THE FEBRUARY, 1935

A

RADIO INDEX

THE ALL-WAVE RADIO MAGAZINE

25c

A Study of Phones and Speakers
Analyzing a Short-Wave Receiver
The Network Programs, Hour by Hour
To the New Owner of an All-Wave Set
Monthly Calendar of the DX Programs

No. 86 N. S. E.

February 1, 1935

RADIO INDEX

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Technical Editor

PAGE TAYLOR
Short Wave Editor

ELEVENTH YEAR

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CONTENTS

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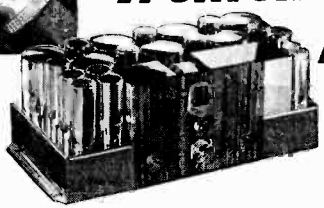
To Span Tremendous Miles..



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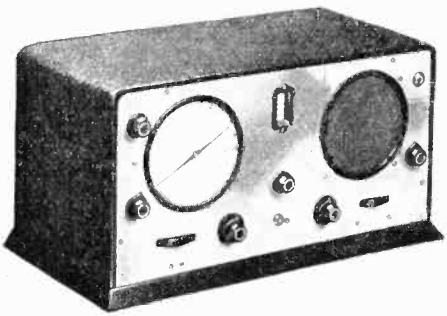

It would be like "painting the lily" to add anything to the expressions of these leaders in short-wave activity. *They know.* These unsolicited testimonials, considering the prominence and unquestioned integrity of the writers, can mean but one thing—the Super SKYRIDER is at the very peak among short-wave receivers. It is unquestionably the last word in a custom-built, "professionally-perfect" short-wave superheterodyne. *Many are trying to follow—but the SKYRIDER still leads!*

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a hallicrafters product

An Analysis of the Super "Skyrider"

• • • By B. FRANCIS DASHIELL

THE 1935 "Super Skyrider," a product of The Hallicrafters, Inc., is a remarkably compact short-wave receiver. It is entirely self-contained and self-powered. The weight of the complete set, in its neat table-type cabinet, is about 40 pounds, and it takes up but very little space. It is a 7-tube superheterodyne giving 9-tube performance because two of the new dual-purpose tubes are incorporated in the circuit. This receiver covers the entire short-wave band from approximately 10 to 200 meters. It effectively eliminates the annoyance of plug-in coils which heretofore have been more or less necessary in the better types of short-wave sets.

A dynamic loud speaker is mounted in the cabinet at the right-hand side, as shown. At the left is a large tuning dial. The lower half of this dial is divided into four wave bands, and the upper half has a scale ranging from 0 to 100. The tuning unit of this receiver permits a continuous band spread operation to extend from the shortest to the longest wave lengths. This action spreads out all of the signals that appear accordingly in each of the four selective wave band groups when the wave-change switch is operated. These are divided evenly throughout the dial space between the 0 and 100 graduations on the scale. Tuning is very easy and the logging of stations becomes highly accurate.

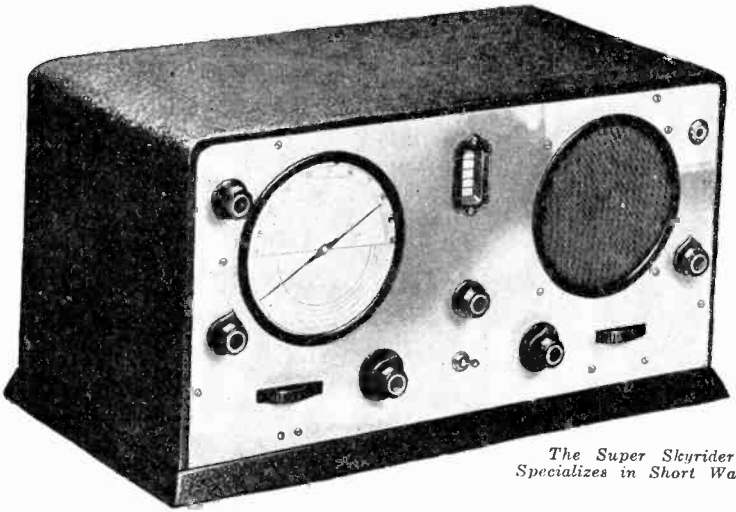
Headphones Or Speaker

At last here is a receiver arranged so that headphones can be used when working great distances or searching for elusive signals. Simply plug a pair of good headphones in the jack on the front of the panel of the set. This action automatically cuts out the loud speaker and renders it silent. The phones connect in the plate circuit of the type 42 power tube. A series plate resistor (R) of 1,000 ohms and capacity (c) of 0.1 microfarad prevents direct current from flowing through the telephones and causing injury to the parts.

The Super Skyrider provides power, true tone and freedom from noise on signals from distant stations. We know that the noise level of a radio receiver decreases in proportion to the selectivity of its tuning. If a set tunes in a signal very broadly to several kilocycles on either side of its proper dial reading for that particular signal, the additional background noise may become as strong as the signal itself. Thus the noise and signal intensity become equal or on a level, and the signal will be lost in noise. There can be a comparative freedom from background noises only if the tuning is extremely sharp. Because the Super Skyrider responds to a very narrow, knife-like width of the frequency band to which it happens to be tuned, the total amount of background noise is low in proportion to the amount of usable signal that can be amplified.

A Crystal Control

This sharpness and increased sensitivity is maintained by the use of a crystal placed in the intermediate-frequency circuit. The piezo-electric effect of a carefully ground quartz crystal is well known. When exactly dimensioned a crystal will oscillate at only one predetermined radio frequency. The crystal is placed between the first detector and first intermediate-frequency amplifier. Only signal frequencies very close to, or identical



The Super Skyrider Specializes in Short Waves

with, the natural frequency of the crystal, will pass through into the i. f. amplifier stages. All others will be rejected. The crystal helps to eliminate the heterodyne interference of nearby station signals because of its extremely sharp limits of resonance.

The Super Skyrider is furnished with a crystal filter circuit complete with or without the crystal. It is a simple matter for the owner to incorporate a crystal in the receiver at any future time. The intermediate frequency of the circuit, that which the crystal will pass to the exclusion of all others, is 465 kilocycles.

The Pre-Selector

A pre-selector circuit is used, and its impedence coupling to the radio-frequency circuit gives extremely high gain or r. f. amplification leading to the input of the first detector. The circuit provides a very high signal-to-noise ratio and thus increases the sensitivity of the set. A 6D6 tube is used in the pre-selector radio-frequency circuit.

The first detector and oscillator are combined in a dual-purpose 6A7 tube. The intermediate-frequency output of this tube is passed into the crystal filter circuit. Here two i. f. coils, wound with Litz wire, give maximum results in both selectivity and sensitivity. Air tuned condensers insure perfect alignment of these i. f. transformers. This is particularly necessary in order to obtain maximum results when using a crystal filter. Both of the i. f. stages use 6D6 tubes.

Beat Note Oscillator

The second detector also acts as a beat note oscillator which makes possible the tuning and detection of extremely weak signals. It utilizes a 6F7 tube as a diode detector, and in which the tetrode portion is used as a beat oscillator coupled into the preceding 6D6 intermediate-frequency tube. The beat oscillator switch can be either set "on" or "off." It is turned on when attempting to locate weak radiophone stations, and it must be on at all times when listening to continuous wave (C.W.) signals.

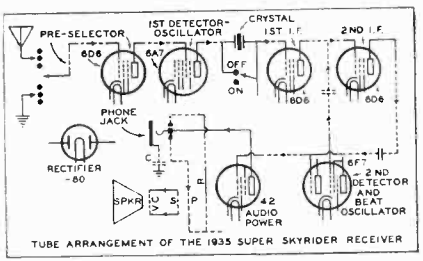
There is a conventional tone control circuit useful for the elimination of interference due to atmospheric and artificial sources. A tapered volume control insures a gradual increase or decrease in volume regardless of the power of the incoming signal. The

power output tube is a type 42. The built-in power supply uses an -80 type rectifier tube. The audio stage, with headphones or loudspeaker, provides high fidelity reproduction of sound.

Used As Monitor

A novel feature of this receiver, which will instantly endorse it to amateurs, is the fact that the set can be used as a monitor or frequency meter for any transmitter regardless of the power and frequency involved. And its harmonics may be used to monitor the broadcast band. A "transmit-receive" switch, when turned from "receive" to "transmit," tends to vary the bias on the two i. f. stages so the receiver will respond as a frequency meter.

Looking at the front panel of the receiver: At the upper right is the phone jack; below it is the "transmit-receive" monitoring switch. The protruding disc at the lower right is the volume control; and at the lower left is the band spreading device. At the upper left is the crystal phasing condenser; and immediately below is the crystal "on-off" switch. The main tuning knob is in the center of the panel—between the dial and the loud speaker. Three other knobs in the lower central portion of the panel, are (left to right): Tone and a. c. "on-off" switch; beat oscillator switch; and wave band changing switch.



TUBE ARRANGEMENT OF THE 1935 SUPER SKYRIDER RECEIVER

Readers interested in this short-wave receiver may secure further details by writing The Hallicrafters, Inc., 3001-B, Southport Ave., Chicago, Ill.

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RCA WORLD-WIDE ANTENNA SYSTEM

"What *Are* MEGACYCLES For?"

● ● ● *By* PAGE TAYLOR

THE most neglected radio listener now is the one who owns an all-wave set without knowing what the extra bands are for. Articles in this magazine have been addressed to successful and unsuccessful shortwave DXers, and even skeptics, but no attempt has yet been made to explain the use of the various bands on an all-wave set to a broadcast band listener.

A few years ago no one bought a shortwave set unless he wanted one. Now that nearly all radios are all-wave many people acquire a new radio without knowing, until it is in their home, that they also have a shortwave set. The problem is, what to do with it? They are not ordinarily DXers. They listen, perhaps, to no more than five or ten local broadcasting stations, but now that they have a radio tuning from 540 to about 20,000 kilocycles, they are curious to know what the extra 17 or 18,500 kilocycles below the broadcast band are for.

Rich and Don't Know It

An all-wave radio is merely four or five radios built into one cabinet, with a switching arrangement enabling one to change easily from one radio to another.

One of these radios is the regular broadcast band set with which everyone is familiar. This set tunes from 540 kilocycles to 1500 or 1700 kilocycles.

An all-wave set consisting of just two units, the broadcast band and a shortwave section, is called a duo-wave receiver. In most duo-wave sets the second band includes the longest of the shortwaves, or expressing it in frequencies, this band extends from 1500 kilocycles to about 4000 or 5000 kilocycles, depending upon the make of the receiver. According to international agreement, the frequencies between 1500 and 4000 kilocycles are set aside, primarily, for stations in the aviation or police service, or for amateurs. The entertainment value of this band, to the average BC (broadcast) or shortwave listener, is less than none.

The "Ham" Stratum

Some listeners enjoy listening to and logging amateur or "ham" stations all over the country, while others find the amateur's technical lingo boring. The amateur is forbidden to transmit music or anything of an entertaining nature, so has nothing left to talk about except his transmitter, and this he does with a vengeance.

Milton Watson owns the stirring baritone voice heard in the singing role of "Captain Flynn O'Flynn," 17th Century soldier-of-fortune. This original radio operetta, is broadcast over the Columbia network Fridays from 10:30 to 11:00 p. m. EST. Watson, who has both Spanish and Irish blood in his veins, looks quite as romantic as his songs sound.

Some shortwavers find the police calls more interesting than any other type of entertainment, but we believe that, for the general radio public, the entertainment value of these stations is overstressed. The gruesome details of the latest crime are never heard, just the matter-of-fact statement that a certain car should proceed to a certain location. A typical police "thriller" often heard is, "Car 46, 71 Vernon, a stray dog. No. 74 call your station."

The Airport Stations

What would seem to be the most interesting of these services included in this band are the airways stations, but the fact is that these stations are the least interesting. One would think that to hear calls from an airplane in flight would be a radio thriller of the first degree, but hearing two or three such calls soon convinces one that this is far from being true. In the first place, neither the ground stations nor the airplanes, give their call letters, thus making it difficult for one to know whether the station to which he listens is in flight or on the ground. Secondly, each transmission lasts but a fraction of a second. A sample airport transmission follows: "Ft. Worth to Little Rock. Overcast. Visibility five miles. Wind southeast. Temperature 74. Barometer twenty-nine ninety-one. Go ahead." An airplane replying is equally interesting.

The Third Band

A set with three bands cover the two bands already mentioned, and a third one tuning from approximately 5000 to about 10,000 kilocycles. It is in this band that stations are heard from the four corners of the world.

It has been pointed out in previous articles in this magazine that shortwave broadcasting stations do not transmit in all parts of the shortwave spectrum, but only in certain small, scattered spots. These spots are popularly called the 49-meter band, the 31-meter band, the 25-, 19-, and 16-meter bands. As 49 meters is approximately

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The Beginner's Story of Radio

by B. Francis Dashiell

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6000 kilocycles and as 31 meters is approximately 9500 kilocycles, these bands are also called the 6000 and 9500 kilocycle bands respectively.

It should be mentioned now that most all-wave sets calibrate the shortwave bands in megacycles. A megacycle is 1000 kilocycles, so 6000 kilocycles equals 6 megacycles and 9500 kilocycles equals 9.5 megacycles (abbreviated megs.).

The Daylight Factor

Stations in the vicinity of 6 megs. like darkness. Satisfactory reception of distant stations is possible in this band only when darkness exists between the transmitter and the receiver. This band is ideal, therefore, for evening reception of South American and European stations and for morning reception of some Asiatic stations, such as YDA in Bandoeng and JVT in Nazaki.

Stations near 9.5 megs. like both darkness and daylight and are at their best when the transmitter is located in a dark area and the receiver in light. Therefore HBL in Geneva, Switzerland, DJA and DJN in Germany and EAQ in Madrid come in excellently from about 5 until 7 p. m., Eastern Standard Time, while it about midnight or later at the transmitters. Stations on the other side of the world, in Australia and Java, visit us in the early morning while it is approaching evening at their own locations.

The Fourth Band

An all-wave receiver with four tuning bands extends the shortwave section down to 17,000 kilocycles (abbreviated kc/s.), or some sets even go further, to 20 or 25,000 kc/s. Between 10,000 and 25,000 kc/s. (10 to 25 megs.) are found the 25, 19, 16 and 13-meter bands, or, in megacycles, the 11, 15, 17 and 21-megacycle bands. As the frequency increases the difficulty in tuning in the stations increases, so in this band the beginner should tune in only the 25- and 19-meter (11 and 15 megs.) bands until some skill is acquired. Generally speaking, these bands are at their best only when daylight exists over the path of the signal from transmitter to receiver, so after darkness falls the tuner should ignore this part of his set.

The Fifth Band

The fifth band on some all-wave sets is the one which tunes the "long waves," above the broadcast band. The only American stations working on these waves are airway weather stations, but some expert DXers successfully hear the high-powered European broadcasters near 1000 meters.

Having become accustomed to a single dial set, the purchaser of new receiving equipment is sometimes appalled by the number of knobs on an all-wave set. Their purpose is easily explained, however, by the salesman in just a moment. One tuning knob tunes all the wave bands. One knob to switch from one wave band to another is provided, and a volume control and a tone control complete the lay-out. There are some sets with a band-spreading device which merely spreads the stations out on the dial instead of allowing them to be closely crowded into a small space. This band-spread device does not increase selectivity but only spreads out the dial settings to make them more easily read. A receiver which cannot separate DJC from HP5B would not be able to accomplish this feat with band-spread.

We will not attempt, in this article, to explain at length how foreign stations may be tuned in as this subject has been covered quite adequately, we believe, in former articles. A few generalities will be given, however.

Tuning for Foreigners

Most of the all-wave sets we have seen, in addition to being calibrated in megacycles, indicate, in some manner, such as a heavy line or a notation, the exact locations of the broadcasting bands in which foreign broadcasters

are heard. Beginners should confine their tuning to these bands at first. The most inexperienced tuner should with little difficulty, be able to pick up some powerful foreign broadcaster if he will make sure, by referring to the list of the 100 Best Stations in this magazine and their schedules, that the station is on the air at the time he is tuning for it.

A new all-wave set owner wishing to try for foreign reception must not be discouraged if no foreigners are heard. Ninety-nine times out of a hundred this would not be the fault of the set, nor, in truth, would the fault lie with the tuner.

S—L—O—W

This writer has mentioned many times in RADEX during the past two years that slow tuning is required to bring in an overseas station. Wishing to learn just how slowly an inexperienced person would turn the dials, he recently asked a lady to try his set, instructing her beforehand that she must tune very slowly, and indicating a spot on the dial where a station might be heard. She followed instructions and tuned, as she thought, very slowly, but it was much too fast for shortwaves. She skipped over ehe entire 48-49 meter band without hearing a station. Then the writer tuned in TIEP and marked on the dials with a pencil its exact spot, then, detuning the station, asked the lady to bring it in again. Still she tuned too fast and passed back and forth over the station several times.

On being reminded that she must tune even more slowly, she found the station on its pencil mark. After bringing it up to good room-filling volume she exclaimed that never before did she know just how slow "slow" was. Readers who are not fortunate enough to have someone mark their dials for them should remember that to tune shortwaves slowly means to move the dial so slowly that its movement is not perceptible to the eye.

When "The O'Neills" act before the microphone, they act! If we didn't know this was just a performance, we might suspect that a real crisis had taken place in the studio. Left to right are Danny O'Neill (Jimmy Tansey), Peggy (Aee McAlister), Mrs. Bailey (Jane West) and Ma (Kate McComb). On the CBS each Monday, Wednesday, Friday at 7:30 p. m. EST.

The Best Chances

At the time of writing the most easily heard foreign stations in each band are:

In the 19-meter band, Pontoise, near 8 a. m., EST. On 25 meters, PHI, Hilversum, Netherlands, near 9 to 10 a. m., EST. In the 31-meter band, HBL in Geneva, Switzerland, on Saturdays only at 5:30 p. m., or PRF5 at Rio de Janeiro, Brazil, daily near 5:30 p. m. Many South Americans can be heard somewhat easily in the 49-meter band any time after 6 p. m.

All-wave set owners who wish to try the short wave bands are referred to several articles which have appeared in RADEX: "How to Tune the Shortwaves," May, 1934; "As I See the Shortwaves," October, 1934; "The Beginner's Story of Radio," Part Twelve, November, 1934. The article on tuning a converter in the November number contains information which should be useful to the owner of an all-wave set, and, "The Shortwaves Are the Thrill Bands," in the January, 1935, RADEX.

* * *

Lowell Thomas' rural retreat in the Berkshires consists of 350 wooded acres on which the famous news commentator conducts a profitable fur farm. Mr. Thomas has the original charter to the land signed by no less personage than King George III himself.

The BEGINNERS' STORY *of* RADIO

PART FIFTEEN

The Production and Control of Sound

● ● ● *By* **B. FRANCIS DASHIELL**

SOUND waves travel very slowly when compared to the swiftness of radio waves. The speed of a sound wave through the atmosphere is approximately 1,100 feet a second. Radio and light waves can travel nearly a million times that far during the same interval of time. A radio wave from a broadcast station that is thousands of miles distant will speed through space to your radio receiver in less time than it takes the resulting sound wave to pass from the loud speaker to your ears.

A striking comparison of the speeds of radio and sound waves frequently is demonstrated by a distant flash of lightning during a thunderstorm. Althought the brilliant lightning discharge will be seen at the same instant its static crash is heard in the loud speaker, the sound of its thunder will not reach the listener until some seconds later. If you allow five seconds for each mile the sound of the thunder has to travel to the observer, after the static wave has been detected by the radio set, the spot where the lightning struck can be determined.

The rapid vibrations of a radio broadcast wave occur at radio frequencies. These are far beyond the audible limits of the human ear. It is the slower audio frequencies, which really are sound waves *unscrambled* from the r.f. carrier waves, that bring the *sounds* of the broadcast to our ears.

The Telephone Receiver

But these audio-frequency waves must first be sent into a device that will communicate its mechanical vibrations to the air so as to set up sound waves that will affect the drums of our ears. The device that is used to create the mechanical motion which will set the air adjacent to the radio receiver in vibration is called a *telephone receiver.*

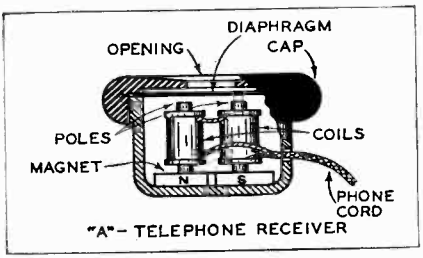
The telephone receiver, familiar to us all for many years, still hangs upon the arms of our desk and wall telephones. It is crude and has changed but little from its original. Its only purpose is to make the electric waves that travel along the wires from the mouthpiece or transmitter audible to us. The telephone receiver that is used for radio reception is a refinement of the well-known type, but its principle remains the same.

The average telephone receiver consists of a long bar magnet. A coil made of many turns of fine wire is wound around one end. A small disc of thin iron is centered over one end of the magnet, but its circumference is firmly clamped between the *shell* of the receiver and the screw cap. The center of the disc or *diaphragm* does not quite touch the end of the bar magnet and, therefore, bends inward under the pull of the magnet, but still is free to vibrate.

A Vibrating Diaphragm

When an audio-frequency current, which may come from either another telephone (which corresponds to the microphone in the broadcasting studio) or from the audio output of a radio set, passes through the coil of wire that is wound around the magnet, it creates a fluctuating electromagnetic field that alternately

strengthens and weakens the permanent *pull* exercised by the bar magnet on the center of the diaphragm. This causes the iron diaphragm to *vibrate* in exact unison with the diaphragm in the transmitting microphone. The ear cap of the receiver has a central opening so that the vibration of the disc will be communicated to the air, and thus reproduce the a.f. electric waves as actual sound waves.



"A"– TELEPHONE RECEIVER

The ordinary radio or wireless *head telephones* are not single bar-magnet types of receivers such as are used in connection with our home and office telephones. They are small *watch-case* type telephones. A typical receiver is shown at "A," Fig. 53. This type has a *bi-polar* permanent magnet that is shaped like a letter U. The container or case usually is made of aluminum; the cap is hard rubber or composition. Two bobbins of fine wire are slipped over the two soft-iron pole pieces of the permanent steel magnet.

How the Phone Works

When the a.f. current from the power output of the radio set passes through the two coils it varies the constant pull of the magnetism in the permanent magnet. This causes the diaphragm to bend in more or spring farther out. Vibrations are developed when the diaphragm is irregularly displaced by the fluctuations of the a.f. current. Thus sound is reproduced. A previous discussion of the average current flowing through a telephone receiver will be found in Chapter Eight.

The pull of the electro-magnet in the telephone receiver tends to bend the diaphragm in proportion to the current flowing through the coils. This force is controlled by the strength of the a.f. current flowing through the turns of wire in the two coils.

Ampere-Turns

A large wire will carry more current and, therefore, it is best to use as large a wire as possible. But we also must have a great many turns of wire to build up a strong magnetic field. The relationship between the large number of turns and the current carrying capacity of the wire is known as *ampere-turns*. We must get as many ampere turns as possible in a small space. In practice, these coils are wound with No. 36 to No. 40 wire. The windings have considerable resistance, usually 1,000 ohms per unit. As two units are connected in series and held to the ears by means of an adjustable *head band*, the entire resistance of the *headset* will be 2,000 ohms, or more.

Distortion

The diaphragm of a telephone receiver, vibrating in *step* with the fluctuations of the audio current, sets the surrounding air into a wave motion. This action communicates sound to the ear. The average headset produces its greatest volume only when the audio frequencies range from about 300 to 1,000 cycles a second. Higher frequencies prevent a strong vibration at the center of the diaphragm because the metal does not have time properly to vibrate vigorously. Thus the *amplitude* of the sound waves that are produced will be considerably lessened. A telephone receiver, therefore, cannot reproduce sound faithfully over the entire range of audio frequencies.

When more power or voltage is used so that the higher frequencies (high notes) can be strengthened, the subsequent *super*-amplification of

the lower frequencies (low notes) will cause *distortion*. A very thin diaphragm will bend more at the center and give more amplitude and greater volume on the rapidly vibrating high notes. But it will be a poor reproducer for low notes. A thick diaphragm will work well on low notes, but because of its inertia and rigidity will not vibrate rapidly and strongly enough to respond well to high notes.

The headset or telephone receiver, therefore, is not the best reproducer of sound having a good fidelity. It is subject to distortion and fails to give faithful tones. It does not have the proper tone to make it satisfactory for all radio reception. However, because of high sensitivity and the ability to place the pair of headphones close to the ears so as to shut out external sounds, the headset is without an equal when it comes to picking up weak and distant signals.

The Phone Adapter

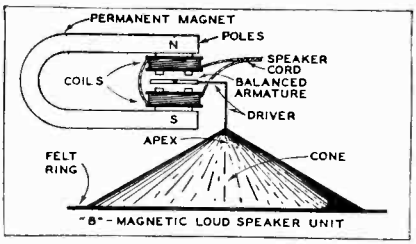
There are several methods of connecting headsets to radio receivers. If telephones are to be used then certain circuit changes and alterations are required. These are more or less difficult for they are associated with mutilation and the danger of burning out portions of the radio set. High potentials are present in these circuits and there is some risk of electrical shock.

An *adapter* device now offers the opportunity to cut in a telephone headset at will to those who desire to quiet the loud speaker and use telephones with modern a.c. sets in order to experience the thrills of distant reception. It is all very simple and permits the phones simply to be plugged into the receiver without circuit alterations. This phone adapter is quickly installed in any all-wave or broadcast receiver. The power tubes are removed and then re-inserted into an adapter *plug* that is placed in the power socket from which the tube was removed. A *phone-jack* is attached to this adapter-plug by means of a flexible cord. A small box containing the jack is then placed at some convenient location in the cabinet, and the headphones plugged in when desired. The speaker is instantly and completely silenced.

But the volume of sound from a telephone receiver is not sufficient to make listening possible for several persons. Early methods included the attaching of a large horn to the telephone receiver cap. This developed the horn type of *loud speaker* and made radio signals audible without the need for close fitting headsets. Undesirable features were present — distortion and lack of tone fidelity, and the volume was weak.

Magnetic Loud Speakers

The first important loud speaker improvement came with the development of the *cone* type of diaphragm. The cone is a large-diameter flat cone made of stiff paper or parchment. It is lightly supported around its edge; not tightly clamped as is the case with the telephone diaphragm. The center or *apex* of the cone is attached to a pin or *driver*. This, in turn, is attached to an arm of soft iron that is balanced freely between the tips of the two poles of the electro-magnet. Audio-frequency current passing through the magnet's coils cause the armature to vibrate similar to the diaphragm of a telephone receiver. This vibration, however, is communicated to the cone by means of the driving pin at the apex.

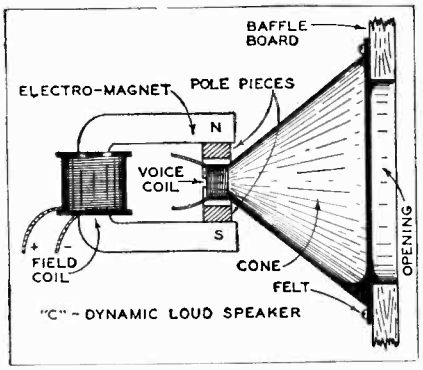


"B"-MAGNETIC LOUD SPEAKER UNIT

The cone speaker, usually known as a *magnetic speaker*, has a higher fidelity of tone than the telephone receiver. It is used extensively with battery sets. At higher frequencies (high notes) the center of the cone vibrates; at the lower frequencies (low notes) the outer edges of the cone vibrate. Thus, various notes, from the lowest to the highest, appear because of the vibration of different areas of the cone's surface, from the outer edge toward the center, respectively. A magnetic cone speaker is shown at "B" Fig. 54.

Dynamic Loud Speakers

Power receivers, such as modern a. c. sets, have a strong signal output which requires large, responsive speakers. The *dynamic* type of speaker revolutionized the radio industry, and practically every radio receiver now uses the dynamic principle. These speakers are capable of the highest fidelity of tone reproduction. A dynamic speaker is shown at "C," Fig. 55.



Instead of using a driver pin to vibrate the apex of the cone, as shown at "B," the dynamic type employs a light coil of fine wire suspended between the two pole pieces of a powerful magnet. The magnetic field, instead of being created by a permanent magnet, is continuously and evenly excited by a powerful direct current that passes through a separate coil. This electro-magnet is the *field* magnet. Frequently this coil is substituted for one of the chokes in the power unit. The exciting coil is known as the *field coil*.

The Voice Coil

The driving or vibrating coil, shown at "C," Fig. 55, is called the *voice coil*. It carries an audio-frequency current and, because its surrounding magnetic field tends to vary in strength according to the fluctuations of current it carries, it will be *displaced* from its normal position at rapid intervals. This displacement or swinging effect, in step with the a. f. current fluctuations, causes the coil to vibrate as if it were a diaphragm in a telephone receiver.

The motion is transmitted to a cone to which the coil is permanently attached at the apex. The apex is a stiff paper *collar*. It is a part of the cone. The outer edge of the cone is glued to some soft material, such as wool or felt, and is then clamped by a metal ring to the housing of the speaker unit. The whole is then bolted to a large board or *baffle*. This gives additional vibrating surface and brings out the deep, low notes that appear in the frequencies below 300 cycles. Sometimes two dynamic speakers, of different diameters, are used simultaneously.

Volume Controls

Up to now we have made no provision for the control of volume. By this we mean the output of sound coming from a telephone receiver or a loud speaker. The intensity of sound can be varied from the lowest to the highest possible volume by means of a *volume control*.

An early form of volume control, now seldom employed, was a variable resistance placed in the "A" battery circuit. This *rheostat* varied the electronic emission within the tubes so the volume of sound could be controlled. Filament control methods have serious disadvantages because the tubes seldom operate under proper filament temperatures. Distortion and

lack of sensitivity is the inevitable result. Such forms of control in old radio sets should be replaced with more modern means.

Perhaps the control of volume by varying the *grid bias*, or negative "C" potential, to the tubes of the r. f. amplifier of any set is one of the most simple methods. The action of the control-grid in a tube has been explained in Chapter Six. We learned how the flow of plate current can be *decreased* if the negative condition of the grid is *increased*. Therefore the volume of sound will be *reduced* if we increase the negative bias on the grid of a tube. The volume control device used in this case is a *potentiometer*.

Other Methods

Many receivers control volume by varying the screen-grid potential applied to the screen-grid tubes. Frequently two or more of these tubes have their screens connected together, and the voltage is varied from as low as 10 to as high as 75 volts. The amplification will *decrease* as the screen-grid potential also is *decreased*.

It is possible to control volume at the audio amplifying end of the circuit. A potentiometer having a resistance of from 300,000 to 500,000 ohms is connected across the two terminals of the secondary of the audio-frequency power transformer. The variable arm of the resistance connects to the grid of the following power tube.

A volume control, which can be placed in the antenna circuit, consists of a high resistance connected across the antenna and ground. Changes in resistance will vary the strength of the antenna signals sent into the receiver. A potentiometer resistance of 10,000 or more ohms is used, and the variable arm will take off antenna current of any strength between minimum and maximum intensity.

Automatic Volume Control

The greatest stride toward volume perfection has been the *automatic volume control*. All receivers, of course, are built with manual volume controls. This is necessary because it is desired that a pleasing volume of sound be selected by setting the control to suit the individual. Volume, unfortunately, has the bad habit of *fading* or quickly *booming* forth, particularly the latter, when the dial tunes station after station.

Automatic volume control maintains this *selected* signal intensity at a constant sound level. Fading, as we know, causes signals intermittently to fall off in strength so they cannot be heard. Automatic volume control can not eliminate all fading for, should a radio signal become so weak that it can no longer affect the tubes of a receiver, the A. V. C. system cannot amplify a signal that does not exist in the antenna. But, in nearly all cases of fading, the A. V. C. system boosts up the fading signal and holds it at an even level as it returns to its normal intensity. As the incoming signal gets stronger, the A. V. C. does not permit the volume to get too loud. All signals can be held at a constant level because the volume cannot increase beyond that selected by the setting of the manual volume control device.

A. V. C. Operation

Automatic volume control, in most cases, is applied to the r. f. and i. f. amplifying tubes of a receiver. The A. V. C. circuit automatically regulates the negative voltage applied to the grids of the tubes in question. If we *increase* the negative bias impressed upon the grids of the tubes we shall then *decrease* the conductivity of the tubes; the plate current drops and, consequently, the volume is diminished.

The automatic change of grid bias applied to the amplifying tubes is brought about by an additional tube—the A. V. C. tube, or by a dual-purpose tube or by a system of resistances. Incoming radio signals, which fade and

vary in intensity, are applied to the A. V. C. tube. They cause changes in its plate current. These changes, in turn, are made to vary the amount of potential applied to the control-grids of the r. f. or i. f. tubes, and tend to hold the amplification at a constant level. We find, then, that a *weak* radio signal automatically brings about a *decrease* in the grid bias applied to the r. f. or i. f. tubes. This, as a result, *increases* their amplification and thus boosts the signal *up* to its predetermined level. A *strong* signal to the A. V. C. tube has the opposite effect; it *increases* the grid bias and thus *decreases* the amplification action, and holds the signal *down* to its proper level.

Quiet A. V. C. Action

Quiet automatic volume control, known more briefly at *Q-A. V. C.*, is a recent achievement. When an amplifier circuit of a radio receiver steps up its amplification rate to maximum sensitivity there also will be an increase in *noise* amplification. The new, quiet system tends to give greater sensitivity to weak signals while at the same time it decreases the *noise-level* in the receiver. *Noise suppression* is a newcomer in the field of *high-fidelity* sound reproduction.

Noise suppression makes use of a new circuit known as the noise gate. The action of the noise gate is to *close* the audio-frequency amplifying circuit of a receiver to all incoming signals during periods when stations are being tuned in. The fault with A. V. C. was that, between station signals, amplification quickly stepped up static and tube noises. But, with the noise suppression system, all *inter-station noise* is eliminated, and the receiver will be silent while station signals are absent. The action of the noise gate is explained below.

Visual Tuning

Visual tuning is accomplished by means of a *meter* or a *glowing light*. The meter indicates the maximum

"Something You've Longed For"

The "Lady Esther" Eliminator

How many times have you remarked to your wife, "I'd like to throttle that bird?"

Here is a brand-new device utilizing the principle of our Perfect Phone Adapter. A small adapter to go under your power tube, a ten-foot cord with a small switch at the end which you can carry to your easy chair.

You are reading or playing cards or visiting with friends. You enjoy the background of music on the radio but suddenly a raucous voice breaks in with a long harangue. Just touch the switch with your finger and the blurb goes down the cold-water pipe.

The set is left operating but only at a whisper so, when the ballyhoo is over, another touch of the switch brings back the music at full volume.

Especially effective with comics. When you hear "This one is going to slay you, Graham," you touch the switch and the slaying is removed to the cellar. Or Joe Penner—you can play a game with Joe. When he says "Wanna buy" the game is to see if you can touch the switch before Joe says "duck."

And for crooners, the "Lady Esther" Eliminator is merciless—and yet merciful. Only one moan and then Silence.

Price $1.50 postpaid

In ordering give make and model of set and list of tubes used. Positively cannot harm the set.

Radio Parts Co.

1401 Prospect Ave., Cleveland, O.

volume of current flowing in a circuit *after* a radio signal has been correctly tuned in. A glowing tube, such as a *neon lamp*, is commonly used for visual tuning. Maximum resonance to a tuned signal is indicated by the *brilliancy* of the light, or the length of a ray of light projected from the lamp.

A visual tuning device depends entirely upon the development of a proper operating voltage within the neon tube. When no signal comes in from the antenna the voltage across the tube will be insufficient to create the characteristic glow that is developed by ionization of the inert gas. The greater this ionization the more brilliant will be the glow from the tube. Now, this changing intensity in brilliancy or in the length of a projected ray of light enables us to use a noise gate for the suppression of noise. As the glow between the elements in the neon tube increases to maximum when a station is tuned in there will be a discharge when a certain brilliancy is reached. This discharge, or flow between the tube elements is the switch effect that starts current to flowing in the audio amplification circuit. This sets the audible portion of the receiver in action. In other words, the noise gate is *opened* suddenly with the tuning in of a signal. The moment the signal is tuned out the neon-tube brilliancy fades away, and the conductivity of the tube ceases. The audio system is again locked.

Tone Control

There are times when it is desirable to accentuate high or low notes coming from a speaker. *Tone control* enables us to fix the pitch of the tone to suit conditions. The most simple method is to connect two or three small bypass condensers in parallel between the audio-frequency output of the power transformer and the ground. These condensers are then connected —one, two or all three together—at will by means of a switch. The small capacity of one condenser will pass only the highest audio frequencies and thus eliminate them from the audio output and speaker circuit. A double capacity will pass slightly lower frequencies; and all the capacity (three condensers) in use will short the high notes or frequencies, and thus permit the deep, low notes or frequencies to become prominent.

This concludes "The Beginner's Story of Radio." It has now been published in book form bound in a handsome leatherette cover.

QUIXOTE Radio Club

• • • *By* E. J. Shields

The Quixote Radio Club was conceived late in 1933 for the purpose of helping short wave listeners to derive the utmost enjoyment from their receiver-investment. Its rapidly expanding membership now numbers 151, of whom roughly a third are active. Officers it has none, other than a Chief Holder of the Sack. Translations are by Prof. Sanchez Mejias.

Through the medium of the Short Wave Reporter, the membership is informed weekly of the stations actually heard by others, and how they too may hear these stations. Thus the QRC members are well and truly advised of what may reasonably be expected of their receivers.

Guided by the premise that the life of a Club is gauged by the activity of its membership, activity is encouraged by the extension of preferred rates. The rendition of reception reports is stimulated by the giving of cash prizes, such reports being gratuitously furnished the experimental stations that provide our entertainment. Stations are never molested by the QRC for the broadcast of special programs, but in some instances interference has been reme-

died at the initiative of the QRC, vigorously seconded by this small but active membership.

An object of the QRC is to have fun, and in this all are invited to join. The Reporter comprises a brief editorial, prize reporting contests, entertaining Spanish lessons, an accurately calibrated "F. B. Iog" illustrating the position of stations upon the receiver dial, a "Garden" for member correspondence embracing both flowers and "raspberries," a Seasonal Contest for reporting new stations, and Alpha Beta reports with conveniently arranged news of what's on the air.

Subscribers to the Reporter are *ipso facto* Members of the QRC. Rates for Active Members, who send in at least one news report weekly, are twenty weeks one dollar; for Associate Members, who contribute no activity, ten weeks one dollar. Residents abroad enjoy a weekly rate equivalent to the postage required to carry a first-class letter to the U.S.A., payable in unused foreign postage stamps of small denomination. It is designed to make these stamps available to Members, at a saving, for use in applying for verifications. Specimen copies of the Reporter will be sent anywhere by request addressed P. O. Box 73, Hendersonville, N. C.

A Novel Aerial

● ● ● *By* Chas. W. Neiswanger*

WE LIVE in a very noisy district and have tried all sorts of wave-traps to eliminate man-made static. We have tried both the L and T types of antenna, with shielded and unshielded leadins. The best form we have found is a large loop on the roof of a three-story building, about ten feet above the roof. This has proven the best by far of all our different types. The loop is in the form of a large square, about twenty feet on each side or 80 feet in all. The two leads (about 40 feet in length) are twisted and carried to a 20-plate variable condenser at the set. Both ends of the leads are attached to the stator plates of the condenser. The rotor plates are connected to the antenna post of the receiver.

We use no ground as, in our locality, all forms of ground pick up noise. In all of our experiments the set works best without a ground. We have a General Motors eight-tube super with volume and tone control. The loop is non-directional and we notice no difference in the strength of signals from any direction.

We have tried attaching the two ends of leadin to aerial and ground posts but find that it broadens the tuning. We find that the variable condenser aids in tuning the antenna to weak stations. We also find that it helps in separating some of those Cuban and Mexican stations on the split frequencies. When the static is very bad we find that it helps to turn the movable plates entirely out of mesh and then turning them back so that the tips mesh very slightly.

As stated before, we were driven to experiment by local interference. Perhaps others may try our method and bring out something still better.

*210 *East Washington St., Muncie, Ind.*

TRIMM FEATHERWEIGHT PHONES

Superior in performance
Small in size
Light in weight
Neat in appearance
High in quality

Secure the best your radio will give by using Trimm Featherweight Headsets.
Buy from your local dealer

TRIMM RADIO MFG. CO.
1528 Armitage Ave., Chicago, Ill.

PRESENTING *the* "Voice *of* Experience"

• • • *By* "BETTY"

ALTHOUGH "The Voice of Experience" prefers to be known as just that, persistent inquiries from network listeners have persuaded him to allow circulation of salient facts of his career.

His name is Marion Sayle Taylor. He was born on August 16, 1889, near Louisville, Ky. His father, now a retired minister, was a widely known evangelist, and his mother devoted her time to church and settlement work. His early education and musical training were entrusted to governesses and tutors, and he attended high school in Henderson, Ky.

His earliest ambition was to become a great pipe organist, and he first appeared in public at the organ when he was 12. During summer vacations he traveled as organist with his father in evangelistic campaigns.

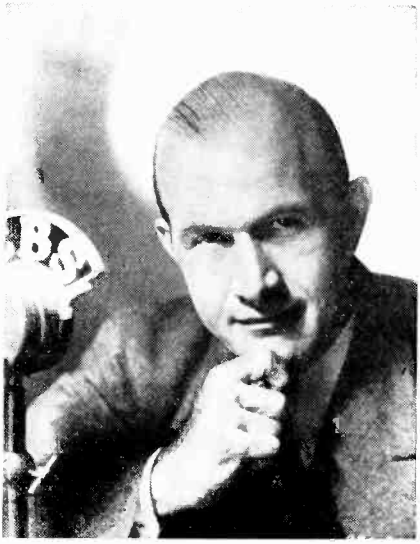
Planned Medical Career

Taylor entered William Jewell College at Liberty, Mo., where he became interested in the study of biology. Before graduation in 1906, he had determined to continue his studies for a medical career. He received his M. A. degree in college and post-graduate work at Pacific University, Ashland Boulevard Clinical School, and the National University of Therapeutics, earning his way as an organist and teacher.

While completing his medical education, he was in an automobile accident which forced him to forego all his ambitions and to re-plan his career. In the accident his hand was crushed and broken in thirty-two places, destroying all hope of his being able to do delicate surgery or perform as an organist. With both possible careers taken away at once, he decided to specialize in sociology and psychology. There followed a period of intense study and research, during which he turned to social work in the old Barbary Coast slums as his human laboratory. During this phase of his career he was naturally called upon for help in every sort of problem. Some time later, after being thoroughly schooled in practices as well as theories, he felt an evangelistic urge to carry his work into larger fields.

Into School Work

At first Taylor lectured on juvenile delinquency and other subjects, and then he took a post as superintendent of schools in Oregon. At the same time he undertook other lecture



The Voice of Experience

work along with post-graduate study and research and found time to write a number of magazine articles and text-books.

His lecture appearances brought him invitations to speak at small stations throughout the west during the early years of radio. Feeling that radio was the best medium for reaching and aiding the greatest number of people, he decided to devote more time to broadcasting. For years he used his name in connection with his broadcasts, which were heard for various periods locally over more than fifty stations, during his travels. Taylor finally decided to become anonymous, believing that people in need of counsel on private matters are less diffident and self-conscious if the counselor is known as an abstract voice rather than a definite personality. His shrewd and sympathetic understanding of his audience's attitude was immediately confirmed by the increase in his fan mail after he adopted the radio title of "The Voice of Experience."

Columbia's mail clerks struggle with the voluminous amount of mail he receives, as he averages between 60,000 and 75,000 letters a month. The greatest number of letters are from married women who have both domestic problems and parental difficulties to submit for solution. Besides giving his advice in these matters, he devotes considerable attention, outside of the studios, to offering unexpected help to worthy charity cases brought to his attention through his work.

The "Voice" is heard Mondays through Fridays from 12:00 noon to 12:15 p. m. EST, and on Sundays from 6:45 to 7:00 p. m. EST over the Columbia network.

Listeners are invited to submit their personal problems to Mr. Taylor for his advice.

The Cast of "Vic and Sade"

Best *of the* Home Dramas

Seventy thousand listeners wrote to NBC to request this picture of Vic, Sade and Rush.

Who are Vic and Sade? Who is Rush? Are Vic and Sade really married? The intense realism which this dramatic trio puts into the roles of the popular family life sketch has endeared them to thousands and brought a flood of such questions to the Chicago studios of NBC from listeners in every corner of the nation.

Most of the fans are both right and wrong. Vic and Sade are married but not to each other. Rush is a sure-enough high school boy but not the son of Vic and Sade.

In private life Victor Rodney Gook, the droll chief accountant of Consolidated Kitchen Ware Company, Plant No. 14, is Art Van Harney, master of seven dialects and featured dramatic star. He is married but to a girl with whom he eloped after meeting her on a blind date.

Sade is Bernardine Flynn, star of many University of Wisconsin campus productions, former Broadway actress and a veteran of NBC networks. Zone Gale, the famous novelist, launched Bernardine on her stage career by recommending her for a Broadway show after watching her at Wisconsin. Bernardine is also married, but to a Chicago physician.

And Rush is 13-year-old Billy Idelson, a high-school freshman who hates his homework and delights in hunting, fishing and horse-back riding.

These delightful sketches may be heard daily, except Saturday and Sunday, over both NBC networks—over NBC (Blue) at 1.30 p. m., EST, and over NBC (Red) at 2:45 p. m. EST.

* * *

Connie Gates, featured blues singer with Kel Murray's Orchestra in the "Let's Dance" program, took her first airplane ride when she flew home to Cleveland to spend the Christmas holidays with her family. It was back in 1929, in Cleveland, that Connie first stepped before the mike. She played the ukelele and sang a song on a children's program. That appearance netted her a contract under which she sang a thirty-minute program every day—for nine dollars a week.

* * *

Virginia Rea has had two distinct radio careers: One as Olive Palmer, famous soprano of a notable concert series, and now as Virginia Rea, star of American Album of Familiar Music and other network programs. Miss Rea became so well known as Olive Palmer in a weekly broadcast which continued for more than four years that even her best friends almost forgot her real name. Now, years later, she is famous in her own right as Virginia Rea, gifted coloratura soprano.

* * *

Bottle, faithful and serious minded servant of Phil Baker on the Armour Hour, confesses to being under a constant strain while broadcasting. Baker delights in doing the most unexpected things, on and off the air, to upset him and the completion of the Friday night programs invariably finds Bottle's brow beaded with perspiration. Switching the scrip and resorting to ad libbing, favorite tricks of the comedian, never fail to startle and cause Bottle to become temporarily panic stricken.

* * *

Members of the cast of "One Man's Family" marvel at the energy and ambition of eighteen-year-old Frank Provo, who plays the role of Johnny Roberts. In addition to essaying dramatic parts on stage and radio, young Provo writes radio scripts—which are produced—and has just finished his first novel, "Out of Eden," in which he did his own illustrating.

* * *

The most unique first name among radio artists is claimed by blonde *Aee* McAlister, who plays the part of Peggy in the Columbia sketch series, "The O'Neills." Aee doesn't know the origin of it but ventures that her mother "probably thought it cute." And Jimmy Tansey, who plays Danny in "The O'Neills," insists his given name is no nickname. Jimmy is the way it was given to him.

* * *

Frank Parker isn't exactly an ardent moving picture fan—at least not when it's his own picture that is being shown. Frank hasn't yet gone to see the Jack Benny picture, in which he plays a featured role. Frank and Jack just can't resist ribbing each other, outside the studio as well as in. "Say, Frank," said Jack recently, "Since you are on so many programs, when do you get time to sleep?" Frank grinned, "When you're telling jokes, Jack."

* * *

The musicians in Don Bestor's Orchestra have never been present at a rehearsal of Jack Benny's script for the Jello program. The music for the program is rehearsed at an entirely different hour because Benny wants the laughs from the musicians to be genuine and spontaneous. This makes the boys in Don's band look forward to the broadcast with unusual zest and they never have a clue to what Jack will spring.

In the Business Department

● ● ● *With* THE EDITOR

WE EXTEND our greetings and thanks to the many readers who so thoughtfully remembered the Editor and staff with Christmas and New Year's cards. We wish that we might reply to all but that is impossible. Such expressions of good wishes bring home to us the thought that we are a friend among friends and that our work is a labor of love and not just a commercialized job. We enter the New Year with real optimism and the conviction that 1935 brings new hope and new opportunities to all of us.

Now In Book Form

That exceedingly simple but highly informative series of articles, "The Beginners' Story of Radio," written by our Technical Editor, B. Francis Dashiell, concludes with this issue. The first of this series was published in October, 1933, and has been running in each issue since that time. It has now been published in sixteen chapters in book form and covers the entire field of broadcast radio from the transmission of the signals to their reception. It explains in language that is easily understood and as free from technicalities as is humanly possible, exactly what part every unit of a receiving set plays in the propagation of signals and the reproduction of sound. The two articles entitled "Is Your Antenna 100% Efficient?" have been rewritten and are incorporated in the book.

"The Beginners' Story of Radio" is printed in large type on "egg-shell" paper and handsomely bound in an attractive leatherette cover titled in gold. It should be in the library of every radio listener.

Presenting the Gentleman in Sideburns, none other than our old friend Bing Crosby. The hirsute adornments were grown by Bing purposely for a new picture in which he was working at the time of this broadcast. This is the way your grandmother would have seen him. Bing is on the Columbia net each Tuesday at nine o'clock p. m. EST.

Tilting at Windmills

From time to time, we receive letters from readers suggesting new methods of allocating the b. c. b. frequencies. Some even go to the trouble of working out entire schemes which they believe would prevent interference and cross-talk. We are reminded of this by a letter from our good friend, Howard L. Spies of Canton, Ohio, but temporarily of Columbus. Mr. Spies suggests dividing the b. c. b. from 540 to about 700 into bands of 5 kc. separation. Unfortunately this entire matter of allocation is in the hands of the Congress of the U. S. The Federal Communications Commission is only a creature of Congress and must allocate the frequencies as ordered by Congress. For any person or any publication to attempt to guide Congress in this or any other matter is an idle "tilting at windmills." The sad thing is that not more

than half a dozen members of Congress know what a frequency is and yet they do not hesitate to order the Commission how to do the work. If the Commission could only use its own judgment, we have no doubt their engineers could greatly improve the present set-up.

The Pot and the Kettle

A reader whose name and address are completely illegible criticizes the form in which some listeners submit their reports of reception. "I went to the WNEL studios this morning and saw different letters from DXers. I assure you I was astonished at the reports. Some ask for verification just saying they heard the station with no report of selections at all. One from San Francisco said he heard the station "R7"! He rubber-stamped his name all over the letter a dozen times. Another report was on scratch paper." So many listeners send in their reports in such a slip-shod fashion that it is a wonder the stations pay any attention to them at all. We also want to stress the importance of writing the name and address plainly. Many people write their letters plainly enough but when it comes to their signature, they dash off a fancy scroll which only they can read.

Minor Matters

"Aren't you using poetic license when you say, as you did recently, that listeners half way around the world actually hear a program before the audience that is present in the studio?" asks one reader. No, and the fact may easily be demonstrated by mathematics. Audible sound travels at the rate of 1100 feet a second, whereas radio waves will travel 186,000 *miles per second*. The radio signals reach a listener 12,000 miles distant in about one-fifteenth of a second or a smaller interval of time than is required for the voice of the speaker to reach the back of the hall.

Since the publication of the two articles on aerials in the October and November issues, we have had many letters from readers who want to put up new aerials but are puzzled to know which type they should use for their particular set. We have asked our Technical Editor to prepare an article for the March issue making definite recommendations for particular sets, such as t. r. f. and small supers, powerful supers, all-wave, short-wave, etc. Do not miss this article in the March number.

The February-March-April edition of the *DX Radio Log of the World* will appear on the newsstands soon after this issue of RADEX. The new issue will contain both the broadcast and the short wave stations of the world, each group being listed by frequencies, by countries, states and cities, and by call letters. This makes the *DX Log* the most complete publication of its kind and a necessary addition to every DXer's library. It may be easily recognized on the stands by its black and white diagonal stripes.

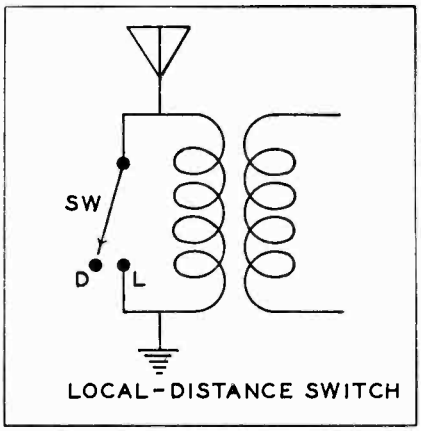
Ticker notes bringing last minute financial news to business men, are broadcast daily over WLW at 3:45 p. m. to 4 p. m., and 1:30 p. m. Saturday. This 15-minute summary of the day's financial news comes through special arrangement with Dow, Jones & Co. and is compiled from the ticker notes of the Wall Street Journal.

"I wish to thank you for bringing to my attention the Perfect Phone Adapter," pens Joseph J. Mazel, 54 West Street, Pomonock, Conn. "After giving the Adapter a good trial, I find that I couldn't do without the phones now."

Beatrice Lillie is the only woman radio comic to be starred in her own right. Mary Livingston, Gracie Allen and Portland Hoffa, for example, all appear with their husbands. Miss Lillie is one of the theatre's biggest drawing cards. She has consistently broken box-office records both here and abroad.

Advice *for* AILING SETS

● ● ● *By the* TECHNICAL EDITOR



LOCAL-DISTANCE SWITCH

WHAT is the real purpose of local-distance switch on my radio receiver, and how does it work?

The local-distance switch is merely a short-circuiting switch placed across the primary of the antenna coupling transformer. When it is closed for local reception it short circuits the coil and prevents distant reception and interference, but it also reduces the local volume. When the switch is open it permits the full antenna energy to pass through the set.

Using a Doublet

I wish to use a doublet antenna with my Midwest 9-tube receiver. Can I change the coil by ungrounding it so a doublet two-wire leadin may be attached?

We are not sure just what you mean about changing or ungrounding the coil. We assume that you wish to separate the primary of the antenna coupling coil from any connection to the ground so the two leads from the doublet can be attached to the two ends of the antenna primary coil. You can do this if you do not change the ground connection but merely remove the coil connection to the ground and attach it to a new terminal for the antenna leadin.

Some doublet antenna systems are equipped with a "set transformer" that takes care of this situation. The Lynch doublet antenna, and others, too, have special coupling devices so that any receiver can be connected to a doublet antenna. We suggest that you procure a coupling transformer and use it between your set (without coil changes) and the antenna. Also, see page 30 of the November, 1934, issue of RADEX.

S-W Converter

I wish to build the short-wave converter that was shown in the November, 1934, issue of RADEX. Please tell me the values of the parts required as shown in the circuit.

The converter circuit was shown merely as an example of an average or typical design so as to explain the method of short-wave converter design. The values of the parts illustrated should be approximately as follows:

The two variable tuning condensers are .00015 mfd. capacity each. Condenser C1 is .001 mfd. C2 and C3 are .1 mfd. each. GC and C4 are .0001 mfd. each. The grid leak for the 56 tube is about 100,000 ohms, but the leak for the detector—58 tube—should be from 3 to 5 megohms. Resistor R1 is 5,000 ohms, and R2 is 50,000 ohms.

It might be necessary to raise the location of the tap placed on the oscillator coils to a greater distance from the bottom, say about another half turn or so, in order to increase oscillation on the higher frequencies. These locations for the taps

can never be designed with absolute certainty—a cut and try method is invariably necessary.

One-Tube Converter

I have one of the ICA Insulette short-wave converters. It fails to work with my RCA Radiola 46. *What can be wrong?*

No great distances can be expected with such a small converter. However, you should be getting results. This is a one-tube autodyne receiver and, therefore, the short-wave conversions of wave length that it may pass into the broadcast receiver will be weak.

The circuit seems satisfactory. Have you tried checking the parts to see whether there is an open circuit? The little resistor in the line from the plate of the -45 tube in your Radiola should be able to pass voltage to the plate of the -27 in the little converter. Check this -27 tube and replace if it fails properly to oscillate.

Adjusting A —K 808-A

How should I go about adjusting for all-wave neutralization and alignment in my Atwater Kent 808-A *receiver?*

As this is a superheterodyne there is nothing that requires neutralization. However, many adjustments are needed to realign this receiver. In our opinion it is a job for a service man.

Looking down upon the chassis, from the front, there are visible 11 trimmer condensers which must be adjusted in order to realign this receiver.

On the top of the large 4-section tuning condenser are four trimmer condensers. From front toward rear of the gang unit these condensers or trimmers are: Front, first detector tuning condenser alignment; next, oscillator trimmer; third, r.f. condenser trimmer; and last, at rear, antenna tuning condenser trimmer.

At right of tuning gang-condenser, between first and second units, is a screw that adjusts the trimmer of one of the wave bands in the detector-oscillator coil unit. This is a very delicate adjustment.

The i.f. trimmer condensers are located on the tops of the three i.f. transformers—two at the right-rear with a type 58 tube between, and one at right, between two 58s. Each transformer has two trimmers on top to align the primary and secondary windings. The intermediate frequency of this receiver is 472.5 kilocycles, and the transformers must be adjusted to "peak" or respond to this frequency. In order propertly to do this you will need a frequency meter and oscillator.

Blue Flicker

Why is it that the second -45 *power tube in my Majestic* 90 *set flares up with a blue flicker after the set has been turned on?*

When a power tube gives off a blue glow or flicker it is usually a sign that the tube is defective. Excessive voltage, gas or electronic emission may be the cause. However, if the glow is slight and varies with the volume of signals, the tube may not be defective. Some tubes will operate satisfactorily for quite a time when this condition exists.

Old Browning Drake

I have an old Browning-Drake receiver. It is in good shape and I would like to replace the tubes now used with the newer dry battery types. What changes are necessary?

You can use the -30 series in this receiver in place of the one -99 and three -01As. However, since the -99 is a three-volt tube, and the others are five-volt tubes, you will find a small resistance in one of the leads to the filament of the -99 tube which should be removed and replaced with a piece of wire.

Replace the detector, radio-frequency, and first audio tubes with three -30s. Place a -31 in the last audio stage. An output transformer

must be used to feed the output of this tube into the magnetic speaker and phones so the windings will not burn out. A new UX socket will be needed to replace the UV socket in the radio-frequency stage. A C battery of -3 volts is used on the grid of the first audio tube, and -22½ volts C on the grid end of the transformer secondary to the last -31 power tube. The plate of this last tube requires 135 volts B battery. Use a 2-volt A battery on the tubes. An Aircell battery will be best.

S. W. Converter Use

How can I connect a Stewart-Warner short-wave converter to my Brunswick B15 *battery set that uses* 2*-volt tubes?*

We assume that you have a model 301 shortwave converter. As this device has its own power supply for heating the tubes it can be plugged into the 110-volt lighting circuit. However, as the converter has a separate pin contact for B power of from 180 to 250 volts, it will be necessary to provide a separate source of 250 volts B battery in addition to that used for the receiver.

The output of the converter is connected to the antenna terminal of the broadcast receiver in the usual manner.

Victor Kolar conducts the Ford Symphony Orchestra over the largest sponsored network in radio history—the nationwide Columbia—every Sunday evening from 9:00 *to* 10:00 *p. m. EST. The dynamic conductor is also a composer and a linguist. This is his latest portrait.*

Howls And Whistles

Please tell me how to get rid of howls and whistles in my General Motors receiver when the volume is turned up?

Check all joints and resolder those that appear poorly made. Examine the rotor shaft for wear in the condenser unit and solder a "pigtail" wire between the shaft and chassis of condenser gang. You might also try a 25,000-ohm resistor from the screen terminal of the third r. f. tube to the chassis. Have a meter test made of all plate and filament voltages to the tubes, as the potentials may be too low. Test the tubes, first, of course.

Fails On Short Waves

I have a Midwest 16*-tube* 1934 *receiver. It works fine except on the* 25*-meter band. This is supposed to go from* 11,700 *to* 33,000 *kilocycles, but it fails to bring in stations or a sound. Why is this?*

In all-wave receivers the tubes will frequently stop oscillating at very high frequencies. This is one of the reasons accounting for "dead" zones in part or all of the upper frequency limits. Try replacing the oscillator tube and checking the plate voltage to see if it is too low.

Hum In Apex

There is a bad hum in my 100 *Apex receiver. How can this be prevented, and is it a serious matter?*

There may be an open grid in the first-detector of i. f. stage coils of this set. The 10,000-ohm resistor in the i.f. and r.f. stages screen-line may be shortened and cause trouble. The two -47 tubes in the power output may be defective and require re-

placing. Hum most always is due to reduced plate voltage; poor tubes or one having a defective and misplaced heater or filament; a defective resistor; bypass condenser or large filter condenser in the power unit.

A. K. -70 Tubes

I have an Atwater Kent 70. Please let me know how to identify the tubes, particularly the detector.

There are three or four designs of the A. K. -70, but we have selected the D-1 chassis as being the most popular. There are, however, only minor differences. Looking down on the top of the chassis, the tubes are: Right rear—two audio power tubes; extreme left—the first audio-frequency tube; row of tubes just left of center, front toward rear—detector, 3rd r. f. tube, 2nd r. f. tube, and last in row at rear, the 1st r. f. tube. The speaker plug is between this row and the two audio power tubes.

Florence Baker, young actress heard on the "True Story Court of Human Relations" (8:30 to 9:00 p. m. EST Fridays) used to play kid roles not so very long ago. Florence is now taking her first steps in grown-up parts and is heard from time to time as the ingenue on the "True Story" program. (Rebroadcast to the West at 11:30 p. m. Fridays, EST)

Brunswick 15

I have a model 15 Brunswick. It looks like the enclosed sketch. Will you tell me the names of the different tubes, such as detector, etc? Also, what new tubes do you recommend to replace the old ones?

This is a tuned-radio-frequency set and therefore has no oscillator. The detector is coupled directly to the push-pull output stage by means of an audio transformer. Looking down on the chassis from the front: Right—the power transformer, and in the rear is the speaker plug or socket, the -80 rectifier, and two -45s audio power in push-pull. The row of tubes to the left: Front— a -24 first r. f., second—a -24 second r. f. tube, third tube, a -24 3rd r. f., and last or rear, a -24 detector tube.

The -24s can be replaced by 57s if suitable adapters are used. Two -47s can be used to replace the two -45s by means of adapters.

Charging "A" Battery

How can I charge a 6-volt storage battery from a 32-volt lighting plant, or is it best to charge it from a 6-volt "B" battery eliminator?

It is not possible to charge a storage battery from a "B" battery eliminator. Your eliminator is a device that attaches to 6 volts direct current and delivers high voltage for the plates of your receiver. We assume you refer to the automobile type that operates on 6 volts and delivers from 120 to 200 volts.

In order to charge your battery it will be necessary to connect it to a source of 6 volts of direct current. Alternating current cannot be used. The generator of the 32-volt plant delivers 32 volts, which is too much. The battery can be charged direct from the generator if a 32 volt, 32 watt, lamp is placed in series with one of the wires leading to the bat-

tery. Such an arrangement will permit one ampere of current to pass through the battery while it is being charged.

A more simple method is to shunt the battery across the terminals of a 6-volt battery section of the lighting plant battery (three single cells). Each single cell gives two volts. The storage battery then can be charged while the entire plant is being charged. Be sure to connect the positive and negative terminals of the radio battery to the same terminals of the 6-volt battery in the battery rack of the plant. Disconnect it as soon as the charging generator is shut down.

Antenna Coupling

How can I make the coils illustrated in the November, 1934, issue of RADEX, which were used for coupling doublet antennas to radio receivers?

The coils shown in Figure 6 are described in detail on page 28 of the same article, top of first column. The two coils are wound on a single tube, closely adjacent to each other, the second winding beginning about the thickness of two wires from the point where the first coil winding ends.

485 Tube VS 56 Type

I read that a type 56 tube could be used in a Sparton 69 receiver to replace Sparton type 485 tubes. I tried this and burned out the 56s. Why was this?

Type 56 tubes can be used to replace type 485 Sparton tubes, but a slight change in the wiring must be made. However, the Sparton 484, which draws more current, can be replaced with a -27, which is practically the same, without any circuit changes.

Many servicemen insert a -27 in place of a 484. Because the -27s have a higher current drain no change is necessary in the winding supplying the 3 volts for the 485. But, with the 56, which draws less current than a -27, a slight change must be made.

The type 56 tubes are recommended in place of -27s for replacing 484s or 485s. A separate filament transformer can be used. Or you can place 1-ohm resistors in each side of the filament supply leading to the tube sockets. If these wire-wound resistors cut down the filament current to less than 2.5 volts when all tubes are operating, it will be necessary to cut out one or more turns of resistance wire on the resistors with a drop or two of solder in order to insert the proper resistance in the filament circuit. The type 56 takes 2.5 volts and 1.0 ampere, while the 485 tages 3 volts and 1.25 amperes.

Directional Radio

Can the broadcast waves from a transmitting station be directed in the same manner that a loop antenna can receive best from one direction? Also, how is the power at a broadcasting station determined?

Broadcasting stations can direct their emitted waves along a certain path. This concentrates the energy in a beam, and beam transmission is not unlike the action of a searchlight. However, the shorter the waves the better they can be reflected by a beam transmitter. The Byrd Expedition uses a beam antenna and is able to send its signals direct to predetermined receiving antennas with a small amount of power. Radio listeners, unless their receiving antennas are set up along the path of the beam transmission, cannot pick up the Little America signals.

The power of a broadcasting station is rated by the number of watts it puts into the antenna for radiation. The higher the voltage and amperage the higher is the charge given the antenna and the greater will be the radiation. A low voltage and high amperage will provide little or no radiation. A high voltage and lower amperage will give powerful radiation—such as 25,000 volts and 2 amperes, or 50,000 watts.

The current sent into the antenna by the oscillating tubes of a broadcasting station is measured by a meter, usually in milliamperes. This meter is set in series with the antenna leadin wire. It is not, however, a regular type of meter. Because the antenna charging current is a radio-frequency vibration, it cannot pass through the fine coils of wire due to the impedence of the latter. The meter, therefore, is a hot-wire ammeter. A single wire expands because of the heat generated by the r.f. current and, in turn, causes the hand of the meter to swing over the dial. The higher the amperage (heat energy) radiated into the antenna the greater will be the movement of the hand of the meter.

Harmonics

Can I get rid of the harmonics of a nearby station by changing the coils in my Silver-Marshall 724 receiver?

You cannot very well replace the intermediate-frequency transformers in this set so as to get rid of certain harmonics. Try adjusting the present coils. Each primary and secondary has a small trimmer condenser for realigning the peak frequency. Also check the insulation between these trimmer condenser plates. Harmonics are more or less natural, and it often is the case that a set will respond to certain local harmonics because of the peak frequency selected by the manufacturers. On page 20 of the May, 1934, issue of RADEX, you will find complete instructions and illustrations for aligning the oscillator circuit of a receiver similar to yours.

A 59 Power Tube

I wish to replace either -45s and -47s with the newer 59 power tubes. How is this accomplished?

The change cannot be recommended for the following reasons: The 59 tube, while it uses the same voltage as the -45 and -47, requires more current. It is a 7-pin tube while the -45 has 4 pins and the -47 has five. Therefore, tube socket replacement would be necessary. The 59 requires at least 200 volts more for its plates than needed by either the -45 or -47. This means a new power transformer in order to supply the higher potential. Other circuit changes would be necessary too, such as new leads to the two additional grids of the 59 type.

Short Waves Are Noisy

I get many local noises when my new RCA-Victor 242 all-wave receiver is tuned to a station. I am using the RCA all-wave antenna. Will some other type of antenna, on my apartment roof, and only 5 feet from the elevator house, give better results?

Reception on short waves always has a tendency to pick up noises, such

(*Continued on page 60*)

An audience which stretches from the Pacific Coast to the Atlantic, knows this lad as Jack Barbour, youngest member of One Man's Family. He is Page Gilman, and despite the fact that he will not celebrate his seventeenth birthday until next April, he has had long and honorable service in radio. Wednesdays at 10:30 p.m. EST, on the NBC.

Our Readers Report *the* Stations Received

FROM "Rocky Knowe," Craigs, County Antrim, North Ireland, Hugh S. Campbell, writes interestingly of DX matters in that country. "I am situated in a country district about 30 miles north of Belfast which is our local station. At a rough estimate I am about 300 feet above sea level and about 20 miles from the north and east coasts of Ireland. My antenna is directed almost due south. I use a percolative or chemical ground device. My receiver is a 1929 Osram 3-valve. It is not extra selective on 'local' stations but is certainly a distance-getter. For DX work I generally use head-telephones as I find it easier to translate weak signals by this means.

"Naturally here, as in England, most DX work concerns American stations though some European and North African stations very nearly come in this class. As regard American stations I find that good reception of these is generally obtainable under three conditions: (1) just previous to full moon and/or the week immediately following; (2) when weather conditions are clear and frosty; (3) when an anti-cyclone is situated just off our west coast or is passing over us (that is, when atmospheric pressure is high.)

"It is generally true also that when North American stations are inaudible, South American stations can be pulled in at good strength, and vice versa. The DX season here is from late September or early October until mid-April though on occasions good reception is achieved in July and August around 3 to 4 a. m. GM T. I append a list of stations logged by me, none of which are as yet verified but all are definitely identified by call signs. If any radio DX fan in America cares to get in touch with me, I'll do my best to answer his or her letters promptly and endeavor to give any information that I can. In conclusion, let me say that I think RADEX the best DX book on the market." The list of stations received is too long to reproduce but it includes practically all of the major stations of the U. S. and Canada clear to the West Coast. Others are XEB, XENT, XEW, Radio Splendide, Radio Nacional, Radio Argentina Radio Prieto and Radio Sarmiento.

A N. Z. Champion

From Pukeroro, Hamilton, New Zealand, comes this letter from J. L. Sullivan (DX-91-A): "I have done all my DXing on a Radiola 20, 1925 model, using 90 v. B and 4½ v. C. I hold the record for New Zealand and Australia for having the most countries and the most European stations verified. Of course in time I will be beaten but I still hold it against all the modern sets and all on the b. c. b. My total reaches nearly 400, not including New Zealand, and all verified. From the U. S. A., I have 180, Canada 7, Mexico 11, South America 5, Australia over 100, Japan 19, China 5, Siam 3, India 1, Kenya Colony 1, Germany 8, France 3, Italy 7, Poland 3, Russia 2, Switzerland 2, Austria 6, Belgium 1, Czechoslovakia 5, and one each from Sweden, Finland, Rumania, Algiers, Spain and Latvia. I have never used the short waves. Should you happen to listen to Fecamp, Normandie, France, on the morning of next March 17th, from 4 to 6 a. m. N. Z. time, you will hear a concert of 12 numbers being dedicated to myself and the New Zealand DX Club. I pride myself in being the only person who has had offered to them a dedication of a whole concert without asking for same."

From Puerto Rico

Manuel Alberto Cadilla, Box 337, San Juan, P. R., sends us a photograph of the new single tower antenna of

WNEL which is not clear enough to print. It was inaugurated on November 13 and reports have been received from as far as England. They have already tested once or twice with their s. w. W4XP on approximately 49 m. This station is on the air every day from 10 to 22 EST. "The surprise of the month," he adds, "was being able to hear the complete wedding ceremony of Prince George and Princess Marina, as broadcast by several stations on the NBC-WJZ network. It was about two hours after sunrise, 7:40 a. m., when I heard the last of this broadcast which came clear from some station on the highest frequencies, probably KOMA. After that I heard WLW on the air for five minutes more. I guess I may call this a record for daylight reception, taking into consideration the distance from here to anywhere in the U. S. Best reception of the month, I think, was WEDC, Chicago, which has been eluding me until this morning when it came R5 but perhaps WLAP, R7, is better." Manuel sends a list of the principal stations he has received. He is pretty well covering continental U. S.

On the West Coast

"The TPs are coming in with wonderful volume," observes Bill Ellis, Hughson, Calif. "I have been hearing several that no one else seems to report. They are what I believe to be a Japanese on 560 carrying the J chain programs and a Japanese or Chinese on 880 and 1000. Can anyone give me any help on them? The one on 880 has a very loud transmitter noise and very poor voice audibility. You should hear the way the Argentine stations come in during the evening. Last night I had LR2 on 910 with wonderful volume although there was plenty of QRM from Trail, B. C. I also hear LS2 with fair volume. I heard the last LR5 DX with fine volume but too much static.

"KFI certainly has a very fine DX chat Friday nights from 11:30 to 12:00 PST. Their program, conducted by Frank D. Andrews, is a fine one. Another broadcast which I feel should have the support of your readers is the KDKA-W8XK DX Club; Joe and Ed are doing a wonderful job. Who is it that is on 705 every morning? Also who musses up WSB in the evenings? It is not my neighbor, KTRB. Who is on 818 in the early a. m.?"

Longer Aerial Helps

"In preparation for this DX season, I added about 25 feet to the length of my aerial and was certainly surprised that such a small addition should make such a big difference but it did," reveals Charles Meyer, Jr., 411 Blake St., St. Joseph, Mo. "The first morning that I tried it, all of the 10-kw. JO's were heard, with three of them at R9 volume although static was rather heavy. My total log, covering three years of DX, now stands at 488. My best new are TGW, JOJK and KGBU. TGW may be heard with quite good volume any Saturday morning and have very good programs. I still use the same old Philco 87 with a coil of wire buried two feet for a ground. I have recently been appointed state manager of the IDA and would appreciate any DXers in Missouri who would like to join the IDA, getting in touch with me."

"DXing has been quite successful here," opines Elwin T. Smith, Box 82, Harrah, Wash. "Have received 19 veries on the b. c. b. including 8 Australians—2CO, 2UE, 2BL, 2GB, 3LO, 4BC, 4BH and 4QG; 7 Japanese—JOIK, JOFK, JODK-1, JOHK, JOAK-1, JOPK and JOQK; 2 Zedders—2 YA and 3YA; and one from Nanking, China, XGOA; and KGU Honolulu."

KOTN Dominates 1500

"My DXing has been fair this season considering noises picked up on the antenna," finds Herbert E. Weidman, 7443 Bennett Ave., Chicago, Ill. "I have picked up KOTN on 1500 kc. for the past three nights from 7 to 8 p. m. CST. Can you imagine a new station that far away coming up through WJBK, WKBV, WKBB and other closer stations? One of the strange

things of radio but they certainly reigned over the 1500 kc. family like a 500-watter, fading very slightly and coming in R-7-8. After three years of tuning for them I finally realized my ambition of tuning in KGU. Sunday morning, November 25, was the last night that I will have to lose sleep for them. Although they faded much and were weak, I was able to identify enough of their program to verify them. No signs of Aussies, J's or ZL's however."

Some DX Specials

Bill Buckley and Jim Watson of Regina, Sask., have arranged a special series of broadcasts by stations in Western Canada for the CDXR. These are to be held on the mornings of Saturday and Sunday, February 9th and 10th. Although all the stations had not accepted at last report, we deem it best to include the schedule in our DX Calendar. "As an inducement for DXers to report on stations already verified by them, we are offering each morning two memberships in the CDXR to the non-member who reports on all stations from the greatest distance. Other prizes will be offered to the most-distant members reporting reception of each program."

Through the co-operation of Joe Becker, Hamilton, Ohio, and Alec Kinghorn and Vincent Clarke of Havana, the National Radio Club has made definite arrangements for a number of special broadcasts by Cuban stations in February, March and April. These will be incorporated in our DX Calendar. We thank C. G. Huber, Chairman of the CPC of the NRC for the data.

Station Notes

Station XENT, writing to give us the latest data on that station, says: "We believe we are the largest station in the world with its own independent lighting plant. We make all of our power for lights and power and do not have any power lines running to the station. We are located eight miles out on a ranch from the American border on the paved highway from Laredo, the Gateway to Mexico, and Mexico City."

The Little House Family, who dramatize the steps in building their own home as a copy of "America's Little House," are heard over the Columbia every Monday and Thursday from 4:00 to 4:15 p. m. EST. Left to right: Mrs. Ethel Jones (Betty Garde), John Jones (Kenneth Daigneau; and the twin sons, Peter and Bill (played by the real-twins, Bill and Bobbie Mauch).

T. R. Grosvenor, President of the Mid-Co DX Exchange, 247 S. Hillside, Wichita, Kans., writes that his organization has taken over all DX activities of Station KFH presenting all of their programs and answering all mail pertaining to DX. "We have a DX program each last Thursday of the month from 2:15 to 2:45 a. m. CST. Under no circumstances will a report be verified unless return postage is received. We will acknowledge postcard reports but will not verify them unless a double postcard is used. DXers must report at least three numbers or announcements."

Station WHDL, Olean, N. Y., calls attention to their new "Control Room Cut-ups" program, presented every Saturday morning from 6 to 7 EST. This is intended as a DX program for early-hour listeners. On this program all formality is dispensed with. "We believe this 'Cut-Up' hour will prove quite popular with the DXers as we try to put forth a novel and interesting broadcast as well as make every effort to announce station call at frequent intervals." WHDL verifies for three cents postage; every report is acknowledged and verified with a special sta-

tion QSL card if proof of reception is sufficient. Reports for verification must be postmarked within 48 hours of reception.

Europeans Coming Fine

From Sydney Mines, Nova Scotia, George F. Bartlett writes to say: "Conditions were never better for European reception than at the present time around about 4 p. m. AST. They start coming in and continue until 8 a. m. During the last week or two (November) I logged nine in Great Britain, nine in France, eight in Germany, six in Italy, two in Poland, two in Switzerland, and one each in Ireland, Spain, Austria, Czecho-Slovakia, Portugal and Sweden. All have been picked up time and time again. A great deal of the credit is due to your *DX Log of the World*. My log at the present time stands at 305, my best being 4RK, LR4, HJN, YV1RC, CMCW, WKAW, KTFI, KDYL and WEXL. All were received on a Philco 5-tube Model 51. Would like to hear from owners of similar sets."

Jovial Frank McIntyre who is now at the helm of Captain Henry's Showboat, the programs of which are usually "good to the last drop." Brother George Henry is in charge while Brother Captain Henry is off honeymooning with his old sweetheart, Nancy Stokes. McIntyre has had a long career on the stage and in the movies. Thursdays at 9 p. m. EST on the WEAF net of the NBC.

"For the past nine evenings, I have been receiving Poste Parisien with plenty of volume," exults Richard Perrin, 15 Pine Grove Ave., Lynn, Mass. "They sign off at exactly 8 p. m. EST. Yet I have never heard a single station in adjoining state, Vermont. There is a freak spot on my 5-tube Lafayette. In the place where I should get just a few code stations, I get all the 49 meters s. w. stations. The receiver tunes only as low as 90 m. and on each side of the narrow band of 49 m. stations, there are the usual 90 and 100 m. stations."

"The only good foreigners that can be relied upon practically all of the time, are PP, and Fecamp," submits Raphael Geller, 1652 Radcliffe Ave., Bronx, N. Y. "I have a Zenith 73 8-tube and find an aerial running n. and s. the best for my locality. I am secretary of the Alpha chapter of the CDXR in New York. Any member wanting a correspondent, drop me a line. I have 312 stations logged with 240 veries."

Some Queries

"Can anyone tell me what station I heard early Sunday morning, December 9, on 1290 kc. making announcements in Spanish or a similar language and in English with a distinct foreign accent?" This query comes from Ray H. Zorn, Troy Grove, Ill. "I first heard the station about 1:30 a. m. CST. At 1:39 the American fox-trot 'Snapshots of You' was announced and played and the announcer said 'OK, Professor.' It seems hard to believe that this could have been the 100-watt station at Sao Paulo, Brazil, but some things I heard through interference lead me to believe it might have been. I would be grateful if anyone could definitely identify this station for me."

"Who can identify a station on about 1080 in Salt Lake City with a call like KSAW or KFAW," queries Clarence Merkel, Jr., 622½ North 7th St., Quincy, Ill., who adds: "I have increased

my log to 640 with 205 of 100 watts or less. I have completed 19 states and need only one more in 10 states. My foreign log is 85."

A Dramatic Broadcast

James T. Spalding, 2012 Alexander Ave., Louisville, Ky., Director of Publicity of the IDA, reports reception of the special broadcasts in connection with the rescue of the wrecked fliers in the Adirondack mountains. These dramatic broadcasts were received through a special portable transmitter using the call GE-1000 on a special frequency of 6100 kcs. and were rebroadcast through W2XAD and W2XAF on 15.340 and 9.530 respectively. Two-way communication between W2XAF and GE-1000 was established. Mr. Spalding reports all communication was heard through GE-1000 but was much less satisfactory than through W2XAF. "This was *the* broadcast of the month and I hope it was widely heard," he adds.

Like Their Sets

"I just recently bought a RCA-Victor 281, 12-tube, and an RCA antenna to match it, and does it work perfectly?" is the rhetorical question of A. R. Callewaert, 4654 Dickerson Ave., Detroit, Mich. "The noise level is reduced greatly so that the signal comes in high above it. The aerial is 40 feet from the ground. I would like to correspond with any DXers that care to write as I am anxious to learn all the ropes of DXing."

Douglas Wauchope, Gable House, Gainesville, Ga., writes to say that he has just purchased a new RCA Model 128 "Magic Brain" all-wave and that he is delighted with it. He sends a long list of the s. w. stations he has heard in two weeks as well as a large number of the West Coast stations on the b. c. b. "The tone is remarkably beautiful," he adds, "and all in all, it is the best thing I have seen this year with absolutely 10 kc. selectivity on all bands. Would be glad to hear from other users of the RCA-128."

"I have purchased a new set since my last letter to you," relates Edward S. Cope, 36 Vansittart Ave., Woodstock, Ont. "It is a six-tube Dominion Electrohome and tunes from 18 to 55 meters. Has VK3LR changed its frequency to about 9585 kcs.? Is I2RO broadcasting at the present time? Germany rolls in here about R9 almost every day. England has been pretty good lately. EAQ comes in well from 5:15 until about 6 and then their signal drops away down. I would like to hear from listeners in Australia and New Zealand."

Reports In Brief

"I believe I have never read any letters from Wisconsin," observes Fred Sanders, 355 Ellis Ave., Peshtigo, Wis. "I have a Majestic 20 with eight tubes. I use a 246-foot aerial 54 feet high and 14 feet of copper pipe ground. To date I have about 350 verifications from Australia to Puerto Rico and P. E. I., and from Argentine to Alaska. Have one or more from every station and the D. of C., one or more from every province in Canada, also Cuba, Mexico, Hawaii, Venezuela, Argentine, New Zealand, Australia, Alaska, Guatemala and P. R."

"My b. c. log is nothing to brag about," confesses Weston E. Taylor, 317 Clifton St., Brush, Colo. "It has increased 100 since last spring and now stands at 290. The really distant stations I have not yet heard with the exception of JOIK and JOAK-1. I have one really good catch on the b. c. and that is CHGS, Summerside, P. E. I. I received them distinctly on 1450. On the s. w., stations are beginning to come in better and I have received all the better known stations with the exception of the French which I cannot seem to locate. Daventry comes in the best of the Europeans and the new PRF-5 is the best of the SA's."

"My b. c. b. log has grown to 455, an increase of 113, but I've had no sleep between the hours of 2 and 4 and 6 and 7 a. m.," deposes Margaret Hamilton of Coopersville, Mich. "Two small-

est stations logged: KFPM, 15 w. Greenville, Tex., and VE9EK, 10 watts, Montmagny, Que. Most distant was Buenos Aires. I hear a 'KEA' on 1050 giving barometer readings, visibility, etc." The latter is probably KDA, a long wave station on 350 kc. It would have a harmonic on 1050.

"I have had a 1934 Midwest 16 with an RCA s. w. aerial since December, 1933," remarks Lucius U. Maltby, Jr., Box 954, Short Hills, N. J. "I haven't spent much time logging stations, yet I have received one or more stations on the b. c. band at every ten kcs. from 550 to 1510. My total to date is 463. Foreign stations on s. w. total 83 and police stations 48. I do not send for verifications because I make sure of their identity."

"I've got a midget Kadette that's so small you can hardly see it," avers Paul C. Downing, Jr., Delray Beach, Fla. "I've just received my 300th station, all on the b. c. b. My best are KGCX, KFJZ, KFVS, KGKY, KOH, KTM, CKTB, VAS and WEDC. I've had 24 stations on the West Coast. I'll be interested in knowing if anyone has a set like mine and goes in for DX also."

"Up to the present time, I have pulled in 450 stations in U. S., Canada, Mexico, Cuba and three in Hawaii," affirms Lt. L. L. Bahr, 5 N. Main St., Elk Ridge, Md. "I have 430 Ekko stamps or stations' own verifications. Have received stamps from every state except Idaho and Wyoming. Am using a Philco 11-tube superhet and would like to hear from other owners of the same receiver."

"There was plenty of static during the FCC checks but I got KONO, KGHF, KGKL, KLUF, WKAQ, and VE9EK. So far I have been unable to log WJEM and WNYC. Has anyone been getting them? I use a Majestic t. r. f. 7-tube set and 3-tube regenerator. Would like to correspond with any active DXers. Address Julian Schaefer, 2036 West 83rd St., Cleveland, Ohio."

"I started verifying in March, 1933," reviews John Clarke, 387 14th St., Buffalo, N. Y.; "and today I applied to the NNRC for a Super-Ace certification which requires 500 verifications of which 52 must be 2000 miles distant." John says he tuned in YV1RC on 960, in Caracas, Venz., at 5:30 p. m. on November 16 and sent in an hour's report.

"I have logged 349 stations and verified 19. My best catches are WKAQ, LR5, WOCL, KFPM, KXO and several other 100-watters in California. I am using an old Amplex C and wish to say to those who have not received anything outside of the U. S., that if my old Amplex can pull in LR5 and WKAQ, any fairly good set can." This report is from Ervin Simon, 5640 Pierce St., Omaha, Nebr.

"I have a new Grunow six-tube and talk about stations—boy, it gets them," enthuses Leonard V. Hall, 316½ North Pine St., Ponca City, Okla. "In three weeks I have logged 83 U. S. stations, 2 Canadian, 5 Mexican, one Cuban and one Jap. I get JOIK on 830 kc. There is generally so much interference that I can't break in on any of the others."

Vernon Andrews, 237 West Irvington Place, Denver, Colo., writes to tell us that KFEL and KVOD are two separate stations although both are on 920, and that KGEK was still in Yuma, Colo., on its November frequency check, not yet having moved to Sterling. Vernon has 582 verifications including 15 foreign countries on the b. c. b. He uses a Philco 96.

The following would each like to get into touch with DXers in their own communities: Stanley A. Schmuch, 94 Otis St., East Cambridge, Mass., and Charles Sodergren, 1213 West Third Street, Dixon, Ills.

"I am only 15 years old and can't seem to fit DX in with my school work to an advantage" complains V. Grassie, Duncan, B. C. "I have managed to get a log of 244 in about nine

(*Continued on page* 48)

The SHORT WAVE Club Meets

● ● ● *With* PAGE TAYLOR

THE experimental shortwave station of the Philips Radio Laboratories at Eindhoven, Netherlands, the well-known PCJ, was officially inaugurated on December 21st and programs are now broadcast simultaneously over PHI and PCJ on 11725 and 15220 kc/s. respectively. Mr. H. L. Zeelenberg of the Secretariaat, N. V. Philips Radio, writes, "As it is of the highest importance for future transmissions to receive as many reports as possible, we would kindly request listeners-in to report on these broadcasts to Philips Radio, Eindhoven, Netherlands."

PHI and PCJ broadcast daily except Tuesday and Wednesday from 1320 to 1620, Amsterdam Standard Time, or from 8 until 11 am, Eastern Standard Time.

A card recently received from station HI-4-D gives its frequency as 6482 kilocycles but the station is still heard on 6500 kcs. HI-4-D, "La Voz de Quisqueya," Santo Domingo City, Dominican Republic, transmits from Monday to Saturday from 4:40 to 7:40 pm, EST., but has been heard many times working until midnight or later broadcasting music and working with Latin-American stations. Incidentally, "Quisqueya" is the native name of the Island of Santo Domingo.

From YV5RMO

Mr. Santiago M. Vegas of YV5RMO in Maracaibo, Venezuela, advises us that his station is on the air daily from 11:30 am to 1 pm and from 5:45 to 10 pm, EST. "We are pleased to know that the reception of our station has improved with our change to 5850 kc/s," writes Sr. Vegas. "Every Monday evening we broadcast operas or other classical music and the rest of the week is dedicated to lovers of the more popular variety, especially local music. Our programs open and close with the playing of the Blue Danube March." YV5RMO announces as "Ecos del Caribe" (Echoes of the Caribbean), and one stroke on a gong usually precedes this announcement. Correct reports are always acknowledged and should be addressed to Apartado de Correos 214, Maracaibo.

Two New Ones

"A new station was heard announcing as an experimental shortwave station at Santiago de Cuba," contributes James T. Spalding, 2012 Alexander, Louisville, Ky. "This was heard at 8 pm, CST on approximately 6180 kcs. They were calling COH who did not answer, after which they called CQ to New York, and finally sent music.

Everybody's friend, Major Edward Bowes, genial master of ceremonies of the Capitol Family broadcasts over the WEAF net of the NBC Sundays at 11:30 a. m. EST. The Capitol program first went on the air to crystal and peanut-tube set listeners on November 19, 1922, and has appeared well over 600 Sundays since.

They were still on the air at 9 pm." The call letters of this station have not yet been learned.

"I added a new station to my log last night," advises Wm. McDaniel, C/o The Gazette, Charleston, W. Va. "It was HP5B in Panama City, Panama, on about 6030 kcs. The address was given as the Miramar Club. This was heard from 9 to 10 pm." A postal card from Melvin Botto, 62 Evelyn St., Buffalo, N. Y., gives this additional information: "HP5B at Panama City on approximately 6040 kcs. It broadcasts excellent musical programs in the evenings from about 9 to 11:30 pm, EST. HP5B announces in Spanish and English and its slogan is 'The Heart of the World, Where the Trade Winds Blow.'"

West Coast Reception

"Shortwave listeners on the Pacific used to envy the eastern listeners but now that we have quite a few really interesting new stations to play with it is not quite so bad," commences a long letter from Harold S. Allen, 1929 N. W. Irving St., Portland, Ore. "Reception here from YDA in Bandoeng, Java, is extremely good. They are on the air at 2 am until 7 am, PST, and play anything from Il Trovatore to Red River Valley. Incidentally, PLV, 9400 kcs. has a schedule every night with JVE, Nazaki. PLV calls JVE in English at about 12:25 am, PST. PLE on 19400 kcs. is also heard well in mid-afternoon, but not regularly, playing records and testing with JVF on 15400 kcs., both coming in here with tremendous volume. I never heard CQN at Macao but while searching for it ran across what I believe to be XQAJ, a Chinese station at Shanghai, on from 2 to 5 am, PST, on 5660 kcs.

"The numerous Japanese stations this fall and winter have literally made our speakers jump, but it appears that JVT on 6750 is the most regular of the lot. They start at 1 am but always play a couple or three recordings of American music at 12:50 am before the actual start of the program.

"Our good old Russian stand-by, RV15 at Khabarovsk, continues to come in from R7 to R9. They are on the air as early as 11:30 pm PST each night with a musical program between 11:30 and midnight. After that it is one solid talk until 5 am or so. I notice they have been putting on a program on Wednesday nights with Russian girls singing our songs. I heard 'Who's Afraid of the Big Bad Wolf?' among many other hits."

Japan in Ohio

"JVF has been coming in lately anywhere from 4 to 5:30 or 6 pm in the afternoons," reports Geo. W. Acker, 267 No. Lyman St., Wadsworth, Ohio. "I recently heard it so well it could be understood all over the house until 6 pm. JVF usually remains good until this time, and then takes a drop, gradually dying out by the minute. DJC is really beginning to come in now. However, it is not at its best until nearly 10 pm. But, the instant it starts to become really good, something else has to start working on 6020 kcs. and spoil it. Recently someone has been heterodyning with DJC during their entire program and I finally identified the rascal as HP5B at Panama City, Panama. At first I thought it was XEBT up to its old tricks, but XEBT seems to have settled down on about 5900 kcs.

"I believe that if any foreign stations are worth listening to, they are the Germans. Not only do they stay on until 4:30 in the morning over there in order that we may have a full evening's enjoyment, but their programs are also the best on the ether waves. No other stations have the deep thundering force and the fine tone and modulation."

Recommends YDA

"I have at last picked up the new NIROM station, YDA, at Bandoeng," reports Charles Miller, 309 View Place.

Covington, Ky. "This station, I think, should be heard fairly well all over the United States. They seem to come on the air at 5:30 am, EST, but how long they remain I cannot say as they fade out here around 8 am. Strangely, instead of fading out at dawn, they get better right after sunrise and hold up well for about a half hour or more. Reception was not particularly good, but good enough to send them a report."

HJ1ABB Like Local

"Here is some information I would like to pass on to other readers," suggests Henry Powicki, 22 Mall Street, W. Lynn, Mass. "Practically all the South Americans listed in the 100 Best come in at the times given. But the best here is HJ1ABB on 6.447 megs., which comes in like a local from 5:30 to 7 or 7:30 pm, then gradually tapers off, but it has quite a good signal until it signs off. I use a Zenith Model 807, 6-tubes, on which I have received many stations and of course the G's and D's of England and Germany, also RV15, EAQ and the USA stations of course."

Lottery on COH

Mrs. Myles Bruning, 155 So. Whitney St., Hartford, Conn., reports reception of COH on 9491 kcs on her 10-tube all-wave Zenith. "My husband used to have an amateur station before the World War," she continues. "Now the two of us are going to see what we can do with a factory-made receiving set. That COH program faded a lot of times and then again it came in as loud and clear as some of our locals. They advertised the Cuban National Lottery and the grand drawing for a quarter of a million dollars."

Premiere of CT1GO

According to reports in World-Radio, the British Broadcasting Corporation publication, a new Portuguese station has been officially opened by a special program in which the President of the Portuguese Republic spoke. This is station CT1GO, owned by the Portuguese Radio Club in Lisbon. Two

Mary Pickford and her leading man, Gale Gordon, at the microphone for one of her series of dramatic plays. Gordon was seen on the stage in New York in "The Dove," and "The Dancers" before he went to the Pacific Coast to engage in radio work. Miss Pickford heard him there and promptly engaged him as her leading man. On the WEAF-NBC chain Wednesdays at 8:00 p. m.

wavelengths are used, but, being in an experimental stage, are subject to slight alteration; one is near 24 meters and the other between 48 and 49 meters. Although CT1GO has not yet been reported in the USA, we have included it in our indices because we believe it can and will be heard here.

Likes Pre-Selector

"Shortwave reception has not been above ordinary here in Newark," complains Nicholas Hock, 20 Burnet St., Newark, N. J. "W9XF asks listeners to write in and they would be glad to send a newly designed QSL card. The following stations have been received as noted: COC, 12:35 am, Sunday, very good; HJ1ABB, fair at 9:30 pm; HJ5ABD, good at 9:35 pm; DFR, Zeesen, Germany, 15570 kcs. at 12:30 pm testing with New York. Prado has been heard on many nights other than their regularly scheduled Thursday program. I use a Hammerlund Comet

Pro with a pre-selector. The pre-selector increases the signals from 25 to 150%. For instance, VK2ME was received with a rather weak signal, then when the pre-selector was turned on, the noise disappeared and the signal increased 100%."

The S. A. Network

Station El Prado, Riobamba, Ecuador, has been very active testing with other stations in the Cadena Indo-Americana. The lady announcer at PRADO, Senorita Judy, usually conducts these roundtable discussions, and her voice is easily recognized whether she talks over the El Prado transmitter on 45.31 meters or over the amateur station HC1FG in the 40 meter amateur band. While the round-table is in progress the call letters of the various stations taking part are not always used, but the familiar names of the owners of the stations. Following is a list of the stations on this network, and the names by which they are known:

PRADO: Srta. Judy or sometimes amigo Cordovez (Friend Cordovez).
YV5RMO: Amigo Vegas (for Santiago M. Vegas).
HJ1ABY: Emisora Atlantico and sometimes, amigo Gimeno.
TIX: "Alma Tica" or Don Gonzalo.
TIEP: Amigo Pinto, and, La Voz del Tropico.
V4RC: Amigo Manolo.

Short Wave Chat

" I got my first copy of RADEX today and notice you list HC2ET in Guayaquil, Ecuador," comments Allan Ford, Portneuf station, Prov. Quebec, Canada. "This station was received here one night from midnight until 12:18 am, EDST. All announcements were in Spanish. The Spanish pronunciation of the alphabet in the June RADEX is very helpful in identifying these stations. HC2ET came in QSA4, R6 on my one-tube receiver."

"It is now 10:30 am, CST and for the past half hour I have been listening to some foreign station speaking what sounds like French on about 15290 kcs., or about midway between W2XE and W2XAD," postcards R. N. Putnam, 920 12th Ave. No., Fargo, N. Dakota. "There is too much fading and noise for me to identify this station and I wonder if any Radexer can help me. I have also logged a new German station on about 9800 kcs. whose call letters I was unable to catch."

"Can anyone identify a station WJFW on about 2300 kcs," asks Lincoln A. Wood, 36 Rock Ave., Lynn, Mass. "I believe this is a fishing boat which works with WOU at Marshfield, but am not sure."

Convalescent Reception

"While sick in quarters I depended a good deal upon my Silver Marshall 8-tuber to keep my spirits near normal," pens J. R. Johnston, Capt. 338th Inf. Commanding CCC Co. 612, Camp Chicago-Lemont, Willow Springs, Ill. "In fishing for South American stations I ran across OAX4D, which I assume is in Lima, Peru. The call letters were mentioned many times in English. This morning GSD announced it was on 25.05 meters and GSB on 31.05 instead of as listed in s. w. magazines. PRADO, Riobamba, Ecuador, is difficult to log unless one understands Spanish. I heard it several times calling Costa Rica and Barranquilla but never identified it until he talked with an Indiana amateur." PRADO is one of the most easily identified of the South American stations which do not speak English. After every musical selection the words "Estacion El Prado, Riobamba, Ecuador," are spoken. This was the first station to use a name to identify itself, thinking a name, PRADO, would be more easily understood than a series of letters and numerals.

Urges Study of Bands

"I believe that shortwave success can be attained only by a careful study as to when the various broadcasting bands are at their peak," surmises

Jack Watrous, La Canada Road, San Mateo, Calif. "Of course these bands change with the seasons, but I have been watching closely the 25-meter band and at this time find it is best from 7:30 to 9 am when GSE and Radio Coloniale are at R9 volume. The 19-meter band is now almost dead since summer is over. PHI is commencing to come in very well on 25 meters and their relay on PCJ is also heard well but irregularly. Surprisingly enough, the Australian stations are received poorly here. A station that eluded me for a very long time has finally been captured. I refer to that old easterners' stand-by EAQ. This station seems to skip right over this location so my reception of it was an event for celebration."

DJC Is Consistent

"I have just bought a new Midwest 16-tube receiver and am enjoying good results with it," says Robert F. Collins, 26 Brickell Ave., Westwood, N. J. "I have over 50 s.w. stations in 19 countries. DJC is by far the best European station for volume and consistency with GSA next. Almost every night I hear YV3RC, HJ1ABB, YV4RC, XEBT, COC, TIEP and YV5RMO with volume to spare. The most distant station I have is VK2ME."

It may help some DXers to know that best reception on the various bands seems to follow the chart following," postcards Wm. R. Hamilton, R1, Box 160, Vallejo, Calif. "Forenoon, 23 to 11 megs. Early afternoon, 16 to 9 megs. Late afternoon, 12 to 9 megs. and evenings, 9.5 to 1.5 megs."

"I hear the Roman station on 9780 kcs. very well now," postcards Drexel Peterson, 615 Seventh St., Boone, Iowa. "Rome compares favorably with the other Europeans now. RADEX gives a station on 9630 kcs. but I hear one announcing as Pronto Roma on 9730."

"Someone may be interested in the list of stations I have heard since last September," thinks Granville Healy Wood, 249 Thomas Ave. So., Minneapolis, Minn. "Some of the stations are: HJ3ABH, which sends a beautiful QSL card, PRADO, HC2RL, YV2RC, VK3ME, CT1AA, VK3LR, HJ1ABB, etc." Mr. Wood tells us that HJ1ABB is now relaying a broadcast band station with the call letters HJ1ABA and that both call signs are given now over the shortwave station.

We are reminded that the interval

Wilfred Pelletier who conducts the weekly operas for Chase & Sanborn on the Red net of the NBC, is a veteran opera conductor and one of the nation's better known musicians. He has been a conductor at the Metropolitan Opera House for many years.

signal of YV3RC is changed. While it used to be three chimes like those used by the NBC, it now consists of four musical notes.

The German Schedule

The latest schedule for the German shortwave broadcasting stations came just before going to press. Time given is Eastern Standard:

12:30 am to 2:00 am, DJB, 15.200 megs.
12:30 am to 2:00 am, DJQ, 15.280 megs.
3:45 am to 7:15 am, DJB, 15.200 megs.
3:45 am to 7:15 am, DJN, 9.540 megs.
8:00 am to 11:30 am, DJN, 9.540 megs.
8:00 am to 11:30 am, DJA, 9.560 megs.
12:00 pm to 4:30 pm, DJC, 6.020 megs.

12:00 pm to 4:30 pm, DJD, 11.760 megs.
5:30 pm to 9:15 pm, DJA, 9.560 megs.
5:30 pm to 10:30 pm, DJC, 6.020 megs.
5:30 pm to 10:30 pm, DJN, 9.540 megs.

A message from the Deutscher Kurzwellensender to their listeners the world over is included in an article entitled "Hello, Everybody" in a magazine called "Germany and You." An excerpt from this article is of interest.

The Program Motif

The world-wide broadcasting service from Zeesen was originated with the view of providing fellow-countrymen throughout the world with typical entertainment and music from the homeland, and to give reliable information on the happenings and conditions here, but its field, at the request of hearers, became international, and now the programs are sent to the world, as it has shown that it too appreciates the waltzes, marches and the immortal masterpieces of German music, and seems to have a desire for the viewpoint of another country on world affairs.

The language difficulty is coped with, climatic conditions solved, and technicians and artists work in the small hours of the night and morning just to provide entertainment and diversion for friends and listeners in other lands. Their greatest reward is the letters of gratitude and appreciation which assure them that their efforts are received.

A sample copy of Germany and You will be sent free to anyone requesting it from Wiking Verlag GmbH., Berlin W9, Columbushaus, Germany.

The pleasure and convenience of tuning foreign short wave stations is greatly increased by using the RADEX Radio Map of the World with Time Converting Dial. Simply turn the dial to YOUR time and it also shows THEIR time.

I Prefer *the* Broadcast Band

By Dr. Harold R. Jacobs*

SHORT wave DX, I have become convinced, offers little under present conditions to interest the DXer who has logged and identified the forty to sixty high or low powered transmitters that can be positively identified. After that it is merely a matter of guesswork made especially unreliable by the total irregularity or absence of schedule, language difficulties, impossibility of accurate calibration of the few crowded bands, especially when the transmitters themselves are notoriously inaccurately monitored, and the necessary unreliability of most published short-wave station lists. I give RADEX credit for limiting itself to those stations which have proven stability.

The short-wave field, except for the stations on the RADEX list, is a madhouse in which impressive logs can be built upon little or no national basis. I do not fall into the error of claiming that certain reception is impossible because there is probably no such word in short-wave DX. I claim that identification of many of these stations is impossible even to an accomplished linguist and, without certain identification of every logged station, the whole log becomes valueless.

Then, too, the fact that no reception is impossible on short waves, removes a lot of excitement. There is nothing to aim for. If you want an African or a South Sea Islander, you merely close your eyes, twirl the dials slowly and, if you are in luck, one might be there. It might be R1 or R9 but it probably won't be identifiable. You may hear snatches of a two-hour telephone circuit (if you have luck) in a foreign idiom but

there is no use trying to verify a foreign phone call. In fact, there are few more foolish things to do than this. It is an easy way to use up a good supply of International Reply Coupons.

On the Other Hand

The broadcast band is much more sensible and DXing there is more reasonable. Even though the frequency checks have unfortunately taken a lot of hundred-watters that would have been good material for sleepless nights, rolled them into a lump and shoved that lump down the throats of our log books, transforming them from nice hard-working 300's to overstuffed five-and-six-hundreds, there is a lot of good DXing left.

Here in New York, you can at least be sure that when the sky is overcast early in January, you won't hear Australia but that on a clear night in November or March, you may. And if you hear an Australian, you can calculate its frequency with no such difficulty as is encountered on that madhouse 49-meter band. By the way, *why* do stations spend fortunes to erect powerful s.w. transmitters and then work them in the middle of the most congested portion of the radio broadcast spectrum, the 49-meter band? Is there much difference between the new 12RO broadcasting American programs on the 49-meter band (or GSA or DJC) and the palpable insanity of, for example, WEAF, WLW, WGN, and WCAU combining their individual transmitters on 1200 kcs? I can't see a great deal of difference.

On the broadcast band, a list of stations means more than a mere notice that such-and-such a station chanced to pause on such-and-such a frequency during its mad gallop among the decimal points. On short waves, too often, it means no more than that.

On the b.c.b. you can plan your DX. You know that in December a French transmitter heard around 2:30 a.m. just below 960 kcs. is Poste Parisienne. It's in the log book and even if you cannot understand French, you may log enough for verification purposes. If you hear it at 4:30 p.m. in November, it may be CKY but the differentiation between the two is far from difficult.

True, the Cubans and Mexicans do jump around a bit but even those jumps are caught in the latest RADEX with fine accuracy. It is noteworthy only because it is such a rarity, that RADEX listed XEAW on 950 for a few months when it was on 960 actually.

Well, this looks like a promising year for b.c.b. DX. I have letters out to my first TP's, 4QG and 5PI, heard early in November. I also heard 2YA and 4BC but could not get them identified with certainty. I've been hearing LR4 frequently right after WBZ signs off, particularly on Friday and Saturady nights. My log stands at present at 676, including verification from HJN, YV1BC, PP, Fecamp, LR5 and the letters out to LR4, 4QG, 5PI and TGW. Including short wave and other nonsense (no amateurs) my total is 1536.

*91-05 *Boulevard, Rockaway Beach, N. Y.*

Pat Kennedy, singing star with Art Kassel and his Kassels in the Air, was presented with six cocktail shakers at a bachelor dinner preceding his marriage a couple of weeks ago . . . What to do with the other five is a problem, Pat says. . . Julia Sanderson, who admits she hates to cook, enjoys Sunday evening when her husband, Frank Crumit, takes complete charge of affairs in the kitchen. . . . Joey Nash, vocalist with Richard Himber's Orchestra, spent his Christmas Day making phonograph recordings.

DX Doings *in* Down Under

• • • *By* ROY W. ARTHUR*

AT THE time I pen these notes regarding radio doings in Australia, a seasonal change is taking place and, following closely in its wake is a somewhat lean period for the DX fraternity. Spring has officially arrived and that foretells the weather henceforward for the next few months, will tend towards a warmer outlook, resulting in the inevitable electric storms and bad reception conditions.

DXers have rather reluctantly bid *au revoir* to Old Man Winter and consequently, for the next few months, will be marking time, perhaps doing a little thumb-twiddling in lieu of the more pleasant pastime of dial-twiddling, in patient but eager anticipation awaiting the first of the American contingent to appear towards the end of November.

In this country reception of American signals, during the winter period, takes effect in the late afternoon. From April to September (our winter) somewhat excellent conditions prevail between the hours of 4 and 7 p.m. Eastern Australia Standard Time, which is equivalent to 10 p.m. to 1 a.m. PST. In the same manner this fact is applicable to signals emanating from Mexico and South America yet, strange to relate, no sign of any Canadian stations.

Sigmund Romberg, famous composer and conductor of the Swift Hour on the NBC-WEAF net, Saturdays at 8 p. m. EST. Romberg has started a campaign to revive the one-step and liven up American dancing. He plans to revive the most popular of the old time favorites and is writing some new one-steps for his broadcasts.

Signals from the U.S.A. peak in this period during the month of July and from that time on, a gradual decline becomes apparent until they fade out around the latter part of September. Covering this duration, great numbers of Pacific Coast stations, together with Central Time stations, Mexican and Hawaiian, are in the offing to be played at considerable strength on the speaker.

A Silent Period

Following the fade-out, nothing is heard of American stations until towards the beginning of December when they again make an appearance much to the Aussie DXers' good content. From December to midway through March, comprises the summer season of DX and within this time. American Broadcasts are played to advantage from 9:30 p.m. until into the early hours of the morning. Favorable occasions have made the way clear for as many as sixty to be heard, beginning the early morning sessions with the inevitable old-time fiddlers very much in evidence.

Undoubtedly the summer months, despite hostile static, are the most prolific for American stations primarily due to the fact that the last of the local stations—apart from a few—have left the air prior to 11:30 p.m. thereby leaving all channels clear, in this part of the world, for reception of overseas stations.

In the winter, over the past few years, the position of DX listening has become an extremely acute one,

owing to the number of channels that were otherwise vacant being taken up by the Australian broadcasters as well as those in New Zealand. At the present time, due to this state of things, many channels are now giving forth nothing but piercing heterodynes.

KFI the Best

Of the galaxy of American stations heard here, the general consensus of opinion shows KFI as supreme. There's no doubt whatever as to the potency of this broadcaster. Referring to it brings to mind happy recollections of splendid broadcasts heard over it. From the Australian point of view, perhaps the most notable one being the Olympic Games resume conducted so ably for our special benefit by Miss Luxford. DXers were certainly thrilled to hear our athletes before the microphone and of their doings at the games.

Among the other stations that are received exceptionally well is WLW. Despite its use of tremendous power, this transmitter has not as yet (compared to what it was when rated at 50 k.w.) shown the improvement that could reasonably be expected of it. Indisputably it has shown some improvement but more than that nothing could be said in its favor.

DXers here are all agreed that the passing of the Mexixcan XER, from a DX viewpoint, is to be regretted. This broadcaster was a most sought after one, with Johnny Boy and company coming over remarkably well. However to rather offset this obvious disappointment, XEPN has filled the breach on several occasions in recent weeks.

Japanese Are Locals

Concerning the stations of the Orient, it can be said that they come in like locals all the year round with the best times presenting themselves during our winter period when they are played as early as 7:30 p.m. to close of transmission which is, in one or two instances, around 12:30 a.m.

Of the Chinese, many of the low powered brigade having ratings in the vicinity of 100 watts, can be logged without any great inconvenience after the locals close down at 11:30 p.m. The real gem, naturally, is the Nanking station XGOA which is, incidentally, the finest overseas station to be received in this country at the present time. It comes in with a punch that is truly astounding. It is easily on a par with locals and is heard excellently practically all the year round. XGOA closes down at 12:30 a.m. but many of the others can be logged until some time after 3:00 a.m.

The Siamese station, HSPI, is the finest of that country to have reached this far and is an old friend of DXers "down under." The splendid Philippine station, KZRM, continues to make a bold showing, it being an old stand-by heard throughout the year. The Bombay station, VUB, is perhaps the strongest Indian to be received here. Almost on a par, however, is VUC. They are tuned only in the winter months from midnight to 3:00 a.m.

The Europeans

Stations located in European countries are played the greater part of the year from about one hour prior to sunrise fading out as soon as the sun is up. Over seventy stations are available from this part of the world on almost any morning from June to September and from January to April.

It was not until the coming of the superheterodyne some three years past, that the realization grew here that overseas reception was not outside the bounds of possibility but, much of the contrary, quite a simple thing. Now several radio journals have given way to the ever-increasing demand of DXers and making space available for them. Australia cannot as yet lay claim to any DX clubs. I

can safely say, however, that DX clubs will be the order of the day here soon.

Reading RADEX, the Australian DXer is impressed at the emphasis placed upon the achievement of logging stations located in this country. Consequently the news that seven new and comparatively-powerful relay stations are under construction here will, I assume, be hailed with delight by American DXers. Information indicated that the stations in question will be on the air sometime early in the New Year. The thought is to serve areas that are now notoriously bad for radio reception, where decent daylight reception is something almost unknown. They will relay the National stations.

New Australians

In addition to those referred to, there are two class B stations which at the present time are nearing completion and are expected to be on the air broadcasting regular schedules prior to November first.

The seven stations first referred to are as follows:

Kelso, Tasmania, 630 kcs. 7000 watts

Clevedon, Queensland, 640 kc. 7000 watts

Lawrence, N. S. W., 660 kc., 7000 watts

Longford, Victoria, 830 kc., 7000 watts

Minding, West Australia, 560 kc., 10,000 watts

Cumnock, N. S. W., 550 kc., 10,000 watts

North Hill, Victoria, 580 kc., 10,000 watts.

The new B Class are:

4AY, Ayr, Queensland, 980 kc., 100 watts

5MU, Murray Bridge, S. A., 1460 kc., 100 watts.

In closing, it may be of interest to mention that the writer has, up to the moment, logged over 400 overseas stations on the b.c.b. The receiver employed is an a.c. 6/7 tube t.r.f. Stromberg-Carlson (Australian made). Aerial comprises 100 feet 7/20 bare stranded copper wire at a height of 50 feet at further end from receiver down to 32 feet. Earth is similar wire apart from being covered to that of aerial and is eight feet long connected to water-pipe. Location: Wollongong is 52 miles south of Sydney, N.S.W., and is situated on the shore of the Pacific Ocean in the beautiful Illawarra district—the "Garden of Australia"— a spot that American tourists never fail to visit when touring "down under."

*10 *Kenny Street, Wollongong. N. S. W., Australia.*

Radio Prevents Air Tragedy

A FEW minutes after Ray W. Brown had taken off from the Akron airport in his company's Lockheed Vega plant for Columbus, on a recent Sunday afternoon, he tuned his ship's radio to Department of Commerce station WWO at the Cleveland airport to obtain the regular 1 o'clock weather broadcast.

Instead of the weather broadcast, he was startled to hear the radio warning:

"Calling Ray Brown in Lockheed NC 539M. Your landing gear is gone! Calling Ray Brown in Lockheed NC 539M. You have lost your right wheel! Calling Ray Brown, Lockheed NC 539M!"

Leaning out of his compartment, he glanced down at his landing gear to discover that one of the shock struts and the right wheel were dangling in the air.

In a flash, he knew that meant landing on one wheel, if he landed at all. And his fast Lockheed had to be landed at a very high rate of speed. The condition of his landing gear meant an almost inevitable crack-up.

Nearly a score of years as a pilot had trained Brown to thinking fast in the air. Since his early flying days, as an Army Air Corps flying instructor during the war up to his present position as aeronautic tire sales manager for the General Tire and Rubber Company, Brown had been in many a jam and had always come out of it on top.

When he first heard the radio warning, he was above the Portage Lakes near Barberton, south-west of Akron. His first thought was to head for one of the lakes and land in the water, although without pontoons.

"Then I decided that the boys would be standing by at Akron and would have the fire extinguishers and emergency equipment ready if I cracked up," Brown said afterward. So he headed back for the home airport.

Sure enough, the boys were standing by. When he took off, several of them had noticed that the wheel was dangling. They knew there was no plane at the port fast enough to overtake him.

But R. F. Kitchingman, head of Akron Air Services, operating a hangar at the airport, was equal to the emergency.

Although there was no radio station at the Akron port, he knew that Brown would be tuning in the radio station at the Cleveland airport to get the 1 o'clock weather report, just about due.

Getting Cleveland on the phone and getting the radio warning on the short wave from station WWO was a matter of seconds. That not a second was lost was evidenced by the fact that Brown's speedy Lockheed had traveled less than ten miles before he picked up the radio warning.

As Brown approached the Akron port again, many anxious eyes were upturned as he circled the port, his right wheel dangling uselessly in the air.

Almost breathless, they watched fearfully as he swooped closer and closer to the ground. Then they saw one of the most beautiful pieces of aircraft handling that any pilot ever has performed.

As coolly as though he were landing in a perfect plane, Brown first set down his tail-wheel. An instant later, his good left wheel was on the ground, while his ship sped forward at 45 miles an hour, well under his normal landing speed, as he had sideslipped the plane in.

Then, almost miraculously, as he eased down the crippled right side of the landing gear, the damaged strut settled again into its proper place, the plane rested on its three wheels and came to a stop.

The watchers gasped, started breathing again and then set up a cheer. When Brown stepped from the plane, which was undamaged except for the strut which had given way when a bolt had become crystallized, he was smiling.

"Treat's on me," he called out cheerfully, as he headed for the airport terminal building, surrounded by the group of greatly relieved friends. "It's an old aviation rule. When you get into a jam and out of it safely, the treat's on you."

Soon, airplanes from all parts of the state, who had picked up the radio warnings, commenced dropping at the airport and their congratulations on his good luck were mingled with admiration for his skillful piloting.

Virginia Rea has a professional critic. He's Edgar Sittig, the cellist, who also happens to be her husband. When the star of the NBC networks is on the air, Sittig leaves the studio and listens to his wife on a regulation loudspeaker. After the program he tells her exactly what happened and gives her a critical analysis of the broadcast. And Miss Rea always listens!

Our Canadian Readers Argue Broadcasting Systems

THE close of the ballot on December first regarding the preference of our Canadian readers between a state-controlled system of broadcasting without advertising and the commercial system without a tax, did not stop the flow of letters. The vote, which was published in the last issue, was not at all conclusive. It does mean, however, that 2052 of our Canadian readers out of 4552, prefer to pay a tax rather than to listen to advertising. On the other hand 2502 prefer the finer programs and the more noteworthy artists possible under the competitive commercial system.

In spite of the fact that the ballots have been counted, we give space herewith to our Canadian friends in which to conclude their arguments pro and con.

Prefers Canadian System

"I favor the license system because it is much more pleasant to listen to a complete evening's program free of interruption save time and station calls. I also favor the tax because with it interference caused by defective electrical equipment, regenerative radio sets, etc., is soon traced and rectified by the radio inspector and his interference car. In Canada the fee is two dollars per year and failure to take out a license makes one liable to a fine and even confiscation of the set. New sets must not be sold unless a license is shown or purchased at time of sale, nor must a serviceman make repairs to or check a set unless a current license can be produced." Winnipeg, Man.

"I prefer the Canadian system but it is only fair to say that we often listen to the U. S. programs and enjoy them very much. We must admit that our national radio system is still far from perfect as we have a large number of low-powered stations and not enough high-powered ones. When our country is adequately covered we hope our system will compare favorably with yours."

"In the U. S. some channels are wasted by a score or more of small stations grinding out yards of advertising and recordings. To have a concert, lecture, debate or anything interesting brought in as a modern radio can bring it is, without a hash of cross talk on cough cures, hot drinks and underwear, is well worth a small tax. The NBC and Columbia systems are fair enough but the ordinary stations are just a nuisance; without advertising they would cease to broadcast and one could enjoy a concert free of interference. With state control a few stations of high power would be ample to entertain all listeners. The Canadian Commission has about eleven stations across the country and they are enough for the population." Nanaimo, B. C.

On the Other Hand

"Government radio officials are apt to consider themselves superlative judges of the proper programs to present. Private sponsors serve their own interests best by offering popular entertainment and by acceding to listeners' requests. There is a powerful incentive to provide second-class artists on government programs to reduce their cost. Such action by private sponsors would be patently unpolitic." Dartmouth, N. S.

"I believe a Radio Commission should be made up of men who have a real knowledge of the radio game, and not men who have been picked from the ranks of politicians and given high-salaried jobs to operate something they know very little about. If we had the right kind of

men at the head of our CRC, I believe we could have one of the best radio systems in the world. As it is at present constituted, I prefer the U. S. system." St. Thomas, Ont.

"The Canadian system has failed in that, when it came into force, advertising was supposed to be discarded and the system kept up by the tax. Now we not only have private advertising galore but the tax as well. And a tax, when once imposed, will eventually be increased. See if I am not right." Winnipeg, Man.

"It is true that the CRC do not mix advertising with their programs but their stations permit spot advertising which hasn't even the excuse of a musical program to back it up. I am sure most Canadian listeners will agree that both the Canadian and the U. S. commercial programs are far superior to anything the Commission has to offer." Toronto, Ont.

"The long announcements in French one has to listen to on the CRC broadcasts at times offset a reasonable amount of advertising. It is, in my opinion, not a question of advertising or no advertising, but of how much time should be taken up by sales announcements. In time, of course, this will adjust itself. On one or two fifteen-minute programs I have listened to lately, about eight minutes were taken by the program and seven minutes in boosting somebody's wares. The result is that *we do not trouble to tune in these programs.*" Tillsonburg, Ont.

"The programs emanating from the U. S. stations, particularly on the networks, are of a higher order and present better artists as a general rule than are available here. If your manufacturers are willing to pay what it costs to put on these high-class programs, why shouldn't the listener put up with a little advertising? Personally I'd be inclined to thank them for it also. While we pay our tax to the Canadian Government, 90 per cent of our listening-time is spent with your American stations." Hamilton, Ont.

"I have spoken to dozens of radio listeners about this question and every one has told me that they very seldom listen to CRC programs as they are usually too 'high-toned', and from my own experience, I have found that these programs are not as a rule the type of program that I want to hear. Before the CRC was appointed, one could get radio interference cleared up but just try and do so now. Radio, in this city, is terrible and nothing that I have heard of has been done to correct matters." Stratford, Ont.

"We are continually bothered in my district with local interference and yet we pay $2.00 a year for a radio license under penalty of prosecution if we do not. The Department informed me when I phoned them a few weeks ago, that they were too busy with prosecutions of unlicensed listeners to bother with interference. If they would eliminate the interference there would not be the necessity for prosecutions that there is. One cannot expect a radio listener to dole out two dollars for a license when, on an average of three nights a week, reception is almost literally blotted out. The principal job of the Department of Marine and Fisheries is to eliminate this interference; they have a spotting car and all the equipment, yet they do nothing." Regina, Sask.

From a Newspaper Man

In an interesting article published in the Toronto "Mail and Empire," J. V. McAree speaks up for the sponsors. We quote briefly: "We were asked the other day to say something devastating, really blistering, you know, about the advertising that comes over the radio, and it struck us as rather a good idea. On reflection, however, it seems to us that there has been enough criticism of

radio advertisers. . . . There is another side to the question, and this seems worth examining. . . . We are not a radio fan, and so have little ground for complaint against programs or advertisers. But if we were an addict, we should probably turn the dial when the distasteful advertising began to come in. That seems to us a simple cure. It is what we recommend to people who do not like certain books or plays. There is no law compelling us to read or see them.

"It is not only ridiculous, but it is unfair to expect advertisers to spend large sums on radio programs for the entertainment of millions of listeners and then be denied the right publicly to take credit for them. The Ford Company paid $00,000 for the exclusive privilege of broadcasting the recent world's series ball games, which it certainly would not have done if obliged to present them anonymously. But the Ford Company's advertising men, being experts, understood the folly of giving any regular sales talk at the moment when tens of millions of people were keyed up to hear the account of the games. They knew that if they took up time at such critical moments they would simply annoy or even enrage the people whose good will they sought. So the Ford business announcements were about as brief as they could be made. Whatever benefit could be had from the broadcast, the Ford people received to the utmost.

"Advertisers who are blatant over the radio cannot escape the penalty that bad taste and bad judgment inevitably impose. They will lose friends. They will build up a body of radio opinion which is expressed in the words: 'Well, whatever toothpaste I buy, it won't be that guy's' . . . . If advertisers were not permitted a chance to make some money out of this vast audience how long would it be until there were no such programs at all? Would radio users be willing to pay for their entertainment directly?

"But the cure for this and other ills of the radio are largely in the hands of the listeners. They are invited, even urged, to write to a station or an advertiser and say what they think of particular programs. Why don't they do it? Why do they not say that they find the sales talk a little sickening, and that their goodwill would be more likely to show itself in action if the naked advertising were shortened or decently clad. We have pointed out again and again a deplorable tendency of people to clamor for laws and more laws when the remedy for the ill is already in their control. Don't buy goods that are offensively advertised over the radio. Turn the dial."

The DX Reports

(*Continued from page* 34)

months with my General Electric. My best are WEDC, WHEF, WHJB, KFPL, KGMB, LR4, JOLK, JONK, JOQK and XGOA. The Cubans don't seem to come in here at all. I can't get even CMK."

"TP's are rolling in fine," proclaims Joel H. Armontrout, 602 E. Magnolia St., Fitzgerald, Ga. "Latest are 2AY, 2CH, 5KA, 2ZJ, 5CL, 4TO, 5DN, 2SM, 2UE, 3LO, 4YA, 3DB, 4QG, 2GB, JOIK, JODK-1, JOAK-1 and KZRM. Log now at 654 with 173 veries. On the other side I have been able to verify Toulouse, Oslo, North National, 2RN Dublin."

"I have a Grebe 7, battery-type, powered with a Majestic A & B with dry C's," explains Roy A. Treglia, 711 Eighth St., Sioux City, Iowa. "I get the *best* reception. Have logged 407 U. S. stations in my limited time at the dials in a year and a half. Would like to hear from Grebe 7 users."

"On my GE 8, I have brought in 400 stations including 50 hundred-watters from coast to coast," announces E. R. Roman, 251 Beacon St., Winnipeg, Man. "For my location this is a pretty good record as we have no stations to the north of us."

"I have a new 10-tube all-wave Zenith table model with RCA Double-doublet antenna system," reports H. E. Bradley, McCamey, Texas. "Am looking for a great season. I received 4BC, Brisbane, Australia, Sunday morning, Nov. 11, at 6 a. m. CST."

"I have never seen a radio magazine with so much information crammed into 96 pages and every issue is better than the one before it."
Burney McClurkan, 804 N. Locust St., Denton, Texas.

THE FEBRUARY DX CALENDAR

of frequency checks and special programs for distant listeners arranged by the stations outside of their regular hours. All time is EST so that programs may be arranged in order.

DAILY

11:00-11:05	VAS	685	2000	Glace Bay
12:00-1:00	WFLA	620	1000	Clearwater
	WMC	780	1000	Memphis
12:00-6:00	KFAC	1300	1000	Los Angeles
12:00-8:00	KJBS	1070	100	San Francisco
1:00-7:00	WEDC	1210	100	Chicago
5:30-7:00	WSPA	1420	100	Spartanburg
6:00-7:00	KFBI	1050	5000	Abilene

Sunday Mornings
February 3

1:00-2:00	WWAE	1200	100	Hammond
2:00-3:30	KVOA	1260	500	Tucson
2:00-4:00	CHAB	1200	100	Moose Jaw
2:05-3:05	LR-5	830	25000	Buenos Aires
3:00-3:20	KLCN	1290	100	Blytheville
3:30-3:50	KXYZ	1440	250	Houston
3:50-4:10	KTUL	1400	250	Tulsa
4:00-4:20	KPAC	1260	500	Pt. Arthur
4:10-4:30	KGDY	1340	250	Huron
4:20-4:40	KRGV	1260	500	Weslaco
4:50-5:10	KARK	890	250	Little Rock
5:00-5:20	KGKO	570	500	Wichita Falls
5:20-5:40	WNAD	1010	500	Norman
5:40-6:00	KUOA	1260	1000	Fayetteville

February 10

2:00-3:00	CFQC	840	1000	Saskatoon
	CMBS	755	150	Havana
2:30-3:30	CJCJ	690	100	Calgary
	CKX	1120	100	Brandon
3:00-4:00	CJRC	1390	100	Winnipeg
	CKBI	1210	100	Prince Albert
	KFXM	1210	100	San Bernardino
	WOS	630	500	Jefferson City
3:00-4:30	LR-5	830	25000	Buenos Aires
3:00-5:00	CHRC	580	100	Quebec
3:30-4:30	CFAC	930	100	Calgary
	CFJC	880	100	Kamloops
	CKUA	580	500	Edmonton
4:00-5:00	CHAB	1200	100	Moose Jaw
	CKOV	630	100	Kelowna
4:30-5:00	CJOC	1230	100	Lethbridge
	CKFC	1410	50	Vancouver
4:30-6:00	10-BP	1200	25	Wingham
5:00-6:00	CJAT	920	250	Trail
5:30-6:00	CFCT	1450	75	Victoria
	CKWX	1010	100	Vancouver

February 17

1:00-3:00	WHAZ	1300	500	Troy
4:00-5:00	CHRC	580	100	Quebec

February 24

1:00-1:30	WKY	900	1000	Oklahoma City
2:00-3:00	KGEK	1200	100	Yuma
2:30-4:30	CKBI	1210	100	Prince Albert
3:00-5:00	XED	1160	500	Guadalajara

February 3, 17

2:00-5:00	VOGY	840	400	St. John's

February 3, 10, 17, 24

12:00-3:00	CMCD	955	150	Havana
1:00-1:15	KOMA	1480	5000	Oklahoma City
2:00-4:00	XEMO	865	2500	Tijuana
2:00-5:00	WMMN	890	250	Fairmont
2:00-6:00	TGW	565	10000	Guatemala
3:00-5:00	CKOV	630	100	Kelowna
	CFCT	1450	75	Victoria
4:00-5:00	CFJC	880	100	Kamloops

Monday Mornings
February 4

2:00-2:20	WCNW	1500	100	Brooklyn
	WJAC	1310	100	Johnstown
2:10-2:30	WFAS	1210	100	White Plains
	WRAK	1370	100	Williamsport
2:20-2:40	WNBF	1500	100	Binghamton
	WCHS	580	500	Charleston
2:30-2:50	WAGM	1420	100	Presque Isle
	WBTM	1370	100	Danville
2:40-3:00	WLVA	1200	100	Lynchburg
2:50-3:10	WHDL	1420	100	Olean
	WHAT	1310	100	Philadelphia
3:00-3:20	WCAX	1200	100	Burlington
3:10-3:30	W8YB	1500	100	Rutland
	WTEL	1310	100	Philadelphia
3:20-3:40	WIBX	1200	100	Utica
3:30-3:50	WQDM	1370	100	St. Albans
	WKOK	1210	100	Sunbury
3:40-4:00	WMBO	1310	100	Auburn
3:45-4:00	KUJ	1370	100	Walla Walla
3:50-4:10	WABY	1370	100	Albany
	WBAX	1210	100	Wilkes-Barre
4:00-4:20	WCAD	1220	500	Canton
	KOOS	1200	250	Marshfield
4:10-4:30	WBBL	1210	100	Richmond
	KGBU	900	500	Ketchikan
	WRDO	1370	100	Augusta
4:20-4:40	WNBZ	1290	50	Saranac Lake
	WBRE	1310	100	Wilkes-Barre
	KGVO	1200	100	Missoula
4:30-4:50	WNBO	1200	100	Washington
	KPQ	1500	100	Wenatchee
4:40-5:00	WRAW	1310	100	Reading
	KGY	1210	100	Olympia
4:50-5:10	WAAT	940	300	Jersey City
	KRKO	1370	50	Everett
5:00-5:20	WSYR	570	250	Syracuse
	KFXD	1200	100	Nampa
5:10-5:30	KVL	1370	100	Seattle
5:20-5:40	KGEZ	1310	100	Kalispell
5:30-5:50	KUJ	1370	100	Walla Walla
5:40-6:00	KGCX	1310	100	Wolf Point
5:50-6:10	KFQD	780	250	Anchorage
6:00-6:20	KSEI	900	250	Pocatello
6:10-6:30	KVOS	1200	100	Bellingham

6:20-6:40	KIT	1310	100	Yakima
6:30-6:50	KRSC	1120	100	Seattle
6:40-7:00	KXRO	1310	100	Aberdeen
6:50-7:10	KFIO	1120	100	Spokane
7:00-7:20	KFJI	1210	100	Klamath Falls
7:10-7:30	KMED	1310	100	Medford
7:20-7:40	KORE	1420	100	Eugene
		February 25		
2:00-2:15	WAVE	940	1000	Louisville
2:00-3:00	CMJP	1360	75	Moron
		February 11, 18, 25		
1:00-1:30	WHEF	1500	100	Kosciusko
12:00-3:00	WCNW	1500	100	Brooklyn
1:00-2:30	XEX	1310	125	Monterrey
4:30-5:00	WNBO	1200	100	Washington
		Tuesday Mornings		
		February 5		
2:00-3:00	CMJP	1360	75	Moron
2:00-2:20	WPAX	1210	100	Thomasville
2:10-2:30	WBHS	1200	100	Huntsville
2:20-2:40	WHBQ	1370	100	Memphis
2:30-2:50	WEED	1420	100	Rocky Mount
2:40-3:00	WOPI	1500	100	Bristol
2:50-3:10	WSMB	1320	500	New Orleans
3:00-3:20	WMBR	1370	100	Jacksonville
3:10-3:30	WNRA	1420	100	Muscle Shoals
3:20-3:40	WSJS	1310	100	Winston-Salem
3:30-3:50	WHEF	1500	100	Kosciusko
3:40-4:00	KMLB	1200	100	Monroe
3:50-4:10	WAGF	1370	100	Dothan
4:00-4:20	KWG	1200	100	Stockton
	WNEL	1290	500	San Juan,
4:10-4:30	WTJS	1310	100	Jackson
	KPJM	1500	100	Prescott
4:20-4:40	WPFB	1370	100	Hattiesburg
	KERN	1370	100	Bakersfield
4:30-4:50	WGPC	1420	100	Albany
	KXO	1500	100	El Centro
4:40-5:00	WBNO	1200	100	New Orleans
	KIEM	1210	100	Eureka
4:50-5:10	WROL	1310	100	Knoxville
	KLS	1440	250	Oakland
5:00-5:20	WDNC	1500	100	Durham
	KGIX	1420	100	Las Vegas
5:10-5:30	WJBW	1200	100	New Orleans
	KGMB	1320	250	Honolulu
5:20-5:40	WAML	1310	100	Laurel
	KRE	1370	100	Berkeley
5:30-5:50	WSIX	1210	100	Springfield
	KGU	750	2500	Honolulu
5:40-6:00	KGAR	1370	100	Tucson
5:50-6:10	KCRJ	1310	100	Jerome
6:00-6:20	KGDM	1100	250	Stockton
6:10-6:30	KSUN	1200	100	Lowell
6:20-6:40	KTRB	740	250	Modesto
6:30-6:50	KUMA	1420	100	Yuma
		February 12		
3:00-4:30	CKBI	1210	100	Prince Albert
		February 19		
12:41-12:49	CKPC	930	100	Brantford
12:51-12:59	CHNS	930	1000	Halifax
1:00-4:00	WDAY	940	1000	Fargo
1:01-1:09	CFCY	630	1000	Charlottetown
1:11-1:19	CJLS	1310	100	Yarmouth
1:21-1:29	CFPL	730	100	London
1:31-1:39	CJKL	1210	100	Kirkland Lake
1:41-1:49	CHNC	1210	100	New Carlisle
1:51-1:59	CFNB	550	500	Fredericton
2:01-2:09	CHRC	580	100	Quebec
2:11-2:19	CFCH	930	100	North Bay
2:21-2:29	CRCS	950	100	Chicoutimi
2:31-2:39	CKGB	1420	100	Timmins
2:41-2:49	CKCL	580	100	Toronto
2:51-2:59	CKTB	1200	100	St. Catharines
3:01-3:09	CHSJ	1120	100	St. John
		February 5, 12, 19, 26		
1:00-2:00	CMBC	1035	150	Havana
		Wednesday Mornings		
		February 6		
1:00-2:00	KFYR	550	1000	Bismarck
1:30-2:00	WHBL	1410	500	Sheboygan
1:30-2:30	WSUI	880	500	Iowa City
2:00-2:20	WEBR	1310	100	Buffalo
2:00-2:30	.....	913	60000	Toulouse
2:10-2:30	WPEN	920	100	Philadelphia
2:20-2:40	WSAJ	1310	100	Grove City
2:30-2:50	WHIS	1410	250	Bluefield
2:40-3:00	WFBG	1310	100	Altoona
2:50-3:10	WPHR	880	100	Petersburg
3:00-3:20	WDAS	1370	100	Philadelphia
	WKBB	1500	100	East Dubuque
3:10-3:30	WRBX	1410	250	Roanoke
	WHBC	1200	100	Canton
	KGIW	1420	100	Alamosa
3:20-3:40	WMBG	1210	100	Richmond
	WTRC	1310	50	Elkhart
	KICA	1370	100	Clovis
3:30-3:50	WBCM	1410	500	Bay City
	KGHI	1200	100	Little Rock
	WSVS	1370	50	Buffalo
3:40-4:00	WGH	1310	100	Newport News
	WGBF	630	500	Evansville
	KIDW	1420	100	Lamar
3:50-4:10	WOCL	1210	50	Jamestown
	WROK	1410	500	Rockford
	KBTM	1200	100	Jonesboro
4:00-4:20	WQAN	880	250	Scranton
	WBOW	1310	100	Terre Haute
	KFBB	1280	1000	Great Falls
4:10-4:30	WHEC	1430	500	Rochester
	WOSU	570	750	Columbus
	KGFL	1370	100	Roswell
4:20-4:40	WSAZ	1190	1000	Huntington
	WBEO	1310	100	Marquette
4:30-4:50	WGAL	1500	100	Lancaster
	WKBN	570	500	Youngstown
	WCAL	1250	1000	Northfield
4:40-5:00	WCAZ	1070	100	Carthage
	KFJB	1200	100	Marshalltown
4:50-5:10	WKBF	1400	500	Indianapolis
	WACO	1420	100	Waco
5:00-5:20	WDZ	1070	100	Tuscola
	KGDE	1200	100	Fergus Falls
5:10-5:30	WLBL	900	2500	Stevens Point
	WLB	1250	1000	Minneapolis
5:20-5:40	WBAA	890	500	W. Lafayette
	WIL	1200	100	St. Louis
5:30-5:50	WTAD	1440	500	Quincy
	KGHF	1320	250	Pueblo
5:40-6:00	WXYZ	1240	1000	Detroit
		February 13		
1:00-5:00	CMOX	1325	200	Havana
		February 20		
12:41-12:49	CKPC	930	100	Brantford
12:51-12:59	CHNS	930	1000	Halifax
1:01-1:09	CFCY	630	500	Charlottetown
1:11-1:19	CJLS	1310	100	Yarmouth
1:21-1:29	CFPL	730	100	London
1:31-1:39	CJKL	1310	100	Kirkland Lake
1:41-1:49	CHNC	1210	100	New Carlisle
1:51-1:59	CFNB	550	500	Fredericton
2:00-2:30	KWTO	560	1000	Springfield
2:01-2:09	CHRC	580	100	Quebec
2:11-2:19	CFCH	930	100	North Bay
2:21-2:29	CRCS	950	100	Chicoutimi
2:31-2:39	CKGB	1420	100	Timmins
2:41-2:49	CKCL	580	100	Toronto
2:51-2:59	CKTB	1200	100	St. Catharines
3:01-3:09	CHSJ	1120	100	St. John
3:00-3:30	KSO	1320	250	Des Moines
3:00-5:00	WOPI	1500	100	Bristol
		February 27		
2:00-3:00	CMBS	775	150	Havana
5:30-5:45	WFBG	1310	100	Altoona
		February 6, 20, 27		
12:00-4:00	CMHW	910	100	Cienfuegos
		February 13, 20, 27		
1:00-1:30	WHEF	1500	100	Kosciusko
2:00-2:30	WROK	1410	500	Rockford
		February 6, 13, 20, 27		
6:00-6:30	WASH	1270	500	Grand Rapids
		Thursday Mornings		
		February 7		
2:00-2:20	WSOC	1210	100	Charlotte

2:10-2:30	WSPA	1420	100	Spartanburg
2:30-2:50	WSGN	1310	100	Birmingham
2:40-3:00	WJBO	1420	100	Baton Rouge
2:50-3:10	WGCM	1210	100	Gulfport
3:00-3:15	KREG	1500	100	Santa Ana
3:00-3:20	WRDW	1500	100	Augusta
	WHBY	1200	100	Green Bay
	WDAH	1310	100	El Paso
3:10-3:30	WKAQ	1240	1000	San Juan
	WJMS	1420	100	Ironwood
	KLUF	1370	100	Galveston
3:20-3:40	WCSF	1360	500	Charleston
	WSDC	1210	100	Chicago
	KTSM	1310	100	El Paso
3:30-3:50	WBIG	1440	500	Greensboro
	KGKL	1370	100	San Angelo
3:40-4:00	WCOA	1340	500	Pensacola
	WSBC	1210	100	Chicago
	KFPM	1310	15	Greenville
3:50-4:10	WQBC	1360	500	Vicksburg
	KFIZ	1420	100	Fond du Lac
	KMAC	1370	100	San Antonio
4:00-4:20	WDBO	580	250	Orlando
	WEBQ	1210	100	Harrisburg
	KFYO	1310	100	Lubbock
4:10-4:30	WNBR	1430	500	Memphis
	WMPC	1200	100	Lapeer
	KONO	1370	100	San Antonio
4:20-4:40	WQAM	560	1000	Miami
	WHBF	1210	100	Rock Island
4:30-4:50	WDAE	1220	1000	Tampa
	WKBZ	1500	100	Muskegon
	KFJM	1370	100	Grand Forks
4:40-5:00	WCBS	1210	100	Springfield
4:50-5:10	WCOC	880	500	Meridian
	WKBV	1500	100	Richmond
5:00-5:2	WTAX	1210	100	Springfield
	KGBX	1310	100	Springfield
	WIOD	1300	1000	Miami
5:10-5:30	WTOC	1260	1000	Savannah
	WHBD	1370	100	Mount Orab
	KCMC	1420	100	Texarkana
5:20-5:40	WHBU	1210	100	Anderson
5:30-5:50	WIBM	1370	100	Jackson
	KGFF	1420	100	Shawnee
5:40-6:00	WOMT	1210	100	Manitowoc
	KNOW	1500	100	Austin
	February 28			
3:15-3:45	KFH	1300	1000	Wichita
	February 7, 14, 21, 28			
12:00-3:00	WCNW	1500	100	Brooklyn
3:00-4:00	CKWX	1010	100	Vancouver

Friday Mornings

	February 1			
2:30-3:30	CHWK	780	100	Chilliwack
3:00-3:20	WJW	1210	100	Akron
	KRMD	1310	100	Shreveport
3:10-3:30	WPAD	1420	100	Paducah
	KOTN	1500	100	Pine Bluff
3:20-3:40	WSEN	1210	100	Columbus
	KFXR	1310	100	Oklahoma City
3:30-3:50	WELL	1420	50	Battle Creek
	KGEK	1200	100	Sterling
3:40-4:00	WALR	1210	100	Zanesville
	KFPL	1310	100	Dublin
3:50-4:10	WMBC	1420	100	Detroit
	WCAT	1200	100	Rapid City
4:00-4:20	WFDF	1310	100	Flint
	KGCU	1240	250	Mandan
4:10-4:30	WFBE	1200	100	Cincinnati
	KWYO	1370	100	Sheridan
4:20-4:40	WGAR	1450	500	Cleveland
	KLPM	1240	250	Minot
4:30-4:40	WCLO	1200	100	Janesville
	KGFG	1370	100	Okla. City
4:40-5:00	WCLS	1310	100	Joliet
	KABC	1420	100	San Antonio
4:50-5:10	WJBL	1200	100	Decatur
	KFJZ	1370	100	Fort Worth
5:00-5:20	WJBK	1500	100	Detroit
	KWCR	1430	250	Cedar Rapids
5:10-5:30	WIBU	1210	100	Poynette
	KGFI	1500	100	Corpus Christi
5:20-5:40	WHDF	1370	100	Calumet
	WLBF	1420	100	Kansas City
5:30-5:50	WCRW	1210	100	Chicago
	KGKB	1500	100	Tyler
5:40-6:00	WTAQ	1330	1000	Eau Claire
	WMBH	1420	100	Joplin
	February 8			
3:00-3:30	KSO	1320	250	Des Moines
	February 15			
1:00-1:30	WDNC	1500	100	Durham
5:00-5:10	KFNF	890	500	Shenandoah
	February 22			
1:00-2:00	CMCA	1230	150	Havana
	February 1, 8, 15, 22, 28			
1:00-2:30	XEX	1310	125	Monterrey

Saturday Mornings

	February 2			
2:10-2:30	WBRB	1210	100	Red Bank
2:20-2:40	WWRL	1500	100	Woodside
2:30-2:50	WGNY	1210	100	Chester
2:40-3:00	WMBQ	1500	100	Brooklyn
2:50-3:10	WGBB	1210	100	Freeport
3:00-3:20	WOKO	1430	500	Albany
	WJBC	1200	100	Bloomington
	KTRH	1330	1000	Houston
3:00-4:00	XEFI	1440	250	Chihuahua
3:10-3:30	WGL	1370	100	Fort Wayne
	KFPW	1210	100	Fort Smith
3:20-3:40	WWAE	1200	100	Hammond
	WTAW	1120	500	College Station
3:30-3:50	WLBC	1310	100	Muncie
	KASA	1210	100	Elk City
3:40-4:00	WFAM	1200	100	South Bend
	KWLC	1270	100	Decorah
3:50-4:10	WCAP	1280	500	Asbury Park
4:00-4:20	WJAY	610	500	Cleveland
	KGCA	1270	100	Decorah
4:10-4:30	WBNS	1430	500	Columbus
	KFVS	1210	100	Cape Girardeau
	WTNJ	1280	500	Trenton
4:20-4:40	WWJ	920	1000	Detroit
	WLNH	1310	100	Laconia
	KGHL	780	1000	Billings
4:30-4:50	KQV	1380	500	Pittsburgh
	KDLR	1210	100	Devils Lake
4:40-5:00	WLAP	1420	100	Lexington
	WOC	1370	100	Davenport
4:50-5:10	WSMK	1380	200	Dayton
	KFXJ	1200	100	Grand Junction
5:00-5-20	WAVE	940	1000	Louisville
	KFDM	960	500	Beaumont
5:10-5:30	WADC	1320	1000	Akron
	KWTN	1210	100	Watertown
5:15-5:15	W8UI	880	500	Iowa City
5:20-5:40	W8PD	1340	1000	Toledo
	WEW	760	1000	St. Louis
5:30-5:50	KWEA	1210	100	Shreveport
5:50-6:10	KGGM	1230	250	Albuquerque
	February 9			
1:00-1:30	WKY	900	100	Oklahoma City
1:00-2:00	CMW	930	1400	Havana
2:00-3:00	CFCN	1030	10000	Calgary
2:30-3:30	CJGX	630	500	Yorkton
	CKY	960	15000	Winnipeg
3:00-4:00	CJOR	600	500	Vancouver
	CKCK	1010	500	Regina
	CJCA	730	500	Edmonton
3:30-4:30	CFRN	1260	100	Edmonton
	CRCV	1100	1000	Vancouver
4:00-5:00	10-BU	1200	50	Canora
	CHWC	1010	500	Regina
4:30-5:30	CJRM	540	1000	Moose Jaw
5:00-6:00	CKMO	1410	100	Vancouver
5:30-6:30	CHWK	780	100	Chilliwack
	CKCD	1010	100	Vancouver
	February 16			
2:00-3:00	CMOK	1230	250	Havana
	February 23			
12:00-8:00	KGIR	1360	1000	Butte
	February 2, 9, 16, 23			
1:00-3:00	TGX	1400	150	Guatemala
	CMCW	540	150	Havana
	WNEL	1290	500	San Juan

Where *to* Get *the* DAY'S NEWS

More radio listeners are interested in knowing where and when to tune in the news of the day, than in any other feature. Radio stations are invited to submit the hours of their daily or weekly news flashes or bulletins. A list of the news commentators will be found under "Talks" on page 62. Key: 1 Sunday, 2 Monday, 3 Tuesday, 4 Wednesday, 5 Thursday, 6 Friday, 7 Saturday.

Stations Using Eastern Time

CFRB, Toronto, on 690
8:00-8:10 a.m. (234567)
12:25-12:30 p.m. (234567)
6:30-6:40 p.m. (234567)
11:00-11:15 p.m. (1234567)

CKLW, Windsor, on 1030
8:00-8:05 a.m. (1234567)
10:00-10:05 a.m. (1234567)
12:45-12:50 p.m. (1234567)
5:55-6:00 p.m. (1234567)
7:45-8:00 p.m. (123456)
8:15-8:30 p.m. (246)

WABC, New York, on 860
10:00-10:05 a.m. (234567)
6:55-7:00 p.m. (234567)
10:55-11:00 p.m. (1)

WCAU, Philadelphia, on 1170
10:00-10:05 a.m. (234567)
7:45-8:00 p.m. (234567)
11:00-11:15 p.m. (234567)

WCKY, Cincinnati, on 1490
10:45-10:50 a.m. (1234567)
6:30-6:35 p.m. (1234567)

WEAF, New York, on 660
10:00-10:05 a.m. (234567)
11:00-11:05 a.m. (1)
4:30-4:45 p.m. (1)
6:30-6:35 p.m. (234567)
6:45-7:00 p.m. (7)
11:15-11:20 p.m. (1)

WGY, Schenectady, on 790
6:30 p.m. (1234567)

WHAM, Rochester, on 1150
12:15 p.m. (1234567)
4:15 p.m. (1234567)
10:30 p.m. (1234567)
11:10 p.m. (4)

WJR, Detroit, on 750
11:00-11:15 p.m. (2345)
11:15-11:30 p.m. (6)

WJZ, New York, on 760
10:45-10:50 a.m. (234567)
11:00-11:05 a.m. (1)
6:30-6:35 p.m. (234567)
6:45-7:00 p.m. (23456)

WLW, Cincinnati, on 700
9:55-10:00 a.m. (7)
10:00 a.m. (4)
10:40 a.m. (23456)
11:00-11:05 p.m. (1234567)

WOR, Newark, on 710
8:00-8:05 a.m. (234567)
12:00-12:05 p.m. (234567)
3:00-3:15 p.m. (1)
5:05-5:10 p.m. (234567)
11:00-11:05 p.m. (234567)
11:00-11:15 p.m. (4)

WPG, Atlantic City, on 1100
10:00 a.m. (1234567)

WRVA, Richmond, on 1110
10:00 a.m. (2356)
10:30 a.m. (7)

WTIC, Hartford, on 1040
10:00-10:05 a.m. (234567)
11:00-11:05 a.m. (4)
6:00-6:30 p.m. (234567)
11:30-11:35 p.m. (4)

Stations Using Central Time

CKY, Winnipeg, on 960
1:00-1:05 p.m. (234567)
4:15-4:30 p.m. (36)
5:40-5:45 p.m. (234567)
9:45-10:00 p.m. (1234567)

KFAB, Lincoln, on 770
11:30-11:45 a.m. (234567)
1:15-1:30 p.m. (234567)
3:15-3:30 p.m. (23457)
4:00-4:15 p.m. (234567)

KSTP, St. Paul, on 1460
7:30-7:35 a.m. (234567)
12:45-12:50 p.m. (234567)
6:10-6:15 p.m. (234567)
10:15-10:25 p.m. (1234567)

KTHS, Hot Springs, on 1060
9:00-9:05 a.m. (234567)
10:00 a.m. (4)

KYW, Chicago, on 1020
6:15-6:30 p.m. (1234567)
9:00-9:15 p.m. (1234567)

WCCO, Minneapolis, on 810
8:30 a.m. (234567)
11:45 a.m. (234567)

WENR, Chicago, on 870
5:30-5:45 p.m. (234567)

WFAA, Dallas, on 800
10:00 a.m. (234567)
5:30 p.m. (234567)

WGN, Chicago, on 720
9:00-9:05 p.m. (234567)

WHO, Des Moines, on 1000
12:30 p.m. (7)
12:45 p.m. (23456)
6:30 p.m. (7)
6:45 p.m. (23456)
10:05 p.m. (234567)

WJJD, Chicago, on 1130
6:00-6:30 a.m. (234567)
12:50-1:00 p.m. (234567)

WLAC, Nashville, on 1470
6:30-7:00 a.m. (234567)
5:55-6:00 p.m. (234567)

WLS, Chicago, on 870
7:00 a.m. (234567)
8:30-8:45 a.m. (4)
10:25 a.m. (234567)
11:55 a.m. (234567)

WMAQ, Chicago, on 670
5:30-5:45 p.m. (234567)

WOAI, San Antonio, on 1190
9:00 a.m. (234567)
10:05 a.m. (4)
5:30 p.m. (234567)

WOWO, Ft. Wayne, on 1160
12:15 p.m. (1234567)

Stations Using Mountain Time

KFEL, Denver, on 920
8:00 a.m. (1234567)
12:00 noon (1234567)
4:00 p.m. (1234567)
7:00 p.m. (1234567)

KOB, Albuquerque, on 1180
6:45 p.m. (234567)

KSL, Salt Lake City, on 1130
8:00 a.m. (234567)
4:55 p.m. (234567)

Stations Using Pacific Time

KECA, Los Angeles, on 1430
12:15 p.m. (234567)
6:15 p.m. (234567)

KFI, Los Angeles, on 640
7:30 a.m. (234567)
9:45 a.m. (234567)
12:00 noon (234567)
10:00 p.m. (234567)

KGO, San Francisco, on 790
9:45-9:50 a.m. (5)
9:55-10:00 a.m. (7)
10:00-10:05 a.m. (2346)
10:30-10:35 a.m. (7)
9:30-9:35 p.m. (2)
10:30-10:35 p.m. (3457)
10:55-11:00 p.m. (6)
11:00-11:05 p.m. (1)

KJR, Seattle, on 970
9:30-10:45 a.m. (234567)
6:00-6:15 p.m. (234567)
9:00-9:15 p.m. (1234567)

KNX, Hollywood, on 1050
9:45-10:00 a.m. (234567)
12:00-12:15 p.m. (234567)
6:00-6:15 p.m. (234567)
9:00-9:15 p.m. (234567)

KPO, San Francisco, on 680
9:00-9:15 a.m. (7)
10:15-10:30 a.m. (246)
12:00-12:15 p.m. (34567)
4:45-5:00 p.m. (23456)
10:55-11:00 p.m. (234567)
11:00-11:05 p.m. (1)

WHAT'S ON THE AIR TONIGHT

Fill in calls and dial numbers for those stations through which you best receive the three chains. You can then turn quickly to the one that has the feature you want.

COLUMBIA.....(C)	
Call	Dial

NATIONAL, Red (R)	
Call	Dial

NATIONAL, Blue (B)	
Call	Dial

TIME: E Eastern; C Central; M Mountain; P Pacific

RADEX is the only publication listing stations in alphabetical order for your convenience.

While these programs are correct at the time of going to press, changes are made from time to time.

MONDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — Buck Rogers; 25th Century
CKLW WAAB WABC WBNS WCAO WCAU WFBL WHEC WHK WJAS WJSV WKBW WKRC WOKO

E-6:30 p.m., C-5:30, M-4:30, P-3:30
C — The Shadow; Drama
WAAB WABC WCAO WCAU WDRC WEAN WFBL WHEC WIBX WJSV WKBW WOKO WORC

E-6:45 p.m., C-5:45, M-4:45, P-3:45
R — Billy Batchelor
WBEN WCAE WCSH WEAF WEEI WFBR WFI WGY WJAR WRC WTAG WTAM WTIC WWJ

B — Lowell Thomas
CFCF CRCT KDKA WBAL WBZ WBZA WFLA WGAR WHAM WIOD WJAX WJR WJZ WLW WMAL WRVA WSYR

E-7:00 p.m., C-6:00, M-5:00, P-4:00
C — Myrt and Marge
WABC WADC WBT WCAO WCAU WDAE WDBO WEAN WFBL WGR WJAS WJSV WKRC WNAC WOKO WQAM WSPD WTOC WWVA

B — Amos 'n' Andy
CRCT KDKA WBAL WBZ WBZA WCKY WENR WFLA WGAR WHAM WIOD WJR WJZ WLW WMAL WPTF WRVA

E-7:15 p.m., C-6:15, M-5:15, P-4:15
B—Willard Robison; Mildred Bailey
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WENR WHAM WJR WJZ WMAL WSYR

E — 7:30 p.m., C-6:30, M-5:30, P-4:30
C — The O'Neills
WABC WCAO WCAU WDRC WFBL WGR WHEC WHP WJAS WJSV WMAS WOKO WORC WWVA

C — Buck Rogers; 25th Century
KMBC KMOX KRLD KTRH KTSA WBBM WBT WCCO WDSU WFBM WGST WHAS WMBG

B — Red Davis; Drama
KDKA KOIL KPRC KSO KSTP KTBS KWCR KWK WAVE WBAL WBZ WBZA WEBC WENR WFLA WHAM WIBA WIOD WIS WJAX WJDX WJZ WKY WMAL WMC WPTF WREN WRVA WSB WSM WSMB WSYR WTAR WWNC

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C — Boake Carter for Philco
CKLW KMBC KMOX WABC WBBM WBT WCAO WCAU WCCO WGR WHAS WHK WJAS WJSV WNAC

B — Dangerous Paradise; Drama
KDKA KOIL KSO KTBS KVOO KWCR KWK WBAL WBZ WBZA WENR WFAA WGAR WHAM WJR WJZ WKY WMAL WOAI WREN WSB WSM WSMB WSYR

R — Uncle Ezra
KYW WBEN WCAE WCSH WDAF WEAF WEEI WGY WJAR WMAQ WOW WRC WSAI WTAG WTAM

E-8:00 p.m., C-7:00, M-6:00, P-5:00
R — Richard Himber and Orchestra
KPRC KSD KTBS KVOO WBAP WBEN WCAE WCSH WDAF WEAF WEEI WFAA WGY WHO WJAR WKY WMAQ WOAI WOC WOW WRC WSAI WTAG WTAM WTIC

B — Jan Garber and Orchestra
KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WKBF WLS WLW WMAL WREN WSYR

C — Diane and Her Life Saver
CKLW KDB KERN KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KSL KWG WABC WADC WBBM WCAO WCAU WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WSPD

E-8:15 p.m., C-7:15, M-6:15, P-5:15
C — Edwin C. Hill
CKLW KMBC KMOX WABC WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WSPD

C — Billy Batchelor
KDB KERN KFBK KFPY KFRC KGB KHJ KMJ KOIN KOL KVI KWG

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — Kate Smith's Star Revue
CKLW KFAB KFH KGKO KLRA KMBC KMOX KOMA KRLD KTRH KTSA KTUL WABC WADC WALA WBBM WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDRC WDSU WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WIBW WIBX WICC WISN WJAS WJSV WKRC WLAC WLBZ WMAS WMBG WMBR WMT WNAC WNOX WNBF WOKO WORC WOWO WQAM WREC WSBT WSFA WSPD

R — Voice of Firestone
CFCF CRCT KFYR KPRC KSD KSTP KTBS KVOO KYW WAVE WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKBF WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

B — Carefree Carnival
KDKA KDYL KFI KGW KHQ KOA KOIL KOMO KPO KSO KWCR WBZ WBZA WCKY WGAR WJR WJZ WLIT WLS WMAL WREN WSYR

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C — Chesterfield Program
CKLW KDB KERN KFBK KFH KFPY KFRC KGB KGMB KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSA KTUL KVI KWG WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBH WKBW WKRC WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAC WNAX WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSPD WTOC

R — A & P Gypsies
KSD WBEN WCAE WCSH WDAF WEAF WEEI WGY WHO WJAR WLIT WMAQ WOC WOW WTAG WTAM WTIC WWJ

B — Sinclair Greater Minstrels
KDKA KFI KFSD KFYR KOA KOIL KPO KPRC KSO KSTP KTAR KTBS KTHS KVOO KWK WBAL WBZ WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WLS

MONDAY (*Continued*)

WLW WMC WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WTAR WTMJ WWNC

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — The Big Show
CKAC CKLW KFAB KLZ KMBC KMOX KSL WABC WADC WBBM WBNS WBT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WHAS WHK WICC WJAS WJSV WKBW WKRC WNAC WOKO WOWO WREC WSPD

R — Colgate House Party
KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC

B — Princess Pat Players
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WENR WGAR WHAM WJR WJZ WMAL WREN WSYR

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — Wayne King and Orchestra
CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WADC WBBM WBNS WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WHAS WHK WIBW WJAS WJSV WKBW WKRC WOKO WSPD

R — Contented Program
CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WJAR WKY WLIT WLW WMAQ WMC WOAI WOC WOW WRC WSB WSM WTAG WTAM WTIC WTMJ WWJ

B — Jackie Heller, Tenor
KDKA KOIL KSO KWCR WBAL WBZ WBZA WCKY WENR WGAR WHAM WJR WJZ WMAL WREN WSYR

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Talks on Health Problems
CFRB CKLW KFH KLRA KLZ KMBC KOH KRLD KTRH KTSA KVOR KWKH WAAB WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHK WHP WIBW WICO WISN WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAX WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC

E-10:45 p.m., C-9:45, M-8:45, P-7:45
C — Emery Deutsch and Orchestra
CFRB CKAC CKLW KFH KGKO KLRA KLZ KMBC KOH KRLD KTRH KTSA KVOR KWKH WAAB WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHK WHP WICC WISN WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAX WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Myrt and Marge
KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KVI KWG WALA WBBM WBRC WCCO WDSU WFBM WGST WHAS WLAC WREC WSFA

B — Amos 'n' Andy
KOIL KPRC KSTP KTHS KWK WBAP WCKY WDAF WENR WFAA WJR WKY WMC WOAI WREN WSB WSM WTMJ

E-11:15 p.m., C-10:15, M-9:15, P-8:15
C — Glen Gray and Orchestra
KLRA WABC WALA WBRC WBT WCAO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFEA WJSV WLAC WLBZ WMAS WMBG WMBR WNAC WNOX WORC WPG WQAM WREC WSFA WSJS WTOC

C — Edwin C. Hill
KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG

E-11:30 p.m., C-10:30, M-9:30, P-8:30
R — Voice of Firestone
KDYL KFI KFSD KGHL KGIR KGU KGW KHQ KOA KOMO KPO KTAR

C — Kate Smith's Star Revue
KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG

TUESDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — Buck Rogers, See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30
C — Musical Appreciation Program
CKLW KLRA WABC WALA WBIG WBRC WBT WCAO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFEA WGLC WHEC WHK WHP WJAS WJSV WKBW WKRC WLAC WLBW WLBZ WMAS WMBG WMBR WNOX WOKO WORC WQAM WREC WSFA WSJS WSPD WTOC WWVA

E-6:45 p.m., C-5:45, M-4:45, P-3:45
R — Billy Batchelor, See Monday
B — Lowell Thomas, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00
C — Myrt and Marge, See Monday
B — Amos 'n' Andy, See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15
R — Whispering Jack Smith
KSD KYW WBEN WCSH WEAF WFBR WJAR WMAQ WRC WSAI WTAG WTAM WTIC

B — Morton Downey
KDKA KOIL KSO KWCR WBZ WBZA WCKY WENR WFI WGAR WHAM WJR WJZ WKBF WMAL WREN

E-7:30 p.m., C-6:30, M-5:30, P-4:30
B — Household Musical Memories
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WENR WGAR WHAM WJZ WMAL WREN WSYR
C — Buck Rogers, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C — Boake Carter, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00
C — Frank Munn; Gustav Haenschen
CKLW KMBC KMOX WABC WADC WBBM WCAO WCAU WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO

R — Leo Reisman and Orchestra
KFYR KPRC KSD KSTP KTBS KVOO WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WIBA WIOD WIS WJAR WJAX WJDX WKBF WKY WMAQ WMC WOC WOW WPTF WRC WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

B — Eno Crime Clues
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WJR WJZ WLS WLW WMAL WREN WSYR

E-8:15 p.m., C-7:15, M-6:15, P-5:15
C — Billy Batchelor, See Monday

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — Abe Lyman; Vivienne Segal
CFRB CKLW KMBC KMOX WABC WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WOWO WSPD

R — Wayne King and Orchestra
KPRC KSD KSTP WBEN WCAE WCSH WDAF WEAF WEEI WFAA WFI WGY WHO WJAR WKBF WKY WMAQ WMC WOAI WOC WOW WRC WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ

B — Lawrence Tibbett
CFCF CRCT KDKA KOIL KSO KWCR WBAL WBZ WBZA WGAR WHAM WJR WJZ WLS WMAL WREN WSYR

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C — Bing Crosby; Mills Bros.
CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KTUL KVI KWG WABC WADC WBBM WBT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGST WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WREC WSPD

R — Ben Bernie and Orchestra
KFYR KOA KPRC KSD KSTP KTBS WBAP WBEN WCAE WCSH WDAY WEAF WEEI WFBR WFI WGY WJAR WJDX WKY WMAQ WMC WOAI WOW WRC WSB WTAG WTAM WTIC WTMJ WWJ

B — Grace Moore, Soprano
KDKA KDYL KFI KGW KHQ KOA KOIL KPO KSO KWCR KWK WBAL WBZ WBZA WCKY WFI WHAM WJR WJZ WKBF WLS WMAL WREN WSYR

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Isham Jones and Orchestra
CKLW KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSA KTUL KVI KWG KWKH WABC WACO WADC WALA WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN

TUESDAY (*Continued*)

WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WIND WISN WJAS WJSV WKBN WKBW WKRC WLAC WLBW WMAS WMBD WMBG WMBR WMT WNAC WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSMK WSPD

R — Ed Wynn; Eddie Duchin

KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS KVOO WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKBF WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTIC WTMJ WWJ WWNC

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — Glen Gray; Walter O'Keefe

CKLW KFAB KFH KLRA KMBC KMOX KOMA KRLD KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGST WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBN WKBW WKRC WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAC WNAX WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSPD WTOC

R — Palmolive Beauty Box

CFCF CRCT KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KVOO WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKBF WKY WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTMJ WWJ WWNC

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Fray and Braggiotti

CFRB CKAC CKLW KDB KFH KGKO KLRA KLZ KMBC KOH KOMA KRLD KSCJ KTRH KTSA KVOR KWKH WAAB WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHK WHP WIBW WICC WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAX WNOX WOKO WORC WPG WQAM WSBT WSFA WSJS WSPD WTOC

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15
C — Joe Haymes and Orchestra

CKAC CKLW KDB KFH KGKO KLRA KLZ KOH KOMA KRLD KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBNS WBRC WBT WCAO WDAE WDBJ WDBO WDNC WDRC WDSU WEAN WFBL WFEA WGLC WHEC WHK WHP WIBW WJAS WJSV WKBW WKRC WLAC WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAC WNAX WNOX WOKO WORC WPG WQAM WSBT WSFA WSJS WSPD WTOC WWVA

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — Johnny Green and Orchestra

CFRB CKAC CKLW KFH KGKO KLRA KLZ KMBC KOH KOMA KRLD KSCJ KTRH KTSA KVOR KWKH WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFEA WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBW WKRC WLAC WLBW WLBZ WMAS WMBD WMBR WMT WNAC WNAX WNOX WORC WPG WQAM WSBT WSFA WSJS WSPD WTOC WWVA

R — Leo Reisman and Orchestra

KDYL KFI KFSD KGIR KGU KGW KHQ KOA KOMO KPO KTAR

WEDNESDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — Buck Rogers, See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30
C — The Shadow, See Monday

E-6:45 p.m., C-5:45, M-4:45, P-3:45
R — Billy Batchelor, See Monday

B — Lowell Thomas, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00
C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15
B — Willard Robison, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30
C — Buck Rogers, See Monday

B — Red Davis, See Monday

C — The O'Neill's, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C — Boake Carter, See Monday

B — Dangerous Paradise, See Monday

R — Uncle Ezra, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00
R — Mary Pickford and Company

CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KVOO WAVE WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

B—Penthouse Party; Mark Hellinger

KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WMAL WREN WSYR

C—Diane and Life Saver, See Monday

E-8:15 p.m., C-7:15, M-6:15, P-5:15
C — Edwin C. Hill, See Monday

C — Billy Batchelor, See Monday

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — Everett Marshall; Victor Arden

CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KVI KWG WABC WADC WBBM WBT WCAO WCAU WDRC WDSU WEAN WFBL WFBM WGR WHAS WIBW WJAS WJSV WKRC WLAC WNAC WOKO WOWO WSPD

B — Lanny Ross and Orchestra

KDKA KOIL KSO KWCR WBAL WGAR WHAM WJR WJZ WLS WMAL WREN WSYR

R — Wayne King, See Tuesday

E-9:00 p.m., C-8:00, M-7:00, P-6:00
R — Fred Allen; Lennie Hayton

KPRC KSD KSTP KTBS KVOO WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFBR WGY WIOD WIS WJAR WJAX WKY WLIT WLW WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ

B — Warden Lawes; Drama

KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WKBF WLS WLW WMAL WREN WSYR

C — Chesterfield Program, See Mon.

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — George and Gracie

CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KTSA KVI KWG WABC WACO WADC WBBM WBIG WBT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WHK WJAS WJSV WKBW WKRC WNAC WOKO WORC WOWO WSPD

B — John McCormack, Tenor

KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WBAL WBZ WBZA WCKY WENR WGAR WHAM WJR WJZ WKBF WLW WMAL WREN WSYR

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — Byrd Expedition Broadcast

CKLW KDB KERN KFAB KFBK KFH KFPY KFRC KFZ KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KTSA KVI KWG WABC WACO WADC WBBM WBNS WBT WCAO WCAU WCCO WDAE WDRC WDSU WEAN WFBL WFBM WGST WHAS WHEC WHK WHP WIBW WJAS WJSV WKBW WKRC WLAC WLBZ WMBG WMT WNAC WNAX WOKO WORC WOWO WQAM WREC

R — Guy Lombardo and Orchestra

KPRC KSD KTBS KTHS KVOO WAVE WBEN WCAE WCSH WDAF WEAF WEEI WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKBF WKY WLIT WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WWJ WWNC

B — Jimmy Fidler, Hollywood Gossip

KDKA KDYL KFI KGW KHQ KOA KOIL KOMO KPO KSO KWCR WBAL WBZ WBZA WCKY WENR WGAR WHAM WJR WJZ WLIT WMAL WREN WSYR

E-10:15 p.m., C-9:15, M-8:15, P-7:15
B — Madame Sylvia, Talks

KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KSTP KWCR

WEDNESDAY(*Continued*)

KWK WBAL WBZ WBZA WEBC WENR WGAR WHAM WJZ WMAL WREN WRVA WSYR WTMJ

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Howard Barlow; Mary Eastman
CFRB CKAC CKLW KDB KFH KGKO KHJ KLRA KLZ KMBC KOH KOMA KRLD KSCJ KTRH KTSA KVOR KWKH WAAB WABC WACO WADC WALA WBBM WBIG WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHP WIBW WICC WISN WJAS WJSV WKRC WLAC WLBW WMAS WMBD WMBR WMT WNOX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTOC

B — Harry Richman; Jack Denny
KDYL KFYR KOA KOIL KPRC KSO KSTP KVOO KWCR KWK WBAL WCKY WDAY WEBC WENR WFAA WHAM WJR WJZ WKY WMAL WREN WRVA WSYR WTMJ

R — One Man's Family
KSD WAPI WAVE WBEN WCAE WCSH WEAF WFBR WFLA WGY WIOD WIS WJAR WJAX WJDX WKBF WLIT WMAQ WMC WOW WPTF WRC WSAI WSB WSMB WSOC WTAG WTAM WTAR WWJ WWNC

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15
C — Leon Belasco and Orchestra
KLRA WABC WALA WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFEA WJSV WLAC WLBZ WMBR WNAC WNOX WORC WPG WQAM WSFA WSJS WTOC

C — Edwin C. Hill, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — Ozzie Nelson and Orchestra
KLRA WABC WALA WBRC WBT WCAO WCAU WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFEA WICC WISN WJSV WLAC WLBZ WMAS WMBR WNAC WNOX WORC WPG WQAM WSFA WSJS WTOC

C — Voice of Experience
KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG

B — Lanny Ross and Orchestra
KDYL KFI KFSD KGO KGW KHQ KOA KOMO

E-12:00 p.m.,C-11:00, M-10:00, P-9:00
R — Fred Allen; Lennie Hayton
KDYL KFI KGO KGW KHQ KOA KOMO

THURSDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — Buck Rogers, See Monday

E-6:45 p.m., C-5:45, M-4:45, P-3:45
R — Billy Batchelor, See Monday

B — Lowell Thomas, See Monday

E-7:00 p.m., C-6:00, M-5:00 P-4:00
C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15
C — Gems of Melody
KDKA KOIL KSO KTBS KWCR WBAL WBZ WBZA WENR WHAM WJZ WMAL WREN WSYR

R—Whispering Jack Smith, See Tues.

E-7:30 p.m., C-6:30, M-5:30, P-4:30
C — Buck Rogers, See Monday

R — Al Bernard-Paul Dumont
KSD KYW WBEN WCSH WDAF WEAF WGY WHO WJAR WMAQ WRC WSAI WTAG WTAM WWJ

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C — Boake Carter, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00
R — Rudy Vallee and Orchestra
CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KVOO WAPI WBAP WBEN WCAE WCSH WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WWJ WWNC

C — Phil Spitalny's Girl Orchestra
CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KSL KVI KWG WABC WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WMAS WNAC WOKO WSPD

E-8:15 p.m., C-7:15, M-6:15, P-5:15
C — Billy Batchelor, See Monday

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — Edwin C. Hill
CKLW KMBC KMOX WABC WADC WBBM WCAO WCAU WDRC WEAN WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WOWO WSPD

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C — Glen Gray; Walter O'Keefe
CKLW KFAB KFH KLRA KMBC KMOX KOMA KRLD KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBN WKBW WKRC WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAC WNAX WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSPD WTOC

R — Maxwell House Show Boat
KDYL KFI KFSD KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS WAPI WAVE WBAP WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKBF WKY WLW WMAQ WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

B — Death Valley Days; Drama
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WMAL WREN WSYR

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Fred Waring's Pennsylvanians
CFRB CKLW CRCM KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGST WHAS WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBN WKBW WKRC WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAC WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSPD WTOC

E-10:00 p.m., C-9:00, M-8:00, P-7:00
R — Paul Whiteman's Music Hall
CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS KVOO WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Leith Stevens' Harmonies
CKLW KFH KLRA KLZ KMBC KRLD KSCJ KTRH KWKH WAAB WABC WADC WALA WBBM WBIG WBT WCAO WCCO WCOA WDBO WDNC WEAN WFBM WFEA WGST WHEC WIBX WICC WJAS WKBN WKRC WLBZ WMAS WMT WOC WOKO WORC WQAM WREC WSJS WSPD

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15
C — Little Jack Little
CFRB CKAC CKLW KDB KFH KGKO KLRA KLZ KOH KOMA KRLD KSCJ KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBBM WBNS WBRC WBT WCAO WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WHEC WHK WHP WIBW WISN WJAS WJSV WKBW WKRC WLAC WLBW WLBZ WMAS WMBD WMT WNAC WNAX WNOX WOKO WORC WPG WQAM WSBT WSFA WSJS WSPD WTOC WWVA

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — Glen Gray; Walter O'Keefe
KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOH KOIN KOL KSL KVI KVOR KWG

FRIDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — Leon Navara and Orchestra
CKLW KFH KGKO KLZ KMBC KOH KOMA KRLD KSCJ KSL KTRH KVOR KWKH WAAB WABC

FRIDAY (*Continued*)

WADC WBBM WCAO WCAU WDNC WDRC WFBL WHEC WHK WISN WJAS WJSV WKBW WLAC WLBW WMT WOKO WORC WSPD

E-6:30 p.m., C-5:30, M-4:30, P-3:30
C — H. V. Kaltenborn
CKLW KFH KGKO KLZ KMBC KOH KOMA KRLD KSCJ KSL KTRH KVOR KWKH WAAB WABC WBBM WCAO WCAU WDNC WDRC WFBL WGLC WHEC WHK WISN WJAS WJSV WKBW WLAC WLBW WMT WOKO WORC WSPD

E-6:45 p.m., C-5:45, M-4:45, P-3:45
R — Billy Batchelor, See Monday

B — Lowell Thomas, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00
C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15
B — Willard Robison, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30
B — Red Davis, See Monday

C — The O'Neill's, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C — Boake Carter, See Monday

B — Dangerous Paradise, See Monday

R — Uncle Ezra, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00
R — Cities Service Concert
CRCT KDYL KOA KPRC KSD KSTP KTBS KTHS KVOO KYW WBAP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WJAR WKY WLIT WOAI WOC WOW WRC WRVA WSAI WTAG WTAM WTIC WWJ

B — Irene Rich; Drama
KDKA KOIL KSO KWCR WAVE WBAL WBZ WBZA WHAM WJZ WLS WMAL WMC WREN WSB WSM WSYR

E-8:15 p.m., C-7:15, M-6:15, P-5:15
C — Edwin C. Hill, See Monday

C — Billy Batchelor, See Monday

B—Robert Armbruster and Orchestra
KDKA KOIL KSO KWCR WBZ WBZA WJR WJZ WKBF WLS WMAL WREN WSYR

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — True Story Court
CKLW KMBC WABC WADC WBBM WCAO WCAU WCCO WDRC WEAN WFBL WGR WHK WJAS WJSV WKRC WNAC WOKO

B — Al Goodman and Orchestra
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLS WMAL WREN WSYR

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C — March of Time
CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KMOX KOIN KOL KRLD KSL KVI KWG WABC WADC WBBM WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGST WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WSPD

R — Frank Munn; Abe Lyman
KSD WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WJAR WLIT WLW WMAQ WOW WRC WTAG WTAM WWJ

B — Beatrice Lillie
CFCF CRCT KDKA KDYL KFI KGW KHQ KOA KOIL KOMO KPO KPRC KSO KTHS KWCR KWK WAPI WAVE WBAL WCKY WFLA WGAR WHAM WIOD WIS WJAX WJDX WJZ WKY WLIT WLS WMAL WMC WPTF WREN WSB WSMB WSYR WTAR WWNC

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Hollywood Hotel
CFRB CKAC CKLW KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJSV WKBH WKBW WKRC WLAC WLBW WLBZ WMAS WMBD WMBG WMBR WMT WNAC WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC

R — Pick and Pat
KSD WBEN WCAE WCSH WDAF WEAF WFBR WGY WHO WJAR WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WWJ

B — Armour Program; Phil Baker
KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTAR KWK WAPI WAVE WBAL WBZ WBZA WEBC WENR WFAA WFLA WGAR WHAM WIOD WJAX WJR WJZ WKY WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

E-10:00 p.m., C-9:00, M-8:00, P-7:00
R — First Nighter; Drama
KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WJAR WKY WLIT WLW WMAQ WMC WOAI WOC WOW WRC WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — O'Flynn's Musical Drama
KLRA KWKH WABC WBIG WBT WCAO WCAU WCHS WDBJ WDOD WDRC WDSU WFBL WGR WHEC WHP WICC WJAS WJSV WLAC WLBW WMAS WMBG WOKO WORC WPG WREC WSJS

R — Coca Cola; Frank Black
CFCF CRCT KDYL KFI KFSD KFYR KGHL KGIR KGU KGW KHQ KOA KOMO KPO KSTP KTAR KTBS KTHS KYW WAVE WCAE WCSH WDAY WEAF WEBC WEEI WFBR WFLA WGY WIBA WIS WJAR WJAX WJDX WKBF WLW WMC WOW WPTF WRC WSB WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15
C — Ozzie Nelson and Orchestra
KLRA WABC WALA WBRC WBT WCAO WDAE WDBO WDNC WDOD WDRC WDSU WEAN WFEA WHK WJSV WLAC WLBZ WMAS WNAC WNOX WORC WPG WQAM WSFA WSJS WTOC

C — Edwin C. Hill, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — True Story Court
KDB KERN KFBK KFPY KGB KHJ KLZ KMJ KMOX KOIN KOL KSL KVI KWG WFRC WHAS WOWO

SATURDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — Lilac Time; Arthur Murray
CKLW KMOX WAAB WABC WADC WBBM WCAU WCCO WDRC WFBL WGR WHAS WHK WOKO WSPD

E-6:30 p.m., C-5:30, M-4:30, P-3:30
C — Eddie Dooley Sports Review
WABC WBIG WBT WCAO WCAU WDBJ WDNC WDRC WEAN WFBL WFEA WHEC WHP WICC WJAS WJSV WKBW WLBZ WMAS WMBG WNAC WOKO WORC WSJS

E-6:45 p.m., C-5:45, M-4:45, P-3:45
R — Thornton Fisher Sports News
KSD KYW WBEN WCAE WCSH WEAF WEEI WFBR WGY WHO WJAR WLW WMAQ WOW WRC WTAG WTAM WTIC WWJ

E-7:00 p.m., C-6:00, M-5:00, P-4:00
C — Soconyland Sketches
WABC WDRC WEAN WGR WICC WLBZ WMAS WNAC WOKO WORC

E-7:15 p.m., C-6:15, M-5:15, P-4:15
R—Whispering Jack Smith, SeeTues.

E-7:30 p.m., C-6:30, M-5:30, P-4:30
C — Victor Arden and Orchestra
CFRB CKAC CKLW WABC WBBM WCAO WCAU WFBL WHK WJAS WNAC WOKO

E-8:00 p.m., C-7:00, M-6:00, P-5:00
C — Roxy and His Gang
CFRB CKAC CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KTSA KVI KWG WABC WBBM WBRC WCAO WCAU WCCO WDOD WDRC WDSU WEAN WFBL WFBM WGR WGST WHAS WHK WIBW WJAS WJSV WKRC WLAC WMT WNAC WOKO WORC WREC WSPD

R — Swift Hour; Sigmund Romberg
KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS WBAP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFBR WFI WGY WIBA WJAR WKY WLW WMAQ WOAI WOW WRC WTAG WTAM WTIC WTMJ WWJ

E-8:45 p.m., C-7:45, M-6:45, P-5:45
C—Robert Armbruster and Orchestra
CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KVI KWG KWKH WABC WADC WBBM WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS

SATURDAY (*Continued*)

WHK WJAS WJSV WKRC WNAC WOKO WOWO WSPD

E-9:00 p.m., C-8:00, M-7:00, P-6:00
R — Songs You Love
KFYR KSD KSTP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WGY WIBA WJAR WLW WMAQ WOW WRC WTAG WTAM WTIC WTMJ WWJ

B — Radio City; Frank Black
KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WLS WMAL WREN WSYR

C — Chesterfield Program, see Monday

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Richard Himber and Orchestra
CKLW KFH KMBC KMOX WAAB WABC WADC WBBM WBNS WBT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGST WHK WJAS WJSV WKBW WKRC WOKO WSBT WSPD

R — Gibson Family Musical
KDYL KFI KFYR KGO KGW KHQ KOA KOMO KSD KSTP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WGY WIBA WJAR WLW WMAQ WOW WRC WTAG WTAM WTIC WTMJ WWJ

B — National Barn Dance
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WKBF WLS WMAL WREN WSYR

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Saturday Revue
CFRB CKLW KDB KFH KGKO KHJ KLRA KLZ KMBC KOH KOMA KRLD KSCJ KTRH KTSA KVOR KWKH WAAB WABC WACO WADC WALA WBIG WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHP WIBW WICC WISN WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMT WNAX WNOX WOKO WORC WPG WQAM WSBT WSFA WSJS WSPD WTOC WWVA

R — Let's Dance
KFYR KPRC KSD KTBS KTHS KVOO KYW WAVE WBAP WBEN WCAE WCSH WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WRC WSB WSMB WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Richard Himber and Orchestra
KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG

B — National Barn Dance
KDYL KFI KGO KGW KHQ KOA KOMO WAVE WJDX WLS WMC WSB WSMB

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — Johnny Green and Orchestra
CKAC CKLW KLRA WAAB WABC WBT WDAE WDBJ WDBO WDOD WDRC WDSU WFBM WGLC WGR WHEC WHP WIBW WJAS WJSV WKRC WMAS WNAC WOKO WOWO WSPD

E-12:00 p.m., C-11:00, M-10:00, P-9:00
C — Cab Calloway and Orchestra
CKAC CKLW KDB KFH KGKO KLRA KLZ KMBC KOH KOMA KTRH KTSA KWKH WABC WBNS WCAU WDBO WDNC WDOD WEAN WFBL WFBM WGLC WHP WIBW WICC WJSV WKBW WKRC WLAC WLBW WNAC WNOX WOKO WPG WQAM WSBT WTOC

SUNDAY

E-11:30 a.m., C-10:30, M-9:30, P-8:30
C — Salt Lake Tabernacle Choir
CKLW KFH KGKO KLRA KLZ KOH KRLD KSCJ KSL KTRH KTSA KWKH WABC WACO WADC WALA WBBM WBMS WCCO WDAE WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WHK WHP WIBW WICC WISN WJAS WJSV WLAC WLBW WLBZ WMAS WMBD WMBR WMT WNAC WNAX WNOX WOKO WORC WQAM WREC WSFA WSPD

R — Major Bowes' Family
KDYL KFYR KOA KPRC KSTP KTBS KVOO WAPI WCAE WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIOD WJAR WJAX WKY WMAQ WMC WOAI WOC WRC WRVA WSAI WSMB WTAG WTAM WWNC

E-12:30 p.m., C-11:30, M-10:30, P-9:30
C — Tito Guizar
CKLW KMBC KMOX WABC WADC WBBM WCAO WCAU WDRC WEAN WFBL WFBM WGR WHAS WJAS WJSV WKH WKRC WMAS WNAC WOKO WORC WOWO WSPD

B — Radio City Symphony
CFCF CRCT KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KVOO WAPI WBAL WBZ WBZA WCKY WDAY WEBC WGAR WHAM WIS WJDX WJR WJZ WKY WMAL WOAI WREN WSMB WSYR WWNC

E-1:00 p.m., C-12:00, M-11:00, P-10:00
C — Church of the Air
CFRB CKLW KFH KGKO KHJ KLRA KLZ KOH KRLD KSCJ KSL KTRH KTSA KWKH WAAB WABC WACO WALA WBBM WBIG WBNS WBT WCAO WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WFBL WGLC WGR WHEC WHP WIBW WJAS WJSV WKRC WLAC WLBW WLBZ WMBR WMT WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WWVA

R — Dale Carnegie, Talks
WBEN WCAE WEAF WEEI WFBR WFI WGY WJAR WRC WSAI WTAG WTAM WTIC WWJ

E-1:30 p.m., C-12:30, M-11:30, P-10:30
R — Miss Bab-o's Surprise
WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WGY WJAR WMAQ WOW WRC WSAI WTAG WTAM WWJ

C — Little Jack Little
CKLW KMBC KMOX KRLD WABC WADC WBBM WBT WCAU WCCO WFBL WFBM WGR WHAS WHK WJAS WJSV WKRC WOWO

E-1:45 p.m., C-12:45, M-11:45, P-10:45
C — Pat Kennedy; Art Kassel
CFRB CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KVI KWG WABC WBBM WBNS WCAO WCAU WCCO WDSU WFBM WGR WGST WHAS WHK WJAS WJSV WKRC WMT WOWO WSPD

E-2:00 p.m., C-1:00, M-12:00, P-11:00
C — Lazy Dan, Minstrel Man
CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KVI KWG WABC WADC WBBM WBNS WBT WCAO WCAU WCCO WDBJ WDRC WDSU WEAN WFBL WFBM WGST WHAS WHEC WHK WIBW WJAS WJSV WKBW WKRC WLAC WMBG WMT WNAC WOWO

B — Anthony Frome; Poet Prince
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WENR WGAK WJR WJZ WMAL WREN WSYR

E-2:15 p.m., C-1:15, M-12:15, P-11:15
B — Becker's Chats About Dogs
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WJR WJZ WLS WMAL WREN WSYR

E-2:30 p.m., C-1:30, M-12:30, P-11:30
C — Hammerstein's Music Hall
CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KVI KWG WABC WADC WBBM WBT WCAO WCAU WCCO WDBJ WDRC WDSU WEAN WFBL WFBM WGST WHAS WHEC WHK WIBW WJAS WJSV WKBW WKRC WLAC WMBG WMT WNAC WOWO

R — Gene Arnold and Commodores
WCAE WCSH WEAF WEEI WFBR WGY WJAR WMAQ WOW WRC WSAI WTAG WTAM

B — Lux Program; Dramas
KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTBS KTHS KVOO KWCR KWK WBAL WBZ WBZA WDAY WEBC WFAA WGAR WHAM WIBA WJR WJZ WKY WLW WMAL WOAI WPTF WREN WRVA WSYR WTAR

E-3:00 p.m., C-2:00, M-1:00, P-12:00
C — N. Y. Philharmonic Symphony
CFRB CKAC CKLW KFH KGKO KHJ KLRA KLZ KOH KRLD KSCJ KSL KTRH KTSA KVOR KWKH WABC WADC WALA WBIG WBNS WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMBR WMT WNAC WOKO WORC WQAM WREC WSBT WSFA WSJS WSPD WTOC

R — Sally of The Talkies
WAPI WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WHO WJAR WJDX WLIT WMAQ WMC WOC WOW WRC WSAI WSB WSM WSMB WTAG WTAM WWJ

SUNDAY (*Continued*)

E-3:30 p.m., C-2:30, M-1:30, P-12:30
R — Penthouse Serenade
KDYL KFI KGO KGW KHQ KOA KOMO KSD WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WHO WJAR WLIT WLW WMAQ WOC WOW WRC WTAG WTAM WTIC WWJ

E-4:00 p.m., C-3:00, M-2:00, P-1:00
Rev. Charles E. Coughlin
KSTP KWK WCAO WCAU WDRC WEAN WFBL WFEA WGAR WGR WHB WHO WICC WIND WJAS WJJD WJR WLBZ WLW WMAS WNAC WNBH WOC WOKO WOL WOR WORC

R — Rhythm Symphony
KDYL KFI KGW KOA KOMO KPO KPRC KTBS WAPI WAVE WBAP WBEN WCSH WDAF WEAF WEBC WEEI WFBR WFLA WGY WIBA WIOD WJAR WJAX WJDX WLIT WMAQ WMC WOAI WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WWJ

B — Sherlock Holmes; Drama
KDKA KOIL KSO KWCR WBAL WBZ WBZA WENR WJZ WMAL WREN WSYR

E-4:30 p.m., C-3:30, M-2:30, P-1:30
R — Harry Reser and Orchestra
KYW WBEN WCAE WCSH WEAF WEEI WFBR WGY WJAR WMAQ WRC WSAI WTAG WTAM WTIC WWJ

B — Morton Downey
KDKA KOIL KSO KWCR WBAL WBZ WBZA WCKY WENR WHAM WJZ WKBF WMAL WREN WSYR

E-4:45 p.m., C-3:45, M-2:45, P-1:45
R — Dream Drama
WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WGY WJAR WMAQ WRC WSAI WTAG WTAM WTIC WWJ

E-5:00 p.m., C-4:00, M-3:00, P-2:00
C — Freddy Martin and Orchestra
CKLW KFH KLRA KLZ KMBC KMOX KOMA KRLD KSL KTRH KTSA KTUL WAAB WABC WADC WBBM WBIG WBRC WBT WCAO WCAU WCCO WDOD WDRC WDSU WEAN WFBL WFBM WGR WGST WHAS WHEC WHK WIBW WJAS WJSV WKBN WKRC WLAC WLBZ WMAS WMBG WOKO WORC WOWO WREC WSPD

R — Sentinels Serenade
CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO WAVE WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFBR WFI WGY WHO WIBA WJAR WKBF WMAQ WMC WOC WOW WRC WSAI WSB WSM WTAG WTAM WTIC WTMJ WWJ

B — Roses and Drums
KDKA KOIL KPRC KSO KTBS KWCR KWK WBAL WBAP WBZ WBZA WENR WGAR WHAM WJR WJZ WKY WLW WMAL WOAI WREN WSYR

E-5:30 p.m., C-4:30, M-3:30, P-2:30
C — Frank Crumit; Julia Sanderson
CKLW KFH KMBC KMOX KOMA KTUL WAAB WABC WADC WBNS WCAO WCAU WDRC WDSU WEAN WFBL WFBM WGR WHAS WHEC WHK WIBX WICC WJSV WMAS WOKO WORC WSPD WWVA

R — Tony Wons
CFCF CRCT KDYL KFI KFSD KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTHS KVOO KYW WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKBF WKY WLIT WMAQ WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSMB WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

B — Cook Travelogues
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WENR WFI WGAR WHAM WJR WJZ WMAL WREN WSYR

E-5:45 p.m., C-4:45, M-3:45, P-2:45
B — Terhune Dog Drama
KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WBAL WBZ WBZA WENR WGAR WHAM WJR WJZ WMAL WREN WSYR

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — National Amateur Night
CFRB CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WBBM WBNS WBT WCAO WCAU WCCO WDRC WDSU WFBL WFBM WGST WHAS WHEC WHK WJAS WJSV WKBW WKRC WOKO

E-6:30 p.m., C-5:30, M-4:30, P-3:30
C — Smilin' Ed McConnell
CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMJ KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WBBM WBNS WBRC WBT WCAU WCCO WDRC WDSU WEAN WFBL WFBM WFEA WGST WHAS WHK WHP WICC WISN WJAS WJSV WKBW WKRC WLAC WLBW WLBZ WORC WQAM WREC WWVA

R — Armco Iron Master
KPRC KSD KTBS KVOO WBAP WBEN WCAE WDAF WEAF WFBR WGY WHO WKY WLIT WLW WMAQ WOAI WOC WOW WRC WTAM WWJ

B — Compana Grand Hotel
KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KSTP KWCR KWK WBAL WBZ WBZA WEBC WENR WGAR WHAM WJR WJZ WMAL WREN WSYR WTMJ

E-6:45 p.m., C-5:45, M-4:45, P-3:45
C — Voice of Experience
CKLW KMBC KMOX WAAB WABC WBBM WBT WCAO WCAU WCCO WDRC WEAN WFBL WHAS WHK WJAS WJSV WKBW WKRC WNAC WOWO WWVA

E-7:00 p.m., C-6:00, M-5:00, P-4:00
B — Jack Benny; Don Bestor
KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KWCR KWK WBAL WBAP WBZ WBZA WEBC WGAR WHAM WIBA WJDX WJR WJZ WKY WLS WLW WMAL WMC WOAI WREN WSB WSM WSMB WSYR WTMJ

C — Alexander Woollcott
KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMOX KOIN KOL KSL KVI KWG WABC WBBM WCAO WCAU WCCO WDRC WFBL WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO

E-7:30 p.m., C-6:30, M-5:30, P-4:30
B — Joe Penner; Ozzie Nelson
KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTAR KVOO KWCR KWK WBAL WBZ WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WJAX WJDX WJR WJZ WKY WLS WMAL WMC WOAI WPTF WREN WRVA WSB WSM WSMB WSYR WTMJ

C — Gulf Headliners
CKLW KLRA KRLD KTRH KTSA WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFEA WGST WHAS WHEC WHK WJAS WJSV WKRC WLAC WLBZ WMAS WMBG WMBR WNAC WOKO WORC WOWO WQAM WREC WSPD WTOC

R — American Radiator Musical
WBEN WCAE WCSH WEAF WFBR WGY WJAR WMAQ WOW WRC WSAI WTAG WTAM WWJ

E-7:45 p.m., C-6:45, M-5:45, P-4:45
R — Fitch Program; Wendell Hall
CFCF KSD WBEN WCAE WCSH WEAF WFBR WGY WHO WJAR WKBF WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WWJ

E-8:00 p.m., C-7:00, M-6:00, P-5:00
C — Eddie Cantor
CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KTSA KTUL KVI KWG WAAB WABC WADC WBBM WBRC WBT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGR WGST WHAS WHK WJAS WJSV WKRC WOKO WOWO WSPD

R — Chase and Sanborn Hour
CFCF CRCT KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KVOO WAPI WAVE WBEN WBZ WBZA WCAE WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKY WLIT WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

B — General Motors Symphony
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WLS WREN WSYR

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — Club Romance
CKLW KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KTSA KTUL KVI KWG KWKH WABC WBBM WBRC WBT WCAO WCAU WCCO WDRC WDSU WEAN WFBL WFBM WGR WGST WHAS WHE

SUNDAY (*Continued*)

WJAS WJSV WKRC WNAC WOKO WOWO WREC WSPD

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C — Ford Symphony
CFRB CKLW KDB KERN KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSA KTUL KVI KVOR KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJSV WKBH WKBN WKRC WLAC WLBW WLBZ WMAS WMBR WMT WNAC WNAX WNOX WOKO WORC WOWO WQAM WSBT WSFA WSJS WSPD WTOC WWVA

R — Manhattan Merry-Go-Round
CFCF KDYL KFI KGO KGW KHQ KOA KOMO KSD KSTP WDAF WEAF WEBC WFBR WFI WGY WHO WJAR WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WTMJ WWJ

8 — Silken Strings; Charles Previn
KDKA KDYL KFI KGO KGW KHQ KOA KOAI KOIL KOMO KPRC KSO KSTP KWCR KWK WBAL WBAP WBZ WBZA WEBC WGAR WHAM WIBA WJR WJZ WKY WLS WLW WMAL WREN WSYR WTMJ

E-9:30 p.m., C-8:30, M-7:30, P-6:30
R — Album of Familiar Music
CFCF CRCT KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP KVOO WBEN WCAE WCSH WDAF WEAF WEEI WFAA WFBR WFI WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC

B — Walter Winchell
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WENR WGAR WHAM WJR WJZ WLW WMAL WREN WSYR

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — Wayne King, See Monday

R — Pontiac Program; Jane Froman
KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSTP KTAR KTBS KTHS WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKBF WKY WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTIC WTMJ WWJ WWNC

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Dramatic Guild
CKAC CKLW KFH KGKO KHJ KLRA KLZ KMBC KOH KRLD KSCJ KTRH KTSA KVOR KWKH WABC WACO WADC WALA WBIG WBNS WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGLC WGR WHEC WHP WIBW WICC WISN WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMBR WMT WNAX WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Little Jack Little
CFRB CKAC CKLW KFH KGKO KLRA KLZ KOH KRLD KSCJ KTRH KTSA KVOR KWKH WABC WACO WADC WBBM WBNS WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WDSU WEAN WFBL WFEA WGLC WGR WHEC WHK WHP WIBW WISN WJAS WJSV WKRC WLAC WLBW WLBZ WMAS WMBD WMBR WMT WNAC WNAX WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC

Advice for Ailing Sets

(*Continued from page* 28)

as sparks emitted by automobiles, street car motors, elevators, telephones and light switches.

We think your antenna is much too close to the elevator motor on the roof. A distance of five feet will permit the picking up of all static waves from sparking motor brushes and switch contacts.

Most all antenna systems are efficient. The one you use has proved very satisfactory. You must get as far away as possible from the elevator pent house on the roof of your apartment building. A filter in the power line may be a great help if some of this interference is coming into the set by that route. Disconnect the antenna and ground, use a short antenna made of a piece of wire about one foot in length, and see if the noises still persist. Remove the short antenna, and any further noise heard will prove conclusively that the power lines are contributing their share of noise.

Strange Noises

There seems to be a steady, crackling rattle that appears in my radio, even when the antenna and ground are disconnected. What could be the cause of this?

Noises such as these are usually due to poor contacts, open or defective resistors and condensers. Also, dirt and dust in the set may be responsible. See the November, 1933, issue of RADEX for information about cleaning up the radio set. There also is the possibility that such noises come to the set through the power line. If this is the case a line filter will be needed. The tubes, connections, sockets and resistors should be carefully checked. The wet electrolytic type of condenser can also be an annoying source of such noise.

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Standard

C—Columbia; R—National (Red); B—National (Blue)

These features are correct at the time of going to press, but changes are being made daily.

CONCERTS

Armco Iron Master, 6:30 p.m. Sunday, R
Chase and Sanborn, 8:00 p.m. Sunday, R
Ford Concert, 9:00 p.m. Sunday, C
General Motors Symphony, 8:00 p.m. Sunday, B
Andre Kostelanetz, 9:00 p.m. Mon., Wed. and Sat., C
N. Y. Philharmonic, 3:00 p.m. Sunday, C
Radio City Music Hall, 12:30 p.m. Sunday, B
Swift Hour, 8:00 p.m. Saturday, R

DANCE BANDS

Victor Arden, 8:30 p.m. Wednesday; 7:30 p.m. Sat., C
Robert Armbruster, 8:45 p.m. Sat., C; 8:15 p.m. Fri., B
Leon Belasco, 9:30 p.m. Friday, B; 11:30 p.m. Sunday; 11:15 p.m. Wed., C
Ben Bernie, 9:00 p.m. Tuesday, R
Don Bestor, 7:00 and 11:30 p.m. Sunday, B
Frank Black, 10:00 p.m. Sun.; 10:30 p.m. Fri., R; 9:00 p.m. Sat., B
Cab Calloway, 12 Mid. Sat. and Sun., C
Jack Denny, 10:30 p.m. Wednesday, B
Eddie Duchin, 9:30 p.m. Tuesday, R
Jan Garber, 8:00 p.m. Monday, B
Lud Gluskin, 9:30 p.m. Monday, C
Al Goodman, 8:30 p.m. Friday, B; 9:30 p.m. Monday, R
Glen Gray, 10:00 p.m. Tuesday; 9:00 and 11:30 p.m. Thursday; 11:15 p.m. Mon., C
Johnny Green, 11:30 p.m. Tues. and Sat., C
Joe Haymes, 11:15 p.m. Tues., C
Lennie Hayton, 9:00 and 12:00 p.m. Wednesday, R
Richard Himber, 8:00 p.m. Monday, R; 9:30 and 11:00 p.m. Saturday, C
Isham Jones, 9:30 p.m. Tuesday, C
Art Kassel, 1:45 p.m. Sunday, C
Wayne King, 8:30 p.m. Tues. and Wed., R; 10:00 p.m. Sunday and Monday, C
Let's Dance, 10:30 p.m. Saturday R
Little Jack Little, 1:30 and 11:00 p.m. Sunday; 11:15 p.m. Thurs., C
Guy Lombardo, 10:00 p.m. Wednesday, R
Abe Lyman, 9:00 p.m. Friday, R; 8:30 p.m. Tuesday, C
Freddy Martin, 5:00 p.m. Sunday, C
Leon Navara, 6:00 p.m. Friday, C
Ozzie Nelson, 7:30 p.m. Sunday, B; 11:30 p.m. Wed.; 11:15 p.m. Friday, C
Charles Previn, 9:00 p.m. Sunday, B
Leo Reisman, 8:00 and 11:30 p.m. Tuesday, R
Harry Reser, 4:30 p.m. Sunday, R
Willard Robison, 7:15 p.m. Mon., Wed. and Fri., B
Leith Stevens, 10:30 p.m. Thursday, C
Phil Spitalny, 8:00 p.m. Thursday, C
Rudy Vallee, 8:00 p.m. Thursday, R
Fred Waring, 9:30 p.m. Thursday, C
Paul Whitman, 10:00 p.m. Thursday, R

DIALOG

Fred Allen, 9:00 and 12:00 p.m. Wednesday, R
Amos 'n' Andy, 7:00 and 11:00 p.m. daily, except Sat. and Sun., B
Phil Baker, 9:30 p.m. Friday, B
Jack Benny, 7:00 and 11:30 p.m. Sunday, B
Block and Sully, 9:30 p.m. Monday, C
Eddie Cantor, 8:00 p.m. Sunday, C
George and Gracie, 9:30 p.m. Wednesday, C
Walter O'Keefe, 10:00 p.m. Tuesday; 9:00 and 11:30 p.m. Thursday, C
Joe Penner, 7:30 p.m. Sunday, B
Ray Perkins, 6:00 p.m. Sunday, C
Pick and Pat, 9:30 p.m. Friday, R
Uncle Ezra, 7:45 p.m. Mon.; Wed., Fri., R
Ed Wynn, 9:30 p.m. Tuesday, R

DRAMA

Billy Batchelor, 6:45 p.m. daily, except Sat. and Sun., R; 8:15 p.m. daily, except Sat. and Sun., C
Dangerous Paradise, 7:45 p.m. Mon., Wed. and Fri., B
Red Davis, 7:30 p.m. Mon., Wed., and Fri., B
Death Valley Days, 9:00 p.m. Thursday, B
Dramatic Guild, 10:30 p.m. Sunday, C
Dream Drama, 4:45 p.m. Sunday, R
Eno Crime Clues, 8:00 p.m. Tuesday, B
First Nighter, 10:00 p.m. Friday, R
Grand Hotel, 6:30 p.m. Sunday, B
Sherlock Holmes, 4:00 p.m. Sunday, B
Warden Lawes, 9:00 p.m. Wednesday, B
Lux Program, 2:30 p.m. Sunday, B
Myrt and Marge, 7:00 and 11:00 p.m. daily, except Sat. and Sun., C
One Man's Family, 10:30 p.m. Wednesday, R
The O'Neills, 7:30 p.m., Mon., Wed., Fri., C
Mary Pickford, 8:00 p.m. Wednesday, R
Princess Pat Players, 9:30 p.m. Monday, B
Irene Rich, 8:00 p.m. Friday, B
Buck Rogers, 6:00 and 7:30 p.m. Mon. to Thurs., inc., C
Roses and Drums, 5:00 p.m. Sunday, B
Sally of the Talkies, 3:00 p.m. Sunday, R
The Shadow, 6:30 p.m. Mon. and Wed., C
Soconyland Sketches, 7:00 p.m. Saturday, C
Terhune Dog Dramas, 5:45 p.m. Sunday, B
True Story Court, 8:30 and 11:30 p.m. Friday, C

PIANO

Fray and Braggiotti, 10:30 p.m. Tuesday, C
Ohman and Arden, 9:30 p.m. Sunday, R

POPULAR PROGRAMS

A & P Gypsies, 9:00 p.m. Monday, R
Album Familiar Music, 9:30 p.m. Sunday, R
American Radiator Musical, 7:30 p.m. Sunday, R
Gene Arnold's Commodores, 2:30 p.m. Sunday, R
Miss Bab-o's Surprise, 1:30 p.m. Sunday, R
Bernard and Dumont, 7:30 p.m. Thursday, R
Major Bowes, 11:30 a.m. Sunday, R
Byrd Expedition, 10:00 p.m. Wednesday, C
Carefree Carnival, 8:30 p.m. Monday, B
Chesterfield Program, 9:00 p.m. Mon., Wed. and Sat., C
Cities Service Concert, 8:00 p.m. Friday, R
Club Romance, 8:30 p.m. Sunday, C
Colgate House Party, 9:30 p.m. Monday, R
Contented Program, 10:00 p.m. Monday, R
Diane and Life Saver, 8:00 p.m. Mon. and Wed., C
Fleischmann Variety, 8:00 p.m. Thursday, R
Forum of Liberty, 8:30 p.m. Thursday, C
Gems of Melody, 7:15 p.m. Thursday, B
Gibson Family Musical, 9:30 p.m. Saturday, R
Gulf Headliners, 7:30 p.m. Sunday, C
Hammerstein's Music Hall, 2:30 p.m. Sunday, C
Hollywood Hotel, 9:30 p.m. Friday, C
Household Musical, 7:30 p.m. Tuesday, B
Lilac Time, 6:00 p.m. Saturday, C
Manhattan Merry-Go-Round, 9:00 p.m. Sunday, R
March of Time, 9:00 p.m. Friday, C
Maxwell House Show Boat, 9:00 p.m. Thursday, R
Music Appreciation, 6:30 p.m. Tuesday, C
National Amateur Night, 6:00 p.m. Sunday, C
National Barn Dance, 9:30 and 11:00 p.m. Saturday, B
O'Flynn's Musical Drama, 10:30 p.m. Friday, C
Palmolive Beauty Box, 10:00 p.m. Tuesday, R
Penthouse Party, 8:00 p.m. Wednesday, B
Penthouse Serenade, 3:30 p.m. Sunday, R
Pontiac Program, 10:00 p.m. Sunday, R

Rhythm Symphony, 4:00 p.m. Sunday, R
Roxy and His Gang, 8:00 p.m. Saturday, C
Saturday Revue, 10:30 p.m. Saturday, C
Sentinels Serenade, 5:00 p.m. Sunday, R
Sinclair Minstrels, 9:00 p.m. Monday, B
Songs You Love, 9:00 p.m. Saturday, R
Voice of Firestone, 8:30 and 11:30 p.m. Monday, R
Tony Wons, 5:30 p.m. Sunday, R

RELIGIOUS

Church of the Air, 1:00 p.m. Sunday, C
Salt Lake Choir, 11:30 a.m. Sunday, C

SINGERS

Mildred Bailey, 7:15 p.m. Mon., Wed., Fri., B
Lois Bennett, 8:30 p.m. Sunday, C
Mary Courtland, 8:45 p.m. Sat., C; 8:15 p.m. Friday, B
Bing Crosby, 9:00 p.m. Tuesday, C
Morton Downey, 4:30 p.m. Sunday; 7:15 p.m. Tuesday, B
Mary Eastman, 10:30 p.m. Wednesday, C
Jane Froman, 10:00 p.m. Sunday, R
Tito Guizar, 12:30 p.m. Sunday, C
Wendell Hall, 7:45 and 11:00 p.m. Sunday, R
Annette Hanshaw, 10:00 p.m. Tuesday; 9:00 and 11:30 p.m. Thurs., C
Jackie Heller, 10:00 p.m. Monday, B
Pat Kennedy, 1:45 p.m. Sunday, C
Ralph Kirbery, 2:00 p.m. Sunday, R
Lazy Dan, 2:00 p.m. Sunday, C
Elizabeth Lennox, 8:30 p.m. Wednesday, C
Beatrice Lillie, 9:00 p.m. Friday, B
Everett Marshall, 8:30 p.m. Wednesday, C
Maxine, 8:00 p.m. Thursday, C
John McCormack, 9:30 p.m. Wednesday, B
Martha Mears, 9:30 p.m. Friday, B
James Melton, 9:00 and 12:00 p.m. Wednesday, R
Mills Brothers, 9:00 p.m. Tuesday, C
Grace Moore, 9:00 p.m. Tuesday, B
Frank Munn, 9:30 p.m. Sunday; 9:00 p.m. Friday, R; 8:00 p.m. Tuesday, C
Joey Nash, 8:00 p.m. Mon., R; 9:30 and 11:00 p.m. Sat., C
Gertrude Niesen, 9:30 p.m. Monday, C
Donald Novis, 5:00 p.m. Sunday, C
Frank Parker, 9:00 p.m. Monday, R; 7:00 and 11:30 p.m. Sunday, B
Virginia Rea, 9:30 p.m. Sunday, R
Harry Richman, 10:30 p.m. Wednesday, B
Lanny Ross, 9:00 p.m. Thursday, R; 8:30 and 11:30 p.m. Wednesday, B
Sanderson-Crumit, 5:30 p.m. Sunday, C
Mme. Schumann-Heink, 5:00 p.m. Sunday, R
Vivienne Segal, 9:00 p.m. Friday, R; 8:30 p.m. Tuesday, C
Mary Small, 1:30 p.m. Sunday, R
Smilin' Ed McConnell, 6:30 p.m. Sunday, C
Kate Smith, 8:30 and 11:30 p.m. Monday, C
Gladys Swarthout, 8:30 and 11:30 p.m. Sunday; 10:00 p.m. Tuesday, R
Conrad Thibault, 9:00 p.m. Thurs., R; 8:30 p.m. Sun., C
Lawrence Tibbett, 8:30 p.m. Tuesday, B
Vera Van, 5:00 p.m. Sunday, C
Whispering Jack Smith, 7:15 p.m. Tues., Thur. and Sat., R

TALKS

Becker's Dog Chats, 2:15 p.m. Sunday, B
Dale Carnegie, 1:00 p.m. Sunday, R
Boake Carter, 7:45 p.m. daily, except Sat. and Sun., C
Cook Travelogues, 5:30 p.m. Sunday, B
Rev. Charles E. Coughlin, 4:00 p.m. Sunday
Eddie Dooley, 6:30 p.m. Saturday, C
Jimmy Fidler, 10:00 p.m. Wednesday, B
Thornton Fisher, 6:45 p.m. Saturday, R
Health Talks, 10:30 p.m. Monday, C
Mark Hellinger, 8:00 p.m. Wednesday, B
Edwin C. Hill, 8:15 and 11:15 p.m. Mon., Wed., Fri.; 8:30 p.m. Thursday, C
H. V. Kaltenborn, 6:30 p.m. Friday, C
John B. Kennedy, 8:30 p.m. Tues; 10:30 p.m. Wed.; 9:00 p.m. Sat., B
Madame Sylvia, 10:15 p.m. Wednesday, B
Lowell Thomas, 6:45 p.m. daily, except Sat. and Sun., B
Voice of Experience, 6:45 p.m. Sunday; 11:30 p.m. Wednesday, C.
Walter Winchell, 9:30 and 11:15 p.m. Sunday, B
Alexander Woollcott, 7:00 p.m. Sunday, C

KEY TO SYMBOLS

As Shown In the Index by Frequencies and Dial Numbers

Frequency is given in kilocycles; wavelength in meters. Night power is shown in watts in third column. Daytime power is shown in parenthesis in fourth column in kilowatts, thus (.25) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column.

Second Column Symbols

a Verifies reception for return postage.
b Verifies only occasionally.
c Does not verify.
d Verification 10c; letter 25c.
e Sends Ekko stamp for 10c.
f Sends Ekko stamp for 5c.
g Sends Ekko stamp for postage.
h Sends own station stamp for 10c.
i Sends own station stamp for 5c.
j Sends own station stamp for postage.
k Has no stamps.
m Verifies for 5c.
z No information available.

Fourth Column Symbols

A American Broadcasting System.
B National "Blue" network.
C Columbia network.
D Daytime only.
Dn Daytime with occasional evening hours.
F Canadian Radio Brdcstg. Commission.
N National "Red" and "Blue" networks.
P Has construction permit only.
R National "Red" network.
S Sunday only.
Sy Synchronized.
X Has permit to increase power.
Y Has permit to change location.
Z Has permit to change frequency.
a-b-c. Small letters show stations using same transmitter.
1-2-3. Figures denote stations sharing time.
..... No information.

Time on the Air

The time is given in accordance with the "24-hour clock." Noon is always 12:00, but midnight may be either 0:00 or 24:00. To change to time of your own clock, subtract twelve. Thus, 18:00-24:00 is 6:00 p. m. to midnight. 23:00-0:30 is 11:00 p. m. to 12:30 a.m. A signifies Atlantic Standard Time (AST). E is Eastern Standard Time (EST). C is Central Standard Time (CST). P is Pacific Standard Time (PST). L is Local Standard Time (LST).

KCYS
600
DIAL

540 kilocycles 555.2 meters

CJRM	ak	1000	F	Moose Jaw, Sask.	M—7-23

550 kilocycles 545.1 meters

CFNB	ak	500	F	Fredericton, N. B.	A—8:10-24
KFUO	ae	500	2 (1)	St. Louis, Mo.	C—7-8; 12:15-12:40; 15-15:40; 22-23
KFYR	ae	1000	N (2.5)	Bismarck, N. D.	C—7-24
KOAC	ak	1000	.....	Corvallis, Ore.	P—9-22
KSD	ak	1000	2R (5)	St. Louis, Mo.	C—8-12:15; 12:40-15; 15:40-24
KTSA	ak	1000	C (5)	San Antonio, Texas	C—7-14; 15-23:30
TISO	ak	250	.....	San Jose, C. R.	C—.....
WDEV	ae	500	D	Waterbury, Vt.	E—7:30-10; 11:30-14; 15-19
WGR	ae	1000	C	Buffalo, N. Y.	E—7:30-24
WKRC	ak	1000	C (2.5)	Cincinnati, Ohio	E—7-1
WSVA	z	500	DP	Staunton, Va.	E—.....

560 kilocycles 535.4 meters

KFDM	ak	500	(1)	Beaumont, Texas	C—7:15-14; 16-22
KLZ	ae	1000	C (2.5)	Denver, Colo.	M—6:45-23:30
KTAB	ak	1000	.....	San Francisco, Calif.	P—7-1
KWTO	ak	1000	D	Springfield, Mo.	C—6-17:45
TGW	ak	10000	565	Guatemala City	C—12-14:30; 18:30-19:30; 21-23
WFI	ae	500	1B (1)	Philadelphia, Pa.	E—6:45-9; 9:45-11; 13-14; 15-16:30; 18-24
WIND	ak	1000	(2.5) A	Gary, Ind.	C—7-1
WIS	ae	1000	N (2.5)	Columbia, S. C.	E—8-24
WLIT	ak	500	1B (1)	Philadelphia, Pa.	E—9-9:45; 11-13; 14-15; 16:30-18
WQAM	ae	1000	C	Miami, Fla.	E—7:30-24
XEAO	ak	250	(.15)	Mexicali, B. C.	P—8-22

570 kilocycles 526.0 meters

KGKO	ak	250	C (1)	Wichita Falls, Texas	C—7:30-23:30
KMTR	ak	500	.....	Hollywood, Calif.	P—6:45-23:30
KVI	ak	1000	.....	Tacoma, Wash.	P—6-24
WKBN	ae	500	1C	Youngstown, Ohio	E—7:30-9; 11-13; 15-20
WMCA	ak	500	A	New York, N. Y.	E—7-1
WNAX	ak	1000	C (5)	Yankton, S. D.	C—6-24
WOSU	ak	750	1 (1)	Columbus, Ohio	E—9-11; 19-23:30
WSYR	ak	250	B	Syracuse, N. Y.	E—7:30-1
WWNC	ae	1000	N	Asheville, N. C.	E—7:30-0:30

580 kilocycles 516.9 meters

CHRC	ak	100	F	Quebec, Que.	E—9-0:30
CKCL	ae	100	F	Toronto, Ont.	E—8-23:30
CKUA	ak	500	.....	Edmonton, Alta.	M—13-14:15; 19-21
KMJ	ak	500	C	Fresno, Calif.	P—7-24
KSAC	ak	500	2 (1)	Manhattan, Kans.	C—9:30-10:30; 12:30-14; 16:30-17:30
WCHS	ak	500	(1)	Charleston, W. Va.	E—7-23
WDBO	ae	250	C (1)	Orlando, Fla.	E—7:30-24
WIBW	ak	1000	C2 (2.5)	Topeka, Kans.	C—6-9:30; 10:30-12:30; 14-16:30; 17:30-24
WTAG	ae	500	R (1)	Worcester, Mass.	E—8-24

590 kilocycles 508.2 meters

KHQ	ak	1000	N (2.5)	Spokane, Wash.	P—6:45-24
WEEI	ak	1000	R	Boston, Mass.	E—.....
WKZO	ae	1000	D	Kalamazoo, Mich.	E—7:30-18
WOW	ae	1000	R (2.5)	Omaha, Neb.	C—6:30-0:30
XEPN	ak	50000	.....	PiedrasNegras,Coah.	C—5-24

600 kilocycles 499.7 meters

CFCF	ae	500	.....	Montreal, Que.	E—8-24
CJOR	ak	500	.....	Vancouver, B. C.	P—7:30-23:15
CRCW	z	500	PF (1)	Windsor, Ont.	E—.....
FQN	z	250	609	St. Pierre, Miquelon	L—Silent
KFSD	ae	1000	N	San Diego, Calif.	P—7-24
WCAC	ak	500	2	Storrs, Conn.	E—12:30-13; 19-20
WCAO	ae	500	C (1)	Baltimore, Md.	E—7-24
WICC	ae	250	2 C (1)	Bridgeport, Conn.	E—7:45-12:30; 13-1
WMT	af	1000	C (2.5)	Waterloo, Iowa	C—7-24
WREC	ak	1000	C (2.5)	Memphis, Tenn.	C—7-24

610 kilocycles 491.5 meters

CMCF	ak	250	.....	Havana, Cuba	E—12-14; 18-20
KFRC	ak	1000	C (5)	San Francisco, Calif.	P—7-24
KZRM	ak	50000	618.5	Manila, P. I.	L—6:30-7:30; 12:15-13:15; 17-22:30
WDAF	ak	1000	R (2.5)	Kansas City, Mo.	C—6:30-24
WIP	ae	1000	A	Philadelphia, Pa.	E—7-1
WJAY	ae	500	A	Cleveland, Ohio	E—6-17:15
XFX	ak	500	.....	Mexico City, D. F.	C—7-12; 16:30-22:30

620 kilocycles 483.6 meters

KGW	ak	1000	N (2.5)	Portland, Ore.	P—7-24
KTAR	ae	1000	N	Phoenix, Ariz.	M—7-23:15
WFLA	ae	1000	Na	Clearwater, Fla.	E—7:30-24
WHJB	ak	250	(.5)	Greensburg, Pa.	E—7-sunset
WLBZ	ak	500	C (1)	Bangor, Maine	E—8-24
WSUN	ae	1000	Na (1)	St. Petersburg, Fla.	E—7:30-24
WTMJ	ae	1000	N (5.)	Milwaukee, Wis.	C—6:45-0:30

630 kilocycles 475.9 meters

CFCY	ae	1000	F	Char't'w'n, P.E.I.	A—12-13:30; 18-23:30
CJGX	ak	500	F	Yorkton, Sask.	C—8:30-9:15; 10:30-12; 19:30-21:30
CKOV	ak	100	F	Kelowna, B. C.	P—8-10; 11:30-13:30; 17:30-22:30
CMBY	z	250	635	Havana, Cuba	E—.....
KFRU	ak	500	1	Columbia, Mo.	C—6-9; 16-sunset; 19-24
KGFX	ak	200	D	Pierre, S. D.	C—9:30-sunset
WGBF	ae	500	1	Evansville, Ind.	C—7-19
WMAL	ak	250	B (.5)	Washington, D. C.	E—6:45-1
WOS	ak	500	1D	Jefferson City, Mo.	C—9-16
WPRO	ak	250	A	Providence, R. I.	E—8-1:15
XEZ	z	500	..	Merida, Yuc.	C—

640 kilocycles 468.5 meters

KFI	ak	50000	N	Los Angeles, Calif.	P—6:30-24
WAIU	ae	500	.....	Columbus, Ohio	E—6:15-17:30
WOI	ae	5000	D	Ames, Iowa	C—6:45-17
XEOX	ak	250	.....	Saltillo, Coah.	C—.....

650 kilocycles 461.3 meters

WSM	ae	50000	N	Nashville, Tenn.	C—6:30-24

660 kilocycles 454.3 meters

WAAW	ak	500	D	Omaha, Neb.	C—6-18:15
WEAF	ak	50000	R	New York, N. Y.	E—6:45-1

670 kilocycles 447.5 meters

WMAQ	ck	50000	N	Chicago, Ill.	C—7-1

680 kilocycles 440.9 meters

CMAF	ak	1000	.....	Havana, Cuba	E—17:30-23
CMCQ	z	1000	.....	Havana, Cuba	E—.....
HJN	ak	500	681	Bogota, Colombia	L—12-13:30; 19-21
KFEQ	ae	2500	D	St. Joseph, Mo.	C—6-17:45
KPO	ak	50000	N	San Francisco, Calif.	P—7:30-24
RDN	z	500	.....	San Salvador, E. S.	L—.....
VAS	ak	2000	685	Glace Bay, N. S.	A—23-23:10; 0-0:10
VOWR	ck	500	681	St. John's, Nfld.	L—11-18:30
WPTF	ae	1000	DnN	Raleigh, N. C.	E—7:30-sunset

690 kilocycles 434.5 meters

CFRB	ae	10000	C	Toronto, Ont.	E—8-0:30
CJCJ	ak	100	F	Calgary, Alta.	M—.....
NAA	ak	1000	.....	Arlington, Va.	E—10:10-10:15; 11:55-12; 21:55-22
XET	ck	500	.....	Monterrey, N. L.	C—12-14; 16-22

700 kilocycles 428.3 meters

WLW	ak	500000	N	Cincinnati, Ohio	E—6:30-3

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710 kilocycles 422.3 meters

KMPC	ae	500	Dn	Beverly Hills, Calif.	P—6:45-0:30
KPCB	ae	250	.....	Seattle, Wash.	P—5:30-sunset; 22-4
TIFB	z	30	714	San Jose, C. R.	C—6-10
WOR	ak	5000	.....	Newark, N. J.	E—6:45-0:30
XEN	ak	1000	711	Mexico City, D. F.	C—9-12; 13-16; 17-24

720 kilocycles 416.4 meters

CMK	ae	3150	725	Havana, Cuba	E—11-13; 19-24
KZEG	ak	1000	.....	Manila, P. I.	L—7:30-12:15; 13:15-17
WGN	ck	50000	.....	Chicago, Ill.	C—7-1:30

KCYS.
800
DIAL

730 kilocycles 410.7 meters

CFPL	ak	100	F	London, Ont.	E—8:15-10:30; 12-13:30; 17-23:30
CJCA	ah	500	F	Edmonton, Alta.	M—7:30-14; 15:30-23
CKAC	ak	5000	C	Montreal, Que.	E—7:30-1
XEBC	ak	5000	.....	Agua Caliente, L. C.	P—.....

740 kilocycles 405.2 meters

KMMJ	ae	1000	D	Clay Center, Neb.	C—5-18
KTRB	ak	250	D	Modesto, Calif.	P—.....
WHEB	ak	250	D	Portsmouth, N. H.	E—8-13:30; 15:15-18
WSB	ah	50000	N	Atlanta, Ga.	C—6:55-24

750 kilocycles 399.8 meters

CMCW	dk	150	755	Havana, Cuba	E—12-18; 1-3
KGU	aj	2500	N	Honolulu, T. H.	L—6:30-22:30
WJR	ak	10000	B	Detroit, Mich.	E—6-24
XEAM	z	50	.....	Nuevo Laredo, Tams.	C—.....

760 kilocycles 394.5 meters

KXA	ae	250	(.5)	Seattle, Wash.	P—.....
WBAL	ae	10000	BSy	Baltimore, Md.	E—21-24
WEW	ae	1000	D	St. Louis, Mo.	C—8-17
WJZ	ck	50000	BSy	New York, N. Y.	E—8-1

770 kilocycles 389.4 meters

CMBS	ak	150	775	Havana, Cuba	E—10-12; 15:30-18
KFAB	ae	5000	CSy	Lincoln, Neb.	C—6-17:45; 20:30-21:30; 22-24
WBBM	ae	25000	CSy	Chicago, Ill.	C—6:50-2:15

780 kilocycles 384.4 meters

CHWK	ak	100	F	Chilliwack, B. C.	P—12-13:30; 18-22:30
CKSO	z	1000	F	Sudbury, Ont.	E—.....
KELW	ae	500	2	Burbank, Calif.	P—10-13; 17-20; 4-6
KFDY	ae	1000	D	Brookings, S. D.	C—12:30-14
KFQD	ck	250	.....	Anchorage, Alaska	L—18-24
KGHL	ak	1000	N (2.5)	Billings, Mont.	M—8-23
KTM	ak	500	2 (1)	Los Angeles, Calif.	P—6-10; 13-17; 20-4
WEAN	ae	500	C (.25)	Providence, R. I.	E—7:30-1
WMC	aj	1000	N (2.5)	Memphis, Tenn.	C—7-24
WTAR	ae	500	N (1)	Norfolk, Va.	E—7-24
XEYZ	z	10000	.....	Mexico City, D. F.	C—10-23

790 kilocycles 379.5 meters

CMJK	ak	150	.....	Camaguey, Cuba	E—11:30-12:30; 17-23
KGO	ak	7500	N	San Francisco, Calif.	P—7-24
WGY	ak	50000	R	Schenectady, N. Y.	E—6:45-1

800 kilocycles 374.8 meters

TIGP	z	75	.....	San Jose, C. R.	C—.....
WBAP	ak	50000	Na	Fort Worth, Tex.	C—8:30-10:30; 12:30-15; 17:30-18:30; 22-24
WFAA	ak	50000	Na	Dallas, Tex.	C—6:45-8:30; 10:30-12:30; 15-17:30; 18:30-22
WTBO	ae	250	D	Cumberland, Md.	E—6-19:15

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810 kilocycles 370.2 meters

WCCO	ae	50000	C	Minneapolis, Minn.	C—7-24
WNYC	ak	1000	N	New York, N. Y.	E—10-19:30
XFC	z	350	.....	Aguascalientes. Ags.	C—.....

820 kilocycles 365.6 meters

WHAS	aj	50000	C	Louisville, Ky.	C—7-24
XEP	z	500	.....	Mexico City, D. F.	C—.....
XETW	dk	500	.....	Mexico City, D. F.	C—12-24

830 kilocycles 361.2 meters

CMC	ae	500	835	Havana, Cuba	E—10:30-11:30; 20-23
KOA	ak	50000	N	Denver, Colo.	M—7-24
TIVL	z	30	835	San Jose, C. R.	A—10-11; 15-16
WEEU	ak	1000	D	Reading, Pa.	E—8-17:30
WHDH	ae	1000	Dn A	Boston, Mass.	E—7-sunset in Denver
WRUF	ae	5000	Dn	Gainesville, Fla.	E—8-19

840 kilocycles 356.9 meters

CFQC	ak	1000	F	Saskatoon, Sask.	M—8-13:30; 17:30-23
CMQ	z	5000	.....	Havana, Cuba	E—6:55-1
CRCT	ak	5000	F	Toronto, Ont.	E—6:45-24
VOGY	ak	400	.....	St. John's, Nfld.	L—10-11:30; 13-14:30; 18-21
XEXX	z	500	845	Mexico City, D. F.	C—10-23

850 kilocycles 352.7 meters

KIEV	aj	250	D	Glendale, Calif.	P—6-17
WWL	ae	10000	.....	New Orleans, La.	C—7-24
WWPA	z	250	DP	Clarion, Pa.	E—.....

860 kilocycles 348.6 meters

CMCX	z	150	865	Havana, Cuba	E—.....
WABC	ae	50000	C	New York, N. Y.	E—7:30-1:30
WHB	ae	500	D	Kansas City, Mo.	C—6-17
XEMO	ak	2500	865	Tijuana, B. C.	P—.....

870 kilocycles 344.6 meters

WENR	ak	50000	Na	Chicago, Ill.	C—10:15-11:45; 15:30-19
WLS	ae	50000	Na	Chicago, Ill.	C—6-10:15; 11:45-15:30; 19-20:30

880 kilocycles 340.7 meters

CFJC	ak	100	F	Kamloops, B. C.	P—7:30-10:30; 12-14; 18-21
CRCO	ak	1000	F	Ottawa, Ont.	E—8-9; 12-14; 17:45-24
KFKA	ak	500	2 (1)	Greeley, Colo.	M—6-7:30; 9-14:30; 16:30-18; 21:30-24
KLX	ae	1000	.....	Oakland, Calif.	P—8-23
KPOF	ak	500	2	Denver, Colo.	M—7:30-9; 14:30-16:30; 19:30-21
WCOC	ae	500	(1)	Meridian, Miss.	C—7:30-14; 17-22:30
WGBI	ae	500	1	Scranton, Pa.	E—9:30-12:30; 13:30-16:30; 17:30-22:30
WPHR	z	500	.....	Petersburg, Va.	E—8-17; 18-21
WQAN	ae	250	1	Scranton, Pa.	E—12:30-13:30; 16:30-17:30
WSUI	ae	500	(1)	Iowa City, Iowa	C—9-10; 11-12:30; 14-16; 18-22

890 kilocycles 336.9 meters

CJIC	z	100	D	S. Ste. Marie, Ont.	E—8:30-9:30; 11-13:30; 16:30-18
KARK	ak	250	(.5)	Little Rock, Ark.	C—7-22
KFNF	ak	500	2 (1)	Shenandoah, Iowa	C—5:30-8; 11-16; 18-21
KUSD	ae	500	2	Vermillion, S. D.	C—16-17; 21-22
WBAA	ak	1000	D	W. Lafayette, Ind.	C—11-12; 12:30-14; 16-17
WGST	aeh	250	C (1)	Atlanta, Ga.	C—7-24
WILL	ak	250	2 (1)	Urbana, Ill.	C—8-11; 17-18
WJAR	ae	500	R	Providence, R. I.	E—8-1
WMMN	ae	250	(.5)	Fairmont, W. Va.	E—9-21:30
XEW	ak	50000	.....	Mexico City, D. F.	C—.....

900 kilocycles 333.1 meters

CMX	ae	1000	905	Havana, Cuba	E—12-14; 20-23
KGA	ak	1000	N (2.5)	Spokane, Wash.	P—6-24

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KGBU	ak	500	.....	Ketchikan, Alaska	L—.....
KHJ	ae	1000	C (5)	Los Angeles, Calif.	P—7-1
KSEI	ck	250	(.5)	Pocatello, Idaho	M—7:3-23
WBEN	ae	1000	R	Buffalo, N. Y.	E—6:45-24
WJAX	aeh	1000	N	Jacksonville, Fla.	E—7-1
WKY	ae	1000	N	Oklahoma City, Ok.	C—6:45-24
WLBL	ak	2500	D	Stevens Point, Wis.	C—8-16
WMFI	z	500	DP	New Haven, Conn.	E—

910 kilocycles 329.6 meters

CJAT	ak	250	F	Trail, B. C.	P—8-22:30
CMHW	z	100	.....	Cienfuegos, Cuba	E—11-13; 18:30-21:30
CRCM	ak	5000	F	Montreal, Que.	E—.....
TICR	z	75	911	San Jose, C. R.	C—16:30-22
XENT	ck	60000	.....	Nuevo Laredo, Tams.	C—18-1

920 kilocycles 325.9 meters

HHK	ae	1000	.....	Port-au-Prince, Haiti	E—Silent
KFEL	ak	500	2	Denver, Colo.	M—6-8:30; 10-12:30; 15-16:30; 18-19:30
KOMO	ak	1000	N	Seattle, Wash.	P—7-24
KPRC	ae	1000	N (5)	Houston, Texas	C—6:30-24
KVOD	ak	500	2	Denver, Colo.	M—8:30-10; 12:30-15; 16:30-18; 19:30-21; 0-1
WAAF	ak	500	D	Chicago, Ill.	C—6-Sunset
WBSO	ae	500	D	Babson Park, Mass.	E—8:30-16:30
WPEN	ak	250	(.5) 1	Philadelphia, Pa.	E—7:30-22
WRAX	ak	250	1 (.5)	Philadelphia, Pa.	E—7:30-22
WSPA	ae	1000	D	Spartanburg, S. C.	E—5:30-22
WWJ	ak	1000	R	Detroit, Mich.	E—7-24
XEAA	z	200	.....	Mexicali, B. C.	P—12-14; 18-20

930 kilocycles 322.4 meters

CFAC	ak	100	F	Calgary, Alta.	M—7:30-22:30
CFCH	ak	100	F	North Bay, Ont.	E—12-13:30; 17:30-23:30
CFLC	ae	100	.....	Prescott, Ont.	E—8-10; 12-14; 17-19:30
CHNS	ae	1000	F	Halifax, N. S.	A—10:30-13:30; 18-24
CKPC	ae	100	F	Brantford, Ont.	E—7-24
CKPR	ak	50	F	Fort William, Ont.	E—.....
CMJF	z	200	.....	Camaguey, Cuba	E—.....
CMW	ak	1400	.....	Havana, Cuba	E—
KGBZ	ak	1000	2 (2.5)	York, Neb.	C—5-6; 7:30-9; 11-12:30; 14-15:30; 17-18:30; 20:30-22
KMA	ak	1000	2 (2.5)	Shenandoah, Iowa	C—6-7:30; 9-11; 12:30-14; 15:30-17
KROW	ak	500	(1)	Oakland, Calif.	P—7-1
WBRC	ak	1000	C	Birmingham, Ala.	C—7-23
WDBJ	ae	1000	C	Roanoke, Va.	E—8-24

940 kilocycles 319.0 meters

CMKM	z	100	.....	Manzanillo, Cuba	E—.....
KOIN	ak	1000	C (2.5)	Portland, Ore.	P—6:30-24
VOAS	ak	100	.....	St. John's, Nfld.	L—11-12:30; 16-17:30
WAAT	ae	500	D	Jersey City, N. J.	E—6:30-18
WAVE	ak	1000	N	Louisville, Ky.	C—7-24
WCSH	ae	1000	R (2.5)	Portland, Maine	E—8-24
WDAY	ae	1000	N (2.5)	Fargo, N. D.	C—7-24
WHA	ak	2500	D	Madison, Wis.	C—8-Sunset
XEFO	ak	5000	.....	Mexico City, D. F.	C—11-15; 18-24

950 kilocycles 315.6 meters

CMCD	ah	500	955	Havana, Cuba	E—12-23:30
CMHD	dk	250	.....	Caibarien, Cuba	E—20-21
CRCS	ak	100	F	Chicoutimi, Que.	E—18; 15-23
KFWB	ak	1000	(2.5)	Hollywood, Calif.	P—7-23:30
KMBC	ae	1000	C (2.5)	Kansas City, Mo.	C—6:25-24
VONF	ak	5000	.....	St. John's, Nfld.	L—12-14; 18-21
WRC	ae	500	R (1)	Washington, D. C.	E—6:30-1

960 kilocycles 312.3 meters

CKY	ak	15000	F	Winnipeg, Man.	C—8:30-14; 16-24
CMJL	z	50	.....	Camaguey, Cuba	E—.....
XEAW	ak	10000	.....	Reynosa, Tams.	C—17-1
YV1RC	ak	5000	.....	Caracas, Venz.	L—11:30-14; 17:15-22

970 kilocycles 309.1 meters

CMGF	ak	100	971.5	Matanzas, Cuba	E—15-17; 20-22:30

KCYS.
970
DIAL

KJR	z	5000	N	Seattle, Wash.	P—7:30-24
WCFL	ae	1500	B	Chicago, Ill.	C—7-24
WIBG	ak	100	D	Glenside, Pa.	E—6-Sunset
XES	dk	250	.....	Tampico, Tams.	C—9:30-14:30; 17-22

980 kilocycles 303.9 meters

KDKA	bk	50000	B	Pittsburgh, Pa.	E—7-1

990 kilocycles 302.8 meters

WBZ	ak	50000	BSy	Boston, Mass.	E—7-1
WBZA	ak	1000	BSy	Springfield, Mass.	E—7-1
XEAF	z	250	.....	Nogales, Son.	M—.....
XEK	ak	100	.....	Mexico City, D. F.	C—11-16; 18-2

1000 kilocycles 299.8 meters

CMBZ	ak	100	1005	Havana, Cuba	E—18-24
KFVD	ak	250	Dn	Los Angeles, Calif.	P—6:30-Sunset; 22-24
WHO	ak	50000	R	Des Moines, Iowa	C—7-24
WORK	ak	1000	.....	York, Pa.	E—8-17:30

1010 kilocycles 296.9 meters

CHML	aei	50	F	Hamilton, Ont.	E—8-13:30; 16:30-23
CHWC	ak	500	3F	Regina, Sask.	M—7-9; 10-11; 12-13; 15:30-23
CKCD	ak	100	.....	Vancouver, B. C.	P—7:30-23:30
CKCK	ak	500	3F	Regina, Sask.	M—9-10; 11-12; 13-15:30
CKCO	z	100	.....	Ottawa, Ont.	E—6-23
CKIC	ak	50	.....	Wolfville, N. S.	A—12-13; 18-19
CKWX	ak	100	.....	Vancouver, B. C.	P—7-20:30; 21-1
CMJO	ak	50	.....	Ciego de Avila, Cuba	E—9-13; 18-22
KGGF	ak	1000	2	Coffeyville, Kans.	C—7-14; 17-20:15; 21:15-22:30
KQW	ae	1000	.....	San Jose, Calif.	P—6:30-22
TIGA	z	30	1014	Cartago, C. R.	C—.....
WHN	ae	1000	.....	New York, N. Y.	E—7:30-1
WNAD	ae	500	2 (1)	Norman, Okla.	C—14-16; 20:15-21:15
WNOX	ak	1000	C (2)	Knoxville, Tenn.	C—6:45-24
XEU	ak	250	.....	Veracruz, Ver.	C—7-9; 10-14; 17-23

1020 kilocycles 293.9 meters

KYW	ak	10000	R	Philadelphia, Pa.	E—6:45-1
XEJ	ak	1250	.....	Juarez, Chih.	C—10-14; 17-23:30

1030 kilocycles 291.1 meters

CFCN	ak	10000	F	Calgary, Alta.	M—.....
CKLW	ae	5000	C	Windsor, Ont.	E—6:45-1
CMBC	de	150	1035	Havana, Cuba	E—.....
CMHI	ak	150	1037	Santa Clara, Cuba	E—11-12; 20-21
CMKC	z	150	1034	Santiago, Cuba	E—.....
XEB	ak	10000	.....	Mexico City, D. F.	C—9-24

1040 kilocycles 288.3 meters

CMGH	ak	15	.....	Matanzas, Cuba	E—14-15; 17-18; 19:30-20:30
KRLD	ae	10000	C	Dallas, Texas	C—6:30-24
KWJJ	ak	500	.....	Portland, Ore.	P—6-Sunset; 21-3:15
WKAR	ak	1000	D	East Lansing, Mich.	E—12-12:30; 14-15
WTIC	ak	50000	R	Hartford, Conn.	E—7-24

1050 kilocycles 285.5 meters

CFCO	ak	100	F	Chatham, Ont.	E—7:30-9; 11-13:30; 17-23
CMJG	z	50	.....	Camaguey, Cuba	E—.....
CRCK	z	1000	F	Quebec, Que.	E—.....
KFBI	ak	5000	Dn	Abilene, Kans.	C—5-19
KNX	ak	50000	.....	Hollywood, Calif.	P—7-23:30

1060 kilocycles 282.8 meters

CMCB	ak	150	.....	Havana, Cuba	E—13-16; 20-24
KTHS	ae	10000	N	Hot Springs, Ark.	C—7-24
WBAL	ae	10000	B	Baltimore, Md.	E—7-21
WJAG	ak	1000	D	Norfolk, Neb.	C—7-Sunset
XEA	ak	125	.....	Guadalajara, Jal.	C—8:30-9; 18-23

1070 kilocycles 280.2 meters

KJBS	ak	100	Dn	San Francisco, Calif.	P—0-Sunset
WCAZ	dk	100	D	Carthage, Ill.	C—9:30-15:30
WDZ	ak	100	D	Tuscola, Ill.	C—7:30-15:30
WTAM	ck	50000	R	Cleveland, Ohio	E—6:30-1

1080 kilocycles 277.6 meters

WBT	ae	50000	C	Charlotte, N. C.	E—7:30-24
WCBD	ak	5000	1Dny	Waukegan, Ill.	C—7:30-10:30; 13:30-14:30; 15:30-24
WMBI	ae	5000	1Dn	Chicago, Ill.	C—7-7:30; 10:30-13:30; 14:30-15:30
XEMA	z	50	.....	Tampico, Tams.	C—.....

1090 kilocycles 275.1 meters

CMGI	z	30	1094	Colon, Cuba	E—.....
KMOX	ak	50000	C	St. Louis, Mo.	C—5:30-24
WESG	ak	1000	.....	Elmira, N. Y.	E—7:30-18:30

1100 kilocycles 272.6 meters

CMCY	ak	500	.....	Havana, Cuba	E—.....
CMHA	z	50	1103	Sagua la Grande, C.	E—.....
CRCV	ak	1000	F	Vancouver, B. C.	P—11-15:15; 17:30-23
KGDM	ak	250	D (1)	Stockton, Calif.	P—6-Sunset; 0-6
KWKH	ae	10000	C	Shreveport, La.	C—.....
TIRCA	ak	500	.....	San Jose, C. R.	C—.....
WLWL	ae	5000	1	New York, N. Y.	E—18-20
WPG	ak	5000	1C	Atlantic City, N. J.	E—9-18; 20-1
XEFG	ak	250	1105	Mexico City, D. F.	C—.....

1110 kilocycles 270.1 meters

KSOO	ak	1000	Dn (2.5)	Sioux Falls, S. D.	C—6:30-18:30
WRVA	ae	5000	N	Richmond, Va.	E—7-24

1120 kilocycles 267.7 meters

CHLP	z	100	.....	Montreal, Que.	E—9-14; 17-24
CHSJ	ae	100	F	St. John, N. B.	A—.....
CKOC	ae	500	F (1)	Hamilton, Ont.	E—7:45-13:30; 16-24
CKX	ak	500	F	Brandon, Man.	C—.....
CMCG	z	150	1125	Havana, Cuba	E—18-24
CMHJ	ae	40	1125	Cienfuegos, Cuba	E—11-13; 17-21
KFIO	ak	100	D	Spokane, Wash.	P—6-17
KFSG	ag	500	a	Los Angeles, Calif.	P—6:30-7:15; 19:30-24
KRKD	ae	500	a (2.5)	Los Angeles, Calif.	P—7:45-19:30; 22-24
KRSC	ck	100	D	Seattle, Wash.	P—6-Sunset
WDEL	ak	250	(.5)	Wilmington, Del.	E—9-22
WISN	ak	250	(1)	Milwaukee, Wis.	C—.....
WMFH	z	500	DP	Boston, Mass.	E—.....
WTAW	ae	500	.....	College Station, Tex.	C—11:50-12:30

1130 kilocycles 265.3 meters

KSL	ae	50000	C	Salt Lake City, Utah	M—6:30-24
WJJD	ak	20000	Dn A	Chicago, Ill.	C—6-18:45
WOV	ag	1000	D	New York, N. Y.	E—8-18

1140 kilocycles 263.0 meters

KVOO	ak	25000	1N	Tulsa, Okla.	C—6:30-21
WAPI	ae	5000	1N	Birmingham, Ala.	C—6-sunset; 21-24

1150 kilocycles 260.7 meters

CMBG	z	225	.....	Havana, Cuba	E—.....
CMJH	ak	50	.....	Ciego de Avila, Cuba	E—8-8:30; 10-15; 17:30-22:30
WHAM	ae	50000	B	Rochester, N. Y.	E—8-1
XEH	ak	250	.....	Monterrey, N. L.	C—9-20
XEWZ	z	100	.....	Mexico City, D. F.	C—.....

1160 kilocycles 258.5 meters

WOWO	ae	10000	1C	Fort Wayne, Ind.	C—7-18:45; 19:30-23
WWVA	ak	5000	1C	Wheeling, W. Va.	E—6:30-20:30
XED	ck	500	...	Guadalajara, Jal.	C—8-9; 12-15:30; 19-23
XEFL	z	5000	P	Tijuana, B. C.	P—.....

KCYS.
1160
DIAL

INDEX BY FREQUENCIES AND DIAL NUMBERS
With Wednesday's Time on the Air

1170 kilocycles 256.3 meters

CMJE	z	50	.....	Camaguey, Cuba	E—.....
COA	z	500	1175	Havana, Cuba	E—.....
WCAU	ae	50000	C	Philadelphia, Pa.	E—8-1

1180 kilocycles 254.1 meters

KEX	ak	5000	2N	Portland, Ore.	P—6:30-17:30; 20-24
KOB	ae	10000	2	Albuquerque, N. M.	M—11-21
VE9EK	ak	10	1185	Montmagny, Que.	E—2-3
WDGY	ak	1000	D (2.5)	Minneapolis, Minn.	C—6:30-20:15
WINS	ae	1000	.....	New York, N. Y.	E—7-19:30
WMAZ	ak	1000	.....	Macon, Ga.	E—7-19
XEFA	z	500	.....	Mexico City, D. F.	C—.....

1190 kilocycles 252.0 meters

HIJ	z	15	1195	Santo Domingo, D. R.	E—.....
WATR	ak	100	D	Waterbury, Conn.	E—9-17:15
WOAI	ak	50000	N	San Antonio, Texas.	C—6:55-13:45; 15-23:30
WSAZ	ak	1000	.....	Huntington, W. Va.	E—7-18:45

1200 kilocycles 249.9 meters

CHAB	ak	100	F	Moose Jaw, Sask.	M—7:30-22
CKTB	ak	100	F	St. Catharines, Ont.	E—8-13:30; 16-23:30
CMCJ	ak	400	.....	Havana, Cuba	E—.....
KADA	ak	100	D	Ada, Okla.	C—.....
KBTM	ak	100	D	Jonesboro, Ark.	C—6-17
KFJB	ak	100	(.25)	Marshalltown, Iowa	C—6-9; 12-15; 18-21
KFXD	ae	100	.....	Nampa, Idaho	M—7-21
KFXJ	ak	100	(.25)	Grand Junction, Col.	M—9-21
KGDE	ak	100	(.25)	Fergus Falls, Minn.	C—7-21
KGEK	ak	100	.....	Sterling, Colo.	M—11:30-13:30
KGFJ	ae	100	.....	Los Angeles, Calif.	P—24 hours
KGHI	ak	100	(.25)	Little Rock, Ark.	C—8-13; 15-22
KGVO	ak	100	.....	Missoula, Mont.	M—8-22
KMLB	ak	100	.....	Monroe, La.	C—.....
KOOS	ae	100	(.25)	Marshfield, Ore.	P—8-19
KSUN	ck	100	D	Lowell, Ariz.	M—Sunrise-Sunset
KVOS	ak	100	.....	Bellingham, Wash	P—7:30-22:30
KWG	ak	100	C	Stockton, Calif.	P—7-24
WABI	ak	100	.....	Bangor, Maine	E—9-14; 18-22
WBBZ	ak	100	.....	Ponca City, Okla.	C—6:30-21:45
WBHS	z	100	.....	Huntsville, Ala.	C—.....
WBNO	ck	100	1	New Orleans, La.	C—12-17 20-23
WCAT	ak	100	D	Rapid City, S. D.	M—12:30-13:30
WCAX	ak	100	.....	Burlington, Vt.	E—12-13; 17-19
WCLO	ak	100	.....	Janesville, Wis.	C—7-20
WFAM	ak	100	8	South Bend, Ind.	C—6:30-24
WFBE	ak	100	(.25) A	Cincinnati, Ohio	E—7-23
WHBC	ak	100	2	Canton, Ohio	E—7-9; 12-15; 18-21
WHBY	ak	100	(.25)	Green Bay, Wis.	C—7:30-23
WIBX	ak	100	(.3) C	Utica, N. Y.	E—8-24
WIL	ak	100	(.25) A	St. Louis, Mo.	C—7-23
WJBC	ak	100	6	Bloomington, Ill.	C—9-12:30; 15-19:30
WJBL	ae	100	6	Decatur, Ill.	C—6:30-9; 12:30-15; 19:30-22
WJBW	ak	100	1	New Orleans, La.	C—8-12; 17-20
WKBO	ak	100	3 (.25)	Harrisburg, Pa.	E—8-11; 15-24
WKJC	ae	100	3 (.25)	Lancaster, Pa.	E—11-15; 18-20
WLVA	ak	100	(.25)	Lynchburg, Va.	E—7-14; 17-22
WMPC	ak	100	.....	Lapeer, Mich.	E—10-14; 15:30-18
WNBO	ae	100	2	Washington, Pa.	E—9-12; 15-18; 21-24
WRBL	ak	100	.....	Columbus, Ga.	C—7-21
WWAE	ae	100	8	Hammond, Ind.	C—7-8:30; 11-13; 16-24
YV3RC	ak	1000	.....	Caracas, Venz.	L—11-14; 17-22:30
10-AK	ak	15	.....	Stratford, Ont.	E—12-13; 17:30-19
10-BP	ak	25	.....	Wingham, Ont.	E—12-13; 19:15-21
10-BU	ak	50	.....	Canora, Sask.	C—.....

1210 kilocycles 247.8 meters

CHNC	ak	100	F	New Carlisle, Que.	A—12:30-13:30; 18-24
CKBI	ak	100	F	Prince Albert, Sask.	M—.....
CKCH	ak	100	F	Hull, Que.	E—11:30-13:15; 17:30-23
CKMC	ak	50	.....	Cobalt, Ont.	E—.....
CMJI	ak	150	.....	Ciego de Avila, Cuba	E—.....

KASA	ck	100	.....	Elk City, Okla.	C—6-8; 9-13:30; 14:30-20
KDLR	ak	100	.....	Devils Lake, N. D.	C—8-14:15; 18-20
KFJI	ak	100	.....	Klamath Falls, Ore.	P—8:30-21
KFOR	ak	100	(.25)C	Lincoln, Neb.	C—7-22:30
KFPW	ak	100	.....	Fort Smith, Ark.	C—6-14; 17:30-21:30
KFVS	ae	100	6 (.25)	Cape Girardeau, Mo.	C—9-12; 16-19:30; 21-24
KFXM	ak	100	9	San Bernardino, Cal.	P—6-19; 21:30-24
KGY	ak	100	.....	Olympia, Wash.	P—7-23
KIEM	ak	100	.....	Eureka, Calif.	P—7:30-22
KPPC	ak	50	9	Pasadena, Calif.	P—Silent
KWEA	z	100	.....	Shreveport, La.	C—.....
KWFV	z	100	.....	Hilo, Hawaii	L—.....
KWTN	ak	100	.....	Watertown, S. D.	C—7-21
WALR	ak	100	.....	Zanesville, Ohio	E—.....
WBAX	ae	100	1	Wilkes Barre, Pa.	E—7-12
WBBL	ak	100	7S	Richmond, Va.	E—Silent
WBRB	ak	100	3	Red Bank, N. J.	E—17-20
WCBS	ak	100	2	Springfield, Ill.	C—11:15-15; 18:45-21
WCOL	ak	100	A	Columbus, Ohio	E—8-1
WCRW	ae	100	4	Chicago, Ill.	C—11-14; 17-19
WEBQ	ae	100	6 (.25)	Harrisburg, Ill.	C—6-9; 12-16; 20:30-24
WEDC	ae	100	4	Chicago, Ill.	C—8:30-10; 15:30-17; 19-20; 22-23; 0-2
WFAS	ak	100	3	White Plains, N. Y.	E—15-17
WGBB	ae	100	3	Freeport, N. Y.	E—9-15; 20-24
WGCM	ae	100	(.25)	Gulfport, Miss.	C—9-13; 19-21
WGNY	ak	100	3	Chester, N. Y.	E—7:30-9
WHBF	ak	100	(.25) A	Rock Island, Ill.	C—7:30-23
WHBU	ak	100	(.25)	Anderson, Ind.	C—7-21
WIBU	ak	100	(.25)	Poynette, Wis.	C—7-19
WJBY	ak	100	.....	Gadsden, Ala.	C—9-21
WJEJ	ah	100	D	Hagerstown, Md.	E—7-Sunset
WJIM	z	100	(.25)	Lansing, Mich.	E—.....
WJW	ak	100	A	Akron, Ohio	E—9:30-1
WKOK	ak	100	1	Sunbury, Pa.	E—12-24
WMBG	ak	100	7C (.25)	Richmond, Va.	E—7-24
WMFG	z	100	P	Hibbing, Minn.	C—.....
WOCL	ak	50	.....	Jamestown, N. Y.	E—10:30-22:30
WOMT	ae	100	.....	Manitowoc, Wis.	C—7-21
WPAX	ae	100	D	Thomasville, Ga.	E—8-21
WSBC	ae	100	4	Chicago, Ill.	C—6-8:30; 10-11; 14-15:30; 20-22; 23-24
WSIX	ak	100	.....	Springfield, Tenn.	C—6-14:30; 17-20:30
WSOC	ak	100	N (.25)	Charlotte, N. C.	E—7-24
WTAX	ak	100	2	Springfield, Ill.	C—.....
XEE	z	50	.....	Durango, Dgo.	C—.....
XEFV	ak	100	.....	Juarez, Chih.	M—9-15; 17-22
XETH	ak	100	.....	Puebla, Pue.	C—8:30-11; 13-15; 19-24

1220 kilocycles 245.8 meters

CMHK	z	50	1225	Cruces, Cuba	E—10-11:30
KFKU	ae	1000	a	Lawrence, Kas.	C—14:30-15; 18-18:30
KTW	ak	1000	S2	Seattle, Wash.	P—Silent
KWSC	ae	1000	2 (2)	Pullman, Wash.	P—6:45-8; 10:30-21:30
WCAD	ak	500	D	Canton, N. Y.	E—12:30-13:30; 15-16
WCAE	ak	1000	R	Pittsburgh, Pa.	E—6:45-1
WDAE	ae	1000	C (2.5)	Tampa, Fla.	E—8-24
WREN	ak	1000	Ba	Lawrence, Kas.	C—7-24

1230 kilocycles 243.8 meters

CJOC	ak	100	F	Lethbridge, Alta.	M—8-14; 16:30-22
CMCA	z	150	2	Havana, Cuba	E—12-14; 17-23
CMOK	z	25	.....	Havana, Cuba	E—.....
KGBX	ak	500	.....	Springfield, Mo.	C—17:45-22
KGGM	ak	250	(.5)	Albuquerque, N. M.	M—6-12; 16-20
KYA	ae	1000	N	San Francisco, Calif.	P—7-24
WFBM	ae	1000	C	Indianapolis, Ind.	C—6:30-24
WNAC	ak	1000	C (2.5)	Boston, Mass.	E—6:30-1
XEFJ	ak	100	.....	Monterrey, N. L.	C—11-14; 18-22

1240 kilocycles 241.8 meters

CJCB	ak	1000	F	Sydney, N. S.	A—10-13:30; 18-23:30
CMHB	z	30	1245	San Spiritus, Cuba	E—.....
KGCU	ak	250	1	Mandan, N. D.	M—12-17; 18:45-21
KLPM	ak	250	1	Minot, N. D.	C—7-13; 18-19:45
KTAT	ak	1000	C	Fort Worth, Texas	C—7-24
KTFI	ae	1000	(1.5)	Twin Falls, Idaho	M—5:45-23:15
WKAQ	ae	1000	.....	San Juan, P. R.	E—11:15-12:15; 130-21:4

KCYS.
1240
DIAL

WXYZ	ak	1000	.....	Detroit, Mich.	E—7-24
XEAI	z	100	.....	Mexico City, D. F.	C—.....
XEKL	z	500	.....	Leon, Guan.	C—10:30-16; 17-23

1250 kilocycles 239.9 meters

CMCU	ak	150	1255	Havana, Cuba	E—12-18
KFOX	ae	1000	.....	Long Beach, Calif.	P—6-24
WCAL	ah	1000	2 (2.5)	Northfield, Minn.	C—9:45-10:15; 20-22
WDSU	ak	1000	C	New Orleans, La.	C—7-24
WHBI	ak	1000	1 (2.5)	Newark, N. J.	E—14-17; 20-22
WLB	ak	1000	2	Minneapolis, Minn.	C—13-13:30
WNEW	ae	1000	1 (2.5)	Newark, N. J.	E—7-4
WTCN	ak	1000	2 (5)	Minneapolis, Minn.	C—6:15-9:45; 22:35-24

1260 kilocycles 238.0 meters

CFRN	ak	100	.....	Edmonton, Alta.	M—7:30-13:30; 15-16; 17:30-20
KOIL	ak	1000	B (2.5)	Council Bluffs, Iowa	C—6-1
KPAC	ak	500	D	Port Arthur, Texas	C—.....
KRGV	ak	500	.....	Weslaco, Texas	C—7-21
KUOA	ak	1000	D	Fayetteville, Ark.	C—7-13; 16-19
KVOA	ak	500	.....	Tucson, Ariz	M—6-9; 12-15; 18-21
WLBW	ae	1000	C	Dayton, Ohio	E—7-1
WNBX	ak	1000	D	Springfield, Vt.	E—7:15-Sunset
WTOC	ae	1000	C	Savannah, Ga.	E—7-1

1270 kilocycles 236.1 meters

CMCP	z	150	.....	Havana, Cuba	E—.....
HIX	ak	1000	.....	Santo Domingo, D.R.	E—11:40-20:10
KGCA	ak	100	2D	Decorah, Iowa	C—8:30-9:45; 10:45-11:30; 12:30-14:30
KOL	ae	1000	C (2.5)	Seattle, Wash.	P—6:45-24
KVOR	ae	1000	C	Colorado Spgs., Colo.	M—7-23
KWLC	ak	100	2D	Decorah, Iowa	C—7:30-8:30; 9:45-10:45; 11:30-12:30; 14:30-15:30
WASH	ak	500	a	Grand Rapids, Mich.	E—7-24
WFBR	ae	500	R	Baltimore, Md.	E—7-24
WJDX	ae	1000	N (2.5)	Jackson, Miss.	C—7-23
WOOD	ak	500	a	Grand Rapids, Mich.	E—7-24
XFB	ak	1000	.....	Jalapa, Ver.	C—8-9; 13-14:30; 20-23:30

1280 kilocycles 234.2 meters

CMCO	z	150	.....	Havana, Cuba	E—.....
KFBB	ae	1000	(2.5)	Great Falls, Mont.	M—8-22
WCAM	ae	500	1	Camden, N. J.	E—11-12; 14-17
WCAP	ae	500	1	Asbury Park, N. J.	E—8:30-11; 12-13; 21-24
WDOD	ae	1000	C (2.5)	Chattanooga, Tenn.	C—7-23:30
WIBA	ae	500	N (1)	Madison, Wis.	C—7:30-24
WORC	ak	500	C	Worcester, Mass.	E—8-24
WRR	ak	500	.....	Dallas, Texas	C—7-23
WTNJ	ak	500	1 A	Trenton, N. J.	E—8-8:30; 13-14; 17-21

1290 kilocycles 232.4 meters

KDYL	ak	1000	N	Salt Lake City, Utah	M—6:30-1
KLCN	z	100	D	Blytheville, Ark.	C—10:30-16:30
WEBC	ae	1000	N (2.5)	Superior, Wis.	C—7-24
WJAS	ak	1000	C (2.5)	Pittsburgh, Pa.	E—7:30-0:30
WNBZ	z	50	D	Saranac Lake, N. Y.	E—.....
WNEL	ak	500	P	San Juan, P. R.	A—.....

1300 kilocycles 230.6 meters

CMKJ	z	20	.....	Guantanamo, Cuba	E—.....
HIZ	z	10	.....	Santo Domingo, D.R.	E—.....
KALE	ak	500	3C	Portland, Ore.	P—7-10:30; 14:30-17; 18-19
KFAC	ak	1000	.....	Los Angeles, Calif.	P—7-24
KFH	ak	1000	C2	Wichita, Kans.	C—7-24
KFJR	ag	500	3	Portland, Ore.	P—10:30-14:30; 17-18
VOAC	z	40	.....	St. John's, Nfld.	L—.....
WBBR	ae	1000	1	Brooklyn, N. Y.	E—6:30-7; 10-12; 18-20
WEVD	ak	1000	1	New York, N. Y.	E—7-9; 15-18; 20-21; 22-23; 0-1
WFAB	ae	1000	1	New York, N. Y.	E—9-10; 12-15; 21-22
WFBC	ak	1000	(1)	Greenville, S. C.	E—7:30-14:30; 17:30-22:30
WHAZ	ae	500	1	Troy, N. Y.	E—Silent
WIOD	ae	1000	N	Miami, Fla.	E—8-24

1310 kilocycles 228.9 meters

CHCK	ak	50	.....	Charlottetown, P.E.I.	A—12-13:30; 17-21

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

CJKL	z	100	.....	Kirkland Lake, Ont.	E—.....
CJLS	z	100	.....	Yarmouth, N. S.	A—.....
CKCV	ak	50	.....	Quebec, Que.	E—12-14; 18-30; 19:30
KCRJ	ak	100	D	Jerome, Ariz.	M—7:30-9:30; 12-13; 16:30-18
KFBK	ak	100	C	Sacramento, Calif.	P—8-24
KFPL	dkh	100	.....	Dublin, Texas	C—6-15; 18-21
KFPM	ae	15	.....	Greenville, Texas	C—7:45-9; 1-14:45; 18-21
KFXR	ak	100	(.25)	Oklahoma City, Ok.	C—7:30-23
KFYO	ak	100	(.25)	Lubbock, Texas	C—7-21
KGCX	ak	100	(.25)	Wolf Point, Mont.	M—7:30-9; 11:30-15; 18-19
KGEZ	aj	100	.....	Kalispell, Mont.	M—8-21
KGFW	ak	100	.....	Kearney, Neb.	C—7-13:30; 15:30-21
KIT	ak	100	(.25)	Yakima, Wash.	P—7-22
KIUJ	z	100	P	Santa Fe, N. Mex.	M—
KMED	ck	100	(.25)	Medford, Ore.	P—8-20
KRMD	ak	100	.....	Shreveport, La.	C—7-21
KTSM	ak	100	.....	El Paso, Texas	M—6:30-13; 15-22
KXRO	ak	100	.....	Aberdeen, Wash.	P—7:30-22
WAML	ak	100	.....	Laurel, Miss.	C—7-10; 11-14; 16-21:30
WBEO	ae	100	.....	Marquette, Mich.	C—9:30-13:15; 17-19
WBOW	ak	100	.....	Terre Haute, Ind.	C—7-22
WBRE	ak	100	.....	Wilkes Barre, Pa.	E—8-21:45
WCLS	ae	100	.....	Joliet, Ill.	C—Silent
WDAH	ak	100	S	El Paso, Texas	M—Silent
WEBR	ae	100	(.25) A	Buffalo, N. Y.	E—7-24
WEXL	ak	50	.....	Royal Oak, Mich.	E—8-4
WFBG	ae	100	3	Altoona, Pa.	E—10:30-16:30; 20:30-24
WFDF	am	100	.....	Flint, Mich.	E—7-24
WGH	ae	100	.....	Newport News, Va.	E—7-13
WHAT	ak	100	4	Philadelphia, Pa.	E—9-11:30; 13-16; 21-24
WJAC	ae	100	3	Johnstown, Pa.	E—9-10:30; 16:30-18:15; 21:15-22:15
WLBC	ak	50	6 (.1)	Muncie, Ind.	C—7-22
WLNH	ak	100	D	Laconia, N. H.	E—8-17
WMBO	ak	100	.....	Auburn, N. Y.	E—9-21
WMFF	z	100	PD	Plattsburg, N. Y.	E—.....
WNBH	ae	100	(.25) C	New Bedford, Mass.	E—7:45-23:20
WOL	ae	100	(.25) A	Washington, D. C.	E—7-24
WRAW	ak	100	.....	Reading, Pa.	E—7-13; 16-22
WROL	ak	100	.....	Knoxville, Tenn.	C—7-24
WSAJ	ae	100	.....	Grove City, Pa.	E—Silent
WSGN	ak	100	(.25)	Birmingham, Ala.	C—6-22
WSJS	ak	100	C	Winston-Salem, N.C.	E—7:45-24
WTEL	ah	100	4	Philadelphia, Pa.	E—7-9; 11:30-13; 16-21
WTJS	ak	100	(.25)	Jackson, Tenn.	C—7-13; 16-22
WTRC	ak	50	6 (.1)	Elkhart, Ind.	C—8-19:30
XEC	z	50	.....	Tijuana, B. C.	P—
XECW	z	10	.....	Mexico City, D. F.	C—.....
XEFC	ak	100	.....	Merida, Yuc.	C—11-12
XEFW	ak	250	.....	Tampico, Tams.	C—9-11; 12-14:30; 17-21
XETB	z	125	.....	Torreon, Coah.	C—.....
XEX	ak	125	.....	Monterrey, N. L.	C—8-21

1320 kilocycles 227.1 meters

CMCK	z	100	P	Havana, Cuba	E—.....
CMOX	z	200	1325	Havana, Cuba	E—
KGHF	ak	500	.....	Pueblo, Colo.	M—7-22
KGMB	ak	250	C	Honolulu, T. H.	L—6-22:30
KID	ae	250	(.5)	Idaho Falls, Idaho	M—6-23
KSO	ak	500	B (1)	Des Moines, Iowa	C—5:30-1
WADC	ae	1000	C (2.5)	Akron, Ohio	E—9-24
WSMB	ak	500	N	New Orleans, La.	C—7-24

KCYS.
1340
DIAL

1330 kilocycles 225.4 meters

KGB	ag	1000	C (2.5)	San Diego, Calif.	P—7-1
KMO	ak	250	.....	Tacoma, Wash.	P—6:45-23
KSCJ	aj	1000	1C (2.5)	Sioux City, Iowa	C—7:30-23
KTRH	ak	500	C (2.5)	Houston, Texas	C—6:30-24
WDRC	ae	1000	C (2.5)	Hartford, Conn.	E—8-24
WSAI	ak	1000	R (2.5)	Cincinnati, Ohio	E—7-24
WTAQ	ae	1000	1	Eau Claire, Wis.	C—7-20

1340 kilocycles 223.7 meters

KFPY	ak	1000	C	Spokane, Wash.	P—7-24
KGDY	ak	250	D	Huron, S. D.	C—.....
KGNO	ak	250	.....	Dodge City, Kans.	C—7-20
WCOA	ak	500	C	Pensacola, Fla.	C—9-22

WFEA	ae	500	C (1)	Manchester, N. H.	E—9-23
WSPD	ae	1000	C (2.5)	Toledo, Ohio	E—7-1
XFD	z	250	.....	Orizaba, Ver.	C—.....

1350 kilocycles 222.1 meters

CMBD	z	150	.....	Havana, Cuba	E—18-23
KIDO	ak	1000	(2.5)	Boise, Idaho	M—7:30-22
KWK	ak	1000	B (2.5)	St. Louis, Mo.	C—6:30-1
WAWZ	ae	250	1 (.5)	Zarephath, N. J.	E—6-9; 17-18:30
WBNX	ae	250	1	New York, N. Y.	E—6-7:30; 9-13

1360 kilocycles 220.4 meters

CMJP	ak	75	.....	Moron, Cuba	E—10-12; 20-22
CMKF	z	30	1363	Holquin, Cuba	E—.....
KGER	ak	1000	.....	Long Beach, Calif.	P—7-23
KGIR	ak	1000	N (2.5)	Butte, Mont.	M—8-23:15
WCSC	ae	500	(1)	Charleston, S. C.	E—8-15:30; 18-23
WFBL	ak	1000	C (5)	Syracuse, N. Y.	E—7-1
WGES	ae	500	1	Chicago, Ill.	C—7-12; 17-20; 23-1
WQBC	ak	500	(1)	Vicksburg, Miss.	C—.....
WSBT	ak	500	1	South Bend, Ind.	C—6:30-24

1370 kilocycles 218.8 meters

CKCW	z	100	P	Moncton, N. B.	A—.....
CMGE	z	30	1375	Cardenas, Cuba	E—.....
KCRC	ak	100	2 (.25)	Enid, Okla.	C—7-9; 11-14; 17-19:45
KERN	ak	100	.....	Bakersfield, Calif.	P—7-24
KFGQ	ak	100	.....	Boone, Iowa	C—.....
KFJM	ak	100	(.25)	Grand Forks, N. D.	C—8-20
KFJZ	ae	100	.....	Fort Worth, Texas	C—7-23
KFRO	z	100	DP	Longview, Texas	C—
KGAR	ae	100	(.25)	Tucson, Ariz.	M—7-13; 16-22
KGFG	bk	100	2	Oklahoma City, Ok.	C—9-11; 14-19; 19:45-24
KGFL	ak	100	4	Roswell, N. M.	M—6-9:30; 14-19:30
KGKL	ak	100	(.25)	San Angelo, Texas	C—8-21:30
KICA	ak	100	4	Clovis, N. M.	M—9:30-14; 19:30-21:30
KLUF	z	100	(.25)	Galveston, Texas	C—.....
KMAC	ak	100	5	San Antonio, Texas	C—7-8:30; 10-11; 12-13:30; 16-18; 19-20; 22-0:30
KONO	ak	100	5	San Antonio, Texas	C—6-7; 8:30-10; 11-12; 13:30-16; 18-19; 20-22
KRE	ak	100	(.25)	Berkeley, Calif.	P—6-24
KRKO	ak	50	1	Everett, Wash.	P—7:30-12; 16:30-20
KSLM	z	100	D	Salem, Ore.	P—.....
KUJ	ak	100	.....	Walla Walla, Wash.	P—6:30-22
KVL	ak	100	1	Seattle, Wash.	P—6-9; 12-15; 18-21
KWKC	z	100	.....	Kansas City, Mo.	C—.....
KWYO	ak	100	.....	Sheridan, Wyo.	M—7-22:30
WABY	ak	100	A	Albany, N. Y.	E—7:30-1
WAGF	ak	100	D	Dothan, Ala.	C—8-17:15
WBTM	ak	100	(.25)	Danville, Va.	E—7-14; 17-22
WCBM	ae	100	(.25) A	Baltimore, Md.	E—.....
WDAS	ae	100	(.25)	Philadelphia, Pa.	E—9-23
WGL	ak	100	C	Fort Wayne, Ind.	C—8-13; 16:45-24
WHBD	ak	100	.....	Mount Orab, Ohio	E—8-11:30; 12-21
WHBQ	ak	100	.....	Memphis, Tenn.	C—7:55-14; 16-22:30
WHDF	ak	100	(.25)	Calumet, Mich.	E—7-9; 11:30-13:30; 17:30-20:30
WIBM	ak	100	(.25)	Jackson, Mich.	E—7-24
WJTL	ae	100	.....	Atlanta, Ga.	E—.....
WLLH	ak	100	(.25)	Lowell, Mass.	E—12-15; 18-21
WMBR	ak	100	C	Jacksonville, Fla.	E—7-24
WMFD	z	100	DP	Wilmington, N. C.	E—.....
WOC	z	100	C	Davenport, Iowa	C—.....
WPFB	ak	100	.....	Hattiesburg, Miss.	C—7:30-9:30; 11-13; 18-20
WQDM	ae	100	D	St. Albans, Vt.	E—.....
WRAK	ak	100	(.25)	Williamsport, Pa.	E—7:30-20
WRDO	ae	100	.....	Augusta, Maine	E—7:30-13:30; 15-21
WRJN	ak	100	.....	Racine, Wis.	C—8:50-14:30; 16-22:30
WSVS	ak	50	D	Buffalo, N. Y.	E—8:30-10; 14-15
XEFE	z	100	.....	Nuevo Laredo, Tams.	C—.....
XEFZ	ae	100	.....	Mexico City, D. F.	C—.....
XEI	ak	125	.....	Morelia, Mich.	C—14-15:30; 21-22
XEZZ	z	100	.....	San Luis Potosi, SLP	C—9:30-15; 17-22

1380 kilocycles 217.3 meters

CMJC	z	150	1382	Camaguey, Cuba	E—.....
KOH	ak	500	C	Reno, Nev.	P—8-24

KQV	ak	500	2A	Pittsburgh, Pa.	E—7-24
WALA	ae	500	C (1)	Mobile, Ala.	C—8-23
WKBH	ae	1000	.....	LaCrosse, Wis.	C—7:30-14; 17-22
WMFE	z	250	PD	New Britain, Conn.	E—.....
WSMK	ak	200	C	Dayton, Ohio	E—7:20; 22-24

1390 kilocycles 215.7 meters

CJRC	ck	100	.....	Winnipeg, Man.	C—8-10:15; 11-14; 16-23:30
HIH	ak	15	1395 San	Ped. de Macoris, DR	E—.....
KLRA	ae	1000	C (2.5)	Little Rock, Ark.	C—6:30-23
KOY	ae	500	(1)	Phoenix, Ariz.	M—.....
WHK	ae	1000	C (2.5)	Cleveland, Ohio	E—7:30-24

1400 kilocycles 214.2 meters

CMCR	z	150	.....	Havana, Cuba	E—12-13; 16-18; 20-21
KLO	ae	500	C	Ogden, Utah	M—7-24
KTUL	ak	250	(.5) C	Tulsa, Okla.	C—6:30-24
TGX	ak	150	.....	Guatemala City, Gt.	C—.....
WARD	ak	500	2	Brooklyn, N. Y.	E—9-11:15; 19-21
WBBC	ae	500	2 (1)	Brooklyn, N. Y.	E—13:30-16; 21-22
WKBF	ak	500	N (1)	Indianapolis, Ind.	C—6:30-24
WLTH	ak	500	2	Brooklyn, N. Y.	E—11:30-13:30; 18-19:30
WVFW	ak	500	2	Brooklyn, N. Y.	E—11:15-13:30; 18-19:30

1410 kilocycles 212.6 meters

CKFC	ak	50	5	Vancouver, B. C.	P—15-16:30
CKMO	ag	100	5	Vancouver, B. C.	P—.....
KGRS	ae	1000	1 (2.5)	Amarillo, Texas	C—6-8; 10-12:30; 15-16:30; 18-19:30; 21-22
WAAB	ak	500	C	Boston, Mass.	E—8-23
WBCM	ae	500	.....	Bay City, Mich.	E—8-24
WDAG	ae	1000	1 (2.5)	Amarillo, Texas	C—8-10; 12:30-15; 16:30-18; 19:30-24; 22-23
WHBL	ae	500	4	Sheboygan, Wis.	C—6-10; 13-16:30; 18-19:30
WHIS	ak	250	2	Bluefield, W. Va.	E—7-9; 12-15; 18-20
WRBX	ae	250	2 (.5)	Roanoke, Va.	E—9-12; 15-18; 20-23
WROK	ak	500	4	Rockford, Ill.	C—10-13; 16:30-18; 19:30-22:30
WSFA	ak	500	C (1)	Montgomery, Ala.	C—6:30-22:30

1420 kilocycles 211.1 meters

CKGB	ak	100	.....	Timmins, Ont.	E—12-13:30; 17-22:30
CKNC	ak	100	F	Toronto, Ont.	E—8-23:15
CMBX	ak	150	1425	Havana, Cuba	E—.....
KABC	ak	100	.....	San Antonio, Texas	C—7-22:30
KABR	z	100	DP	Aberdeen, S. Dak.	C—.....
KBPS	aj	100	4	Portland, Ore.	P—Silent
KCMC	ak	100	.....	Texarkana, Ark.	C—7-14; 16-21
KFIZ	ak	100	.....	Fond du Lac, Wis.	C—10-13; 16-22
KGFF	ak	100	.....	Shawnee, Okla.	C—7:30-15; 17-21
KGGC	ak	100	.....	San Francisco, Cal.	P—9-13; 16-23
KGIW	ak	100	1	Alamosa, Colo.	M—10-13; 17-19; 22-23
KGIX	ak	100	P	Las Vegas, Nev.	M—.....
KIDW	z	100	1	Lamar, Colo.	M—8-10; 13-17; 19-22
KORE	ae	100	.....	Eugene, Ore.	P—7:45-21
KUMA	ak	100	.....	Yuma, Ariz.	M—7-9; 11-13; 18-22
KXL	ae	100	4 (.25)	Portland, Ore.	P—8-24
WACO	ak	100	C	Waco, Texas	C—8-17
WAGM	ae	100	.....	Presque Isle, Maine	E—11-13; 16-19
WAZL	ak	100	2	Hazleton, Pa.	E—10:30-14:30; 16-22
WEED	ak	100	3	Rocky Mount, N. C.	E—7-21
WEHC	ae	100	3 (.25)	Charlottesville, Va.	E—7-13:05; 16-1
WEHS	ak	100	a	Cicero, Ill.	C—16-18
WELL	ak	50	.....	Battle Creek, Mich.	E—7:30-23
WGPC	ak	100	.....	Albany, Ga.	C—7-16:45
WHDL	ak	100	D	Olean, N. Y.	E—7-sunset
WHFC	ae	100	a	Cicero, Ill.	C—7-13:30; 18-21; 23-1
WILM	aj	100	2	Wilmington, Del.	E—7-11; 14-17; 21-24
WJBO	z	100	D	Baton Rouge, La.	C—.....
WJMS	ak	100	.....	Ironwood, Mich.	C—7:30-19:30
WKBI	ak	100	a	Cicero, Ill.	C—13:30-16; 21-23
WLAP	ak	100	(.25)	Lexington, Ky.	C—7-23
WLBF	ak	100	.....	Kansas City, Kans.	C—7-22
WMAS	ak	100	C (.25)	Springfield, Mass.	E—7:30-24
WMBC	ae	100	(.25)	Detroit, Mich.	E—7:30-24
WMBH	ak	100	(.25)	Joplin, Mo.	C—7:30-14; 18-21:30
WMFJ	z	100	P	Daytona Beach, Fla.	E—.....
WNRA	ak	100	D	Muscle Shoals, Ala.	C—7-13; 16-22
WPAD	ak	100	(.25)	Paducah, Ky.	C—7-9:30; 11-14; 16-22:30
WWC	z	1000	P	Spartanburg, S. C.	E—.....

KCYS.
1420
DIAL

XEFB	ak	100	.....	Monterrey, N. L.	E—10-14; 18-22:30
.....	z	100	P	Lewiston, Idaho	M—.....
.....	z	100	P (.25)	Ponce, P. R.	E—.....

1430 kilocycles 209.7 meters

KECA	ak	1000	(5)	Los Angeles, Calif.	P—7-23
KGNF	ak	500	D (1)	North Platte, Neb.	C—7-Sunset
KWCR	ak	250	B (.5)	Cedar Rapids, Iowa	C—7-24
WBNS	ae	500	C (1)	Columbus, Ohio	E— 6:15-24
WHEC	ae	500	C (1)	Rochester, N. Y.	E—8-24
WHP	ak	500	C (1)	Harrisburg, Pa.	E—8:30-1
WNBR	ae	500	A	Memphis, Tenn.	C—7-13; 15-22
WOKO	ae	500	C (1)	Albany, N. Y.	E—8-1

1440 kilocycles 208.2 meters

KDFN	ak	500	.....	Casper, Wyo.	M—7:30-13:30; 15-21
KLS	ae	250	D	Oakland, Calif.	P—8-Sunset
KXYZ	ak	500	.....	Houston, Texas	C—6:30-13; 14:30-23
WBIG	ae	500	C (1)	Greensboro, N. C.	E—7:30-23
WCBA	aj	500	a	Allentown, Pa.	E—7-23
WMBD	ae	500	3C (1)	Peoria, Ill.	C—6-11; 20-24
WSAN	aj	500	a	Allentown, Pa.	E—Silent
WTAD	ak	500	3	Quincy, Ill.	C—11-20
XEFI	ae	250	.....	Chihuahua, Chih.	C—.....

1450 kilocycles 206.8 meters

CFCT	ae	75	.....	Victoria, B. C.	P—8-12:30; 17:30-20:15
CHGS	ae	50	F	Summerside, P.E.I.	A—7:30-8:30; 10:30-14; 16-23
KTBS	ck	1000	N	Shreveport, La.	C—7-24
WGAR	ak	500	B (1)	Cleveland, Ohio	E—6:30-1
WHOM	ae	250	....	Jersey City, N. J.	E—8-24
WSAR	ae	250	.....	Fall River, Mass.	E—8-15:30; 17-22
WTFI	ak	500	.....	Athens, Ga.	E—9-21

1460 kilocycles 205.4 meters

KSTP	ae	10000	N (25)	St. Paul, Minn.	C—7-0:30
WJSV	ak	10000	C	Washington, D. C.	E—6:30-1

1470 kilocycles 204.0 meters

WLAC	ak	5000	C	Nashville, Tenn.	C—6:30-24

1480 kilocycles 202.6 meters

KOMA	ak	5000	C	Oklahoma City, Ok.	C—7-24
WKBW	ae	5000	C	Buffalo, N. Y.	E—9-1

1490 kilocycles 201.2 meters

WCKY	ae	5000	B	Covington, Ky.	E—7-24

1500 kilocycles 199.9 meters

CMCN	z	250	.....	Havana, Cuba	E—.....
KDB	ak	100	C	Santa Barbara, Calif.	P—7:30-24
KGFI	ak	100	(.25)	Corpus Christi, Tex.	C—7-15; 18-22
KGFK	ak	100	.....	Moorhead, Minn.	C—8-21
KGKB	ak	100	.....	Tyler, Texas	C—8-10; 12-13; 17-20:30
KGKY	ck	100	.....	Scottsbluff, Neb.	M—9-13:30; 17:30-21
KNOW	ak	100	.....	Austin, Texas	C—7:30-14; 16-22
KOTN	ak	100	D	Pine Bluff, Ark.	C—7-17:30
KPJM	ak	100	.....	Prescott, Ariz.	M—8-13:30; 17:30-20:30
KPQ	ak	100	.....	Wenatchee, Wash.	P—6:30-22:30
KREG	ak	100	.....	Santa Ana, Calif.	P—9-23
KXO	ae	100	.....	El Centro, Calif.	P—7-14; 16-21
WCNW	ak	100	1 (.25)	Brooklyn, N. Y.	E—14-18; 22-3
WDNC	ak	100	C	Durham, N. C.	E—7:30-24
WGAL	ae	100	(.25)	Lancaster, Pa.	E—9-22
WHEF	z	100	(.25)	Kosciusko, Miss.	C—6-24
WJBK	ae	100	(.25) A	Detroit, Mich.	E—7-Sunset; 21-24
WKBB	ae	100	(.25)	E. Dubuque, Ill.	C—7-21
WKBV	ak	100	.....	Richmond, Ind.	C—10-12; 18-22
WKBZ	ak	100	(.25)	Muskegon, Mich.	E—9-21

WKEU	ak	100	.....	LaGrange, Ga.	C—10-12; 15-18
WMBQ	ae	100	1	Brooklyn, N. Y.	E—9-11; 18-20
WMEX	ak	100	(.25) A	Boston, Mass.	E—9-1
WNBF	ae	100	(.25) C	Binghamton, N. Y.	E—7-22
WOPI	ae	100	.....	Bristol, Tenn.	E—6:30-18
WRDW	ak	100	.....	Augusta, Ga.	E—8-21
WRGA	ak	100	(.25)	Rome, Ga.	C—7-10; 12-15; 18-21
WSYB	ak	100	.....	Rutland, Vt.	E—10-13; 17-21
WWRL	ak	100	1 (.25)	Woodside, N. Y.	E—8-9; 11-14; 20-22
WWSW	ae	100	(.25)	Pittsburgh, Pa.	E—8-24

1510 kilocycles 198.6 meters

CFRC	ak	100	.....	Kingston, Ont.	E—.....
CKCR	ak	100	.....	Waterloo, Ont.	E—8:30-13:30; 16:30-23

1530 kilocycles 196.0 meters

W1XBS	z	1000	A	Waterbury, Conn.	E—8:30-23:30
W9XBY	z	1000	.....	Kansas City, Mo.	C—7-1

1550 kilocycles 193.4 meters

W2XR	z	1000	.....	Long Isl. City, N. Y.	E—16-19
W6XAI	z	1000	.....	Bakersfield, Calif.	P—.....

INDEX BY LOCATIONS

Frequency in kilocycles in second column. Night power in watts in third column. Net work affiliations in fourth column: C Columbia, R National Red, B National Blue, N National Red and Blue. F Canadian. A American.

ALABAMA

Birmingham			
WAPI	1140	5000	N
WBRC	930	1000	C
WSGN	1310	100	
Dothan			
WAGF	1370	100	
Gadsden			
WJBY	1210	100	
Huntsville			
WBHS	1200	100	
Mobile			
WALA	1380	500	C
Montgomery			
WSFA	1410	500	C
Muscle Shoals			
WNRA	1420	100	

ALASKA

Anchorage			
KFQD	780	250	
Ketchikan			
KGBU	900	500	

ARIZONA

Jerome			
KCRJ	1310	100	
Lowell			
KSUN	1200	100	
Phoenix			
KOY	1390	500	
KTAR	620	1000	N
Prescott			
KPJM	1500	100	
Tucson			
KGAR	1370	100	
KVOA	1260	500	
Yuma			
KUMA	1420	100	

ARKANSAS

Blytheville			
KLCN	1290	100	
Fayetteville			
KUOA	1260	1000	
Fort Smith			
KFPW	1210	100	
Hot Springs			
KTHS	1060	10000	N
Jonesboro			
KBTM	1200	100	
Little Rock			
KARK	890	250	
KGHI	1200	100	
KLRA	1390	1000	C
Pine Bluff			
KOTN	1500	100	
Texarkana			
KCMC	1420	100	

CALIFORNIA

Bakersfield			
KERN	1370	100	C
W6XAI	1550	1000	
Berkeley			
KRE	1370	100	
Beverly Hills			
KMPC	710	500	
Burbank			
KELW	780	500	
El Centro			
KXO	1500	100	
Eureka			
KIEM	1210	100	
Fresno			
KMJ	580	500	C
Glendale			
KIEV	850	250	
Hollywood			
KFWB	950	1000	
KMTR	570	1000	
KNX	1050	50000	
Long Beach			
KFOX	1250	1000	
KGER	1360	1000	
Los Angeles			
KECA	1430	1000	
KFAC	1300	1000	
KFI	640	50000	N
KFSG	1120	500	
KFVD	1000	250	
KGFJ	1200	100	
KHJ	900	1000	C
KRKD	1120	500	
KTM	780	500	
Modesto			
KTRB	740	250	
Oakland			
KLS	1440	250	
KLX	880	1000	
KROW	930	1000	
Pasadena			
KPPC	1210	50	
Sacramento			
KFBK	1310	100	C
San Bernardino			
KFXM	1210	100	
San Diego			
KFSD	600	1000	N
KGB	1330	1000	C
San Francisco			
KFRC	610	1000	C
KGGC	1420	100	
KGO	790	7500	N
KJBS	1070	100	
KPO	680	50000	N
KTAB	560	1000	
KYA	1230	1000	N
San Jose			
KQW	1010	1000	
Santa Ana			
KREG	1500	100	
Santa Barbara			
KDB	1500	100	C
Stockton			
KGDM	1100	250	
KWG	1200	100	C

COLORADO

Alamosa			
KGIW	1420	100	
Colorado Springs			
KVOR	1270	1000	C
Denver			
KFEL	920	500	
KLZ	560	1000	C
KOA	830	50000	N
KPOF	880	500	
KVOD	920	500	
Grand Junction			
KFXJ	1200	100	
Greeley			
KFKA	880	500	
Lamar			
KIDW	1420	100	
Pueblo			
KGHF	1320	500	
Sterling			
KGEK	1200	100	

CONNECTICUT

Bridgeport			
WICC	600	250	C
Hartford			
WDRC	1330	1000	C
WTIC	1040	50000	R
New Britain			
WMFE	1380	250	
New Haven			
WMFI	900	500	
Storrs			
WCAC	600	500	
Waterbury			
WATR	1190	100	
W1XBS	1530	1000	A

DELAWARE

Wilmington			
WDEL	1120	250	A
WILM	1420	100	

DISTRICT OF COLUMBIA

Washington			
WJSV	1460	10000	C
WMAL	630	250	B
WOL	1310	100	A
WRC	950	500	R

FLORIDA

Clearwater			
WFLA	620	1000	N
Daytona Beach			
WMFJ	1420	100	
Gainesville			
WRUF	830	5000	
Jacksonville			
WJAX	900	1000	N
WMBR	1370	100	C
Miami			
WIOD	1300	1000	N
WQAM	560	1000	C
Orlando			
WDBO	580	250	C
Pensacola			
WCOA	1340	500	C
St. Petersburg			
WSUN	620	1000	N

Tampa
WDAE 1220 1000 C

GEORGIA

Albany
WGPC 1420 100

Athens
WTFI 1450 500

Atlanta
WGST 890 500 C
WJTL 1370 100
WSB 740 50000 N

Augusta
WRDW 1500 100

Columbus
WRBL 1200 100

LaGrange
WKEU 1500 100

Macon
WMAZ 1180 1000

Rome
WRGA 1500 100

Savannah
WTOC 1260 1000 C

Thomasville
WPAX 1210 100

HAWAII

Hilo
KWFV 1210 100

Honolulu
KGMB 1320 250 C
KGU 750 2500 N

IDAHO

Boise
KIDO 1350 1000

Idaho Falls
KID 1320 250

Lewiston
1420 100

Nampa
KFXD 1200 100

Pocatello
KSEI 900 250

Twin Falls
KTFI 1240 500

ILLINOIS

Bloomington
WJBC 1200 100

Carthage
WCAZ 1070 100

Chicago
WAAF 920 500
WBBM 770 25000 C
WCFL 970 1500 B
WCRW 1210 100
WEDC 1210 100
WENR 870 50000 N
WGES 1360 500
WGN 720 50000
WJJD 1130 20000 A
WLS 870 50000 N
WMAQ 670 50000 N
WMBI 1080 5000
WSBC 1210 100

Cicero
WEHS 1420 100
WHFC 1420 100
WKBI 1420 100

Decatur
WJBL 1200 100

East Dubuque
WKBB 1500 100

Harrisburg
WEBQ 1210 100

Joliet
WCLS 1310 100

Peoria
WMBD 1440 500 C

Quincy
WTAD 1440 500

Rockford
WROK 1410 500

Rock Island
WHBF 1210 100 A

Springfield
WCBS 1210 100
WTAX 1210 100

Tuscola
WDZ 1070 100

Urbana
WILL 890 250

Waukegan
WCBD 1080 5000

INDIANA

Anderson
WHBU 1210 100

Elkhart
WTRC 1310 50

Evansville
WGBF 630 500

Fort Wayne
WGL 1370 100 C
WOWO 1160 10000 C

Gary
WIND 560 1000 A

Hammond
WWAE 1200 100

Indianapolis
WFBM 1230 1000 C
WKBF 1400 500 N

Muncie
WLBC 1310 100

Richmond
WKBV 1500 100

South Bend
WFAM 1200 100
WSBT 1360 500 C

Terre Haute
WBOW 1310 100

West Lafayette
WBAA 890 1000

IOWA

Ames
WOI 640 5000

Boone
KFGQ 1370 100

Cedar Rapids
KWCR 1430 250 B

Council Bluffs
KOIL 1260 1000 B

Davenport
WOC 1370 100 C

Decorah
KGCA 1270 100
KWLC 1270 100

Des Moines
KSO 1320 500 B
WHO 1000 50000 R

Iowa City
WSUI 880 500

Marshalltown
KFJB 1200 100

Shenandoah
KFNF 890 500
KMA 930 1000

Sioux City
KSCJ 1330 1000 C

Waterloo
WMT 600 1000 C

KANSAS

Abilene
KFBI 1050 5000

Coffeyville
KGGF 1010 1000

Dodge City
KGNO 1340 250

Kansas City
WLBF 1420 100

Lawrence
KFKU 1220 1000
WREN 1220 1000 B

Manhattan
KSAC 580 500

Topeka
WIBW 580 1000 C

Wichita
KFH 1300 1000 C

KENTUCKY

Covington
WCKY 1490 5000 B

Lexington
WLAP 1420 100

Louisville
WAVE 940 1000 N
WHAS 820 50000 C

Paducah
WPAD 1420 100

LOUISIANA

Baton Rouge
WJBO 1420 100

Monroe
KMLB 1200 100

New Orleans
WBNO 1200 100
WDSU 1250 1000 C
WJBW 1200 100
WSMB 1320 500 N
WWL 850 10000

Shreveport
KRMD 1310 100
KTBS 1450 1000 N
KWEA 1210 100
KWKH 1100 10000 C

MAINE

Augusta
WRDO 1370 100

Bangor
WABI 1200 100
WLBZ 620 500 C

Portland
WCSH 940 1000 R

Presque Isle
WAGM 1420 100

MARYLAND

Baltimore
WBAL 1060 10000 B
WCAO 600 500 C
WCBM 1370 100 A
WFBR 1270 500 R

Cumberland
WTBO 800 250

Hagerstown
WJEJ 1210 100

MASSACHUSETTS

Babson Park
WBSO 920 500

Boston
WAAB 1410 500 C
WBZ 990 50000 B
WEEI 590 1000 R
WHDH 830 1000 A
WMEX 1500 100 A
WNAC 1230 1000 C
WMFH 1120 500

Fall River
WSAR 1450 250

Lowell
WLLH 1370 100

New Bedford
WNBH 1310 100 C

Springfield
WBZA 990 1000 B
WMAS 1420 100 C

Worcester
WORC 1280 500 C
WTAG 580 500 R

MICHIGAN

Battle Creek
WELL 1420 50

Bay City
WBCM 1410 500

Calumet
WHDF 1370 100

Detroit
WJBK 1500 100 A
WJR 750 10000 B
WMBC 1420 100
WWJ 920 1000 R
WXYZ 1240 1000

East Lansing
WKAR 1040 1000

Flint
WFDF 1310 100

Grand Rapids
WASH 1270 500
WOOD 1270 500

Ironwood
WJMS 1420 100

Jackson
WIBM 1370 100

Kalamazoo
WKZO 590 1000

Lansing
WJIM 1210 100

Lapeer
WMPC 1200 100

Marquette
WBEO 1310 100

Muskegon
WKBZ 1500 100

Royal Oak
WEXL 1310 50

MINNESOTA

Fergus Falls
KGDE 1200 100

Hibbing
WMFG 1210 100

Minneapolis
WCCO 810 50000 C
WDGY 1180 1000
WLB 1250 1000
WTCN 1250 1000

Moorhead
KGFK 1500 100

Northfield
WCAL 1250 2500

St. Paul
KSTP 1460 10000 N

MISSISSIPPI

Gulfport
WGCM 1210 100

Hattiesburg
WPFB 1370 100

Jackson
WJDX 1270 1000 N

Kosciusko
WHEF 1500 100

Laurel
WAML 1310 100

Meridian
WCOC 880 500

Vicksburg
WQBC 1360 500

MISSOURI

Cape Girardeau
KFVS 1210 100

Columbia
KFRU 630 500

Jefferson City
WOS 630 500

Joplin
WMBH 1420 100

Kansas City
KMBC 950 1000 C

KWKC	1370	100
WDAF	610	1000 R
WHB	860	500
W9XBY	1530	1000

St. Joseph

KFEQ	680	2500

St. Louis

KFUO	550	500
KMOX	1090	50000 C
KSD	550	1000 R
KWK	1350	1000 B
WEW	760	1000
WIL	1200	100 A

Springfield

KGBX	1230	500
KWTO	560	1000

MONTANA

Billings

KGHL	780	1000 N

Butte

KGIR	1360	1000 N

Great Falls

KFBB	1280	1000

Kalispell

KGEZ	1310	100

Missoula

KGVO	1200	100

Wolf Point

KGCX	1310	100

NEBRASKA

Clay Center

KMMJ	740	1000

Kearney

KGFW	1310	100

Lincoln

KFAB	770	5000 C
KFOR	1210	100 C

Norfolk

WJAG	1060	1000

North Platte

KGNF	1430	500

Omaha

WAAW	660	500
WOW	590	1000 R

Scottsbluff

KGKY	1500	100

York

KGBZ	930	1000

NEVADA

Las Vegas

KGIX	1420	100

Reno

KOH	1380	500 C

NEW HAMPSHIRE

Laconia

WLNH	1310	100

Manchester

WFEA	1340	500 C

Portsmouth

WHEB	740	250

NEW JERSEY

Asbury Park

WCAP	1280	500

Atlantic City

WPG	1100	5000 C

Camden

WCAM	1280	500

Jersey City

WAAT	940	500
WHOM	1450	250

Newark

WHBI	1250	250
WNEW	1250	1000
WOR	710	5000

Red Bank

WBRB	1210	100

Trenton

WTNJ	1280	500 A

Zarephath

WAWZ	1350	250

NEW MEXICO

Albuquerque

KGGM	1230	250
KOB	1180	10000

Clovis

KICA	1370	100

Roswell

KGFL	1370	100

Santa Fe

KIUJ	1310	100

NEW YORK

Albany

WABY	1370	100 A
WOKO	1430	500 C

Auburn

WMBO	1310	100

Binghamton

WNBF	1500	100 C

Brooklyn

WARD	1400	500
WBBC	1400	500
WBBR	1300	1000
WCNW	1500	100
WLTH	1400	500
WMBQ	1500	100
WVFW	1400	500

Buffalo

WBEN	900	1000 R
WEBR	1310	100 A
WGR	550	1000 C
WKBW	1480	5000 C
WSVS	1370	50

Canton

WCAD	1220	500

Chester

WGNY	1210	100

Elmira

WESG	1090	1000

Freeport

WGBB	1210	100

Jamestown

WOCL	1210	50

Long Island City

W2XR	1550	1000

New York

WABC	860	50000 C
WBNX	1350	250
WBOQ	860	50000
WEAF	660	50000 R
WEVD	1300	1000
WFAB	1300	1000
WHN	1010	1000
WINS	1180	1000
WJZ	760	50000 B
WLWL	1100	5000
WMCA	570	500 A
WNYC	810	1000
WOV	1130	1000

Olean

WHDL	1420	100

Plattsburg

WMFF	1310	100

Rochester

WHAM	1150	50000 B
WHEC	1430	500 C

Saranac Lake

WNBZ	1290	50

Schenectady

WGY	790	50000 R

Syracuse

WFBL	1360	1000 C
WSYR	570	250 B

Troy

WHAZ	1300	500

Utica

WIBX	1200	100 C

White Plains

WFAS	1210	100

Woodside

WWRL	1500	100

NORTH CAROLINA

Asheville

WWNC	570	1000 N

Charlotte

WBT	1080	50000 C
WSOC	1210	100 N

Durham

WDNC	1500	100 C

Greensboro

WBIG	1440	500 C

Raleigh

WPTF	680	5000 N

Rocky Mount

WEED	1420	100

Wilmington

WMFD	1370	100

Winston-Salem

WSJS	1310	100 C

NORTH DAKOTA

Bismarck

KFYR	550	1000 N

Devils Lake

KDLR	1210	100

Fargo

WDAY	940	1000 N

Grand Forks

KFJM	1370	100

Mandan

KGCU	1240	250

Minot

KLPM	1240	250

OHIO

Akron

WADC	1320	1000 C
WJW	1210	100 A

Canton

WHBC	1200	100

Cincinnati

WFBE	1200	100 A
WKRC	550	1000 C
WLW	700	500000 N
WSAI	1330	1000 R

Cleveland

WGAR	1450	500 B
WHK	1390	1000 C
WJAY	610	500 A
WTAM	1070	50000 R

Columbus

WAIU	640	500
WBNS	1430	500 C
WCOL	1210	100 A
WOSU	570	750

Dayton

WLBW	1260	1000 C
WSMK	1380	200 C

Mount Orab

WHBD	1370	100

Toledo

WSPD	1340	1000 C

Youngstown

WKBN	570	500 C

Zanesville

WALR	1210	100

OKLAHOMA

Ada

KADA	1200	100

Elk City

KASA	1210	100

Enid

KCRC	1370	100

Norman

WNAD	1010	500

Oklahoma City

KFXR	1310	100
KGFG	1370	100
KOMA	1480	5000 C
WKY	900	1000 N

Ponca City

WBBZ	1200	100

Shawnee

KGFF	1420	100

Tulsa

KTUL	1400	250 C
KVOO	1140	25000 N

OREGON

Corvallis

KOAC	550	1000

Eugene

KORE	1420	100

Klamath Falls

KFJI	1210	100

Marshfield

KOOS	1200	250

Medford

KMED	1310	100

Portland

KALE	1300	500 C
KBPS	1420	100
KEX	1180	5000 N
KFJR	1300	500
KGW	620	1000 N
KOIN	940	1000 C
KWJJ	1040	500
KXL	1420	100

Salem

KSLM	1370	100

PENNSYLVANIA

Allentown

WCBA	1440	500
WSAN	1440	500

Altoona

WFBG	1310	100

Clarion

WWPA	850	250

Glenside

WIBG	970	100

Greensburg

WHJB	620	250

Grove City

WSAJ	1310	100

Harrisburg

WHP	1430	500 C
WKBO	1200	100

Hazleton

WAZL	1420	100

Johnstown

WJAC	1310	100

Lancaster

WGAL	1500	100
WKJC	1200	100

Philadelphia

KYW	1020	10000 R
WCAU	1170	50000 C
WDAS	1370	100
WFI	560	500 B
WHAT	1310	100
WIP	610	1000 A
WLIT	560	500 B
WPEN	920	250
WRAX	920	250
WTEL	1310	100

Pittsburgh

KDKA	980	50000 B
KQV	1380	500 A
WCAE	1220	1000 R
WJAS	1290	1000 C
WWSW	1500	100

Reading

WEEU	830	1000
WRAW	1310	100

Scranton

WGBI	880	500
WQAN	880	250

Sunbury
WKOK 1210 100
Washington
WNBO 1200 100
Wilkes-Barre
WBAX 1210 100
WBRE 1310 100
Williamsport
WRAK 1370 100
York
WORK 1000 1000

PHILIPPINES

Manila
KZEG 720 1000
KZRM 618.5 50000

PORTO RICO

Ponce
1420 100
San Juan
WKAQ 1240 1000
WNEL 1290 500

RHODE ISLAND

Providence
WEAN 780 500 C
WJAR 890 500 R
WPRO 630 250 A

SOUTH CAROLINA

Charleston
WCSC 1360 500
Columbia
WIS 560 1000 N
Greenville
WFBC 1300 1000
Spartanburg
WSPA 920 1000
WWC 1420 1000

SOUTH DAKOTA

Aberdeen
KABR 1420 100
Brookings
KFDY 780 1000
Huron
KGDY 1340 250
Pierre
KGFX 630 200
Rapid City
WCAT 1200 100
Sioux Falls
KSOO 1110 1000
Vermillion
KUSD 890 500
Watertown
KWTN 1210 100
Yankton
WNAX 570 1000 C

TENNESSEE

Bristol
WOPI 1500 100
Chattanooga
WDOD 1280 1000 C
Jackson
WTJS 1310 100
Knoxville
WNOX 1010 1000 C
WROL 1310 100
Memphis
WHBQ 1370 100
WMC 780 1000 N
WNBR 1430 500 A
WREC 600 1000 C
Nashville
WLAC 1470 5000 C
WSM 650 50000 N
Springfield
WSIX 1210 100

TEXAS

Amarillo
KGRS 1410 1000
WDAG 1410 1000
Austin
KNOW 1500 100
Beaumont
KFDM 560 500
College Station
WTAW 1120 500
Corpus Christi
KGFI 1500 100
Dallas
KRLD 1040 10000 C
WFAA 800 50000 N
WRR 1280 500
Dublin
KFPL 1310 100
El Paso
KTSM 1310 100
WDAH 1310 100
Fort Worth
KFJZ 1370 100
KTAT 1240 1000 C
WBAP 800 50000 N
Galveston
KLUF 1370 100
Greenville
KFPM 1310 15
Houston
KPRC 920 1000 N
KTRH 1330 1000 C
KXYZ 1440 500
Longview
KFRO 1370 100
Lubbock
KFYO 1310 100
Port Arthur
KPAC 1260 500
San Angelo
KGKL 1370 100
San Antonio
KABC 1420 100
KMAC 1370 100
KONO 1370 100
KTSA 550 1000 C
WOAI 1190 50000 N
Tyler
KGKB 1500 100
Waco
WACO 1420 100 C
Weslaco
KRGV 1260 500
Wichita Falls
KGKO 570 500 C

UTAH

Ogden
KLO 1400 500 C
Salt Lake City
KDYL 1290 1000 N
KSL 1130 50000 C

VERMONT

Burlington
WCAX 1200 100
Rutland
WSYB 1500 100
St. Albans
WQDM 1370 100
Springfield
WNBX 1260 1000
Waterbury
WDEV 550 500

VIRGINIA

Arlington
NAA 690 1000
Charlottesville
WEHC 1420 100
Danville
WBTM 1370 100
Lynchburg
WLVA 1200 100
Newport News
WGH 1310 100
Norfolk
WTAR 780 500 N
Petersburg
WPHR 880 500
Richmond
WBBL 1210 100
WMBG 1210 100 C
WRVA 1110 5000 N
Roanoke
WDBJ 930 1000 C
WRBX 1410 250
Staunton
WSVA 550 500

WASHINGTON

Aberdeen
KXRO 1310 100
Bellingham
KVOS 1200 100
Everett
KRKO 1370 50
Olympia
KGY 1210 100
Pullman
KWSC 1220 1000
Seattle
KJR 970 5000 N
KOL 1270 1000 C
KOMO 920 1000 N
KPCB 710 250
KRSC 1120 100
KTW 1220 1000
KVL 1370 100
KXA 760 250
Spokane
KFIO 1120 100
KFPY 1340 1000 C
KGA 900 1000 N
KHQ 590 1000 N
Tacoma
KMO 1330 250
KVI 570 1000 C
Walla Walla
KUJ 1370 100
Wenatchee
KPQ 1500 100
Yakima
KIT 1310 100

WEST VIRGINIA

Bluefield
WHIS 1410 250
Charleston
WCHS 580 500
Fairmont
WMMN 890 250
Huntington
WSAZ 1190 1000
Wheeling
WWVA 1160 5000 C

WISCONSIN

Eau Claire
WTAQ 1330 1000
Fond du Lac
KFIZ 1420 100
Green Bay
WHBY 1200 100
Janesville
WCLO 1200 100
LaCrosse
WKBH 1380 1000
Madison
WHA 940 2500
WIBA 1280 1000 N
Manitowoc
WOMT 1210 100
Milwaukee
WISN 1120 250 C
WTMJ 620 1000 N
Poynette
WIBU 1210 100
Racine
WRJN 1370 100
Sheboygan
WHBL 1410 500
Stevens Point
WLBL 900 2500
Superior
WEBC 1290 1000 N

WYOMING

Casper
KDFN 1440 500
Sheridan
KWYO 1370 100

CANADA

ALBERTA

Calgary
CFAC 930 100 F
CFCN 1030 10000 F
CJCJ 690 100 F
Edmonton
CFRN 1260 100
CJCA 730 500 F
CKUA 580 500
Lethridge
CJOC 1230 100 F

BRITISH COLUMBIA

Chilliwack
CHWK 780 100 F
Kamloops
CFJC 880 100 F
Kelowna
CKOV 630 100 F
Trail
CJAT 910 250 F
Vancouver
CJOR 600 500
CKCD 1010 100
CKFC 1410 50
CKMO 1410 100
CKWX 1010 100
CRCV 1100 1000 F
Victoria
CFCT 1450 75

MANITOBA

Brandon
CKX 1120 500 F
Winnipeg
CJRC 1390 100
CKY 960 15000 F

NEW BRUNSWICK

Fredericton
CFNB 550 500 F
Moncton
CKCW 1370 100
St. John
CHSJ 1120 100 F

NOVA SCOTIA

Glace Bay
VAS 685 2000
Halifax
CHNS 930 1000 F
Sydney
CJCB 1240 1000 F
Wolfville
CKIC 1010 50
Yarmouth
CJLS 1310 100

ONTARIO

Brantford
CKPC 930 100 F
Chatham
CFCO 1050 100 F

CFAC 930 100 Calgary, Alta.
Calgary Herald, Southam Bldg.

CFCF 600 500 Montreal, Que.
Mt. Royal Hotel

CFCH 930 100 North Bay, Ont.
Capitol Theatre Bldg.

CFCN 1030 10000 Calgary, Alta.
Toronto Gen. Trust Bldg.

CFCO 1050 100 Chatham, Ont.
Wm. Pitt Hotel

CFCT 1450 75 Victoria, B. C.
620 View St.

CFCY 630 1000 Charlottetown, P.E.I.
143 Great George St.

CFJC 880 100 Kamloops, B. C.
Wilcox-Hall Bldg.

CFLC 930 100 Prescott, Ont.
Victoria Hall

CFNB 550 500 Fredericton, N. B.
York St.

CFPL 730 100 London, Ont.
Richmond St.

CFQC 840 1000 Saskatoon, Sask.
216 First Ave., No.

CFRB 690 10000 Toronto, Ont.
37 Bloor St. W.

CFRC 1510 100 Kingston, Ont.
Queens University

CFRN 1260 100 Edmonton, Alta.
Birks Bldg.

CHAB 1200 100 Moose Jaw, Sask.
Grant Hall Hotel

CHCK 1310 50 Charlottetown, P.E.I.
36 Upper Hillsboro St.

CHGS 1450 50 Summerside, P. E. I.
190 Water St.

CHLP 1120 100 Montreal, Que.
Sun Life Bldg.

CHML 1010 50 Hamilton, Ont.
47 Main St. E.

CHNC 1210 100 New Carlisle, Que.
Dr. Charles Houde

CHNS 930 1000 Halifax, N. S.
Lord Nelson Hotel

CHRC 580 100 Quebec, Que.
CHRC, Ltd., Victoria Hotel

CHSJ 1120 100 St. John, N. B.
Admiral Beatty Hotel

CHWC 1010 500 Regina, Sask.
Kitchener Hotel

CHWK 780 100 Chilliwack, B. C.
Wellington Ave.

CJAT 910 250 Trail, B. C.
Trail Amateur Radio Assn.

CJCA 730 500 Edmonton, Alta.
10122—100A St.

CJCB 1240 1000 Sydney, N. S.
318 Charlotte St.

CJCJ 690 100 Calgary, Alta.
New Albertan Bldg.

CJGX 630 500 Yorkton, Sask.
188 Grain Exchange Bldg.

CJIC 890 100 S. Ste. Marie, Ont.
72 Pine St.

CJKL 1310 100 Kirkland Lake, Ont.
O. J. Thorpe

CJLS 1310 100 Yarmouth, N. S.
Laurie L. Smith, Grand Hotel

CJOC 1230 100 Lethbridge, Alta.
Marquis Hotel

CJOR 600 500 Vancouver, B. C.
G. C. Chandler, Hotel Grosvenor

CJRC 1390 100 Winnipeg, Man.
Royal Alexandra Hotel

CJRM 540 1000 Moose Jaw, Sask.
311 Main St. No.

CKAC 730 5000 Montreal, Que.
980 St. Catherine St. W.

CKBI 1210 100 Prince Albert, Sask.
Canada Bldg.

CKCD 1010 100 Vancouver, B. C.
142 Hastings St. W.

CKCH 1210 100 Hull, Que.
Standish Hall Hotel

CKCK 1010 500 Regina, Sask.
1853 Hamilton St.

CKCL 580 100 Toronto, Ont.
444 University Ave.

CKCO 1010 100 Ottawa, Ont.
272 Somerset St. W.

CKCR 1510 100 Waterloo, Ont.
24 King St. So.

CKCV 1310 50 Quebec, Que.
254 Ave. Marguerite

CKCW 1370 100 Moncton, N. B.
Moncton Brdcstg. Co., Ltd.

CKFC 1410 50 Vancouver, B. C.
Hemlock & 12th Ave.

CKGB 1420 100 Timmins, Ont.
R. H. Thompson, Press Bldg.

CKIC 1010 50 Wolfville, N. S.
Acadia University

CKLW 1030 5000 Windsor, Ont.
Guaranty Trust Bldg.

CKMC 1210 50 Cobalt, Ont.
R. L. MacAdam

CKMO 1410 100 Vancouver, B. C.
1604 Bekins Bldg.

CKNC 1420 100 Toronto, Ont.
805 Davenport Road

CKOC 1120 500 Hamilton, Ont.
Wentworth Bldg.

CKOV 630 100 Kelowna, B. C.
Okanagan Broadcasters, Ltd., Box 243

CKPC 930 100 Brantford, Ont.
Arcade Bldg.

CKPR 930 50 Fort William, Ont.
Royal Edward Hotel

CKSO 780 1000 Sudbury, Ont.
Sudbury Star

CKTB 1200 100 St. Catharines, Ont.
E. T. Sandell, Welland House

CKUA 580 500 Edmonton, Alta.
University of Alberta.

CKWX 1010 100 Vancouver, B. C.
Hotel Georgia

CKX 1120 500 Brandon, Man.
Rosser Ave.

CKY 960 15000 Winnipeg, Man.
Sherbrooke St.

CMAF 680 1000 Havana, Cuba
1 y 8 Rept. Miramar

CMBC 1035 150 Havana, Cuba
Domingo Fernandez, Maximo Gomez No. 139

CMBD 1350 150 Havana, Cuba
Luis Perez Garcia, Centre Gallege

CMBG 1150 225 Havana, Cuba
John L. Stowers, Hospital No. 100

CMBS 775 150 Havana, Cuba
Calzada y H. St., Vedado

CMBX 1425 150 Havana, Cuba
Alberto Alvarez, Belascoain No. 32

CMBY 635 250 Havana, Cuba
Infanta 132 esq-Jevellar

CMBZ 1005 100 Havana, Cuba
Manuely G. Salas, San Rafael No. 14
CMC 835 500 Havana, Cuba
Aguila y Dragones
CMCA 1230 150 Havana, Cuba
J. M. Gonzales, Galiano No. 102
CMCB 1060 150 Havana, Cuba
Metropolitan Bldg.
CMCD 955 250 Havana, Cuba
Calle G y 25, Vedado
CMCF 610 250 Havana, Cuba
Raoul Karman, P. O. Box 647
CMCG 1125 150 Havana, Cuba
Emilie Perera, San Miguel No. 62
CMCJ 1200 400 Havana, Cuba
Rafael Rodriquez, Estevez No. 4
CMCK 1320 100 Havana, Cuba
Manuel Autran G., Vedado
CMCN 1500 250 Havana, Cuba
Reina y Ave. Buen Ritiroe, Marianao
CMCO 1280 150 Havana, Cuba
Ass. Detes. del Comercio
CMCP 1270 150 Havana, Cuba
Calzada de Luyane No. 132
CMCQ 680 1000 Havana, Cuba
Vista Alegre No. 80, Vibora
CMCR 1400 150 Havana, Cuba
Milagros No. 35, Vibora
CMCU 1255 150 Havana, Cuba
San Francisco No. 13, Vibora
CMCW 755 150 Havana, Cuba
Galiano y San Lazaro Sts.
CMCX 865 150 Havana, Cuba

CMCY 1100 500 Havana, Cuba
Manuel D. Autran, Calle G 215, Vedado
CMGE 1375 30 Cardenas, Cuba
Genaro Sebater, Cespedes No. 180
CMGF 971.5 100 Matanzas, Cuba
G. Betancourt No. 51
CMGH 1040 15 Matanzas, Cuba
B. Byrne No. 113
CMGI 1094 30 Colon, Cuba
Armando Linanza, Marti No. 35
CMHA 1103 50 Sagua la Grande, Cuba
Abelardo Menocal, Carrillo No. 1
CMHB 1245 30 San Spiritus, Cuba
Independencia No. 33
CMHD 950 250 Caibarien, Cuba
Manuel Alvarez, M. Escobar 17
CMHI 1037 150 Santa Clara, Cuba
Lavis y Paz, Independencia No. 34
CMHJ 1125 40 Cienfuegos, Cuba
Romoualde Ugalde, Hotel Bristol
CMHK 1225 50 Cruces, Cuba
Heredia No. 61
CMHW 910 100 Cienfuegos, Cuba
Arguelles No. 200
CMJC 1382 150 Camaguey, Cuba
Feliciano Isaac, Cisneros y G. Gomez
CMJE 1170 50 Camaguey, Cuba
Manuel Fernandez, Hnos. Aguere No. 2
CMJF 930 200 Camaguey, Cuba
John L. Stowers, Republica No. 88
CMJG 1050 50 Camaguey, Cuba
Jose Antonio Lefran, Maceo No. 1
CMJH 1150 50 Ciego de Avila, Cuba
Luis Marauri, Vista Hermosa
CMJI 1210 150 Ciego de Avila, Cuba
Gilberto Gessa Lopez, Independencia 95
CMJK 790 150 Camaguey, Cuba
Cia. Nacional de Radio, Finlay

CMJL 960 50 Camaguey, Cuba
Enrique Artime, Cuba No. 27
CMJO 1010 50 Ciego de Avila, Cuba
Jose M. Rey, C. Central & Maceo
CMJP 1360 75 Moron, Cuba
Cesar Canall, Callejas No. 28
CMK 725 3150 Havana, Cuba
Hote Plaza
CMKC 1034 150 Santiago, Cuba
J. A. Saco, Alta 23
CMKF 1363 30 Holquin, Cuba
Libertad esq. Arias
CMKJ 1300 20 Guantanamo, Cuba
Luis Morlote, East Giro 11
CMKM 940 100 Manzanillo, Cuba
Jesus Armeste, Merchant y P. Figuerado
CMOK 1230 250 Havana, Cuba
Rafael Valdez, Marques Gonzales 52
CMOX 1325 200 Havana, Cuba
10 entre 17 y 19, Vedado
CMQ 840 5000 Havana, Cuba
25 Numero 445, Vedado
CMW 930 1400 Havana, Cuba
Troncoso y Gil, Apdo. 1010
CMX 905 1000 Havana, Cuba
Casa "Lavin," Ave. de a Republica 99A
COA 1175 500 Havana, Cuba
Juan Fernandez, Aguiar 126, Altes
CRCK 1050 1000 Quebec, Que.
Chateau Frontenac Hotel
CRCM 910 5000 Montreal, Que.
1231 St. Catherine St. W.
CRCO 880 1000 Ottawa, Ont.
Chateau Laurier Hotel
CRCS 950 100 Chicoutimi, Que.
4 Rue Larouche
CRCT 840 5000 Toronto, Ont.
805 Davenport Road
CRCV 1100 1000 Vancouver, B. C.
C. N. R. Station Bldg.
CRCW 600 500 Windsor, Ont.
Guaranty Trust Bldg.
FQN 609 250 St. Pierre, Miq.

HHK 920 1000 Port-au-Prince, Haiti
Haitian Government
HIH 1395 15 San Pedro de M., D.R.
Domingo Dominguez
HIJ 1195 15 Santo Domingo, D. R.
Tuto Baez, Hostos 34
HIX 1270 1000 Santo Domingo, D. R.
J. R. Saladin, Director General
HIZ 1300 10 Santo Domingo, D. R
Abbes and Garcia
KABC 1420 100 San Antonio, Texas
Texas Theatre Bldg.
KABR 1420 100 Aberdeen, S. Dak.
Aberdeen Broadcast Co.
KADA 1200 100 Ada, Okla.
C. C. Morris
KALE 1300 500 Portland, Ore.
Kale, Inc., New Heathman Hotel
KARK 890 250 Little Rock, Ark.
N. S. L. Bldg.
KASA 1210 100 Elk City, Okla.
E. M. Woody, Casa Grande Hotel
KBPS 1420 100 Portland, Ore.
E. 12th & Hoyt Sts.
KBTM 1200 100 Jonesboro, Ark.
Jay P. Beard
KCMC 1420 100 Texarkana, Ark.
M. P. Mims, Box 865

KCRC 1370 100 Enid, Okla.
Enid Radiophone Co., Oxford Hotel

KCRJ 1310 100 Jerome, Ariz.
Chas. C. Robinson, Drawer D.

KDB 1500 100 Santa Barbara, Calif.
15-17 E. Haley St.

KDFN 1440 500 Casper, Wyo.
Donald Lewis Hathaway

KDKA 980 50000 Pittsburgh, Pa.
Hotel Wm. Penn

KDLR 1210 100 Devils Lake, N. D.
KDLR, Inc., 1025 3rd Street

KDYL 1290 1000 Salt Lake City, Utah
Ezra Thompson Bldg.

KECA 1430 1000 Los Angeles, Calif.
1000 S. Hope St.

KELW 780 500 Burbank, Calif.
3702 Magnolia Park Blvd.

KERN 1370 100 Bakersfield, Calif.
Elk's Club

KEX 1180 5000 Portland, Ore.
Oregonian Bldg.

KFAB 770 5000 Lincoln, Neb.
Cornhusker Hotel

KFAC 1300 1000 Los Angeles, Calif.
E. L. Cord, 645 So. Mariposa

KFBB 1280 1000 Great Falls, Mont.
Buttrey Broadcast., Inc.

KFBI 1050 5000 Abilene, Kans.
Box 345

KFBK 1310 100 Sacramento, Calif.
Sacramento Bee

KFDM 560 500 Beaumont, Texas
Beaumont Hotel, P. O. Box 2950

KFDY 780 1000 Brookings, S. D.
South Dakota State College

KFEL 920 500 Denver, Colo.
Albany Hotel

KFEQ 680 2500 St. Joseph, Mo.
Schneider Bldg.

KFGQ 1370 100 Boone, Iowa
924 W. 2nd St.

KFH 1300 1000 Wichita, Kans.
124 1/2 S. Market St.

KFI 640 50000 Los Angeles, Calif.
1000 S. Hope St.

KFIO 1120 100 Spokane, Wash.
213 Riverside Ave.

KFIZ 1420 100 Fond du Lac, Wis.
18 W. 1st St.

KFJB 1200 100 Marshalltown, Iowa
1603 W. Main St.

KFJI 1210 100 Klamath Falls, Ore.
KFJI Broadcasters, Inc., Willard Hotel

KFJM 1370 100 Grand Forks, N. D.
University of North Dakota

KFJR 1300 500 Portland, Ore.
622 Lumbermen's Bldg.

KFJZ 1370 100 Fort Worth, Texas
Texas Hotel

KFKA 880 500 Greeley, Colo.
Box 735

KFKU 1220 1000 Lawrence, Kans.
University of Kansas

KFNF 890 500 Shenandoah, Iowa
407 Sycamore St.

KFOR 1210 100 Lincoln, Neb.
Howard Shuman, Hotel Lincoln

KFOX 1250 1000 Long Beach, Calif.
220 E. Anaheim St.

KFPL 1310 100 Dublin, Texas
C. C. Baxter, Box 176

KFPM 1310 15 Greenville, Texas
New Furniture Co.

KFPW 1210 100 Fort Smith, Ark.
Goldman Hotel

KFPY 1340 1000 Spokane, Wash.
Symons Bldg.

KFQD 780 250 Anchorage, Alaska
411—4th Ave.

KFRC 610 1000 San Francisco, Calif.
1000 Van Ness Ave.

KFRO 1370 100 Longview, Texas
Voice of Longview

KFRU 630 500 Columbia, Mo.
KFRU, Inc., 9th and Elm Sts.

KFSD 600 1000 San Diego, Calif.
U. S. Grant Hotel

KFSG 1120 500 Los Angeles, Calif.
1100 Glendale Blvd.

KFUO 550 500 St. Louis, Mo.
801 De Mun St.

KFVD 1000 250 Los Angeles, Calif.
E. L. Cord, 645 S. Mariposa

KFVS 1210 100 Cape Girardeau, Mo.
Oscar C. Hirsch, Box 275

KFWB 950 1000 Hollywood, Calif.
Warner Bros. Motion Pictures, Inc.

KFXD 1200 100 Nampa, Idaho
Frank E. Hurt, 1024 12th Ave., S.

KFXJ 1200 100 Grand Jct., Colo.
Hillcrest Manor

KFXM 1210 100 San Bernardino, Calif.
California Hotel

KFXR 1310 100 Oklahoma City, Okla.
541 Hightower Bldg.

KFYO 1310 100 Lubbock, Texas
Kirksey Bros., Hotel Lubbock

KFYR 550 1000 Bismarck, N. D.
320 Broadway

KGA 900 1000 Spokane, Wash.
1023 W. Riverside Ave.

KGAR 1370 100 Tucson, Ariz.
142 S. 6th Ave.

KGB 1330 1000 San Diego, Calif.
1012—1st St.

KGBU 900 500 Ketchikan, Alaska
Mile 5, Wards Cove Rd.

KGBX 1230 500 Springfield, Mo.
KGBX, Inc., C. of C. Bldg.

KGBZ 930 1000 York, Neb.
KGBZ Broadcasting Co., 715 Grant Ave.

KGCA 1270 100 Decorah, Iowa
Charles W. Greenley, 201 Water St.

KGCU 1240 250 Mandan, N. D.
404 W. Main St.

KGCX 1310 100 Wolf Point, Mont.
E. E. Krebsbach.

KGDE 1200 100 Fergus Falls, Minn.
C. L. Jaren

KGDM 1100 250 Stockton, Calif.
E. F. Peffer, 42 S. Calif. St.

KGDY 1340 250 Huron, S. D.
Voice of S. D., Inc., 347 Dakota Ave.

KGEK 1200 100 Sterling, Colo.
Elmer G. Beehler, 109 W. 2nd St.

KGER 1360 1000 Long Beach, Calif.
435 Pine Ave.

KGEZ 1310 100 Kalispell, Mont.
Donald C. Treloar, Box 1

KGFF 1420 100 Shawnee, Okla.
9th & Bell Sts.

KGFG 1370 100 Oklahoma City, Okla.
Okla. Broadcasting Co., 1113 N. Broadway

KGFI 1500 100 Corpus Christi, Texas
Eagle Broadcasting Co., Inc., P. O. Box 1508

KGFJ 1200 100 Los Angeles, Calif.
Ben S. McGlashan, 1417 S. Figueroa.

KGFK 1500 100 Moorhead, Minn.
722 Center Ave.

KGFL 1370 100 Roswell, N. M.
KGFL, Inc., 507 N. Main St.

KGFW 1310 100 Kearney, Neb.
Midway Hotel

KGFX 630 200 Pierre, S. D.
Dana McNeil, 510 Summit Ave.

KGGC 1420 100 San Francisco, Calif.
230 Eddy St.

KGGF 1010 1000 Coffeyville, Kans.
Coffeyville Journal Bldg.

KGGM 1230 250 Albuquerque, N. M.
Franciscan Hotel

KGHF 1320 250 Pueblo, Colo.
C. P. Ritchie, 113 Broadway

KGHI 1200 100 Little Rock, Ark.
Arkansas Brdcstg. Co., Marion Hotel

KGHL 780 1000 Billings, Mont.
5th & N. Broadway

KGIR 1360 1000 Butte, Mont.
KGIR, Inc., 121 W. Broadway

KGIW 1420 100 Alamosa, Colo.
Leonard E. Wilson, 326 N. Commercial

KGIX 1420 100 Las Vegas, Nev.
J. M. Heaton, Box 656

KGKB 1500 100 Tyler, Texas
115 S. College

KGKL 1370 100 San Angelo, Texas
KGKL, Inc., St. Angelus Hotel

KGKO 570 500 Wichita Falls, Texas
9th St. & Indiana Ave.

KGKY 1500 100 Scottsbluff, Neb.
Hilliard Co., Inc., 1517 1/2 Broadway

KGMB 1320 250 Honolulu, T. H.
Honolulu Broadcasting Co., Box 2663

KGNF 1430 500 North Platte, Neb.
Great Plains Broadcasting Co., W. 12th St.

KGNO 1340 250 Dodge City, Kans.
First Natl. Bank Bldg.

KGO 790 7500 San Francisco, Calif.
111 Sutter St.

KGRS 1410 1000 Amarillo, Texas
E. B. Gish, Bellaire Park

KGU 750 2500 Honolulu, T. H.
Kaploiani at South St.

KGVO 1200 100 Missoula, Mont.
Mosbys, Inc., 240 N. Higgins

KGW 620 1000 Portland, Ore.
325 Adler St.

KGY 1210 100 Olympia, Wash.
KGY, Inc., 11th and Capitol Way

KHJ 900 1000 Los Angeles, Calif.
7th at Bixel

KHQ 590 1000 Spokane, Wash.
Sprague Ave. & Post St.

KICA 1370 100 Clovis, N. M.
Southwest Broadcasting Co.

KID 1320 250 Idaho Falls, Idaho
Park Ave. & Broadway

KIDO 1350 1000 Boise, Idaho
Hotel Boise

KIDW 1420 100 Lamar, Colo.
Lamar Broadcasting Co., Box 688

KIEM 1210 100 Eureka, Calif.
Redwood Bdcstg. Co., Vance Hotel

KIEV 850 250 Glendale, Calif.
Cannon System, Ltd., Glendale Hotel

KIT 1310 100 Yakima, Wash.
109 1/2 E. Yakima Ave.

KIUJ 1310 100 Santa Fe, N. Mex.
J. H. Speck

KJBS 1070 100 San Francisco, Calif.
1380 Bush St.

KJR 970 5000 Seattle, Wash.
Skinner Bldg.

KLCN 1290 100 Blytheville, Ark.
C. L. Lintzenich, Main and Division St.

KLO 1400 500 Ogden, Utah
405 — 25th St.

KLPM 1240 250 Minot, N. D.
John B. Cooley, Box 707

KLRA 1390 1000 Little Rock, Ark.
Arkansas Broadcasting Co., Box 550

KLS 1440 250 Oakland, Calif.
Warner Bros., 2201 Telegraph Ave.

KLUF 1370 100 Galveston, Texas
Geo. R. Clough, 3327 Ave. P.

KLX 880 1000 Oakland, Calif.
Tribune Tower

KLZ 560 1000 Denver, Colo.
Shirley-Savoy Hotel

KMA 930 500 Shenandoah, Iowa
Earl E. May Seed & Nursery Co.

KMAC 1370 100 San Antonio, Texas
W. W. McAllister, Blue Bonnet Hotel

KMBC 950 1000 Kansas City, Mo.
Pickwick Hotel

KMED 1310 100 Medford, Ore.
Mrs. W. J. Virgin, Sparta Bldg.

KMJ 580 500 Fresno, Calif.
Van Ness & Calaveras Sts.

KMLB 1200 100 Monroe, La.
Francis Hotel

KMMJ 740 1000 Clay Center, Neb.
The M. M. Johnson Co.

KMO 1330 250 Tacoma, Wash.
KMO, Inc., Hotel Winthrop

KMOX 1090 50000 St. Louis, Mo.
401 S. 12th St.

KMPC 710 500 Beverly Hills, Calif.
9631 Wiltshire Blvd.

KMTR 570 500 Hollywood, Calif.
KMTR Radio Corp., 915 N. Formosa Ave.

KNOW 1500 100 Austin, Texas
Driskill Hotel

KNX 1050 25000 Hollywood, Calif.
West. Broadcast Co., Inc., 1558 N. Vine St.

KOA 830 50000 Denver, Colo.
General Electric Co., 1370 Krameria St.

KOAC 550 1000 Corvallis, Ore.
Oregon State Agricultural College

KOB 1180 10000 Albuquerque, N. M.
Albuquerque Journal, Box 667

KOH 1380 500 Reno, Nev.
440 N. Virginia St.

KOIL 1260 1000 Council Bluffs, Iowa
Mona Motor Oil Co.

KOIN 940 1000 Portland, Ore.
KOIN, Inc., New Heathman Hotel

KOL 1270 1000 Seattle, Wash.
Northern Life Tower

KOMA 1480 5000 Oklahoma City, Okla.
Biltmore Hotel

KOMO 920 1000 Seattle, Wash.
Skinner Bldg

KONO 1370 100 San Antonio, Texas
Mission Broadcast. Co., St. Anthony Hotel

KOOS 1200 250 Marshfield, Ore.
H. H. Hanseth, Hall Bldg.

KORE 1420 100 Eugene, Ore.
733 Willamette St.

KOTN 1500 100 Pine Bluff, Ark.
William H. Chaplin, Hotel Pines

KOY 1390 500 Phoenix, Ariz.
621 N. Central Ave.

KPAC 1260 500 Port Arthur, Texas
Port Arthur College

KPCB 710 100 Seattle, Wash.
Tower Bldg.

KPJM 1500 100 Prescott, Ariz.
Scott & Sturm, P. O. Box 782

KPO 680 50000 San Francisco, Calif.
111 Sutter St.

KPOF 880 500 Denver, Colo.
Pillar Of Fire, 1845 Champa St.

KPPC 1210 50 Pasadena, Calif.
585 E. Colorado St.

KPQ 1500 100 Wenatchee, Wash.
KPQ Bldg.

KPRC 920 1000 Houston, Texas
2204 Shell Bldg.

KQV 1380 500 Pittsburgh, Pa.
KQV Broadcasting Co., Investment Bldg.

KQW 1010 1000 San Jose, Calif.
87 E. San Antonio St.

KRE 1370 100 Berkeley, Calif.
2345 Channing Way

KREG 1500 100 Santa Ana, Calif.
3rd & Sycamore Sts.

KRGV 1260 500 Weslaco, Texas
KRGV, Inc.

KRKD 1120 500 Los Angeles, Calif.
815 Spring Arcade Bldg.

KRKO 1370 50 Everett, Wash.
Lee Mudgett, 2814 Rucker Ave.

KRLD 1040 10000 Dallas, Texas
KRLD Radio Corp., Adolphus Hotel

KRMD 1310 100 Shreveport, La.
Jefferson Hotel

KROW 930 500 Oakland, Calif.
1803 Franklin St.

KRSC 1120 100 Seattle, Wash.
Radio Sales Corp., Washington Athletic Club

KSAC 580 500 Manhattan, Kans.
State College of Agriculture

KSCJ 1330 1000 Sioux City, Iowa
Perkins Bros. Co., 415 Douglas St.

KSD 550 1000 St. Louis, Mo.
12th & Olive Sts.

KSEI 900 250 Pocatello, Idaho
Radio Service Corp., 141 S. 6th Ave.

KSL 1130 50000 Salt Lake City, Utah
Vermont Bldg.

KSLM 1370 100 Salem, Ore.
Oregon Radio, Inc.

KSO 1320 500 Des Moines, Iowa
Des Moines Register & Tribune

KSOO 1110 1000 Sioux Falls, S. D.
Sioux Falls Brdcst. Assn., Carpenter Hotel

KSTP 1460 10000 St. Paul, Minn.
St. Paul Hotel

KSUN 1200 100 Lowell, Ariz.
Copper Electrical Co., Drawer C

KTAB 560 1000 San Francisco, Calif.
5th & Mission Sts.

KTAR 620 1000 Phoenix, Ariz.
116 N. Central Ave.

KTAT 1240 1000 Fort Worth, Texas
Ft. Worth Natl. Bank Bldg.

KTBS 1450 1000 Shreveport, La.
Box 1642

KTFI 1240 1000 Twin Falls, Idaho
Radio Broadcasting Corp., Box 521

KTHS 1060 10000 Hot Springs, Ark.
Chamber of Commerce, Box 886

KTM 780 500 Los Angeles, Calif.
214 S. Vermont St.

KTRB 740 250 Modesto, Calif.
McTammany & Bates

KTRH 1330 1000 Houston, Texas
KTRH Broadcasting Co., Rice Hotel

KTSA 550 1000 San Antonio, Texas
Southwest Broadcasting Co., Plaza Hotel

KTSM 1310 100 El Paso, Texas
P. O. Box 1976

KTUL 1400 250 Tulsa, Okla.
National Bank of Tulsa Bldg.

KTW 1220 1000 Seattle, Wash.
77th Ave. & Spring St.

KUJ 1370 100 Walla Walla, Wash.
KUJ, Inc., Marcus Whitman Hotel

KUMA 1420 100 Yuma, Ariz.
Dr. A. H. Schermann, Box 267

KUOA 1260 1000 Fayetteville, Ark.
KUOA, Inc., Washington Hotel

KUSD 890 500 Vermillion, S. D.
University of South Dakota

KVI 570 1000 Tacoma, Wash.
W. R. Rust Bldg.

KVL 1370 100 Seattle, Wash.
KVL, Inc., 5th and Virginia St.

KVOA 1260 500 Tucson, Ariz.
Cons. Natl. Bank Bldg.

KVOD 920 500 Denver, Colo.
Continental Oil Bldg.

KVOO 1140 25000 Tulsa, Okla.
Wright Bldg.

KVOR 1270 1000 Colorado Spg., Colo.
Mining Exchange Bldg.

KVOS 1200 100 Bellingham, Wash.
115 W. Magnolia St.

KWCR 1430 250 Cedar Rapids, Iowa
Hotel Montrose

KWEA 1210 100 Shreveport, La.
Spring & Fannin Sts.

KWFV 1210 100 Hilo, Hawaii
Hilo Broadcasting Co., Ltd.

KWG 1200 100 Stockton, Calif.
Medico-Dental Bldg.

KWJJ 1040 500 Portland, Ore.
622 S. W. Salmon St.

KWK 1350 1000 St. Louis, Mo.
Thomas Patrick, Inc., Hotel Chase

KWKC 1370 100 Kansas City, Mo
39th & Main Sts.

KWKH 1100 10000 Shreveport, La.
Spring & Fannin Sts.

KWLC 1270 100 Decorah, Iowa
Luther College

KWSC 1220 1000 Pullman, Wash.
State College of Washington

KWTN 1210 100 Watertown, S. D.
Citizens Bank Bldg.

KWTO 560 1000 Springfield, Mo.
KGBX Inc.

KWYO 1370 100 Sheridan, Wyo.
Big Horn Brdcstg. Co.

KXA 760 250 Seattle, Wash.
American Radio Tel. Co., 218 Bigelow Bldg.

KXL 1420 100 Portland, Ore.
KXL Broadcasters, Multnomah Hotel

KXO 1500 100 El Centro, Calif.
F. M. Bowles, Box 140

KXRO 1310 100 Aberdeen, Wash.
KXRO, Inc., Hotel Morck.
KXYZ 1440 250 Houston, Texas
Fannin & Rusk Sts.
KYA 1230 1000 San Francisco, Calif.
988 Market St.
KYW 1020 10000 Philadelphia, Pa.
310 S. Michigan Ave.
KZEG 720 1000 Manila, P. I.
Erlanger & Gallinger, Inc.
KZRM 618.5 50000 Manila, P. I.
601 Escolta
NAA 690 1000 Arlington, Va.
United States Navy
RDN 680 500 San Salvador, E. S.
Republic of El Salvador
TGW 565 10000 Guatemala, Gua.
Gobierno de Guatemala
TGX 1400 150 Guatemala City
TICR 912 75 San Jose, C. R.
Government of Costa Rica
TIFB 714 30 San Jose, C. R.
TIGA 1014 30 Cartago, C. R.
TIGP 800 75 San Jose, C. R.
Gonzalo Pinto H. Apt. 225
TIRCA 1100 500 San Jose, C. R.
Perry Girton, Apt. 225
TISO 550 250 San Jose, C. R.
P. F. Saborio, Apt. 1354
TIVL 835 30 San Jose, C. R.
VAS 685 2000 Glace Bay, N. S.
Canadian Marconi Co., Ltd.
VE9EK 1185 10 Montmagny, Que.
J. A. Marquis, P. O. Box 52
VOAC 1300 40 St. John's, Nfld.
VOAS 940 100 St. John's N. F.
Ayre & Sons, Ltd., Water St.
VOGY 840 400 St. John's, N. F.
Newfoundland Hotel
VONF 950 5000 St. John's N. F.
Dominion Broadcasting Co., Ltd., Box 135
VOWR 681 500 St. John's, N. F.
Wesley United Church, Box 157
WAAB 1410 500 Boston, Mass.
21 Brookline Ave.
WAAF 920 500 Chicago, Ill.
836 Exchange Ave.
WAAT 940 300 Jersey City, N. J.
Bremer Broadcasting Corp., 50 Journal Sq
WAAW 660 500 Omaha, Neb.
Omaha Grain Exchange
WABC 860 50000 New York, N. Y.
485 Madison Ave.
WABI 1200 100 Bangor, Maine
First Universalist Society Park St.
WABY 1370 100 Albany, N. Y.
Colonial Display House
WACO 1420 100 Waco, Texas
Amicable Bldg.
WADC 1320 1000 Akron, Ohio
Allen T. Simmons, P. O. Box 29
WAGF 1370 100 Dothan, Ala.
Houston Hotel
WAGM 1420 100 Presque Isle, Me.
Aroostook Broadcasting Corp., Main St.
WAIU 640 500 Columbus, Ohio
Deshler-Wallick Hotel
WALA 1380 500 Mobile, Ala.
Battle House
WALR 1210 100 Zanesville, Ohio
First Trust & Savs. Bank Bldg.
WAML 1310 100 Laurel, Miss.
Southland Radio Corp., Box 26
WAPI 1140 5000 Birmingham, Ala.
Protective Life Bldg.
WARD 1400 500 Brooklyn, N. Y.
427 Flatbush Ave., Ext.
WASH 1270 500 Grand Rapids, Mich.
Grand Rapids Natl. Bank Bldg.
WATR 1190 100 Waterbury, Conn.
WATR Co. Inc. 47 Grand St.
WAVE 940 1000 Louisville, Ky.
WAVE, Inc., 1525 Brown Hotel
WAWZ 1350 250 Zarephath, N. J.
Pillar of Fire.
WAZL 1420 100 Hazleton, Pa.
Hazleton Broadcasting Service, Inc.
WBAA 890 1000 West Lafayette, Ind.
Purdue University
WBAL 1060 10000 Baltimore, Md.
Lexington Bldg.
WBAP 800 50000 Fort Worth, Texas
Blackstone Hotel
WBAX 1210 100 Wilkes-Barre, Pa.
John H. Stenger, Jr., 70 S. Main St.
WBBC 1400 500 Brooklyn, N. Y.
552-54 Atlantic Ave.
WBBL 1210 100 Richmond, Va.
1627 Monument Ave.
WBBM 770 25000 Chicago, Ill.
WBBM Broadcasting Corp., Wrigley Bldg.
WBBR 1300 1000 Brooklyn, N. Y.
124 Columbia Heights
WBBZ 1200 100 Ponca City, Okla.
C. L. Carrell, 407 W. South Ave.
WBCM 1410 500 Bay City, Mich.
James E. Davidson, Hotel Wenonah
WBEN 900 1000 Buffalo, N. Y.
WBEN, Inc., Hotel Statler
WBEO 1310 100 Marquette, Mich.
146 W. Washington St.
WBHS 1200 100 Huntsville, Ala.
Virgil V. Evans
WBIG 1440 500 Greensboro, N. C.
Box 408
WBNO 1200 100 New Orleans, La.
Hotel Marbero
WBNS 1430 500 Columbus, O.
33 N. High St.
WBNX 1350 250 New York, N. Y.
260 E. 161st St.
WBOQ 860 50000 New York, N. Y.
Atlantic Broadcasting Corp.
WBOW 1310 100 Terre Haute, Ind.
Banks of Wabash, Inc., 19 Beach Block
WBRB 1210 100 Red Bank, N. J.
63 Broad St.
WBRC 930 1000 Birmingham, Ala.
Bankhead Hotel
WBRE 1310 100 Wilkes-Barre, Pa.
Louis G. Baltimore, 16 N. Main
WBSO 920 500 Babson Park, Mass.
Drawer B
WBT 1080 50000 Charlotte, N. C.
Station WBT, Inc., Wilder Bldg.
WBTM 1370 100 Danville, Va.
Miller Bldg.
WBZ 990 50000 Boston, Mass.
Hotel Bradford

WBZA 990 1000 **Springfield, Mass.**
Hotel Kimball
WCAC 600 500 **Storrs, Conn.**
Connecticut State College
WCAD 1220 500 **Canton, N. Y.**
St. Lawrence University
WCAE 1220 1000 **Pittsburgh, Pa.**
6th Ave. & Smithfield St.
WCAL 1250 1000 **Northfield, Minn.**
St. Olaf College
WCAM 1280 500 **Camden, N. J.**
City of Camden, City Hall
WCAO 600 500 **Baltimore, Md.**
811 W. Lanvale St.
WCAP 1280 500 **Asbury Park, N. J.**
Convention Hall
WCAT 1200 100 **Rapid City, S. D.**
South Dakota State School of Mines
WCAU 1170 50000 **Philadelphia, Pa.**
WCAU Broadcasting Co., 1622 Chestnut
WCAX 1200 100 **Burlington, Vt.**
203 College St.
WCAZ 1070 100 **Carthage, Ill.**
97 1/2 Adams St.
WCBA 1440 500 **Allentown, Pa.**
B. Bryan Musselman, 39-41 10th St.
WCBD 1080 5000 **Waukegan, Ill.**
75 E. Wacker Drive, Chicago
WCBM 1370 100 **Baltimore, Md.**
Keith Theatre Bldg.
WCBS 1210 100 **Springfield, Ill.**
WCBS, Inc., 208 1/2 S. 5th.
WCCO 810 50000 **Minneapolis, Minn.**
Nicollet Hotel
WCFL 970 1500 **Chicago, Ill.**
666 Lake Shore Drive
WCHS 580 500 **Charleston, W. Va.**
WOBU, Inc., Ruffner Hotel
WCKY 1490 5000 **Covington, Ky.**
6th & Madison Sts.
WCLO 1200 100 **Janesville, Wis.**
200 E. Milwaukee St.
WCLS 1310 100 **Joliet, Ill.**
WCLS, Inc., 301 E. Jefferson St.
WCNW 1500 100 **Brooklyn, N. Y.**
Arthur Faske, 1525 Pitkin Ave.
WCOA 1340 500 **Pensacola, Fla.**
San Carlos Hotel
WCOC 880 500 **Meridian, Miss.**
Box 603
WCOL 1210 100 **Columbus, Ohio**
WCOL Inc., 30 N. High St.
WCRW 1210 100 **Chicago, Ill.**
Clinton R. White, 2756 Pine Grove Ave.
WCSC 1360 500 **Charleston, S. C.**
Francis Marion Hotel
WCSH 940 1000 **Portland, Me.**
579 Congress St.
WDAE 1220 1000 **Tampa, Fla.**
Tampa Times Co., Tampa Terrace
WDAF 610 1000 **Kansas City, Mo.**
1729 Grand Ave.
WDAG 1410 1000 **Amarillo, Texas**
Box 306
WDAH 1310 100 **El Paso, Texas**
Box 1976
WDAS 1370 100 **Philadelphia, Pa.**
WDAS Brdcstg. Co., Inc., Broadwood Hotel
WDAY 940 1000 **Fargo, N. D.**
WDAY, Inc., Black Bldg., 118 Broadway
WDBJ 930 1000 **Roanoke, Va.**
Times World Corp., P. O. Box 150

WDBO 580 250 **Orlando, Fla.**
555 N. Orange Ave.
WDEL 1120 250 **Wilmington, Del.**
WDEL, Inc., 10th and King Sts.
WDEV 550 500 **Waterbury, Vt.**
Harry C. Whitehill, Stowe St.
WDGY 1180 1000 **Minneapolis, Minn.**
Dr. Geo. W. Young, 909 W. Broadway
WDNC 1500 100 **Durham, N. C.**
Washington Duke Hotel
WDOD 1280 1000 **Chattanooga, Tenn.**
WDOD Broadcasting Corp., Hotel Patten
WDRC 1330 1000 **Hartford, Conn.**
WDRC, Inc., Corning Bldg., 11 Asylum St.
WDSU 1250 1000 **New Orleans, La.**
WDSU Inc., Hotel Monteleone
WDZ 1070 100 **Tuscola, Ill.**
James L. Bush, Star Store Bldg.
WEAF 660 50000 **New York, N. Y.**
30 Rockefeller Plaza
WEAN 780 500 **Providence, R. I.**
New Crown Hotel
WEBC 1290 1000 **Superior, Wis.**
Spaulding Hotel, Duluth, Minn.
WEBQ 1210 100 **Harrisburg, Ill.**
100 E. Poplar St.
WEBR 1310 100 **Buffalo, N. Y.**
Howell Broadcasting Co., Inc., 735 Main
WEDC 1210 100 **Chicago, Ill.**
Emil Denemark, 3860 Ogden Ave.
WEED 1420 100 **Rocky Mount, N. C.**
Wm. Avera Wynne, Box 221
WEEI 590 1000 **Boston, Mass.**
182 Tremont St.
WEEU 830 1000 **Reading, Pa.**
Berks Broadcasting Co., 533 Penn.
WEHC 1420 100 **Charlottesville, Va.**
7th & Main Sts.
WEHS 1420 100 **Cicero, Ill.**
WEHS, Inc., 6138 W. Cermak Rd.
WELL 1420 50 **Battle Creek, Mich.**
Enquirer News, 38 W. State St.
WENR 870 50000 **Chicago, Ill.**
222 N. Bank Drive
WESG 1090 1000 **Elmira, N. Y.**
Mark Twain Hotel
WEVD 1300 500 **New York, N. Y.**
Jewish Daily Forward, Hotel Claridge
WEW 760 1000 **St. Louis, Mo.**
St. Louis University, 221 N. Grand Blvd.
WEXL 1310 50 **Royal Oak, Mich.**
212 W. 6th St.
WFAA 800 50000 **Dallas, Texas**
Baker Hotel
WFAB 1300 1000 **New York, N. Y.**
Fifth Avenue Broadcasting Corp.
WFAM 1200 100 **South Bend, Ind.**
South Bend Tribune, 225 W. Colfax Ave.
WFAS 1210 100 **White Plains, N. Y.**
Hotel Roger Smith
WFBC 1300 1000 **Greenville, S. C.**
Imperial Hotel
WFBE 1200 100 **Cincinnati, Ohio**
WFBE, Inc., Hotel Sinton
WFBG 1310 100 **Altoona, Pa.**
Gable Broadcasting Co. 12th Av. & 13th St.
WFBL 1360 1000 **Syracuse, N. Y.**
Onondaga Hotel
WFBM 1230 1000 **Indianapolis, Ind.**
48 Monument Circle
WFBR 1270 500 **Baltimore, Md.**
7 St. Paul St.

WFDF 1310 100 Flint, Mich.
Union Industrial Bldg.

WFEA 1340 600 Manchester, N. H.
Carpenter Hotel

WFI 560 500 Philadelphia, Pa.
WFI Broadcasting Co., 801 Market

WFLA 620 1000 Clearwater, Fla.
Box 119

WGAL 1500 100 Lancaster, Pa.
WGAL, Inc., 8 W. King St.

WGAR 1450 500 Cleveland, Ohio
WGAR Broadcasting Co., Hotel Statler

WGBB 1210 100 Freeport, N. Y.
H. H. Carman, 64 S. Grove St.

WGBF 630 500 Evansville, Ind.
519 Vine St.

WGBI 880 500 Scranton, Pa.
116 N. Washington Ave.

WGCM 1210 100 Gulfport, Miss.
Great Southern Hotel

WGES 1360 500 Chicago, Ill.
128 N. Crawford Ave.

WGH 1310 100 Newport News, Va.
2813 Washington Ave.

WGL 1370 100 Fort Wayne, Ind.
F. C. Zieg, 213 W. Main St.

WGN 720 50000 Chicago, Ill.
WGN, Inc., Tribune Tower

WGNY 1210 100 Chester, N. Y.
Peter Goelet (Orange County)

WGPC 1420 100 Albany, Ga.
Rylander Theatre Bldg.

WGR 550 1000 Buffalo, N. Y.
Rand Bldg.

WGST 890 250 Atlanta, Ga.
Ansley Hotel

WGY 790 50000 Schenectady, N. Y.
1 River Road

WHA 940 2500 Madison, Wis.
University of Wisconsin

WHAM 1150 50000 Rochester, N. Y.
100 Carlson Road

WHAS 820 50000 Louisville, Ky.
300 W. Liberty St.

WHAT 1310 100 Philadelphia, Pa.
Public Ledger Bldg.

WHAZ 1300 500 Troy, N. Y.
8th St.

WHB 860 500 Kansas City, Mo.
WHB Broadcasting Co., Scarritt Bldg.

WHBC 1200 100 Canton, Ohio
Edw. P. Graham, 319 Tusc. St., W.

WHBD 1370 100 Mount Orab, Ohio
F. P. Moler

WHBF 1210 100 Rock Island, Ill.
Hotel Harms

WHBI 1250 1000 Newark, N. J.
100 Shipman St.

WHBL 1410 500 Sheboygan, Wis.
Press Publishing Co., Press Bldg.

WHBQ 1370 100 Memphis, Tenn.
Brdcstg. Sta. WNBQ, Inc., Hotel Claridge

WHBU 1210 100 Anderson, Ind.
Anderson Broadcasting Corp., Box 816

WHBY 1200 100 Green Bay, Wis.
WHBY, Inc., Bellin Bldg.

WHDF 1370 100 Calumet, Mich.
Box 643

WHDH 830 1000 Boston, Mass.
Matheson Radio Co., 62 Boylston

WHDL 1420 100 Olean, N. Y.
Exchange Natl. Bank Bldg.

WHEB 740 250 Portsmouth, N. H.
Box 522, 39 Congress St.

WHEC 1430 500 Rochester, N. Y.
WHEC, Inc., 40 Franklin St.

WHEF 1500 100 Kosciusko, Miss.
417 W. Adams St.

WHFC 1420 100 Cicero, Ill.
WHFC, Inc., 6138 W. Cermak Road

WHIS 1410 250 Bluefield, W. Va.
Bland St.

WHJB 620 250 Greensburg, Pa.
Penn-Albert Hotel, 128 Pa. Ave.

WHK 1390 1000 Cleveland, Ohio
1311 Terminal Tower

WHN 1010 1000 New York, N. Y.
1540 Broadway

WHO 1000 50000 Des Moines, Iowa
Central Brdcstg. Co., 914 Walnut St.

WHOM 1450 250 Jersey City, N. J.
2870 Boulevard

WHP 1430 500 Harrisburg, Pa.
WHP, Inc., 216 Locust St.

WIBA 1280 1000 Madison, Wis.
111 King St.

WIBG 970 100 Glenside, Pa.
WIBG, Inc., Keswick Bldg.

WIBM 1370 100 Jackson, Mich.
WIBM, Inc., 306 W. Michigan Ave.

WIBU 1210 100 Poynette, Wis.
Wm. C. Forrest, R. F. D. No. 3

WIBW 580 1000 Topeka, Kans.
11th & Topeka Blvd.

WIBX 1200 100 Utica, N. Y.
WIBX, Inc., 1st Natl. Bank Bldg.

WICC 600 250 Bridgeport, Conn.
Southern Conn. Broadcasting Corp.

WIL 1200 100 St. Louis, Mo.
Melbourne Hotel

WILL 890 250 Urbana, Ill.
University of Illinois

WILM 1420 100 Wilmington, Del.
920 King St.

WIND 560 1000 Gary, Ind.
504 Broadway

WINS 1180 1000 New York, N. Y.
110 E. 58th St.

WIOD 1300 1000 Miami, Fla.
Herald Bldg.

WIP 610 1000 Philadelphia, Pa.
Gimbel Bldg.

WIS 560 1000 Columbia, S. C.
Station WIS, Inc., 1811 Main St.

WISN 1120 250 Milwaukee, Wis.
123 W. Michigan St.

WJAC 1310 100 Johnstown, Pa.
WJAC, Inc., Locust St.

WJAG 1060 1000 Norfolk, Neb.
Norfolk Daily News

WJAR 890 500 Providence, R. I.
Outlet Co., Weybossett St.

WJAS 1290 1000 Pittsburgh, Pa.
Chamber of Commerce Bldg.

WJAX 900 1000 Jacksonville, Fla.
City of Jacksonville

WJAY 610 500 Cleveland, Ohio
1224 Huron Road

WJBC 1200 100 Bloomington, Ill.
Kaskaskia Broadcasting Co.

WJBK 1500 100 Detroit, Mich.
6559 Hamilton Ave.

WJBL 1200 100 Decatur, Ill.
Gushard Bldg.

WJBO 1420 100 Baton Rouge, La.
Baton Rouge Broadcasting Co., Inc.
WJBW 1200 100 New Orleans, La.
C. C. Carlson, 2743 Dumaine St.
WJBY 1210 100 Gadsden, Ala.
Gadsden Broadcasting Co., 112 N. 8th St.
WJDX 1270 1000 Jackson, Miss.
Lamar Life Bldg.
WJEJ 1210 100 Hagerstown, Md.
Lovely Dame Bldg.
WJIM 1210 100 Lansing, Mich.
Capital City Brdcstg. Co.
WJJD 1130 20000 Chicago, Ill.
WJJD, Inc., 201 N. Wells St.
WJMS 1420 100 Ironwood, Mich.
WJMS, Inc., St. James Hotel
WJR 750 10000 Detroit, Mich.
WJR, Inc., Fisher Bldg.
WJSV 1460 10000 Washington, D. C.
Shoreham Bldg.
WJTL 1370 100 Atlanta, Ga.
Oglethorpe University
WJW 1210 100 Akron, Ohio
WJW, Inc., 41 S. High St.
WJZ 760 50000 New York, N. Y.
30 Rockefeller Plaza
WKAQ 1240 1000 San Juan, P. R.
Radio Corp. of Porto Rico, P. O. Box 358
WKAR 1040 1000 East Lansing, Mich.
Michigan State College
WKBB 1500 100 East Dubuque, Ill.
Richard W. Hoffman
WKBF 1400 500 Indianapolis, Ind.
540 N. Meridian St.
WKBH 1380 1000 LaCrosse, Wis.
WKBH, Inc., 409 Main St.
WKBI 1420 100 Cicero, Ill.
WKBI Inc., 6138 W. Cermak Road
WKBN 570 500 Youngstown, Ohio
17 N. Champion St.
WKBO 1200 100 Harrisburg, Pa.
Penn Harris Hotel
WKBV 1500 100 Richmond, Ind.
Knox Radio Corp., Box 308
WKBW 1480 5000 Buffalo, N. Y.
Rand Bldg.
WKBZ 1500 100 Muskegon, Mich.
Karl L. Ashbacker & Sons
WKEU 1500 100 LaGrange, Ga.
Radio Station WKEU, 906 Hill St.
WKJC 1200 100 Lancaster, Pa.
16 W. King St.
WKOK 1210 100 Sunbury, Pa.
1150 N. Front St.
WKRC 550 1000 Cincinnati, Ohio
WKRC, Inc., Hotel Alms
WKY 900 1000 Oklahoma City, Okla.
Plaza Court Bldg.
WKZO 590 1000 Kalamazoo, Mich.
John E. Fetzer, Burdick Hotel
WLAC 1470 5000 Nashville, Tenn.
159—4th Ave. No.
WLAP 1420 100 Lexington, Ky.
Main & Esplanade
WLB 1250 1000 Minneapolis, Minn.
University of Minnesota
WLBC 1310 100 Muncie, Ind.
D. A. Burton, Anthony Bldg.
WLBF 1420 100 Kansas City, Kans.
WLBF Broadcasting Co., Huron Bldg.
WLBL 900 2500 Stevens Point, Wis.
Wisconsin Dept. of Agriculture and Markets
WLBW 1260 1000 Dayton, Ohio
39 S. Ludlow St.
WLBZ 620 500 Bangor, Me.
Maine Broadcasting Co., Inc., 100 Main
WLIT 560 500 Philadelphia, Pa.
8th & Market Sts.
WLLH 1370 100 Lowell, Mass.
Albert S. Moffat, Box D
WLNH 1310 100 Laconia, N. H.
523 Main St.
WLS 870 50000 Chicago, Ill.
1230 W. Washington Blvd.
WLTH 1400 500 Brooklyn, N. Y.
305 Washington St.
WLVA 1200 100 Lynchburg, Va.
915 Main St.
WLW 700 50000 Cincinnati, Ohio
1329 Arlington St.
WLWL 1100 5000 New York, N. Y.
415 W. 59th St.
WMAL 630 250 Washington, D. C.
712—11th St., N. W.
WMAQ 670 5000 Chicago, Ill.
Merchandise Mart
WMAS 1420 100 Springfield, Mass.
WMAS, Inc., 70 Chestnut St.
WMAZ 1180 1000 Macon, Ga.
211 Cotton Ave.
WMBC 1420 100 Detroit, Mich.
7310 Woodward Ave.
WMBD 1440 500 Peoria, Ill.
114 N. Madison St.
WMBG 1210 100 Richmond, Va.
914 W. Broad St.
WMBH 1420 100 Joplin, Mo.
1334 Roosevelt St.
WMBI 1080 5000 Chicago, Ill.
153 Institute Place
WMBO 1310 100 Auburn, N. Y.
WMBO, Inc., Metcalf Bldg.
WMBQ 1500 100 Brooklyn, N. Y.
Paul J. Gollhofer, 95 Leonard St.
WMBR 1370 100 Jacksonville, Fla.
F. J. Reynolds, Carling Hotel
WMC 780 1000 Memphis, Tenn.
WMC, Inc., Hotel Gayoso
WMCA 570 500 New York, N. Y.
1697 Broadway
WMEX 1500 100 Boston, Mass.
The Northern Corp., Hotel Manger
WMFD 1370 100 Wilmington, N. C.
Richard Austin Dunlea
WMFE 1380 250 New Britain, Conn.
William J. Sanders
WMFF 1310 100 Plattsburg, N. Y.
Plattsburg Broadcasting Corp.
WMFG 1210 100 Hibbing, Minn.
Head of the Lakes Brdcstg. Co.
WMFH 1120 500 Boston, Mass.

WMFI 900 500 New Haven, Conn.
Patrick J. Goode
WMFJ 1420 100 Daytona Beach, Fla.

WMMN 890 250 Fairmont, W. Va.
A. M. Rowe, Inc., 325 Main St.
WMPC 1200 100 Lapeer, Mich.
81 Liberty St.
WMT 600 500 Waterloo, Iowa
3rd & Lafayette Sts.
WNAC 1230 1000 Boston, Mass.
21 Brookline Ave.

WNAD 1010 500 Norman, Okla.
University of Oklahoma

WNAX 570 1000 Yankton, S. D.
House of Gurney, Inc., 2nd and Capital St.

WNBF 1500 100 Binghamton, N. Y.
Arlington Hotel

WNBH 1310 100 New Bedford, Mass.
251 Union St.

WNBO 1200 100 Washington, Pa.
319 E. Beau St.

WNBR 1430 500 Memphis, Tenn.
Memphis Broadcasting Co., Hotel DeVoy

WNBX 1260 1000 Springfield, Vt.
WNBX Broadcasting Corp., 39 Main St.

WNBZ 1290 50 Saranac Lake, N. Y.
Smith & Mace, 70 Broadway

WNEL 1290 500 San Juan, P. R.
Box 1252

WNEW 1250 1000 Newark, N. J.
Wodaam Corp., 1060 Broad

WNOX 1010 1000 Knoxville, Tenn.
WNOX, Inc., Hotel Andrew Johnson

WNRA 1420 100 Muscle Shoals, Ala.
Kathryn Jones, P. O. Box 486, Sheffield, Ala.

WNYC 810 1000 New York, N. Y.
Centre & Duane Sts.

WOAI 1190 50000 San Antonio, Texas
Southland Industries, Inc., 1038 Navarro

WOC 1370 100 Davenport, Iowa
Palmer School of Chiropractic

WOCL 1210 50 Jamestown, N. Y.
A. E. Newton, 840 N. Main St.

WOI 640 5000 Ames, Iowa
Iowa State College

WOKO 1430 500 Albany, N. Y.
WOKO, Inc., Hotel Ten Eyck

WOL 1310 100 Washington, D. C.
American Broadcasting Co., Annapolis Hote

WOMT 1210 100 Manitowoc, Wis.
Francis M. Kadow, Box 326

WOOD 1270 500 Grand Rapids, Mich.
Grand Rapids Natl. Bank Bldg.

WOPI 1500 100 Bristol, Tenn.
22nd & State Sts.

WOR 710 5000 Newark, N. J.
147 Market St.

WORC 1280 500 Worcester, Mass.
Alfred F. Kleindienst, 60 Franklin St.

WORK 1000 1000 York, Pa.
York Broadcasting Co., 15 S. Beaver St.

WOS 630 500 Jefferson City, Mo.
State Highway Control, Capitol Bldg.

WOSU 570 750 Columbus, Ohio
Ohio State University

WOV 1130 1000 New York, N. Y.
16 E. 42nd St.

WOW 590 1000 Omaha, Neb.
Woodmen of the World, 4th and Farnam

WOWO 1160 10000 Fort Wayne, Ind.
Main Auto Supply Co., 213 W. Main

WPAD 1420 100 Paducah, Ky.
2201 Broadway

WPAX 1210 100 Thomasville, Ga.
H. Wimpy, 135 E. Jackson St.

WPEN 920 250 Philadelphia, Pa.
22nd & Walnut Sts.

WPFB 1370 100 Hattiesburg, Miss.
Geo. T. Bishop, Box 530

WPG 1100 5000 Atlantic City, N. J.
Convention Hall

WPHR 880 100 Petersburg, Va.
WLBG, Inc., Medical Arts Bldg.

WPRO 630 250 Providence, R. I.
Cherry & Webb Brdcstg. Co., 15 Chestnut

WPTF 680 5000 Raleigh, N. C.
324 Fayetteville St.

WQAM 560 1000 Miami, Fla.
Miami Brdcstg. Co., Inc., 327 N. E. 1st Ave.

WQAN 880 250 Scranton, Pa.
Scranton Times, 149 Penn Ave.

WQBC 1360 500 Vicksburg, Miss.
Delta Broadcasting Co., Hotel Vicksburg

WQDM 1370 100 St. Albans, Vt.
42 N. Main St.

WRAK 1370 100 Williamsport, Pa.
WRAK, Inc., 244 W. 4th St.

WRAW 1310 100 Reading, Pa.
Reading Broadcasting Co., 533 Penn St

WRAX 920 250 Philadelphia, Pa.
WRAX Broadcasting Co., 217 S. Broad St.

WRBL 1200 100 Columbus, Ga.
Royal Theatre Bldg.

WRBX 1410 250 Roanoke, Va.
P. O. Box 2389

WRC 950 500 Washington, D. C.
National Press Bldg.

WRDO 1370 100 Augusta, Me.
WRDO, Inc., Augusta House

WRDW 1500 100 Augusta, Ga.
Augusta Brdcstg. Co., 309 8th St.

WREC 600 500 Memphis, Tenn.
WREC, Inc., Hotel Peabody

WREN 1220 1000 Lawrence, Kans.
Jenny Wren Co., 8th and Vermont St.

WRGA 1500 100 Rome, Ga.
10 Third Ave.

WRJN 1370 100 Racine, Wis.
Racine Broadcasting Corp., Hotel Racine

WROK 1410 500 Rockford, Ill.
109 So. Water St.

WROL 1310 100 Knoxville, Tenn.
Stuart Broadcasting Corp., 524 S. Gay

WRR 1280 500 Dallas, Texas
City of Dallas, Southland Life Bldg.

WRUF 830 5000 Gainesville, Fla.
State University

WRVA 1110 5000 Richmond, Va.
Larus & Bros Co., Inc., 22nd and Gary St.

WSAI 1330 1000 Cincinnati, Ohio
Crosley Radio Corp., 1329 Arlington

WSAJ 1310 100 Grove City, Pa.
Grove City College, 418 Poplar St.

WSAN 1440 500 Allentown, Pa.
WSAN, Inc., 39 10th St.

WSAR 1450 250 Fall River, Mass.
Academy of Music Bldg.

WSAZ 1190 1000 Huntington, W. Va.
WSAZ, Inc., P. O. Box 729

WSB 740 50000 Atlanta, Ga.
Atlanta Journal, 7 N. Forsyth St.

WSBC 1210 100 Chicago, Ill.
Gene T. Dyer, 1258 S. Michigan Ave.

WSBT 1360 500 South Bend, Ind.
South Bend Tribune, 225 W. Colfax Ave.

WSFA 1410 500 Montgomery, Ala.
Jefferson Davis Hotel

WSGN 1310 100 Birmingham, Ala.
R. B. Broyles, Tutwiler Hotel

WSIX 1210 100 Springfield, Tenn.
638 Tire & Vulcanizing Co.

WSJS 1310 100 Winston-Salem, N. C.
Winston-Salem Journal Co., 416 N. Marshall

WSM 650 50000 Nashville, Tenn.
301—7th Ave. No.

WSMB 1320 500 New Orleans, La.
WSMB, Inc., Maison Blanche Bldg.

WSMK 1380 200 Dayton, Ohio
WSMK Inc., 4th and Main St.

WSOC 1210 100 Charlotte, N. C.
WSOC, Inc., Box 730

WSPA 920 1000 Spartanburg, S. C.
Virgil V. Evans, Ravenel and Avant St.

WSPD 1340 1000 Toledo, Ohio
Toledo Broadcasting Co., 505 Jefferson

WSUI 880 500 Iowa City, Iowa
State University of Iowa

WSUN 620 1000 St. Petersburg, Fla.
Chamber of Commerce

WSVA 550 500 Staunton, Va.
Marion K. Gilliam

WSVS 1370 50 Buffalo, N. Y.
666 E. Delavan Ave.

WSYB 1500 100 Rutland, Vt.
Philip Weiss Music Co., 80 West St.

WSYR 570 250 Syracuse, N. Y.
E. Onondaga & S. Warren Sts.

WTAD 1440 500 Quincy, Ill.
Illinois Brdcstg. Corp., State and 6th

WTAG 580 500 Worcester, Mass.
18 Franklin St.

WTAM 1070 50000 Cleveland, Ohio
1367 E. 6th St.

WTAQ 1330 1000 Eau Claire, Wis.
Gillette Rubber Co., Hotel Eau Claire

WTAR 780 500 Norfolk, Va.
WTAR Radio Corp., Wainwright Bldg.

WTAW 1120 500 College Station, Tex.
Agricultural and Mechanical College

WTAX 1210 100 Springfield, Ill.
WTAX, Inc., 416 E. Capitol Ave.

WTBO 800 250 Cumberland, Md.
Associated Brdcstg. Corp., Box 794

WTCN 1250 1000 Minneapolis, Minn.
Wesley Temple Bldg.

WTEL 1310 100 Philadelphia, Pa.
Broad & Erie Ave.

WTFI 1450 500 Athens, Ga.
133 E. Washington St.

WTIC 1040 50000 Hartford, Conn.
26 Grove St.

WTJS 1310 100 Jackson, Tenn.
Sun Publishing Co., Sun Bldg.

WTMJ 620 1000 Milwaukee, Wis.
The Journal Co., 333 W. State St.

WTNJ 1280 500 Trenton, N. J.
Trenton Brdcstg. Co., Stacy Trent Hotel

WTOC 1260 1000 Savannah, Ga.
Savannah Brdcstg. Co., De Soto Hotel

WTRC 1310 50 Elkhart, Ind.
Truth Radio Corp., Hotel Elkhart

WVFW 1400 500 Brooklyn, N. Y.
Paramount Brdcstg. Co., 1 Nevins St.

WWAE 1200 100 Hammond, Ind.
402 Hammond Bldg.

WWC 1420 1000 Spartanburg, S. C.
Virgil V. Evans, Ravenal & Avant St.

WWJ 920 1000 Detroit, Mich.
Evening News Assn., 616 Lafayette Blvd.

WWL 850 10000 New Orleans, La.
Loyola University, Roosevelt Hotel

WWNC 570 1000 Asheville, N. C.
Citizen Brdcstg. Co., Inc., Flatiron Bldg.

WWPA 850 250 Clarion, Pa.

WWRL 1500 100 Woodside, N. Y.
4130—58th St.

WWSW 1500 100 Pittsburgh, Pa.
Hotel Schenley

WWVA 1160 5000 Wheeling, W. Va.
Hawley Bldg.

WXYZ 1240 1000 Detroit, Mich.
Madison Theatre Bldg.

W1XBS 1530 1000 Waterbury, Conn.
61 Leavenworth St., Amer. Republican, Inc.

W2XR 1550 1000 Long Island City, N. Y.
Scientific Brdcstg. Serv., 41 Park Row, N. Y.

W6XAI 1550 1000 Bakersfield, Calif.
Pioneer Mercantile Co.

W9XBY 1530 1000 Kansas City, Mo.
First National Television Inc.

XEA 1060 125 Guadalajara, Jal.
Alberto Palos Souza, Apdo. 197

XEAA 920 200 Mexicali, B. C.
Apdo. 42

XEAF 990 250 Nogales, Son.
Francisco G. Elias, Hotel Central

XEAI 1240 100 Mexico City, D. F.
Carlos Gonzales Caballero, Insurgentes 366

XEAM 750 50 Nuevo Laredo, Tams.
Edificio Banco Longoria

XEAO 560 250 Mexicali, B. C.
Luis L. Castro, C. Altamirano 156

XEAW 960 10000 Reynosa, Tams.
Internacional Broadcasting Co., S. A.

XEAZ 1420 7 Leon, Guan.
Pocitos 47

XEB 1030 10000 Mexico City, D. F.
El Buen Tono, S. A., Apdo. 79-44

XEBC 730 2500 Agua Caliente, B. C.
Agua Caliente Hotel

XEC 1310 50 Tijuana, B. C.

XECW 1310 10 Mexico City, D. F.
Maria Elena Bravo de Cordero Ave. Juarez 104

XED 1160 500 Guadalajara, Jal.
Cia. Radiofonografica, Apdo. 197

XEE 1210 50 Durango, Dgo.
20 de Nov. 112 (Apdo. 148)

XEFA 1180 500 Mexico City, D. F.
Eduardo Limon Segui, Meditarraneo 236

XEFB 1420 100 Monterrey, N. L.
Jesus Quintanilla, P. O. Box 317

XEFC 1310 100 Merida, Yuc.
J. Molina Font. Calle 59, 517

XEFE 1370 100 Laredo, Tams.
R. T. Carranza, Km. 4 Carretera Laredo Mt.

XEFG 1100 250 Mexico City, D. F.
Ricardo Gonzales Montero, Tepic 48

XEFI 1440 250 Chihuahua, Chih.
Feliciano Lopez Isles, Ap. 157

XEFJ 1230 100 Monterrey, N. L.
R. Junco de la Vega, P. O. Box 186

XEFL 1160 500 Tijuana, B. C.
(P. O. Box 6, San Diego, Calif.)

XEFO 940 5000 Mexico City, D. F.
Reforma No. 137

XEFV 1210 100 Jaurez, Chih.
Cordova & Prieto, Ave. Ferrocarril 104

XEFW 1310 70 Tampico, Tams.
J. E. Martinez, Salvador Diaz Miron 6

XEFZ 1370 100 Mexico City, D. F.
Manuel Zetina, Calzada Nonoalco 481

XEG 1280 500 Ensenada, B. C.

XEH 1150 250 Monterrey, N. L.
Tarnava y Cia, P. O. Box 147

XEI 1370 125 Morelia, Mich.
Carlos Gutierrez M., F. I. Madero 545

XEJ 1020 1250 Juarez, Chih.
Juan G. Buttner, P. O. Box 111
XEK 990 100 Mexico City, D. F.
Arturo Martinez, Jalapa No. 51
XEKL 1240 500 Leon, Guan.
5 de Mayo 26
XEMA 1080 50 Tampico, Tams.
Manuel M. Pier, Aretsanos 10
XEMO 865 2500 Tijuana, B. C.
P. O. Box 202, San Diego, Calif.
XEN 710 1000 Mexico City, D. F.
Cerveceria Modelo Ave. Juarez 77
XENT 910 60000 Nuevo Laredo, Tams.
Box 410, Laredo, Texas
XEOX 640 250 Saltillo, Coah.
Victoria No. 4, Altos.
XEP 820 500 Mexico City, D. F.
Cia Difusora de Mexico S. A., Rembrandt 11
XEPN 590 50000 Piedras Negras, Coah.
Piedras Negras Brdcstg. Co., Madero 53
XES 970 250 Tampico, Tams.
Fernando Sada, Box 309
XET 690 500 Monterrey, N. L.
P. O. Box 203, Hidalgo
XETB 1310 125 Torreon, Coah.
Jose A. Berumen, R. Corona 317
XETH 1210 100 Puebla, Pue.
Ramon Huerta G., Calle 17 ,Oriente 11
XETW 820 500 Mexico City, D. F.
Rafael M. Pena, Ave. 16 de Sep. 83

XEU 1010 250 Veracruz, Ver.
Fernando Pazos Sosa, Independencia 98
XEW 890 50000 Mexico City, D. F.
P. O. Box 2516
XEWZ 1150 100 Mexico City, D. F.
Medellin e Insurgentes
XEX 1310 125 Monterrey, N. L.
L. F. Petit Jean, P. O. Box 10
XEXX 845 500 Mexico City, D. F.
Av. Pino Suarez 9
XEYZ 780 10000 Mexico City, D. F.
Angel M. Diez, Ave. Juarez 48
XEZ 630 500 Merida, Yuc.
XEZZ 1370 100 San Luis Potosi, SLP
Emilio Delgado R. Ave. Chicosein 32
XFB 1270 1000 Jalapa, Ver.
Gobierno del Estado de Veracruz
XFC 810 350 Aguascallentes, Ags.
Gobierno del Estado de Aguascallentes
XFD 1340 350 Orizaba, Ver.
Gobierno Estado de Veracruz
XFO 940 5000 Mexico City, D. F.
Nat. Rev. Party, Ave. Morelos 110
XFX 610 1000 Mexico City, D. F.
Secretaria de Educacion Publica
10-AK 1200 15 Stratford, Ont.
M. I. Higgins, 151 Ontario St.
10-BP 1200 25 Wingham, Ont.
W. T. Cruickshank, Box 65
10-BU 1200 50 Canora, Sask.
Canora Radio Assn.

100 Best Shortwave Stations by Call Letters

Frequencies are given in megacycles and the time is Eastern Standard. In this list, the location of the transmitter is given. For a more complete list of the shortwave stations by frequencies, by calls and by countries, see the *DX Log of the World*.

Amateur phones are heard between 1.875 and 2.000 megs. 3.900 and 4.000 megs. 7.000 and 7.300 megs. (Foreign only). 14.150 and 14.250 megs.

Broadcast Pickup stations: 1.606; 1.622; 1.646; 2.102; 2.150; 2.190; 2.390.

CJRO, Middlechurch, Man., 6.150. Relays Canadian Radio Com. programs, 8-11 p.m. and 11:30 to midnight.

CJRX, Middlechurch, Man., 11.720. Same schedule as CJRO, q. v.

COC, Havana, Cuba, 6.010. 4-6 p.m.; 8-9; and 10-11 p.m. daily. Sat., 11:30-12:30 p.m.

COH, Havana, Cuba, 9.500. 5-6; 8-9 p.m.

CP5, La Paz, Bolivia, 6.080. 8-9 p.m.

CT1AA, Lisbon, Portugal, 9.600. Tues., Thurs., Fri., 4:30-7 p.m.

CT1GO, Lisbon, Portugal, 6.190. Sat., 8-9 p.m.; Tues, Thurs., 7:30-8:15 p.m. 12.330: Sat., Sun., 9-10 a.m.

DJA, Zeesen, Germany, 9.560. Daily, 8-11:30 a.m.; 5:15-9:15 p.m.

DJB, Zeesen, Germany, 15.200. 3:45-7:15 a.m

DJC, Zeesen, Germany, 6.020. Noon to 4:30 p.m.; 5:30-10:45 p.m.

DJD, Zeesen, Germany, 11.760: Noon to 4:30 p.m.

DJE, Zeesen, Germany, 17.760. Irregularly, Mornings.

DJN, Zeesen, Germany, 9.540. 3:45-7:15 a.m.; 8-11:30 a.m.; 5:15-10:45 p.m.

EAQ, Aranjuez, Spain, 9.862. 5:30-7 p.m.; Sat. noon to 2 p.m.

GBB, Rugby, England, 13.500. Phones Canada.

GBS, Rugby, England, 12.150. Phones N.Y.

GBU, Rugby, England, 12.240. Phones N. Y.

GBW, Rugby, England, 14.440. Phones N. Y. 6-8 p.m.

GSA, Daventry, England, 6.050. 10:45 a.m. to 12:45 p.m.; 4:30-5:45 p.m.; 6-8 p.m.

GSB, Daventry, England, 9.510. 3-5 a.m.; 7:30 a.m. to 5:45 p.m.

GSC, Daventry, England, 9.585. 6-8 p.m.

GSD, Daventry, England, 11.750. 3-5 a.m.; 1-4:30 p.m.

GSE, Daventry, England, 11.865. 9:15-10:45 a.m.

GSF, Daventry, England, 15.140. 6-9 a.m.

GSG, Daventry, England, 17.790. 6-8:30 a.m.

HBL, Prangins, Switzerland, 9.595. Sat. 5:30-6:15 p.m.

HBP, Prangins, Switzerland, 7.797 Sat. 5:30-6:15 p.m.

HCJB, Quito, Ecuador, 8.200. 8:15-10:15 daily except Monday.

HC2ET, Guayaquil, Ecuador, 4.600 Fri., Sat., 9:30-11 p.m.

HC2RL, Guayaquil, Ecuador, 6.659. Tues. 9:14-11:14 p.m.; Sun. 5:45-7:45 p.m.

HIH, San Pedro de Macoris, D. R., 6.810. 4-7:30 p.m.

HIX, Santo Domingo, D. R., 5.948. Tues. and Fri., 8-10 p.m.

HI1A, Santiago de los Caballeros D.R., 6.240. 7:30-9:30 p.m. daily.

HI4-D, Santo Domingo, D.R., 6.500. 4:40-7:40 p.m.

HJA2, Bogota, Colombia, 5.825.

HJA3, Barranquilla, Colombia, 12.830

HJB, Bogota, Colombia, 14.930.

HJN, Bogota, Colombia, 6.080 Tests irreg.

HJ1ABB, Barranquilla Colombia, 6.447. 5-10 p.m.

HJ1ABE, Cartagena, Colombia, 6.115, Monday, 10-mid., Wed., 8-10 p.m.

HJ1ABG, Barranquilla, Colombia 6.042. 7-10 p.m.

HJ3ABD, Bogota, Colombia, 7.406. "Colombia Broadcasting." 6-9 p.m. daily.

HJ4ABB, Manizales, Colombia, 7.200 Wed., 8-9 p.m.; Sun., 3-6 p.m.

AROUND *the* CLOCK *on the* SHORT WAVES

MIDNIGHT TO NOON (EST)

GMT	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	COC W3XAL W8XK W9XF	HI1A TGX VK2ME W9XF	TGX VK2ME	DJB DJN GSB GSD RV15	DJB DJN GSB GSD JVT RV15 VK3LR	DJB DJN HVJ RNE RV15 JVT VK2ME VK3LR VK3ME YDA	DJB DJN GSF GSG HSJ RV15 JVT VE9GW VK2ME VK3LR W1XAZ YDA	GSF GSG Pont. Rabat RV15 VE9GW VK2ME VK3LR W1XAZ W8XK	DJN GSF GSG PCJ PHI Pont. Rabat. VE9GW VK2ME W1XAZ W8XK	DJA DJN GSE PCJ PHI Pont. VE9GW W1XAZ W8XK	DJA DJN GSA GSB GSE HVJ PCJ PHI Pont. VE9GW W1XAZ W8XK W3XAL	DJA DJN GSA GSB Pont. Rabat. VE9GW W1XAZ W2XE W3XAL W3XL W8XK W9XAA

NOON TO MIDNIGHT (EST)

GMT	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	1:00	2:00	3:00	4:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	DJC DJD EAQ GSA GSB Pont. VE9GW VUB W1XAZ W2XE W3XAL W3XAU W3XL W8XK W9XAA	DJC DJD EAQ GSB GSD Pont. VE9GW W1XAZ W3XAL W3XAU W3XL W8XK W9XAA XEBT	DJC DJD GSB GSD Pont. Rabat VE9GW W1XAZ W2XAD W3XAL W3XAU W3XL W8XK W9XAA XEBT	DJC DJD GSB GSD ORK Pont. Rabat RV59 VE9GW W1XAZ W2XE W3XAL W3XAU W3XL W8XK W9XAA XEBT	COC CT1AA DJC DJD GSA GSB GSD I2RO Pont. Rabat RV59 VE9GW W1XAZ W2XE W3XAU W3XL W8XK W9XF W9XAA XEBT YV3RC	COC COH CT1AA DJA DJN DJC EAQ GSA GSB HBL HBP HC2RL HJ1ABB I2RO Pont. PRF5 Rabat RV59 VE9GW W1XAZ W3XAL W3XAU W8XK W9XF W9XAA XEBT YV2RC YV3RC	CT1AA DJA DJN DJC DJD EAQ GSA GSC HBL HBP HC2RL HJ1ABB I2RO Pont Rabat VE9GW W1XAZ W2XE W3XAL W3XAU W8XK W9XAA W9XF XEBT YV2RC YV3RC YV4RC YV5RMO	DJA DJN DJD GSA GSC HC2RL HJ1ABB HJ1ABG I2RO Pont. VE9GW W1XAL W1XAZ W2XAF W2XE W3XAL W3XAU W8XK W9XAA W9XF XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJRX COC COH CP5 DJA DJN DJC HCJB HIX HJ1ABB Pont. VE9GW W1XAL W1XAZ W2XAF W2XE W3XAL W3XAU W8XK W9XAA XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJRX DJN DJC HCJB HC2RL HIX HJ1ABB OAX4D PRADO VE9GW W1XAZ W2XAF W2XE W3XAL W3XAU W8XK W9XF W9XAA XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJRX DJC DJN HC2RL OAX4D Pont. PRADO W1XAZ W2XAF W2XE W3XAL W3XAU W8XK W9XF XEBT YV2RC	CJRO CJRX COC Pont. W1XAZ W3XAL W3XAU W8XK W9XAA W9XF

HJ4ABE, Medellin, Colombia, 5.900. 7-11 p.m.

HJ5ABD, Cali, Colombia, 6.490. Thurs., Sat., Sun., 7-9 p.m.

HPF, Panama City, Panama, 14.545. Phones Hialeah.

HP5B, Panama City, Panama, 6.030. 7-10:30 p.m.

HSJ, Bangkok, Siam, 7.980.

HVJ, Vatican City, 15.120. 5-5:15 a.m. daily except Sunday. Occasionally from 10-10:30 a.m.

I2RO, Rome, Italy.
5.550:
5.725:
6.070: 6:30-8 p.m., Mon., Wed., Fri.
6.980:
9.630: 4-7 p.m. irreg.
9.780: 4-7 p.m. irreg.

JVE, Nazaki, Japan, 15.660. Phones Java, nights.

JVF, Nazaki, Japan, 15.620. Phones Dixon, 5-11 p.m.

JVH, Nazaki, Japan, 14.600. Phones Europe, 2-6 a.m.

JVQ, Nazaki, Japan, 7.470. Phone.

JVT, Nazaki, Japan, 6.750: 4-8 a.m.

KAY, Manila, P. I., 14.980. Phones Dixon.

KKH, Kahuku, T. H., 7.520. Phones Dixon.

KKP, Kahuku, T. H., 16.030. Phones Dixon.

KNRA, "Seth Parker", 6.160; 6.660; 6.670; 8.230; 8.820; 8.840; 13.200

KWO, Dixon, Calif., 15.415. Phones Hawaii and Manila.

KWU, Dixon, Calif., 15.355. Phones Japan.

KWX, Dixon, Calif., 7.610. Phones Hawaii.

LCL, Jeloy, Norway, 9.550: 11 a.m.-5 p.m.

LSX, Monte Grande, Argentina, 10.350. Phones New York

OAX4D, Lima, Peru, 5.780: Wed., 9-11:30 p.m.

ORK, Ruysselede, Belgium, 10.330. 2:45-4:15 p.m.

PCJ, Hilversum, Netherlands, 15.220.
15.220. Daily exc. Tues and Wed., 8-11 a.m.

PHI, Hilversuum, Netherlands, 11.725. 8-11 a.m.

Police Stations, on frequencies 1.596; 1.634; 1.642 1.658 1.666 1.674; 1.682; 1.706 1.712 2.382 2.406; 2.414; 2.416 2.422 2.430; 2.442; 2.450; 2.452 2.458; 2.466; 2.474; 2.482; 2.490.

PRADO, Riobamba, Ecuador, 6.618. Thurs., 9-11:30 p.m.

PRF5, Rio de Janeiro, Brazil, 9.505. 5:30-6:15 p.m.

Radio Colonlaic, Pontoise, France, 11.710: 1:15-5 p.m.; 5:15-9 p.m.; 10 p.m. to midnight.
11.905: 11:15 a.m. to 5 p.m.
15.243: 7:30-11 a.m.

Rabat, Morocco, 8.035. Sun., 11 a.m. to noon, 2-7 p.m.
12.830. Sun., 7-9 a.m.

RKI, Moscow, U.S.S.R., 7.520. Phones USA.

RNE, Moscow, U.S.S.R., 12.000. Sun., 6 a.m. and 10 a.m.

RV15, Khabarovsk, U.S.S.R., 4.273. 3-9 a.m.

RV59, Moscow, U.S.S.R., 5.996. 3-6 p.m.

TGX, Guatemala City, Guatemala 5.937. Sun., 1-3 a.m.; other days, 8-12 p.m.

TIEP, San Jose, Costa Rica, 6.710. 7-10 p.m.

TYA, Pontoise, France, 12.215. Phones Algeria.

VE9GW, Bowmanville, Ont., 6.095. Sun., noon to 8 p.m.; Mon., Tues., Wed., 2-11 p.m.; Thur., Fri., Sat., 6 a.m. to 11 p.m.

VE9HX, Halifax, N. S., 6.110. 5-11 p.m.

VK2ME, Pennant Hills, Australia, 9.585. Mid. to 2 a.m. and 4:30-8:30 a.m., Sundays only.

VK3LR, Melbourne, Australia, 9.580. Daily exc. Sun. 4-8 a.m.

VK3ME, Braybank, Australia 9.503. Wed., 5-6:30 a.m.; Sat. 5-7 a.m.

VUB, Bombay, India 9.565. Testing from noon to 1 p.m.

WOO, Ocean Gate, N. J., 4.273; 4.753; 8.560; 12.840. Phones Ships.

W1XAL, Boston, Mass., 6.040. Tues., Thurs., Sun., 7:30-9:30 p.m.

W1XAZ, Millis, Mass., 9.570. 6 a.m. to midnight.

W2XAD, Schenectady, N. Y., 15.340. 2:30-3:30 p.m.

W2XAF, Schenectady, N. Y., 9.530. 7:40-11 p.m.

W2XE, Wayne, N. J., 6.120. 6-11 p.m.
11.830. 3-5 p.m.
15.270. 11 a.m. to 1 p.m.

W3XAL, Boundbrook, N. J., 6.100. Mon., Wed., Sat., 5 p.m. to midnight.
17.780. Daily exc. Fri., 8 a.m. to 2 p.m.

W3XAU, Newton Sq., Pa., 6.060. 8 p.m. to 11 p.m.
9.590. Noon to 8 p.m.

W3XL, Boundbrook, N. J. 17.310. Fri., 11 a.m. to 5 p.m.

W8XAL, Mason, Ohio, 6.060. Irregular.

W8XK, Saxonburg, Pa., 6.140. 4:30 p.m. to 12:30 a.m.
11.870. 4:30-10 p.m.
15.210. 10 a.m. to 5:15 p.m.
21.540. 7 a.m. to 2 p.m.

W9XAA, Chicago, Ill., 6.080. Sun., 11:30 a.m. to 9 p.m.
Tues. Thur., Sat., 4-12 p.m.
Mon., Wed. Fri., 4:30-7 p.m.

W9XF, Downer's Grove, Ill., 6.100. Daily exc. Sat. and Sun., 4:30.

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"I have been a reader and user of your wonderful publication for the past three years. Can't see how any radio fan can function without it—whether they are short wave or just regular broadcast fans."

C. C. Lowe, 12532 Waltham, Detroit, Mich.

"I would like to take this opportunity to add a word of praise for your magazine as I consider it by far the best publication of its kind obtainable in Canada. The various articles are so nicely proportioned with the frequency index so easy to understand and always up to date. The Beginners' Story of Radio is worth many dollars to the student."

Lewis Middlecote, 166 Lansdowne Ave., Winnipeg, Man.

"I compliment you upon such a well-put-up magazine. Your plan of indexing stations is the last word in convenience."

Berkeley W. B. Hutchinson, North Galiano Island, B. C.

9 p.m.; 9:30 p.m. to 2 a.m. Sunday, 4:30-7 p.m. and 9 p.m. to 2 a.m.

XEBT, Mexico City, D. F., 6.010. Relays XEB, 10 a.m. to 11 p.m.

XGL, Shanghai, China, 7.960.

XGN, Shanghai, China, 16.380.

XGO, Shanghai, China, 7.575.

YDA, Bandoeng, Java, 6.116. A NIROM station.

YNA, Managua, Nicaragua, 14.480. Phones Hialeah.

YNLF, Managua, Nicaragua, 6.950. 7-8; 10-11 p.m.

YVQ, Maracay, Venezuela, 6.672. Relays Caracas BC stations occasionally.

YVR, Maracay, Venezuela, 9.168. Phones Madrid.

YVQ, Maracay, Venezuela, 6.672.

YV2RC, Caracas, Venezuela, 6.112. 5:15-10 p.m.

YV3RC, Caracas, Venezuela, 6.150. 5-10 p.m.

YV4RC, Caracas, Venezuela, 6.375. 4:30-10:30 p.m.

YV5RMO, Maracay, Venezuela, 5.850; 5:15-10:15 p.m.

YV6RV, Valencia, Venezuela, 6.030. "La Voz de Carabobo."

ZFB, St. George, Bermuda, 10.060.

ZFS, Nassau, Bahamas, 4.513. The Cadena Indo-Americano includes stations: HJ1ABH, PRADO, TIEP, YNLF, YV4RC, YV5RMO.

THE MONTH'S CHANGES

FREQUENCIES

730	XEBC	Agua Caliente B. C., from 760
910	XENT	Nuevo Laredo, Tams., from 1120
1010	XEU	Veracruz Ver., from 980
1050	CFCO	Chatham, Ont., from 600
1120	CKX	Brandon, Man., from 1450
1230	CMOK	Havana, Cuba, from 1375
1230	XEFJ	Monterrey, N. L.
1240	XEKL	Leon, Guan., from 920
1450	CHGS	Summerside, P. E. I., from 1500

NEW

600	CRCW	Windsor, Ontario
630	XEZ	Merida, Yuc.
780	CKSO	Sudbury, Ontario
1160	XEFL	Tijuana, B. C.
1280	XEG	Ensenada, B. C.
1310	XEC	Tijuana, B. C.
1420	WMFJ	Daytona Beach, Fla.
....	WWC	Spartanburg, S. C.
....	.....	Ponce, Puerto Rico
....	.....	Lewiston, Idaho

CALLS

1210	WPAX	Thomasville, Ga., from WQDX
1230	CMOK	Havana, Cuba, from COK
1320	CMOX	Havana, Cuba, from COX

POWER

840	CMQ	Havana, Cuba, 340 to 5000
910	XENT	Nuevo Laredo, Tams., 50,000 to 60,000
1020	XEJ	Juarez, Chih., 250 to 1250

OWNERS

1200	KGHI	Little Rock, Ark., to Arkansas Broadcasting Co.
1500	WRDW	Augusta, Ga., to Augusta Broadcasting Co.
1530	WIXBS	Waterbury, Conn., to American Republican, Inc.
1550	W2XR	Long Island City, to Scientific Broadcasting Service

DELETIONS

660	XEAL	Mexico City
920	XEOR	Tijuana, B. C.
980	XEAE	Mexicali, B. C.
1210	XEMZ	Tijuana, B. C.

CHAINS

1200	WIBX	Utica, N. Y., new CBS
1340	WCOA	Pensacola, new CBS
1500	WNBF	Binghamton, N. Y., new CBS

The February DX Log of the World contains both the broadcast and short wave stations, each listed three ways.

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☐ Leatherette Cover ..... .50

Beginner's Story of Radio ..... .75

☐ DX Radio Log of the World (Broadcast Band and Short Waves)..... .10

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86 City and State.....

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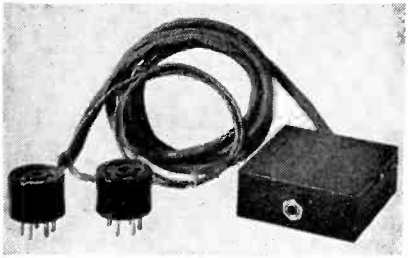

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4. **Station Group Locator;**
5. **Simplified Tuning Guide Lights;**
6. **Automatic Select-O-Band Indicator;**
7. **Illuminated Pointer Indicator;**
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