representative Sanders of Louisiana most vitally affect broadcasters. Seeking as they do to make changes in the organic act governing the industry and the Federal Communications Commission, these measures deserve the careful study of every broadcaster. In order to assist broadcasters in such study, the Legal Department prepared an analysis of the bills, which was circulated to the membership of the NAB at the District meetings held during the fall of 1941.

Leading up to the introduction of these bills, was Senator White's resolutions calling for an investigation of the Federal Communications Commission's Regulations Governing Chain Broadcasting, introduced almost immediately following the promulgation of those regulations on May 2, 1941. Pursuant to the vote of the NAB membership at the St. Louis Convention in May, the NAB, acting through Neville Miller, President, appeared before the Interstate Commerce Committee of the Senate in support of the resolution. The hearings were recessed, subject to the call of the chair, on June 20, and have not since been resumed. Subsequent to the recess, the Commission amended the regulations in certain respects; in November, by stipulation approved by the Court, the operation of the regulations was suspended pending judicial determination of the bill for a temporary injunction against their operation which was filed by CBS and NBC, and in which stations WHAM and WOW joined.

Of vital importance to the broadcasting industry and advertising generally was the eleventh hour threat to impose a gross receipts tax on time sales by stations and networks. A united industry succeeded in defeating the tax.

## **Copyrights**

Strenuous efforts were made by the State Department to persuade the Committee on Foreign Relations of the Senate that the Senate should give its advice and consent to adherence to the International Copyright Union. The NAB, in company with all other users and authors of copyrighted material, vigorously opposed adherence at the hearings before

that Committee. To date, the Committee has not made a report to the Senate. The effect of adherence of greatest importance to broadcasters would be the enormous number of musical compositions now in the public domain which would be thrown into the field of copyright protection. These works would become unusable because of the impossibility, under existing world conditions, of contacting their authors at the present time. Companion bills for the preservation of authors' rights during the emergency were introduced by Senator Bone and Representative Kramer; NAB appeared at the hearing and suggested perfecting amendments.

The Johnson Bill seeking to bar the advertising of alcoholic beverages by radio was reintroduced at this session. The Committee on Interstate Commerce of the Senate has not scheduled hearings on the bill. Because the measure is grossly discriminatory against radio in favor of competing media, NAB will oppose the bill if hearings are held.

The NAB appeared at the hearings on the daylight-saving time bills and urged the Committee on Interstate and Foreign Commerce of the House to report out a bill providing for daylight-saving time on a nation-wide basis. Such a bill has passed both branches of the Congress and has gone to the President for signature.

The Sacks Bill to legalize copyright in recorded renditions and interpretations has been referred to the Committee on Patents of the House; no hearings have been scheduled. The NAB is opposed to this measure.

## **State Legislation**

Legislatures in forty-four states have been in session this year. District Directors cooperated with counsel by appointing broadcasters in each state, and wherever possible in the state capital, to serve as Legislative Contacts for NAB. By providing an additional safeguard against overlooking the introduction of bills affecting radio, and liaison for communication on legislative matters in each state, this innovation has been most useful in this department.

Chiefly of note at this year's sessions was the introduction of 35 so-called "anti-ASCAP" bills in 18 states. Other than enactment of the Wisconsin law to provide effective enforcement of existing provisions relating to investigators and

music brokers, no such bills have been enacted. The NAB did not encourage or support any legislation of this character. The Montana law of this character was repealed.

The Perry bill to bar off-the-air recording of broadcasts was again introduced, in somewhat different form, in New York. New York state broadcasters persuaded the author to strike the enacting clause, and the measure was killed. A committee is working to perfect an acceptable bill for introduction at the next session.

Oregon passed a radio libel law, relieving broadcasters from liability for radio defamation unless the plaintiff can prove that the broadcaster failed to exercise due care. A similar bill was vetoed by the Governor of Washington.

### Litigation

The position of the NAB in *RCA v. Whiteman* was sustained in the Circuit Court of Appeals and again in the Supreme Court, thus establishing the law, except in Pennsylvania, that broadcasters are at liberty to play phonograph records without license from the record manufacturer or the performing artists. This was a notable accomplishment for the industry, particularly for the smaller stations.

The Florida and Nebraska statutes prohibiting as an "unlawful combination" the activities of an aggregation of authors, composers, publishers and copyright owners whose object is to fix prices were held by the U. S. Supreme Court not to violate

the Federal Constitution or copyright laws.

### Other Activities

Nearly five months were required in conference with the AAAA Time-Buyers' Committee to determine that complete reconciliation of views on certain provisions was impossible at the time. The Agency Contract, recommended by the NAB March 21, is the result of the protracted discussions. During the summer new committees were appointed and conferences have been resumed.

In cooperation with FCC staff an NAB committee was successful in securing amendment to the standard and FM application forms which greatly facilitates filling out of these forms.

Correspondence with stations and their attorneys on numerous matters as well as assistance to staff and general office work has consumed considerable time. Since Ed Kirby's going to the War Department, the duties of Secretary of the Code Committee have devolved on counsel. Service as alternate to Neville Miller on the International Broadcasting Committee of the Defense Communications Board has not been burdensome to date. There have been no meetings of the Committee on Cooperation Between Press, Radio and Bar since the last report. The New York Tax Committee, appointed to combat assessment by the City of New York of real estate tax on station equipment, was successful in its efforts.

# NAB WAR-DEFENSE ACTIVITY

*By Arthur Stringer, NAB Director of Promotion*

**T**HE march of world events brought changes to the NAB promotion department in 1941. The last normal operation ended on March 29 with the nationwide Radio Movin' Day promotion, when 90 per cent of all broadcast stations shifted to new locations on listeners' dials in accordance with the terms of the Havana Treaty.

At the year's end the department's activities were concerned solely with winning the war. It was engaged in coordinating the radio recruiting efforts of the nation's fighting forces, Army, Navy, Marine Corps and Coast Guard. It continued cooperation with the U. S. Civil Service Commission and, upon request, cooperated with members of other agencies.

### Assisting OPM

On September 10, with the cooperation of manufacturers of broadcasting apparatus, NAB completed an involved research job for OPM which ordinarily would have taken months and the employment of large numbers of auditors. The problem was to determine in pounds the needs of the broadcasting industry on a 1940 basis—apparatus, parts, tubes and towers. Ninety-five per cent of the volume of the manufacturing end of the business responded, on a few days notice, to a conference called in Washington. At the end of the day those attending had produced the required information. After another day of calculations, the findings

were presented to Director of Priorities, Donald M. Nelson.

As an outgrowth of this meeting, this and other NAB departments continue to devote considerable time with government officials concerned with priorities. Information, rulings and suggestions are relayed to stations through NAB Reports and by correspondence having to do with specific problems.

Immediately after Pearl Harbor, the Army and Navy requested the NAB National Defense Committee, of which the promotion manager is secretary, to urge the institution of intensive radio technician training courses throughout the United States. During the previous several months some thirty-two such radio

courses with approximately 900 students, had been established. But with official requests from the armed forces, the committee quickly inaugurated a plan which contemplated the training of tens of thousands of technicians during 1942. Colleges and universities throughout the country are cooperating in this all-out educational effort. Funds are provided by Congress with supervision and disbursements under the Engineering, Science and Management Defense Training program of the U. S. Office of Education. The plan provides for the teaching of the fundamentals of radio. The courses are essentially foundation-feeder courses for later "in-service" Army and Navy specialized instruction.

# LABOR RELATIONS IN 1941

*By Joseph L. Miller, NAB Director of Labor Relations*

**C**ORRELATING the broadcasting industry's labor policy with national war-time labor policy will be the principal function of the NAB's Labor Relations Department in 1942. Management and labor generally have agreed that there shall be no strikes for the duration of the war, and that all disputes shall be settled by peaceful means. All the principal labor unions dealing with the broadcasting industry have subscribed to this policy—a policy adopted by the NAB when its Labor Relations Department was established in 1938.

Steering whatever disputes may arise into the proper channels for amicable settlement will be the Department's major function during the coming year. The Department, however, deals with all problems involving broadcasting stations and labor—both personnel problems and problems concerning labor programs on the air. The Department advises all

member stations on the application of labor laws to their employees; furnishes information and advice with regard to collective bargaining; keeps the members informed of all labor developments affecting the industry.

Broadcasting and labor enjoyed a harmonious relationship in 1941. Evidence of this harmony was seen in the whole-hearted support given to the industry by the entire organized labor movement in killing the time sales tax proposed in Congress. There were only a few work stoppages, and most of these were settled within a day or two of their start. The industry was generous with the time on the air accorded to the labor unions. Labor leaders made 74 appearances on the four major networks alone, while numerous local stations carried periodic programs devoted to labor problems.

*For "Engineering Developments" by Lynne C. Smeby, NAB Director of Engineering, please turn to page 973 in the Technical Section.*

# 1941-PUBLIC RELATIONS-1942

**P**UBLIC relations of radio begin in the program department. NAB has repeated this up and down the land for the past four years. Today, the war drives this home as never before. In 1941, the industry went through a gradual transition into defense programming culminating to a full war-time basis on December 7. Elaborate brochures, issuance of mighty pronouncements are meaningless unless the program log can back up every claim, spoken or written.

Fortunately the claim that no media in history ever won the complete confidence of the public as has American radio can be documented and authenticated to the satisfaction of all but the blind. This confidence, this tremendous audience, was begot by what came from the loud-speaker in the front parlor, in the kitchen, on the farm, and in the office. If there is criticism to be made, it is that radio has, in years gone by, been reluctant to take its stand on its own record. In good faith, it adopted a policy of "let the record speak for itself."

But there were those, for reasons, political or otherwise, who sought to bring into court a record of their own making. Upon how vigorously radio mobilizes its legions of listeners in every segment of our social and economic life, depends the future development of American radio under the American system. Public relations, then, is the number one mission of radio in this war.

In the past year, the NAB Code stood like a rock of Gibraltar against those who would assault and destroy radio for their own interests. There was the unfounded attack upon the integrity of radio news, and the fairness in apportioning time for controversial public issues, by a sub-Committee of the Senate, operating under questionable investigatory authority. This melted under the sunlight of public opinion. The integrity of radio news and its fairness in the controversial field was vindicated.

There were a few who started an insidious campaign that "commercial" radio could not be relied upon to "indoctrinate" the youth of the next generation with principles of democracy as the Nazis had used radio to indoctrinate their present and next generation with nazi ideology. But the preponderance of women's organizations whose confidence had been

won through sheer sincerity of purpose, beat down this fallacious and clever approach for "social" control of American broadcasting.

## Radio's War Service

Radio has managed to serve the defense and now the war effort, without dropping essential public service features in the agricultural, educational and religious fields. This is no little accomplishment. In these three groups will be found the most steadfast supporters of the American system of radio. When the war came, through the workings of self-regulation instituted by the Code three years ago, it was ready to make the necessary program adjustments caused by war secrecy and censorship. In fact, in advance of the censor, the NAB issued its own War Time Guide voluntarily, which, with few modifications, is the industry's censor's guide as officially promulgated.

Along with all others, radio stations have had to make financial sacrifices in the war thus far. More may be expected. Revenues will be lost on coastal stations which will go off the air from time to time for air-warning service. In one or two instances, certain types of media competition have sought to take advantage of this in showing loss of audience. Such underhand efforts should be exposed to full public view. As a matter of fact, a silent station during an air raid warning has probably more potential listeners standing by, ready and eager to listen upon resumption of service, than it has at any time, day or night. In war, people rely on radio for instruction, for news and for inspiration.

In anticipation of the war, the NAB Board of Directors assented to a request by the War Department for the loan of Ed Kirby, its Public Relations Director "for the duration." As a dollar-a-year man, representing the industry in the war-nerve center in Washington, he has surrounded himself with a staff of men chosen directly from the industry, representative of all types of stations and networks, and all sections of the country. This work has been a real contribution to both the Army and to the industry. It is sound public relations work, because it is concerned only with what does and does not go into the microphone.

# THE N A B CODE

**A**MONG the highlights of this past year were evidences of continued public approval of the Code and the placing of the commercial sections in effect. Restrictions on the length of commercial copy in five, ten and twenty-five minute programs were adopted by the membership. In his message to the 1941 annual convention NAB President Neville Miller stated: "Time continues to prove the wisdom shown by the industry in the adoption of the Code." Code provisions are in six sections, as follows:

## Children's Programs

Programs designed specifically for children reach impressionable minds and influence social attitudes, aptitudes and approaches and, therefore, they require the closest supervision of broadcasters in the selection and control of material, characterization and plot.

This does not mean that the vigor and vitality common to a child's imagination and love of adventure should be removed. It does mean that programs should be based upon sound social concepts and presented with a superior degree of craftsmanship; that these programs should reflect respect for parents, adult authority, law and order, clean living, high morals, fair play and honorable behavior. Such programs must not contain sequences involving horror or torture or use of the supernatural or superstitious or any other material which might reasonably be regarded as likely to overstimulate the child listener, or be prejudicial to sound character development. No advertising appeal which would encourage activities of a dangerous social nature will be permitted.

To establish acceptable and improving standards for children's programs, the National Association of Broadcasters will continuously engage in studies and consultations with parent and child study groups. The results of these studies will be made available for application to all children's programs.

## Controversial Public Issues

As part of their public service, networks and stations shall provide time for the presentation of public questions including those of controversial nature. Such time shall be allotted with due regard to all the other elements of balanced program schedules and to the degree of public interest in the questions to be presented. Broadcasters shall use their best efforts to allot

Time for the presentation of controversial issues shall not be sold, such time with fairness to all elements in a given controversy. except for political broadcasts. There are three fundamental reasons for this refusal to sell time for public discussion and, in its stead, providing time for it without charge. First, it is a public duty of broadcasters to bring such discussion to the radio audience regardless of the willingness of others to pay for it. Second, should time be sold for the discussion of controversial issues, it would have to be sold, in fairness, to all with the ability and desire to buy at any given time. Consequently, all possibility of regulating the amount of discussion on the air in proportion to other elements of properly balanced programming or of allotting the available periods with due regard to listener interest in the topics to be discussed would be surrendered. Third,

and by far the most important, should time be sold for the discussion of controversial public issues and for the propagation of the views of individuals or groups, a powerful public forum would inevitably gravitate almost wholly into the hands of those with the greater means to buy it.

The political broadcasts excepted above are any broadcasts in connection with a political campaign in behalf of or against the candidacy of a legally qualified candidate for nomination or election to public office, or in behalf of or against a public proposal which is subject to ballot. This exception is made because at certain times the contending parties want to use and are entitled to use more time than broadcasters could possibly afford to give away.

Nothing in the prohibition against selling time for the presentation of controversial public issues shall be interpreted as barring sponsorship of the public forum type of program when such a program is regularly presented as a series of fair-sided discussions of public issues and when control of the fairness of the program rests wholly with the broadcasting station or network.

### **Educational Broadcasting**

While all radio programs possess some educative values, broadcasters nevertheless desire to be of assistance in helping toward more specific educational efforts, and will continue to use their time and facilities to that end and, in cooperation with appropriate groups, will continue their search for improving applications of radio as an educational adjunct.

### **News**

News shall be presented with fairness and accuracy and the broadcasting station or network shall satisfy itself that the arrangements made for obtaining news insure this result. Since the number of broadcasting channels is limited, news broadcasts shall not be editorial. This means that news shall not be selected for the purpose of furthering or hindering either side of any controversial public issue nor shall it be colored by the opinions or desires of the station or network management, the editor or others engaged in its preparation or the person actually delivering it over the air, or, in the case of sponsored news broadcasts, the advertiser.

The fundamental purpose of news dissemination in a democracy is to enable people to know what is happening and to understand the meaning of events so that they may form their own conclusions and, therefore, nothing in the foregoing shall be understood as preventing news broadcasters from analyzing and elucidating news so long as such analysis and elucidation are free of bias.

News commentators as well as all other newscasters shall be governed by these provisions.

### **Religious Broadcasts**

Radio, which reaches men of all creeds and races simultaneously, may not be used to convey attacks upon another's race or religion. Rather it should be the purpose of the religious broadcast to promote the spiritual harmony and understanding of mankind and to administer broadly to the varied religious needs of the community.



**Commercial Programs and Length of Commercial Copy**

Acceptance of programs and announcements shall be limited to products and services offered by individuals and firms engaged in legitimate commerce; whose products, services, radio advertising, testimonials and other statements, comply with pertinent legal requirements, fair trade practices and acceptable standards of good taste.

Brief handling of commercial copy is recommended procedure.

Member stations shall hold the length of commercial copy, including that devoted to contests and offers, to the following number of minutes and seconds:

*Daytime*

Five-minute programs . . . . .	2:00
*Five-minute news programs . . . . .	1:45
Ten-minute programs . . . . .	2:30
Fifteen-minute programs . . . . .	3:15
Twenty-five-minute programs . . . . .	4:15
Thirty-minute programs . . . . .	4:30
Sixty-minute programs . . . . .	9:00

*Night-time*

Five-minute programs . . . . .	1:45
*Five-minute news programs . . . . .	1:30
Ten-minute programs . . . . .	2:00
Fifteen-minute programs . . . . .	2:30
Twenty-five-minute programs . . . . .	2:45
Thirty-minute programs . . . . .	3:00
Sixty-minute programs . . . . .	6:00

*Exceptions:*

The above limitations do not apply to participation programs, announcement programs, "musical clocks," shoppers' guides and local programs falling within these general classifications.

Because of the varying economic and social conditions throughout the United States, members of the NAB shall have the right to present to the NAB for special ruling local situations which in the opinion of the member may justify exceptions to the above prescribed limitations.

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\* Further restriction by individual stations is recommended.



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# NATIONAL INDEPENDENT BROADCASTERS, INC.

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**T**HE National Independent Broadcasters, consistent with the purposes of its creation and existence, has during the year 1941 been extremely active in the interests of the broadcasters of radio stations in this country. Among the many matters receiving the attention of its officers and committees was the negotiations with Ascaph, BMI, AF of M and NAPA; rules, regulations and forms of the FCC. Several committee meetings were held to discuss other important matters, including; national business and how to obtain it; interference on local and regional channels; free time to the Government and the advisability of asking compensation for at least a portion of the services rendered, for and in behalf of the Government.

Also, its officers devoted considerable time in defeating the proposed tax on broadcasting stations. The president of National Independent Broadcasters testified on that subject before the Senate Committee in Washington.

On September 21st and 23rd a very successful convention was held in Chicago, attended by over 200 broadcasters from all parts of the United States, and included many distinguished guests. Among them were the Honorable James Lawrence Fly, Army officials, representatives of the Department of Justice, officials of Ascaph, BMI, etc. It was considered unusual since it was a meeting of the Broadcasters for the Broadcasters with no slate of pre-arranged resolutions. Everyone had an equal opportunity to be heard. Many important subjects were discussed and everyone benefited by attendance.

Since the convention, committees and the officers have been extremely busy on matters of importance to all broadcasters and are now cooperating with the different branches of the Government in connection with the War and War activities.

### **Headquarters Address**

500 EDMONDS BLDG., WASHINGTON, D. C.  
PHONE, REPUBLIC 3607

HAROLD A. LAFOUNT

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730 Fifth Ave., New York, N. Y.

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# INDEPENDENT RADIO NETWORK AFFILIATES, INC.

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**F**UTURE STATUS OF IRNA remained in doubt as RADIO ANNUAL went to press. Late in November, 1941, after having served as a key factor in working out details of the industry peace settlement with the American Society of Composers, Authors and Publishers, IRNA was eclipsed and, to a certain extent, relegated to the background by defections from its own ranks resulting in the formation of a new trade organization, Network Affiliates, Inc. As a result of this and certain other factors, including the inability of IRNA officers, all of whom are unpaid, to devote the necessary time to carrying out the arduous duties imposed upon them, it was decided at a board meeting in Chicago on Nov. 25, 1941, to discontinue regular meetings and activities pending final decision at the May, 1942, NAB convention in Cleveland on IRNA's future course. Its officers twice tried to resign, but were persuaded to continue in office pending the May convention. Meanwhile, IRNA remained quiescent, but without dissolution.

Although NAI took the play away from IRNA in final stages of the Ascap negotiations, the latter's contributions to settlement of that 10-month battle were of no small significance to the industry. INRA secured two important concessions from Ascap: a reduction of the local blanket commercial fee from 2¾ per cent to 2¼ per cent, and an allowance of 15 per cent (the advertising agency commission) deductible by stations from gross local business before applying the Ascap tax. These concessions, it was figured, amounted to a total saving over a year's time of approximately 30 per cent from the original network agreement with Ascap or, in round figures based on 1940 non-network revenue, over \$600,000 per annum.

## **Executive Committee**

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DON S. ELIAS,  
WWNC, Asheville, N. C.  
I. R. LOUNSBERRY,  
WGR, Buffalo

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JOHN A. KENNEDY,  
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WGR, Buffalo

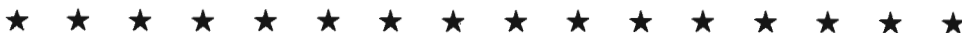
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SAMUEL R. ROSENBAUM,  
WFIL, Philadelphia

L. B. WILSON,  
WCKY, Cincinnati



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# NETWORK AFFILIATES, INCORPORATED

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**N**ETWORK AFFILIATES, INC. (which was temporarily called Independent Broadcasters, Inc.), was organized in Chicago, November 1941, by a group of 76 owners and managers of independently owned network affiliated stations, who felt the need for an organization actively functioning in behalf of their stations. Any regional outlet, whether or not affiliated with a network, is eligible for membership, provided it has no management or ownership connection with a national network.

At its organizational meeting, NAI stated that the original purpose and fundamental objective behind its formation was the preservation of the American System of Broadcasting. With membership in practically every state in the Union, the immediate aims and purposes of the organization were outlined as follows:

1. The clarification of contracts then being offered to the industry by Ascap.
2. The organization of active opposition to the granting of super-power stations, which are regarded as a threat to the fundamental structure of the American System of Broadcasting.
3. The selection of a committee to counsel and cooperate with the FCC in formulating regulations designed to stimulate the growth and development of the American System of Broadcasting. In this connection a committee of NAI met with the FCC to clarify and understand the Chair broadcasting rules.
4. The appointment of a Legislative Committee to give intelligent and constructive study to proposed legislation which would affect the radio industry. This committee was successful in helping to "debunk" the proposed Sanders advertising tax bill.
5. The formation of a Network Committee to work with the national networks in an effort to develop and promote healthy and mutually beneficial relations between the members of NAI and the network.

Board of Directors of NAI met with FCC Chairman James L. Fly on the day war was declared by the United States against Japan and offered the cooperation and services of NAI to whatever purpose was deemed desirable. At the present time the organization has put first and foremost among its purposes cooperation on all radio matters relating to National Defense and the war program.

## Officers

EUGENE C. PULLIAM, *President*  
WIRE, Indianapolis

HULBERT TAFT, JR., *Vice President*  
WKRC, Cincinnati

WILLIAM J. SCRIPPS, *Secretary-Treasurer*  
WWJ, Detroit

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Present officers and directors will serve until some time in April 1942, when the next regular meeting of the NAI will be held. National office of the NAI is in the Munsey Bldg., Washington, D. C., under the direction of Ed Cooper. Paul Spearman is Washington attorney for the group.



# ORGANIZATIONS

## PERSONNEL—ADDRESSES

### Acoustical Society of America

919 North Michigan Ave., Chicago, Ill.  
Whitehall 7010

#### OFFICERS

President..... E. C. Wente  
(Bell Telephone Laboratories, Inc.)  
Vice-President..... C. R. Hanna  
(Westinghouse Electric & Mfg. Co.)  
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(Acoustical Construction Corp.)  
Editor..... F. A. Firestone  
(University of Michigan)

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L. J. Sivan, Bell Telephone Laboratories, Inc.; W. F. Snyder, National Bureau of Standards; Robert M. Morris, National Broadcasting Co.; Benjamin Olney, Stromberg-Carlson Telephone Mfg. Co.; H. S. Knowles, Jenson Radio Mfg. Co.; Robert W. Young, C. G. Conn, Ltd.

#### FUNCTIONS

The purpose of the society is to increase and diffuse the knowledge of acoustics and promote its practical applications.

### Actors' Equity Association

45 W. 47th St., New York, N. Y.

Bryant 9-3550

#### OFFICERS

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Counsel..... Paul N. Turner  
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Terms Expire in 1945: John Alexander, Louis Calhern, Mady Christians, John Eriot (CEA), Lillian Gish, Alan Hewitt, Myron McCormick, Cornelia Otis Skinner, Richard Taber, Ethel Waters, Margaret Webster.

Terms Expire in 1945: Walter Abel, Leon Ames, Jean Beryl (CEA), Matt Briggs, Audrey Christie, John Emery, Ruth Hammond, Sam Jaffe, Sam Levene, Kent Smith.

Terms Expire in 1944: Patricia Collinge, Dudley Diggs, E. John Kennedy, Philip Loeb, John A. Lorenz, Emily Marsh (CEA), Hiram S. Sherman, Jack Whiting, Mervin Williams, Harold Vermilyea.

Terms Expire in 1943: Broderick Crawford, Eric Dressler, Earle Larimore, Gerald Moore (CEA), Hugh Rennie, Katherine Warren.

Terms Expire in 1942: Glenn Anders, Alexander Clark, Jose Ferrer, Norman Van Emburgh (CEA), Evelyn Varben, Ethel Wilson, Franklin Fox, William Gaxton, Walter N. Greaza, Edith Gresham, Raymond Massey, Donald Randolph, Ray Roberts, Ben Smith, Leona Powers, Edith L. Van Cleve, Richard Whorf.

#### BRANCH OFFICES

Los Angeles: I. B. Kornblum, 6331 Hollywood Blvd., Hollywood, Calif.

San Francisco: Theodore Hale, 111 O'Farrell Street.  
Chicago: Frank Dare, 720 Bittersweet Place.

### Advertising Federation of America

330 West 42nd St., New York, N. Y.

Bryant 9-0430

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#### FUNCTIONS

To provide a common forum and a central medium for cooperative effort on behalf of all individuals and groups interested in advertising.

To elevate the standards of advertising practice and to combat any unfair competitive methods in its sale.

To help increase the effectiveness of advertising as an instrument of distribution, with its resulting benefits to business and the general public.

To determine and disseminate more accurate knowledge of the functions of advertising in business, and its social and economic values.

To aid in raising the standards of education and training for advertising practitioners.

### Advertising Research Foundation

330 West 42nd St., New York, N. Y.

Longacre 3-1454

#### OFFICERS

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Treasurer..... John Benson  
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## Agricultural Marketing Service— Radio Section

United States Department of Agriculture  
Washington, D. C.  
Republic 4142

### OFFICERS

Senior Information Specialist.....Elwyn J. Rowell  
Associate Radio Specialist.....Jack H. Towers  
Assistant in Radio Information.....K. M. Sisco

### BRANCH OFFICERS

Boston: 408 Atlantic Ave.; Phone, Hubbard 2087;  
Charles E. Esbach, Director.  
Chicago: 1103 New Post Office Bldg.; Phone,  
Wabash 9207; Lance G. Hooks, Associate Information  
Specialist.  
Atlanta: 522 New Post Office Bldg.; Phone, Main  
3517; A. D. Harlan, Regional Representative.  
Kansas City, Mo.: 317 U. S. Court House Bldg.;  
Phone, Victor 3755; R. E. Corbin, Regional Representa-  
tive.

### FUNCTIONS

The function of this government agency is the preparation and presentation of broadcasts and broadcast material for use on network, regional and local programs; and the preparation of daily reports on the markets for all important crops and live-stock reports, etc., for dissemination locally and on a regional basis through all press associations. In addition the Washington office supervises remote control programs devoted to market news presented over more than 25 stations, and broadcasts of market information for homemakers presented over 37 stations.

## American Association of Advertising Agencies

420 Lexington Ave., New York, N. Y.  
LExington 2-7980

### OFFICERS

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Director of Service.....L. W. MacKenzie  
Counsel.....McKercher & Link

### FUNCTIONS

The American Association of Advertising Agencies was formed in 1917 by the amalgamation of the New England, New York, Philadelphia, Southern and Western Advertising Agency Associations—to promote the interests and raise the standards of advertising and of the advertising agency business.

It welcomes to membership any advertising agency qualified to aid in this purpose by reason of its ability to serve the cause of advertising, its financial soundness and its demonstrated desire to adhere to sound and ethical business practices.

The aims of the Association are partly ethical and partly economic. It is a professional body and also a trade association. It aims to raise standards, to improve technique, to ascertain values, to safeguard relations, and to cooperate with other organized effort in related fields.

One of the major aims of the Association is to keep advertising agency practice on a high level, in order that it may be most useful to the advertiser, most helpful to the publisher and respected by business men.

Early in its career the Association adopted for the guidance of its members two official statements. One is entitled "Agency Service Standards," in which agency service is defined, so that advertisers and publishers may know what to expect and agencies may know what should be required of them, thus discouraging the incompetent and encouraging those equipped to render effective service.

The other statement, entitled "Standards of Practice," deals with agency relations with media, clients and the public, with fair and ethical agency competition, and other professional ethics.

## American Bar Association (Standing Committee on Communications)

Office of the Chairman: 810 Colorado Bldg.  
Washington, D. C.

### COMMITTEE

Chairman.....John W. Guider  
Committeeman.....Edwin M. Borchard  
Committeeman.....John C. Kendall  
Committeeman.....Eugene O. Sykes  
Committeeman.....Harry P. Warner

### FUNCTIONS

The main function of this committee is to keep in touch with any phase of the field of communications in which the American Bar Association may have an interest. It reports to the Bar Association at intervals with recommendations for action, and carries out such mandates as it receives from the Association.

## American Communications Associa- tion (C. I. O.)

10 Bridge St., New York, N. Y.  
BOWling Green 9-3006

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## American Council on Education

744 Jackson Place, Washington, D. C.  
NATIONAL 5691

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Vice-President.....C. S. Marsh  
Assistant to President.....Donald J. Shank  
Chief Accountant.....Grace R. Ontrich

### BRANCH OFFICE

9 Rockefeller Plaza, New York, N. Y.  
Director of Recording Division.....Emilie Holey

### FUNCTIONS

This Council's purpose is to advance American education through comprehensive voluntary, cooperative action on the part of educational associations, organizations and institutions, through the promotion, initiation and administration of systematic studies, cooperative experiments, and conferences.

## American Federation of Musicians

1450 Broadway, New York, N. Y.  
PEnnsylvania 6-2545

### OFFICERS

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## American Federation of Radio Artists (AFRA)

2 West 45th St., New York, N. Y.  
VANDerbilt 6-1810

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### BRANCH OFFICES

Chicago Local—540 North Michigan Avenue, Chicago, Ill.; Raymond Jones, Executive Secretary; Phone, Superior 6517.

Los Angeles Local—6331 Hollywood Boulevard, Hollywood, Calif.; I. B. Kornblum, Executive Secretary; Phone, Hillside, 5121.

San Francisco Local—111 O'Farrell Street, San Francisco, California; Phone, Sutter 3196, San Francisco, California.

Cincinnati Local—Box 14, Cincinnati, Ohio.

Montreal Local—1126 St. Catherine St., West Montreal, Canada.

Detroit Local—1500 Penobscott Bldg., Detroit, Mich. St. Louis Local—4317 Lindell Blvd., St. Louis, Mo.

Miami Local—Box 3545, Miami, Fla.

Denver Local—4231 West 32nd St., Denver, Colo.

Racine Local—804 Hamilton St., Racine, Wisc.

Cleveland Local—11418 Bellflower Rd., Cleveland, Ohio.

Washington Local—P. O. Box No. 269, Washington, D. C.

Portland Local—P. O. Box No. 263, Portland, Ore. Dallas Local—P. O. Box 2181, Dallas, Texas.

Other locals located in Des Moines, Ia.; Philadelphia, Pa.; Pittsburgh, Pa.; Schenectady, N. Y.; Boston, Mass.; Birmingham, Ala.; Shreveport, La.; Charlotte, N. C.; Rochester, N. Y.; Baltimore, Md.

## American Guild of Musical Artists, Inc. (A. F. L.)

2 West 45th St., New York, N. Y.  
 Murray Hill 2-5644

### OFFICERS

President.....Lawrence Tibbett  
 First Vice-President.....Jascha Heifetz  
 Second Vice-President.....Richard Bonelli  
 Third Vice-President.....Margaret Speaks  
 Fourth Vice-President.....Jose Iturbi  
 Fifth Vice-President.....Howard Hanson  
 Recording Secretary.....Elizabeth Hoepfel  
 Treasurer.....Frank Chapman  
 Executive Secretary.....Blanche Witherspoon  
 Counsel.....Henry Jaffe

### BOARD OF GOVERNORS

Paul Althouse, Arthur Anderson, Zlatko Balokovic, Ruth Bretton, John Brownlee, George Cehanovsky, Amy Ellerman, Eva Gauthier, Coe Glade, Walter Golde, Herbert Graf, John Gurney, Roland Guerard, Edward Harris, Julius Huehn, Edwin Hughes, Sascha Jacobsen, Frederick Jagel, Arthur Kent, Alexander Kipnis, Arthur Mahoney, James Melton, Lanny Ross, Alexander Smallens, Georgia Standing, Kerstin Thorborg, Armand Tokatyan.

### BRANCH OFFICES

Hollywood: 7046 Hollywood Blvd.—Phone, Hollywood 7311; Chicago: 540 N. Michigan Blvd.—Phone, Superior 6517.

### FUNCTIONS

AGMA is a union whose purpose is to bargain collectively on behalf of its members and to deal with

employers, contractors, managers, impresarios, agents and others whose activities affect its members. AGMA is a branch of the AAAA and is a sister union of the American Federation of Radio Artists.

## American Marketing Association

Address individual officers

### OFFICERS

President.....Howard T. Hovde  
 (University of Pennsylvania)  
 Secretary.....Albert Haring  
 (Indiana University)  
 Vice-President.....Archibald Crossley  
 (Crossley, Inc.)  
 Vice-President.....Alvah B. Wheeler  
 (Modern Industry)  
 Treasurer.....Howard Whipple Green  
 (Real Property Inv. of Metro Cleveland)  
 Editor-in-Chief, Journal of Marketing, Ewald T. Grether  
 (University of California)

### DIRECTORS

Robert Arkell, J. L. Hudson Co., Detroit, Mich.; Ralph Cassady, Jr., University of California, Los Angeles, Calif.; Donald R. G. Cowan, Republic Steel Co., Cleveland, Ohio; Robert F. Elder, Lever Bros. Co., Cambridge, Mass.; Arthur B. Gunnarson, U. S. Chamber of Commerce, Washington, D. C.; Dudley M. Phelps, University of Michigan, Ann Arbor, Mich.; Philip Salisbury, Sales Management, New York, N. Y.

### FUNCTIONS

American Marketing Association is an organization for the study of marketing research.

## American Newspaper Publishers Association

370 Lexington Ave., New York, N. Y.  
 Caledonia 5-2000

### OFFICERS

President.....Walter M. Dear  
 Vice-President.....Linwood I. Noyes  
 Secretary.....Norman Chandler  
 Treasurer.....W. G. Chandler  
 General Manager.....Cranston Williams

### FUNCTIONS

To foster and protect the business and business interests of daily newspapers.

## The American Radio Relay League, Inc.

38 LaSalle Road, West Hartford, Conn.  
 Hartford 3-6269

### OFFICERS

President.....George W. Bailey  
 Vice-President.....Charles E. Blalack  
 Managing Secretary.....Keneth B. Warner  
 Acting Treasurer.....David H. Houghton  
 Communications Manager.....F. E. Handy

### FUNCTIONS

The American Radio Relay League is a non-commercial association of radio amateurs, bonded for the promotion of interest in amateur radio communication and experimentation, for the relaying of messages by radio, for the advancement of the radio art and of the public welfare, for the representation of the amateur in legislative matters, and for the maintenance of fraternalism and a high standard of conduct. The League publishes QST, a publication devoted solely to amateur radio, issued monthly. It also publishes The Radio Amateur's Handbook annually and other publications.

## American Society of Composers, Authors and Publishers

30 Rockefeller Plaza, New York, N. Y.  
 Columbia 5-7464

### OFFICERS

President.....Gene Buck  
 Vice-President.....Louis Bernstein

Vice-President .....Otto A. Harbach  
 Secretary .....George W. Meyer  
 Treasurer .....Gustave Schirmer  
 Assistant Secretary .....J. J. Bregman  
 Assistant Treasurer .....Irving Caesar  
 General Manager .....John C. Paine

**ADMINISTRATIVE COMMITTEE**

E. C. Mills, Chairman; Gene Buck, Louis Bernstein,  
 Irving Caesar, Walter Fischer.

**BOARD OF DIRECTORS**

Fred E. Ahlert, Louis Bernstein, J. J. Bregman,  
 Saul Bornstein, Gene Buck, Irving Caesar, J. J.  
 Robbins, John O'Connor, Max Dreyfus, L. Wolfe Gilbert,  
 A. Walter Kramer, R. F. Murray, Geoffrey O'Hara,  
 Richard Rodgers, Walter Fischer, Oscar Hammerstein II,  
 Otto A. Harbach, Jerome Kern, Geo. W. Meyer, Jack  
 Mills, Gustave Schirmer, Oley Speaks, Herman Starr,  
 Deems Taylor.

**FUNCTIONS**

ASCAP licenses public performance for profit of  
 music copyrighted by its members and the members of  
 many similar societies located in foreign countries.

**BRANCH OFFICES AND REPRESENTATIVES**

**ALABAMA:** I. T. Cohen, 607-11 First National Bank  
 Bldg., Atlanta, Ga.  
**ARIZONA:** Richard J. Powers, 414 Guaranty Bldg., 6331  
 Hollywood Blvd., Hollywood, Calif.  
**ARKANSAS:** Frank H. Hemby, 1613-14 Tower Petroleum  
 Bldg., 1905 Elm St., Dallas, Texas.  
**CALIFORNIA:** (Northern Part) H. A. Levinson, 111  
 Sutter Bldg., San Francisco, Calif.; (Southern Part)  
 Richard J. Powers, 414 Guaranty Bldg., 6331 Holly-  
 wood Blvd., Hollywood, Calif.  
**COLORADO:** H. O. Bergkamp, 1101-2 Security Bldg.,  
 Denver, Colo.  
**CONNECTICUT:** ASCAP, 30 Rockefeller Plaza, New  
 York, N. Y.  
**DELAWARE:** E. A. Sherwood, 1616 Baltimore Trust  
 Bldg., Baltimore, Md.  
**DISTRICT OF COLUMBIA:** E. A. Sherwood, 1616  
 Baltimore Trust Bldg., Baltimore, Md.  
**GEORGIA:** I. T. Cohen, 607-11 First National Bank  
 Bldg., Atlanta, Ga.  
**IDAHO:** Herman Kenin, 911 Public Service Bldg., Port-  
 land, Ore.  
**ILLINOIS:** E. S. Hartman, 7 So. Dearborn St., Chi-  
 cago, Ill.  
**INDIANA:** Sneathen & Summers, 1214 Circle Tower,  
 Indianapolis, Ind.  
**IOWA:** John C. Wooden, 601 Des Moines Bldg.,  
 Des Moines, Iowa.  
**KENTUCKY:** William F. Clarke, Jr., Louisville Trust  
 Bldg., Louisville, Ky.  
**LOUISIANA:** J. Studebaker Lucas, 1015 Carondelet  
 Bldg., New Orleans, La.  
**MAINE:** R. W. Rome, 44 School St., Boston, Mass.  
**MARYLAND:** E. A. Sherwood, 1616 Baltimore Trust  
 Bldg., Baltimore, Md.  
**MASSACHUSETTS:** R. W. Rome, 44 School Street,  
 Boston, Mass.  
**MICHIGAN:** Grosner & Burak, 782-784 Penobscot  
 Bldg., Detroit, Mich.  
**MINNESOTA:** Dwain M. Ewing, 909 Northwestern  
 Bank Bldg., Minneapolis, Minn.  
**MISSISSIPPI:** J. Studebaker Lucas, 1015 Carondelet  
 Bldg., New Orleans, La.  
**MISSOURI:** (Address Nearest Office) Maurice J.  
 O'Sullivan, 700 Gloyd Bldg., Kansas City, Mo.  
 Karl P. Spencer, 407 N. 8th St., St. Louis, Mo.  
**MONTANA:** Herman Kenin, 911 Public Service Bldg.,  
 Portland, Ore.  
**NEVADA:** H. A. Levinson, 111 Sutter Bldg., San Fran-  
 cisco, Calif.  
**NEW HAMPSHIRE:** R. W. Rome, 44 School St., Boston,  
 Mass.  
**NEW JERSEY:** ASCAP, National Newark Bldg., 744  
 Broad St., Newark, N. J.  
**NEW MEXICO:** H. O. Bergkamp, Security Bldg., Denver,  
 Colo.  
**NEW YORK:** (Address Nearest Office) American So-  
 ciety of Composers, Authors and Publishers, 30  
 Rockefeller Plaza, New York, N. Y.  
 Lawrence Schlus, 1140 Lincoln-Alliance Bank Bldg.,  
 Rochester, N. Y.  
**NORTH CAROLINA:** I. T. Cohen, 607-11 First Na-  
 tional Bank Bldg., Atlanta, Ga.  
**OHIO:** (Address Nearest Office) Samuel Feldman,  
 3910-11 Carew Towers, Cincinnati, Ohio.  
 Frankel & Frankel, 1520 NBC Bldg., Cleveland, Ohio.

**OKLAHOMA:** Frank H. Hemby, 1613-14 Tower Petrole-  
 um Bldg., 1905 Elm St., Dallas, Texas.  
**OREGON:** Herman Kenin, 911 Public Service Bldg.,  
 Portland, Oregon.  
**PENNSYLVANIA:** (Address Nearest Office) (Western  
 Part) William J. O'Brien, 509 Grant Bldg., Pitts-  
 burgh, Pa.  
 (Eastern Part) H. A. Brown, 1638 Lincoln Liberty  
 Bldg., Philadelphia, Pa.  
**RHODE ISLAND:** R. W. Rome, 44 School Street,  
 Boston, Mass.  
**SOUTH CAROLINA:** I. T. Cohen, 607-11 First National  
 Bank Bldg., Atlanta, Ga.  
**SOUTH DAKOTA:** Dwain M. Ewing, 909 Northwestern  
 Bank Bldg., Minneapolis, Minn.  
**TENNESSEE:** I. T. Cohen, 607-11 First National Bank  
 Bldg., Atlanta, Ga.  
**TEXAS:** Frank H. Hemby, 1613-14 Tower Petroleum  
 Bldg., 1905 Elm Street, Dallas, Texas.  
**UTAH:** H. O. Bergkamp, Security Bldg., Denver, Colo.  
**VERMONT:** R. W. Rome, 44 School Street, Boston,  
 Mass.  
**VIRGINIA:** I. T. Cohen, 607-11 First National Bank  
 Bldg., Atlanta, Ga.  
**WEST VIRGINIA:** I. T. Cohen, 607-11 First National  
 Bank Bldg., Atlanta, Ga.  
**WISCONSIN:** Robert A. Hess, Flankinton Bldg., Mil-  
 waukee, Wis.  
**WYOMING:** H. O. Bergkamp, 1101-2 Security Bldg.,  
 Denver, Colo.  
**EUROPEAN REPRESENTATIVE:** Hugo Bryk, Mirabeau,  
 Hotel, Monte Carlo, Monaco, France.  
**JAPAN:** Dr. W. Plage, 29 Mikawadaimachi, Azabu-Ku,  
 Tokyo, Japan.  
**HAWAII:** H. A. Levinson, 111 Sutter Bldg., San Fran-  
 cisco, Calif.  
**PUERTO RICO:** Augusto Suarez, Atlantic Ave. No. 8,  
 P. O. Box 3949, Santurce, P. R.  
**CUBA:** Dr. Ricardo E. Viurrun, 211 O'Reilly Street,  
 Havana, Cuba.  
**CANADA:** Canadian Performing Right Society, Ltd.,  
 Royal Bank Bldg., Toronto, Ont.

**American Television Society**

Headquarters: 1140 Broadway, New York, N. Y.  
 CAledonia 5-7430  
 Meeting Place: Hotel Woodstock, New York, N. Y.

**OFFICERS**

President .....Norman D. Waters  
 Vice-President .....Don McClure  
 Treasurer .....Robert Champlain  
 Secretary .....Kay Reynolds

**DIRECTORS**

David O. Alber, Halsey V. Barrett, William Caro,  
 Don McClure, Robert Champlain, Olga Lee, Kay  
 Reynolds, George Wallace, Norman D. Waters.

**COMMITTEES**

Defense: I. A. Hirschman, Chairman  
 Production: Thomas H. Hutchinson, Chairman  
 Script: Don McClure, Chairman  
 Talent: Olga Lee, Chairman  
 Motion Pictures: S. S. Liggett, Chairman  
 Research: C. Matthew Dessner, Chairman  
 Library: Charles H. Whitebrook, Chairman  
 Education: J. Raymond Hutchinson, Chairman  
 Publications: George Wallace, Chairman  
 Public Relations: David O. Alber, Chairman  
 Social: Vivian Fletcher, Chairman  
 Membership: Halsey V. Barrett

**FUNCTIONS**

American Television Society is a non-profit society  
 organized to foster the study, understanding and  
 appreciation of television as a cultural, educational,  
 entertainment and advertising medium. It provides its  
 members with an intelligence center and clearing  
 house for information pertaining to television and its  
 development; a forum for the exchange of ideas and  
 discussion of mutual problems relating to or affecting  
 television; a television library; special meetings for  
 the dissemination of television information; the op-  
 portunity to view and study television technique.

**Associated Actors and Artistes of  
 America**

45 West 47th St., New York, N. Y.  
 Phone: BRyant 9-3550

**OFFICERS**

President-Executive Director .....Frank Gillmore



## ORGANIZATIONS

Executive Secretary.....Paul Dullzell  
 1st Vice-President.....Jean Greenfield  
 2nd Vice-President.....Kenneth Thomson  
 Treasurer.....Ruth Richmond  
 Counsel.....Paul M. Turner

### FUNCTIONS

Associated Actors and Artists of America, generally known as the Four A's, holds the international charter from American Federation of Labor covering theatrical entertainers. Actors' Equity, American Federation of Radio Artists, Screen Actors Guild, Chorus Equity, American Guild of Variety Artists, American Guild of Musical Artists, etc., are granted charters via Four A's.

### Associated Broadcast Technicians, Unit of the International Brotherhood of Electrical Workers

1200 Fifteenth St., N.W., Washington, D. C.  
 District 3766

#### OFFICERS

President.....Arthur J. Maus  
 Vice-President.....Russell S. Stanton  
 Secretary-Treasurer.....F. Lee Dechant  
 Business Manager.....Russ Rennaker

#### REGIONAL COUNCILORS

1st Region.....William H. Rule  
 2nd Region.....Robert J. Mayberry  
 3rd Region.....Edwin F. Laker  
 4th Region.....C. M. Baker  
 5th Region.....Lawrence H. Dammert  
 6th Region.....Arthur J. Maus  
 7th Region.....F. L. Dechant  
 8th Region.....N. P. Nelson  
 9th Region.....Russell S. Stanton

#### FUNCTIONS

Associated Broadcast Technicians is an association of IBEW local unions of radio broadcast technicians. It functions as a council for the purposes of coordinating and furthering interests of its members.

### Association for Education By Radio

228 N. La Salle St., Chicago, Ill.  
 Dearborn 7801

#### OFFICERS

Chairman.....Harold W. Kent  
 Membership Chairman.....William D. Boutwell  
 Treasurer.....Robert L. Hudson  
 Vice-Chairman.....John Gunstream

#### PUBLICATION COMMITTEE

Elizabeth Goudy, Chairman; Carl Menzer, WSUI, Iowa City, Ia.; Dr. I. Keith Tyler, Ohio State University; Phillip H. Cohen, Library of Congress, Washington, D. C.; Capt. Harold W. Kent, War Department, Washington, D. C.; Dr. William Dow Boutwell, Office of Education, Washington, D. C.; Luella Hoskins, New York University; James G. Hanlon, Editor; George Jennings, Business Manager.

### Association of Canadian Advertisers, Inc.

85 Richmond St., West, Toronto, Ont.  
 Adelaide 9774

#### OFFICERS

President.....Robert E. Jones  
 (General Foods, Ltd.)  
 Vice-President.....P. K. Abrahamson  
 (The Borden Co., Ltd.)  
 Vice-President.....E. F. Millard  
 (Ford Motor Co. of Canada)  
 Vice-President.....R. E. Merry  
 (Lever Bros., Ltd.)  
 Vice-President.....J. W. Doherty  
 (Imperial Oil, Ltd.)  
 Treasurer.....W. O. H. James  
 (The Dominion Bank)  
 Secretary-Manager.....Athol McQuarrie

#### DIRECTORS

C. R. Vint, Colgate-Palmolive-Peet Co., Ltd.; J. E.

Mason, Canada Dry Ginger Ale, Ltd.; R. L. Sperber, Sterling Products, Ltd.; Neil B. Powter, Howard Smith Paper Mills, Ltd.; Leslie Choycem McColl-Frontenac Oil Co., Ltd.; Joseph R. Foster, Courtaulds-Canada, Ltd.; Sydney R. Skelton, Goodyear Tire & Rubber Co.; George Bertram, Swift Canadian Co., Ltd.; S. H. Young, Christie, Brown & Co., Ltd.; G. H. Morgan, Canadian Kodak Co., Ltd.

#### FUNCTIONS

This association was incorporated in March 1917 for the improvement and promotion of the advertising and sales interests of its members and the exchange of information among its members. "Analysis of Circulation of Canadian Publications" is published every two years.

### Association of National Advertisers, Inc.

330 West 42nd St., New York, N. Y.  
 BRyant 9-6330

#### OFFICERS

Chairman of Board.....Gordon E. Cole  
 (Cannon Mills, Inc.)  
 Vice-Chairman.....Carleton Healy  
 (Hiram Walker, Inc.)  
 Vice-Chairman.....Charles G. Mortimer, Jr.  
 (General Foods Corp.)  
 President.....Paul B. West  
 Treasurer.....M. H. Leister  
 (Sun Oil Co.)  
 Secretary.....G. S. McMillan

#### DIRECTORS

Albert Brown, The Best Foods, Inc.; Robert B. Brown, Bristol-Myers Co.; A. O. Buckingham, Cluett Peabody & Co.; C. C. Carr, Aluminum Company of America; Paul S. Ellison, Hygrade Sylvania Corp.; Keith C. Evans, Inland Steel Co.; Price Gilbert, Jr., The Coca Cola Co.; W. A. Hart, E. I. du Pont de Nemours & Co.; M. H. Leister, Sun Oil Co.; J. P. Miller, Pet Milk Sales Corp.; H. W. Roden, Harold H. Clapp, Inc.; D. P. Smeiser, The Proctor & Gamble Co.; H. M. Warren, National Carbon Co.

#### FUNCTIONS

The Association of National Advertisers is composed of the leading companies of the United States who use advertising. Its function is to represent them and further their interests as buyers of advertising.

### Association of Radio Transcription Producers of Hollywood, Inc.

Hollywood Blvd. at Cosmo, Hollywood, Calif.  
 HOLLYWOOD 3545

#### OFFICERS

President.....Gerald King  
 Secretary.....C. P. MacGregor  
 Treasurer.....J. Messer  
 General Counsel.....John J. Wilson

#### DIRECTORS

Gerald King, C. P. MacGregor, A. Schrade.

#### FUNCTIONS

This organization is a cooperative trade association of companies active in the transcription business in Hollywood. Membership is composed of: Allied Phonograph & Record Co.; Radio Transcription Co. of America, Ltd.; C. P. MacGregor Sound Studios; Ray Morgan & Co.; Standard Radio; Field Bros.; Edward Sloman Productions, Ltd.; George Logan Price, Inc.

### Authors' Guild

6 E. 39th St., New York, N. Y.  
 Murray Hill 5-6930

#### OFFICERS

President.....Carl Carmer  
 Vice-President.....Manuel Komroff  
 Secretary.....Helen Huff

#### COUNCIL

Helen Christine Bennett, Berton Braley, Ben Lucien Burman, Elmer Davis, Fairfax Downey, Bernard DeVoto, Mignon Eberhart, Walter D. Edmonds, Arthur Guiterman, Harry Hansen, Fannie Hurst, Inez Haynes Irwin,

Will Irwin, Denis Tilden Lynch, Alice Duer Miller, Frederick C. Painton, Henry F. Prongle, Kenneth Roberts, Marjorie Hillis Roulston, Carl Sandburg, Oscar Schisgall, Emma Gelders Sterne, Arthur Train, Jr., Mark Van Doren, M. R. Werner, Margaret Widdemer, Thyra Samter Winslow, W. E. Woodward, Arthur Leo Zagat.

### Authors' League

6 E. 39th St., New York, N. Y.  
Murray Hill 5-6930

#### OFFICERS

President.....Howard Lindsay  
Vice-President.....Henry F. Pringle  
Secretary.....Kenneth Webb

#### COUNCIL

Louis Adamic, Stephen Vincent Bennett, Irving Berlin, Elaine Sterne Carrington, Marc Connelly, Norman L. Corwin, Russel Crouse, Elmer Davis, Merrill Denison, Frances Goodrich, Moss Hart, Philo Higley, Inez Haynes Irwin, Will Irwin, Sidney Kingsley, John Howard Lawson, Denis Tilden Lynch Albert Maltz, William Brown Me'oney, Kenyon Nicholson, Nathaniel Peer, Arthur Richman, Oscar Schisgall, Lyman Beecher Stowe, A. E. Thomas, John Vandercook, Rita Weiman, Stanley Young.

#### FUNCTIONS

The Authors' League of America, Inc., is the national organization of authors, dramatists, screen writers and radio writers. It was organized in 1912 in order to procure adequate copyright legislation, both international and domestic; to protect the rights and property of all those who create copy-rightable material of whatever kind or nature; to advise and assist all such in business matters relating to the disposal of their productions and to obtain for them prompt remuneration therefor; to disseminate information among them as to their just rights and remedies. Its membership is approximately 4,200.

### BMI Canada, Ltd.

1802 Victory Bldg., Toronto, Ont.  
Elgin 5623

#### OFFICERS

President.....Neville Miller  
Vice-President.....M. E. Tompkins  
Vice-President.....Harry Sedgwick  
Vice-President.....Joseph Sedgwick  
Vice-President.....Glen Bannerman  
Secretary-Treasurer.....T. Arthur Evans

#### FUNCTIONS

BMI Canada, Ltd., was organized to buy and publish original music, to coordinate and license performing rights of music published under its own imprint and of music in the catalogs of affiliated publishers and performing right societies and to provide equal opportunity of recognition for all writers and composers.

### Broadcast Music, Inc. (BMI)

580 Fifth Ave., New York, N. Y.  
Pennsylvania 6-5466

#### OFFICERS

President.....Neville Miller  
Vice-President-General Manager.....M. E. Tompkins  
Vice-President-General Counsel.....Sydney M. Kaye  
Vice-President.....Carl Haverlin  
Treasurer.....C. E. Lawrence

#### DIRECTORS

Neville Miller, National Association of Broadcasters; Walter Damm, WTMJ; John Elmer, WCBM; Edward K'auber, Columbia Broadcasting System; Niles Trammell, National Broadcasting Co.; Paul Morency, WTIC; John Shepard, 3rd, The Yankee Network.

#### BRANCH OFFICES

1549 North Vine St., Hollywood, Calif.  
Executive-in-Charge.....Harry Engel

54 West Randolph St., Chicago, Ill.  
Executive-in-Charge.....James Cairns

#### FUNCTIONS

The functions of BMI are: (1) To buy and publish original music; (2) to coordinate and license the

performing rights to music published under its own imprint and of music in the catalogs of affiliated publishers and performing rights societies; (3) to provide equal opportunity of recognition for all writers and composers.

### Canadian Association of Broadcasters

1802 Victory Bldg., Toronto, Ont.  
Canada  
Elgin 5623

#### FUNCTIONS

The Canadian Association of Broadcasters is a trade association comprising 61 privately owned radio stations.

(For detailed information concerning officers and directors see Canadian Section.)

### Canadian Performing Right Society, Ltd.

1003 Royal Bank Bldg., Toronto, Canada

#### OFFICERS

President-Managing Director...H. T. Jamieson, F.C.A.

#### BOARD OF DIRECTORS

Gene Buck, Louis Bernstein, John G. Paine, Ralph Hawkes, Holmes Maddock, H. T. Jamieson.

#### FUNCTIONS

This organization was formed for the protection of Canadian performing rights and the licensing of public performance of music.

### Catholic Actors Guild of America, Inc.

Hotel Astor, New York, N. Y.  
Circle 6-5566

#### OFFICERS

President.....George M. Cohan  
First Vice-President.....Gene Buck  
Second Vice-President.....Hugh O'Connell  
Honorary Vice-Presidents:

Bing Crosby, Dan Healy, Pat O'Brien, Donald Brian Chaplain-Treasurer.....Rev. John F. White  
Recording Secretary.....Don Gautier  
Counsel.....Hon. Alfred J. Talley  
Historian.....Allyn Gilly  
Executive Secretary.....George Buck  
Chairman of Executive Board.....John A. Bado  
Social Secretary (Theatrical).....Jane Hoy  
Social Secretary (Non-Theatrical)

Mrs. Cornelius J. Gallagher

#### FUNCTIONS

The Catholic Actors Guild is a charitable, benevolent and social organization for the people of the theatre, screen and radio, non-sectarian in scope.

### Catholic Writers Guild of America, Inc.

128 W. 71st St., New York, N. Y.  
ENdicott 2-0411

#### OFFICERS

President.....Joseph Avery Durkin  
1st Vice-President.....Edwin P. Kilroe  
2nd Vice-President.....Richard Reid  
3rd Vice-President.....Daniel D. Halpin  
Treasurer.....Hugh A. O'Donnell  
Financial Secretary.....Eleanor M. Tucker  
Recording Secretary.....Clarence E. Heller  
Corresponding Secretary.....Bernadette A. Forrest  
Counsel.....Henry N. Steinert  
Spiritual Director.....Rev. John B. Kelly  
Honorary President.....Very Rev. Francis Joseph Spellman  
President Emeritus.....James J. Walsh

#### BOARD OF GOVERNORS

Thomas E. Woodlock, Very Rev. Fulton J. Sheen, Eugene A. Colligan, Victor Ridder, Elizabeth Jordan, James O'Shaughnessy, Kathleen Norris, Rev. Hugh

# ORGANIZATIONS

Morley, Katherine Egerly, Charles H. Moran, Margaret Marshall, Nick Kenny, Mrs. Philip Brennan, Nicholas Farley, Kenton Kilmer.

## Clear Channel Broadcasting Service

919 Shoreman Bldg., Washington, D. C.  
REpublic 3306

### OFFICERS

Chairman.....Edwin W. Craig  
Director.....Victor Sholis  
Treasurer.....Harold Hough  
Chairman, Engineering Committee.....J. H. DeWitt, Jr.  
Counsel.....Louis G. Caldwell

### FUNCTIONS

The function of the Clear Channel Broadcasting Service is to foster the interests of independently-owned clear channel standard broadcast stations in matters of engineering allocation, national and international, to the end of preserving and improving radio reception to rural and sparsely settled areas and to cities and towns having no stations of their own.

## Committee on Consumer Relations In Advertising, Inc.

420 Lexington Ave., New York, N. Y.  
MURry Hill 5-7367

### OFFICERS

Chairman.....John Benson  
Executive Director.....Kenneth Dameron

### FUNCTIONS

This committee engages in research in the economics of advertising and the economics of consumption; provides a meeting place where consumers and advertisers can discuss mutual problems; provides consultation service for advertising agencies and other interested in management problems arising from consumer movements.

## Defense Communications Board

Chairman's Office: c-o Federal Communications Commission, Washington, D. C.

### PERSONNEL

James Lawrence Fiy, Chairman, Federal Communications Commission; Major General Dawson Olmstead, Chief Signal Officer of U. S. Army; Rear Admiral Leigh Noyes, Director of Naval Communications; Breckenridge Long, Assistant Secretary of State in charge of the Division of International Communications; Herbert E. Gaston, Assistant Secretary of Treasury in charge of Treasury Enforcement Activities.

### COMMITTEES

Alternates: E. K. Jett, Chief Engineer, Federal Communications Commission; Colonel Otis K. Sadtler, Chief of Operations Branch of Signal Corps; Captain Joseph R. Redman, Assistant Director of Naval Communications; Francis C. de Wolf, Principal Divisional Assistant of Division of International Communications; Commander J. F. Farley, Chief of Communications of U. S. Coast Guard.

Coordinating: E. K. Jett, Chief Engineer of the Federal Communication Commission, Chairman; Francis C. De Wolf, Department of State; Major W. T. Guest, Department of War; Lt. Commander Franz O. Willenbacher, Department of Navy; Commander J. F. Farley, Chief of Communications, U. S. Coast Guard, Department of Treasury.

Law: Telford Taylor, General Counsel of Federal Communications Commission, Chairman; Major J. W. Huysson, Office of the Judge Advocate General, Department of War; Steven Spingarn, Department of Treasury; Lt. Commander Franz O. Willenbacher, Department of Navy; Raymond T. Ringling, Department of State.

Labor Advisory: Robert J. Watt, Chairman; Paul E. Griffith, Secretary.

Industry Advisory: Walter S. Gifford, Chairman; Dr. C. B. Jolliffe, Secretary.

Amateur Radio: George W. Bailey, Chairman; E. M. Webster, Secretary.

Aviation Communications: Paul Goldsborough, Chairman; Ford Studebaker, Secretary.

Domestic Broadcasting: Neville Miller, Chairman; A. D. Ring, Secretary.

Interdepartment Radio Advisory: J. H. Dellinger, Chairman; E. K. Jett, Vice-Chairman; Gerald C. Gross, Secretary; P. F. Siling, Assistant Secretary.

International Broadcasting: Walter C. Evans, Chairman; P. F. Siling, Secretary.

Radiocommunications: E. M. Webster, Chairman; F. M. Ryan, Secretary.

Communications Liaison for Civilian Defense: E. M. Webster, Chairman; Herbert A. Friede, Secretary.

Priorities Liaison: Lt. Commander R. H. Griffin, Chairman.

(For complete personnel of various committees see section in this volume titled "Radio in Defense".)

## Defense Savings Radio Section, Treasury Department

709 Twelfth St., N. W., Washington, D. C.  
National 6400

### PERSONNEL

Chief, Radio-Press Section.....Vincent F. Callahan  
Assistant Chief, Radio Section.....Charles J. Gilchrist  
Chief, Women's Programs.....Marjorie L. Spriggs  
Chief, Farm & Foreign Language Programs,  
Emerson Waldman

Copy Editor.....Frank R. King

### FUNCTIONS

The Radio Section of the Defense Savings Staff of the Treasury Department handles all radio promotion for the sale of Defense Bonds and Stamps. Description of activities is to be found in "Radio in Defense" section in this volume.

## The Dramatists' Guild

6 E. 39th St., New York, N. Y.  
MURray Hill 5-6930

### OFFICERS

President.....Elmer Rice  
Vice-President.....George S. Kaufman  
Secretary.....Richard Rodgers

### COUNCIL

George Abbott, Robert Ardrey, Philip Barry, Clare Boothe, Edward Childs Carpenter, Marc Connelly, Rachel Crothers, Russel Crouse, Owen Davis, Philip Dunning, Dorothy Fields, Rose Franken, Clifford Goldsmith, Paul Green, Lorenz Hart, Lillian Hellman, Arthur Kober, Melvin Levy, Howard Lindsay, Elizabeth MacFadden, George Middleton, John Monks, Jr., Eugene O'Neill, Arthur Richman, Irwin Shaw, Arthur Schwartz, Robert E. Sherwood, George Sklar, Lulu Vollmer, Victor Wolfson.

### FUNCTIONS

The Dramatists' Guild is one of the guilds of the Authors' League of America, Inc. The guild is primarily a protective organization for playwrights.

## Federal Communications Bar Association

National Press Bldg., Washington, D. C.

### OFFICERS

President.....Eugene O. Sykes  
First Vice-President.....Paul M. Segal  
Second Vice-President.....Eliot C. Lovett  
Secretary.....Reed T. Rollo  
Treasurer.....John M. Littlepage

### FUNCTIONS

To promote the proper administration of the Communications Act of 1934 and related acts, to uphold the honor of practice before the Federal Communications Commission, and to encourage cordial intercourse among the practitioners. It issues a monthly publication, the Federal Communications Bar Journal, which is devoted to matters of interest pertaining to communications law.

## Federal Radio Education Committee (FREC)

Room 3355 South Interior Bldg., Washington, D. C.  
RRepublic 1820, Extension 2280

### OFFICERS

Chairman.....J. W. Studebaker  
Vice-Chairman.....C. F. Klinefelter  
Secretary-Editor.....Getrude G. Broderick  
Assistant to the Chairman.....W. D. Boutwell  
Director, Script & Transcription Exchange,  
Gordon Studebaker

### COMMITTEE

John Elmer, WCBM, Baltimore; Willard Givens, National Education Association; Reverend George Johnson, Catholic University of America; Neville Miller, National Association of Broadcasters; Harold B. McCarthy, National Association of Educational Broadcasters; Gerald C. Gruss, Federal Communications Commission; Walter G. Freston, Jr., National Broadcasting Co.; Levering Tyson, Muhlenberg College; Sterling Fisher, Columbia Broadcasting System; John W. Studebaker, United States Commissioner of Education.

### FUNCTIONS

The Federal Radio Education Committee was appointed in 1935 by the Federal Communications Commission with the recommendation at that time that the broadcasters, on one hand, and the educators, on the other, would combine forces which would: (1) eliminate controversy and misunderstanding between groups of educators and between the industry and educators; (2) promote actual cooperative arrangements between educators and broadcasters on national, regional and local bases. Publications to date include Script Exchange Catalog, Forums on the Air, College Radio Workshop, The School Radio Sound System, Glossary of Radio Terms, "Americans All—Immigrants All," a supplementary teaching aid in the use of recordings of program series of the same name, the FREC Service Bulletin, and many others.

## Federal Trade Commission

Constitution Ave. at 6th St., N.W., Washington, D.C.  
NATIONAL 8206

### PERSONNEL

Chairman.....Charles H. March  
Commissioner.....Ewin L. Davis  
Commissioner.....Garland S. Ferguson  
Commissioner.....William A. Ayres  
Commissioner.....Robert E. Freer  
Secretary.....Otis B. Johnson  
Chief Economist.....Col. William H. England  
Director, Radio & Periodical Division.....P. B. Morehouse  
Assistant Director, Radio & Periodical Division  
William F. Davidson

### FUNCTIONS

The Federal Trade Commission is a Governmental agency whose object is to prevent unfair methods of competition and unfair and deceptive acts and practices in commerce. For a description of the actual procedure and work of this body see articles appearing in other sections of this volume.

## Financial Advertisers Association

221 S. La Salle St., Chicago, Ill.  
State 5547

### OFFICERS

President.....Victor Cullin  
(Mississippi Valley Trust Co.)  
First Vice-President.....L. E. Townsend  
(Bank of America)  
Second Vice-President.....Lewis F. Gordon  
(Citizens & Southern National Bank)  
Third Vice-President.....J. Lowell Lafferty  
(Fort Worth National Bank)  
Treasurer.....Fred W. Mathison  
(National Security Bank)  
Executive Vice-President.....Preston E. Reed

## First Advertising Agency Group

524 Union Commerce Bldg., Cleveland, Ohio  
Main 5194

### OFFICERS

President.....Lee E. Donnelley  
Vice-President.....Norman Lewis  
Secretary-Treasurer.....Melvin F. Hall

### BRANCH OFFICES

Membership in this organization includes advertising agencies in the following cities: Albany, N. Y.; Atlanta, Ga.; Buffalo, N. Y.; Cincinnati, Ohio; Cleveland, Ohio; Denver, Colo.; Des Moines, Iowa; Detroit, Mich.; Jacksonville, Fla.; Los Angeles, Calif.; Nashville, Tenn.; New York, N. Y.; Oakland, Calif.; Philadelphia, Pa.; Pittsburgh, Pa.; Portland, Ore.; Richmond, Va.; San Francisco, Calif.; San Jose, Calif.; Salt Lake City, Utah; Seattle, Wash.; St. Louis, Mo.; Tacoma, Wash.; Toronto, Ont.; Montreal, Que.; Halifax, Nova Scotia; Vancouver, B. C.; Winnipeg, Manitoba.

### FUNCTIONS

This organization is a cooperative group of independently owned advertising agencies using identical standards of agency procedure and acting as branch offices in the interest of each member.

## F M Broadcasters, Inc. (FMBI)

21 Brookline Ave., Boston, Mass.  
Commonwealth 0800

### OFFICERS

President.....John Shepard, 3rd  
Vice-President.....John V. L. Hogan  
Secretary-Treasurer.....Robert T. Bartley  
General Manager.....Dick Dorrance

### DIRECTORS

Walter J. Damm, Franklin M. Doolittle, C. M. Jansky, Jr., Ray H. Manson, Carl Meyers, Paul W. Morency, T. C. Streibert.

### BRANCH OFFICE

52 Vanderbilt Ave., New York, N. Y.  
Phone, Murray Hill 4-7201

### FUNCTIONS

FMBI is a non-profit association of FM boosters founded to see that frequency modulation advances in a coordinated logical manner; to guarantee that its interests are furthered and protected and to represent the FM industry in Washington; to provide an advisory service for its membership stations; to offer liaison between broadcasters and manufacturers interpreting the problems of each; to conduct a program of promotion and publicity aimed at stimulating public interest, and to provide a competent and accurate service for the truthful dissemination of information concerning FM. Membership includes individuals and companies who have an FM station, a construction permit or an application on file with the FCC for one.

## Georgia Association of Broadcasters

c-o Radio Station WRBL, Columbus, Ga.

### OFFICERS

President.....James Woodruff, Jr.  
(WRBL, Columbus)  
Vice-President.....Ray Ringston  
(WRDL, Augusta)  
Secretary-Treasurer.....Allie Williams  
(WMAZ, Macon)

### DIRECTORS

E. K. Cargill, WMAZ, Macon; Jack Williams, WAYX, Waycross; Leonard Reinsch, WSB, Atlanta.

### FUNCTIONS

The Georgia Association of Broadcasters is a regional trade association of 19 Georgia broadcasting stations.

## Independent Radio Network

### Affiliates, Inc. (IRNA)

Chairman's Office: 200 Bankers Securities Bldg., Philadelphia, Pa.

### OFFICERS

Chairman.....Samuel R. Rosenbaum  
(WFIL, Philadelphia)  
Vice-Chairman & Treasurer.....Paul W. Morency

# ORGANIZATIONS

## EXECUTIVE COMMITTEE

Martin B. Campbell, WFAA, Dallas, Texas; Don S. Elias, WWNC, Asheville, N. C.; I. R. Lounsberry, WGR, Buffalo, N. Y.; P. W. Morency, WTIC, Hartford, Conn.; Samuel R. Rosenbaum, WFIL, Philadelphia, Pa.

## DIRECTORS

Martin Campbell, WFAA, Dallas, Texas; Edwin W. Craig, WSM, Nashville, Tenn.; Mark Ethridge, WHAS, Louisville, Ky.; Don S. Elias, WWNC, Asheville, N. C.; John A. Kennedy, WCHS, Charleston, W. Va.; I. R. Lounsberry, WGR, Buffalo, N. Y.; Paul W. Morency, WTIC, Hartford, Conn.; Charles W. Myers, KOIN, Portland, Ore.; George W. Norton, WAVE, Louisville, Ky.; Samuel R. Rosenbaum, WFIL, Philadelphia, Pa.; L. B. Wilson, WCKY, Cincinnati, Ohio.

## Institute of Radio Engineers, Inc.

330 West 42nd St., New York, N. Y.  
MEdallion 3-5661

### OFFICERS

President.....A. F. Van Dyck  
Secretary.....Harold P. Westman

### FUNCTIONS

The Institute of Radio Engineers is a professional organization of engineers in radio and allied fields. It publishes a magazine entitled "Proceeding of the I. R. E." and conducts meetings in New York and various other cities in the United States, Canada, and Argentina.

## Intercollegiate Broadcasting System, Inc.

507 Fifth Ave., New York, N. Y.  
Vanderbilt 6-6075

### OFFICERS

President.....George Abraham  
Business Manager.....Louis M. Bloch, Jr.  
Technical Manager.....David W. Borst  
Executive Secretary.....Jean MacInnis  
Director of Programs & Production.....Lawrence Lader

### BRANCH OFFICE

720 State St., Schenectady, N. Y.  
Technical Manager.....David W. Borst

### FUNCTIONS

Intercollegiate Broadcasting system is a non-profit association of college campus radio stations and has as its purpose the furtherance of education, entertainment and goodwill among its members. The IBS maintains for the benefit of its members program, business and technical departments. Member stations include the following: Brown University, University of California, University of California at Los Angeles, Columbia University, University of Connecticut, Cornell University, University of Florida, Georgetown University, Hampton College, Harvard University, Hamilton College, Knox College, Pembroke College, Princeton University, Rhode Island State University, St. Edwards University, St. Lawrence University, Swarthmore College, Union College, Wesleyan University, Williams College, and Yale University.

## Interdepartment Radio Advisory Committee (IRAC)

Chairman's Office: Federal Communications Commission, Washington, D. C.

### OFFICERS

Chairman.....Dr. J. H. Dellinger  
Vice-Chairman.....E. K. Jett  
Secretary.....Gerald C. Gross  
Assistant Secretary.....P. F. Silling

### MEMBERS

Department of Agriculture.....E. W. Loveridge  
Department of Commerce.....Dr. J. H. Dellinger  
Federal Communications Commission.....E. K. Jett  
Department of Interior.....C. D. Monteith  
Department of Justice.....T. D. Quinn  
Maritime Commission.....D. S. Brierly

Department of Navy.....Admiral S. C. Hooper  
Post Office Department.....Roy M. Martin  
Department of State.....Thomas Burke  
Department of Treasury.....Commander J. F. Farley  
Department of War.....Major General J. O. Mauborgne

### ALTERNATE MEMBERS

Department of Agriculture.....Wallace L. Kaddery  
Department of Commerce.....L. H. Simson  
Federal Communications Commission.....Gerald C. Gross  
Department of Interior.....John S. Cross  
Department of Justice.....H. J. Walls  
Maritime Commission.....J. T. Welsh  
Department of Navy.....Commander John R. Redman  
Post Office Department.....none  
Department of State.....Francis C. de Wolf  
Department of Treasury.....Commander C. H. Peterson  
Department of War.....Major Wesley T. Guest

### FUNCTIONS

This committee, composed of representative officials from the various government departments and agencies is charged with advising the President in regard to the assignment of frequencies to government station or classes of station. Little of the committee's work is divulged for public information because of its nature (e.g. National Defense), which is confidential.

## International Short Wave Club

923 Vine Street, East Liverpool, Ohio  
Phone, 3546-W

### OFFICERS

President & Editor.....Arthur J. Green  
Board of Advisors.....Joseph B. Sessions  
Board of Advisors.....Jacob N. Kleimans  
Board of Advisors.....Charles H. Schroeder  
European Representative.....Arthur E. Bear

### BRANCH OFFICES

New York Chapter: Jacob N. Kleimans, Sec.; London (England) Chapter: Arthur E. Bear, Sec.; Manchester (England) Chapter: Officers to be elected monthly; Brighton (England) Chapter: John Bennett, Sec.; Guernsey (England) Chapter: F. S. LaPavoux, Sec.  
(Note: The English Chapters have temporarily suspended operations.)

### FUNCTIONS

The purpose of the organization is to gather information, helpful hints, station schedules, etc., and send this to members of the organization. The club has members in 141 countries and possessions that act as news reporters.

## The Lambs

130 W. 44th St., New York, N. Y.  
BRyant 9-8020

### OFFICERS

Shepherd.....Fred Waring  
Boy.....Raymond Peck  
Corresponding Secretary.....Bobby Clark  
Recording Secretary.....Sam Forrest  
Treasurer.....Ralph Trier  
Librarian.....John Golden  
Assistant Secretary.....T. H. Druiitt

### MEMBERS OF THE COUNCIL

Kenneth Webb, Martin Gillen, James E. Meighan, Earl Benham, Edward C. Lilley, John McManus, Percy Moore, Edwin Burke, Dr. M. Sayle Taylor, M. D. Stauffer, William P. Adams, Hal Christensen, Walter N. Greaza, Thomas Jefferson Miley, Tex O'Rourke.

LIFE DIRECTORS: R. H. Burnside, A. O. Brown, Frank Crummit, William Gaxton.

## Market Research Council

### OFFICERS

President.....Will S. Johnson  
(Vick Chemical Co.)  
Vice-President.....Elmo Roper  
(Elmo Roper)  
Secretary-Treasurer.....D. B. Lucas  
(New York University)

### EXECUTIVE COMMITTEE

Will S. Johnson, Elmo Roper, D. B. Lucas, Arno H. Johnson (J. Walter Thompson Co.); Hugh M. Beville, Jr. (National Broadcasting Co.).

### FUNCTIONS

This organization is a small informal group (limited membership) of leading market research men interested in general market research who meet monthly for a discussion of mutual problems.

## Music Publishers' Protective Association, Inc.

45 Rockefeller Plaza, New York, N. Y.  
Circle 6-3084

### OFFICERS

Chairman of the Board.....Walter G. Douglas  
President.....Lester Santly  
Vice-President.....Jack Mills  
Secretary.....J. J. Bregman  
Treasurer.....Richard F. Murray  
General Manager.....Harry Fox

## National Advisory Council on Radio in Education

60 E. 42nd St., New York, N. Y.  
MUrray Hill 2-3420

### OFFICERS

Secretary.....Dr. Levering Tyson

### FUNCTIONS

The National Advisory Council on Radio in Education was organized to promote the more effective utilization of the art of broadcasting in the general field of American education. Its membership includes representatives in the field of education, government and industry as well as the general public.

(Activities suspended for duration of war.)

## National Association of Broadcast Engineers

201 N. Wells Bldg., Chicago, Ill.  
Randolph 8884

### OFFICERS

President.....E. C. Horstman  
Vice-President.....J. H. Brown  
Secretary-Treasurer.....G. Maher, Jr.  
Assistant Secretary-Treasurer.....F. R. Rojas  
Assistant Secretary-Treasurer.....E. Stolzenberger

### FUNCTIONS

The NABET is a national labor organization which consists of radio engineers in the broadcast industry. Chapters are located all over the United States.

## National Association of Broadcasters

Normandy Bldg., 1627 "K" Street, N. W.,  
Washington, D. C.  
National 2080

### OFFICERS

President.....Neville Miller  
Assistant to President-Acting  
Secretary-Treasurer.....C. E. Arney, Jr.  
General Counsel.....Russell P. Place  
Director of Public Relations.....Edward M. Kirby  
Director of Labor Relations.....Joseph L. Miller  
Director of Broadcasting Advertising.....Frank E. Pellegrin  
Director of Research.....Paul F. Peter  
Director of Engineering.....Lynne C. Smeby  
Director of Promotion.....Arthur C. Stringer  
Auditor.....Everett E. Revercomb

### BOARD OF DIRECTORS

#### District

- 1—Paul Morency, WTIC, Hartford, Conn.
- 2—Clarence Wheeler, WHEC, Rochester, N. Y.  
Edward Klauber, CBS, New York, N. Y. (director-at-large)
- 3—Isaac D. Levy, WCAU, Philadelphia, Pa.
- 4—John A. Kennedy, WBLK, Clarksburg, W. Va.  
Frank M. Russell, WRC, Washington, D. C. (director-at-large)  
John Elmer, WCBM, Baltimore, Md. (director-at-large)

Don S. Elias, WWNC, Asheville, N. C. (director-at-large)

- 5—Frank King, WMBR, Jacksonville, Fla.  
James W. Woodruff, Jr., WRBL, Columbus, Ga. (director-at-large)
- 6—Edwin W. Craig, WSM, Nashville, Tenn.
- 7—J. H. Ryan, WSPD, Toledo, Ohio  
George W. Norton, Jr., WAVE, Louisville, Ky. (director-at-large)
- James D. Shouse, WLW, Cincinnati, O.
- 8—John E. Fetzer, WKZO, Kalamazoo, Mich.
- 9—Edgar L. Bill, WMBD, Georgia, Ill.
- 10—John J. Gillin, Jr., WOW, Omaha, Nebr.  
J. O. Maland, Des Moines, Ia.
- 11—Earl H. Gammons, WCCO, Minneapolis, Minn.
- 12—Herbert Hollister, KFBI, Wichita, Kans.
- 13—O. L. Taylor, KGNC, Amarillo, Tex.
- 14—Eugene P. O'Fallon, KFEL, Denver, Colo.
- 15—Howard Lane, KFBK, Sacramento, Calif.
- 16—Harrison Holloway, KFI-KECA, Los Angeles, Calif.
- 17—Harry R. Spence, KXRO, Aberdeen, Wash.

### EXECUTIVE COMMITTEE

Neville Miller, Paul W. Morency, James D. Shouse, Don S. Elias, John J. Gillin, Jr., John Elmer, O. L. Taylor.

## National Association of Educational Broadcasters

Exec. Sec'y., Radio Station WILL, Univ. of Illinois,  
Urbana, Illinois

### OFFICERS

President.....Howard A. Engle  
(WHA, Madison, Wisc.)  
Vice-President.....Gilbert D. Williams  
(WBAA, West Lafayette, Ind.)  
Treasurer.....W. I. Griffith  
(WOI, Ames, Iowa)  
Executive Secretary.....Frank Schooley  
(WILL, Urbana, Illinois)

### FUNCTIONS

To further the interests of educational broadcasting stations and educators broadcasting over commercial stations.

## National Association of Performing Artists

630 Fifth Ave., New York, N. Y.  
Circle 7-8194

### OFFICERS

President.....James J. Walker  
First Vice-President.....Fred Waring  
Vice-President.....Meyer Davis  
Vice-President.....Paul Whiteman  
Vice-President.....Al Jolson  
Secretary.....Frank Crumit  
Treasurer.....Don Voorhees  
General Counsel.....Maurice J. Speiser

### BOARD OF DIRECTORS

Fred Waring, Chairman; Connie Boswell, Noel Coward, Bing Crosby, Frank Crumit, Meyer Davis, Mary Garden, Benny Goodman, Jascha Heifetz, Lewis James, Al Jolson, Arthur W. Levy, Guy Lombardo, John McCormack, Grace Moore, Ray Noble, Walter O'Keefe, Dick Powell, Fritz Reiner, Jacob Rosenberg, Fabien Sevitsky, Nathaniel Shilkret, Lawrence Tibbett, Rudy Vallee, Don Voorhees, James J. Walker, Paul Whiteman, Victor Young, Efreim Zimbalist.

### FUNCTIONS

The object of the Association is to protect the recordings of its members and the prevention of their unauthorized use primarily by broadcast stations, coin-operated machines, etc.

## National Better Business Bureau, Inc.

405 Lexington Ave., New York, N. Y.  
MUrray Hill 6-3535

### OFFICERS

President.....R. P. Clayberger  
Vice-President.....Harry Dwight Smith  
Secretary.....Warren C. Agry  
Treasurer.....John L. Anderson  
General Manager.....Edward L. Greene

# ORGANIZATIONS

## FUNCTIONS

This organization assists the public, advertisers and publishers to avoid false and deceptive advertising. It cooperates with law enforcement agencies in this work.

## National Committee on Education by Radio

Room 308, One Madison Ave., New York, N. Y.  
CAledonia 5-6965

### OFFICERS

Chairman..... Arthur G. Crane  
(Pres., University of Wyoming)  
Vice-Chairman..... James E. Cummings  
Secretary..... Ruth L. Goodnough

### FUNCTIONS

Acts as spokesman in radio matters for organized education. Publishes a bulletin titled "Education by Radio." Aids and encourages non-commercial radio stations. Promotes cooperation between educators and commercial broadcasters. Acts as clearing house for information about education by radio.

## National Independent Broadcasters, Inc. (NIB)

Chairman's Office: 730 Fifth Ave., New York, N. Y.  
Washington Office: Edmonds Bldg., 917 Fifteenth St., N.W., Washington, D. C.  
Phone, Republic 3607

### OFFICERS

Chairman, Board of Directors..... Harold A. Lafount  
President..... George B. Storer  
Vice-President..... L. B. Wilson  
Secretary-Treasurer..... Lloyd C. Thomas  
General Counsel..... Andrew W. Bennett  
Managing Director..... Edwin M. Spence

### DIRECTORS

Harold A. Lafount, Chairman of the Board; Ralph L. Atias, WJJD, Chicago, Ill.; S. A. Cisler, WGRG, Louisville, Ky.; Edward Codel, WPAT, Paterson, N. J.; E. B. Craney, KGIR, Butte, Mont.; A. J. Fletcher, WRAL, Raleigh, N. C.; Thompson Guernsey, WLBZ, Bangor, Me.; James F. Hopkins, WJBK, Detroit, Mich.; C. J. Lanphier, WEM, Milwaukee, Wisc.; Martin L. Leich, WBOW, Terre Haute, Ind.; Ben Ludw, WIBW, Topeka, Kans.; Glenn Marshall, Jr., WFOY, St. Augustine, Fla.; E. C. Reineke, WDAY, Fargo, N. D.; L. M. Sepaugh, WSLI, Jackson, Miss.; Edwin M. Spence, WWDC, Washington, D. C.; George B. Storer, The Fort Industry Co.; Lloyd C. Thomas, KGFV, Kearney, Nebr.; Arthur Westlund, KRE, Berkeley, Calif.; L. B. Wilson, WCKY, Cincinnati, Ohio.

### FUNCTIONS

This association was organized and is operated by independently owned and operated stations, as distinguished from national networks and stations owned or managed by national networks, to meet the need of special representation for such independently owned stations in handling the problems and activities peculiar to them as a group. All broadcast stations are eligible for membership except stations owned or managed by national networks.

## National Industrial Advertisers Association, Inc.

100 E. Ohio St., Chicago, Ill.  
Superior 8140

### OFFICERS

President..... W. D. Murphy  
(Ellis, Younggreen & Finn)  
Vice-President..... L. R. Garretson  
(Leeds & Northrup Co.)  
Vice-President..... E. C. Howell  
(The Carboly Co.)  
Vice-President..... Herbert V. Mercready  
(Magnus Chemical Co.)  
Vice-President..... Arthur Neher  
(Century Electric Co.)  
Vice-President..... Louis J. Ott

(Ohio Brass Co.)

Vice-President..... E. A. Phoenix  
(Johns-Manville Sales Corp.)  
Secretary-Treasurer..... C. D. Davenport  
(Union Steel Products Co.)  
Past President..... R. P. Dodds  
(Truscon Steel Co.)  
Headquarters Secretary..... M. R. Webster

### DIRECTORS

Roy D. Baldwin, Simonds Saw & Steel Co., Fitchburg, Mass.; K. R. Sutherland, Sutherland-Abbott, Boston, Mass.; Frederick I. Lackens, The Hays Corp., Michigan City, Ind.; W. Lane Witt, Crane Co., Chicago, Ill.; George F. Mathews, The Lunkenheimer Co., Cincinnati, O.; William E. McFee, American Rolling Mill Co., Middletown, O.; C. B. Cook, The Ewell-Parker Electric Co., Cleveland, O.; Ernest C. Roberts, The Clark Controller Co., Cleveland, Ohio; Tom Moule, Ralph L. Wolfe & Associates, Detroit, Mich.; Bruce Morse, Square D Company, Detroit, Mich.; B. C. O'Brien, Roots-Connersville Blower Corp., Connersville, Ind.; Stanley Murray, The Perfect Circle Co., Hagerstown, Ind.; M. R. Klitten, The McCarty Co., Los Angeles, Calif.; S. C. Eastman, Dozier-Graham-Eastman, Los Angeles, Calif.; J. William Stair, B. M. Root Co., York, Pa.; Frank W. Fensinger, Landis Tool Co., Waynesboro, Pa.; Arnold J. Andrews, Bucyrus-Erie Co., South Milwaukee, Wisc.; Walter E. Schultz, Delta Mfg. Co., Milwaukee, Wisc.; O. J. Eliertson, Pioneer Engineering Works, Inc., Minneapolis, Minn.; Lowell H. Swenson, William Bros. Boiler & Mfg. Co., Minneapolis, Minn.; D. W. Kelley, Canadian Industries, Ltd., Montreal, P. Q.; A. P. Darcel, Crane, Ltd., Montreal, P. Q.; F. H. Finkerton, U. S. Rubber Co., New York, N. Y.; John Coakley, Thomas A. Edison, Inc., West Orange, N. J.; Keith B. Lydiard, Alan Bridgeman Sanger, New York, N. Y.; C. M. Neighbors, Babcock & Wilcox Co.; R. E. Lovekin, R. E. Lovekin Corp., Philadelphia, Pa.; A. O. Witt, Schramm, Inc., West Chester, Pa.; Edmund D. Kennedy, Copperwald Steel Co., Glassport, Pa.; C. E. Herington, Meeharite Research Institute of America, Pittsburgh, Pa.; George R. Holt, W. F. & John Barnes Co., Rockford, Ill.; M. R. Crossman, Barber-Colman Co., Rockford, Ill.; R. T. Reinhardt, California Corrugated Culvert Co., Berkeley, Calif.; Gordon W. Monfort, Caterpillar Tractor Co., San Leandro, Calif.; Arthur Neher, Century Electric Co., St. Louis, Mo.; Charles W. Bolan, Carter Carburetor Co., St. Louis, Mo.; Philip Linne, Cwines-Corning Fiberglas Corp., Toledo, Ohio; Allen P. Colby, National Supply Co., Toledo, Ohio; P. A. M. Galilee, Canadian Westinghouse Co., Hamilton, Ont.; L. B. Hicks, Canadian General Electric Co., Toronto, Ont.; George B. Wright, Nash Engineering Co., South Norwalk, Conn.; G. M. Fletcher, The Stan'ey Works, New Britain, Conn.; L. H. Taylor, The Deming Co., Salem, Ohio; William S. Miller, The General Fireproofing Co., Youngstown, Ohio; C. M. Buchana, Van Sant, Dugdale & Co., Baltimore, Md.; R. D. Hawkins, Hammond Machinery Builders, Inc., Kalamazoo, Mich.

### FUNCTIONS

This organization is a trade association devoting its efforts exclusively to the advancement of industrial advertising and marketing technique and practice.

## National Television System Committee

### PERSONNEL

Chairman..... Dr. W. R. G. Baker  
(General Electric Co.)  
Secretary..... Virgil M. Graham  
(Hygrade Sylvania Corp.)  
Committeeman..... Dr. Ralph Bown  
Alternate..... D. A. Quarles  
(Bell Telephone Labs., Inc.)  
Committeeman..... Adrain Murphy  
Alternate..... Dr. P. C. Goldmark  
(Columbia Broadcasting System, Inc.)

Committeeman..... Allen B. DuMont  
 Alternate..... Dr. T. T. Goldsmith  
 (Allen B. DuMont Laboratories, Inc.)  
 Committeeman..... B. R. Cummings  
 Alternate..... P. J. Herbst  
 (Farnsworth Television & Radio Corp.)  
 Committeeman..... Dr. E. F. W. Alexanderson  
 Alternate..... I. J. Kaar  
 (General Electric Co.)  
 Committeeman..... Daniel E. Harnett  
 Alternate..... W. A. MacDonald  
 (Hazeltine Service Corporation)  
 Committeeman..... Albert I. Lodwick  
 Alternate..... A. F. Murray  
 (Hughes Tool Company)  
 Committeeman..... Dr. Alfred N. Goldsmith  
 Alternate..... H. A. Wheeler  
 (Institute of Radio Engineers)  
 Committeeman..... J. V. L. Hogan  
 Alternate..... L. C. Smeby  
 (National Association of Broadcasters)  
 Committeeman..... David B. Smith  
 Alternate..... F. J. Bingley  
 (Philco Corporation)  
 Committeeman..... Dr. R. H. Manson  
 Alternate..... Dr. G. R. Town  
 (Stromberg-Carlson Telephone Mfg. Co.)  
 Committeeman..... Paul Raibourn  
 (Television Productions, Inc.)  
 Committeeman..... John R. Howland  
 Alternate..... J. E. Brown  
 (Zenith Radio Corporation)  
**COMMITTEE CHAIRMAN**  
 Committee on Synchronization..... D. B. Smith  
 Committee on Color Television..... Dr. P. C. Goldmark  
 Committee on Monitoring..... Dr. T. T. Goldsmith, Jr.  
 Committee on Visual Sideband..... C. A. Priest

## National Variety Artists, Inc.

225 W. 46th St., New York, N. Y.  
 Columbus 5-2638

### OFFICERS

President..... Louis Handin  
 First Vice-President..... Joe McInerney  
 Second Vice-President..... Lester Rose  
 Treasurer..... William Marble  
 Recording Secretary..... Rosa Crouch

### DIRECTORS

Charles H. Preston, Jack Boyle, Joe Verdi, Nick Elliott, Charles Johnson, Juliet Heath, Ed West, Joe Rose.

### FUNCTIONS

The function of National Variety Artists, Inc., is to promote Americanism and fraternal and welfare activities among the members of the theatrical profession.

## National Youth Administration Radio Workshop

1697 Broadway, New York, N. Y.  
 Circle 6-3888

### OFFICERS

Director of Publicity & Radio Workshop,  
 Stanley L. Stevens

### FUNCTIONS

NYA Radio Workshop gives work experience to youths between the ages of 16 and 25 years in the following phases of radio and entertainment: symphonic music, popular music, choral group, music library, composers laboratory, music research, music copying, production, publicity and radio technology.

## Nebraska Broadcasters Association

Secretary's Office: c/o WJAG, Norfolk, Nebr.  
 Phone: 432

### OFFICERS

President..... Vernon H. Smith  
 (KOWH, Omaha)  
 Vice-President..... L. L. Hilliard  
 (KGKY, Scottsbluff)  
 Secretary-Treasurer..... Art Thomas  
 (WJAG, Norfolk)

### DIRECTORS

Don Searle, KOIL, Omaha; W. I. LeBarron, North Platte.

## MEMBER STATIONS

KFAB, Lincoln; KFOR, Lincoln; KGFV, Kearney; KGKY, Scottsbluff; KGFN, North Platte; KMMJ, Grand Island; KORN, Fremont; KOWH, Omaha; KOIL, Omaha; WJAG, Norfolk; WOW, Omaha.

## Network Affiliates, Inc.

Munsey Bldg., Washington, D. C.

### OFFICERS

President..... Eugene C. Pulliam  
 (WIRE, Indianapolis, Ind.)  
 Vice-President..... Hubert Taft, Jr.  
 (WKRC, Cincinnati, O.)  
 Secretary-Treasurer..... William J. Scripps  
 (WWJ, Detroit, Mich.)

### DIRECTORS

Ed Craney, KGIR, Butte, Mont.; W. J. Scripps, WWJ, Detroit, Mich.; Eugene C. Pulliam, WIRE, Indianapolis, Ind.; Ronald Woodyard, WING, Dayton, O.; Luther L. Hill, KRNT, Des Moines, Ia.; H. J. Brennen, KQV, Pittsburgh, Pa.; Hoyt Wooten, WREC, Memphis, Tenn.; John A. Kennedy, WCHS, Charleston, W. Va.; Edgar Bill, WMBD, Peoria, Ill.; Donald Davis, WHB, Kansas City, Mo.; Hubert Taft, Jr., WKRC, Cincinnati, O.; Leonard H. Kapner, WCAE, Pittsburgh, Pa.

### BRANCH OFFICES

Indianapolis: Claypool Hotel; Phone, Riley 1541; Eugene C. Pulliam, President.

Detroit: 626 West Lafayette Blvd., Phone Randolph 2000; William J. Scripps, Secretary-Treasurer.

### FUNCTIONS

All independently owned network affiliates are eligible to membership in Network Affiliates, Inc. Clear channel stations and purely local stations are not eligible for membership. The principal object of the association is to promote and protect the American system of broadcasting as it now functions and to oppose the establishment of super-power stations in the United States. It also serves as a mutual clearing house for network affiliate stations in their relations with the network company, ASCAP, BMI and with the FCC.

## New Jersey Broadcasters' Association

c/o Walter Patrick Kelly

WAAT, 50 Journal Square, Jersey City, N. J.

### OFFICERS

President..... A. Harry Zoog  
 (WFPG, Atlantic City)  
 Vice-President..... Edward Codel  
 (WPAT, Paterson)  
 Vice-President..... O. L. Maxey  
 (WSNJ, Bridgeton)  
 Secretary-Treasurer..... Walter Patrick Kelly  
 (WAAT, Jersey City)

### EXECUTIVE BOARD

A. Harry Zoog, Edward Codel, O. L. Maxey, Walter Patrick Kelly, John C. Bird, WCAP, Asbury Park; George V. Kelly, WPAT, Paterson, George S. McGinley, WTTM, Trenton; A. B. Schillin, WAAT, Jersey City.

## Newspaper Radio Committee

370 Lexington Ave., New York, N. Y.

Lexington 2-8497

### OFFICERS

Chairman..... Harold V. Hough  
 Vice-Chairman..... Walter J. Damm  
 Treasurer..... D. Tennant Bryan

### FUNCTIONS

Newspaper Radio Committee was organized by publishers of newspapers owning broadcast stations to present before the FCC their defense against FCC Order No. 79 issued March 20, 1941.

## North Carolina Association of Broadcasters

President's Office: c/o WPTF, Raleigh, N. C.

### OFFICERS

President..... Richard H. Mason  
 (WPTF, Raleigh)  
 Vice-President..... George Walker



# ORGANIZATIONS

(WAIR, Winston-Salem)  
 Secretary-Treasurer.....Richard A. Dunlea  
 (WSOC, Charlotte)  
**FUNCTIONS**

This association coordinates the activities of all member stations in connection with problems in which they have a mutual interest.

## Northern California Broadcasters Association

c/o C. L. McCarthy, Secretary  
 KQW, 87 E. San Antonio St., San Jose, Calif.  
**OFFICERS**  
 President.....Arthur Westlund  
 (KRE, Berkeley)  
 Secretary-Treasurer.....C. L. McCarthy  
 (KQW, San Jose)

## Ohio Association of Broadcasters

c/o George L. Young, Secretary-Treasurer  
 WSPD, Toledo, Ohio  
**OFFICERS**  
 President.....W. P. Williamson  
 (WKBN, Youngstown)  
 Vice-President.....Hulbert Taft, Jr.  
 (WKRC, Cincinnati)  
 Secretary-Treasurer.....George L. Young  
 (WSPD, Toledo)

## Oregon State Broadcasters' Association

c/o Lee Bishop, President  
 KMED, Medford, Ore.  
**OFFICERS**  
 President.....Lee Bishop  
 (KMED, Medford)  
 Vice-President.....Carey Jennings  
 (KWJJ, Portland)  
 Secretary.....Frank Loggan  
 (KBND, Bend)  
**FUNCTIONS**

Membership roster of this organization includes all broadcasting stations in Oregon, including state and municipal stations. Purpose is to be of mutual assistance in commercial, management and technical problems by exchange of information and group action if needed.

## Pacific Advertising Association

900 Title Guarantee Bldg., Los Angeles, Calif.  
 Michigan 0479  
**OFFICERS**  
 President.....Don Belding  
 (Lord & Thomas)  
 Senior Vice-President.....Lawrence W. Lane  
 (Lane Publishing Co.)  
 Secretary-Treasurer.....Kenneth Bourke  
 (University Union Club)  
 Vice-President At-Large.....Claire Drew Forbes  
 (Rhodes Department Store)  
 Managing Director.....Charles W. Collier  
 Executive Secretary.....Lela M. Huey  
 V-P District 1.....J. Corning Todd  
 (McCandlish Lithograph Co.)  
 V-P District 2.....A. A. Campbell  
 (Salt Lake City Tribune-Telegram)  
 V-P District 3.....Kelmar K. LeMaster  
 (Portland Oregonian)  
 V-P District 4.....Howard Willoughby  
 (Foster & Kleiser Co.)  
 V-P District 5.....L. N. Shun  
 (Advertising Counselors, Inc.)  
 Chairman, Finance Division.....Walter J. Held  
 (Standard Oil Co.)

Chairman, Club Service Division.....Elliott C. Hensel  
 (Business Counselor)  
 Chairman, Advancement of Business Division,  
 Walter W. R. May  
 (Portland General Electric Co.)  
 Chairman, Senior Advisory Committee,  
 Junior Division.....Robert L. Philippi  
 (Union Oil Co.)  
 Chairman, Junior Executive Committee,  
 Junior Division.....Mary Cunningham  
 (Braun & Co.)

**FUNCTIONS**  
 This Association is composed of 22 advertising clubs in 11 western states and of contributing members to the association's advancement of business program.

## Pennsylvania Broadcasters Association

P. O. Box 11, Harrisburg, Pa.  
**OFFICERS**  
 President.....Clair R. McCollough  
 (WGAL, Lancaster)  
 Vice-President.....Clifford Chafey  
 (WEEU, Reading)  
 Secretary.....C. G. Moss  
 (WKBO, Harrisburg)  
 Treasurer.....Dr. Leon Levy  
 (WCAU, Philadelphia)

**DIRECTORS**  
 H. Kenneth Brennen, WJAS, Pittsburgh; George E. Joy, WRAC, Williamsport; Arthur Simon, WPEN, Philadelphia.

**FUNCTIONS**  
 This organization is a mutual association of the broadcasting stations of Pennsylvania, formed for the purpose of conducting business negotiations concerning matters of interest to the radio broadcasting stations of the state. Its membership is active on the part of practically every station in the state.

## Professional Music Men, Inc.

1270 Sixth Ave., New York, N. Y.  
 Circle 7-6075  
**OFFICERS**  
 President.....Rocco Vocco  
 First Vice-President.....Joseph Santly  
 Second Vice-President.....Charles Warren  
 Third Vice-President.....Harry Link  
 Treasurer.....Irving Tanz  
 Financial Secretary.....Michael L. Schloss  
 Recording Secretary.....Louis E. Schwartz  
 Sergeant-at-Arms.....David Kent  
 Executive Director.....Bob Miller

**BRANCH OFFICES**  
 19 S. La Salle St., Chicago, Ill.  
 Regional Director.....Morton Schaefer  
 5451 Marathon St., Hollywood, Calif.  
 Regional Director.....Nat Winecoff  
 11 Lewis Street, Somerville, Mass.  
 Regional Director.....Frank Machado  
 316 Porter St., Philadelphia, Pa.  
 Regional Director.....David Blum

## The Radio Club of America, Inc.

11 W. 42nd St., New York, N. Y.  
 Longacre 5-6622  
**OFFICERS**  
 President.....John L. Callahan  
 Vice-President.....Paul Ware  
 Corresponding Secretary.....Lincoln Walsh  
 Recording Secretary.....Harold M. Lewis  
 Treasurer.....Joe J. Stanley  
**FUNCTIONS**  
 Object of the club is the promotion of cooperation among those interested in scientific investigation and

amateur operation in the art of radio communication. Meetings are held monthly from September through June at Columbia University. Proceedings are published approximately six times a year (see listing under publications contained in this volume).

## Radio Correspondents' Association

United States Capitol, Washington, D. C.  
 NAational 3120, Extension 1410

### OFFICERS

President.....H. R. Baukage  
 Vice-President.....Fred W. Morrison  
 Secretary (acting).....Fulton Lewis, Jr.  
 Treasurer.....Francis W. Tully, Jr.  
 Ex-Officio Member, Executive Committee

Albert L. Warner  
 Superintendent, House Gallery.....Robert M. Menaugh  
 Superintendent, Senate Gallery.....D. Harold McGrath

### FUNCTIONS

This is an organization of radio news reporters and correspondents in the National Capitol, gathering daily news for dissemination through the medium of radio. It controls the membership of the Senate and House radio galleries and is vested with complete responsibility for any radio representatives who attend news conferences at the White House or government as well as providing facilities for radio newsmen at national political conventions.

## Radio Council— Chicago Public Schools

228 N. La Salle St., Chicago, Ill.  
 Dearborn 7801

### OFFICERS

Superintendent of Schools.....Dr. William H. Johnson  
 Director.....Harold W. Kent  
 Program Director.....George Jennings

### EXECUTIVE COMMITTEE OF SCHOOL BROADCAST CONFERENCE

Harold W. Kent, Chairman; Judith Waller, National Broadcasting Co.; Lavinia Schwartz, Columbia Broadcasting System; George Jennings, Chairman of Conference Publications Committee; Harriet Hester, WLS, Chicago; Al Hollender, WJJD-WIND, Chicago; David Heffernan, Cook County Schools; Luella Hoskins, New York University.

### FUNCTIONS

The Radio Council operates a non-commercial educational FM station and is producing group, primarily interested in in-schools broadcasts for Chicago schools. It also produces many out-of-school programs over local stations and publishes literature in this connection. It also conducts the annual School Broadcast Conference which is primarily interested in showing ways in which to use radio programs in the classroom; public service programs for community organizations; adult education.

## Radio Council On Children's Programs

9 Rockefeller Plaza, New York, N. Y.  
 Circle 6-1097

### OFFICERS

President.....Mrs. Nathaniel Singer  
 Vice-President.....Mrs. Dorothy Lewis  
 Treasurer.....Wilson Parkhill  
 Secretary.....Rita Hochheimer

### FUNCTIONS

Council was formed to obtain more and better radio programs for children.

## Radio Executives Club of New York

347 Madison Ave., New York, N. Y.

### OFFICERS

President.....John Hymes  
 Vice-President.....Arthur Sinshemer  
 Vice-President.....Alman J. Taranto  
 Secretary.....William Wilson  
 Treasurer.....Ed. Devney

### FUNCTIONS

The major functions of the Radio Executives Club are: (1) to promote and encourage the use of radio broadcasting as an advertising medium; (2) to create a lasting fraternity of persons engaged in the business of radio; (3) to promote a better understanding of radio broadcasting and its attending problems; (4) to award annually a plaque to any individual or group of individuals who, in the opinion of the club, has made the most outstanding contribution toward the advancement of radio; (5) to maintain a central bureau of employment for members of the club; (6) to provide a common meeting place for all persons engaged in the business of radio. Meetings are held weekly from October to May and membership is open to anyone engaged in the business of radio.

## Radio Manufacturers Association

1317 F Street, N. W., Washington, D. C.  
 National 4901

### OFFICERS

President.....Paul V. Galvin  
 (Galvin Manufacturing Corp.)  
 Executive Vice-President-General Manager  
 Bond Geddes  
 Vice-President.....Ray H. Manson  
 (Stromberg-Carlson Tel. Mfg. Co.)  
 Vice-President.....Roy Burlew  
 (Ken-Rad Tube & Lamp Co.)  
 Vice-President.....H. E. Osmun  
 (Centralab)  
 Vice-President.....James P. Quam  
 (Quam-Nichols Co.)  
 Treasurer.....Leslie Muter  
 (The Muter Co.)  
 General Counsel.....John W. Van Allen  
 (Buffalo, N. Y.)

### DIRECTORS

Ben Abrams, Emerson Radio & Phonograph Corp.; Octave Blake, Cornell-Dubilier Electric Co.; James C. Daley, Jefferson Electric Co.; B. G. Erskine, Hygrade Sylvania Corp.; Jerome J. Kahn, Standard Transformer Corp.; Ernest Searing, International Resistance Co.; H. E. Osmun, Centralab; Ray H. Manson, Stromberg-Carlson Tel. Mfg. Co.; H. C. Bonfig, RCA Mfg. Co.; E. A. Nicholas, Farnsworth Television & Radio Corp.; G. W. Thompson, Noblitt-Sparks Industries, Inc.; P. S. Billings, Belmont Radio Corp.; P. V. Galvin, Galvin Manufacturing Corp.; David T. Schultz, Rayethon Production Corp.; James T. Buckley, Philadelphia Storage Battery Co.; Ernest Alschuler, Electric Research Laboratories, Inc.; W. R. G. Baker, General Electric Co.; Roy Burlew, Ken-Rad Tube & Lamp Corp.; A. H. Gardner, Colonial Radio Corp.; A. S. Wells, Wells-Gardner & Co.; R. C. Crosrove, The Crosley Corp.; E. F. McDonald, Jr., Zenith Radio Corp.; James P. Quam, Quam-Nichols Co.; Ray F. Sparrow, P. R. Mallory & Co.

Honorary Directors: Hebert H. Frost, A. Atwater Kent, Paul B. Klugh.

## Radio Manufacturers Association of Canada

159 Bay St., Toronto, Ont., Canada  
 Adelaide 1531

### OFFICERS

President.....E. C. Grimley  
 Vice-President.....L. A. Young

# ORGANIZATIONS

Executive Secretary.....W. W. Richardson  
 Chairman of Engineering Committee.....C. J. Irwin

### FUNCTIONS

This association is a non-profit and cooperative organization founded in 1926 to promote all interests of radio industry.

## Radio Producers Club of Hollywood

404 Guaranty Bldg., Los Angeles, Calif.  
 Hollywood 7337

### OFFICERS

President.....Z. Wayne Griffin  
 Vice-President-Secretary.....Carroll O'Meara  
 Vice-President-Treasurer.....Murray Bolen  
 Sergeants-At-Arms.....Tom McKnight, Charles Vanda

### FUNCTIONS

This club is purely a social and fraternal organization of members all of whom are active producers of TC shows. Membership includes 48 free lance and agency producers in Hollywood who meet every three weeks.

## Radio Script & Transcription Exchange, Federal Radio Education Committee

U. S. Office of Education, Washington, D. C.  
 Republic 1820, Extension 2225

### OFFICERS

Director.....John Gordon Studebaker

### FUNCTIONS

The exchange is designed to promote more effective local broadcasting by educational and civic organizations and radio stations by serving as a clearing house for selected educational radio scripts, transcriptions and production aids, and as a source of all kinds of information pertaining to the field of educational radio.

## The Radio Writers' Guild of the Authors' League of America, Inc.

6 E. 39th Street, New York, N. Y.  
 Murray Hill 5-6930

### OFFICERS

National President.....Henry Fisk Carlton  
 Vice-President, Eastern Region.....Katharine Seymour  
 Vice-President, Middle Western Region

Courtney Savage

Vice-President, Western Region.....John Boylan  
 Executive Secretary, Eastern Region.....Luise Silcox  
 Assistant Secretary, Eastern Region

Margaret Scheurman

Assistant Secretary, Western Region.....Pauline Lauber

### BRANCH OFFICES

Hollywood: 1655 N. Cherokee Ave.  
 Chicago: 1255 North State Parkway.

### EASTERN REGIONAL COUNCIL

Stuart Ayers, Ann Barley, Erik Barnouw, Elaine Sterne Carrington, George Corey, Norman Corwin, Merrill Denison, Knowles Entrikin, Laurence Hammond, James Hart, Stuart Hawkins, Harry R. Herrmann, Philo Higley, Welbourn Kelley, Ruth Adams Knight, J. T. W. Martin, Richard McDonagh, Vera Oldham, Addy Richton, Kenneth Webb, Francis Wilson.

### FUNCTIONS

The Guild is one of the Guilds of The Authors' League of America, Inc. The Guild is primarily a protective organization for writers in the radio field.

## Rocky Mountain Radio Council, Inc.

21 East 18th Ave., Denver, Colo.  
 KEystone 5306

### OFFICERS

President.....C. B. Hershey  
 Secretary.....Mrs. M. E. Richards

Treasurer.....E. A. Conway, S. J.  
 Director.....Robert B. Hudson

### EXECUTIVE COMMITTEE

John W. Amesse, A. Helen Anderson, Dorothy Dee Hamilton, H. M. Crain, Thurston J. Davies, James D. Finn, uigg Newton, Jr., Robert L. Stearns.

### FUNCTIONS

The Rocky Mountain Radio Council is a non-profit corporation of 28 organizations formed to give professional aid to educational organizations in planning, preparing and producing their radio broadcasts. In 1941 it produced 367 programs for 31 organizations, which were re-broadcast 1542 times from 19 commercial radio stations in the Rocky Mountain region. Recording studio facilities available for commercial work.

## SESAC, Inc.

113 W. 42nd St., New York, N. Y.  
 BRyant 9-3223

### OFFICERS

President.....Paul Heinecke

### FUNCTIONS

Licensing use of copyrighted music.

## Society of Jewish Composers, Publishers and Song Writers

152 W. 42nd St., New York, N. Y.  
 LONGacre 5-9124

### OFFICERS

President.....Sholom Secunda  
 Vice-President.....Rev. Pinchus Jassinowsky  
 Treasurer.....Alexander Olshanetsky  
 Secretary.....Henry Lefkowitz  
 General Manager.....Salom J. Perlmutter  
 Counsel.....A. Edward Masters

### FUNCTIONS

This association licenses public performance rights of music copyrighted by its members and on which they collect royalties. Association owns approximately 95 percent of the Jewish compositions.

## Society of Motion Picture Engineers

Hotel Pennsylvania, New York, N. Y.  
 PENnsylvania 6-0620

### OFFICERS

President.....Emery Huse  
 Past President.....E. A. Williford  
 Executive Vice-President.....H. Griffin  
 Engineering Vice-President.....D. E. Hyndman  
 Editorial Vice-President.....A. C. Downes  
 Financial Vice-President.....A. S. Dickinson  
 Convention Vice-President.....W. C. Kunzmann  
 Secretary.....P. J. Larsen  
 Treasurer.....G. Friedl, Jr.

### GOVERNORS

M. C. Batsel, F. E. Carlson, J. G. Frayne, A. N. Goldsmith, E. M. Honan, J. A. Maurer, L. L. Ryder.

### FUNCTIONS

In addition to its motion picture activities, this association is actively interested in television. It publishes a monthly organ in which various subjects are discussed by men in the industry.

## Song Writers' Protective Association (SPA)

1250 Sixth Ave., New York, N. Y.  
 COlumbus 5-3758

### OFFICERS

President.....Irving Caesar  
 Vice-President.....L. Wolfe Gilbert

Second Vice-President.....Otto Harbach  
 Secretary.....Fred E. Ahlert  
 Treasurer.....Charles Tobias  
 Chairman of Council.....Oscar Hammerstein, 2nd  
 Executive Secretary.....Lillian Lange

**BRANCH OFFICE**

6912 Hollywood, Calif.  
 West Coast Representative.....L. Wolfe Gilbert

**FUNCTIONS**

Song Writers' Protective Association aims to foster the interests of all persons engaged in writing musical compositions. By cooperative effort it seeks to eliminate inequitable conditions and harmful practices and to assist members when disputes arise over enforcement of contracts or the collection of royalties.

**Southern California Broadcasters' Association, Inc.**

6121 Sunset Blvd., Los Angeles, Calif.  
 Hollywood 1212

**OFFICERS**

President.....Harry W. Witt  
 (KNX, Los Angeles)  
 Vice-President.....Ben McGlashen  
 (KGFJ, Los Angeles)  
 Secretary-Treasurer.....Lawrence McDowell  
 (KFOX, Long Beach)

**FUNCTIONS**

Membership of the Southern California Broadcasters' Association is composed of 19 southern California stations, represented in each case by its manager or senior executive. Monthly meetings are devoted to discussion of industry problems, such as ASCAP, BMI, labor, engineering, code of ethics, agency recognition, coordination with governmental agencies, civic activities, etc.

**Sports Broadcasters Association (New York Chapter)**

c/o Dave Driscoll, 1440 Broadway, New York, N. Y.  
 Pennsylvania 6-8600

**OFFICERS**

President.....Ted Husing  
 Vice-President.....Paul Douglas  
 Treasurer.....Bert Lee  
 Secretary.....Dave Driscoll

**FUNCTIONS**

It is the object of the Sports Broadcasters Association to promote the standard of the profession of sports broadcasting among its members and to disseminate sports information to its members through a regular weekly luncheon. Membership is restricted to any male person who is actively engaged in the profession of sports broadcasting whether as an announcer, commentator or writer.

**United States Department of Interior—Radio Section**

Interior Department Radio Studios, Washington, D. C.  
 Republic 1820

**PERSONNEL**

Director.....Shannon Allen  
 Chief Script Writer.....Louis J. Hazam  
 Program Director.....Paul Woodbridge  
 Chief Engineer.....Walter Pauly

**FUNCTIONS**

The functions of the Radio Section of the Interior Department is to report the functions and services of the offices and bureaus of the Department using all forms of radio and transcription production; to serve all agencies of the Federal government through its studios and transcription production facilities.

**Washington State Association of Broadcasters**

207 East Market St., Aberdeen, Wash.  
 Aberdeen 4098

**OFFICERS**

President.....Harry R. Spence  
 (KXRO, Aberdeen)  
 Vice-President.....Rogan Jones  
 (KVOS, Bellingham)  
 Secretary-Treasurer.....Robert Priebe  
 (KRSC, Seattle)

**FUNCTIONS**

The Washington State Association of Broadcasters is an organization formed for the mutual protection, the exchange of commercial ideas and the education of its members in matters pertaining to radio.

**Western Association of Broadcasters**

c/o Radio Station CJOR, 846 Howe St., Vancouver, B. C., Canada  
 MArine 6464

**OFFICERS**

President.....G. C. Chandler  
 (CJOR, Vancouver, B. C.)

**DIRECTORS**

Alberta: G. R. A. Rice, CFRN, Edmonton; British Columbia: J. W. B. Browne, CKOV, Kelowna; Manitoba: F. H. Elphicke, CJRC, Winnipeg; Saskatchewan: Lloyd Moffat, CKBI, Prince Albert.

**CANADIAN ASSOCIATION OF BROADCASTERS DELEGATES**

G. C. Chandler, CJOR, Vancouver, B. C.; H. R. Carson, CFAC, Calgary, Alberta; G. C. Chandler, CJOR, Vancouver, B. C.

**FUNCTIONS**

Western Association of Broadcasters is a regional trade association of broadcasting stations in Manitoba, Saskatchewan, Alberta and British Columbia, closely affiliated with the Canadian Association of Broadcasters. It is virtually a western division of the latter organization, as all members are in both associations.

**Wisconsin League of Radio Stations**

c/o WNBH, La Crosse, Wisc.  
 La Crosse 450

**OFFICERS**

President.....James F. Kyler  
 Treasurer.....Hiram Born  
 Secretary.....Ed Cunniff

**Woman's National Radio Committee**

113 West 57th St., New York, N. Y.  
 Circle 7-4110

**OFFICERS**

Chairman.....Mme. Yolanda Mero-Irion  
 Vice-Chairman.....Mrs. D. Leigh Colvin  
 Second Vice-Chairman.....Mrs. Marion M. Miller  
 Secretary.....Miss Helen Havener  
 Treasurer.....Mrs. M. D. Jackson  
 Executive Secretary.....Mrs. Rosalie Wolf  
 Chairman, Publication Committee.....Mrs. Charles Little  
 Committee Chairman.....Mrs. Jesse M. Bader  
 Members-At-Large.....Mrs. Sidonie M. Gruenberg,  
 Mrs. Samuel Kubie, Mrs. Edwin C. Lewis, Mrs. Mary F. Larkin, Mrs. Marion M. Miller, Mrs. Stanley Woodard.

**FUNCTIONS**

This committee has for its purpose to raise the standard of radio programs for adults, young people and children by: (1) retaining on the air the finer type of program; (2) removing objectionable features; (3) improving advertising content of broadcasts; (4) encouraging the production and presentation of more fine programs, worthwhile from the educational, cultural and entertainment viewpoint.

# COMMITTEES OF THE DEFENSE COMMUNICATIONS BOARD

CONTINUED FROM PAGE 45

## LAW COMMITTEE

The duties of the Law Committee include the furnishing of legal opinions and advice, and the drafting of final reports and recommendations, proposed Executive Orders, proclamations, and legislation. The Law Committee will report directly to the Board but will have liaison, for purposes of advice and consultation, with the Coordinating Committee, and, as may be necessary, with other committees.

Chairman  
**TELFORD TAYLOR**  
 General Counsel, Federal  
 Communications Commission  
**MAJOR J. W. HUYSSOON**  
 Office of the Judge Advocate General,  
 War Department

**STEVEN SPINGARN**  
 Treasury Department  
**LT. COM. FRANZ O. WILLENBUCHER**  
 Navy Department  
**RAYMOND T. YINGLING**  
 State Department

## LABOR ADVISORY COMMITTEE

The duties of the Labor Advisory Committee include the submission of expert advice to the Board on all labor problems incident to the proper carrying out of its national defense mission. With the requirements of national defense as a primary consideration, the Labor Advisory Committee will submit recommendations to the Board on such problems as are referred to it by the Board. The Labor Committee will report directly to the Board but will have liaison for the purpose of advice and consultation with the Coordinating Committee and the Industry Advisory Committee.

Chairman: Robert J. Watt      Secretary: Paul E. Griffith

Organization	Representative	Alternate
American Federation of Labor Congress of Industrial Organizations	Robert J. Watt Joseph P. Selly	
National Federation of Telephone Workers	Paul E. Griffith	Leo George

## INDUSTRY ADVISORY COMMITTEE

The duties of the Industry Advisory Committee include the submission of expert advice to the Board on all problems of general concern to the communications companies incident to the proper carrying out of the Board's national defense mission. With the requirements of national defense as a primary consideration, the Industry Advisory Committee will submit recommendations to the Board on such problems as are referred to it by the Board. The Industry Advisory Committee will report directly to the Board but will have liaison for the purpose of advice and consultation with the Coordinating Committee and the Labor Advisory Committee.

Whenever a problem involving domestic or international broadcasting shall arise, the Chairman of the Industry Advisory Committee shall notify the Chairman of the Domestic Broadcasting Committee or International Broadcasting Committee, as the case may be, and such Domestic or International Broadcasting Committee shall designate a Delegate to act as a member of the Industry Advisory Committee on that problem.

Chairman: Walter S. Gifford      Secretary: Dr. C. B. Jolliffe

Organization	Representative	Alternate
American Telephone and Telegraph Company .....	Walter S. Gifford	Keith S. McHugh F. C. Alexander
Globe Wireless, Ltd. ....	Jack Kaufman	
International Telephone and Telegraph Corp. ....	Col. Sosthenes Behn	Frank W. Phelan (All America Cables and Radio, Inc.)
Postal Telegraph, Inc. ....	E. F. Chinlund	Ellery W. Stone
Press Wireless, Inc. ....	Joseph Pierson	Donald K. deNeuf
Radio Corporation of America....	David Sarnoff	Dr. C. B. Jolliffe
Tropical Radio Telegraph Co. ....	Wm. E. Beakes R. A. Phillips	R. V. Howley
U. S. Independent Telephone Assn. ....	(Central Electric & Telephone Co.)	Louis Pitcher
Western Union Telegraph Co. ....	A. N. Williams	F. E. d'Humy

### AVIATION COMMUNICATIONS COMMITTEE

The duties of this Committee include the study of all phases of domestic and international civil aviation radio facilities and communications services associated therewith. It will have liaison with the U. S. Government Facilities Committee and the State and Municipal Facilities Committee. With the requirements of national defense as a primary consideration, the Committee shall recommend plans for the most efficacious use of all of these facilities in time of military emergency, giving due consideration to the needs of other governmental agencies, of industry, and of other civilian activities.

Chairman: Paul Goldsborough      Secretary: Ford Studebaker

Organization	Representative	Alternate
Aeronautical Radio, Inc. ....	Paul Goldsborough	A. E. Harrison
American Association of Airport Executives .....	L. M. Rawlins, Jr., Manager-Engineer	
American Export Airlines, Inc. ....	Ford Studebaker	E. L. Stuhrman
American Telephone and Telegraph Company .....	R. L. Jones	F. A. Cowan
Department of Commerce (Civil Aeronautics Administration) ...	R. G. Nichols	Eugene Sibley
Federal Communications Commission .....	E. M. Webster	Marshall S. Orr
National Advisory Committee for Aeronautics .....	Charles H. Helms	
Navy Department .....	Comdr. A. I. Price	
Pan American Airways System ...	H. C. Leuteritz	
Postal Telegraph, Inc. ....	A. F. Connery	John M. Wells, Southbridge, Mass.
Private Fliers Association, Inc. ....	Roger Wolfe Kahn	
State Department .....	Arthur Lebel	
U. S. Coast Guard .....	Lt. Comdr. F. A. Leamy	Lt. Chester L. Harding Lt. Col. A. W. Marriner, Air Corps
War Department .....	Lt. Col. Wallace G. Smith	
Department of Commerce (Weather Bureau) .....	Delbert M. Little	Ivan R. Tannehill
Western Union Telegraph Co. ....	P. J. Howe	H. M. Saunders

### DOMESTIC BROADCASTING COMMITTEE

The duties of this Committee include the study of the physical aspects of domestic standard broadcasting and formulation of recommendations of such precautions, supplementary facilities and reallocations as it shall deem desirable under foreseeable military conditions. It shall also consider other domestic broadcasting systems including relay broadcasting, high fre-

• • • **DEFENSE COMMUNICATIONS COMMITTEES** • • •

quency (FM) broadcasting, television, facsimile broadcasting and experimental broadcasting. The Committee's work in all of these fields will include recommendations for the speedy and efficacious use in time of military emergency of all necessary domestic broadcasting facilities and communications services associated therewith, with the requirements of the national defense as a primary consideration.

Chairman: Neville Miller

Secretary: A. D. Ring

Organization	Representative	Alternate
American Telephone and Telegraph Company	G. L. Best	H. H. Carter
Columbia Broadcasting System, Inc.	Harry Butcher	Paul Porter
Federal Communications Commission	George P. Adair	Lucien Hilmer
Federal Radio Education Committee	Wm. D. Boutwell	
FM Broadcasters, Inc.	John Shepard, 3rd.	Philip G. Loucks
Finch Telecommunications, Inc.	W. G. H. Finch	James Baldwin
Mutual Broadcasting System, Inc.	W. E. MacFarlane	Fred Weber
National Association of Broadcasters	Neville Miller	Lynne C. Smeby
National Broadcasting Company	Frank M. Russell	Dr. Charles B. Jolliffe
National Independent Broadcasters	Harold A. Lafount	Andrew W. Bennett
National Television System Committee of the RMA Engineering Department	W. R. G. Baker	V. M. Graham
Office of Government Reports	Lowell Mellett	Robert I. Berger
Postal Telegraph-Cable Company	Ellery W. Stone	A. F. Connery
State Department	Harvey Otterman	
U. S. Independent Telephone Association	Louis Pitcher	Clyde S. Bailey
War Department	Lt. Col. Frank C. Meade, Signal Corps	Major Raymond C. Maude, Signal Corps
Western Union Telegraph Company	H. P. Corwith	A. W. Donaldson

**INTERDEPARTMENT RADIO ADVISORY COMMITTEE**

This Committee is designated under the provisions of Paragraphs 5 and 7, but without reference to Paragraph 8, of the President's Executive Order of September 24, 1940. The duties of this Committee will include making special studies and recommendations regarding frequency allocations, with the requirements of national defense as a primary consideration but giving due consideration to the needs of governmental agencies, of industry, and of other civilian activities.

Chairman: Dr. J. H. Dellinger

Vice-Chairman: E. K. Jett

Secretary: Gerald C. Gross

Assistant Secretary: P. F. Siling

Organization	Representative	Alternate
Department of Agriculture	E. W. Loveridge	Wallace L. Kadderly
Department of Commerce	Dr. J. H. Dellinger	L. H. Simson
Federal Communications Commission	E. K. Jett	Gerald C. Gross
Department of Interior	C. D. Monteith	John S. Cross
Department of Justice	T. D. Quinn	H. J. Walls
Department of Labor		
U. S. Maritime Commission	D. S. Brierley	J. T. Welsh
Navy Department	Admiral S. C. Hooper	Comdr. John R. Redman
Post Office Department	Roy M. Martin	Charles M. Knoble

<b>Organization</b>	<b>Representative</b>	<b>Alternate</b>
State Department .....	Thomas Burke	F. C. deWolf
U. S. Coast Guard .....	Comdr. J. F. Farley	Lt. Comdr. C. H. Peterson
War Department .....	Major Wesley T. Guest	Capt. Wm. E. Plummer

### **INTERNATIONAL BROADCASTING COMMITTEE**

The duties of this Committee include the study of all phases of international broadcasting and the formulation of recommendations concerning such precautions, supplementary facilities and reallocations as it shall deem desirable under foreseeable military conditions. With the requirements of national defense as a primary consideration, it shall also recommend plans for the speedy and efficacious use of all necessary international broadcasting facilities in time of military emergency giving due consideration to the needs of other governmental agencies, of industry, and of other civilian activities.

Chairman: Walter C. Evans                      Secretary: P. F. Siling

<b>Organization</b>	<b>Representative</b>	<b>Alternate</b>
Columbia Broadcasting System, Inc. ....	Harry Butcher	Edmund Chester
Department of Commerce (Bureau of Foreign and Domestic Commerce) .....	Thomas E. Lyons	
Crosley Corporation (The) .....	James D. Shouse	R. J. Rockwell
Federal Communications Commission .....	Gerald C. Gross	P. F. Siling
General Electric Company .....	Robert S. Peare	
International Broadcasting Coordinator .....	Stanley P. Richardson	
Mutual Broadcasting System, Inc. ....	Alfred J. McCosker	Fred Weber
National Association of Broadcasters .....	Neville Miller	Russell P. Place
National Broadcasting Company, Inc. ....	John F. Royal	Dr. Charles B. Jolliffe
Navy Department .....	Read Adm. S. C. Hooper	Paul D. Miles
Office of Coordinator of Information .....	Nathan David	Murry Brophy
Office of Coordinator of Inter-American Affairs .....	Don Francisco	John H. Payne
Office of Government Reports .....	Lowell Mellett	Robert I. Berger
State Department .....	Thomas Burke	
Westinghouse Electric and Manufacturing Co. ....	Walter C. Evans	F. P. Nelson
World Wide Broadcasting Corporation .....	Walter S. Lemmon	Prof. Wm. Y. Elliott

### **RADIO COMMUNICATIONS COMMITTEE**

The duties of this Committee include the study of all phases of domestic and international radiotelegraph and radiotelephone communications facilities (including mobile and fixed services) except aviation, amateur, Federal, State, and Municipal communications facilities. With the requirements of national defense as a primary consideration, the Committee shall recommend plans for the most efficacious use of all of these facilities in time of military emergency, giving due consideration to the needs of other governmental agencies, of industry, and of other civilian activities.

Chairman: E. M. Webster                      Secretary: F. M. Ryan

<b>Organization</b>	<b>Representative</b>	<b>Alternate</b>
American Merchant Marine Institute, Inc. ....	R. J. Baker	
American Telephone and Telegraph Company .....	W. G. Thompson	F. M. Ryan
Association of Edison Illuminating Companies .....	G. G. Langdon	



• • • **DEFENSE COMMUNICATIONS COMMITTEES** • • •

Organization	Representative	Alternate
Department of Commerce	Dr. J. H. Dellinger	L. H. Simson
Donnelly Radio Telephone Company	Louis B. Gilmer	
Edison Electric Institute	H. E. Kent	
Federal Communications Commission	E. M. Webster	Paul M. Lion
Globe Wireless, Ltd.	Jack Kaufman	F. C. Alexander
Lake Carriers' Association	Gilbert R. Johnson	C. M. Jansky, Jr.
Lorain County Radio Corporation	Herman E. Hageman	Frank C. Dunbar
Mackay Radio and Telegraph Company	Haraden Pratt	L. Spangenberg
Maritime Commission	D. S. Brierley	J. T. Welsh
Mutual Telephone Company	W. I. Harrington	Alvah A. Scott
Navy Department	Comdr. R. E. Melling	Comdr. John R. Redman
Press Wireless, Inc.	Joseph Pierson	Donald K. deNeuf
Radiomarine Corporation of America	Chas. J. Pannill	Arthur J. Costigan, Traffic Manager
R.C.A. Communications, Inc.	Wm. A. Winterbottom	Frank W. Wozencraft
South Porto Rico Sugar Company	T. J. Phillips	
Tropical Radio Telegraph Company	R. V. Howley	C. C. Harris
U. S. Coast Guard	Lt. Comdr. C. H. Peterson	Comdr. J. F. Farley
U. S.-Liberia Radio Corporation	Byron H. Larabee	
War Department	Major Wesley T. Guest	Capt. Wm. E. Plummer, Signal Corps

**COMMUNICATIONS LIAISON COMMITTEE FOR CIVILIAN DEFENSE**

The duties of this Committee include the submission of expert advice on all communications problems in which the Defense Communications Board and the Office of Civilian Defense are mutually interested. With the requirements of national defense as a primary consideration, the Committee will submit recommendations to the Board on such problems as are referred to it by the Board. In addition, the Committee shall have liaison with a similar committee of the Office of Civilian Defense and shall work with that committee in planning for the most efficacious use of communications facilities for civilian defense.

Chairman: E. M. Webster

Secretary: Herbert A. Friede

Organization	Representative	Alternate
American Radio Relay League	George W. Bailey	
Federal Communications Commission	E. M. Webster	
International Association of Chiefs of Police	Capt. Donald S. Leonard	
International Association of Fire Chiefs and International Association of Fire Fighters	Herbert A. Friede	
Office of Government Reports	Robert I. Berger	
War Department	Lt. Col. Frank C. Meade, Signal Corps	Major Raymond C. Maude, Signal Corps
Domestic Broadcasting Committee, Defense Communications Board	Neville Miller	Lynne C. Smeby
Telegraph Committee, Defense Communications Board	R. H. Vehling	
Telephone Committee, Defense Communications Board	Ralph I. Mabbs	Clyde S. Bailey

## PRIORITIES LIAISON COMMITTEE

The duties of this Committee include the study of non-military priorities problems confronting the various branches of the communications industry. With the requirements of national defense as a primary consideration the Committee will determine the over-all needs of the communications industry for materials and equipment, and make recommendations to the Board for transmittal to the Office of Production Management or the Supply Priorities and Allocations Board. In addition the Committee will have liaison with representatives of the Office of Production Management and may call upon the priorities communications consultants and representatives of the numbered committees of the Board as well as other government and industry experts for advice and assistance in planning proposed programs and policies.

Chairman: Lt. Comdr. R. H. Griffin

Organization	Representative	Alternate
Federal Communications Commission	E. K. Jett	Gerald C. Gross
Navy Department	Lt. Comdr. R. H. Griffin, U.S.N.	
State Department	J. T. Keating	Harvey Otterman
U. S. Coast Guard	Comdr. R. J. Mauerman	
War Department	Lt. Col. F. L. Stanley, Signal Corps	Major J. A. Holman, Signal Corps

### PRIORITIES REPRESENTATIVES

#### Amateur Radio Committee

George W. Bailey,  
The American Radio League

#### Aviation Communications Committee

Paul Goldsborough,  
Aeronautical Radio, Inc

A. E. Harrison,  
Aeronautical Radio, Inc.

#### Cable Committee

Forest L. Henderson,  
All America Cables and Radio, Inc.

I. S. Coggeshall,  
The Western Union Telegraph Co.

#### Domestic Broadcasting Committee

Dr. W. R. G. Baker,  
National Television System Committee  
of the RMA Engineering Department

Lynne C. Smeby,  
National Association of Broadcasters

#### International Broadcasting Committee

R. J. Rockwell,  
The Crosley Corporation

M. L. Prescott,  
General Electric Company

#### Radiocommunications Committee

Donald K. deNeuf,  
Press Wireless, Inc.

Haraden Pratt,  
Mackay Radio and Telegraph Co.

#### State and Municipal Facilities Committee

Captain Donald S. Leonard,  
International Assn. of Chiefs of Police

Lloyd N. Chatterton,  
International Municipal Signal Assn.

#### Telegraph Committee

Ellery W. Stone,  
Postal Telegraph-Cable Company

E. R. Shute,  
The Western Union Telegraph Co.

#### Telephone Committee

L. G. Woodford,  
Americal Telephone and Telegraph Co.

E. C. Blomeyer,  
U. S. Independent Telephone Assn.

#### Communications Liaison Committee for Civilian Defense

Herbert A. Friede,  
International Assn. of Fire Chiefs

George W. Bailey,  
The American Radio Relay League

# NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS

*As of January 1, 1942*

<i>Call Letters</i>	<i>Institutions</i>	<i>Address</i>	<i>Director</i>
KFJM	Univ. of N. Dakota	Grand Forks, N. D.	D. R. Jenkins
KFKU	Univ. of Kansas	Lawrence, Kansas	Harold G. Ingham
KOAC	Oregon State College	Corvallis, Oregon	
KUSD	Univ. of S. Dakota	Vermillion, S. D.	G. R. Bauer
KWLC	Luther College	Decorah, Ia.	Karl Hanson
KWSC	State College of Wash.	Pullman, Wash.	Kenneth E. Yeend
WBAA	Purdue University	Lafayette, Ind.	Gilbert D. Williams
WBEZ	Chicago Radio Council	Chicago, Ill.	Harold W. Kent
WCAL	St. Olaf College	Northfield, Minn.	M. C. Jensen
WCAT	S. Dakota School of Mines	Rapid City, S. D.	C. M. Rowe
WESG	Cornell University	Ithaca, N. Y.	Michael R. Hanna
WHA	Univ. of Wisconsin	Madison, Wis.	H. B. McCarty
WHAZ	Rensselaer Poly.	Troy, New York	W. J. Williams
WILL	Univ. of Illinois	Urbana, Ill.	Jos. F. Wright
WNAD	Oklahoma University	Norman, Okla.	Homer Heck
WNYC	City of New York, Municipal Broadcasting System	New York, N. Y.	M. S. Novik
WOI	Iowa State College	Ames, Iowa	W. I. Griffith
WOSU	Ohio State University	Columbus, Ohio	R. C. Higgy
WRUF	Univ. of Florida	Gainesville, Fla.	Garland Powell
WSAJ	Grove City College	Grove City, Pa.	H. W. Harmon
WSUI	State Univ. of Iowa	Iowa City, Iowa	Carl Menzer
WRUL & WRUW	World Wide Broadcasting Foundation	Boston, Mass.	Walter S. Lemmon
	Cleveland College	Cleveland, Ohio	Gazella P. Shepherd (Mrs.)
	University of Kentucky	Lexington, Ky.	Elmer G. Sulzer
	University of Michigan	Ann Arbor, Mich.	Waldo Abbot
	Western State Teachers College	Kalamazoo, Mich.	W. G. Marburger
	Indiana University	Bloomington, Ind.	Robert Allen
	Oklahoma Baptist University	Shawnee, Okla.	Ralph E. Matthews



# EDUCATIONAL RADIO PLAYS ITS PART IN NATIONAL DEFENSE

*By Wm. D. Boutwell, Chief, Division of Radio, Publications and Exhibits  
U. S. Office of Education*

**T**HE official recognition and support of Congress was awarded educational radio in 1941 with the establishment of a permanent radio division in the U. S. Office of Education. This significant step has culminated six years of effort in this direction, and insures important plans for the future. Most of these plans center in the Educational Radio Script and Transcription Exchange. In its report, the House Appropriations Committee stated: "The increase in salary appropriations this year for the Office of Education is largely for the expansion of activities of the radio service that is engaged in compiling, indexing, and disseminating radio scripts for distribution in educational channels throughout the country. There is a very large interest in these educational scripts in high schools and colleges through the country, and it is essential that there be one clearing-house to which interested parties may apply in order to obtain the loan of the scripts for educational broadcasting. The radio unit is, in effect, a library service."

## **Script Exchange**

The Exchange was established in 1936 under the auspices of the Federal Radio Education Committee—a committee composed of some 40 men and women representing education, religion, the radio industry, the press, labor, civic organizations, and other related groups. The FREC planned that the Exchange should be a direct answer to the many requests for service of all kinds which it had been receiving from educators, broadcasters, civic groups—in fact anyone who wished to use the radio for educational purposes. That the Exchange serviced 17,000 requests in the past year is evidence to the fact that the FREC did find the answer to an important radio need.

Six radio scripts were offered by the Exchange at the time of its organization. A new script catalog which will be issued in 1942 will probably list about 1,000 scripts on a wide variety of subjects, and many aids to the organization and production of educational programs.

## **Transcription Service**

An initial series of transcribed programs was made available through the Exchange in 1939. The programs, "Americans All—Immigrants All," had been produced by the WPA-financed Radio Project which was then a part of the Office of Education. The programs had been awarded two national honors as the outstanding educational series of the year. The transcriptions pointed the way to the development this past year of the Transcription Service for Schools. A catalog has just been issued listing 96 recorded programs available on a loan basis. Need for this transcription service and the possibilities it offers were proven by a survey conducted by the Office of Education in 1941. This survey indicates that more than 2,700 junior and senior high schools in the United States, Puerto Rico, Hawaii, and the Philippine Islands are equipped to play radio transcriptions at 33 1/3 RPM. These schools represent a potential listening audience of over 2,000,000 students.

The Transcription Service for Schools does not represent an effort to compete with commercial producers. It has been established to provide a source of educational recordings with which schools can experiment. It is another instance where the Exchange can assist in stimulating interest in the tools of education by radio.

## **Radio and Defense**

The national defense effort has placed an added responsibility on educators in the last year. It would be mere wishful thinking to expect this responsibility to lessen in 1942. Radio services in the Office of Education have been geared to this emergency. Scripts and transcriptions are available which can help schools and other groups develop national defense and morale programs. Such Government agencies as the Office for Emergency Management, the Treasury Department, the Department of Justice, and the Public Health Service have placed in the Exchange transcriptions which have timely significance and value.

## FM For Education

Encouraging the use by schools of the ultra-high frequency bands reserved exclusively a few years ago for education has been of vital concern to the Radio Division of the Office of Education. The Commissioner of Education, John W. Studebaker, particularly during the past year has insistently called upon city superintendents and state school officers to consider seriously and make definite plans for the establishment of educational FM stations in the bands allocated by the FCC. The Commissioner has carried on his campaign for FM educational stations both by direct appeal to educators and by sponsorship of section meetings devoted to school-owned stations in such national radio conferences as the Institute for Education by Radio at Ohio State University and the Annual School Broadcast Conference in Chicago.

## FREC

The Federal Radio Education Committee has continued to work toward the goals stated in its original charter, namely, to eliminate controversy and misunderstanding between groups of educators and between the industry and educators; and to promote actual cooperative arrangements between educators and broadcasters on national, regional, and local bases. The Committee has carried on research studies which may be grouped into three classifications: those under the direction of Dr. Paul F. Lazarsfeld at the Office of Radio Research, Columbia University; those under Dr. I. Keith Tyler, Evaluation of School Broadcasts, Ohio State University; and the studies centered in the Office of Education. The FREC research activities in the Office of Education have been completed. The studies by the Office of Radio Research this year have resulted in two publications, "Radio Listener Panels" and "Audience Building in Educational Broadcasting." This project will continue up to 1944. The Evaluation of School Broadcasts terminates as of June 30, 1942. A total of 60 publications is expected to emerge from the findings of the Ohio group.

The "Service Bulletin" of the Federal Radio Education Committee has been, and will continue to be published monthly. The Bulletin has shown considerable evidence of serving as a helpful medium for the dissemination of in-

formation and the exchange of ideas and experiences of other groups.

## New Association

While not a part of the radio work of the Office of Education, the new Association for Education by Radio is worthy of mention as an important recent development in the field. This organization was formed to provide "an instrumentality through which persons interested in education by radio may have adequate communication." Some of its other purposes are to represent the interests of education by radio wherever necessary, to encourage research and experimentation, to advance radio training, and to publish pertinent news and information. It is hoped that the Association for Education by Radio will become the voice of the ever-increasing group of those interested in education by radio.

## Future Plans

To look to the future—the Congressional appropriation for radio has made it possible to inaugurate two new services in the Educational Radio Script and Transcription Exchange, a technical advisory service and an information service. The technical advisory service will employ an expert who can give concrete advice to schools about play-back equipment, central sound systems, recording machines, acoustics, building transmitters and receivers, FM broadcasting, and other allied subjects. Judging from the letters which now come to the Exchange, this type of expert advice is greatly needed by educational groups all over the country. Research activities in this field will also be carried on by the technical advisory service.

An attempt has been made to conduct an information service in the Exchange in past years, but because of insufficient facilities it has not been very effective. With the creation of the position of Radio Information Specialist, a better clearing-house and center for information on all aspects of education by radio will go into action. This service will collect and assemble data on such phases of educational radio as teacher training, workshops, conferences, programs, etc., and make it ready for distribution.

The year 1942 will undoubtedly offer us—and all those working in educational radio—greater opportunities for service and greater responsibilities for making that service coordinated and effective.

☆ ☆ ☆ *Radio In Defense* ☆ ☆ ☆

# F. C. C. LIST OF NON-COMMERCIAL EDUCATIONAL BROADCAST STATIONS

<i>Licensee and Location</i>	<i>Call Letters</i>	<i>Frequency (Kc)</i>	<i>Power</i>
San Diego Unified School District, San Diego, Calif. ....	KSDS	42300	1000 w (CP only)
Board of Education of San Francisco, Unified School District, San Fran- cisco, Calif. ....	KALW	42100	1000 w
Board of Education, City of Chicago, Chicago, Ill. ....	WBEZ	42500	1000 w (CP only)
University of Illinois Urbana, Ill. ....	WIUC	42900	250 w (CP only)
University of Kentucky, Beattyville, Ky. ....	WBKY	42900	100 w
Board of Education, City of New York, Brooklyn, N. Y. ....	WNYE	42100	1000 w (CP only)
Cleveland City Board of Education, (Charles H. Lake, Superintendent) Cleveland, Ohio ....	WBOE	42500	1000 w
Board of Education of the Memphis City Schools— Memphis, Tenn. ....		42100	250 w (CP only)

## F. C. C. REGULATIONS

### Operation and Service

The operation of, and the service furnished by, non-commercial educational broadcast stations shall be governed by the following regulations:

(a) A non-commercial educational broadcast station will be licensed only to an organized non-profit educational agency and upon a showing that the station will be used for the advancement of the agency's educational program particularly with regard to use in an educational system consisting of several units.

(b) Each station may transmit programs directed to specific schools in the system for use in connection with the regular courses as well as routine and administrative material pertaining to the school system and may transmit educational and entertainment programs to the general public.

(c) Each station shall furnish a non-profit and non-commercial broadcast service. No sponsored or commercial program shall be transmitted nor shall commercial announcements of any character be made. A station shall not transmit the programs of other classes of broadcast stations unless all commercial announcements and commercial references in the continuity are eliminated.

### Power Requirements

The operating power of non-commercial education broadcast stations shall

be not less than 100 watts or greater than 1000 watts unless a definite need for greater power is shown.

The transmitter of each non-commercial educational broadcast station shall be equipped with automatic frequency control apparatus so designed and constructed that it is capable of maintaining the operating frequency within plus or minus 0.01 percent of the assigned frequency.

Non-commercial educational broadcast stations are not required to operate on any definite schedule or minimum hours.

The transmitting equipment, installation, and operation as well as the location of the transmitter shall be in conformity with the requirements of good engineering practice as released from time to time by the Commission.

### Frequencies Allotted

The following frequencies are allotted for assignment to non-commercial educational broadcast stations:

42,100 kc.	42,300 kc.
42,500	42,700
42,900	

Stations serving the same area will not be assigned adjacent frequencies.

Frequency modulation shall be employed exclusively unless it is shown that there is a special need for the use of amplitude modulation.

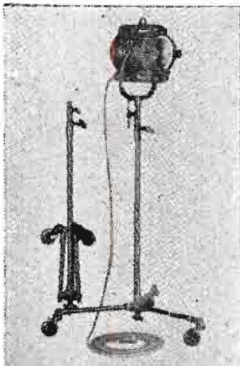
Only one frequency will be assigned to a station.



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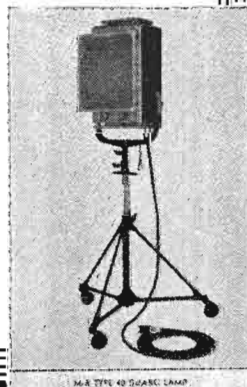
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# ENGINEERING DEVELOPMENTS

*By Lynne C. Smeby, NAB Director of Engineering*

**N**INETEEN HUNDRED FORTY-ONE brought engineering developments on many fronts. The outstanding developments were: the reallocation of March 29; numerous improvements in the broadcast system such as increases in power; new standard band stations; high frequency stations; television; and improvements in the international broadcasting facilities. Superimposed on the already burdened engineers was the new thing called "Priorities," a frankenstein which never seems to tire of finding new reasons why you can't have 2 cents worth of wire to keep your equipment in operating condition. Uncle Sam's need for unlimited numbers of radio technicians has seriously depleted the staff of most broadcast stations in the country. A chief engineer can no longer telephone the factory and have urgently needed replacement part delivered the next day, nor does he have in his file several score of applicants for jobs as operators from which to draw when a new technician is required.

## **Frequency Reallocation**

On December 13, 1937 the North American Regional Broadcast Agreement was consummated. The Agreement provided broadcast channels for all of the North American countries whereas in the past only Canada and the United States had an agreement and the rest of the countries were forced to spot their transmitters whenever they could receive the best coverage irrespective of the damage done to stations in Canada and the United States. There were many legal and technical difficulties to be ironed out before the agreement could become effective. As late as January 14, 1941 a meeting was held by the representative of the United States, Canada, Mexico, Cuba, Haiti, and the Dominican Republic in order to iron out remaining reallocation conflicts. The reallocation was not definitely ordered until January 31 leaving less than 60 days in which to shift the frequency of approximately 1,300 stations in North America of which approximately 800 were in the United States. Engineers had estimated that it would require a minimum of 3 months in which to properly make the change. Led by A. D. Ring, former Assistant

Chief Engineer of the FCC in charge of Broadcasting, the shifts were made smoothly with the wholehearted cooperation of the FCC, the manufacturers of equipment, and the broadcasters. The morning of March 29 found every station in the country at its new address. A minor number of operations in connection with the reallocation such as realigning some directional antennas upon the new frequencies were performed after March 29.

In the past a good share of our regional and clear channels have been subjected, at one time or another, to ruinous interference from stations particularly in Mexico and Cuba. On March 29 our good friends to the South began participating in the orderly division of channels available to domestic broadcasting. Under the agreement our stations suffer only the normal amount of interference that they would suffer from a station in the United States or Canada. All of the North American countries subscribed to the Standards of Good Engineering Practice of the FCC insofar as they pertain to allocation problems.

## **Power Increases**

The reallocation opened the way for increases in power for some stations. Also a great number of stations during 1941 took advantage of possibilities for power increases. By the end of 1941 a good percentage of the local stations were operating on 250 watts. A large number of regionals increased their night power to 5,000 watts. During the year approximately 80 stations increased power and there was a net increase of 56 operating stations. The breakdown of clear channels and the super-power controversy was revived by a number of applications for duplication on clear channels and by a number of applications for so-called "superpowers" of 500 to 750 kilowatts. The year also saw the start of an attempt to obtain a power of 10,000 watts day time for regionals.

## **Frequency Modulation**

High frequency broadcasting, or FM has undergone a steady development during 1941. One of the most significant rules

established for FM was the one providing for rating of coverage on the basis of square miles covered and not on the power of the transmitters. Also stations in the same locality were required to cover the same area. The first licensed commercial FM station W47NV owned by WSM in Nashville, Tennessee, started regular operation on March 1. The transmitter was designed and built under the direction of Jack DeWitt, Chief Engineer.

At the end of the year CPs for over 60 high frequency stations had been granted and application for over 50 more awaited action by the FCC. Approximately 24 stations were in operation at the end of the year. Early in the year all the channels set aside for FM were used up in New York City leaving a residue of applications which apparently cannot be granted. It was originally thought that FM stations could operate on adjacent channels in the same city. However it was found that a channel must be skipped.

Amateur reports of long distance reception on 5 meters and observations and measurements made by others indicate that FM signals at distances of several hundred miles reach rather high intensities for long enough periods so as to require that they may have to be considered in allocation problems.

Secrecy methods of transmitting by radio telephony have been used extensively on radio extensions to the telephone system. During the year Muzak Corp. of New York City was authorized by the FCC to conduct "scrambled" FM transmissions on 117 megacycles. Regular FM receivers tuned to this transmission will receive a disagreeable squeal along with the program. It is intended that the station will serve listeners who pay for the privilege by renting a special receiver which removes the "pig squeal."

### **Increase In Receivers**

Each year the number of receivers in the hands of the public has shown a steady increase and 1941 was no exception. An estimated 56,000,000 standard band receivers were in the hands of the public at the close of 1941 as against an estimated 50,100,000 at the beginning of 1941. At the close of the year there were an estimated 200,000 FM receivers in the country and an estimated 5,000 television receivers in the New York City area.

### **Defense Communications Board**

Organization of the Defense Communications Board was perfected on January 6. It was charged with the duties of

dealing with the physical aspects of all communications as they pertain to the national defense. Headed by James Lawrence Fly, the Board membership is made up of members from the FCC, the Army, the Navy, the State Department, the Treasury Department and the Coast Guard. Functioning directly under the Board are the law, coordinating, labor advisory and industry advisor committees. Functioning through the coordinating committee are 13 committees as follows:

Amateur Radio, Aviation, Communication, Cable, Domestic Broadcasting, Interdepartment Radio Advisory, International Broadcasting, Radio Communication, State and Municipal Facilities, Telegraph, Telephone, United States Government Facilities, Communication Liaison for Civilian Defense, and Priorities Liaison.

Many engineers of the broadcasting industry have devoted a considerable amount of time to work of the DCB Committees. The DCB work is of course confidential and therefore the work accomplished cannot be given publicity. Suffice to say that the industry in general and many of the industry engineers in particular deserve a great deal of credit for the way in which they have wholeheartedly given of their time and effort in carrying on the work of the DCB.

### **Television**

Although National Defense requirements have seriously interfered with television nevertheless several important and interesting developments occurred during the year. The first public showing of direct color television pickup occurred on January 9 when the CBS demonstrated its system to the Institute of Radio Engineers and the press. During the IRE Convention in January the Bell Telephone Laboratories demonstrated coaxial transmission of television from New York to Philadelphia and back to New York. The demonstration showed the possibility of long distance transmission of television signals over land cables. The pictures showed very little degradation of quality.

The RCA came forward with major contributions during the year. A projection system of television was demonstrated in the New York Theater on a screen 15 by 20 feet. Also during this demonstration part of the program a telecast was picked up at Camp Upton on Long Island and relayed 68 miles to

New York by means of 3 ultra high frequency relay stations. An RCA home receiver with a projection tube producing a picture on a 13½ by an 18 inch screen was demonstrated.

1941 saw the authorization by the FCC of television on a commercial basis. The unselfish cooperation on the part of all those interested in television resulted in standards acceptable to all of those concerned. This was accomplished by the National Television Systems Committee.

### Facsimile

Two way multiplexing of facsimile and voice by means of FM from an airplane was demonstrated by W. G. H. Finch during the week of January 13. So far as facsimile transmission to the public is concerned there was very little activity during the year. Facsimile research has turned toward specific uses such as the transmission of press and military uses.

### International Broadcasting

During 1941 plans for improving the International Broadcasting facilities of the United States were greatly advanced. The General Electric Company plans to construct a 50 KW short wave plant at Bellemont, California. The Columbia Broadcasting System at the close of 1941 put into service its new extensive Bentwood plant. This plant employs two 50 KW transmitters using 13 antennas. Also late in the year station KSFO at San Francisco was granted a CP for a 100 KW short wave station designed to serve the Orient. This station is being rushed to completion and should be ready for service shortly. These improvements in International Broadcasting facilities augment the improvements made by NBC, GE and Crosley during the past two or three years, and give the United States international facilities second to none in the world.

### Recordings

In June a committee sponsored by the NAB was formed for the purpose of establishing Recording and Reproducing Standards. The Committee has a membership of over 70 and represents virtually the entire recording industry. So far 15 standards have been adopted. The committee is continuing its studies and

is making progress in spite of the fact that most engineers are very busy with work in connection with the defense.

### Priorities

During the year "priorities" has come to plague the radio industry along with most other industries. The first item to be curtailed was the use of aluminum for acetate recording blanks. The discs manufacturers successfully substituted glass and we now have an adequate supply of discs unless the acetate and the glass becomes critical also.

The broadcasting industry was granted a defense rating of A-10. However, it was soon found that this was entirely inadequate. Work was then started to obtain an allocation plan for the industry. The priority system has been changed several times during the year. A new one has just been announced in which DCB will advise the OPM on priority requests from all communication companies. It is expected that this will expedite the granting of priorities to broadcast stations.

### Experimental Activity

One of the most interesting experimental grants during the year was the one to WHO. This grant was for a power of 150 KW to test out the Polyphase transmission systems that had initially been tested with 1 KW. In this system there is a center tower radiating the carrier and four auxiliary towers surrounding it to supply the side bands. The system can be thought of as producing a directional pattern that rotates. The system saves half of the modulator power. Dr. John F. Byrne is credited with the Polyphase idea and Paul Loyet technical supervisor of WHO has directed the experiments.

1942 will present problems that will tax the ingenuity and industry of the broadcast engineers. Replacement and repair parts will become scarcer and scarcer and the armed forces will sap personnel to a great degree. All engineers must and will bend every effort to maintain an efficient broadcast system for the purpose of assisting the war effort and administering to the morale of the public.



# WESTERN ELECTRIC IN ALL OUT WAR EFFORT

**V**ASTLY increased production to help meet America's emergency land, sea, and air communications needs—that's the story of Western Electric Company in 1941. During the year the Company threw its technical facilities into the Big Job of turning out equipment for the armed forces of the U. S. and telephone apparatus to meet the unprecedented "emergency" requirements of the Bell System.

In normal times, Western Electric manufactures broadcast transmitters and associated equipment, radio units for aviation, marine, and police service, and other by-products of telephone research—all in addition to its principal function as source of supply for Bell System telephone apparatus.

## "Command Sets"

In 1941, however, not only was the production of telephone equipment and material greatly increased, but the company became a source of radio "command sets" for America's fighting planes, tanks, and torpedo boats, throat microphones and "bomber mikes" for Air Corps pilots, battle announcing and battle telephone systems for our two-ocean Navy, and high powered radio units for ground use, as well as of field wire, field telephones and field switchboards.

Before the company could hit its stride in its defense and war work, plant capacity had to be boosted to meet the unprecedented demand. During 1941 employment on Government orders jumped 400 per cent in the Specialty Products Division, responsible for the Company's production of combat equipment. New plants were leased to handle this work supplementing the capacity of the Company's three principal works. At year's end the entire Western Electric Company forces of production were moving into high gear.

Western Electric is producing ever-increasing quantities of aviation radio units, providing instantaneous two-way plane-to-plane and plane-to-ground communication. These "command sets" were, by the end of 1941, leaving the assembly lines at a constantly accelerating pace.

## Announcing Systems

Western Electric, fashioning the P.A. system of peacetime to duty in war, is turning out battle telephone and battle announcing systems for America's newest aircraft carriers, battleships, and other naval units. To the engine room, to the gun turrets, to all vital stations on board, these systems carry commands. Thus equipped with "battle announcing systems," the fleet, in battle or on patrol, loses no precious time in transforming word to action.

## Telephone Progress

Paralleling its work on Government contracts, Western Electric is today manufacturing greatly augmented quantities of telephone apparatus, keeping pace with the rising telephone traffic curves in Bell System locations throughout the U. S. Each month, as new records are set for the number of telephones in use, so must new records be set for telephone manufacture.

To meet this demand, the company, in 1941 alone, manufactured many billions of conductor feet of cable, built and installed central office equipment in new or expanding Bell System exchanges, manufactured and installed telephone equipment in military and naval locations, as well as defense plants of private industry.

As throughout the communications manufacturing industry, this increased production for 1941 had to be completed despite the necessity of conserving vital materials. To help accomplish this, Western Electric replaced these materials wherever possible with others less essential.

## Replacement Methods

So successful has this program proved that several hundred pursuit fighter planes could be built with the aluminum the company will save annually by its replacement methods. By replacing a zinc aluminum alloy, in another manufacturing process, an annual saving of zinc amounting to 1,600,000 pounds was effected. Programs to save many other essential materials, such as nickel and magnesium, are also well under way.



# RMA HAS ENORMOUS PROGRAM

*By Bond Geddes,  
Executive Vice President of Radio Manufacturers Association*

**I**N the national defense program, the radio industry is now engaged on an enormous program. Radio is a new agency of offensive and defensive warfare, which practically did not exist in the World War I. For aircraft, submarines, battleships, tanks, Signal Corps and even the individual infantryman now require voluminous radio equipment. For all this, the American radio industry is now being geared into peak defense production, and with the additional problems of producing a substantial volume of new receiving sets required for civilian use and also of providing sufficient tubes, parts, etc. to maintain in operation both the nation's broadcasting service and also the 50 million receiving sets now estimated to be in the hands of the public.

## **Defense Program Paramount**

The radio defense program, of course, is paramount and is being given precedence in all industry factories. Already defense contracts totalling \$300,000,000 have been awarded by the government for radio apparatus. The immediate program aggregates about \$1,100,000,000. It includes many new radio devices which have been developed by government experts and also in the industry's own laboratories. This 1942 defense radio program will tax the capacity—which already has been expanded, with new plants and factories—of the industry, its executives, engineers and skilled employees.

The radio industry, therefore, largely is shifting from a civilian to a defense production basis, with over \$600,000,000 worth of government contracts for defense radio scheduled in the spring of 1942. This includes Army Signal Corps, Navy, Lend-Lease, and other defense requirements for many types of radio equipment. Necessarily, the civilian requirements for new radios are secondary, except for maintenance and repair parts for broadcasting stations and for the public sets now in use.

The national defense agencies, including OPM, have recognized the import-

ance of radio communication for public morale, information and for other purposes, such as the Civilian Defense project, as well as international short wave broadcasting. The general policy of the government largely has been to assist the radio industry to maintain its necessary engineers, laboratories, staffs of skilled radio employees, etc. to do the enormous defense radio job. To this end, sufficient allocations of metals and other "critical" materials have been provided substantially by the government for civilian radio production, to maintain existing plants and personnel until the big defense contracts are distributed.

## **RMA Priorities Committee**

The Radio Manufacturers Association, with its membership representing probably 90 per cent in volume of the radio industry, early in the defense program recognized its responsibilities and problems, both defense and civilian. Shortly after OPM was organized, the RMA appointed, on March 24, a Priorities Committee, to cooperate with all government agencies. This originally was headed by Paul V. Galvin of Chicago, now President of RMA. Its present Chairman is Fred D. Williams of Philadelphia. It began to function with the institution of "priorities"—which now have become so familiar—and has continued largely to represent the industry's interests on both defense and civilian problems.

Prompt steps to conserve "critical" metals were taken by the industry. An all-industry conference was held April 29 and voluntary action taken to reduce the use of aluminum and other defense metals, in addition to discontinuance of some types of radio sets. Substitutions also were an early resort, copper and plastics being substituted for aluminum. Other materials were later substituted when the original "substitutes" became short. Engineering ingenuity also was exercised in conservation and simplification, but there still is nothing approaching "ersatz" in radio design. Special allocations of aluminum, copper,

☆ ☆ ☆ *Radio In Defense* ☆ ☆ ☆

nickel and plastics have been provided to the industry by OPM, on a basis of gradual curtailment, although the popular and familiar plastic cabinet has now virtually disappeared from the production lines, due to the increasing shortage of plastics required for ammunition production.

Problems of conservation, substitution and simplification were met by the industry through the organization, July 1, of an RMA Materiel Bureau, through the Association's Engineering Department. Over 100 of the most expert radio engineers of the country participated in the voluminous and difficult work of the Materiel Bureau. This consists of a dozen "specialist" groups covering various radio components and materials involved in the defense program. Director W. R. G. Baker of the RMA Engineering Department is in charge of this important industry operation.

### 1941 Civilian Production Maintained

With the expansion of "defense radio" production in 1941 and with the special OPM allocations, plus manufacturers' inventories on hand, the civilian production of 1942 in the industry has been well maintained. Curtailed production of new receiving sets in 1942 is certain, as the industry's plants become more extensively engaged upon defense work.

OPM has organized a Radio Industry Defense Advisory Committee, appointed on October 30. This government agency

will be concerned both with the defense and civilian programs of radio and also the maintenance of broadcasting service and of the receiving sets in the hands of the public.

Problems of all branches of the radio industry have been of concern to RMA, its Priorities Committee and Board of Directors. The interests of radio wholesalers, dealers and service men, as well as manufacturers, have been presented to officials of OPM, OPA and other government agencies in an effort to minimize, so far as may be consistent with the defense program, the effects of curtailed civilian production upon them. They, like the manufacturers, are directly concerned in the price control policies of the Office of Price Administration, which "pegged" radio prices late in 1941 on the levels prevailing October 15, 1941, pending further price control action during 1942. Except for some price increases last September, due largely to the new federal excise tax and increased labor costs, there has been no substantial rise in radio price schedules comparable to those of many other consumer goods.

Thus far, the radio industry has fully met its defense responsibilities to the government and, with difficulties innumerable, has been able to keep its products on reasonable levels of production and price, while, as a high OPM official stated, it has done an outstanding job in conservation and substitution of defense materials.

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## Radio Manufacturers Association

*Officers and Executive Personnel—1941-1942*

**Headquarters: 1317 F. St., N.W., Washington, D. C.**

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### President

Paul V. Galvin, Galvin Manufacturing Corp., Chicago, Ill.

### Executive Vice-Pres.-General Mgr.

Bond Geddes, 1317 F St., N. W., Washington, D. C.

### Vice-Presidents

Ray H. Manson, Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y.

Roy Burley, Ken-Rad Tube & Lamp Co., Owensboro, Kentucky.

H. E. Osmun, Centralab, Milwaukee, Wisconsin.

James P. Quam, Quam-Nichols Company, Chicago, Ill.

### Treasurer

Leslie F. Muter The Muter Company, Chicago, Illinois.

### Secretary

Bond Geddes, 1317 F Street, N. W., Washington, D. C.

### General Counsel

John W. Van Allen, Liberty Bank Building, Buffalo, New York.

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### RMA BOARD OF DIRECTORS

**Term Expiring 1942**

Ben Abrams, Emerson Radio & Phonograph Corporation, New York, N. Y.

Octave Blake, Cornell-Dubilier Electric Corp., S. Plainfield, N. J.

R. C. Cosgrove, The Crosley Corporation, Cincinnati, Ohio.

James C. Daley, Jefferson Electric Co., Bellwood, Ill.

B. G. Erskine, Hygrade Sylvania Corporation, Emporium, Pennsylvania.

J. J. Kahn, Standard Transformer Corp., Chicago, Ill.

E. F. McDonald, Jr., Zenith Radio Corp., Chicago, Ill.  
 H. E. Osmun, Centralab, Milwaukee, Wis.  
 James P. Quam, Quam-Nichols Co., Chicago, Ill.  
 Ernest Searing, International Resistance Co., Philadelphia, Pa.  
 Ray F. Sparrow, P. R. Mallory & Co., Indianapolis, Ind.  
 G. W. Thompson, Noblitt-Sparks Industries, Inc., Columbus, Indiana.

#### **Term Expiring 1943**

P. S. Billings, Belmont Radio Corporation, Chicago, Illinois.  
 H. C. Bonfig, RCA Manufacturing Co., Camden, New Jersey.  
 James T. Buckley, Philco Corporation, Philadelphia, Pa.  
 Paul V. Galvin, Galvin Manufacturing Corporation, Chicago, Illinois.  
 E. A. Nicholas, Farnsworth Television & Radio Corp., Fort Wayne, Indiana.  
 David T. Schultz, Raytheon Production Corporation, Newton, Massachusetts.

#### **Term Expiring 1944**

E. Alschuler, Electrical Research Labs., Inc., Evanston, Illinois.  
 W. R. G. Baker, General Electric Company, Bridgeport, Connecticut  
 Roy Burlew, Ken-Rad Tube and Lamp Corporation, Owensboro, Kentucky  
 A. H. Gardner, Colonial Radio Corporation, Buffalo, New York  
 Ray H. Manson, Stromberg-Carlson Telephone Manufacturing Co., Rochester, New York.  
 A. S. Wells, Wells-Gardner & Company, Chicago, Illinois.

#### **RMA STANDING COMMITTEES**

##### **Executive Committee**

Paul V. Galvin, Chairman  
 Ben Abrams  
 W. R. G. Baker  
 H. C. Bonfig  
 James T. Buckley  
 Roy Burlew  
 Ray H. Manson  
 E. F. McDonald, Jr.  
 H. E. Osmun  
 James P. Quam

##### **Credit Committee**

J. J. Kahn, Chairman, Standard Transformer Corp.  
 Eastern Division:  
 Victor Mucher, Vice Chairman, Clarostat Mfg. Co., Inc.  
 Western Division:  
 E. R. Carlson, Vice-Chairman, Crowe Name Plate & Mfg. Co.

#### **RMA DIVISIONS**

Sets: Ray H. Manson, Chairman  
 Tubes: Roy Burlew, Chairman  
 Parts & Accessories: H. E. Osmun, Chairman

Amplifier & Sound Equipment: James P. Quam, Chairman  
 Radio Parts National Trade Show: J. J. Kahn & H. E. Osmun, RMA Representatives

#### **RMA ENGINEERING DEPARTMENT**

W. R. G. Baker, Director, General Electric Co.  
 Virgil M. Graham, Assistant-Director & Chairman of General Standards Committee, Hygrade Sylvania Corp.  
 N. P. Case, Chairman, Receiver Section, Hazeltine Service Corp.  
 Dorman D. Israel, Chairman, Broadcast Receivers Committee, Emerson Radio & Phonograph Corp.  
 M. L. Levy, Chairman, Frequency Modulation Receivers Committee, Stromberg-Carlson Telephone Mfg. Co.  
 S. W. Seeley, Chairman, Television Receivers Committee, RCA License Laboratory.  
 R. M. Wise, Chairman, Vacuum Tube Section, Hygrade Sylvania Corp.  
 Dr. P. T. Weeks, Chairman, Receiving Tubes Committee, Raytheon Production Corp.  
 T. T. Goldsmith, Chairman, Cathode Ray Tubes Committee, Allan B. DuMont Laboratories, Inc.  
 L. C. F. Horle, Chairman, Component Parts Section.  
 C. A. Priest, Chairman, Transmitter Section, General Electric Co.  
 R. H. Harmon, Chairman, Broadcast Transmitter & Speech Input Committee  
 P. J. Herbst, Chairman, Television Transmitters Committee, Farnsworth Television & Radio Corp.  
 I. R. Weir, Chairman, Frequency Modulation Transmitters Committee, General Electric Co.  
 W. A. Ellmore, Chairman, Sound Equipment Section, Utah Radio Products Co.  
 W. R. G. Baker, National Television Systems Committee, General Electric Co.  
 W. M. Angus, Chairman, Frequency Modulation Systems Committee, Hazeltine Service Corp.  
 E. W. Engstrom, Chairman, Facsimile Systems Committee, RCA Manufacturing Co.  
 H. C. Sheve, Chairman, Safety Committee, Stromberg-Carlson Telephone Mfg. Co.  
 L. C. F. Horle, Manager, RMA Data & Materials Bureaus  
**Export Committee**  
 W. A. Coogan, Chairman, Hygrade Sylvania Corp.  
**Legislative Committee**  
 A. H. Gardner, Chairman, Colonial Radio Corporation

#### Membership Committee

Ernest Alschuler, Chairman, Electrical Research Laboratories, Inc.

#### Traffic Committee

O. J. Davies, Chairman, RCA Manufacturing Company, Inc.

### RMA SPECIAL COMMITTEES

#### Advertising Committee

John S. Garceau, Chairman

#### Convention Committee

A. S. Wells, Chairman

#### Priorities Committee

Fred D. Williams, Chairman; S. T. Thompson, Vice-Chairman

#### Service Committee

J. K. Rose, Chairman

#### Wage-Hour Administration Committee

Octave Blake, Chairman, Cornell-Dubilier Electric Corp.

### NATIONAL TELEVISION SYSTEMS COMMITTEE

Dr. W. R. G. Baker, Chairman, General Electric Co.

Virgil M. Graham, Secretary, Hygrade Sylvania Corp.

Dr. Ralph Bown, Bell Telephone Laboratories, Inc.; D. A. Quarles, Alternate. Adrain Murphy, Columbia Broadcasting System, Inc.; Dr. P. C. Goldmark, Alternate.

Allen B. DuMont, Allen B. DuMont Laboratories, Inc.; Dr. T. T. Goldsmith, Alternate.

B. Ray Cummings, Farnsworth Television & Radio Corp.; P. J. Herbst, Alternate.

Dr. E. F. W. Alexanderson, General Electric Co.; I. J. Kaar, Alternate.

Daniel E. Harnett, Hazeltine Service Corp.; W. A. MacDonald, Alternate.

Albert I. Lodwick, Hughes Tool Co.; A. F. Murray, Alternate.

Dr. Alfred N. Goldsmith, Institute of Radio Engineers; H. A. Wheeler, Alternate.

J. V. L. Hogan, National Association of Broadcasters; L. C. Smeby, Alternate.

David B. Smith, Philco Corp.; F. J. Bingley, Alternate.

Dr. R. H. Manson, Stromberg-Carlson Telephone Mfg. Co.; Dr. G. R. Town, Alternate.

Paul Raibourn, Television Productions, Inc.

John R. Howland, Zenith Radio Corp.; J. E. Brown, Alternate.

#### Committee on Color Television:

Dr. P. C. Goldmark, Chairman, Columbia Broadcasting System.

#### Committee on Monitoring:

Dr. T. T. Goldsmith, Jr., Chairman, Allen B. DuMont Laboratories, Inc.

#### Committee on Visual Sideband:

C. A. Priest, Chairman, General Electric Company.

### OPM RADIO INDUSTRY ADVISORY COMMITTEE

(Appointed November 21, 1941)

Ben Abrams, Emerson Radio & Phonograph Corp., New York, N. Y.

W. R. G. Baker, General Electric Co., Bridgeport, Conn.

M. F. Balcom, Hygrade Sylvania Corp., Emporium, Pa.

W. J. Barkley, Collins Radio Co., New York, N. Y.

A. Bloom, General Instrument Corp., Elizabeth, N. J.

H. C. Bonfig, RCA Manufacturing Co., Camden, N. J.

Roy Burlew, Ken-Rad Tube & Lamp Corp., Owensboro, Ky.

H. W. Clough, Belden Manufacturing Co., Chicago, Ill.

Allen B. DuMont, Allen B. DuMont Laboratories, Inc., Passaic, N. J.

P. V. Galvin, Galvin Manufacturing Corp., Chicago, Ill.

Larry Gubb, Philco Radio & Television Corp., Philadelphia, Pa.

K. D. Hamilton, Isolantite, Inc., Belleville, N. J.

W. P. Hilliard, Bendix Radio Corp., Baltimore, Md.

H. J. Hoffman, Westinghouse Electric & Mfg. Co., Bloomfield, N. J.

J. J. Kahn, Standard Transformer Corp., Chicago, Ill.

L. L. Kelsey, Stewart-Warner Corp., Chicago, Ill.

R. H. Manson, Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y.

Jack M. Marks, Fada Radio & Electric Co., Long Island City, N. Y.

Victor Mucher, Clarostat Manufacturing Co., Brooklyn, N. Y.

L. F. Muter, The Muter Co., Chicago, Ill.

Harold L. Olesen, Weston Electrical Instrument Corp., Newark, N. J.

James P. Quam, Quam-Nichols Co., Chicago, Ill.

W. F. Satterthwaite, General Dry Batteries, Inc., Cleveland, O.

Ernest Searing, International Resistance Co., Philadelphia, Pa.

S. N. Shure, Shure Bros., Chicago, Ill.

Ray F. Sparrow, P. R. Mallory & Co., Indianapolis, Ind.

R. C. Sprague, Sprague Specialties Co., North Adams, Mass.

Arthur E. Thissen, General Radio Co., Cambridge, Mass.

S. T. Thompson, Zenith Radio Corp., Chicago, Ill.

A. S. Wells, Wells-Gardner & Co., Chicago, Ill.



# CHIEF ENGINEERS

OF STATIONS IN UNITED STATES AND CANADA

AS OF JANUARY 1st, 1942

## Alabama

Anniston, WHMA.....Jerry Hunt  
Birmingham,  
WAPI.....Norman S. Hurley  
WBRC.....J. C. Bell  
WSGN.....Paul Cram  
Decatur, WMSL.....Hudie Brown  
Dothan, WAGF.....John T. Hubbard  
Huntsville, WBHP.....John Garrison  
Mobile,  
WALA.....R. M. Cole  
WMOB.....T. L. Greenwood  
Montgomery,  
WCOV.....H. R. Johnson  
WSFA.....Cliff Shelkofsky  
Muscle Shoals City, WMSD.....George Martin  
Opelika, WJHO.....F. M. Hyatt  
Selma, WHBB.....William Kilgore  
Tuscaloosa, WJRD.....Fred L. James, Jr.

## Arizona

Globe, KWJB.....Jordan Priestler  
Jerome, KCRJ.....Wayne Fernyhough  
Lowell, KSUN.....David C. Kaibach  
Phoenix,  
KOY.....Robert Thompson  
KPHO.....Howard Seitz  
KTAR.....A. C. Anderson  
Prescott, KYCA.....John R. Quinn  
Safford, KGLU.....Herbert Hartman  
Tucson, KVOA.....R. H. Holsclaw

## Arkansas

Blytheville, KLCN.....Bob Connor  
Helena, KFPA.....J. C. Warren  
Hot Springs National Park, KTHS.....J. C. Norman  
Little Rock,  
KARK.....Dan Winn  
KGHI.....K. F. Tracy  
KLRK.....K. F. Tracy  
Siloam Springs, KUOA.....Cecil E. Smith

## California

Bakersfield,  
KERN.....Verne Shatto  
KPMC.....L. P. Jarvis  
Beverly Hills, KMPC.....Lloyd Sigmon  
Chico, KHSL.....Emory P. Milburn  
Eureka, KIEM.....Alvor Olson, William R. Rambo  
Fresno,  
KARM.....John F. Scales  
KPRE.....Sheldon Anderson  
KMJ.....Irvin Dickinson  
Glendale, KIEV.....John Tutt  
Long Beach,  
KPOX.....Lawrence W. McDowell  
KGER.....Jay Tapp  
Los Angeles,  
KECA.....H. L. Blatterman, Curtis W. Mason  
KFAC.....H. W. Anderson  
KFI.....H. L. Blatterman, Curtis W. Mason  
KFSG.....Myron Kluge  
KFVD.....John A. Smithson  
KFWB.....Harry Myers  
KJL.....Frank Kennedy  
KNX.....Lester H. Bowman  
KRKD.....Willis O. Freitag  
Marysville, KMYC.....John B. Gould  
Merced, KYOS.....William Musladin  
Modesto, KTRB.....Wayne Berthold  
Monterey, KDON.....Omer N. Wright

Oakland,  
KLS.....R. C. Butler  
KROW.....R. V. Howard  
Pasadena,  
KPAS.....John A. Smithson  
KPPC.....N. V. Parsons  
Redding, KVCV.....Pat O'Brien  
Riverside, KPRO.....Norman Dewers  
Sacramento,  
KFEK.....Norman D. Webster  
KROY.....Milton Cooper  
San Bernardino, KFXM.....Richard T. Sampson  
San Diego,  
KFMB.....Leslie G. Hewitt  
KGB.....Vern Milton  
San Francisco,  
KFRK.....Jim McArdle  
KGO.....Curtis D. Peck  
KPO.....Curtis D. Peck  
KSN.....Mel Williams  
KSFO.....Royal V. Howard  
KYA.....Paul C. Schulz  
San Luis Obispo, KVEC.....Earl Travis  
Santa Ana, KVOE.....Wallace S. Wiggins  
Santa Barbara, KDB.....William A. Crabbe  
Santa Rosa, KSRO.....Howard McAuley  
Stockton, KGDM.....Fred Eilers  
Visalia, KTKC.....Bert Williamson  
Watsonville, KHUB.....Fred Clapp

## Colorado

Colorado Springs, KVOR.....H. C. Strang  
Denver,  
KPEL.....Charles Hastings  
KLZ.....Harvey Wehrman  
KMYR.....Robert Lewis  
KOA.....Robert H. Owen  
KPOF.....Paul H. Schisler  
KVOD.....W. D. Pyle  
Grand Junction, KPXJ.....Noel Vaughn  
Greeley, KFKA.....George Pogue  
La Junta, KOKO.....Leonard E. Wilson

## Connecticut

Bridgeport,  
WICC.....George Keich  
WNAB.....Gard Ray  
Hartford,  
WDRG.....Italo A. Martino  
WHIT.....Richard K. Blackburn  
WVIC.....H. D. Taylor  
New Britain, WNBC.....Roger B. Holt  
New Haven, WELI.....J. Gordon Keyworth  
New London, WNLG.....Walter J. Tucker, Jr.  
Waterbury, WATR.....Harold Thomas

## District of Columbia

Washington,  
WINX.....Ralph E. Cannon, Jr.  
WJSV.....Clyde Hunt  
WMAL.....A. E. Johnson  
WOL.....Harry Lyon  
WRC.....A. E. Johnson  
WWDC.....U. L. Lynch

## Florida

Fort Lauderdale, WFTL.....Joe L. Stewart  
Gainesville, WRUF.....Albert Moreno

Jacksonville,  
 WJAX ..... John T. Hopkins, 3rd  
 WJHP ..... B. Hayford  
 WMBR ..... H. B. Greene  
 Lakeland, WLAJ ..... Roger Jenkins  
 Lake Worth, WWPJ ..... W. H. Malone  
 Miami,  
 WIOD ..... M. C. Scott  
 WQAM ..... Ralph Nulsen  
 Miami Beach, WKAT ..... Arthur Smith, Thomas Magee  
 Ocala, WTMG ..... William P. Callahan  
 Orlando,  
 WDBO ..... J. E. Yarbrough  
 WLOF ..... Russell H. Bennett  
 Panama City, WDLF ..... Floyd E. Steele  
 Pensacola, WCOA ..... G. E. Mead  
 St. Augustine, WFOY ..... Pat Bernard  
 St. Petersburg,  
 WSUN ..... Tom Herrin  
 WTSP ..... Marion Gulick  
 Sarasota, WSPB ..... John Buning  
 Tallahassee, WTAL ..... William A. Snowden, Jr.  
 Tampa,  
 WDAE ..... William Pharr Moore  
 WFLA ..... Joe Mitchell

## Georgia

Albany,  
 WALB ..... Noel Martin  
 WGPC ..... George Farris  
 Atlanta,  
 WAGA ..... Cliff Hanson  
 WATL ..... J. M. Coner, Jr.  
 WGST ..... Ben Ackerman  
 WSB ..... C. F. "Harry" Daugherty  
 Augusta, WRDW ..... Harvey Aderhold  
 Brunswick, WMOG ..... Robert M. Henley  
 Cedartown, WGAA ..... Denzil Pulley  
 Columbus, WRBL ..... Wilfred Siddle  
 Cordele, WMJM ..... Clayton Lee  
 Dalton, WBLJ ..... W. C. Roberts  
 Gainesville, WGGG ..... L. H. Christian  
 La Grange, WLAG ..... James Hudson  
 Macon, WMAZ ..... George P. Rankin, Jr.  
 Moultrie, WMGA ..... James Wilder  
 Rome, WRGA ..... R. L. Starr  
 Savannah,  
 WSAV ..... Meredith E. Thompson  
 WTOG ..... J. R. Donovan  
 Thomasville, WPAX ..... James W. Poole  
 Tooeva, WRLC ..... H. C. Lindahl  
 Valdosta, WGOV ..... L. C. McCall  
 Waycross, WAYX ..... John T. Tobola  
 West Point, WDAK ..... James G. Cobble

## Idaho

Boise, KIDO ..... H. W. Toodtemeier  
 Lewiston, KRRC ..... Milton MacLafferty  
 Nampa, KFXD ..... Eddie Hurt  
 Pocatello, KSEI ..... Henry H. Fletcher  
 Twin Falls, KTFI ..... Franklin V. Cox  
 Wallace, KWAL ..... W. M. Bruner

## Illinois

Aurora, WMRO ..... Leo Burch  
 Bloomington, WJBC ..... Ted Bailey  
 Chicago,  
 WAAF ..... Carl Ehrlich  
 WAIT ..... Edward J. Jaeger  
 WBBM ..... Frank B. Falknor  
 WCFL ..... Maynard F. Marquardt  
 WEDC ..... Caleb C. Frisk  
 WENR ..... Howard C. Luttgens  
 WGES ..... George Bush  
 WGN ..... Carl J. Meyers  
 WJJD ..... Walter Myers  
 WLS ..... Thomas L. Rowe  
 WMAQ ..... Howard C. Luttgens  
 WMBI ..... A. P. Frye  
 WSBC ..... Edward J. Jaeger  
 Cicero, WHFC ..... George M. Ives, Jr.  
 Danville, WDAN ..... Theodore Magin  
 Decatur, WSOY ..... M. H. Stuckwisch  
 East St. Louis, WTMV ..... Thomas R. McLean  
 Galesburg, WGIL ..... Gerald P. Foster

Harrisburg, WEBQ ..... Joseph R. Tate  
 Herrin, WJPF ..... Lynton R. Lemond  
 Jacksonville, WLDS ..... Gerald Cassens  
 Joliet, WCLS ..... Lester DeCosta  
 Peoria, WMBD ..... Ted Giles  
 Quincy, WTAD ..... Francis Wentura  
 Rockford, WROK ..... T. C. Cameron  
 Rock Island, WHBF ..... R. J. Sinnett  
 Springfield, WCBS ..... Richard L. Ashenfelter  
 Tuscola, WDW ..... Mark Spies  
 Urbana, WILL ..... A. James Ebel

## Indiana

Elkhart, WTRC ..... K. N. Singleton  
 Fort Wayne, WGL-WOWO ..... R. G. Duffield, Jr.  
 Gary, WIND ..... George Maki  
 Hammond,  
 WHIP ..... H. V. Fitzcharles  
 WJOB ..... John Felthouse  
 Indianapolis,  
 WFBM ..... Harold S. Holland  
 WIBC ..... Harry Adams  
 WIRE ..... Eugene E. Alden  
 WISH ..... Stokes Gresham, Jr.  
 Muncie, WLBC ..... M. M. Crain  
 New Albany, WGRC ..... William Tharp  
 South Bend, WSBT ..... H. G. Cole  
 Terre Haute, WBOW ..... Robert B. Almon  
 Vincennes, WAOV ..... Claude M. Harris

## Iowa

Ames, WOI ..... L. L. Lewis  
 Boone, KFGQ ..... Paul R. Huntsinger  
 Burlington, KBUR ..... Willis Wilson  
 Cedar Rapids, WMT ..... Charles F. Quenton  
 Clinton, KROS ..... Gilbert Andrew  
 Dayenport, WOC ..... Ray Stauffer  
 Decorah, KWLC ..... Oliver M. Eittrheim  
 Des Moines,  
 KRNT-KSO ..... Paul Huntsinger  
 WHO ..... P. A. Loyet  
 Dubuque,  
 KDTH ..... Stan Beck  
 WKBB ..... Leonard Carlson  
 Fort Dodge, KVFD ..... Jack Hunter Duncan  
 Iowa City, WSUI ..... S. J. Ebert  
 Marshalltown, KFJB ..... Eugene Peak  
 Mason City, KGLD ..... Leo Born  
 Ottumwa, KBIZ ..... Wayne J. Hatchett  
 Shenandoah,  
 KFNE ..... E. George Crocker  
 KMA ..... Ray Schroeder  
 Sioux City,  
 KSCJ ..... Alvin H. Smith  
 KTRT ..... Carl MeGee

## Kansas

Atchison, KVAK ..... Charles Weisman  
 Coffeyville, KGGF ..... Sarto Jaminet  
 Dodge City, KGNO ..... Ralph Hickman  
 Garden City, KIUL ..... W. N. Moore  
 Great Bend, KVGB ..... Leo Legleiter  
 Kansas City, KCKN ..... C. E. "Red" Salzer, Jr.  
 Lawrence, WREN ..... Carl Blicsner  
 Manhattan, KSAC ..... R. C. Dennison  
 Pittsburg, KOAM ..... W. L. Brown  
 Salina, KSAL ..... N. E. Vance, Jr.  
 Topeka, WIBW ..... Karl Troeglen  
 Wichita,  
 KFBI ..... K. W. Pyle  
 KFH ..... Amos C. Daisnian

## Kentucky

Ashland, WCMI ..... Clarence Weaver  
 Bowling Green, WLB ..... Earl Jaego  
 Harlan, WHLN ..... Max Cockley  
 Hopkinsville, WHOP ..... B. A. Smith  
 Lexington, WLAP ..... Sanford Helt  
 Louisville,  
 WAVE ..... Wilbur Hudson  
 WHAS ..... Orrin W. Townner  
 WINN ..... John Alfred Rutherford

# CHIEF ENGINEERS

Owensboro, WOMI..... W. W. Binford  
Paducah, WPAD..... C. G. Sims

## Louisiana

Alexandria, KALB..... Jesse Sexton  
Baton Rouge, WJBO..... Wilbur T. Golson  
Lafayette, KVOL..... Hillman Bailey  
Lake Charles, KPLC..... E. C. Moses  
Munroe, KMLB..... O. L. Morgan  
New Orleans,  
WJBW..... Robert R. Brown  
WNOE..... C. E. Davidson  
WWL..... J. D. Bloom, Jr.  
Shreveport, KRMD..... R. M. Deau

## Maine

Augusta, WRDO..... Harold Dinsmore  
Bangor, WABI..... Nelson H. Lawson  
Lewiston, WCCU..... Leslie R. Hall  
Portland, WCSH..... G. Fred Crandon

## Maryland

Baltimore,  
WBAL..... George W. Cooke  
WCAO..... Martin L. Jones  
WCBM..... G. Porter Houston  
WFBR..... William Q. Ranft  
WITH..... James Duff  
Cumberland, WTBO..... Charles Ray Sine  
Frederick, WFMD..... A. V. Tidmore  
Hagerstown, WJEJ..... G. Harold Brewer  
Salisbury, WBOC..... Peter A. Alfonsi

## Massachusetts

WAAB..... Paul A. DeMars, Irving Robinson  
WBZ..... F. M. Sloan  
WBZA..... H. E. Randol  
WCOP..... Roland C. Hale  
WEEL..... P. K. Baldwin  
WHDH..... R. G. Matheson  
WMEX..... A. S. Pote  
WNAC..... Paul A. DeMars, Irving Robinson  
WORL..... John Parker  
Fall River, WSAR..... John C. Pavao  
Fitchburg, KAIM..... Theodore Kalin  
Greenfield, WHAI..... James L. Spates  
Holyoke, WHYN..... Thomas Humphrey  
Hyannis, WOCB..... Rodney A. Merrill  
Lawrence, WLAW..... George A. Hincley  
Lowell, WLLH..... Anthony Michaels  
New Bedford..... Clyde Pierce  
Pittsfield, WBRK..... Norman Blake  
Salem, WESX..... Richard I. Hammond  
Springfield,  
WMAS..... Earle G. Hewinson  
WSPR..... Lawrence A. Reilly  
Worcester, WTAG..... Hobart H. Newell

## Michigan

Battle Creek, WELL..... Raymond B. Roof  
Bay City, WBCM..... Ralph H. Carpenter  
Calumet, WHDF..... George L. Burgan  
Detroit,  
WJBK..... Paul Frincke  
WJLB..... Edward H. Clark  
WJR..... M. R. Mitchell  
WWJ..... Walter Hoffman  
WXYZ..... Verne C. Alston  
Escanaba, WDBC..... Jack Postor  
East Lansing, WKAR..... Norris E. Grover  
Flint, WFDF..... Frank D. Fallain  
Grand Rapids,  
WASH-WOOD..... Fred W. Russell  
WLAV..... Raymond A. Plank  
Ironwood, WJMS..... August Jarvi

Jackson, WIBM..... Charles Wirtanen  
Kalamazoo, WKZO..... Arthur E. Covell  
Lapeer, WMPC..... Hollis P. Hayes  
Muskegon, WKBZ..... George Krivitzky  
Pontiac, WCAR..... Wiley D. Wenger  
Port Huron, WHLS..... Leslie Conant  
Royal Oak, WEXL..... Joseph L. McFarland  
Saginaw, WSAM..... Simon Maruszyn  
Traverse City, WTCM..... Drew McClay

## Minnesota

Albert Lea, KATE..... George Church  
Duluth, KDAL..... R. A. Dettman  
Hibbing, WMPG..... C. B. Persons  
Minneapolis,  
WCCO..... Hugh S. McCartney  
WDGY..... George K. Jacobsen  
WLB..... Martin Stuhler  
WLOL..... Gene Brautigam, Ogden Prestholdt  
WTCN..... John M. Sherman  
Moorhead, KVOX..... Fred Monkkonen  
Northfield, WCAL..... Amos Dicke  
Rochester, KROC..... Fred C. Clarke  
St. Paul,  
KSTP..... Hector R. Skifter  
WMIN..... Warren Fritze  
Virginia, WLLB..... Wayne Kestila  
Willmar, KWLM..... Vern Baumgartner  
Winona, KWNO..... Maurice Reutter

## Mississippi

Columbus, WCBI..... P. C. Melone  
Greenville, WJPR..... Ray A. Dickson, Horace Alvis  
Gulfport, WGM..... Gordon Clark  
Hattiesburg, WFOR..... C. H. Dyess  
Jackson, WJDX..... P. G. Root  
Laurel, WAML..... Bruce Dennis  
McComb, WSKB..... Robert Louis Sanders  
Natchez, WMIS..... George Wilson  
Vicksburg, WQBC..... C. E. Drake

## Missouri

Cape Girardeau, KFVS..... Oscar C. Hirsch  
Clayton, KFUE..... Carl H. Meyer  
Columbia, KFRU..... Robert Haigh  
Hannibal, KHMO..... Ben Parrish  
Jefferson City, KWOS..... J. C. Haynes, Jr.  
Joplin, WMBH..... Baxter Burriss  
Kansas City,  
WDAF..... Joseph A. Flaherty  
WHB..... Henry Goldenberg  
Poplar Bluff, KWOC..... Don Lidenton  
St. Joseph, KPFEQ..... J. Wesley Koch  
St. Louis,  
KMOX..... Harry Harvey  
KWK..... James P. Burke  
KXOK..... Arthur Rekart  
WEW..... George E. Ruoppel  
WLL..... Chal C. Stoup  
Sedalia, KDRO..... Glen Gray  
Springfield, KGBX-KWTO..... Fritz Bauer

## Montana

Billings, KGHL..... Jeff Kiichli  
Bozeman, KRBM..... Fred Heister  
Butte, KGIR..... Fred Heister  
Great Falls, KFBB..... Wilbur Myhre  
Helena, KPFA..... R. D. Martin  
Kalispell, KGEZ..... Donald Gorman  
Miles City, KRJF..... Henry B. Poole  
Missoula, KGVO..... George Allison  
Wolf Point, KGCX..... Eugene Bunker

## Nebraska

Fremont, KORN..... Lee Gustavson  
Grand Island, KMMJ..... Ray Taylor

Kearney, KGFW..... Jack Lewis  
 Lincoln, KFAB-KFOR..... Mark W. Bullock  
 Norfolk, WJAG..... Frank Weidenbach  
 North Platte, KGNF..... Stephen Inns  
 Omaha,  
 KBON..... Leland Gustafson  
 KOLL..... Mark Bullock  
 WOW..... William J. Kotera

## Nevada

Las Vegas, KENO..... V. L. Harvey  
 Reno, KOH..... M. Howlitt Kees

## New Hampshire

Keene, WKNE..... M. Leonard Savare  
 Laconia, WLNH..... Louis Steady  
 Manchester,  
 WFEA..... Reginald A. B. Schow  
 WMUR..... Vincent H. Chandler  
 Portsmouth, WHEB..... William B. Robinson

## New Jersey

Asbury Park, WCAP..... Thomas F. Burley, Jr.  
 John Basso  
 Atlantic City, WBAB..... Earle Godfrey  
 Camden, WCAM..... C. E. Onens  
 Jersey City,  
 WAAT..... Frank V. Bremer  
 WHOM..... Allison Burdham  
 Paterson, WPAT..... Earl F. Lucas  
 Trenton,  
 WTNJ..... Edward P. Knowles  
 TTTM..... Blair K. Thron  
 Zaraphath, WAWZ..... Nathaniel Wilson

## New Mexico

Albuquerque,  
 KGGM..... Leonard Dodds  
 KOB..... George S. Johnson  
 Clovis, KICA..... Wesley Rutz  
 Las Vegas, KFUN..... A. F. Schultz  
 Tucumanari, KTNM..... Lester Q. Krasin

## New York

Albany,  
 WABY..... J. H. Corey  
 WOKO..... O. A. Sardi  
 Auburn, WMBO..... Herbert House  
 Batavia, WBTA..... John Dinter  
 Binghamton, WBNF..... Lester H. Gilbert  
 Brooklyn,  
 WBBR..... Ralph Leffler  
 WBYN..... Peter Testan  
 WCNW..... Arthur Faske  
 Buffalo,  
 WBEN..... Ralph J. Kingsley  
 WBNY..... Thomas L. Vines  
 WEBR..... Ralph J. Kingsley  
 WGR..... K. B. Hoffman  
 WKBW..... K. B. Hoffman  
 Elmira, WENY..... Perry Esten  
 Freeport, WGBB..... Alfred Sturham  
 Ithaca, WHCU..... True McLean  
 Jamestown, WJTN..... Harold J. Kratzert  
 Kingston, WKNY..... M. S. Seimes  
 Newburgh, WGNV..... Patrick Simpson  
 New York,  
 WABC..... Henry Grossman  
 WBNX..... H. L. Wilson  
 WEAJ (NBC)..... O. B. Hanson  
 WEVD..... Charles Brown  
 WHN..... Paul Fuelling  
 WINS..... Paul Von Kunits  
 WJZ (Blue Network)..... George Milne  
 WMCA..... Frank Marx  
 WOV..... Whitman N. Hall  
 WNYC..... I. Brimberg  
 WOR..... J. R. Poppele  
 WNEW..... M. J. Weiner  
 WQXR..... Russell D. Valentine

Niagara Falls, WHLD..... Robert Wilson  
 Ogdensburg, WSLB..... Raymond E. Lafferty  
 Olean, WHDL..... Warren E. McDowell  
 Plattsburg, WMMF..... Jack Nazak  
 Poughkeepsie, WKIP..... John Burke  
 Rochester,  
 WHAM..... Kenneth Gardner  
 WHEC..... Bernard C. O'Brien  
 WSAY..... Gordon P. Brown  
 Saranae Lake, WNBZ..... Harold Warner  
 Schenectady, WGY..... W. J. Purcell  
 Syracuse,  
 WAGE..... Charles Braumen  
 WFBL..... Alfred R. Marcy  
 WOLF..... David Foote  
 WSYR..... A. G. Belle Isle  
 Troy,  
 WHAZ..... H. D. Harris  
 WTRY..... A. H. Chismark  
 Utica, WIBX..... J. T. Dowdell  
 Watertown,  
 WATN..... Craig L. Whitman  
 WWNY..... Maynard B. Davis  
 White Plains, WFAS..... Harry C. Laubenstein  
 Woodside, WRRL..... William H. Reuman

## North Carolina

Asheville,  
 WISE..... Charles Sumner  
 WUNC..... Cecil Hoskins  
 Burlington, WBBB..... C. C. Penny  
 Charlotte,  
 WAYS..... Bob Rigby  
 WBT..... J. J. Betoungy  
 WSOC..... L. L. Caudle, Jr.  
 Durham, WDNC..... Raymond Dalton  
 Elizabeth City, WCNC..... Joe Kyle  
 Fayetteville, WFNC..... Frank Stewart  
 Gastonia, WGNC..... Clarence Morse  
 Goldsboro, WGBR..... H. H. Lance  
 Greensboro, WBIG..... Earl Allison  
 Greenville, WGTC..... Bruce Mayo  
 Hickory, WHKY..... E. S. Long  
 High Point, WMFR..... Howard Saunders  
 Kinston, WPTC..... Glen Neuville  
 Raleigh,  
 WPTF..... Henry Hutlick, Jr.  
 WRAL..... Stanley H. Brown  
 Roanoke Rapids, WCBT..... Lewis Hiland  
 Rocky Mount, WEED..... Isaac G. Murphrey  
 Salisbury, WSTP..... Carl B. Watson  
 Wilmington, WMFD..... Robert David England  
 Wilson, WGTM..... W. H. Malone  
 Winston-Salem,  
 WAIR..... Earl F. Downey  
 WSIS..... Phil Hedrick

## North Dakota

Bismarck, KFYZ..... Ivar Nelson  
 Devil's Lake, KDER..... Richard Moritz  
 Fargo, WDAY..... Julius Hetland  
 Grand Forks,  
 KFJM..... Elwin J. O'Brien  
 KILQ..... Harvey Kees  
 Jamestown, KRMC..... Lloyd R. Amoo  
 Mandan, KGGU..... Otto H. Lehner  
 Minot, KLPN..... C. W. Baker  
 Valley City, KOVC..... Stanley Guth

## Ohio

Akron,  
 WADC..... John Aitkenhead  
 WAKR..... Don Dayton  
 WJW..... Gerald Roberts  
 Ashtabula, WICA..... G. G. Gautney  
 Canton, WHBC..... Kenneth L. Sliker  
 Cincinnati,  
 WCKY..... C. H. Topmiller  
 WCPO..... Glen A. Davis  
 WKRC..... John M. Tiffany  
 WLW..... R. J. Rockwell  
 WSAI..... R. J. Rockwell

# CHIEF ENGINEERS

Cleveland,  
 WCLE ..... Carl Smith  
 WGAR ..... R. Morris Pierce  
 WHK ..... Carl Smith  
 Columbus,  
 WBNS ..... Lester H. Nafziger  
 WCOL ..... Ernest Lowe  
 WHKC ..... J. E. Anderson  
 Dayton,  
 WHIO ..... Ernest L. Adams  
 WING ..... Paul F. Braden  
 Findlay, WFIN ..... Edgar Smith  
 Lima, WLOK ..... Russell Shettler  
 Mansfield, WMAN ..... Perry Wilson  
 Marion, WMRN ..... S. Robert Morrison  
 Portsmouth, WPAY ..... Maurice Myers  
 Steubenville, WSTV ..... Joseph M. Troesch  
 Toledo,  
 WSPD ..... William Stringfellow  
 WTOL ..... Frank B. Ridgeway  
 Warren, WRRN ..... James F. Ranney  
 Youngstown,  
 WFMJ ..... Frank Bieringer  
 WKBN ..... B. T. Wilkens  
 Zanesville, WHIZ ..... William A. Hunt

## Oklahoma

Ada, KADA ..... T. A. Golladay  
 Ardmore, KVSQ ..... George Milner  
 Elk City, KASA ..... Howard Rex Morris  
 Enid, KCRC ..... A. B. Clopton  
 Lawton, KSWO ..... Clifford Easum  
 Muskogee, KBIX ..... Earl Homer Graves  
 Norman, WNAD ..... Royden Freeland  
 Oklahoma City,  
 KOCY ..... G. W. Brock  
 KOMA ..... M. W. Thomas  
 KTKO ..... Bernard Tullius  
 WKY ..... Herman J. Lovell  
 Ponca City, WBBZ ..... Louis Brown  
 Shawnee, KGFF ..... S. Riccioffi  
 Tulsa,  
 KOME ..... Leland Sacy  
 KTUL ..... Nathan Wilcox  
 KVOO ..... L. W. Stinson

## Oregon

Albany, KWIL ..... Paul Spargo  
 Astoria, KAST ..... Raymond Williams  
 Baker, KBKR ..... Sidney Williams  
 Bend, KBND ..... Robert Dickinson  
 Corvallis, KOAC ..... Grant S. Feikert  
 Eugene, KORE ..... Harold Gander  
 Grant's Pass, KUIN ..... Edward A. Malone  
 La Grande, KLBH ..... Miles L. Shepherd  
 Marshfield, KOOS ..... Roger L. Spangh  
 Pendleton, KWRC ..... Marvin Johnston  
 Portland,  
 KBFS ..... Louis Ballinger  
 KEX-KGW ..... Harold Singleton  
 KALE-KOIN ..... Louis S. Bookwalter  
 KXL ..... Ralph C. Mifflin  
 Roseburg, KRNR ..... Henry J. Chandler, Jr.  
 Salem, KSLM ..... Goodwin Lein

## Pennsylvania

Allentown, WCBA-WSAN ..... William A. McCutcheon  
 Altoona, WFBG ..... George Burgoon  
 Butler, WISR ..... Clifford L. Gorsuch  
 Du Bois, WCED ..... D. W. Jefferies  
 Easton, WEST ..... J. E. Mathiot  
 Erie,  
 WERC ..... Otis L. Atherton  
 WLEU ..... Clarence Baker  
 Greensburg, WHJB ..... Walter McCoy  
 Grove City, WSAB ..... H. W. Harmon

Harrisburg,  
 WHP ..... R. S. Duncan  
 WKBO ..... J. E. Mathiot  
 Hazleton, WAZL ..... J. E. Mathiot  
 Johnstown, WJAC ..... Nevin Straub  
 Lancaster, WGAL ..... J. E. Mathiot  
 Lewistown, WMRF ..... Bernard H. Bopp  
 New Castle, WKST ..... Robert Emeh  
 Philadelphia,  
 KYW ..... Ernest H. Gager  
 WCAU ..... (acting) George Lewis  
 WDAS ..... Frank Unterberger  
 WFIL ..... Arnold Nygren  
 WIBG ..... John H. Henninger  
 WIP ..... Clifford Harris  
 WPEN ..... Charles W. Burtis  
 WTEL ..... Gray D. MacLaughlin  
 Westinghouse Stations, Inc. .... Joseph E. Baudino  
 Pittsburgh,  
 KDKA ..... Dwight A. Myer  
 KQV ..... Walter McCoy  
 WCAG ..... James Schultz  
 WJAS ..... Walter W. McCoy  
 WWSW ..... Henry R. Kaiser  
 Scranton,  
 WARM ..... Adolph Oeschmann  
 WGBI ..... Kenneth R. Cooke  
 Sharon, WPIC ..... A. C. Heck  
 Sunbury, WKOK ..... Cliff Kerstetter  
 Untontown, WMBS ..... S. M. Glotfelty  
 Washington, WJPA ..... Joseph M. Troesch  
 Wilkes-Barre,  
 WBAX ..... R. G. Love  
 WBRE ..... Charles Sakoski  
 Williamsport, WRAK ..... Louis N. Persio  
 York, WORK ..... J. E. Mathiot

## Rhode Island

Pawtucket, WFCT ..... Howard Thornley  
 Providence,  
 WEAN ..... Paul A. DeMars  
 WJAR ..... Thomas C. J. Prior  
 WPRO ..... Howard W. Thornley

## South Carolina

Charleston,  
 WCSC ..... James Weaver  
 WTMA ..... Douglass M. Bradham  
 Columbia,  
 WCOS ..... Charles C. Thoman  
 WIS ..... Scott Hell  
 Florence, WOLS ..... R. M. Wallace  
 Greenville,  
 WFBC ..... W. C. Etheredge  
 WMRC ..... George D. Tate  
 Greenwood, WCRS ..... Fred U. Wamble  
 Spartanburg, WORD-WSPA ..... Ralph S. Bennett  
 Sumter, WFIG ..... Paul Petroski

## South Dakota

Aberdeen, KABR ..... Delbert T. Hunt  
 Pierre, KGPX ..... Robert H. Dye  
 Rapid City, KOBH ..... M. J. Jones  
 Sioux Falls, KELO-KSOO ..... Max Staley  
 Vermillion, KUSD ..... Kenneth Relf  
 Watertown, KWAT ..... Sherrill Zimmerman  
 Yankton, WNAX ..... Clifford Todd

## Tennessee

Bristol, WOPI ..... R. H. Smith  
 Chattanooga,  
 WAPO ..... B. B. Barnes  
 WDFE ..... J. V. Sanderson  
 WDD ..... Julius Vessels  
 Clarksville, WZM ..... Bob Thompson  
 Cookeville, WHUB ..... Charles R. Duke

Jackson, WTJS.....B. Carey Brummel  
 Johnson City, WJHL.....O. K. Garland  
 Kingsport, WKPT.....G. W. Upchurch  
 Knoxville,  
 WBIR.....Edward McGinley  
 WNOX.....J. B. Epperson  
 WROL.....Owen McReynolds  
 Memphis,  
 WHBO.....W. M. Roy  
 WMC.....C. E. Baker  
 WMP5.....J. G. Deaderick  
 WREC.....S. D. Wooten, Jr.  
 Nashville,  
 WLAC.....F. D. Binns  
 WSIX.....Bascom E. Porter  
 WSM.....J. H. DeWitt, Jr.

## Texas

Abilene, KRBC.....J. B. Casey  
 Amarillo, KFDA.....Howard Blaker  
 Austin,  
 KNOW.....James E. Lewis  
 KTBC.....Harry Slife  
 Beaumont, KFDM.....Lawrence Sanders  
 Big Spring, KBST.....Andrew M. Jones  
 Brady, KNEI.....J. Royland Gorder  
 Brownsville, KEEW.....George Martin  
 Brownwood, KBWD.....G. M. Patterson  
 College Station, WTAW.....H. C. Dillingham  
 Corpus Christi, KRIS.....B. C. Boatright  
 Corsicana, KAND.....W. E. Bradford  
 Dallas,  
 KRLD.....Roy M. Flynn  
 KSKY.....Morris M. Ming  
 WFAA.....Raymond Collins  
 WRR.....D. J. Tucker  
 Denton, KDNT.....Harwell V. Shepard  
 Dublin, KFPL.....D. Reed  
 El Paso,  
 KROD.....Edward P. Talbott  
 KTSM.....E. L. Gemoets  
 Fort Worth,  
 KPJZ.....Edward L. Starnes  
 KGKO.....R. C. Stinson  
 WBAP.....R. C. Stinson  
 Galveston, KLUF.....Lee Clough  
 Harlingen, KGBS.....David Holt  
 Houston,  
 KPRC.....H. T. Wheeler  
 KXYZ.....Gerald Chinski  
 Huntsville, KSAM.....Robert Newton  
 Laredo, KPAB.....Lloyd Davidson  
 Lubbock, KFYO.....W. H. Torrey  
 Lufkin, KRBA.....Ambrose Kramer  
 Midland, KRLH.....Robert A. Harmon  
 Pampa, KPDN.....H. E. Kreiger  
 Paris, KPLT.....J. Martin Neil  
 Pecos, KIUN.....Carl Cook  
 Port Arthur, KPAC.....Glen Boatright  
 San Angelo, KGKL.....Frank Jones  
 San Antonio,  
 KABC.....Kenneth Hyman  
 KONO.....George W. Ing  
 KTSA.....W. G. Egerton  
 WOAI.....Fred Sterling  
 Sherman, KRRV.....T. E. Spellman  
 Sweetwater, KXOX.....G. W. Dotson  
 Temple, KTEM.....Paul Shaw  
 Texarkana, KCMC.....Harvey Robertson  
 Tyler, KGKB.....John B. Sheppard  
 Vernon, KWVC.....Herman Ridgway  
 Victoria, KVIC.....O. A. Rasmussen, Jr.  
 Waco, WACO.....L. H. Appleman  
 Weslaco, KRGV.....Neal McNaughten  
 Wichita Falls, KWFT.....John Adams

## Utah

Cedar City, KSUB.....Hurschel Urie  
 Logan, KVNU.....C. N. Layne  
 Ogden, KL0.....W. D'Orr Cozzens  
 Provo, KOVO.....Arch L. Madsen  
 Salt Lake City,  
 KDYL.....John M. Baldwin  
 KSL.....Eugene G. Pack, Willice E. Groves  
 KUTA.....Lyle Wahlquist

## Vermont

Burlington, WCAX.....James W. Tierney  
 St. Albans, WWSR.....Michael Calabrese  
 Waterbury, WDEV.....Paul Hurd

## Virginia

Charlottesville, WCHV.....Walter Gray  
 Covington, WJMA.....Howard Schoenwetter  
 Danville, WBTM.....Harry W. Spencer  
 Fredericksburg, WFVA.....James Garber  
 Harrisonburg, WSVL.....Warren L. Braun  
 Lynchburg, WLVA.....John Orth  
 Richmond,  
 WBBL.....J. A. Steere  
 WMBG.....Wilfred H. Wood  
 WRNL.....Walter S. Selden  
 WRVA.....David C. Woods  
 Roanoke,  
 WDBJ.....J. W. Robertson  
 WSLS.....Philip Briggs  
 Suffolk, WLPM.....William Rupp  
 Winchester, WINC.....Phil Whitney

## Washington

Aberdeen, KXRO.....W. M. McGoffin  
 Centralia-Chehalis, KELA.....DeWitt Morris  
 Everett,  
 KEVE.....Lloyd Wallgren  
 KRKO.....Lee Mudgett  
 Longview, KWLK.....B. G. Cunningham  
 Olympia, KGY.....John Thatcher  
 Pullman, KWSC.....Kenneth Pendleton  
 Seattle,  
 KEVR.....Robert S. McCaw  
 KIRO.....James Hatfield  
 KJR.....F. J. Brott  
 KOMO.....F. J. Brott  
 KRSC.....George Freeman  
 KXA.....John DeBuque  
 Spokane,  
 KFIO.....C. T. Strong  
 KFPY.....George Langford  
 KGA-KHQ.....A. G. Sparing  
 Martinsville, WMVA.....R. E. Liverence  
 Newport News, WGH.....Raymond P. Aylor, Jr.  
 Norfolk, WTAR.....J. L. Grether  
 Petersburg, WPID.....Herbert Powell  
 Tacoma,  
 KTBI.....Kenneth Grindle  
 KVI.....William D. Haase  
 KMO.....Joe Kolesar  
 Walla Walla, KUJ.....M. L. MacLafferty  
 Wenatchee, KPQ.....C. E. Wylie  
 Yakima, KIT.....H. B. Murphy

## West Virginia

Beckley, WJLS.....Al J. Ginkle  
 Bluefield, WHIS.....P. T. Flanagan  
 Charleston,  
 WCHS.....Odes E. Robinson  
 WGKV.....Charles Williams  
 Clarksburg, WBLK.....C. S. Clemans  
 Fairmont, WMMN.....Roy Heck  
 Huntington, WSAZ.....Russell Banks  
 Logan, WLOG.....John Francis Yarns  
 Morgantown, WAJR.....Ray C. Spencar  
 Parkersburg, WPAR.....W. A. Sodare  
 Welch, WBRW.....John Csesnich  
 Wheeling,  
 WKWK.....Fred Baker  
 WWVA.....Flemm G. Boudy

## Wisconsin

Appleton, WHBY.....George Merkle  
 Ashland, WATW.....Hine Dahlback  
 Eau Claire, WEAU.....Charles B. Persous  
 Fond du Lac, KFIZ.....Wendell S. Meyers  
 Green Bay, WTAQ.....Wallace Stengcl  
 Janesville, WCLO.....Paul Holton  
 La Crosse, WKBH.....Al Leeman

# CHIEF ENGINEERS

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 WHA.....John Stiehl  
 WIBA.....Norman Hahn  
 Manitowac, WOMT.....W. F. Dubin  
 Marinette, WMAM.....Werner Schwarz  
 Medford, WIGM.....Nathan Williams  
 Milwaukee,  
 WEMP.....Raymond Host  
 WISN.....D. A. Weller  
 WTMJ.....Daniel W. Gellerup  
 Oshkosk, WOSH.....Nathan Williams  
 Poynette, WIBU.....Leonard Doese  
 Racine, WRJN.....F. Lee Dechant  
 Rice Lake, WJMC.....Ray Pearson  
 Sheboygan, WHBL.....Herbert Mayer  
 Stevens Point, WLBL.....Donald L. Yapp  
 Superior, WDSM.....Rudolph Luukinen  
 Wausau, WSAU.....Roland Richardt  
 Wisconsin Rapids, WFHR.....Garth N. Bowker

## Wyoming

Cheyenne, KFBC.....Gaul Barrett  
 Powell, KPOW.....Del Brandt  
 Rock Springs, KQRS.....Archie Buchanan  
 Sheridan, KWYO.....Robert F. Crossthwaite

## Alaska

Anchorage, KFQD.....William J. Wagner  
 Fairbanks, KFAR.....Stanton Bennett  
 Juneau, KINY.....Vincent I. Kraft, W. R. Nichols  
 Ketchikan, KGBU.....James A. Britton

## Hawaii

Honolulu, KGMB.....Ernest Lindemann

## Puerto Rico

Ponce, WPAB.....Jose Sepulveda  
 San Juan,  
 WIAC.....Alfonso Sanchez  
 WKAQ.....Angel P. del Valle

## Canada

### Alberta

Calgary,  
 CFAC.....E. C. Connor  
 CFCA.....W. V. McLaughlin  
 Edmonton,  
 CFRN.....F. Makepeace  
 CJA.....Hastings McMahon  
 CKUA.....J. W. Porteous  
 Grande Prairie, CFGP.....Bill Couch  
 Lethbridge, CJOC.....James Ihey

### British Columbia

Kamloops, CFJC.....D. Sharpe  
 Kelowna, CKOV.....J. H. B. Browne  
 Nelson, CKLN.....Merion W. Brown  
 Prince Rupert, CFPR.....C. H. Insulander  
 Trail, CJAT.....E. C. Aylen  
 Vancouver,  
 CBR.....Norman Olding  
 CJOR.....H. B. Seabrook  
 CKMO.....R. Whiteside  
 CKWX.....E. Ross McIntyre  
 Victoria, CJVI.....J. Sommers

### Manitoba

Brandon, CKX.....C. E. R. Collins  
 Flin Flon, CFAR.....Ray Tate

Winnipeg,  
 CJRC.....Albert Hooper  
 CKY.....W. A. Duffield

## New Brunswick

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 Fredericton, CFNB.....E. S. Cassidy  
 Moncton, CKCW.....A. J. White  
 Sackville, CBA.....H. M. Smith  
 Saint John, CHSJ.....J. G. Bishop

## Nova Scotia

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 Sydney, CJCB.....Charles Atkinson  
 Yarmouth, CJLS.....Donald L. Smith

## Ontario

Brantford, CKPC.....Clayton Anguish  
 Chatham, CFCO.....Gordon Brooks  
 Fort William-Port Arthur, CKPR.....  
 Hamilton,  
 CHML.....William Crawford  
 CKOC.....L. Horton  
 Kenora, CKCA.....Russel C. Fawcett  
 Kingston, CFRG.....Professor H. S. Stewart  
 Kirkland Lake, CJKL.....Norman Chaplin  
 Kitchener, CKCR.....Ion Hartman  
 London, CFPL.....Cecil Yorke  
 North Bay, CFCB.....Jack Barnaby  
 Ottawa, CBO.....E. C. Stewart  
 Owen Sound, CFOS.....Alan Harper  
 St. Catharines, CKTB.....W. H. Allen  
 Sault Ste. Marie, CJIC.....S. C. Cusack  
 Stratford, CJCS.....George Hildebrand  
 Sudbury, CKSO.....Jim McRae  
 Timmins, CKGB.....Ernest Mott  
 Toronto,  
 CBL.....M. L. Poole  
 CBY.....M. L. Poole  
 CFRB.....Jack Sharpe  
 CKCL.....Ernest O. Swan  
 Windsor, CKLW.....W. J. Carler  
 Wingham, WRNX.....Scott Reid

## Prince Edward Island

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 Summerside, CHGS.....Angus MacKee  
 Chicoutimi, CBJ.....J. E. Roberts  
 Hull, CKCH.....J. L. Champagne

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 CBF.....Gordon W. Olive  
 CBM.....Gordon W. Olive  
 CFCE.....J. G. Gettenby  
 CHLP.....F. P. Tambling  
 CKAC.....Leonard Spencer  
 New Carlisle, CHNC.....J. R. McGough  
 Quebec,  
 CHRC.....Arsene Nadeau  
 CKCV.....Paul Richard  
 Sherbrooke, CHLT.....Julien Dupras  
 Val D'Or, CKVD.....Thomas Watson

## Saskatchewan

Moose Jaw, CHAB.....A. E. Jacobson  
 Prince Albert, CKBI.....T. Van Nes  
 Regina,  
 CJRM.....William McDonald  
 CKCK.....E. A. Strong  
 Saskatoon, CFQC.....Stan Clifton

# SUPREME WAR EFFORT BY RCA

**R**ADIO alone among means of communication meets and surpasses the lightning movement of modern warfare; for this reason, all the resources of the Radio Corporation of America—research, manufacturing, direct communications, and broadcasting—are geared to a supreme war effort.

Minutes after word went out December 7 that the Japanese had struck Pearl Harbor, David Sarnoff radioed President Roosevelt that “all our facilities and personnel are ready and at your instant service;” hours later, every phase of the widespread activities of RCA and its associated companies was shifted from a basis of defense preparation to one of all-out war production and service.

In RCA Laboratories there was an immediate revision of plans and a redoubling of effort to drive the science of radio across new frontiers. Every research scientist and development engineer, already actively engaged in defense work, is sparing no effort or expense in the perfection of new and improved radio communication devices as well as other electronic instruments for the armed forces.

## 80 Per Cent For War

On the front line in defense production for almost two years, the RCA Manufacturing Company finished 1941 with its volume of unfilled orders at 80 per cent for war, 20 per cent for commercial use. Deliveries are being rushed, and many orders are reaching their destination weeks, and sometimes months, ahead of schedule. Employment is at an all-time high.

It is impossible, in time of war, to describe the exact nature of radio devices being built for the Government. It can be said, however, that the RCA plants are busy turning out radio equip-

ment for tanks, aircraft, battleships, cruisers, submarines, destroyers, field sets for the Army, public address system, under-water sound instruments for detection and location of submarines, radio direction finders, radio locators and altimeters, sound-powered batteryless telephones, many types of vacuum tubes, sound motion picture apparatus and recorders, as well as transmitters and receivers designed for the many purposes and variable conditions under which radio must operate in war-time.

## Morale

Within 24 hours after the United States entered the war, more than 16,500 employees of RCAM staged mass demonstrations at the Harrison and Camden, N. J. plants to pledge allegiance to the American flag. Shortly thereafter, it became known that the “Beat the Promise” campaign in defense production, which ended December 1, would be followed by a “Beat the Promise for Victory” campaign in war production starting February 1.

Meanwhile, representatives of RCAM attended radio industry conferences in Washington, where 1942 production plans, laid down a month earlier, were checked and revised upward by officials of the Government, Army and Navy.

Of particular significance in the nation's war production plans was the manufacture of the electron microscope developed by RCA Laboratories. Capable of magnifying infinitely small bits of matter up to 100,000 diameters, this instrument is finding a constantly widening field of application. Built at present for war industries only, the electron microscope is being used on important munitions studies, particularly in the fields of chemistry and metallurgy.

☆ ☆ ☆ *Radio In Defense* ☆ ☆ ☆



## N. B. C.

With broadcasting performing a vital role in building public morale, the National Broadcasting Company's No. 1 program is war service. as an agent for instantaneous communication with millions of people, NBC has built its news and information services to a point where they equal, if not surpass, broadcasting's value as a medium of public entertainment. In Washington, where the President's words of request and the Congress' action to declare war were broadcast to the nation, and on the war fronts around the world, where eye-witness coverage of war is given, NBC is performing its duty as an agency of defense. At the same time, it maintains its programs of music, drama and comedy, which it regards as revitalizing tonics to the people of a nation at war.

NBC's television service, limited at present, is none-the-less performing a vital war function. In New York, where some 300,000 air-raid wardens are in training, NBC has organized television to greatly facilitate the job. Television receivers are set up in selected areas for the reception of visual instructions, which have been worked out as studio presentations. Experts in bomb protection technique appear in the programs.

All facilities of NBC and the Blue Network Company, Inc., stand ready at all times for the use of the President, Government officials, and the Congress for communicating with the public.

### RCA Communications

The direct radio communication circuits of RCA Communications, Inc., which link the United States with forty-nine countries of the world, are performing an irreplaceable function in the general war

scheme. Operating under the jurisdiction of the Defense Communications Board, with censorship being handled by the U. S. Navy, these circuits are maintaining contact with nations and far-flung outposts that could be reached by no other means. Adding materially to its general effectiveness, RCAC opened in December the first direct radiotelegraph circuit ever to link the United States and Australia. Even after its main installations at Manila were destroyed in the face of Japanese advances, the company re-established communications with the Philippines by contacting a small station on the island of Cebu.

### Marine Equipment

While its marine radiotelegraph services have been reduced, Radiomarine Corporation of America still maintains to a limited degree these vital links with ships at sea. At the same time, Radiomarine, which has large Government orders for marine radio equipment, has for the second time in a year enlarged its manufacturing space, equipped it with machinery and tools, and added to its personnel. Likewise, it has broadened its facilities for maintaining and servicing its more than 1,500 radio installations in the rapidly expanding merchant fleet.

### RCA Institutes

RCA Institutes, deluged by inquiries from prospective students who wished to prepare themselves for war's technical jobs, recently placed under consideration plans for additional radio courses relating to the war effort. The Institutes finished 1941 with enrollment in the New York and Chicago Schools at a record-breaking high.



**AN UP-TO-THE-MINUTE LIST OF IMPORTANT**  
**EQUIPMENT FIRMS**  
**SUPPLYING RADIO IN ALL OF ITS BRANCHES**

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 Treasurer, Sales Manager.....C. H. Bunch  
 Secretary, Office Manager.....L. E. Williams  
 Vice President, Chief Electrical Engineer,  
 J. A. Comstock  
 Factory Manager.....William F. Radon  
**BRANCH OFFICES:** Clyde, N. Y. **PROD-**  
**UCTS:** Air Cooled Capacitors, Transform-  
 ers, Voltage Regulating and Stepdown,  
 Luminous Tube and High Intensity Mercury  
 Vapor Lamp Transformers, Fluorescent  
 Ballasts.

**Amperex Electronic Products**

79 Washington St., Brooklyn, N. Y.  
 Phone Cumberland 6-4430

Contact.....S. Norris  
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 Angeles, Calif.; 3218 Western Ave., Seattle,  
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**UCTS:** Transmitting Tubes.

**Amperite Co.**

561 Broadway, New York, N. Y.  
 Phone CAnal 6-1446

Contact.....S. Ruttenberg  
**PRODUCTS:** Velocity and Kontak Micro-  
 phones, Floor and Desk Stands.

**Amplifier Co. of America**

17 W. 20th St., New York, N. Y.  
 CHelsea 2-6998

General Manager.....N. M. Haynes  
 Chief Engineer.....A. C. Shaney  
 Sales Manager.....H. S. Manney  
**PRODUCTS:** Program, Monitor, and Audi-  
 tion Amplifiers, Voltage Regulators, Audio  
 Transformers, Audio Reactors, Equalizers,  
 Band Pass, High Pass, and Low Pass Filters,  
 Band Rejection Filters, 6, 12, 36 and 48-volt  
 Humless Regulated (DC) Power Supplies,  
 Volume Indicators, Direct-Coupled Ampli-  
 fiers, Code Training Oscillators, Tape Inkers,  
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 High Fidelity Transformers, Saturable Re-  
 actors.

**Ansley Radio Corp.**

21-10 49th Ave., Long Island City, N. Y.  
 Phone STillwell 4-4405

President.....Arthur C. Ansley  
 Secretary-Treasurer.....Anne Klein Ansley  
 Sales Manager.....John J. Wood

Purchasing Agent.....D. Prato  
 Chief Engineer.....F. Dieli  
 Production Manager.....H. Brave  
**PRODUCTS:** Radio-Phonograph Combina-  
 tions, Marine Direction Finder.

**Atlas Sound Corp.**

1443-39th St., Brooklyn, N. Y.  
 Phone WI 8-5500

Contact.....R. C. Reinhardt  
**BRANCH OFFICES:** 1280 Mission St., San  
 Francisco, Cal.; 530 Erie Bldg., Cleveland,  
 O.; 21 E. Van Buren St., Chicago, Ill.; 310  
 Central Bank Bldg., Tulsa, Okla. **PROD-**  
**UCTS:** Microphone Floor and Desk Stands,  
 "BOOM" Stands and Supports, Cable Con-  
 nectors (shielded), Monitor Speakers, High  
 Powered P. A. Speakers, Speaker Baffles and  
 Projectors, Speaker Enclosures, and P. A.  
 Accessories.

**Audak Company**

500 Fifth Ave., New York, N. Y.  
 Phone LA 4-3723

Contact.....Geo. V. Sullivan  
**BRANCH OFFICES:** All key cities.  
**PRODUCTS:** Microdyne Pickups, Cutting  
 Heads, and Acoustic Instruments.

**Audio Devices, Inc.**

1600 Broadway, N. Y. C.  
 Phone CI 5-5696

President.....Hazard E. Reeves  
 Vice President.....Bryce Haynes  
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 Traffic Manager.....Donald E. Ward  
 Research Engineer.....C. J. Lebel  
**PRODUCTS:** Instantaneous Acetate Re-  
 cording Blanks, All Types of Cutting and  
 Playback Style, Audiodyne Chipchaser and  
 Croovoscope, Audio Devices Sound Effects  
 Kit, and Audiodyne Recording Blanks.

**Blaw-Knox Co.**

Pittsburgh, Pa.  
 Phone St. 2700

**BRANCH OFFICES:** Peoples Gas Bldg.,  
 Chicago; Brown-Marx Bldg., Birmingham,  
 Ala.; 342 Madison Ave., N. Y. C.; 1617  
 Pennsylvania Blvd., Phila. **PRODUCTS:**  
 Radio Towers.

### **Bliley Elec. Co.**

Union Station Bldg., Erie, Pa.  
Phone 22-281

Sales Manager.....G. E. Wright  
General Manager.....F. D. Bliley  
Purchasing Agent.....Q. L. Horsman  
Advertising Manager.....F. A. Lennberg  
Chief Engineer.....C. C. Collman  
Research Engineer.....J. M. Wolfskill  
Production Manager.....W. R. Mong

PRODUCTS: Quartz Piezo-Electric Crystals and Mountings, Quartz Crystals for Transmitter and Receiver Frequency Control, for Filters, Ultrasonics, Piezo-Electric Pressure Gauges and for special optical or electrical applications.

### **Bud Radio, Inc.**

2118 E. 55th St., Cleveland, O.  
Phone HE 7166

President.....Max L. Haas  
Vice President.....George Grostick  
Treasurer.....H. A. Haas  
Secretary.....A. N. Haas  
Engineer.....John Moran  
Production Manager.....A. M. Crombie  
Superintendent.....E. Hoffman  
Office Manager.....M. G. Dawson

PRODUCTS: Visible Condensers, Relay Racks, Panels, Chassis, Cabinets, Coils, R. F., Band Switching, Plugs, Switches, Jacks, dials, Sockets, Name Plates, Tube Shields.

### **William W. L. Burnett Radio Lab.**

4814 Idaho St., San Diego, Calif.  
Phone Talbot 4943

Contact.....William W. L. Burnett  
PRODUCTS: Piezo-Electric Crystals, Holders, Constant Temperature Ovens, Frequency Measuring Equipment, Laboratory Equipment, Conducting of Radio Laboratory Measurements, Frequency Monitoring Service.

### **Carrier Microphone Co.**

439 So. La Brea Ave., Inglewood, Calif.  
Contact.....O. B. Carrier  
PRODUCTS: Dynamic and Velocity Microphones.

### **Clarostat Mfg. Co., Inc.**

285 N. 6th St., Brooklyn, N. Y.  
Phone EV 8-6770

President.....John J. Mucher  
General Manager.....Victor Mucher  
Treasurer.....Jacob Mucher  
Secretary.....Stephen Mucher  
Chief Engineer.....George Mucher  
Sales Engineer.....J. Edward Trefz  
BRANCH OFFICES: 540 No. Mich. Ave., Chicago. PRODUCTS: Fixed and Variable Power Resistors, Power Rheostats, Power Resistor Decade Boxes, Wire Wound Potentiometers, "T" "L" Cism Pads, 25 and 10 Watt Attenuators, Special Resistor Products, and Composition Potentiometers.

### **The Clough-Brengle Co.**

5501 N. Broadway, Chicago, Ill.  
Phone Longbeach 5616

President.....Kendall Clough  
Vice President.....Fred Wellman  
Secretary-Treasurer.....Arthur R. Hall  
Assistant Treasurer.....Helen M. Roth  
Assistant Secretary.....Charles C. Duerr

PRODUCTS: Radio Testing Equipment, Service and Laboratory Instruments, Beat Frequency Oscillators, Audio Oscillators, Signal Generators, Graphoscopes (Oscilloscopes), Unimeters, Transmission Measuring Sets, Tube Testers and Capacity-Resistance Bridges.

### **Cornell-Dubilier Elec. Co.**

So. Plainfield, New Jersey  
Phone Plainfield 6-9000

PRODUCTS: Radio Transmitting and Receiving Capacitors.

### **Corning Glass Works**

Corning, N. Y.  
Phone Corning 372

Contact.....C. J. Phillips  
BRANCH OFFICES: 718 Fifth Ave., New York, N. Y. PRODUCTS: Pyrex Antenna, Entering, Standoff, Strain and Wall Tube Insulators.

### **Cornish Wire Co., Inc.**

15 Park Row, New York, N. Y.  
Phone CO 7-2525

Contact.....W. F. Osler, Jr.  
PRODUCTS: Radio and Electrical Wires and Cables.

### **The Daven Co.**

158 Summit St., Newark, N. J.  
Phone Market 2-3459

President.....Lewis Newman  
Vice President.....George H. Newman  
PRODUCTS: Attenuators, Attenuation Boxes and Networks, Apparatus for Radio Labs. and Apparatus for Testing Sound, Measuring Sound, Measuring Impedances; Balanced "H" Pads, Broadcasting Equipment, Controls, Compensators, Control Apparatus and Panels, Decade Resistances, Boxes and Voltage Dividers, Dual Potentiometers, Dual Volume Controls, Davohms (wire wound resistors), Equipment for Labs., Faders, Filament Rheostats, Fixed Attenuators, Gain Sets, Impedance Measuring Boxes, Logarithmic Resistors, Line Equalizers, Laboratory Equipment, Ladder Network Attenuators, Multipliers, Meter-Checking Devices, Shunts and Adjustment Rheostats, Measuring Instruments, Meters (output power), Mixer Panels, Panels, Potentiometers, Power Supply, Resistances, Rheostats, Resistors; Rotary and Radio Switches; R F Switches, Sound Controls, Sound Equipment, Switches (contact type), Speech Input Equipment, Single Potentiometers, Special Built-Apparatus,

Switches; Test Equipment, Television Switches, Controls; "Tee" Attenuators, Volume Controls, Indicators; Variable and Fixed Attenuators.

**Allen B. DuMont Labs., Inc.**

2 Main Ave., Passaic, N. J.  
Phone Passaic 3-1616

Contact.....Allen B. Du Mont  
BRANCH OFFICES: 515 Madison Ave., New York City. PRODUCTS: Television Receivers, Transmitters and Studio Equipment, Cathode-Ray Tubes and Oscillographs.

**Eastern Mike-Stand Co.**

56 Christopher Ave., Brooklyn, N. Y.  
Phone DIckens 2-3538

Contact.....S. Sherman  
BRANCH OFFICES: 43 E. Ohio St., Chicago, Ill.; 7101 W. Chester Pike, Upper Darby, Pa.; 3106 Edgewood Ave., Richmond, Va.; 18288 Appoline Ave., Detroit. PRODUCTS: Microphone Stands and Accessories, Locking Telephone Plugs, Shock Absorbers.

**Eitel-McCullough, Inc.**

San Bruno, Calif.  
Phone San Bruno 117

President.....W. W. Eitel  
Vice President & Treasurer,

J. A. McCullough

PRODUCTS: Transmitting Vacuum Tubes, Vacuum Relays and Rectifiers.

**Electro-Voice Mfg. Co., Inc.**

1239 S. Bend Ave., So. Bend, Ind.  
Phone S. Bend 3-7764

President.....Albert Kahn  
Engineer.....L. R. Burroughs  
PRODUCTS: Velocity, Dynamic and Carbon Microphones.

**Epiphone, Inc.**

142 W. 14th St., New York, N. Y.  
Phone: CH 2-4408

Contact.....E. A. Stathopoulos  
PRODUCTS: Amplifiers, P. A. Systems, Electronic Musical Stringed Instruments.

**Evanston Sound Proof Door**

1127 Hinman Ave., Evanston, Ill.  
Phone University 2758

Contact.....W. W. Lloyd  
PRODUCTS: Sound Proof Doors.

**Fairchild Aviation Corp.**

88-06 Van Wyck Blvd., Jamaica, L. I., N. Y.  
Phone JAMAica 6-3800

Manager Sound Equipment Division,

B. H. Collins

Products: Disc Sound Recorders, Transcription Turntables, Amplifiers, Pickups, Acetate Discs, Recording Styli, and Amplifier-Equalizers.

**Federal Telegraph Co.**

200 Mt. Pleasant Ave., Newark, N. J.  
Phone Humboldt 2-7000

President.....Luke McNamee  
Vice President & General Manager,  
St. George Lafitte

Comptroller.....James E. Wallen  
Secretary & Treasurer.....S. G. Ordway  
Plant Superintendent.....T. M. Douglas  
Purchasing Agent.....L. C. Mercier  
Chief Draftsman.....A. R. Lallone  
Chief Engineer.....E. G. Ports

BRANCH OFFICES: 59 Ogden St., Newark, N. J.; 389 Oraton St., Newark, N. J.; 1000 Passaic Ave., E. Newark, N. J. PRODUCTS: Transmitting and Receiving Equipment, Transmitting Tubes, Direction Finders, Marine Radio Equipment, Broadcast and Communications Transmitters.

**Federal Recorder Co., Inc.**

630 S. Wabash Ave., Chicago, Ill.  
Phone Har. 8330

General Manager.....Ralph Rubenstein  
Engineer.....Gordon Macke

BRANCH OFFICES: 251 Fourth Ave., New York, N. Y.; 150 Marietta St. N. W., Atlanta, Ga.; 569 Mission St., San Francisco, Calif. PRODUCTS: 12 and 16" Recording Discs, Cutter Heads, Recording Amplifiers, Home Recorders, Cutting and Playback Needles, Steel, Glass and Paper Base Recording Blanks.

**Finch Telecommunications, Inc.**

4th and Virginia Sts., Passaic, N. J.  
Phone PA 2-3440

President.....Frederic C. Scofield  
Vice President.....Frank R. Brick, Jr.  
Vice President.....Samuel Ostrolenk  
Treasurer.....Alfred Gross  
Secretary.....Marie C. Gilman  
Assistant Secretary.....John P. Raftery  
Superintendent of Plant Operation,

Lawrence Knapp

PRODUCTS: Facsimile for broadcasting, aviation, marine, radio applications and general industrial applications, wire and radio. Telepicture Equipment for wire and radio operation. Special Communications Equipment.

**Gates Companies**

Quincy, Ill.

PRODUCTS: Radio Broadcast and Communications Transmitters, Phasing and Antenna Equipment, Frequency Control and Remote Control Apparatus, Speech Equipment, Sound Effects Tables, Limiting Amplifiers.

**General Electric**

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Vice President.....W. R. G. Baker  
Managing Engineer.....I. J. Kaar  
Designing Engineer.....W. M. Angus  
Sales Manager.....A. A. Brandt  
Advertising & Sales Promotion Manager,

Harry J. Deines

Manager, Radio & Television Receiver Sales Division.....P. A. Tilley  
PRODUCTS: Electric Sets, Battery Sets, Radio and Phonograph Combinations, Tele-

vision Receivers, FM Receivers.

### **General Electric**

#### **Transmitter & Tube Sales Divisions**

1 River Road, Schenectady, N. Y.

Manager.....G. W. Henry  
Commercial Engineer.....G. F. Metcalf  
U. S. Government Sales.....V. M. Lucas  
Television and FM Sales.....W. R. David  
Police and Emergency Radio...D. L. Chesnut  
Transmitting Tube Sales....E. H. Fritschel  
Advertising and Sales Promotion.W. H. Green

PRODUCTS: FM, Television, Standard-Band and ST Equipment, Transmitting and Receiver-set Tubes, Antennas, Monitoring Devices, Measuring Apparatus, Quartz Crystals, etc.

BRANCH OFFICES: 187 Spring St., Atlanta, Ga.; 140 Federal St., Boston, Mass.; 840 South Canal St., Chicago, Ill.; 4966 Woodland Ave., Cleveland, Ohio; 1801 N. Lamar St., Dallas, Texas; 650 Seventeenth St., Denver, Colo.; 212 North Vignes St., Los Angeles, Calif.; 570 Lexington Ave., New York, N. Y.; 1405 Locust St., Philadelphia, Pa.; 920 S.W. Sixth Ave., Portland, Ore.; 235 Montgomery St., San Francisco, Calif.; 1 River Rd., Schenectady, N. Y.; 806 Fifteenth St., N.W., Washington, D. C.

### **General Radio Co.**

30 State St., Cambridge, Mass.  
Phone TRObridge 4400

Contact.....H. B. Richmond  
BRANCH OFFICES: 90 West St., N. Y. C.; 1000 N. Seward St., Los Angeles, Cal.; PRODUCTS: Broadcast Station Frequency and Modulation Monitors, Volume Controls, Test Equipment, Sound Measuring and Analyzing Equipment.

### **Geo. H. Hardner Corp.**

602 Hamilton St., Allentown, Penna.  
Phone Allentown 9549

President.....Thomas E. Spicknall  
PRODUCTS: Towers, Radials, Studios and Transmitter Buildings.

### **Hardwick, Hindle, Inc.**

40 Hermon St., Newark, N. J.  
Phone Market 2-8200

President.....A. H. Hardwick  
Vice President.....R. F. Golden  
Treasurer.....J. A. Greene  
Chief Engineer.....D. F. Hastings  
PRODUCTS: Fixed and Adjustable Resistors. Rheostats, Fixed & Tapped Vitreous Enamel Resistors, Non-inductive Resistors, Power Rheostats, Laboratory Rheostats, Load Boxes, Special Resistance Devices.

### **Hartenstine Zane Co., Inc.**

225 Broadway, New York, N. Y.  
Phone BA 7-8390

Contact.....Chas. J. Hartenstine  
BRANCH OFFICE: 571 Springdale Ave., East Orange, N. J. PRODUCTS: Antennae

Installation including all field work for foundations, erection, painting, lighting, and servicing radio towers. Installing ground systems and coaxial cable.

### **Hollister Crystal Co.**

Wichita, Kansas

Phone Wichita 4-2387

Contact.....Herb Hollister  
PRODUCTS: "A" Cut Quartz Crystals.

### **Insuline Corp. of America**

30-30 Northern Blvd., L. I. City, New York  
Phone St. 4-6890

President.....S. J. Spector  
Sales Manager.....Edward J. Cohen  
Vice President.....A. G. Heller  
Production Manager.....I. W. Romm  
PRODUCTS: Radio Receiving-Transmitting Parts and Accessories, Stamping Metal Goods, Radio Chassis, Metal Cabinets, Plugs, Jacks, Sockets, Screw Machine Parts, Test Tools, Test Leads.

### **International-Stacey Corp.**

875 Michigan Ave., Columbus, O.  
Phone University 2123

Contact.....O. M. Havekotte  
BRANCH OFFICES: 21 West St., N. Y. C.; P. O. Box 3350, Beaumont, Texas. PRODUCTS: Antenna, Airway Beacon, Radio Directional Beacon Towers; Patented Ground Screen; Transmission and Radio Towers.

### **Isolantite Inc.**

343 Cortlandt St., Belleville, N. J.  
Phone Belleville 2-1316

Vice President & General Manager,  
K. D. Hamilton  
SALES OFFICE: 233 Broadway, New York, N. Y. Phone Rector 2-9274. Contact, E. A. Domber. PRODUCTS: High Frequency Radio Insulators, Coaxial Transmission Line and Accessory Equipment, Special Antenna Equipment.

### **Johns-Manville Corp.**

22 East 40th St., New York, N. Y.  
Phone LEXington 2-7600

PRODUCTS: Sound-control; Materials and Acoustical-Engineering Service.

### **E. F. Johnson Co.**

Waseca, Minn.  
Phone 432

General Manager.....E. F. Johnson  
Controller.....F. C. Mann  
Chief Engineer.....L. W. Olander  
Purchasing Agent.....M. L. Johnson  
BRANCH OFFICE: 259 W. 14th St., N. Y. C. PRODUCTS: Phasing Equipment, Antenna Tuning Units, Inductors, Variable Condensers, Tube Sockets, Insulators, Plugs and Jacks, Copperweld Wire, Coupling Equipment, Insulators, Concentric Line, Special Antennas, & Special Order Equipment.

### **Kenyon Transformer Co., Inc.**

840 Barry St., New York, N. Y.

Phone DAYton 9-0100

President.....Franklin P. Kenyon  
Chief Engineer.....F. Ralph Kenyon  
Sales Manager.....Gene Turney  
BRANCH OFFICES: 21 E. Van Buren St.,  
Chicago, Ill.; 2412 West 7th St., Los Angeles,  
Calif.; 262 Grayson Pl., Teaneck, N. J.  
PRODUCTS: Transformers, Reactors, Fil-  
ters.

### **"King Brand" Music Papers**

1595 Broadway, New York, N. Y.

Phone CI 6-0488

Contact....."Wes" Cowen  
BRANCH OFFICE: 5423 Crenshaw Blvd.,  
Los Angeles, Calif. PRODUCTS: Music-  
Manuscript Paper, Score Paper, Ink, Fountain  
Pens, Carrying Cases and Covers, Batons,  
Duplicating Papers, Music Tapes.

### **Lapp Insulator Co., Inc.**

Le Roy, N. Y.

Phone Le Roy 385

PRODUCTS: Tower Footing and Guy  
Insulators, Stand-Off, Entrance and Antenna  
Insulators, Porcelain Water Coils, Radio  
Frequency High Voltage Condensers.

### **Lehigh Structural Steel Co.**

17 Battery Place, New York, N. Y.

Phone WHITEhall 4-1424

Contact.....J. F. Neary  
BRANCH OFFICES: In all principal cities.  
PRODUCTS: Vertical Radiators, Antenna  
Towers and Masts.

### **The Lifetime Corp.**

1101 Adams St., Toledo, O.

Phone Main 5643

Contact.....Wm. H. Manoff  
PRODUCTS: Microphones: Carbon, Dy-  
namic, Velocity; Trumpets, Reflex Trumpets,  
P. M. Trumpet Units, Aluminum Baffles.

### **John E. Lingo and Son, Inc.**

28th St. and Buren Ave., Camden, N. J.

Phone Camden 487

Contact.....J. E. Lingo  
PRODUCTS: Vertical Radiators; Guyed  
Tubular Steel and Portable Dural; Turn-  
stile and UHF Antennae, Tubular Steel  
Supporting Poles (for UHF Antennae).

### **Littelfuse, Inc.**

4757 Ravenswood, Chicago, Ill.

Phone Long. 7778

PRODUCTS: Fuses: Radio Transmitter,  
Radio and Television, and Aircraft Trans-  
mitter; Neon Modulation Indicators.

### **Miles Reproducer Co., Inc.**

812 Broadway, New York, N. Y.

Phone GRamercy 5-9466

Contact.....J. M. Kuhlik  
PRODUCTS: Filmgraph—Instantaneous,  
Continuous Recording Devices; Permanent  
Play-Back.

### **Mirror Record Corp.**

58 W. 25th St., New York, N. Y.

Phone CH 3-2222

Contact.....P. K. Trautwein  
PRODUCTS: All Recording Accessories.

### **Pacent Engineering Corp.**

79 Madison Ave., New York, N. Y.

Phone ASHland 4-1586

Contact.....R. L. Lewis  
PRODUCTS: Theatre Sound Equipment,  
P. A. Apparatus, Intercommunicating Equip-  
ment, High Fidelity Radios & Equipment.

### **Pacific Sound Equipment Co., Inc.**

7373 Melrose Ave., Hollywood, Calif.

Phone WY 6937

President & Engineer....Robert G. Metzner  
Secretary-Treasurer & Sales Manager,

William L. Maas

Foreman.....John Plant

BRANCH OFFICES: 121 Vermont Ave.,  
N. W., Wash., D. C.; 1100 Pine St., St. Louis,  
Mo.; 1900 Euclid Ave., Cleveland, O.; 1930  
Mariposa St., Fresno, Calif.; 4762 Woodward  
Ave., Detroit, Mich.; 1609—19th St., Bakers-  
field, Calif.; 153 Kearney St., San Francisco,  
Calif.; 30 Rockefeller Plaza, N. Y. C. PROD-  
UCTS: Transcription Playbacks, Recording  
Machines and Turntables.

### **Par-Metal Products Corp.**

3262—49th St., Long Island City, N. Y.

Phone ASToria 8-8905

Contact.....A. A. Parmet  
PRODUCTS: Racks—relay and cabinet  
type—Panels, Metal Equipment.

### **Poinsettia, Inc.**

96 Cedar Ave., Pitman, N. J.

Phone Pitman 511

President.....E. Poinsett  
Vice President.....W. Warner  
BRANCH OFFICES: 4447 W. Irving Park  
Rd., Chicago, Ill.; 705 S. First St., Louis-  
ville, Ky. PRODUCTS: Phonograph Rec-  
ord Manufacturing Equipment, and Made to  
Order Phonograph Records.

### **Presto Recording Corp.**

242 W. 55th St., New York, N. Y.

Phone CI 5-7760

President.....George J. Saliba  
Vice President.....Morris M. Gruber  
General Sales Manager....Ralph C. Powell  
PRODUCTS: Sound Recording Equipment,  
Discs and Needles, Transcription Turntables,  
Recording Amplifiers and Accessory Record-  
ing Equipment.

### **B. A. Proctor Co., Inc.**

230 Park Ave., New York, N. Y.  
Phone MU 6-7542

President & Treasurer....Barton A. Proctor  
Vice President & Secretary,

Ferd. C. W. Thiede

PRODUCTS: Crystal Pickups and Recording Heads, Transcription Turntables and Recording Machines.

### **RCA Manufacturing Co., Inc.**

Camden, New Jersey  
Phone Camden 8000

Chairman, Executive Committee,

G. K. Throckmorton

President.....Robt. Shannon  
Commercial V. P.....H. C. Bonfig  
Financial V. P. & Secy.....F. H. Corregan  
V. P. in charge of Engineering Products, RCA  
Photophone & Intl. Div.....F. R. Deakins  
V. P. & Adv. Director.....T. F. Joyce  
Adv. Mgr.....D. J. Finn  
V. P. of Purchasing.....N. A. Mears  
V. P. & Genl. Attorney.....L. B. Morris  
V. P. in charge of Mfg. & Prod. Engineering.....E. W. Ritter  
Asst. V. P.....R. B. Austrian

BRANCH OFFICES: 530 Citizens & Southern Bank Bldg., Atlanta, Ga.—J. W. Cocke, Manager; 589 E. Illinois St., Chicago, Ill.—R. A. Graver, Manager; 616-618 Keith Bldg., Cleveland, O.—H. M. Winters, Manager; 1002 Santa Fe Bldg., Dallas, Tex.—G. Malsed, Manager; 213 West 18th St., Kansas City, Mo.—M. Magg, Manager; 411 Fifth Ave., New York, N. Y.—M. F. Blakeslee, Manager; 170 Ninth St., San Francisco, Cal.—J. K. West, Manager. PRODUCTS: Broadcast Station Transmitters, Microphones and Associated Equipment, Electric and Radio Broadcast Transcriptions, Instantaneous Disc Recording Equipment, Facsimile Equipment, Television Transmitters, F. M. Transmitters.

### **Radio Engineering Labs., Inc.**

35-54—36th St., Long Island City, N. Y.  
Phone RAvenswood 8-2340

Contact.....Charles M. Srebroff  
PRODUCTS: Frequency Modulation — Broadcast Transmitters, Receiver and Loud Speaker Units, Portable Transmitters and Receivers for speech frequencies, Hi-Fidelity Broadcast Relay Transmitters, Portable Transmitters for broadcast pickup service, Transmitters and Receivers for fixed stations on speech frequencies and Speech Equipment; Aircraft Transmitters and Receivers; Military and Municipal Transmitters and Receivers.

### **Ralston Record Co.**

96 Cedar Ave., Pitman, N. J.  
Phone Pitman 511

Contact.....F. L. Pedrick  
PRODUCTS: Phonograph Records.

### **The Chas. E. Schuler Engineering Co.**

109 Cambria St., Newark, O.  
Phone Newark 4319

President.....Charles E. Schuler  
Chief Engineer.....Charles Schwartz  
Secretary-Treasurer.....Corwin D. Harris  
Superintendent.....D. E. VanNess  
PRODUCTS: Steel Vertical Radiators for Antenna Systems, Guyed and Self-supporting.

### **Scientific Radio Service**

4301 Sheridan Ave., University Park, Md.  
Phone Hyattsville 0535

Contact.....H. D. Eisenhauer  
PRODUCTS: Piezo Electric Crystals and Holders, Calibration and Testing of Radio Frequency Monitors.

### **Scully Machine Co.**

62 Walter St., Bridgeport, Conn.  
Phone 4-5300

Owner.....L. J. Scully  
Manager.....J. J. Scully  
PRODUCTS: Precision Disc Recording Machines.

### **Seattle Radio Supply Co., Inc.**

2117—2nd Ave., Seattle, Wash.  
President & Manager.....R. C. James, Sr.  
Assistant Manager.....E. O. Mickelson  
PRODUCTS: Radio Parts and Tubes.

### **Shure Bros.**

225 W. Huron St., Chicago, Ill.  
Phone Del 8381

General Manager.....S. N. Shure  
Sales Manager.....J. A. Berman  
Chief Engineer.....B. B. Bauer  
BRANCH OFFICES: 136 Liberty St., N. Y. C.; 908 W. Venice Blvd., Los Angeles; 415 Peachtree St., N. E., Atlanta, Ga.; 2411 First Ave., Seattle, Wash. PRODUCTS: Microphones, Phonograph Pickups, Magnetic Cutters, Microphone Stands, Vibration Pickups and Acoustic Devices.

### **Speak-O-Phone Record. & Equip. Co.**

23 West 60th St., New York, N. Y.  
Phone CO 5-1350

General Sales Manager.....C. A. Austin  
Secretary.....R. L. Lee  
PRODUCTS: Recording and reproducing equipment.

### **Stromberg-Carlson Telephone Mfg. Co.**

100 Carlson Rd., Rochester, N. Y.  
Phone Culver 260

Contact.....Ray H. Manson  
BRANCH OFFICES: 564 West Adams St., Chicago, Ill.; 2017 Grand Ave., Kansas City, Mo.; 1355 Market St., San Francisco, Calif.

PRODUCTS: Electric, Combination, Television and FM Sets; Paging Systems, Antenna Kits.

### **Taylor Tubes, Inc.**

Chicago, Ill.

Phone Armitage 1730

Contact.....Frank Hajek  
PRODUCTS: Transmitting Tubes—Triodes and Rectifiers.

### **The Triplett Electrical Instrument Co.**

Bluffton, Ohio

Contact.....R. L. Triplett  
BRANCH OFFICES: All principal U. S. cities. PRODUCTS: Electrical Measuring Instruments, Industrial, Laboratory and Radio Test Equipment.

### **Truscon Steel Co.**

Youngstown, Ohio

Phone Youngstown 32171

Contact.....George F. Bateson  
BRANCH OFFICES: All principal U. S. cities. PRODUCTS: Vertical Radiators, uniform cross section guyed or narrow base self supporting type.

### **The Turner Co.**

909 17th St., N. E., Cedar Rapids, Iowa

Phone Cedar Rapids 32607

President.....David Turner  
Secretary-Vice President..John B. Turner II  
Treasurer.....Ralph W. Martin  
Manager.....H. W. Johnson  
PRODUCTS: Microphones and Microphone Accessories, Radio Vibrators.

### **United Transformer Corp.**

150 Varick St., New York, N. Y.

Phone Canal 6-1080

Contact.....I. A. Mitchell  
PRODUCTS: Transformers, Reactors, Automatic Regulators, Voltage Control Units, Filters; Universal Broadcast Equalizers, Recording and Line Equalizers.

### **Universal Battery Co.**

3410 S. La Salle St., Chicago, Ill.

Phone Boulevard 7400

President.....A. B. Levitt  
Secretary.....A. H. Cohn  
Sales Manager.....R. S. Mowry  
Superintendent.....Emil Arnst  
PRODUCTS: 2 and 6 Volt Batteries, Wet Storage Batteries.

### **Universal Microphone Co., Ltd.**

Inglewood, Calif.

Phones Orchard 74216, Inglewood

Oregon 8-1030, Los Angeles

President.....James R. Fouch  
Vice President.....James L. Fouch  
Secretary-Treasurer.....I. I. Sevey  
BRANCH OFFICE: 540 No. Michigan Ave.,

Chicago, Ill.; 259 W. 14th St., New York City, N. Y.; 2120 16th St., N. W., Washington, D. C. PRODUCTS: Microphones, Stands and Accessories, Recording Machines and Supplies.

### **Western Electric Co., Inc.**

(Specialty Products Division)

300 Central Ave., Kearney, New Jersey

Phone Mitchell 2-7700

Manager.....F. R. Lack  
Manager Commercial Sales...H. N. Willets  
Publicity.....A. B. Kouwenhoven  
Radio and Sound Systems...L. F. Bockoven  
Aviation and Marine Radio..F. C. McMullen  
Field Representative—San Francisco,

H. L. Hamilton

Field Representative—Kansas City,

G. W. Davis

Field Representative—Atlanta..F. M. Harris  
Manager of Government Sales...C. R. Smith

PRODUCTS: Hearing Aids and Hearing Measuring Equipment; Aviation, Marine, Police Radio Transmitters and Receivers; Radio Broadcasting Equipment; Sound Distribution Systems; Vacuum Tubes; Radio Altimeters; Acoustic Measuring Equipment; Microphones, Loudspeakers, and allied items; Telephone Apparatus and Cable; Carrier Telephone Equipment and Train Dispatching Apparatus.

### **Westinghouse Elec. & Mfg. Co.**

2519 Wilkens Ave., Baltimore, Md.

Phone Gilmor 7320

Manager.....W. C. Evans  
Manager Sales.....C. J. Burnside  
Asst. Mgr. Sales.....E. T. Morris  
Mgr. Engineer.....J. A. Hutcheson

BRANCH OFFICES: In all principal cities. PRODUCTS: Radio Transmitting Apparatus for broadcast use; Antenna Phasing, Tuning and Lighting Equipment; Special Control Items and Operating Consoles; Power Equipment, Generators, Motors, De-ion Circuit Breakers, Relays, Instruments, Meters, Indicating Lights, Supervisory Apparatus, Insulating Material, etc.

### **Weston Electrical Instrument Corp.**

614 Frelinghuysen Ave., Newark, N. J.

Phone Bigelow 3-4700

Contact.....V. E. Jenkins  
BRANCH OFFICES: All principal U. S. cities and Canada. PRODUCTS: Tubecheckers, Vacuum Tube Voltmeters, Power Level Indicators, Volume Indicators, Switchboard Voltmeters and Ammeters, Portable Voltmeters, Ammeters and Ohmmeters, Portable Capacity Testers, Portable Combination Volt-Ohm-Milliammeters.

### **Wincharger Corp.**

E. Seventh and Division Sts., Sioux City, Iowa  
Phone Sioux City 8-6513

Contact.....R. F. Weing  
PRODUCTS: Vertical Radiators, Antenna Towers and Accessories, and Dynamotors.





# INTERNATIONAL



**CUBA**



**MEXICO**



**SOUTH AMERICA**



***International  
Broadcast  
Stations  
and  
F.C.C. Regulations***



***Pan-American Networks (see page 858)***

# INTERNATIONAL BROADCAST STATIONS IN THE UNITED STATES

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

Licensee and Location	Call Letters	Frequency (Kc)	Power
The Associated Broadcasters, Inc. San Francisco, Calif.....	KWID	6060, 9570, 11870, 15350, 17760, 21610	100 kw
Columbia Broadcasting System, Inc. Near Wayne, N. J..... C. P. Brentwood, N. Y.....	WCBX	6120, 6170, 9650, 11830, 15270, 17830, 21570 CP 6060, 21520	10 kw C.P. 50 kw
Columbia Broadcasting System, Inc. Brentwood, N. Y.....	WCRC	6060, 6120, 6170, 11830, 15270, 17830, 21520, 21570, 9650	50 kw
The Crosley Corp. Mason, Ohio .....	WLWO	6080, 9590, 11710, 15250, 17800, 21650	75 kw
General Electric Company South Schenectady, N. Y.....	WGEA	6190, 9556, 15330, 21500, 21590	50 kw
General Electric Company South Schenectady, N. Y.....	WGEO	6190, 9530, 15330	100 kw
General Electric Company near Belmont, Calif.....	KGEI	6190, 9530, 15330 S.A. 9670	50 kw
National Broadcasting Co., Inc. Bound Brook, N. J.....	WRCA	6100, 11890, 15150, 21630, 9670, 17780 (50 to 100 kw on 9670)	50 kw
National Broadcasting Co., Inc. Bound Brook, N. J.....	WNBI	Same as WRCA	Same as WRCA
WCAU Broadcasting Company Newtown Square, Pa.....	WCAB	6060, 9650, 11830, 15270, 21520, 25725	10 kw
Westinghouse Radio Stations, Inc. Hull, Mass. ....	WBOS	6140, 9570, 11870, 15210, 17780, 21540	50 kw
World Wide Broadcasting Corp. Scituate, Mass. ....	WRUL	6040, 11730, 11790, 15130, 15350, 17750, 21460	50 kw
World Wide Broadcasting Corp. Scituate, Mass. ....	WRUS	6040, 11730, 11790, 15130, 15350, 17750	50 to 100 kw
World Wide Broadcasting Corp. Scituate, Mass. ....	WRUW	11730, 15130, 25600, 11790, 15350, 17750, 9700	20 kw C.P. 50 kw

## Special International Broadcast Stations

The Crosley Corp. Cincinnati, Ohio .....	W8XAL	6080	1 kw
Westinghouse Radio Stations, Inc. Hull, Mass. ....	W1XWH	9570	700 w

# THE LATIN AMERICAN NETWORKS

**F**ROM the international viewpoint, the most significant development of 1941 in the broadcast field was the organization of three commercial long wave networks in Latin America to supplement, and later, possibly, supplant purely short wave airings from the United States to our southern Good Neighbor republics. Actively encouraged by the Government, the development of these new links with Latin America progressed rapidly during 1941 until early this year all three networks were operating commercially.

With encouragement of the exchange of ideals, ideas and goods between the American nations a primary objective of United States policy, in order to develop Hemisphere solidarity in the face of Axis aggression, beginning of operation of these new Latin American long wave links by U. S. broadcasters served to afford means of reaching the largest potential audiences in South America in their own language and via their own stations. Surveys have shown that while there is a considerable short wave listening audience, such International broadcasts do not reach a majority of the population whose listening habits are restricted to the standard band. Short wave broadcasts also are subject to considerable atmospheric interference which can be overcome with properly equipped International links when local hookups are used for rebroadcast purposes.

## **NBC, CBS, Crosley Networks**

Made up of previously established South American stations, hooked together by wire and short wave for the purpose of rebroadcasting U. S. programs, the three networks were organized by NBC, CBS and Crosley Corp. (WLWO), Cincinnati. NBC and CBS, with 124 and 76 S. A. affiliates, respectively, was set up to cover practically the entire southern continent, while WLWO limited operations to the so-called "quarter-sphere," Mexico, Central America, Panama, Venezuela, Colombia and the Caribbean Islands. The WLWO hook-up comprised 15 stations in these areas.

With three commercial networks in

operation, the questions facing these pioneers was whether there was enough advertising money available to support them—or even one, for that matter.

At first glance the answer would appear to be negative. Statistics on U. S. advertising expenditures in Latin America are unofficial and hard to obtain, but most authoritative estimates place the total expenditure by U. S. firms, both parent companies and their Latin American producers and distributors, at only \$20,000,000 per year in all media. Compared with the 1941 U. S. advertising bill, estimated at \$1,700,000,000 — of \$107,000,000 or more than four times the which network radio here accounted for total for all media in Latin America—the magnitude of the problem becomes immediately apparent.

## **Taking the "Long View"**

However, like all new broadcast developments, this venture in inter-American relations is based on long-range planning. With U. S. foreign trade in other than war goods at an absolute minimum, due to the war, American exporters are turning more and more to South America as an outlet for their goods. This factor, plus the Government's favorable trade agreements with Latin America, acts as a strong stimulant in expanding the field and may be expected to result eventually in providing these new South American hookups with the conditions necessary for full scale commercial operation, bringing a substantial return on investments.

Meanwhile, until conditions are ripe, these pioneers in hemisphere broadcasting find themselves in a position similar to those other two new broadcast developments, television and frequency modulation. All must struggle along as best they can on slim budgets until the day when their foresight, ingenuity and patience will be rewarded in a material way. In the interim, however, the Latin American broadcasters have the satisfaction of knowing they are rendering important service to their country in paving the way for better understanding between the free peoples of North and South America.

*(For Pan-American Networks See Page 858)*

☆ ☆ ☆ *Radio In Defense* ☆ ☆ ☆

# FCC REGULATIONS REGARDING INTERNATIONAL BROADCAST STATIONS

The term "international broadcast station" means a station licensed for the transmission of broadcast programs for international public reception. (Frequencies for these stations are allocated from bands assigned (between 6000 and 26600 kilocycles) for broadcasting by international agreement.)

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

(a) That there is a need for the international broadcast service proposed to be rendered.

(b) That the necessary program sources are available to the applicant to render an effective international service.

(c) That the technical facilities are available on which the proposed service can be rendered without causing interference to established international stations having prior registration and occupancy in conformity with existing international conventions or regulations on the frequency requested.

(d) That directive antennas and other technical facilities will be employed to deliver maximum signals to the country or countries for which the service is designed.

(e) That the production of the program service and the technical operation of the proposed station will be conducted by qualified persons.

(f) That the applicant is technically and financially qualified and possesses adequate technical facilities to carry forward the service proposed.

(g) That the public interest, convenience, and necessity will be served through the operation of the proposed station.

A licensee of an international broadcast station shall render only an international broadcast service which will reflect the culture of this country and which will promote international goodwill, understanding, and cooperation. Any program solely intended for, and directed to an audience in the continental United States does not meet the requirements for this service.

(The Commission on July 14, 1939, suspended the operation of this rule until further order of the Commission.)

## Commercial Service

Such international broadcast service may include commercial or sponsored programs: Provided, that—

(1) Commercial program continuities give no more than the name of the sponsor of the program and the name and general character of the commodity, utility or service, or attraction advertised.

(2) In case of advertising a commodity, the commodity is regularly sold or is being promoted for sale on the open market in the foreign country or countries to which the program is directed in accordance with paragraph (c) of this section.

(3) In case of advertising an American utility or service to prospective tourists or visitors to the United States, the advertisement continuity is particularly directed to such persons in the foreign country or countries where they reside and to which the program is directed in accordance with paragraph (c) of this section.

(4) In case of advertising an international attraction (such as a world fair, resort, spa, etc.) to prospective tourists or visitors to the United States, the oral continuity concerning such attraction is consistent with the purpose and intent of this section.

(5) In case of any other type of advertising, such advertising is directed to the foreign country or countries and to which the program is directed in accordance with paragraph (c) of this section and is consistent with the purpose and intent of this section.

The areas or zones established to be served by international broadcast stations are the foreign countries of the world, and directive antennas shall be employed to direct the signals to specific countries. The antenna shall be so designed and operated that the signal (field intensity) toward the specific foreign country or countries served shall be at least 3.16 times the average effective signal from the station (power gain of 10).

An international broadcast station may transmit the program of a standard broadcast station or network system: Provided, The conditions in the commercial provision of these rules in regard to any commercial continuities are observed and when station identifications are made, only the call letter designa-

tion of the international station is given on its assigned frequency: And provided further, That in the case of chain broadcasting the program is not carried simultaneously by another international station (except another station owned by the same licensee operated on a frequency in a different group to obtain continuity of signal service), the signals from which are directed to the same foreign country or countries.

Station identification, program announcements, and oral continuity shall be made with international significance (language particularly) which is designed for the foreign country or countries for which the service is primarily intended.

#### Program Logs

(1) Each licensee of an international broadcast station shall make verbatim mechanical records of all international programs transmitted.

(2) The mechanical records, and such manuscripts, transcripts, and translations of international broadcast programs as are made shall be kept by the licensee for a period of two years after the date of broadcast and shall be furnished the Commission or be available for inspection by representatives of the Commission upon request.

(3) If the broadcast is in a language other than English the licensee shall furnish to the Commission upon request such record and scripts together with complete translations in English.

#### Frequency Assignment

The following groups of frequencies are allocated for assignment to international broadcast stations:

Group A	15330
6040 kc.	15350
6060	Group E
6080	17750 kc.
6100	17760
6120 <sup>1</sup>	17780
6140	17800
6170	17830
6190	Group F
Group B	21460 kc.
9530 kc.	21500 <sup>2</sup>
9550 <sup>2</sup>	21520
9570	21540
9590	21570
9650	21590
9670	21610
Group C	21630
11710	21650
11730 <sup>2</sup>	Group G
11790	25600 kc.
11820	25625
11830	25650
11870	25675
11890	25700

Group D	25725
15130 <sup>1</sup>	25750
15150	25775
15210	25800
15230	25825
15270	25850

Additional frequencies allocated by international agreement may be assigned to international broadcast stations subject to the conditions that no objectionable interference results to the service of foreign international broadcast stations which, in the opinion of the Commission, have priority of assignment.

Any frequency licensed to an international broadcast station shall also be available for assignment to other international broadcast stations, provided no objectionable interference is caused to the service of any United States international broadcast station.

An international broadcast station will not be authorized to use more than one frequency listed in any group listed in the rule on available frequencies without a showing of technical necessity.

Not more than one frequency shall be used simultaneously under the same authorization and call letter designation.

No international broadcast station will be authorized to install equipment or licensed for operation with a power less than 50 kilowatts.

#### Supplemental Report

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

1. The number of hours operated on each frequency.
2. A list of programs transmitted of special international interest.
3. Outline of reports of reception and interference and conclusions with regard to propagation characteristics of the frequency assigned.

The transmitter of each international broadcast station shall be equipped with automatic frequency control apparatus so designed and constructed that it is capable of maintaining the operating frequency within plus or minus 0.005 per cent of the assigned frequency.

<sup>1</sup> Authorizations for international broadcast stations which permit operation on these frequencies shall be subject to the condition that the authorizations for these frequencies may be modified by the Commission to delete these frequencies without advance notice or hearing.

<sup>2</sup> Authorizations for international broadcast stations which permit operation on these frequencies shall be subject to the condition that there shall be no commercial or advertising announcements of any kind in the programs broadcast through the medium of these frequencies, and that the names of program sponsors shall not be broadcast.

# STATIONS OF CUBA

## PROVINCE OF HABANA

Call Letters	Owner	Frequency Kilocycles	Power Watts
CMW	A. Gil & M. Troncoso	550	2500
CMCY	Radio Habana Cuba, Cadena Azul, S. A.	590	15000
CMZ	Ministerio de Educacion	630	5000
CMCD	(Suspended)	630	15000
CMQ	Cambo & Gabriel, S. A.	690	25000 d.; 15000 n.
CMK	Fauto Montiel	740	250
CMBC	Domingo Fernandez Cruz	790	5000 d.; 1000 n.
CMBL	Radio Cadena Suaritos, S. A.	860	5000
CMCF	Oscar Gutierrez	910	5000
CMBZ	Manuel & Guillermo Salas	950	250
CMCK	Luis Casas Romero	980	5000
CMX	Francisco Lavin Gomez	1010	10000 (C.P. 25000)
CMCM	Compania Transradio Columbia, S. A.	1060	250
CMBY	Pages & Compania	1110	250
CMBQ	Amletto Battisti	1150	5000 d.; 1000 n.
CMCU	Jorge Garcia Serra	1190	250 (C.P. 5000)
CMCO	Enrique Lasanta	1230	250
CMCW	Jose Villarino	1230	250
CMBF	Compania Cubana de Radio & Television, S. A.	1260	5000
CMCH	Radio Popular, S. A.	1290	250
CMCX	Radio Popular, S. A.	1290	250
CMBG	John L. Stowers	1330	1000
CMBS	Enrique Artalejo	1330	250
CMOA	Juan Fernandez Duran	1360	250
CMC	Radiotelefonica Commercial de la Habana, S. A.	1360	250
CMBX	Vicente Espinosa	1390	250
CMCB	Metropolitan Radio de Cuba, S. A.	1390	250
CMBD	Luis Perez Garcia	1420	250 (C.P. 5000)
CMCQ	Andres Martinez	1420	250 (C.P. 5000)
CMCG	La Onda, S. A.	1460	250
CMCA	Agusto Testar & Jose Manuel Gonzalez	1490	250
CMOX	Perez & Chisholm	1490	250
CMBH	Alberto Alvarez Ferrera	1540	5000
CMCJ	Rafael Rodriguez	1580	250
CMCR	Aurelio Hernandez	1580	250

## PROVINCE OF PINAR DEL RIO

CMAK	Juan de Dios Carreno	Artemisa	830	250
CMAN	Radio Habana Cuba, Cadena Azul, S. A.	Pinar del Rio	1300	1000
CMAC	Israel Porras Fajardo	Guanajay	1320	100
CMAB	Francisco Martinez	Pinar del Rio	1450	250

• • • **CUBA STATIONS** • • •

**PROVINCE OF MATANZAS**

Call Letters	Owner	City	Frequency Kilocycles	Power Watts
CMGF	Bernabe R. de la Torre	Matanzas	1240	250
CMGN	Radio Habana Cuba, Cadena Azul, S. A.	Jovellanos	1310	1000
CMGH	Manuel Garcia Alvarez	Matanzas	1440	500
CMGE	Genaro Sabater	Cardenas	1470	250

**PROVINCE OF LAS VILLAS**

CMHI	Radio Habana Cuba, Cadena Azul, S. A.	Santa Clara	570	1000
CMHQ	Cambo & Gabriel, S. A.	Santa Clara	810	5000
CMHW	R. H. C., Cadena Azul, S. A.	Santa Clara	960	1000
CMHT	Fernando N. Soto del Valle	Trinidad	990	250
CMHO	Enrique Lasante	Santa Clara	1250	250
CMHA	Abelardo Menocal	Sagua la Grande	1280	250
CMHP	Candidis de los Guevara	Placetas	1320	250
CMHJ	Romualdo Ugalde	Cienfuegos	1350	250
CMHK	Virgilio Villanueva	Cruces	1380	250
CMHB	Vicente E. Weis	Sancti Spiritus	1410	250
CMHM	Jose R. Fomenias	Cienfuegos	1450	250
CMHX	Francisco Chevarry	Santa Clara	1480	250
CMHD		Caibarien	1560	250

**PROVINCE OF CAMAGUEY**

CMJK	Jones Castrillon & Cia.	Camaguey	620	250
CMJN	Radio Habana Cuba, Cadena Azul, S. A.	Camaguey	740	1000
CMJA	Rafael Valdes Jimenez	Camaguey	1060	250
CMJL	(In construction)	Camaguey	920	5000
CMJE	Primo A. Cesares	Camaguey	1230	250
CMJM	Radio Habana Cuba, Cadena Azul, S. A.	Ciego de Avila	1270	1000
CMJF	Gertrudis de la Cruz Perez	Camaguey	1300	250
CMJC	Fernando Terron Bolanos	Camaguey	1340	250
CMJH	Luis Marauri	Ciego de Avila	1370	250
CMJW	Andres Moran Cisneros	Camaguey	1400	250
CMJI	Gilberto Gessa	Ciego de Avila	1440	250
CMJO	Bonifacio Idefonso	Ciego de Avila	1470	250
CMJQ	Gaspar Estevez	Nuevitas	1580	250

**PROVINCE OF ORIENTE**

CMKM	Raimundo Comas Soler	Manzanillo	560	250
CMKV	Radio Habana Cuba, Cadena Azul, S. A.	Holguin	600	1000
CMKS	Candido Savon Suarez	Guantanamo	900	250
CMKJ	(In construction)	Holguin	800	1000
CMKN	Radio Habana Cuba, Cadena Azul, S. A.	Santiago de Cuba	930	1000
CMKU	Cambo & Gabriel, S. A.	Santiago de Cuba	970	5000
CMKW	Ricardo Miranda & Raul Souлары	Santiago de Cuba	1000	1000
CMKG	Emilio Grau Medina	Victoria de las Tunas	1050	250
CMKX	Oscar Vidal Benitez	Bayamo	1090	250
CMKH	Virgilio Arciero	Guantanamo	1130	250
CMKO	Manuel Angulo Farran	Holguin	1220	250
CMKC	Robert Miguel Gonzalez	Santiago de Cuba	1250	250
CMKD	Otto J. Vinas Gimeno	Santiago de Cuba	1290	1000
CMKE	Radio Manzanillo, S. A.	Manzanilla	1320	250
CMKY	Pedro Zacca Cheda	Puerto Padre	1350	100
CMKR	Jaime Nadal	Santiago de Cuba	1390	250

**CUBA STATIONS**

Call Letters	Owner	City	Frequency Kilocycles	Power Watts
CMKZ.....	Joaquin Venero Obregon .....	Palma Soriano .....	1430	250
CMKQ.....	Angela Vicedo Quintero .....	San Luis .....	1460	500
CMKF.....	Manuel J. de Gongora.....	Holguin .....	1490	250

**SHORT WAVE STATIONS IN HAVANA**

COCO*	Luis Casas Romero .....		6010	5000
COCH.....	General Broadcasting Co. ....		9437	5000
COCQ†	Cambo & Gabriel, S. A.....		9670	5000
COCM.....	Cia. Transradio Columbia, S. A.....		9833	1000
COCX‡	Francisco A. Lavin .....		11650	1000

\* Using 8700 kilocycles provisionally.

† Using 8845 kilocycles provisionally.

‡ Using 9200 kilocycles provisionally.

**SHORT WAVE STATIONS IN THE INTERIOR**

**Province of Matanzas**

COGF.....	Bernabe R. de la Torre.....	Matanzas .....	11800	1000
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**Province of Las Villas**

COHI§	Radio Habana Cuba .....	Santa Clara .....	11765	5000
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**Province of Camaguey**

COJK.....	Jones, Castrillon & Cia.....	Camaguey .....	8663	1000
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**Province of Oriente**

COKG.....	Emilio Grau Medina .....	Santiago de Cuba... ..	8942	1200
	§ Using 6450 kilocycles provisionally.			

**SHORT WAVE STATIONS OPERATED BY  
OFFICIAL ORGANIZATIONS**

COX-4.....	Ejercito Constitucional .....	Habana .....	6390	5000
COX-7.....	Ejercito Constitucional .....	Habana .....	4290	5000
COL-2.....	Division Cetral de la Policia.....	Habana .....	1750	500
CLA-5.....	Direccion de Radio .....	Habana .....	5600, 11200, 200	
			7350, 11250	
CLX.....	Observatorio Nacional .....	Habana .....	3497.5,	250
			6995, 8415,	
			8500, 13990	
CO20N.....	Observatorio Nacional .....	Habana .....	Amateur Band	250

**SHORT WAVE STATIONS PRIVATELY OPERATED  
FOR SPECIAL SERVICES**

CMA-5.....	Cuba Transatlantic Corp. ....	Habana .....	5780, 6790, 1000	
			8630, 11560,,	
			15505 and 17260	
CML-5.....	Cuba Transatlantic Corp. ....	Santiago de Cuba. Same as above		150
CMY.....	Observatorio del Colegio de Montserrat.	Cienfuegos .....	8415, 13990	200
COLB.....	Observatorio del Colegio de Belen.....	Habana .....	3847.5, 7695	200



# STATIONS OF MEXICO

<i>Call Letters</i>	<i>Owner</i>	<i>Location</i>	<i>Frequency Kilocycles</i>	<i>Power Watts Actual</i>
XEMU.....	Cia. Radiodifusora de P. Negras...	Piedras Negras, Coah.....	580	250
XEZ.....	Jorge L. Palomeque.....	Merida, Yuc. ....	600	2000
XEBX.....	Miguel B. Rodriguez.....	Sabinas, Coah. ....	610	250 (Auth.: 500)
XERJ.....	Oscar Perez E.....	Mazatlan, Sin. ....	610	500
XEFB.....	Jesus Quintanilla .....	Monterrey, N. L. ....	630	500
XEBZ.....	Refugio Esparza Vda. de Valezzi...	Mexico, D. F.....	660	100 (Auth.: 500)
XED.....	Cia. Radiofonografica, S. A.....	Guadalajara, Jal. ....	680	1000
XEN.....	Guillermina P. de del Conde.....	Mexico, D. F.....	690	1000 (Auth.: 5000)
XEAC.....	Jorge I. Rivera.....	Tijuana, B. C. ....	690	5000
XEQ.....	Radio Panamericana, S. A. ....	Mexico, D. F.....	730	50000
XERC.....	Radio Popular de Mexico, S. A.....	Mexico, D. F.....	790	500 (Auth.: 1000)
XEFW.....	Flores y Martinez.....	Tampico, Tam. ....	810	300 (Auth.: 5000)
XELA.....	Radio Metropolitana, S. A.....	Mexico, D. F.....	830	1000
XEMO.....	Fernando Federico Ferreira.....	Tijuana, B. C. ....	860	5000
XEUN.....	Universidad Nacional de Mexico*	Mexico, D. F.....	860	1000 (Auth.: 5000)
XEW.....	Cadena Radiodifusora Mexicana...	Mexico, D. F.....	900	100000
XEAO.....	Chavez y Castro, Sucesores.....	Mexicali, B. C. ....	910	250
XEBH.....	Carlos Balderrama.....	Hermosillo, Son. ....	920	1000
XEMJ.....	Jesus F. Elizondo.....	Piedras Negras, Coah.....	920	200
XEDP.....	Radio Gobernacion* .....	Mexico, D. F.....	940	500 (Auth.: 150000)
XEGM.....	Rita Mayans y Gustavo Faist F.....	Tijuana, B. C.....	950	2500
XEFE.....	Rafael T. Carranza.....	Nuevo Laredo, Tam. ....	960	250 (Auth.: 1000)
XEU.....	Fernando Pazos y Cia.....	Veracruz, Ver. ....	960	500
XEHK.....	Carmen Villasenor .....	Guadalajara, Jal. ....	960	125 (Auth.: 250)
XEK.....	Arturo Martinez .....	Mexico, D. F.....	970	200 (Auth.: 500)
XEJ.....	Pedro Meneses, Jr. ....	Ciudad Juarez, Chih. ....	970	1000 (Auth.: 5000)
XEFQ.....	Pedro L. Diaz.....	Cananea, Son. ....	980	500
XEXT.....	Gobierno del Estado de Nayarit* ..	Tepic, Nay. ....	980	1000
XET.....	El Pregonero del Norte, S. A.....	Monterrey, N. L.....	990	5000
XECL.....	Alfonso A. Lacarra.....	Mexicali, B. C.....	990	1000 (Auth.: 5000)
XEJB.....	Gobierno del Estado de Jalisco.....	Guadalajara, Jal. ....	1010	5000
XEG.....	Rodolfo Junco de la Vega.....	Monterrey, N. L. ....	1050	50000 (Auth.: 150000)

# MEXICO STATIONS

Call Letters	Owner	Location	Power	
			Frequency Kilocycles	Watts Actual
XERB.....	Radiodifusora Internacional, S. A.	Tijuana, B. C.	1090	50000
XEHR.....	Manuel R. Canale	Puebla, Pue.	1090	250
XEFO.....	Partido Revolucion Mexicana	Mexico, D. F.	1110	5000
			(Auth.: 20000)	
XENT.....	Cia Industrial Universal, S.A.	Nuevo Laredo, Tam.	1140	50000
XEJP.....	Delia Cubillas de Fernandez	Mexico, D. F.	1150	100
			(Auth.: 600)	
XECD.....	Ricardo Vazquez	Puebla, Pue.	1170	350
XELO.....	Cia. Radiodifusora de P. Negras	Tijuana, B. C.	1190	10000
			(Auth.: 50000)	
XEB.....	El Buen Tono, S. A.	Mexico, D. F.	1220	20000
			(Auth.: 100000)	
XERZ.....	Rafael C. Navarro	Leon, Gto.	1240	250
XEAT.....	Amador Ronquillo***	H. del Parral, Chih.	1250	250
			(Auth.: 600)	
XEH.....	Radio Tarnava, S. de R. L.	Monterrey, N. L.	1250	100
			(Auth.: 1000-500)	
XETF.....	Jose Rodriguez Lopez	Veracruz, Ver.	1250	500
XEDK.....	Salvador Vazquez T.	Guadalajara, Jal.	1250	250
			(Auth.: 500)	
XEL.....	Ramon Farreiro R.	Mexico, D. F.	1260	250
			(Auth.: 750)	
XEBL.....	Max Gomez Blanco	Culiacan, Sin.	1260	500
XEBM.....	Benjamin Briones	San Luis Potosi, S. L.	1260	150
XEDW.....	Hector Silva Canto	Minatitlan, Ver.	1260	250
XEBU.....	Feliciano Lopez Islas	Chihuahua, Chih.	1260	100
XEBP.....	Alejandro O. Stevenson, Jr.	Pte. Torreon, Coah.	1260	250
XEDF.....	Ruperto Villarreal	Nuevo Laredo, Tam.	1260	250
XEAX.....	Alvaro Rodriguez A.	Oaxaca, Oax.	1270	500
XEFM.....	Sucs. R. Ortiz Gonzalez	Leon, Gto.	1270	20
			(Auth.: 100)	
XEGL.....	Fausto M. Gomez	Navojoa, Son.	1270	500
XEBA.....	Javier Velasco	Ciudad Guzman, Jal.	1270	20
			(Auth.: 250)	
XEFV.....	Dario Cordoba	Ciudad Juarez, Chih.	1270	100
			(Auth.: 250)	
XEME.....	Perfecto Villamil Cisero	Merida, Yuc.	1270	400
			(Auth.: 500)	
XEX.....	El Herald del Comercio, S. A.	Monterrey, N. L.	1280	500
XEE.....	Alejandro O. Stevenson, Jr.	Durango, Dgo.	1280	50
			(Auth.: 100)	
XEOX.....	Felipe G. de Leon	Los Mochis, Sin.	1280	250
XELK.....	Macias y Acevedo	Zacatecas, Zac.	1280	100
XEBW.....	Radio Emisora del Norte	Chihuahua, Chih.	1280	250
			(Auth.: 600)	
XERL.....	J. Roberto Levy	Colima, Col.	1280	250
XEAG.....	Diodoro Zuniga	Cordoba, Ver.	1280	250
XEDA.....	Pedro Riestra Diaz	Mexico, D. F.	1290	200
			(Auth.: 1000)	
XEAP.....	Emilio Manzanilla	Ciudad Obregon, Son.	1290	50
			(Auth.: 100)	
XEP.....	Esteban Parra	Ciudad Juarez, Chih.	1300	500
XES.....	Difusora Portena, S. de R. L.	Tampico, Tam.	1300	100
			(Auth.: 5000)	
XEC.....	Luis E. Enciso	Tijuana, B. C.	1310	100

# MEXICO STATIONS

Call Letters	Owner	Location	Frequency Kilocycles	Power Watts Actual
XEHV	Juan A. Palavicini	Veracruz, Ver.	1310	1000
XEAD	Alejandro A. Diaz	Guadalajara, Jal.	1310	150
				(Auth.: 500)
XEAI	Carmen Gutierrez	Mexico, D. F.	1320	500
XEKS	Juan Antonio de la Pena	Saltillo, Coah.	1330	100
XECF	Francisco Perez H.	Los Mochis, Sin.	1330	150
				(Auth.: 1000)
XEBO	Alfonso Martinez	Irapuato, Gto.	1330	600
XELW	Salvador Galindo de la Torre	Guadalajara, Jal.	1340	250
XEDH	Vicente Hernandez	Villa Acuna, Coah.	1340	200
				(Auth.: 250)
XEBK	G. Guajardo y J. M. Cortes	Nuevo Laredo, Tam.	1340	100
XEFZ	Pedro E. Rocher	Coatzacoalcos, Ver.	1340	250
XECA	Nicolas M. Picot	Tampico, Tam.	1340	250
XECW	Juan Sedas M.	Cordoba, Ver.	1340	250
XEFC	Julio Molina Font	Merida, Yuc.	1340	100
				(Auth.: 250)
XEMA	Jose Ma. Acevedo Moya	Fresnillo, Zac.	1340	100
XEAA	Alberto Gonzalez	Mexicali, B. C.	1340	200
				(Auth.: 250)
XEXS	Instituto Cientifico y Literario*	Toluca, Mex.	1340	75
				(Auth.: 100)
XEQK	Angel H. Ferreiro	Mexico, D. F.	1350	400
				(Auth.: 1000)
XETB	Aurelio G. Zaragoza	Pte Torreon, Coah.	1350	500
XEBI	Pedro C. Rivas	Aguascalientes, Ags.	1360	250
XESA	Pablos y Elizalde, S. de R. L.	Culiacan, Sin.	1360	500
XEHF	Gaston Mascarenas	Nogales, Son.	1370	1000
XETQ	Francisco Campos H.	Orizaba, Ver.	1370	250
XEMR	Enrique Serna Martinez	Monterrey, N. L.	1370	500
XEHL	Radio Anunciadora Kist, S. de R. L.	Guadalajara, Jal.	1370	500
XEA	Luis A. Maury	Campeche, Camp.	1370	250
XEMX	Guillermo Robles	Mexico, D. F.	1380	100
				(Auth.: 500)
XEM	Pedro Meneses, Jr.	Chihuahua, Chih.	1390	500
XETL	Calixto Almazan	Tuxpan, Ver.	1390	250
XEAZ	Carlos V. Rodriguez	Reynosa, Tam.	1390	250
XEAM	Manuel L. Salinas	Matamoros, Tam.	1400	250
XEAJ	Emilio Manzanilla	Navojoa, Son.	1400	100
XETF	Luis E. Enciso	Ensenada, B. C.	1400	250
XEI	Tiburcio Ponce	Morelia, Mich.	1400	250
XEMH	Alvaro Barquet	Merida, Yuc.	1400	100
XEKJ	Refugio Acosta de Valdivieso	Acapulco, Gro.	1400	250
XEBS	Maria Remedios Delgado	Mexico, D. F.	1410	200
				(Auth.: 750)
XEDS	Alejandro A. Schober	Mazatlan, Sin.	1420	500
XEF	Gilberto Gil	C. Juarez, Chih.	1420	100
XEON	Cia. Radiodifusora Mexicana, S. A.	Tijuana, B. C.	1420	2000
XECZ	Zeferino Z. Jimenez	San Luis Potosi, S. L. P.	1430	100
				(Auth.: 1000)

# MEXICO STATIONS

Call Letters	Owner	Location	Frequency Kilocycles	Power Watts Actual
XEOK.....	Arturo Pina Perez.....	Progreso, Yuc.....	1430	100
XELZ.....	Maria Cardona de Zetina.....	Mexico, D. F.....	1440	250
(Auth.: 1000)				
XEFI.....	Ramiro G. Uranga.....	Chihuahua, Chih.....	1440	1000
XEY.....	Lucinda Arenas de Meza Millan***	San Luis Rio Col, Son.....	1450	250
XEGC.....	Guillermo Calzada.....	Zamora, Mich.....	1450	100
XEJX.....	Radio Emisora Queretana, S. de R.L.	Queretaro, Qro.....	1450	250
XEBQ.....	Maria Refugio A. de Valdivieso....	Torreon, Coah.....	1450	100
(Auth.: 250)				
XEDJ.....	Enrique Saralegui.....	Magdalena, Son.....	1450	100
XEFK.....	Manuel Zapata Espinosa.....	Merida, Yuc.....	1450	100
XERK.....	Dario Mondragon.....	Tepic, Nay.....	1450	100
XEXE.....	H. Ayuntamiento de Texcoco***	Texcoco, Mex.....	1450	100
XEBJ.....	Fernando Elizalde.....	Ciudad Victoria, Tam.....	1450	100
XEPP.....	Hector Sotomayor.....	Orizaba, Ver.....	1450	100
XEWG.....	Carlos Mendez.....	Ciudad Juarez.....	1460	250
(Auth.: 1000)				
XETU.....	Juan Perez Cardenas.....	Tampico, Tam.....	1460	1000
XEAU.....	Manuel Acuna Varela.....	Tijuana, B. C.....	1470	250
(Auth.: 5000)				
XESM.....	Salvador San Martin.....	Mexico, D. F.....	1470	500
(Auth.: 1000-5000)				
XEJR.....	Anastasio Gomez Gallardo.....	H. del Parral, Chih.....	1490	100
XEDR.....	Modesto Ortega.....	Guaymas, Son.....	1490	100
XECH.....	Rodolfo Llamas***	Toluca, Mex.....	1490	250
XERH.....	Gabriel Hernandez Llergo.....	Mexico, D. F.....	1500	400
(Auth.: 500)				
XEBG.....	Angel B. Fernandez.....	Tijuana, B. C.....	1550	1000
XEAW.....	Cia Internacional Dif. de Reynosa	Reynosa, Tam.....	1570	100000
XEMC.....	Dolores G. Estrada de F.....	Mexico, D. F.....	1590	200
(Auth.: 5000)				

## Short Wave Stations

XEJG.....	Gobierno del Estado de Jalisco...	Guadalajara, Jal.....	4820	200
XEBT.....	El Buen Tono, S.A.....	Mexico, D. F.....	6000	10000
XEWI.....	Institucion Mundial de la V. I.**	Mexico, D. F.....	6015	400
XEUW.....	Fernando Pazos Sosa.....	Veracruz, Ver.....	6020	250
XEKW.....	Jose Martinez Ramirez.....	Morelia, Mich.....	6030	500
XETW.....	Flores y Martinez.....	Tampico, Tam.....	6045	100
XEBF.....	Pedro Coronel Aburto.....	Jalapa, Ver.....	6090	250
XEUZ.....	Partido Revolucion Mexicana.....	Mexico, D. F.....	6130	100
XEDQ.....	Cia. Radiofonografica, S. A.....	Guadalajara, Jal.....	6155	100
XEXA.....	Radio Gobernacion*	Mexico, D. F.....	6175	100
XECC.....	Ricardo Vazquez.....	Puebla, Pue.....	6185	50
XECR.....	Secretaria de Relaciones Exteriores*	Mexico, D. F.....	7380	20000
XEWW.....	Cadena Radiodifusora Mexicana, S. A.....	Mexico, D. F.....	9500	10000
XEFT.....	Jose Rodriguez Lopez.....	Veracruz, Ver.....	9545	12
(Auth.: 250)				
XEYU.....	Universidad Nacional de Mexico*	Mexico, D. F.....	9600	250
XEQQ.....	Radio Panamericana, S. A.....	Mexico, D. F.....	9680	1000
XEBR.....	Carlos Balderrama.....	Hermosillo, Son.....	11820	150
XEUZ.....	Partido Revolucion Mexicana.....	Mexico, D. F.....	11880	100
XEWW.....	Cadena Radiodifusora Mexicana, S. A.....	Mexico, D. F.....	15160	10000

\* Official station

\*\* Cultural station

\*\*\* Suspended temporarily

# STATIONS OF \_\_\_\_\_ \_\_\_\_\_ SOUTH AMERICA

## ARGENTINA

<i>Call Letters</i>	<i>Station Name</i>	<i>Location</i>	<i>Frequency Kilocycles</i>	<i>Power Watts</i>
LV1	Radio Graffigna	San Juan	560	10000
LV12	Radio Aconquija	Tucuman	580	5000
LS10	Radio Calloa	Florida, Buenos Aires	590	6000
LV3	Radio Cordoba	Cordoba	620	15000
LV6	Radio Mendoza	Mendoza	630	10000
LU4	Radio Comodora Rivadavia	Comodoro Rivadavia, Chubut	640	5000
LS4	Radio Portena	Ciudadela, Buenos Aires	670	12000
LU12	Radio Rio Gallegos	Rio Gallegos, Santa Cruz	680	1000
LV4	Radio San Rafael	San Rafael, Mendoza	690	1000
LS1	Radio Municipal	Monte Grande, Buenos Aires	710	50000
LW7	Radio Catamarca	Catamarca	730	1000
LRA		Buenos Aires	750	10000
LT1	Radio del Rosario	Rosario, Santa Fe	780	10000
LW1	Radio Cultura	Cordoba	790	15000
LV7	Radio Tucuman	Tucuman	820	2500
LR5	Radio Excelsior	Monte Grande, Buenos Aires	830	25000
LT8	Radio Rosario	Rosario, Santa Fe	840	3000
LR6	Radio Mitre	Hurlingham, Buenos Aires	870	25000
LU2	Radio Bahia Blanca	Bahia Blanca	900	5000
LR2	Radio Argentina	Banfield, Buenos Aires	910	6000
LR3	Radio Belgrano	Hurlingham, Buenos Aires	950	90000
LV2	Radio Central	Cordoba	960	5000
LV9	Radio Provincia de Salta	Salta	970	1000
LR4	Radio Splendid	Rivadavia, Buenos Aires	990	50000
LT4	Radio Misiones Posadas	Posadas, Misiones	1010	1000
LS2	Radio Fenix	Florida, Buenos Aires	1030	5000
LR1	Radio El Mundo	San Fernando, Buenos Aires	1070	50000
LT5	Radio Chaco	Resistencia, Chaco	1080	1500
LV5	Radio Los Andes	San Juan	1090	1500
LU5	Radio Neuquen	Neuquen	1130	1000
LU3	Radio del Sud	Bahia Blanca	1150	10000
LT3	Radio Sociedad Rural de Crealistas	Rosario, Santa Fe	1160	5000
LV11	Radio del Norte	Santiago del Estero	1170	2000
LS2	Radio Prieto	Florida, Buenos Aires	1190	15000
LT9	Radio Roca Soler	Santa Fe	1200	1000
LV10	Radio de Cuyo	Heras, Mendoza	1210	2500
LT2	Radio Stentor	Rosario, Santa Fe	1230	15000
LU7	Radio Gral. San Martin	Bahia Blanca	1240	2500
LU8		Santa Rosa, La Pampa	1250	500
LT12		Santa Fe	1260	1000

**SOUTH AMERICAN STATIONS**

Call Letters	Station Name	Location	Frequency Kilocycles	Power Watts
LV12	Radio La Voz del Aire	Vicente Lopez, Buenos Aires	1270	6000
LU6	Radio Atlantica	Mar del Plata	1300	500
LS11	Radio Provincia de Buenos Aires	Olmos, Buenos Aires	1310	30000
LT10	Radio del Instituto Social de la Universidad Nacional del Litoral.	Santa Fe	1320	500
LV17		Cordoba	1330	1000
LT7	Radio Provincia de Corrientes	Corrientes	1340	1000
LS6	Radio del Pueblo	Ciudadela, Buenos Aires	1350	6000
LV15		Catamarca	1360	500
LV18		Mendoza	1370	500
LR11	Radio de la Universidad Nacional de La Plata	La Plata	1390	500
LV13	Radio Provincia de Jujuy	Jujuy	1430	1000
LU9		Necochea, Buenos Aires	1440	500
LV14	Radio Provincia de La Rioja	La Rioja	1460	500
LT11	Radio Provincia de Entre Rios	Parana, Entre Rios	1470	500
LV16	Radio Universidad de Cuyo	Mendoza	1520	250
LV8	Radio Presidente	Cordoba	1540	250

**Short Wave Stations**

LRS1	Radio Argentina de Emisoras Splendid	Buenos Aires	6090	25000
LRM	Sociedad Diario	Mendoza	6180	10000
LRA2		Buenos Aires	6180	7000
LRS	Radio Argentina de Emisoras Splendid	Buenos Aires	9590	25000
LRX	Radio El Mundo	San Fernando, Buenos Aires	9660	7000
LRA1		Buenos Aires	9690	7000
LRA3		Buenos Aires	11730	7000
LRY	Radio Belgrano	Hurlingham, Buenos Aires	11840	90000
LRR	Diario La Capital	Rosario, Santa Fe	11880	10000
LRU	Radio El Mundo	San Fernando, Buenos Aires	15290	7000
LRA5		Buenos Aires	17830	7000
LRA6		Buenos Aires	42485	150

**BOLIVIA**

Call Letters	Station Name	Location	Owner	Frequency Kilocycles	Power Watts
CP44	Radio Popular	Cochabamba	Victor Veltze	580	50
CP32	Radio Bolivia	La Paz	J. C. Salinas	1150	30
CP24	Radio Sucre	La Paz	Arturo Steele	680	30
CP20	Radio Condor	La Paz	Ramon Pelaez	900	1000
CP19	Radio Cultura	La Paz	Hugo Aspiazu	950	50
CP31	Radio Patria	La Paz	Senor Freire	1000	30
CP4	Radio Illimani	La Paz	Estado	1040	10000
CP10	Radio La Paz	La Paz	Gonzalo Munoz A.	1090	100
CP45	Radio Rural	Cochabamba	Raul Montecinos	1090	50
CP16	Radio Paris	La Paz	Abel Maldonado	1200	100

**SOUTH AMERICAN STATIONS**

<i>Call Letters</i>	<i>Station Name</i>	<i>Location</i>	<i>Owner</i>	<i>Frequency Kilocycles</i>	<i>Power Watts</i>
CP14	Radio La Noche	La Paz	Javier Romero	1250	100
CP13	Radio El Oriente	Santa Cruz	L. Canedo Reyes	1250	50
CP18	Radio Kosmos	La Paz	Luis Cortadellas	1300	50
CP29	Radio Fides	La Paz	C. S. Calixto	1350	250
CP28	Radio Central	Cochabamba	Gottret & Co.	1360	150
CPX	Radio National	La Paz	Costas Bros.	1400	1200
CP27	Radio Pilot	Sucre	Carlos Torres R.	1420	50
CP36	Radio Mercurio	Oruro	Enrique Wanting	1420	50
CP8	Radio America	La Paz	Luis Medina	1450	50
CP17	Radio Libertad	Potosi	Alfredo Ossio L.	800	50
CP41	Radio Chuquisaca	Sucre	Jose Camacho	6020	250
CP11	Radio Oruro	Oruro	Estado	6100	250
CP15	Radio Condor	La Paz	Ramon Pelaez	6120	1000
CP22	Radio International	Potosi	Luis Camacho A.	6130	250
CP30	Radio El Oriente	Santa Cruz	L. Canedo Reyes	6135	250
CP12	Radio Fides	La Paz	C. S. Calixto	6150	250
CP39	Radio Continental	Cochabamba	Remberto Zapata	6160	250
CP37	Radio Pagador	Oruro	Mariaca & Co.	6190	250
CP5	Radio Illimani	La Paz	Estado	6200	1000
CP1	Radio Chuquisaca	Sucre	Jose Camacho B.	9500	1000
CP38	Radio National	La Paz	Costas Bros.	9510	1200
CP40	Radio Central	Cochabamba	Gottret & Co.	9570	250

**BRAZIL**

<i>Call Letters</i>	<i>Station Name and/or Owner, City</i>	<i>Frequency Kilocycles</i>	<i>Power Watts</i>
PRJ6	Radiodifusora de Aracajua, Aracajua, Sergipe	630	1000
PRJ8	Cultura de Aracatuba, Aracatuba, Sao Paulo	1460	100
PRJ3	Araguari, Araguari, Minas Geraes	970	250
PRD4	Cultura de Araraquara, Araraquara, Sao Paulo	1370	500
PRA4	Sociedade de Baia S. A., Sao Salvador, Bahia	740	10000
ZYA9	Radiodifusora de Assis, Assis, Sao Paulo	1550	100
PRJ8	Barretos, Barretos, Sao Paulo	1530	100
PRG8	Bauru Radio Club, Bauru, Sao Paulo	1210	500
PRC5	Club do Para, Belem, Para	1450	2000
		4865	2000
PRC7	Sociedade Radio Mineira, Belo Horizonte, Minas Geraes	690	3000
PRH6	Sociedade Radio Guarany, Belo Horizonte, Minas Geraes	1340	3000
PR13	Inconfidencia, Belo Herozinte, Minas Geraes	880	25000
PRC4	Club de Blumenau, Blumenau, Santa Catharina	1330	250
PRF8	Emissora Botucatu, S. A., Botucatu, Sao Paulo	1530	100
ZYA3	Radiodifusora Cambara, S. A., Cambara, Parana	1590	100
PRC9	Sociedade Radio, E. de Campinas, Campinas, Sao Paulo	1170	1000
PR17	Sociedade Campo Grande, Campo Grande, Mato Grosso	1510	100
PRF7	Cultura de Campos, Campos, Rio de Janeiro	1330	500
ZYA2	Radiofusora Matogrossense, Corumba, Mato Grosso	1470	500
PRG6	Sociedade Mantiqueira, Cruzeiro, Sao Paulo	640	500
PRB2	Club Paranaense, Curityba, Parana	1440	5000
ZYB6	Voz de Formiga, Formiga, Minas Geraes	1530	100

• • • SOUTH AMERICAN STATIONS • • •

Call Letters	Station Name—Owner and Location, City	Frequency Kilocycles	Power Watts
PRE9	Ceara Radio Club, Fortaleza, Ceara	1320	2000
		6105, 15165	2000
PRB5	Club Hertz, Franca, Sao Paulo	1240	250
PRD9	Radiodifusora Itapetininga, Itapetininga, Sao Paulo	970	250
ZYA7	Club de Itarare, S. A., Itarare, Sao Paulo	1550	100
PRG4	Club de Jaboticabal, Jaboticabal, Sao Paulo	1250	250
PRG7	Club de Jauense, Jau, Sao Paulo	1010	250
ZYA5	Radiodifusora de Joinville, Joinville, Santa Catarina	1600	100
PRI4	Tabajara da Paraiba, Joao Pesson, Parahyba	1110	10000
PRB3	Sociedade de Juiz de Fora, Juiz de Fora, Minas Geraes	1010	500
PRJ5	Educadora de Limeira, Limeira, Sao Paulo	1550	100
ZYB3	Lins Radio Club, S. A., Lins, Sao Paulo	1550	100
PRF6	Government, Manaus, Amazonas	4895	100
PRI2	Club de Marilia, Marilia, Sao Paulo	1090	500
ZYB5	Educadora de Natal, S. A., Natal, Rio Grande do Norte	1270	1000
PRD8	Club Fluminense, Nictheroy, Rio de Janeiro	1320	1000
PRE6	Sociedade Fluminense, Nictheroy, Rio de Janeiro	1470	1000
PRJ4	Educadora de Parnaiba, Parnaiba, Piaui	1470	500
ZYB4	Radio Club de Patos, Patos, Minas Geraes	1530	100
PRC3	Sociedade Pelotense, Pelotas, Rio Grande do Sul	580	250
PRH4	Radio Culture, Pelotas, Rio Grande do Sul	1320	500
PRD3	Petropolis Radiodifusora S. A., Petropolis, Rio de Janeiro	1480	1000
PRD6	Club de Piracicaba, Piracicaba, Sao Paulo	820	250
PRH5	Club Pocos de Caldas, Pocos de Caldas, Minas Geraes	1160	250
PRJ2	Club Pontagrossense, Ponta Grosso, Parana	1240	500
PRC2	Sociedade Gaucha, Porto Alegre, Rio Grande do Sul	680	5000
PRF9	Radiodifusora Porto Alegrense, Porto Alegre, Rio Grande do Sul	640	5000
PRH2	Sociedade Farroupilha, Porto Alegre, Rio Grande do Sul	600	25000
PRJ7	Club de Pousa Alegre, S. A., Pousa Alegre, Minas Geraes	1530	100
PRI5	A Voz do Sertao, Presidente Prudente, Sao Paulo	970	250
PRA8	Club de Pernambuco, Recife, Pernambuco	720	25000
PRA7	Club de Ribeirao Preto, Ribeirao Preto, Sao Paulo	730	500
PRH7	Louzada, Bueno & Cia., Riberirao Preto, Sao Paulo	1170	...
PRF2	Club de Rio Clara, Rio Clara, Sao Paulo	1460	250
PRA2	Ministerio Educacao e Saude Publica, Rio de Janeiro, Federal District	800	25000
PRA3	Club do Brasil, Rio de Janeiro, Federal District	860	10000
PRA9	Sociedade Mayrink Veiga, Rio de Janeiro, Federal District	1220	25000
PRB7	Sociedade Radio Educadora do Brasil, Rio de Janeiro, Federal District	900	5000
		6200, 9610, 15370	25000
PRC8	Sociedade Guanabara, Rio de Janeiro, Federal District	1360	5000
PRD2	Sociedade Radio Cruzeiro do Sul, Rio de Janeiro, Federal District	1060	10000
PRD5	Instituto Educacao do Distrito Federal, Rio de Janeiro, Federal District	1400	1000
PRE2	Sociedade Vera Cruz, Rio de Janeiro, Federal District	1430	20000
PRE3	Transmissora Brasileira, Rio de Janeiro, Federal District	1180	10000
PRE8	Sociedade Radio Nacional, Rio de Janeiro, Federal District	980	25000
PRF4	Jornal do Brasil S. A., Rio de Janeiro, Federal District	940	10000
PRG3	Tupy do Rio de Janeiro, Federal District	1280	10000
PRH8	Ipanema S. A., Rio de Janeiro, Federal District	1120	5000
PRB8	Rio Preto S. A., Rio Preto, Sao Paulo	640	250



**• • • SOUTH AMERICAN STATIONS • • •**

Call Letters	Station Name—Owner and Location, City	Frequency Kilocycles	Power Watts
PRB4	Club de Santos, Santos, Sao Paulo	1450	1000
PRG5	Sociedade Radio Atlantica, Santos, Sao Paulo	580	750
ZYA6	Sao Carlos, S. A., Sao Carlos, Sao Paulo	1590	100
PRJ9	Radiodifusora do Estado, Sao Luis, Maranhao	1490	5000
PR16	Club Sao Manoel, Sao Paulo	1510	100
ZYA4	Radiodifusora Paraisense, S. A., Sao Sebastiao do Paraiso	1510	100
PRD7	Club de Sorocaba, Sorocaba, Sao Paulo	1080	500
ZYA8	Club Sorocaba, Sorocaba, Sao Paulo	1590	100
PRA5	Sao Paulo, Sao Paulo, Sao Paulo	1260	5000
PRA6	Sociedade Radio Educadora Paulista, Sao Paulo, Sao Paulo	890	10000
PRB6	Sociedade Radio Cruzeiro do Sul, Sao Paulo, Sao Paulo	1200	10000
PRB9	Sociedade Record, Sao Paulo, Sao Paulo	1000	25000
PRE4	Sociedade Cultura "Voz de Espaco," Sao Paulo, Sao Paulo	1300	5000
PRE7	Sociedade Radio Comos, Sao Paulo, Sao Paulo	1410	5000
PRF3	Difusora Sao Paulo, Sao Paulo	960	5000
PRG2	Tupy de Sao Paulo, Sao Paulo, Sao Paulo	1040	25000
PRG9	Excelsior, Sao Paulo, Sao Paulo	1100	25000
PRH3	Piratinga, Sao Paulo, Sao Paulo	620	5000
PRH9	Sociedade Bandeirante, Sao Paulo, Sao Paulo	840	5000
ZYB7-8-9	Radiodifusora de Sao Paulo, Sao Paulo, Sao Paulo	6095, 11765, 25000	15155
PRE5	Sociedade Triangulo Mineiro Uberaba, Minas Geraes	1390	500
PRC6	Radiodifusora Brasileira, S. A., Uberlandia, Minas Geraes	1510	100
ZYB2	Club de Varginha, Ltd., Varginhas, Minas Geraes	1590	100
PR19	Club do Espirito Santo, Victoria, Espirito Santo	1350	100
PRF5	Comp. Radio Internacional Brasil, Rio de Janeiro, Federal District	6105, 9500, 9600	
		10220, 15190	12000
PRA8	Club de Pernambuco, Recife, Pernambuco	6012	5000

**BRITISH GUIANA**

Call Letters	Owner and Location	Frequency Kilocycles	Power Watts
ZFY	British Guiana United Broadcasting Co., Georgetown	6130	650

**CHILE**

Call Letters	Station Name	Location	Owner	Frequency Kilocycles	Power Watts
CA63	Radio Esmeralda	Iquique	Antonio Cajiao	630	250
CA90	Radio Ynesta	Tocopilla	Hilda Cueller	900	100
CA96	La Voz del Norte	Coquimbo	Cesar Nieme Apey	960	200
CA127	La Voz del Norte	Antofagasta	Raquel Palma de Pedreni	1270	100
CA141	Radio El Loa	Antofagasta	Angel Garcia & Co.	1410	1000
CB57	Soc. Nac. de Agriculture	Santiago	Soc. Nac. de Agriculture	570	10000
CB62	Radio Chilena	Santiago	International Machinery Co.	620	1500
CB64	La Union de Recreo	Vina Del Mar	Adriano Iz	640	1000
CB68	Radio Metro	Vina Del Mar	Renard & Garcia Tello	680	1000
CB76	Cooperative Vitalicia	Santiago	Soc. Cooperative Vitalicia	760	10000

• • • **SOUTH AMERICAN STATIONS** • • •

Call Letters	Station Name	Location	Owner	Frequency Kilocycles	Power Watts
CB78	Cooperative Vitalicia	Valparaiso	Soc. Cooperative Vitalicia	780	10000
CB84	Radio del Pacifico	Valparaiso	Angel Prieto	840	1000
CB89	Otto Becker	Santiago	Bernardo & Otto Becker	890	1000
CB93	Radio Hucke	Santiago	Orlandini & Raggio, Ltd.	930	1000
CB90	El Mercurio	Valparaiso	Empresa Periodistica El Mercurio	900	1000
CB97	Radio S.I.A.M.	Santiago	Soc. Industrial de Maquinaria	970	1000
CB101	Radio Mayo	Santiago	Felix Bewais & Cia.	1010	1000
CB103	Univ. Tecnica Sta. Maria	Valparaiso	Fundacion Santa Maria	1030	400
CB106	Sud America	Santiago	Manuel Casablanca	1060	1000
CB111	Radio Los Castanos	Vina del Mar	Joaquin Venegas	1110	1000
CB113	Radio de Quillota	Valparaiso	Vargas & Salinas	1130	1000
CB114	Radio del Pacifico	Santiago	Ricardo Vivado	1140	1000
CB116	Radio Valparaiso	Valparaiso	Oscar Cornejo Harker	1160	1000
CB118	Radio Nacional	Santiago	Asmusen, Blanco & Cia.	1180	1000
CB120	Diario La Union	Valparaiso	Jiles & Cia.	1200	1000
CB124	Radio Espana	Valparaiso	Ramon & Fernando Garcia & Co.	1240	250
CB126	Radio Carrera	Santiago	Soc. Chilena Radiodifusora, S. A.	1260	1000
CB130	Radio "La Americana"	Santiago	Lehman & Becker	1300	2000
CB132	Radio "Wallace"	Valparaiso	David Wallace	1320	1000
CB134	Radio Cervantes	Santiago	Amilear Locci J.	1340	1000
CB138	"El Mercurio"	Santiago	Emp. Periodistica "El Mercurio"	1380	15000
CB140	Onda Azul	San Antonio	Soc. Radiodifusora Onda Azul, Ltd.	1400	100
CB144B	Radio O'Higgins	Santiago	Bogolowski & Cia.	1440	2000
CB144C	Radio Moraga & Cia.	Santiago	Miguel Torres de la Fuente	1440	100
CB147	Radio Continental Vitalicia	Valparaiso	Luis Falcone	1470	100
CB150		Santiago		1500	50000
CE960	Radio "La Americana"	Santiago	Lehmann & Becker	9600	100
CE970	Cooperative Vitalicia	Valparaiso	Soc. Cooperative Vitalicia	9700	10000
CE1170	Radio Otto Becker	Santiago	Bernardo & Otto Becker	11700	150
CE1174	Radio Hucke	Santiago	Orlandini & Raggio	11740	1000
CE1180	Soc. Nac. de Agriculture	Santiago	Soc. Nac. de Agricultura	11800	1000
CC63	Radio Central	Rancagua	Manuel Massoni	630	1000
CC64	Diario El Sur	Concepcion	Mario Saez	640	1000
CC67		Talca	Ramon Abasolo	670	100
CC84	Radio Cultura	Talcahuano	Rancisco Morales	840	100
CC96	Radio Curico	Curico	Alberto Guerra	960	100
CC109	Radio Rancagua	Rancagua	Jorge Romero	1090	1000
CC117	Radio Zenith	Concepcion	Federico Sanchez	1170	1000
CC121		Los Angeles	Frederico Sanchez	1210	1200
CC127	Radio Aliviol	Chillan	Rafael Barrios	1270	100
CC133	Radio La Discusion	Chillan	Miguel Arrau	1330	150
CC141	Radio "Patria"	Concepcion	Pedro Lopez de Heredia	1410	100
CC143	Radio Atlantida	Talca	Enrique Garcia	1430	100
CC145	Radio La Colmena	Rancagua	Ramon Caceres	1450	100
CD69	Radio Sur	Valdivia	Soc. Radio-Emisoras "Sur de Chile"	690	1000
CD84	Soc. Agricola & Granadera de Osorno	Osorno	Soc. Agricola & Ganadera de Osorno	840	1500
CD90	La Frontera	Temuca	Daniel de Mayo	900	100
CD101	Radio Llanguihue	Puerto Montt	Soc. Radio-Emisoras "Sur de Chile"	1010	1000

• • • SOUTH AMERICAN STATIONS • • •

Call Letters	Station Name	Location	Owner	Frequency Kilocycles	Power Watts
CD103	Radio Magallanes	Magallanes	Ramon Verde Ramos	1030	100
CD111	Radio Austral	Magallanes	Emilio Turina	1110	100
CD113		Punta Arenas	Julio Femenina Loyola	1130	1000
CD125	Radio Temuco	Temuco	Jorge Spano Riffo	1250	100
CD132	Radio Baguedano	Valudivia	Carlos Cockbaine	1320	100
CD136	La Voz del Sur	Punta Arenas	Ines Diez Paz	1360	100
CD147	Radio Aliviol	Puerto Montt	Ernesto Riedel	1470	100
CE1190	Radio Sur	Valdivia	Soc. Radio-Emisoras "Sur de Chile"	11900	250

**COLOMBIA**

Call Letters	Location	Owner	Frequency Kilocycles	Power Watts
HJ-FX	Manizales	Antonio Pinzon H.	600	1000
HJ-CU	Bogota	Cristobal Paez	720	5000
HJ-CI	Bogota	Manuel J. Gaitan	810	2500
HJ-CC	Bogota	Gustavo Uribe Th.	870	5000
HJ-CS	Bogota	Cia. de Radiodifusion	920	50000
HJ-CM	Bogota	Colombia Broadcasting	970	500
HJ-CZ	Bogota	Cipriano Rios Hoyos	1040	2500
HC-CG	Bogota	Julio Bernal	1060	500
HJ-AH	Barranquilla	Emisora Atlantico	1080	1000
HJ-EE	Cali	Jose T. Calderon	1090	500
HJ-CB	Bogota	Colombia Broadcasting	1105	1000
HJ-GE	Bucaramanga	Gustavo Sorzano	1130	1000
HJ-BJ	Santa Marta	Julio A. Sanchez	1140	500
HJ-DT	Medellin	Alfonso Jaramillo	1150	500
HJ-EB	Cali	Eduardo Cordoba	1150	500
HJ-CO	Bogota	Jesus M. Garcia	1160	1000
HJ-AN	Barranquilla	Paez, Reina & Bernal	1190	1000
HJ-CR	Bogota	Gobierno Nacional (Cultural)	1200	5000
HJ-FM	Armenia	Botero & Compania	1210	500
HJ-CE	Bogota	Gustavo Uribe Th.	1220	1000
HJ-EO	Cartago	Daniel Benitez	1280	500
HJ-AF	Cartagena	I. boratorios Fuentes	1240	500
HJ-DK	Medellin	Cia. Colombia de Radio-difusion	1250	500
HJ-EL	Cali	Hernando Bueno	1260	500
HJ-BC	Cucuta	Pompilio Sanchez	1270	500
HJ-AT	Barranquilla	Delfina V. De Haayen	1275	1000
HJ-GK	Bucaramanga	Francisco A. Bueno	1280	500
HJ-DA	Medellin	Humberto Restrepo A.	1285	500
HJ-CK	Bogota	Arez & Tobon Sierra	1290	500
HJ-EC	Cali	Rafael Angulo	1300	500
HJ-AK	Barranquilla	Vassallo E. Hijos & Mendez	1310	500
HJ-DQ	Medellin	Cia. Ant. de Radiodifusion	1320	750
HJ-AA	Barranquilla	Alfonso Rosales Navarro	1330	500
HJ-CN	Bogota	Roberto Laignelet	1335	500
HJ-EF	Cali	Hernando Bueno	1340	250
HJ-FF	Pereira	Antonio Giraldo	1350	500
HJ-DC	Medellin	Francisco Guartas	1350	500
HJ-HA	Pasto	Sociedad Radio Nariro	1350	500

• • • SOUTH AMERICAN STATIONS • • •

Call Letters	Location	Owner	Frequency Kilocycles	Power Watts
HJ-AI	Barranquilla	Julian Melendez	1370	500
HJ-EN	Cali	Alfonso Mesa Vargas	1370	500
HJ-DR	Medellin	Torres Toro	1380	500
HJ-CJ	Bogota	Manuel J. Gaitan	1380	500
HJ-EA	Popayan	Jesus Armando Ormaza	1385	500
HJ-FD	Manizales	Cia. Radio Manizales	1390	750
HJ-AR	Cartagena	Lequerica Hermanos	1400	500
HJ-BA	Pamplona	Gonzalo Vargas	1400	100
HJ-BH	Santa Marta	Manuel C. Conde	1410	500
HJ-EI	Buga	Hernando Bueno	1410	100
HJ-AC	Magangue	Manuel Agustin Varela	1420	100
HJ-EK	Tulua	Eduardo Cardeazabal	1430	100
HJ-FL	Ibague	Luis E. Martinez	1440	100
HJ-AD	Cartagena	Laboratorios Fuentes	1440	250
HJ-EG	Popayan	Mercedes M. De Valencia	1450	500
HJ-EJ	Palmira	Daniel Benitez	1460	500
HJ-CL	Girardot	Carlos J. Sanchez G.	1460	100
HJ-BE	Cienaga	Elvira De Pereira	1460	250
HJ-AL	Monteria	Julio Cesar Patino	1465	500
HJ-FE	Pereira	Cesar & Mario Arango	1470	500
HJ-DL	Medellin	Alberto Estrada	1480	500
HJ-DU	Medellin	Universidad de Antioquia (Cultural)	1490	250
HJ-AS	Barranquilla	Miguel A. Ruiz	1500	250
HJ-FO	Ibague	Vicente Caitan Rondon	1500	100
HJ-FJ	Aguadas C.	Roberto Florez (Cultural)	1500	25
HJ-EM	Cali	Arturo Salazar	1510	500
HJ-DM	Medellin	Cia. Antioquena de Radiodifusion	1520	1000
HJ-BF	Ocana	Luis Linero	1525	100
HJ-CP	Guaduas	Ruperto Aguilera Leon (Cultural)	1530	250
HJ-FI	Armenia	Angel & Jaramillo	1540	500
HJ-EH	Santander	Escuela Rafael Tello (Cultural)	1550	175
HJ-FB	Manizales	Cia. Radio Manizales	4765	750
HJ-GB	Bucaramanga	Francisco A. Bueno	4775	2500
HJ-AB	Barranquilla	Paez, Reina & Bernal	4785	2500
HJ-DX	Medellin	Francisco Cuartas	4795	750
HJ-DG	Quibdo	Intend. Del Choco (Cultural)	4805	500
HJ-BB	Cucuta	Pompilio Sanchez	4815	750
HJ-ED	Cali	Eduardo Cordoba	4825	750
HJ-FH	Armenia	Botero & Compania	4875	500
HJ-DP	Medellin	Cia. Ant. De Radiodifusion	4885	1000
HJ-CH	Bogota	Manuel J. Gaitan	4895	750
HJ-AG	Barranquilla	Emisora Atlantico	4905	750
HJ-AP	Cartagena	Lequerica Hermanos	4925	750
HJ-CW	Bogota	Jesus M. Garcia	4935	750
HJ-CQ	Bogota	Ministerio de Economia Nal. (Cultural)	4955	150
HJ-AE	Cartagena	Laboratorios Fuentes	4965	750
HJ-CX	Bogota	Cipriano Rios Hoyos	6018	750
HJ-FA	Pereira	Cesar & Mariq Arango	6054.3	700
HJ-CF	Bogota	Gustavo Uribe Th.	6073	750
HJ-FK	Pereira	Sociedad La Voz Amiga	6097	2500
HJ-DE	Medellin	Cia. Colombia de Radio-difusion	6145	5000
HJ-CD	Bogota	Colombia Broadcasting	6160	750
HJ-CA	Bogota	Cristobal Paez	9540	5000
HJ-CT	Bogota	Cobierno Nacional	9630	2500

• • • SOUTH AMERICAN STATIONS • • •

**ECUADOR**

Call Letters	Owner	Station Name	Location	Frequency Kilocycles	Power Watts
HC2AJ.....	Odalía Arauz de G. ....	Radio Guayaquil .....	Guayaquil	.900	100
HCJB.....	Alfonso Vilmot .....	Ondas del Pacífico.....	Guayaquil	.900	25
HC2CW.....	Clarence W. Jones .....	La Voz de Quito.....	Quito	.973	50
HC2OAD...	Cia. Radidifusora del Ecuador .....	Cia. Radidifusora del Ecuador .....	Guayaquil	1050	1000
HC2ET.....	Empresa "El Telegrafo" ....	Diario "El Telegrafo" ..	Guayaquil	.1131	100
HC2JSB....	Juan S. Behr .....	Ecuador Radio .....	Guayaquil	.1250	200
HC2RB.....	Erik Williams .....	La Voz del Litoral.....	Guayaquil	.1250	200
HC1ETC....	Manuel Mantilla .....	Radio Teatro Bolívar.....	Quito	.1304	300
HCQR.....	Carlos Mantilla .....	Radio Quito .....	Quito	.1330	300
HC2AU.....	Augusto Alvarado O. ....	Radio Atalaya .....	Guayaquil	.1350	200

**Short Wave Stations**

HCJB4.....	Pedro Zambrano Barcia ....	La Voz de Manabí ....	Portoviejo	3645	80
HC1GQ.....	Cia. del Ferrocarril del Sur..	Nariz del Diablo .....	Quito	3710	80
HC1IM.....	Concejo Municipal .....	La Voz de Imbabura .....	Ibarra	4020	300
HCJB.....	Clarence W. Jones .....	Broadcast Provincial.....	Quito	4107	200
HC1AO.....	Octavio Espinosa, José Heredia Crespo .....	La Voz de Tomebamba.....	Cuenca	4200	200
HC1VT.....	Concejo Municipal .....	La Voz del Tungurahua.....	Ambato	4300	250
HC1PM.....	Leonardo Ponde .....	El Palomar .....	Quito	5725	150
HC1QRX....	Carlos Mantilla .....	Radio Quito .....	Quito	5970	300
HC2JSB....	Juan S. Behr .....	Ecuador Radio .....	Guayaquil	7845	300
HC2CW.....	Alfonso Vilmot .....	Ondas del Pacífico.....	Guayaquil	8400	50
HC1GQ.....	Cia. del Ferrocarril del Sur..	Nariz del Diablo .....	Quito	9163	150
HC2ET.....	Empresa "El Telegrafo" ....	Diario "El Telegrafo" ..	Guayaquil	9200	300
HC1ETC....	Manuel Mantilla .....	Radio Teatro Bolívar.....	Quito	9350	300
HC2AK.....	Cia. Radio Difusora del Ecuador .....	Cia. Radiodifusora del Ecuador .....	Guayaquil	9377	1000
HC2OAD...	Odalía Arauz de G.....	La Voz del Alma .....	Guayaquil	9400	200
HCJB.....	Clarence W. Jones.....	La Voz de los Andes.....	Quito	12455	10000

**PARAGUAY**

Call Letters	Station Name—Owner—Location	Frequency Kilocycles	Power Watts
ZP1.....	Radio El País—Atilo C. Bajac, Asuncion.....	970	100
ZP4.....	Radio Continental—Isern & Sacarello, Asuncion .....	730	100
ZP5.....	Radio Paraguay—Alfonso Sa, Asuncion.....	1360	100
ZP6.....	Radio Livieres—Jordon Livieres, Asuncion...	1300	100
ZP11.....	Radio Charitas—Juventud Antoniana, Asuncion .....	1200	100
ZP10.....	Noriega Hnos. & Franco, Asuncion.....	1330	100
ZP17.....	Haneman Hnos., Asuncion .....	1030	100
ZP7.....	La Voz del Aire—Julio Coriolot, Encarnacion.	900	

**Short Wave Stations**

ZPA1.....	Peruvian Government, Asuncion.....	6070	3000
ZPA2.....	Teleco Paraguaya, S. A., Asuncion.....	11721	5000
ZPA6.....	Teleco Paraguaya, S. A., Asuncion.....	7890	5000
ZPA7.....	Teleco Paraguaya, S. A., Asuncion.....	15780	5000
ZPO3.....	Teleco Paraguaya, S. A., Asuncion.....	13333	5000

• • • SOUTH AMERICAN STATIONS • • •

**PERU**

Call Letters	Owner	Station Name	Location	Frequency Kilocycles	Power Watts
OAX4A	Government	Radio Nacional	Lima	850	10000
OAX4E	Ing. Juan P. Goicochea	Radio Goicochea	Lima	960	250
OAX4F*	Armando Ortiz Lambert	Radio Mundial	Lima	1080	250
OAX4C	Alvarado & Urteaga	Radio Callao	Callao	1160	500
OAX4B	Empres Peruana Parlante	Radio Lima	Lima	1200	250
OAX4L	Radio Miraflores	Radio Miraflores	Miraflores	1250	200
OAX4I	Radio Internacional	Radio Internacional	Lima	1320	250
OAX6C	J. Antonio Umbert F.	Radio Continental	Arequipa	1370	250
OAX5B	Luis de los Heros & Rios	Radio Universal	Ica	1460	200

**Short Wave Stations**

OAX2A	Rafael Larco Hoyle	Radio La Nacion	Trujillo	6000	250
OAX4P	Alfredo Elejalde Granados	Radio Huancayo	Huancayo	6200	250
OAX6B	Maximo J. Landa	Radio Landa	Arequipa	6035	150
OAX6A	Jorge E. Olazabel	Radio Arequipa	Arequipa	6050	100
OAX6E	J. Antonio Humbert F.	Radio Continental	Arequipa	6055	300
OAX4Z	Government	Radio Nacional	Lima	6082	15000
OAX4H*	Armando Ortiz Lambert	Radio Mundial	Lima	6095	1000
OAX3A	Victor Priano Storace	Radio Huanuco	Huanuco	6115	400
OAX7A	Carlos Lizarraga Fisher	Radio Cuzco	Cuzco	6128	100
OAX1A	Jose Carlos Montjoy D.	Radio Delcar	Chiclayo	6150	200
OAX4G	Empresa Peruana Parlante	Radio Lima	Lima	6190	250
OAX6D	J. Antonio Umbert F.	Radio Continental	Arequipa	9500	250
OAX4J	Radio Internacional	Radio Internacional	Lima	9520	200
OAX4K	Ing. Juan P. Goicochea	Radio Goicochea	Lima	9545	250
OAX4T	Government	Radio Nacional	Lima	9562	10000
OAX5C	Luis de los Heros & Rios	Radio Universal	Ica	9590	200

**URUGUAY**

Call Letters	Station Name	Location	Owner	Frequency Kilocycles	Power Watts
CW1	Radio Popular	Real de San Carlos	Colonias Bernotti y Montellano	550	4500
CW3	Radio Rural del Uruguay	Florida	Rodolfo J. Caissiol	580	300
CX4	Direccion de Agronomia	Montevideo	Direccion de Agronomia	610	5000
CW7	Radio Carmelo	Carmelo-Colonia	Alberto Pablo Brouard	640	250
CX6	Estacion Oficial	Montevideo	S.O.D.R.E.	650	20000
CW27	Radio Tabare	Salto	Luis Batlle Berres	680	250
CX8	Radio Jackson	Montevideo	Ramon Puyal	690	500
CX10	Radio Ariel	Montevideo	Ferrera, Gestoso y Cia.	730	1000
CX12	Radio Oriental	Montevideo	Luis A. Artola	770	5000
CX14	El Espectador	Montevideo	Difusoras El Espectador	810	5000
CW23	Radio Cultural	Salto	Domingo Giordano	820	250
CX16	Radio Carve	Montevideo	S.A.D.R.E.P.	850	10000
CX18	Radio Sport	Montevideo	Difusoras El Espectador	890	5000
CX20	Radio Montecarlo	Montevideo	Carlos L. Romay	930	2000
CX22	Radio Universal	Montevideo	Harispiru Hnos	970	1500
CX24	La Voz del Aire	Montevideo	S.A.D.R.E.P.	1010	2500
CX26	Radio Uruguay	Montevideo	A. Canepa y Cia.	1050	2000
CX28	Radio Imparcial	Montevideo	Walfrido Figueira Moran	1090	3000
CW31	Salto Broadcasting	Salto	Salvador E. Pera	1120	250
CX30	Radio Nacional	Montevideo	Silva y Larrea	1130	1000

• • • **SOUTH AMERICAN STATIONS** • • •

Call Letter	Station Name	Location	Owner	Frequency Kilocycles	Power Watts
CX32	Radio Aguila	Montevideo	Compania Uruguaya de Publicidad S. A.	1170	500
CW33	Difusora Florida	Florida	Omar F. Barreiro	1200	75
CX34	Radio Artigas	Montevideo	A. Canepa y Cia.	1210	500
CW35	Paysandu Broadcasting	Paysandu	Buenaventura Malher y Ordoqui	1240	250
CX36	Centenario Brdcstng.	Montevideo	Vaquez y Walder	1250	250
CX38	Estacion Oficial	Montevideo	S.O.D.R.E.	1290	5000
CW39	La Voz de Paysandu	Paysandu	Miguel Penna	1320	100
CX40	Radio Fenix	Montevideo	Julio J. Rabassa	1330	500
CW19	Difusora Rochense	Rocha	Juan J. Harispuru y Abel Machado	1340	50
CW19A	Radio Charrua	Rivera	Jorge Dowton Garcia	1340	60
CW41	Brdcstng. San Jose	San Jose	Juan J. Harispuru y Pedro Bruccoleri	1360	50
CX42	Tribuna Sonora	Montevideo	Hector Verrazza	1370	500
CW45	Difusora Treinta y Tres	Treinta y Tres	Marroche, Lacurcia y Rodriguez	1390	60
CW46A	Difusora Zorrilla de San Martin	Facuarembó	Luis S. Dini	1400	2000
CX44	Radio Montevideo	Montevideo	Julio J. Rabassa	1410	250
CW25	Radio Durazno	Durazno	Artola, Evangelisti y Cia.	1430	500
CX46	Radio America	Montevideo	Guzman Bortacchi	1450	1500
CW46B	Liceo de Dolores	Dolores-Soriano	Roberto Taruselli	1460	50
CW47	Radio Canelones	Canelones	Julio J. Rabassa	1470	300
CW43B	Radio Internacional	Rivera	Walfrido Figueira	1480	300
CW43	Radio Lavalleja	Minas	Volante y Harispuru	1480	100
CX48	Radio Femenina	Montevideo	Vazquez y Cia.	1490	1500
CW47A	Radio Welcome	San Jose	Fasola, Rios y Tiboni	1510	100
CX50	Radio El Mundo	Montevideo	Bernardino Ayala	1530	300
CX52	Radio Litoral Soriano	Mercedes	Anibal Frabasile, Juan Orlando Kelly, Jose Pedro Irigaray y Florencio Donato Montero	1570	50

**Short Wave Stations**

CXA2	Radio Continental	Montevideo	Racine y Schmidt	6000	5000	
CXA30	Radio Nacional	Montevideo	Silva y Larrea	6035	1000	
CXA3	(Proyectada)	Montevideo	Leon y Lanieira	6075	2500	
CXA4	Estacion Oficial	Montevideo	S.O.D.R.E.	6125	5000	
CXA21	Radio Fenix	Montevideo	Julio J. Rabassa	6170	1000	
CXA1	Estacion Oficial	Montevideo	S.O.D.R.E.	6200	50	
CX14	El Espectador	Montevideo	El Espectador	7330	50	
CXA6	Estacion Oficial	Montevideo	S.O.D.R.E.	9620	20000	
CXA8	Radio Real de San Carlos	Real de San Carlos	Colonía	Jaime Yankelevich	9640	5000
CX14	El Espectador	Montevideo	El Espectador	10000	20	
CXA19	El Espectador	Montevideo	El Espectador	11705	1000	
CXA14	Radio Real de San Carlos	Real de San Carlos	Colonía	Jaime Yankelevich	11820	1000
CXA10	Estacion Oficial	Montevideo	S.O.D.R.E.	11895	20000	
CXA18	Estacion Oficial	Montevideo	S.O.D.R.E.	15300	20000	
CXA11	Estacion Oficial	Montevideo	S.O.D.R.E.	27000	2500	
CXA22	Estacion Oficial	Montevideo	S.O.D.R.E.	29500	2500	
CXA23	Estacion Oficial	Montevideo	S.O.D.R.E.	43500	2500	
CXA24	Estacion Oficial	Montevideo	S.O.D.R.E.	58000	2500	

• • • SOUTH AMERICAN STATIONS • • •

**VENEZUELA**

Call Letters	Station Name	Location	Owner and Director of Station	Frequency Kilocycles	Power Watts
YV5RI	Radio Continente	Caracas	Oscar Vicentelli Oscar Vicentelli	590	1750
YV5RH	La Voz de La Petria	Caracas	Mons. J. M. Pellin Mons. J. M. Pellin	720	1500
YV5RB	Radiodifusora Venez.	Caracas	Degwitz & Siblesz H. Degwitz	790	7250
YV5RQ	Radio Libertador	Caracas	Jesusa Gonzales A. Jose Gil Borges	880	1820
YV5RA	Radio Caracas	Caracas	Cia. Anonima Almacen Americano Ricardo Espina	960	13000
YV2RB	La Voz del Tachira	San Cristobal	Jesus Diaz Gonzalez Jesus Diaz Gonzalez	980	500
YV5RG	Ondas Populares	Caracas	Gonzalo Veloz M. Gonzalo Veloz M.	1010	1480
YV5RZ	Emisora Vargas	La Guaira	Gonzalo Veloz Mancera Gonzalo Veloz Mancera	1050	770
YV6RE	Ondas del Neveri	Barcelona	L. J. Arreaza Almenar L. J. Arreaza Almenar	1080	300
YV1RF	Ondas del Lago	Maracaibo	N. Vale Quintero N. Vale Quintero	1120	845
YV1RD	Radiodifusora Maracaibo	Maracaibo	G. Govea & G. Nouel Guillermo Govea	1150	308
YV5RL	Radio Tropical	Caracas	Ponce & Viggiani Ponce & Viggiani	1160	1150
YV3RE	Radio Barquisimeto	Barquisimeto	Amilcar Segura Amilcar Segura	1240	1175
YV1RK	Radio Popular	Maracaibo	Jose Higuera M. Rafael Rivera P.	1250	675
YV3RA	Radio America	Barquisimeto	Arturo Ramos M. Arturo Ramos M.	1270	264
YV1RA	Ecos del Zulia	Maracaibo	Luis Garcia Nebot Luis Garcia Nebot	1300	150
YV4RA	La Voz de Carabobo	Valencia	G. Degwitz G. Degwitz	1350	1280
YV1RW	Radio Coro	Coro	Roger Leyba Roger Leyba	1370	300
YV4RE	Radio Valencia	Valencia	Miguel Ache Miguel Ache	1400	1750
YV1RC	La Voz de la Fe	Maracaibo	Pedro A. Bermudez V. Pedro A. Bermudez V.	1400	800
YV6RA	Ecos del Orinoco	Ciudad Bolivar	E. Torres Valencia E. Torres Valencia	1400	960
YV4RL	Radio Maracay	Maracay	Atilio Ormezzano Atilio Ormezzano	1430	300
YV4RR	Radio Puerto Cabello	Puerto Cabello	Rafael A. Segura Rafael A. Segura	1470	800

**Short Wave Stations**

YV1RJ	Radio Falcon	Coro	Compania Anonima Jesus Romero	3300	300
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• • • SOUTH AMERICAN STATIONS • • •

Call Letters	Station Name	Location	Owner and Director of Station	Frequency Kilocycles	Power Watts
YV1RO	...Radio Trujillo	Trujillo	Pedro J. Torres	3310	1040
YV5RS	...Radio Libertador	Caracas	Pedro J. Torres Corp. Rayco	3360	1550
YV1RT	...La Voz de la Fe	Maracaibo	N. Vale Quintero Pedro A. Bermudez V.	3370	700
YV5RY	...Radio Continente	Caracas	Oscar Vicentelli	3380	1590
YV4RK	...Radio Maracay	Maracay	Oscar Vicentelli	3390	465
YV5RW	...Radio Tropical	Caracas	Atilio Ormezzano Ponce & Viggiani	3400	1150
YV3RX	...Radio America	Barquisimeto	Atilio Ormezzano Arturo Ramos Maggi	3410	1040
YV2RC	...La Voz de la Sierra	Merida	Arturo Ramos Maggi Amilcar Segura	3420	495
YV5RX	...La Voz de la Patria	Caracas	Roberto Straus Mons. J. M. Pellin	3430	2700
YV1RU	...Radiodifusora Maracaibo	Maracaibo	Pedro Vargas G. Govea & G. Nouel	3440	1900
YV6RC	...Ondas del Neveri	Barcelona	Guillermo Govea L. J. Arreaza A.	3450	465
YV4RP	...Radio Valencia	Valencia	L. J. Arreaza Miguel Ache	3460	1000
YV4RQ	...Radio Puerto Cabello	Puerto Cabello	Miguel Ache Rafael A. Segura	3480	885
YV3RF	...La Voz del Llano	Acarigua	Rafael A. Segura Pausides Sigala	3490	160
YV5RV	...Emisora Vargas	La Guaira	Luis Barrios Gonzalo Veloz M.	3500	350
YV1RV	...Ecos del Zulia	Maracaibo	Gonzalo Veloz M. L. Garcia Nebot	4750	300
YV4RO	...Radio Carabobo	Valencia	L. Garcia Nebot G. Degwitz	4760	300
YV1RY	...Radio Coro	Coro	G. Degwitz Roger Leyba	4770	312
YV3RN	...Radio Barquisimeto	Barquisimeto	Roger Leyba Amilcar Segura	4780	1250
YV6RU	...Ecos del Orinoco	Ciudad Bolivar	Amilcar Segura E. Torres Valencia	4790	960
YV1RX	...Ondas del Lago	Maracaibo	F. Torres Valencia N. Vale Quintero	4800	3080
YV1RL	...Radio Popular	Maracaibo	N. Vale Quintero J. A. Higuera M.	4810	300
YV2RN	...La Voz del Tachira	San Cristobal	Rafael Rivera Parra Jesus Diaz Gonzalez	4830	2000
YV1RZ	...Radio Valera	Valera	Jesus Diaz Gonzalez Pedro Flores Jelambi	4840	4840
YV5RU	...Ondas Populares	Caracas	Pedro Flores Jelambi Gonzalo Veloz M.	4860	2232
YV5RM	...Radiodifusora Venez.	Caracas	Gonzalo Veloz M. Degwitz & Siblesz	4890	7250
YV5RN	...Radio Caracas	Caracas	H. Degwitz Almacén Americano	4920	7550
			Ricardo Espina		

# STATIONS OF \_\_\_\_\_ \_\_\_\_\_ CENTRAL AMERICA

## BRITISH HONDURAS

Call Letters	Operated by and Location	Frequency Kilocycles	Power Watts
ZIK2 . . .	Government, Belize . . . . .	10600	200

## COSTA RICA

Call Letters	Owner and Location	Frequency Kilocycles	Power Watts
TI5JJM . . . . .	Emilio E. Martinez, Alajuela . . . . .	575	1500
TI4NRH . . . . .	Amando Cespedes M., Heredia . . . . .	710	750
TIRH . . . . .	Rafael Hine Ch., San Jose . . . . .	970	500
TIGPH2 . . . . .	Gonzalo Pinto H., San Jose . . . . .	800	3000
TIEP . . . . .	Eduardo Pinto H., San Jose . . . . .	830	3000
TIFA . . . . .	Francisco Arie, San Jose . . . . .	1000	250
TIGPH . . . . .	Gonzalo Pinto H., San Jose . . . . .	605	6500
TISMG . . . . .	Guillermo Zuniga R., San Jose . . . . .	1045	500
TILJ . . . . .	Lola Monge Peralta, San Jose . . . . .	775	450
TILS . . . . .	Luis Saenz Mata, San Jose . . . . .	880	5000
TIVP . . . . .	Narcisco Garcia, San Jose . . . . .	750	500
TIPG . . . . .	Claudia Martinez N., San Jose . . . . .	625	5000
TIRCC . . . . .	Carlos Borge, San Jose . . . . .	1200	500
TIRS . . . . .	Rogelio Sotela B., San Jose . . . . .	920	400
TIEP . . . . .	Eudardo Pinto, San Jose . . . . .	1225	3000
TIGP . . . . .	Jose Maria Pinaud, San Jose . . . . .	690	2000
TIHZ . . . . .	Heli Zuniga, San Jose . . . . .	1150	1000
TIOS . . . . .	Guillermo Castro Saenz, San Jose . . . . .	940	500
TINBC . . . . .	Oscar Martinez Nussbaumer, San Jose . . . . .	1070	5000
TIBAS . . . . .	Gonzalo Pinto H., San Juan de Tibas . . . . .	650	8000
TIMC . . . . .	Jorge Mario Cardos M., Cartago . . . . .	735	750

### Short Wave Stations

TI14NRH . . . . .	Amando Cespedes, Heredia . . . . .	9692	750
TIEP . . . . .	Eduardo Pinto H., San Jose . . . . .	6700	1000
TIGPH . . . . .	Gonzalo Pinto H., San Jose . . . . .	5875	1000
TIPG . . . . .	Claudia Martinez, San Jose . . . . .	9615	2000
TIRCC . . . . .	Carlos Borge, San Jose . . . . .	6180	300
TIRH . . . . .	Rafael Hine Ch., San Jose . . . . .	6150	250
TILS . . . . .	Luis Saenz Mata, San Pedro . . . . .	6165	2000
TIRVM . . . . .	Ruben Venegas Mora, Las Juntas de Abangarez . . . . .	6035	500
TIWS . . . . .	Manuel Campos J., Puntarenas . . . . .	6065	500

## GUATEMALA

Call Letters	Owner and Location	Frequency Kilocycles	Power Watts
TGW . . . . .	Radiodifusora Nacional, Guatemala City . . . . .	1520	10000
TGI . . . . .	Government, Guatemala City . . . . .	1310	300
TGX . . . . .	El Liberal Progresista (newspaper), Guatemala City . . . . .	1400	50
TGQ . . . . .	Government, Quezaltenango . . . . .	1450	300

• • • **CENTRAL AMERICAN STATIONS** • • •

**Short Wave Stations**

Call Letters	Owner and Location	Frequency Kilocycles	Power Watts
TGWA.....	Radiodifusora Nacional, Guatemala City.....	9685, 11760, 15170, 17800	10000
TGWB.....	Radiofusora Nacional, Guatemala City.....	6480	1000
TGWC.....	Radiodifusora Nacional, Guatemala City.....	2320, 760	1000
TG2.....	Government, Guatemala City.....	6190	300
TGX1.....	El Liberal Progresista (newspaper), Guatemala City.....	6100	50
TGQA.....	Government, Quezaltenango.....	6400	300

**HONDURAS**

Call Letters	Owner	Station Name	Location	Frequency Kilocycles	Power Watts
HRN.....	Rafael Ferrary.....	La Voz de Honduras..	Tegucigalpa	1450	500

**Short Wave Stations**

HRN.....	Rafael Ferrary.....	La Voz de Honduras..	Tegucigalpa	2437	500
HRD2.....	Genoveva v. de Castaneda.....	La Voz de Atlantida..	La Ceiba	6235	250
HRP1.....	Filiberto Diaz Zelaya..	Eco de Hondura.....	San Pedro Sula.	6351	100

**NICARAGUA**

Call Letters	Owner	Station Name	Location	Frequency Kilocycles	Power Watts
YNPH.....	Rodolfo Sengelmann ..	Radio Phillip.....	Managua	660	500

**Short Wave Stations**

YNJAT.....	Dr. Augustin Tijerino..	La Voz del Aire.....	Leon	5758	400
YNGU.....	Ernesto Gutierrez.....	Voz de Los Lagos.....	Managua	6340	50
YNOW.....	Mendoza & Bros.....	Voz de La America Central.....	Managua	6850	800
YNFT.....	Jose F. Tercero Z.....	La Voz de La Sultana..	Granada	7500	100
YNLT.....	Leonidas A. Tenoria....	La Voz del Mombacho..	Granada	7625	100
YNDG.....	Dionisio E. Gallo.....	Gilfilian.....	Leon	7660	200
YNRS.....	Rudolfo Sengelmann ..	Radio Nicaraguense ..	Managua	8590	500

**PANAMA**

Call Letters	Owner (and Station Name)	Location	Frequency Kilocycles	Power Watts
HOK.....	Jose Jaen & Jaen, La Voz de la Victor.....	Colon	640	250
HP5C.....	Radio Miramar.....	Panama City	730	100
HOQ.....	Agustin de Mena & Jose M. Herrera, Jr., Radio Nacional.....	Panama City	1250	250
HP6J.....	La Voz de Panama.....	Panama City	1358	250
HOC.....	Jose Jaen & Jaen.....	Panama City	1440	250

**Short Wave Stations**

HOA.....	Ron Dalley.....	Panama City	2310	500
HP5K.....	La Voz de La Victor.....	Colon	6005	1000
HP5B.....	Radio Miramar.....	Panama City	6030	100
HP5F.....	La Voz de Colon.....	Colon	6050	500
HP5H.....	La Voz del Pueblo.....	Panama City	6122	400
HP5J.....	La Voz de Panama.....	Panama City	9607	250
HP5A.....	Radio Teatro Estrella de Panama.....	Panama City	11700	1000
HP5G.....	Ron Dalley.....	Panama City	11780	800

• • • STATIONS IN THE WEST INDIES • • •

**BAHAMAS**

Call Letters	Owner	Location	Frequency Kilocycles	Power Watts
ZNS.....	Bahamas Government	Nassau	790	1000
			C.P.640	5000

**Short Wave Stations**

ZNS.....	Bahamas Government	Nassau	6090	600
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**CURACAO**

Call Letters	Owner	Location	Frequency Kilocycles	Power Watts
PJCI.....	Government of Curacao	Willemstad	9106	150
			5929	(C.P. 1000)

**DOMINICAN REPUBLIC**

Call Letters	Operator	Location	Frequency Kilocycles	Power Watts
HIN.....	J. M. Bonetti B.	Ciudad Trujillo	1090	150
HIX.....	Government	Ciudad Trujillo	950	800
HIZ.....	Frank Hatton	Ciudad Trujillo	1350	200
HI8Q.....	Julio Garcia A.	Ciudad Trujillo	1475	25

**Short Wave Stations**

HI1G.....	A. C. Puello	Ciudad Trujillo	6280	100
HI2G.....	A. C. Puello	Ciudad Trujillo	9290	100
HIL.....	F. C. Teixido	Ciudad Trujillo	6500	60
HI1N.....	J. M. Bonetti B.	Ciudad Trujillo	6243	700
HIT.....	F. A. Sanabia	Ciudad Trujillo	6630	100
HI1Z.....	Frank Hatton	Ciudad Trujillo	6316	100
HI1X.....	Government	Ciudad Trujillo	6206	300
HI6H.....	Emilio Garden, Jr.	Ciudad Trujillo	6115	100
HI8T.....	Raul Henriquez S.	Ciudad Trujillo	6122	30
HI3C.....	And. Herrero H.	La Romana	6105	30
HIH.....	D. Dominguez	San Pedro de Macoris	6780	250
HI1J.....	F. M. Donastorg	San Pedro de Macoris	6025	40
HI1A.....	Rafael Western	Santiago	6182	75
HI1L.....	Maria J. Tavares	Santiago	6480	100
HI1S.....	Generoso Sarnelli	Santiago	6420	200
HI3U.....	Fernando Bertran	Santiago	6015	100
HI9B.....	J. L. Sanchez	Santiago	6383	200
HI9T.....	Luis A. Pelegrin	Puerto Plata	6170	100

**PAN-AMERICAN NETWORK DATA**

**CBS PAN-AMERICAN NETWORK—see page 858**

**CADENA RADIO INTER-AMERICANA (CRIA)-CROSLY CORP.—  
see page 860**

**NBC PAN-AMERICAN SERVICE—see page 861**

# NO DELAYS

**NEW "AUTOMATIC" \*  
POSTAL WIRES  
GET THERE FASTER**



**CALL**

# Postal Telegraph

For your convenience, charges  
for telegrams telephoned-in  
appear on your telephone bill.

*\*For descriptive folder — address Postal  
Telegraph, 157 Chambers St., New York  
or ask local branch manager.*

MARYLAND

Reported to: December 31, 1941

BALTIMORE city population now over 1,000,000. 1940 census: 859,100. June 1941 est

Practically all defense plants in this area, including the great shipbuilding plant, are open seven days a week.

The thousands of automobiles carrying defense workers have made a major factor in traffic congestion that the city has recently adopted drastic traffic regulations which have been prohibited everywhere in the business districts from 7:30 A.M. to 6:30 P.M.

The big industrial and shipbuilding plants have staggered the time of their opening. To relieve some of the congestion that has developed on routes leading to the plants, entirely new thoroughfares have been built or are now under construction. In regard to the Martin plant.

Some months ago the head of the collection department of the city was asked about collections. At that time he said they were few. The same question was asked just before this was written. "They are much better," was his reply. He said that conditions are better, money is coming in and were spending it.

A report just released to Ross Federal Service in cooperation with the United States Bureau of Economic Warfare shows that payrolls in the area last month were much higher than in November 1941. The level of employment in selected manufacturing plants in 1941 rose 30.8% above that of November 1940. Payrolls have for a long period shown a steady increase.

Federal Housing officials call the present major housing developments are the Federal Housing Administration. Five additional developments are already being opened to date. There are 250 trailers and 6 dormitory units.

B & O Railroad reports a 10% increase of 8537 employees in 1941 are reported.

BALTIMORE has these words in their Year's Report: "They are serving the city."

# THINGS ARE HAPPENING to the Radio Audience

For instance . . . in January 1942 there were 49% more people—a vastly increased radio audience—in Charleston, S. C., than the 1940 census showed. In San Diego, California, the rise is 47.7% in the same period.

And so it goes . . . in many of the country's key markets . . . as the quickening tempo of military and industrial activity shifts population and buying power in America's most dramatic market upheaval.

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18 East 48th Street

New York

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is the Ross Federal coincidental study that doesn't syphon up some important data. These little suspected facts will pay for the study many times over.

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##### OUTDOOR ADVERTISING CHECKING

##### TRAFFIC CHECKING

\*For a detailed presentation of Ross Federal's many research services write for a copy of *SOUNDINGS*.

# ROSS FEDERAL RESEARCH

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