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RADIO INDEX

THE ALL-WAVE RADIO MAGAZINE

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Just What are Harmonics?
Uniform DX Rules Needed
The 100 Best Short Wave Stations
Thursday Time on the Air
Broadcasting Stations of Europe

No. 65

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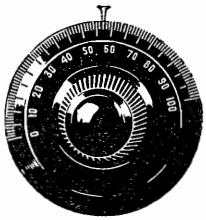

FRED CLAYTON BUTLER
Editor and Publisher

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Otherwise Mrs. George Olsen

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Just What Are HARMONICS?

• • • *By* B. FRANCIS DASHIELL

WHILE the problem of harmonics is difficult to solve, the phenomenon itself is simple and should not be mysterious, for it is a matter of vibration, well-known to students of physics and music.

Before considering harmonics in radio let us seek a simple analogy whereby a better understanding of the subject may be obtained. If a wire be stretched taut between two supports and picked to set it in vibration, the whole will vibrate from end to end. A short, tight wire will vibrate rapidly with a note of high pitch, but a long, loose wire will vibrate slowly with a low pitched note.

These are *fundamentals* or principal vibrations and notes. The rate at which vibrations occur is called the fundamental *frequency,* and the length of the portion of the wire that vibrates, from end to end of motion, is the fundamental *wave length.*

In addition to the fundamental activities of the vibrating wire there are many other vibrations occurring within the fundamentals. These have less intensity of motion or energy, but have higher frequencies and shorter wave lengths than the fundamental. They are, then, *harmonics* of the fundamental or principal vibration. And harmonics are just as natural to radio circuits as they are to piano, violin and musical strings.

When the wire vibrates as a whole at its fundamental frequency, there are also harmonic vibrations contained within it. They are in each of the two halves of the total fundamental length, but have *half* the fundamental wave length and *twice* the principal frequency. This is the *second harmonic.* In addition, the three thirds of the whole also vibrate independently of the fundamental motion, at *one-third* of the wave length and *three* times the frequency. This is the *third harmonic.* And the *fourth, fifth,* etc., harmonics, obtain in the same manner.

Harmonics, then, are independent vibrations, occurring simultaneously within the main vibrating action. Their wave lengths are fractions—1/2, 1/3, 1/4, 1/5, etc.—of the fundamental wave length, but the frequencies are multiples—1, 2, 3, 4, 5, etc.—of the fundamental frequency or rate of vibration per second.

Now, it is known that radio circuits exhibit exactly similar effects. Above we have seen how mechanical vibrations have smaller and simultaneous vibrations or harmonics, especially in musical instruments. But

He got the wrong number but the right girl. Elsie Hitz in "The Magic Voice" CBS Tuesday, 8:15 p. m. EST. and Saturday. 7:45.

in radio we deal with invisible and inaudible oscillations or vibrations. These can only be created through the medium of tubes, inductances (coils of wire) and capacities (condensers). The tuning of a circuit to resonance can cause it to oscillate at a steady rate—fundamental frequency and wave length—just as a permanently stretched wire will always vibrate at a uniform rate and produce the same musical note.

Fundamental Frequencies

Oscillation in a radio circuit is a form of vibration, not mechanical and visible, but electrical because of the rapid swinging back and forth of a high frequency alternating current. The fundamental frequencies may vary from a rate of 300,000,000 cycles in ultra-short waves to 15,000 cycles for the very long waves. These changes in current direction through the inductance and capacity set up a fundamental vibration—the lowest frequency at which the maximum of energy is transmitted. Harmonics, too, are present in the radio circuit, in the same proportion found in mechanical vibrations.

For instance, a broadcasting station tuned to a fundamental wave length of 300 meters and a fundamental frequency of 1,000 kilocycles, will emit a second harmonic on a wave length of 150 meters with a frequency of 2,000 kilocycles. A third harmonic will appear on 100 meters at a frequency of 3,000 kcs., and the fourth harmonic on 75 meters with a frequency of 4,000 kilocycles. Since broadcasting stations are licensed to operate on one fixed wave length, it is a violation of the law to emit harmonics, and they are suppressed as best they can.

Receiver Harmonics

Harmonics are not confined entirely to broadcasting circuits. Any superheterodyne receiver will produce harmonics within itself. Trouble comes when the second harmonic of a superheterodyne oscillator beats against an incoming signal so as to create a frequency equal to that of the fixed intermediate frequency transformers and circuit. This in turn beats against the signal and produces a wavering, throbbing and beating heterodyne form of interference. Receivers having an i.f. circuit tuned to even multiples of 5, such as 160, 200, 240, etc., kilocycles, are apt to be troubled with harmonic beats, while those having uneven multiples, such as 175, 195, 225, etc., kilocycles, are less likely to be annoyed.

When nearby commercial, Naval, and aircraft and airways radio stations work on frequencies between 175 and 250 kilocycles, or utilize longer waves capable of creating harmonics falling within the same frequency range, there may be direct pickup by the i.f. circuit of a superheterodyne receiver, thereby sending the interfering signals into the amplifier. Imperfect shielding in this portion of the circuit is largely productive of such interference.

Shielding Essential

Good radio sets have very few internal harmonics. When makers take particular caution to use good shielding, provide perfect grounding of the

The song and dance man of Big Time, Johnny Hart "in Hollywood" Monday, Tuesday, Thursday, 7:45 p. m. EST over WJZ-NBC network.

shields, proper spacing of aerial and ground leads within the set, and correctly locate the plate leads that pass close to the second detector and radio-frequency chokes, there is little likelihood of interfering whistles and beats being created in the r.f. circuits. While some beats, of course, will be natural to many radio sets, they will be so weak as to be practically inaudible.

Introduction of all-wave receivers presents a new problem in harmonics. These sets cover a much wider frequency band and, therefore, are more susceptible to additional harmonics. The tuning limits of an all-wave receiver are from 15 to 550 meters—19,990 to 545 kilocycles. A station broadcasting on 400 meters and 750 kilocycles, for instance, emits harmonics on 200 meters and 1,500 kcs., 133 meters and 2,250 kcs., 100 meters and 3,000 kcs., 80 meters and 3,750 kilocycles, etc. All of these, and more, may be picked up by an all-wave receiver.

Such harmonics picked up by the antenna cannot be avoided. There are times when we hear dots and dashes of code transmission at several points on the dial. Each happens to be one of a number of the harmonics of the fundamental broadcast frequency. We know that code is not permitted within the broadcast band, and, therefore, the reception must be by harmonics. But in the all-wave set, which covers the code bands, few listeners will know whether a station is actually short-wave code or merely the harmonic of a nearby Naval or commercial station. By catching the call of the code station it can be identified and its transmitting wave determined by remembering always that the fundamental broadcast wave frequency is lower by ½, ⅓, ¼, etc., than the apparent wave frequency being received.

There is little that can be done to eliminate harmonics in radio. Complete suppression at the source is a step in the right direction. But the question of self generated harmonics within a superheterodyne receiver seems not to permit of easy solution. There are always present certain tuning combinations which are inevitable, and when such station frequencies happen to combine there is nothing that will prevent throbbing, beating interferences. Only a mathematical genius can compute the amazing number of combinations that can occur within the broadcast band. The gradual trend, however, toward better transmission facilities and the suppression of harmonics, and the improvements in superheterodyne receivers, promises much in solving the problem of harmonics in the future.

Paul Whiteman's Rhythm Boys are now an integral part of the Whiteman orchestra. They are heard over the NBC networks with the King of Jazz. Left to right: Jimmy Noel, Al Dary, George McDonald and Ray Kulz.

UNIFORMITY NEEDED *in* DX RULES ••• *Calls or Locations*

IN the November issue of this magazine, six rules of DXing were set forth as embodying the opinion of the Editor. These rules have attracted much comment both favorable and adverse. It is to be regretted that there are no uniform rules in DX which can be adopted by all clubs. At present there is much confusion and a member of one club finds, upon joining another, that many entries on his official log are not recognized by the second group.

For the purpose of focusing attention upon this important matter, we are reprinting the six rules with the arguments regarding them both pro and con.

The Rules

First: Do not log a station nor ask for verification unless you are positive in your own mind of the identity of the station.

Second: If a station moves to a new location or a new frequency, you may count it a second time.

Third: If a station merely changes its call letters or increases its power, the second reception does not count.

Fourth: If a station uses two different sets of call letters, you may log each of them.

Fifth: Stations outside the broadcast band such as police broadcasters may be logged if you hear them on your regular broadcast receiver.

Sixth: Short-wave stations heard on harmonics of their regular frequency, such as airport stations, may be entered.

The Opposition

First to be heard is "Dr. H. R. J." of Rockaway Beach, N. Y., who says: "I want to take exception to your claim that stations should be counted by location and not by call letters. Does that mean that I should count WABC three times, because they have moved their transmitter from New York City to Long Island to Wayne, N. J.? It is manifestly absurd. You get into all sorts of trouble when you try to log by location instead of by call letters. To quote Gracie Allen, 'It's silly.' "

Second at bat is Joseph Stokes, 7318 Woodlawn Ave., Swissvale, Pa.: "I claim that changed call letters constitute a new station because it generally happens when a station changes its call it has new owners, new equipment and quite often the transmitter is moved to a point different from its former location. Under your rule if a transmitter is moved only a block, it's a new location and a new station for the log. How in the dickens are we to keep track of the moving of transmitters? Me for changed call letters—there's not half so much trouble."

Mary Livingstone as Jack's "Jill" happens to be Mrs. Benny. On the new Canada Dry program CBS Thursday, 8:15 and Sunday, 10 p. m. EST.

"A radio log should be a list of the calls used by radio stations," thinks B. L. Ahman, Jr., 3313 Westerwald Ave., Baltimore, Md. "If a station changes its call letters that should constitute a new addition to our log."

"I wish to voice my disapproval, along with many other DXers, of your standard regarding change of call letters," states J. Kenneth Vetter, 964 Waukegan Road, Deerfield, Ill. "Your rule is inconsistent in that you recognize stations with two sets of calls. What's the difference?" Mr. Vetter asked the Newark News DX Club for a ruling on this question and it was given as follows: "The club counts calls and not transmitters. With due regard for the opinions of others and rules of other organizations, we'd all have to be historians to keep an accurate record of broadcasting stations, additions, deletions, changes of calls, and locations over a long period of years."

For the Defense

On the other side of the question on Rule Three, we find L. E. Wallace, 110 N. Duval Street, Tallahassee, Florida: "My policy up to now has been never to count a station a second time unless two of the three factors concerned were changed. In other words, either location and ownership, location and call or call and ownership. Some DXers certainly must be liberal with their consciences to count a change of calls as a new station."

And from A. E. Armstrong, 2021 Bonita Drive, Glendale, Calif.: "When a station changes its call letters I also change the letters on my log but I do not count it as a new station."

So much for changes in calls; now for Rule Two regarding changes in frequency. To this rule Mr. Armstrong takes exception. "I disagree for the reason that a general upheaval of frequencies on the broadcast band would in a short time increase a log of say 400 stations to perhaps 600 or 700 and this would, of course, give an entirely wrong impression of the actual number of stations logged."

And Eugene Martin writes from

Who is this famous Monarch Mystery Singer? Hear him Sundays at 2 p. m. EST with Chas. J. Gilchrest, DX Radio Editor.

Denver, Colo., to say: "I take violent exception to your statement that a station which moves to a different frequency may be counted a second time. If I had followed that system I would have more than 3,000 stations logged. For instance, I would have counted WOAI not once but six times."

"Changing a frequency," thinks Robert R. Rawstron, 296 Main Street, Claremont, N. H., "is merely like changing one's own street address."

Like Mr. Armstrong, Carleton Lord, 137 North Highland Ave., Akron, Ohio, is both "with us and agin us." "If a station changes its call letters a second reception does not count as a new station. This is very logical. However if a station changes its frequency, you call it a new station. How can you back that up? The call is the same, the transmitter is the same and the location hasn't changed. I'm afraid you pulled a boner there."

Summing it Up

The prisoner at the bar now takes the stand in his own defense.

The Editor looks upon DXing as a

contest in which a certain number of problems are presented for conquering. Each of the stations in the broadcast band with its present call, power, frequency and location constitutes one of these problems and a DXer is entitled to credit for solving it. The difficulty of the problem lies in three of its factors: power, frequency and location. The call letters have not the slightest effect upon the problem and any change in them is utterly immaterial so far as having conquered a problem is concerned. But let a station change its location and an entirely new problem is presented to the DXer. By location we do not mean and did not think our rule would be so construed, as a slight movement of the transmitter. RADEX does not show the location of transmitters and it would be folly to try to register calls by transmitter locations. But the Dxer who logged WFBC at Knoxville, Tenn., may find it difficult if not impossible to log them from Greenville, S. C. WDIX at Tupelo, Miss., is an entirely different problem from WDIX at Texarkana, Ark. We think that the DXer who logs either of these stations at its new location is entitled to exactly as much credit as he was for its original logging. True, there should be some limit. The movement of KGGF, from South Coffeyville, Okla., perhaps a few blocks to Coffeyville, Kansas, for instance, does not perceptibly increase the difficulty of its logging. But on the other hand, many who logged WJW at Mansfield, Ohio, will not be able to log it from Akron. Or KLO at Salt Lake City instead of Ogden.

On New Frequencies

Similarly, though perhaps not to so great an extent, a change in frequency constitutes a new problem. WDEV on 550 is an entirely different problem from WDEV on 1420. Those who logged WDBO on 1120 may never be able to do so on 580. We had few reports of reception of WKAQ when they were on 890 but now it is regularly picked up on 1240.

(Continued on page 31)

WHEN THINGS

• • •

Serviceman "Fixed" It

My Brunswick model S-14 receiver gave some trouble and I sent it to a serviceman who returned it in such shape that no stations came in where they should. He said my condenser plates were bent and he straightened them out, and now states that the trouble cannot be remedied.

The most annoying thing that an inexperienced serviceman can do is to tinker with the tuning condensers and their plates. It is a difficult feat for the careful manufacturer to shape the plates so the dial will track perfectly at 10-kilocycle intervals the full length of the tuning scale. And when someone attempts to adjust these parts, that rarely become defective, the entire tuning scale is apt to be thrown out of adjustment and the dial numbers rendered useless.

In your case, however, it appears that the dial or drum has slipped about ten kilocycles away from the correct setting. Also it is likely the fan leaves of one or more of the condensers have been bent at 640, 900 and 1460 kilocycles. Any well equipped shop should be able to correct this slip and reshape the leaves or plates at the above distorted spots, provided the person doing the work knows his business. It is a relatively simple job. You can loosen the dial or drum on the shaft and slip it until it moves up ten kilocycles so most all stations will come in where they belong. The only error then will be at 640, 900 and 1460 kilocycles.

Tubes for General Electric

I have a 9-tube General Electric a.c. receiver and wish to make it more sensitive and selective by using the new types of tubes in place of those now in operation.

GO WRONG

By the TECHNICAL EDITOR

The -45s in this set should remain, although there is an adapter made so that the new 46s can be substituted. But we do recommend that the present -27s be replaced by the new 56s and no adapters will be needed. You can use the new 57s in place of the -24s with suitable adapters, but the gain in efficiency is doubtful. The greatest improvement is the substitution of 56s for -27s.

Slow Heating Receiver

I have a Brunswick 9-tube set and it gives me a great deal of trouble in cold weather by taking so long to heat up. On cold winter mornings it takes from 15 to 25 minutes to start, and then it goes off with a loud, sharp noise and works perfectly afterward. In warm weather the set does not take so long to start playing. The tubes have been checked and are perfect. How can the trouble be fixed?

Regardless of external thermal conditions no a.c. receiver should require more than 30 seconds at the most to operate properly with full volume of sound. It is difficult to say exactly what causes this trouble without having a thorough continuity test made of every circuit in the set.

However, we are confident that there is a thermal contact in an active line in this receiver which requires a rise of temperature within the set from certain of the tubes or high resistance of the contact itself, to complete the circuit. This may be located in any soldered joint, condenser, coil, voltage divider system, or in a tube, regardless of what a tube tested after being removed.

We recommend that every soldered joint in this receiver be sweated again with a hot soldering iron. Take a hot and well tinned iron and apply it to every joint and remelt the solder so as to make the joint anew. Failing in this, an electrical continuity test by a competent service man and testing meters will be necessary. Sometimes, when the set is playing, if every unit and joint is struck or shaken, the defective point will be indicated by a sudden shutting off of the program. Faults such as this are the most difficult to locate of any that befall radio receivers.

"The story of Omar Khayyam" with Stuart Buchanan as Omar and Betty Webb as Nur-Ulan. WABC-CBS Thursdays at 9:30 p. m. EST.

Tunes Too Broadly

My Philco model 77A tuned radio frequency circuit will not separate stations between 1000 and 550 kilocycles as well as I believe it should. Stations WTIC and WTAM always interfere, although the former is not 30 miles distant. Why is this?

Radio signals always tune sharper as the frequencies increase or the wave lengths decrease. Thus, above 1000 kcs., and on toward the 1500 kc. end of the dial, you will find the tuning is sharper. On low waves, below 100 meters, or 3000 kcs., the tuning

becomes difficult at times. On higher waves, below 1000 kcs.—toward 550 kcs.—and then on up toward 1000 meters or 300 kcs., the tuning becomes broader, and stations having only 10 kilocycles difference are bound to interfere, although widely separated by distance. Two stations operating on 1060 and 1070 kilocycles, such as WTIC and WTAM, and using such high power, are apt to interfere on any set.

The obvious solution is to treat WTIC like a local station and use a very small antenna that will not pick up WTAM. Also use as short an outside aerial as practicable to receive distant signals. Frequently a small .00025 fixed condenser in series with either the aerial or ground lead wire will make a set tune more sharply. Thousands of people experience similar station interference when stations are one division apart—or 10 kilocycles.

New Rectifier Tubes

I wish to use the new 82 full-wave rectifier tube in place of the -80 now in my set. Can this be done and will any improvement be noticed?

Fanny May Baldridge in "The Miracles of Magnolia," has been collecting negro songs since she was ten years old. NBC-WJZ network irregularly.

If the -80 type rectifier provides sufficient current to operate your set satisfactorily—and it must if it was part of the original design—there is no need for replacement. The rectifier tube does no more than provide the passage of a certain amount of current to operate the radio receiver.

If a change was justified, the new type 82 could not be used to replace the older -80 because the -80 tube requires 5 volts and the 82 only 2.5 volts on the filament. However, the new type 83 tube may be used to replace the -80 by placing a 2000 ohm resistor in each plate lead and a small choke in each plate lead as well. This change is not advised for the reason that an increased consumption of power is not indicated to justify using new type rectifier tubes.

More New Tubes

I wish to replace the -27 type tubes in my Melrose 8-tube set if it will be proper to do so. Will you please advise me?

We recommend the changing of all -27s in your receiver to the new 56s. No adapters are necessary. The improved performance of the 56s justifies the change. See an article in December issue for more detailed information about replacements.

Power Tubes Burn Out

I own a Majestic 70-B receiver which seems to burn out the -71A power tubes too often. A radio serviceman told me the set has too much power for these tubes and that is the cause of the trouble.

The -71A tubes are made to operate with 5 volts on the filaments, and, in this set, two tubes are connected in parallel for push-pull operation. We assume you use the 7BP6 power unit with this set. There are two brown wires that furnish 5 volts for these tube filaments, and they should be tested with a volt meter to see whether the potential is higher than 5 volts. If so, a suitable resistance should be connected in series with one wire to reduce the voltage applied to

the filaments to the proper voltage. This could be the only reason why the tubes burn out.

You could substitute two -45 type tubes for the two -71As, but the filaments must be connected in series for the -45 uses 2.5 volts each. The filament amperage will be three times that of the -71As but, if the power unit does not heat too much, the change will improve your power output.

Using Headphones

How can I attach a pair of headphones to my Clarion model 61 a.c. receiver so I can listen in late at night without disturbing the rest of the family, when asleep, by the noise of the loud speaker?

You must be careful to avoid danger from the high voltage of the plate circuit which might cross the phones and burn them out after heating them to the danger point. First, the speaker voice coil lead must be located where it comes from the secondary of the output transformer, and a small switch inserted so that the speaker can be turned off or on when the headphones are to be used or not.

Locate the detector -24 type tube, and find the connection between its plate and the primary of the audio input transformer, A 0.5 microfarad fixed condenser should be attached to the plate lead and the other terminal of the condenser carried out to a binding post conveniently located beside another binding post that is grounded to the chassis. When the headphones are to be used they are attached to the two binding posts and the speaker switch opened.

The Wunderlitch Tube

I have a Crosley model 124 and a friend has a model RCA 80 and we have been wondering if we could use the new Wunderlitch instead of the detectors now in use and also get automatic volume control out of the sets by using this tube; also can I replace my -35s with the new 58s?

You cannot replace your present detector with the Wunderlitch, which

Richard Crooks, famous tenor, alternates with Lawrence Tibbett on the Firestone program, NBC-Red chain Mondays at 8:30 p. m. EST.

is more or less a special purpose tube best adapted for new circuits designed to meet its requirements. And, if you could use it, you could get no automatic volume control effects unless it was situated particularly to bring this about.

In the Crosley set we do recommend replacing the -27s by the new 56s, and this can be done without the use of adapters. The same holds good for the RCA model 80 set. The -35s of the Crosley may be replaced with the new 58s, using suitable adapters.

Stations Interfere

At times, when radio weather reception conditions are best, my Kolster model 6E seems to tune too broadly and stations interfere with each other.

This is because the signals come in with more power during good, clear and cool weather, and the same effect is produced that would be noticed were the stations powerful semi-local broadcasters. The stations you mention, WJR and WJZ, are only 10 kilocycles apart, and will tend to overlap in the best of receivers at some

(Continued on page 27)

Working the SHORTWAVE SPECTRUM

• • • *High Frequency Logging*

IN ANOTHER column we are giving a scale showing how the radio waves are allotted among the various services. This should prove helpful in identifying short wave stations heard. We have had many comments upon the convenience of the arrangement by call letters in the last issue. In this issue we are picking the one hundred best stations regularly tuned in by our readers and listing them both by calls and frequencies. We urge our readers to add to this list their most reliable catches. Be sure to give us the wavelength or frequency and if possible the time heard.

For the information of our s. w. listeners let us repeat that a complete list of the foreign s. w. stations was published in the September issue No. 61, arranged by countries. A complete list of all s. w. stations by frequencies was contained in the October edition No. 62. In November, No. 63, the s. w. stations of the U. S. were given by states and in December, No. 64, the s. w. stations of Canada were listed by provinces.

"While I am interested primarily in short waves," comments James Sheehe, 1861 Davis St., Elmira, N. Y., "I listen and DX frequently on the broadcast band. My receiver is a Walker Flexi-Unit short-wave adapter connected to a two-stage audio amplifier which gives me the equivalent of a three-tube set. It tunes 15 to 550 meters. I have received such stations as VK3ME, 12RO, G5SW, Pontoise, LSN, LSX, PRADO, HCJB, HKD, XAM, XIF and many other short-wave stations. Also the broadcast stations, CMC, CMAF, XEFD, XEW, XER, XEN, KFI, CKCI, KOA, and many others. WESG operates on 1270 kcys., with 1000 watts, during the daylight hours. It was formerly WEAI at Ithaca, N. Y. However, as the owners, Cornell University, could not fill the number of hours on the air required for them, they leased the station to the Elmira Star Gazette, Elmira, N. Y. The transmitter remains unchanged at Ithaca, but the main studios and offices have been moved to the Mark Twain Hotel at Elmira. The old studios are used for a noon-time farm broadcast every day from Ithaca."

"I have a station which I hope you or some of your readers will be able to identify for me," writes George W. Burns, 2466 Wahl Terrace, Cincinnati, Ohio. "I hear it each morning on about 18,290 kcys. very clear and loud. It comes in with conversations in what I believe is Spanish (apparently trans-Atlantic or ship-shore

Fred Allen, bland comic of the stage, now star of the "Bath Club" CBS net Sundays at 9 p. m. EST.

KXYZ **1440** Houston, Texas, *CST.* 7-10 a.m.; 11 a.m.-1:15 p.m.; 3:30-10:30 p.m.

KYA **1230** San Francisco, Calif. 7:30 a.m.-mid., *PST.*

KYW **1020** Chicago, Ill., *CST.* 7 a.m.-1 a.m. next day.

KZRM **618.5** Manila, P. I. 6:30-7:30 a.m.; 12:15-1:15; 3-10:30 p.m.

NAA **690** Arlington, Va.

RUS **664** Salvador.

TGW **570** Guatamala.

TICR **911** San Jose, C. R.

VAS **685** Glace Bay, N. S., *AST.* 1-1:15 p.m.; mid.-12:15 a.m.

VOAS **810** St. Johns, N. F. 11 a.m.-12:30 p.m.; 4-5:30 p.m. (Zone 19).

VOGT **893** Wabana, N. F. Silent.

VOGY **860** St. Johns, N. F.

VONA **950** St. Johns, N. F. 12:30-2 p.m.; 6:30-8 p.m. (Zone 19)

VONF **1115** St. Johns, N. F. 1-2 p.m.; 6:30-8 p.m. (Zone 19)

VOWR **750** St. Johns, N. F. 8:15 p.m.-10 p.m. (Zone 19)

WAAB **1410** Boston, Mass., *EST.* 7:45 a.m.-mid.

WAAF **920** Chicago, Ill., *CST.* 6 a.m.-local sunset.

WAAM **1250** Newark, N. J., *EST.* 7-9 a.m.; 10 a.m.-noon; 2-4:30 p.m.; 6-9 p.m.

WAAT **940** Jersey City, N. J., *EST.* 6 a.m -6 p.m.

WAAW **660** Omaha, Neb., *CST.* 6 a.m.-6 p.m.

WABC **860** New York City, *EST.* 7:30 a.m.-2 a.m. next day.

WABI **1200** Bangor, Maine, *EST.* 6-9 a.m.; noon-3 p.m.; 6-9 p.m.

WABZ **1200** New Orleans, La., *CST.* Noon-4 p.m.; 8 p.m.-mid.

WACO **1240** Waco, Texas, *CST.* 6-7 a.m.; 9-noon; 1:30-4 p.m.; 7-9 p.m.

WADC **1320** Akron, Ohio, *EST.* 8:30 a.m.-mid.

WAGM **1420** Presque Isle, Me., *EST.* 10 a.m.-1 p.m.; 4:30-9:30 p.m.

WAIU **640** Columbus, Ohio, *EST.* 7 a.m.-sunset.

WALR **1210** Zanesville, Ohio, *EST.* 9 a.m.-10 p.m.

WAMC **1420** Anniston, Ala., *CST.* 7-10:30 a.m.; noon-9 p.m.

WAPI **1140** Birmingham, Ala., *CST.* 6 a.m.-9 p.m.

WASH **1270** Gd. Rapids, Mich., *CST.* 7 a.m.-mid.

WAWZ **1350** Zarephath. N. J.,*EST.* 6-9 a.m.; 3-5:30; 10:30-mid.

WAZL **1420** Hazelton, Pa., *EST.*

WBAA **1400** Lafayette, Ind., *CST.* Silent.

WBAK **1430** Harrisburg, Pa., *EST.* 10:30-11:30 a.m.; 1:30-2:30; 4-4:30 p.m.

WBAL **1060** Baltimore, Md., *EST.* 7 a.m.-mid.

WBAP **800** Ft. Worth, Texas, *CST.* 8:30-10:30 a.m.: 12:30-3 p.m.; 4:30-5:30 p.m.; 6-9 p.m.

WBAX **1210** Wilkes Barre, Pa., *EST.* 7:30 a.m.-noon; 6-11 p.m.

WBBC **1400** Brooklyn, N. Y., *EST.* 11:30-noon; 7:30-9 p.m.

WBBL **1210** Richmond, Va., *EST.* Silent.

WBBM **770** Chicago, Ill , *CST.* 6:45 a.m.-10 p.m.; 11:30 p.m.-2 a.m.

WBBR **1300** Brooklyn, N. Y., *EST.* 10 a.m.-noon: 6-8 p.m.

WBBZ **1200** Ponca City, Okla., *CST.* 6 a.m.-10 p.m.

WBCM **1410** Bay City, Mich., *CST.* 8 a.m.-mid.

WBEN **900** Buffalo, N. Y , *EST.* 6:45 a.m.-mid.

WBEO **1310** Marquette, Mich.

WBHS **1200** Huntsville, Ala., *CST.* 8 a.m.-2 p.m.; 5-9:30 p.m.

WBIG **1440** Greensboro, N. C., *EST.* 8 a.m.-3 p.m.; 5-11 p.m.

WBNX **1350** New York City, *EST.* Silent

WBOQ **860** New York City.

WBOW **1310** Terre Haute, Ind., *CST.* 7 a.m.-2 p.m.; 4-11 p.m.

WBRC **930** Birmingham, Ala., *CST.* 7 a.m.-11 p.m.

WBRE **1310** Wilkes Barre, Pa.

WBSO **920** Babson Park, Mass., 7 a.m.-5 p.m., *EST*

WBT **1080** Charlotte, N. C., *EST.* 7 a.m.-mid.

WBTM **1370** Danville, Va., *EST.* 11 a.m.-1 p.m.; 6-6:30; 7-10:30 p.m.

WBZ **990** Boston, Mass., *EST.* 7 a.m.-mid.

WBZA **990** Springfield, Mass., *EST.* 7 a.m.-mid.

WCAC **600** Storrs, Conn., *EST.* 12:30-1 p.m.; 7-8 p.m.

WCAD **1220** Canton, N. Y., *EST.* 12:30-1:20 p.m.

WCAE **1220** Pittsburgh, Pa., *EST.* 6:45 a.m.-mid.

WCAH **1430** Columbus, Ohio, *EST.* 7:45 a.m.-mid.

WCAJ **590** Lincoln, Neb., *CST.* 10-10:45 a.m.; 3:30-4 p.m.

WCAL **1250** Northfield, Minn., *CST.* 9:45-10:15 a.m.

WCAM **1280** Camden, N. J., *EST.* 2-5 p.m.

WCAO **600** Baltimore, Md., *EST.* 7 a.m.-mid.

WCAP **1280** Asbury Park, N. J., *EST.* 9 a.m.-noon; 5-mid.

WCAT **1200** Rapid City, S. D., *CST.* 1:30-2:30 p.m.

WCAU **1170** Philadelphia, Pa., *EST.* 8 a.m.-1 a.m. next day.

WCAX **1200** Burlington, Vt., *EST.* Noon-1 p.m.

WCAZ **1070** Carthage, Ill., *CST.* 9:30 a.m.-3:30 p.m.

WCBA **1440** Allentown, Pa., *EST.* 7:30 a.m.-1 p.m.

WCBD **1080** Zion, Ill., *CST.* 6-7 a.m.; 7:30-10:30 a.m.; 1:30-3 p.m.; 4:30-5:30 p.m.

WCBM **1370** Baltimore, Md., *EST.* 7 a.m.-1:30 p.m.; 5-11 p.m.

WCBS **1210** Springfield, Ill., *CST.* 11:30 a.m.-3 p.m.; 6:45-9 p.m.

WCCO **810** Minneapolis, Minn. 6:45 a.m.-mid., *CST.*

WCDA **1350** New York City, *EST.* 9a a.m.-noon; 5:30-8:30 p.m.

WCFL **970** Chicago, Ill., *CST.* 6 a.m.-mid.

WCGU **1400** Brooklyn, N. Y., *EST.* 1:30-3:45 p.m.; 9-10:30 p.m.

WCKY **1490** Covington, Ky., *CST.* Mid.-mid.

WCLO **1200** Janesville, Wis., *CST.* 7:30 a.m.-3:30 p.m.; 5-9 p.m.

WCLS **1310** Joliet, Ill., *CST.* 11 a.m.-noon; 3-8 p.m.

WCMA **1400** Culver, Ind., *CST.* 6-6:30 a.m.; 1:15-4:15 p.m.; 10:30-mid.

WCOA **1340** Pensacola, Fla., *CST.* 9 a.m.-10:30 p.m.

WCOC **880** Meridian, Miss., *CST.* 7:30 a.m.-2 p.m.; 5-11 p.m.

WCOD **1200** Harrisburg, Pa., *EST.* 8-11 a.m.; 3-6 p.m.; 9-11 p.m.

WCRW **1210** Chicago, Ill., *CST.* 7-8:30 a.m.; 11:30 a.m.-1:30 p.m.; 6-7 p.m; 9-10 p.m.

WCSC **1360** Charleston, S. C., *EST.* 8 a.m.-3 p.m.; 6-11 p.m.

WCSH **940** Portland, Maine, *EST.* 7:45 a.m.-1 p.m.; 2-11:15 p.m.

WDAE **1220** Tampa, Fla., *EST.* 8 a.m.-mid.

WDAF **610** Kansas City, Mo., *CST.* 6:26 a.m.-mid.

WDAG **1410** Amarillo, Texas, *CST.* 8-10 a.m.; 12:30-3 p.m.; 4:30-6 p.m.; 7:30-mid.

WDAH **1310** El Paso, Texas.

WDAS **1370** Philadelphia, Pa., *EST.* 9 a.m.-10:30 p.m.

WDAY **940** Fargo, N. D., *CST.* 6 a.m.-11 p.m.

WDBJ **930** Roanoke, Va., *EST.* 8 a.m.-mid.

WDBO **580** Orlando, Fla., *EST.* 7 a.m.-mid.

WDEL **1120** Wilmington, Del., *EST.* 9 a.m.-10 p.m.

WDEV **550** Waterbury, Vt., *EST.* 9:30-11 a.m.; noon-2 p.m.

WDGY **1180** Minneapolis, Minn. 6:30 a.m.-8:15 p.m., *CST.*

WDOD **1280** Chattanooga, Tenn. 7:30 a.m.-11 p.m., *CST.*

WDRC **1330** Hartford, Conn., *EST.* 8 a.m.-mid.

WDSU **1250** New Orleans, La., *CST.* 7 a.m.-11:45 p.m.

WDZ **1070** Tuscola, Ill., *CST.* 7 a.m.-4:30 p.m.

WEAF **660** New York City, *EST.* 6:45 a.m.-1 a.m. next day.

WEAN **780** Providence, R. I., *EST.* 7:30 a.m.-1 a.m. next day.

WEAO **570** Columbus, Ohio, *EST.* 9-11 a.m.; 1-3 p.m.

WEBC **1290** Superior, Wis., *CST.* 7 a.m.-11 p.m.

WEBQ **1210** Harrisburg, Ill., *CST.* 6-9 a.m.; noon-4 p.m.; 7:30-9 p.m.

WEBR **1310** Buffalo, N. Y., *EST.* 7 a.m.-2 a.m. next day.

WEDC **1210** Chicago, Ill.

WEEI **590** Boston, Mass., *EST.* 6:45 a.m.-mid.

WEEU **830** Reading, Pa., *EST.* 8 a.m.-8 p.m.

WEHC **1350** Emory, Va., *EST.* 6-8 a.m.; 11 a.m.-2 p.m.; 4-7.

KGRS 1410 Amarillo, Texas, *CST.* 6-8 a.m.; 10 a.m.-12:30 p.m.; 3-4:30 p.m.; 6-7:30 p.m.

KGU 750 Honolulu, Hawaii. 6:15-10:40 a.m.; 11:45-1 p.m.; 4:45-11 p.m. (Zone 5)

KGVO 1200 Missoula, Mont., *MST.* 6 a.m.-mid.

KGW 620 Portland, Ore., *PST.* 6:30 a.m.-mid.

KGY 1210 Olympia, Wash., *PST.* 6 a.m.-6 p.m.

KHJ 900 Los Angeles, Calif., *PST.* 7 a.m.-1 a.m. next day.

KHQ 590 Spokane, Wash., *PST.* 7 a.m.-mid.

KICA 1370 Clovis, N. M.

KICK 1420 Red Oak, Iowa. Silent.

KID 1320 Idaho Falls, Idaho, *MST.* 9 a.m.-mid.

KIDO 1350 Boise, Idaho, *MST.* 7 a.m.-10 p.m.

KIDW 1420 Lamar, Colo., *MST.* 6-8 a.m.; 2-6 p.m.; 8-10.

KIEM 1210 Eureka, Calif., *PST.*

KIEV 850 Glendale, Calif., *PST.*

KIT 1310 Yakima, Wash., *PST.* 7 a.m.-11 p.m.

KJBS 1070 San Francisco, Calif. Mid. to local sunset, *PST.*

KJR 970 Seattle, Wash., *PST.* 7 a.m.-mid.

KLCN 1290 Blytheville, Ark.

KLO 1400 Salt Lake City, Utah. 8:30 a.m.-10:30 p.m., *MST.*

KLPM 1240 Minot, N. D., *CST.* 7 a.m.-1 p.m.; 6-7:45 p.m.; 10-11:30 p.m.

KLRA 1390 Little Rock, Ark., *CST.* 8-11 a.m.; 1-5 p.m.; 6:30-11 p.m.

KLS 1440 Oakland, Calif., *PST.* 8:30 a.m.-7:30 p.m.

KLX 880 Oakland, Calif., *PST.* 7 a.m.-11 p.m.

KLZ 560 Denver, Colo., *MST.* 6:30 a.m.-11:30 p.m.

KMA 930 Shenandoah, Iowa, *CST.* 6-7:30 a.m.; 9:30-11 a.m.;12:30-2 p.m.; 3:30-5 p.m.

KMAC 1370 San Antonio, Tex., *CST.* 7-8:30 a.m.; 10-11 a.m.; noon-1:30 p.m.; 4-6 p.m.; 7-8 p.m.; 10 p.m.-mid.

KMBC 950 Kansas City, Mo., *CST.* 6:15 a.m.-mid.

KMED 1310 Medford, Ore., *PST.* 8 a.m.-9:30 p.m.

KMJ 580 Fresno, Calif., *PST.* 7 a.m.-mid.

KMLB 1200 Monroe, La., *CST.* 7 a.m.-10 p.m.

KMMJ 740 Clay Center, Neb., *CST.* 5:45 a.m.-sunset.

KMO 1330 Tacoma, Wash., *PST.* 6:30 a.m.-11 p.m.

KMOX 1090 St. Louis, Mo., *CST.* 6:45 a.m.-12:45 a.m. next day.

KMPC 710 Beverly Hills, Calif. 6:30 a.m.-5:15 p.m.; 8-1 a.m. *PST.*

KMTR 570 Hollywood, Calif., *PST.* 6:30 a.m.-mid.

KNOW 1500 Austin, Texas, *CST.* 7:30 a.m.-1 p.m.; 5-11 p.m.

KNX 1050 Hollywood, Calif., *PST.* 6:30 a.m.-1 a.m. next day.

KOA 830 Denver, Colo., *MST.* 7 a.m.-mid.

KOAC 550 Corvalis, Ore., *PST.* 6:30 a.m.-4 p.m.; 6-8:30 p.m.

KOB 1180 Albuquerque, N. M. 7 a.m.-9 p.m., *MST.*

KOCW 1400 Chickasha, Okla.

KOH 1380 Reno, Nev., *PST.* 8 a.m.-9 p.m.

KOIL 1260 Council Bluffs, Ia., *CST.* 6 a.m.-mid.

KOIN 940 Portland, Ore., *PST.* 6 a.m.-1 a.m. next day.

KOL 1270 Seattle, Wash., *PST.* 6:45 a.m.-mid.

KOMA 1480 Oklahoma City, Okla. 7 a.m.-11 p.m., *CST.*

KOMO 920 Seattle, Wash., *PST.* 6:55 a.m.-12:30 a.m. next day.

KONO 1370 San Antonio, Tex., *CST.* 8:30-10 a.m.; 11 a.m.-noon; 1:30-4 p.m.; 6-7 p.m.; 8-10.

KOOS 1370 Marshfield, Ore., *PST.* 9 a.m.-9 p.m.

KORE 1420 Eugene, Ore., *PST.* 7:45 a.m.-8:30 p.m.

KOY 1390 Phoenix, Ariz., *MST.* 7 a.m.-10 p.m.

KPCB 650 Seattle, Wash., *PST.* 5:30 a.m.-8 p.m.; 10 p.m.-4 a.m.

KPJM 1500 Prescott, Ariz., *MST.* 9 a.m.-9 p.m.

KPO 680 San Francisco, Calif. 7:30 a.m.-mid., *PST.*

KPOF 880 Denver, Colo., *MST.* 7:30-9 a.m.; 2:30-4:30 p.m.; 6-8- p.m.

KPPC 1210 Pasadena, Calif., *PST.* Silent.

KPQ 1500 Wenatchee, Wash., *PST.* 7 a.m.-10 p.m.

KPRC 920 Houston, Texas, *CST.* 6:30 a.m.-mid.

KQV 1380 Pittsburgh, Pa., *EST.* 8:30 a.m.-1 p.m.; 2-11 p.m.

KQW 1010 San Jose, Calif., *PST.* 7 a.m.-3 p.m.; 4:30-10 p.m.

KRE 1370 Berkeley, Calif., *PST.* 6:30-9:30 a.m.; noon-3 p.m.; 6-9 p.m.

KREG 1500 Santa Ana, Calif., *PST.* 9 a.m.-11 p.m.

KRGV 1260 Harlingen, Texas, *CST.* 7-9:30 a.m.; 12:30-3:30 p.m.

KRKD 1120 Los Angeles, Calif., *PST.* 6 a.m.-1:30 p.m.; 3-7:30 p.m.

KRLD 1040 Dallas, Texas, *CST.* 6-7:15 a.m.; 7:45-9 a.m.; 10-11 a.m.; 12:30-4:30 p.m.; 5:30-7 p.m.; 7:30-8:30; 9:30-10:30.

KRMD 1310 Shreveport, La., *CST.* 7 a.m.-1 p.m.; 5-8 p.m.

KROW 930 Oakland, Calif., *PST.* 8-9 a.m.; 1-6 p.m.; 7:30-11

KRSC 1120 Seattle, Wash., *PST.* Sunrise to local sunset.

KSAC 580 Manhattan, Kans., *CST.* 8-9 a.m.; 10-10:30 a.m.; 12:30-1:30 p.m.; 4:30-5:30 p.m.

KSCJ 1330 Sioux City, Iowa, *CST.* 6:30 a.m.-11 p.m.

KSD 550 St. Louis, Mo., *CST.* 7 a.m.-12:15 p.m.; 12:40-11 p.m.

KSEI 890 Pocatello, Idaho, *MST.* 8 a.m.-11 p.m.

KSL 1130 Salt Lake City, Utah. 7 a.m.-mid., *MST.*

KSO 1380 Clarinda, Iowa.

KSOO 1110 Sioux Falls, S. D., *CST.* 6 a.m.-8 p.m.

KSTP 1460 St. Paul, Minn., *CST.* 6:30 a.m.-12:30 a.m. next day.

KTAB 560 San Francisco, Calif. 6:45 a.m.-1 a.m., *PST.*

KTAR 620 Phoenix, Ariz., *MST.* 7 a.m.-11:15 p.m.

KTAT 1240 Ft. Worth, Texas. 7-9 a.m.; noon-1:30 p.m.; 4-7 p.m.; 9-mid.

KTBS 1450 Shreveport, La., *CST.* 6 a.m.-mid.

KTFI 1240 Twin Falls, Idaho, *MST.* 6:30 a.m.-11 p.m.

KTHS 1040 Hot Springs, Ark., *CST.* 9-10 a.m.; 11 a.m.-12:30 p.m.; 4:30-5:30 p.m.; 7-7:30; 8:30-9:30; 10:30-11:30 p.m.

KTM 780 Los Angeles, Calif., *PST.* 6-10 a.m.; 1-5 p.m.; 8 p.m.-4 a.m. next day.

KTRH 1120 Houston, Texas, *CST.* 6:30-11 a.m.; noon-11:30 p.m.

KTSA 1290 San Antonio, Tex., *CST.* 6-8 a.m.; 9:30-11:30 a.m.; 3-5 p.m.; 7-10 p.m.

KTSM 1310 El Paso, Texas.

KTW 1220 Seattle, Wash.

KUJ 1370 Walla Walla, Wash. 6 a.m.-sunset, *PST.*

KUMA 1420 Yuma, Ariz., *MST.* 7-9 a.m.; noon-3 p.m.; 6-9 p.m.

KUOA 1390 Fayetteville, Ark., *CST.* 7-8 a.m.; 11 a.m.-1 p.m.; 5-6:30.

KUSD 890 Vermillion, S. D., *CST.* Silent.

KVI 570 Tacoma, Wash., *PST.* 6:30 a.m.-mid.

KVL 1370 Seattle, Wash.

KVOA 1260 Tucson, Ariz. 6-9 a.m.; noon-3 p.m.; 6-9 p.m.

KVOO 1140 Tulsa, Okla., *CST.* 7 a.m.-1:45 p.m.; 3-7:45; 9-mid.

KVOR 1270 Colorado Springs, Colo. 7 a.m.-10 p.m., *MST.*

KVOS 1200 Bellingham, Wash.

KWCR 1420 Cedar Rapids, Ia., *CST.* 6:30 a.m.-mid.

KWEA 1210 Shreveport, La.

KWG 1200 Stockton, Calif., *PST.* 7 a.m.-mid.

KWJJ 1060 Portland, Ore.

KWK 1350 St. Louis, Mo., *CST.* 6:55 a.m.-12:15 a.m. next day.

KWKC 1370 Kansas City, Mo.

KWKH 850 Shreveport, La., *CST.* 8:30 p.m.-mid.

KWLC 1270 Decorah, Iowa, *CST.* 6:45-8 a.m.; 10:30-9:30 p.m.; 11:30 a.m.-12:30 p.m.

KWSC 1220 Pullman, Wash., *PST.* 6:45-8 a.m.; 10:30-7:30 p.m.

KWWG 1260 Brownsville, Texas.

KXA 760 Seattle, Wash., *PST.* 7 a.m.-sundown; 9 p.m.-mid.

KXL 1420 Portland, Ore., *PST.* 7 a.m.-mid.

KXO 1500 El Centro, Calif.

KXRO 1310 Aberdeen, Wash., *PST* 7:30 a.m.-10 p.m.

KCMC 1420 Texarkana, Ark., *CST.* 6:45 a.m.-2 p.m.; 4-9 p.m.

KCRC 1370 Enid, Okla., *CST.* 10 a.m.-2 p.m.; 3:45-7:45 p.m.

KCRJ 1310 Jerome, Ariz., *MST.* 7:30-9:30 a.m.; noon-1 p.m.; 3:45-6 p.m.

KDB 1500 Santa Barbara, Calif., 8 a.m.-mid., *PST.*

KDFN 1440 Casper, Wyo., *MST.* 9 a.m.-9 p.m.

KDKA 980 Pittsburgh, Pa., *EST.* 7 a.m.-12:30 a.m. next day.

KDLR 1210 Devils Lake, N. D., *CST.* 7 a.m.-3 p.m.; 5:30-9:30 p.m.

KDYL 1290 Salt Lake City, Utah. 6:30 a.m.-1 a.m., *MST.*

KECA 1430 Los Angeles, Calif., *PST.* 9 a.m.-11 p.m.

KELW 780 Burbank, Calif., *PST.* 10 a.m.-1 p.m.; 5-8 p.m.

KERN 1200 Bakersfield, Calif., *PST.* 7:30 a.m.-mid.

KEX 1180 Portland, Ore., *PST.* 7 a.m.-noon; 1 p.m.-mid.

KFAB 770 Lincoln, Neb., *CST.* 6 a.m.-10:30 p.m.

KFAC 1300 Los Angeles, Calif., *PST.* 7 a.m.-mid.

KFBB 1280 Great Falls, Mont., *MST* 8 a.m.-3 p.m.; 5-10 p.m.

KFBI 1050 Abilene, Kans., *CST.* 5 a.m.-9 p.m.

KFBK 1310 Sacramento, Calif., *PST.* 7 a.m.-11 p.m.

KFBL 1370 Everett, Wash., *PST.* 8:30 a.m.-noon; 3-6 p.m.; 3-6 a.m.

KFDM 560 Beaumont, Tex., *CST.* 7 a.m.-2 p.m.; 4:30-10:30 p.m.

KFDY 550 Brookings, S. D., *CST.* 12:30-2 p.m.

KFEL 920 Denver, Colo., *MST.* 7-8:30 a.m.; 10 a.m.-12:30 p.m.; 3-4:30 p.m.; 6-7:30 p.m.; 9-mid.

KFEQ 680 St. Joseph, Mo., *CST.* 6 a.m.-7:45 p.m.

KFGQ 1310 Boone, Iowa, *CST.* 6-7:30 a.m.; 1:30-2:30 p.m.

KFH 1300 Wichita, Kans., *CST.* 7-8:30 a.m.; 9-11 a.m.; 11:30 a.m.-2 p.m.; 3-9; 10-11 p.m.

KFI 640 Los Angeles, Calif., *PST.* 6:30 a.m.-mid.

KFIO 1120 Spokane, Wash., *PST.* 6 a.m.-sunset.

KFIZ 1420 Fond du Lac, Wis., *CST.* 10 a.m.-1 p.m.; 4-10 p.m.

KFJB 1200 Marshalltown, Iowa. 6-9 a.m.; noon-3 p.m.; 6-9 p.m.

KFJI 1210 Klamath Falls, Ore. 7:30 a.m.-9 p.m., *PST.*

KFJM 1370 Grand Forks, N. D. 7 a.m.-9 p.m., *CST.*

KFJR 1300 Portland, Ore., *PST.* 10:30 a.m.-2:30 p.m.; 5-6 p.m.; 7-8 p.m.

KFJZ 1370 Fort Worth, Texas, *CST.* 7 a.m.-11 p.m.

KFKA 880 Greeley, Colo., *MST.* 6-7:30 a.m.; 9 a.m.-2:30 p.m.; 8-11 p.m.

KFKU 1220 Lawrence, Kans., *CST.* 2:30-3 p.m.; 6-6:15 p.m.

KFKX 1020 Chicago, Ill.

KFLV 1410 Rockford, Ill., *CST.* 10 a.m.-12:30 p.m.; 3-6 p.m.; 8-10:45 p.m.

KFLX 1370 Galveston. Texas.

KFMX 1250 Northfield, Minn., *CST.* 10:15-10:35 a.m.

KFNF 890 Shenandoah, Iowa, *CST.* 5-8 a.m.; 9-10 a.m.; 12:15-5 p.m.; 6-10 p.m.

KFOR 1210 Lincoln, Nebr., *CST.* 7 a.m.-10 p.m.

KFOX 1250 Long Beach, Calif., *PST.* 6 a.m.-mid.

KFPL 1310 Dublin, Texas, *CST.* 6 a.m.-10:30 p.m.

KFPM 1310 Greenville, Texas, *CST.* 7:45-9 a.m.; 1-2:45 p.m.; 6-9.

KFPW 1210 Fort Smith, Ark., *CST.* 6:30 a.m.-2 p.m.; 5-10:30 p.m.

KFPY 1340 Spokane, Wash., *PST.* 7 a.m.-12:30 a.m. next day.

KFQD 1230 Anchorage, Alaska. 6 p.m.-mid. (Zone 6)

KFRC 610 San Francisco, Calif. 7 a.m.-1 a.m., *PST.*

KFRU 630 Columbia, Mo., *CST.* 6:30-9 a.m.; 4-8 p.m.

KFSD 600 San Diego, Calif., *PST.* 7:30 a.m.-mid.

KFSG 1120 Los Angeles, Calif., *PST.* 1:30-3 p.m.; 7:30-mid.

KFUL 1290 Galveston, Texas, *CST.* 8-9:30a.m.; 11a.m.-1p.m.; 2:30-4 p.m.; 5:30-8 p.m.; 10:15-mid.

KFUO 550 St. Louis, Mo., *CST.* 6:30-7 a.m.; 12:15-12:40 p.m.; 11-unlimited

KFVD 1000 Los Angeles, Calif., *PST.* 6 a.m.-6:45 p.m.; 10 p.m.-mid.

KFVS 1210 Cape Girardeau, Mo. 9 a.m.-noon; 4-7:30; 9-mid. *CST.*

KFWB 950 Los Angeles, Calif., *PST.* 7:30 a.m.-mid.

KFWF 1200 St. Louis. Mo., *CST.* 11 a.m.-12:30; 8-10 p.m.

KFWI 930 San Francisco, Calif. 7-8 a.m.; 9 a.m.-1 p.m.; 6-7:30 p.m.; 11 p.m.-1 a.m. *PST.*

KFXD 1200 Nampa, Idaho, *MST.* 7 a.m.-9 p.m.

KFXF 920 Denver, Colo., *MST.* 8:30-10 a.m.; 12:30-3; 4:30-6; 7:30-9 p.m.

KFXJ 1310 Grand Jct., Colo., *MST.* 8 a.m.-2 p.m.; 6-9 p.m.

KFXM 1210 San Bernardino, Calif. 7 a.m.-mid. *PST.*

KFXR 1310 Oklahoma City, Okla. 7:30 a.m.-2 p.m.; 4-10, *CST.*

KFYO 1310 Lubbock, Texas.

KFYR 550 Bismarck, N. D., *CST.* 6:30 a.m.-12:30 p.m.; 2-11 p.m.

KGA 1470 Spokane, Wash., *PST.* 6 a.m.-mid.

KGAR 1370 Tucson, Ariz., *MST.* 7 a.m.-1:30 p.m.; 4-11.

KGB 1330 San Diego, Calif., *PST.* 7 a.m.-mid.

KGBU 900 Ketchikan, Alaska. (Zone 8), 10 a.m.-3 p.m.; 5-7; 10 p.m.-3 a.m.

KGBX 1310 Springfield, Mo., *CST.* 6:30-9:30 a.m.; 11 a.m.-2 p.m.; 4-10 p.m.

KGBZ 930 York, Neb., *CST.* 7:30-9:30 a.m.; 11 a.m.-12:30 p.m.; 2-3:30 p.m.; 5-6:30 p.m.; 7-mid.

KGCA 1270 Decorah, Iowa, *CST.* 8:30-9:45 a.m.; 10:45-11:30 a.m.; 12:30-2:30 p.m.

KGCR 1210 Watertown, S. D., *CST.* 6:30 a.m.-3 p.m.; 5-9.

KGCU 1240 Mandan, N. D., *MST.* Noon-5 p.m.; 6:45-9 p.m.

KGCX 1310 Wolf Point, Mont., *MST.* 6:30-9 a.m.; 11:30-3; 6-9 p.m.

KGDA 1370 Mitchell, S. D., *CST.* 8 a.m.-4:30 p.m.; 5:30-9.

KGDE 1200 Fergus Falls, Minn. 7 a.m.-9 p.m., *CST.*

KGDM 1100 Stockton, Calif., *PST.* 6 a.m.-sunset.

KGDY 1200 Huron, S. D., *CST.* 7 a.m.-2 p.m.; 4-9 p.m.

KGEK 1200 Yuma, Colo., *MST.* 11 a.m.-1:30 p.m.

KGER 1360 Long Beach, Calif., *PST.* 6 a.m.-mid.

KGEW 1200 Ft. Morgan, Colo., *MST.* 6:30-9:30 p.m.

KGEZ 1310 Kalispell, Mont., *MST.* 8 a.m.-9 p.m.

KGFF 1420 Shawnee, Okla., *CST.* 7:30 a.m.-9 p.m.

KGFG 1370 Oklahoma City, Okla. 7:15-10 a.m.; 3-3:45 p.m.; 7:45-9:15 p.m. *CST.*

KGFI 1500 Corpus Christi, Texas. 7 a.m.-3 p.m.; 6-10 p.m., *CST.*

KGFJ 1200 Los Angeles, Calif. 24 hours daily.

KGFK 1500 Moorhead, Minn., *CST.* 8 a.m.-9 p.m.

KGFL 1370 Santa Fe, N. M., *MST.* 9-10 a.m.; 11 a.m.-3 p.m.; 4-5:30 p.m.; 7:30-9.

KGFW 1310 Kearney, Neb., *CST.* 7:30 a.m.-1:30 p.m.; 5-10:30 p.m.

KFGX 630 Pierre, S. D.

KGGC 1420 San Francisco, Calif. 9 a.m.-9 p.m., *PST.*

KGGF 1010 Coffeyville, Kans., *CST.* 7:30 a.m.-2 p.m.; 5-10:30.

KGGM 1230 Albuquerque, N. M. 8 a.m.-2 p.m.; 4-10 p.m., *MST.*

KGHF 1320 Pueblo, Colo., *MST.* 7 a.m.-1 p.m.; 4-10 p.m.

KGHI 1200 Little Rock, Ark., *CST.* 8:30 a.m.-1:30 p.m.; 5-9; mid.-3 a.m.

KGHL 950 Billings, Mont., *MST.* 7:30 a.m.-4 p.m.; 5:30-11.

KGIR 1360 Butte, Mont., *MST.* 7 a.m.-mid.

KGIW 1420 Trinidad, Colo., *MST.* 6-8 a.m.; 10-2 p.m.; 5-8 p.m.

KGIX 1420 Las Vegas, Nev., *PST.* 6-9 a.m.; noon-3 p.m.; 6-9 p.m.

KGIZ 1500 Grant City, Mo., *CST.* 7-11 a.m.; noon-5 p.m.; 6-9 p.m.

KGKB 1500 Tyler, Texas, *CST.* 7 a.m.-2 p.m.; 4-10 p.m.

KGKL 1370 San Angelo, Texas, *CST* 8 a.m.-9:30 p.m.

KGKO 570 Wichita Falls, Texas.

KGKX 1420 Lewiston, Idaho.

KGKY 1500 Scottsbluff, Neb., *MST.* 6:30 a.m.-2 p.m.; 4:30-9.

KGMB 1320 Honolulu, Hawaii. 7-9 a.m.; 10:40 a.m.-11 p.m. (Zone 5)

KGNF 1430 North Platte, Neb. 7 a.m.-sunset, *MST.*

KGNO 1210 Dodge City, Kans. 7:30 a.m.-3:30 p.m.; 5-9, *MST.*

KGO 790 San Francisco, Calif. 7 a.m.-12-30 a.m., *PST.*

CFAC **690** Calgary, Alta., *MST.* 7:30-9 a.m.; 11:30 a.m.-1:30 p. m.; 4:30-6 p.m.; 7-9 p.m.
CFBO **890** St. John, N. B.
CFCA **1120** Toronto Ont., *EST.* 7:15-noon; 1-10:30 p.m.
CFCF **1030** Montreal, Que., *EST.* 8 a.m.-mid.
CFCH **930** North Bay, Ont., *EST.* 8-8:30 a.m.; noon-1 p.m.; 5-8
CFCN **985** Calgary, Alta., *MST.* 7:30 a.m.-1:30 p.m.; 5-11 p.m.
CFCO **1210** Chatham, Ont., *EST.* 7:15-7:30 p.m.; 8:15-8:30 p.m.
CFCT **630** Victoria, B. C., *PST.* 8:30 a.m.-12:30; 6-8 p.m.
CFCY **580** Charlottetown, P. E. I. *AST.* 11:30 a.m.-noon; 4:30-8 p.m.
CFJC **1120** Kamloops, B. C., *PST.* 7:30-9:30 a.m.; noon-2 p.m.; 5:30-7 p.m.
CFLC **915** Prescott, Ont., *EST.* 8-10 a.m.; noon-2 p.m.; 5-7:30
CFNB **1210** Fredericton, N. B., *AST.* 8:30-9:30 a.m.; 12:30-2 p.m.
CFQC **910** Saskatoon, Sask.
CFRB **690** Toronto, Ont., *EST.* 8 a.m.-mid.
CFRC **930** Kingston, Ont.
CHCH **1200** Montreal, Que.
CHCK **960** Charlottetown, P. E. I. Noon-2 p.m.; 5-7:30 p.m., *AST.*
CHGS **1120** Summerside, P. E. I. 10 a.m.-2 p.m.; 4-8 p.m., *AST.*
CHLS **730** Vancouver, B. C., *PST.* 8:50-9 p.m.
CHMA **580** Edmonton, Alta., *MST.* Silent.
CHML **880** Hamilton, Ont., *EST.* 9 a.m.-2 p.m.
CHNC **840** Toronto, Ont. 7:15-7:30 p. m.
CHNS **815** Halifax, N. S., *AST.* 8 a.m.-2 p.m.; 6 p.m.-mid.
CHRC **645** Quebec, Que., *EST.* 9 a.m.-2 p.m.; 5 p.m.-mid.
CHWC **960** Regina, Sask., *MST.* 7-9 a.m.; 10-11 a.m.; noon-1 p. m.; 3:30-6:30 p.m.
CHWK **665** Chilliwack, B. C., *PST.* Noon-8 p.m.
CHYC **730** Montreal, Que.
CJCA **745** Edmonton, Alta., *MST.* 7:45-9:15 a.m.; noon-1 p.m.; 3:30-4:30 p.m.; 5-7:30 p.m.; 9-10 p.m.
CJCB **880** Sydney, N. S., *AST.* 10 a.m.-2 p.m.; 6-10 p.m.
CJCJ **690** Calgary, Alta., *MST.* 9-11:30 a.m.; 1:45-3 p.m.; 6-7 p.m.
CJGC **595** London, Ont., *EST.* 8:45 a.m.-1:15 p.m.; 5:30-10.
CJGX **630** Yorkton, Sask., *CST.* 8:30-9:15 a.m.; 10:30-10:45 a. m.; 12:40-1:45 p.m.; 7:15-9 p.m.
CJOC **1120** Lethbridge, Alta., *MST.* 8:45-10 a.m.; noon-1:15 p.m.; 3-4 p.m.; 6-8 p.m.
CJOR **1210** Vancouver, B. C., *PST.* 7:30 a.m.-1 p.m.; 4-10:30 p.m.
CJRM **665** Moose Jaw, Sask., *MST.* 8-10:30 a.m.; noon-2:30 p.m.
CJRW **665** Fleming, Sask., *MST.* Noon-1 p.m.; 4:30-10 p.m.
CKAC **730** Montreal, Que., *EST.* 7:30 a.m.-mid.
CKCD **730** Vancouver, B. C.
CKCI **645** Quebec, Que., *EST.* 1-1:30 p.m.
CKCK **960** Regina, Sask., *MST.* 9-10 a.m.; 11 a.m.-noon; 1-3:30; 5:30-mid.
CKCL **580** Toronto, Ont., *EST* 8:30 a.m.-mid.
CKCO **890** Ottawa, Ont.
CKCR **645** Waterloo, Ont., *EST.* 10 a.m.-1:15 p.m.; 4-10 p.m.
CKCV **880** Quebec, Que., *EST.* Noon-2 p.m.; 6:30-11 p.m.
CKFC **730** Vancouver, B. C. 9-10:30 p.m.
CKGW **840** Toronto, Ont., *EST.* 6:45 a.m.-mid.
CKIC **1010** Wolfville, N. S., *AST.* 7:30-8:30 a.m.; 12:15-1:15 p.m.; 6-7 p.m.; 8-10 p.m.
CKLC **840** Red Deer, Alta., *MST.* 8 a.m.-8 p.m.
CKMC **1210** Cobalt, Ont., *EST.* 7-9 p.m.
CKMO **730** Vancouver, B. C.
CKNC **960** Toronto, Ont., *EST.* 8 a.m.-12:30 p.m.; 2:30-11:15.
CKOC **635** Hamilton, Ont., *EST.* 8 a.m.-10:30 p.m.
CKOK **540** Windsor, Ont., *EST.* 7:30 a.m.-mid.
CKOV **1200** Kelowna, B. C., *PST.* 8-9 a.m.; 11:30 a.m.-2 p.m.; 4:30-7:30 p.m.; 9-11 p.m.
CKPC **880** Preston, Ont., *EST.* 4 p.m.-mid.
CKPR **890** Ft. William, Ont., *EST.* 9 a.m.-2 p.m.; 5:30-11 p.m.
CKTB **635** St. Catharines, Ont., 1:30-5 p.m.; 6:30-8 p.m., *EST.*
CKUA **580** Edmonton, Alta., *MST.* Silent
CKWX **730** Vancouver, B. C., *PST.* 8-8:30 a.m.; 10:30 a.m.-noon; 4:30-7:30; 10:30-11:30 p.m.
CKX **930** Brandon, Man., *CST.* 8:30-930 a.m.
CKY **780** Winnipeg, Man., *CST.* 8:30 a.m.-2:15; 3:30-10:45 p.m.
CMAB **1249** Pinar del Rio, Cuba.
CMAF **680** Havana, Cuba, *EST.* 5-11:30 p.m.
CMAY **965** Havana, Cuba.
CMBC **965** Havana, Cuba, *EST.* 11 a.m.-5 p.m.
CMBD **1270** Havana, Cuba.
CMBF **1365** Havana, Cuba.
CMBG **1070** Havana, Cuba.
CMBJ **1140** Havana, Cuba.
CMBK **1485** Havana, Cuba.
CMBL **1445** Havana, Cuba, *EST.* 3-5 p.m.
CMBN **1445** Havana, Cuba, *EST.* 2-3 p.m.; 9:15-11 p.m.
CMBR **1485** Havana, Cuba.
CMBS **780** Havana, Cuba.
CMBW **1140** Havana, Cuba.
CMBY **1230** Havana, Cuba.
CMBZ **1010** Havana, Cuba, *EST.* 9-10:30 a.m.; noon-2 p.m.; 4-5 p.m.; 6-7 p.m.; 8-11 p.m.
CMC **840** Havana, Cuba.
CMCA **1230** Havana, Cuba.
CMCB **1070** Havana, Cuba, *EST.* 11:30 a.m.-1 p.m.; 5-6 p.m.; 7:30-10 p.m.
CMCD **925** Havana, Cuba, *EST.* Noon-3 p.m.; 8 p.m.-mid.
CMCF **890** Havana, Cuba, *EST.* 5-8 p.m.
CMCH **1405** Havana, Cuba, *EST.* 5-9 p.m.
CMCJ **1180** Havana, Cuba.
CMCM **1405** Havana, Cuba.
CMCN **1270** Havana, Cuba.
CMCQ **780** Havana, Cuba.
CMCR **1325** Havana, Cuba.
CMCU **630** Havana, Cuba.
CMCW **1365** Havana, Cuba, *EST.* 6 p.m.-mid.
CMCX **1010** Havana, Cuba.
CMCY **1325** Havana, Cuba, *EST.* 8:30-10:30 p.m.
CMDB **1405** Havana, Cuba.
CMDD **588** Havana, Cuba.
CMDE **925** Havana, Cuba.
CMGA **834** Colon, Cuba.
CMGB **1205** Matanzas, Cuba.
CMGC **820** Matanzas, Cuba.
CMGE **1375** Cardenas, Cuba, *EST.* noon-2; 8-10 p.m.
CMGF **987** Matanzas, Cuba.
CMGH **1040** Matanzas, Cuba.
CMHC **790** Tuinucu, Cuba.
CMHD **950** Caibarien, Cuba.
CMHI **1030** Santa Clara, Cuba, *EST* 11 a.m.-1 p.m.; 8-10 p.m.
CMHJ **1125** Cienfuegos, Cuba, *EST.* 11 a.m.-1 p.m.; 7-9 p.m.
CMHK **1225** Cruces, Cuba.
CMHL **1290** Cienfuegos, Cuba.
CMJC **1382** Camaguey, Cuba.
CMJE **1175** Camaguey, Cuba.
CMJF **930** Camaguey, Cuba.
CMJG **1050** Camaguey, Cuba.
CMJH **1150** Ciego de Avila, Cuba. 10 a.m.-2 p.m.; 5-10 p.m., *EST*
CMJI **1260** Ciego de Avila, Cuba. 10 a.m.-1:30 p.m.; 6-10, *EST.*
CMJK **790** Camaguey, Cuba.
CMJL **960** Camaguey, Cuba.
CMJN **1270** Camaguey, Cuba.
CMJO **1110** Ciego de Avila, Cuba.
CMJP **1310** Moron, Cuba.
CMK **730** Havana, Cuba, *EST.* 10 a.m.-noon; 6 p.m.-mid.
CMKC **1034** Santiago, Cuba.
CMKJ **1300** Guantanamo, Cuba.
CMQ **630** Havana, Cuba.
CMW **1185** Havana, Cuba, *EST.* 7:30 a.m.-11:30 p.m.
CMX **890** Havana, Cuba, *EST.* 11 a.m.-2 p.m.; 8-10 p.m.
CNRA **630** Moncton, N. B., *AST.* 12:30-2 p.m.; 6:15-7:15 p.m
CNRH **815** Halifax, N. S., *AST* Silent.
CNRO **600** Ottawa, Ont., *EST.* Noon-1 p.m.; 6-11 p.m.
CNRV **1030** Vancouver, B. C., *PST.* 2-3:30 p.m.; 5:30-8:30 p.m.
CPRY **840** Toronto, Ont., *EST.* 1-1:30 p.m.;10-10:30 p.m.
HHK **920** Port-au-Prince, Haiti.
HIX **630** Santo Domingo, *EST.* Silent.
KABC **1420** San Antonio, Tex., *CST.* 6:45 a.m.-1:30 p.m.; 4-11:30 p.m.
KALE **1300** Portland, Ore., *PST.* 7-10:30 a.m.; 2:30-5; 6-7 p.m.; 8-mid.
KARK **890** Little Rock, Ark., *CST.* 7:30 a.m.-9 p.m.
KASA **1210** Elk City, Okla., *CST.* 7 a.m.-9 p.m.
KBPS **1420** Portland, Ore., *PST.* 11 a.m.-12:30 p.m.; 3-5 p.m.
KBTM **1200** Paragould, Ark., *CST.* 7:30 a.m.-1:30 p.m.; 3:15-6:15.

	Watts		Kcys.
JALISCO			
Guadalajara, Jal. X-10	500	XEA	1155
	500	XED	1155
MICHOACAN			
Morelia, Mich. Y-12	150	XEI	1310
NEUVO LEON			
Monterrey, N. L. U-13	100	XEFB	1315
	1000	XEH	1132
	500	XET	690
OAXACA			
Oaxaca, Oax. AA-14	105	XEE	1000
PUEBLA			
Puebla Z-13	101	XEV	1000
QUERETARO			
Queretaro X-12 br	40	XEFS	1000
TAMAULIPAS			
Matamoros U-14 tr	150000	XETM	845
N. Laredo S-13	101	XEFE	1000
	150000	XENT	1115
	200	XEP	1400
Reynosa, Tams. T-14	10000	XEAW	955
Tampico, Tams. W-14	500	XEM	730
	500	XES	1055
VERA CRUZ			
Jalapa Y-14	100	XETC	1000
Vera Cruz, Ver. Z-14	500	XETF	630
	100	XEU	1007
YUCATAN			
Merida, Yuc. X-19	10	XEFC	1050
	105	XEY	1000
WEST INDIES			
CUBA			
Caibarien W-25	250	CMHD	950
Camaguey W-26	150	CMJC	1382
	50	CMJE	1175
	200	CMJF	930
	50	CMJG	1050
	300	CMJK	790
	50	CMJL	960
	50	CMJN	1270
Cardenas W-24	30	CMGE	1375
Ciego de Avila W-26	50	CMJH	1150
	5	CMJI	1260
	15	CMJO	1110
Cienfuegos W-25	40	CMHJ	1125
	20	CMHL	1290
Colon W-24	100	CMGA	834
Cruces	15	CMHK	1225
Guantanamo X-28 tc	20	CMKJ	1300
Havana W-23	1000	CMAF	680
	150	CMAY	965
	150	CMBC	965
	150	CMBD	1270
	150	CMBF	1365
	225	CMBG	1070
	150	CMBJ	1140
	15	CMBK	1485
	20	CMBL	1445
	30	CMBN	1445
	40	CMBR	1485
	150	CMBS	780
	150	CMBW	1140
	350	CMBY	1230
	150	CMBZ	1010
	500	CMC	840
	150	CMCA	1230
	150	CMCB	1070
	250	CMCD	925
	250	CMCF	890
	50	CMCH	1405
	250	CMCJ	1180
	15	CMCM	1405
	250	CMCN	1270
	1000	CMCQ	780
	150	CMCR	1325
	150	CMCU	630
	150	CMCW	1365
	150	CMCX	1010
	1000	CMCY	1325
	40	CMDB	1405
	150	CMDD	588
	250	CMDE	925
	3150	CMK	730
	250	CMQ	630
	1400	CMW	1185
	500	CMX	890
Matanzas W-24	30	CMGB	1205
	30	CMGC	820
	100	CMGF	987
	15	CMGH	1040
Moron	7.5	CMJP	1310
Pinar del Rio W-22	20	CMAB	1249
Santa Clara W-25	30	CMHI	1030
Santiago X-28	150	CMKC	1034
Tuinucu W-25 rc	250	CMHC	790
DOMINICAN REPUBLIC			
Santo Domingo X-31	1000	HIX	630
HAITI			
Port au Prince X-30	1000	HHK	920
SOUTH AMERICA			
Caracas Venz. DD-31	5000	YV1BC	960

TIME CONVERSION TABLE

Atlantic	Eastern	Central	Mountain	Pacific	Atlantic	Eastern	Central	Mountain	Pacific
1:00	12:00	11:00	10:00	9:00	7:00	6:00	5:00	4:00	3:00
2:00	1:00	12:00	11:00	10:00	8:00	7:00	6:00	5:00	4:00
3:00	2:00	1:00	12:00	11:00	9:00	8:00	7:00	6:00	5:00
4:00	3:00	2:00	1:00	12:00	10:00	9:00	8:00	7:00	6:00
5:00	4:00	3:00	2:00	1:00	11:00	10:00	9:00	8:00	7:00
6:00	5:00	4:00	3:00	2:00	12:00	11:00	10:00	9:00	8:00

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

	Watts			Kcys.
Edmonton A-8	250	CHMA		580
	500	CJCA		745
	500	CKUA		580
Lethbridge C-8	100	CJOC		1120
Red Deer A-8	1000	CKLC		840
BRITISH COLUMBIA				
Chilliwack B-3	100	CHWK		665
Kamloops B-5	100	CJFC		1120
Kelowna C-6 tl	100	CKOV		1200
Trail C-6 c	25	10-AT		1155
Vancouver B-3	100	CHLS		730
	500	CJOR		1210
	100	CKCD		730
	50	CKFC		730
	100	CKMO		730
	100	CKWX		730
	500	CNRV		1030
Victoria C-3	500	CFCT		630
MANITOBA				
Brandon D-14	500	CKX		930
Winnipeg D-15	5000	CKY		780
NEW BRUNSWICK				
Fredericton D-29	100	CFNB		1210
Moncton D-30	700	CNRA		630
St. John D-30	500	CFBO		890
NOVA SCOTIA				
Glace Bay C-32	2000	VAS		685
Halifax E-31	500	CHNS		815
	500	CNRH		815
Sydney C-32	100	CJCB		880
Wolfville D-31	50	CKIC		1010
ONTARIO				
Brantford H-23 tr	15	10-BQ		1200
Chatham H-22	250	CFCO		1210
Cobalt E-23	100	CKMC		1210
Ft. William E-19 bl	100	CKPR		890
Hamilton H-24	50	CHML		880
	1000	CKOC		635
Kingston G-25	50	CFRC		930
London H-23	5000	CJGC		595
North Bay F-23 c	100	CFCH		930
Ottawa F-25	100	CKCO		890
	500	CNRO		600
Prescott F-25	100	CFLC		915
Preston H-23	100	CKPC		880
St. Catherines H-24 tl	1000	CKTB		635
Stratford H-23 tc	15	10-AK		1200
Toronto G-24	500	CFCA		1120
	10000	CFRB	C	690
	5000	CHNC		840
	500	CKCL		580
	5000	CKGW	N	840
	500	CKNC		960
	5000	CPRY		840
Waterloo G-23	100	CKCR		645
Windsor I-22 tc	5000	CKOK	C	540
Wingham G-23	25	10-BP		1199
		CFCB		960
PRINCE EDWARD ISLAND				
Charlottestown C-31	500	CFCY		580
	100	CHCK		960
Summerside C-31	100	CHGS		1120
QUEBEC				
Montreal E-26	500	CFCF	N	1030
	100	CHCH		1200
	5000	CHYC		730
	5000	CKAC	C	730
Quebec D-27	100	CHRC		645
	100	CKCI		645
	100	CKCV		880
SASKATCHEWAN				
Canora B-13 tl	15	10-BU		1200
Fleming C-13	1000	CJRW		665
Moose Jaw C-11	500	CJRM		665
	25	10-AB		1200
Prince Albert A-11 rc	25	10-BI		1200
Regina C-12	500	CHWC		960
	500	CKCK		960
Saskatoon B-11	500	CFQC		910
Yorkton B-13	500	CJGX		630
NEWFOUNDLAND				
St. Johns A-35	200	VOAS		810
	500	VOGY		860
	100	VONA		950
	500	VONF		1115
	750	VOWR		750
Wabana A-35	400	VOGT		893
CENTRAL AMERICA				
COSTA RICA				
San Jose FF-23	50	TICR		911
GUATAMALA				
Guatamala CC-18 tr	50	TGW		570
SALVADOR				
Salvador CC-19 br	500	RUS		664
MEXICO				
AGUASCALIENTES				
Aguascalientes W-11 bc	250	XFC		810
BAJA CALIFORNIA				
Tiajuana N-3 bc	300	XEFD		1020
CHIHUAHUA				
Chihuahua R-9	100	XEFI		1000
	250	XFF		915
Juarez P-9	101	XEJ		1000
	5000	XEQ		750
COAHUILA				
Piedras Negras S-12 tr	100000	XEPN		885
Saltillo, Coah. U-12	25	XEL		1000
Torreon U-11 tl	125	XETB		1380
	100	XETG		1000
Villa Acuna R-12 c	75000	XER-XEF		735
D. F.				
Coyoacan Y-13	100	XEFZ		1370
Mexico City Y-13	1000	XEB		1030
	250	XEFA		1250
	250	XEG		1070
	101	XEK		990
	1000	XEN		711
	5000	XEFO		940
	500	XETA		1140
	100	XETQ		1230
	2500	XETR		610
	5000	XEW		910
	500	XEX		1210
	500	XEZ		780
	2000	XFG		638
	500	XFX		867
Toluca Y-12	50	XEC		1000

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

SOUTH DAKOTA

	Watts		Kcys.
Brookings H-15	500	KFDY	550
Huron H-14	100	KGDY	1200
Mitchell H-14	100	KGDA	1370
Pierre G-13	200	KGFX	630
Rapid City H-12	100	WCAT	1200
Sioux Falls H-15	1000	KSOO	1110
Vermillion I-15	500	KUSD	890
Watertown G-15	100	KGCR	1210
Yankton I-15	1000	WNAX C	570

TENNESSEE

Bristol L-23	100	WOPI	1500
Chattanooga N-21	1000	WDOD C	1280
Jackson M-19 br	100	WTJS	1310
Knoxville M-22	50	WFBC	1200
	1000	WNOX C	560
	100	WROL	1310
Memphis N-19	100	WHBQ	1370
	500	WMC N	780
	500	WNBR	1430
	500	WREC C	600
Nashville M-21	5000	WLAC C	1470
	50000	WSM N	650
Springfield M-20	100	WSIX	1210

TEXAS

Amarillo N-12	1000	KGRS	1410
	1000	WDAG	1410
Austin Q-14	100	KNOW	1500
Beaumont R-17	500	KFDM	560
Brownsville U-15	500	KWWG	1260
College Sta. Q-15	500	WTAW	1120
Corpus Christi S-14	100	KGFI	1500
Dallas P-15	10000	KRLD C	1040
	50000	WFAA N	800
	500	WRR C	1280
Dublin P-14	100	KFPL	1310
El Paso P-9	100	KTSM	1310
	100	WDAH	1310
Fort Worth P-15	100	KFJZ	1370
	1000	KTAT	1240
	10000	WBAP N	800
Galveston R-16	100	KFLX	1370
	500	KFUL	1290
Greenville O-15	15	KFPM	1310
Harlingen T-14	500	KRGV	1260
Houston R-16	1000	KPRC N	920
	500	KTRH C	1120
	500	KXYZ	1440
Lubbock O-12 tr	100	KFYO	1310
San Angelo Q-13	100	KGKL	1370
San Antonio R-14	100	KABC	1420
	100	KMAC	1370
	100	KONO	1370
	1000	KTSA C	1290
	50000	WOAI N	1190
Tyler P-16 rc	100	KGKB	1500
Waco Q-15	1000	WACO C	1240
Wichita Falls O-14	250	KGKO	570

UTAH

Salt Lake City I-7	1000	KDYL N	1290
	500	KLO	1400
	50000	KSL C	1130

VERMONT

Burlington F-27	100	WCAX	1200
Rutland G-27	100	WSYB	1500
St. Albans F-27	100	WQDM	1370
Springfield G-27	250	WNBX	1260
Waterbury F-27 c	500	WDEV	550

VIRGINIA

	Watts		Kcys.
Arlington J-25	1000	NAA	690
Danville L-25	100	WBTM	1370
Emory L-23	500	WEHC	1350
Lynchburg L-25	100	WLVA	1370
Newport News L-26	100	WGH	1310
Norfolk L-26	500	WTAR C	780
Petersburg L-26	100	WPHR	1200
Portsmouth L-26 tc	500	WPOR	780
Richmond K-26	100	WBBL	1210
	100	WMBG C	1210
	5000	WRVA N	1110
Roanoke L-24	250	WDBJ C	930
	250	WRBX	1410

WASHINGTON

Aberdeen D-2	100	KXRO	1310
Bellingham C-3	100	KVOS	1200
Everett C-3	50	KFBL	1370
Olympia D-3 tl	100	KGY	1210
Pullman E-5	1000	KWSC	1220
Seattle C-3	5000	KJR N	970
	1000	KOL C	1270
	1000	KOMO N	920
	100	KPCB	650
	100	KRSC	1120
	1000	KTW	1220
	100	KVL	1370
	250	KXA	760
Spokane D-5	100	KFIO	1120
	1000	KFPY C	1340
	5000	KGA B	1470
	1000	KHQ N	590
Tacoma D-3	250	KMO	1330
	500	KVI C	570
Walla Walla E-5	100	KUJ	1370
Wenatchee D-4	100	KPQ	1500
Yakima D-4	100	KIT	1310

WEST VIRGINIA

Bluefield L-24	250	WHIS	1410
Charleston K-23	250	WOBU	580
Fairmont J-24	250	WMMN	890
Huntington K-23	250	WSAZ	580
Wheeling J-24	5000	WWVA C	1160

WISCONSIN

Eau Claire G-18	1000	WTAQ C	1330
Fond du Lac H-19	100	KFIZ	1420
Green Bay G-19	100	WHBY	1200
Janesville I-19	100	WCLO	1200
La Crosse H-18	1000	WKBH C	1380
Madison H-19	1000	WHA	940
	500	WIBA N	1280
Manitowoc H-20	100	WOMT	1210
Milwaukee H-19	250	WHAD C	1120
	250	WISN C	1120
	1000	WTMJ N	620
Poynette H-19	100	WIBU	1210
Racine I-20	100	WRJN	1370
Sheboygan H-20	500	WHBL	1410
Stevens Point G-19	2000	WLBL	900
Superior F-17	1000	WEBC N	1290

WYOMING

Casper H-10	500	KDFN	1440

CANADA

ALBERTA

Calgary B-7	500	CFAC	690
	10000	CFCN	985
	500	CJCJ	690

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

	Watts			Kcys.
Saranac Lake F-26	50	WMBZ		1290
Schenectady G-27	50000	WGY	R	790
Syracuse G-25	1000	WFBL	C	1360
	250	WMAC		570
	250	WSYR	R	570
Troy G-27	500	WHAZ		1300
Tupper Lake F-26	100	WHDL		1420
Utica G-26	100	WIBX		1200
Woodside I-27	100	WWRL		1500
White Plains H-27 bl	100	WFAS		1210

NORTH CAROLINA

Asheville M-23	1000	WWNC	N	570
Charlotte M-24	25000	WBT	C	1080
Gastonia M-24	100	WSOC		1210
Greensboro M-24	500	WBIG	C	1440
Raleigh M-25	1000	WPTF	N	680
Wilmington N-26	100	WRAM		1370
Winston-Salem M-24	100	WSJS	C	1310

NORTH DAKOTA

Bismarck F-13	1000	KFYR	N	550
Devils Lake E-14	100	KDLR		1210
Fargo F-15	1000	WDAY	N	940
Grand Forks E-15	100	KFJM		1370
Mandan F-13	250	KGCU		1240
Minot E-13	250	KLPM		1240

OHIO

Akron I-23	1000	WADC	C	1320
	100	WJW		1210
Canton I-23	10	WHBC		1200
Cincinnati K-22	100	WFBE		1200
	1000	WKRC	C	550
	50000	WLW	B	700
	500	WSAI	R	1330
Cleveland I-23	500	WGAR	B	1450
	1000	WHK	C	1390
	500	WJAY		610
	50000	WTAM	R	1070
Columbus J-22	500	WAIU		640
	500	WCAH	C	1430
	750	WEAO		570
	100	WSEN		1210
Dayton J-22	200	WSMK		1380
Mount Orab K-22	100	WHBD		1370
Toledo I-22	1000	WSPD	C	1340
Youngstown I-23	500	WKBN	C	570
Zanesville J-23	100	WALR		1210

OKLAHOMA

Chickasha N-14	250	KOCW		1400
Elk City N-13	100	KASA		1210
Enid M-14	100	KCRC		1370
Norman N-15	500	WNAD		1010
Oklahoma N-15	100	KFXR		1310
	100	KGFG		1370
	5000	KOMA	C	1480
	1000	WKY	N	900
Ponca City M-15	100	WBBZ		1200
Shawnee N-15	100	KGFF		1420
Tulsa M-15	5000	KVOO	N	1140

OREGON

Corvallis E-2	1000	KOAC		550
Eugene F-2	100	KORE		1420
Klamath Falls G-3 c	100	KFJI		1210
Marshfield F-1	100	KOOS		1370
Medford G-2	100	KMED		1310
Portland E-3	500	KALE	C	1300
	5000	KEX	N	1180
	100	KBPS		1420
	500	KFJR		1300
	1000	KGW	N	620
	1000	KOIN	C	940
	500	KWJJ		1060
	100	KXL		1420

PENNSYLVANIA

Allentown I-26	250	WCBA		1440
	250	WSAN		1440
Altoona I-25	100	WFBG		1310
Carbondale H-26	10	WNBW		1200
Erie H-24	100	WERE		1420
	500	WLBW	C	1260
Glenside I-26 rc	25	WIBG		930
Grove City I-24	100	WSAJ		1310
Harrisburg I-25	500	WBAK		1430
	100	WCOD		1200
	500	WHP	C	1430
Hazleton I-26 lc	100	WAZL		1420
Johnstown J-24	100	WJAC		1310
Lancaster I-26	100	WGAL		1310
	100	WKJC		1200
Lewisburg I-26	100	WJBU		1210
Philadelphia I-26	50000	WCAU	C	1170
	100	WDAS		1370
	500	WFAN	C	610
	500	WFI	R	560
	100	WHAT		1310
	500	WIP	C	610
	500	WLIT	R	560
	100	WPEN		1500
	250	WRAX		1020
	100	WTEL		1310
Pittsburgh J-24	50000	KDKA	B	980
	500	KQV		1380
	1000	WCAE	R	1220
	1000	WJAS	C	1290
	100	WWSW		1500
Reading I-26	1000	WEEU		830
	100	WRAW		1310
Scranton H-26	250	WGBI		880
	250	WQAN		880
Washington J-24	100	WNBO		1200
Wilkes-Barre I-26	100	WBAX		1210
	100	WBRE		1310
Williamsport I-25	100	WRAK		1370
	100	WJEQ		1370
York J-25 tr	1000	WORK		1000

PHILIPPINES

Cebu	500	KZRC	937.
Manila	1000	KZKA	1110
	50000	KZRM	618.5

PORTO RICO

San Juan W-34	1000	WKAQ	1240

RHODE ISLAND

Providence H-28	250	WEAN	C	780
	250	WJAR	R	890
	100	WPAW		1210
	100	WPRO		1210

SOUTH CAROLINA

Charleston O-25	500	WCSC		1360
Columbia N-24	500	WIS	N	1010
Spartanburg N-23	100	WSPA		1420

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

	Watts			Kcys.
Flint H-22	100	WFDF		1310
Grand Rapids H-21	500	WASH		1270
	500	WOOD		1270
Ironwood F-18 rc	100	WJMS		1420
Jackson I-21	100	WIBM		1370
Kalamazoo I-21 tl	1000	WKZO		590
Lapeer H-22	100	WMPC		1500
Ludington H-20	100	WKBZ		1500
Marquette F-19	100	WBEO		1310
Royal Oak H-22	50	WEXL		1310
MINNESOTA				
Fergus Falls F-15	100	KGDE		1200
Minneapolis G-17	50000	WCCO	C	810
	1000	WDGY		1180
	1000	WLB		1250
	1000	WRHM		1250
Moorhead F-15	100	KGFK		1500
Northfield G-17	1000	KFMX		1250
	1000	WCAL		1250
St. Paul G-17	10000	KSTP	N	1460
MISSISSIPPI				
Greenville O-18	100	WKFI		1210
Gulfport Q-19	100	WGCM		1210
Hattiesburg Q-19	100	WPFB		1370
Jackson P-19	1000	WJDX	N	1270
Kosciusko O-19 bc	100	WHEF		1500
Laurel P-19 br	100	WTSL		1310
Meridian P-20	500	WCOC		880
Vicksburg P-18	500	WQBC		1360
MISSOURI				
Cp. Girardeau L-19	100	KFVS		1210
Columbia K-17	500	KFRU		630
Grant City J-16	100	KGIZ		1500
Jefferson City L-17	500	WOS		630
Joplin M-16	100	WMBH		1420
Kansas City K-16	1000	KMBC	C	950
	100	KWKC		1370
	1000	WDAF	R	610
	500	WHB		860
	1000	WOQ		1300
St. Joseph K-16	2500	KFEQ		680
St. Louis L-18	500	KFUO		550
	100	KFWF		1200
	50000	KMOX	C	1090
	500	KSD	R	550
	1000	KWK	B	1350
	1000	WEW		760
	100	WIL		1200
Springfield M-17	100	KGBX		1310
MONTANA				
Billings F-9	1000	KGHL	N	950
Butte F-7	500	KGIR	N	1360
Great Falls E-8	1000	KFBB		1280
Kalispell D-7	100	KGEZ		1310
Missoula E-7	100	KGVO		1200
Wolf Point E-11	100	KGCX		1310
NEBRASKA				
Clay Center J-14	1000	KMMJ		740
Kearney J-14 bc	100	KGFW		1310
Lincoln J-15	5000	KFAB	C	770
	100	KFOR		1210
	500	WCAJ		590
Norfolk I-15	1000	WJAG		1060
North Platte J-13	500	KGNF		1430
Omaha J-15	500	WAAW		660
	1000	WOW	R	590
Scottsbluff I-11	100	KGKY		1500
York J-15	500	KGBZ		930

	Watts			Kcys.
NEVADA				
Las Vegas L-5	100	KGIX		1420
Reno I-3	500	KOH	C	1380
NEW HAMPSHIRE				
Laconia G-28 lc	100	WKAV		1310
Manchester G-28	500	WFEA	C	1430
Portsmouth G-28 tc	250	WHEB		740
NEW JERSEY				
Asbury Park I-27	500	WCAP	C	1280
Atlantic City J-27	5000	WPG	C	1100
Camden I-26	500	WCAM		1280
Jersey City I-27	300	WAAT		940
	250	WHOM		1450
Newark I-27	1000	WAAM		1250
	250	WGCP		1250
	5000	WOR		710
Paterson I-27	1000	WODA		1250
Red Bank I-27	100	WJBI		1210
Trenton I-26	500	WOAX		1280
Zarephath I-27	250	WAWZ		1350
NEW MEXICO				
Albuquerque N-7	250	KGGM		1230
	10000	KOB		1180
Clovis O-11 tr	100	KICA		1370
Santa Fe M-10	100	KGFL		1370
NEW YORK				
Albany G-27 bl	500	WOKO	C	1430
Auburn H-25	100	WMBO		1310
Binghamton H-26	100	WMBF		1500
Brooklyn I-27	500	WBBC		1400
	1000	WBBR		1300
	500	WCGU		1400
	500	WFOX		1400
	500	WLTH		1400
	100	WMBQ		1500
	100	WMIL		1500
Buffalo H-24	1000	WBEN	R	900
	100	WEBR		1310
	1000	WGR	C	550
	5000	WKBW	C	1480
	50	WSVS		1370
Canton F-26	500	WCAD		1220
Chester Twp.	50	WGNY		1210
Elmira H-25 c	1000	WESG		1040
Freeport I-27	100	WGBB		1210
Hudson Falls G-27	50	WGLC		1370
Jamestown H-24	50	WOCL		1210
New York City I-27	50000	WABC	C	860
	250	WBNX		1350
	50000	WBOQ		860
	250	WCDA		1350
	50000	WEAF	R	660
	500	WEVD		1300
	1000	WFAB		1300
	500	WINS		1180
	250	WHN		1010
	30000	WJZ	B	760
	5000	WLWL		1100
	500	WMCA		570
	250	WMSG		1350
	500	WNYC		570
	1000	WOV		1130
	250	WPAP		1010
	500	WPCH		810
	250	WQAO		1010
	250	WRNY		1010
Rochester G-25	5000	WHAM	B	1150
	500	WHEC	C	1430

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

ILLINOIS

	Watts			Kcys.
Carthage J-18	50	WCAZ		1070
Chicago I-20	10000	KFKX		1020
	10000	KYW	N	1020
	500	WAAF		920
	25000	WBBM	C	770
	1500	WCFL	R	970
	100	WCRW		1210
	100	WEDC		1210
	50000	WENR	N	870
	500	WGES		1360
	25000	WGN	C	720
	1000	WIBO		560
	20000	WJJD		1130
	50000	WLS	N	870
	5000	WMAQ	N	670
	5000	WMBI		1080
	500	WPCC		560
	100	WSBC		1210
Cicero I-20	100	WEHS		1420
	100	WHFC		1420
	100	WKBI		1420
Decatur K-19	100	WJBL		1200
Galesburg J-18	100	WKBS		1310
Harrisburg L-19	100	WEBQ		1210
Joliet I-19	100	WCLS		1310
	100	WKBB		1310
La Salle J-19	100	WJBC		1200
Peoria J-19	500	WMBD	C	1440
Quincy K-18	500	WTAD		1440
Rockford I-19	500	KFLV		1410
Rock Island I-18	100	WHBF		1210
Springfield K-19	100	WCBS		1210
	100	WTAX		1210
Tuscola K-20	100	WDZ		1070
Urbana J-20	250	WILL		890
Zion I-20	5000	WCBD		1080

INDIANA

Anderson J-21	100	WHBU		1210
Connersville K-21	100	WKBV		1500
Culver I-20	500	WCMA		1400
Elkhart I-21 bc	50	WTRC		1310
Evansville L-20	500	WGBF		630
Fort Wayne J-21	100	WGL	C	1370
	10000	WOWO	C	1160
Gary I-20	1000	WJKS		1360
Hammond I-20 bc	100	WWAE		1200
Indianapolis J-21	1000	WFBM	C	1230
	500	WKBF		1400
Lafayette J-20	500	WBAA		1400
Muncie J-21	50	WLBC		1310
South Bend I-20	100	WFAM	C	1200
	500	WSBT	C	1230
Terre Haute K-20	100	WBOW		1310

IOWA

Ames I-17	5000	WOI		640
Boone I-17	100	KFGQ		1310
Cedar Rapids I-18	100	KWCR	B	1420
Clarinda J-16	100	KSO	B	1380
Council Bluffs J-16	1000	KOIL	B	1260
Davenport I-18	5000	WOC	R	1000
Decorah H-18	100	KGCA		1270
	100	KWLC		1270
Des Moines I-17	5000	WHO	R	1000
Iowa City I-18	500	WSUI		880
Marshalltown I-17	100	KFJB		1200
Ottumwa J-17	100	WIAS		1310
Red Oak J-16	100	KICK		1420
Shenandoah J-16	500	KFNF		890
	500	KMA		930
Sioux City I-15	1000	KSCJ	C	1330
Waterloo I-17	500	WMT	C	600

KANSAS

	Watts			Kcys.
Abilene K-15 bl	5000	KFBI		1050
Coffeyville M-15 tr	500	KGGF		1010
Dodge City L-13	100	KGNO		1210
Kansas City K-16	100	WLBF		1420
Lawrence K-16	500	KFKU		1220
	1000	WREN	B	1220
Manhattan K-15	500	KSAC		580
Topeka K-16	1000	WIBW	C	580
Wichita L-15	1000	KFH	C	1300

KENTUCKY

Covington K-22	5000	WCKY	N	1490
Hopkinsville M-20	1000	WFIW	C	940
Louisville L-21	25000	WHAS	C	820
	100	WLAP		1200
Paducah M-19	100	WPAD		1420

LOUISIANA

Monroe P-18	100	KMLB		1200
New Orleans R-19	100	WABZ		1200
	1000	WDSU	C	1250
	100	WJBO		1420
	100	WJBW		1200
	500	WSMB	N	1320
	10000	WWL		850
Shreveport P-17	100	KRMD		1310
	1000	KTBS	N	1450
	100	KWEA		1210
	10000	KWKH		850

MAINE

Augusta F-28	100	WRDO		1370
Bangor F-29	100	WABI		1200
	500	WLBZ	C	620
Portland F-28	1000	WCSH	R	940
Presque Isle D-29 lc	100	WAGM		1420

MARYLAND

Baltimore J-26	10000	WBAL	B	1060
	250	WCAO	C	600
	100	WCBM		1370
	500	WFBR	R	1270
Cumberland J-25	100	WTBO		1420
Hagerstown J-25 rc	100	WJEJ		1210

MASSACHUSETTS

Babson Park G-28	500	WBSO		920
Boston G-28	500	WAAB	C	1410
	25000	WBZ	B	990
	1000	WEEI	R	590
	1000	WHDH		830
	100	WLOE		1500
	1000	WNAC	C	1230
Fall River H-28	250	WSAR		1450
Lexington G-28	100	WLEY		1370
New Bedford H-28	100	WNBH		1310
Springfield H-27	1000	WBZA	B	990
	100	WMAS		1420
Worcester G-28	100	WORC	C	1200
	250	WTAG	R	580

MICHIGAN

Battle Creek I-21	50	WELL		1420
Bay City H-22	500	WBCM	C	1410
Calumet E-19	100	WHDF		1370
Detroit H-22	50	WJBK		1370
	10000	WJR	B	750
	100	WMBC		1420
	1000	WWJ	R	920
	1000	WXYZ		1240
East Lansing H-21	1000	WKAR		1040

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

	Watts			Kcys.
ALABAMA				
Anniston O-21 tr	100	WAMC		1420
Birmingham O-21	5000	WAPI	N	1140
	500	WBRC	C	930
	100	WKBC		1310
Gadsden O-21	100	WJBY		1210
Huntsville N-21 c	100	WBHS		1200
Mobile Q-20	500	WODX	C	1410
Montgomery P-21	500	WSFA	C	1410
Troy P-21 rc	100	WHET		1210
ALASKA				
Anchorage	250	KFQD		1230
Juneau	100	----------		1310
Ketchikan	500	KGBU		900
ARIZONA				
Jerome M-6	100	KCRJ		1310
Phoenix N-6	500	KOY	C	1390
	500	KTAR	N	620
Prescott M-6	100	KPJM		1500
Tucson O-7	100	KGAR		1370
	500	KVOA		1260
Yuma O-5 tl	100	KUMA		1420
ARKANSAS				
Blytheville M-19	50	KLCN		1290
Fayetteville M-16	1000	KUOA		1390
Fort Smith N-16	100	KFPW		1210
Hot Springs N-17	10000	KTHS	N	1040
Little Rock N-17	250	KARK		890
	100	KGHI		1200
	1000	KLRA	C	1390
Paragould M-18	100	KBTM		1200
Texarkana O-17 bl	100	KCMC		1420
CALIFORNIA				
Bakersfield L-2 br	100	KERN	C	1200
Berkeley J-2	100	KRE		1370
Beverly Hills M-3 bl	500	KMPC		710
Burbank M-3	500	KELW		780
El Centro N-4	100	KXO		1500
Eureka H-1 tc	100	KIEM		1210
Fresno K-2	500	KMJ	C	580
Glendale M-3	100	KIEV		850
Hollywood M-3	500	KMTR		570
	25000	KNX		1050
Long Beach M-3	1000	KFOX	C	1250
	1000	KGER		1360
Los Angeles M-3	1000	KECA	N	1430
	1000	KFAC		1300
	50000	KFI	N	640
	500	KFSG		1120
	250	KFVD		1000
	1000	KFWB		950
	100	KGFJ		1200
	1000	KHJ	C	900
	500	KRKD		1120
	500	KTM		780
Oakland J-1	250	KLS		1440
	500	KLX		880
	500	KROW		930
Pasadena M-3	50	KPPC		1210
Sacramento J-2	100	KFBK	C	1310
San Bernardino M-3	100	KFXM		1210
San Diego N-3	500	KFSD	N	600
	1000	KGB	C	1330
San Francisco J-1	1000	KFRC	C	610
	500	KFWI		930
	100	KGGC		1420
	7500	KGO	N	790
	100	KJBS		1070
	5000	KPO	N	680
	1000	KTAB		560
	1000	KYA	N	1230
San Jose J-1	500	KQW		1010
Santa Ana M-3	100	KREG		1500
Santa Barbara M-2	100	KDB	C	1500
Stockton J-2	250	KGDM		1100
	100	KWG	C	1200
COLORADO				
Colorado Springs K-11	1000	KVOR	C	1270
Denver K-11	500	KFEL		920
	500	KFXF		920
	1000	KLZ	C	560
	12500	KOA	N	830
	500	KPOF		880
Fort Morgan J-11	100	KGEW		1200
Grand Junction K-9 lc	100	KFXJ		1310
Greeley J-11	500	KFKA		880
Lamar L-12 lc	100	KIDW		1420
Pueblo L-11	250	KGHF		1320
Trinidad L-11	100	KGIW		1420
Yuma J-12	100	KGEK		1200
CONNECTICUT				
Bridgeport H-27	250	WICC	C	600
Hartford H-27	500	WDRC	C	1330
	50000	WTIC	R	1060
Storrs H-28	250	WCAC		600
DELAWARE				
Wilmington J-26	250	WDEL		1120
	100	WILM		1420
DISTRICT OF COLUMBIA				
Washington J-26	10000	WJSV	C	1460
	250	WMAL		630
	500	WRC	N	950
	100	WOL		1310
FLORIDA				
Clearwater R-24	1000	WFLA	N	620
Gainesville Q-24	5000	WRUF	C	830
Jacksonville Q-24	1000	WJAX	N	900
Miami T-25	1000	WIOD	N	1300
	1000	WQAM	C	560
Orlando R-24	250	WDBO	C	580
Pensacola Q-21	500	WCOA		1340
St. Petersburg S-24	1000	WSUN	N	620
Tampa R-24	1000	WDAE	C	1220
	100	WMBR		1370
GEORGIA				
Americus P-22 c	100	WENC		1420
Athens N-23 bc	500	WTFI		1450
Atlanta O-22	250	WGST	C	890
	100	WJTL		1370
	5000	WSB	N	740
Augusta O-23	100	WRDW		1500
Columbus O-22	100	WRBL		1200
Macon O-23	500	WMAZ		1180
Rome N-22	100	WFDV		1500
Savannah O-24	500	WTOC	C	1260
Thomasville Q-22	100	WQDX		1210
HAWAII				
Honolulu	250	KGMB	C	1320
	1000	KGU	N	750
IDAHO				
Boise G-5	1000	KIDO		1350
Idaho Falls G-7	250	KID		1320
Nampa G-5	100	KFXD		1200
Pocatello H-7	250	KSEI		890
Lewiston E-5 rc	100	KGKX		1420
Twin Falls H-6	500	KTFI		1240

WCAH	ae	500	CA	Columbus, Ohio	Commercial Radio Service Co.
WFEA	ae	500	CHA	Manchester, N. H.	New Hampshire Broadcasting Co.
WHEC	ae	500	CA	Rochester, N. Y.	WHEC, Inc. (Roch. Sav. Bank Bldg.)
WHP	ak	500	1CA(1)	Harrisburg, Pa.	WHP, Inc. (Harrisburg Telegraph)
WNBR	ae	500	.....	Memphis, Tenn.	Memphis Bdctg. Co. (WGBC)
WOKO	ae	500	CA	Albany, N. Y.	WOKO, Inc. (Hotel Ten Eyck)

1440 kilocycles 208.2 meters

CMBL	ak	20	1445	Havana, Cuba	Julio C. Hidalgo
CMBN	ak	30	1445	Havana, Cuba	Armando Romeu Marrero
KDFN	ak	500	.....	Casper, Wyo.	Donald L. Hathaway
KLS	ae	250	D	Oakland, Calif.	Warner Bros.
KXYZ	ak	500	.....	Houston, Texas	Harris County Broadcast Co.
WBIG	ae	500	C(1)	Greensboro, N. C.	No. Carolina Broadcasting Co., Inc.
WCBA	ah	250	a	Allentown, Pa.	B. Bryan Musselman
WMBD	ae	500	3C(1)	Peoria, Ill.	Peoria Broadcasting Co.
WSAN	z	250	a	Allentown, Pa.	Allentown Call Publishing Co., Inc.
WTAD	ak	500	3	Quincy, Ill.	Illinois Broadcasting Corp.

1450 kilocycles 206.8 meters

KTBS	ae	1000	N	Shreveport, La.	Tri-State Bdctg. System, Inc.
WGAR	ak	500	B	Cleveland, Ohio	WGAR Broadcasting Co., Inc.
WHOM	ae	250	.....	Jersey City, N. J.	New Jersey Broadcasting Corp.
WSAR	aeh	250	.....	Fall River, Mass.	Doughty & Welch Electric Co., Inc.
WTFI	ak	500	.....	Athens, Ga.	Liberty Broadcasting Co.

1460 kilocycles 205.4 meters

KSTP	ae	10000	N	St. Paul, Minn.	National Battery Broadcasting Co.
WJSV	ck	10000	C	Washington, D. C.	Old Dominion Broadcasting Co.

1470 kilocycles 204.0 meters

KGA	ak	5000	B	Spokane, Wash.	Northwest Broadcasting System
WLAC	ae	5000	C	Nashville, Tenn.	Life & Casualty Insurance Co.

1480 kilocycles 202.6 meters

CMBK	z	15	1485	Havana, Cuba	Alberto Alvarez
CMBR	z	40	.....	Havana, Cuba	Tomas Basail
KOMA	ak	5000	C	Oklahoma City, Okla.	National Radio Mfg. Co.
WKBW	ae	5000	C	Buffalo, N. Y.	Buffalo Broadcasting Corp.

1490 kilocycles 201.2 meters

WCKY	ae	5000	N	Covington, Ky.	L. B. Wilson, Inc. (Mabley & Carew)

1500 kilocycles 199.9 meters

KDB	ak	100	CT	Santa Barbara, Calif.	Santa Barbara Broadcasters, Ltd.
KGFI	aj	100	(.25)	Corpus Christi, Texas	Eagle Broadcasting Co., Inc.
KGFK	ak	100	.....	Moorhead, Minn.	Red River Broadcasting Co., Inc.
KGIZ	ak	100	.....	Grant City, Mo.	Grant City Park Corp.
KGKB	bk	100	.....	Tyler, Texas	East Texas Broadcasting Co.
KGKY	ck	100	.....	Scottsbluff, Neb.	Hilliard Co., Inc.
KNOW	ak	100	.....	Austin, Texas	KUT Bdctg. Co. (Driskill Hotel)
KPJM	ak	100	.....	Prescott, Arizona	Scott & Sturm
KPQ	aj	100	.....	Wenatchee, Wash.	Wescoast Broadcasting Co.
KREG	ak	100	.....	Santa Ana, Calif.	J. S. Edwards
KXO	z	100	.....	El Centro, Calif.	E. R. Irey and F. M. Bowles
WFDV	ak	100	.....	Rome, Ga.	Rome Broadcasting Corp.
WHEF	ak	100	(.25)	Kosciusko, Miss.	Attala Milling & Produce Co.
WKBV	z	100	.....	Connersville, Ind.	William O. Knox
WKBZ	ak	100	.....	Ludington, Mich.	K. L. Ashbacker
WLOE	ae	100	(.25)	Boston, Mass.	Boston Broadcasting Co. (WRSC)
WMBQ	ae	100	1	Brooklyn, N. Y.	Paul J. Gollhofer
WMIL	ak	100	1	Brooklyn, N. Y.	Arthur Faske
WMPC	ak	100	.....	Lapeer, Mich.	First Methodist Protestant Church
WNBF	ae	100	.....	Binghamton, N. Y.	Howitt-Wood Radio Co., Inc.
WOPI	ae	100	.....	Bristol, Tenn.	Radiophone Bdctg. Station WOPI
WPEN	ce	100	(.25)	Philadelphia, Pa.	Wm. Penn Broadcasting Co.
WRDW	ae	100	.....	Augusta, Ga.	Musicove, Inc. (Relays WLW)
WSYB	aeh	100	.....	Rutland, Vt.	Philip Weiss Music Co.
WWRL	ak	100	1	Woodside, N. Y.	Long Island Broadcasting Corp.
WWSW	ae	100	X(.25)	Pittsburgh, Pa.	Walker & Downing Radio Corp.

KCYS.
1500
MTRS.
199.9
DIAL

1390 kilocycles 215.7 meters

KLRA	ae	1000	1C	Little Rock, Ark.	Arkansas Broadcasting Co.
KOY	ae	500	C	Phoenix, Arizona	Nielson Radio & Sporting Goods Co.
KUOA	bk	1000	1	Fayetteville, Ark.	Southwestern Hotel Co. (Ft. Smith)
WHK	ae	1000	C	Cleveland, Ohio	Radio Air Service Corp. (Higbee Stor e)

1400 kilocycles 214.2 meters

CMCH	ak	50	1405	Havana, Cuba	Wifredo & Hum. Fontanals Sanchez
CMCM	z	15	1405	Havana, Cuba	Aurelio Balino
CMDB	z	40	1405	Havana, Cuba	Julio Powers
KLO	ae	500	.....	Salt Lake City, Utah	Interstate Bcg. Corp. (Hotel Bigelow)
KOCW	z	250	(.5)	Chickasha, Okla.	J. T. Griffin
WBAA	ak	500	1	Lafayette, Ind.	Purdue University
WBBC	ae	500	2	Brooklyn, N. Y.	Brooklyn Broadcasting Corp.
WCGU	ak	500	2	Brooklyn, N. Y.	United States Broadcasting Corp.
WCMA	ak	500	1	Culver, Ind.	General Broadcasting, Inc.
WFOX	ak	500	2	Brooklyn, N. Y.	Paramount Broadcasting Co.
WKBF	ak	500	1W	Indianapolis, Ind.	Indianapolis Broadcasting, Inc.
WLTH	aeh	500	2	Brooklyn, N. Y.	Voice of Brooklyn, Inc.
XEP	z	200	.....	Laredo, Mexico	La Voz Latino

1410 kilocycles 212.6 meters

KFLV	ak	500	4	Rockford, Ill.	Rockford Broadcasters, Inc.
KGRS	ae	1000	1	Amarillo, Texas	E. B. Gish
WAAB	ae	500	CH	Boston, Mass.	Bay State Broadcasting Corp.
WBCM	ae	500	C	Bay City, Mich.	James E. Davidson
WDAG	ae	1000	1	Amarillo, Texas	National Radio & Bdctg. Corp.
WHBL	ae	500	4	Sheboygan, Wis.	The Press Publishing Co.
WHIS	ak	250	2	Bluefield, W. Va.	Daily Telegraph
WODX	ea	500	3CU	Mobile, Ala.	Mobile Broadcasting Corp.
WRBX	ae	250	2	Roanoke, Va.	Richmond Development Corp.
WSFA	ak	500	3C	Montgomery, Ala.	Montgomery Broadcasting Co., Inc.

1420 kilocycles 211.1 meters

KABC	ak	100	.....	San Antonio, Texas	Alamo Bctg. Co., Inc. (Texas Theatre)
KBPS	aj	100	4	Portland, Ore.	Student Body Benson Polytech. School
KCMC	ak	100	.....	Texarkana, Ark.	Texarkana Gazette & Daily News
KFIZ	ak	100	.....	Fond du Lac, Wis.	Reporter Printing Co.
KGFF	ak	100	.....	Shawnee, Okla.	KGFF Bdctg. Co. (Aldridge Hotel)
KGGC	ak	100	5	San Francisco, Calif.	Golden Gate Broadcasting Co.
KGIW	ak	100	1	Trinidad, Colo.	Leonard E. Wilson
KGIX	ak	100	.....	Las Vegas, Nevada	J. M. Heaton
KGKX	z	100	.....	Lewiston, Idaho	Sand Point Broadcasting Co.
KICK	z	100	Y	Red Oak, Iowa	Red Oak Radio Corp.
KIDW	ak	100	1	Lamar, Colo.	Lamar Broadcasting Co.
KORE	aeh	100	.....	Eugene, Ore.	Frank L. Hill & Curtis G. Phillips
KUMA	ak	100	.....	Yuma, Arizona	Dr. Albert H. Schermann
KWCR	ae	100	B(.25)	Cedar Rapids, Iowa	Cedar Rapids Broadcast Co.
KXL	ae	100	4	Portland, Ore.	KXL Broadcasters (Hotel Multnomah)
WAGM	af	100	.....	Presque Isle, Maine	Aroostook Broadcasting Corp.
WAMC	ae	100	.....	Anniston, Ala	Raymond C. Hammett (Alabama Hot.
WAZL	z	100	P2	Hazleton, Pa.	Herman G. Halsted
WEHS	ak	100	a	Cicero, Ill.	WEHS, Inc.
WELL	z	50	.....	Battle Creek, Mich.	Enquirer-News Co.
WENC	ak	100	D	Americus, Ga.	Americus Broadcast Co.
WERE	ae	100	.....	Erie, Pa.	Erie Bdctg. Corp. (Lawrence Hotel)
WHDL	aeh	100	D	Tupper Lake, N. Y.	Tupper Lake Broadcasting Co., Inc.
WHFC	ae	100	a	Cicero, Ill.	WHFC, Inc.
WILM	ae	100	2	Wilmington, Del.	Delaware Broadcasting Co.
WJBO	z	100	D	New Orleans, La.	Valdemar Jensen
WJMS	ak	100	.....	Ironwood, Mich.	WJMS, Inc. (St. James Hotel)
WKBI	ak	100	a	Cicero, Ill.	WKBI, Inc.
WLBF	ae	100	.....	Kansas City, Kans.	WLBF Bdctg. Co. (Aladdin Hotel)
WMAS	ak	100	CH	Springfield, Mass.	Albert S. Moffet
WMBC	ae	100	(.25)	Detroit, Mich.	Michigan Broadcasting Co.
WMBH	ak	100	(.25)	Joplin, Mo.	W. M. Robertson
WPAD	ak	100	.....	Paducah, Ky.	Paducah Bdctg. Co. (Ritz Hotel)
WSPA	aeh	100	(.25)	Spartanburg, S. C.	The Voice of South Carolina
WTBO	ae	100	(.25)	Cumberland, Md.	Interstate Broadcasting System, Inc.

1430 kilocycles 209.7 meters

KECA	ah	1000	N	Los Angeles, Calif.	Earle C. Anthony, Inc.
KGNF	ak	500	D	North Platte, Neb.	Great Plains Broadcasting Co.
WBAK	ak	500	1(1)	Harrisburg, Pa.	Pennsylvania State Police

1350 kilocycles 222.1 meters

KIDO	ak	1000	.....	Boise, Idaho	C. G. Phillips & Frank Hill
KWK	ae	1000	B	St. Louis, Mo.	Thomas Patrick, Inc. (Hotel Chase)
WAWZ	ae	250	1	Zarephath, N. J.	Pillar of Fire
WBNX	ae	250	1a	New York City	New York Met. Broadcasting Corp.
WCDA	ae	250	1a	New York City	Italian Educ. Bdctg. Co., Inc.
WEHC	ae	500	DY	Emory, Va.	Emory & Henry College
WMSG	ae	250	1a	New York City	New York Met. Broadcasting Corp.

1360 kilocycles 220.4 meters

CMBF	z	150	1365	Havana .Cuba	Ramon Bardales
CMCW	ak	150	1365	Havana, Cuba	Jose Lorenzo
KGER	ah	1000	.....	Long Beach, Calif.	Consolidated Bdctg. Co. (R/C Los An.)
KGIR	ak	500	NJ	Butte, Mont.	KGIR, Inc.
WCSC	ae	500	.....	Charleston, S. C.	So. Carolina Broadcasting Co., Inc.
WFBL	ak	1000	C(2.2)	Syracuse, N. Y.	Onondaga Radio Broadcasting Corp.
WGES	ae	500	1(1)	Chicago, Ill.	Oak Leaves Broadcasting Station, Inc.
WJKS	agj	1000	1Z	Gary, Ind.	Johnson-Kennedy Radio Corp.
WQBC	ak	500	.....	Vicksburg, Miss.	Delta Bdctg. Co. (Post-Herald Station)

1370 kilocycles 218.7 meters

CMGE	z	30	1375	Cardenas, Cuba	Genaro Sebater
KCRC	ak	100	2(.25)	Enid, Okla.	Enid Radiophone Co. (Oxford Hotel)
KFBL	aj	50	3	Everett, Wash.	Leese Bros.
KFJM	zk	100	.....	Grand Forks, N. Dak.	University of North Dakota
KFJZ	ae	100	.....	Fort Worth, Texas	Fort Worth Broadcasters, Inc.
KFLX	z	100	.....	Galveston, Texas	George Roy Clough
KGAR	ae	100	(.25)	Tucson, Arizona	Tucson Motor Service Co.
KGDA	ak	100	.....	Mitchell, S. Dak.	Mitchell Broadcasting Corp.
KGFG	bk	100	2	Oklahoma City, Okla.	Oklahoma Broadcasting Co., Inc.
KGFL	zk	100	4	Santa Fe, N. Mex.	KGFL, Inc.
KGKL	ak	100	.....	San Angelo, Texas	KGKL, Inc. (St. Angelus Hotel)
KICA	z	100	4	Clovis, N. Mex.	W. E. Whitmore
KMAC	ak	100	5	San Antonio, Texas	Walmac Co., Inc. (Blue Bonnet Stud.)
KONO	ak	100	5	San Antonio, Texas	Mission Broadcasting Co.
KOOS	ae	100	.....	Marshfield, Ore.	H. H. Hanseth, Inc. (Hall Bldg.)
KRE	ak	100	.....	Berkeley, Calif.	First Cong. Church of Berkeley
KUJ	ak	100	D	Walla Walla, Wash.	KUJ, Inc. (Marcus Whitman Hotel)
KVL	z	100	3	Seattle, Wash.	KVL, Inc.
KWKC	z	100	.....	Kansas City, Mo.	Wilson Duncan Broadcasting Co.
WBTM	ak	100	7	Danville, Va.	Piedmont Broadcasting Corp.
WCBM	ae	100	Z(.25)	Baltimore, Md.	Baltimore Broadcasting Corp.
WDAS	aeh	100	(.25)	Philadelphia, Pa.	WDAS Bdctg. Sta., Inc. (Elks Hotel)
WGLC	z	50	Y(.1)	Hudson Falls, N. Y.	O. T. Griffin & G. F. Bissell
WGL	aeh	100	C	Fort Wayne, Ind.	F. C. Zieg
WHBD	bk	100	.....	Mount Orab, Ohio	F. P. Moler
WHBQ	ak	100	.....	Memphis, Tenn.	Station WHBQ, Inc. (Hotel Claridge)
WHDF	ak	100	(.25)	Calumet, Mich.	Upper Michigan Broadcasting Co.
WIBM	aeh	100	1	Jackson, Mich.	WIBM, Inc. (Otsega Hotel)
WJBK	ae	50	1Q	Detroit, Mich.	James F. Hopkins, Inc. (Curtiss Bldg.)
WJEQ	z	100	6P	Williamsport, Pa.	Sun-Gazette Broadcasting Co.
WJTL	ae	100	.....	Atlanta, Ga.	Oglethorpe University
WLEY	aeh	100	(.25)	Lexington, Mass.	Lexington Air Station
WLVA	ck	100	7	Lynchburg, Va.	Lynchburg Broadcasting Corp.
WMBR	ak	100	.....	Tampa, Fla.	F. J. Reynolds
WPFB	ak	100	.....	Hattiesburg, Miss.	Hattiesburg Broadcasting Co.
WQDM	ae	100	D	St. Albans, Vt.	A. J. St. Antoine & E. J. Regan
WRAK	ak	100	6	Williamsport, Pa.	C. R. Cummins (Penn Central Bldg.)
WRAM	ae	100	.....	Wilmington, N. C.	Wilmington Radio Assn., Inc.
WRDO	ae	100	.....	Augusta, Maine	WRDO, Inc. (Augusta House)
WRJN	ae	100	.....	Racine, Wis.	Racine Bdctg. Corp. (Hotel Racine)
WSVS	ak	50	.....	Buffalo, N. Y.	Seneca Vocational School
XEFZ	ae	100	.....	Coyoacan, Mexico	Manuel Zetina

KCYS. 1380 MTRS. 217.3 DIAL

CUT OUT ON DOTTED LINES

1380 kilocycles 217.3 meters

CMJC	z	150	1382	Camaguey, Cuba	Feliciano Isaac
KOH	ak	500	C	Reno, Nevada	McClatchy Newspapers
KQV	ak	500	2	Pittsburgh, Pa.	KQV Bdctg. Co. (Investment Bldg.)
KSO	z	100	BYZ(.25)	Clarinda, Iowa	Iowa Broadcasting Co.
WKBH	aj	1000	1C	LaCrosse, Wis.	WKBH, Inc. (Radio Bldg.)
WSMK	ak	200	2	Dayton, Ohio	Stanley M. Krohn, Jr.
XETB	z	125	.....	Torreon, Coah., Mex.	Jose A. Berumen

1310 kilocycles 228.9 meters

CMJP	z	7.5	.....	Moron, Cuba	Cesar Canals
KCRJ	ak	100	D	Jerome, Arizona	Chas. C. Robinson
KFBK	ak	100	C	Sacramento, Calif.	Jas. McClatchy Co.
KFGQ	ak	100	7	Boone, Iowa	Boone Biblical College
KFPL	ck	100	.....	Dublin, Texas	C. C. Baxter
KFPM	ae	15	.....	Greenville, Texas	New Furniture Co.
KFXJ	ak	100	Z	Grand Junction, Colo.	Western Slope Broadcasting Co.
KFXR	ak	100	(.25)	Oklahoma City, Okla.	Exchange Ave. Baptist Church
KFYO	z	100	(.25)Z	Lubbock, Texas	T. E. Kirksey
KGBX	ae	100	.....	Springfield, Mo.	KGBX, Inc.
KGCX	ak	100	(.25)	Wolf Point, Mont.	First State Bank of Vida
KGEZ	aj	100	.....	Kalispell, Mont.	Donald C. Treloar
KGFW	ah	100	.....	Kearney, Neb.	Central Nebraska Bdctg. Corp.
KIT	ak	100	.....	Yakima, Wash.	Valley Broadcasters, Inc.
KMED	ak	100	.....	Medford, Ore.	Mrs. W. J. Virgin
KRMD	ak	100	.....	Shreveport, La.	KRMD, Inc. (Jefferson Hotel)
KTSM	z	100	a	El Paso, Texas	Tri-State Broadcasting Co., Inc.
KXRO	ak	100	.....	Aberdeen, Wash.	KXRO, Inc. (Hotel Morck)
WBEO	z	100	.....	Marquette, Mich.	Lake Superior Broadcasting Co.
WBOW	ak	100	.....	Terre Haute, Ind.	Banks of Wabash, Inc.
WBRE	z	100	.....	Wilkes-Barre, Pa.	Louis G. Baltimore
WCLS	ae	100	b	Joliet, Ill.	WCLS, Inc.
WDAH	z	100	a	El Paso, Texas	Tri-State Broadcasting Co., Inc.
WEBR	ae	100	Q(.25)	Buffalo, N. Y.	Howell Broadcasting Station
WEXL	ak	50	.....	Royal Oak, Mich.	Royal Oak Broadcasting Co.
WFBG	ae	100	3	Altoona, Pa.	The Gable Broadcasting Co.
WFDF	ae	100	.....	Flint, Mich.	Frank D. Fallain (Union Ind. Bldg.)
WGAL	ae	100	5	Lancaster, Pa.	WGAL, Inc. (Lancaster Newsp. Bldg.
WGH	ae	100	.....	Newport News, Va.	Hampton Roads Broadcasting Corp.
WHAT	ak	100	4	Philadelphia, Pa.	Independence Broadcasting Co.
WIAS	ak	100	7	Ottumwa, Iowa	Iowa Bdctg. Co. (Hotel Ottumwa)
WJAC	ae	100	3	Johnstown, Pa.	WJAC, Inc.
WKAV	ae	100	.....	Laconia, N. H.	Laconia Radio Club
WKBB	ae	100	bYZ	Joliet, Ill.	Richard W. Hoffman
WKBC	z	100	.....	Birmingham, Ala.	R. B. Broyles Furniture Co.
WKBS	z	100	.....	Galesburg, Ill.	Permil N. Nelson
WLBC	ak	50	6	Muncie, Ind.	D. A. Burton—A. J. Marriott
WMBO	ak	100	.....	Auburn, N. Y.	WMBO, Inc. (Masonic Temple)
WNBH	ae	100	H(.25)	New Bedford, Mass.	New Bedford Bdctg. Co. (N. B. Hotel)
WOL	ae	100	.....	Washington, D. C.	American Broadcasting Co.
WRAW	ak	100	5X	Reading, Pa.	Reading Broadcasting Co.
WROL	ak	100	.....	Knoxville, Tenn.	Stuart Bdctg. Co. (Farragut Hotel)
WSAJ	ae	100	.....	Grove City, Pa.	Grove City College
WSJS	ae	100	C	Winston-Salem, N. C.	Winston-Salem Journal Co.
WTEL	ae	100	4	Philadelphia, Pa.	Foulkrod Radio Eng. Co., Inc.
WTJS	ak	100	(.25)	Jackson, Tenn.	Sun Publishing Co. (Sun Bldg.)
WTRC	ak	50	6	Elkhart, Ind.	Elkhart Daily Truth
WTSL	z	100	.....	Laurel, Miss.	Southland Radio Corp.
XEFB	ak	100	1315	Monterrey, N. L., Mex.	Quintanilla y Stevenson
XEI	ak	150	.....	Morelia, Mexico	Carlos Gutierrez M.
.....	z	100	.....	Juneau, Alaska	Juneau Broadcasting Co.

1320 kilocycles 227.1 meters

CMCR	z	150	1325	Havana, Cuba	Aurelio Hernandez
CMCY	ak	1000	1325	Havana, Cuba	M. D. Autran
KGHF	ak	250	(.5)	Pueblo, Colo.	C. P. Ritchie & J. E. Finch
KGMB	ak	250	C	Honolulu, Hawaii	Honolulu Broadcasting Co.
KID	ae	250	(.5)	Idaho Falls, Idaho	KID Broadcasting Co., Inc.
WADC	ae	1000	C	Akron, Ohio	Allan T. Simmons
WSMB	ae	500	N	New Orleans, La.	WSMB, Inc.

1330 kilocycles 225.4 meters

KGB	ae	1000	CT	San Diego, Calif.	Don Lee Broadcasting System
KMO	ak	250	.....	Tacoma, Wash.	KMO, Inc. (Hotel Winthrop)
KSCJ	ah	1000	1C(2.5)	Sioux City, Iowa	Perkins Bros. Co.
WDRC	ae	500	CH	Hartford, Conn.	WDRC, Inc.
WSAI	ae	500	R(1)	Cincinnati, Ohio	The Crosley Radio Corp.
WTAQ	ae	1000	1C	Eau Claire, Wis.	The Gillette Rubber Co.

1340 kilocycles 223.7 meters

KFPY	ae	1000	CT	Spokane, Wash.	Symons Bdctg. Co. (Symons Bldg.)
WCOA	agj	500	.....	Pensacola, Fla.	Pensacola Bdctg. Co. (San Carlos Hot.)
WSPD	ae	1000	C	Toledo, Ohio	Toledo Bdctg. Co. (Com. Perry Hotel)

KTAT	ak	1000	1	Fort Worth, Texas	KTAT Broadcast Co., Inc.
KTFI	ak	500	.....	Twin Falls, Idaho	Radio Broadcasting Corp. of Idaho
WACO	ak	1000	1C	Waco, Texas	Central Texas Broadcasting Co.
WKAQ	ae	1000	.....	San Juan, P. R.	Radio Corp. of Porto Rico
WXYZ	ak	1000	.....	Detroit, Mich.	Kunsky-Trendle Broadcasting Corp.

1250 kilocycles 239.9 meters

KFMX	aj	1000	2	Northfield, Minn.	Carleton College
KFOX	ae	1000	CT	Long Beach, Calif.	Nichols & Warinner, Inc.
WAAM	ae	1000	1(2.5)	Newark, N. J.	WAAM, Inc.
WCAL	ae	1000	2	Northfield, Minn.	St. Olaf College
WDSU	ak	1000	C	New Orleans, La.	Jos. H. Uhalt
WGCP	ak	250	1	Newark, N. J.	May Radio Broadcasting Co.
WLB	ak	1000	2	Minneapolis, Minn.	University of Minnesota
WODA	z	1000	1	Paterson, N. J.	Richard E. O'Dea
WRHM	ae	1000	2	Minneapolis, Minn.	Minnesota Broadcasting Corp.
XEFA	z	250	.....	Mexico City, Mexico	Manuel F. Murguia

1260 kilocycles 238.0 meters

CMJI	ak	5	.....	Ciego de Avila, Cuba	Gilberto Gessa Lopez
KOIL	ak	1000	B	Council Bluffs, Iowa	Mona Motor Oil Co.
KRGV	ae	500	1	Harlingen, Texas	KRGV, Inc. (Rio Grande Na. Life Bldg.)
KVOA	ak	500	P	Tucson, Arizona	Robert M. Riculfi
KWWG	z	500	1	Brownsville, Texas	Frank P. Jackson
WLBW	ae	500	C(1)	Erie, Pa.	Broadcasters of Pennsylvania, Inc.
WNBX	ak	250	D	Springfield, Vt.	WNBX Broadcasting Corp.
WTOC	ae	500	CU	Savannah, Ga.	Savannah Broadcasting Co., Inc.

1270 kilocycles 236.1 meters

CMBD	z	150	.....	Havana, Cuba	Luis Perez Garcia
CMCN	z	250	.....	Havana, Cuba	Antonio Ginard
CMJN	z	50	.....	Camaguey, Cuba	E. de Ugarriza
KGCA	ak	100	D2	Decorah, Iowa	Chas. W. Greenley
KOL	ae	1000	CT	Seattle, Wash.	Seattle Broadcasting Co.
KVOR	ae	1000	C	Colorado Springs, Col.	Reynolds Radio Co., Inc.
KWLC	ak	100	D2	Decorah, Iowa	Luther College
WASH	ak	500	a	Grand Rapids, Mich.	Kunsky-Trendle Broadcasting Corp.
WFBR	ae	500	R	Baltimore, Md.	Baltimore Radio Show, Inc.
WJDX	ak	1000	N	Jackson, Miss.	Lamar Life Insurance Co.
WOOD	ak	500	a	Grand Rapids, Mich.	Kunsky-Trendle Broadcasting Corp.

1280 kilocycles 234.2 meters

KFBB	aeh	1000	(2.5)	Great Falls, Mont.	Buttrey Broadcast, Inc.
WCAM	aeh	500	1	Camden, N. J.	City of Camden (City Hall Tower)
WCAP	ae	500	1C	Asbury Park, N. J.	Radio Industries Broadcast Co.
WDOD	ae	1000	C(2.5)	Chattanooga, Tenn.	WDOD Bdctg. Corp. (Hotel Patten)
WIBA	ae	500	N(1)	Madison, Wis.	Badger Broadcasting Co., Inc.
WOAX	aeh	500	1	Trenton, N. J.	Trenton Broadcasting Co.
WRR	aeh	500	C	Dallas, Texas	City of Dallas (Hilton Hotel)

1290 kilocycles 232.4 meters

CMHL	z	20	.....	Cienfuegos, Cuba	Oscar Zayas
KDYL	ak	1000	N	Salt Lake City, Utah	Intermountain Broadcasting Corp.
KFUL	ak	500	1	Galveston, Texas	News Publishing Co. (Buccaneer Hotel)
KLCN	z	50	D	Blytheville, Ark.	C. L. Lintzenich
KTSA	ak	1000	1C(2.5)	San Antonio, Texas	Southwest Broadcast Co. (Plaza Hotel)
WEBC	ae	1000	N(2.5)	Superior, Wis.	Head of the Lakes Broadcasting Co.
WJAS	ak	1000	C(2.5)	Pittsburgh, Pa.	Pittsburgh Radio Supply House
WNBZ	z	50	D	Saranac Lake, N. Y.	Smith & Mace

1300 kilocycles 230.6 meters

CMKJ	z	20	.....	Guantanamo, Cuba	Luis Morlote
KALE	ak	500	3C	Portland, Ore.	KALE, Inc.
KFAC	aj	1000	.....	Los Angeles, Calif.	Los Angeles Broadcasting Co.
KFH	ae	1000	C	Wichita, Kans.	Wichita Eagle—Hotel Lassen
KFJR	ag	500	3	Portland, Ore.	Ashley C. Dixon—KFJR, Inc.
WBBR	aej	1000	1	Brooklyn, N. Y.	Peoples Pulpit Assn.
WEVD	ae	500	1	New York City	Debs Memorial Radio Fund, Inc.
WFAB	z	1000	1	New York City	Fifth Avenue Broadcasting Corp.
WHAZ	ae	500	1	Troy, N. Y.	Rensselaer Polytechnic Institute
WIOD	aeh	1000	N	Miami, Fla.	Isle of Dreams Broadcasting Corp.
WOQ	ae	1000	.....	Kansas City, Mo.	Unity School of Christianity
XEM	z	250	.....	Tampico, Tams, Mex.	Maria T. de Gutirrez

KYCS.
1300
MTRS.
230.6
DIAL

CUT OUT ON DOTTED LINES

CJOR	ak	500	E	Vancouver, B. C.	George C. Chandler
CKMC	ak	100	8	Cobalt, Ont.	R. L. McAdam
KASA	ak	100	.....	Elk City, Okla.	E. M. Woody (Casa Grande Hotel)
KDLR	ak	100	.....	Devils Lake, N. Dak.	KDLR, Inc.
KFJI	ak	100	.....	Klamath Falls, Ore.	KFJI Broadcasters, Inc.
KFOR	ak	100	(.25)	Lincoln, Neb.	Howard A. Shuman
KFPW	ak	100	.....	Fort Smith, Ark.	Southwestern Hotel Co.
KFVS	ae	100	6	Cape Girardeau, Mo.	Oscar C. Hirsch
KFXM	ak	100	9	San Bernardino, Calif.	J. C. & E. W. Lee
KGCR	ah	100	.....	Watertown, S. Dak.	Greater Kampeska Radio Corp.
KGNO	ak	100	.....	Dodge City, Kans.	Dodge City Broadcasting Co.
KGY	ak	100	.....	Olympia, Wash.	KGY, Inc. (Capitol Park Bldg.)
KIEM	z	100	DP	Eureka, Calif.	Harold H. Hanseth
KPPC	ak	50	9	Pasadena, Calif.	Pasadena Presbyterian Church
KWEA	z	100	.....	Shreveport, La.	Hello World Broadcasting Corp.
WALR	ae	100	.....	Zanesville, Ohio	WALR Broadcasting Corp.
WBAX	ae	100	1	Wilkes-Barre, Pa.	John H. Stenger, Jr. (Morris Bldg.)
WBBL	ak	100	7S	Richmond, Va.	Grace Covenant Pres. Church
WCBS	ak	100	2	Springfield, Ill.	WCBS, Inc.
WCRW	ae	100	4	Chicago, Ill.	Clinton R. White
WEBQ	ae	100	6	Harrisburg, Ill.	Harrisburg Broadcasting Co.
WEDC	z	100	4	Chicago, Ill.	Emil Denemark, Inc.
WFAS	ak	100	3	White Plains, N. Y.	Westchester Broadcasting Corp.
WGBB	ae	100	3	Freeport, N. Y.	Harry H. Carman
WGCM	ae	100	5	Gulfport, Miss.	Great Southern Land Co.
WGNY	z	50	P	Chester Twp., N. Y.	Peter Goelet
WHBF	ae	100	.....	Rock Island, Ill.	Rock Island Broadcasting Co.
WHBU	aj	100	.....	Anderson, Ind.	Anderson Broadcasting Corp.
WHET	ak	100	D	Troy, Ala.	Troy Broadcasting Co.
WIBU	ae	100	.....	Poynette, Wis.	Wm. C. Forrest
WJBI	ak	100	3	Red Bank, N. J.	Monmouth Broadcasting Co., Inc.
WJBU	ae	100	1	Lewisburg, Pa.	Bucknell University
WJBY	aeh	100	.....	Gadsden, Ala.	Ingrams Broadcasting Co.
WJEJ	z	100	D	Hagerstown, Md.	A. V. Tidmore
WJW	ae	100	.....	Akron, Ohio	John F. Weimer
WKFI	ak	100	5	Greenville, Miss.	J. Pat Scully
WMBG	aj	100	7C	Richmond, Va.	Havens & Martin, Inc.
WOCL	ak	50	.....	Jamestown, N. Y.	A. E. Newton
WOMT	ae	100	.....	Manitowoc, Wis.	Francis Mangin Kadow
WPAW	ak	100	a	Providence, R. I.	Cherry & Webb Broadcasting Co.
WPRO	ak	100	a	Providence, R. I.	Cherry & Webb Broadcasting Co.
WQDX	z	100	.....	Thomasville, Ga.	Stevens Luke
WSBC	z	100	4	Chicago, Ill.	World Battery Co., Inc.
WSEN	ak	100	.....	Columbus, Ohio	Columbus Bdctg. Corp. (Seneca Hotel)
WSIX	ae	100	.....	Springfield, Tenn.	638 Tire & Vulc. Co. (R/C WLW)
WSOC	ae	100	.....	Gastonia, N. C.	WSOC, Inc.
WTAX	ae	100	2	Springfield, Ill.	WTAX, Inc.
XEX	z	500	.....	Mexico City, Mexico	Excelsior, Cia Editorial S. A.

1220 kilocycles 245.8 meters

CMHK	z	15	1225	Cruces, Cuba	V. Villaneuva
KFKU	ae	500	1	Lawrence, Kans.	University of Kansas
KTW	z	1000	2S	Seattle, Wash.	First Presbyterian Church
KWSC	ae	1000	2(2)	Pullman, Wash.	State College of Washington
WCAD	ak	500	D	Canton, N. Y.	St. Lawrence University
WCAE	ae	1000	R	Pittsburgh, Pa.	WCAE, Inc. and Sun-Telegraph
WDAE	ak	1000	C	Tampa, Fla.	Tampa Daily Times (Tampa Terrace)
WREN	ak	1000	1B	Lawrence, Kans.	Jenny Wren Co.

1230 kilocycles 243.8 meters

CMBY	z	350	.....	Havana, Cuba	Callejas-Estefani
CMCA	z	150	.....	Havana, Cuba	Manuel Cruz
KFQD	aj	250	.....	Anchorage, Alaska	Anchorage Radio Club, Inc.
KGGM	ak	250	(.5)	Albuquerque, N. M.	New Mexico Broadcasting Co.
KYA	ae	1000	N	San Francisco, Calif.	Pacific Broadcasting Co.
WFBM	aeh	1000	1C	Indianapolis, Ind.	Indianapolis Power & Light Co.
WNAC	ae	1000	CH	Boston, Mass.	Shepard Broadcasting Service, Inc.
WSBT	ak	500	1C	South Bend, Ind.	South Bend Tribune (WFAM)
XETQ	z	100	.....	Mexico, Mexico	Carlos G. Caballero

1240 kilocycles 241.8 meters

CMAB	z	20	1249	Pinar del Rio, Cuba	Jose Silvera
KGCU	ak	250	3	Mandan, N. Dak.	Mandan Radio Assn.
KLPM	ak	250	3	Minot, N. Dak.	John B. Cooley

1160 kilocycles 258.5 meters

WOWO	ae	10000	1C	Fort Wayne, Ind.	Main Auto Supply Co.
WWVA	ae	5000	IC	Wheeling, W. Va.	West Virginia Broadcasting Corp.

1170 kilocycles 256.3 meters

CMJE	z	50	1175	Camaguey, Cuba	Manuel Fernandez
WCAU	ae	50000	C	Philadelphia, Pa.	Universal Broadcasting Corp.

1180 kilocycles 254.1 meters

CMCJ	z	250	.....	Havana, Cuba	Rafael Rodriquez
CMW	ae	1400	1185	Havana, Cuba	Troncoso y Gil
KEX	ak	5000	2N	Portland, Ore.	National Broadcasting Co.
KOB	ae	10000	2	Albuquerque, N. M.	N. M. Coll. of Agr. & Mechanical Arts
WDGY	ak	1000	Dn	Minneapolis, Minn.	George W. Young
WINS	ae	500	.....	New York City	American Radio News Corp.
WMAZ	ak	500	.....	Macon, Ga.	Southeastern Broadcasting Co.

1190 kilocycles 252.0 meters

WOAI	aeh	50000	N	San Antonio, Texas	Southern Equipment Co.

1200 kilocycles 249.9 meters

CHCH	z	100	.....	Montreal, Que.	Montreal Radio Corp.
CKOV	ak	100	.....	Kelowna, B. C.	Okanagan Broadcasters, Ltd.
CMGB	z	30	1205	Matanzas, Cuba	Jose Anorga
KBTM	ak	100	D	Paragould, Ark.	Beard's Temple of Music
KERN	ak	100	CT	Bakersfield, Calif.	Bee Bakersfield Broadcasting Co.
KFJB	ak	100	(.25)	Marshalltown, Iowa	Marshall Electric Co., Inc.
KFWF	ak	100	5	St. Louis, Mo.	St. Louis Truth Center, Inc.
KFXD	ae	100	.....	Nampa, Idaho	Frank E. Hurt (R/C Boise)
KGDE	ae	100	(.25)	Fergus Falls, Minn.	Jaren Drug Co.
KGDY	ak	100	.....	Huron, S. D.	Voice of South Dakota, Inc.
KGEK	ak	100	9	Yuma, Colo.	Beehler Electrical Equipment Co.
KGEW	ak	100	9	Ft. Morgan, Colo.	City of Fort Morgan
KGFJ	ae	100	.....	Los Angeles, Calif.	Ben. S. McGlashan
KGHI	ak	100	.....	Little Rock, Ark.	O. A. Cook
KGVO	ak	100	.....	Missoula, Mont.	Mosby's, Inc.
KMLB	ae	100	.....	Monroe, La.	Liner's Broadcasting Station, Inc.
KVOS	z	100	.....	Bellingham, Wash.	KVOS, Inc.
KWG	aeh	100	CT	Stockton, Calif.	McClatchy Newspapers
WABI	ak	100	.....	Bangor, Maine	First Universalist Society
WABZ	ak	100	1	New Orleans, La.	Samuel D. Reeks
WBBZ	ak	100	.....	Ponca City, Okla.	C. L. Carrell (R/C various cities)
WBHS	ak	100	4	Huntsville, Ala.	Radio Station WBHS, Inc.
WCAT	ak	100	D	Rapid City, S. D.	State School of Mines
WCAX	ak	100	.....	Burlington, Vt.	Burlington Daily News
WCLO	ak	100	.....	Janesville, Wis.	WCLO Radio Corp. (R/C Beloit)
WCOD	ae	100	3	Harrisburg, Pa.	Keystone Broadcasting Corp.
WFAM	ak	100	8C	South Bend, Ind.	South Bend Tribune (WSBT)
WFBC	z	50	XY	Knoxville, Tenn.	Virgil V. Evans
WFBE	ak	100	(.25)	Cincinnati, Ohio	The Post Publishing Co., Opr.
WHBC	ak	10	.....	Canton, Ohio	Edward P. Graham
WHBY	ak	100	.....	Green Bay, Wis.	WHBY, Inc.
WIBX	z	100	(.3)	Utica, N. Y.	WIBX, Inc.
WIL	ae	100	5(.25)	St. Louis, Mo.	Missouri Broadcasting Corp.
WJBC	ae	100	6	LaSalle, Ill.	Kaskaskia Broadcasting Co.
WJBL	ae	100	6	Decatur, Ill.	Commodore Broadcasting, Inc.
WJBW	ak	100	1	New Orleans, La.	C. C. Carlson
WKJC	ae	100	3	Lancaster, Pa.	Lancaster Bdctg. Service, Inc.
WLAP	ae	100	(.25)	Louisville, Ky.	American Broadcasting Corp. of Ky.
WNBO	aeh	100	.....	Washington, Pa.	Spriggs Symplex
WNBW	z	10	(.1)	Carbondale, Pa.	WNBW, Inc.
WORC	ak	100	CH	Worcester, Mass.	A. F. Kleindienst
WPHR	ae	100	(.25)	Petersburg, Va.	WLBG, Inc.
WRBL	ak	100	.....	Columbus, Ga.	WRBL Radio Station, Inc.
WWAE	aeh	100	8	Hammond, Ind.	Hammond-Calumet Bdctg. Corp.
10-AB	ak	25	.....	Moose Jaw, Sask.	Moose Jaw Radio Assn.
10-AK	ak	15	.....	Stratford, Ont.	M. I. Higgins Elec. & Radio Co.
10-BI	ak	25	.....	Prince Albert, Sask.	Prince Albert Radio Club
10-BP	ak	25	1199	Wingham, Ont.	W. T. Cruickshank
10-BQ	ak	15	.....	Brantford, Ont.	Tom Brown & Harold Brown
10-BU	z	15	.....	Canora, Sask.	Canora Radio Assn.

1210 kilocycles 247.8 meters

CFCO	ak	250	8G	Chatham, Ont.	John Beardall (Wm. Pitt Hotel)
CFNB	ae	100	E	Fredericton, N. B.	James S. Neill & Sons, Ltd.

KCYS.
1210
MTRS.
247.8
DIAL

CUT OUT ON DOTTED LINES

1060 kilocycles 282.8 meters

KWJJ	z	500	Dn	Portland, Ore.	KWJJ Broadcast Co., Inc.
WBAL	ae	10000	1B	Baltimore, Md.	Consolidated Gas, Elec. L. & Pwr. Co.
WJAG	ak	1000	Dn	Norfolk, Neb.	Norfolk Daily News
WTIC	ak	50000	1R	Hartford, Conn.	Travelers' Bdctg. Service Corp.

1070 kilocycles 280.2 meters

CMBG	z	225	.....	Havana, Cuba	John L. Stowers
CMCB	af	150	.....	Havana, Cuba	Metropolitan-Radio de Cuba
KJBS	ae	100	D	San Francisco, Calif.	Julius Brunton & Sons Co.
WCAZ	ae	50	D	Carthage, Ill.	Superior Bdctg. Service, Inc.
WDZ	ak	100	D	Tuscola, Ill.	James L. Bush
WTAM	ak	50000	R	Cleveland, Ohio	National Broadcasting Co., Inc.
XEG	z	250	.....	Mexico City, Mexico	Miguel Yarza

1080 kilocycles 277.6 meters

WBT	ae	25000	CU	Charlotte, N. C.	Station WBT, Inc.
WCBD	ae	5000	1Dn	Zion, Ill.	Wilbur Glenn Voliva
WMBI	ck	5000	1Dn	Chicago, Ill.	Moody Bible Institute

1090 kilocycles 275.1 meters

KMOX	ak	50000	C	St. Louis, Mo.	Voice of St. Louis, Inc.

1100 kilocycles 272.6 meters

KGDM	ak	250	D	Stockton, Calif.	E. F. Peffer
WLWL	ae	5000	1	New York City	Missionary Society of St. Paul
WPG	ae	5000	1C	Atlantic City, N. J.	Municipality of Atlantic City

1110 kilocycles 270.1 meters

CMJO	z	15	.....	Ciego de Avila, Cuba	Rey-Borges
KSOO	ae	1000	Dn(2.5)	Sioux Falls, So. Dak.	Sioux Falls Broadcast Assn., Inc.
VONF	z	500	1115	St. John's, N. F.	
WRVA	ae	5000	N	Richmond, Va.	Larus & Bros. Co., Inc.
XENT	z	150000	1115	Neuvo Laredo, Mex.	Compania Industrial Universal, S. A.

1120 kilocycles 267.7 meters

CFCA	ak	500	G	Toronto, Ont.	Toronto Daily Star
CFJC	ak	100	EL	Kamloops, B. C.	The Kamloops Sentinel
CHGS	ce	100	VX	Summerside, P. E. I.	R. T. Holman, Ltd.
CJOC	ak	100	.....	Lethbridge, Alta.	Harold R. Carson
CMHJ	ae	40	1125	Cienfuegos, Cuba	Victorino Lopez (Hotel Bristol)
KFIO	ae	100	D	Spokane, Wash.	Spokane Broadcasting Corp.
KFSG	ak	500	3	Los Angeles, Calif.	Echo Park Evangelistic Assn.
KRKD	aeh	500	3	Los Angeles, Calif.	Dalton's, Inc. (Arcade Bldg.)
KRSC	ak	100	D	Seattle, Wash.	Radio Sales Corp. (Wash. Ath. Club)
KTRH	ak	500	2C	Houston, Tex.	KTRH Broadcasting Co. (Rice Hotel)
WDEL	aj	250	(.5)	Wilmington, Del.	WDEL, Inc.
WHAD	ae	250	1C	Milwaukee, Wis.	Marquette University
WISN	ak	250	1C	Milwaukee, Wis.	American Radio News Corp.
WTAW	ae	500	2	College Station, Texas	Agricultural & Mech. College

1130 kilocycles 265.3 meters

KSL	ae	50000	C	Salt Lake City, Utah	Radio Service Corp. of Utah
WJJD	ze	20000	Dn	Chicago, Ill.	WJJD, Inc. (Palmer House)
WOV	ae	1000	D	New York City	International Broadcasting Corp.
XEH	ak	1000	1132	Monterrey, Mexico	Tarnava & Cia

1140 kilocycles 263.0 meters

CMBJ	z	150	.....	Havana, Cuba	Emilio Perera
CMBW	z	150	.....	Havana, Cuba	Alvarez-Moris
KVOO	ae	5000	1N	Tulsa, Okla.	Southwestern Sales Corp.
WAPI	aj	5000	1N	Birmingham, Ala.	WAPI Broadcasting Corp.
XETA	z	500	.....	Mexico City, Mexico	Manuel Espinosa Tagle

1150 kilocycles 260.7 meters

CMJH	ak	50	.....	Ciego de Avila, Cuba	Luis Marauri Mendoza
WHAM	ae	5000	BX	Rochester, N. Y.	Stromberg-Carlson Tel. Mfg. Co.
XEA	ak	500	K1155	Guadalajara, Mexico	Radiofonografica de Guadalajara, S. A.
XED	z	500	1155	Guadalajara, Mex.	International Broadcasting Co.
10-AT	z	25	1155	Trail, B. C.	Trail Amateur Radio Assn.

970 kilocycles 309.1 meters

KJR	ae	5000	N	Seattle, Wash.	Northwest Broadcasting System, Inc.
WCFL	ak	1500	RX	Chicago, Ill.	Chicago Federation of Labor

980 kilocycles 305.9 meters

CFCN	ak	10000	985FL	Calgary, Alberta	The Voice of the Prairies, Ltd.
CMGF	z	100	987	Matanzas, Cuba	Bernabe R. de la Torre
KDKA	ak	50000	B	Pittsburgh, Pa.	Westinghouse Elec. & Mfg. Co.

990 kilocycles 302.8 meters

WBZ	ak	25000	BA	Boston, Mass.	Westinghouse Elec. & Mfg. Co.
WBZA	ak	1000	BA	Springfield, Mass.	Westinghouse Elec. & Mfg. Co.
XEK	z	101	.....	Mexico City, Mexico	Arturo Martinez

1000 kilocycles 299.8 meters

KFVD	ak	250	Dn	Los Angeles, Calif.	Los Angeles Broadcasting Co.
WHO	z	5000	RAX	Des Moines, Iowa	Central Broadcasting Co.
WOC	ak	5000	RAX	Davenport, Iowa	Central Broadcasting Co.
WORK	aj	1000	D	York, Pa.	York Broadcasting Co.
XEC	z	50	.....	Toluca, Mexico	Jesus R. Benavides
XEE	z	105	.....	Oaxaca, Oax., Mexico	Alfonso Zorilla B.
XEFE	z	100	.....	N. Laredo, Tams., Mex.	Rafael T. Carranza
XEFI	z	100	.....	Chihuahua, Mexico	Feliciano Lopez Islas
XEFS	z	40	.....	Queretaro, Mexico	Salvador Sandhez
XEJ	ak	100	K	Juarez, Mexico	Juan G. Buttner & Leo Allande
XEL	ak	25	.....	Saltillo, Mexico	Antonio Garza Castro y J. T. Perez
XETC	z	100	.....	Jalapa, Ver., Mexico	Juventino Sanchez
XETG	z	100	.....	Torreon, Coah., Mex.	Feliciano Lopez Islas
XEU	ak	100	1007K	Veracruz, Mexico	Baltasat Pazos Sosa
XEV	z	100	.....	Puebla, Pue., Mex.	Ciro Molina
XEY	z	105	.....	Merida, Yuc.	Partido Socialista S. E.

1010 kilocycles 296.8 meters

CKIC	ak	50	.....	Wolfville, N. S.	Acadia University
CMBZ	ak	150	.....	Havana, Cuba	Manuel & Guillermo Salas
CMCX	z	150	.....	Havana, Cuba	Diario "El Mundo"
KGGF	ak	500	2(1)	Coffeyville, Kans.	Powell & Platz
KQW	ae	500	T	San Jose, Calif.	Pacific Agricultural Foundation, Ltd.
WHN	ae	250	1	New York City	Marcus Loew Booking Agency
WIS	ae	500	N(1)	Columbia, S. C.	South Carolina Bdctg. Co., Inc.
WNAD	ae	500	2	Norman, Okla.	University of Oklahoma
WPAP	ae	250	1a	New York City	Jersey Boulevard Corp.
WQAO	ae	250	1a	New York City	Jersey Boulevard Corp.
WRNY	z	250	1	New York City	Aviation Radio Station, Inc.

1020 kilocycles 293.9 meters

KYW	ae	10000	N	Chicago, Ill.	Westinghouse Elec. & Mfg. Co. (KFKX)
WRAX	ae	250	D	Philadelphia, Pa.	WRAX Broadcasting Co.
XEFD	z	300	.....	Tiajuana, Mex.	Carlos de la Sierra

1030 kilocycles 291.1 meters

CFCF	ae	500	NG	Montreal, Que.	Canadian Marconi Co.
CMHI	ck	30	a	Santa Clara, Cuba	Laviz & Paz
CMKC	z	150	1034a	Santiago de Cuba	Pinol Batlle y Co.
CNRV	ak	500	.....	Vancouver, B. C.	Canadian National Railways
XEB	ak	1000	.....	Mexico City, Mexico	El Buen Tono, S. A.

1040 kilocycles 288.3 meters

CMGH	z	15	.....	Matanzas, Cuba	O. y J. Alvarez
KRLD	ae	10000	1C	Dallas, Tex.	KRLD Radio Corp. (Adolphus Hotel)
KTHS	ae	10000	1N	Hot Springs, Ark.	Chamber of Commerce
WESG	ae	1000	D	Elmira, N. Y.	WESG, Inc.
WKAR	ae	1000	D	East Lansing, Mich.	Michigan State College

1050 kilocycles 285.5 meters

CMJG	z	50	.....	Camaguey, Cuba	Jose Antonio Lefran
KFBI	ae	5000	Dn	Abilene, Kans.	Farmers & Bankers Life Ins. Co.
KNX	ae	25000	X	Hollywood, Calif.	Western Broadcast Co.
XEFC	z	10	.....	Merida, Yuc.	Hugo Molina Font
XES	adk	500	1055K	Tampico, Mexico	Wendell Cox

KCYS.
1050
MTRS.
285.5
DIAL

CUT OUT ON DOTTED LINES

VOGT		400	893	Wabana, N. F.	The Gaiety Theatre
WGST	ae	250	C(.5)	Atlanta, Ga.	Southern Broadcasting Co.
WILL	ak	250	2(.5)	Urbana, Ill.	University of Illinois
WJAR	ae	250	(.5)R	Providence, R. I.	The Outlet Co.
WMMN	aeh	250	(.5)	Fairmont, W. Va.	A. M. Rowe, Inc.

900 kilocycles 333.1 meters

KGBU	ak	500	.....	Ketchikan, Alaska	Alaska Radio & Service Co.
KHJ	ae	1000	CT	Los Angeles, Calif.	Don Lee Broadcasting System
WBEN	ae	1000	R	Buffalo, N. Y.	WBEN, Inc., Buffalo Evening News
WJAX	aeh	1000	N	Jacksonville, Fla.	City of Jacksonville
WKY	ae	1000	N	Oklahoma City, Okla.	Oklahoma Publishing Co.
WLBL	ae	2000	D	Stevens Point, Wis.	Wis. Dept. Agriculture & Markets

910 kilocycles 329.6 meters

CFQC	z	500	.....	Saskatoon, Sask.	The Electric Shop, Ltd.
CFLC	ae	100	915	Prescott, Ont.	Radio Association of Prescott
TICR	z	50	911	San Jose, Costa Rica	
XEW	ak	5000	.....	Mexico City, Mexico	Cadena Radio-difusora Mexicana S. A.
XFF	z	500	915	Chihuahua, Mex.	Gobierno del Estado de Chihuahua

920 kilocycles 325.9 meters

CMCD	aeh	250	925	Havana, Cuba	Angel Bertematy y Garcia
CMDE	z	250	925	Havana, Cuba	Evilio Villar
HHK	z	1000	.....	Port au Prince, Haiti	Republic of Haiti
KFEL	ak	500	1	Denver, Colo.	Gene O'Fallon (Albany Hotel)
KFXF	ae	500	1	Denver, Colo.	Colorado Radio Corp.
KOMO	aj	1000	N	Seattle, Wash.	Fisher's Blend Station, Inc.
KPRC	ae	1000	N(2.5)	Houston, Texas	Houston Printing Co. (Houston Post
WAAF	ak	500	D	Chicago, Ill.	Drovers Journal Publishing Co.
WBSO	ae	500	D	Babson Park, Mass.	Broadcasting Service Org., Inc.
WWJ	ak	1000	R	Detroit, Mich.	The Detroit News

930 kilocycles 322.4 meters

CFCH	aj	100	3LM	North Bay, Ont.	Northern Supplies, Ltd.
CFRC	ak	50	3(.2)	Kingston, Ont.	Queen's University
CKX	ak	500	E	Brandon, Manitoba	Manitoba Telephone System
CMJF	z	200	.....	Camaguey, Cuba	John L. Stowers
KFWI	aj	500	1	San Francisco, Calif.	Radio Entertainments, Ltd.
KGBZ	ak	500	2(1)	York, Neb.	Dr. Geo. R. Miller
KMA	ae	500	2(1)	Shenandoah, Iowa	Earl E. May Seed & Nursery Co.
KROW	ak	500	1(1)	Oakland, Calif.	Educational Broadcasting Corp.
WBRC	ak	500	C(1)	Birmingham, Ala.	Birmingham Bdctg. Co., Inc.
WDBJ	ae	250	C(.5)	Roanoke, Va.	Times-World Corp.
WIBG	ae	25	D	Glenside, Penna.	WIBG, Inc. (Keswick Bldg.)

940 kilocycles 319.0 meters

KOIN	zk	1000	CT	Portland, Ore.	KOIN, Inc. (New Heathman Hotel)
WAAT	ae	300	D	Jersey City, N. J.	Bremer Broadcasting Corp.
WCSH	ae	1000	R(2.5)	Portland, Maine	Congress Square Hotel Co.
WDAY	ae	1000	N	Fargo, No. Dakota	WDAY, Inc. (Black Bldg.)
WFIW	ae	1000	C	Hopkinsville, Ky.	WFIW, Inc.
WHA	ak	1000	D	Madison, Wis.	University of Wisconsin
XEFO	ak	5000	(3.5)	Mexico City, Mexico	National Revolucionario Party

950 kilocycles 315.6 meters

CMHD	z	250	.....	Caibarien, Cuba	Manual Alvarez
KFWB	ak	1000	.....	Los Angeles, Calif.	Warner Bros. Broadcasting Corp.
KGHL	ak	1000	NJ(2.5)	Billings, Mont.	Northwestern Auto Supply Co.
KMBC	ak	1000	C	Kansas City, Mo.	Midland Bdctg. Co. (Pickwick Hotel)
VONA	z	100	.....	St. John's, N. F.	Lane, Gillard & Avery
WRC	ak	500	N	Washington, D. C.	National Broadcasting Co., Inc.
XEAW	z	10000	955	Reynosa, Mex.	International Broadcasting Co.

960 kilocycles 312.3 meters

CHCK	ak	100	V	Charlottetown, P.E. I.	J. A. Gesner & W. E. Burke
CHWC	ak	500	3FL	Regina, Sask.	R. H. Williams & Sons, Ltd.
CKCK	ak	500	3FL	Regina, Sask.	Leader Post, Ltd. (Leader Bldg.)
CKNC	ak	500	M	Toronto, Ont.	Canadian National Carbon Co., Ltd.
CMAY	z	150	965	Havana, Cuba	Efigenio Oliver
CMBC	aeh	150	965	Havana, Cuba	Domingo Fernandez
CMJL	z	50	.....	Camaguey, Cuba	Enrique Artimes
YV1BC	z	5000	.....	Caracas, Venezuela	Caracas Broadcasting

800 kilocycles 374.8 meters

WBAP	ak	10000	1N	Fort Worth, Texas	Carter Publications, Inc.
WFAA	ak	50000	1N	Dallas, Texas	Dallas News-Dallas Journal

810 kilocycles 370.2 meters

CHNS	ae	500	815aZG	Halifax, N. S.	Maritime Bdctg. Co., Ltd. Oprs.
CNRH	ak	500	815aZ	Halifax, N. S.	Canadian National Railways
VOAS	ak	200	D	St. John's, N. F.	Ayre & Sons, Ltd.
WCCO	ae	50000	C	Minneapolis, Minn.	Northwestern Broadcasting, Inc.
WPCH	ak	500	D	New York City	Eastern Broadcasters, Inc.
XFC	z	250	.....	Aguascalientes, Mex.	Gobierno del Estado de Aguascalientes

820 kilocycles 365.6 meters

CMGC	z	30	.....	Matanzas, Cuba	Oscar S. Mechoso
WHAS	aj	25000	C	Louisville, Ky.	The Louisville Times Co., Inc.

830 kilocycles 361.2 meters

CMGA	z	100	834	Colon, Cuba	L. Valdes Figueroa
KOA	ak	12500	NJ	Denver, Colo.	General Electric Co. (NBC Opr.)
WEEU	ak	1000	D	Reading, Pa.	Berks Broadcasting Co.
WHDH	ae	1000	DY	Boston, Mass.	Matheson Radio Co., Inc.
WRUF	ae	5000	DnC	Gainesville, Fla.	State of Florida (Univ. of Fla.)

840 kilocycles 356.9 meters

CHNC	z	5000	a	Toronto, Ont.	Canadian National Carbon Co., Ltd.
CKGW	ae	5000	NEa	Toronto, Ont.	Gooderham & Worts, Ltd.
CKLC	ak	1000	G	Red Deer, Alta.	Alberta Pacific Grain Co., Ltd.
CMC	z	500	.....	Havana, Cuba	Cuban Telephone Co.
CPRY	ae	5000	La	Toronto, Ont.	Canadian Pacific Co., Royal York Hotel
XETM	z	15000	P845	Matamoros, Mex.	Miguel Musquiz, A.

850 kilocycles 352.7 meters

KIEV	z	100	D	Glendale, Calif.	Cannon Systems, Inc.
KWKH	ae	10000	1	Shreveport, La.	Hello World Broadcasting Corp.
WWL	ak	10000	1DnX	New Orleans, La.	WWL Development Co. (Loyola Univ.)

860 kilocycles 348.6 meters

VOGY	z	500	P	St. John's, N. F.	
WABC	ae	50000	aC	New York City	Atlantic Broadcasting Corp.
WBOQ	ae	50000	a	New York City	Atlantic Broadcasting Corp. (tests)
WHB	ae	500	D	Kansas City, Mo.	WHB Broadcasting Co.
XFX	z	500	867	Mexico City, Mexico	Secretaria de Educacion Publica

870 kilocycles 344.6 meters

WENR	ak	50000	Na	Chicago, Ill.	Great Lakes Bdctg. Co. NBC Opr.
WLS	ae	50000	Na	Chicago, Ill.	Agricultural Broadcasting Co.

880 kilocycles 340.7 meters

CHML	ae	50	4G	Hamilton, Ont.	Maple Leaf Radio Co., Ltd.
CJCB	ak	100	G	Sydney, N. S.	Nathansan's Radio Headquarters
CKCV	ak	100	.....	Quebec, Que.	Vandry, Inc.
CKPC	ak	100	4L	Preston, Ont.	Cyrus Dolph
KFKA	ak	500	2(1)	Greeley, Colo.	Mid-Western Radio Corp.
KLX	ae	500	.....	Oakland, Calif.	Tribune Publishing Co.
KPOF	ae	500	2	Denver, Colo.	Pillar of Fire
WCOC	ae	500	(1)	Meridian, Miss.	Mississippi Broadcasting Co., Inc.
WGBI	ah	250	Q1	Scranton, Pa.	Scrantorr Broadcasters, Inc.
WQAN	ak	250	1	Scranton, Pa.	Scranton Times
WSUI	ae	500	.....	Iowa City, Iowa	State University of Iowa
XEPN	z	100000	885	Piedras Negras, Mex.	(Yolanda Hotel, Eagle Pass, Tex.)

890 kilocycles 336.9 meters

CFBO	z	500	.....	St. John, N. B.	C. A. Munro, Ltd.
CKCO	z	100	3	Ottawa, Ont.	Dr. G. M. Geldert
CKPR	ak	100	3G	Fort William, Ont.	Dougall Motor Car Co., Ltd.
CMCF	ak	250	1	Havana, Cuba	Raoul Karman, Casa DelaPorte
CMX	ae	500	1	Havana, Cuba	Casa "Lavin" Francisco A. Lavin, Adm.
KARK	ak	250	.....	Little Rock, Ark.	Arkansas Radio & Equipment Co.
KFNF	ak	500	2(1)	Shenandoah, Iowa	Henry Field Company
KSEI	ae	250	(.5)	Pocatello, Idaho	Radio Service Corporation
KUSD	ae	500	2	Vermillion, S. Dak.	University of South Dakota

KCYS.
890
MTRS.
336.9
DIAL

CUT OUT ON DOTTED LINES

690 kilocycles 434.5 meters

CFAC	ak	500	1G	Calgary, Alta.	Calgary Herald, Ltd.
CFRB	ae	10000	CM	Toronto, Ont.	Rogers-Majestic Corp., Ltd.
CJCJ	ak	500	1LE	Calgary, Alta.	Albertan Publishing Co., Ltd.
NAA	z	1000	.....	Arlington, Va.	U. S. Navy
VAS	z	2000	685(4)	Glace Bay, N. S.	Canadian Marconi Co.
XET	ck	500	.....	Monterrey, Mexico	Cadena Radio Difusora Mexicana S. A.

700 kilocycles 428.3 meters

WLW	ae	50000	B	Cincinnati, Ohio	The Crosley Radio Corporation

710 kilocycles 422.3 meters

KMPC	ae	500	Dn	Beverly Hills, Calif.	R. S. MacMillan
WOR	ak	5000	X	Newark, N. J.	Bamberger's Broadcasting Service, Inc.
XEN	agj	1000	711K	Mexico City	Cerveceria Modelo S. A.

720 kilocycles 416.4 meters

WGN	ak	25000	C	Chicago, Ill.	WGN, Inc., Drake Hotel

730 kilocycles 410.7 meters

CHLS	ak	100	1b	Vancouver, B. C.	W. G. Hassell (Province Bldg.)
CHYC	z	5000	Sa	Montreal, Que.	Northern Electric Co., Ltd.
CKAC	ak	5000	CaM	Montreal, Que.	La Presse Publishing Co., Ltd.
CKCD	z	100	1b	Vancouver, B. C.	Vancouver Daily Province
CKFC	ak	50	1	Vancouver, B. C.	United Church of Canada
CKMO	z	100	1	Vancouver, B. C.	Sprott-Shaw Radio Co.
CKWX	ak	100	1L	Vancouver, B. C.	Western Broadcasting Co., Ltd.
CMK	aeh	3150	.....	Havana, Cuba	National Broadcasting Co. of Cuba
XEF-XER	z	75000	735	Villa Acuna, Mexico	Villa Acuna Broadcasting Co., Inc.

740 kilocycles 405.2 meters

CJCA	ae	500	745EL	Edmonton, Alberta	Edmonton Journal, Ltd.
KMMJ	bk	1000	Dn	Clay Center, Neb.	M. M. Johnson Co. (R/C Lincoln)
WSB	aeh	5000	N	Atlanta, Ga.	Atlanta Journal, Biltmore Hotel
WHEB	ak	250	D	Portsmouth, N. H.	Granite State Broadcasting Co.

750 kilocycles 399.8 meters

KGU	aj	2500	NX	Honolulu, Hawaii	Advertiser Publishing Co.
VOWR	ak	750	.....	St. John's, N. F.	Wesley United Church
WJR	ak	10000	B	Detroit, Mich.	WJR, The Goodwill Station, Inc.
XEQ	aeh	5000	.....	Juarez, Chih., Mexico	Radio Difusora National S. A.

760 kilocycles 394.5 meters

KXA	ae	250	(.5)	Seattle, Wash.	American Radio Tel. Co.
WBAL	ae	10000	BA	Baltimore, Md.	(See 1060 kcys. also)
WEW	ae	1000	D	St. Louis, Mo.	St. Louis University
WJZ	ck	30000	BA	New York City	National Broadcasting Co., Inc.

770 kilocycles 389.4 meters

KFAB	ae	5000	1C	Lincoln, Neb.	KFAB Broadcasting Co.
WBBM	ae	25000	1C	Chicago, Ill.	WBBM Bdctg. Corp. (Wrigley Bldg.)

780 kilocycles 384.4 meters

CKY	z	5000	.....	Winnipeg, Man.	Manitoba Telephone System
CMBS	z	150	.....	Havana, Cuba	Enrique Artalejo
CMCQ	z	1000	.....	Havana, Cuba	Andres Martinez
KELW	aeh	500	2	Burbank, Calif.	Magnolia Park, Ltd.
KTM	ae	500	2(1)	Los Angeles, Calif.	Pickwick Broadcasting Corp., Ltd.
WEAN	ak	250	CH(.5)	Providence, R. I.	Shepard Broadcasting Service, Inc.
WMC	ak	500	N(1)	Memphis, Tenn.	Memphis Commercial Appeal, Inc.
WPOR	aeh	500	b	Portsmouth, Va.	WTAR Radio Corp. (Norfolk)
WTAR	aeh	500	bC	Norfolk, Va.	WTAR Radio Corp.
XEZ	z	500	.....	Mexico, Mexico	Joaquin Capilla

790 kilocycles 379.5 meters

CMHC	z	250		Tuinucu, Cuba	Frank H. Jones
CMJK	z	300	.....	Camaguey, Cuba	Tano Gomez
KGO	ak	7500	N	San Francisco, Calif.	General Electric Co. (Opr. NBC)
WGY	ak	50000	R	Schenectady, N. Y.	General Electric Co.

600 kilocycles 499.7 meters

CNRO	ak	500	F	Ottawa, Ont.	Canadian National Railways
KFSD	ah	500	N(1)	San Diego, Calif.	Airfan Radio Corp.
WCAC	ak	250	2	Storrs, Conn.	Connecticut Agricultural College
WCAO	ae	250	C	Baltimore, Md.	Monumental Radio Co.
WICC	ae	250	2H(.5)C	Bridgeport, Conn.	Bridgeport Bdctg. Station, Inc.
WMT	ak	500	C	Waterloo, Iowa	Waterloo Broadcasting Co.
WREC	z	500	C(1)	Memphis, Tenn.	WREC, Inc.

610 kilocycles 491.5 meters

KFRC	ae	1000	C	San Francisco, Calif.	Don Lee Broadcasting System
WDAF	ae	1000	R	Kansas City, Mo.	Kansas City Star Co.
WIP	ak	500	C	Philadelphia, Pa.	Pennsylvania Bdctg. Co. (WFAN)
WJAY	ae	500	D	Cleveland, Ohio	Cleveland Radio Broadcasting Corp.
XETR	z	2500	.....	Mexico City, Mexico	Cia. Difusora Mexicana S. A.

620 kilocycles 483.6 meters

KGW	ae	1000	N	Portland, Ore.	Oregonian Publishing Co.
KTAR	ae	500	NJ(1)	Phoenix, Ariz.	KTAR Broadcasting Co.
WFLA	ae	1000	Na(2.5)	Clearwater, Fla.	Florida West Coast Bdctg. Co., Inc.
WLBZ	ak	500	C	Bangor, Maine	Maine Broadcasting Co., Inc.
WSUN	ae	1000	Na(2.5)	St. Petersburg, Fla.	Florida West Coast Bdctg. Co., Inc.
WTMJ	ae	1000	N(2.5)	Milwaukee, Wis.	Journal Company

630 kilocycles 475.9 meters

CFCT	ae	500	G	Victoria, B. C.	Victoria Broadcasting Assn.
CJGX	ae	500	FL	Yorkton, Sask.	Winnipeg Grain Exchange
CKOC	ae	1000	635aG	Hamilton, Ont.	Wentworth Radio Bdctg. Co., Ltd.
CKTB	aej	1000	635aL	St. Catharines, Ont.	Wentworth Radio Bdctg. Co., Ltd.
CMCU	z	150	.....	Havana, Cuba	Jorge Garcia Serra
CMQ	z	250	.....	Havana, Cuba	Jose Fernandez
CNRA	ae	700	F	Moncton, N. B.	Canadian National Railways
HIX	ah	1000	.....	Santo Domingo, D. R.	The Dominican Government
KFRU	ak	500	1	Columbia, Mo.	KFRU, Inc.
KGFX	z	200	D	Pierre, S. D.	Dana McNeil
WGBF	ae	500	W	Evansville, Ind.	Evansville On the Air, Inc.
WMAL	ae	250	(.5)	Washington, D. C.	M. A. Leese Radio Corp., Inc.
WOS	ak	500	1D	Jefferson City, Mo.	Missouri State Marketing Bureau
XETF	ak	500	K	Veracruz, Ver., Mexico	Manuel Angel Fernandez

640 kilocycles 468.5 meters

CHRC	ak	100	645aG	Quebec, Que.	CHRC, Ltd., Victoria Hotel
CKCI	ck	100	645a	Quebec, Que.	Le Soleil, Ltd.
CKCR	ak	100	645G	Waterloo, Ont.	Mitchell & Liddle
KFI	ah	50000	N1	Los Angeles, Calif.	Earle C. Anthony, Inc.
WAIU	ae	500	1	Columbus, Ohio	American Insurance Union
WOI	ae	5000	D	Ames, Iowa	State College of Agriculture

650 kilocycles 461.3 meters

KPCB	ae	100	.....	Seattle, Wash.	Queen City Broadcasting Co.
WSM	aej	50000	N	Nashville, Tenn.	National Life & Accident Ins. Co.

660 kilocycles 454.3 meters

CHWK	ak	100	665	Chilliwack, B. C.	Chilliwack Broadcasting Co., Ltd.
CJRM	z	500	665	Moose Jaw, Sask.	Jas. Richardson & Sons, Ltd.
CJRW	z	1000	665	Fleming, Sask.	Jas. Richardson & Sons, Ltd.
RUS	z	500	664	Salvador	Republic of El Salvador
WAAW	agh	500	D	Omaha, Neb.	Omaha Grain Exchange
WEAF	ak	50000	R	New York City	National Broadcasting Co., Inc.

670 kilocycles 447.5 meters

WMAQ	ae	5000	N	Chicago, Ill.	WMAQ, Inc. (NBC Lessees)

680 kilocycles 440.9 meters

CMAF	ak	1000	.....	Havana, Cuba	International Broadcasting Co.
KFEQ	ae	2500	D	St. Joseph, Mo.	Scroggin & Co., Bank
KPO	ak	5000	N	San Francisco, Calif.	National Broadcasting Co., Inc.
WPTF	ae	1000	N Dn	Raleigh, N. C.	Durham Life Insurance Co.
XFG	z	2000	683.3	Mexico, Mexico	Sria. de Guerra y Marina

KCYS.
680
MTRS.
440.9
DIAL

CUT OUT ON DOTTED LINES

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540 kilocycles 555.6 meters

CKOK	ae	5000	CG	Windsor, Ont.	Essex Broadcasters, Ltd.

550 kilocycles 545.1 meters

KFDY	ae	500	(1)1	Brookings, S. D.	South Dakota State College
KFUO	ae	500	2(1)	St. Louis, Mo.	Evangelical Lutheran Church
KFYR	ah	1000	1N(2.5)	Bismarck, No. Dakota	Meyer Broadcasting Co.
KOAC	ak	1000	.....	Corvallis, Ore.	Oregon State Agricultural College
KSD	ak	500	2R	St. Louis, Mo.	Pulitzer Publishing Co.
WDEV	ae	500	D	Waterbury, Vt.	Harry G. Whitehill
WGR	ae	1000	C	Buffalo, N. Y.	Buffalo Broadcasting Corp.
WKRC	ak	1000	C	Cincinnati, Ohio	WKRC, Inc., Hotel Alms

560 kilocycles 535.4 meters

KFDM	ak	500	(1)	Beaumont, Texas	Sabine Broadcasting Co., Inc.
KLZ	ae	1000	C	Denver, Colo.	Reynolds Radio Co., Inc.
KTAB	ae	1000	.....	San Francisco, Calif.	Associated Broadcasters, Inc.
WFI	ae	500	1R	Philadelphia, Pa.	WFI Broadcasting Co.
WIBO	ae	1000	(1.5)a	Chicago, Ill.	Nelson Bros. Bond & Mtg. Co.
WLIT	ak	500	1R	Philadelphia, Pa.	Lit Bros. Broadcasting System, Inc.
WNOX	ak	1000	C(2)	Knoxville, Tenn.	So. Carolina Broadcasting Co., Inc.
WPCC	ak	500	Sa	Chicago, Ill.	North Shore Congregational Church
WQAM	ae	1000	C	Miami, Fla.	Miami Broadcasting Co.

570 kilocycles 526.0 meters

KGKO	z	250	(.5)	Wichita Falls, Texas	Wichita Falls Broadcasting Co.
KMTR	aeh	500	.....	Hollywood, Calif.	KMTR Radio Corp.
KVI	ae	500	C	Tacoma, Wash.	Puget Sound Broadcasting Co.
TGW	z	50	.....	Guatamala	
WBAO	ae	750	1	Columbus, Ohio	Ohio State University
WKBN	ak	500	1C	Youngstown, Ohio	WKBN Broadcasting Corp.
WMCA	ak	500	3	New York, N. Y.	Knickerbocker Broadcasting Co., Inc.
WNAX	ae	1000	C	Yankton, S. D.	House of Gurney, Inc.
WNYC	ak	500	3	New York, N. Y.	Dept. of Plant & Structures
WSYR	ak	250	R2	Syracuse, N. Y.	Clive B. Meredith Estate (WMAC)
WWNC	ae	1000	N	Asheville, N. C.	Citizens Broadcasting Co., Inc.

580 kilocycles 516.9 meters

CFCY	ae	500	E	Charlottetown, P. E. I.	Island Radio Broadcasting Co., Ltd.
CHMA	ak	250	4S	Edmonton, Alta.	Christian & Missionary Alliance
CKCL	agj	500	.....	Toronto, Ont.	The Dominion Battery Co.
CKUA	ak	500	4F	Edmonton, Alta.	University of Alberta
CMDD	z	150	588	Havana, Cuba	G. deSequeira
KMJ	ak	500	CT	Fresno, Calif.	McClatchy Radio Stations (Fresno Bee)
KSAC	ak	500	2(1)	Manhattan, Kans.	State Agricultural College
WDBO	ae	250	CU	Orlando, Fla.	Orlando Broadcasting Co., Inc.
WIBW	ae	1000	C2	Topeka, Kans.	Capper Publications
WOBU	ak	250	1(.5)	Charleston, W. Va.	WOBU, Inc., Ruffner Hotel
WSAZ	ak	250	1(.5)	Huntington, W. Va.	WSAZ, Inc.
WTAG	ae	250	R(.5)	Worcester, Mass.	Worcester Telegram Pub. Co., Inc.

590 kilocycles 508.2 meters

CJGC	ae	5000	595GZ	London, Ont.	Free Press Printing Co., Ltd.
KHQ	ak	1000	N(2)	Spokane, Wash.	Louis Wasmer, Inc.
WCAJ	ae	500	1	Lincoln, Neb.	Nebraska Wesleyan University
WEEI	ak	1000	R	Boston, Mass.	Edison Electric Illuminating Co.
WKZO	ae	1000	D	Kalamazoo, Mich.	WKZO, Inc., Burdick Hotel
WOW	aeh	1000	1R	Omaha, Neb.	Woodmen of the World

QUARTETS

Mills Brothers, 9:15 p.m., Mon. and Thurs., C.
Revelers, 5:00 p.m., Sunday, R.
Rollickers, 11:00 p.m., Mon. and Tues., B.
Southernaires, 12:30 p.m., Sunday, R.

RELIGIOUS

Dr. S. Parkes Cadman, 3:30 p.m., Sunday, R.
Cathedral Hour, 1:00 p.m., Sunday, C.
Catholic Hour, 6:00 p.m., Sunday, R.
Church of the Air, 1:30 p.m., Sunday, C.
Father Coughlin, 4:00 p.m., Sunday
Mid-Week Hymn Sing, 7:00 p.m., Tuesday, R.
National Vespers, 5:00 p.m., Sunday, B.
National Youth Conference, 4:30 p.m., Sunday, B.
Seth Parker's, 10:45 p.m., Sunday, R.
Salt Lake Choir, 12 noon, Sunday, C.
Temple of Song, 4:00 p.m., Sunday, B.

SINGERS

Ilomay Bailey, 10:45 p.m., Tues. and Thurs.; 6:45 p.m., Sat., B.
Mildred Bailey, 10:45 p.m., Friday, B.
Irene Beasley, 6:30 p.m., Sun.; 6:00 p.m., Mon. and Fri., C.
Connie Boswell, 6:30 p.m., Wednesday, C.
Buccaneers, 10:30 p.m., Saturday, B.
Eddie Cantor, 8:00 p.m., Sunday, R.
Charles Carlile, 10:45 p.m., Thursday, C.
Corn Cob Pipe Club, 10:00 p.m., Wednesday, R.
Richard Crooks, 8:30 and 11:30 p.m., every other Mon., R.
Bing Crosby, 9:00 p.m., Wed. and Sat., C.
Vaughn DeLeath, 6:30 p.m., Mon.; 6:00 p.m., Wed.; 10:45 p.m., Sat., C.
Do Re Mi, 6:45 p.m., Saturday, C.
Morton Downey, 7:45 p.m., Mon.; 9:30 p.m., Fri.; 10:00 p.m., Sat., C.
Jessica Dragonette, 8:00 p.m., Friday, R.
Eddie and Ralph, 9:30 p.m., Friday, B.
Ruth Etting, 9:00 p.m., Mon. and Thurs., C.
Fields and Hall, 7:00 p.m., Saturday, B.
Jane Froman, 4:00 p.m., Sunday, R.
Jack Fulton, 8:30 p.m., Monday, B.
Funnyboners, 6:00 p.m., Saturday, C.
Al Jolson, 10:00 p.m., Friday, R.
Ralph Kirbery, 6:30 p.m., Tuesday, R.
Nino Martini, 11:00 p.m., Mon., Wed. and Fri., C.
Barbara Maurel, 7:15 p.m., Sunday, C.
Tommy McLaughlin, 9:15 p.m., Tuesday, C.
Monarch Mystery Tenor, 2:00 p.m., Sunday, B.
Frank Munn, 9:15 p.m., Sun.; 9:30 p.m., Mon., R.
Donald Novis, 11:15 p.m., Sunday, R.
Old Singing Master, 10:15 p.m., Sunday, B.
William O'Neal, 10:45 p.m., Tuesday, C.
Pickens Sisters, 8:00 p.m., Mon.; 11:00 p.m., Sat., B.
Georgie Price, 7:45 p.m., Tues. and Thurs., C.
Radio Rubes, 10:30 p.m., Wednesday, B.
Virginia Rea, 9:30 p.m., Monday, R.
Regimentalists, 8:00 p.m., Thursday, B.
Reis and Dunn, 12:30 p.m., Sun.; 6:15 p.m., Mon. and Tues., C.
Carson Robison, 7:30 p.m., Tues. and Thurs., R.
Lanny Ross, 11:00 p.m., Tues., 9:00 p.m., Thurs., R.
Sanderson-Crumit, 8:00 p.m., Tuesday, R.
Singin' Sam, 8:15 p.m., Mon., Wed. and Fri., C.
Smiling Ed McConnell, 2:00 p.m., Sunday, C.
Kate Smith, 8:30 p.m., Mon., Tues. and Wed., C.
Tastyeast Jesters, 7:15 p.m., Monday, B.
Irene Taylor, 8:30 p.m., Wednesday, R.
Three Keys, 11:15 p.m., Tues. and Wed., R.
Three X Sisters, 7:30 p.m., Mon., Wed. and Fri., C.
Lawrence Tibbett, 8:30 and 11:30 p.m., every other Monday, R.
Trade and Mark, 9:15 p.m., Sunday, B; 8:45 p.m., Wendesday, C.
Gus Van, 8:00 p.m., Monday, B.
Whispering Jack Smith, 8:00 p.m., Mon. and Wed., C.

TALKS

America's Grub St., 6:00 p.m., Sunday, C.
Frank Buck, 5:45 p.m., Sunday, R.
Floyd Gibbons, 10:30 p.m., Friday, R.
William Hard, 6:45 p.m., Tuesday, R.
Johnny Hart, 6:15 p.m., Daily, ex. Sat. and Sun., B.
Edwin C. Hill, 10:30 p.m., Tues. and Thurs.; 8:00 p.m., Friday, C.
Horlick's Health, 8:30 p.m., Tues. and Fri., B.
International Radio Forum, 4:30 p.m., Sunday, R.
H. V. Kaltenborn, 6:00 p.m., Tues. and Thurs., C.
Dr. Julius Klein, 7:00 p.m., Sunday, C.
Frederick Landis, 2:45 p.m., Sunday, C.
David Lawrence, 9:00 p.m., Sunday, R.
National Farm and Home, 12:30 p.m., daily ex. Sun., B.
National Radio Forum, 10:30 p.m., Monday, R.
Our American Schools, 6:30 p.m., Sunday, R.
Angelo Patri, 7:45 p.m., and 11:15 p.m., Sun. and Wed., C.
Public Affairs Institute, 10:15 p.m., Sat., C.
Nellie Revell, 11:00 p.m., Wednesday, R.
Sigmund Spaeth, 8:15 p.m., Thursday, B.
Lowell Thomas, 6:45 p.m., daily, ex. Sat. and Sun., B.
Howard Thurston, 8:45 p.m., and 12:15 a.m., Thurs. and Fri., B.
Frederic William Wile, 7:00 p.m., Saturday, C.
Walter Winchell, 9:30 and 11:15 p.m., Sunday, B.
Your Government, 8:00 p.m., Tuesday, B.

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 killowatts, thus (.25) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column. R-C indicates Remote Control. Where space permits, names of hotels or other buildings used in announcements are shown in parenthesis. These are not mail addresses.

Second Column Symbols

a Verifies reception for return postage.
b Verifies only occasionally.
c Does not verify.
d Verification 25c; reply card 10c.
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.
z Failed to reply.

Fourth Column Symbols

A These stations are synchronized.
B National "Blue" network.
C Columbia network.
D Daytime only.
Dn Daytime with occasional evening hours.
E Trans-Canada network.
F Canadian National Railways network.
G All Canadian networks.
H Yankee network.
J Orange and gold network.
K Mexican networks.
L Canadian Pacific Ry. network (Dominion).
M Canadian Radio Corp. network.
N National "Red" and "Blue" networks.
P Has construction permit only.
Q Great Lakes network.
R National "Red" network.
S Sunday only.
T Don Lee System.
U Dixie network.
V Maritime Broadcasting network.
W Curtis-Indiana network.
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.

TUESDAY—*(Continued)*

WDOD WDSU WEAN WHP WIBW WICC WISN WJSV WKBW WLAC WLBW WMBD WMT WNAC WNAX WOKO WPG WSBT WSPD WTOC

R — The Goldbergs, See Monday

E-12:30 a.m., C-11:30, M-10:30, P-9:30
R — Ben Bernie and Orchestra
KFI KFSD KGO KGW KHQ KOMO KTAR

WEDNESDAY

E-10:15 a.m., C-9:15, M-8:15, P-7:15
B — Clara, Lu 'n' Em, See Monday

E-12:30 p.m., C-11:30, M-10:30, P-9:30
B — National Farm, See Monday

E-5:45 p.m., C:4:45, M-3:45, P-2:45
B — Orphan Annie, See Monday

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — Vaughn DeLeath
CKOK KFH KMOX KSL KTRH WAAB WABC WBCM WBIG WBRC WBT WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WFAN WFEA WHAS WHEC WICC WIP WJAS WJSV WKBN WKBW WLAC WOKO WQAM WSFA WSJS WSPD WTOC WWVA
R — Waldorf-Astoria See Monday

E-6:15 p.m., C-5:15, M-4:15, P-3:15
B — Johnny Hart, See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30
C — Connie Boswell
CKOK WAAB WABC WBCM WBIG WBRC WBT WCAO WDBJ WDBO WDOD WDRC WDSU WFEA WGR WHP WICC WJAS WJSV WLAC WOKO WORC WQAM WSJS WSPD WTAR WTOC

E-6:45 p.m., C-5:45, M-4:45, P-3:45
R — E. Circle 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
R — G. E. Circle, See Monday
B — Amos 'n' Andy, See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15
C — Buck Rogers, See Monday
R — Wheatenaville See Monday
B — Royal Vagabonds—Ward Wilson
KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KPRC KSO KVOO KWK WBAL WBZ WBZA WCKY WEBC WENR WIOD WJAX WJDX WJZ WKY WMC WOAI WPTF WSB WSM WSMB WWNC

E-7:30 p.m., C-6:30, M-5:30, P-4:30
C — Three X Sisters See Monday
B — Five Star Theatre, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C — Angelo Patri, Your Child
CKOK KMBC KMOX WABC WCAO WCAU WCCO WFBL WGN WGR WHAS WHK WJAS WJSV WKRC WNAC

R — The Goldbergs See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00
C — Whispering Jack Smith, See Mon.
R — The Shadow, Drama
WBEN WCSH WEAF WEEI WFBR WGY WJAR WLIT WRC WTAG WTIC

E-8:15 p.m. C-7:15 M-6:15, P-5:15
C — Singin' Sam, See Monday

E-8:30 p.m. C-7:30, M-6:30, P-5:30
C — Kate Smith, See Monday
R — Irene Taylor
KDYL KEX KFYR KGA KOA KPO KPRC KSD KTBS WCAE WCKY WDAY WEAF WEBC WEEI WFLA WIBA WJAX WKY WRC WSAI WSB WSMB WTAG WTAM WWJ

E-8:45 p.m., C-7:45, M-6:45, P-5:45
C — Trade and Mark
CKOK KLZ KMBC KMOX KSL WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WOWO WSPD
R — Jack Denny and Orchestra
KPRC KSD KTBS KVOO WBEN WCAE WCKY WCSH WEAF WEEI WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKY WLIT WMAQ WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C — Guy Lombardo-Burns and Allen
CKOK KMBC KMOX KOMA KRLD KTSA WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WSPD
R — Symphony Erno Rapee
KDYL KFI KFYR KGO KOA KSD KSTP KTBS KVOO WCKY WDAF WDAY WEAF WEBC WFBR WFLA WHO WIBA WIOD WIS WKY WLIT WMC WOAI WOC WOW WRC WRVA WSAI WSB WWJ WWNC
B — Sherlock Holmes
CFCF CKGW KDKA KOIL KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WREN
C — Chesterfield Program, See Monday

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Eno Crime Club
CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WHK WJAS WJSV WKBW WKRC WNAC WSPD
B — Friendship Town
KDKA KOIL KSO KWK WBAL WBZ WBZA WENR WGAR WHAM WJR WJZ WLW WREN

E-10:00 p.m., C-9:00, M-8:00, P-7:00
R — Corn Cob Pipe Club
KDYL KFI KGHL KGIR KGO KGW KHQ KOA KOMO KSD WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WGY WHO WJAR WLIT WOC WOW WRC WRVA WSAI WTAG WTAM WTIC WWJ
B — Phillips Lord, See Monday

E-10:15 p.m., C-9:15, M-8:15, P-7:15
B — Andy Sannella and Orchestra
KWCR KWK WBAL WBZ WBZA WCKY WGAR WJZ
C — Easy Aces, See Monday

E-10:30 p.m., C-9:30, M-8:30, P-7:30
R — NBC Artists Service
KFYR KSD WBEN WCAE WDAF WEAF WFBR WFLA WGY WIBA WIOD WIS WJAR WMAQ WOW WRC WTAM WTIC WWJ WWNC

B — Radio Rubes
KDKA KFYR KWCR WBAL WBZ WBZA WCKY WGAR WHAM WIBA WJR WJZ WREN

E-10:45 p.m. C-9:45, M:8:45, P-7:45
C — Myrt and Marge, See Monday

E-11:00 a.m., C-10:00, M-9:00, P-8:00
R — Nellie Revell Interviews
KSD WCAE WCKY WEAF WFBR WGY WJAR WLIT WRC WTAM WWJ
C — Nino Martini, See Monday
B — Amos 'n' Andy, See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15
C — Angelo Patri, Your Child
KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG
R — Three Keys, See Tuesday

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — Isham Jones, See Tuesday

E-12:00 p.m., C-11:00, M-10:00, P-9:00
C — Don Redman, See Tuesday
R — The Goldbergs, See Monday
B — Cab Calloway and Orchestra
KPRC KTBS WAPI WEBC WJZ WKY WMC WOAI WOW WSB WSM WSMB

E-12:15 a.m., C-11:15, M-10:15, P-9:15
B — Sherlock Holmes
KDYL KFK KFSD KGHL KGIR KGO KGW KHQ KOA KOMO KTAR

THURSDAY

E-10:15 a.m., C-9:15, M-8:15, P-7:15
B — Clara Lu 'n' Em See Monday

E-12:30 p.m., C-11:30, M-10:30, P-9:30
B — National Farm, See Monday

E-5:45 p.m., C-4:45, M-3:45, P-2:45
B — Orphan Annie, See Monday

E-6:00 p.m., C-5:00 M-4:00, P-3:00
C — H. V. Kaltenborn See Tuesday
R — Waldorf-Astoria, See Monday

E-6:15 p.m., C-5:15, M-4:15, P-3:15
B — Johnny Hart, See Monday

E-6:45 p.m., C-5:45, M-4:45, P-3:45
R — G. E. Circle, 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
R — G. E. Circle, See Monday
B — Amos 'n' Andy, See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15
C — Buck Rogers, See Monday
R — Wheatenaville, See Monday
B — Ward Wilson, See Wednesday

E-7:30 p.m., C-6:30, M-5:30, P-4:30
R — Carson Robison, See Tuesday
B — Concert Footlights
KDKA KDYL KFI KFSD KFYR KGO KOA KPRC KTBS KWCR WBAL WEBC WENR WIBA WIS WJZ WOAI WREN WSMB

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C — Georgie Price, See Tuesday
R — The Goldbergs, See Monday

TUESDAY—*(Continued)*

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
R — Mid-Week Hymn Sing
KDYL KFI KFYR KGIR KGO KHQ KOA KTAR KTBS KVOO WBEN WEAF WFBR WIBA WJDX WSAI WSB WSM WTAG WWJ

E-7:15 p.m., C-6:15, M-5:15, P-4:15
C — Buck Rogers, See Monday
R — Wheatenaville, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30
R — Barbasol, Carson Robison
KYW WBEN WCAE WCKY WCSH WEAF WEEI WFBR WFI WGY WJAR WOW WRC WSAI WTAG WTAM WWJ

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C — Chase and Sanborn—George Price
CKOK KMBC KMOX WABC WCAO WCAU WGN WGR WHK WJAS WKRC WNAC WOKO
B — Antobal's Cubans
CFCF CKGW KDKA KWCR WBZ WBZA WGAR WIOD WIS WJZ WSMB
R — The Goldbergs, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00
C — Abe Lyman and Orchestra
CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WSPD
R — Blackstone, Sanderson-Crumit
KSD KSTP KYW WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG WTAM WWJ
B — You and Your Government
KDKA KDYL KECA KEX KFSD KGA KGHL KGIR KJR KOA KOIL KPO KSO KTAR KTBS KVOO KWCR KWK KYA WBZ WBZA WCKY WFLA WIOD WIS WJDX WJZ WMAQ WMC WOAI WREN WRVA WSB WSMB WWNC

E-8:15 p.m., C-7:15, M-6:15, P-5:15
C — Magic Voice
CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WSPD

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — Kate Smith, See Monday
R — Wayne King and Orchestra
KSD KSTP WBEN WCAE WCKY WCSH WEAF WEBC WEEI WFBR WFI WGY WHO WIBA WJAR WMAQ WOC WOW WRC WSAI WTAG WTAM WTMJ WWJ
B — Horlick's Program
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WHAM WJZ WLS WLW WREN

E-8:45 p.m., C-7:45, M-6:45, P-5:45
C — The Columbians
CFRB CKOK KLRA KLZ KMBC KRLD KSCJ KSL KTSA KVOR WABC WACO WBCM WBIG WBRC WBT WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFAN WFBM WFEA WGR WHAS WHEC WHP WIBW WICC WIP WISN WJAS WJSV WLAC WLBW WMT WNAC WNAX WODX WOKO WORC WQAM WSJS WSPD WTAQ WTAR WTOC

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C — Chesterfield Program, See Monday
R — Ben Bernie and Orchestra
KFYR KOA KPRC KSTP WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEEI WFBR WFI WGY WHO WJAR WKY WLS WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ
B — Household Musical Memories
KDKA KSO KWK WBAL WBZ WBZA WHAM WJR WJZ WMAQ WREN

E-9:15 p.m., C-8:15, M-7:15 P-6:15
C — Threads of Happiness
CKOK KDB KERN KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KTRH KVI KWG WABC WADC WBRC WBT WCAO WCAU WCCO WDOD WDRC WDSU WEAN WFBL WFBM WGN WGST WHAS WHK WJAS WJSV WKBW WKRC WLAC WNAC WOKO WOWO WSPD WTAR

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — California Melodies
CFRB CKOK KFH KLRA KLZ KMBC KSCJ KSL KTRH KTSA KVOR WABC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBM WFEA WHEC WHP WIBW WJAS WJSV WKBN WKBW WLAC WLBW WMBD WMT WNAC WNAX WODX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC
R — Ed Wynn-Don Voorhees
CFCF KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS KVOO WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC
B — Garcia's Novelty Orchestra
KDKA KOIL KWK WBAL WBZ WBZA WENR WGAR WHAM WJR WJZ WLW WREN

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — Five Star Theatre
KLRA WABC WBIG WBT WCAO WCAU WDBJ WDOD WDRC WDSU WEAN WFBL WFEA WICC WJAS WJSV WKBW WLAC WMBG WNAC WNOX WOKO WORC WREC WSJS WTAR
R — Lucky Strike Hour
KDYL KFI KFSD KFYR KGO KGU KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS WAPI WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WENR WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WMC WOAI WOC WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC
B — Phillips Lord, See Monday

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Edwin C. Hill
CFRB CKOK KFH KLRA KMBC KSCJ KTRH KTSA KVOR WAAB WABC WBBM WBCM WBIG WBRC WBT WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFAN WFBM WFEA WHAS WHEC WHP WIBW WICC WIP WISN WJAS WJSV WKBN WKBW WLAC WLBW WMBD WMT WNAX WODX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC
B — Al and Pete
KWCR KWK WBAL WCKY WHAM WJR WJZ WREN

E-10:45 p.m., C-9:45, M-8:45, P-7:45
B — Ilomay Bailey, Soprano
KOIL KWCR KWK WBAL WCKY WGAR WJR WJZ WREN
C — Myrt and Marge, See Monday

C — William O'Neal, Tenor
CFRB CKOK WAAB WABC WBCM WCAU WDRC WEAN WFEA WHEC WICC WJAS WJSV WKBN WKBW WLAC WLBW WOKO WORC WSBT WSPD WTOC

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Howard Barlow's Symphony
CFRB CKOK KFAB KFH KLRA KLZ KMBC KSCJ KSL KTRH KVOR WAAB WABC WBCM WBRC WBT WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFAN WFBM WHAS WHEC WHP WIBW WICC WIP WISN WJAS WJSV WKBN WKBW WLAC WLBW WMBD WMT WNAX WODX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC WWVA
R — Lanny Ross, Tenor
KSD WCAE WCKY WEAF WFBR WFI WGY WTAG WWJ
B — Rollickers, See Monday
B — Amos 'n' Andy, See Monday

E-11:15 p.m., C-10:15, M-9:15, P-8:15
R — Three Keys
WBEN WCAE WDAF WEAF WFBR WFI WJAR WTAG WWJ
B — Cesare Sodero, See Monday
E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — Isham Jones and Orchestra
CFRB CKOK KFAB KFH KLRA KLZ KMBC KMOX KSCJ KSL KTRH KVOR WABC WBCM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBM WHEC WHP WIBW WICC WISN WJSV WKBN WKBW WLAC WLBW WMBD WMT WNAX WODX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC WWVA

E-12:00 p.m., C-11:00, M-10:00, P-9:00
C — Don Redman and Orchestra
CKOK KFAB KMBC KRLD KSCJ KSL KTRH KVOR WABC WBRC WBT WCAH WCAU WCCO WDAE

E-3:00 p.m., C-2:00, M-1:00, P-12:00
C — N. Y. Philharmonic Orchestra
CFRB CKOK KFAB KFH KLRA KLZ KMBC KRLD KSCJ KSL KTRH KVOR WAAB WABC WACO WBCM WBIG WBRC WBT WCAH WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFAN WFBM WFEA WHAS WHEC WHP WIBW WICC WIP WISN WJAS WJSV WKBN WKBW WLAC WLBW WMBD WMT WODX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTAQ WTAR WTOC WWVA
R — Wayne King and Orchestra
KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS KTHS KVOO KYW WBEN WCAE WCKY WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WIBA WJAR WKY WLIT WOAI WOC WOW WRC WSAI WTAG WTAM WTMJ WWJ
B — Our American Music
KOIL KWCR KWK WBAL WFLA WGAR WIOD WJAX WJZ WMAQ WREN WRVA WSB WSM WSMB WWNC

E-3:30 p.m., C-2:30, M-1:30, P-12:30
R — Dr. S. Parkes Cadman
KDYL KFSD KFYR KGHL KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTHS KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WGY WHO WIBA WJAR WKY WLIT WOAI WOC WOW WRC WSAI WTAG WTAM WWJ
B — Manhattan Merry-Go-Round
KDKA KOIL KWCR KWK WBAL WBZ WBZA WHAM WJZ WMAQ WREN

E-4:00 p.m., C-3:00, M-2:00, P-1:00
—Father Coughlin
KMOX KSTP KYW WCAO WCAU WDRC WEAN WFBL WFEA WGAR WGR WHB WICC WJAS WJR WLBZ WLW WMT WNAC WNBH WOC WOL WOKO WOR WORC
R — Iodent—Jane Froman
KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KTAR KTBS KTHS KVOO WAPI WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMAQ WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC
B — Temple of Song
CFCF KDKA KFI KFSD KFYR KGHL KGO KGW KOA KOIL KSO KSTP KTBS KWCR KWK WBAL WBZ WBZA WCKY WEBC WGAR WHAM WIBA WIOD WIS WJAX WJR WJZ WKY WMAQ WMC WREN WRVA WSB WSM WSMB WWNC

E-4:15 p.m., C-3:15, M-2:15, P-1:15
R — Wildroot—Vee Lawnhurst
KDYL KFI KGO KGW KHQ KOA KOMO WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WJAR WLIT WMAQ WOW WRC WSAI WTAG WTAM WWJ

E-4:30 p.m., C-3:30, M-2:30, P-1:30
R — International Radio Forum
CKGW WBEN WCAE WCKY WDAF WEAF WEEI WFBR WGY WJAR WOW WSAI WTAG
B — National Youth Conference
KDYL KFSD KFYR KGHL KGO KGW KHQ KOA KOIL KOMO KPRC KSTP KTAR KVOO KWCR KWK WAPI WBAL WBZ WBZA WDAY WEBC WENR WGAR WHAM WIOD WIS WJAX WJDX WJZ WMC WOAI WPTF WREN WRVA WSB WSM WWNC

E-4:45 p.m., C-3:45, M-2:45, P-1:45
R — Le Trio Charmant
CKGW WBEN WCKY WDAF WEAF WFBR WGY WJAR WOW WTAG

E-5:00 p.m., C-4:00, M-3:00, P-2:00
C — Roses and Drums, Drama
CKOK KMBC KMOX KRLD WAAB WABC WADC WCAO WCCO WDSU WGN WGR WHAS WHK WJAS WJSV WKRC
R — The Revelers Quartet
WBEN WCAE WDAF WEAF WEEI WENR WFBR WGY WHO WJAR WOC WRC WTAG WTAM WWJ
B — National Vespers
KFSD KFYR KGHL KGO KGW KHQ KOA KOIL KOMO KPRC KTAR KTBS KWCR KWK WAPI WBAL WBAP WBZ WBZA WEBC WFLA WGAR WIOD WIS WJAX WJDX WJZ WOAI WPTF WREN WSB WSM WSMB WWNC

E-5:30 p.m., C-4:30, M-3:30, P-2:30
C — Blue Coal Revue
WAAB WABC WCAO WCAU WDRC WEAN WFBL WGR WHEC WHP WOKO
R — Big Ben's Dream Dramas
KDYL KFI KGO KOA KSD KSTP WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WFI WGY WJAR WOW WRC WSAI WTAG WTAM WWJ
B — Pages of Romance, Drama
KDKA KSO KOIL KWCR KWK KYW WBAL WBZ WBZA WGAR WJR WJZ WLW WREN

E-5:45 p.m., C-4:45, M-3:45, P-2:45
R — Bring 'Em Back Alive
KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KSD KSTP KTAR WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WGY WHO WIBA WJAR WMAQ WOC WOW WRC WSAI WTAG WTAM WTMJ WWJ

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — America's Grub Street
CFRB CKOK KFH KLZ KRLD KSCJ KSL KVOR WAAB WABC WACO WBBM WBCM WBIG WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFEA WHAS WHEC WHP WIBW WICC WJSV WLAC WLBW WMT WNAX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTAQ WTAR WTOC WWVA
R — Catholic Hour
KDYL KEX KFYR KGA KGHL KGIR KJR KOA KPRC KSD KTAR KTBS KVOO KYA WAPI WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WENR WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMC WOAI WOC WWNC WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC
B — Paul Whiteman's Concert
CFCF CKGW KOIL KWCR KWK WBAL WBZ WBZA WCKY WENR WGAR WHAM WJR WJZ WREN

E-6:30 p.m., C-5:30, M-4:30, P-3:30
C — Irene Beasley
CFRB CKOK KFH KLZ KMBC KRLD KSCJ KSL KVOR WAAB WABC WACO WADC WBBM WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDBO WDSU WEAN WFBM WFEA WGST WHP WIBW WICC WISN WJAS WKBH WKBN WKBW WLAC WLBW WLBZ WMT WNAX WNOX WOKO WQAM WREC WSBT WSFA WSJS WSPD WTAR WTOC WWVA
R — Our American Schools
KDYL KECA KEX KFSD KFYR KGA KJR KOA KPO KPRC KSD KTBS KVOO KYA WBAP WBEN WCAE WCSH WDAY WEAF WEBC WEEI WENR WFBR WFLA WGY WIBA WIOD WJAR WKY WLIT WMC WOAI WOW WPTF WRC WRVA WSAI WSM WSMB WTAG WWJ WWNC

E-7:00 p.m., C-6:00, M-5:00, P-4:00
C — World's Business
KFH KLZ KMBC KSCJ KSL KTRH KVOR WABC WACO WBCM WBIG WBRC WBT WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFAN WFBM WFEA WGR WHAS WHEC WHP WIBW WICC WIP WISN WJAS WJSV WKBN WLBW WMT WNAC WNAX WOKO WORC WPG WQAM WSBT WSFA WSJS WSPD WTAR WTOC WWVA
R — Marimba Band
KDYL KFI KFSD KFYR KGO KGW KOA KPRC KSD KTBS KVOO WCKY WDAF WDAY WEAF WEBC WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WMAQ WOAI WOC WSMB WTAG WWJ WWNC

E-7:15 p.m., C-6:15, M-5:15, P-4:15
C — Barbara Maurel, Contralto
CKOK KFH KLZ KMBC KRLD KSCJ KSL KTRH WABC WACO WBCM WBIG WBT WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WFAN WFBM WFEA WGR WHAS WHEC WHP WIBW WIP WISN WJAS WKBN WLBW WNAC WNAX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTAR WTOC WWVA
R — Wheatenaville, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30
C — Memories in Melody
CKOK KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KTRH KVI KWG WABC WBRC WBT WCAO WCAU WCCO WDAE WEAN WFBM WGN WGR WGST WHAS WJAS WJSV WMT WNAC WREC
R — Orchestral Gems
CFCF KSD WBEN WCAE WDAF WEAF WFBR WGY WHO WJAR WOC WRC WSAI WTAG WTAM WTIC WWJ

SATURDAY—*(Continued)*

WMBD WMT WNAX WODX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC WWVA

B — Harding Sisters, Piano

CKGW KDKA KOIL KSO KWK WBAL WHAM WJZ WREN

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

C — Guy Lombardo and Orchestra

CFRB CKOK KFAB KLRA KLZ KMBC KSCJ KSL KTRH KVOR WAAB WABC WBCM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBM WHAS WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBW WLAC WLBW WMBD WMT WNAX WODX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC WWVA

R — Jack Denny and Orchestra

KSD WBEN WCAE WCKY WDAF WEAF WFBR WFI WGY WHO WJAR WOC WRC WSAI WTAG WTAM WWJ

B — Pickens Sisters

CKGW KDKA KFYR KOIL KPRC KTBS KVOO KWCR KWK WBAL WEBC WFAA WFLA WHAM WIBA WIOD WIS WJR WJZ WLW WMC WREN WSB WSMB WWNC

E-11:15 p.m., C-10:15, M-9:15, P-8:15

B — Lew White, Organist

KOIL KWCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WREN

E-11:30 p.m., C-10:30, M-9:30, P-8:30

R — Paul Whiteman and Orchestra

KSD WBEN WCAE WCKY WDAF WEAF WFBR WFI WGY WHO WJAR WMAQ WOC WRC WTAG WTAM WWJ

C — Harold Stern and Orchestra

CFRB CKOK KFAB KLRA KLZ KMBC KSCJ KSL KTRH KVOR WAAB WABC WBCM WBRC WBT WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFAN WHEC WHP WIBW WICC WIP WISN WJSV WKBW WLAC WLBW WMBD WMT WNAX WODX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC WWVA

E-12:00 p.m., C-11:00, M-10:00, P-9:00

C — Ted Fiorito and Orchestra

CKOK KFAB KFH KLZ KMBC KRLD KSCJ KSL KTRH KVOR WABC WBRC WBT WCAH WCAU WCCO WDAE WDBJ WDOD WDSU WEAN WHP WIBW WICC WISN WJSV WKBW WLAC WLBW WMBD WMT WNAC WNAX WOKO WPG WSBT WSPD WTOC WWVA

B — Don Bester and Orchestra

KOIL KSO KWCR KWK WBZ WBZA WGAR WJZ WREN

R — Ted Weems and Orchestra

KDYL KEX KFSD KFYR KJR KPO KPRC KSD KSTP KTBS WBEN WCAE WCKY WDAF WEAF WEBC WFBR WFI WFLA WGY WHO WIBA WIOD WJAR WJAX WMAQ WMC WOAI WOC WRC WSB WSMB WTAG WTAM WWNC

E-12:30 a.m., C-11:30, M-10:30, P-9:30

R — Vincent Lopez and Orchestra

KDYL KEX KFYR KGA KJR KPO KPRC KSD KSTP KTBS KVOO WBEN WCAE WCKY WDAF WEAF WEBC WFBR WFI WFLA WHO WIBA WIOD WJAR WJAX WKY WMC WOAI WOC WRC WSB WSMB WTAG WTAM WWNC

SUNDAY

E-11:30 a.m., C-10:30, M-9:30, P-8:30

R — Major Bowes Family

KDYL KEX KFSD KFYR KGA KJR KOA KPO KPRC KVOO WBAP WBEN WDAF WDAY WEAF WFBR WFLA WGY WHO WIOD WJAR WJAX WKY WMC WOC WRC WSB WSM WSMB WTAG WTAM WWJ WWNC

E-12:00 p.m., C-11:00, M-10:00, P-9:00

C — Salt Lake Tabernacle Choir

CFRB CKOK KFAB KLZ KSCJ KSL KTRH KTSA KVOR WAAB WABC WBCM WBT WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFAN WFEA WGR WHAS WHEC WHP WIBW WIP WISN WJAS WJSV WKBN WLBW WMBD WMT WOKO WORC WPG WQAM WSBT WSJS WSPD WTAQ WTAR WWVA

E-12:30 p.m., C-11:30, M-10:30, P-9:30

C — Reis and Dunn

CFRB CKOK KFAB KLZ KMBC KSCJ KSL KTRH KTSA KVOR WABC WBCM WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDSU WGR WHAS WHEC WHP WIBW WISN WJAS WJSV WKBN WLBW WMBD WMT WOKO WPG WQAM WSBT WSJS WSPD WTAQ WTAR WTOC WWVA

R — Southland Sketches

CKGW KDYL KEX KFSD KFYR KGA KGHL KGIR KJR KOA KPO KPRC KTAR WCKY WDAF WDAY WEAF WGY WHO WIOD WIS WJAR WJAX WOC WSMB WTAG WTAM WWJ WWNC

E-12:45 p.m., C-11:45, M-10:45, P-9:45

C — Emery Deutsch and Orchestra

CFRB CKOK KFAB KLZ KMBC KSCJ KSL KTRH KTSA KVOR WABC WBCM WBIG WBT WCAH WCAO WCAU WCCO WDBJ WDOD WDSU WGR WHEC WIBW WISN WJAS WJSV WKBN WLBW WMBD WMT WODX WOKO WPG WQAM WSJS WSPD WTAQ WTAR WTOC WWVA

E-1:00 p.m., C-12:00, M-11:00, P-10:00

C — Cathedral Hour

CFRB CKOK KFAB KLZ KMBC KSCJ KTSA KVOR WAAB WABC WBCM WBRC WCAH WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFBM WGR WHAS WHEC WIBW WJAS WJSV WKBN WLAC WMT WODX WOKO WPG WQAM WSBT WSFA WSJS WSPD WTAQ WTAR WWVA

R — K-7 Drama

WBEN WCAE WCKY WDAF WEAF WFBR WFI WGY WJAR WRC WTAG WTAM WWJ

B — Roxy and His Gang

CFCF CKGW KDKA KFI KFSD KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSTP KTAR KTBS KVOO KWCR KWK WAPI WBAL WBZ WBZA WDAF WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WJR WJZ WKY WLW WMAQ WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

E-1:30 p.m., C-12:30, M-11:30, P-10:30

C — Church of the Air

CFRB CKOK KLZ KSCJ KSL KTRH KTSA KVOR WAAB WABC WBCM WBIG WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WGR WHEC WHP WIBW WJAS WJSV WLAC WLBW WMT WODX WOKO WPG WQAM WSBT WSJS WSPD WTAQ WTAR WTOC WWVA

R — Pop Concert—Walter Logan

KSD WBEN WCAE WCKY WDAF WEAF WFBR WFI WGY WJAR WOW WRC WSAI WTAG WTAM WWJ

E-2:00 p.m., C-1:00, M-12:00, P-11:00

C — Smiling Ed McConnell

CKOK KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMOX KOIN KOL KSL KVI KWG WABC WBBM WBT WCCO WDSU WGR WGST WHAS WHEC WJAS WJSV WKRC WLAC WNAC WOWO WQAM WRR

R — Father Bernard Hubbard

CFCF CKGW KFI KFSD KGO KGW KHQ KOA KOMO KSD KTBS WAPI WBEN WCAE WCKY WDAF WEAF WEEI WFAA WFBR WFLA WGY WIOD WIS WJAR WJAX WJDX WMC WOAI WOW WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC

B — Monarch Mystery Tenor

KDKA KFYR KOIL KSO KSTP KWCR KWK WBZ WBZA WDAY WEBC WGAR WHAM WIBA WJR WLW WMAQ WREN WTMJ

E-2:15 p.m., C-1:15, M-12:15, P-11:15

C — Victor Arden and Orchestra

CKOK KMBC KMOX WABC WBBM WCAO WCAU WGR WHEC WHK WJAS WKRC WNAC WOKO WOWO

E-2:30 p.m., C-1:30, M-12:30, P-11:30

R — Moonshine and Honeysuckle

CFCF CKGW WCAE WCKY WCSH WDAF WEAF WEEI WFBR WGY WHO WJAR WMAQ WOC WOW WRC WTAG WTAM WWJ

B — Yeast Foamers

KDKA KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTAR KTHS KVOO KWCR KWK KYW WAPI WBAL WBZ WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WLW WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC

E-2:45 p.m., C-1:45, M-12:45, P-11:45

C — Hoosier Editor

CKOK KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMOX KOIN KOL KOMA KSL WABC WBBM WCAH WCAO WCAU WCCO WGR WHAS WHK WJAS WJSV WKRC WMT WNAC WOWO WRR

FRIDAY—*(Continued)*

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — To The Ladies-Morton Downey
CKOK KMBC KMOX KTAT WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WGST WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WRR WSPD
R — Pond's Program
KSD WBEN WCAE WCSH WDAF WEAF WENR WFBR WGY WHO WJAR WLIT WOC WOW WRC WSAI WTAG WTAM WWJ
B — Armour-Eddie and Ralph
KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KPRC KSTP KWK WAPI WBAL WBZ WBZA WEBC WFAA WGAR WHAM WIOD WJAX WJR WJZ WKY WMAQ WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

E-10:00 p.m. C-9:00, M-8:00, P-7:00
R — Chevrolet-Al Jolson
KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS KVOO WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WENR WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC
B — Phillips Lord See Monday

E-10:15 p.m., C-9:15, M-8:15, P-7:15
C — Easy Aces See Monday

E-10:30 p.m., C-9:30, M-8:30, P-7:30
R — Elgin—Floyd Gibbons
KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KTHS KVOO WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WENR WFAA WFBR WFLA WGY WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMC WOAI WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WWJ WWNC

E-10:45 p.m., C-9:45, M-8:45, P-7:45
C — Myrt and Marge, See Monday
B — Mildred Bailey
KDKA KOIL KWCR KYW WBAL WGAR WHAM WJR WJZ WLW WREN

E-11:00 p.m., C-10:00, M-9:00, P-8:00
R — Anson Weeks and Orchestra
KSD WCAE WCKY WEAF WFBR WJAR WTAG WWJ
C — Nino Martini, See Monday
B — Amos 'n' Andy, See Monday

E-12:00 p.m., C-11:00 M-10:00, P-9:00
C — Ben Pollack and Orchestra
CKOK KFAB KMBC KRLD KSCJ KSL KTRH KVOR WABC WBRC WBT WCAH WCAU WDAE WDOD WDSU WEAN WHP WIBW WICC WISN WJSV WKBW WLAC WLBW WMBD WMT WNAC WNAX WOKO WPG WSBT WSPD WTOC
R — The Goldbergs, See Monday
B — Cab Calloway, See Wednesday

E-12:15 a.m. C:11:15, M-10:15, P-9:15
B — Howard Thurston, See Thursday

SATURDAY

E-12:30 p.m., C-11:30, M-10:30, P-9:30
B — National Farm, See Monday

E-5:45 p.m., C-4:45, M-3:45, P-2:45
B — Orphan Annie, See Monday

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — The Funnyboners
CFRB CKOK KFH KLZ KMBC KMOX KSCJ KSL KTRH KVOR WAAB WABC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFEA WHAS WHEC WHP WIBW WICC WISN WJAS WJSV WKBW WLAC WLBW WMT WNAX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTAQ WTAR WTOC WWVA
B — Little German Band
KDKA KOIL KSO KWCR WBAL WJR WJZ WREN
R — Waldorf-Astoria, See Monday

E-6:45 p.m., C-5:45, M-4:45, P-3:45
C — Do Re Mi Trio
CFRB CKOK KFH KLZ KMBC KSCJ KTRH KVOR WAAB WABC WBCM WBIG WBRC WBT WCAH WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBM WFEA WHP WISN WJAS WJSV WKBW WLAC WLBW WMT WOKO WORC WQAM WSFA WSJS WSPD WTAQ WTAR WTOC WWVA
B — Lee Sims and Orchestra
WBAL WENR WGAR WHAM WIOD WIS WJR WJZ
R — G. E. Circle, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00
C — Frederick William Wile
KTRH WABC WBCM WBIG WBRC WCAO WCAU WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBM WFEA WGR WHAS WHEC WHK WHP WICC WJSV WLBW WNAC WNAX WOKO WQAM WSFA WSPD WTAR WWVA
B — Fields and Hall, Songs
CKGW KDKA KTBS KWCR KWK WBAL WBZ WBZA WCKY WFLA WGAR WHAM WIOD WIS WJR WJZ WLW WMC WSB WSMB WWNC
R — G. E. Circle See Monday

E-7:15 p.m., C-6:15, M-5:15, P-4:15
R — George Olsen and Orchestra
KGO KOA WBEN WCAE WCKY WDAF WEAF WEEI WFBR WFI WGY WHO WJAR WOC WOW WRC WTAG WWJ

E-7:30 p.m., C-6:30, M-5:30, P-4:30
B — Cuckoo Program, Ray Knight
CKGW KFYR KSO KTBS KWCR KWK WBAL WBZ WBZA WCKY WEBC WFLA WGAR WHAM WIBA WIOD WIS WJDX WJZ WMC WOAI WREN WSB WSMB WWNC

E-8:00 p.m., C-7:00, M-6:00, P-5:00
R — Archer Gibson, Organist
CKG WKSD WBEN WCAE WCSH WDAF WEAF WEEI WFI WHO WJAR WMAQ WOC WTAG WTAM WWJ
C — Abe Lyman, See Tuesday

E-8:15 p.m., C-7:15, M-6:15, P-5:15
B — Anson Weeks and Orchestra
KDKA KEX KFSD KFYR KJR KOA KPO KPRC KTAR KTBS KWCR KWK WBAL WCKY WFLA WGAR WHAM WIBA WIOD WIS WJZ WMC WOAI WRC WREN WSB WSMB WWNC
C — Magic Voice, See Tuesday

E-8:45 p.m., C-7:45, M-6:45, P-5:45
B — Road to Romany
CFCF CKGW KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WMAQ WREN

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C — Chesterfield Program, See Monday
R — Erno Rapee Concert
KDYL KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS WAPI WBAP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WKY WMAQ WMC WOAI WOC WOW WRC WSAI WSB WSMB WTAG WTAM WWJ WWNC

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Carborundum Band
CKOK KMBC KMOX WAAB WABC WCAO WCAU WCCO WGN WHAS WHK WJAS WKBW WKRC WSPD

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — Morton Downey
CFRB CKOK KFH KLRA KLZ KMBC KSCJ KSL KTRH KTSA KVOR WAAB WABC WBCM WBIG WBRC WBT WCAH WACO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBM WFEA WHAS WHEC WHP WIBW WICC WJAS WJSV WKBW WLAC WLBW WMBD WMT WNAX WODX WOKO WORC WPG WQAM WSBT WSPD WTAR WTOC
B — Whoopee
CFCF CKGW KDKA KSO KWCR KWK WBAL WENR WHAM WJZ WREN
R — Lucky Strike See Tuesday

E-10:15 p.m., C-9:15, M-8:15, P-7:15
C — Public Affairs Institute
KFH KLRA KLZ KMBC KSCJ KTRH KTSA KVOR WAAB WABC WBBM WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBM WFEA WHEC WHP WIBW WICC WJAS WJSV WKBW WLAC WLBW WMBD WMT WNAX WODX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC WWVA

E-10:30 p.m., C-9:30, M-8:30, P-7:30
B — Buccaneers Male Trio
CFCF CKGW KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WHAM WJZ WREN

E-10:45 p.m., C-9:45, M-8:45, P-7:45
C — Vaughn DeLeath
CFRB CKOK KFH KLRA KLZ KMBC KMOX KSCJ KTRH KTSA KVOR WAAB WABC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WBDO WDOD WDRC WDSU WEAN WFBM WFEA WHAS WHEC WHP WIBW WICC WISN WJAS WJSV WKBW WLAC WLBW

THURSDAY—*(Continued)*

E-8:00 p.m., C-7:00, M-6:00, P-5:00
R — Fleischmann, Rudy Vallee
CFCF CKGW KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR WAPI WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHO WIOD WJAR WJAX WJDX WKY WMAQ WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ
B — Regimentalists, Male Chorus
KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WGAR WJZ WLS WREN
C — Abe Lyman, See Tuesday

E-8:15 p.m., C-7:15, M-6:15 P-5:15
C — Jack Benny-Ted Weems
CFRB CKOK KMBC KMOX WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WOWO WPG WSPD
B — Song Sleuth, Sigmund Spaeth
KDKA KOIL KSO KWCR WBAL WGAR WJZ WLS WREN

E-8:30 p.m., C-7:30, M-6:30 P-5:30
B — Rin Tin Tin Thriller
KDKA KOIL KSO KWK WBZ WBZA WGAR WHAM WJZ WLS WLW WREN

E-8:45 p.m., C-7:45, M-6:45, P-5:45
C — Jack Denny and Orchestra
CKOK KMBC KMOX WABC WADC WBIG WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WGN WGR WGST WHAS WHK WJAS WJSV WKRC WLAC WMBG WNAC WNOX WODX WOKO WOWO WQAM WREC WSPD WTAR WTOC
B — Howard Thurston, Magician
KDKA KOIL KSO KWK WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WREN

E-9:00 p.m., C-8:00 M-7:00, P-6:00
R — Maxwell House Show Boat
KDYL KFI KFSD KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS WAPI WBEN WCAE WCKY WCSH WDAF WEAF WEEI WFBR WFI WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC
C — Chesterfield Program See Monday
B — Death Valley Days
KDKA KOIL KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLS WLW WREN

E-9:15 p.m., C-8:15, M-7:15, P-6:15
C — Mills Brothers, See Monday

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Col. Stoopnagle and Budd
CKOK KDB KERN KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KSCJ KSL KTAT KTRH KTSA KVI KWG WABC WADC WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBO WDRC WDSU WEAN WFBL WFBM WGN WGST WHAS WHEC WHK WJAS WJSV WKBW WKRC WLAC WNAC WOKO WOWO WQAM WREC WRR WSPD WTAR WTOC

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — Five Star Theatre, See Tuesday
R — Lucky Strike, See Tuesday
B — Phillips Lord, See Monday

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Edwin C. Hill, See Tuesday
B — Al and Pete, See Tuesday

E-10:45 p.m., C-9:45, M-8:45, P-7:45
C — Myrt and Marge, See Monday
B — Ilomay Bailey See Tuesday
C — Charles Carlile, Tenor
CFRB CKOK KWAB WABC WBCM WCAU WDRC WEAN WFEA WHEC WICC WJAS WJSV WKBN WKBW WLAC WLBW WOKO WORC WSPD

E-11:00 p.m., C-10:00, M-9:00, P-8:00
B — Amos 'n' Andy, See Monday
C — Howard Barlow, See Tuesday

E-11:15 p.m., C-10:15, M-9:15 P-8:15
B — Cesare Sodero, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30
R — Ben Bernie and Orchestra
KSD WBEN WCAE WCKY WDAF WEAF WFBR WFI WHO WJAR WMAQ WOC WOW WTAG WTAM WWJ
C — Isham Jones, See Tuesday

E-12:00 p.m., C-11:00, M-10:00, P-9:00
C — Eddie Duchin and Orchestra
CKOK KFAB KMBC KRLD KSCJ KTRH KVOR WABC WBT WCAH WCAU WCCO WDAE WDOD WDRC WDSU WEAN WFBM WHP WIBW WICC WISN WJSV WKBW WLAC WLBW WMBD WMT WNAC WNAX WOKO WPG WSBT WSPD WTOC
R — The Goldbergs, See Monday
B — Carl Moore and Orchestra
KDKA KFYR KOIL KPRC KSTP KTBS KVOO KWCR WBZ WBZA WCKY WEBC WFLA WGAR WIBA WIOD WJZ WKY WMC WRC WREN WSB WSM WSMB WWNC.

E-12:15 a.m., C-11:15, M-10:15, P-9:15
B — Howard Thurston, Magician
KDYL KFI KGO KGW KHQ KOA KOMO

E-12:30 a.m., C-11:30, M-10:30, P-9:30
R — Hollywood on the Air
KFSD KGA KJR KOA KSD KSTP KTBS KVOO WCAE WDAF WEAF WEBC WENR WFBR WFI WFLA WHO WIBA WIOD WJAR WKY WMC WOAI WOC WRC WSB WSM WSMB WTAM WWNC

FRIDAY

E-10:15 a.m., C-9:15, M-8:15, P-7:15
B — Clara, Lu 'n' Em, See Monday

E-12:30 p.m., C-11:30, M-10:30, P-9:30
B — National Farm, See Monday

E-5:45 p.m. C-4:45, M-3:45, P-2:45
B — Orphan Annie See Monday

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — Irene Beasley, See Monday
R — Waldorf-Astoria, See Monday

E-6:15 p.m., C-5:15, M-4:15, P-3:15
B — Johnny Hart, See Monday

E-6:45 p m., C-5:45, M-4:45, P-3:45
R — G. E. Circle, 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
R — G. E. Circle, See Monday
B — Amos 'n' Andy, See Monday

E-7:15 p.m., C-6:15, M-5:15 P-4:15
C — Buck Rogers, See Monday
B — Ward Wilson, See Wednesday

E-7:30 p.m., C-6:30, M-5:30, P-4:30
C — Three X Sisters, See Monday
B — Five Star Theatre, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45
R — The Goldbergs, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00
C — Edwin C. Hill
CFRB CKOK KLRA KLZ KMBC KRLD KSCJ KSL KTRH KTSA KVOR WABC WACO WBBM WBCM WBIG WBRC WBT WCAH WCAO WDAE WDBJ WDBO WDOD WDSU WEAN WFAN WFEA WGR WHAS WHEC WHK WHP WIBW WICC WIP WISN WJAS WJSV WLAC WLBW WMT WNAC WOKO WQAM WSFA WSJS WSPD WTAQ WTAR WTOC
R — Cities Service Orchestra
CKGW KDYL KOA KPRC KSD KSTP KTBS KYW WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WJAR WKY WLIT WOAI WOC WOW WRC WSAI WTAG WTAM WTIC WTMJ WWJ
B — Nestle's Program
KDKA KOIL KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WLS WREN

E-8:15 p.m., C-7:15, M-6:15, P-5:15
C — Singin' Sam, See Monday

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — March of Time
CKOK KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KSL KWG WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WOWO WSPD
B — Horlick's Program, See Tuesday

E-8:45 p.m., C-7:45, M-6:45, P-5:45
B — Howard Thurston, See Thursday

E-9:00 p.m. C-8:00, M-7:00, P-6:00
C — Chesterfield Program, See Monday
R + Clicquot Club
KSD WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WHO WJAR WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WWJ
B — First Nighter
KDKA KDYL KFI KFSD KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTAR KTBS KWK WBAL WBZ WBZA WCKY WEBC WGAR WHAM WJZ WKY WLS WOAI WREN WTMJ

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Standard

BANDS

Carborundum Band, 9:30 p.m., Saturday, C.
Little German Band, 6:00 p.m., Saturday, B.
Marimba Band, 7:00 p.m., Sunday, R.

CONCERTS

Balkan Melodies, 10:00 p.m., Sunday, R.
Howard Barlow's Symphony, 11:00 p.m., Tues., Thurs., C.
Concert Footlights, 7:30 p.m., Thursday, B.
The Gauchos, 11:00 p.m., Sunday, C.
Le Trio Charmant, 4:45 p.m., Sunday, R.
L'Heure Exquise, 10:15 p.m., Sunday, R.
Walter Logan, 1:30 p.m., Sunday, R.
National Opera, 11:15 p.m., Monday and Tuesday, B.
New York Philharmonic Symphony, 3:00 p.m., Sunday, C.
Orchestral Gems, 7:30 p.m., Sunday, R.
Our American Music, 3:00 p.m., Sunday, B.
Erno Rapee, 9:00 p.m., Wednesday; 9:00 p.m., Saturday, R.
Road to Romany, 8:45 p.m., Saturday, B.
Russian Gaieties, 8:00 p.m., Sunday, B.
Cesare Sodero, 11:15 p.m., Mon., Tues., Thurs., B.
Waldorf-Astoria Orchestra, 6:00 p.m., Daily, ex. Sun., R.

DANCE BANDS

Ben Bernie, 9:00 p.m. and 12:30 a.m., Tues.; 11:30 p.m., Thurs., R.
Don Bestor, 12 mid., Saturday, B.
Cab Calloway, 12 mid., Wednesday and Friday, B.
Jack Denny, 8:45 p.m., Wed.; 11 p.m., Sat., R; 12 mid., Mon., B; 8:45 p.m., Thurs., C.
Emery Deutsch, 12:45 p.m., Sunday, C.
Eddie Duchin, 11:30 p.m., Sun.; 12 mid., Thurs., C.
Ted Fiorito, 12 mid., Saturday, C.
George Hall, 6:30 p.m., Tuesday, C.
Isham Jones, 11:30 p.m., Tues., Wed., Thurs., C.
Wayne King, 3:00 p.m., Sunday; 8:30 p.m., Tuesday, R.
Guy Lombardo, 11:30 p.m., Mon.; 9 p.m., Wed.; 11:00 p.m., Sat., C.
Vincent Lopez, 12:30 a.m., Saturday, R.
Abe Lyman, 8:00 p.m., Tues., Thurs., Sat., C.
Carl Moore, 12 mid., Thursday, B.
George Olsen, 7:15 p.m., Saturday, R.
Ben Pollack, 12 mid., Friday, C.
Don Redman, 12 mid., Tuesday, Wednesday, C.
Riviera Orchestra, 12 mid., Monday, C.
Harry Salznick, 11:30 p.m., Monday, R.
Andy Sannella, 10:15 p.m., Wednesday, B.
Harold Stern, 11:30 p.m., Saturday, C.
William Stoess, 12 mid., Sunday, B.
Rudy Vallee, 8:00 p.m., Thursday, R.
Anson Weeks, 12:15 a.m., Mon.; 11:00 p.m., Fri., R; 8:15 p.m., Sat., B.
Ted Weems, 11:00 p.m., Mon.; 12 mid., Sat., R; 10:00 p.m., Sun.; 8:15 p.m., Thurs., C.
Paul Whiteman, 9:30 p.m., Mon.; 11:30 p.m., Sat., R; 6:00 p.m., Sun., B.

DIALOG

Al and Pete, 10:30 p.m., Tues. and Thurs., B.
Amos 'n' Andy, 7:00 and 11:00 p.m., Daily, ex. Sat. and Sun., B.
Burns and Allen, 9:00 p.m., Wednesday, C.
Clara, Lu 'n' Em, 10:15 a.m., Daily, ex. Sat. and Sun., B.
Cuckoo Program, 7:30 p.m., Saturday, B.
Easy Aces, 10:15 p.m., Mon., Wed., Fri., C.
Willie and Eugene Howard, 7:15 p.m., Wed., Thurs., Fri., B.
Howard and Shelton, 9:00 p.m., Tuesday and Friday, C.
Graucho and Chico Marx, 7:30 p.m., Monday, B.
Baron Munchausen, 10:00 p.m., Thursday, R.
Stoopnagle and Budd, 9:30 p.m., Thursday, C.
Wheatenaville, 7:15 p.m., daily, ex. Fri. and Sat., R.
Ward Wilson, 7:15 p.m., Wed., Thurs., Fri., B.

DRAMA

Red Adams, 8:30 p.m., Sunday, B.
Big Ben's, 5:30 p.m., Sunday, R.
Death Valley Day, 9:00 p.m., Thursday, B.
Eno Crime Club, 9:30 p.m., Wednesday, C.
First Nighter, 9:00 p.m., Friday, B.
Friendship Town, 9:30 p.m., Wednesday, B.
Fu Manchu, 8:45 p.m., Monday, C.
The Goldbergs, 7:45 p.m. and 12:00 mid., daily, ex. Sat. and Sun., R.
Great Moments in History, 7:30 p.m., Sunday, B.
Sherlock Holmes, 9:00 p.m. and 12:15 a.m., Wed., B.
Buck Jones, 7:15 p.m., daily ex. Sat. and Sun., C.
K-7, 1:00 p.m., Sunday, R.
Phillips Lord, 10:00 p.m., daily, ex. Sat. and Sun., B.
Magic Voice, 8:15 p.m., Tues. and Sat., C.
March of Time, 8:30 p.m., Friday, C.
Moonshine and Honeysuckle, 2:30 p.m., Sunday, R.
Myrt and Marge, 7:00 and 10:45 p.m., daily ex. Sat. and Sun., C.
Mysteries in Paris, 9:30 p.m., Monday, C.
Pages of Romance, 5:30 p.m., Sunday, B.
Rin Tin Tin, 8:30 p.m., Thursday, B.
Roses and Drums, 5:00 p.m., Sunday, C.
The Shadow, 8:00 p.m., Wednesday, R.
Soconyland Sketches, 8:00 p.m., Monday, R.

PIANO AND ORGAN

Fray and Braggiotti, 10:30 p.m., Monday, C.
Archer Gibson, 8:00 p.m., Sat., R; 10:30 p.m., Mon., B.
Harding Sisters, 10:45 p.m., Saturday, B.
Ernest Hutcheson, 10:30 p.m., Sunday, C.
Vee Lawnhurst, 4:15 p.m., Sunday, R.
Ohman and Arden, 9:45 p.m., Sun., R; 2:15 p.m., Sun., C.
Lee Sims, 6:45 p.m., Saturday, B.
Lew White, 11:15 p.m., Saturday, B.

POPULAR PROGRAMS

A. & P. Gypsies, 9:00 p.m., Monday, R.
Fred Allen's Bath Club, 9:00 p.m., Sunday, C.
Antobal's Cubans, 7:45 p.m., Tuesday, B.
Armour Program, 9:30 p.m., Friday, B.
Jack Benny, 10:00 p.m., Sun., and 8:15 p.m., Thurs., C.
Blue Coal Revue, 5:30 p.m., Sunday, C.
Major Bowes Family, 11:30 a.m., Sunday, R.
Carnation Program, 10:00 p.m., Monday, R.
Chase and Sanborn, 8:00 p.m., Sun., R; 7:45 p.m., Tues. Thurs., C.
Cities Service, 8:00 p.m., Friday, R.
Clicquot Club, 9:00 p.m., Friday, R.
Enna Jettick Melodies, 9:00 p.m., Sunday, B.
Firestone, 8:30 and 11:30 p.m., Monday, R.
Five Star Theatre, 7:30 p.m., Mon., Wed. and Fri., B; 10:00 p.m., Tues., and Thurs., C.
Jack Frost's Melody, 9:30 p.m., Monday, B.
G. E. Circle, 6:45 and 7:00 p.m., daily, ex. Sun. and Tues., R.
Garcia's Novelty Orchestra, 9:30 p.m., Tuesday, B.
Sam Herman, 11:00 p.m., Sunday, B.
Hollywood on the Air, 12:30 a.m., Thursday, R.
Household Musical, 9:00 p.m., Tuesday, B.
Iodent Program, 4:00 p.m., Sunday, R.
Lucky Strike, 10:00 p.m., Tues., Thurs. and Sat., R.
Manhattan Merry-Go-Round, 3:30 p.m., Sunday, B.
Maxwell House, 9:00 p.m., Thursday, R.
Memories in Melody, 7:30 p.m., Sunday, C.
Nestle's, 8:00 p.m., Friday, B.
Pennzoil Parade, 9:30 and 11:30 p.m., Sunday, C.
Pond's Program, 9:30 p.m., Friday, R.
Roxy and His Gang, 1:00 p.m., Sunday, B.
Roxy Theatre Ensemble, 8:30 p.m., Sunday, C.
Sheaffer Revue, 9:45 p.m., Sunday, B.
Sinclair Minstrels, 9:00 p.m., Monday, B.
To The Ladies, 9:30 p.m., Friday, C.
Whoopee, 10:00 p.m., Saturday, B.
Ed Wynn, 9:30 p.m., Tuesday, R.
Yeast Foamers, 2:30 p.m., Sunday, B.

SUNDAY—*(Continued)*

B — Great Moments in History
KDKA KDYL KFI KFSD KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTAR KVOO KWK WBAL WBZ WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WJAX WJDX WJR WJZ WKY WLS WLW WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C — Angelo Patri See Wednesday

E-8:00 p.m., C-7:00, M-6:00, P-5:00
C — Andre Kostelanetz Presents
CKOK KLRA KMBC KMOX KRLD KSCJ KSL KTRH KTSA KVOR WABC WACO WBBM WBCM WBRC WCAH WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBM WFEA WGR WHAS WHEC WHP WIBW WISN WJAS WJSV WLAC WLBW WMT WNAC WNAX WOKO WORC WQAM WSFA WSJS WSPD WTAR WWVA
R — Chase and Sanborn Hour
CFCF CKGW KDYL KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KVOO WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJDX WKY WLIT WMAQ WMC WOAI WOC WOW WRC WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC
B — Russian Gaieties
KDKA KOIL KSO KWCR WBAL WGAR WJR WJZ WLS WREN

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — Roxy Theatre Ensemble
CKOK KLRA KLZ KMBC KRLD KSCJ KSL KTRH KTSA KVOR WAAB WABC WBCM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBM WFEA WGR WHAS WHEC WHP WIBW WICC WISN WJAS WJSV WLBW WMT WNAX WODX WOKO WORC WQAM WSJS WSPD WTAR
B — Red Adams, Drama
KDKA KSO KWCR WBAL WGAR WIS WJR WJZ WREN

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C — Fred Allen's Bath Club
CKOK KDB KERN KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KSCJ KSL KVI KWG WABC WADC WBT WCAH WCAO WCAU WCCO WDAE WDBO WDOD WDRC WDSU WEAN WFBL WFBM WGN WGR WGST WHAS WHEC WHK WISN WJAS WJSV WKRC WLAC WMT WNAC WOKO WORC WOWO WQAM WREC WSPD WTAR
R — Our Government, David Lawrence
KSD KTBS KVOO WEAF WENR WFI WFLA WGY WHO WIOD WIS WJAR WJDX WKY WOAI WOC WRC WSAI WWNC
B — Enna Jettick Melodies
CKGW KDKA KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KOMO KSO KSTP KTAR KWCR KWK WBAL WBZ WBZA WCKY WDAY WEBC WGAR WHAM WIBA WJR WJZ WKY WREN WTMJ

E-9:15 p.m., C-8:15, M-7:15, P-6:15
R — Album of Familiar Music
KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KTHS WAPI WBEN WCAE WCKY WCSH WEAF WENR WFAA WFBR WFI WFLA WGY WHO WIOD WJAR WJAX WJDX WKY WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ
B — Smith Brothers
KDKA KOIL KSO KWCR KWK KYW WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW WREN

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Pennzoil Parade
CKOK KLRA KMBC KMOX KOMA KTSA WABC WADC WBRC WBT WCAO WCAU WCCO WDRC WEAN WFBL WGN WGR WGST WHEC WHK WJAS WJSV WKRC WLAC WLBZ WNAC WOKO WSPD
B — Walter Winchell
KDKA KOIL KSO KWCR KWK KYW WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW WREN

E-9:45 p.m., C-8:45, M-7:45, P-6:45
R — Ohman and Arden Orchestra
KSD KYW WBEN WCAE WCSH WDAF WEAF WFBR WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG WTAM WTIC WWJ
B — Sheaffer Lifetime Revue
CFCF CKGW KDKA KFI KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTBS KTHS KWCR KWK WAPI WBAL WBZ WBZA WCKY WDAY WEBC WENR WFAA WGAR WHAM WIBA WJDX WJR WJZ WKY WMC WOAI WREN WSB WSM WSMB WTMJ

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — Jack Benny-Ted Weems
CFRB CKAC CKOK KMBC KMOX WAAB WABC WADC WCAO WCAU WCCO WDRC WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WOKO WOWO WPG WSPD
R — Balkan Melodies
KSD WBEN WCAE WDAF WEAF WFBR WFI WGY WHO WIOD WIS WJAR WJAX WMAQ WOC WOW WRC WTAG WTAM WWJ WWNC

E-10:15 p.m., C-9:15, M-8:15, P-7:15
R — L'Heure Exquise
CFCF CKGW KDYL KFYR KGO KOA KPRC KSTP KTBS WBEN WCAE WCKY WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WIBA WIOD WIS WJAR WJAX WMC WOAI WOW WRC WRVA WSM WSMB WTAG WTAM WTIC WWJ WWNC
B — Old Singing Master
KDKA KOIL KSO KWK WBAL WBZ WBZA WGAR WHAM WJZ WLW WMAQ WREN

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Ernest Hutcheson, Pianist
CFRB CKOK KFH KLRA KLZ KMBC KMOX KSCJ KSL KTRH KTSA KVOR WAAB WABC WBCM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBM WFEA WGR WHAS WHEC WHP WIBW WICC WISN WJAS WJSV WKBN WLAC WLBW WMBD WMT WNAX WODX WOKO WPG WQAM WSJS WSPD WTAR WTOC

E-10:45 p.m., C-9:45, M-8:45, P-7:45
R — Sunday at Seth Parker's
CFCF CKGW KDYL KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KPRC KSTP KTBS KTHS KYW WAPI WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ WWNC

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — The Gauchos
CKOK KFAB KFH KLRA KLZ KMOX KSCJ KTRH KVOR WAAB WABC WBCM WBRC WBT WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFAN WFBM WGR WHAS WHEC WHP WIBW WICC WIP WISN WJAS WJSV WKBN WLAC WLBW WMBD WMT WNAX WODX WOKO WPG WQAM WSJS WSPD WTAR WTOC
B — Sam Herman Xylophonist
KOIL KWCR KWK WBAL WGAR WHAM WJR WJZ WMAQ WREN

E-11:15 p.m., C-10:15, M-9:15, P-8:15
R — Donald Novis, Tenor
KDYL KFYR KGHL KGO KGW KHQ KSTP KTBS WCAE WCKY WDAF WEAF WEBC WENR WFBR WFI WFLA WGY WHO WIBA WIS WJAX WMC WOC WRC WSB WSM WSMB WTAG WTAM WWJ WWNC
B — Walter Winchell
KDYL KFI KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KTBS KTHS WAPI WBAP WJDX WKY WMC WOAI WSB WSM WSMB
C — Angelo Patri, See Wednesday

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — Eddie Duchin and Orchestra
CFRB KLRA KTRH WABC WBCM WBRC WBT WCAO WCAU WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WHP WICC WISN WJSV WKBN WLAC WLBW WMT WNAC WOKO WPG WQAM WSJS WSPD WTAR WTOC
C — Pennzoil Parade
KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KSL KVI KWG
R — Melodic Serenade
KDYL KFSD KFYR KGHL KGO KHQ KPRC KSTP KTAR KTBS WAPI WBAP WCAE WDAF WEAF WEBC WENR WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WMC WOC WOW WRC WSB WSMB WTAM WWJ WWNC

E-12:00 m., C-11:00, M-10:00, P-9:00
B — William Stoess and Orchestra
KFYR KGHL KGO KGW KHQ KOA KOIL KOMO KPRC KSTP KTBS KWCR KWK WBZ WBZA WDAY WENR WFLA WGAR WHAM WIBA WIOD WIS WJR WJZ WKY WLW WMC WREN WSB WSM WSMB WWNC

MONDAY—*(Continued)*

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C — Chesterfield Program
CKOK KDB KERN KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KSL KTRH KTSA KVI KWG WABC WADC WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WDSU WEAN WFBL WFBM WGN WGST WHAD WHAS WHEC WHK WJAS WJSV WKBW WKRC WLAC WLBZ WMBG WMT WNAC WOKO WOWO WPG WQAM WREC WRR WSPD WTAR WTOC
R — A. & P. Gypsies
KSD WBEN WCAE WCSH WDAF WEAF WEEI WGY WHO WJAR WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WWJ
B — Sinclair Wiener Minstrels
KDKA KFYR KOIL KPRC KSTP KTBS KVOO KWCR KWK WBAL WBZ WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WLS WLW WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC

E-9:15 p.m., C-8:15, M-7:15, P-6:15
C — Mills Brothers
CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WSPD

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Mysteries in Paris
CKOK KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KSL KVI KWG WABC WADC WBT WCAO WCAU WCCO WDSU WEAN WFBL WGN WGST WHEC WHK WJAS WJSV WKBW WKRC WLAC WNAC WOKO WOWO WSPD
R — Buick—Paul Whiteman
KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTHS WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WJAR WJAX WJDX WKY WLIT WMAQ WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WWJ
B — Jack Frost's Melody Moments
KDKA WBAL WENR WGAR WHAM WJR WJZ WLW

E-10:00 p.m., C-9:00, M-8:00, P-7:00
R — Carnation Contented Program
CFCF CKGW KFYR KPRC KSD WBEN WCAE WDAF WEAF WEBC WENR WFAA WFLA WGY WHO WIOD WJAX WKY WMC WOAI WOC WRVA WSAI WSB WSM WTAM WTMJ WWJ
B — Phillips Lord—Country Doctor
CFCF CKGW KDKA KOIL KSO KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WMAQ WREN

E-10:15 p.m., C-9:15, M-8:15, P-7:15
C — Easy Aces
CFRB CKOK KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KSL KVI KWG WAAB WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WHAS WHK WJAS WJSV WKBW WKRC WOKO WOWO WSPD

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — Fray and Braggiotti
CFRB CKOK KLRA KMBC KSCJ KTRH KTSA KVOR WAAB WABC WADC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDBO WDRC WDSU WEAN WFBM WFEA WHK WHP WIBW WICC WISN WKBH WKBN WKBW WLAC WLBW WLBZ WMBD WMT WNAX WNOX WODX WOKO WORC WQAM WREC WSBT WSJS WSPD WTAR WTOC
R — National Radio Forum
KECA KEX KFYR KGA KJR KPO KPRC KSD KTAR KTBS WBEN WCSH WDAF WEAF WEEI WENR WFBR WFLA WIOD WIS WJAR WJDX WKY WMC WOAI WRC WRVA WSAI WSM WSMB WTAM WWJ WWNC
B — Archer Gibson, Organist
CFCF KDKA KWCR KWK WBAL WBZ WBZA WCKY WJR WJZ WREN

E-10:45 p.m., C-9:30, M-8:30, P-7:30
C — Myrt and Marge
KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KSL KVI KWG WBBM WCCO WDSU WFBM WHAS WLAC

E-11:00 p.m., C-10:00, M-9:00, P-8:00
C — Nino Martini, Tenor
CKOK KFAB KFH KLRA KLZ KMBC KSCJ KSL KTRH KVOR WAAB WABC WBCM WBRC WBT WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFAN WFBM WHAS WHEC WHP WIBW WICC WIP WISN WJAS WJSV WKBN WKBW WLAC WLBW WMBD WMT WNAX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC
R — Ted Weems and Orchestra
KSD WCAE WCKY WEAF WFBR WGY WOW WRC WTAG WWJ
B — Rollickers Quartet
WBAL WFLA WGAR WHAM WIOD WIS WJAX WJR WJZ WWNC
B — Amos 'n' Andy
KDYL KFI KFSD KGO KGW KHQ KOA KOIL KOMO KPRC KSD KSO KSTP KTHS KWK WBAP WDAF WENR WJDX WKY WMAQ WMC WOAI WREN WSB WSM WSMB WTMJ

E-11:15 p.m., C-10:15, M-9:15, P-8:15
B — Opera—Cesare Sodero Orchestra
KWCR KWK WBAL WCKY WENR WGAR WHAM WIS WJR WJZ WREN WWNC

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — Guy Lombardo and Orchestra
CFRB CKOK KFAB KFH KLRA KLZ KMBC KSCJ KSL KTRH KVOR WAAB WABC WBCM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBM WHAS WHEC WHP WIBW WICC WISN WJAS WJSV WKBN WKBW WLAC WLBW WMBD WMT WNAX WOKO WORC WPG WQAM WSBT WSJS WSPD WTAR WTOC
R — Harry Salznic. and Orchestra
KSD WBEN WCAE WDAF WEAF WFBR WGY WJAR WRC WTAG WWJ
R — Voice of Firestone
KFSD KFYR KGU KSTP KTAR WDAY WEBC WIBA WTMJ

E-12:00 p.m., C-11:00, M-10:00, P-9:00
C — Riviera Orchestra
CFRB CKOK KFAB KLZ KMBC KMOX KRLD KSCJ KSL KTRH KVOR WABC WBRC WBT WCAH WCAU WCCO WDAE WDOD WDSU WFBM WHP WIBW WICC WISN WJSV WKBW WLAC WLBW WMBD WMT WNAC WNAX WOKO WPG WSBT WSPD WTOC
R — The Goldbergs
KDYL KECA KEX KGA KJR KOA KPO
B — Jack Denny and Orchestra
KDKA KFYR KOIL KPRC KSTP KTBS KWCR KWK KYW WAPI WBAL WBAP WBZ WBZA WEBC WFLA WGAR WIBA WIOD WJZ WKY WMC WOAI WRC WREN WSB WSM WSMB WWNC

E-12:15 a.m., C-11:15, M-10:15, P-9:15
R — Anson Weeks and Orchestra
WDAF WEAF WFBR WMAQ WOC

TUESDAY

E-10:15 a.m., C-9:15, M-8:15, P-7:15
B — Clara, Lu 'n' Em, See Monday

E-12:30 p.m., C-11:30, M-10:30, P-9:30
B — National Farm, See Monday

E-5:45 p.m., C-4:45, M-3:45, P-2:45
B — Orphan Annie, See Monday

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — H. V. Kaltenborn
CKOK KFH KSCJ KSL KTRH KVOR WAAB WABC WBCM WBIG WBRC WBT WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFAN WFEA WHAS WHEC WICC WIP WJAS WJSV WKBN WKBW WLAC WLBW WNAX WOKO WORC WQAM WSFA WSJS WSPD WTAR WTOC WWVA
R — Waldorf-Astoria, See Monday

E-6:15 p.m., C-5:15, M-4:15, P-3:15
C — Reis and Dunn, See Monday
B — Johnny Hart See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30
C — George Hall and Orchestra
CFRB CKOK WAAB WABC WBCM WBIG WBRC WBT WDBJ WDBO WDOD WDRC WFEA WGR WHP WICC WJAS WLBW WOKO WORC WQAM WSBT WSFA WSJS WSPD WTAR WTOC
R — Ralph Kirbery, Baritone
KFYR KGO KOA KOMO KSD KTBS KVOO WBEN WDAF WEAF WEBC WFBR WFI WIBA WIOD WIS WMAQ WMC WOAI WSB WSM WSMB WTAG WWNC

E-6:45 p.m., C-5:45, M-4:45, P-3:45
R — Back of News, Wm. Hard
WBEN WEAF WFBR WFI WIS WJR WPTF WRC WSM WTAG WWJ WWNC
B — Lowel Thomas, See Monday

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).....WABC NATIONAL, Red (R).....WEAF NATIONAL, Blue (B).....WJZ

Call	Dial	Call	Dial

Call	Dial	Call	Dial

Call	Dial	Call	Dial

TIME—E Eastern Standard; C Central Standard; M Mountain Standard; P Pacific Standard.
RADEX is the only publication listing stations in alphabetical order for your convenience.

MONDAY

E-10:15 a.m., C-9:15, M-8:15, P-7:15
B — Clara, Lu 'n' Em
KDKA KDYL KFYR KOA KOIL KPRC KSD KSO KVOO KWK WAPI WBAL WBAP WBZ WBZA WCKY WDAY WEBC WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC

E-12:30 p.m., C-11:30, M-10:30, P-9:30
B — National Farm and Home
KDKA KFYR KOA KOIL KPRC KSD KSO KSTP KTBS KTHS KWCR KWK KYW WAPI WBAL WBZ WBZA WCKY WDAF WDAY WEBC WFAA WFLA WHAM WHO WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WLW WMC WOAI WOC WOW WPTF WRC WREN WRVA WSB WSM WSMB WWNC

E-5:45 p.m. C-4:45, M-3:45, P-2:45
B — Little Orphan Annie
CKGW KDKA WBAL WBZ WBZA WCKY WGAR WHAM WIS WJAX WJR WJZ WRVA WWNC

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — Irene Beasley
CFRB KFH KMOX KSCJ KTRH WAAB WABC WBCM WBIG WBRC WBT WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WFAN WFEA WHEC WICC WIP WKBN WKBW WLBW WOKO WORC WQAM WSBT WSFA WSJS WSPD WTAR WTOC
R — Waldorf-Astoria Orchestra
CKGW KFYR KGO KHQ KOA KPRC KSD KTBS WBEN WCKY WDAF WEAF WFBR WHO WIBA WIOD WIS WJAR WKY WMC WOAI WOC WRC WSB WSMB WTAG WTAM WWNC

E-6:15 p.m. C-5:15 M-4:15, P-3:15
C — Rees and Dunn
CFRB CKOK KFH KLZ KMBC KSCJ KTRH KVOR WAAB WABC WBCM WBIG WBRC WBT WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFAN WGR WHEC WHP WIP WISN WJSV WKBN WLAC WLBW WMT WNAX WOKO WORC WQAM WSBT WSFA WSJS WSPD WTAQ WTAR WTOC
B — Johnny Hart in Hollywood
KDKA KOIL KSO KWCR WBAL WBZ WBZA WJZ WMAQ WREN

E-6:30 p.m., C-5:30, M-4:30, P-:30
C — Vaughn DeLeath
CFRB CKOK WAAB WABC WBCM WBRC WBT WDBJ WDBO WDRC WDSU WFEA WGR WICC WJSV WKBN WLAC WLBW WOKO WORC WQAM WSFA WSJS WSPD WTAR WTOC

E-6:45 p.m., C-5:45, M-4:45, P-3:45
R — G. E. Circle
WBEN WCAE WCSH WEAF WFBR WFI WJAR WRC WSAI WTAG WTAM WTIC WWJ
B — Lowell Thomas
CKGW KDKA WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW

E-7:30 p.m., C-6:00, M-5:00, P-4:00
C — Myrt and Marge
CKOK KRLD WABC WADC WBT WCAO WCAU WDRC WEAN WFBL WGR WHK WJAS WJSV WKRC WNAC WOKO WSPD WWVA
B — Amos 'n' Andy
CKGW KDKA WBAL WBZ WBZA WCKY WFLA WGAR WHAM WIOD WJAX WJR WJZ WLW WPTF WRC WRVA WWNC
R — G. E. Circle
KDYL KFI KFYR KGO KGW KHQ KOA KOMO WDAF WDAY WEBC WGY WHO WIBA WMAQ WOC WOW WTMJ

E-7:15 p.m., C-6:15, M-5:15, P-4:15
C — Buck Rogers, Year 2432
CKOK WABC WGR WHK WNAC
R — Wheatenaville, Ray Knight
WDAF WEAF WEEI WGY WHO WJAR WLIT WMAQ WOC WOW WRC WTAM WWJ
B — Tastyeast Jesters
KDKA WBAL WBZ WBZA WCKY WHAM WJZ

E-7:30 p.m., C-6:30, M-5:30, P-4:30
C — Three X Sisters
WABC WCAU WDRC WEAN WFBL WFEA WGR WHEC WHP WJAS WJSV WLBZ WNAC WOKO WORC
B — Five Star Theatre
KDKA KTBS WBAL WBZ WBZA WHAM WIS WJZ WMC WPTF WSMB WWNC

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C — Morton Downey
CFRB CKOK KFH KLRA KMBC KMOX KRLD KSCJ KTRH KVOR WABC WBCM WBIG WBRC WCAH WCAO WCAU WDBJ WDBO WDOD WDSU WEAN WFEA WGR WHAS WHEC WHP WIBW WISN WJAS WJSV WKBN WLAC WLBW WMT WNAC WNAX WOKO WORC WQAM WSFA WSJS WSPD WTAQ WTAR WTOC WWVA
R — The Goldbergs
KFYR KPRC WBEN WCAE WCSH WDAF WEAF WEEI WENR WFAA WFBR WGY WJAR WKY WLIT WOAI WOW WRC WSAI WTAG WTAM WTMJ WWJ

E-8:00 p.m., C-7:00, M-6:00, P-5:00
C — Whispering Jack Smith
CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WSPD
R — Soconyland Sketches
WBEN WCSH WEAF WEEI WGY WJAR WTAG WTIC
B — Gus Van—Pickens Sisters
KDKA KOIL KPRC KSO KTBS KVOO KWCR KWK WBAL WBZ WBZA WCKY WFAA WGAR WHAM WJDX WJZ WKY WLS WMC WOAI WREN WSB WSM WSMB

E-8:15 p.m., C-7:15, M-6:15, P-5:15
C — Singin' Sam
CKOK KMBC KMOX WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WGR WHK WJAS WJSV WKRC WNAC WOKO WSPD

E-8:30 p.m., C-7:30 M-6:30, P-5:30
C — Kate Smith
CKOK KMBC KMOX WABC WADC WBCM WCAH WCAO WCAU WCCO WFBL WFBM WGN WGR WHAS WHEC WHK WISN WJAS WJSV WKRC WOKO WOWO WSPD
R — Voice of Firestone
CFCF CKGW KPRC KSD KTBS KVOO WBEN WCAE WCSH WEAF WEEI WFAA WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKY WLIT WMAQ WMC WOAI WOC WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTIC WWJ WWNC
B — Jack Fulton, Tenor
KDKA KSO KWCR KWK WBAL WBZ WBZA WJR WJZ WLW WMAQ WREN

E-8:45 p.m., C-7:45, M-6:45, P-5:45
C — Fu Manchu Mystery
CFRB CKOK KMBC KMOX KRLD WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WSPD

JANUARY DX CALENDAR

A. M. time is given as of the night before. Thus early Monday morning programs are listed under Sunday night. Time is given in Eastern Standard so that programs may be listed in proper sequence.

SUNDAY NIGHT

Jan. 1st

Mid.-2:00—CMCH, 1405, Havana, Cuba.
2:00-3:00—CHWK, 665 Chilliwack, B. C.
3:00-5:00—KPCB, 650, Seattle, Wash.

Jan. 1st, 8th, 15th, 22nd, 29th

Mid.-1:00—WSAZ, 580, Huntington, W. Va.
12:30-1:00—KSOO, 1110, Sioux Falls, S. D.
1:00-2:00—WGES, 1360, Oak Park, Ill.

MONDAY NIGHT

Jan. 9th

2:00-3:00—KFYR, 550 Bismarck, N. D.
3:00-5:00—WHBF, 1210 Rock Island, Ill.
3:00-5:00—1OBI, 1200 Prince Albert, Sask.

Jan. 30th

4:00-6:00—KPOF, 880 Denver, Colo.

Jan. 2nd, 9th, 16th, 23rd, 30th

Mid.-2:30—WMIL, 1500, Brooklyn, N. Y.
1:00-5:00—WABZ, 1200, New Orleans, La.
2:00-4:00—KOY, 1390, Phoenix, Ariz.
5:00-6:00—WAWZ, 1350, Zarephath, N. J.
5:15-5:30—WHP, 1430, Harrisburg, Pa.

TUESDAY NIGHT

Jan. 3rd

3:00-6:00—WOPI, 1500, Bristol, Tenn.

Jan. 10th

2:00-3:00—WJMS, 1420, Ironwood, Mich.

Jan. 24th

2:30-3:30—WCLO, 1200, Janesville, Wis.
3:00-4:00—KDLR, 1210, Devils Lake, N. D.
3:00-5:00—LS-8, 1230, Buenos Aires, Argentina.
4:30-6:30—1OBP, 1199, Wingham, Ont.

Jan. 31st

2:30-3:00—CHWK, 665, Chilliwack, B. C.
2:00-9:00—KGIR, 1360, Butte, Mont.
4:00-4:30—KGAR, 1370, Tucson, Ariz.

Jan. 3rd, 10th, 17th, 24th, 31st

Mid.-1:00—XEH, 1132, Monterrey, Mex.
1:00-4:00—WSUI, 880, Iowa City, Iowa.
3:00-4:00—CFJC, 1120, Kamloops, B. C.
3:00-4:00—KFGQ, 1310, Boone, Iowa.

WEDNESDAY NIGHT

Jan. 4th

1:00-3:00—KFJZ, 1370, Ft. Worth, Tex.

Jan. 18th

2:00-4:00—KGVO, 1200, Missoula, Mo.

Jan. 4th, 11th, 18th, 25th

11:30-12:30—KFUO, 550, St. Louis, Mo.
Mid.-1:00—WHBL, 1410, Sheboygan, Wis.
2:00-3:00—KFXJ, 1310, Grand Junction, Colo.
2:30-4:30—CKWX, 730, Vancouver, B. C.
2:30-4:30—KGFF, 1420, Shawnee, Okla.

THURSDAY NIGHT

Jan. 5th

10:00-11:00—WKAQ, 1240, Porto Rico.

Jan. 5th, 19th

11:30-3:00—WMBC, 1420, Detroit, Mich.

Jan. 12th, 26th

3:00-5:00—KGFK, 1500, Moorhead, Minn.
3:00-5:00—KASA, 1210, Elk City, Okla.

Jan. 19th

2:00-7:00—KGKB, 1500, Tyler, Tex.
6:30-8:30—1OBI, 1200, Prince Albert, Sask.

Jan. 26th

2:00-5:00—WAGM, 1420, Presque Isle, Me.

Jan. 5th, 12th, 19th, 26th

Mid.-1:00—WTEL, 1310, Philadelphia, Pa.
Mid.-2:30—WMIL, 1500, Brooklyn, N. Y.
2:00-3:00—CFAC, 690, Calgary, Alta.
3:00-4:00—CKOV, 1200, Kelowna, B. C.

FRIDAY NIGHT

Jan. 6th

2:00-4:00—1OBQ, 1200, Brantford, Ont.

Jan. 6th 20th

2:00-3:00—WRAM, 1370, Wilmington, N. C.

Jan. 20th

1:00-5:00—KRMD, 1310, Shreveport, La.
5:00-6:00—WJBU, 1210, Lewisburg, Pa.

Jan. 6th, 13th, 20th, 27th

12:30-1:30—WCAJ, 590, Lincoln, Neb.
1:00-2:00—CFCN, 985, Calgary, Alta.
1:00-3:00—CKCL, 580, Toronto, Ont.
1:00-2:00—WENC, 1420, Americus, Ga.
1:00-4:00—CKPR, 890, Ft. William, Ont.
1:30-3:30—KGEK, 1200, Yuma, Colo.

SATURDAY NIGHT

Dec. 31st

12:30-1:30—WACO, 1240, Waco, Texas.
1:30-2:30—CHGS, 1120, Summerside, P. E.
2:00-3:00—CHML, 880, Hamilton, Ont.
4:00-4:30—KGAR, 1370, Tucson, Ariz.

Dec. 31st, Jan. 7th

1:00-5:00—WJEJ, 1210, Hagerstown. Md.

Dec. 31st, Jan. 14th

2:30-4:30—1OAB, 1200, Moose Jaw, Sask.

Jan. 7th

Mid.-4:00—WRBX, 1410, Roanoke, Va.
1:00-3:00—WILL, 890, Urbana, Ill.
2:30-4:30—KLPM, 1240, Minot, N. D.
3:00-5:00—CKPC, 880, Preston, Ont.

Jan. 14th

1:00-2:00—WJAG, 1060, Norfolk, Nebr.
2:00-4:00—WHET, 1210, Troy, Ala.
4:00-7:00—KFBI, 1050, Abilene, Kans.

Jan. 21st

2:00-3:00—WTOC, 1260, Savannah, Ga.
4:00-6:00—KGFI, 1500, Corpus Christi, Tex.

Jan. 28th

Mid.-4:00—WIBW, 580, Topeka, Kans.
2:00-3:30—WFAS, 1210, White Plains, N. Y.

Jan. 7th, 21st

1:00-3:00—KUSD, 890, Vermilion, S. D.

Jan. 7th, 14th, 21st, 28th

Mid.-1:00—WJBK, 1370, Detroit, Mich.
Mid.-2:00—WCAH, 1430, Columbus, Ohio.
Mid.-2:00—WGBI, 880, Scranton, Pa.
Mid.-3:00—CMCD, 925, Havana, Cuba.
Mid.-3:00—WWRL, 1500, Woodside, N. Y.
Mid.-5:00—WTFI, 1450, Athens, Ga.
12:30-3:00—WBBZ, 1200, Ponca City, Okla.
1:00-1:30—WKY, 900, Oklahoma, Okla.
1:00-2:00—KQV, 1380, Pittsburgh, Pa.
1:00-2:00—WGBF, 630, Evansville, Ind.
1:00-2:00—WGES, 1360, Oak Park, Ill.
1:00-3:00—KRLD, 1040, Dallas, Texas.
1:00-3:00—WIBG, 930, Glenside, Pa.
1:00-3:30—WOW, 590, Omaha, Neb.
1:00-4:00—KGU, 750, Honolulu, T. H.
1:15-2:30—WOMT, 1210, Manitowoc, Wisc.
1:30-3:00—KMAC, 1370, San Antonio, Texas.
2:00-5:00—KFEL, 920, Denver, Colo.
2:00-6:00—WTRC, 1310, Elkhart, Ind.
2:30-4:30—CKWX, 730, Vancouver, B. C.
3:00-4:00—CFCT, 630, Victoria, B. C.
3:00-4:00—CKOV, 1200, Kelowna, B. C.
3:00-4:00—KDB, 1500, Santa Barbara, Calif.
3:00-4:00—KFXF, 920, Denver, Colo.
3:00-4:00—KFXM, 1210, S. Bernardino, Calif.
3:00-4:00—WKBZ, 1500, Ludington, Mich.
3:00-6:00—KGCX, 1310, Wolf Point, Mont.
4:00-6:00—KVOA, 1260, Tucson, Ariz.

The DX World

(Continued from page 25)

"Since writing you last December, my log of b.c. stations has grown from 245 to 402 and still growing," says Ernest Ball, 39 Delaware Ave., Ottawa, Ont. "I have logged all frequencies and all the states except North Dakota, Montana and Wyoming. Without the use of earphones I have logged and verified such stations as KABC, KFYO and 10-BP. Other verifications that I consider good are WRBL, Columbus, Ga., a 50-watter, over 1000 miles from Ottawa; 10-BQ, 15 watts; HIX, WKAQ, CMCF and KOY. I got WKAQ at 6 p. m. once, it was the first time I had heard it. They verified that report. I have eight 100-watters verified from over 1000 miles."

"I live in a deep valley in a small city," writes Dane B. Sutfin, 10 William St., Hornell, N. Y. "The broadcast band is not so good while the short waves are nil except amateur code. With a Silver-Marshall 714 super, in just a little more than a year, I have received 309 stations in the b. c. band although reception is good only from about 11 p. m. to 5 a. m., the rest of the hours being fierce with man-made noises. What can you tell me about the long waves, that is above the b. c. band? Has anyone ever received the long wave European broadcasts?" Can anyone give Mr. Sutfin this information?

John Jaeger, 174 Fairview Ave., Jersey City, N. J., as well as several others, write that they miss the blanks formerly given in the index by call letters. They used these to make notes regarding reception, reports and verification. We had to remove these spaces to make room for the time on the air but will have to give the matter some thought with a view to providing spaces for such data.

"I am writing to give you the new winter schedule of station 10AB, Moose Jaw, Sask.," writes Robert McLean, 1149-2nd Ave., N. W., Moose Jaw, Sask. "I am one of the operators and announcers of that station. 10AB is an amateur station operating on a regular schedule. The services of artists, announcers, operators and, in fact, all concerned with the station, are free. The station is kept up by donations from the citizens. We have been in continual operation since 1922."

"Would advise RADEX readers to try for TGW on 45.30 meters, any evening except Monday, Saturday and Sunday," suggests George Nahas, 147 Seeley St., Brooklyn, N. Y. "They are on between 10 p. m. and 12 midnight EST and are using 75 watts power."

"I wish to tell you of a change in time of station XEF-XER from 24 hours daily, to 5:45 p. m. to 7:30 a. m. CST," advises Ermin David, RR 2, Gering, Nebr. "This was announced October 24th by Herbert Dinney, announcer of that station."

That WIBS, about which a number of readers have inquired, is really WRDS, Michigan State Police, thinks R. M. Ballard, Visalia, Calif.

"I have been DXing about six months," advises Walter Balla, 126 Palmerston Road, Rochester, N. Y., "and in a very poor location, but I have managed to log about 260 stations, with about 193 verified. I am using a Crosley 6-tube Gembox. This is a powerful set. I have a 100-foot aerial and a copper plate for a ground. I am a member of the Buffalo Evening News DX Club, and would like to correspond with other DXers."

"I am only sixteen years of age and am not allowed to sit up late for fear of waking the whole house," confesses Henry Bradshaw, 32 Vansitmart Ave., Hamilton, Ont. "However, I can get considerable distance on our Eveready 8-tube set. I have logged 192 stations, only two of which were received later than 10:30 p. m. EST. KFI, Los Angeles, booms in every Sunday night as soon as our local station, CKOC, signs off at 10:30 p. m."

"Thanks to you, I managed to pull

(Continued on page 80)

The WORLD *on* SHORT WAVES

● ● ● *By* CLARENCE SARGENT

I TAKE a good deal of interest in reading in your magazine of the people who do not believe in some other folks' records because they do not tune the stations in themselves. I wish I could show them my 800 letters and cards and perhaps they might believe. Just to prove what can be done with high-class receivers, I am submitting my yesterday's log (November 27th) with a photo of my outfit and a few of my verification cards. If all my verfications were to be shown, it would require the whole house.

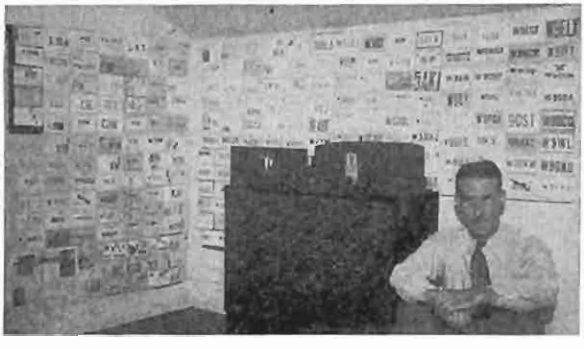
All of the following short wave stations were tuned in yesterday and this morning on a National AC-45 receiver. (I also have a Lincoln SW-8.) The times are shown in Eastern Standard-

5:20 a.m.	W7FN	Seattle, Wash. Working 4QZ
5:30	X5N	Rodriguez Dam, Mex. Working 2KR
5:35	X3B	Pachuca, Mex. Working 2KR
5:45	W7AQX	Pendleton, Ore. Working 6BKZ
10:35	W6CNE	Hollywood, Calif. Working 2ALK
10:40	W5AEB	Bryan, Texas. Working 4TO
11:00	LSM	Buenos Aires, Arg. Working New York
11:07	GBB	Rugby, England. Working CGA
11:35	GBW	Rugby, England. Testing
11:40	I2RO	Rome, Italy. Music
11:50	GBC	Rugby, England. Testing
11:57	FYA	Paris, France. Music
1:00 p.m.	ZFB	Hamilton, Bermuda. Testing WNB
1:30	KWO	Dixon, Calif. Testing KKP
1:32	KKP	Kaunuku, Hawaii. Working KWO
2:10	W9CJJ	Denver, Colo. QTT
4:10	LSN	Buenos Aires, Arg. Music
4:15	HBP	Geneva, Switz. Testing New York
5:10	EAQ	Madrid, Spain. Music
5:35	W9EYN	Colo. Springs, Colo. Working 6CNE
5:40	W6CZ	Los Angeles, Calif. CQ
10:15	W5VJ	Jackson, Miss. CQ
2:30 a.m.	W6EDV	Grimes, Calif. Working 6BJZ
2:40	W7ND	Portland, Ore. Working 9th Dist.

In addition to the short waves, I took time out to bring in the following stations on the broadcast band with my Philco AC-11: XER, XFI, XEW, XEFO, XEPN, KSL, KOA, KNX, KGO, KPO, KHQ, KHJ, KFRC, KPCB, KMPC, KOIN, KRJ, KEX, KYA, KTAT, KFOX, KLO.

I have been in the DX game for four years and from 15 to 550 meters, I have a log of 1827 stations which I hope to make 2000 before spring. Here is a summary: Cuba 22, Mexico 17, British Columbia 2, Manitoba 7, Alberta 4, Haiti 1, England 18, France 3, Holland 1, Italy 4, Java 1, Argentina 5, Brazil 6, Honduras 1, Columbia 8, Australia 4, Costa Rico 3, Hawaiian Islands 3, Venezuela 1, Chili 1, Bermuda 2, Switzerland 3, Ecuador 3, Spain 1, Denmark 1, Germany 7, Peru 1, Morocco 1, Portugal 1, Egypt 1, Guatemala 1. Our own Pacific Coast 111, Texas 44, Florida 31.

I think your magazine is one of the best ever. For the DX fan it is a wonderful help and has been of much value to me especially on Cuban and Mexican stations. I look forward every month to the new issue.



Clarence Sargent, short wave DXer extraordinary. He lives in Dansville, N. Y., and is a member of the A. R. R. L. and the I. S. W. C.

advice would be welcome. Cannot seem to hear their station call. Thanks to RADEX, I pulled in 5CK and 2CO this week."

"2BL, 4QG, 3LO, 2YA, 5CK, 2CO, and an unidentified on 730, were all coming in good this morning, November 22nd, better than I've ever heard them," reports Roland Churchill, 4243 N. Richmond St., Chicago, Ill.

The Dx Rules

(Continued from page 6)

But, on the other hand, in what possible way was the difficulty of the problem increased when WJAK changed its call to WTRC or KTBR to KALE? If, then, no new problem was presented in the tuning in of WTRC or KALE to those who already had been given credit for WJAK and KTBR, by what possible logic are they entitled to credit for the second reception of these stations? One might just as well claim credit for a station on Monday night and again on Tuesday.

Some Inconsistency Necessary

It is true as Mr. Carleton Lord pointed out, the rules we have enumerated are inconsistent in that we permit the logging of both calls from one transmitter. In this case however a new factor enters the problem, that of time. Where one transmitter is used by two stations they must necessarily broadcast at different hours. This shift in hours changes the problem to some extent. In any event, however, we think a DXer is entitled to credit for both WFLA and WSUN, for instance, even though their programs take the air from the same transmitter.

We admit that merely counting calls simplifies the matter of records but we claim that it does not give a true indication of the credit due a DXer. Our suggestion in the matter of records is to count our logs by frequencies. Thus we will say that on 540 one has CKX (now 930), Brandon, Manitoba, and CKOK (formerly CKWO), Windsor, Ontario—two stations. CKX might be counted again on the 930 frequency but CKOK would not be counted if one had already taken credit for CKWO.

We believe there is a field here for the joint action of the DX Clubs in clarifying and standardizing the rules for logging. In the December issue of this magazine, we pointed out another evil to be guarded against and that is shooting in a report of reception to any station on the frequency tuned in in the hope that you may hit the right one. Such a practice cannot be too strongly condemned for it will surely bring DX into disrepute with those who are absolutely necessary to its continuance—the station managers.

The New Zealand Radio Times points out still another evil which they call "wallpapering." "DX means distance," they point out, "and that cannot apply to New Zealand stations. The ridiculousness of writing to powerful nearby stations is apparent while the same thing applies to writing to a smaller station in your own town. Clearly those reports are of no use to those stations and the club, by encouraging its members to write to stations under those conditions, is only fostering the spirit of wall-papering and not true Dxing. If the New Zealand stations are inundated with requests for cards from people in New Zealand there will come a time when those stations will close down on issuing cards. Already they are complaining of the expense to which they are put by a very large number of listeners who want only verifications." This is a matter that should be carefully considered and it would seem that DX Clubs might well put a minimum mileage upon stations which may count in DX contests. When a listener living in Philadelphia writes to WCAU for a verification, for example, he is lowering the standing of all DXers with that station.

"Then in quick succession I tuned in JFAK, Tokyo; JOBK, Osaka; JOHK, Sendai; JOGK, Kumamoto; JOCK, Nagoya; JOIK, Sapporo; and JOFK, Hiroshima. All eight of these stations were broadcasting the same program. All, except JFAK, came in plenty loud on the speaker. JFAK was not as loud as the others, but plenty loud enough to tell what station it was. They must have been broadcasting a chain program. These eight Japanese stations, plus 2YA which came in last spring, make a total of nine Trans-Pacific stations which I have received. That getting all eight Jap stations was a feat, wasn't it?"

"I believe the Trans-Pacifics are going to come in good this fall and winter," suggests O. R. Queen, 725 W. Portland St., Phoenix, Ariz. "I heard JOIK, Sapporo, Japan, on the air immediately after KOA signed off at midnight, Saturday, November 5th. They announced the call letters in English at 12:15 A.M. and evidently left the air. Last winter I could never tune them in before 2 A.M. MST. Would like to hear from someone in this vicinity who has tuned the Honolulu stations successfully. I don't seem to have any luck with them."

His Patience Rewarded

Never to have heard Australia and then bring in six VK's in two nights is an unusual experience and one that again emphasizes the uncanny performance of the radio waves. And, incidentally, it ought to give the rest of us encouragement in keeping on trying for those elusive Oceanics.

"You may be interested to learn," advises A. E. Armstrong, 2021 Bonita Drive, Glendale, Calif., "that I have increased my broadcast log from 394 to 420. This addition was aided materially by the logging of eight Australian stations. I have been DXing for six years, and, during the DX season have made a practice of sitting up most of the night either Friday or Saturday nights, or both. In all those years of patient tuning I had never, until a few weeks ago, had any real luck with the Australians, although I had had plenty of Japs and also three stations in New Zealand. Recently, however, I struck two good nights and had the following: 2CO, Carowa, and 2FC, Sydney, N.S.W.; 3AR, Melbourne; 4QG and 4BC, Brisbane, Queens, the latter only 600 watts; 5CL, Adelaide and 5CK, Crystal Brook, S. Australia, and 6WF, Perth, W. Australia. Strangely enough the station that came in clearest and with most power was the 600-watt 4BC. Since those two freak nights I have had no more Australians, and may never have them again. I think this experience illustrates the truth of the contention that no hard and fast rules can be set down on reception of DX stations."

A Good Night

"It seems that the night, or rather the morning, of October 2nd, was good all over the country," comments R. N. Putnam, 920 12th Ave. No., Fargo, N. D. "I was fortunate enough to be tuning at about 4 A.M. and received the following stations: WKAQ, KGU, 2YA, 3YA, 4QG, 2BL, 3LO, 2GB. This was an immense thrill to me as they were my first foreign. My log is now about 300 stations with the above as my best catches. Last evening reception was very bad here and for a while I could scarcely get WLW at all, but on 705 kcys. I was getting that Mexican that bothered us last year. Has anyone definitely found out what it is? I'm very poor at deciphering Mexican so didn't get the calls."

"Every morning at 4 A.M. MST I get a station on 1150 kcys.," reports Russell H. Johnson, 535 Ave. J No., Saskatoon, Sask., "where the announcer speaks distinctly as an Englishman, and 3LO is there. On the other hand, there is ZL2ZJ, Gisborne, New Zealand, only a 20-watter, and they use a distinct English accent, and I don't suppose LR8, Buenos Aires, would have an English announcer, would they? Any

Tuning the TRANS-PACIFIC'S

DXing for JO's, VK's and ZL's

WHILE some listeners are despairing of ever receiving a single Japanese station, here are instances of six and seven JO's coming in on a dial at the same time! Like somebody's salt slogan, when it rains it pours.

"Yesterday morning, November 12th, at 12:40 A. M., PST, I received a program which I believe came from Japan," reports Harold Allen, Prince George, B. C. "I listened to them for an hour and forty minutes, but they never announced the station. Before I turned my set off I moved around the dial and discovered that there were eight more stations apparently broadcasting the same program. I cannot be exactly sure as the program was in Japanese and, of course, I couldn't understand. But on looking up in RADEX I discovered that at each point on the dial there was a powerful Japanese station. The stations coming in loudest were I believe: JFAK, Tokyo, 670 kcys.; JOSK, Kokura, 740; JORK, Osaka, 750; JOHK, Sendai, 770; JOGK, Kumamoto, 790; JOCK, Nagoya, 810; JOIK, Sapporo, 830; JOFK, Hiroshima, 850, and JOAK, Tokyo, 870. I listened to the station on 750 kcys. for an hour and forty minutes and the only English spoken was about five minutes of news and a half-hour story, which was half English and half Japanese. And I would like to know, if possible, whether or not these stations ever broadcast their call letters in English. If they do, I don't mind listening and waiting. If not, I guess it's just too bad."

"Have you any authentic information on the new Jap stations?" is the query of Fred W. Janssen, 220 South Santa Cruz Street, Ventura, Calif. "I have been hearing new Japs on 730 and 920 kcs. for quite some time and have been unable to find anything showing them to be on those channels. I know there were a number of new stations added over there but no one in this country seems to have any information about them." Will some Pacific Coast Radexer give us this information? Mr. Janssen wants the mail address of the Cubans and we are trying to get this information into this issue. He says he sends out all his reports to Spanish-speaking stations in that language but even that doesn't help much.

Here's the Information

Almost in answer to Mr. Janssen's inquiry comes a letter from Homer G. Gosney, 431 South Elena Ave., Redondo Beach, Calif., making three corrections in the Japanese stations as published in our October issue. JFAK, he says, should be, not Tokyo, but Taihoku, Taiwan, the latter being formerly known as the Isle of Formosa. JOQK at Niigata (not Nilgata) should be on 920 kcs. with 500 watts and JOSK, Kokura, on 735 kcs. with 1000 watts. Mr. Gosney lists the new stations as follows: JORK, Kochi, 720 kcs., 500 watts; JOTK, Matsue, 625 kcs., 500 watts; JOUK, Akita, 645 kcs., 300 watts; JOVK, Hakodate, 680 kcs., 500 watts; JOOK, Kyoto, 960 kcs., 300 watts. Mr. Gosney tells us that six more Japanese stations are coming on the air, Maebashi, Tokushima, Hamamatsu, Fukui, Nagasaki and Asahigawa.

To the above Meyer Tuchinsky adds JFBK, Tainan, Formosa, on 1111 kcs. with 1000 watts.

"This morning, November 12th, between 3 and 3:30 A.M. CST, I was surprised to hear JOAK, Tokyo, coming in with a program for the Japanese children," writes Thomas Quaid, University Station, Enid, Okla.

the volume control entirely off. The output transformer has been replaced to no avail. The set also oscillates from 1400 to 900 kilocycles with ground wire off, and with ground on as it should be, with volume full, the signals from 900 to 550 kilocycles gradually fall off until at 600 kcs., it entirely disappears.

It is quite common for oscillation to be more persistent on the high frequencies than on the lows. Oscillation in your case may be due to abnormal screen-grid voltage or a defect in one or both of the by-pass circuits. If in the former, look for an open volume control at the cathode end of the resistance, or a short circuit in the resistor in the series screen-grid leads of the radio-frequency tubes (5000 ohms in the red wire of the power unit). There may also be an open screen-grid by-pass condenser (0.1 mfd. condensers between cathode and screen of first two -24 tubes). These would account for the rumble in the speaker as the volume is not under perfect control when the ground end of the control resistance is open at the cathode end. After the above trouble has been remedied the trimmer condensers should be readjusted for sharp tuning over the entire wave band. We are confident this trouble is confined in the radio-frequency end of this receiver, assuming of course, that the speaker is in perfect condition.

Retubing a Scott Set

I have a Scott All Wave receiver—deluxe model—and I wish to use the new tubes by changing the -24s and -35s to 57s and 58s.

Not knowing what model you have we cannot advise fully for so many models use different tubes. The newest uses the latest tubes throughout—four 58s, three 56s, one 57, two -45s and one Wunderlitch. An earlier deluxe model used a -35 or -51 in the pre-selector stage; a -24 first detector; a 56 oscillator; three -24s in i.f. stages, a 56 second detector; two 56s and two -45s in audio stages. These may give you some idea of the use and combination of new and old tubes. Generally speaking, we think you can use the 58s with adapters in place of the -35s, and if you have any -27s in your set by all means replace them with 56s without adapters.

THAT CRICKET GAME

A number of readers were thrilled to pick up a play-by-play report of a cricket game on some unknown station in the early hours of Friday, Dec. 2. Charles Leboeuf, Box 222, North Grosvenordale, Conn., says it was a game between English and Australian players and was announced by a Mr. Whitelaw who said comments on the game should be addressed to 4 Australia House, London.

Derek Wharton, 22 Elmwood, N. Y., received the program as early as 1:05 a. m. EST, and as that would be 6 a. m. in London, he thinks it unlikely that game was in England.

Douglas Wauchope (address not given) says the announcer mentioned the heat of the day and that he looked for rain before nightfall. As 2 a. m. would be the middle of the afternoon in Australia, he thinks the game was in that country.

Paul Staude, 247 Noble St., Souderton, Pa., says the sponsors were a certain soap manufacturing concern. He held the program for two hours. Some listeners reported the station on 910, others on 900 and 920.

As so many received it, we presume the program was relayed by some American station. Who can solve the mystery?

NEW WAVE TRAP IDEA

A wave trap which uses a 199 tube and thus works on an entirely new principle as illustrated and described in the January "Popular Mechanics," page 110. Instead of absorbing the signal of unwanted station, it "bucks" it. Simple and worth trying out.

201 and few sets had more than three. The circuits were crystal or regenerative and the latter set up horrible squeals when they oscillated, destroying neighboring ear-drums. The broadcast band was full of code from spark sets. The acid from the batteries ate holes in mother's rugs and from the batteries to the set led a maze of wires. Jefferson City, Missouri, with the "King of the Ivories" playing the piano from the state penitentiary, was wonderful DX from Cleveland. Crowds gathered around the shrill, squawking sets in front of radio shops, marvelling open-mouthed.

Those were the days. Those were the days.

By the Technical Editor

(Continued from page 9)

distance when they come in under good conditions of radio reception. We do not think this set will provide better separation of such powerful stations so close to each other.

Make a wave trap of 60 turns of No. 28 covered wire wrapped around a small tube three inches in diameter and shunted in parellel with a .00035 mfd. capacity variable condenser. Connect the device in series with the aerial, which should be as short as consistent with good reception, and it may be possible to sharpen the tuning of interfering stations.

Amfico Condenser Capacity

I have an Amfico receiver which I intend to alter so as to receive down to 80 meters as well as the present broadcast band. Can you tell me the capacity of the variable condensers?

The capacities of all variable condensers used to tune the broadcast band in most all standard receivers varies from .00035 to .0005 mfds. capacity. Many are about .0004 microfarads. It is likely that your condensers range closely within these limits. We see no reason why these condensers should not tune smaller coils used for lower waves, say from 125 to 200 meters, without much difficulty. On the lower waves—80 to 125 meters—the movement of the condensers will be much slower, and consequently the tuning will be more difficult. Small capacity condensers are used for tuning small coils on short waves because the movement is greater and stations are not crowded so close together on the dial. You should not expect to arrange new coils of less wire in your set and get short wave stations below 100 meters with success. We believe you can get the police calls, airplane and amateur stations with smaller coils and the present equipment, without much trouble.

Open Resistor Connection

I have a model 44 Radiola and between 1500 and 1220 kcs. it works with full volume and perfect clarity. From 1220 up to the 550 end of the dial it is necessary for me to decrease the volume in order to keep the set from breaking into oscillation. I recently adjusted the set by ear by tuning the three variable condensers; otherwise, stations roar in from all points. What can be the cause of this annoyance?

The nature of the trouble seems to indicate that the volume control resistor connection is open at the cathode end. This action would raise the screen-grid potential sufficiently to cause oscillation in the radio-frequency portion of the receiver. Make a careful examination and test of the resistor and contacts. The resistance of this control should be 2900 ohms. Also examine the leads from the end of the control resistor to the cathodes of the first and second r.f. -24 tubes.

It is well-known that alignment of the tuning condensers on both the high and low frequencies is difficult to obtain and it is likely that the alignment is good on the high frequencies and allowing oscillations to occur on the lower frequencies. A careful adjustment may remedy the trouble.

Speaker Rumbles

The speaker of my Radiola model 46 set rumbles at all times, even with

Thoughts On An EIGHTH BIRTHDAY

• • • *Looking Back in Radio*

THE first issue of RADEX saw the light just before Christmas in 1924. It gave to the radio world the now universal method of logging stations by frequencies. It was published in de luxe form with imitation leather covers and sold for fifty cents the copy. Until then logs had been kept alphabetically by call letters and consequently there was no way of telling where to tune for a station that had never been heard. Stations were allotted (or rather they grabbed) wavelengths and not frequencies.

Stations on the same wavelength came in at different places on the dial. When the idea first came to your Editor of publishing a list of stations in the order in which they would come in on the dial, it was a puzzle to know how this could be done. His first thought was that a space for dial numbers should be given to each station but, due to the fact that stations could not keep on their proper wavelengths, these dial numbers, instead of progressing evenly as they should, were ragged—sometimes up and sometimes down.

Birth of an Idea

It was finally decided to publish a list with a blank for the dial reading for each frequency as measured in kilocycles. This was the birth of the modern plan of grouping stations by kilocycles in even tens rather than unevenly in meters. This gave the dial reading for the channel and if stations on that frequency did not come in where they should, it was just too bad.

For two years RADEX appeared in the form of a log-book but in the autumn of 1926 it appeared as a magazine with 42 pages. From this issue, No. 15, the following stations, all of which have now disappeared, are taken from the index by frequencies. In order to agree with the zero-to-100 dials then in use, this index began with 1480 kilocycles and ran in reverse. There were no stations listed on the 1490 or 1500 channels in those days.

How many of these old-time stations can you locate?

On 1480: KFXB, KGBY, WIBS.
On 1470: WABB.
On 1460: KFVD, KFXY, KFYF, WFRL, WPDQ.
On 1450: KGTT, WABW, WJBA.
On 1440: KNRC.
On 1430: KGCN, KSMR, WCBR, WCWS, WIBH, WKBA.
On 1420: KFWC, KFWO.
On 1410: KFWV.
On 1390: KFBC, KFQW, WHBM, WHBW. WIBM, WKBG, WPRC, WRST.
On 1380: KFAF, WFKB, WOK.
On 1370: KFJC, KFRW, WIBI.
On 1360: KFUU, WQAA.
On 1350: WBBW, WBES, WHBD.
On 1340: KFQP, KFUR, WNRC, WRAF.
On 1330: KFIU, KFKZ, KFOB, KFQZ, WDAD, WEBL.
On 1320: KFVN, KGBS, WDBK, WJBR, WMRJ.

Of all the stations on these sixteen channels, only one remains in the same place today—WSVS, The Seneca Vocational School, Buffalo, N. Y., and, oddly enough, it still has the same power. Only one station then had more than 5000 watts—KGBS with 10,000, the "super-power" station at Seattle.

There were no pentode tubes nor screen-grids, no dynamic speakers nor even cones, no volume or tone controls, no local-long distance switches. The sets were mostly home-made affairs and those that were offered for sale were in crude, ugly boxes with the batteries on the floor. The speaker was usually a small tin horn to which was fastened with adhesive tape, a head-phone unit. The tubes were 199, 200, and

265 Pacific Ave., Toronto, Ont., is the proud owner. He reports that he brought in 108 new stations in exactly one month, including 48 amateurs, 13 police and two other s. w. He says he can tune down to 160 meters by using his ground as an aerial. G. Dana Boylan, 2205 Monroe Street, Wilmington, Del., has a two-tube receiver which he offers to put up against all the 11, 12 or 14 tube superhets! Living in what he says is radioly the worst location in Wilmington and with his radiator for a ground, he has 316 stations to his credit. He says he hears KFI every night now regardless of the weather. (Page Ripley.) He counts CKWX, Vancouver, B. C., and KGFK, Moorhead, Minn., as among his best. He has HIX verified among 5 Mexicans, 15 Canadians, 9 Cubans, 2 Nova Scotians, and 5 Californians. Dana doesn't tell us what circuit he uses but we greatly fear it is a regenerative which is extremely sensitive but an awful nuisance to everybody for a mile around when it oscillates which it usually does.

Some Good Reports

"Considering my distance from most of the stations in the U. S. and Canada, I believe my log of 500 very good," says L. E. Wallace, 110 N. Duval St., Tallahassee, Fla., "with 492 verifications, and 387 of these stations more than 500 miles from here. This list includes 28 from California, 5 in Oregon, 8 in Washington, and 3 in British Columbia. Among these are KJBS, KFXJ (50 watts), KXO, CKMO (50 watts), CKWX, KPCB, KFIO, and KFVD. I have logged all but two states, Maine and Wyoming, and have completed Florida, Georgia, Kentucky, Louisiana, Mississippi, South Carolina, Tennessee, Utah, and West Virginia. Foreign includes YV1BC, RUS, WKAQ, XEJ, XEFB (using 50), XEV, CMGF (first in U. S. to hear it), CMJG, and KGU,, if KGU can be called foreign. Also on October 29th I picked up my first Trans-Pacific station, 2YA, and held it from 4:27 to 5:34. Total of 20 in Canada, 21 in Cuba, and 18 in Mexico."

"I have a log of 641 stations of which 581 are verified and 56 2000-milers," writes M. Skalicky, Box 332 Terrace P. O., Homeville, Pa. "Some of my best catches are HIX, RUS, YV1BC, WKAQ, VPN, LS9, CKOV, KPQ, KOOS, 1OAB, KXRO, KFPM, KXL, KBPS, KGFL, WNBX, WNBW, WHBC, KGU, KGMB, KXO, KERN, KFBK, KFXM, KDB, 10-BP, 10-BQ and 2BL, but 2BL isn't verified yet as I only received them on October 17th; all the others above are verified. I use a 300-foot antenna with a 20-foot lead-in right now. I've been using a 100-foot antenna till this summer, but the 300-foot antenna works the best. The ground I use is about 30 feet long with a lead-in and it is 3 feet above the ground. I have four pipes driven in the ground and the copper wire is stretched from pipe to pipe. It runs the same direction as the antenna. I've tried quite a few different grounds, but the one above is the best I ever used."

"Set received at 6:30 a. m. December 25th, 1931; 75 stations logged by 9:30 p. m. same day; 150 stations by December 27th; 315 stations in the first month; 506 stations in not quite eleven months." This, thinks George B. Holland, Jr., 1340 Baker Ave., Schenectady, N. Y., ought to constitute some kind of a record. He hasn't counted twenty police stations, half a dozen relays and thirty amateurs which he picked up between 1500 and 1715 kcs. He submits the following questions: (1) What station was broadcasting records on about 990 kcs. with no announcements, about 4:30 a. m. Nov. 13th? (2) What station was doing the same on 630 kcs? (3) Where is W2XDF? (4) Where is VE9BM?" Nos. 1 and 2 were stations testing and may have been any of the stations on these two channels. W2XDF is the Faske Engineering Co., Brooklyn, with 500 watts and one of its frequencies is 1604 kcs. VE9BM is the Northern Electric Co., Ltd., 121 Shearer St., Montreal, Que.

(Continued on page 33)

Hilo, Hawaii, "for it is around the eighth of the month before RADEX reaches me. I really don't know what I would do without it as it sure has helped me in DXing. At present my log is 176 stations with 91 verified; have received 37 states, Mexico, Japan, Canada, Cuba and New Zealand. I have heard stations on all frequencies from 540 to 1500 with the exception of 1150 and 1440 and I hope to have these two included before this DX season is over. I want to tell you how much your DX calendar has helped me this month. I never used to know when DX programs were put on and, living so far away from the states made it hard to get the information here in time for the programs. Every month RADEX is getting better and better and is always full of valuable and interesting information."

Uses Loop for Interference

"Have had unusually good luck this month in logging new stations," advises Earl R. Roberts, 105 Gomber Ave., Cambridge, Ohio. "I succeeded in getting a new continent and in finishing up four more states bringing the total of completely logged states to 32. The new continent is South America, YV1BC, Caracas, Venezuela, being the station heard twice this month with the volume of a local each time. CFLC comes in good now from 5 to 7 p. m. EST each evening; CKCO came in on 885 kcys. at 10:45 p. m. Friday, but I had to disconnect my outside aerial and use the directional loop to cut out the interference; CKPC was received last night at 5:30 p. m.; CHNC is a phantom call for CKGW and was used Tuesdays and Fridays 7:30 to 8 p. m. EST. Our Ohio outlaw, WAIR, New Philadelphia, put on a special DX last Saturday from 1 to 2:09 a. m. EST on 850 kcys., using only 7½ watts. It came in weak but clear although the modulation was poor on the speech. I received KXO last Wednesday morning at 12:15 to 12:45 a. m. EST with fair volume and WCKY was on at the same time. How's that for selectivity? Had quite a bit of luck last night. I came home early and tried that station on 925 kcys. about 9:30 p. m. It came in after a few minutes of tuning and after listening to a concert orchestra. He announced in Spanish, 'HHK, Port-au-Prince, Haiti,' and then also in English. Talk about surprises!"

Our Little Ones

It looks as though we would have to start a baby department for little sets. Here is a one-peanut-tube set claiming 339 stations. I. H. Nixon,

NEWS *of the* DX WORLD

• • • *The Growing Logs*

IN spite of the pages recently added to this magazine, our readers seem to be insatiable for DX news, tips and gossip. "More, more," is the cry. "I read every word," says one. "I read each issue over and over," says another. "Print just what they claim; never mind the unbelievers," say many. And then we get one like this: "Print any more of those wild yarns and I for one am off RADEX for life." Well, we'll hew to the line and let the chips fall where they may. So here goes:

"I am always interested in the DX news," writes O. D. Duncan, 811 W. Woodard St., Denison, Texas. "I enjoy trying to get stations but seldom radio past midnight. I have been radioing since 1926 when I got a Crosley, then a Fada, Majestic, RCA, and now have the new 91-L Philco and have it trimmed so close that I can tune out WFAA, a 50,000 watter on 800 kcys., and tune in WGY, Schenectady on 790, and WCCO on 810. Since the first of October I have listened to and logged at least one station on each of the channels on the broadcast band, except two, 730 and 960 kcys. The Mexican stations cause me a lot of grief as they seem to be all over the dial and never seem to give their calls. I listened to one on 910 kycs. one night for an hour and a half and he never gave his call letters. I finally got so disgusted I tuned him out. Do wish that I could find a real good shortwave converter that doesn't cost too much. I tried one but all I got was a lot of noise and W8XK on two different places. Keep that good all-wave radio magazine going and tell the ones who don't believe certain stations can be heard that they just don't know, because I tried for six years to hear a Boston station and then for two nights they were like a local."

Here is a new Radexer joining the family due to a misfortune: "While recovering from a broken back and paralyzed legs," writes D. T. Cantwell from St. Joseph's Hospital, away up in North Bay, Ontario, "I decided to chase away boredom (I've been here seven months so far) by buying a second-hand radio. It's a 7-tube Atwater Kent, all-electric but with headphones only. Now I don't know the first thing about a radio set or DXing. I got a copy of your magazine recently—it's an excellent work, first class, really—and it has helped me a lot. Would you be interested in the list of far-off stations I got in 17 days—48 all told?

Logging from a Cot

"North Bay has its own station, CFCH, 100 watts on 930 kcs. The town is 200 miles north of Toronto. My aerial stretches from a second-story window to a nearby building. Here are my long distance catches: WJSV, WOWO, WADC, WDOD, WLAC, WWVA, WBZ, WIOD, WFIW, WCKY, WJAX, WWL, WSB, WCCO, XER, WHAS, WSM, WOW, WEAO and CKOK. Yet I can't get Ottawa or Montreal!"

That is a fine list to pull in in a few days from so far north under adverse conditions and what a pleasure it must be to one so sadly handicapped. Come on, Radexers, let's send a New Year card to this game brother who has been lying on his back for the last seven or eight months. Let's hope he soon recovers from his "interference" and that the rest of his life is free from "static." Address him at the hospital. (Two cents postage on cards.)

A Voice from Hawaii

"Living so far out in the middle of the Pacific is my own hard luck," laments Goldie Charlock, P. O. Box 804,

from the Hotel Roosevelt. By this time the band was full-fledged. It had enlisted Victor Lombardo, Larry Owen and Jim Dillon, saxophonists; and Ben Davis, bass horn player.

Along came a radio sponsor and for years the Lombardos have retained a wide and devoted audience. They work hard on their programs, and quarrel heatedly but good-naturedly over new arrangements. Guy is the final arbiter. The Royal Canadians merge into perfect harmony when he waves his violin bow. If for any reason Guy is detained, Carmen steps forward with his saxophone to lead the band. Guy is 29 and as quiet and unostentatious as in the days when they were Ontario's boy wonders.

David Ross Announcing

Another one of that strange, mysterious breed—the native New Yorker—was recently smoked out of his hiding place in the Columbia studios. When he emerged into the full light of day he was seen to be David Ross, diminutive CBS announcer. What brought him out of his lair was a glittering gold medal which the American Academy of Arts and Letters has awarded him as the 1932 prize for good diction. The Academy's gold medal is presented each year to the radio announcer whose diction and pronunciation during the preceding twelve months is judged the best example of vocal perfection.

Newsboy to Poet

In true Alger tradition, David Ross began his working career as a newsboy. After graduation from high school he enrolled for a liberal arts course in the College of the City of New York and later transferred to Rutgers for agricultural training. A brief experience with this convinced him he would never be a good farmer, scientific or otherwise, and he left college to enter the world of business. One of his early jobs was supervisor of an orphan asylum; he was secretary to a temperamental Russian baroness for a while, and he consistently bothered magazine editors with his poetry. With occasional stray parts in musical comedies, writing advertising copy and reviewing a book a week for a magazine, he was able to keep body and soul, so to speak, together. He got his first radio job on the now defunct WGBS in New York and after two years there joined Columbia. He began as a dramatic reader, became a regular announcer and finally developed a program of poetry readings.

Among the programs he has announced for CBS are Arabesque, Around the Samovar, To the Ladies, and many others. Then, too, there is his own program, Poet's Gold, in which he reads verse to his heart's content.

Others who have won the diction medal in previous years are Milton J. Cross, 1929; Alwyn Bach, 1930; and John Holbrook, 1931.

MORE DX TIPS

WCLO broadcasts the latest up-to-the minute DX tips for the Transcontinental Radio DX Club, on their DX program the last Wednesday morning of each month from 2:30 to 3:30 a. m. EST, reports Robert H. Weaver, 603 W. Market St., York, Penna. Through the courtesy of this club we are able to include LS-8 at Buenos Aires in our DX Calendar this month.

over the NBC-WEAF network, it's verbal acrobatics and not facial calisthenics that make him funny. When he makes another stage appearance, however, he'll need his face again, and he is afraid he'll lose the ability to distort it into strange shapes. So what's to do about it? He sits before a mirror and makes faces at himself for half an hour each day. Then he spends another thirty minutes practicing the tongue twisting that has made him a radio hit.

Chief of the Royal Canadians

When Guy Lombardo was a small boy in London, Ontario, and his father sent him trudging truculently to his first violin lesson, the outcome come not be foreseen. In the ensuing years, Guy enrolled three younger brothers and several school friends as his musical disciples. The Lombardo boys—Guy, Carmen, Liebert and Victor—gave the home town a new kind of music.

Their first appearance was at a mother's club in London, an event linked in later years to their musical entry in New York. Guy was then 12 years old. He played the violin, young Freddy Kreitzer pounded the piano, Carmen tooted the flute, and little Liebert set up a jazzy racket with an old kettle and drums purchased for the occasion.

At an early age, Guy rebelled against the "hot" type of jazz, and groped around for a tempo and style which pleased him. Unaware at the time of its full value, he stumbled across the soft legato tempo which won his band its laurels years later.

Cooperating as old friends and resourceful musicians, the Royal Canadians today are at the peak in popular music. They have advanced to increasing favor through their weekly Robert Burns Panatela programs over the Columbia network, and through countless engagements in vaudeville, hotels and summer spots for revellers.

Getting a Start

In early days, the young Lombardos charged $15 for a private dance performance. They even were willing to reduce the charge when they had swell refreshments and if they danced with the guests during solo numbers. Soon the orchestra was augmented by George Gowans, who turned to the drums while Liebert mastered the trumpet; Francis Henry, who played the guitar, and Fred Higman, saxophonist. They were stepping up the ladder. After a season at Springbank pavilion and an ensuing summer at the London Winter Gardens—a nickel-a-dance place—they experienced their first triumph at Fort Stanley Casino, where they drew crowds to the Lake Erie resort.

Next came an offer to go on a vaudeville tour, and the title "Royal Canadians" was tagged on to add a little swank. They got as far as Cleveland where, after being held over for three weeks, they received a tempting offer from a roadhouse. Chicago was next in line. There they became favorites at the Granada Cafe. Word of their Chicago success spread to New York, where the husband of the woman who had invited them to play at the London Mother's Club years before was instrumental in arranging an offer

WHO'S WHO *In Radioland*

• • • *"Betty" Tells Us*

JACK PEARL, alias Baron Munchausen first saw the light of day in Little Old New York, October 29, 1895. He attended Public School 62 and later DeWitt Clinton High School. Soon after leaving school he secured his first job as an errand boy for a safety razor manufacturer.

A number of various jobs followed until finally, while still a youngster, he was employed in the stock room of the Shapiro Publishing Company, and it was there that he received his first taste of Broadway. In the course of events he became a song and act plugger. In 1910, when his soprano voice was at its prime, he was offered a job at $12.00 a week by Gus Edwards in a chorus he was forming. Members of the chorus at the time were Walter Winchell, Eddie Buzzell, George Jessel, Eddie Cantor and the Duncan Sisters. With a definite idea of his worth, Pearl held out for the fabulous salary of $15.00. He didn't get the job!

Not at all chagrined by his failure to "crash" the entertainment field, he continued as a plugger for the Shapiro firm until he learned that "School Days" was about to be produced with Herman Timberg in the leading role. He presented himself promptly for a place in the cast and by dint of much persuasion and a little misrepresentation of his age and experience, he finally secured one.

Baron Münchausen

His big chance came when Danny Murphy, the German comedian, became ill. At a moment's notice Pearl was thrust into the part. He acquitted himself notably and thereafter the part was his. He toured with the show in his featured role for two years.

Burlesque and Vaudeville

After that he went into vaudeville on the Keith circuit from 1913 to 1915. On the advice of a friend he entered burlesque for the experience to be had there and trouped in that field for four years until the Shuberts bought up his contract for $13,000. He was featured in their Winter Garden shows each year from then until 1930. Finally he was headlined in the last Ziegfeld Follies.

Jack is married to Winifred Desborough. He first met her in a revival of "The Belle of New York" in which she played the leading role. Nurtured by the glaring footlights the romance flourished and eventually they were married. They have no children.

The trials of people who don't know what to do with their hands when facing an audience is nothing to the problem of Jack Pearl, who doesn't know what to do with his face since he went into radio. It was his ability to make his face do tricks that brought him his first success on the stage, and now that he is the Baron Munchausen of the Lucky Strike Thursday night broadcasts

tions leave the air. We will see if this can be arranged. We fear that by the time the information gets to us from San Francisco, it may be too late to be any good. Then, too, we are at a loss to know how to provide space for it but if our readers want it, we will make every effort to supply it for them.

"In regard to WJSV," writes John Strong, 1436 Meridian Place N.W., Washington, D. C. "I might tell you that they moved from Mt. Vernon Hills, Va., to Alexandria, Va., and not from Alexandria to Washington. They didn't really move anyhow. It is almost entirely a new station. Already it has been heard in all Canadian provinces, all states in the U. S. and Mexico, in Europe, Australia and South America. It is not operating at full strength yet. They have one vertical strand of wire for the antenna and when they get a real aerial up they expect a 30% increase in signal strength."

All of the 533 stations logged by George Othen, 115 Litchfield Ave., West, Willmar, Minn., come in at the frequencies shown in RADEX with the exception of KMJ which still comes in on 1210. Last September upon information from the Radio Commission, we changed KMJ from 1210 to 580 but evidently it has not yet moved to its new channel. Will some of our California readers let us know about this? Mr. Othen has a Majestic 293 and thinks that RADEX should be in every home where there is a radio. We agree with him.

The Synchronized Channel

"I see in the November RADEX that D. G. P. of Rochester says that WHEC, WOKO, WCAH and WHP are no longer synchronized," comments Harry Lytle, Jr., 491 Linwood Ave., Columbus, Ohio. "I wish to confirm his statement and I am enclosing a day's program of WCAH to prove it. Whenever WCAH wants to broadcast a local program it does so."

VOGY, St. John's, Nfld., on 860 can best be picked up between 3:00 and 5:00 a. m. EST on Sunday mornings, volunteers Robert E. Moran, 1309 Wellington St., Ottawa, Ont. Mr. Moran wants to know if any Radexers have yet received their verification from YV1BC for their program on October 3rd. He hasn't. He is also worrying about KGGM at Albuquerque which hasn't answered his letter of October 9th. Meyer Tuchinsky sends us the letter-head of YV1BC so evidently he got his verification. Their address is Apartado de Correos 290, Caracas, Venezuela, S. A.

NNRC DX Tips

"I thought perhaps your readers might be interested in knowing that this station broadcasts the DX tips of the Newark News Radio Club each Monday, Wednesday, Thursday and Saturday evenings at midnight," writes Radio Station WHOM, Jersey City, N. J.

Benjamin Stein, 435 Aisquith St., Baltimore, Md., reports CMCW on 955 kcys. He says CMCQ broadcasts every Tuesday night from midnight to 1:00 a. m. EST. He thinks he is financing the operation of the Cuban station. He has about twenty dimes down there now which aren't bringing him anything. Looks like another job for the marines. Chas. L. Morgan, 800 East 179th St., New York City, says he was advised by a Cuban station not to send any money to a station in that country unless it announced in English. He says he finds this a good rule.

CMCH at Havana, very kindly dedicated a program to RADEX on November 26th but the information regarding it reached us too late for us to get it to our readers. We deeply appreciate this courtesy to Radexers and hope a similar program can be arranged sufficiently in advance for a hundred thousand of us to try to tune it in.

Next Month

Another article by Mr. Dashiell on the use of head-phones with modern all-electric receivers.

value of our catches. Not a bad idea at that. Try this formula on some of your best ones and let's see who has the highest "quotient."

"Your readers often mention their 'best catches,'" writes R. C. Myretetus, 515 Lincoln Ave., Collingswood, N. J. "I have evolved a system by which these hard-to-get stations can be accurately recorded in figures and use it myself. Using your radio map and taking your home city as a center, draw concentric circles at distances of 100 miles per the scale. Next use this formula: Distance in Miles divided by Power in Watts gives your distance factor. Carry to two decimals. For example, I consider CMHJ, Cienfuegos, Cuba, mine. This is a 75-watter and 1340 miles from Collingswood, N. J. 1340 divided by 75 gives a quotient of 17.86, the figure representing the catch. If you consider this scheme has merit, you can pass it along to your readers and let them send in their best catches showing distance divided by power, and quotient, a higher figure being considered better than a lower one."

Telling them Apart

Can you tell your Aussies from your Newzies? Well, here's how by T. Colegrove, Frankfort, Mich. "In trying to decide whether a certain station is a VK or a ZL, it might help to know that the ZL stations are not allowed to do any advertising whatever while the VK's are much like the U. S. stations in this respect." In connection with Mr. Dashiell's article on harmonics in this issue, this excerpt from Mr. Colegrove's letter is interesting. "I have never yet heard WBAK on the b. c. band, yet the other day I heard him on his sixth harmonic, 8,580 kcs., or 34.9 meters, during his 10:30-11:03 a. m. broadcast. XER is the only foreign station whose harmonic I have heard and then only his second on 1470 kcs. And speaking of harmonics, my receiver is now aboard a boat and we dock less than a quarter of a mile from the wireless station whose standby receiver is always tuned to 410 kcs. except when a station is being worked. This receiver, being regenerative and therefore a miniature broadcasting station when it is in oscillation, has a second harmonic on 820 kcs. so bad that daytime reception of WHAS is impossible and that of WCCO quite difficult. Even at night this receiver makes a very bad heterodyne with WHAS." Mr. Colgrove is anxious to identify Trans-Pacific stations heard on 540 and 1460 kcs.

Help!

Who knows whether or not they finally caught these men on the roof?

"On November 1st at 6:30 p. m. CST," writes Louis Strand, 3500 Herndon St., Chicago, Ill. "I overheard the following on approximately 1060 kcys.: 'Officer Karney, Officer Karney, Officer Karney, come to my house (street and number mentioned) at once. There are some men on top of the roof trying to cut the wires. Officer Karney, Officer Karney, come at once. This broadcast may be interrupted any moment.' That is all I heard and am curious to know if this was a genuine call for police or just a play. It sounded so realistic that I am inclined to think it was a real police call, although I can't see how that could be done on the regular broadcast band. Can you or any of the readers satisfy my curiosity?"

"We have police radio now in Montreal," writes Leslie G. Briscoe, 3743 Hutchinson St., Montreal, Que. "The transmitter has an output of 400 watts and operates, I understand, on about 2800 kcys. Their call is UYR. Could any of the readers write me personally and tell me whether it was CHWC or CKCK that broadcast the DX program on November 6th from 3 to 5 a. m. EST, on 960 kcys.? By the way, I now have 2YA in Wellington, N. Z., my first trans-Pacific station. What a kick I got hearing it!"

Les Heron, 378 High Street, East, Moose Jaw, Sask., wants us to give some of the Pacific Coast programs especially those after 9:30 p. m. PST, at which time the eastern network programs carried by the western sta-

to each direction at a height of about 60 feet. I am using a Midwest 11-tube set which tunes very sharply on any aerial, but after putting up this new one, you have to be right on the station's nose to get its program."

Trolley Troubles

"In the November issue of RADEX I noticed a Mr. Delmore having interference due to a trolley car," writes C. J. Pratt, 167 Oakdean Blvd., Winnipeg, Man. "I have a friend who lives on a street where the trolley cars run and who had the same trouble. We experimented with everything and finally the aerial. This seemed to be the source of the trouble. His aerial was parallel with the trolley wire, so we changed it to right angles with it. This change practically stopped all interference and gave better reception. Another friend was having the same trouble so I told him about the aerial. He put up an umbrella aerial instead of changing the old one. This also stopped the interference."

"I live 23 feet from a carline, with heavy automobile traffic, at the front of the house," comments John J. Swatko, Secretary Radio Review DX Club, 216 Fifth Ave., Homestead, Pa. "At the rear of the house there is a railroad, with a telegraph line. At one time I had the same trouble as Mr. Delmore of Philadelphia now has. My troubles were cut by using a 120-foot aerial 'M' shaped. I am using a double ground, one on a cold-water pipe and the other is an outside ground using a pipe with copper wire wrapped around it. One pound of salt and water in pipe. It would be best for Mr. Delmore to have his aerial above all wires if he can do it."

Stranger than Fiction

But here is a reader who picked up a station not only without either aerial or ground but with his tubes burned out. "Doctor Watson, come here, I want you."

"I don't know whether I should write to you or Robert Ripley," comments Richard Canfield, 2401 S.W. 28th St., Miami, Fla. "Yesterday my set went completely out. Both locals were a mere whisper with the volume on full. But, 'believe it or not' WBT, Charlotte, N. C., 651 miles away, came in fine. I took the set to the shop and they found three tubes burned out. I had no ground or aerial hooked up when WBT was coming in. 'What makes my set do that?' I can prove the above story by three people and hope to have verifications from WBT next week. Incidentally, WKAQ, San Juan, P. R., is on 2 to 4 p. m. and 6 to 10:30 p. m. AST every night."

"Vos you dere, Sharlie?" asks Baron Munchausen, before he tells a whopper.

Here is a rough and ready rule worked out so that we Radexers can measure mathematically the relative

your ardent fans who would like to see her photo, please."

We strive to please and the charming Ethel graces the front cover of this issue.

More Suggestions

Miss Florence Haist, Box 157, Lindenwold, N. J., is responsible for the suggestion which we are putting into effect with this issue. That is to convert the times on the DX Calendar into Eastern Standard in order that they may be arranged chronologically. We think this is a good idea and one that will add to the convenience of this popular feature.

We have had so many requests for information in regard to attaching headphones with and without adapters that we have asked Mr. Dashiell to prepare a new article for the February issue of this magazine on this subject. What with new sets and new tubes the best method of using phones is ever-changing. So, Eugene Delmore, 2247 N. 15th St., Philadelphia, and others, watch the February number.

No More Tests

Now the darn depression is hitting the Radexers. The Radio Commission is discontinuing the tests as an economy measure and putting it up to each broadcaster to keep on his frequency within fifty cycles either way under penalty of losing his license. Frequency checks will be made only when a station is unable to have it done for themselves. No notices of such tests will be given to the public. This is sad news for many a station would be missing today from thousands of logs except for the rare opportunity of picking them up on these tests.

Let's test the theory that radio signals are better caught west to east than vice versa. WJAG, Norfolk, Nebraska, which is about in the center of the North American continent, will put on another program especially for the Radexers Saturday night, January 14th, from midnight to 1:00 a. m. CST. We will pit the Westerners against the Easterners and see which side can submit the most reports of reception of this program. The North and the South might enter the contest also.

A little kink that makes for quick reference is submitted by William M. Perry, 517 East Tahlequah Ave., Sulphur, Okla. He takes a pair of shears and with one cut takes off the lower right corner of all the pages of his RADEX from 1 to 46 inclusive. He then moves back a quarter of an inch or so and again clips page 1 to 34 inclusive. This gives him two tabs one of which opens the book instantly to What's on the Air and the other to the Index by Frequencies and Dial Numbers. He hasn't patented the idea.

Switching Signals

"Last night, November 3rd, about 8 o'clock, rather than turn the volume down, I backed off the 1010 frequency to about 1015 kcys.," writes R. R. Rawstron, 926 Main St., Claremont, N. H. "By using a 270-foot counterpoise I could hear KYW very loudly, and by removing the counterpoise and using only a 130-foot aerial I could hear only one of the New Yorkers very loudly also. This was done by leaving the dial at 1015 kcys. and not touching it at all either before or after use of the counterpoise."

Some listeners have several different aerials and grounds connected to switches so that it is possible to use any one of them and very often interference on some particular channel may be entirely eliminated by changing the aerial and ground combination.

"Last week I put up an aerial just on a hunch that it might give results," says W. E. Evans, 2 Woodland Road, Sewickley, Pa. "I purchased 100 feet of solid aerial wire and cut it into four 25-foot lengths, strung one in each direction, north, east, south and west, brought them together at the house and soldered the lead-in to all four of them. Due to my location I was able to get all four wires running

In the EDITORIAL SANCTUM

• • • *The Monthly Confab*

A VERY HAPPY NEW YEAR to all our readers. Nineteen Thirty Two is gone and good riddance. Nineteen Thirty Three is something else again. What changes the years have wrought. Elsewhere in this magazine we are indulging in some editorial reminiscences due to an accidental perusal of the first issue of this publication in magazine form away back in the dark ages of 1926 B.C. (Before the Commission.) We still break out in a cold sweat when we think of the vagaries of radio in those uncontrolled days. Invariably, it seemed, we would no sooner get on the press with the very latest data on stations than hundreds of them would switch to new frequencies. It was as though they were waiting for us to go to press before making the unheralded and wholesale shifts. Once we had to sell an entire edition for junk!

Of course we still have our troubles. Trying to keep up with the stations in Cuba and Mexico is a potent cause for insomnia. But perhaps one of these days our honorable Department of State will get around to negotiating a new radio treaty with those countries. At present they seem to take the position that so long as a station is on the south bank of the Rio Grande, everything is lovely. That must be our "isolationist" policy we read about.

Keeping up with Mexico

We are trying hard to get the correct data on those new Mexicans for this issue but even the people in Mexico do not seem to know much about them. Alvin Oliver, 1921 West Dallas St., Houston, Texas, is close enough to them so he ought to know. He reports that the new station on 885 kcs. is XEPN at Piedras Negras, Coahuilla, with "many thousands" of watts power. We have also had this station reported as XETN and the town as Tiedras Negras. None of our maps of Mexico shows either town but it is evidently across the Rio Grande from Eagle Pass, Texas, for this station has a studio there and all mail should be sent to Eagle Pass. Mr. Oliver says this station has not yet begun regular transmission but expects to do so very soon and that their time on the air will be from 6 p. m. until 2:00 a. m. CST. He also writes that he thinks XED at Reynosa has changed its call to XEAW and wants to know when XENT will begin broadcasting.

We have had reports that XEPN will use 100,000 watts and another new one, XETM on 845 at Matamoras, Tamaulipas, will use 150,000 and the new XETN on 1115 at Laredo, Tams., will likewise use 150,000. If this government doesn't soon agree with Mexico upon a division of frequencies, half our stations will be heterodyned by Mexican stations.

Another Report

"I am reporting reception of a new Mexican station that I heard last night," reports Paul Russnak, Bartley, W. Va. "They were broadcasting their third test program and said they were going to have another one tonight (November 16th). I think the call letters are XEPN on 885 kcys., with an authorized wattage of 100,000. They are announcing as 'The Voice of the Western Hemisphere.' They have a studio at Eagle Pass, Texas. I could not catch the name of the town, but it was in the state of Coahuila, Mexico."

And There it is

"Please have the photo of Ethel Shutta on one of your cover plates as soon as possible on some future issue of RADEX," pleads Paul Russnak, Bartley, W. Va. "I am like many other of

up underneath the base. So effective is the shielding that undesirable oscillation is said to be entirely eliminated and stray pick-up from local stations reduced to a very low level. With antenna disconnected it is practically impossible, say the makers, to hear even nearby powerful stations.

In the V-16 two speakers are used so that all tones and pitches are clearly received. The speakers are perfectly matched and sound as a single unit. More than 8 watts are supplied to each one of the speaker fields. A power line filter is provided to eliminate any disturbances which might be picked up by the power line. The console in which this chassis is mounted is one of unusual beauty.

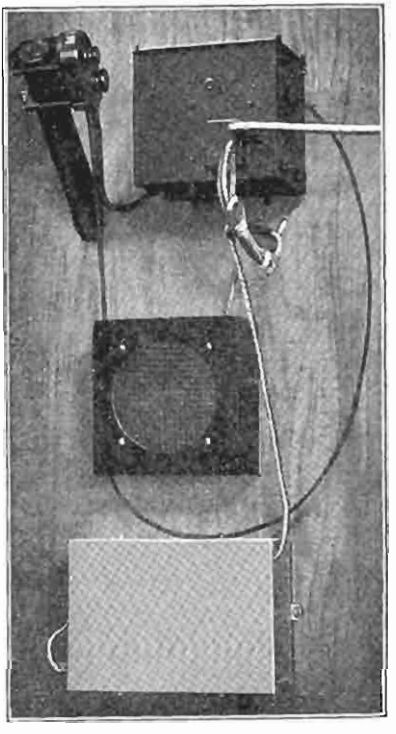
A 1933 Auto Radio

Constant improvement is taking place in the automobile-radio field. The Gulbransen Company, 816 North Kedzie Ave., Chicago, presents a seven-tube Superheterodyne of extremely compact size, the chassis container being less than 7x6x9 inches. The midget control panel with illuminated dial and switch attaches to the steering column below the wheel. It has automatic volume control, dynamic speaker and full range tone control. Receiver circuit is compensated so that either a "B" eliminator or "B" batteries may be used. No "C" battery is required.

In the illustration the control unit is shown on the steering column. The receiver unit with special dash mounting at the upper right. The dynamic speaker with single-hole dash mounting is in the center and the "B" Eliminator is at the bottom. The "A" current is taken, of course, from the regular battery of the car.

Long Waves on Midwest

Long wave coils are now available for use in the 16-tube Midwest Receiver, which give a tuning range of 15 to 550 meters and 1000 to 2000 meters. This coverage is obtained without the use of plug-in coils. Five points are used on the wave band selector instead of four.



The Gulbransen Auto-Radio

SCHEDULE OF XEU

In sending their subscription to RADEX, Radio Station XEU, Veracruz, Mexico, give this information regarding their programs and state that everyone reporting the reception of their station will receive a "beautiful picture from the Station and Mexico." They state that it is not necessary to send money or postage; they will answer immediately upon receipt of report. Weekdays: 7:00 to 8:00 a. m. News, weather, financial information, short stories; 10:00 to 11:00 a. m. Special information of interest to women; Noon to 3:00 p. m. Commercial programs with music; 6:00 to 7:00 p. m. Short stories for babies by Uncle Victor; 7:00 to midnight Commercial programs with music. Sundays: 7:00 to 8:00 a. m.; Noon to 4:00 p. m. and 7:00 to 11:00 p. m.

The PROGRESS *of* RADIO

• • • *A Developing Art*

"The inquiry from Emil Sesto of the Ship E. M. Clark in the October issue, prompts me to write this letter," says W. E. Doty, 127 Riverside Drive, New York. "A few days ago I had a demonstration of a new and simple way of operating an a. c. radio receiver from d. c. current with quiet and excellent results. This device is known as the 'Solar Inverter' and is slightly larger than a cigar box and very simple in construction. It is plugged into the supply line and the receiver plugs into it. It is said to be capable of handling up to 12 tubes. Only one simple adjustment is necessary according to the number of tubes a set uses. It will not function with sets using 250 or 281 tubes. It is also said to filter out the line noises. I was impressed with what I heard and saw and believe other readers would be."

The Solar Inverter

Our Technical Editor says that this Inverter is of the magnetic type instead of the usual rotary motor-generator type and is nearly as efficient; that there are no moving parts to create interference and that it compares favorably with converters; that it has a replaceable unit that is good for 1000 hours of operation. It converts 110 volts of d. c. to 110 volts a. c.

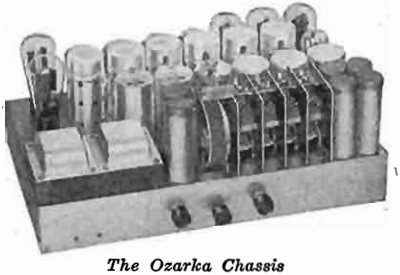
The Solar Inverter is manufactured by the Solar Manufacturing Corp., 599 Broadway, New York, and they have this to say regarding their device:

"The direct current is applied to the primary of a transformer through an interrupter which is tuned to 60 cycles. This interrupter is driven by an electromagnet in the same manner as the familiar bell or buzzer. The pulsating d. c. through the primary induces a. c. in the secondary. The box is of sound-proof material so that no noise is heard within two feet in a quiet room. A filter system suppresses all r. f. disturbances due to the vibrator. The metal box is 11x7x6 inches. The inverter is available for loads up to 150 watts at 110 or 220 volts and from d. c. lines of 32, 110 and 220 volts. The magnetic unit will require replacement in the average home about once a year and a new unit is provided in exchange for $2.50."

The Solar Inverter may also be secured through the Wholesale Radio Service Co., 100 Sixth Ave., New York City.

A Sixteen-Tuber

We are presenting herewith an illustration of the chassis of the Ozarka V-16 which was unfortunately left out of a previous issue. Every coil and tube in the radio frequency circuit is completely shielded by means of aluminum cans. All of the wiring is effectively shielded by the metal sub-base; and in addition to this, a separate shielding partition is built



The Ozarka Chassis

back of the very hall in which he is speaking! By the clock he hears the speaker seven hours before he speaks!

"I have a Stewart-Warner combination long- and short-wave radio," says W. H. Bradford, Box 64, Newfields, N. H. "Have picked up over 600 different calls so far. Get talks from ships, police calls, airway reports, as well as programs across the water, but my best one is Sydney, Australia, on a test program. Call letters VK2ME, but only got it once. My set is eight tubes on regular broadcast; when using short waves use ten tubes. Am not using any outside aerial at all. All I have is a short wire from my set to the bed springs."

"I have a new Lafayette ten-tube all-wave set," reports R. A. Gravel, Custom House, Port-au-Prince, Haiti, "and have not been a week in this game, but have picked up some 57 stations, among which W3XAL, Boundbrook, N. J., shortwave broadcast of Sunday, November 13th, has been my best reception from 11 A. M. to 4 P. M.

"It certainly was great," comments Frank E. Switalski, 2819 Victoria Ave., Cincinnati, Ohio, "to see YV1BC included in the regular indices this month. This station uses 5000 watts. I hear them also on 49.49 meters as loud as WLW, every evening. Best shortwave stations at this time are YV1BC, VE9GW, VK2ME and EAQ."

How RADIO WAVES ARE DIVIDED • • •

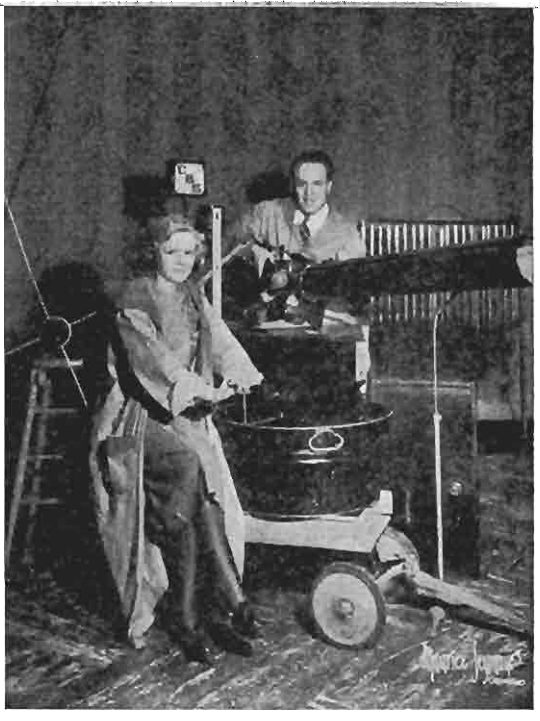
10 kcs.	to 100	Long Waves, Fixed Point to Point, Transoceanic, High Power Government and Commercial
100 to	195	Fixed Point to Point and Maritime, Mobile, Ship to Shore
195 to	245	Government
245 to	283	Government and Point to Point
283 to	390	Government
390 to	485	Maritime, Mobile, Aircraft, Government
485 to	550	Government
550 to	1500	Broadcast Band
1500 to	1600	Marine Fire
1600 to	1716	Television
1716 to	2000	Amateur
2000 to	2300	Television
2300 to	2500	Police, Fire, Miscellaneous
2500 to	2750	Ship, Airway, Coastal
2750 to	3100	Television, Aviation
3100 to	3500	Government, Air, etc.
3500 to	4000	Amateur
4000 to	4535	Ship, Government, Foreign
4535 to	5365	Point to Point Foreign, etc.
5365 to	6160	Relay Broadcast, Air, Foreign
6160 to	6425	Ships, Coastal
6425 to	7000	Air, Point to Point
7000 to	7300	Amateur
7300 to	8000	Point to Point
8000 to	8900	Government, Point to Point
8900 to	9600	Point to Point, Relay Broadcast
9600 to	11000	Point to Point
11000 to	13330	Government, Point to Point, Ships, Relay Broadcast
13330 to	14000	Point to Point
14000 to	14400	Amateur
14400 to	16060	Point to Point, Relay Broadcast
16060 to	18100	Ships, Government, Point to Point, Misc.
18100 to	21420	Point to Point
21420 to	23000	Ship to Shore, etc.
23000 to	30000	Experimental Amateur
30000 to	100000	English Channel Experiments in Ultra-Short Waves
Above	100000	Heat Rays, Solar Rays, X Rays and Gamma Rays

phone), then shortly after 10 A. M. EST a man calls 'Allo Berlin' several times and then carries on a conversation in German. I have never heard this station at any time other than between 9:30 and 10:30 A. M. According to the recent shortwave logs appearing in RADEX, there is a YVQ at Maracay, Venezuela on 18,296 kcys., which works Berlin and also tests irregularly around 10 A. M. Could this be my station? I have just recently purchased a Philco model 43 baby-grand as an auxiliary to the large cabinet model Zenith and in the thirteen days which I have had it, have identified 337 s. w. stations, boosting my log from 468 b. c. to a total of 805 on all waves. Except for S. S. Monarch of Bermuda, S. S. Bremen, VRT-ZFB, Bermuda, and LSG, Buenos Aires, my s. w. log is entirely domestic, but even then, I have surely been bitten hard by the short-wave bug."

Gets League of Nations

"I am proud to report the reception of the League of Nations station at Geneva, Switzerland, HBP on 38.47 meters, on October 9, 1932," writes Eugene M. Howard, 2036 Houston St., Indianapolis, Ind. "I heard their broadcast for about forty minutes, with good loudspeaker volume and had very little background noise. I am enclosing a copy of the letter I received in verification of that broadcast. Since I have been reading RADEX I have not noticed a report on the reception of this station. I have noticed that few, if any, reports of DX reception have been reported to you from Indianapolis or vicinity. I have heard that it is a hard spot for good reception. Could this have anything to do with lack of reports?"

"I read C. R. Anderson's inquiry regarding a station which after playing a piece shouts, 'Hello America,'" advises Edwin A. Thompson, 509 Cypress Way, Long Beach, Calif. "I have heard the same station this afternoon, November 3rd, from 3 to 4 PST. Mr. Anderson believes it to be between 15 and 30 meters. I believe it is between 25.58 and 26.00 meters. I have logged VE9JR at 25.58 meters and this apparently 'anonymous' station comes in very close on my dial (Stewart-Warner short-wave converter). I, too, am curious to know what station this could be. It seems to me the pieces played are Mexican or Spanish, perhaps indicating location of the station."



Here are the blood-curdling noises of the "Fu Manchu Mysteries." The rain falls, the wind moans, an airplane roars. Helen Earle is running the water-fall and Urban Johnson crunches shoes in a pan of corn flakes.

From A. C. Lyell, P. O. Box 795, in far-off Bloemfontein, O. F. S., South Africa, comes a subscription to RADEX with the information that he is picking up quite easily on his Pilot Dragon all-wave set, a number of the American stations on short waves including New York, Cincinnati, Pittsburgh and W3XAL at Bound Brook. The time in transit between Cleveland and Bloemfontein is exactly one month. It's hard to realize that Mr. Lyell can hear a speaker in the United States even before those in the

WEHS 1420 Cicero, Ill., *CST.* 4-6 p.m.
WELL 1420 Battle Creek, Mich.
WENC 1420 Americus, Ga., *EST.* 7 a.m.-2 p.m.; 4 p.m.-sunset.
WENR 870 Chicago, Ill., *CST.* 10:15-11:45 a.m.; 3:30-7 p.m.; 8:30 p.m.-1 a.m. next day.
WERE 1420 Erie, Pa., *EST.* 8 a.m.-1:30 p.m.; 3:45-10:45.
WESG 1040 Elmira, N. Y. Variable.
WEVD 1300 New York City, *EST.* 8-9 a.m.; 3-6 p.m.; 8-9 p.m.; 10-11 p.m.
WEW 760 St. Louis, Mo., *CST.* 8 a.m.-5 p.m.
WEXL 1310 Royal Oak, Mich., *EST.* 8 a.m.-11 p.m.
WFAA 800 Dallas, Texas, *CST.* 6:45-8:30 a.m.; 10:30 a.m.-12:30 p.m.; 3-5 p.m.; 5:30-6; 9-11:30 p.m.
WFAB 1300 New York City.
WFAM 1200 South Bend, Ind., *CST.* 7:30-10:15 a.m.; noon-3 p.m.; 5:30-8:30 p.m.
WFAN 610 Philadelphia, Pa., *EST.* 9 a.m.-mid.
WFAS 1210 White Plains, N. Y. 3-5 p.m.; 9-mid. *EST.*
WFBC 1200 Knoxville, Tenn.
WFBE 1200 Cincinnati, Ohio, *EST.* 7 a.m.-11 p.m.
WFBG 1310 Altoona, Pa. 10:30 a.m.-4:30 p.m.; 7-10:30 p.m.
WFBL 1360 Syracuse, N. Y., *EST.* 7:30 a.m.-mid.
WFBM 1230 Indianapolis, Ind., *CST.* 7:30-10:15 a.m.; noon-3 p.m.; 5:30 p.m.-mid.
WFBR 1270 Baltimore, Md., *EST.* 7 a.m.-mid.
WFDF 1310 Flint, Mich., *CST.* 7 a.m.-11 p.m.
WFDV 1500 Rome, Ga., *CST.* 6-9 a.m.; noon-3 p.m.; 6-9 p.m.
WFEA 1430 Manchester, N. H., *EST.* 9 a.m.-11 p.m.
WFI 560 Philadelphia, Pa., *EST.* 6:45-9 a.m.; 9:45-11 p.m.; 1-2 p.m.; 3-4:30 p.m.; 6-mid.
WFIW 940 Hopkinsville, Ky., *CST.* 6 a.m.-3 p.m.; 5 p.m.-mid.
WFLA 620 Clearwater, Fla , *EST.* 7:15 a.m.-mid.
WFOX 1400 Brooklyn, N. Y., *EST.* 3:45-6 p.m.; 10:30-mid.
WGAL 1310 Lancaster, Pa., *EST.* 10 a.m.-noon; 1:30-6 p.m.
WGAR 1450 Cleveland, Ohio, *EST* 6 a.m.-1 a.m. next day.
WGBB 1210 Freeport , N. Y., *EST* 7-9 p.m.
WGBF 630 Evansville, Ind., *CST.* 6:30 a.m.-3:30 p.m.; 4-6:45 p.m.; 8-11 p.m.
WGBI 880 Scranton, Pa., *EST.* 9:30 a.m.-12:30 p.m.; 1:30-4:30 p.m.; 5:30-10:30 p.m.
WGCM 1210 Gulfport, Miss., *CST.* 8 a.m.-2 p.m.; 3-9 p.m.
WGCP 1250 Newark, N. J., *EST* 2-5 p.m.; 8-10 p.m.
WGES 1360 Chicago, Ill., *CST.* 8 a.m.-12:30 p.m.; 6:15-8:30
WGH 1310 Newport News, Va. 7 a.m.-2 p.m.; 5-11 p.m., *EST.*
WGL 1370 Fort Wayne, Ind., *CST.* 6:15 a.m.-9:30 p.m.
WGLC 1370 Hudson Falls, N. Y., *EST.*
WGN 720 Chicago, Ill., *CST.* 7:30 a.m.-1:30 a.m. next day.
WGNY 1210 Chester, N. Y., *EST.*
WGR 550 Buffalo, N. Y., *EST.* 7:30 a.m.-mid.
WGST 890 Atlanta, Ga., *CST.* 7 a.m.-11 p.m.
WGY 790 Schenectady N.Y., *EST.* 6:45 a.m.-1 a.m. next day.
WHA 940 Madison, Wis., *CST.* 8 a.m.-3:30 p.m.
WHAD 1120 Milwaukee, Wis., *CST.* 9:30-10:15 a.m.; 3-4 p.m.; 8:30-9:30 p.m.
WHAM 1150 Rochester, N. Y., *EST.* 7:45 a.m.-mid.
WHAS 820 Louisville, Ky., *CST.* 7 a.m.-mid.
WHAT 1310 Philadelphia, Pa., *EST.* 9-11:30 a.m.; 1-2 p.m.
WHAZ 1300 Troy, N. Y., *EST.* Silent.
WHB 860 Kansas City, Mo., *CST.* 6 a.m.-sunset,
WHBC 1200 Canton, Ohio, *EST.* 6-9 a.m.; noon-3 p.m.; 6-9 p.m.
WHBD 1370 Mt. Orab, Ohio, *EST.* 7-11 a.m.; noon-5 p.m.; 6-9 p.m.
WHBF 1210 Rock Island, Ill., *CST.* 10 a.m.-3 p.m.; 5 p.m.-mid.
WHBL 1410 Sheboygan, Wis., *CST.* 7-10 a.m.; 12:30-3 p.m.; 6-8 p.m.
WHBQ 1370 Memphis, Tenn., *CST.* 7:55 a.m.-10:30 p.m.
WHBU 1210 Anderson, Ind., *CST.* 7 a.m.-1 p.m.; 3-9:15 p.m.
WHBY 1200 Green Bay, Wis., *CST.* 7 a.m.-10 p.m.
WHDF 1370 Calumet, Mich., *CST.* 9-10 a.m.; noon-1 p.m.; 4:40-7:30
WHDH 830 Boston, Mass., *EST.* 8 a.m.-12:45 p.m.; 2:45-7:15.
WHDL 1420 Tupper Lake, N. Y., *EST* 7:45 a.m.-1 p.m.; 3-7:45 p.m.
WHEB 740 Portsmouth, N. H., *EST.* 10 a.m.-sunset.
WHEC 1430 Rochester, N. Y., *EST.* 8 a.m.-mid.
WHEF 1500 Kosciusko, Miss.
WHET 1210 Troy, Ala., *CST.* 6-8 a.m.; 11 a.m.-5 p.m.
WHFC 1420 Cicero, Ill., *CST.* 7 a.m.-1:30 p.m.; 6-9 p.m.; 11 p.m.-1 a.m. next day.
WHIS 1410 Bluefield, W. Va., *EST.* 8-9 a.m.; noon-2 p.m.; 6-8 p.m.
WHK 1390 Cleveland, Ohio, *EST.* 7 a.m.-mid.
WHN 1010 New York City, *EST.* 1:30-7 p.m.
WHO 1000 Des Moines, Iowa.
WHOM 1450 Jersey City, N. J., *EST.* 3-6 p.m.; 9-mid.
WHP 1430 Harrisburg, Pa., *EST.* 8:30-10:30 a.m.; 11:30-1:30; 2:30-4; 4:30-1 a.m.
WIAS 1310 Ottumwa, Iowa, *CST.* 7:30 a.m.-1:30 p.m.; 4-9 p.m.
WIBA 1280 Madison, Wis., *CST.* 6:30 a.m.-11:30 p.m.
WIBG 930 Glenside, Pa., *EST.* Daybreak to sunset.
WIBM 1370 Jackson, Mich., *CST.* 7:30 a.m.-8:15 p.m.; 11 p.m.-mid.
WIBO 560 Chicago, Ill., *CST.* 6:30 a.m.-mid.
WIBU 1210 Poynette, Wis., *CST.* 9 a.m.-9 p.m.
WIBW 580 Topeka, Kans., *CST* 6 a.m.-mid.
WIBX 1200 Utica, N. Y.
WICC 600 Bridgeport, Conn., *EST* 7:30 a.m.-12:30 p.m.; 1-7 p.m.; 8-mid.
WIL 1200 St. Louis, Mo., *CST* 7-11 a.m.; 12:30-7:45; 10-mid.
WILL 890 Urbana, Ill., *CST.* 10 a.m.-12:15 p.m.; 5-6 p.m.
WILM 1420 Wilmington, Del., *EST* 7:30 a.m.-2 p.m.; 4:30-10 p.m.
WINS 1180 New York City, *EST.* 7 a.m.-10:15 p.m.
WIOD 1300 Miami, Fla., *EST.* 7 a.m.-1 a.m. next day.
WIP 610 Philadelphia, Pa., *EST.* 9 a.m.-mid.
WIS 1010 Columbia, S. C., *EST* 7 a.m.-1:30 p.m.; 5:30-11 p.m.
WISN 1120 Milwaukee, Wis., *CST.* 7-9:30 a.m.; 10:15 a.m.-3 p.m.; 4-8:30 p.m.; 9:30 p.m.-mid.
WJAC 1310 Johnstown, Pa., *EST.* 8:30-10:30 a.m.; 4:30-7 p.m.
WJAG 1060 Norfolk, Neb., *CST.* 6 a.m.-sunset.
WJAR 890 Providence, R. I., *EST.* 8 a.m.-mid.
WJAS 1290 Pittsburgh, Pa., *EST.* 7:30 a.m.-11:30 p.m.
WJAX 900 Jacksonville, Fla., *EST* 7 a.m.-11 p.m.
WJAY 610 Cleveland, Ohio, *EST.* 6 a.m.-6:45 p.m.
WJBC 1200 LaSalle, Ill., *CST.* 8-9 a.m.; 10 a.m.-12:30 p.m. 3:30-6:30 p.m.
WJBI 1210 Red Bank, N. J., *EST.* 9 a.m.-noon; 5-7 p.m.
WJBK 1370 Detroit, Mich., *EST.* 7 a.m.-11 p.m.
WJBL 1200 Decatur, Ill., *CST.* 6:30-8 a.m.; 9-10 p.m.; 12:30-3; 6:30-10:30 p.m.
WJBO 1420 New Orleans, La.
WJBU 1210 Lewisburg, Pa., *EST.* Noon-2 p.m.; 4-6 p.m.
WJBW 1200 New Orleans, La., *CST.* 8 a.m.-noon; 4-8 p.m.
WJBY 1210 Gadsden, Ala., *CST.* 6 a.m.-12:10 next day.
WJDX 1270 Jackson, Miss., *CST.* 6:15-10 a.m.; 11:30 a.m.-10 p.m.
WJEJ 1210 Hagerstown, Md. 7 a.m.-5 p.m.
WJEQ 1370 Williamsport, Pa.
WJJD 1130 Chicago, Ill., *CST.* 6 a.m.-8:30 p.m.
WJKS 1360 Gary, Ind., *CST.* 12:30-6-15 p.m.; 8:30 p.m.-mid.
WJMS 1420 Ironwood, Mich., *CST.* 7 a.m.-2:30 p.m.; 4:30 p.m.-sunset.
WJR 750 Detroit, Mich., *EST.* 6:00 a.m.-1 a.m. nextday.
WJSV 1460 Washington, D. C., *EST* 7:30 a.m.-1 a.m. next day.
WJTL 1370 Atlanta, Ga., *CST.* 6:45 a.m.-mid.

WJW **1210** Akron, Ohio, *EST.* 8 a.m.-10 p.m.

WJZ **760** New York City, *EST.* 7:30 a.m.-1 a.m. next day.

WKAQ **1240** San Juan, P. R., *AST.* 2:30-4:30 p.m.; 6:30-10:30 p.m.

WKAR **1040** E. Lansing, Mich., *CST.* Noon-12:30 p.m.

WKAV **1310** Laconia, N. H., *EST.* 9 a.m.-1 p.m.; 3-8 p.m.

WKBB **1310** Joliet, Ill., *CST.* 8-11 a.m.; noon-3 p.m.; 8-mid.

WKBC **1310** Birmingham, Ala.

WKBF **1400** Indianapolis, Ind., *CST.* 6:30 a.m.-1:15 p.m.; 4:15-10:30 p.m.

WKBH **1380** LaCrosse, Wis., *CST.* 7:30 a.m.-10 p.m.

WKBI **1420** Cicero, Ill., *CST.* 1:30-4 p.m.; 9-11 p.m.

WKBN **570** Youngstown, Ohio, *EST.* 7-9 a.m.; 11 a.m.-1 p.m.; 3-mid.

WKBS **1310** Galesburg, Ill.

WKBV **1500** Connersville, Ind., *CST.* 10 a.m.-noon; 6-10 p.m.

WKBW **1480** Buffalo, N. Y., *EST* 9:15 a.m.-1 a.m. next day.

WKBZ **1500** Ludington, Mich., *CST.* 9 a.m.-9:30 p.m.

WKFI **1210** Greenville, Miss., *CST.* 7 a.m.-2 p.m.; 4-9 p.m.

WKJC **1200** Lancaster, Pa., *EST.* 11 a.m.-3 p.m.; 6-9 p.m.

WKRC **550** Cincinnati, Ohio, *EST.* 6:45 a.m.-mid.

WKY **900** Oklahoma City, Okla.. 6:30 a.m.-11:30 p.m., *CST.*

WKZO **590** Kalamazoo, Mich., *CST.* 6:30 a.m.-8:15 p.m.

WLAC **1470** Nashville, Tenn., *CST.* 7 a.m.-11 p.m.

WLAP **1200** Louisville, Ky., *CST.* 6:30 a.m.-11 p.m.

WLB **1250** Minneapolis, Minn., 8-9 p.m. *CST.*

WLBC **1310** Muncie, Ind., *CST.* 7 a.m.-11 p.m.

WLBF **1420** Kansas City, Kans. 7a.m.-11:30 p.m. *CST.*

WLBL **900** Stevens Point, Wis. 8 a.m.-4:30 p.m. *CST.*

WLBW **1260** Erie, Pa., *EST.* 8 a.m.-1 a.m. next day.

WLBZ **620** Bangor, Maine, *EST.* 8:30 a.m.-mid.

WLEY **1370** Lexington, Mass., *EST.* Noon-3 p.m.; 6-9 p.m.

WLIT **560** Philadelphia, Pa., *EST.* 9-9:45 a.m.; 11 a.m.-1 p.m.; 2-3 p.m.; 4:30-6 p.m.

WLOE **1500** Boston, Mass., *EST.* 10 a.m.-1:30 p.m.; 4:30-10 p.m.

WLS **870** Chicago, Ill., *CST.* 6-10:15 a.m.; 11:45 a.m.-3:30 p.m.; 7-8:30 p.m.

WLTH **1400** Brooklyn, N. Y., *EST.* 8:45-11:30 a.m.; 6-7:30 p.m.

WLVA **1370** Lynchburg, Va., *EST.* 8-11 a.m.; 1-6 p.m.

WLW **700** Cincinnati, Ohio, *EST.* 6:30 a.m.-1 a.m. next day.

WLWL **1100** New York City. 6-8 p.m., *EST.*

WMAC **570** Syracuse, N. Y.

WMAL **630** Washington, D. C., *EST.* 8 a.m.-mid.

WMAQ **670** Chicago, Ill., *CST.* 7 a.m.-1 a.m. next day.

WMAS **1420** Springfield, Mass., *EST* 7:45 a.m.-mid.

WMAZ **1180** Macon, Ga., *EST.* 7 a.m.-9:30 p.m.

WMBC **1420** Detroit, Mich., *EST.* 7:30 a.m.-mid.

WMBD **1440** Peoria, Ill., *CST.* 6-9:30 a.m.; 1-2:30 p.m.; 8-mid.

WMBG **1210** Richmond, Va., *EST.* 7:30 a.m.-1:30 p.m.; 5-11 p.m.

WMBH **1420** Joplin, Mo. Noon-2 p.m.; 6-9:30 p.m., *CST.*

WMBI **1080** Chicago, Ill., *CST.* 7-7:30 a.m.; 10:30-11:30 a.m.; noon-1:30; 3:30-4:30; 5-6:30 p.m.

WMBO **1310** Auburn, N. Y., *EST.* 9 a.m.-9 p.m.

WMBQ **1500** Brooklyn, N. Y., *EST.* 9-11 a.m.; 8-10 p.m.

WMBR **1370** Tampa, Fla., *EST.* 6:45 a.m.-10 p.m.

WMC **780** Memphis, Tenn., *CST.* 7 a.m.-11 p.m.

WMCA **570** New York City, *EST.* 8-11 a.m.; noon-6 p.m.; 9:30 p.m.-2 a.m.

WMIL **1500** Brooklyn, N. Y., *EST.* 2-8 p.m.

WMMN **890** Fairmont, W. Va., *EST.* 7 a.m.-9 p.m.

WMPC **1500** Lapeer, Mich., *EST.* 10 a.m.-2 p.m.; 3:30-6 p.m.

WMSG **1350** New York City, *EST.* Noon-3; 8:30-10:30 p.m.

WMT **600** Waterloo, Iowa, *CST.* 7 a.m.-11 p.m.

WNAC **1230** Boston, Mass., *EST.* 8 a.m.-1 a.m. next day.

WNAD **1010** Norman, Okla. 7:15-9:15 p.m.

WNAX **570** Yankton, S. D., *CST.* 6 a.m.-mid.

WNBF **1500** Binghamton, N.Y., *EST.* 7 a.m.-10 p.m.

WNBH **1310** New Belford, Mass, *EST.* 8:30 a.m.-1:10 p.m.; 3-11 p.m.

WNBO **1200** Washington, Pa., *EST.* 9 a.m.-noon; 3-6 p.m.; 9 p.m.-mid.

WNBR **1430** Memphis, Tenn., *CST.* 7:30 a.m.-12:30 p.m.; 3-10:15

WNBW **1200** Carbondale, Pa.

WNBX **1260** Springfield, Vt., *EST.* 6 a.m.-sunset.

WNBZ **1290** Saranac Lake, N. Y.

WNOX **560** Knoxville, Tenn., *CST.* 6:45 a.m.-11 p.m.

WNYC **570** New York City, *EST.* 11 a.m.-noon; 6-9:30 p.m.

WOAI **1190** San Antonio, Tex., *CST.* 6:30-9:45 a.m.; 11:15-3:30; 4:45-10:45 p.m.

WOAX **1280** Trenton, N. J., *EST.* Noon-2 p.m.

WOBU **580** Charleston, W.Va., *EST.* 9 a.m.-noon; 2-4 p.m.; 8:30 p.m.-mid.

WOC **1000** Davenport, Iowa, *CST.* 7 a.m.-11 p.m.

WOCL **1210** Jamestown, N. Y., *EST.* Noon-mid.

WODA **1250** Paterson, N. J.

WODX **1410** Mobile, Ala., *CST.* 9 a.m.-4 p.m.; 9-11 p.m.

WOI **640** Ames, Iowa, *CST.* 6:30 a.m.-2:30 p.m.

WOKO **1430** Albany, N. Y., *EST.* 9 a.m.-1 a.m. next day.

WOL **1310** Washington, D. C., *EST* 7 a.m.-1 p.m.; 3-9 p.m.

WOMT **1210** Manitowoc, Wis., *CST.* 7 a.m.-9 p.m.

WOOD **1270** Gd. Rapids, Mich., *CST* 7 a.m.-mid.

WOPI **1500** Bristol, Tenn., *EST.* 7 a.m.-2 p.m.; 4-9 p.m.

WOQ **1300** Kansas City, Mo., *CST.* 6-7 a.m.; 8:35-9:05 a.m.; 11-11:30 a.m.; 2-3 p.m.; 9-10; 11-mid.

WOR **710** Newark, N. J., *EST.* 6:45 a.m.-mid.

WORC **1200** Worcester, Mass., *EST.* 8 a.m.-mid.

WORK **1000** York, Pa., *EST.* 7:55 a.m.-sunset.

WOS **630** Jefferson City, Mo. 9 a.m.-4 p.m., *CST.*

WOV **1130** New York City, *EST.* 8 a.m.-6 p.m.

WOW **590** Omaha, Neb., *CST.* 6:15-10 a.m.; 10:45-3:30; 4-11:30 p.m.

WOWO **1160** Fort Wayne, Ind., *CST.* 7:30 a.m.-7:45 p.m.; 9:15 p.m.-mid.

WPAD **1420** Paducah, Ky., *CST.* 7-9:30 a.m.; 11 a.m.-2 p.m. 4-10:30 p.m.

WPAP **1010** New York City, *EST.* 7-9 p.m.

WPAW **1210** Providence, R. I., *EST.* 9 a.m.-1:45 p.m.; 3 p.m.-mid.

WPCC **560** Chicago, Ill. Silent.

WPCH **810** New York City, *EST.* 8 a.m.-sunset.

WPEN **1500** Philadelphia, Pa., *EST.* 7:30 a.m.-10:30 p. m.

WPFB **1370** Hattiesburg, Miss., *CST.* 7 a.m.-2 p.m.; 4-9 p.m.

WPG **1100** Atlantic City, N.J., *EST.* 8:15 a.m.-6 p.m.; 8 p.m.-1 a.m.

WPHR **1200** Petersburg, Va., *EST.* 7-11 a.m.; noon-5 p.m.; 6-9 p.m.

WPOR **780** Norfolk, Va.

WPRO **1210** Providence, R. I., *EST.* 9 a.m.-1:45 p.m.; 3 p.m.-mid.

WPTF **680** Raleigh, N. C., *EST.* 6:45 a.m.-8:15 p.m.

WQAM **560** Miami, Fla., *EST.* 7 a.m.-mid.

WQAN **880** Scranton, Pa., *EST.* 12:30-1:30 p.m.; 4:30-5:30 p.m

WQAO **1010** New York City, *EST.* Silent.

WQBC **1360** Vicksburg, Miss., *CST.* 7:30 a.m.-2:30 p.m.; 5-10 p.m.

WQDM **1370** St. Albans, Vt., *EST.* 8-9 a.m.; 11 a.m.-2 p.m.

WQDX **1210** Thomasville, Ga.

WRAK **1370** Williamsport, Pa., *EST.* 8:30 a.m.-2:30 p.m.; 4:30-10:30.

WRAM **1370** Wilmington, N. C., *EST.* 7:30 a.m.-3 p.m.; 6:30-11 p.m.

WRAW **1310** Reading, Pa., *EST.* 7-9:30 a.m.; 6 p.m.-mid.

WRAX 1020 Philadelphia, Pa., *EST.* 7 a.m.-sunset.
WRBL 1200 Columbus, Ga., *CST.* 7 a.m.-9 p.m.
WRBX 1410 Roanoke, Va., *EST.* 9 a.m.-noon; 3-6 p.m.; 8 p.m.-1.
WRC 950 Washington, D.C., *EST.* 6:45 a.m.-1 a.m. next day.
WRDO 1370 Augusta, Maine, *EST.* 7-9:30 a.m.; 10:30 a.m.-1:30 p.m.; 3:30-10 p. m.
WRDW 1500 Augusta, Ga., *EST.* 8 a.m.-2 p.m.; 5-11 p.m.
WREC 600 Memphis, Tenn.
WREN 1220 Lawrence, Kans., *CST.* 7 a.m.-mid.
WRHM 1250 Minneapolis, Minn. 6:15-9:45 a.m.; 10:35-8 p.m.; 9 p. m.-1 a.m. *CST*
WRJN 1370 Racine, Wis., *CST.* 8 a.m.-10:30 p.m.
WRNY 1010 New York City.
WROL 1310 Knoxville, Tenn., *CST.* 7 a.m.-10 p.m.
WRR 1280 Dallas, Texas, *CST.* 6:30 a.m.-11 p.m.
WRUF 830 Gainesville, Fla., *EST.* 8 a.m.-7 p.m.
WRVA 1110 Richmond, Va., *EST.* 7 a.m.-3:15 p.m.; 4:15-mid.
WSAI 1330 Cincinnati, Ohio, *EST.* 8 a.m.-11 p.m.
WSAJ 1310 Grove City, Pa. 5-6 p.m.
WSAN 1440 Allentown, Pa., *EST.* 5 p.m.-mid.
WSAR 1450 Fall River, Mass., *EST.* 8 a.m.-3:30 p.m.; 5-10 p.m.
WSAZ 580 Huntington, W. Va., *EST.* 6-9 a.m.; noon-2 p.m.; 4-8:30.
WSB 740 Atlanta, Ga., *CST.* 7 a.m.-mid.
WSBC 1210 Chicago, Ill.
WSBT 1230 South Bend, Ind., *CST.* 6-7:30 a.m.; 10:15 a.m.-noon; 3-5:30 p.m.
WSEN 1210 Columbus, Ohio, *EST.* 8 a.m.-11 p.m.
WSFA 1410 Montgomery, Ala., *CST.* 6 a.m.-9 p.m.
WSIX 1210 Springfield, Tenn., *CST.* 6 a.m.-3 p.m.; 6-9 p.m.
WSJS 1310 Winston-Salem, N. C. 8 a.m.-mid., *EST.*
WSM 650 Nashville, Tenn., *CST.* 6:30 a.m.-mid.
WSMB 1320 New Orleans, La., *CST.* 7 a.m.-mid.
WSMK 1380 Dayton, Ohio, *EST.* 7 a.m.-8 p.m.; 10 p.m.-mid.
WSOC 1210 Gastonia, N. C., *EST.* 8 a.m.-10 p.m.
WSPA 1420 Spartanburg, S. C., *EST.* 7:30 a.m.-11 p.m.
WSPD 1340 Toledo, Ohio, *EST.* 7:30 a.m.-mid.
WSUI 880 Iowa City, Iowa, *CST.* 9-10 a.m.; 11-12:30; 2-4; 6-10 p.m.
WSUN 620 St. Petersburg, Fla., *EST.* 7:15 a.m.-mid.
WSVS 1370 Buffalo, N. Y., *EST.* 8:30 a.m.-10 a.m.; 2-3 p.m.
WSYB 1500 Rutland, Vt., *EST.* 10 a.m.-1 p.m.; 5-9 p.m.
WSYR 570 Syracuse, N. Y., *EST.* 7 a.m.-3 p.m.; 4-11 p.m.

WTAD 1440 Quincy, Ill., *CST.* 9:30 a.m.-1 p.m.; 2:30-8 p.m.
WTAG 580 Worcester, Mass., *EST.* 8 a.m.-11:15 p.m.
WTAM 1070 Cleveland, Ohio, *EST.* 6:30 a.m.-1 a.m. next day.
WTAQ 1330 Eau Claire, Wis., *CST.* 7 a.m.-8 p.m.
WTAR 780 Norfolk, Va., *EST.* 7 a.m.-mid.
WTAW 1120 College Station, Texas. Silent
WTAX 1210 Springfield, Ill., *CST.* 7-11:30 a.m.; 3-6:45; 9-mid.
WTBO 1420 Cumberland, Md., *EST.* 7 a.m.-1:30 p.m.; 2:30-8 p.m.
WTEL 1310 Philadelphia, Pa., *EST.* 7-9 a.m.; 11:30-1 p.m.; 5-mid.
WTFI 1450 Athens, Ga., *EST.* 8 a.m.-4 p.m.; 6-10 p.m.
WTIC 1060 Hartford, Conn., *EST.* 7 a.m.-4 p.m.
WTJS 1310 Jackson, Tenn., *CST.* 7 a.m.-1 p.m.; 3-9 p.m.
WTMJ 620 Milwaukee, Wis., *CST.* 6:45 a.m.-mid.
WTOC 1260 Savannah, Ga., *EST.* 7 a.m.-mid.
WTRC 1310 Elkhart, Ind., *CST.* 7:30 a.m.-7:30 p.m.
WTSL 1310 Laurel, Miss.
WWAE 1200 Hammond, Ind., *CST.* 7 a.m.-8:30; 11-1 p.m.; 4-11:30 p.m.
WWJ 920 Detroit, Mich., *EST.* 7:30 a.m.-mid.
WWL 850 New Orleans, La., *CST.* 8 a.m.-8:30 p.m.
WWNC 570 Asheville, N. C., *CST.* 7 a.m.-mid.
WWRL 1500 Woodside, N. Y., *EST.* 8-9 a.m.; 11 a.m.-noon; 1-2 p.m.
WWSW 1500 Pittsburgh, Pa., *EST.* 8 a.m.-1:30 p.m.; 3-11:30 p.m.
WWVA 1160 Wheeling, W. Va., *EST.* 7:30 a.m.-9 p.m.
WXYZ 1240 Detroit, Mich., *EST.* 7:30 a.m.-mid.
XEA 1155 Guadalajara, Mex., *CST.* 11 a.m.-noon; 2-3 p.m.; 5-11.
XEAW 955 Reynosa, Mex.
XEB 1030 Mexico City, Mex., *CST.* 8 a.m.-mid.
XEC 1000 Toluca, Mex.
XED 1155 Guadalajara, Mex.
XEE 1000 Oaxaco, Mex.
XEF 735 Villa Acuna, Mex. 24 hours daily.
XEFA 1250 Mexico City, Mex.
XEFB 1315 Monterrey, Mex., *CST.* 11 a.m.-2 p.m.; 6-10 p.m.
XEFC 1050 Merida, Mex.
XEFD 1020 Tijuana, Mex.
XEFE 1000 Laredo, Mex.
XEFI 1000 Chihuahua, Mex.
XEFO 940 Mexico City, Mex., *CST* 2-3 p.m.; 7-11 p.m.
XEFS 1000 Queretaro, Mex., *CST.* 7:30-10:30 p.m.
XEFZ 1370 Coyoacan, Mex., *CST.* 8-11 p.m.
XEG 1070 Mexico City, Mex.
XEH 1132 Monterrey, Mex., *CST.* 9 a.m.-1:30 p.m.; 6-10 p.m.
XEI 1310 Morelia, Mex., *CST.* 2-3:30 p.m.; 8:30-10 p.m.
XEJ 1000 Juarez, Mex., *CST.* 11 a.m.-4 p.m.; 6-11 p.m.

XEK 990 Mexico City, Mex.
XEL 1000 Saltillo, Mex., *CST.* 11 a.m.-1 p.m.; 6-9 p.m.
XEM 1300 Tampico, Mex.
XEN 711 Mexico City, Mex., *CST.* 10 a.m.-noon; 2-4 p.m.; 7-11
XENT 1115 Neuvo Laredo, Mex.
XEP 1400 Laredo, Mex.
XEPN 885 Piedras Negras, Mex.
XEQ 750 Juarez, Mex., *MST.* 9 a.m.-2 p.m.; 5-11 p.m.
XER 735 Villa Acuna, Mex. 24 hours daily.
XES 1055 Tampico, Mex., *CST.* 9-10:30 a.m.; noon-2 p.m.; 7-15-10 p.m.
XET 690 Monterrey, Mex., *CST.* 9 a.m.-2 p.m.; 6-10 p.m.
XETA 1140 Mexico City, Mex.
XETB 1380 Torreon, Mex.
XETC 1000 Jalapa, Mex.
XETF 630 Veracruz, Mex., *CST.* 7-8 a.m.; noon-2 p.m.; 7 p.m.-mid.
XETG 1000 Torreon, Mex.
XETM 845 Matamoros, Mex.
XETQ 1230 Mexico City, Mex.
XETR 610 Mexico City, Mex.
XEU 1007 Veracruz, Mex., *CST.* 7-8 a.m.; 10-11 a.m.; noon-3 p.m.; 6-mid.
XEV 1000 Pueblo, Mex.
XEW 910 Mexico City, Mex., *CST* 10 a.m.-mid.
XEX 1210 Mexico City, Mex.
XEY 1000 Mexida, Mex.
XEZ 780 Mexico City, Mex.
XFC 810 Aguascalientes, Mex.
XFF 915 Chihuahua, Mex.
XFG 683.3 Mexico City, Mex.
XFX 867 Mexico City, Mex.
YV1BC 960 Caracas, Venz.
10-AB 1200 Moose Jaw, Sask., *MST.* 5:30-11 p.m.
10-AK 1200 Stratford, Ont., *EST.* 6-8 p.m.
10-AT 1155 Trail, B. C.
10-BI 1200 Prince Albert, Sask. Noon-1 p.m.; 6-8 p.m., *MST.*
10-BP 1199 Wingham, Ont., *EST.* Noon-1; 7:15-9 p.m.
10-BQ 1200 Brantford, Ont., *EST.* 8-10 p.m.
10-BU 1200 Canora, Sask.

One Hundred Best Short Wave Stations

By Frequencies and Wave Lengths

Submitted by our readers as being most regularly received. Times are given in Eastern Standard. First column gives frequency in megacycles (for kilocycles read the decimal point as a comma) and the second column, wave-lengths in meters.

For complete lists of short-wave stations see the following issues of this magazine:
September: Foreign stations arranged by countries.
October: Complete list by frequencies and waves.
November: American stations by states.
December: Canadian stations by provinces and Complete list by call letters.

2.735	109.62	VE9CI London, Ontario, Daily 9-11 p.m.; Sun. 11 a.m.-7 p.m.
3.583	83.68	G2NM Sonning-on-Thames, England
3.750	79.95	I3RO Rome, Italy
3.998	75.00	HCJB Quito, Ecuador, 7:30-9:45 a.m.
4.273	70.65	RV15 Khabarovsk, USSR, 3-9 a.m.
4.792	62.56	VE9BY London, Ontario, Sat. mid.-1 a.m.
4.797	62.50	W2XV Long Island City, N. Y., Wed.-Fri. 8-10 p.m.
4.975	60.27	GBC Rugby, England W2XV Long Island City, N. Y.
5.045	59.42	VRT-ZFA Hamilton, Bermuda
5.144	58.33	DIQ Nauen, Germany
5.357	55.96	XDA Mexico City
5.710	52.51	HCJB Quito, Ecuador VE9CL Winnipeg, Manitoba
5.766	52.00	XAM Merida, Yucatan
5.879	51.00	XDA Mexico City
5.925	50.60	HKO Medellin, Colombia, Mon.-Wed.-Fri. 8-10 p.m.; Tue.-Thur.-Sat. 6-8 p.m.
5.968	50.26	HVJ Vatican City 2-2:15 p.m.; Sun. 5-5:30 a.m.
5.996	50.00	HKD Barranquilla, Colombia, 8-10 p.m.
6.005	49.93	VE9DR Drummondville, Que., 7 p.m.-mid.
6.020	49.80	W9XF Chicago, Ill. XEW Mexico City
6.036	49.67	W4XB Miami, Fla., 5-11 p.m.
6.057	49.50	CMCI Havana, Cuba, 9-11 p.m. ZL2ZX Wellington, N. Z., Mon.-Wed.-Thur.-Sat., 2:15-6:15 a.m.
6.058	49.49	YV1BC Caracas, Venezuela
6.060	49.48	VQ7LO Nairibi, Kenya, Daily 11 a.m.-3:30 p.m.; Tues. 3-4 a.m.; Thur. 8-9 a.m. W8XAL Cincinnati, Ohio, 6-10:30 a.m., 1:30-3:30 p.m., 7 p.m.-1:30 a.m.
6.070	49.39	VE9CS Vancouver, B. C.
6.076	49.34	W9XAA Chicago, Ill., Sun. 11 a.m.-9 p.m.
6.090	49.23	VE9BJ St. Johns, N. B., 5 p.m. and 11 p.m.
6.095	49.19	W9XF Chicago, Ill., Daily, ex. Sat., 4:30-8 p.m., 9:30 p.m.-2 a.m.
6.092	49.22	VE9GW Bowmanville, Ont., Daily 5-11 p.m.; Sun. 1-7 p.m.
6.096	49.17	W3XAL Boundbrook, N. J., Sat. 4 p.m.-1 a.m.
6.125	48.95	YV11BMO Maracaibo, Venezuela 8-11 p.m.
6.131	48.90	HKA Barranquilla, Colombia, 8-10 p.m.
6.140	48.83	W8XK Pittsburgh, Pa., 4-11 p.m.
6.150	48.75	VE9CL Winnipeg, Man.
6.220	48.20	I2RO Rome, Italy
6.335	47.35	VE9AP Drummondville, Que.
6.386	46.96	W3XL Boundbrook, N. J.
6.426	46.65	VE9BY London, Ont., Wed. 8:30-9:30 p.m.; Fri. 7-8 p.m.,; Sat. 8-11 p.m.
6.611	45.35	TGW Guatemala, Tues.-Thur.-Fri. 10:30 p.m.-mid.
6.618	45.31	PRADO Rio Bamba, Ecuador, Thur. 9-11 p.m.
6.667	44.98	I1AX Rome, Italy
6.675	44.91	DGK Nauen, Germany
6.818	44.00	XDA Mexico City
6.888	43.54	KEQ Kahuku, Hawaii
6.989	42.90	GBS Rugby, England
6.993	42.87	HKD Barranquilla, Colombia
6.995	42.85	GBS Rugby, England
7.139	42.00	HJ4ABB Manizales, Colombia, Sat. 10 p.m.-mid.
7.140	41.99	HKX Bogota, Colombia
7.143	41.95	HJ3ABF Bogota, Colombia
7.312	41.03	CM5RY Matanzas, Cuba, Sat. 10:45-11:30 p.m.
7.439	40.30	HBQ Geneva, Switzerland, Sun. 5-5:45 p.m.
7.518	39.89	HDK-KKH Kahuka, Hawaii
7.610	39.40	HJ3ABF Bogota, Colombia, 7-11 p.m.
7.775	38.57	F8BZ Paris, France
7.790	38.49	HBP Geneva, Switzerland, Sun. 5-5:45 p.m.
7.890	38.00	VPD Suva, Fiji Islands
7.940	37.76	VK2ME Sydney, Australia
8.100	37.01	J1AA Tokyo, Japan
8.645	34.68	VE9BY London, Ont., Mon. 3-4 p.m.
8.650	34.66	W2XV Long Island City, N. Y.
8.950	33.50	TGX Guatemala, Sat. 10 p.m.-mid.
9.012	33.27	KEJ Bolinas, Calif.
9.090	32.98	VK3ME Melbourne, Australia
9.200	32.59	GBS Rugby, England
9.250	32.41	GBK Bodmin, England
9.310	32.20	GBC Rugby, England
9.375	31.97	XDA Mexico City
9.410	31.86	PLE Bandoeng, Java PLV Bandoeng, Java
9.480	31.63	PLW Bandoeng, Java
9.492	31.58	PRBA Rio de Janeiro, Brazil, 6-6:15 p.m.
9.520	31.49	OXY Skamleback, Denmark, 2-6:30 p.m.
9.530	31.46	W2XAF Schenectady, N. Y., 5 p.m.-mid.
9.548	31.40	VK3ME Melbourne, Australia, Wed. 5-6:30 a.m.; Sat. 5-7 a.m.
9.552	31.38	DJA Zeesen, Germany, 2-6:30 p.m.
9.555	31.37	VE9DR Drummondville, Que.
9.570	31.33	SR1 Poznan, Poland, Tues. 6-8 a.m. W1XAZ Springfield, Mass., noon-mid.
9.580	31.30	HBL Geneva, Switzerland, Sun. 5-5:45 p.m.
9.585	31.28	VK2ME Sydney, Australia, mid.-2 a.m. 4:30-8:30 a.m., 1:30-3:30 p.m.
9.590	31.26	PCJ Eindhove, Netherlands
9.592	31.25	CT1AA Lisbon, Portugal, Thur.-Fri. 4-6 p.m.
9.616	31.18	VQ7LO Nairobi, Kenya
9.670	31.00	TI4NRH Heredia, Costa Rica, daily 10-11 p.m.
9.790	30.63	GBW Rugby, England
9.862	30.40	EAQ Madrid, Spain, 6:30-8 p.m. J1AA Tokyo, Japan, 5:30-7 a.m.
9.895	30.30	LSN Buenos Aires, Argentina
9.928	30.20	HJY Bogota, Colombia
9.942	30.15	GBU Rugby, England
10.060	29.80	VRT-ZFA Hamilton, Bermuda
10.090	29.70	OPM Leopoldsville, Belgian Congo
10.212	29.35	PSH Rio de Janeiro, Brazil
10.285	29.15	DJQ Konigswusterhausen, Germany
10.288	29.16	DIQ Nauen, Germany
10.300	29.00	LSN Buenos Aires, Argentina LSX Buenos Aires, Argentina
10.340	28.99	ORK Brussels, Belgium
10.390	28.85	GBX Rugby, England
10.410	28.80	LSY Buenos Aires, Argentina
11.174	26.83	CT3AQ Funchel, Madeira, Tues.-Thur., 5-6:30 p.m.; Sun. 10:30 a.m.-noon
11.308	26.51	FYA Paris, France
11.490	26.10	GBK Bodmin, England
11.530	26.00	XAM Merida, Yucatan
11.644	25.75	PPQ Rio de Janeiro, Brazil
11.680	25.67	YVQ Maracaibo, Venezuela
11.720	25.58	VE9JR Winnipeg, Man., 6:30-8:30
11.750	25.51	G5SW Chelmsford, England

11.760	25.50	XDA Mexico City
11.780	25.54	VE9DR Drummondville, Que.
11.800	25.40	I2RO Rome, Italy, 11 a.m.-12:30 p.m., 2:30-5:30 p.m.
11.840	25.34	W9XAA Chicago, Ill.
11.872	25.25	W8XK Pittsburgh, Pa., 4-10 p.m.
11.898	25.20	FYA Paris, France, 11:30 a.m.-2:30 p.m. 4-7 p.m.
12.190	24.60	GBS Rugby, England
		GBX Rugby, England
12.290	24.40	GBU Rugby, England
12.780	23.46	GBC Rugby, England
12.820	23.38	CNR Rabat, Morocco, Sun. 7:30-9 a.m.
13.074	29.33	J1AA Tokyo, Japan
13.628	22.00	F8BZ Paris, France
14.310	20.95	G2NM Sonning-on-Thames, England
14.420	20.80	VPD Suva, Fiji Islands
14.450	20.75	GBW Rugby, England
14.480	20.70	LSN Buenos Aires, Argentina
		W8XK Pittsburgh, Pa.
14.620	20.51	XDA Mexico City
15.066	19.90	TI4NRH Heredia, Costa Rica, Sat.-Sun. 11 a.m.-noon
15.120	19.83	HVJ Vatican City, daily 5-5:15 a.m.
15.190	19.73	DJB Zeesen, Germany, 8 a.m.-noon
15.204	19.72	W8XK Pittsburgh, Pa., 9 a.m.-4 p.m.
15.220	19.71	PCJ Eindhoven, Netherlands
15.234	19.68	FYA Paris, France
15.320	19.57	W2XAD Schenectady, N. Y., daily 4-7 p.m.; Sat.-Sun. 2-7 p.m.
15.456	19.40	F8BZ Paris, France
15.750	19.03	F31CD Saigon, Indo-China
15.760	19.02	J1AA Tokyo, Japan
16.150	18.56	GBX Rugby, England
17.080	17.55	GBC Rugby, England
17.380	17.25	J1AA Tokyo, Japan
17.772	16.87	W3XAL Boundbrook, N. J., daily 8 a.m.-4 p.m.
17.780	16.86	W8XK Pittsburgh, Pa.
18.100	16.56	GBK Bodmin, England
18.105	16.56	W9XAA Chicago, Ill.
18.124	16.54	GBW Rugby, England
18.296	16.39	YVQ Maracaibo, Venezuela
18.310	16.38	GBS Rugby, England
18.444	16.25	HJY Bogota, Colombia
18.820	16.10	GBU Rugby, England
18.820	15.93	PLE Bandoeng, Java, Tues. 8:40-10:40 a.m
19.684	15.23	EAQ Madrid, Spain, Sat. 1-3 p.m.
20.500	14.63	W9XF Chicago, Ill.
20.680	14.50	LSN Buenos Aires, Argentina
		LSX Buenos Aires, Argentina
20.820	14.40	LSY Buenos Aires, Argentina, Sun. 4 p.m.
21.020	14.27	LSN Buenos Aires, Argentina
21.540	13.92	W8XK Pittsburgh, Pa.
24.390	12.30	VE9GW Bowmanville, Ont.
25.960	11.55	G5SW Chelmsford, England, Mon.-Fri. 7:30-8:30 a.m., 1:30-7 p.m.; Sat. 8-9 a.m. 1:30-7 p.m.

The Hundred Best
S. W. STATIONS *By Calls*

CMCI Havana, Cuba
6.057 49.50 9-11 p.m.
CM5RY Matanzas, Cuba
7.312 40.00 Sat. 10:45-11:30 p.m.
CNR Rabat, Morocco
12.820 23.38 Sun. 7:30-9 a.m.
CT1AA Lisbon, Portugal
9.592 31.25 Thur.-Fri. 4-6 p.m.
CT 3AQ Funchel, Madeira
11.174 26.83 Tues.-Thur. 5-6:30 p.m.; Sun. 10:30-noon
DGK Nauen, Germany
6.675 44.91
DIQ Nauen, Germany
5.144 58.33
10.288 29.16
DJA Zeesen, Germany
9.552 31.38 2-6:30 p.m.
DJB Zeesen, Germany
15.190 19.73 8-Noon
DJQ Konigswusterhausen, Germany
10.285 29.15
EAQ Madrid, Spain
9.862 30.40 6:30-8 p.m.
19.684 15.23 Sat. 1-3 p.m.
FYA Paris, France
11.308 26.51
11.898 25.20 11:30 a.m.-2:30 p.m., 4-7 p.m.
15.234 19.68
F31CD Saigon, Indo-China
15.750 19.03
F8BZ Paris, France
7.775 38.57
13.628 22.00
15.456 19.40
GBC Rugby, England
4.975 60.27
9.310 32.20
12.780 23.46
17.080 17.55
GBK Bodmin, England
9.250 32.41
11.490 26.10
18.100 16.56
GBS Rugby, England
6.989 42.90
6.995 42.85
9.200 32.59
12.190 24.60
18.310 16.38
GBU Rugby, England
9.942 30.15
12.290 24.40
18.620 16.10
GBW Rugby, England
9.790 30.63
14.450 20.75
18.124 16.54
GBX Rugby, England
10.390 28.85
12.190 24.60
16.150 18.56
G2NM Sonning-on-Thames, England
3.583 83.68
14.310 20.95
G5SW Chelmsford, England
11.750 25.51
25.960 11.55 Mon. to Fri. 7:30-8:30 a.m., 1:30-7 p.m.; Sat. 8-9 a.m., 1:30-7 p.m.
HBL Geneva, Switzerland
9.580 31.30 Sun. 5-5:45 p.m.
HBP Geneva, Switzerland
7.790 38.49 Sun. 5-5:45 p.m.
HBQ Geneva, Switzerland
7.439 40.30 Sun. 5-5:45 p.m.
HCJB Quito, Ecuador
5.710 52.51
3.998 75.00 7:30-9:45 a.m.
HJY Bogota, Colombia
9.928 30.20
18.444 16.25
HJ3ABF Bogota, Colombia
7.143 41.95
7.610 39.40 7-11 p.m.
HJ4ABB Manizales, Colombia
7.139 42.00 Sat. 10 p.m.-mid.
HKA Barranquilla, Colombia
6.131 48.90 8-10 p.m.
HKD Barranquilla, Colombia
5.996 50.00 8-10 p.m.
6.993 42.87
HKO Medellin, Colombia
5.925 50.60 Mon.-Wed.-Fri. 8-10 p.m.; Tue.-Thu.-Sat. 6-8 p.m.
HKX Bogota, Colombia
7.140 41.99
HVJ Vatican City
5.968 50.26 2-2:15 p.m.; Sun. 5-5:30 a.m.
14.850 20.19
15.120 19.83 Daily 5-5:15 a.m.
I1AX Rome, Italy
6.667 44.98
I2RO Rome, Italy
6.220 48.20
11.800 25.40 11 a.m.-12:30 p.m., 2:30-5:30 p.m.
I3RO Rome, Italy
3.750 79.95
J1AA Tokyo, Japan
8.100 37.01
9.862 30.40 5:30 a.m.-7 a.m.
13.074 22.93
15.760 19.02
17.380 17.25
KDK-KKH Kahuku, Hawaii
7.518 39.89
KEJ Bolinas, Calif.
9.012 33.27
KEQ Kahuku, Hawaii
6.888 43.54
LSN Buenos Aires, Argentina
9.895 30.30
10.300 29.00
14.480 20.70
20.680 14.50
21.020 14.27
LSX Buenos Aires, Argentina
10.300 29.00
20.680 14.50
LSY Buenos Aires, Argentina
10.410 28.80
20.820 14.40 Sun. 4 p.m.

OPM Leopoldsville, Belgian Congo
10.090 29.70
ORK Brussels, Belgium
10.340 28.99
OXY Skamleback, Denmark
9.520 31.49 2-6:30 p.m.
PCJ Eindhoven, Netherlands
9.590 31.26
15.220 19.71
PLE Bandoeng, Java
9.410 31.86
18.820 15.93 Tue. 8:40-10:40 a.m.
PLV Bandoeng, Java
9.410 31.86
PLW Bandoeng, Java
8.120 36.92
9.480 31.63
PPQ Rio de Janeiro, Brazil
11.644 25.75
PRADO Riobamba, Ecuador
6.618 45.31 Thur. 9-11 p.m.
PRBA Rio de Janeiro, Brazil
9.492 31.58 6-6:15 p.m.
PSH Rio de Janeiro, Brazil
10.212 29.35
RV15 Khabarovsk, USSR
4.273 70.65 3-9 a.m.
SR1 Poznan, Poland
9.570 31.33 Tue. 6-8 a.m.
TGW Guatamala
6.611 45.35 Tu.-Thur.-Fri. 10:30 p.m.-Mid.
TGX Guatamala
8.950 33.50 Sat. 10 p.m.-Mid.
TI4NRH Heredia, Costa Rica
9.670 31.00 Weekdays 10-11 p.m.
15.066 19.90 Sat.-Sun. 11 a.m.-noon.
VE9AP Drummondville, Que.
6.335 47.35
VE9BJ St. John, N. B.
6.090 49.23 5 p.m. and 11 p.m.
VE9BY London, Ontario
4.792 62.56 Sat. Mid.-1 a.m.
6.426 46.65 Wed. 8:30-9:30 p.m.; Fri. 7-8 p.m.; Sat. 8-11 p.m.
8.645 34.68 Mon. 3-4 p.m.
VE9CI London, Onatrio
2.735 109.62 9-11 p.m.; Sun. 11 a.m.-7 p.m.
VE9CL Winnipeg, Manitoba
5.710 52.51
6.150 48.75
VE9CS Vancouver, B. C.
6.070 49.39
VE9DR Drummondville, Que.
6.005 49.93 7 p.m.-Mid.
9.555 31.37
11.780 25.44
VE9GW Bowmanville, Ontario
6.092 49.22 5-11 p.m.; Sun. 1-7 p.m.
24.390 12.30
VE9JR Winnipeg, Manitoba
11.720 25.58 6:30-8:30 p.m.
VK2ME Sydney, Australia
7.940 37.76
9.585 31.28 Sat. Mid.-2 a.m., 4-30-8:30 a.m., 1:30-3:30 p.m.
VK3ME Melbourne, Australia
9.090 32.98
9.548 31.40 Wed. 5-6:30 a.m.; Sat. 5-7 a.m.
VPD Suva, Fiji Islands
7.890 38.00
14.420 20.80
VQ7LO Nairobi, Kenya
6.060 49.48 11 a.m.-3:30 p.m.; Tue. 3-4 a.m.; Thur. 8-9 a.m.
9.616 31.18
VRT-ZFA Hamilton, Bermuda
5.045 59.42
10.060 29.80
W1XAZ Springfield, Mass.
9.570 31.33 Noon-Mid.
W2XAD Schenectady, N. Y.
15.320 19.57 4-7 p.m.; Sat.-Sun. 2-7 p.m.
W2XAF Schenectady, N. Y.
9.530 31.46 5 p.m.-Mid.
W2XV Long Island City, N. Y.
4.797 62.50 Wed.-Fri. 8-10 p.m.
4.975 60.27
8.650 34.66
W3XAL Boundbrook, N. J.
6.096 49.17 Sat. 4 p.m.-1 a.m.
17.772 16.87 Daily 8 a.m.-4 p.m.
W3XL Boundbrook, N. J.
6.386 46.96
W4XB Miami, Fla.
6.036 49.67 5-11 p.m.
W8XAL Cincinnati, Ohio
6.060 49.48 6-10:30 a.m.; 1:30-3:30 p.m., 7 p.m.-1:30 a.m.
W8XK Pittsburgh, Pa.
6.140 48.83 4 p.m.-11 p.m.
11.872 25.25 4 p.m.-10 p.m.
14.480 20.70
15.204 19.72 9 a.m.-4 p.m.
17.780 16.87
21.540 13.92
W9XAA Chicago, Ill.
6.076 49.34 Sun. 11 a.m.-9 p.m.
11.840 25.34
18.105 16.56
W9XF Chicago, Ill.
6.020 49.80
6.095 49.19 Daily ex. Sat. 4:30-8 p.m.; 9:30 p.m.-2 a.m.
20.500 14.63
XAM Merida, Yucatan
5.766 52.00
11.530 26.00
XDA Mexico City
5.357 55.96
5.879 51.00
6.818 44.00
9.375 31.97
11.760 25.50
14.620 20.51
XEW Mexico City
6.020 49.80
YVQ Maracaibo, Venezuela
11.680 25.67
18.296 16.39
YV1BC Caracas, Venezuela
6.058 49.49
YV11BMO Maracaibo, Venezuela
6.125 48.95 8-11 p.m.
ZL2ZX Wellington, N. Z.
6.057 49.50 Mon.-Wed.-Thur.-Sat. 2-15-6:15 a.m.

Broadcasting Stations of Europe

(Time is given in G. M. T.)

Kcs.	Kwts.	City, Call and Country
155	**7**	Kaunas (Lithuania)
160	**8.5**	Huizen (Holland) Exchanges wavelengths with Hilversum every three months.
167	**54**	Lahti (Finland) (relays Helsinki)
174	**75**	Radio-Paris (France)
183.5	**60**	Konigs Wusterhausen (Zeesen) (Germany) (relays Berlin) (S. W. Station DJA on 31.38 m.)
187.5	**10**	Irkoutsk, (RV14) (USSR)
193.0	**30**	Daventry National (Great Britain) (S. W. Station G5SW on 25.53 m.)
195	**7**	Ankara (Turkey)
202.6	**100**	Moscow (Old Komintern) (Russia) (RV1)
207.5	**13**	Eiffel Tower (Paris) (France) (FL)
212.5	**120**	Warsaw No. 1 (Poland)
217.5	**100**	Novosibirsk (RV6) (USSR)
222.2	**0.5**	Kasbah (Tunis)
222.5	**30**	Motala (Sweden) (relays Stockholm)
230.1	**100**	Moscow (Trades Union) (Russia) (WZSPS)
238.1	**4**	Novosibirsk (Russia)
	10	Baku (RV8) (USSR)
242.5		Vienna Experimental (Austria)
244	**0.6**	Boden (Sweden) (relays Stockholm)
250	**5**	Istanbul (Turkey)
	21	Reykjavik (Iceland)
256	**25**	Tashkent (Russia) (RV11)
260	**7.5**	Kalundborg (Denmark) (relays Copenhagen)
268.5	**40**	Moscow, Popoff (Russia) (RV58)
271.5	**35**	Minsk Koloditschi (RV10) (USSR)
277	**60**	Oslo (Norway)
280	**10**	Tiflis (Russia) (RV7)
290	**36**	Kiev (Russia) (RV9)
300	**100**	Leningrad (Russia) (Kolpino) (RV53)
310	**10**	Alma Ata (RV60) (USSR)
320	**20**	Kharkov (RV4) (USSR)
340	**20**	Saratov (RV3) (USSR)
353.4	**4**	Rostov-on-Don (RV12) (USSR)
363.6	**50**	Sverdlovsk (RV5) (USSR)
385	**10**	Petrozavodsk (Russia) (RV29)
389	**0.6**	Ostersund (Sweden) (relays Sundsvall)
394	**1.8**	Nijni Novgorod (Russia)
395	**1.5**	Geneva (Switzerland) (Relays Sottens)
416.7	**20**	Moscow (Experimental) (Russia) (RV2)
428.6	**4**	Minsk (Russia)
434.7	**1.2**	Oulu, Uleaborg (Finland)
442	**0.6**	Lausanne (Switzerland) (relays Sottens)
522	**2.5**	Ljubljana (Yugoslavia)
	1.2	Samara (RV16) (USSR)

527	0.25	Freiburg-im-Breisgau (Germany) (relays Stuttgart)
530	2	Grenoble (PTT) (France)
	0.25	Hanover (Germany) (relays Hamburg)
531	2	Smolensk (Russia)
533	16	Wilno (Poland)
536	0.25	Augsburg (Germany) (relays Munich)
	1.5	Kaiserslautern (Germany) (relays Munich)
	0.7	Hamar (Norway) (relays Oslo)
	1	Tampere (Finland) (relays Helsinki)
545	18.5	Budapest No. 1 (Hungary) (Lakihegy)
554	3	Palermo (Italy)
	10	Sundsvall (Sweden) (relays Stockholm)
563	60	Munich (Germany)
572	15	Riga (Latvia)
581	15	Vienna (Rosenhugel) (Austria)
589	15	Brussels No. 1 (Belgium) (Veltheim)
	10	Astrakhan (RV35) (USSR)
599	20	Florence (Italy) (I1FI) (relays Turin)
	1.8	Nijni Novgorod (Russia)
603.6	1.2	Moscow (Russia)
608	1.2	Trondheim (Norway)
614	120	Prague (Czechoslovakia) (No. 1)
617	10	Oufa (RV22) (USSR)
625	10	Ivanovo-Voznesenk (RV33) (USSR)
	50	North Regional (Manchester) (Great Britain)
630.2	1.2	Sebastopol (Russia)
635	60	Langenberg (Germany)
644	1.5	Lyons (La Doua) (France) (relays PTT)
	0.5	Tartu (Estonia)
653	60	Schweizerischer Landessender (Beromunster) (Switzerland)
662	0.5	Bodo (Norway)
	0.5	Danzig (Free City) (relays Konigsberg)
	0.5	Klagenfurt (Austria) (relays Vienna)
	0.7	Porsgrund (Norway) (relays Oslo)
	1	Salamanca (Spain) (EAJ22)
	0.6	San Sebastian EAJ8 (Spain) (Mon., Wed., Fri. 7:30-9:00 p.m., other days 10 p.m. to midnight)
	0.1	Tromso (Norway)
	0.15	Uppsala (Sweden) (relays Stockholm)
	1.0	Pori (Finland)
666.5	4	Odessa (Russia)
671	0.35	Aalesund (Norway)
	0.08	Notodden (Norway)
	0.7	Paris (PTT) (Ecole Superieure) (France)
	0.15	Rjukan (Norway) (relays Oslo)
680	50	Rome (I1RO) (Italy) (S. W. Station 2RO on 25.4 m.)
689	0.25	Malmberget (relays Boden) (Sweden)
	55	Stockholm (Sweden) (SASA)
696	1.5	Parede (Portugal)
697	2.8	Belgrade (Yugoslavia)
707	2	Madrid (Union Radio) (EAJ7) (Spain) 7-8:30 p.m. and (except Monday) 10 p.m. to 12 midnight
		Madrid (Radio Espana) (Spain) 5-7 p.m. (Mon. 5 p.m. to 12 midnight) (EAJ2)
	100	Moscow-Stalin (Russia)
715	1.5	Berlin (Witzleben) (Germany) (No. 1)
721.1	6	Rabat (Morocco)
725	1.2	Dublin (Ireland)
734	16	Katowice (Poland)
743	25	Radio-Suisse Romande (Sottens) (Switzerland)
752	25	Midland Regional (Great Britain)
761	12	Bucharest (Romania)
769.9	120	Leipzig (Germany)
770	10	Archangel (Russia) (RV36)
	1.5	Frankfurt-am-Main (Germany)
779	8	Toulouse (Radiophonie du Midi) (France)
	10	Stalino (RV26) (USSR)
788	16	Lwow (Poland) (Lemburg)
792.5		Moscow (Russia)
797	50	Scottish Regional (Nr. Falkirk) (Great Britain)
806	1.5	Hamburg (Germany)
810	1.2	Radio LL. (Paris) (France)
815	1	Bolzano (Italy)
	10	Helsinki (Finland) (relays Lahti)
	1.5	Seville (Union Radio) (EAJ5) (Spain)
	10	Kharkov (RV20) (USSR)
816	0.7	Fredriksstad (Norway) (relays Oslo)
824	1	Bergen (Norway)
825.3	13	Algiers (N. Africa)
832	60	Stuttgart (Muhlacker) (Germany)
842		Tiraspol (Russia)
843	50	London Regional (Great Britain) (Brookmans Park)
852	7	Graz (Austria) (usually relays Vienna)
855.5	1.2	Leningrad (Russia) (RV70)
860	8	Radio Barcelona (EAJ1) (Spain)
869	11.5	Strasbourg (Brumath) (France) (PTT)
878	35	Brno (Czechoslovakia) (Brunn)
887	15	Brussels No. 2 (Belgium) (Flemish programme) (Velthem)
896	5.5	Cadiz (Spain)
	1.9	Poznan (Poland)
905	7	Milan (Italy) (relays Turin)
914	60	Poste Parisien (Paris) (France)
923	60	Breslau (Germany)
932	10	Goteborg (Sweden) (relays Stockholm)
	0.25	Dresden (Germany) (relays Leipzig)
941	1.5	Naples (Italy) (I1NA) (relays Rome
	1	Sofia (Rodno-Radio) (Bulgaria)
950	1.6	Marseilles (PTT) (France)
	1.5	Cracow (Poland)
959	10	Genoa (Italy) (I1GE) (relays Turin)
		Radio-Vitus (Paris) (France) (S. W. Station on 43.75 m.)
	1	Cardiff (Great Britain)
968	0.25	Pietarsaari (Jacobstad) (Finland) (relays Helsinki)
977	0.5	Falun (Sweden)
	0.75	Zagreb (Yugoslavia)
986	13	Bordeaux-Lafayette (PTT) (France)
995	50	North National (Manchester) (Great Britain)
1004	11	Tallinn (Estonia)
1013	7	Hilversum (Holland) (Up to 4.40 p.m.)
	20	Hilversum (Holland) (After 4:40 p.m.) (Exchanges wavelengths with Huizen every three months.)
1022	2.5	Kosice (Czechoslovakia)
	0.7	Limoges (PTT) (France)
1031	13.2	Viipuri (Viborg) (Finland) (relays Helsinki)
	1	Bournemouth (Great Britain)
1040	0.12	Plymouth (Great Britain)
	50	Scottish National (Nr. Falkirk) (Great Britain) (Swansea)
1043	0.7	Radio Lyons (France)
1049	0.8	Montpellier (France)
	0.5	Berlin Relay (Germany)
1058	0.5	Magdeburg (Germany)
	0.5	Stettin (Germany) (relays Berlin)
	0.5	Innsbruck (Austria) (relays Vienna)
1063	2	Lisbon (CT1AA) (Portugal) (S. W. Station on 31.25 m.)
1067	0.75	Copenhagen (Denmark)
1071		Radio Liege (Belgium)
1076	14	Bratislava (Czechoslovakia)
1085	60	Heilsberg (Germany) (relays Konigsberg)
1096	7	Turin (Italy)
1103	1.3	Rennes (France) (PTT)
1112	0.25	Bremen (Germany) (relays Hamburg)
	20	Bari (Italy)
1121	0.7	Oviedo (Spain)
	1.5	Radio Valencia (Spain)
1130	1.3	Lille (PTT) (France)
1137	11	Moravska-Ostrava (Czechoslovakia)
1147	50	London National (Great Britain) (Brookmans Park)
1157	17	Frankfurt-am-Main (Germany)
	2	Leipzig (Germany)
1166	10	Horby (Sweden) (relays Stockholm)
1175	0.7	Toulouse (PTT) (France)
1184	5	Gleiwitz (Germany) (relays Breslau)
	1	Almeria (Spain) (EAJ18)
1193	1	Barcelona (Association Nat.) (EAJ15) (Spain)

	0.25	Trollhattan (Sweden)
1202	0.3	Varberg (Sweden)
1205	0.8	Juan-les-Pins (Nice) (France)
1211	0.2	Kalmar (relays Stockholm)
	10	Trieste (Italy)
1220	0.5	Berne (Switzerland) (relays Beromunster)
	0.4	Cartagena (Spain)
	0.25	Cassel (Germany) (relays Frankfurt)
	0.2	Eskilstuna (Sweden) (relays Stockholm)
	0.25	Kiruna (Sweden) (relays Boden)
	0.5	Linz (Austria) (relays Vienna)
	0.4	Saffle (Sweden) (relays Stockholm)
	0.6	Turku (Abo) (Finland) (relays Helsinki)
	0.12	Swansea (Great Britain)
	0.1	Schaerbeck (Belgium)
1229	0.5	Basle (Switzerland)
1236		Liege Experimental (Belgium)
1238	1	Belfast (N. Ireland)
1247	0.5	Stavanger (Norway)
1250	1.5	Radio Beziers (France)
1256	2	Nurnberg (Germany) (relays Munich)
1265	3	Bordeaux-Sud-Ouest (France)
	1	Radio Nimes (France)
	0.2	Orebro (Sweden) (relays Stockholm)
1274	0.5	Christiansand (Norway)
1283	2	Lodz (Poland) (Experimental)
1292	0.25	Kiel (Germany) (relays Hamburg)
	0.25	Norrkoping (Sweden)
	0.2	Halsingborg (Sweden)
1301	1.25	Malmo (Sweden) (relays Stockholm)
	0.2	Umea (Sweden)
1310	0.05	Uddevala (Sweden)
1319	0.5	Flensburg (Germany) (relays Hamburg)
1328	0.15	Hudiksval (Sweden)
1337	1	Cork (Ireland)
1345	10	Fecamp (Radio Normandie) (France)
1355	0.5	Pori (Bjorneborg) (Finland) (relays Helsinki)
1365	1.5	Beziers (France)
1373	0.5	Salzburg (Austria) (relays Vienna)
1382	0.25	Karlstad (Sweden)
	0.5	Konigsberg (Germany)
1391	0.2	Halmstad (Sweden)
	3	Radio Chatelineau (Belgium) (Brussels)
1400	1	Aberdeen (Great Britain)
	10	Warsaw No. 2 (Poland)
1420	1	Newcastle (Great Britain)
1428	3	Csepel (Hungary)
1430	3	Budapest No. 2 (Hungary) (After 7:30 p.m.)
1450	0.15	Boras (Sweden)
1460	0.2	Ornskoldsvik (Sweden)
1470	0.2	Gavle (Sweden) (relays Stockholm)
1480	0.25	Kristinehamn (Sweden)
1490	0.25	Jonkoping (Sweden) (relays Stockholm)
1530	0.2	Karlskrona (Sweden) (relays Stockholm)
1714		St. Quentin (France)

MAIL ADDRESSES OF CUBAN STATIONS

CMAB	Jose Silvera, Marti 101, Pinar del Rio
CMAF	The International Broadcasting Co. of Cuba, P. O. Box 66, Havana
CMBC	Domingo Fernandez, Monte 139, Havana
CMBD	Luis Perez Garcia, Enamorados y Flores, S. Suarez, Havana
CMBG	John L. Stowers, Hospital No. 100, Havana
CMBJ	Emilio Perera, Consulado y Virtudes, Havana
CMBK	Alberto Alvarez, Marti No. 25, Guanabacoa, Havana
CMBL	Julio C. Hidalgo, Zapata 150 entre 6 y 8 Vedado, Havana
CMBN	Armando Romeu, San Francisco No. 49, Vibora, Havana
CMBR	Tomas Basail, Ave. 6 entre F y G, Arroyo Apolo, Havana
CMBS	E. Artalejo, Calzada y H. Vedado, Havana
CMBW	Alvarez-Moris, Ayesteran No. 13, Havana
CMBY	Callejas-Estefani, Principe No. 33, Havana
CMBZ	Manuel and Guillermo Salas, San Rafael No. 14, Havana
CMC	Cuban Telephone Co., Apartado 945, Havana
CMCA	Manuel Cruz, Ave., de Italia No. 102, Havana
CMCB	Metropolitan-Radio de Cuba, Metropolitan Bldg., Havana
CMCD	Angel Bertematy y Garcia, Hotel Palace, G y 25, Vedado, Havana
CMCF	Raoul Karman, Rayo No. 67, P. O. Box 647, Havana
CMCH	Wifredo and Humberto Fontanals Sanchez, 88 Primelles St., Havana
CMCJ	R. Rodriguez, Estevez 4, Havana
CMCM	Aurelio Balino, Belascoain No. 639, Havana
CMCN	Antonio Ginard, Reina y Ave. Buen Retiro, Marianao, Havana
CMCQ	Andres Martinez, Vista Alegra 80, Vibora, Havana
CMCR	Aurelio Hernandez, Milagros No. 35, Vibora, Havana
CMCU	Jorge Garcia Serra, San Francisco No. 13, Vibora, Havana
CMCW	Vilarino Cervantes y Lorenzo, Fabrica corner Asburu Sts., Havana
CMCY	M. D. Autran, 215 Presidents Ave., Vedado, Havana
CMDB	Julio Powers, Quinta 476, Vedado, Havana
CMDD	G. de Sequeira, Agramonte 32, Regla, Havana
CMGA	L. Valdes Figueroa, Marti 19, Colon
CMGB	Jose Anorga, Magdalena 1, Matanzas
CMGC	Oscar S. Mechoso, Independencia 56, Matanzas
CMGE	G. Sabater, 14 numero 72, Cardenas
CMGF	B. R. de la Torre, G. Betancourt 105, Matanzas
CMGH	O. y J. Alvarez, B. Byrne 113, Matanzas
CMHC	Frank H. Jones, C. Tuinucu, Tuinucu
CMHD	Manuel Alvarez, M. Escobar 17, Caibarien
CMHI	Laviz & Paz, Independencia No. 34, Santa Clara
CMHJ	Victorino Lopez, Apartado 57, Cienfuegos, S. C.
CMHK	V. Villaneuva, Heredia 61, Cruces
CMHL	Oscar Zayas, San Carlos 156, Cienfuegos
CMJC	F. Isaac, Cisneros y G. Gomez, Camaguey
CMJE	M. Fernandez, Hnos. Aguero 2, Camaguey
CMJF	J. L. Stowers, Hotel Plaza, Camaguey
CMJG	J. Antonio Lefran, Martires 133, Camaguey
CMJH	Luis Marauri Mendoza, Independence St., 89, Ciego de Avila
CMJI	Gilberto Gessa Lopez, Independencia No. 95, Ciego de Avila
CMJL	Enrique Artime, Cuba 27, Camaguey

CMJN	E. de Ugarriza, Martires, No. 11, Camaguey
CMJO	Rey-Borges, G. Machado y Maceo, Ciego de Avila
CMJP	Cesar Canals, Callejas s-n, Moron
CMK	National Broadcasting Company of Cuba, Sinargura No. 1, Havana
CMKC	Pinol Batlle y Co. J. A. Saco alta 23, Santiago de Cuba
CMKJ	Luis Morlote, E. Giro 11, Guanatanamo
CMQ	J. Fernandez, 25 numero 445, Vedado, Havana
CMW	Troncoso y Gil, Paseo de Marti 103, Havana
CMX	Casa "Lavin," Francisco A. Lavin, Administrador, Ave., de la Republica No. 99-A, Havana

The Month's Changes

FREQUENCY

860	VOGY	St. Johns, Newfoundland, from 910
915	XFF	Chihuahua, Mexico, from 875
1040	WESG	Elmira, N. Y., from 1270
1155	XED	Guadalajara, Mexico, from 965
1180	CMCJ	Havana, Cuba, from 588
1325	CMCY	Havana, Cuba, from 1360

OWNERS

1040	WESG	Elmira, N. Y., to WESG, Inc.
1115	XENT	Neuvo Laredo, Mex., to Compania Industrial Universal, S. A.
1200	WHBY	Green Bay, Wis., to WHBY, Inc.
1210	WHBF	Rock Island, Ill., to Rock Island Broadcasting Co.
1290	KTSA	San Antonio, Tex., to Southwest Broadcast Co.
1300	WFAB	New York City, to Fifth Ave. Broadcasting Corp.
1310	WTSL	Laurel, Miss., to Southland Radio Corp.
1400	KOCW	Chickasha, Okla., to J. T. Griffin
1420	KIDW	Lamar, Colo., to Lamar Broadcasting Co.

NEW

845	XETM	Matamoros, Mexico
885	XEPN	Piedras Negras, Mexico
955	XEAW	Reynosa, Mexico
1310	.....	Juneau, Alaska

POWER

850	WWL	New Orleans, La., 5000 to 10000
1115	XENT	Neuvo Laredo, Mex., 50000 to 150000
1440	KXYZ	Houston, Texas, 250 to 500
1500	KGFK	Moorhead, Minn., 50 to 100
1500	KPQ	Wenatchee, Wash., 50 to 100

LOCATION

1155	XED	Guadalajara, Mex., from Reynosa, Mex.
1370	WGLC	Hudson Falls, N. Y., from Glens Falls N. Y.

DELETED

1450	WBMS	Hackensack, N. J.
1450	WNJ	Newark, N. J.

REINSTATED

1200	WFBC	Knoxville, Tenn.

PERMIT TO CHANGE LOCATION

1200	WFBC	Knoxville, Tenn., to Greenville, S. C.

PERMIT TO CHANGE FREQUENCY

1310	KFPM	Grand Junction, Colo., to 1200

HEARD ON OTHER FREQUENCIES

CMAF	680, Havana, on 660
CMBD	1270, Havana, on 960
CMBG	1070, Havana, on 1065
CMBS	780, Havana, on 790
CMBW	1140, Havana, on 965
CMCD	925, Havana, on 915
CMCF	890, Havana, on 900
CMCJ	1180, Havana, on 588
CMCW	1365, Havana, on 965
CMCY	1325, Havana, on 1365
XEFZ	1370, Coyoacan, on 1500
XEG	1070, Mexico City, on 1075
XETF	630, Veracruz, on 625
XETR	610, Mexico City, on 600
XFX	867, Mexico City, on 860
10-BQ	1200, Brantford, on 1170

Cuban and Mexican Changes

CUBAN CHANGES

By courtesy of the Newark News Radio Club, we are passing on this information that comes to them from the announcer of CMCW in Havana.

CMBC from 965 to 1270
CMBD from 1270 to 965
CMBF from 1365 to 1325
CMBR from 1485 to 1500
CMBW from 1140 to 925
CMBY from 1230 to 1235
CMCA from 1230 to 1235
CMCD from 925 to 1140
CMCH from 1405 to 1395
CMCJ from 1180 to 1185
CMCM from 1405 to 1395
CMCN from 1270 to 925
CMCR from 1325 to 1375
CMCW from 1365 to 965
CMDB from 1405 to 1395
CMW from 1185 to 585

MEXICAN CHANGES

(Received too late to change indices)

XEA	Guadalajara. 1000 to 1155 kcs.
XEAW	Reynosa. 955 to 965 kcs.
XEFZ	Coyoacan. 1370 to 1500 kcs.
XEG	Mexico City. 1070 to 1075 kcs.
XEP	Mexico City. 1400 to 780 kcs.
XEU	Veracruz. 1007 to 1010 kcs.
XEY	Merida. 1000 to 546.8 kcs.
KFC	Aguascalientes. 810 to 805 kcs.
KFG	Mexico City. 683.3 to 638.3 kcs.
XFX	Mexico City. 867 to 860 kcs.

NEW STATIONS

XEAN	Juarez, Chih. 750 kc., 5000 w.
XEFH	Mexico City. 1360 kc., 250 w.
XEFJ	Monterrey, N. L. 1000 kc., 100 w
XEFV	Juarez, Chih. 1370 kc., 50 w.
XEFW	Tampico, Tams. 1240 kc., 70 w.
XETH	Puebla, Pue. 840 kc., 100 w.
XETU	Pachuca, Hgo. 890 kc., 100 w.
XETW	Mexico City. 830 kc., 500 w.
XFI	Mexico City. 818.1 kc., 1000 w.
XFO	Mexico City. 940 kc., 5000 w.

The DX World

(Continued from page 33)

in YV1BC, Caracas, Venezuela, Sunday, October 2nd," reports Albert Sandham, 99 Page St., St. Catharines, Ont. "So far I have heard programs from seven countries: Canada, United States, Mexico, Cuba, Dominican Republic, Porto Rico and Venezuela. I have been DXing three years and have heard 413 stations so far. I have a Rogers electric set, 1929 model, type 540, using eight tubes."

"Reception is good here in the country," writes Henry C. Arsenault, Box 28, St. Raphael, P. E. I. "I live exactly 12 miles from Summerside. I have a 3-tube radio built by my cousin, Anthony Arsenault of Summerside. It sure gives me good results. I have heard nearly 300 different stations and most of them on the loud speaker. I also get good daytime reception. I would like to hear from radio fans all over the world, and promise to answer all letters I receive."

"DXers should try for these transatlantic stations," suggests Raymond M. Bell, 616 S. Allen St., State College, Pa. "Great Britain, 7:00 p. m. EST, stations on 625, 797, 843, 995, 1040, 1148 kcys., with 50 KW; Germany, 6:00 p. m. EST, on 635, 832, 923, 1085 kcys., 60 KW; France, Paris, 6:00 p. m. EST, on 914, 60 KW. Also try for Germany midnight EST till sunrise in Germany (about 1:00 a. m. EST)."

"I am only two miles from WSB's transmitter," writes Douglas Wanchope (no address), "and have had some interference from them, until lately when I built a wavetrap. Before, even with the aerial and ground disconnected, this station overlapped about 25 kilocycles each way on the dial, but with the wavetrap in series and my aerial and ground connected, WJZ comes in without a trace of interference.

"I have received 330 and verified over 200 stations on our 9-tube Fada," advises Howard Rung, 64 Lisbon Ave., Buffalo, N. Y. "The only chance I have to DX is weekends and holidays because of school. My log consists of stations in 43 states and six different countries. I would appreciate hearing from other 14-year old DXers about their records."

"I've kept a list of all the stations I've heard since about 1926," advises Leo Skelly, 125 Lake St., St. Catharines, Ont., "but did not actually start to DX until about 1929. Have a log of 581 to date, including RUS, KPCB, CMHC, KTLC, CKWX, WKAQ and others. I'd like to hear from owners of Sparton radios and promise to answer all letters."

"This morning (October 9th) was great for DXing," reports Jack W. Roberts, 4836 Mulberry St., Philadelphia, Pa. "I managed to get five new stations, all pretty good, which brings my total up to 351. They were KGGM, KFBB, KLZ, KMPC and WEDC. I am hoping to catch at least five more tonight."

"I haven't been DXing for quite a year and my log is 412," says Luther E. Grim, 505 S. Main St., Red Lion, Pa. "My two latest catches (WKAQ and YV1BC) are by far my most prized catches, with KFVD, 10BQ and VAS crowding in close for recognition."

"I have been a DXer for about seven months now, and have a log of 124 stations on my Philco 5-tube Baby Grand," says Myron Force, 1209 Belle Ave., Lakewood, Ohio. "I have three California stations which I think is fairly good for a small radio."

"I use a Crosley Pup, one tube, regular broadcast band set of about eight or nine years ago," says John C. Fulton, 306 Elmwood Ave., Providence, R. I. "I have received 121 stations, including 17 shortwave stations."

"I won a cash prize from WTBO, Cumberland, Md., 100 watts, for their DX in September," boasts G. Wrightman, 1171 W. 32nd Ave., W., Vancouver, B. C. "My report was the most distant. That makes four prizes in eight months."

"On your Right"—the Radio Map of the World with Time Converter.

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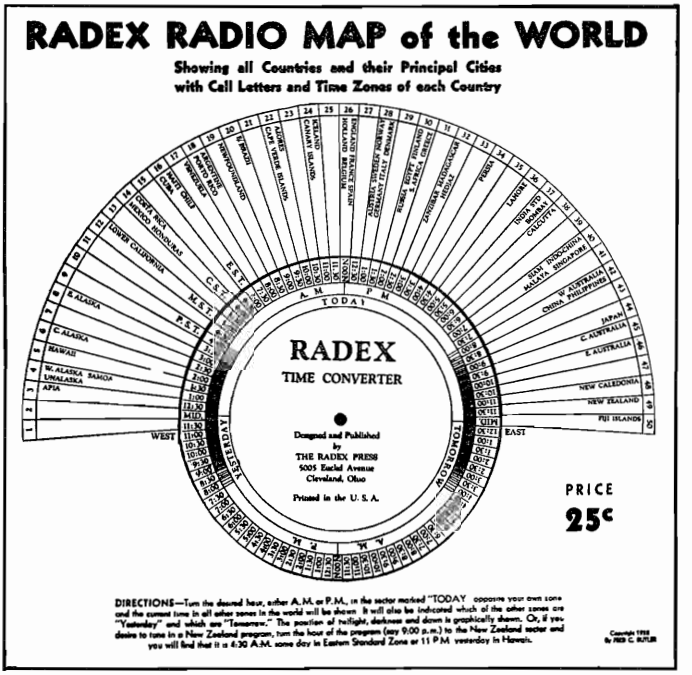

Tells You When You Must Tune for Distant Programs

On the double page inside is a fine map of the world—the size of six pages of RADEX—with all the principal cities and time zones plainly shown. Adds immensely to pleasure of DXing.

On the back is a list of all countries in the world with the call letters assigned to each and zone key for use on the Converter.

Mailed anywhere in the world for 25 cents. Given free with a year's subscription to RADEX; see subscription blank on page 24.

THE RADEX PRESS, INC.

5005 EUCLID AVENUE CLEVELAND, OHIO, U. S. A.

Sometimes I think there ought to be a law to make everyone do a little studying every week. I didn't think that a year ago because it looked like all the cards were stacked against me. But I am certainly rolling in the money now. Maybe my story will show you the way to larger earnings also.

I Thought Radio Was a Plaything

But Now My Eyes Are Opened, and I'm Making Over $75.00 a Week!

$50 a week! Man alive, a year ago I thought anyone making that much was just plain lucky.

Twelve months ago I was just barely getting by. It was the same old story—a little job; a salary as small as the job.

If you had told me that twelve months later I would be making $75 a week in my own Radio business—I'd thought you were crazy.

But I am getting ahead of my story—let me tell you how it all started. I was hard up a year ago because I had been kidding myself—that's all—not because I had to be. I thought a fellow either had to be lucky or have a string of college degrees a half a mile long to make good money.

One day I picked up a magazine and the headline of an ad attracted me because it seemed to fit my case. It said, "I will show you how to start a spare time or full time Radio business of your own WITHOUT CAPITAL."

"They're trying to kid somebody," I thought, "but I'll find out what it is all about anyway."

I wrote in and within a few days received a 64-page book telling about the opportunities in Radio, how I could prepare right at home in my spare time, and how they would show me how to start making money in my neighborhood selling and repairing Radio sets. It would probably have sounded too good to be true if the promises had not been backed up by 100 letters from fellows who had taken their course and were very enthusiastic about it.

What has happened since seems almost like a dream to me now. I took their course and in about a month I was ready to start making money in my neighborhood—as much as $5 and $15 a week. It wasn't long until I had saved enough money to start a little business of my own.

That business has since grown to the point where I am clearing an average of $75 a week. All this took place under the watchful guidance of my friends at the National Radio Institute. They also offered to train me for other lines—in case I wasn't interested in having my own business. Broadcasting stations, Radio Manufacturers, Operating on Board Ship, Servicing Sets, Aircraft Radio, Television and Talking Movies are other fields their training covers. And to think, until the day I wrote for that book, I'd been wailing, "I have never had a chance—will never have one because I have no pull and have never had the advantage of a good education!"

Friend—you may not be as bad off as I was—but think it over—are you satisfied? Are you making as much money as you need? Would you sign a contract to stay where you are for the next ten years at the same salary? Those are the things you have to think about—because no one is going to make it his business to push you ahead—you must make it your own business.

Take my tip—write for their book. It won't cost you anything—only a three-cent stamp. It shows you a lot of things which I don't believe you know now—a lot of facts and figures on the opportunities in this new, fast-growing field. Where the jobs are, what they pay, how to get ready for one. Beginners as well as experienced men are making as much as $1,000 to $2,000 a year more as a result of N. R. I. training. You place yourself under no obligation because the book is free and is gladly sent to anyone who is ambitious and wants to get ahead. Just address J. E. Smith, President National Radio Institute, Dept. 3AO, Washington, D. C.

J. E. Smith, President,
National Radio Institute,
Dept. 3AO, Washington, D. C.

Dear Mr. Smith: Send me your free book, "Rich Rewards in Radio," which points out the opportunities for spare time and full time jobs in Radio and your famous 50-50 method of training men to become Radio Experts through home study. I understand this request places me under no obligation.

Name .....

Address .....

City..... State.....