

THE FEBRUARY, 1935

RADIO IN DEX

THE ALL-WAVE RADIO MAGAZINE



25^c

**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

February 1, 1935



RADIO INDEX

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ELEVENTH YEAR

NUMBER 86

CONTENTS

Frontispiece—Ruth Newman
Young Singer of the Columbia

	PAGE
An Analysis of the Super "Skyrider," by B. Francis Dashiell	3
"What are Megacycles for?," by Page Taylor	6
How Radio Sounds are Produced and Controlled, by B. Francis Dashiell.....	10
Presenting "The Voice of Experience," by "Betty"	18
In the Business Department, with the Editor	21
Advice for Ailing Sets, by the Technical Editor	23
Our Readers Report the Stations Received	29
The Short Wave Club Meets, with Page Taylor	35
"I Prefer the Broadcast Band," by Dr. Harold R. Jacobs	40
DX Doings in "Down Under," by Roy W. Arthur	42
Radio Prevents Air Tragedy	44
Our Canadian Readers Argue Broadcasting Systems	46
The February Calendar of DX Programs and Frequency Checks.....	49
Where to Get the News of the Day	52
"What's on the Air Tonight?"	53
How to Find Your Favorite Program	61
Wednesday's Time on the Air and Index by Frequencies.....	63
Index by States and Cities with Network Affiliation	77
Station Addresses and Index by Call Letters	82
The One Hundred Best S. W. Stations by Calls	93
Around the Clock on the Short Waves, the Monthly Time Table	94
The Month's Changes in Station Data	96

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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 impedance 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 fil-

ter 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.

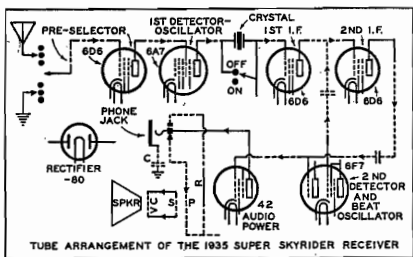
There is a conventional tone control circuit useful for the elimination of interference due to atmospheric and artificial sources. A tapered volume control insures a gradual increase or decrease in volume regardless of the power of the incoming signal. The

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.



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

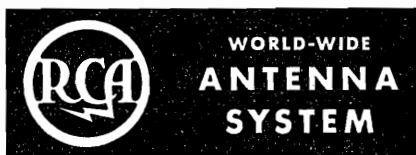


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“What Are MEGACYCLES For?”

• • • 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 short-wave 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 interna-

tional 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 reply 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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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 short-wave 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 the 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 (Ae 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. Although 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*.

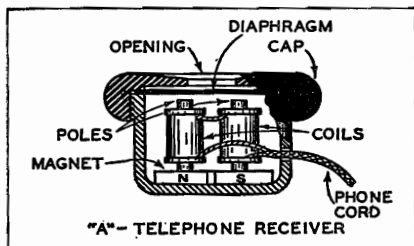
The telephone receiver, familiar to us all for many years, still hangs upon the arms of our desk and wall telephones. It is crude and has changed but little from its original. Its only purpose is to make the electric waves that travel along the wires from the mouthpiece or transmitter audible to us. 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.



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.

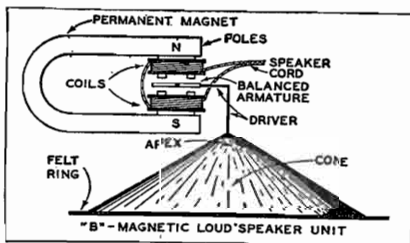
An *adapter* device now offers the opportunity to cut in a telephone headset at will to those who desire to quiet the loud speaker and use telephones with modern a.c. sets in order to experience the thrills of distant reception. It is all very simple and permits the phones simply to be plugged into the 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

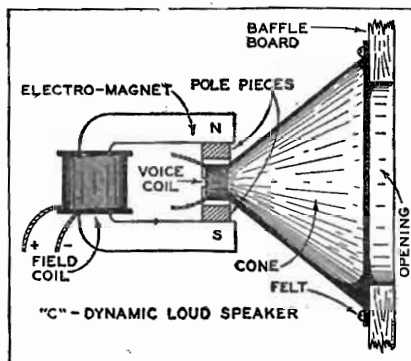
The first important loud speaker improvement came with the development of the *cone* type of diaphragm. The cone is a large-diameter flat cone made of stiff paper or parchment. It is lightly supported around its edge; not tightly clamped as is the case with the telephone diaphragm. The center or *apex* 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.



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 vol-*

ume 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



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.

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.

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 slipshod 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.

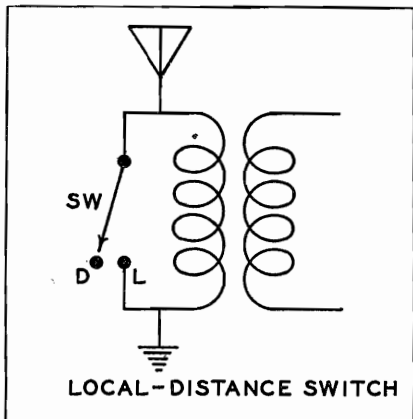
Ticker notes bringing last minute financial news to business men, are broadcast daily over WLW at 3:45 p. m. to 4 p. m., and 1:30 p. m. Saturday. This 15-minute summary of the day's financial news comes through special arrangement with Dow, Jones & Co. and is compiled from the ticker notes of the Wall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



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 Insulettes 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 properly 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



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.

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.

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.



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)

tube. The speaker plug is between this row and the two audio power tubes.

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 R.A.D.E.X., 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 takes 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 impedance 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 bor-



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).

der on the paved highway from Laredo, the Gateway to Mexico, and Mexico City."

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 KFJH 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, YVIRC, 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."

"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 Pecamp," 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



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.

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 re-broadcast 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: KFFPM, 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 KG CX, KFJZ, K FVS, 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, Venez., 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, KFFPM, 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, 316 1/2 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 WEAJ 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 Baranquilla 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., Minneapo-

lis, Minn. "Some of the stations are: HJ3ABH, which sends a beautiful QSL card, PRADO, HC2RL, YV2RC, VK3MF, 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 short-wave 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 mega
 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, WEAJ, 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 Saturday 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 Humber'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.

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,



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.

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 Mexican 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 (A u s t r a l i a n

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 side-slipped 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 \$100,000 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 pro-

grams 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 Joël 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 McClurken, 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
8:00-7:00	KFBI	1050 5000	Ablene
Sunday Mornings			
February 3			
1:00-2:00	WWAE	1200 100	Hammond
2:00-3:30	KVOA	1280 500	Tucson
2:00-4:00	OHAB	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	1280 500	Pt. Arthur
4:10-4:30	KQDY	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 5000	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
	KCOV	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	Trill
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	CMGD	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	TGWF	565 10000	Guatemala
3:00-5:00	KCOV	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
	WRAB	1370 100	Williamsport
2:20-2:40	WNEF	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	WCAK	1200 100	Burlington
3:10-3:30	WSYB	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
	KOY	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	Kallspell
5:30-5:50	KUJ	1370 100	Walla Walla
5:40-6:00	KGCK	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 KPFO 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
 12:00-2:00 WCNW 1500 100 Brooklyn
 1:00-3:30 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 WBBQ 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
 WNLN 1290 500 San Juan
 4:10-4:30 WTJS 1310 100 Jackson
 KPJM 1500 100 Prescott
 4:20-4:40 WFFB 1370 100 Hattiesburg
 WERN 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
 KGMF 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 CFYC 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 KFVR 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 Tououse
 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
 WKBW 1600 100 East Dubuque
 3:10-3:30 WRBX 1410 250 Roanoke
 WHBC 1200 100 Canton
 WGIW 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
 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
 WGHF 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 CFYC 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 KBO 1320 250 Des Moines
 3:00-5:00 WOPI 1500 1000 Bristol

February 27

2:00-3:00 CMBS 775 150 Havana
 5:30-5:45 WFBG 1310 100 Altoona

February 6, 27

12:00-4:00 CMHW 910 100 Cienfuegos

February 13, 20, 27

1:00-3:00 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 WBOC 1210 100 Charlotte

1-3 XETH 1210
 3:30-7 WTEL 1310

2:10-2:30	WSPA	1420	100	Spartanburg	5:20-5:40	WHDH	1370	100	Calumet
2:30-2:50	WSGN	1310	100	Birmingham		WLBH	1420	100	Kansas City
2:40-3:00	WJBO	1420	100	Baton Rouge	5:30-5:50	WCRW	1210	100	Chicago
2:50-3:10	WGCM	1210	100	Gulport		KGKB	1500	100	Tyler
3:00-3:15	KREG	1500	100	Santa Ana	5:40-6:00	WTAQ	1330	1000	Eau Claire
3:00-3:20	WRDW	1500	100	Augusta		WMBH	1420	100	Joplin
	WBHY	1200	100	Green Bay					February 8
	WDAH	1310	100	El Paso	3:00-3:30	KSO	1320	250	Des Moines
3:10-3:30	WKAQ	1240	1000	San Juan					February 15
	WJMS	1420	100	Ironwood	1:00-1:30	WDNC	1500	100	Durham
	KLUF	1370	100	Galveston	5:00-5:10	KFPN	890	500	Shenandoah
3:20-3:40	WCSE	1360	500	Charleston					February 22
	WEDC	1210	100	Chicago	1:00-2:00	CMCA	1230	150	Havana
	KTSM	1310	100	El Paso					February 1, 8, 15, 22, 28
3:30-3:50	WBIG	1440	500	Greensboro	1:00-2:30	KEX	1310	125	Monterrey
	KGKL	1370	100	San Angelo					
3:40-4:00	WCOA	1340	500	Pensacola					Saturday Mornings
	WSBC	1210	100	Chicago					February 2
	KFPN	1310	15	Greenville	2:10-2:30	WBRB	1210	100	Red Bank S
3:50-4:10	WQBC	1360	500	Yicksburg	2:20-2:40	WRRL	1500	100	Woodside
	KFIZ	1420	100	Fond du Lac	2:30-2:50	WGNV	1210	100	Chester
	KMAC	1370	100	San Antonio	2:40-3:00	WMBQ	1500	100	Brooklyn E
4:00-4:20	WDBO	580	250	Orlando	2:50-3:10	WGBB	1210	100	Freeport
	WFBQ	1210	100	Harrisburg	3:00-3:20	WOKO	1430	500	Albany
4:10-4:30	KFYO	1310	100	Lubbock		WJBC	1200	100	Bloomington
	WNBR	1430	500	Memphis	3:00-4:00	KTRH	1330	1000	Houston
	WMPC	1200	100	Lapeer	3:10-3:30	XEFI	1440	250	Chihuahua
	KONO	1370	100	San Antonio		WGL	1370	100	Fort Wayne
4:20-4:40	WQAM	560	1000	Miami	3:20-3:40	KFPW	1210	100	Fort Smith
	WBBF	1210	100	Rock Island		WVAE	1200	100	Hammond
4:30-4:50	WDAE	1220	1000	Tampa	3:30-3:50	WTAW	1120	500	College Station
	WKBZ	1500	100	Muskegon		WLCB	1310	100	Muncie
	KFJM	1370	100	Grand Forks	3:40-4:00	KASA	1210	100	Elk City
4:40-5:00	WCBS	1210	100	Springfield		WFAM	1200	100	South Bend
4:50-5:10	WCOC	880	500	Meridian		KWLC	1270	100	Decorah
	WKBV	1500	100	Richmond	3:50-4:10	WCAP	1280	500	Asbury Park E
5:00-5:2	WTAX	1210	100	Springfield	4:00-4:20	WJAY	610	500	Cleveland
	KGBX	1310	100	Springfield		KGCA	1270	100	Decorah
	WIOD	1300	1000	Miami	4:10-4:30	WBNS	1430	500	Columbus
5:10-5:30	WTOC	1260	1000	Savannah		KFVS	1210	100	Cape Girardeau
	WHDH	1370	100	Mount Orab		WTNJ	1280	500	Trenton
	KCMC	1420	100	Texasarkana	4:20-4:40	WWJ	920	1000	Detroit
5:20-5:40	WBBU	1210	100	Anderson		WLNH	1310	100	Laconia E
5:30-5:50	WIBM	1370	100	Jackson		KGHL	780	1000	Billings
	KGFF	1420	100	Shawnee	4:30-4:50	KQV	1380	500	Pittsburgh
5:40-6:00	WOMT	1210	100	Manitowoc		KDLR	1210	100	Devils Lake
	KNOW	1500	100	Austin	4:40-5:00	WLAP	1420	100	Lexington
						WOC	1370	100	Davenport
3:15-3:45	KFH	1300	1000	Wichita	4:50-5:10	WSMK	1380	200	Dayton
						KFXJ	1200	100	Grand Junction
12:00-3:00	WCNW	1500	100	Brooklyn	5:00-5:20	WAVE	940	1000	Louisville
3:00-4:00	CKWX	1010	100	Vancouver		KFDM	960	500	Beaumont
					5:10-5:30	WADC	1320	1000	Akron
						KWTN	1210	100	Watertown
					5:15-6:15	WSUI	880	500	Iowa City
					5:20-5:40	WSPD	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
2:30-3:30	CHWK	780	100	Chilliwack	1:00-1:30	WKY	900	100	Oklahoma City
3:00-3:20	WJW	1210	100	Akron	1:00-2:00	CMW	930	1400	Havana
	KRMD	1310	100	Shreveport	2:00-3:00	CFCN	1030	1000	Calgary
3:10-3:30	WPAF	1420	100	Faducach	2:30-3:30	CJGX	630	500	Yorkton
	KOTN	1500	100	Pine Bluff		CKY	960	15000	Winnipeg
3:20-3:40	WSEN	1210	100	Columbus	3:00-4:00	CJOR	600	500	Vancouver
	KFXR	1310	100	Oklahoma City		CKCK	1010	500	Regina
3:30-3:50	WELL	1420	50	Battle Creek		CJCA	730	500	Edmonton
	KGEK	1200	100	Starling	3:30-4:30	CFRN	1260	100	Edmonton
3:40-4:00	WALR	1210	100	Zanesville		CRCV	1100	1000	Vancouver
	KFPL	1310	100	Dublin	4:00-5:00	10-BU	1200	50	Canora
3:50-4:10	WMBC	1420	100	Detroit		CHWC	1010	500	Regina
	WCAT	1200	100	Rapid City	4:30-5:30	CJRM	540	1000	Moose Jaw
4:00-4:20	WDFW	1310	100	Flint	5:00-6:00	CKMO	1410	100	Vancouver
	KGCU	1240	250	Minot	5:30-6:30	CHWK	780	100	Chilliwack
4:10-4:30	WFBZ	1200	100	Cincinnati		CKCD	1010	100	Vancouver
	KWYO	1370	100	Sheridan					February 16
4:20-4:40	WGAR	1450	500	Cleveland	2:00-3:00	CMOK	1230	250	Havana
	KLPM	1240	250	Minot					February 23
4:30-4:40	WGLO	1200	100	Janesville	12:00-8:00	KGIR	1360	1000	Butte
	KGFG	1370	100	Oks. City					February 2, 9, 16, 23
4:40-5:00	WCLS	1310	100	Joliet	1:00-3:00	TGX	1400	150	Guatemala
	KABC	1420	100	San Antonio		CMCW	540	150	Havana
4:50-5:10	WJBL	1200	100	Decatur		WNEL	1290	500	San Juan
	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					

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. (234567)

CKLW, Windsor, on 1030

8:00-8:05 a.m. (234567)
10:00-10:05 a.m. (234567)
12:45-12:50 p.m. (234567)
5:55-6:00 p.m. (234567)
7:45-8:00 p.m. (234567)
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)

WKCY, Cincinnati, on 1490

10:45-10:50 a.m. (234567)
6:30-6:35 p.m. (234567)

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. (234567)

WHAM, Rochester, on 1150

12:15 p.m. (234567)
4:15 p.m. (234567)
10:30 p.m. (234567)
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 WDRG
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 WTOP WJJJ

B — Lowell Thomas

CFCE CRCT KDKA WBAL WBZ
WAZA 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 WTOP WVVV

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 WDRG WFBL
WGR WHEC WHP WJAS WJSV
WMA5 WOKO WORG WVVV

C — Buck Rogers; 25th Century

KMBC KMOX KRLD KTRH K TSA
WBHM WBT WCCO WDSU WFBM
WGST WHAS WMBG

B — Red Davis; Drama

KDKA KOIL KPFC KSO KSTP
KTBS KWCR KWK WAVE WBAL
WBZ WBZA WEBC WENR WFLA
WHAM WIBA WIOD WIS WJAX
WJDZ 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 WSAI 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
KPFC KSD KTBS KVOO WBAP
WBEN WCAE WCSH WDAF WEAF
WEEI WFAA WGY WHO WJAR
WKY WMAQ WOAI WOC WOW
WRC WSAI WTAG WTAM WTTT

B — Jan Garber and Orchestra

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

C — Diane and Her Life Saver

CKLW KDB KERN KFPY KPFC
KGB KHJ KLZ KMBC KMJ KMOX
KSL KWG WABC WADC WBBM
WCAO WCAU WDRG 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 WDRG
WEAN WFBL WFBM WGR WHAS
WHK WJAS WJSV WKRC WNAC
WOKO WSPD

C — Billy Batchelor

KDB KERN KFBK KFPY KPFC
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
K TSA KTUL WABC WADC WALA
WBHM WBNS WBRC WBT WCAO

WCAU WCCO WCOA WDAE WDBJ
WDRG WDSU WEAN WFBL WFBM
WFEA WGR WGST WHAS WHEC
WHK WIBW WIBX WICC WISN
WJAS WJSV WKRC WLAC WLBB
WMA5 WMBG WMBR WMT WNAC
WNOX WNBW WOKO WORC WOWO
WQAM WREC WSBT WSFA WSPD

R — Voice of Firestone

CFCE CRCT KFYR KPFC KSD
KSTP KTBS KVOO KYW WAVE
WBEN WCAE WCSH WDAF WDAY
WEAF WEBC WEEI WFBR WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKBW WKY WMAQ
WMC WOAI WOW WPTF WRC
WRVA WSB WSM WSMB WSOC
WTAG WTAM WTAR WTTT WTMJ
WVJ 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
KVCJ KSL KTRH K TSA KTUL
KVI KWG WABC WACO WADC
WALA WBBM WBIG WBNS WBRC
WBT WCAO WCAU WCCO WDAE
WDBJ WDBO WDNC WDOD WDRG
WDSU WEAN WFBL WFBM WFEA
WGST WHAS WHEC WHK WHP
WIBW WICC WISN WJAS WJSV
WKBH WKBW WKRC WLAC WLBB
WLBB WMA5 WMBD WMBG
WMBR WMT WNAC WNAX WOKO
WORG WOWO WPG WQAM WREC
WSFA WSJS WSPD WTOP

R — A & P Gypsies

KSD WBEN WCAE WCSH WDAF
WEAF WEEI WGY WHO WJAR
WLIT WMAQ WOC WOW WTAG
WTAM WTTT WVVV

B — Sinclair Greater Minstrels

KDKA KFI KFSD KFYR KOA KOIL
KPO KPFC KSO KSTP KTRH KTBS
KTBS 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 WSOB
WTAR WTMJ WUNC

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
WDRG WDSU WEAN WFBL WFBM
WHAS WHK WICC WJAS WJSV
WKBW WKRC WNAC WOKO
WOWO WREC WSPD

R — Colgate House Party

KDYL KFI KFYP KGO KGW KHQ
KOA KOMO KPRC KSD KSTP
KTBS KVOO WBEW WCAE WCHS
WDAF WDAY WEAF WEBC WEEI
WFAB WFRB 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 WUNC

B — Princess Pat Players

KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WCKY WENR
WHAM WJAZ 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
KFYP KFRC KGB KHJ KLZ KMBC
KMJ KMOX KOIN KOL KRLL
KSL KVIK WAB WABC WADC
WBBM WBNS WCAO WCAU WCCO
WDRG WDSU WEAN WFBL WFBM
WHAS WHK WJAZ WJSV
WKBW WKRC WOKO WSPD

R — Contended Program

CFCE CRCT KDYL KFI KFYP
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP WBEW WCAE WCHS
WDAF WEAF WEBC WEEI WFAB
WFRB WGY WHO WJAR WKY
WLIT WLW WMAQ WMC WOAI
WOC WOW WRC WSB WSM WTAG
WTAM WTMJ WTMJ WWJ

B — Jackie Heller, Tenor

KDKA KOIL KSO KWCR WBAL
WBZ WBZA WCKY WENR WGBR
WHAM WJAZ 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 KLRK KLZ
KMBC KOH KRLL KTRH KTSK
KVOX KWKH WAAB WABC WACO
WADC WALA WBIG WBNS WBRC
WBT WCAU WCCO WDAE WDBJ
WDBO WDNC WDOD WDSU WEAN
WFBL WFBM WFEA WGLC WGR
WHCC WHK WHP WIBW WICO
WISN WJAZ WJSV WKRC WLAC
WLWB WLWZ WMA5 WMBD
WMBG WMBR WMT WNAX WNOX
WOKO WORC WPG WQAM WREC
WSBT WSFA WSJS WSPD WTOG

E-10:45 p.m., C-9:45, M-8:45, P-7:45

C — Emery Deutsch and Orchestra
CFRB CKAC CKLW KFH KGKO
KLRK KLZ KMBC KOH KRLL
KTRH KTSK KVOX KWKH WAAB
WABC WACO WADC WALA WBIG
WBNS WBRC WBT WCAO WCAU
WDAE WDBJ WDBO WDNC WDOD
WDSU WEAN WFBL WFBM WFEA
WGLC WGR WHCC WHK WHP
WICC WISN WJAZ WJSV WKRC

WLAC WLWB WLWZ WMA5 WMBD
WMBG WMBR WMT WNAX WNOX
WOKO WORC WPG WQAM WREC
WSBT WSFA WSJS WSPD WTOG

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

KDB KERN KFAB KFBK KFYP
KFRC KGB KHJ KLRK KLZ KMBC
KMJ KMOX KOIN KOL KOMA
KRLL 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 WFAB
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 WDRG WDSU WEAN WFEA
WJSV WLAC WLWB WMA5 WMBG
WMBR WNAC WNOX WORC WPG
WQAM WREC WSFA WSJS WTOG

C — Edwin C. Hill

KDB KERN KFBK KFYP 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 KGHK KGIR
KGUKGW KHQ KOA KOMO KPO
KTRK

C — Kate Smith's Star Revue

KDB KERN KFBK KFYP 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 KLRK WABC WALA WBIG
WBRC WBT WCAO WDAE WDBJ
WDBO WDNC WDOD WDRG WDSU
WEAN WFEA WGLC WHEC WHK
WHP WJAZ WJSV WKBW WKRC
WLAC WLWB WLWZ WMA5 WMBG
WMBR WNOX WOKO WQAM WQAM
WREC WSFA WSJS WSPD WTOG
WWSA

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 — Whispersing Jack Smith
KSD KYW WBEW WCHS WEAF
WFRB WJAR WMAQ WRC WSAI
WTAG WTAM WTIC

B — Morton Downey

KDKA KOIL KSO KWCR WBZ
WBZA WCKY WENR WFI WGAR
WHAM WJAZ WJZ WKBW 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 WJAZ 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 Haenschel
CKLW KMBC KMOX WABC WADC
WBBM WCAO WCAU WDRG WEAN
WFBL WFBM WGR WHAS WHK
WJAZ WJSV WKRC WNAC WOKO

R — Leo Reisman and Orchestra

KFYP KPRC KSD KSTP KTBS
KV00 WAVE WBAP WBEW WCAE
WCHS WDAF WDAY WEAF WEBC
WEEI WFRB WFI WFLA WGY
WIBA WIOD WIS WJAR WJAX
WJDX WKBW WKY WMAQ WMC
WOC WOW WPTF WRC WSB WSM
WSMB WSOB WTAG WTAM WTAR
WTIC WTMJ WWJ WUNC

B — Erno 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
WDRG WEAN WFBL WFBM WGR
WHAS WHK WJAZ WJSV WKRC
WNAC WOKO WOW WSPD

R — Wayne King and Orchestra

KPRC KSD KSTP WBEW WCAE
WCHS WDAF WEAF WEEI WFAA
WFIWGY WHO WJAR WKBW WKY
WMAQ WMC WOAI WOC WOW
WRC WSAI WSB WSM WSMB
WTAG WTAM WTIC WTMJ WWJ
B — Lawrence Tibbett
CFCE CRCT KDYL KOIL KSO
KWCR WBAL WBZ WBZA WGAR
WHAM WJAZ 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 KFYP
KFRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KRLL KSL
KTUL KVI KWG WABC WADC
WBBM WBT WCAO WCAU WCCO
WDRG WDSU WEAN WFBL WFBM
WGST WHAS WHK WJAZ WJSV
WKBW WKRC WNAC WOKO
WOWO WREC WSPD

R — Ben Bernie and Orchestra

KFYP KOA KPRC KSD KSTP
KTBS WBAP WBEW WCAE WCHS
WDAY WEAF WEEI WFRB 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 WKBW 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 KFYP KFRC KGB KGKO
KHJ KLRK KLZ KMBC KMJ KMOX
KOH KOIN KOL KOMA KRLL
KSCJ KSL KTRH KTSK KTUL KVI
KWG KWKH WABC WACO WADC
WALA WBBM WBNS WBRC WBT
WCAO WCAU WCCO WDAE WDBJ
WDBO WDOD WDRG WDSU WEAN

TUESDAY (Continued)

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

R — Ed Wynns; Eddie Duchin

KDYL KFI KFSD KFYR KGHL
KGIR KGO KGW KHQ KOA KOMO
KPRC KSD KSTP KTAR KTBS
KTHS KV00.WAVE WBAP WBEN
WCAE WCSH WDAF WDAY WFAF
WEBC WEEL WFBR WFLA WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKBF WKY WMAQ
WMC WOA1 WOV WPTF WRC
WRVA WSB WSM WSMB WSOC
WTAG WTAM WTC 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
WDAA WDBJ WDBO WDNC WDDO
WDRS WDSU WEAN WFBL WFBN
WFEA WGST WHEC WHK WHP
WIBW WICC WISN WJAS WJSV
WKBN WKWB WKRC WLAC
WLWB WLZB WMAS WMBD
WMBG WMBR WMT WNAC WNAX
WOKO WORC WOWO WPG WQAM
WREC WSFA WSJS WSPD WTC

R — Palmolive Beauty Box

CFCF CRCT KDYL KFI KFSD
KFYR KGHL KGIR KGO KGW
KHQ KOA KOMO KPRC KSD KSTP
KTAR KTBS KV00 WAVE WBAP
WBEN WCAE WCSH WDAF WDAY
WEAF WEBC WEEL WFBR WFLA
WGY WHO WIOD WIS WJAR WJAX
WJDX WKBF WKY WLW WMAQ
WMC WOA1 WOV 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 WDDO WDRS WDSU
WEAN WFBL WFBN WFEA WGLC
WGR WHEC WHK WHP WIBW
WICC WJAS WJSV WKRC WLAC
WLWB WLZB WMAS WMBD
WMBG WMBR WMT WNAX WNOX
WOKO WORC WPG WQAM WSBT
WSFA WSJS WSPD WTC

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 Haynes 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 WDRS WDSU WEAN WFBL
WFEA WGLC WHEC WHK WHP

WIBW WJAS WJSV WKWB WKRC
WLAC WLWB WLZB WMAS WMBG
WMBR WMT WNAC WNAX WNOX
WOKO WORC WPG WQAM WSBT
WSFA WSJS WSPD WTC WVVVA

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 WDDO WDRS
WDSU WEAN WFBL WFEA WHEC
WHK WHP WIBW WICC WISN
WJAS WJSV WKWB WKRC WLAC
WLWB WLZB WMAS WMBD
WMBR WMT WNAC WNAX WNOX
WORC WPG WQAM WSBT WSFA
WSJS WSPD WTC WVVVA

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 KV00
WAVE WBAP WBEN WCAE WKY
WCSH WDAF WDAY WFAF WEBC
WEEL WFBR WFLA WGY WHO
WIBA WIOD WIS WJAR WJAX
WJDX WKY WLIT WMAQ WMC
WOA1 WOV WPTF WRC
WRVA WSAI WSB WSM WSMB
WTAG WTAM WTC 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 WDRS
WDSU WEAN WFBL WFBN 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 KV00
WBEN WCAE WCSH WDAF WFAF
WEBC WEEL WFBR WGY WIOD
WIS WJAR WJAX WKY WLIT
WLW WMAQ WMC WOA1 WOV
WPTF WRC WRVA WSB WSM
WSMB WTAG WTAM WTC 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
WADC WBBM WBIG WBT WCAO
WCAU WCCO WDRS WDSU WEAN
WFBL WFBN WHK WJAS WJSV
WKWB WKRC WNC 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 KFBK KFPY
KFRC KGB KHJ KZB KHJ
KLRA KLZ KMBC KML KMOX
KOIN KOL KOMA KRLD KSL KTRH
KTSa KVI KWG WABC WACO
WADC WBBM WBNS WBT WCAO
WCAU WCCO WDAE WDRS WDSU
WEAN WFBL WFBN WGST WHAS
WHEC WHK WHP WIBW WJAS
WJSV WKWB WKRC WLAC WLZB
WMBG WMT WNAC WNAX WOKO
WORC WOWO WQAM WREC

R — Guy Lombardo and Orchestra

KPRC KSD KTBS KTHS KV00
WAVE WBEN WCAE WCSH WDAF
WEAF WEEL WFAA WFBR WFLA
WGY WHO WIOD WIS WJAR WJAX
WJDX WKBF WKY WLIT WLW
WMAQ WMC WOA1 WOV WPTF
WRC WRVA WSB WSM WSMB
WTAG WTAM WTC WTMJ 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 — Madama 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 KDKF KFH
KGKO KHJ KLRA KLZ KMBC
KOH KOMA KRLD KSCJ KTRH
KTSB KYOR KWKH WAAB WABC
WACO WADC WALA WBBM WBIG
WBRC WBT WCAO WDAE WDBJ
WDOB WDNB WDRS WDSU
WEAN WFBL WFBM WFEA
WGLC WGR WHEC WHP WIBW
WICC WISN WJAS WJSV WKRC
WLAC WLWB 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 KV00 KWCR KWK
WBAL WCKY WDAY WZBC WENR
WFAA WHAM WJR WJZ WKY
WMAL WREN WRVA WSYR WTMJ

R — One Man's Family
KSD WAPI WAVE WBNB 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 WDBJ WDOB WDNB
WDOC WDRS WDSU WEAN WFEA
WJAS WJSV WLAC WLWB 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 WDOB WDNB
WDOC WDRS WDSU WEAN WFEA
WICC WISN WJSV WLAC WLWB
WMBR 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

E — 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 WBNB 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
CFRC CRCT KDYL KFI KFYR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAR KV00 WAPI
WBAP WBNB 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 KFBC
KFPY KFRC KGB KHJ KLZ KMBC
KMJ KMOX KOIN KOL KSL KVI
KWG WABC WADC WBBM WCAO
WCAU WCCO WDRS 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 WDRS WEAN
WFBL WFBM WGR WHAS WHK
WJAS WJSV WKRC WNAC WOKO
WOW WSPD

E-9:00 p.m., C-8:00, M-7:00, P-6:00

C — Glen Gray; Walter O'Keefe
CKLW KFAB KHJ KLRA KMBC
KMOX KOMA KRLD KSCJ KTRH
KTSB KTUL KWKH WABC WACO
WADC WALA WBBM WBIG WBNB
WBRC WBT WCAO WCAU WCCO
WDAE WDBJ WDOB WDOC WDRS
WDSU WEAN WFBL WFBM WFEA
WGST WHAS WHEC WHK WHP
WIBW WICC WISN WJAS WJSV
WKBN WKWB WKRC WLAC
WLWB WLWB WMAS WMBD
WMBG WMBR WMT WNAC WNAX
WOKO WORC WOW WPG WQAM
WREC WSFA WSJS WSPD WTOC

R — Maxwell House Show Boat

KDYL KFI KFSD KGHK KGRH
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAR KTBS WAPI
WAVE WBAP WBNB 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 KTSB
KTUL KVI KYOR KWG WABC
WACO WADC WALA WBBM WBIG
WBNS WBRC WBT WCAO WCAU
WCCO WDAE WDBJ WDOB WDNB
WDOC WDRS WDSU WEAN WFBL
WFBM WFEA WGLC WGST WHAS
WHEC WHK WHP WIBW WICC
WISN WJAS WJSV WKBN WKWB
WKRC WLAC WLWB WLWB 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
CFRC CRCT KDYL KFI KFYR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAR KTBS KTHS
KV00 WAPI WAVE WBAF WBNB
WCAE WCSH WDAF WDAY WEAF
WEBC WEEI WFBR WFI WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLV 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 WDOB
WDOC WEAN WFBM WFEA WGST
WHEC WIBX WICC WJAS WKBN
WKRC WLBB 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 KTSB KYOR
KWKH WABC WACO WADC WALA
WBBM WBNB WBRC WBT WCAO
WCCO WDAE WDBJ WDOB WDNB
WDOC WDRS WDSU WEAN WFBL
WFBM WFEA WGLC WHEC WHK
WHP WIBW WISN WJAS WJSV
WKBW WKRC WLAC WLWB WLWB
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 KYOR 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 KYOR KWKH WAAB WABC

FRIDAY (Continued)

WADC WBBM WCAO WCAU WDNC
WDRG WFBL WHEC WHK WISN
WJAS WJSV WKBW WLAC WLWB
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 KRLL KSCJ KSL KTRH
KVOR KWKH WAAB WABC WBBM
WCAO WCAU WDNC WDRG WFBL
WGLC WHEC WHK WISN WJAS
WJSV WKBW WLAC WLWB 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 — Beaque Carter, See Monday

B — Donagoe 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 WFRB
WGY WHO WJAR WKY WLIT
WQAI WOC WOV 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 WDRG 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
KFCR KGB KHJ KLZ KMJ KMOX
KOLN KO KRLL KSL KVI KWG
WABC WADC WBBM WCAO WCAU
WCCO WDRG WDSU WEAN WFBL
WFBM WGST WHAS WHK WJAS
WJSV WKBW WKRC WNAC WOKO
WOW WSPD

R — Frank Munn; Abe Lyman

KSD WBEN WCAE WCSH WDAF

WEAF WEEI WFBW WGY WJAR
WLIT WLW WMAQ WOV 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 WOV 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 KFCR
KGB KGKO KHJ KLRA KLZ KMBC
KMJ KMOX KOH KOIN KOL KOMA
KRLL KSCJ KSL KTRH K TSA
KTUL KVI KVOR KWG KWKH
WABC WACO WADC WALA WBBM
WBIG WBNS WBRG WBT WCAO
WCAU WCCO WDAE WDBJ WDBO
WDNC WDOD WDRG WDSU WEAN
WFBL WFBM WFEA WGST WHAS
WHEC WHK WHP WIBW WIBX
WICC WISN WJAS WJSV WKBH
WKBW WKRC WLAC WLWB WLZ
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 WFBW WGY WHO WJAR
WLIT WMAQ WOC WOV WRC
WSAI WTAG WTAM WTIC WWJ

B — Armour Program; Phil Baker

KDKA KDYL KFI KGO KWG 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 WQAI
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 KWG KHQ KOA
KOMO KPRC KSD KSTP WBEN
WCAE WCSH WDAF WEAF WEBC
WEEI WFAA WFRB WGY WHO
WJAR WKY WLIT WLW WMAQ
WMC WQAI WOC WOV 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
WDRG WDSU WFBL WGR WHEC
WHP WICC WJAS WJSV WLAC
WLBWJWMA S WMBG WOKO WORC
WPG WREC WWSJ

R — Coca Cola; Frank Black

CFCF CRCT KDYL KFI KFSD
KFYR KGHL KGIR KGU KWG
KHQ KOA KOMO KPO KSTP KTAR
KTBS KTHS KYW WAVE WCAE
WCSH WDAY WEAF WEBC WEEI
WFRB WFLA WGY WIBA WIS
WJAR WJAX WJDX WKBF WLW
WMC WOV WPTF WRC WSB
WSMB WSOX 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 WBRG WBT
WCAO WDAE WDBO WDNC WDOD
WDRG WDSU WEAN WFEA WHK
WJSV WLAC WLZB WJAS 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 WFRG WHAS
WOWO

SATURDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00

C — Lilac Time; Arthur Murray

CKLW KWBW WAAB WABC WADC
WBBM WCAU WCCO WDRG 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 WDRG WEAN WFBL
WFEA WHEC WHP WICC WJAS
WJSV WKBW WLZB WJAS WMBG
WNAC WOKO WORC WWSJ

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 WFBW WGY WHO
WJAR WLW WMAQ WOV WRC
WTAG WTAM WTIC WWJ

E-7:00 p.m., C-6:00, M-5:00, P-4:00

C — Soconyland Sketches

WABC WDRG WEAN WGR WICC
WLZB WMAS WNAC WOKO WORC

E-7:15 p.m., C-6:15, M-5:15, P-4:15

R — Whispering Jack Smith, See Tues.

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 KFCR KGB KHJ
KLRA KLZ KMBC KMJ KMOX
KOLN KOL KOMA KRLL KSL
KTRH K TSA KVI KWG WABC
WBBM WBRG WCAO WCAU WCCO
WDOD WDRG 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 KWG KHQ KOA
KOMO KPRC KSD KSTP KTBS
WBAP WBEN WCAE WCSH WDAF
WEAF WEBC WEEI WFRB WFI
WGY WIBA WJAR WKY WLW
WMAQ WQAI WOV 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
KFCR KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KRLL KSL KVI
KWG KWKH WABC WADC WBBM
WBT WCAO WCAU WCCO WDRG
WEAN WFBL WFBM WGR WHAS

SATURDAY (Continued)

WHK WJAS WJSV WKRC WNAC
WOKO WOWO WSPD

E-9:30 p.m., C-8:00, M-7:00, P-6:00

R — Songs You Love
KFYR KSD KSTP WBEN WCAE
WCSH WDAF WDAY WFAE WFCB
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 WCKA 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 Humber and Orchestra
CKLW KFH KMBC KMOX WAAB
WABC WADC WBBM WBNS WBT
WCAO WCAU WCCO WDRC WDSU
WEAN WFBL WFWM 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 WFAE
WFCB 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 WKBW 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 KTSR KFOR
KWKH WAAB WABC WACO WADC
WALA WBIG WBT WCAO WCAU
WCCO WDAE WDBJ WDBO WDNC
WDDO WDRC WDSU WEAN WFBL
WFWM WFEA WGLC WGR WHEC
WHP WIBW WICC WISN WJAS
WJSV WKRC WLAC WLWB WLWB
WMAS WMBD WMT WNAK WNOX
WOKO WORC WPG WQAM WSBT
WSFA WSJS WSPD WTOC WVVV

R — Let's Dance

KFYR KPRC KSD KTBS KTHS
KVOO KYW WAVE WBAW WBEN
WCAE WCSH WDAY WFAE WFCB
WEEI WFAA WFBY WFLA WGY
WIBA WIOD WIS WJAR WJAX
WJDX WKY WLW WMAQ WMC
WOAI WOW WRC WSB WSMB
WTAG WTAM WTAR WTIC WTMJ
WVJ WWNC

E-11:00 p.m., C-10:00, M-9:00, P-8:00

C — Richard Humber and Orchestra
KDB KERN KFBK KFPY KFCR
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 WDDO

WDRC WDSU WFWM WGLC WGR
WHEC WHP WIBW WJAS WJSV
WKRC WLAC WORC WQAM WSBT
WSFA WSJS WTOC

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 KTSR KWKH WABC WBNS
WCAU WDBO WDNC WDDO WEAN
WFBL WFWM WGLC WHP WIBW
WICC WJSV WKBW WKRC WLAC
WLWB 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
KTSR KWKH WABC WACO WADC
WALA WBBM WBMS WCCO WDAE
WDBO WDDO WDRC WDSU WEAN
WFBL WFWM WFEA WGLC WHK
WHP WIBW WICC WISN WJAS
WJSV WLAC WLWB WLWB WMAS
WMBD WMBR WMT WNAK WNAK
WNOX WOKO WORC WQAM WREC
WSFA WSPD

R — Majer Bowes' Family

KDYL KFYR KOA KPRC KSTP
KTBS KVOO WAPI WCAE WDAF
WDAY WFAE WFCB 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 WFWM WGR WHAS WJAS
WJSV WKB WKRC WMAS WNAC
WOKO WORC WOWO WSPD

B — Radio City Symphony

CPFC CRCT KDKA KDYL KFI
KFYR KGO KGW KHQ KOA KOIL
KOMO KPRC KSO KVOO WAPI
WBAL WBZ WBZA WCKY WDAY
WFCB 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 KTSR KWKH WAAB WABC
WACO WALA WBBM WBIG WBNS
WBT WCAO WCCO WDAE WDBJ
WDBO WDNC WDDO WDRC WDSU
WFBL WGLC WGR WHEC WHP
WIBW WJAS WJSV WKRC WLAC
WLWB WLWB WMBR WMT WNOX
WOKO WORC WPG WQAM WREC
WSBT WSFA WSJS WSPD WVVV

R — Dale Carnegie, Talks

WBEN WCAE WFAE WEEI WFBR
WPI 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 WFAE
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 WFWM 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 KFCR KGB KHJ KLZ KMBC
KMJ KMOX KOIN KOL KRLD
KSL KVI KWG WABC WBBM
WBNS WCAO WCAU WCCO WDSU
WFWM 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 KFBK KFBK
KFPY KFCR 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 WFWM WGST WHAS WHEC
WHK WIBW WJAS WJSV WKBW
WKRC WLAC WMBG WMT WNAC
WOWO

B — Anthony Frome; Poet Prince

KDKA KOIL KSO KWCR KWR
WBAL WBZ WBZA WENR WGA
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 KFBK KFBK
KFPY KFCR 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 WFWM WGST WHAS WHEC
WHK WIBW WJAS WJSV WKBW
WKRC WLAC WMBG WMT WNAC
WOWO

R — Gene Arnold and Commodores

WCAE WCSH WFAE 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 WFCB 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 KTSR KFOR KWKH
WABC WADC WALA WBIG WBNS
WBT WCAO WCAU WCCO WDAE
WDBJ WDBO WDNC WDDO WDRC
WDSU WEAN WFBL WFWM WFEA
WGLC WGR WHEC WHK WHP
WIBW WICC WISN WJAS WJSV
WKRC WLAC WLWB WLWB WMAS
WMBD WMBR WMT WNAK WOKO
WORC WQAM WREC WSBT WSFA
WSJS WSPD WTOC

R — Sally of The Talkies

WAPI WBEN WCAE WCSH WDAF
WFAE 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 WBEW WCAE WCSH
WDAF WFAE WEEI WFBW WGY
WHO WJAX WLIT WLW WMAQ
WOC WOV 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
WJDD WJR WLBZ WLW WMAS
WNAC WNBH WOC WOKO WOL
WOR WORC

R — Rhythmic Symphony
KDYL KFI KGW KOA KOMO KPO
KPRC KTBS WAPI WAVE WBAP
WBEN WCSH WDAF WFAE WFCB
WEEI WFBW WFLA WGY WIBA
WIOD WJAX 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 WBEW WCAE WCSH WFAE
WEEI WFBW WGY WJAX 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 WFAE
WEEI WFBW WFI WGY WJAX
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
KTSU KTUL WAAB WABC WADC
WBMM WBIG WBOC 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
WREX WSPD

R — Sentinels Serenade
CFPC CRCT KDYL KFI KFJR
KGO KGW KHQ KOA KOMO WAVE
WBEN WCAE WCSH WDAF WFAE
WFCB WEEI WFBW WFI WGY
WHO WIBA WJAX WKBF WMAQ
WMC WOC WOV WRC WSAI WSB
WSM WTAG WTAM WTIC WTMJ
WWJ

B — Roses and Drums
KDKA KOIL KPRC KSO KTHS
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
CFPC CRCT KDYL KFI KFSD
KFYR KGW KHQ KOA KOMO KPO
KPRC KSD KSTP KTAR KTHS
KV00 KYW WAPI WAVE WBAP
WBEN WCAE WCSH WDAF WDAY
WFAE WFCB WEEI WFBW WGY
WHO WIBA WIOD WIS WJAX
WJAX WJDX WKBF WKY WMAQ
WMC WOAI WOV 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 KFBC
KFYR KPRC KGB KHJ KLZ KMBC
KMJ KMOX KOIN KOL KRLD
KSL KVI KGW WAAB WABC
WBMM 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 KFBC
KFYR KPRC KGB KHJ KLZ KMJ
KMOX KOIN KOL KRLD KSL KVI
KGW WAAB WABC WBMM WBNS
WBRC WBT WCAU WCCO WDRC
WDSU WEAN WFBL WFBM WFEA
WGST WHAS WHK WHP WICC
WISN WJAS WJSV WKBW WKRC
WLAC WLW WLBZ WORC WQAM
WREX WWVA

R — Armo Iron Master
KPRC KSD KTBS KV00 WBAP
WBEN WCAE WDAF WFAE WFBW
WGY WHO WKY WLIT WLW
WMAQ WOAI WOC WOV WRC
WTAM WWJ

B — Compana Grand Hotel
KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KSO KSTP KWCR
KWK WBAL WBZ WBZA WFCB
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
WBMM WBT WCAO WCAU WCCO
WDRC WEAN WFBL WHAS WHK
WJAS WJSV WKBW WKRC WNC
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 WFCB WGAR WHAM WIBA
WJDX WJR WJZ WKY WLW WLW
WMAL WMC WOAI WREN WSB
WSM WSMB WSYR WTMJ

C — Alexander Woolcott
KDB KERN KFBC KFPY KFRC
KGB KHJ KLZ KMBC KMOX
KOIN KOL KSL KVI KGW WABC
WBMM 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

E — Joe Penner; Ozzie Nelson
KDKA KDYL KFI KFJR KGO
KGW KHQ KOA KOIL KOMO KPRC
KSO KSTP KTAR KV00 KWCR
KWK WBAL WBZ WBZA WDAY
WFCB 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 KTSU
WABC WACO WADC WALA WBIG
WBNS WBRW WBT WCAO WCAU
WDAE WDBJ WDOD WDOD WDRC
WDSU WEAN WFEA WGST WHAS
WHEC WHK WJAS WJSV WKRC
WLAC WLBZ WMAS WMBG WMBR
WNAC WOKO WORC WOWO WQAM
WREX WSPD WTOC

R — American Radiator Musical
WBEN WCAE WCSH WFAE WFBW
WGY WJAX WMAQ WOV WRC
WSAI WTAG WTAM WWJ

E-7:45 p.m., C-6:45, M-5:45, P-4:45
R — Fitch Program; Wendell Hall
CFPC KSD WBEW WCAE WCSH
WFAE WFBW WGY WHO WJAX
WKBF WLIT WMAQ WOC WOV
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 KFBC
KFYR KPRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOIN KOL
KOMA KRLD KSL KTRH KTSU
KTUL KVI KGW WAAB WABC
WADC WBMM WBOC WBT WCAO
WCAU WCCO WDRC WDSU WEAN
WFBL WFBM WGR WGST WHAS
WHK WJAS WJSV WKRC WOKO
WOWO WSPD

R — Chase and Sanborn Hour
CFPC CRCT KDYL KFI KFJR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAR KV00 WAPI
WAVE WBEN WBZ WBZA WCAE
WCSH WDAF WDAY WFAE WFCB
WFAA WFBW WFLA WGY WHO
WIOD WIS WJAX WJAX WJDX
WKY WLIT WLW WMAQ WMC
WOAI WOC WOV 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 KFBC
KFYR KPRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOIN KOL
KOMA KRLD KSL KTRH KTSU
KTUL KVI KGW KWKH WABC
WBMM WBRW WBT WCAO WCAU
WCCO WDRC WDSU WEAN WFBL
WFBM WGR WGST WHAS WHK

SUNDAY (Continued)

WJAS WJSY WKRC WNAC WOKO
WOWO WREC WSFD

E-9:00 p.m., C-8:00, M-7:00, P-6:00

C — Ford Symphony

CFRB CKLW KDB KERN KFBK
KFB KFPY KFRC KGB KGKO
KHJ KLRA KLZ KMBC KMJ
KMOX KOH KOIN KOL KOMA
KRLL KSCJ KSL KTRH KTSB
KTUL KVI KFOR 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
WKBB WKBN WKRC WLAC
WLWB WLZB WMAS WMBR WMT
WNAC WNAX WNOX WOKO WORC
WOWO WQAM WSBT WSFA WSJS
WSFD WTOC WVVV

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

B — 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 KV00 WBEN WCAE WCSH
WDAF WEAF WEEI WFAA WFBR
WFI WFLA WGY WHO WIOD WIS
WJAR WJAX WJDX WKY WMAQ
WMC WOA1 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 KFJR KGHL
KGR 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 WOA1 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 KRLL
KSCJ KTRH KTSB KFOR KWKH
WABC WACO WADC WALA WBIG
WBNS WBT WCAO WCAU WCCO
WDAE WDBJ WDBO WDNC WDOD
WDRS WDSU WEAN WFBL WFBM
WFEA WGLC WGR WHEC WHP
WIBW WICC WISN WJAS WJSV
WMBR WLAC WLWB WLZB 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 KRLL KSCJ
KTRH KTSB KFOR KWKH WABC
WACO WADC WBBM WBNS WBT
WCAO WCAU WCCO WDAE WDBJ
WDBO WDNC WDOD WDRS WDSU
WEAN WFBL WFEA WGLC WGR
WHEC WHP WHP WIBW WISN
WJAS WJSV WKRC WLAC WLWB
WLWB 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, 8:00 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
Leth 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
Rock 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
Soconyand 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
Palmyline 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 Gulzar, 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
 Everette 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 Woolcott, 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.
- n 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 Brdsteig. 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).

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

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	<div style="text-align: right; font-weight: bold; margin-bottom: 10px;">KCYS.</div> <div style="text-align: right; font-weight: bold; margin-bottom: 10px;">600</div> <div style="text-align: right; font-weight: bold; margin-bottom: 10px;">DIAL</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); position: absolute; right: -100px; top: 50%; font-weight: bold; font-size: small;">CUT OUT ON DOTTED LINES</div>	
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.	F-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 1000 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	Piedras Negras, 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-.....		
FON z 250 609	St. Pierre, Miquelon	L-Silent		
KFSN 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		

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

610 kilocycles 491.5 meters

CMCF	ak	250	.....	Havana, Cuba	E-12-14; 18-20
KFRM	ak	1000	C (5)	San Francisco, Calif.	P-7-24
KZRM	ak	5000	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	G (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
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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
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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
CJ CJ	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	50000	N	Cincinnati, Ohio	E-6:30-3
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INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

710 kilocycles 422.3 meters

KMPC	ae	500	Dn	Beverly Hills, Calif.
KPCB	ae	250	.....	Seattle, Wash.
TIFB	z	30	714	San Jose, C. R.
WOR	ak	5000	.....	Newark, N. J.
XEN	ak	1000	711	Mexico City, D. F.

P	6:45-0:30
P	5:30-sunset; 22-4
C	6-10
E	6:45-0:30
C	9-12; 13-16; 17-24

720 kilocycles 416.4 meters

CMK	ae	3150	725	Havana, Cuba
KZEG	ak	1000	.....	Manila, P. I.
WGN	ck	5000	.....	Chicago, Ill.

E	11-13; 19-24
L	7:30-12:15; 13:15-17
C	7-1:30

**KCYS.
800
DIAL**

730 kilocycles 410.7 meters

CFPL	ak	100	F	London, Ont.
CJCA	ah	500	F	Edmonton, Alta.
CKAC	ak	5000	C	Montreal, Que.
XEBC	ak	5000	.....	Agua Caliente, L. C.

E	8:15-10:30; 12-13:30; 17-23:30
M	7:30-14; 15:30-23
E	7:30-1
P	.....

740 kilocycles 405.2 meters

KMMJ	ae	1000	D	Clay Center, Neb.
KTRB	ak	250	D	Modesto, Calif.
WHEB	ak	250	D	Portsmouth, N. H.
WSB	ah	5000	N	Atlanta, Ga.

C	5-18
P	.....
E	8-13:30; 15:15-18
C	6:55-24

750 kilocycles 399.8 meters

CMCW	dk	150	755	Havana, Cuba
KGU	aj	2500	N	Honolulu, T. H.
WJR	ak	10000	B	Detroit, Mich.
XEAM	z	50	.....	Nuevo Laredo, Tams.

E	12-18; 1-3
L	6:30-22:30
E	6-24
C	.....

760 kilocycles 394.5 meters

KXA	ae	250	(.5)	Seattle, Wash.
WBAL	ae	10000	BSy	Baltimore, Md.
WEW	ae	1000	D	St. Louis, Mo.
WJZ	ck	5000	BSy	New York, N. Y.

P	.....
E	21-24
C	8-17
E	8-1

770 kilocycles 389.4 meters

CMBS	ak	150	775	Havana, Cuba
KFAB	ae	5000	CSy	Lincoln, Neb.
WBBM	ae	25000	CSy	Chicago, Ill.

E	10-12; 15:30-18
C	6-17:45; 20:30-21:30; 22-24
C	6:50-2:15

780 kilocycles 384.4 meters

CHWK	ak	100	F	Chilliwack, B. C.
CKSO	z	1000	F	Sudbury, Ont.
KELW	ae	500	2	Burbank, Calif.
KFDY	ae	1000	D	Brookings, S. D.
KFOD	ck	250	.....	Anchorage, Alaska
KGHL	ak	1000	N (2.5)	Billings, Mont.
KTM	ak	500	2 (1)	Los Angeles, Calif.
WEAN	ae	500	C (.25)	Providence, R. I.
WMC	aj	1000	N (2.5)	Memphis, Tenn.
WTAR	ae	500	N (1)	Norfolk, Va.
XEYZ	z	10000	.....	Mexico City, D. F.

P	12-13:30; 18-22:30
E	.....
P	10-13; 17-20; 4-6
C	12:30-14
L	18-24
M	8-23
P	6-10; 13-17; 20-4
E	7:30-1
C	7-24
E	7-24
C	10-23

790 kilocycles 379.5 meters

CMJK	ak	150	.....	Camaguey, Cuba
KGO	ak	7500	N	San Francisco, Calif.
WGY	ak	50000	R	Schenectady, N. Y.

E	11:30-12:30; 17-23
P	7-24
E	6:45-1

800 kilocycles 374.8 meters

TIGP	z	75	.....	San Jose, C. R.
WBAP	ak	5000	Na	Fort Worth, Tex.
WFAA	ak	5000	Na	Dallas, Tex.
WTBO	ae	250	D	Cumberland, Md.

C	.....
C	8:30-10:30; 12:30-15; 17:30-18:30; 22-24
C	6:45-8:30; 10:30-12:30; 15-17:30; 18:30-22
E	6-19:15

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

810 kilocycles 370.2 meters

WCCO	ae	5000	C	Minneapolis, Minn.	C-7-24
WNYC	ak	1000	N	New York, N. Y.	E-10-19:30
XFC	z	350	Aguascalientes, Ags.	C-.....

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820 kilocycles 365.6 meters

WHAS	aj	5000	C	Louisville, Ky.	C-7-24
XEP	z	500	Mexico City, D. F.	C-.....
XETW	dk	500	Mexico City, D. F.	C-12-24

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830 kilocycles 361.2 meters

CMC	ae	500	835	Havana, Cuba	E-10:30-11:30; 20-23
KOA	ak	5000	N	Denver, Colo.	M-7-24
TIVL	z	30	835	San Jose, C. R.	A-10-11; 15-16
WEU	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

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840 kilocycles 356.9 meters

CFQC	al	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

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850 kilocycles 352.7 meters

KIEV	aj	250	D	Glendale, Calif.	P-6-17
WWL	ae	1000	New Orleans, La.	C-7-24
WWPA	z	250	DF	Clarion, Pa.	E-.....

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860 kilocycles 348.6 meters

CMCX	z	150	865	Havana, Cuba	E-.....
WABC	ae	5000	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-.....

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870 kilocycles 344.6 meters

WENR	ak	5000	Na	Chicago, Ill.	C-10:15-11:45; 15:30-19
WLS	ae	5000	Na	Chicago, Ill.	C-6-10:15; 11:45-15:30; 19-20:30

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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

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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	ah	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	5000	Mexico City, D. F.	C-.....

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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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INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

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	ae	1000	N	Jacksonville, Fla.	E—7-1
WKY	ae	1000	N	Oklahoma City, Ok.	C—6:45-24
WBL	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	ak	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
WBOS	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

**KCYS.
970
DIAL**

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—.....
GMW	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

GMKM	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
WAYE	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

CMGD	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	ak	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
YVIRC	ak	5000	Caracas, Venez.	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
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CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

<p>KJR z 5000 N WCFL ae 1500 B WIBG ak 100 D XES dk 250</p>	<p>Seattle, Wash. Chicago, Ill. Glenside, Pa. Tampico, Tams.</p>	<p>P-7:30-24 C-7-24 E-6-Sunset C-9:30-14:30; 17-22</p>	<div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px;"></div>
<p>980 kilocycles 303.9 meters</p>			
<p>KDKA bk 50000 B</p>	<p>Pittsburgh, Pa.</p>		<div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px;"></div>
<p>990 kilocycles 302.8 meters</p>			
<p>WBZ ak 50000 BSy WBZA ak 1000 BSy XEAF z 250</p>	<p>Boston, Mass. Springfield, Mass. Nogales, Son. Mexico City, D. F.</p>	<p>E-7-1 E-7-1 M-..... C-11-16; 18-2</p>	<div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px;"></div>
<p>XEK ak 100</p>			
<p>1000 kilocycles 299.8 meters</p>			
<p>CMBZ ak 100 1005 KFVD ak 250 Dn WHO ak 50000 R WORK ak 1000</p>	<p>Havana, Cuba Los Angeles, Calif. Des Moines, Iowa York, Pa.</p>	<p>E-18-24 P-6:30-Sunset; 22-24 C-7-24 E-8-17:30</p>	<div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px;"></div>
<p>1010 kilocycles 296.9 meters</p>			
<p>CHML ael 50 F CHWC ak 500 3F CKCD ak 100</p>	<p>Hamilton, Ont. Regina, Sask. Vancouver, B. C. Regina, Sask. Ottawa, Ont. Wolfville, N. S. Vancouver, B. C. Ciego de Avila, Cuba Coffeyville, Kans. San Jose, Calif. Cartago, C. R. New York, N. Y. Norman, Okla. Knoxville, Tenn. Veracruz, Ver.</p>	<p>E-8-13:30; 16:30-23 M-7-9; 10-11; 12-13; 15:30-23 P-7:30-23:30 M-9-10; 11-12; 13-15:30 E-6-23 A-12-13; 18-19 P-7-20:30; 21-1 E-9-13; 18-22 C-7-14; 17-20:15; 21:15-22:30 P-6:30-22 C-..... E-7:30-1 C-14-16; 20:15-21:15 C-6:45-24 C-7-9; 10-14; 17-23</p>	<div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px;"></div>
<p>CKCK ak 500 3F CECO z 100</p>			
<p>CKIC ak 50</p>			
<p>CKWX ak 100</p>			
<p>CMJO ak 50</p>			
<p>KCGF ak 1000 2 KOW ae 1000</p>			
<p>TIGA z 30 1014 WHN ae 1000</p>			
<p>WNAD ae 500 2 (1) WNOX ak 1000 C (2) XEU ak 250</p>			
<p>1020 kilocycles 293.9 meters</p>			
<p>KYW ak 10000 R XEJ ak 1250</p>	<p>Philadelphia, Pa. Juarez, Chih.</p>	<p>E-6:45-1 C-10-14; 17-23:30</p>	<div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px;"></div>
<p>1030 kilocycles 291.1 meters</p>			
<p>CFCN ak 10000 F CKLW ae 5000 C CMBC de 150 1035 CMHI ak 150 1037 CMKC z 150 1034 XEB ak 10000</p>	<p>Calgary, Alta. Windsor, Ont. Havana, Cuba Santa Clara, Cuba Santiago, Cuba Mexico City, D. F.</p>	<p>M-..... E-6:45-1 E-..... E-11-12; 20-21 E-..... C-9-24</p>	<div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px;"></div>
<p>1040 kilocycles 288.3 meters</p>			
<p>CMGH ak 15</p>	<p>Matanzas, Cuba</p>	<p>E-14-15; 17-18; 19:30-20:30 C-6:30-24 P-6-Sunset; 21-3:15 E-12-12:30; 14-15 E-7-24</p>	<div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px;"></div>
<p>KRLD ae 10000 C KVJJ ak 500 D WKAR ak 1000 D WTIC ak 50000 R</p>	<p>Dallas, Texas Portland, Ore. East Lansing, Mich. Hartford, Conn.</p>		
<p>1050 kilocycles 285.5 meters</p>			
<p>CFCO ak 100 F CMJG z 50</p>	<p>Chatham, Ont. Camaguey, Cuba Quebec, Que. Abilene, Kans. Hollywood, Calif.</p>	<p>E-7:30-9; 11-13:30; 17-23 E-..... E-..... C-5-19 P-7-23:30</p>	<div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px;"></div>
<p>CRCK z 1000 F KFBI ak 5000 Dn KNX ak 50000</p>			
<p>1060 kilocycles 282.8 meters</p>			
<p>CMCB ak 150</p>	<p>Havana, Cuba</p>	<p>E-13-16; 20-24 C-7-24 E-7-21 C-7-Sunset C-8:30-9; 18-23</p>	<div style="border: 1px solid black; width: 100%; height: 15px; margin-bottom: 5px;"></div>
<p>KTHS ae 10000 N WBAL ae 10000 B WJAG ak 1000 D XEA ak 125</p>	<p>Hot Springs, Ark. Baltimore, Md. Norfolk, Neb. Guadalajara, Jal.</p>		

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

1070 kilocycles	280.2 meters	<table border="1" style="width: 100%; height: 20px;"> <tr><td style="width: 33%;"></td><td style="width: 33%;"></td><td style="width: 33%;"></td></tr> </table>			
KJBS ak 100 Dn	San Francisco, Calif.	P-0-Sunset			
WGAZ 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	<table border="1" style="width: 100%; height: 20px;"> <tr><td style="width: 33%;"></td><td style="width: 33%;"></td><td style="width: 33%;"></td></tr> </table>			
WBT ae 50000 C	Charlotte, N. C.	E-7:30-24			
WCB D ak 5000 1Dn	Waukegan, Ill.	C-7:30-10:30; 13:30-14:30; 15:30-24			
WMBI ae 5000 1Dn	Chicago, Ill.	C-7:30; 10:30-13:30; 14:30-15:30			
XEMA z 50	Tampico, Tams.	C-.....			

1090 kilocycles	275.1 meters	<table border="1" style="width: 100%; height: 20px;"> <tr><td style="width: 33%;"></td><td style="width: 33%;"></td><td style="width: 33%;"></td></tr> </table>			
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	<table border="1" style="width: 100%; height: 20px;"> <tr><td style="width: 33%;"></td><td style="width: 33%;"></td><td style="width: 33%;"></td></tr> </table>			
CMCY ak 500	Havana, Cuba	E-.....			
CMHA z 50 1103	Sagua la Grande, C.	E-.....			
CRGV 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 ae 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	<table border="1" style="width: 100%; height: 20px;"> <tr><td style="width: 33%;"></td><td style="width: 33%;"></td><td style="width: 33%;"></td></tr> </table>			
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	<table border="1" style="width: 100%; height: 20px;"> <tr><td style="width: 33%;"></td><td style="width: 33%;"></td><td style="width: 33%;"></td></tr> </table>			
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	Glenfuegos, 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	<table border="1" style="width: 100%; height: 20px;"> <tr><td style="width: 33%;"></td><td style="width: 33%;"></td><td style="width: 33%;"></td></tr> </table>			
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	<table border="1" style="width: 100%; height: 20px;"> <tr><td style="width: 33%;"></td><td style="width: 33%;"></td><td style="width: 33%;"></td></tr> </table>			
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	<table border="1" style="width: 100%; height: 20px;"> <tr><td style="width: 33%;"></td><td style="width: 33%;"></td><td style="width: 33%;"></td></tr> </table>			
CMBG z 225	Havana, Cuba	E-.....			
CMJH ak 50	Ciego de Avilla, 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	<table border="1" style="width: 100%; height: 20px;"> <tr><td style="width: 33%;"></td><td style="width: 33%;"></td><td style="width: 33%;"></td></tr> </table>			
WOWO ae 10000 1C	Fort Wayne, Ind.	C-7-18:45; 19:30-23			
WVVA 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-.....			

**KCY5.
1160
DIAL**

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

1170 kilocycles 256.3 meters

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CMJE z 50
COA z 500 1175
WCAU ae 50000 C

Camaguey, Cuba E-.....
Havana, Cuba E-.....
Philadelphia, Pa. E-8-1

E-.....
E-.....
E-8-1

1180 kilocycles 254.1 meters

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KEX ak 5000 2N
KOB ae 10000 2
VE9EK ak 10 1185
WDGY ak 1000 D (2.5)
WINS ae 1000
WMAZ ak 1000
XEFA z 500

Portland, Ore.
Albuquerque, N. M.
Montmagny, Que.
Minneapolis, Minn.
New York, N. Y.
Macon, Ga.
Mexico City, D. F.

P-6:30-17:30; 20-24
M-11-21
E-2-3
C-6:30-20:15
E-7-19:30
E-7-19
C-.....

1190 kilocycles 252.0 meters

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HIJ z 15 1195
WATR ak 100 D
WOAI ak 50000 N
WSAZ ak 1000

Santo Domingo, D. R.
Waterbury, Conn.
San Antonio, Texas.
Huntington, W. Va.

E-.....
E-9-17:15
C-6:55-13:45; 15-23:30
E-7-18:45

1200 kilocycles 249.9 meters

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CHAB ak 100 F
CKTB ak 100 F
CMCJ ak 400
KADA ak 100 D
KBTM ak 100 D
KFJB ak 100 (.25)
KFXD ae 100
KFXJ ak 100 (.25)
KGDE ak 100 (.25)
KGEK ak 100
KGJF ae 100
KGHI ak 100 (.25)
KQVO ak 100
KMLB ak 100
KOOS ae 100 (.25)
KSUN ck 100 D
KVOS ck 100
KWG ak 100 C
WABI ak 100
WBBZ ak 100
WBHS z 100
WBNO ck 100 1
WCAT ak 100 D
WCAX ak 100
WCLO ak 100
WFAM ak 100 8
WFBE ak 100 (.25) A
WHBC ak 100 2
WHBY ak 100 (.25)
WIBX ak 100 (.3) C
WIL ak 100 (.25) A
WJBC ak 100 6
WJBL ae 100 6
WJBW ak 100 1
WKBO ak 100 3 (.25)
WKJC ae 100 3 (.25)
WLVA ak 100 (.25)
WMPC ak 100
WNBO ae 100 2
WRBL ak 100
WWAE ae 100 8
YV3RC ak 1000
10-AK ak 15
10-BP ak 25
10-BU ak 50

Moose Jaw, Sask.
St. Catharines, Ont.
Havana, Cuba
Ada, Okla.
Jonesboro, Ark.
Marshalltown, Iowa
Nampa, Idaho
Grand Junction, Col.
Fergus Falls, Minn.
Sterling, Colo.
Los Angeles, Calif.
Little Rock, Ark.
Missoula, Mont.
Monroe, La.
Marshfield, Ore.
Lowell, Ariz.
Bellingham, Wash
Stockton, Calif.
Bangor, Maine
Ponca City, Okla.
Huntsville, Ala.
New Orleans, La.
Rapid City, S. D.
Burlington, Vt.
Janesville, Wis.
South Bend, Ind.
Cincinnati, Ohio
Canton, Ohio
Green Bay, Wis.
Utica, N. Y.
St. Louis, Mo.
Bloomington, Ill.
Decatur, Ill.
New Orleans, La.
Harrisburg, Pa.
Lancaster, Pa.
Lynchburg, Va.
Lapeer, Mich.
Washington, Pa.
Columbus, Ga.
Hammond, Ind.
Caracas, Venez.
Stratford, Ont.
Wingham, Ont.
Canora, Sask.

M-7:30-22
E-8-13:30; 16-23:30
E-.....
C-.....
C-6-17
C-6-9; 12-15; 18-21
M-7-21
M-9-21
C-7-21
M-11:30-13:30
P-24 hours
C-8-13; 15-22
M-8-22
C-.....
P-8-19
M-Sunrise-Sunset
P-7:30-22:30
P-7-24
E-9-14; 18-22
C-6:30-21:45
C-.....
C-12-17 20-23
M-12:30-13:30
E-12-13; 17-19
C-7-20
C-6:30-24
E-7-23
E-7-9; 12-15; 18-21
C-7:30-23
E-8-24
C-7-23
C-9-12:30; 15-19:30
C-6:30-9; 12:30-15; 19:30-22
C-8-12; 17-20
E-8-11; 15-24
E-11-15; 18-20
E-7-14; 17-22
E-10-14; 15:30-18
E-9-12; 15-18; 21-24
C-7-21
C-7-8:30; 11-13; 16-24
L-11-14; 17-22:30
E-12-13; 17:30-19
E-12-13; 19:15-21
C-.....

1210 kilocycles 247.8 meters

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CHNC ak 100 F
CKBI ak 100 F
CKGH ak 100 F
CKMC ak 50
CMJI ak 150

New Carlisle, Que.
Prince Albert, Sask.
Hull, Que.
Cobalt, Ont.
Ciego de Avila, Cuba

A-12:30-13:30; 18-24
M-.....
E-11:30-13:15; 17:30-23
E-.....
E-.....

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

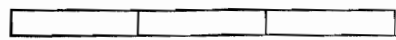
KASA	ck	100	.....	Elk City, Okla.	C-6-8; 9-13:30; 14:30-20
KDLR	ak	100	.....	Devils Lake, N. D.	C-8-14:15; 18-20
KFJI	ak	100	.....	Klamath Falls, Ore.	P-8:30-21
KFOR	ak	100	(.25)C	Lincoln, Neb.	C-7-22:30
KFPW	ak	100	.....	Fort Smith, Ark.	C-6-14; 17:30-21:30
KFVS	ae	100	6(.25)	Cape Girardeau, Mo.	C-9-12; 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-.....
KWV	z	100	.....	Hilo, Hawaii	L-.....
KWTV	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
WGNV	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

CMHK	z	50	1225
KFKU	ae	1000	a
KTW	ak	1000	S2
KWSC	ae	1000	2(2)
WCAD	ak	500	D
WCAE	ak	1000	R
WDAE	ae	1000	C(2.5)
WREN	ak	1000	Ba

245.8 meters

Cruces, Cuba	E-10-11:30
Lawrence, Kas.	C-14:30-15; 18-18:30
Seattle, Wash.	P-Silent
Pullman, Wash.	P-6:45-8; 10:30-21:30
Canton, N. Y.	E-12:30-13:30; 15-16
Pittsburgh, Pa.	E-6:45-1
Tampa, Fla.	E-8-24
Lawrence, Kas.	C-7-24

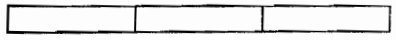


1230 kilocycles

CJOC	ak	100	F
CMCA	z	150	2
CMOK	z	25	.....
KG BX	ak	500	.....
KGGM	ak	250	(.5)
KYA	ae	1000	N
WFBM	ae	1000	C
WNAC	ak	1000	C(2.5)
XEFJ	ak	100	.....

243.8 meters

Lethbridge, Alta.	M-8-14; 16:30-22
Havana, Cuba	E-12-14; 17-23
Havana, Cuba	E-.....
Springfield, Mo.	C-17:45-22
Albuquerque, N. M.	M-6-12; 16-20
San Francisco, Calif.	P-7-24
Indianapolis, Ind.	C-6:30-24
Boston, Mass.	E-6:30-1
Monterrey, N. L.	C-11-14; 18-22

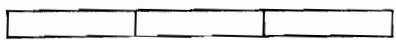


1240 kilocycles

CJCB	ak	1000	F
CMHB	z	30	1245
KGCU	ak	250	1
KLPM	ak	250	1
KTAT	ak	1000	C
KTFI	ae	1000	(1.5)
WKAQ	ae	1000	.....

241.8 meters

Sydney, N. S.	A-10-13:30; 18-23:30
San Spiritus, Cuba	E-.....
Mandan, N. D.	M-12-17; 18:45-21
Minot, N. D.	C-7-13; 18-19:45
Fort Worth, Texas	C-7-24
Twin Falls, Idaho	M-5:45-23:15
San Juan, P. R.	E-11:15-12:15; 130-21:4



KCYS.
1240
DIAL

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

<p>WXYZ ak 1000 XEAI z 100 XEKL z 500</p>	<p>Detroit, Mich. Mexico City, D. F. Leon, Guan.</p>	<p>E-7-24 C-..... C-10:30-16; 17-23</p>				
<p>1250 kilocycles 239.9 meters</p>		<table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>				
<p>CMCX ak 150 1255 KFOU ae 1000 WCAL ah 1000 2 (2.5) WDSU ak 1000 C WHBI ak 1000 1 (2.5) WLB ak 1000 2 WNEW ae 1000 1 (2.5) WTGN ak 1000 2 (5)</p>	<p>Havana, Cuba Long Beach, Calif. Northfield, Minn. New Orleans, La. Newark, N. J. Minneapolis, Minn. Newark, N. J. Minneapolis, Minn.</p>	<p>E-12-18 P-6-24 C-9:45-10:15; 20-22 C-7-24 E-14-17; 20-22 C-13-13:30 E-7-4 C-6:15-9:45; 22:35-24</p>				
<p>1260 kilocycles 238.0 meters</p>		<table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>				
<p>CFRN ak 100 KOIL ak 1000 B (2.5) KPAC ak 500 D KRGV ak 500 KUOA ak 1000 D KVOA ak 500 WLBW ae 1000 C WNBX ak 1000 D WTOC ae 1000 C</p>	<p>Edmonton, Alta. Council Bluffs, Iowa Port Arthur, Texas Weslaco, Texas Fayetteville, Ark. Tucson, Ariz Dayton, Ohio Springfield, Vt. Savannah, Ga.</p>	<p>M-7:30-13:30; 15-16; 17:30-20 C-6-1 C-..... C-7-21 C-7-13; 16-19 M-6-9; 12-15; 18-21 E-7-1 E-7:15-Sunset E-7-1</p>				
<p>1270 kilocycles 236.1 meters</p>		<table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>				
<p>CMCP z 150 HIX ak 1000 KGCA ak 100 2D KOL ae 1000 C (2.5) KVOR ae 1000 C KWLC ak 100 2D WASH ak 500 a WFBR ae 500 R WJDX ae 1000 N (2.5) WOOD ak 500 a XFB ak 1000</p>	<p>Havana, Cuba Santo Domingo, D.R. Decorah, Iowa Seattle, Wash. Colorado Spgs., Colo. Decorah, Iowa Grand Rapids, Mich. Baltimore, Md. Jackson, Miss. Grand Rapids, Mich. Jalapa, Ver.</p>	<p>E-..... E-11:40-20:10 C-8:30-9:45; 10:45-11:30; 12:30-14:30 P-6:45-24 M-7-23 C-7:30-8:30; 9:45-10:45; 11:30-12:30; 14:30-15:30 E-7-24 E-7-24 C-7-23 E-7-24 C-8-9; 13-14:30; 20-23:30</p>				
<p>1280 kilocycles 234.2 meters</p>		<table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>				
<p>CMCO z 150 KFBB ae 1000 (2.5) WCAM ae 500 1 WCAP ae 500 1 WDOD ae 1000 C (2.5) WIBA ae 500 N (1) WORC ak 500 C WRR ak 500 WTNJ ak 500 1 A</p>	<p>Havana, Cuba Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Madison, Wis. Worcester, Mass. Dallas, Texas Trenton, N. J.</p>	<p>E-..... M-8-22 E-11-12; 14-17 E-8:30-11; 12-13; 21-24 C-7-23:30 C-7:30-24 E-8-24 C-7-23 E-8-8:30; 13-14; 17-21</p>				
<p>1290 kilocycles 232.4 meters</p>		<table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>				
<p>KDYL ak 1000 N KLCN z 100 D WEBC ae 1000 N (2.5) WJAS ak 1000 C (2.5) WNBZ z 50 D WNEL ak 500 P</p>	<p>Salt Lake City, Utah Blytheville, Ark. Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. San Juan, P. R.</p>	<p>M-6:30-1 C-10:30-16:30 C-7-24 E-7:30-0:30 E-..... A-.....</p>				
<p>1300 kilocycles 230.6 meters</p>		<table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>				
<p>CMKJ z 20 HIZ z 10 KALE ak 500 3C KFAC ak 1000 KFH ak 1000 C2 KFJR ag 500 3 VOAC z 40 WBBR ae 1000 1 WEVD ak 1000 1 WFAB ae 1000 1 WFBC ak 1000 (1) WHAZ ae 500 1 WIOD ae 1000 N</p>	<p>Guantanamo, Cuba Santo Domingo, D.R. Portland, Ore. Los Angeles, Calif. Wichita, Kans. Portland, Ore. St. John's, Nfld. Brooklyn, N. Y. New York, N. Y. New York, N. Y. Greenville, S. C. Troy, N. Y. Miami, Fla.</p>	<p>E-..... E-..... P-7-10:30; 14:30-17; 18-19 P-7-24 C-7-24 P-10:30-14:30; 17-18 L-..... E-6:30-7; 10-12; 18-20 E-7-9; 15-18; 20-21; 22-23; 0-1 E-9-10; 12-15; 21-22 E-7:30-14:30; 17:30-22:30 E-Silent E-8-24</p>				
<p>1310 kilocycles 228.9 meters</p>		<table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>				
<p>CHCK ak 50</p>	<p>Charlottetown, P.E.I.</p>	<p>A-12-13:30; 17-21</p>				

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
KFFL dkh	100	.....		Dublin, Texas	C—6-15; 18-21
KPFM	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	.....	KallsPELL, Mont.	M—8-21
KGFV	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	Torreón, Coah.	C—
XEX	ak	125	Monterrey, N. L.	C—8-21

1320 kilocycles 227.1 meters

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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

**KCY5.
1340
DIAL**

1330 kilocycles 225.4 meters

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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
WDRG	ae	1000	C (2.5)	Hartford, Conn.	E—8-24
WSAI	ak	1000	R (2.5)	Cincinnati, Ohio	E—7-24
WTAQ	ae	1000	I	Eau Claire, Wis.	C—7-20

1340 kilocycles 223.7 meters

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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

**CUT OUT ON
DOTTED LINES**

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

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	I (.5)	Zarephath, N. J.	E-6-9; 17-18:30
WBNX	ae	250	I	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
KGRJ	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
WBOC	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 (2.5)	Enid, Okla.	C-7-9; 11-14; 17-19:45
KERN	ak	100	.....	Bakersfield, Calif.	P-7-24
KFGO	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
KFRZ	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
KGLF	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

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

KOY ak 500 2A Pittsburgh, Pa.
 WALA ae 500 C (1) Mobile, Ala.
 WKBH ae 1000 LaCrosse, Wis.
 WMFE z 250 PD New Britain, Conn.
 WSMK ak 200 C Dayton, Ohio

E-7-24
 C-8-23
 C-7:30-14; 17-22
 E-.....
 E-7:20; 22-24

1390 kilocycles 215.7 meters

CJRC ck 100 Winnipeg, Man.
 HJH ak 15 1395 San Ped. de Macoris, DR
 KLRA ae 1000 C (2.5) Little Rock, Ark.
 KOY ae 500 (1) Phoenix, Ariz.
 WHK ae 1000 C (2.5) Cleveland, Ohio

C-8-10:15; 11-14; 16-23:30
 E-.....
 C-6:30-23
 M-.....
 E-7:30-24

1400 kilocycles 214.2 meters

CMCR z 150 Havana, Cuba
 KLO ae 500 C Ogden, Utah
 KTUL ak 250 (.5) C Tulsa, Okla.
 TGX ak 150 Guatemala City, Gt.
 WARD ak 500 2 Brooklyn, N. Y.
 WBBC ae 500 2 (1) Brooklyn, N. Y.
 WKBF ak 500 N (1) Indianapolis, Ind.
 WLTH ak 500 2 Brooklyn, N. Y.
 WYFW ak 500 2 Brooklyn, N. Y.

E-12-13; 16-18; 20-21
 M-7-24
 C-6:30-24
 C-.....
 E-9-11:15; 19-21
 E-13:30-16; 21-22
 C-6:30-24
 E-11:30-13:30; 18-19:30
 E-11:15-13:30; 18-19:30

1410 kilocycles 212.6 meters

CKFC ak 50 5 Vancouver, B. C.
 CKMO ag 100 5 Vancouver, B. C.
 KGRS ae 1000 1 (2.5) Amarillo, Texas
 WAAB ak 500 C Boston, Mass.
 WBCM ae 500 Bay City, Mich.
 WDAG ae 1000 1 (2.5) Amarillo, Texas
 WHBL ae 500 4 Sheboygan, Wis.
 WHIS ak 250 2 Bluefield, W. Va.
 WRBX ae 250 2 (.5) Roanoke, Va.
 WROK ak 500 4 Rockford, Ill.
 WSFA ak 500 C (1) Montgomery, Ala.

P-15-16:30
 P-.....
 C-6-8; 10-12:30; 15-16:30; 18-19:30; 21-22
 E-8-23
 E-8-24
 C-8-10; 12:30-15; 16:30-18; 19:30-24; 22-23
 C-6-10; 13-16:30; 18-19:30
 E-7-9; 12-15; 18-20
 E-9-12; 15-18; 20-23
 C-10-13; 16:30-18; 19:30-22:30
 C-6:30-22:30

1420 kilocycles 211.1 meters

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

E-12-13:30; 17-22:30
 E-8-23:15
 E-.....
 C-7-22:30
 C-.....
 P-Silent
 C-7-14; 16-21
 C-10-13; 16-22
 C-7:30-15; 17-21
 P-9-13; 16-23
 M-10-13; 17-19; 22-23
 M-.....
 M-8-10; 13-17; 19-22
 P-7:45-21
 M-7-9; 11-13; 18-22
 P-8-24
 C-8-17
 E-11-13; 16-19
 E-10:30-14:30; 16-22
 E-7-21
 E-7-13:05; 16-1
 C-16-18
 E-7:30-23
 C-7-16:45
 E-7-sunset
 C-7-13:30; 18-21; 23-1
 E-7-11; 14-17; 21-24
 C-.....
 C-7:30-19:30
 C-13:30-16; 21-23
 C-7-23
 C-7-22
 E-7:30-24
 E-7:30-24
 C-7:30-14; 18-21:30
 E-.....
 C-7-13; 16-22
 C-7-9:30; 11-14; 16-22:30
 E-.....

**CKYS.
 1420
 DIAL**

INDEX BY FREQUENCIES AND DIAL NUMBERS

With Wednesday's Time on the Air

<p>XEFB ak 100 z 100 z 100 P (.25)</p>	<p>Monterrey, N. L. Lewiston, Idaho Ponce, P. R.</p>	<p>E-10-14; 18-22:30 M-..... E-.....</p>
<h2 style="margin: 0;">1430 kilocycles 209.7 meters</h2>		
<p>KECA ak 1000 (5) KGNF ak 500 D (1) KWCR ak 250 B (.5) WBNS ae 500 C (1) WHEC ae 500 C (1) WHP ak 500 C (1) WNBR ae 500 A WOKO ae 500 C (1)</p>	<p>Los Angeles, Calif. North Platte, Neb. Cedar Rapids, Iowa Columbus, Ohio Rochester, N. Y. Harrisburg, Pa. Memphis, Tenn. Albany, N. Y.</p>	<p>P-7-23 C-7-Sunset C-7-24 E-6:15-24 E-8-24 E-8:30-1 C-7-13; 15-22 E-8-1</p>
<h2 style="margin: 0;">1440 kilocycles 208.2 meters</h2>		
<p>KDFN ak 500 KLS ae 250 D KXYZ ak 500 WBIG ak 500 C (1) WCBA aj 500 a WMBD ae 500 3C (1) WSAN aj 500 a WTAD ak 500 3 XEFI ae 250</p>	<p>Casper, Wyo. Oakland, Calif. Houston, Texas Greensboro, N. C. Allentown, Pa. Peoria, Ill. Allentown, Pa. Quincy, Ill. Chihuahua, Chih.</p>	<p>M-7-30-13:30; 15-21 P-8-Sunset C-6:30-13; 14:30-23 E-7:30-23 E-7-25 C-6-11; 20-24 E-Silent C-11-20 C-.....</p>
<h2 style="margin: 0;">1450 kilocycles 206.8 meters</h2>		
<p>CFCT ae 75 CHGS ae 50 F KTBS ck 1000 N WGAR ak 500 B (1) WHOM ae 250 WSAR ae 250 WTFI ak 500</p>	<p>Victoria, B. C. Summerside, P.E.I. Shreveport, La. Cleveland, Ohio Jersey City, N. J. Fall River, Mass. Athens, Ga.</p>	<p>P-8-12:30; 17:30-20:15 A-7:30-8:30; 10:30-14; 16-23 C-7-24 E-6:30-1 E-8-24 E-8-15:30; 17-22 E-9-21</p>
<h2 style="margin: 0;">1460 kilocycles 205.4 meters</h2>		
<p>KSTP ae 10000 N (25) WJSV ak 10000 C</p>	<p>St. Paul, Minn. Washington, D. C.</p>	<p>C-7-0:30 E-6:30-1</p>
<h2 style="margin: 0;">1470 kilocycles 204.0 meters</h2>		
<p>WLAC ak 5000 C</p>	<p>Nashville, Tenn.</p>	<p>C-6:30-24</p>
<h2 style="margin: 0;">1480 kilocycles 202.6 meters</h2>		
<p>KOMA ak 5000 C WKBW ae 5000 C</p>	<p>Oklahoma City, Ok. Buffalo, N. Y.</p>	<p>C-7-24 E-9-1</p>
<h2 style="margin: 0;">1490 kilocycles 201.2 meters</h2>		
<p>WCKY ae 5000 B</p>	<p>Covington, Ky.</p>	<p>E-7-24</p>
<h2 style="margin: 0;">1500 kilocycles 199.9 meters</h2>		
<p>CMCN z 250 KDB ak 100 C KGFI ak 100 (.25) KGEK ak 100 KGKB ak 100 KGKY ck 100 KNOW ak 100 KOTN ak 100 D KPJM ak 100 KPO ak 100 KREG ak 100 KXO ae 100 WCNW ak 100 1 (.25) WDNC ak 100 C WGAL ae 100 (.25) WHEF z 100 (.25) WJBK ae 100 (.25) A WKBB ae 100 (.25) WKBV ak 100 WKBZ ak 100 (.25)</p>	<p>Havana, Cuba Santa Barbara, Calif. Corpus Christi, Tex. Moorhead, Minn. Tyler, Texas Scottsbluff, Neb. Austin, Texas Pine Bluff, Ark. Prescott, Ariz. Wenatchee, Wash. Santa Ana, Calif. El Centro, Calif. Brooklyn, N. Y. Durham, N. C. Lancaster, Pa. Kosciusko, Miss. Detroit, Mich. E. Dubuque, Ill. Richmond, Ind. Muskegon, Mich.</p>	<p>E-..... P-7:30-24 C-7-15; 18-22 C-8-21 C-8-10; 12-13; 17-20:30 M-9-13:30; 17:30-21 C-7:30-14; 16-22 C-7-17:30 M-8-13:30; 17:30-20:30 P-6:30-22:30 P-9-23 P-7-14; 16-21 E-14-18; 22-3 E-7:30-24 E-9-22 C-6-24 E-7-Sunset; 21-24 C-7-21 C-10-12; 18-22 E-9-21</p>

INDEX BY LOCATIONS

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
WOFI 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.

<p>ALABAMA</p> <p>Birmingham</p> <p>WAPI 1140 5000 N</p> <p>WBRC 930 1000 C</p> <p>WSGN 1310 100</p> <p>Dothan</p> <p>WAGF 1370 100</p> <p>Gadsden</p> <p>WJBY 1210 100</p> <p>Huntsville</p> <p>WBHS 1200 100</p> <p>Mobile</p> <p>WALA 1380 500 C</p> <p>Montgomery</p> <p>WSFA 1410 500 C</p> <p>Muscle Shoals</p> <p>WNRA 1420 100</p> <p>ALASKA</p> <p>Anchorage</p> <p>KFOD 780 250</p> <p>Ketchikan</p> <p>KGBU 900 500</p> <p>ARIZONA</p> <p>Jerome</p> <p>KCRJ 1310 100</p> <p>Lowell</p> <p>KSUN 1200 100</p> <p>Phoenix</p> <p>KOY 1390 500</p> <p>KRAR 620 1000 N</p> <p>Prescott</p> <p>KPJM 1500 100</p> <p>Tucson</p> <p>KGAR 1370 100</p> <p>KVOA 1260 500</p> <p>Yuma</p> <p>KUMA 1420 100</p> <p>ARKANSAS</p> <p>Blytheville</p> <p>KLCN 1290 100</p> <p>Fayetteville</p> <p>KUOA 1260 1000</p> <p>Fort Smith</p> <p>KFPW 1210 100</p> <p>Hot Springs</p> <p>KTHS 1060 1000 N</p>	<p>Jonesboro</p> <p>KBTM 1200 100</p> <p>Little Rock</p> <p>KARK 890 250</p> <p>KLHI 1200 100</p> <p>KGRA 1390 1000 C</p> <p>Pine Bluff</p> <p>KOTN 1500 100</p> <p>Texarkana</p> <p>KCMC 1420 100</p> <p>CALIFORNIA</p> <p>Bakersfield</p> <p>KERN 1370 100 C</p> <p>W6XAI 1550 1000</p> <p>Berkeley</p> <p>KRE 1370 100</p> <p>Beverly Hills</p> <p>KMPC 710 500</p> <p>Burbank</p> <p>KELW 780 500</p> <p>El Centro</p> <p>KXO 1500 100</p> <p>Eureka</p> <p>KIEM 1210 100</p> <p>Fresno</p> <p>KMJ 580 500 C</p> <p>Glendale</p> <p>KIEV 850 250</p> <p>Hollywood</p> <p>KFWB 950 1000</p> <p>KMTR 570 1000</p> <p>KNX 1050 50000</p> <p>Long Beach</p> <p>KFOX 1250 1000</p> <p>KGER 1360 1000</p> <p>Los Angeles</p> <p>KECA 1430 1000</p> <p>KFAC 1300 1000</p> <p>KFI 640 50000 N</p> <p>KFSG 1120 500</p> <p>KFVD 1000 250</p> <p>KGFJ 1200 100</p> <p>KHJ 900 1000 C</p> <p>KRRK 1120 500</p> <p>KTM 780 500</p> <p>Modesto</p> <p>KTRB 740 250</p> <p>Oakland</p> <p>KLS 1440 250</p>	<p>KLX 880 1000</p> <p>KROW 930 1000</p> <p>Pasadena</p> <p>KPPC 1210 50</p> <p>Sacramento</p> <p>KFBK 1310 100 C</p> <p>San Bernardino</p> <p>KFXM 1210 100</p> <p>San Diego</p> <p>KFSD 600 1000 N</p> <p>KGB 1330 1000 C</p> <p>San Francisco</p> <p>KFRC 610 1000 C</p> <p>KGGG 1420 100</p> <p>KGO 790 7500 N</p> <p>KJBS 1070 100</p> <p>KPO 680 50000 N</p> <p>KTAB 560 1000</p> <p>KYA 1230 1000 N</p> <p>San Jose</p> <p>KQW 1010 1000</p> <p>Santa Ana</p> <p>KREG 1500 100</p> <p>Santa Barbara</p> <p>KDB 1500 100 C</p> <p>Stockton</p> <p>KGDM 1100 250</p> <p>KWG 1200 100 C</p> <p>COLORADO</p> <p>Alamosa</p> <p>KGIW 1420 100</p> <p>Colorado Springs</p> <p>KVOR 1270 1000 C</p> <p>Denver</p> <p>KFEL 920 500</p> <p>KLZ 560 1000 C</p> <p>KOA 830 50000 N</p> <p>KPOF 880 500</p> <p>KVOD 920 500</p> <p>Grand Junction</p> <p>KFXJ 1200 100</p> <p>Greeley</p> <p>KFKA 880 500</p> <p>Lamar</p> <p>KIDW 1420 100</p> <p>Pueblo</p> <p>KGHF 1320 500</p>	<p>Sterling</p> <p>KGEK 1200 100</p> <p>CONNECTICUT</p> <p>Bridgeport</p> <p>WICC 600 250 C</p> <p>Hartford</p> <p>WDRG 1330 1000 C</p> <p>WTIC 1040 50000 R</p> <p>New Britain</p> <p>WMFE 1380 250</p> <p>New Haven</p> <p>WMEI 900 500</p> <p>Storrs</p> <p>WCAC 600 500</p> <p>Waterbury</p> <p>WATR 1190 100</p> <p>WIXBS 1530 1000 A</p> <p>DELAWARE</p> <p>Wilmington</p> <p>WDEL 1120 250 A</p> <p>WILM 1420 100</p> <p>DISTRICT OF COLUMBIA</p> <p>Washington</p> <p>WJSV 1460 10000 C</p> <p>WMAL 630 250 B</p> <p>WOL 1310 100 A</p> <p>WRC 950 500 R</p> <p>FLORIDA</p> <p>Clearwater</p> <p>WFLA 620 1000 N</p> <p>Daytona Beach</p> <p>WMPJ 1420 100</p> <p>Gainesville</p> <p>WRUF 830 5000</p> <p>Jacksonville</p> <p>WJAX 900 1000 N</p> <p>WMBR 1370 100 C</p> <p>Miami</p> <p>WIOD 1300 1000 N</p> <p>WQAM 560 1000 C</p> <p>Orlando</p> <p>WDBO 580 250 C</p> <p>Pensacola</p> <p>WCOA 1340 500 C</p> <p>St. Petersburg</p> <p>WSUN 620 1000 N</p>
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INDEX BY LOCATIONS

Tampa WDAE 1220 1000 C	Rockford WRCK 1410 500	Lawrence KFKY 1220 1000	MICHIGAN
GEORGIA	Rock Island WHBF 1210 100 A	WREN 1220 1000 B	Battle Creek WELL 1420 50
Albany WGPC 1420 100	Springfield WCBS 1210 100	Manhattan KSAC 580 500	Bay City WBCM 1410 500
Athens WTFI 1450 500	WTAX 1210 100	Topeka WIBW 580 1000 C	Calumet WHDF 1370 100
Atlanta WGST 890 500 C	Tuscola WDZ 1070 100	Wichita KFH 1300 1000 C	Detroit WJBK 1500 100 A
WJTL 1370 100	Urbana WILL 890 250	KENTUCKY	WJR 750 10000 B
WSB 740 50000 N	Waukegan WCBBD 1080 5000	Covington WCKY 1490 5000 B	WMBG 1420 100
Augusta WRDW 1500 100	INDIANA	Lexington WLAP 1420 100	WWJ 920 1000 R
Columbus WRBL 1200 100	Anderson WHBU 1210 100	Louisville WAVE 940 1000 N	WXYZ 1240 1000
LaGrange WKEU 1500 100	Elkhart WTRC 1310 50	WHAS 820 50000 C	East Lansing WKAR 1040 1000
Macon WMAZ 1180 1000	Evansville WGBF 630 500	Paducah WPAD 1420 100	Flint WFDF 1310 100
Rome WRGA 1500 100	Fort Wayne WGL 1370 100 C	LOUISIANA	Grand Rapids WASH 1270 500
Savannah WTOC 1260 1000 C	WOWO 1160 10000 C	Baton Rouge WJBO 1420 100	WOOD 1270 500
Thomasville WPAX 1210 100	Gary WIND 560 1000 A	Monroe KMLB 1200 100	Ironwood WJMS 1420 100
HAWAII	Hammond WWAE 1200 100	New Orleans WBNO 1200 100	WJBM 1370 100
Hilo KWFV 1210 100	Indianapolis WFMB 1230 1000 C	WDSU 1250 1000 C	Kalamazoo WKZO 590 1000
Honolulu KGMB 1320 250 C	WKBF 1400 500 N	WJBW 1200 100	Lansing WJIM 1210 100
KGU 750 2500 N	Muncie WLBC 1310 100	WSMB 1320 500 N	Lapeer WMPC 1200 100
IDAHO	Richmond WKBV 1500 100	WWL 850 10000	Marquette WBEO 1310 100
Boise KIDO 1350 1000	South Bend WFAM 1200 100	Shreveport KRMD 1310 100	Muskegon WKBZ 1500 100
Idaho Falls KID 1320 250	WSBT 1360 500 C	KTBS 1450 1000 N	Royal Oak WEXL 1310 50
Lewiston 1420 100	Terre Haute WBOW 1310 100	KWEA 1210 100	MINNESOTA
Nampa KFXD 1200 100	West Lafayette WBAA 890 1000	KWKH 1100 10000 C	Fergus Falls KGDE 1200 100
Pocatello KSET 900 250	IOWA	MAINE	Hibbing WMFG 1210 100
Twin Falls KTFI 1240 500	Ames WOI 640 5000	Augusta WRDO 1370 100	Minneapolis WCCO 810 50000 C
ILLINOIS	Boone KFGQ 1370 100	Bangor WABI 1200 100	WGDY 1180 1000
Bloomington WJBC 1200 100	Cedar Rapids KWCR 1430 250 B	WLBZ 620 500 C	WLB 1250 1000
Carthage WCAZ 1070 100	Council Bluffs KOIL 1260 1000 B	Portland WCSH 940 1000 R	WTCN 1250 1000
Chicago WAAF 920 500	Davenport WOC 1370 100 C	Presque Isle WAGM 1420 100	Moorhead KGFK 1500 100
WBBM 770 25000 C	Decorah KCGA 1270 100	MARYLAND	Northfield WCAL 1250 2500
WCFL 970 1500 B	KWLG 1270 100	Baltimore WBAL 1060 10000 B	St. Paul KSTP 1460 10000 N
WCRW 1210 100	Des Moines KSO 1320 500 B	WCAO 600 500 C	MISSISSIPPI
WEDC 1210 100	WEO 1000 50000 R	WCBM 1370 100 A	Gulfport WGCM 1210 100
WENR 870 50000 N	Iowa City WSUI 880 500	WFBR 1270 500 R	Hattiesburg WFFB 1370 100
WGES 1360 500	Marshalltown KFJB 1200 100	Cumberland WTBO 800 250	Jackson WJDX 1270 1000 N
WGN 720 50000	Shenandoah KFNF 890 500	Hagerstown WJEJ 1210 100	Kosciusko WHEF 1500 100
WJJD 1130 20000 A	KMA 930 1000	Babson Park WBSO 920 500	Laurel WAML 1310 100
WLS 870 50000 N	Sioux City KSCJ 1330 1000 C	Boston WAAB 1410 500 C	Meridian WCOG 880 500
WMAQ 670 50000 N	Waterloo WMT 600 1000 C	WEEI 590 1000 R	Vicksburg WOBC 1360 500
WMBI 1080 5000	KANSAS	WHDH 830 1000 A	MISSOURI
WSBC 1210 100	Abilene KFBI 1050 5000	WMEX 1500 100 A	Cape Girardeau KFVS 1210 100
Cicero WEHS 1420 100	Coffeyville KGGF 1010 1000	WNAC 1230 1000 C	Columbia KFRU 630 500
WEHC 1420 100	Dodge City KGNQ 1340 250	WMPH 1120 500	Jefferson City WOS 630 500
WKBI 1420 100	Kansas City WLBFB 1420 100	Fall River WSAR 1450 250	Joplin WMBH 1420 100
Decatur WJBL 1200 100	MISSOURI	Lowell WLLH 1370 100	Kansas City KMBC 950 1000 C
East Dubuque WKBB 1500 100	Abilene KFBI 1050 5000	New Bedford WNBH 1310 100 C	
Harrisburg WEBQ 1210 100	Coffeyville KGGF 1010 1000	Springfield WBZA 990 1000 B	
Joliet WJLS 1310 100	Dodge City KGNQ 1340 250	Worcester WORC 1280 500 C	
Peoria WMBD 1440 500 C	Kansas City WLBFB 1420 100	WTAG 580 500 R	
Quincy WTAD 1440 500			

INDEX BY LOCATIONS

<ul style="list-style-type: none"> —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 	<ul style="list-style-type: none"> Zarephath —WAWZ 1350 250 NEW MEXICO Albuquerque —KBGM 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 —WBNF 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 —WWSV 1370 50 Canton —WCAD 1220 500 Chester —WGNV 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 Whita Plains —WFAS 1210 100 	<ul style="list-style-type: none"> Woodside —WWRL 1500 100 NORTH CAROLINA Ashville —WWNC 570 1000 N Charlotte —WBT 1080 50000 C —WSOC 1210 100 N Durham —WDNC 1500 100 C Greensboro —WBGJ 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 —KGGC 1240 250 Minot —KLPN 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 —WVSM 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 —KGFJ 1370 100 —KOMA 1480 5000 C —WKY 900 1000 N 	<ul style="list-style-type: none"> Ponca City —WBBZ 1200 100 Shawnee —KGFJ 1420 100 Tulsa —KTUL 1400 250 C —KVUU 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 —KGV 620 1000 N —KOIN 940 1000 C —KWJ 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 Glenaside —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 —KOV 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
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INDEX BY LOCATIONS

Sunbury WKOK 1210 100 Washington WNB0 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 5000 PORTO RICO Ponce 1420 100 San Juan WKAO 1240 1000 WNEL 1290 500 RHODE ISLAND Providence WEAN 780 500 C WJAR 890 500 R WPRO 630 250 A SOUTH CAROLINA Charleston WCSG 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 WR0L 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 KGGI 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 KFR0 1370 100 Lubbock KFV0 1310 100 Port Arthur KPAC 1260 500 San Angelo KGKL 1370 100 San Antonio KABC 1420 100 KMAC 1370 100 KONO 1370 100 K TSA 550 1000 C W0AI 1190 50000 N Tyler KGKB 1500 100 Waco WAGO 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 WTAZ 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 WSWA 550 500 WASHINGTON Aberdeen KXRO 1310 100 Bellingham KVO5 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 KPO 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 WWSVA 1160 5000 C WISCONSIN Eau Claire WTAO 1330 1000 Fond du Lac KFIZ 1420 100 Green Bay WBBV 1200 100 Janesville WCLO 1200 100 LaCrosse WKBH 1380 1000 Madison WFLA 940 2500 WBA 1280 1000 N Manitowoc W0MT 1210 100 Milwaukee WISN 1120 250 C WTMJ 620 1000 N	Poyntette WBUR 1210 100 Racine WRJN 1370 100 Sheboygan WHBL 1410 500 Stevens Point WLBL 900 2500 Superior WEEC 1290 1000 N WYOMING Casper KDFN 1440 500 Sheridan KWYO 1370 100 CANADA ALBERTA Calgary CFAC 930 100 F CFPC 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 CKGD 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 CJCBC 1240 1000 F Wolfville CKIC 1010 50 Yarmouth CJLS 1310 100 ONTARIO Brantford CKPC 930 100 F Chatham CFCO 1050 100 F
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INDEX BY LOCATIONS

Cobalt		Yorkton		XEFO	940 5000	Cardenas	
CKMC 1210	50	XJGX 630	500 F	XEFZ	1370 100	CMGE	1375 30
Fort William		NEWFOUNDLAND		XEK	990 100	Clejo de Avila	
CKPR 930	50 F	St. John's		XEN	710 1000	CMJH	1150 50
Hamilton		VOAC	1300 40	XEO	940 5000	CMJI	1210 150
CHML 1010	50 F	VOAS	940 100	XEP	820 500	CMJO	1010 50
CKOK 1120	500 F	VOGY	840 400	XETW	890 50000	Centrujos	
Kingston		VONF	950 5000	XEWX	1150 100	CMJH	1125 40
CFRC 1510	100	VOWR	681 500	XEXX	845 500	CMHW	910 100
Kirkland Lake		MIQUELON		XEYZ	780 10000	Colon	
CJKL 1310	100	St. Pierre		XFX	610 1000	CMGI	1094 30
London		FQN	609 250	DURANGO		Cruces	
CFPL 730	100 F	CENTRAL AMERICA		Durango		CMHK	1225 50
North Bay		COSTA RICA		XEE	1210 50	Guantanamo	
CFCH 930	100 F	Cartago		GUANAJUATO		CMKJ	1300 20
Ottawa		TIGA	1014 30	Leon		Havana	
CKCO 1010	100	San Jose		XEAX	1420 7	CMAF	680 1000
CRCO 880	1000 F	TICR	912 75	XEKL	1240 500	CMBC	1035 150
Prescott		TIFB	714 30	JALISCO		CMBD	1350 150
CFLC 930	100	TIGP	800 75	Guadalajara		CMBG	1150 225
St. Catharines		TIRCA	1100 500	XEA	1060 125	CMBS	775 150
CKTB 1200	100 F	TISO	550 250	XED	1160 500	CMBX	1425 150
Sault Ste. Marie		TIVL	835 30	MICHOACAN		CMBY	635 250
CJJC 890	100	GUATEMALA		Moralla		CMCZ	1005 100
Stratford		Guatemala City		XEI	1370 125	CMC	835 500
10-AK 1200	15	TGW	565 10000	NUEVO LEON		CMCA	1230 150
Sudbury		TGX	1400 150	Monterrey		CMCB	1060 150
CKSO 780	1000	EL SALVADOR		XEFB	1420 100	CMCD	955 250
Timmins		San Salvador		XEFJ	1230 100	CMCF	610 250
CKGB 1420	100	RDN	680 500	XEH	1150 250	CMCG	1125 150
Toronto		MEXICO		XET	690 500	CMCJ	1200 400
CFRB 690	10000 C	AGUASCALIENTES		XEX	1310 125	CMCN	1500 250
CKLC 580	100 F	Aguascalientes		PUEBLA		CMCO	1280 150
CKNC 1420	100 F	XFC	810 350	Puebla		CMCP	1270 150
CRCT 840	5000 N	San Luis Potosi		XETH	1210 100	CMCQ	680 1000
Waterloo		San Luis Potosi		SAN LUIS POTOSI		CMCR	1400 150
CKCR 1510	100	San Luis Potosi		San Luis Potosi		CMCW	755 150
Windsor		AGUASCALIENTES		XEZZ	1370 100	CMCX	865 150
CKLW 1030	5000 C	Aguascalientes		SONORA		CMCY	1100 500
CRCW 600	500 F	XFG	810 350	Nogales		CMK	725 3150
Wingham		BAJA CALIFORNIA		XEAF	990 250	CMOK	1230 250
10-BP 1200	25	Agua Caliente		TAMAULIPAS		CMOX	1325 200
PRINCE EDWARD ISLAND		Agua Caliente		Nuevo Laredo		CMQ	840 5000
Charlottetown		XBC 730	5000	XEAM	750 50	CMW	930 1400
CFCY 630	1000 F	Ensenada		XEFE	1370 100	CMX	905 1000
CHGC 1310	50	XEG	1280 500	XENT	910 60000	COA	1175 500
Summerside		Mexicali		Reynosa		Holquin	
CHGS 1450	50 F	XEAA	920 200	XEAW	960 10000	CMKF	1363 30
QUEBEC		XEAO	560 250	Tampico		Manzanillo	
Chicoutimi		Tijuana		XEFW	1310 250	CMKM	940 100
CRCS 950	100 F	XEC	1310 50	XEMA	1080 50	Matanzas	
Hull		XEFL	1160 5000	XES	970 250	CMGZ	971.5 100
CKCH 1210	100 F	XEMO	865 2500	VERACRUZ		CMGH	1040 15
Montmagny		CHIHUAHUA		Jalapa		Moron	
VE9EK 1185	10	Chihuahua		XFB	1270 250	CMJP	1360 75
Montreal		XEFI	1440 250	Orizaba		CMJA	1103 50
CFCF 600	500 N	Juarez		Veracruz		San Spiritus	
CHLP 1120	100	XEFV	1210 100	XEU	1010 250	CMHB	1245 30
CKAC 730	5000 C	XEJ	1020 1250	YUCATAN		Santa Clara	
CRGM 910	5000 F	COAHUILA		Morita		CMHI	1037 150
New Carlisle		Pedras Negras		XEF	1310 100	Santiago	
CHNC 1210	100 F	XEPN	590 5000	XEZ	630 500	CMCK	1034 150
Quebec		Saltitilo		WEST INDIES		DOMINICAN REPUBLIC	
CHRC 580	100 F	XEOX	640 250	CUBA		San Pedro de	
CKCV 1310	50	Torreón		Calbarion		Marcoris	
CRCK 1050	1000 F	XETB	1310 125	CMHD	950 250	HIH	1395 15
SASKATCHEWAN		XELO	660 D. F.	Camaguey		Santo Domingo	
Canora		Mexico City		CMJC	1382 150	HIJ	1195 15
10-BU 1200	50	XEAI	1240 100	CMJE	1170 50	HIX	1270 1000
CHAB 1200	100 F	XEB	1030 10000	CMJF	930 200	HIZ	1300 10
CMJM 540	1000 F	XECW	1310 10	CMJG	1050 50	HAITI	
Prince Albert		XEFA	1180 500	CMJK	790 150	Port-au-Prince	
CKBI 1210	100 F	XEFG	1100 250	CMJL	960 50	HHK	920 1000
Regina		WEST INDIES		CUBA		DOMINICAN REPUBLIC	
CHWC 1010	500 F	Calbarion		Calbarion		San Pedro de	
CKCK 1010	500 F	CMHD	950 250	CMHD	950 250	Marcoris	
Saskatoon		Camaguey		Camaguey		Santo Domingo	
CFQC 840	1000 F	CMJC	1382 150	CMJE	1170 50	HIJ	1195 15
		CMJF	930 200	CMJG	1050 50	HIX	1270 1000
		CMJK	790 150	CMJL	960 50	HIZ	1300 10
						HAITI	
						Port-au-Prince	
						HHK	920 1000

INDEX BY CALL LETTERS

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 Brdestg. Co., Ltd.
CKFX	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 Gallego
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
CMEY	635	250	Havana, Cuba
			Infanta 132 esq-Jevellar

INDEX BY CALL LETTERS

CMBZ 1005	100	Havana, Cuba	CMJL 960	50	Camaguey, Cuba
Manuely G. Salas, San Rafael No. 14			Enrique Artime, Cuba No. 27		
CMC 835	500	Havana, Cuba	CMJO 1010	50	Ciego de Avila, Cuba
Agulla y Dragones			Jose M. Rey, C. Centra l & Maceo		
CMCA 1230	150	Havana, Cuba	CMJP 1360	75	Moron, Cuba
J. M. Gonzales, Galiano No. 102			Cesar Canall, Callejas No. 28		
CMCB 1060	150	Havana, Cuba	CMK 725	3150	Havana, Cuba
Metropolitan Bldg.			Hote l Plaza		
CMCD 955	250	Havana, Cuba	CMKC 1034	150	Santiago, Cuba
Calle G y 25, Vedado			J. A. Saco, Alta 23		
CMCF 610	250	Havana, Cuba	CMKF 1363	30	Holquin, Cuba
Raoul Karman, P. O. Box 647			Libertad esq. Arias		
CMCG 1125	150	Havana, Cuba	CMKJ 1300	20	Guantanamo, Cuba
Emille Perera, San Miguel No. 62			Luis Morlote, East Giro 11		
CMCJ 1200	400	Havana, Cuba	CMKM 940	100	Manzanillo, Cuba
Rafael Rodriguez, Estevez No. 4			Jesus Armeste, Merchant y P. Figuerado		
CMCK 1320	100	Havana, Cuba	CMOK 1230	250	Havana, Cuba
Manuel Autran G., Vedado			Rafael Valdez, Marques Gonzales 52		
CMCN 1500	250	Havana, Cuba	CMOX 1325	200	Havana, Cuba
Reina y Ave. Buen Ritiroe, Marianao			10 entre 17 y 19, Vedado		
CMCO 1280	150	Havana, Cuba	CMQ 840	5000	Havana, Cuba
Ass. Detes. del Comercio			25 Numero 445, Vedado		
CMCP 1270	150	Havana, Cuba	CMW 930	1400	Havana, Cuba
Calzada de Luyane No. 132			Troncoso y Gll. Apdo. 1010		
CMCQ 680	1000	Havana, Cuba	CMX 905	1000	Havana, Cuba
Vista Alegre No. 80, Vibora			Casa "Lavin," Ave. del a Republica 99A		
CMCR 1400	150	Havana, Cuba	COA 1175	500	Havana, Cuba
Milagros No. 35, Vibora			Juan Fernandez, Aguilar 120 . Altes		
CMCU 1255	150	Havana, Cuba	CRCK 1050	1000	Quebec, Que.
San Francisco No. 13, Vibora			Chateau Frontenas Hotel		
CMCW 755	150	Havana, Cuba	CRCM 910	5000	Montreal, Que.
Galiano y San Lazaro Sts.			1231 St. Catherine St. W.		
CMCX 865	150	Havana, Cuba	CRCO 880	1000	Ottawa, Ont.
			Chateau Laurier Hotel		
CMCY 1100	500	Havana, Cuba	CRCS 950	100	Chicoutimi, Que.
Manuel D. Autran, Calle G 215, Vedado			4 Rue Larouche		
CMGE 1375	30	Cardenas, Cuba	CRCT 840	5000	Toronto, Ont.
Genaro Sebater, Cespedes No. 180			805 Davenport Road		
CMGF 971.5	100	Matanzas, Cuba	CRCV 1100	1000	Vancouver, B. C.
G. Betancourt No. 51			C. N. R. Station Bldg.		
CMGH 1040	15	Matanzas, Cuba	CRCW 600	500	Windsor, Ont.
B. Byrne No. 113			Guaranty Trust Bldg.		
CMGI 1094	30	Colon, Cuba	FQN 609	250	St. Pierre, Mq.
Armando Linanza, Mart i No. 35					
CMHA 1103	50	SaguaLa Grande, Cuba	HHK 920	1000	Port-au-Prince, Haiti
Abelardo Menocal, Carrillo No. 1			Haitian Government		
CMHB 1245	30	San Spiritus, Cuba	HIH 1395	15	San Pedro de M., D.R.
Independencia No. 33			Domingo Dominguez		
CMHD 950	250	Calbarlen, Cuba	HIJ 1195	15	Santo Domingo, D. R.
Manuel Alvarez, M. Escobar 17			Tuto Baez, Hostos 34		
CMHI 1037	150	Santa Clara, Cuba	HIX 1270	1000	Santo Domingo, D. R.
Lavis y Paz, Independencia No. 34			J. R. Saladin, Director General		
CMHJ 1125	40	Cienfuegos, Cuba	HIZ 1300	10	Santo Domingo, D. R
Romoualde Ugalde, Hotel Bristol			Abbes and Garcia		
CMHK 1225	50	Cruces, Cuba	KABC 1420	100	San Antonio, Texas
Heredia No. 61			Texas Theatre Bldg.		
CMHW 910	100	Cienfuegos, Cuba	KABR 1420	100	Aberdeen, S. Dak.
Arguelles No. 200			Aberdeen Broadcast Co.		
CMJC 1382	150	Camaguey, Cuba	KADA 1200	100	Ada, Okla.
Feliciano Isaac, Cisneros y G. Gomez			C. C. Morris		
CMJE 1170	50	Camaguey, Cuba	KALE 1300	500	Portland, Ore.
Manuel Fernandez, Hnos. Aguiere No. 2			Kale, Inc., New Heathman Hotel		
CMJF 930	200	Camaguey, Cuba	KARK 890	250	Little Rock, Ark.
John L. Stowers, Republica No. 88			N. S. L. Bldg.		
CMJG 1050	50	Camaguey, Cuba	KASA 1210	100	Elk City, Okla.
Jose Antonio Lefran, Maceo No.1			E. M. Woody, Casa Grande Hotel		
CMJH 1150	50	Ciego de Avila, Cuba	KBPS 1420	100	Portland, Ore.
Luis Marauri, Vista Hermosa			E. 12th & Hoyt Sts.		
CMJI 1210	150	Ciego de Avila, Cuba	KBTM 1200	100	Jonesboro, Ark.
Gilberto Gessa Lopez, Independencia 95			Jay P. Beard		
CMJK 790	150	Camaguey, Cuba	KCMC 1420	100	Texarkana, Ark.
Cla. Nacional de Radio, Finlay			M. P. Mims, Box 865		

INDEX BY CALL LETTERS

KCRC 1370 100 Enid, Okla. Enid Radiophone Co., Oxford Hotel	KFPM 1310 15 Greenville, Texas New Furniture Co.
KCRJ 1310 100 Jerome, Ariz. Chas. C. Robinson, Drawer D.	KFPW 1210 100 Fort Smith, Ark. Goldman Hotel
KDB 1500 100 Santa Barbara, Calif. 15-17 E. Haley St.	KFPY 1340 1000 Spokane, Wash. Symons Bldg.
KDFN 1440 500 Casper, Wyo. Donald Lewis Hathaway	KFQD 780 250 Anchorage, Alaska 411-4th Ave.
KDKA 980 50000 Pittsburgh, Pa. Hotel Wm. Penn	KFRG 610 1000 San Francisco, Calif. 1000 Van Ness Ave.
KDLR 1210 100 Devils Lake, N. D. KDLR, Inc., 1025 3rd Street	KFRO 1370 100 Longview, Texas Voice of Longview
KDYL 1290 1000 Salt Lake City, Utah Ezra Thompson Bldg.	KFRU 630 500 Columbia, Mo. KFRU, Inc., 9th and Elm Sts.
KECA 1430 1000 Los Angeles, Calif. 1000 S. Hope St.	KFSD 600 1000 San Diego, Calif. U. S. Grant Hotel
KELW 780 500 Burbank, Calif. 3702 Magnolia Park Blvd.	KFSG 1120 500 Los Angeles, Calif. 1100 Glendale Blvd.
KERN 1370 100 Bakersfield, Calif. Elk's Club	KFUO 550 500 St. Louis, Mo. 801 De Mun St.
KEX 1180 5000 Portland, Ore. Oregonian Bldg.	KFVD 1000 250 Los Angeles, Calif. E. L. Cord, 645 S. Mariposa
KFAB 770 5000 Lincoln, Neb. Cornhusker Hotel	KFVS 1210 100 Cape Girardeau, Mo. Oscar C. Hirsch, Box 275
KFAC 1300 1000 Los Angeles, Calif. E. L. Cord, 645 So. Mariposa	KFWB 950 1000 Hollywood, Calif. Warner Bros. Motion Pictures, Inc.
KFBB 1280 1000 Great Falls, Mont. Buttrey Broadcast., Inc.	KFXD 1200 100 Nampa, Idaho Frank E. Hurt, 1024 12th Ave., S.
KFBI 1050 5000 Abilene, Kans. Box 345	KFXJ 1200 100 Grand Jct., Colo. Hillcrest Manor
KFBK 1310 100 Sacramento, Calif. Sacramento Bee	KFXM 1210 100 San Bernardino, Calif. California Hotel
KFDM 560 500 Beaumont, Texas Beaumont Hotel, P. O. Box 2950	KFXR 1310 100 Oklahoma City, Okla. 541 Hightower Bldg.
KFDY 780 1000 Brookings, S. D. South Dakota State College	KFYO 1310 100 Lubbock, Texas Kirksey Bros., Hotel Lubbock
KFEL 920 500 Denver, Colo. Albany Hotel	KFYR 550 1000 Bismarck, N. D. 320 Broadway
KFEQ 680 2500 St. Joseph, Mo. Schneider Bldg.	KGA 900 1000 Spokane, Wash. 1023 W. Riverside Ave.
KFGQ 1370 100 Boone, Iowa 924 W. 2nd St.	KGAR 1370 100 Tucson, Ariz. 142 S. 6th Ave.
KFH 1300 1000 Wichita, Kans. 124 1/2 S. Market St.	KGB 1330 1000 San Diego, Calif. 1012-1st St.
KFI 640 50000 Los Angeles, Calif. 1000 S. Hope St.	KGBU 900 500 Ketchikan, Alaska Mile 5, Wards Cove Rd.
KFIO 1120 100 Spokane, Wash. 213 Riverside Ave.	KGBX 1230 500 Springfield, Mo. KGBX, Inc., C. of C. Bldg.
KFIZ 1420 100 Fond du Lac, Wis. 18 W. 1st St.	KGBZ 930 1000 York, Neb. KGBZ Broadcasting Co., 715 Grant Ave.
KFJB 1200 100 Marshalltown, Iowa 1603 W. Main St.	KGCA 1270 100 Decorah, Iowa Charles W. Greenley, 201 Water St.
KFJI 1210 100 Klamath Falls, Ore. KFJI Broadcasters, Inc., Willard Hotel	KGCU 1240 250 Mandan, N. D. 404 W. Main St.
KFJM 1370 100 Grand Forks, N. D. University of North Dakota	KGCC 1310 100 Wolf Point, Mont. E. E. Krebsbach.
KFJR 1300 500 Portland, Ore. 622 Lumbermen's Bldg.	KGDE 1200 100 Fergus Falls, Minn. C. L. Jaren
KFJZ 1370 100 Fort Worth, Texas Texas Hotel	KGDM 1100 250 Stockton, Calif. E. F. Peffer, 42 S. Calif. St.
KFKA 880 500 Greeley, Colo. Box 735	KGDY 1340 250 Huron, S. D. Voice of S. D., Inc., 347 Dakota Ave.
KFKU 1220 1000 Lawrence, Kans. University of Kansas	KGEK 1200 100 Sterling, Colo. Elmer G. Beehier, 109 W. 2nd St.
KFNF 890 500 Shenandoah, Iowa 407 Sycamore St.	KGER 1360 1000 Long Beach, Calif. 435 Pine Ave.
KFOR 1210 100 Lincoln, Neb. Howard Shuman, Hotel Lincoln	KGEZ 1310 100 Kallispell, Mont. Donald C. Treloar, Box 1
KFOX 1250 1000 Long Beach, Calif. 220 E. Anaheim St.	KGFF 1420 100 Shawnee, Okla. 9th & Bell Sts.
KFPL 1310 100 Dublin, Texas C. C. Baxter, Box 176	KGFG 1370 100 Oklahoma City, Okla. Okla. Broadcasting Co., 1113 N. Broadway

INDEX BY CALL LETTERS

KGFI 1500 100 Corpus Christi, Texas Eagle Broadcasting Co., Inc., P. O. Box 1508	KIT 1310 100 Yakima, Wash. 109 1/2 E. Yakima Ave.
KGFI 1290 100 Los Angeles, Calif. Ben S. McGlashan, 1417 S. Figueroa.	KIUJ 1310 100 Santa Fe, N. Mex. J. H. Speck
KGFK 1500 100 Moorhead, Minn. 722 Center Ave.	KJBS 1070 100 San Francisco, Calif. 1380 Bush St.
KGFL 1370 100 Roswell, N. M. KGFL, Inc., 507 N. Main St.	KJR 970 5000 Seattle, Wash. Skinner Bldg.
KGFW 1310 100 Kearney, Neb. Midway Hotel	KLCN 1290 100 Blytheville, Ark. C. L. Lintzenich, Main and Division St.
KGFX 630 200 Pierre, S. D. Dana McNeil, 510 Summit Ave.	KLO 1400 500 Ogden, Utah 405—25th St.
KGGC 1420 100 San Francisco, Calif. 230 Eddy St.	KLPM 1240 250 Minot, N. D. John B. Cooley, Box 707
KGGF 1010 1000 Coffeyville, Kans. Coffeyville Journal Bldg.	KLRA 1390 1000 Little Rock, Ark. Arkansas Broadcasting Co., Box 550
KGGM 1230 250 Albuquerque, N. M. Franciscan Hotel	KLS 1440 250 Oakland, Calif. Warner Bros., 2201 Telegraph Ave.
KGHF 1320 250 Pueblo, Colo. C. P. Ritche, 113 Broadway	KLUF 1370 100 Galveston, Texas Geo. R. Clough, 3327 Ave. P.
KGHI 1200 100 Little Rock, Ark. Arkansas Brdcastg. Co., Marion Hotel	KLX 890 1000 Oakland, Calif. Tribune Tower
KGHL 780 1000 Billings, Mont. 5th & N. Broadway	KLZ 560 1000 Denver, Colo. Shirley-Savoy Hotel
KGIR 1360 1000 Butte, Mont. KGIR, Inc., 121 W. Broadway	KMA 930 500 Shenandoah, Iowa Earl E. May Seed & Nursery Co.
KGIW 1420 100 Alamosa, Colo. Leonard E. Wilson, 326 N. Commercial	KMAC 1370 100 San Antonio, Texas W. W. McAllister, Blue Bonnet Hotel
KGIX 1420 100 Las Vegas, Nev. J. M. Heaton, Box 656	KMBC 950 1000 Kansas City, Mo. Plekwick Hotel
KGKB 1500 100 Tyler, Texas 115 S. College	KMED 1310 100 Medford, Ore. Mrs. W. J. Virgin, Sparta Bldg.
KGKL 1370 100 San Angelo, Texas KGKL, Inc., St. Angelus Hotel	KMJ 580 500 Fresno, Calif. Van Ness & Calaveras Sts.
KGKO 570 500 Wichita Falls, Texas 9th St. & Indiana Ave.	KMLB 1200 100 Monroe, La. Francis Hotel
KGKY 1500 100 Scottsbluff, Neb. Hilliard Co., Inc., 1517 1/2 Broadway	KMMJ 740 1000 Clay Center, Neb. The M. M. Johnson Co.
KGMB 1320 250 Honolulu, T. H. Honolulu Broadcasting Co., Box 2663	KMO 1330 250 Tacoma, Wash. KMO, Inc., Hotel Winthrop
KGNF 1430 500 North Platte, Neb. Great Plains Broadcasting Co., W. 12th St.	KMOX 1090 5000 St. Louis, Mo. 401 S. 12th St.
KGNO 1340 250 Dodge City, Kans. First Natl. Bank Bldg.	KMPC 710 500 Beverly Hills, Calif. 9631 Wilshire Blvd.
KGO 790 7500 San Francisco, Calif. 111 Sutter St.	KMTR 570 500 Hollywood, Calif. KMTR Radio Corp., 915 N. Formosa Ave.
KGRS 1410 1000 Amarillo, Texas E. B. Gish, Bellaire Park	KNOW 1500 100 Austin, Texas Driskill Hotel
KGU 750 2500 Honolulu, T. H. Kaplanani at South St.	KNX 1050 25000 Hollywood, Calif. West. Broadcast Co., Inc., 1558 N. Vine St.
KGVO 1200 100 Missoula, Mont. Mosbys, Inc., 240 N. Higgins	KOA 830 50000 Denver, Colo. General Electric Co., 1370 Krameria St.
KGW 620 1000 Portland, Ore. 325 Adler St.	KOAC 550 1000 Corvallis, Ore. Oregon State Agricultural College
KGY 1210 100 Olympia, Wash. KGY, Inc., 11th and Capitol Way	KOB 1180 10000 Albuquerque, N. M. Albuquerque Journal, Box 667
KHJ 900 1000 Los Angeles, Calif. 7th at Bixel	KOH 1380 500 Reno, Nev. 440 N. Virginia St.
KHQ 590 1000 Spokane, Wash. Sprague Ave. & Post St.	KOIL 1260 1000 Council Bluffs, Iowa Mona Motor Oil Co.
KICA 1370 100 Clovis, N. M. Southwest Broadcasting Co.	KOIN 940 1000 Portland, Ore. KOIN, Inc., New Heathman Hotel
KID 1320 250 Idaho Falls, Idaho Park Ave. & Broadway	KOL 1270 1000 Seattle, Wash. Northern Life Tower
KIDO 1350 1000 Boise, Idaho Hotel Boise	KOMA 1480 5000 Oklahoma City, Okla. Biltmore Hotel
KIDW 1420 100 Lamar, Colo. Lamar Broadcasting Co., Box 688	KOMO 920 1000 Seattle, Wash. Skinner Bldg.
KIEM 1210 100 Eureka, Calif. Redwood Bdestg. Co., Vance Hotel	KONO 1370 100 San Antonio, Texas Mission Broadcast Co., St. Anthony Hotel
KIEV 850 250 Glendale, Calif. Cannon System, Ltd., Glendale Hotel	KOOS 1200 250 Marshfield, Ore. H. H. Hanseth, Hall Bldg.

INDEX BY CALL LETTERS

KORE 1420 100 733 Willamette St.	Eugene, Ore.	KTFI 1240 1000 Radio Broadcasting Corp., Box 521	Twin Falls, Idaho
KOTN 1500 100 William H. Chaplin, Hotel Pines	Pine Bluff, Ark.	KTHS 1060 10000 Chamber of Commerce, Box 886	Hot Springs, Ark.
KOY 1390 500 621 N. Central Ave.	Phoenix, Ariz.	KTM 780 500 214 S. Vermont St.	Los Angeles, Calif.
KPAC 1260 500 Port Arthur College	Port Arthur, Texas	KTRB 740 250 McTammany & Bates	Modesto, Calif.
KPCB 710 100 Tower Bldg.	Seattle, Wash.	KTRH 1330 1000 KTRH Broadcasting Co., Rice Hotel	Houston, Texas
KPJM 1500 100 Scott & Sturm, P. O. Box 782	Prescott, Ariz.	KTSA 550 1000 Southwest Broadcasting Co., Plaza Hotel	San Antonio, Texas
KPO 680 50000 111 Sutter St.	San Francisco, Calif.	KTSM 1310 100 P. O. Box 1976	El Paso, Texas
KPOF 880 500 Pillar Of Fire, 1845 Champa St.	Denver, Colo.	KTUL 1400 250 National Bank of Tulsa Bldg.	Tulsa, Okla.
KPPC 1210 50 585 E. Colorado St.	Pasadena, Calif.	KTW 1220 1000 77th Ave. & Spring St.	Seattle, Wash.
KPQ 1500 100 KPQ Bldg.	Wenatchee, Wash.	KUJ 1370 100 KUJ, Inc., Marcus Whitman Hotel	Walla Walla, Wash.
KPRC 920 1000 2204 Shell Bldg.	Houston, Texas	KUMA 1420 100 Dr. A. H. Schermann, Box 267	Yuma, Ariz.
KQV 1380 500 KQV Broadcasting Co., Investment Bldg.	Pittsburgh, Pa.	KUOA 1260 1000 KUOA, Inc., Washington Hotel	Fayetteville, Ark.
KQW 1010 1000 87 E. San Antonio St.	San Jose, Calif.	KUSD 890 500 University of South Dakota	Vermillion, S. D.
KRE 1370 100 2345 Channing Way	Berkeley, Calif.	KVI 570 1000 W. R. Rust Bldg.	Tacoma, Wash.
KREG 1500 100 3rd & Sycamore Sts.	Santa Ana, Calif.	KVL 1370 100 KVL, Inc., 5th and Virginia St.	Seattle, Wash.
KRGV 1260 500 KRGV, Inc.	Weslaco, Texas	KVOA 1260 500 Cons. Natl. Bank Bldg.	Tucson, Ariz.
KRKD 1120 500 815 Spring Arcade Bldg.	Los Angeles, Calif.	KVOD 920 500 Continental Oil Bldg.	Denver, Colo.
KRKO 1370 50 Lee Mudgett, 2814 Rucker Ave.	Everett, Wash.	KVVO 1140 25000 Wright Bldg.	Tulsa, Okla.
KRLD 1040 10000 KRLD Radio Corp., Adolphus Hotel	Dallas, Texas	KVOR 1270 1000 Mining Exchange Bldg.	Colorado Spg., Colo.
KRMD 1310 100 Jefferson Hotel	Shreveport, La.	KVOS 1200 100 115 W. Magnolia St.	Bellingham, Wash.
KROW 930 500 1803 Franklin St.	Oakland, Calif.	KWCR 1430 250 Hotel Montrose	Cedar Rapids, Iowa
KRSC 1120 100 RadioSalesCorp., Washington Athletic Club	Seattle, Wash.	KWEA 1210 100 Spring & Fannin Sts.	Shreveport, La.
KSAC 580 500 State College of Agriculture	Manhattan, Kans.	KWFFV 1210 100 Hilo Broadcasting Co., Ltd.	Hilo, Hawaii
KSCJ 1330 1000 Perkins Bros. Co., 415 Douglas St.	Sioux City, Iowa	KWG 1200 100 Medico-Dental Bldg.	Stockton, Calif.
KSD 550 1000 12th & Olive Sts.	St. Louis, Mo.	KWJJ 1040 500 622 S. W. Salmon St.	Portland, Ore.
KSEI 900 250 Radio Service Corp., 141 S. 6th Ave.	Pocatello, Idaho	KWK 1350 1000 Thomas Patrick, Inc., Hotel Chase	St. Louis, Mo.
KSL 1130 50000 Vermont Bldg.	Salt Lake City, Utah	KWKC 1370 100 39th & Main Sts.	Kansas City, Mo.
KSLM 1370 100 Oregon Radio, Inc.	Salem, Ore.	KWKH 1100 10000 Spring & Fannin Sts.	Shreveport, La.
KSO 1320 500 Des Moines Register & Tribune	Des Moines, Iowa	KWLC 1270 100 Luther College	Decorah, Iowa
KSOO 1110 1000 Sioux Falls Brdest. Assn., Carpenter Hotel	Sioux Falls, S. D.	KWSC 1220 1000 State College of Washington	Pullman, Wash.
KSTP 1460 10000 St. Paul Hotel	St. Paul, Minn.	KWTN 1210 100 Citizens Bank Bldg.	Watertown, S. D.
KSUN 1200 100 Copper Electrical Co., Drawer C	Lowell, Ariz.	KWTO 560 1000 KGBX Inc.	Springfield, Mo.
KTAB 560 1000 5th & Mission Sts.	San Francisco, Calif.	KWYO 1370 100 Big Horn Brdestg. Co.	Sheridan, Wyo.
KTAR 620 1000 116 N. Central Ave.	Phoenix, Ariz.	KXA 760 250 American Radio Tel. Co., 218 Bigelow Bldg	Seattle, Wash.
KTAT 1240 1000 Ft. Worth Natl. Bank Bldg.	Fort Worth, Texas	KXL 1420 100 KXL Broadcasters, Multnomah Hotel	Portland, Ore.
KTBS 1450 1000 Box 1642	Shreveport, La.	KXO 1500 100 F. M. Bowles, Box 140	El Centro, Calif.

8 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
 NRIOM 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: **HJABH**,
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 Broad-
 casting Co.
 1500 **WRDW** Augusta, Ga., to Augusta Broad-
 casting Co.
 1530 **W1XBS** Waterbury, Conn., to American
 Republican, Inc.
 1550 **W2XR** Long Island City, to Scientific Broad-
 casting Service

DELETIONS

660 **XEAL** Mexico City
 920 **XEOK** 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
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 One year's subscription to RADEX, 10 issues..... 1.75
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 Leatherette Cover50
 Beginner's Story of Radio75
 DX Radio Log of the World (Broadcast Band and Short Waves)..... .10

Write Name Plainly.....

Street and Number.....

City and State.....

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EJAAABE, Medellin, Colombia, 5.900. 7-11 p.m.
EJSAABD, 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, 7.950.
HVJ, Vatica 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: 6.930: 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, 4.740. 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, Jelvoy, 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, Ruyselede, 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.
PHL, Hilversum, 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 Coloniale, Pontoise, France, 11.710: 1:15-5 p.m.; 5:15-9 p.m.; 10 p.m. to midnlight. 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., 5.906. 3-6 p.m.
TXG, 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.
W3XAL, Mason, Ohio, 6.060. Irregular.
W8XK, Saxenburg, 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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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	HILA TGX VK2ME W9XF	TGX VK2ME	DJB DJB GSB GSD RV15	DJB DJB GSB GSD JVT RV15 VK3LR	DJB DJB HVJ RNE RV15 VK2ME VK3LR VK3ME YDA	DJB DJB GSF GSF HSJ RV15 JVT VE9GW VK2ME VK3LR VK3ME W1XAZ YDA	GSF GSF Rabat. PHI RV15 VE9GW VK2ME W8XK	DJB DJB GSF GSF PCJ PHI PHI Rabat. W1XAZ W8XK	DJA DJB GSE PCJ PHI PHI VE9GW W1XAZ W8XK	DJA DJB GSA GSB GSE HVJ PCJ PHI PHI VE9GW W1XAZ W8XK W3XAL	DJA DJB GSA GSB GSE PHI PHI VE9GW W1XAZ W8XK W3XAL

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 W3XL W3XAU W3XL W8XK W9XAA W8XK W9XAA	DJC DJD EAQ GSB GSB GSD Pont. Rabat VE9GW W1XAZ W3XAL W3XL W3XAU W8XK W9XAA XEBT	DJC DJD GSB GSD Pont. Rabat VE9GW W1XAZ W3XAL W3XL W3XAU W8XK W9XAA XEBT	DJC DJD GSB GSD ORK Rabat RV59 VE9GW W1XAZ W2XE W3XAL W3XL W3XAU W8XK W9XAA XEBT	COC CT1AA DJB DJD GSA DJA DJB DJB DJB EAQ GSA GSB HBL HBP HC2RL HJ1ABB I2RO I2RO I2RO Pont. PRF5 Rabat RV59 VE9GW W1XAZ W2XE W3XL W8XK W9XF W9XAA XEBT YV3RC	COC COH CT1AA DJA DJB DJB DJB EAQ GSA GSB HBL HBP HC2RL HJ1ABB I2RO I2RO I2RO Pont. PRF5 Rabat RV59 VE9GW W1XAZ W2XE W3XL W8XK W9XF W9XAA XEBT YV3RC	CT1AA DJA DJB DJB DJB EAQ GSA GSC HBL HBP HC2RL HJ1ABB I2RO I2RO I2RO Pont. Rabat RV59 VE9GW W1XAZ W2XE W3XL W8XK W9XF W9XAA XEBT YV3RC YV5RMO	DJA DJB DJD GSA GSC HC2RL HJ1ABB I2RO HJ1ABG I2RO HC2RL VE9GW W1XAL W1XAZ W2XAF W2XE W1XAZ W3XAL W3XAU W8XK W9XAA W9XF W8XK XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJR COC COH CP5 DJA DJB DJB DJB HC2RL VE9GW W1XAL W1XAZ W2XAF W2XE W1XAZ W3XAL W3XAU W8XK W9XAA W9XF W8XK XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJR DJB DJB DJB HC2RL HIX HJ1ABB OAX4D PRADO VE9GW W1XAZ W2XAF W2XE W1XAZ W3XAL W3XAU W8XK W9XAA W9XF W8XK XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJR DJB DJB DJB HC2RL OAX4D PRADO VE9GW W1XAZ W2XAF W2XE W1XAZ W3XAL W3XAU W8XK W9XAA W9XF W8XK XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJR COC DJB DJB HC2RL OAX4D PRADO VE9GW W1XAZ W2XAF W2XE W1XAZ W3XAL W3XAU W8XK W9XAA W9XF W8XK XEBT YV2RC YV3RC YV4RC YV5RMO

INDEX BY CALL LETTERS

<p>KEJ 1020 1250 Juarez, Chih. Juan G. Buttner, P. O. Box 111</p> <p>KEK 990 100 Mexico City, D. F. Arturo Martinez, Jalapa No. 51</p> <p>KEKL 1240 500 Leon, Guan. 5 de Mayo 26</p> <p>KEMA 1080 50 Tampico, Tams. Manuel M. Pier, Aretsanos 10</p> <p>KEMO 865 2500 Tijuana, E. C. P. O. Box 202, San Diego, Calif.</p> <p>XEN 710 1000 Mexico City, D. F. Cerveceria Modelo Ave. Juarez 77</p> <p>XENT 910 60000 Nuevo Laredo, Tams. Box 410, Laredo, Texas</p> <p>XEOX 640 250 Saltillo, Coah. Victoria No. 4, Altos.</p> <p>XEP 820 500 Mexico City, D. F. Cia Difusora de Mexico S. A., Rembrandt 11</p> <p>XEPN 590 50000 Piedras Negras, Coah. Piedras Negras Brdcastg. Co., Madero 53</p> <p>XES 970 250 Tampico, Tams. Fernando Sada, Box 309</p> <p>XET 690 500 Monterrey, N. L. P. O. Box 203, Hidalgo</p> <p>XETB 1310 125 Tlaxcoan, Coah. Jose A. Berumen, R. Corona 317</p> <p>XETH 1210 100 Puebla, Pue. Ramon Huerta G., Calle 17, Oriente 11</p> <p>XETW 820 500 Mexico City, D. F. Rafael M. Pena, Ave. 16 de Sep. 83</p>	<p>XEU 1010 250 Veracruz, Ver. Fernando Pazos Sosa, Independencia 98</p> <p>KEW 890 50000 Mexico City, D. F. P. O. Box 2516</p> <p>KEWZ 1150 100 Mexico City, D. F. Medellin e Insurgentes</p> <p>XEX 1310 125 Monterrey, N. L. L. F. Petit Jean, P. O. Box 10</p> <p>XEXX 845 500 Mexico City, D. F. Av. Pino Suarez 9</p> <p>KEYZ 780 10000 Mexico City, D. F. Angel M. Diez, Ave. Juarez 48</p> <p>KEZ 630 500 Merida, Yuc.</p> <p>KEZZ 1370 100 San Luis Potosi, SLP Emillo Delgado R. Ave. Chilcosein 32</p> <p>XFB 1270 1000 Jalapa, Ver. Gobierno del Estado de Veracruz</p> <p>XFC 810 350 Aguascalientes, Ags. Gobierno del Estado de Aguascalientes</p> <p>XFD 1340 350 Orizaba, Ver. Gobierno Estado de Veracruz</p> <p>XFO 940 5000 Mexico City, D. F. Nat. Rev. Party, Ave. Morelos 110</p> <p>AFX 610 1000 Mexico City, D. F. Secretaria de Educacion Publica</p> <p>10-AK 1200 15 Stratford, Ont. M. I. Higgins, 151 Ontario St.</p> <p>10-BP 1200 25 Wingham, Ont. W. T. Cruckshank, Box 65</p> <p>10-BU 1200 50 Canora, Sask. Canora Radio Assn.</p>
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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*.

<p>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.</p> <p>Broadcast Pickup stations: 1.606; 1.622; 1.646; 2.102; 2.150; 2.190; 2.390.</p> <p>CJRO, Middlechurch, Man., 6.150. Relays Canadian Radio Com. programs, 8-11 p.m. and 11:30 to midnight.</p> <p>CJRX, Middlechurch, Man., 11.720. Same schedule as CJRO, Q. v.</p> <p>COC, Havana, Cuba, 6.010. 4-6 p.m.; 8-9; and 10-11 p.m. daily. Sat., 11:30-12:30 p.m.</p> <p>COH, Havana, Cuba, 9.500. 5-6; 8-9 p.m.</p> <p>CP5, La Paz, Bolivia, 6.080. 8-9 p.m.</p> <p>CTIAA, Lisbon, Portugal, 9.600. Tues., Thurs., Fri., 4:30-7 p.m.</p> <p>CTIGO, 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.</p> <p>DJA, Zeesen, Germany, 9.560. Daily, 8-11:30 a.m.; 5:15-9:15 p.m.</p> <p>DJB, Zeesen, Germany, 15.200. 3:45-7:15 a.m.</p> <p>DJC, Zeesen, Germany, 6.020. Noon to 4:30 p.m.; 5:30-10:45 p.m.</p>	<p>DJD, Zeesen, Germany, 11.760. Noon to 4:30 p.m.</p> <p>DJE, Zeesen, Germany, 17.760. Irregularly, Mornings.</p> <p>DJN, Zeesen, Germany, 9.540. 3:45-7:15 a.m.; 8-11:30 a.m.; 5:15-10:45 p.m.</p> <p>EAQ, Aranjuez, Spain, 9.862. 5:30-7 p.m.; Sat. noon to 2 p.m.</p> <p>GBB, Rugby, England, 13.500. Phones Canada.</p> <p>GBS, Rugby, England, 12.150. Phones N.Y.</p> <p>GBU, Rugby, England, 12.240. Phones N.Y.</p> <p>GBW, Rugby, England, 14.440. Phones N. Y. 6-8 p.m.</p> <p>GSA, Daventry, England, 6.050. 10:45 a.m. to 12:45 p.m.; 4:30-5:45 p.m.; 6-8 p.m.</p> <p>GSB, Daventry, England, 9.510. 3-5 a.m.; 7:30 a.m. to 5:45 p.m.</p> <p>GSC, Daventry, England, 9.585. 6-8 p.m.</p> <p>GSD, Daventry, England, 11.750. 3-5 a.m.; 1-4:30 p.m.</p> <p>GSE, Daventry, England, 11.865. 9:15-10:45 a.m.</p> <p>GSF, Daventry, England, 15.140. 6-9 a.m.</p> <p>GSG, Daventry, England, 17.790. 6-8:30 a.m.</p> <p>HBL, Prangins, Switzerland, 9.595. Sat. 5:30-6:15 p.m.</p>	<p>HBP, Prangins, Switzerland, 7.797. Sat. 5:30-6:15 p.m.</p> <p>HCJB, Quito, Ecuador, 8.200. 8:15-10:15 daily except Monday.</p> <p>HCZET, Guayaquil, Ecuador, 4.600. Fri., Sat., 9:30-11 p.m.</p> <p>HCZRL, Guayaquil, Ecuador, 6.659. Tues. 9:14-11:14 p.m.; Sun. 5:45-7:45 p.m.</p> <p>HIH, San Pedro de Macoris, D. R., 6.810. 4-7:30 p.m.</p> <p>HIX, Santo Domingo, D. R., 5.948. Tues. and Fri., 8-10 p.m.</p> <p>HIIA, Santiago de los Caballeros D.R., 6.240. 7:30-9:30 p.m. daily.</p> <p>HI-4-D, Santo Domingo, D.R., 6.500. 4:40-7:40 p.m.</p> <p>HJA2, Bogota, Colombia, 5.825.</p> <p>HJA3, Barranquilla, Colombia, 12.830</p> <p>HJB, Bogota, Colombia, 14.930.</p> <p>HJN, Bogota, Colombia, 6.080. Tests irreg.</p> <p>HJLABB, Barranquilla Colombia, 6.447. 5-10 p.m.</p> <p>HJIAE, Cartagena, Colombia, 6.115. Monday, 10-mid., Wed., 8-10 p.m.</p> <p>HJIABG, Barranquilla, Colombia 6.042. 7-10 p.m.</p> <p>HJ3ABD, Bogota, Colombia, 7.406. "Colombia Broadcasting." 6-9 p.m. daily.</p> <p>HJ4ABB, Manizales, Colombia, 7.200. Wed., 8-9 p.m.; Sun., 3-6 p.m.</p>
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INDEX BY CALL LETTERS

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.
Marlon 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 Brdcastg. 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 Brdcastg. Corp., Box 704	
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 Brdcastg. Co., Stacy Trent Hotel	
WTOC 1260 1000	Savannah, Ga.
Savannah Brdcastg. Co., De Soto Hotel	
WTRC 1310 50	Elkhart, Ind.
Truth Radio Corp., Hotel Elkhart	
WVFW 1400 500	Brooklyn, N. Y.
Paramount Brdcastg. Co., 1 Nevins St.	
WWAE 1200 100	Hammond, Ind.
402 Hammond Bldg.	
WWC 1420 1000	Spartanburg, S. C.
Virgil V. Evans, Ravenel & 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 Brdcastg. 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.	
W1XB5 1530 1000	Waterbury, Conn.
61 Leavenworth St., Amer. Republican, Inc.	
W2XR 1550 1000	Long Island City, N. Y.
Scientific Brdcastg. Serv., 41 Park Row, N. Y.	
W6XA1 1550 1000	Bakersfield, Calif.
Pioneer Mercantile Co.	
W9XBY1530 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.
Poitios 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 Bravode Cordero Ave. Juarez 104	
XED 1160 500	Guadalajara, Jal.
Cla. Radiofonografica, Apdo. 197	
XEE 1210 50	Durango, Dgo.
20 de Nov. 112 (Apdo. 148)	
XEFA 1180 500	Mexico City, D. F.
Eduardo Limon Segul, 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 Carreteras Laredo Mt.	
XEFG 1100 250	Mexico City, D. F.
Ricardo Gonzales Montero, Teple 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 Nozalco 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	

INDEX BY CALL LETTERS

WNAD 1010	500 Norman, Okla. University of Oklahoma	WPRO 630	250 Providence, R. I. Cherry & Webb Bldg. Co., 15 Chestnut
WNAX 570	1000 Yankton, S. D. House of Gurney, Inc., 2nd and Capital St.	WPTF 680	5000 Raleigh, N. C. 324 Fayetteville St.
WNBF 1500	100 Binghamton, N. Y. Arlington Hotel	WQAM 560	1000 Miami, Fla. Miami Bldg. Co., Inc., 327 N. E. 1st Ave.
WNBH 1310	100 New Bedford, Mass. 251 Union St.	WQAN 880	250 Scranton, Pa. Scranton Times, 149 Penn Ave.
WNBO 1200	100 Washington, Pa. 319 E. Beau St.	WQBC 1360	500 Vicksburg, Miss. Delta Broadcasting Co., Hotel Vicksburg
WNBR 1430	500 Memphis, Tenn. Memphis Broadcasting Co., Hotel DeVoy	WQDM 1370	100 St. Albans, Vt. 42 N. Main St.
WNBX 1260	1000 Springfield, Vt. WNBX Broadcasting Corp., 39 Main St.	WRAC 1370	100 Williamsport, Pa. WRAC, Inc., 244 W. 4th St.
WNBZ 1290	50 Saranac Lake, N. Y. Smith & Mace, 70 Broadway	WRAX 1310	100 Reading, Pa. Reading Broadcasting Co., 533 Penn St.
WNEL 1290	500 San Juan, P. R. Box 1252	WRAX 920	250 Philadelphia, Pa. WRAX Broadcasting Co., 217 S. Broad St.
WNEW 1250	1000 Newark, N. J. Wodaam Corp., 1060 Broad	WRBL 1200	100 Columbus, Ga. Royal Theatre Bldg.
WNOX 1010	1000 Knoxville, Tenn. WNOX, Inc., Hotel Andrew Johnson	WRBX 1410	250 Roanoke, Va. P. O. Box 2389
WNRA 1420	100 Muscle Shoals, Ala. Kathryn Jones, P. O. Box 486, Sheffield, Ala.	WRC 950	500 Washington, D. C. National Press Bldg.
WNYC 810	1000 New York, N. Y. Centre & Duane Sts.	WRDO 1370	100 Augusta, Me. WRDO, Inc., Augusta House
WOAI 1190	50000 San Antonio, Texas Southland Industries, Inc., 1038 Navarro	WRDW 1500	100 Augusta, Ga. Augusta Bldg. Co., 309 8th St.
WOC 1370	100 Davenport, Iowa Palmer School of Chiropractic	WREC 600	500 Memphis, Tenn. WREC, Inc., Hotel Peabody
WOCL 1210	50 Jamestown, N. Y. A. E. Newton, 840 N. Main St.	WREN 1220	1000 Lawrence, Kans. Jenny Wren Co., 8th and Vermont St.
WOI 640	5000 Ames, Iowa Iowa State College	WRGA 1500	100 Rome, Ga. 10 Third Ave.
WOKO 1430	500 Albany, N. Y. WOKO, Inc., Hotel Ten Eyck	WRJN 1370	100 Racine, Wis. Racine Broadcasting Corp., Hotel Racine
WOL 1310	100 Washington, D. C. American Broadcasting Co., Annapolis Hotel	WROK 1410	500 Rockford, Ill. 109 So. Water St.
WOMT 1210	100 Manitowoc, Wis. Francis M. Kadow, Box 326	WROL 1310	100 Knoxville, Tenn. Stuart Broadcasting Corp., 524 S. Gay
WOOD 1270	500 Grand Rapids, Mich. Grand Rapids Natl. Bank Bldg.	WRR 1280	500 Dallas, Texas City of Dallas, Southland Life Bldg.
WOPI 1500	100 Bristol, Tenn. 22nd & State Sts.	WRUF 830	5000 Gainesville, Fla. State University
WOR 710	5000 Newark, N. J. 147 Market St.	WRVA 1110	5000 Richmond, Va. Larus & Bros Co., Inc., 22nd and Gary St.
WORC 1280	500 Worcester, Mass. Alfred F. Kleindienst, 60 Franklin St.	WSAI 1330	1000 Cincinnati, Ohio Crosley Radio Corp., 1329 Arlington
WORK 1000	1000 York, Pa. York Broadcasting Co., 15 S. Beaver St.	WSAJ 1310	100 Grove City, Pa. Grove City College, 418 Poplar St.
WOS 630	500 Jefferson City, Mo. State Highway Control, Capitol Bldg.	WSAN 1440	500 Allentown, Pa. WSAN, Inc., 39 10th St.
WOSU 570	750 Columbus, Ohio Ohio State University	WSAR 1450	250 Fall River, Mass. Academy of Music Bldg.
WOV 1130	1000 New York, N. Y. 16 E. 42nd St.	WSAZ 1190	1000 Huntington, W. Va. WSAZ, Inc., P. O. Box 729
WOW 590	1000 Omaha, Neb. Woodmen of the World, 4th and Farnam	WSB 740	50000 Atlanta, Ga. Atlanta Journal, 7 N. Forsyth St.
WOWO 1160	10000 Fort Wayne, Ind. Main Auto Supply Co., 213 W. Main	WSBC 1210	100 Chicago, Ill. Gene T. Dyer, 1258 S. Michigan Ave.
WPAD 1420	100 Paducah, Ky. 2201 Broadway	WSBT 1360	500 South Bend, Ind. South Bend Tribune, 225 W. Colfax Ave.
WPAX 1210	100 Thomasville, Ga. H. Wimpy, 135 E. Jackson St.	WSFA 1410	500 Montgomery, Ala. Jefferson Davis Hotel
WPEN 920	250 Philadelphia, Pa. 22nd & Walnut Sts.	WSGN 1310	100 Birmingham, Ala. R. B. Broyles, Tutwiler Hotel
WPF6 1370	100 Hattiesburg, Miss. Geo. T. Bishop, Box 530	WSIX 1210	100 Springfield, Tenn. 638 Tire & Vulcanizing Co.
WPG 1100	5000 Atlantic City, N. J. Convention Hall	WSJS 1310	100 Winston-Salem, N. C. Winston-Salem Journal Co., 416 N. Marshall
WPHR 880	100 Petersburg, Va. WLBG, Inc., Medical Arts Bldg.	WSM 650	50000 Nashville, Tenn. 301-7th Ave. No.

INDEX BY CALL LETTERS

WJBO 1420 100 Baton Rouge, La. Baton Rouge Broadcasting Co., Inc.
WJBW 1280 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 Brdstg. 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 858
WKAR 1040 1000 East Lansing, Mich. Michigan State College
WKBB 1500 100 East Dubuque, Ill. Richard W. Hoffman
WKBF 1400 500 Indianapolis, Ind. 640 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.
WKBE 1500 100 Muskegon, Mich. Karl L. Ashbacher & 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. Fetser, 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.
WLBK 1420 100 Kansas City, Kans. WLBK 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. 623 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.
WMAI 630 250 Washington, D. C. 712-11th St., N. W.
WMAQ 670 5000 Chicago, Ill. Merchandise Mart
WMAS 1420 100 Springfield, Mass. WMAI, 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
WMOB 1310 100 Auburn, N. Y. WMOB, 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
WMCB 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 Brdstg. 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.

INDEX BY CALL LETTERS

	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
	WGNV 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. Brdstg. 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 Brdstg. 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.

INDEX BY CALL LETTERS

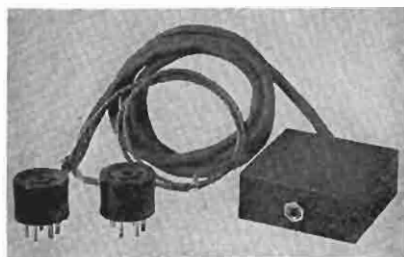
WBZA 990 1000 Springfield, Mass.
 Hotel Kimball
WCAC 600 500 Storrs, Conn.
 Connecticut State College
WCAD 1220 500 Canton, N. Y.
 St. Lawrence University
WCAE 1220 1000 Pittsburgh, Pa.
 6th Ave. & Smithfield St.
WCAL 1250 1000 Northfield, Minn.
 St. Olaf College
WCAM 1280 500 Camden, N. J.
 City of 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 Brdestg. 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 Denmark, 3860 Ogden Ave.
WEED 1420 100 Rocky Mount, N. C.
 Wm. Avera Wynne, Box 221
WEEI 590 1000 Boston, Mass.
 182 Tremont St.
WEUU 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.

INDEX BY CALL LETTERS

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.		
VESEK 1185	10	Montmagny, Que.
J. A. Marquis, P. O. Box 62		
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 Radlo 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		



THE "PERFECT" PHONE ADAPTER for All Receivers

To Install:

Simply remove the power tube or tubes and place the small adapter or adapters (shown in the cut) in the sockets. Now put the tubes in the adapters and leave them there. That is all.

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*When ordering give make and model
of receiver and a list of the tubes used.*

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Address.....
Town.....State.....

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DEPT. 518 - CINCINNATI, OHIO, U. S. A.
Established 1920 Cable Address Miraco. All Codes

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Thrills toGreetings of Foreign Stations

Safford, Arizona—It's real thrill to listen to my Midwest, to hear a voice from so far off land. I use it as the voice of the Pacific, VE2ME, in Astoria, B.C. "We take you now to Western Albany," etc. Franklin H. Johnson, P. O. Box 244.

