

THE APRIL 1934

RADIO INDEX

THE ALL-WAVE RADIO MAGAZINE



25^c

30 cents
in Canada
Including
Tax

200 Dependable S. W. Stations
Bad Practices in Verifying
Addresses of All Stations
Neutralizing and Aligning
How Signals are Detected

No. 78

APRIL DX CALENDAR

Time in EST

SUNDAY MORNINGS

Mar. 25
4:00-5:00—VE9EK, Montmagny, 1195 (.01)

Apr. 1
1:00-2:00—WTOC, Savannah, 1260 (.5)
WWAE, Hammond, 1200 (.1)
3:00-4:00—KIT, Yakima, 1310 (.1)

Apr. 1-29
3:00-5:00—CMCU, Havana, 1100 (.5)

Apr. 1-15
5:00-6:00—XFB, Jalapa, 1290 (1)

Apr. 8-15-22-29
1:00-3:30—WIBM, Jackson, 1370 (.1)

Apr. 15
3:00-4:00—WHBQ, Memphis, 1370 (.1)

Apr. 22
4:00-5:00—WSPA, Spartanburg, 1420 (.1)

Apr. 29
2:30-4:30—CKBI, Prince Albert, 1210 (.1)

Apr. 1-8-15-22-29
12:00-1:00—CMBW, Havana, 1140 (.6)
12:00-3:00—CMCD, Havana, 915 (.5)
2:00-3:00—KFJM, Prescott, 1500 (1)
3:00-4:00—KGER, Long Beach, 1360 (1)
3:00-5:00—CFJC, Kamloops, 1310 (.1)

MONDAY MORNINGS

Apr. 2
2:30-4:00—CHWK, Chilliwack, 780 (1)
3:45-4:00—KUJ, Walla Walla, 1370 (1)

Apr. 16
12:30-1:00—WGNY, Chester, 1210 (1)

Apr. 2-9-16-23-30
12:30-1:00—KSOO, Sioux Falls, 1110 (1)

TUESDAY MORNINGS

Apr. 10
1:00-2:00—COC, Havana, 6010
(10c for verie)

Apr. 24
2:00-5:00—XED, Guadalajara, 1155 (.5)

Apr. 3-10-17-24
4:00-4:30—WBNS, Columbus, 1430 (.5)

WEDNESDAY MORNINGS

Apr. 4
4:30-5:00—WCAL, Northfield, 1250 (1)

THURSDAY MORNINGS

Mar. 29-May 3
5:00-6:00—WRAW, Reading, 1310 (.1)

FRIDAY MORNINGS

Apr. 6-13-20-27
12:00-2:00—CFCN, Calgary, 1030 (10)
1:00-2:00—KOIL, Council Bluffs, 1260 (1)

SATURDAY MORNINGS

Apr. 7-14-21-28
11:00-12:00—CMK, Havana, 730 (2)
12:00-3:00—WGES, Chicago, 1360 (.5)
4:00-5:00—XEA0, Mexicali, 56 (.25)

SATURDAY EVENINGS

4:00-5:30—EAR-58, Canary Isls., 41.5 m.
7:00-8:30—EAR-58, Canary Isls., 41.5 m.
10:00-11:00—YVIBQ, Caracas, 960-6112
YVQ, Maracay, 6672

THE MONTH'S CHANGES

FREQUENCIES

580 CHRC Quebec, Que., from 930
600 KFQD Anchorage, Alaska, from 1230
610 XFX Mexico City, D. F., from 840
767 CMCQ Havana, Cuba, from 775
780 CKY Winnipeg, Man., from 910
865 XEMO Tijuana, B. C., from 980
890 XEW Mexico City, D. F., from 910
930 CKPR Fort William, Ont., from 780
940 VOAS St. John's, Nfld., from 810
1007 CMHI Santa Clara, Cuba, from 1037
1048 CMBG Havana, Cuba, from 1052
1048 CMCB Havana, Cuba, from 1052
1050 VOGY St. John's, Nfld., from 950
1100 XEA Guadalajara, Jal., from 1000
1105 XEFG Mexico City, D. F., from 1085
1130 TGW Guatemala City, Gua., from 1350
1147 CMBJ Havana, Cuba, from 1140
1200 XETH Puebla, Pue., from 860
1215 CMHK Cruces, Cuba, from 1225
1300 VOAC St. John's, Nfld., from 800
1310 XEFW Tampico, Tams., from 1280
1316 CMCY Havana, Cuba, from 1325
1357 CMCN Havana, Cuba, from 1375
1357 CMCR Havana, Cuba, from 1375
1405 CMCM Havana, Cuba, from 1410

POWER

546.8 XEY Merida, Yuc., 105 to 10
560 XEA0 Mexicali, B. C., 100 to 250
585 XEPN Piedras Negras, Coah., 75000 to 50000
620 KTAR Phoenix, Ariz., 500 to 1000
730 CMK Havana, Cuba, 3150 to 2000
757 XEOK Tijuana, B. C., 5000 to 2500
780 XEP Mexico City, D. F., 1000 to 500
820 XEBC Agua Caliente, B. C., 7500 to 2500
865 XEMO Tijuana, B. C., 800 to 1500
880 WGBI Seranton, Pa., 250 to 500

890 XEW Mexico City, D. F., 5000 to 50000
1000 XEL Saltillo, Coah., 40 to 10
1015 XEJ Jaurez, Chih., 500 to 250
1070 WCAZ Carthage, Ill., 50 to 100
1100 XEA Guadalajara, Jal., 250 to 125
1105 XEFG Mexico City, D. F., 500 to 250
1310 XEI Morelia, Mich., 250 to 125

NEW

630 XEMZ Tijuana, B. C.
740 Modesto, Calif.
1103 CMHA Sagua la Grande, Cuba
1185 CMBX Havana, Cuba
1190 Waterbury, Conn.
1310 WLNH Laconia, N. H.
1310 XECW Mexico City, D. F.
1370 Sheridan, Wyo.
1390 CMPN Havana, Cuba
1420 Erie, Pa.

OWNERS

546.8 XEY Merida, Yuc., to Bartolome Garcia Correa
600 WICC Bridgeport, Conn., to Southern Conn. Brdcastg. Corp.
820 XEBC Agua Caliente, B. C., to Alberto Aldrete
890 XEAF Nogales, Son., to Francisco G. Elias
1430 WBNS Columbus, Ohio, to WBNS, Inc.

CALLS

580 WCHS Charleston, W. Va., from WOBU
865 XEMO Tijuana, B. C., from XEAE
1310 WSGN Birmingham, Ala., from WKBC

LOCATION

1370 WRAM Durham, N. C., from Wilmington, N. C

DELETE

1000 XEFS Queretaro, Qro.

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For years the performance of SCOTT receivers has *merely begun* at the highest point of efficiency reached by most radio receivers.

England, France, Germany, Spain, Italy, Australia—the whole wide world—has been heard *regularly* by SCOTT owners for years! And for years SCOTT owners have also enjoyed finer reception of stations on the regular broadcast band.

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FIFTEEN**

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Send me particulars regarding the SCOTT ALL-WAVE FIFTEEN, and PROOF of its vast superiority.

Name

Address

Town.....State.....

APRIL 1, 1934



RADIO INDEX

Reg. U. S. Patent Office

FRED CLAYTON BUTLER

Editor and Publisher



B. FRANCIS DASHIELL
Technical Editor

PAGE TAYLOR
Short Wave Editor

TENTH YEAR

CONTENTS

NUMBER 78

Frontispiece—Lyda Roberti
Guest star in recent Auto Show Program

The April Calendar of Special DX Programs.....	2nd cover
The Month's Changes in Station Information.....	2nd cover
How Radio Waves are Transmitted and Detected.....	3
The Secrets of DX Success, <i>by Mrs. C. H. Judd</i>	7
Visiting with the Celebrities, and "Betty".....	9
The Pursuit of Television.....	13
Apropos of Radio, Letters to the Editor.....	14
The Reception Symbols.....	18
Monthly Meeting of the DX Club.....	20
Neutralizing and Aligning Receivers.....	25
Bad Practices in Verification.....	27
Reviewing the Short Wave Field, <i>with Page Taylor</i>	30
What Makes My Set Do That? <i>Answered by The Technical Editor</i>	39
The Network Programs for April.....	50
A Handy Index to What You Want to Hear.....	59
North American Stations Indexed by Frequencies with Mail Addresses.....	61
Ditto by States and Cities.....	75
Log by Calls for 820 Stations.....	80
Short Wave Relay Broadcasters of North America.....	91
Around the Clock on the Short Waves.....	92
One Hundred Best S. W. Stations by Calls.....	93
World S. W. Relay Stations by Calls.....	94
Two Hundred Dependable S. W. Stations by Frequencies.....	94

Published Monthly Excepting July and August
See Subscription Blank on Page 96

\$1.75 per Year

25c Per Copy

THE RADEX PRESS, INC.

Publication Office, 404 No. Wesley Ave., Mount Morris, Illinois.

Editorial and Executive Office, Hanna Building, Cleveland, Ohio

Entered as second-class matter November 7, 1932, at the post office at Mount Morris, Ill.,
under the Act of March 3, 1879. Printed in U. S. A.

ADDRESS ALL CORRESPONDENCE TO CLEVELAND OFFICE

The BEGINNERS' STORY of RADIO

PART SEVEN

How Radio Waves Are Transmitted and Detected

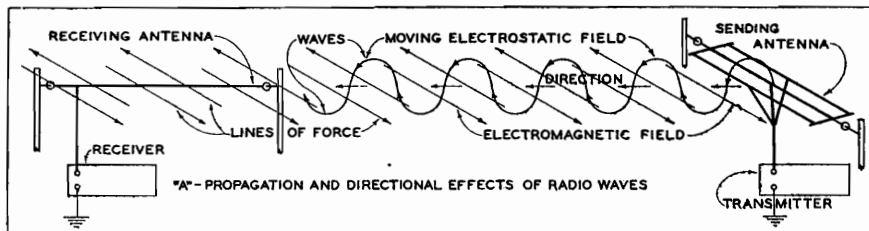
• • • By B. FRANCIS DASHIELL

PERHAPS at this time it will be well to see what happens to the radio wave that is sent out from a broadcasting station. It will be remembered that when a wave is emitted from the sending antenna it is in the form of vibrating energy and motion. This was described in Parts One and Two. And we have learned that a similar wave is picked up by the receiving antenna. It can be tuned and amplified in the radio-frequency circuit of a receiver, as shown in Part Five. But, the reader will ask, how are broadcast waves propagated through the air and finally detected by the radio receiver?

The theory of radio wave motion is

The Carrier Wave

What happens between the sending and receiving antennas when a radio wave is being transmitted? In the illustration "A", at the right, we see a broadcasting station and antenna. At the left is a receiving antenna and set. The sending antenna is connected to the oscillating circuit of the transmitter; it becomes highly charged with a radio-frequency voltage (high-frequency alternating current). The terrific speed of the vibrations together with the powerful charging current creates an *electrostatic field* about the antenna. This field vibrates with each alternation of the antenna charging current. In



the most complicated feature met with in our study of radio, and if the reader is to understand how signals are transmitted and detected it will be necessary to devote at least a few moments to the subject. Fortunately, however, radio wave forms may be easily illustrated by wavy lines that depict the electrical oscillations. In Part Two several forms of alternating-current wave motions were given; more will be shown in this chapter.

"A" the waves of the field are shown as they are pushed out into space. Each wave is forced one wave length farther away when a new a.c. cycle oscillates through the antenna. Therefore the vibrations in the electrostatic field sweeping out through space appear simultaneously with the cycles of radio-frequency antenna current. This emission, passing out in all directions, is the carrier wave which transmits speech and music

from the broadcasting studio.

The Magnetic Field

The waves of the electric field move outward like ripples that appear when a stone is thrown into a pond of still water. Accompanying this forward movement is an associated *electromagnetic field*. And were it not for this speeding wave of magnetic energy, radio reception would be impossible. Curiously enough, the magnetic field moves in a direction always at *right angles* to the movement of the electrostatic field. At each reversal (alternation) of antenna current—and the broadcast electric field—the direction of the magnetic field also reverses. In other words, the magnetic field swings back and forth, from right to left, and from left to right. This movement is indicated in "A" by the arrows.

If the magnetic lines of force of a moving magnetic field cut across a wire they will generate an electric current. This was explained in Part Three. And a similar effect occurs in the receiving antenna. When the antenna, shown in "A," is crossed by a rapidly swinging electromagnetic field, a wave of current is induced in it every time the field changes direction. For instance, if a broadcasting station transmits on a frequency of 1,000 kilocycles, its wave will have 1,000,000 complete vibrations or cycles per second. The accompanying magnetic field will also make 1,000,000 *complete* reversals in direction. As these lines of force swing back and forth over the antenna like some gigantic pendulum they induce an alternating current having a frequency of 1,000,000 cycles (1,000 kilocycles)—the same as the original current in the broadcasting system. Any receiver tuned to resonance at 1,000 kilocycles will respond to this wave. And millions of sets can be attached to antennas covering the earth only a few inches apart without diminishing the original strength of the broadcast electric and magnetic fields; all will receive an equal amount of energy from the passing lines of force!

Directional Effect

Now, if the wire points directly toward the transmitter, as shown in "A," the vibrating magnetic field will cut across the *entire length* of the antenna. A current of maximum strength will be induced. But if the antenna is placed at right angles to its previous position it will then present only a minimum surface to the crossing magnetic field. The wire will be struck by only a few lines of force, and very little current will be induced. This simple phenomenon gives radio its remarkable directional effects and makes possible the *radio compass*.

The induced currents are very weak. It becomes necessary to utilize the principles of radio-frequency amplification (explained in Part Five) to "step up" the original energy to greater strength. The resulting signals, which are greatly amplified radio carrier-waves, vibrate at terrific speeds. Neither the human ear nor mechanical devices can respond by vibrating at similar speeds. The *inaudible* signal, when delivered from the output of the tuned r.f. amplifying circuit (shown at "E" in Part Five), must be altered in form and slowed down to an *audible* rate before it can be used to produce sound. This, then, is the function of the *detector*.

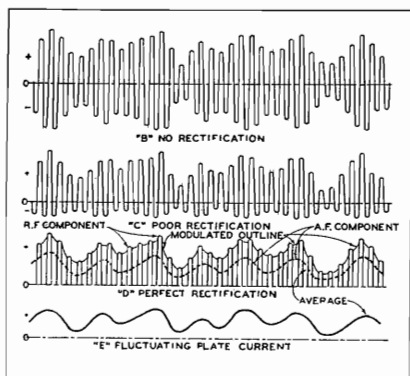
The Detector Tube

The first part of this series explained that a radio receiver is quite similar to a radio transmitter. Its tubes perform exactly the same duties as the much larger ones in the broadcasting station. But they operate in a reverse arrangement. However, an additional tube is used by the receiver—the detector tube.

The detector *rectifies* or *demodulates* the modulated radio-frequency alternating current wave received in the antenna by separating the audio frequencies (created by the microphone) from the radio frequency carrier wave (created by the transmitter). A "scrambled" or modulated carrier wave is shown at "E," Part

Two. As a result the current flowing from the detector tube toward the loud speaker will be similar to the microphone current ("D" in Part Two).

When we studied the electron tube in the preceding chapter we did not learn how the tube operates to *detect* radio waves or signals. The name "detector" really is a misnomer, for the tube actually is a rectifier. It takes an alternating current and changes it to a pulsating direct current. But these pulses occur at the same intervals as the alternations in the alternating current. They are too fast to produce audible sound vibrations in the loud speaker. The *average* of these pulses provides a slowly fluctuating current that surges the same as the current flowing from the microphone. This current can be amplified further by the *audio-amplifying* circuit. Any degree of energy can be developed for the operation of loud speakers at great volume.



Rectifying the Carrier

"B" shows a typical modulated radio-frequency carrier wave; it is also similar to the wave form shown at "E," Part Two. This inaudible wave is made up of two halves; the lower—negative; and the upper—positive. Each of the two halves—positive and negative—has been modulated equally by the audible microphone current to give it the fluctuating outline that follows the variations

in the microphone current. Each half is continuously balanced or neutralized by the opposite alternation. So the tendency of the slow fluctuations of one half of the carrier-wave *outline* to vibrate the loud speaker cone will be offset by an equal pull in the opposite direction. Therefore, we must eliminate one half of the wave—the lower half, or negative alternation.

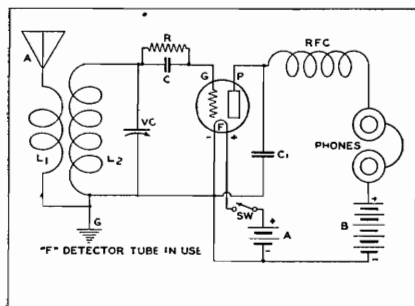
By eliminating one half of the wave more current flows on the retained half than on the reduced half. The better a tube eliminates one half of the wave the more efficiently it rectifies. "B" shows an unaltered carrier wave; "C" indicates the effect of poor rectification; and "D" pictures a wave form that has been perfectly rectified. Elementary diode tube rectification was discussed at some length in Part Six.

The A. F. and R. F. Components

Ordinarily the grid of a tube becomes alternately positive and negative (see Part Six) under the influence of the r.f. alternating potential impressed upon it. The grid of the detector, however, is held at a constant negative charge; hence it cannot become positive when the positive alternations appear; it simply becomes a little less negative. Therefore, a corresponding *rise* in the positive plate current occurs. This rise fluctuates in voltage and flows from the plate as an average of the rectified alternations, as shown in "D." It is an audio current, similar to the fluctuating direct current coming from the microphone in the broadcast studio.

But the plate current from the detector is made up of both the rectified r.f. alternations and the average of these pulsations, as shown in "D." The r.f. vibrations now are useless; they will be troublesome and must be discarded. These pulsations are called the *radio-frequency component*. Only the average plate current, also shown at "D," and, more clearly, at "E," is desired to operate the loud speaker. This is called the *audio-*

frequency component. How are these two components separated so that the audio-frequency current can perform useful work?



A Simple Circuit

At "F" we see a typical detector-tube circuit. All the symbols used have been explained in previous chapters. The antenna current passes through the primary coil L1 and induces stronger currents in the secondary L2 which is tuned to resonance by the condenser VC. A selected signal can be impressed on the grid G. But G is given a negative charge. The grid condenser C and grid leak R are connected close to G. The condenser C permits high-frequency alternations to pass to the grid, and holds back any direct current. The leak R permits any excess of electrons on G to leak back slowly into the circuit. Each time G lowers its negative potential when a positive alternation is impressed upon it a certain number of electrons slip across from the filament to the plate and cause a rise in the plate current. The detection method shown here is the *grid leak* and *condenser* scheme. It is sensitive and gives best results on distant weak signals. But it is not so stable when the resistance of the leak R has a high value. The *grid-bias* method is in almost universal use today. The grid negative bias is obtained from a cathode resistor, "C" battery, or a "bleeder" circuit. It is very stable in operation.

Choking Out the R. F.

The radio-frequency pulsations in

the plate current cannot pass through the radio-frequency choke RFC because of its high reactance (see Part Five) to high speed alternating currents. But the condenser C1 offers a low reactance path to high frequency currents, and becomes the bypassing path by which the r.f. component is turned back into a neutral circuit. The average flow or fluctuating a.f. component easily passes through RFC because of the negligible reactance to low frequencies, but is blocked by the condenser C1 because of its high reactance to low frequencies. Therefore, only a slow, pulsating, fluctuating plate current, shown at "E," passes through RFC and into the remainder of the circuit. The phones, shown in diagram "F," may be substituted by the primary coil of an audio-frequency transformer, so that the a.f. component may be further amplified before passing into the loud speaker.

(Next month we shall follow the audio-frequency current as it passes from the plate of the detector tube, through the audio-amplification circuit and tubes, and into the loud speaker.)

Queries

1. What is the carrier wave?
2. What is the relation between electrostatic and magnetic fields?
3. How should antenna be placed to receive maximum signals?
4. What part does the detector tube play?
5. Draw sketches illustrating (a) the high frequency wave before it is modulated by the current from the microphone; (b) after modulation; (c) after rectification by the detector tube; (d) the wave that enters the phones or speaker.
6. Why does the detector tube reject the negative alternations?
7. What is the audio-frequency component?
8. What is the function of the grid-condenser? Of the grid-leak?
9. What is the grid-bias? How is it obtained?
10. By what method may the a. f. and r. f. components be separated?

Back issues containing the "Beginners' Story" can be supplied for 25c each or five for \$1.00.

The SECRETS of DX Success

● ● ● By New Zealand's Woman Champion*

EARLY in 1930, my husband decided to buy a radio set and, as at that time I was not greatly interested, I left the selection of a receiver to him. A standard t. r. f. Atwater Kent, Model 60, was decided on, employing three 24's, two 27's, two 45's, and one 80—a total of eight valves.

I will never forget the thrill of hearing my first American during one Sunday evening, shortly after we got the set. I was counting the number of stations that could be heard and happened on the station just as the announcer said "WOAI, San Antonio, Texas, on a test program." This was about 9:15 p. m. and we listened until the station signed off at 10 p. m. At this time the receiver was working on a temporary aerial approximately 40 feet long and 10 feet from the ground.

After logging my first American I became very keen to see how many stations I could log, and my husband decided that if I was going "station-hunting" a better aerial would be necessary. So two 32-foot masts were erected and an L-type aerial 100 feet long, running in an east and west direction, was slung between them. The earthing system is an old car radiator, buried five feet under the ground within eight feet of the receiver. Water is periodically poured down a pipe attached to the radiator to keep the surrounding earth damp.

With this equipment signal strength improved considerably and many stations were logged where previously they could not even be heard. At this time I had no thought of writing for verifications and was quite satisfied just to log the stations heard. In twelve months, from July, 1930, I logged 92 American and Australian stations, several of which to my sorrow I have never heard again.

Gets the DX Fever

About this time the New Zealand DX Club was formed and through reading the DX notes in the Radio Record, I decided I would become one of the DX fraternity, get down to serious listening and write to all overseas stations heard.

Practically all my DXing is done on Wednesday afternoons—our local half-holiday—and during the weekends, as I am at business all the week and am usually too tired in the evening to do much dial twirling, apart from the fact that most of the Americans close down early in the evening.

I do not consider our locality, which is about 2 miles from town and about 150 feet above sea level, a



A Cleveland girl who is making good in the big city. Connie Gates, formerly of WHK, now appears before a nationwide Columbia audience each Tuesday and Thursday at 12:15 p. m. EST. She plays her own piano accompaniment.

particularly good one for DX reception, as power interference is very troublesome. I consider the summer and autumn months the best for American reception as many DX programs are then heard. During these months, also, several stations have been heard on their early morning programs, namely, KOAC, KFAB, KMMJ, KMO, CKMO, and several others which I have not heard at any other time. I also find the autumn months favorable for the reception of Eastern American stations and quite a few are heard between 3:45 p. m. and 4:30 p. m. during the months of April and May.

Just recently my husband erected a second aerial of the L-type, consisting of a single wire 155 feet long at an average height of 40 feet, which, with the lead-in, makes a total length of 200 feet. The aerial now runs north and south. At this time headphones were fitted as the small members of the family objected strongly to "static noises." Up to this time all DXing had been done on the speaker but now, with the new aerial and phones, I hope to increase my verifications considerably.

I think DXing is a wonderful hobby but to obtain success I consider one needs, firstly, a good receiver; secondly, patience, and last but not least, a very tolerant family.

*(Editor's note: The winner of the "Lady DXers' Cup" of the New Zealand Radio Club, Mrs. C. H. Judd, Tauranga, N. Z., writes the above interesting story of her experience for the New Zealand Radio Times. Mrs. Judd submitted 160 stations.)

THE WORLD LOG

The May issue of this magazine will contain all the broadcasting stations of the world which have heretofore appeared in our quarterly, The DX Log of the World. The usual order will be resumed in the June issue.

Cleaning up the Outlaws

THE Government has begun to clean up the unlicensed stations in the state of Texas. In Abilene, one Curry Jackson has been convicted on two counts—operating a radio station without a license from the FRC, and operating a station with an unlicensed operator—and sentenced to ten days.

In Waco, Fred Bitterman and Albert Cox were convicted of similar charges. They were found guilty by a jury of the charge that they had been operating a station at Temple with the call TEM-TEX without a license.

These convictions upset the defense of unlicensed stations in Texas that their low power kept their signals within the state and hence were not subject to interstate control. The investigators have now proceeded to Austin to investigate reports that three unlicensed stations are being operated there. From Austin they will go to Houston and Fort Worth.

Judge E. O. Sykes, Chairman of the FRC, made the following statement: "Under the Radio Act paramount consideration must be given to listeners. It is manifestly impossible to provide first-class reception from authorized stations, however modern their equipment or rigid the rules, if the signals of licensed stations are to be disturbed or distorted by signals from illegal stations.

"At the present state of the art it is not possible to erect a station for broadcasting purposes, operating at night, who signals will not either extend beyond the borders of any state or be capable of causing interference with the reception of stations located outside that state, despite the use of low power. If the signals are not clear enough in an adjoining state to be heard by the general public, they will undoubtedly cause interference and play havoc with signals of authorized stations operating on the same or adjoining frequency."

VISITING *with the* CELEBRITIES

• • • *and* "BETTY"

MILTON J. Cross, who tells the story of the opera during the broadcasts from the Metropolitan Opera House every Saturday afternoon over a combined NBC-WEAF-WJZ network, is probably the oldest radio announcer in the world in point of service, although a relatively young man in years. He just happened along when radio was uttering its first infant squawls. An adventurous friend of his had built a receiving set and induced Milt to listen to the noises he was getting through the earphones. The latter decided he wanted to give radio a try.

The day after the assault on his eardrums, Milton hot-footed across the Jersey meadows to Newark and the station whose growing pains he had heard on the crystal set. In those early days of radio, the WJZ studio was housed in a partitioned-off portion of a restroom in the Westinghouse Electric and Manufacturing Company's plant in the outskirts of the Jersey metropolis. In this cubbyhole were the program, continuity and announcing departments, all three managed and staffed by two men. It was their job not only to announce programs, suggest and arrange musical numbers, write continuity and, incidentally, to fill in with a little vocalizing or piano playing whenever someone failed to show up on scheduled time as often happened.

The harassed "staff" welcomed Milton with open arms and some amazement, for in those days it was an unusual event for a person who really could do something to volunteer his or her services for radio. Really good artists turned up their noses at the noisy infant, just as they had years before when the movies were struggling for a start.

Takes the Air

Milton J. Cross went on the air for

the first time on September 15, 1921, not as an announcer, but as a tenor soloist, and for the next few months was heard a number of times in song programs. At that time music was, and it still is, his hobby. He had taken a course at the Damrosch School of Musical Art, graduating with a diploma which stated that he was a duly accredited musical supervisor for public schools. He never made use of his diploma, but went into church singing. He sang with the Paulist Choristers and toured the country with that organization. He also was a soloist at the First Presbyterian church in Manhattan, and was a member of the quartet at the Progressive Synagogue in Brooklyn.

With such a musical background, it was little wonder that the hard working "staff" at WJZ was glad to welcome Milton with open arms.

During those few months, the pop-



Milton J. Cross

ularity of radio grew by leaps and bounds, and while Milton claims there was no connection between the two events, the fact remains that within six months after he started singing on the air, business at the station had increased to the point where two announcers were required to handle the growing number of programs—and that's where Milt's radio history really begins.

Becomes an Announcer

He was taken on as the second announcer on March 13, 1922. His musical accomplishments undoubtedly helped, for he often was called on to fill in with entertainment. But radio was acquiring sophistication along with size, and after WJZ joined the National Broadcasting Company more and more new departments were added which took much of the burden off the announcer.

As radio progressed, it became a profession instead of a toy, and artists began to treat it seriously. Soon there was nothing for Milt to do but announce, and he began to concentrate on that. His idea was to make announcing as much of an



James Melton

art as singing, and without doubt he succeeded.

Milton is proud of the gold medal which was awarded him in 1929 for diction by the American Academy of Arts and Letters. "All my life I have been what is termed a slow thinker," he told the Academy members in accepting the award, "and this, I am sure, has been reflected in my radio voice."

Milton is a real New York product, born there and educated at DeWitt Clinton High School before attending the Damrosch School of Musical Art. He is six feet, two inches tall, and weighs 208 pounds. He smokes cigars, is quiet, hates exercise, and takes his fan mail very seriously.

Sang His Way Up

A circuitous path brought James Melton from his first appearance as a soloist in a church of Citra, Florida, to the microphones.

Jimmy first lifted his voice as an infant in Moultrie, Georgia, in 1904. The family moved to Citra where the father continued in the lumber business and young Jimmy started to school. The Meltons settled in Ocala, Florida, and Jimmy was enrolled at the University of Florida. Then his gradual trek northward began. He attended the University of Georgia and earned spending money by playing the saxophone in a college dance band. His next stop was at Vanderbilt College, Nashville, Tenn., where he played football and studied voice under Gaetano De Luca, opera singer.

With the passing of school days, the young tenor-saxophone-player decided New York would be his next training ground. It wasn't quite as easy as breaking into colleges. Secretaries didn't seem a bit interested in Jimmy's pleas for an audition with Roxy, the impresario. So Jimmy just went ahead and sang in the hall outside of Roxy's office. Within a week, he had been added to the Roxy gang.

Likes to Cook

Jimmy is six feet, three inches tall, weighs 196 pounds, and is married to

the former Marjorie McClure, a writer. He has an unusual warmth and range of voice, and possesses an almost boyish enthusiasm for hobbies in many fields. His favorites are cruising on his fifty foot yacht, "Melody," and his talent for cooking. He likes nothing better than acting as host and chef for a group of congenial friends, afloat on the "Melody," or in his attractive apartment overlooking East River and Long Island Sound. Another hobby is hats, of which he has 35, but not the Ed Wynn kind. He also collects glassware and pewter and has a large number of pieces of these, many of them of great value.

In addition to Jimmy's broadcasting activities, he is also in demand for concert appearances, one tour with George Gershwin having taken him 8,000 miles to 28 cities in as many days.

Jimmy's pet peeve is draughts. The young tenor will never visit a restaurant or a supper club the second time if there is the faintest suspicion of draught hitting him at any time on his first visit. Laryngitis induced by a draught once caused him to cancel a \$3,000 engagement, and since then he has had more affection for a rattlesnake than for a draught.

* * *

Many of the outstanding radio programs are using guest stars, and where radio artists used to be booked for 13, 26, or 52 weeks a year ago, many of them now rotate from one program to another. The call for Hollywood and stage celebrities has never been louder or more insistent.

When Mae West was approached to do a series of programs, she said she didn't care to risk being a bad radio star because it might damage her film following. They finally talked her into agreeing to take a huge fee, but it can be noticed that Miss West has never bowed in as a steady radio performer. And she may be the wisest of the lot.

Take the average film star as an example. He or she may be drawing



May we present the charming young singers whose voices blend for Ted Fiorito's Old Gold program? From the left as usual: Blonde Marjorie Briggs, brunette Dottie Hill and auburn-haired Betty Noyes. They broadcast Wednesdays from 10:00 to 10:30 p. m. EST, from the studios of KHJ in Los Angeles over a coast-to-coast Columbia network.

a salary of \$4000 or \$5000 a week for 40 weeks. Few of them get \$5000 as radio guest stars and most of them are paid about \$1000 or \$2500 for a one-time appearance on a radio program.

Before facing the microphone they may have big followings. After making a guest appearance, they may be considered failures. The reason? Bad material, bad presentation, bad judgment. Not a few of the guest artists have been pronounced "rotten" by listeners. A reputation that a star has labored years to build up in motion pictures may go out the window in one half-hour radio program.

Some of them, like Helen Hayes and Walter Huston, have added to their prestige by their radio appearances. Most of them have not. Not

a few movie comedians have been pretty sorry radio entertainers. They all take their futures in their hands when they face the radio audience.

The demand for them, however, keeps up. More programs today than ever before feature guest stars. The average sponsor looks to the one-time appearance idea as something he wants. In many instances, he passes up well-established radio stars with known followings for the guest star with a "name."

* * *

If the Revelers quartette can spare an extra six weeks from their schedule this summer they will accept an offer from a London supper club impresario to stop over for an engagement on their way to Russia, which they will tour.

* * *

George Gershwin, famous composer, is famous for something else than his modern music. He's famous for his "stripes." He always wears striped suits and shirts, and he'll never really be comfortable in evening clothes until striped coats are considered the thing.

* * *

The costumes which Jane Froman designed for her appearance in the "Ziegfeld Follies" have brought so much favorable comment from the ladies in the chic Follies' audiences that a smart Fifth Avenue modiste has persuaded Jane to act as critic-at-large for her new creations.

* * *

Jessica Dragonette is a very discreet young lady as well as a soloist par excellence. An interviewer asked the star who was the handsomest man in radio. "As I haven't met them all, I can't answer that," was the way Jessica diplomatically sidestepped the query.

* * *

Frank Luther believes that all work and no play makes Jack and plenty of it. Between broadcasting, recording and movie shorts, he succeeds in keeping the big, bad wolf barking up another tree. And for recreation he

gets out a weekly radio column.

* * *

Albert Spalding added another duty to his extensive radio and concert schedule recently when he began teaching violin at the Juilliard School of Music. Incidentally, Albert served with the A. E. F. in Italy under Major Fiorello LaGuardia, the present Mayor of New York.

* * *

The old air thriller, "The Shadow," is being condensed into a vaudeville skit, but the original "Shadow," Frank Readick, will not play the lead because the "March of Time" keeps him in New York Friday nights.

* * *

Frederic William Wile admires Arthur Pryor, director of the March of Time program, more than anyone else in radio . . . Colonel Stoopnagle names Harry Langdon as his favorite film comedian . . . George Hall's wife is an interior decorator, which accounts for many antiques in the apartment . . . Mark Warnow is an amateur hypnotist and magician, one room of his home being devoted to an array of magical contraptions that would delight the heart of Thurston.

* * *

Fred Waring, who recently leased a home in Bronxville, N. Y., spends his spare time arranging (of all things) furniture . . . Betty Barthell lives with two other girls in a Greenwich Village apartment . . . Since their inception four years ago, Gertrude Berg, who plays Molly in the sketches, has written over seventy characters into The Goldbergs . . . Jack Fulton was trombonist with Paul Whiteman for four years before the bandmaster discovered he could sing . . . Helen Pickens, of the Pickens Sisters, recently married Salvatore M. Curioni, engineer and war ace of the Italian Flying Corps.

Don't try to attach your phones to the speaker as the smaller coils of the phones will quickly burn out.

The Pursuit of TELEVISION

It's Still a Will-o'-the-Wisp

ALTHOUGH a few stations are sending out television impulses, the science stills seems to be very much in the laboratory stage. In its sixth annual report, the Federal Radio Commission has this to say regarding the present state of the art:

"While no startling inventions have come to light in television during the past year, the progress that has been made has been marked by a steady improvement in the detail of pictures transmitted. This improvement has been made possible through increased attention to technical details in the optical pick-up system, in the photo-electric cell and amplifying systems, and in the actual modulation of the radio waves emitted. This development has in a general way paralleled the progress that was made in the early stages of sound broadcasting.

The Television Band

"Much attention has been given to the part of the spectrum in which television emissions will best fit. Although there are at the present time four 100-kilocycle bands between 2,000 and 3,000 kilocycles assigned to television, it has been evident for a considerable time that this space is not sufficient to meet the requirements of this new and growing art to furnish entertainment to the public. The experimenters have turned to the unexplored regions above 30,000 kilocycles. The work at these frequencies has shown signs of real promise as a future locus for this service, and the Federal Radio Commission has assigned wide frequency bands in this region for experimental work in television. Proposals have been received by the Commission from the industry to increase the space in this band in order to protect the future of television.

The Present Status

"Although considerable progress

has been made in scanning methods, using both the mechanical type of scanning and the electrical or so-called cathode-ray type of scanning, it appears that many new developments must still be made before television can be accepted as a satisfactory entertainment service. While attempts have been made to broadcast scenes covering large areas, the majority of television stations have limited their transmissions to faces of one or two performers at most. This type of program, while of interest because of its novelty and usefulness for experimental work, has a very small amount of sustained 'look-in' interest. Such programs fall far short of what the public has been led to expect in the way of entertainment considering especially the fact that the technical improvements made during the last few years in sight-and-sound motion picture technique have created in the mind of the public a desire for very high technical standards of performance."

A SHORT WAVE LOG

The April-May-June issue of the DX Log of the World will be entirely devoted to the short waves. This issue will constitute what we believe will be the finest Short Wave Log ever published. On sale at all newsstands April 15 at ten cents.

LETTERS to *The* Editor

● ● ● Apropos of RADIO

THE many letters that have come to us relative to the article last month, "What's the Matter with Radio," indicate that we touched a spot where thousands of listeners have been feeling pain. Nearly all of these letters begin with the statement that the writers believe in the so-called American system of broadcasting as opposed to a license on receiving sets but, without exception, the writers feel that many of the sponsors are greedy in their demand for space on the program and that they thereby defeat their own ends.

Some sponsors recently have been almost demanding that their listeners go at once and purchase their products "if they want the program continued." Methods such as these can

only cause resentment against the advertiser instead of the good-will for which he is paying. As some of the writers point out, many sponsors have learned to sugar-coat the advertising dose so that it is not at all unpalatable but a large number are still presenting their "plugs" raw and undiluted.

No doubt many stations have been hard-pressed to make ends meet the last few years and have grabbed at any and every sort of advertising to eke out their income. Golden eggs are all right when they aren't secured by killing the goose. All that a station has to sell to an advertiser is its audience. The most important obligation of a station to itself, therefore, is to hold its audience. It takes more nerve than most people possess to get up and walk out on a show that displeases them—but it is very, very easy to turn the dial.

The following letter is typical of many.

Objects to Chiseling

"I'm glad you got all 'het up' about radio in that article about 'What's the Matter with Radio,'" agrees Marian Canniff, 2112 S. Cedar St., Lansing, Mich. "Personally I can just about always find something to my liking on the air. I am a strong booster for the American system of broadcasting but I could find plenty of room for improvement in the methods of presenting the necessary advertising. Right this minute I am listening to the Cities Service program. They advertise, but I have never yet felt the least resentment toward their 'plugs.' The Chevrolet program, too, who could resent that advertising? There are others—in fact it seems to me that most of the big concerns are doing much better on their plugs. But what makes me just about burn up is the habit so many stations have



The famous A & P Gypsy tenor, Frank Parker, has rejoined that popular program and may be heard every Monday on the National Red at 9:00 p. m. EST. Parker, who had been the featured tenor of the program for several years, withdrew last December to join the Revelers Quartet. Now he is holding both jobs.

of cutting both ends of a program to insert that local 'blurb'. And WJR is still one of the worst offenders I know of. I steer clear of that station for Blue Chain programs if I can possibly get what I want on another station. I want to be sure I am going to hear the whole program."

One Tube Sets

Relative to mention in these pages regarding disputed reception of overseas stations on a one-tube set, the Secretary of the New Zealand Short Wave Radio Club, O. B. McDonagh, writes: "Reception on one-valve in New Zealand is far from an uncommon occurrence. Personally I have myself received Schenectady on the occasion of the broadcast of Kingsford Smith. This was a Schnell circuit on a breadboard. In the old days, many of us received London, favorable nights of course. One of my members who is Chief Engineer on an overseas boat, always uses one valve. As a matter of fact, the receiver I am using is a humble little two-valve battery job and many of my members are in the same position." Mr. McDonagh adds that the NZSWC was the first national listeners Club to be founded in N. Z. "where we appear to be favorably situated as regards reception." He would like to introduce some American listeners to penpals in New Zealand but unfortunately does not give his address and we are unable to locate it.

"I am going to offer a suggestion to your other readers," advises Robert L. Griffin, 5053½ Montezume Ave., Los Angeles, Calif., "whereby they may get a little more enjoyment out of RADEX, if possible. In the Index by Call Letters, I block the small square out in red and likewise the Index by Frequencies. This enables anyone to see immediately what stations they have listened to and also adds incentive to see if you can fill a channel. The blackout out of the call letters does not interfere with their legibility and, if done neatly, gives a business like look to others and impresses them with the importance of



Here we have those entertaining explorers of the 25th century, Wilma, Buck and Dr. Huer from the "Buck Rogers" program which you may hear daily except Saturday and Sunday, over the Columbia from 6:00 to 6:15 p. m. EST. Adele Ronson plays the part of the adventurous "Wilma Deering." Curtis Arnall is "Buck" and Edgar Stehli is the super-scientist, "Dr. Huer." They are examining a rocket-gun for the annihilation of their enemies on the various planets.

DXing. I wish I had been a reader of RADEX longer, but you may rest assured that you have a lifetime reader now. Your publication of Police Broadcasting Stations was very interesting, as I am employed on the Los Angeles Department assigned to the Robbery Squad. I use a Zenith all-wave Model 288-A."

Learning Code

A lot of our readers would like to learn code so that they may read the messages they hear on the air. Others of course would like to know code so that they might take the examination as an amateur. Many of them write us that they fear that they could not learn the code. They will be interested to know that nine-year-old Jean Hudson captured the World's

Championship in the 20-word-per-minute class at the Chicago Convention of the hams this year. She turned in *perfect* copy in a five-minute test. Jean now operates her own station with the call W3BAK. Jean studied code through the Candler System and after two months study copied code at the rate of 30 words per minute for five minutes.

"I enjoy reading the accounts of other listeners," begins Weston E. Taylor, 317 Clifton St., Brush, Colo. "I note that some of them ask other fans to write them and they promise to answer. Well, I've written three of them and not a reply and I enclosed postage too. I wish you'd publish a note asking them not to promise answers if they don't mean it." We have had so many complaints on this score that we have about decided to discontinue this service. It is too bad as we know many cases where interesting friendships have been built up through correspondence thus invited. But like so many other good things the selfish few spoil the pleasures of many.

Some of the troubles of the western fans are set forth by Homer F. Gosney, 431 S. Elena Ave., Redondo Beach, Calif. "XEAE is completely annihilating our reception from KDKA. XEBC is raising hob with WCCO and on many receivers is blanketing WHAS. It may be hard for the Easterners to believe, but JODK-2 is interfering with reception from KGBU and, morning after morning, KFAB is badly distorted by interference from JOHK. XGOA is giving WAAW plenty of distortion after 4:00 a. m. PST. JOBK creates a heavy heterodyne to the discomfort of KGU." Aside from this and the interference of local stations, everything is all right, except for the code from the ships at sea.

A Bad Spot

"In Highland Falls, N. Y., in the Hudson Valley, there exists an unusual disturbance to radio reception in the form of frequent and extreme fading on all frequencies, with con-

sequent distortion to voice and music reproduction," reports W. G. Odenwalder, Care American Tel. & Tel. Co., 32 Sixth Ave., New York, N. Y. "The writer has visited several homes in this town and found the same trouble in all instances, proving that the fault is not in the receivers. I would especially appreciate hearing from fans living in the territory in question or from any one who can suggest a possible cause of this trouble and a remedy." This is an interesting phenomenon and we hope some of our readers in the vicinity of Highland Falls will write Mr. Odenwalder regarding their experience, whether good or bad.

Our readers in Great Britain will be interested to know that we have arranged to carry a stock of RADEX, the DX Log of the World and the Time Converter, with Arthur C. Baker, 10, Lansdowne Road, Sale, Cheshire, England. Mr. Baker will receive a supply of each issue and should have them on hand well in advance of the first of each month. Readers in continental Europe will also be able to secure copies from Mr. Baker more quickly than from the U. S.

A new radio book with the intriguing title, "28 Tested Methods of Making Extra Money," has been published by the National Radio Institute, Washington, D. C. They have collected a number of simple tasks connected with radio by which handy men may add to their income. Among them are Erecting Aerials, Installing

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With the Clubs

Robert H. Weaver, President of the National Radio Club (603 W. Market St., York, Pa.) writes us that his club has taken over the membership of the Atlantic Radio Club and the Central DX Club. He calls our attention to the fact that a number of the clubs are working in cooperation in the matter of DX programs and in this way are doing a great deal to prevent the clashing of DX schedules. Some of the clubs are joining together to stage certain DX programs and frolics. This is a step in the right direction and will certainly help to eliminate the duplication in the matter of requests upon stations for specials. In this connection Robert J. Gilchrist, Summit, N. J., tells us that The Interstate Radio Association of Summit, N. J., the Greater Chicago DX Club, the Anglo-American Radio Society and the North American Radio Club of Hackensack, were all combined with the Globe Circlers Radio Club into the Globe Circlers Radio DX Club with headquarters at 40 Linden St., Hackensack, N. J., with a combined membership of 112. A four-page mimeographed bulletin is mailed to members twice monthly with tip-cards on alternate weeks.

The "Flatbush DX Club" is the latest organization to try its wings. Fred Maybarduk, 180 Woodruff Ave., Brooklyn, N. Y., is Chairman. They plan to publish a ten-page magazine each month with a yearly subscription price of 60 cents. There will be no initiation or membership fees. The activities will cover all the waves.



Introducing Carson Robison and his Buckaroos, interpreters of hill-billy tunes, cowboy ballads and native folk-music. They are heard over the WJZ-maze of the NBC each Sunday afternoon at two o'clock EST. Top row, left to right: John Mitchell and Bill Mitchell. Bottom row, left to right: Carson Robison and Frank Luther.

As we understand a letter from C. E. Sevier, 1515 Hanover St., Baltimore, Md., Station WCBM gave as first prize on a recent DX program for the Newark News Radio Club, a year's subscription to RADEX which was bought for the purpose by 17 DXers in Baltimore. He suggests that other stations which desire to receive reports on their DX programs, do likewise.

Radexers in Holland, Michigan, have formed the Lake Shore Radio DX Club with twelve members.

When KDKA Wandered

"I notice letters from old-timers. Well, I'm a real old-timer too," muses R. W. Schofield, Wilma Plunge, Missoula, Mont. "I can remember KDKA when we had to follow him all over the dial on one broadcast and before there was any F. R. C., even before a station had to have a license. My

first set was a crystal detector with about four tubes of amplification put together by myself from somebody's diagram. The next was a Crosley Super-Triridine put out in 1924 and I recall the furore created in our neighborhood when I pulled in CMAB in Santiago, Cuba, and I had all the neighbors in to hear it."

We hope this item will come to the attention of someone who is really in need of A and B eliminators and hasn't the money to buy them. J. Edward Diehm, Jr., 424 Walnut St., Pottstown, Pa., writes that he has A and B eliminators which he has been using on his Zenith, Model 27, that he will give to someone who can make use of them. They are in good condition but of no further use to him as he has a new Model 95 Philco. All he asks is that the recipient pay the express charges. We are not quite clear from Mr. Diehm's letter whether he also offers his Zenith set. There must be hundreds of families in or near Pottstown who would appreciate the opportunity of accepting Mr. Diehm's generous offer. He adds the postscript that he would like to hear from other owners of the Model 95 Philco.

Last month we mentioned the fact that F. Wiseman, 13 Kyle St., Scotswood, Newcastle-on-Tyne, England, makes records of his reception and forwards them to the stations heard as proof. Mr. Wiseman now writes us that he has sent records to about 70 U. S. stations but that some of them have failed to verify. Naturally enough he finds this hard to understand. He has recorded stations as distant as KNX. He recorded the addresses of President Roosevelt on Dec. 28 and again on Jan. 30 and sent the records to him. He has received an acknowledgment from the Secretary of State.

"I wish to congratulate Mr. Dashiell on his very fine articles entitled 'The Beginner's Story of Radio,'" writes Rudolph Kure, Cincinnati, Ohio. "It surely is a wonderful work. Its power and cleverness lies in its simplicity. Never before have I seen matters per-

taining to radio fundamentals told in such plain and easily digestible language."

Wilfred D. MacDonald, Meadowville, Pictou Co., Nova Scotia, is anxious to hear from some reader in or near Eagle Pass or Del Rio, Texas. He is greatly interested in XEPN and XER.

"Your DX Log of the World sure helped me the first time I used it," admits Bill Otte, 1024 Barrett Ave., Richmond, Calif. "I picked up six Japs and one Chinese the first night."

The Reception Symbols

WE have received many requests to reprint the codes used in reporting volume and quality of reception. These appeared in the September, 1933, issue of this magazine.

The R (audibility) code is used to describe the volume of a broadcast, from the weakest phone signal to full loudspeaker volume. The QSA (readability) code describes the clearness or understandability of a signal. Understandability need not necessarily be dependent upon audibility; as an example, a station can be heard 50 feet away from a speaker without being at all intelligible (QSA1, R9) or, it may be possible to clearly understand every word of a transmission which is just fairly audible in the phones (QSA5, R4).

These descriptions can be carried further by employing a code to describe atmospheric (static) and fading, by the letters N, X, R or S. The letter N means nix—that is, no fading, or no static. Example: Pontoise, QSA4, R7/S/N. In the first bracket after the R symbol, fading is indicated, and in the last bracket, atmospherics. Hence the above would be read: Pontoise was heard quite clearly (QSA4), with good volume (R7), slight fading (/S) and no static (/N).

YV1BC, QSA1, R7/R/XX means that YV1BC was bothered by rapid fading and bad static, both of which combined to make the program unintelligible, QSA1, in spite of very good volume, R7.

The QSA and R codes are universally understood and may be used when writing to foreign as well as domestic stations to describe their transmission.

R1—The faintest signal that can be heard on headphones.

R2—A weak headphone signal.

R3—Audible but only partially readable.

R4—A fair signal.

R5—A good headphone or a weak speaker signal.

R6—Fair speaker volume.

R7—Strong volume.

R8—Very strong volume.

R9—Extremely strong, maximum volume.

QSA1—Unintelligible.

QSA2—Signals which can be understood only now and then.

QSA3—Poor signals, understood with difficulty.

QSA4—Good signals, quite easily understood.

QSA5—Perfectly understandable.

S—Slight fading.

SS—Deep fading.

SSS—Complete fadeout.

R—Rapid fading.

N—No fading.

X—Slight static.

XX—Rather bad static.

XXX—Very heavy static.

N—No static.



Dean Fossler at the console. He plays the opening and closing music on the programs of both "Amos 'n' Andy" and the "Goldbergs." Believe it or not, an organist who plays only two tunes—Toselli's "Serenade" and "The Perfect Song." Playing four times a day for Amos 'n' Andy and twice for the Goldbergs, he has never witnessed either broadcast.

The Universal DX Club

THE Universal Radio DX Club is the only DX Club in the West, writes Charles C. Norton, President, (2559 Polk St., San Francisco). Our club members are called Universalites and they reside in sixteen states of the U. S., Canada, Alaska, England, Chile, Ireland, Japan and New Zealand. We issue a DX tip sheet every ten days and a membership list twice each season for those who wish to correspond.

Our Club has already had 35 DX programs this season and many more are to be given during March and April. Our dues are only 85 cents a year with a 35-cent membership fee. Our tip sheet is complete in every way; we list all DX programs and also letters from the members.

KPCB, Seattle, Wash., is the official radio station of the Club and broadcasts special DX programs the first Monday morning of every month from midnight to one o'clock, PST. The programs are presented by William D. Reuter and Vernon E. Sawyer of KPCB who are both directors of the Club.

Other directors and committeemen

are Russell K. Heller, Emaus, Pa., Ollie Ross, Vallejo, Calif., Ralph H. Schiller, former president of the Transcontinental Radio DX Club, Maynard Fischer, formerly of the Buffalo Evening News DX Club, Alexander Maley, Warren E. Winkley, Howard Rung, John J. Barlow, John Kuhn, Donald Gross, Glen W. Anderson, C. R. Herman and Albert L. Larrick. Leslie W. Orton of England is second vice-president.

This club should not be confused with the Universal DX Club of Hackensack, N. J.

Great thought for the month: "To be successful in life, you must keep on climbing. When you reach the top of the ladder, you will probably remember that you left the aerial wire on the ground."

Monthly Meeting of *the* DX CLUB

• • • Talking Over *the* Logs

THOSE letters which pertain to the verification problem this month, appear in another column under the title "Bad Practices in Verification." We recommend this article to the careful consideration of all those who are interested in the verification of reports of reception. These writers are earnest, convinced that the careless, thoughtless and impertinent actions of the few may spoil the sport of the many.

"CX4, 643 kcs., is being received very generally in the early evenings," advises Robert Rosenberger, 17 Janssen Place, Kansas City, Mo. "and it would be well to take note of this—it is 'Servicio Oficial de Difusion Electrica' Montevideo, Uruguay. This season has concluded a year's DXing on my Majestic with 840 stations on the old log. Latest catches (since the new year and it is January 8) LS7, CX6, CX4, TICR, and Helsinki, Finland. I landed a 1-KW USSR at 1:00 p. m. CST December 24. Pre-New-Year receptions include Monte Ceneri, Switzerland, on special test, 1165 kcs., Belgrade, Yugoslavia (testing); HIX, Breslau. Latest veris include JOAK, JOGK, Poste Parisian, Frankfurt, Riga, Latvia, JOIK, a card from JOHK, WKAQ, all entered in the I. D. A. DX contest. I enjoy reports of foreign reception and see no reason for most of them to be open to criticism. Here are some good stations for DXers to try for in Santiago, Chile: CE45, 935 kcs., 4000 watts, up to 11:00 p. m. EST; CE102, 1025 kcs., 250 watts, up to 1 a. m. EST."

Did He Have Japan?

"I have a 1933 8-tube Zenith table model on which I have logged over 200 stations in the past three months," writes H. F. Bradley, Box 934, McCamey, Texas. "My best are CJRM, CMCW, WBBC and KVI. I can bring KFI in clearly at noon. On Sunday

morning, Feb. 4, I picked up three stations (with the same program), one on 750, one on 770 and one on 810. From 4 to 4:30 a. m. CST, there was a speech in a foreign language which I know was not Spanish or German. At 4:30 an orchestra started playing slow songs music in which treble instruments predominated, stringed instruments and probably flutes. A lady sang in this foreign language, followed by a man singing. They failed to announce in English and I lost them shortly after 5 a. m. According to Mr. Calow's article in November RAdEX, I hope that I had JOBK-1, JOHK, and JOCK-1. I would appreciate it if some fellow reader who positively identified this same program could enlighten me as so far, after repeated efforts, I have failed to log any foreign stations."

"I have to date a log of 459 stations received since October 1, 1933, with no duplications," boasts R. W. Schofield, Wilma Plunge, Missoula, Mont. "I have only four more stations to hear before I will have logged every Japanese. I have had KZRM in Manila; ZBW, Hongkong; XGOA, Nanking, which station can be between 655 and 660, and I hope in due time to receive a veri; 14 Aussies, 4 New Zealanders (2YA both before and after December 1, 1933); KGU every night; CMQ, Havana; and lots of Canadian and Mexican stations. I wonder how many years some of these fellows have taken to accumulate their logs. I start a new log each October and think that it is only fair to count as a log stations received during the following twelve months. I am sure that if I were to count every station which I have heard, no matter what the change in call, wave length, location, etc., I would be able to tabulate a log of over a thousand stations, but what of it? In my opinion it's distance that counts, not numbers."

Now Has 30 Countries

"I have added to my b.c. log in the last twelve months 177 stations, bringing the total to 594 stations heard and a grand total on all waves of 1375," reports K. P. Williamson, 1610 Sherbrooke St. West, Montreal, Que., Can. "My log includes 30 countries, 48 states and 8 provinces in Canada. I consider my best catches on the b. c. band to be CMAB (30 watts); YV1BC, HJN, LR5, and numerous 100-watt stations in the middle and southwest. My location doesn't seem to be good enough for me to contact any of the trans-Pacific stations, but I live in hope that the poor radio conditions which we have been experiencing here and which seem to be more or less prevalent all over the continent, will improve to a point where long distance DX will be possible. I am strongly against changing any of the features in RADEX, although I note that you are urged to do so by

many readers, as I find it 100 per cent okay."

"I have seen but few letters from Oklahoma and thought I would let you know that there are a few DXers here," comments Frank Pieratt, 216 East Grand, Ponca City, Okla. "I am using an Atwater Kent 708 and have had fair luck with it. The set is very sensitive and powerful but is lacking in selectivity and has considerable background noise. I am using a Lynch antenna and a 12-foot pipe for a ground. I have 423 stations on the b. c. band, including 13 Cubans, 12 Japs, one Chinese, WKAQ, KGU and YV1BC. The Japs come in very well almost any morning from 5:00 to 5:45 CST, but I cannot catch the Australians. I think my best are 10-BQ, KJTY on 6.650 and NZRLC, the dirigible Macon. I heard the latter in a three-way conversation with the Battleships Lexington and California. They were on approximately 44 meters."

Gets JO's in Daylight

"I own a Midwest 16-tube B-16. My antenna is a Lynch transposed with a filtered aerial which I made myself; it is about 170 feet long of No. 14 insulated copper wire, and around it is wound about 900 feet of No. 20 enameled copper wire. For DX work this will improve reception about 75 per cent over a single antenna." This inventory comes from Werner Alf Howald, 632 S. Fetterly Ave., Los Angeles, Calif. "For some reason Australian stations do not come in here on the b. c. b. but the Japs are very good sometimes even when the sun is up. This morning I picked up a Russian on 570 but could not get the call; which one is that? (Ed.—The DX Log of the World shows the 10 kw. station at Magnitogorsk on 571.) I have one or more stations on every channel from 530 to 1500."

Another who needs Wyoming to complete his roster of the states is Walter Dice, 714 Chess St., Bridgeville, Pa. Perhaps more listeners need Wyoming than any other state. Too



A new comedy team on the Columbia net consists of Cecil Lean and Cleo Mayfield. They're members of the "Ward's Family Theatre" which is broadcast each Sunday evening at 6:45 EST. Lean writes the sketches in which he plays straight to the less-than profound intelligence of the character played by Miss Mayfield.

bad KDFN won't put on a few DX programs and make a lot of people happy. That station should realize its responsibility as the sole representative of a great state. We will have to see if we can't induce them to contribute one program to the DX army. Mr. Dice also needs Newfoundland to have every province in Canada. As a matter of fact Newfoundland is not a province of Canada but is a direct province of the English crown. Through the DX tips of KDKA, Mr. Dice learns that CX-26 will be on the air on the morning of March 10th but the hours are unknown and LR-5 will broadcast another DX program some time in March.

"Last year I sent you some letters giving you my luck in DXing," writes Robert C. Gaede, 3010 E. Overlook Road, Cleveland Heights, Ohio. "Then I was just a young and inexperienced person who called himself a DXer. I had about 60 stations." "Now," adds Robert who has reached the mature age of 13, "I have 187 stations. I get up in the early hours and get a great deal of pleasure out of it. I use a 4-tube Philco Jr. I have 12 of Chicago's 14 stations. Have not received any coast station but KFI. I have stations from 36 states. Those which I have in Mexico are XEPN, XER, XEN and XEW. I have now 11 stations in Canada, but none from Cuba or South America. I would like to join some DX club; hope I get over the 200 mark soon."

"This is my first letter to this column," greets Harold H. Mendler, 2971 West 29th St., Brooklyn, N. Y., "the reason for which is the anniversary of my first year of DXing with my two old faithfuls; first, RADEX, and second, my 8-tube Fada 25Z. I now have 180 verifications and over 300 logged. It is still my ambition to hear a European or Australian station I read so much about. Among my best catches are XEFV (verified) and a 50 watter at the time heard, and the other is LR5 heard with fair volume and no static. I'd like to communicate regularly with some DXer, pref-

erably one who owns a Fada or lives in Brooklyn or Manhattan."

JO's All Over Dial

"DX has been quite good here lately," states another reader in Regina, Sask., J. Drake, 1920 Athol Street. "I have been able to add quite a few new stations to my constantly growing log. The veris have also been coming in and now total 383 with over 50 reports out to stations on this continent and elsewhere. I have had very good luck with the Japanese stations this season, now having verified three and reports out to 22 others. For a couple of mornings, they came in all over the dial and I was able to send away quite good reports to them. For two mornings I was just able to hear 2BL, 2GB, 3UE, 3HA and 4BC but could not get any identifying numbers. I'm going to get them yet, though."

"I have one of the best all-wave receivers on the market," lauds W. J. Ray, 5811 College Ave., Oakland, Calif. "It is a Patterson 7-tube superheterodyne. I have had the set one year and to date have logged 475 stations all over the world: 163 broadcast in U. S., Canada, Mexico, Alaska, Japan, China, Hawaii, Manchuria, New Zealand and Philippines; 181 shortwave in U. S., Canada, Mexico, Japan, England, France, Spain, Madeira, Argentina, Venezuela, Brazil, Colombia, Ecuador, Costa Rica, Morocco, Italy, Holland, Germany, Portugal, Australia, Java, and amateurs in Alaska, Hawaii, Mexico, New Zealand, and another shortwave stations in Siberia."

"RADEX has made possible my logging of 230 stations since the middle of November," admits James W. Hughes, 4722 Griscom St., Philadelphia, Pa. "That's not many compared to some of your readers' records, but I consider it very good. I am a student so don't have much time for radio. Have not started on the frequency check or late hours yet, and so have at least a hundred more stations that I can easily receive. My set is a Pilot Dragon, 6-tube, all-wave



Two Jacks and a Jeanie. Left to right, Jack Whiting, musical comedy baritone; Jeanie Lang, personality singer; Jack Denny, orchestra leader. Their combined talents entertain you on the Marvelous Melodies program over the Columbian net every Friday evening at 9:30 EST. Sponsor: the Richard Hudnut Company.

set. Some of my best catches are KOY, KGA, XEX, XFG, WOMT, and my best CHGS, 50 watts. Tell your readers to try CHGS from 6:30 to 7:00 a. m. EST. My latest is CMCI, Havana, 49.5 meters. I received them at 5:00 p. m. EST."

"Here's a call for help," cries Paul L. King, 1523 Madison St., Madison, Wis. "I picked up a station Feb. 17 at 3:05 CST on approximately 870 kcs. The program consisted of selections played on the pipe organ and it was not a recording. Two announcements were heard but the modulation was so poor on voice that the words were all but indistinguishable. I made out the word 'California' in both announcements and the call letters of which there were four seemed to end in O." This was undoubtedly the new XEMO at Tijuana, Lower California. They operate on 870. New stations are springing up in Lower California thriving on advertising from business firms across the border in the U. S.

Western Disadvantages

From Aug. Balbi, 1427 Myra Ave., Los Angeles, Calif., comes this report: "No doubt you are aware that we are at some disadvantage out here in pulling in Eastern or even Midwest and Southern stations during the early evening hours. The band is crowded with Coast stations with only a few channels left for distant reception. Then we have the 24-hour pests like KGfJ on 1200. My set is a late 1933 all-wave Patterson 10-tube and it's plenty hot on both b. c. and s. w. My present log stands at about 230 stations. Last October I logged 13 Japs, 12 Aussies, and one each in China, Hawaii and Alaska. I have between 16 and 20 locals to contend with."

"I was up on New Year's eve until about 5:30 a. m. EST," writes 12-year old Russell Geiger, Poland, Ohio, "and pulled in about a dozen new stations, bringing my total to 251 in the U. S., Canada, Mexico and Cuba. I had hoped to make my total reach 300 before summer, but doubt it now, as the frequency checks were not conducted on New Year's morning and I cannot sit up whenever I desire. I have been up only three mornings this season, but added 42 new ones in that time. Have had no luck with the T-P's as yet, but am going to keep plugging. I had the luck to get WEXL and it is the first station I have received of less than 100 watts. Have 41 states, including D. of C."

"Although conditions have not been too favorable lately, I have been able to pick up quite a few over-sea stations on my Pilot-Dragon 8 with wonderful results," reports A. C. Lyell, 88a High Level Road, Cape Town, South Africa. "I picked up WCAU, Philadelphia, quite clearly on Jan. 5, also WHAM, Rochester, WSB, Atlanta, and WCCO, Minneapolis. On the 14th I picked up the program of a children's service from WMBI, Chicago. An unexpected catch on Jan. 4 was PLV, 31.86 meters, Java, conversing with KWX, Dixon, Calif., 39.42 m. The reception was exception-

ally clear and I heard every word. W2XAF, Schenectady and W8XAL, Cincinnati, have lately been coming through beautifully."

"My log now stands at 439 stations, with 240 verified," claims Robert W. Botzum, 633 Moss St., Reading, Pa. "I have 365 in U. S., 42 in Canada, 15 in Mexico, 12 in Cuba, one each in Venezuela, Hawaii, Haiti, Porto Rico, and one police station. 35 stations are 2000 miles or more away. For the past few weeks on certain nights, I have heard a foreign station interfering with WBZ on 990. Sometimes there's a man talking Spanish, and other times I can hear an orchestra or band playing. I can't bring this station in clear enough to hear its call. Could it be station LR4 in Buenos Aires?"

Great Luck with TP's

"I have an A.K. 89 10-tube super-heterodyne, which I have had pepped up with 58 tubes and the ground described in one of the fall issues of RADEX," remarks Reuben Greene, North Bennington, Vt. "During October I had great luck with the T. P.'s. I heard five of them, but have not had any luck with the T. A.'s. Do many get them? In my room I also have an A.K. 155 Midget, with which I got WKAQ during their test in September. Got a big kick out of that, as I have no antenna for that set. Should be glad to communicate with other DXers, especially those with an A.K. 89 and those who have logged foreigners."

"I have logged 184 stations which include stations in five provinces," writes George Funnell, 370 King St., London, Ont. "The best Canadian catch was CJOR, Vancouver. Only eleven states of the U. S. not heard from. I also have received stations in Mexico, Cuba, and HJN, Bogota. On Sunday, January 28, received program from HJ1ABB, Baranquilla, Colombia, on about 46 meters. I would like to hear from DXers in the south, and also in Canada, east and west. I have a Marconi Model 36-37, all-wave, 13-tube receiver. My

aerial runs north and south with lead-in at south end. It is 7-strand copper wire, 50 feet above the ground, and 130 feet long."

"I would like to correspond with any DXer, especially one in New Zealand or Australia," requests George R. Schneider, 3148 Yorkshire Road, Cleveland Heights, Ohio. "Using an RCA 60 with nine tubes (1928 model) in a little over a year, I have managed to log 402 stations with 91 verified. My best catches are KFVD and KGGM, 1500 watts; KFPM, 15 watts; KFWI and KTM, 500 watts; 10-BQ, 5 watts; KGNO, KFXD, KGEK, KONO and KMPC, 100 watts; CMJP, 75 watts, CMCW, 150 watts. I have received at least one station in 46 of the states plus Porto Rico, Cuba, Canada and Mexico."

"My list of stations may not seem so impressive since it does not contain any outside North America, but I hope to add some foreign stations in the near future," modestly asserts Charles Miller, 309 View Place, Covington, Ky. "I have 116 stations, including 35 states, 6 Canadians and 4 Mexicans. I have worked 11 West Coast stations, my best being KFRC, KFSD, KGW, KHJ, KHQ and KOIN. My Mexicans include XER, XEPN, XEW and XEFO; Canadians, CKAC, CKLW, CKOC, CKY, CRCO and CRCT. My set is a Majestic Model 70, 6-tube which I have had for about eight years. Haven't much of an aerial, just from one chimney to another on top of the house, or about 15 feet."

Static Below Zero

"I have received a verification from XENT, Nuevo Laredo, Mex.," reports Frank Wheeler, 406 Eagle Point, Lakeside, Erie, Pa. "When I received them they were using 18,000 watts power. Sunday morning, Feb. 11, I did some DXing to see how the sub-zero weather affected reception. It was nine below zero here. I was surprised to find that there was a lot of static but I received XES, 250 watts, CMJH, 50 watts. I have

(Continued on page 49)

Neutralization *and* Alignment of RECEIVERS

2. Realigning the Receiver

● ● ● *By* B. FRANCIS DASHIELL

THE information given in this month's installment deals with the alignment of radio receivers. It applies equally to tuned-radio-frequency sets (the neutralization of which was discussed last month) and superheterodyne circuits. However, the latter vary considerably in design and tube arrangement, and will demand more definite and individual realignment instruction.

When two or more r.f. transformer coils are tuned simultaneously, by a series of variable condensers attached to a single shaft, the condensers must be set in line so that all will have equal capacities at any setting of the dial. This adjustment is called alignment or equalization of condenser capacities.

The reader has frequently observed that the variable condenser tuning unit of practically all receivers is a combination of two, three, four or five individual condenser "rotors" fitted to a single shaft. This is called a "gang" condenser. But, inequalities of capacity, due to construction, slightly deformed plates, or variations in the spacing between plates, is the reason why condensers on one shaft do not always have identical capacities.

The Trimmer Condensers

Therefore a tiny amount of adjustable capacity is added to each condenser of the gang for balancing purposes. Small "trimmer" or "balancing" condensers are shunted across each of the larger tuning units. The capacity of a trimmer usually is from 1/8 to 1/10 that of its associated larger condenser. Adjusting these small condensers to balance the capacity of the units of

the entire gang will permit the various circuits of the set to be tuned synchronously when the dial is rotated.

In some newer sets, however, trimmer condensers have been discarded. An end plate of the rotor of each tuning condenser is split into a number of fan-like segments. Each segment covers a certain frequency, such as 550, 600, 700, 850, 1100, etc., kilocycles. The capacity of the condenser can be varied by slightly bending one or more sections of the



Those duets you've been hearing on the "Myrt and Marge" program are the voices of "Marge"—Donna Damerel by name—and her husband, Gene Kretzinger. They were married only a few months ago. Gene plays the part of "Gene Glenn" and also as half of the harmony team of "Gene and Charlie," also heard via the CBS.

split end-plate. The method of realignment is the same as for trimmer or balancing condensers except that the shape or flatness of the end plate is changed.

Tuning condensers, as well as trimmers, frequently become unbalanced through damage while cleaning or from constant change because of wear. Even the slightest detuning of the circuits will throw one or more of the tuned circuits out of resonance, and the set is neither sensitive nor selective. In some cases one condenser in the gang is not provided with an additional balancing unit, and all the other condensers, then, must be balanced so as to match the fixed capacity of this one condenser.

Using a Milliammeter

When a receiver is to be realigned some method must be provided for determining when the set gives forth its maximum power. To listen by ear to the speaker is a very simple method, but not always accurate.

The loud speaker indicates only the audio-frequency component of the original signal. A d.c. milliammeter will operate on the rectified radio frequency component of the detector. It will give a more definitely visual indication of the output power. It is the more satisfactory method, both for realignment and neutralization. The meter may be inserted in series with the plate of the detector tube, preferably with an adapter. The movement of the meter hand indicates the amount of rectified r.f. component in the plate current. And the degree of meter deflection will be at its maximum when the circuits are properly tuned. This will be accompanied by the loudest possible signal from the speaker. In some sets, particularly those with grid-leak detectors, the meter hand will show the least deflection with the loudest signal.

When realigning a receiver, all parts, such as shields, etc., must be in place, for the set should operate under perfect conditions. These are best when distant stations come in

clearly and easily, at times when static and interference are absent.

Method of Adjustment

The adjustments are made as follows: Tune the receiver to some distant station that is operating on approximately 600 kcs. As this is the lower tuning limit of the dial it represents maximum capacity of the condenser. All rotor plates will be in mesh with the stator plates. (See page 6, January, 1934, issue of R-DEX for a complete description of condensers, parts and capacity.)

First, turn the adjusting screw or nut on each tiny trimmer. Use a slim, wooden or bakelite tool which insulates against additional capacity. Eliminate body capacity effects by keeping the hand away from the chassis. Slowly adjust the capacity of the first trimmer by turning the screw one way or the other. At one critical point it will be readily observed that a strong flow of plate current occurs, and that the loudest signal comes from the speaker. It is advisable to turn the volume down from time to time while making the adjustments. The ear can detect an increase in weak signals more easily than with loud ones.

Now set the dial to a station of 1,000 kilocycles, and make a readjustment of all trimmers. Perhaps at this point it will be found that little or no readjustment is necessary. Again change the tuning to another station on about 1,400 kilocycles, and readjust all trimmers. If no readjustment is required at either 1,000 or 1,400 (these are approximate settings) no further attention need be given to the rebalancing of the circuits.

If adjustment of the trimmers shows a continuous increase in signal output when the maximum tuning limits are reached, beyond which the condenser can no longer be adjusted, it will be necessary to detune the dial to a slightly lower reading so the signal volume will be reduced (about one-fourth). Reset all trim-

(Continued on page 48)

BAD PRACTICES *in* Verification May Destroy DX

A WARNING to DXers cannot be sounded too frequently," thinks W. H. Applegate, Vice Chairman of the Courtesy Programs Committee of the NNRC, 547 North Pine Ave., Chicago, Ill. "They must absolutely play fair or DXing will be a thing of the past in a very short while so far as verifications are concerned. I have had considerable contact with the radio stations of the country and particularly with those in Canada. There are no better friends of the DXers anywhere than the stations in Canada who cooperate most obligingly in supplying special programs. However, my attention has been called to many instances where the fans are inexcusably inaccurate, unthinkingly unfair or just downright dishonest in submitting reception reports to stations.

"Gross inaccuracy in a reception report is unpardonable. No fan should write for a verification unless he positively identifies the station to whom he is reporting. Don't write to some station just because you heard something on their frequency at a time when you have a tip that they are supposed to be on the air. If you can't make sure of the identity of the station, forget about it; don't make a guess. Think what the people at the radio station must think of you if you are wrong. It makes you look dishonest to say the least.

Pay Your Way

"There are many instances of unfairness on the part of the fans. Many DXers seem to think that the radio stations should bear the expense of their hobby. They won't enclose anything with their reports to cover return postage. Some even report to the stations on a penny postal card and expect to get a let-

ter of verification in return. Many reporting from the U. S. to stations in Canada send U. S. postage stamps for return mailing.

"Radio stations have hundreds of reports to answer and if they have to stand that postage bill, it will run into money. Then they have in addition, the letter-heads and verification cards and the stenographic expense. The least the fan can do is enclose enough to cover return postage. Don't send U. S. stamps to Canada. You couldn't use a Canadian stamp in the U. S. If you can't obtain some Canadian stamps from a friend in Canada, then send a coin. Occasionally you may hear some station say that return postage need not be enclosed but that is a rare



George Hall, whose band you hear several times a week over the Columbia web. His orchestra is an attraction at the Hotel Taft, New York City, where he has been a fixture for two and one-half years.

exception and should only be taken advantage of when you know it to be a fact. Radio stations should, and many are, refusing to answer any reception report unless return postage is enclosed.

Digging Grave for DX

"Then there are the fans who are downright dishonest. Unfortunately there aren't just a few of them either. They're plentiful and the subject shouldn't be passed over with just a few words about them being in the minority and that they will soon dig their own grave. They'll dig the grave for all DXing if they aren't stopped. One type is very crude. They report nothing to a station except to say 'I heard your station at such a time and enjoyed the program.' Then they expect a verification. They figure the stations may be careless in answering their mail and that a verification will be forthcoming. Occasionally that does happen.

"Then there is the species that just make up a report which they hope will not be checked closely and that a veri will be sent them. Sometimes they also get by. The third type is the clever one. He really convinces the station that he heard them. He obtains the data on a portion of a distant station's program and sends them a report which, to the station, appears bona fide. These professionals make use of many methods of obtaining their data on a station's program. Some evidently use the air-mail to trade data with unscrupulous fans in other parts of the country.

"These wrongful practices should cease. Let's play fair with the radio stations to whom we are indebted for the continuance of our fascinating hobby."

Care Brings Replies

To this timely warning, Clement Van Velsor, 1035 Sanford Ave., Irvington, N. J., adds: "With a very few exceptions, I get a verification practically every time. Here's why: I

don't send just a line or two enclosing nothing at all and then ask for a verification. I send details with exact time and practically everything heard. I indicate the time used whether EST or some other and the day and date underlined. Usually 20 minutes is enough but to distant and hard-to-get stations I send a half-hour or more. I give exact time to the quarter-minute and just what occurred as nearly exact as possible. I enclose ten cents always unless RANEX states that five cents or return postage is sufficient. I give as much detail as possible on reception conditions and seldom run over a single page written on one side only.

"If a foreign station is heard and I don't know the language, I use even more care to give the exact time and describe everything I heard in detail. I don't send our currency to distant countries because it's absolutely no good to them. I always use a typewriter. I never lose sight of the fact that a veri is only a matter of cour-



The latest member of Radio's stardom is Dell Campo, handsome young South American tenor. He is heard on his own programs several times each week over the Columbiaair, featuring romantic songs. Campo is a native of Chile.

tesy to the listener and is not at all obligatory. With more consideration, more courtesy and more thoughtfulness on the part of the listener, the station will do its share."

Carroll H. Weyrich, 6 N. Gorman Ave., Baltimore, Md., joins this compendium with: "Of course there are instances in which many DXers submit correct reports, enclose postage and never receive a verification. Why? In my opinion, simply because that class which submits fake reports or does not enclose return postage, is arousing bitterness toward all DXers. Some DXers do not realize the amount of expense a station undergoes and seem to think a station exists solely for verifying reception. A station is not compelled by law to verify reports; they do it only as a matter of courtesy."

Write in Friendly Tone

Mrs. Alice Wilbur, 80 Green St., Newark, N. J., has very little trouble in securing verifications. In the first place, she believes, the report must be correct if proper attention is to be paid to it. In the second place she believes that the report should have personality, that is a friendly tone. She allows stations from five to six weeks before writing a second time and then she sends a complete report of the program a second time. She now has 245 verifications, the result of a year's work, with 28 still out. The only stations that have failed her are the Mexicans. She had no difficulty at all with WTFI and WBTM which were complained of by Mr. McPoyle of West Philadelphia. From these stations she received nice letters in four days' time.

To the above, Roger D. Causse, Box 6688, Lester, Pa., adds: "Verifications depend upon the kind of letter written to the station and, in most cases, the listeners are to blame if their letters are not answered. I have always used a letter along the same lines as the one printed on page 14 of the January RADEX. I use stationery with my name and address printed at the top

and I always typewrite the letters so there will be no difficulty about reading the letter. It is to be expected that at times your letters are overlooked or mislaid in the rush of mail but usually a nicely worded reminder after 60 days brings results. I allow 60 days to elapse for American stations and 90 days for foreign. My Australian veris took four months as did most of my South American but Europeans usually answer within 90 days. I have had more failures to answer with the Mexican and Colombian stations than any other."

"The only complaint I have to offer is against those fellows who become angered at stations who do not reply at once to reports," points out R. K. McFall, 711 4th Ave., SE. Minot, N. Dak. "The majority of stations willingly verify *helpful* reports. I suggest that those lads who do the kicking try sending a little valuable dope to the stations. How clear is the carrier? Is the musical response as good as the voice response? What are the receiving conditions? How does their volume compare with equally-distant stations of the same power? Are their programs interesting? Do they come in consistently? Try these on your typewriter and watch the results. It is my impression that such data is useful to the engineers and program directors of radio stations. They appreciate it."

Don't think of building over your old battery set into an all-electric. You might just as well try to rebuild a Ford into a Lincoln.



The new home of station XEZ located in Merida, State of Yucatan, Mexico.

REVIEWING *the*

Short Wave FIELD

. . . . By PAGE TAYLOR

BECAUSE so many new readers are joining our ranks each month, we deem it advisable at this time to devote a part of this article to a discussion of a few of the expressions and technical terms which are often heard when listening to shortwave stations. While such expressions as "Condition B" or "Try your A1 emission, old man," are intelligible to an experienced listener, they may cause considerable concern to a person hearing them for the first time.

First of all, what is a "short" wave? Generally speaking, any wavelength shorter than 200 meters is considered a short wave, but most persons who are used to listening to foreign stations between 20 and 50 meters feel that the 121 meter wavelength used by some of the police stations is a rather "long" wave. We like the term used by the Federal Radio Commission, "medium short wave band," to designate the wavelengths between 70 and 200 meters. Waves from 14 meters to 70 meters can be called short waves, while those shorter than 14 meters are ultra-short waves or ultra-high frequencies.

In addition to the arc and spark transmitters there are three types of emissions: These are, A1, continuous wave (CW); A2, interrupted continuous wave (ICW), and A3, Phone. CW and ICW stations are code stations, but there are many stations which use all three types of emission. RADEX lists only A3 type stations.

The Phone Stations

One of the first things to cause a new listener annoyance is scrambled speech. There is no need to describe here how it sounds as everyone will

recognize it on hearing it. This is speech inversion or inverted modulation, used by many telephone stations so that conversations carried on by their subscribers cannot be understood by the general radio public. The expression "Condition A" is used by operators to designate inverted modulation, while a station transmitting intelligible speech is said to be using "Condition B."

The list of Shortwave Stations by Frequencies has undergone some modification, introducing several new features exclusive to RADEX. For the first time in any list, readers are



Doubtless you have heard the voice of Gloria Holden many, many times. For the past four years she has appeared on Columbia network dramatic programs. Her present schedule brings her before the CBS mike in roles of persons current in the week's news through the "March of Time", each Friday night at 8:30 EST.

shown which stations use inverted modulation, and which do not, and the attitude of each station towards verifications is clearly shown. A complete list of s.w. addresses will be given next month.

The terms "commercial" and "telephone" station have been discontinued in favor of the more accurate "point-to-point" station. A point-to-point station is one which is licensed to communicate with only certain locations, which are specifically mentioned in the station's license, as, for example, the Lawrenceville stations which talk with Rugby, England. The Rocky Point and Bolinas stations are really point-to-point stations but we refer to them as being Experimental because their licenses are more flexible, permitting the points of communication named to be changed often; Little America is the most recent addition to their licenses.

The Police Stations

The Federal Radio Commission has adopted a new allocation plan for state and municipal police frequencies, effective May 1, 1934, which provides for additional police channels which were made available at the Mexico City Conference. It was nearly five years ago that police radio systems were inaugurated in Detroit and Chicago, and for two years these stations were heard on only three frequencies. Last year the number of assigned frequencies was increased from 9 to 11, and under the new plan twenty channels will be immediately available. It was decided that the maximum power of these stations be limited to 5 kw days and 1 kw nights. Details of the new frequency assignments will appear in an early issue of this magazine.

Some other recent decisions of the Radio Commission follow:

The point-to-point stations at Dixon, Calif., KWO, KWU, etc., are now licensed to work with ships on the Pacific.

The World Wide Broadcasting Corp. of Boston, Mass., is permitted to use the transmitter now known as

W1XAL on three new frequencies, viz. 2398, 3493 and 6425 kcs. with 5 kw power.

Station KFZ has been granted special temporary authority to use freqs. 9520, 11830 and 15270 kcs. until about April 15.

The National Broadcasting Co. was granted license KNRA, the schooner "Seth Parker," 1 kw, freqs. 6660, 6670, 8820, 8840, 13200, 13230, 17600 and 17620 kcs.

Miami on S.W.

The following letter from Mr. J. S. Bare of W4XB was received too late to include the schedule in our indices. "Shortwave station W4XB is owned and operated by the Isle of Dreams Broadcasting Corp., owners also of radio station WIOD (Wonderful Isle of Dreams), southernmost associate of the National Broadcasting Co. W4XB is operated on an assigned frequency of 6040 kilocycles.

"W4XB relays the regularly scheduled programs of WIOD as follows: 4 pm to 1 am, EST, daily, 2500 watts.

"Both stations' transmitters and towers are located on Collins Island, a small island in Biscayne Bay, away from the cities of Miami and Miami Beach, while our officers and studios are in the city of Miami."

Who Heard This?

"This morning before going to the office I heard a station for almost a half hour which I could not identify. Perhaps someone can help me on this," suggests Guy R. Bigbee, Hq. Co., 66th Inf. (Light Tanks), Fort Benning, Ga. "Time was about 6:20-6:50 am, EST. Frequency, approximately 7900 kcs. Several languages were used, the first sounding like French. I couldn't tell what the last one was as it was rather peculiar in tone. At about 6:30 they sounded a bell or gong, as it was too loud for chimes; they rang four times, and a few seconds later rang again, either once or twice (one sounded like it might have been an echo). Reception was good until the time mentioned, when I got a barrage of static." This

magazine never likes to guess at what a station *might* be, but in this one instance we will hazard the guess that Mr. Bigbee's station is HSJ at Bangkok, Siam, as the identification signal described, and announcements in French, English, Chinese, Siamese and Russian are characteristic of this station.

WQO Calling RKF

"I had RKF on about 44 meters. This is in Moscow, Russia," contributes W. T. R. Morris, Jr., 3219 Garland Ave., Richmond, Va. "RKF was talking with WQO. Pretty poor reception due to static and code interference. WQO was right next to him on the dial and was coming in like a ton of bricks. RKF was about QSA3, R5, but at times was pretty loud. I heard WQO calling him at 4:35 pm EST and then I luckily tuned right to RKF about a degree on the dial from Rocky Point WQO. They said little to each other. WQO had NBC music on most of the time and called RKF just now and then. By the way, I heard VE9GW say today that if anyone wanted a veri from them to please enclose an International Reply Coupon to cover cost of stationery and postage."

IRM Relaying 2RO

From S. R. Steele, 3606 Homewood Ave., Toledo, Ohio, comes an inquiry regarding a station he heard announcing in a foreign language and broadcasting opera on 30.7 meters between 3:45 and 5:30 p. m., EST. The answer to Mr. Steele's question is included in the letter which follows, from R. W. Evans, 832 Richie Ave., Lima, Ohio. "In a postal card at an earlier date I mentioned hearing 12RO on 9820 kcs, but have since heard them on their regular 25.4 wave, and have identified the 9820 kcs, 30.7 meter station as IRM, Rome. They relay 2RO often in the afternoons and sometimes talk with some other station in Italian. This month I have heard YV2AM near 40 meters on Sundays, and have heard PHI near 25 meters several times. GSE

and GSG certainly come in fine in the mornings. COC, the new Cuban, was heard testing near 8 p.m. on 6000 kcs. The S. S. Columbus, DOBX, is heard often phoning WOO. A new ship talking to WOO uses the call VQJP. These ships are heard in the 70 meter band. The programs from G6RX are coming in very well now. They relay Daventry until about 8 p.m., every night except Saturday and Sunday. CGA on 4900 kcs. works this end of the circuit. I have also received a verification from 'Maroc-France' or Rabat, Morocco, giving a two page description of the station and its schedule. A post card view of the station and its antenna is also included. 10 kw power is used."

S.W. on the West Coast

"Shortwave reception on the whole has been rather good this winter," concludes Aug. Balbi, 1427 Mipa Ave., Los Angeles, Calif. "I have logged GSE nearly every day for 3 months, also Pontoise is a good bet. I am very disappointed with VK2ME, either poor or absent entirely. The very best reception in clearness and volume lately is PLV on 31.86 meters in Bandoeng, Java, broadcasting musical selections between 6:45 and 7 a.m., PST, most every day. RV15, USSR, comes on 10 p.m. but becomes good after 11:30 p.m. to 6 a.m. A safe bet during the winter. PSK also good, as also are some other S. Americans like YV3BC, 1BC, HJ1ABB, Prado, HC2RL, if not interfered by code stations, which happens often. VE9GW and W9XF also impossible to separate at times; seems strange that with so many channels the shortwave stations should crowd one another. I would like to hear from other Patterson owners in regard to reception, especially of Germany and Italy."

Difficulty on 20-29 Band

Howard R. Garrett, 171 Hillsdale Ave., Toronto, Ont., writes, "This is the first report I have made on s. w. work but it certainly will not be the last. I have had a 2-tube DeForrest



Here at last we have a picture of "Charlie." Cliff Hall, half of the "Baron Munchausen" cast, makes a good living by listening to "whoppers." He is without doubt one of the best "straight men" in the gag industry. On the National Red every Wednesday evening at eight, EST.

Crosley converter for three weeks now and have logged 367 stations. This brings my grand total up to 946 stations on all bands. For some reason I have logged no stations between 20-29 meters but am still trying. I am very much interested in listening to the amateurs and the ships, and would like to correspond with someone using a converter who is interested in these stations. HJ1ABB is R7 between 9 and 9:45 p.m. here. G6RX is R8 from 9-11 p.m. daily. WOU tests in the evenings from 7-9 p.m. Will someone identify the following calls for me: JP8, 6425 kcs.; ERLD on 74.9 meters (KRLD?); and WAGP, which was talking to the trawler WIEP on about 115.75 meters?"

A New Nicaraguan

"I heard a new station in Nicaragua on about 44.5 meters, understood the call to be YN3RC," post-cards John Shanks, Russellville, Tenn. "YN3RC was heard from 8:40 until 10 p.m., CST. Also heard TIGP in

San Jose, Costa Rica, near 44.5 meters, from 9:05 to 10:49 p. m., CST, when he signed off."

The call sign of the new Nicaraguan is given in the Bulletin of the CSWRC as YN-CRG, while Mr. Geo. W. Burns, 2466 Wahl Terrace, Cincinnati, Ohio, mentions YNCRD. Mr. Burns adds, "An HR1UG, Tegucigalpa, Honduras, reported close to HJ4ABB. This is listed as owned by Kenneth H. See, but announces as Experimental station of the Honduran government, 5 miles from the city. (HRB? We hope so. Ed.) Some time ago I reported a WMEV in Florida on about 6600 plus; it is at Opa Locka, Florida, and owned by Aeronautical Radio, Inc."

Readers who were twisting s.w. dials back in 1930-31 will recall that Kenneth H. See was the manager of HRB, and that this station was also 5 miles from Tegucigalpa. We would gladly delete a few Colombians if we could hear HRB's Marimba Band again.

A Young Short-Waver

When he is not busy with his school work, 15-yr. old Chas. Finnegan, 3317 Malta St., Philadelphia, Pa., enjoys foreign reception on his little receiver using two type -30 tubes. "I have received DJA, DJC, LSN, GCW testing, LSX with Byrd, and GCU," he writes. "Before I bought RADEX I never worked lower than the police bands; now I never go higher than 53 meters. I have only been a DX fan for a short time as the set is only 3 months old. I suggest that tuners try for KFZ through LSX some Saturday night; it is interesting to hear the LSX operator hooking up New York with Little America."

G. K. Harrison, Box 424, Hobbs, N. Mex., sends a summary of stations received on his Midwest G-9 receiver, using an aerial 150 feet long pointed in a westerly direction. The transposed lead-in is 25 feet long and the ground is his own "desert special." Mr. Harrison says that during a recent storm period reception was completely cut off except for PLV, 9415

kcs., Bandoeng, Java, which came through consistently near 8:30 a.m., CST. The new frequency of W3XL is given as 17310 kcs. and the schedule as noon to 6 p.m. CST on Fridays.

Some Brief Reports

"I own one of the new 1934 Midwest 16's and you can't beat it," boasts Weston E. Taylor, 317 Clifton St., Brush, Colo. "As yet I have no outside aerial, but on the makeshift I am using have received with R9 signal strength, PLV in Bandoeng, as well as many other foreign stations in Europe, Hawaii and South America. When I get a good aerial I expect to get some real results. I'll be glad to hear from other fans and owners of the Midwest, and will reply to all correspondents."

"My receiver is a model 288 Zenith, 8-tube superhet, and I have written for verifications from a number of overseas s.w. stations," says P. H. Perry, 905 Glengyle Place, Chicago, Ill. "I haven't tried yet for very many small stations or T-P's. Perhaps some reader could aid me on this one: On a Saturday I had a station broadcasting music on 8.4 megs. at 10:04 a.m., CST. He signed off with a C-, and played "On the Way to Bombay." I would like to hear from owners of this set; I have some difficulty in getting S. A. and Central American stations."

An enthusiastic user of this same receiver, who also lives in Chicago, is R. Robinson Duff, M. D., 1118 West 35th St. "I paid no attention to radio following the arrival of the chain broadcasting system as it was useless and discouraging," writes Dr. Duff. "This year I was fortunate enough to obtain a Model 288 Zenith Allwave set which has brought me more pleasure and re-awakened the old enthusiasm of going out and getting them, which I had when we used to sit up until 3 a.m. to get the Pacific Coast."

No Luck With D's and G's

"I managed to add a couple of new stations, RNE and PHI," advises James Owen, 1019 W. Webster,

Springfield, Mo. "The Russian station didn't come in very well but PHI had a good QSA4, R7 signal one Sunday morning. I haven't had much luck with the British stations nor the Germans lately excepting GSE and DJB. I find that PSK and EAQ are still my best stations. PSK can be found practically any night between 6 and 6:30 p.m. CST, coming in very well."

Several interesting items are included in this letter from Cyrus Will, 665 Greenleaf Ave., Glencoe, Ill.: "HJ1ABB gave their new schedule as noon to 1 p.m. and 7:30 to 10 p.m., EST. HJA3, new phone station in Barranquilla, Colombia, is heard irregularly in the evenings near 10 p.m. They call Bogota just above W3XL, on 46.75 meters. CMB2, Havana, 52 meters, broadcasts international events. They have no schedule but work only when an international broadcast is required. A station CFU in Rossland, B. C., was heard testing on 52 meters."

Germany Wants Reports

Guy R. Bigbee asks us to quote a part of a verification he received from the German s. w. senders. "Perhaps you would be good enough to help us make our broadcasts more widely known by calling the attention of your radio friends to them," the paragraph reads. "Please say that we are always happy to receive comments and expressions from overseas listeners; such reports help us to check technical station efficiency, and besides, it is nice to be in direct friendly touch with your country." The German Kurzwellensenders are operated by the Reichs-Rundfunk-Gessellschaft of Berlin.

"I believe I had PK1WK on the 5th of February, but could not get enough for a verification," rightfully complains Wm. McDaniel, The Charleston Gazette, Charleston, W. Va. "I have heard a station just below EAQ, on 9700 kcs. signing off at 5:35 p.m. in some foreign language which I could not catch." Possibly IRM.

Verie from COC

G. L. Rich, 3322 Ellwood Ave., Richmond, Va., has a card from COC which reads: "Short Wave Radio Station COC, P. O. Box 98, Havana, Cuba. Station COC broadcasts daily from 4 to 6 p.m., EST." Mr. Rich hears this station on 5900 kcs.

"I suppose some of the boys have reported GCW sending music and testing in the afternoons on 30.6 meters, coming through better than GSB usually does," remarks C. R. Anderson, 1026 1st St., Mason City, Ia. "CT1AA has been heard testing on about 19.55 m., sending music and apparently asking for reports. COC is heard on various wavelengths between 49.8 and 51 meters, but seems to have settled down on a scant 50 meters."

From Sr. C. Lopez Videla, Manager of CP5, La Paz, Bolivia, we learn that this station is conducting tests on 9.120 megacycles. Sr. Lopez would appreciate reports from listeners comparing reception of CP5 on its two frequencies, 6.080 and 9.120.

Porto Rican Special

DX'ers who wish to add HI1A to their logs have an opportunity of doing so every Sunday morning at 1 a.m., EST, when they broadcast special DX programs, according to information received from Ramon M. Marti, Box 3783, Santurce, Porto Rico.

"Using a Pilot Super-Wasp 4-tube converter ahead of a Bosch 6-tube superhet, I have had some fairly good luck on the s.w.," says Geo. W. Banks, 105 S. Main St., North Brookfield, Mass. "My list covers 28 countries in five continents. I use a 56 tube in place of the 27 in the converter, and also a wave-trap to prevent broadcast signals of 550 kcs. from heterodyning the s.w. signals. This idea was taken from the January RADEX, as was the idea of using the 56 tube. My antenna is about 150 feet long and 45 feet high, running NE to SW, and with a 50-foot lead-in. I would like to hear from owners of the Midwest 16."

Carlton Duncan, Camas, Wash., reports reception of WHEW talking to WEM at Rocky Point, and information is requested concerning this station. WHEW is on the Byrd Expedition ship "Bear of Oakland," but we have understood it was licensed for code emission only.

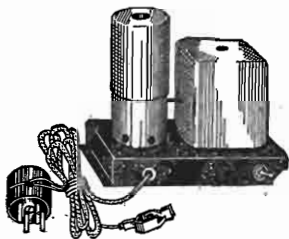
"Why don't you list W4XB on 48.67 meters in your lists?" suggests R. M. Ballard, Visalia, Calif. "I asked for a verification from HJ1ABB on their RADEX special program; it came in here with R8, QSA5 volume." A write-up on 4XB is found earlier in this article.

If any of our readers picked up Nairobi, Kenya, on their special DX for RADEX on March 12th, please be sure to advise us. This station not only put on this program especially for our readers but they generously went to the expense of cabling their arrangements. We would like to give them a report of any reception.

The Beat Note OSCILLATOR

WHEN tuning a radio receiver many weak stations fail to make their presence known. This may be due to fading at the time the dial passes that particular wave length, or hurried tuning may be the fault. Short-wave reception is subject to such discouragements, and the owner of a good short or all-wave set frequently believes his receiver to be a failure.

A new device—the Beat Note Oscillator—will tell the listener when a station is being passed, for it tunes in signals by the "zero-beat" method. No weak stations are lost, for they are located and announced by a whistle. The Oscillator eliminates searching, and prevents the skipping of stations. It works well on all wave lengths, and is absolutely stable of operation. Its operation consists merely of snapping the switch on or off.



The Beat Note Oscillator

The Oscillator, consisting of a compact tuning unit and shielded screen-grid tube, is easily installed without touching the wiring of the receiver. It can be used only with superheterodyne receivers. It obtains its power through an adapter placed beneath a power tube. The connections are permanent and, once adjusted, the Oscillator need not be tuned again.

Tuning the Whistle

The operation is very simple. A station is tuned in on the short-wave or broadcast receiver the first time only. Then the Beat Note Oscillator is turned on, and its knob adjusted until a whistle is heard. The knob is rotated slowly until the whistle disappears and another becomes audible. Between these whistles is a sharp spot of silence—the point of zero beat. Set the knob permanently at this point. Now tune the receiver to some other station and a whistle appears. Set the dial to the zero beat point of the whistle and turn off the Oscillator. The station will be heard on its peak signal strength without further tuning. When the Oscillator is turned on whistles all over the dial indicate the presence of stations. Set the dial on any whistle, turn off the Oscillator, and there is a station.

The whistles are produced by interference between carrier waves and the temporarily created Oscillator waves. It is the most sensitive method known for locating the presence of a radio carrier signal. Transmissions so weak as to be otherwise practically inaudible and unintelligible, always create a heterodyne whistle when mixed with a signal having a different frequency.

In the days of the old, regenerative sets, which, while nuisances, are unsurpassed for sensitivity, all stations made themselves known by loud whistles, squeals and howls. The trouble then was to get rid of the whistle after a station had been located by its whistle. The Beat Note Oscillator whistle is mild in tone, and is created only when a station is being located. It will not cause interference and objectionable noises, and is used for only a moment at a time to locate an otherwise hard to find station.

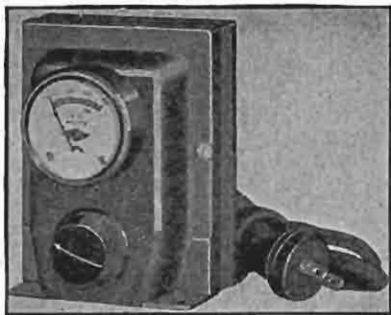
The Oscillator was developed and is manufactured by Sol. Perlman, 647 East 96th Street, Brooklyn, N. Y.

Adjustable VOLTAGE

NO longer need a radio set be operated below normal performance because of poor voltage, say the manufacturers of a new device that has just appeared on the market. The Variable-Voltage Adjustor, designed and manufactured by the Acme Electric Mfg. Co., of Cleveland, Ohio, is a unique regulating device that permits the adjustment of the primary line-voltage from either below or above normal to the proper operating point.

Similar in construction to an ordinary step-down transformer, a series of taps has been provided. A knob enables the operator to set his own voltage and a dial registers the effect.

Whenever a radio or other electrical device is connected to a supply line at a considerable distance from the distributing transformer, the drop in voltage resulting usually effects a considerable change in the performance of the unit. An over-voltage condition often causes damage to radio tubes, condensers, etc., and is apt to damage the electrical insulation, melt connections, burn brushes, etc. In localities supplied with power from a generating plant that is not controlled by a voltage regulator, a great fluctuation creates a damaging condition for radios particularly.



Acme Variable Voltage Adjustor

This device is made in two sizes with voltage ranges from 85 to 145 and 160 to 240 respectively.

NOTES *and* TIPS

IF you are out of reach of XEAW and CRCT on the 960 channel, here is a good chance to add YV1BC, Caracas, Venezuela, to your log. They write us that they will broadcast a special program on April 14, from 9:30 to 10:30 p. m., Caracas Time, in celebration of Pan-American Day. The program will include numbers by a Venezuelan Choral organization of 80 voices and selections by the Venezuela Symphonic Orchestra. It will be broadcast on 960 kc. and also on 6,112 megs. or 49.8 meters and will be retransmitted by station YVQ, from Maracay, on their frequency of 6,672 megs. or 44.96 meters.

"We have just completed the installation of a new Northern Electric 100-watt transmitter," writes Radio Station CKBI, Prince Albert, Sask. "This is the very latest equipment with crystal control and employs grid modulation of the power stage. The installation includes frequency monitoring equipment as well as such accessories as modulation percentage indicators and the new dynamic microphones. We will soon be moving the transmitter from the downtown section to a location outside the city so that then we will be able to reach a little farther out as there

will not be the absorption of the radiated power. As to test programs, we will put on only one each month until further notice; this will be Sunday morning at 2:30 to 4:30 EST, the last Saturday night of each month." Congratulations to CKBI on their new equipment. They have many friends this side the imaginary line.

Station XES writes us that they were forced to call off all DX programs due to damage to plant last fall by cyclone. Their transmitter has been rebuilt with more power than ever. Until March 31, they are running a DX program from 2 to 3 a. m. EST on Saturdays. They verify for ten cents in U. S. stamps (no coins) or write a letter for 25 cents. As March 31 will close their DX programs they would like all requests by that date.

Radio Station CJRM, Moose Jaw, Sask., sends Dr. M. Dean Miller, 429 E. Market St., Akron, Ohio, their schedule which is as follows: Sunday 11 a. m. to 4:15 p. m. and 6 p. m. to 9:30; Saturday, 8 a. m. to 3 p. m. and 5:15 to 10:30; week days, 8 a. m. to 2:30 p. m. and 4:45 to 10:30. All time is Mountain Standard.

Several readers have reported picking up KDA about 1060. Henry Arbic, Acton, Ont., points out that one of the frequencies of this station is 350 kcs. Thus it would have a third harmonic at 1050 and that is where Mr. Arbic has been hearing it.

XEW, Mexico City, writes us that on April first that station will install a new 50,000-watt RCA-Victor transmitter and will then broadcast on a frequency of 980 kcs. The same station will operate a 5,000-watt transmitter on a frequency of either 910 or 840 kcs.

Says a postscript from WCOC, Meridian, Miss.: "Sometimes get behind on verifications on account of very large amount of mail received, but as soon as possible, all are answered."

From New Zealand, Karl Halpern, 495 East 3rd St., Brooklyn, N. Y., re-

ceives a letter which reads in part as follows: "Radio here has been revolutionized in late months. The 'B' stations are being bought by the Government to be used as relay stations in remote towns. The National station 3YL on 1200 kc. with 500 watts, replaces the old 3ZC, Christchurch. They are using the old transmitter and site of 3YA."

To this information, George E. Bott, 507 Southampton St. E., Hastings, N. Z., adds, "1ZR has now taken over the call and frequency of 1YX and 3ZC and 2ZW have been closed. 2YC and 3YL are on daily from 6 to 10 p. m."

The Associated Press reports that the powerful XER, owned and operated by remote control from the U. S. by Dr. John R. Brinkley, has been forcibly closed by Mexican government troops. The station is charged with sending out medical talks and advertising medical articles without authorization. The station has been given 30 days in which to dismantle its equipment. If this order is not carried out, government engineers will proceed to remove the machinery, according to report.

Short wave station COC, operating on 49.9 m. or 6010 kcs. will broadcast a DX program for the NNRC on April 10th, from 1:00 to 2:00 a. m. EST. The address of the station is P. O. Box 98, Havana, Cuba. A new verification card is to be printed for the occasion. Ten cents is the cost of verifying. All announcements will be in English and Spanish. Alec. Kinghorn, Cuban representative of the NNRC, will make the announcements. This info comes from Alfred W. Oppel, Executive Secretary of the NNRC.

Remember that old phones will often become demagnetized and be so faint as to be useless. Test them on a flash-light battery and see if you get a good, sharp click.

The 56 tube has the same base as the old 27 and will make considerable improvement especially in the detector stage.

HOW to TUNE

WITH the modern receivers all calibrated in kilocycles, we sometimes forget those who still use the old dials marked merely from 0 to 100. "We are readers of RADEX and find any program or station we want but I have friends who have an Atwater Kent radio that is numbered from 5 to 100 instead of in kilocycles like my Philco. My friends lose so many good programs because they cannot find the stations on their radio." This letter from Mrs. Maude Rolfe, 1741 Burnett Ave., Waco, Texas, reminds us that we have not mentioned in these columns for a long time, how users of sets with such dials as this Atwater Kent, may tell where to tune for stations they have never heard.

Turn to page 63 of this issue of RADEX. The stations are grouped by frequencies as measured in kilocycles. Opposite each frequency are three blank spaces. Tune in any station on this page you can hear. Let us say you tune in WJZ in New York on 760 kcs. and that it comes in on your dial at say 65. Enter this 65 in one of the squares opposite 760. Now tune in another station. Let us say you hear WGY Schenectady at 62. Enter this in the square opposite 790. It is obvious now that if you want to tune in WBBM, Chicago, on 770 that it will come in between 65 and 62 on your dial.

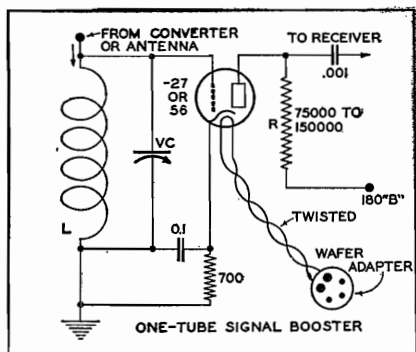
Identifying Stations

After you have tuned in those stations you readily hear for a few days and have entered your dial readings opposite their respective frequencies, you can then tell approximately where to set your dials for those stations you have never heard. The more stations you enter in this way, the easier it is to tune for the stations you have not yet logged. This same method will enable you to identify the stations you have never before received. Let us say that you hear a station on 61. By referring

(Continued on page 48)

What Makes MY SET Do That?

● ● ● *Answered by the Technical Editor*



I HAVE been using a Stewart-Warner short-wave converter with a tuned-radio-frequency receiver. I decided that I could boost the volume of the converter output in order to get more powerful signals into the broadcast receiver. So I built a single stage of resistance coupled amplification, as shown in my sketch. The sensitivity was increased, and the volume was doubled.

This is a very good scheme. But we believe that the stage of radio-frequency amplification can be made more sensitive, and the selectivity of the broadcast receiver improved, by providing a tuned input circuit. This method is shown in the diagram. For those of our readers who wish to build this unit, for use with short-wave converters, or as a one-stage r.f. signal booster or amplifier, and pre-stage receiver selector, for any kind of radio set, it is described as follows:

The coil L is a tuned inductance of about 70 turns of No. 26 wire wound on a tube two inches in diameter. It is tuned by a shunted variable condenser (VC) having a capacity of .00035 microfarads (350 micro-microfarads). A 56 type tube is used because of its low current con-

sumption. The heater is operated from the converter or receiver, with suitable wafer adapter connection beneath some tube. The 180 volts plate potential is taken from some convenient terminal. The plate resistor (R) may vary from 50,000 to 150,000 ohms, and some experimentation will be necessary to select the proper value. The cathode bias resistor and condenser have nominal values, as shown.

Noisy Hum Control

The hum control in my Philco 87 makes a noise when adjusted. The set also makes a crackling noise when operating. This noise even persists without ground or aerial. What can be wrong?

The hum control is a 6-ohm potentiometer connected across the two leads from the 1.5 volt winding of the power transformer which feeds the filaments of the four -26 tubes. The center-tap, or adjusting arm, of the control is connected to the neutral point (terminal 2) of the voltage divider resistance. Any defect in the connection or in the movable arm of the control will cause crackling sounds.

The other noises in your set are characteristic of loose connections or bad tube elements. Broken down filter condensers or bad resistors may cause the trouble.

Tubes in Philco 111

How can I tell the locations of the different tubes and their functions in my Philco 111?

The tubes in this set are: From left to right across the rear of the chassis, looking down: -80 rectifier; -24 first radio-frequency; -27 oscillator; -24 first detector; -24 first intermediate-frequency; -24 second intermediate-frequency; -27 detector-

rectifier (second detector). Then, at right: Rear -27 is detector-amplifier; -27 toward the front is the first audio tube; and the two -45s are push-pull second audio amplifiers.

Lyric Sounds "Tinny"

There is a "tinny" sound in my Lyric S-8 receiver. The tubes are good, but the tone seems too high in pitch. Why is this?

Perhaps there is trouble in the tone control. If it does not work properly it will not pass the several frequencies through the audio transformer. This control is a unit of variable resistance and condenser shunted across the two terminals of the first audio transformer, and also connected between the plate of the -27 detector tube and the ground.

The control uses a 70,000 ohm resistor shunted with a control arm and a .05 mfd. bypass condenser. This condenser may be shorted. Then, between the lower end of the control unit and the ground, is a .5 mfd. fixed condenser which may be defective, and connected across this condenser is a 100,000 ohm resistor (color code—brown-black-yellow). There is a .02 mfd. condenser connected between one terminal of the primary of the transformer and the end of the control that attaches to the plate of the -27 tube. This may also be shorted and cause trouble.

Test and examine the cathode condensers and resistors in series with the cathodes of the -27 detector tube. Then, there is the possibility of trouble in the speaker. Try connecting a .1 mfd. fixed condenser across the terminals of the .02 mfd. condenser now in series with the lead to the plate end of the transformer primary, in an attempt to improve the low notes.

Crystal Control of Frequency

I have wondered whether a crystal control can be placed in my Philco 15X receiver so as to control the intermediate frequencies, and improve tuning and oscillator actions. What do you suggest?

Certain crystals, when cut to some particular dimensions, become active under what is known as the "piezo-electric" effect. As such, the crystal has a specific frequency at which it will oscillate. The crystal, therefore, can be made to control the vibrations of a transmitting station and hold its broadcast to a fixed or standard frequency. Some progress is being made in the application of fixed frequency crystals to radio receivers. Crystals are cut from quartz, tourmaline, and even rochelle salts.

The use of a crystal in the oscillator circuit of a receiver is complicated. Only a few schemes have been worked out, and then only in specially designed circuits. We think it quite impracticable to install a crystal at this time in any existing receiver.

Crystals are being used in limited cases in connection with loud speakers so they will reproduce more faithfully the higher frequencies. Crystal speakers tend to improve the quality of a receiver that uses pentodes.

Flewelling S-W Adapter

I have a Flewelling short-wave adapter, and would like to know how to attach it to my Radiola 60 receiver.

The plug of the adapter is placed in the second detector socket, which is the -27 tube second from the end next to the -71A power audio tube. Remove the -27 tube and insert the adapter plug. We assume that your adapter is number 73, with a plug having 5 prongs to fit a 5-contact (-27) socket.

This adapter, which is really a small short-wave receiver, sends its power into the -71A power tube for amplification and reception on your speaker. No changes in aerial and ground are necessary. The ground wire remains where it is, and the aerial wire is attached to the adapter.

New Tubes in Majestic 70-B

Can I use the new type tubes in my Majestic 70-B receiver?

This receiver uses four -26 type tubes, for which there is no substitute, since they are all 1.5 volt tubes. The

-27 detector can be replaced with a 56.

A-K Audio Transformers

I would like to know what audio transformers are used in the Atwater Kent model 20 receiver, and how they should be connected to the tubes and circuit.

The model 20 Atwater Kent receiver uses two audio transformers—one between the detector and first audio tube, and another between the first and second audio tubes.

The first transformer may have a 6 to 1 ratio; and the second a 3 to 1 ratio.

The plate terminal of the primary (P) of the 6:1 transformer is connected to the plate of the detector tube. Terminal B connects to the 22½ volt B battery—a yellow wire. The G of the transformer attaches to the grid of the first audio tube, and -F connects to the -A of the A battery.

P of the second transformer connects to the plate of the first audio tube; B goes to a 67½ volt B battery—a white wire. G of the secondary winding connects to the grid of the last or second audio output tube; and -F connects to -C, or the green-yellow wire of the C battery. The plate of the last tube connects to the 90 volts B battery, through a speaker or phones, by a brown wire.

Poor Tone in Apex

My Apex model 8A works well, but the tone is poor. There is a distortion which can best be described by likening it to that produced by a speaker not properly centered. But the speaker is good, and the same distortion is noted when another speaker is connected. When the tone control is down to bass this distortion is not noticed so much, but when it is turned toward treble the tone becomes very scratchy.

Have the 550-ohm section of the volume divider of the Apex receiver replaced with a new one, as this is quite likely the cause of trouble, providing the rest of the set and tubes check up properly. The resistance

element of this section of the divider, which is connected from the ground to the -47 tube filament center, may be destroyed and shunted with a new element having at least a 5-watt rating, and 550 ohms resistance.

A Vibrating Speaker

My small 1933 General Electric radio receiver seems to have a vibrating speaker cone. The cone is firmly fixed, but gives trouble. How can it be remedied?

It seems likely that the diaphragm has developed a state of self-resonance due to the fatigue of the material composing the speaker. Sometimes this happens in new sets, particularly if the material is from a defective lot. Or there may be a broken spider, or an improperly suspended cone. A partially open voice coil, or reduced field current, will contribute to this vibration. Make a careful check of the voltages and windings of the speaker.

Philco 96 Has a Whistle

My Philco model 96 has developed a whistle on every station, from the low frequency end of the dial to the high frequency end. The whistle is weakest at the high frequency end of the dial, and loud on the low frequency end. While tuning for a station the whistle is on each side of the station, but it disappears entirely when the receiver is tuned to resonance with the station. Why is this?

This annoyance is caused by an open plate or screen-bypass condenser, or an open screen bleeder resistor. The screen bleeder resistor is a 70,000 ohm resistor connected between the grounded chassis and a middle point between two other resistors in the line that feeds the screen grids of the three r.f. -24 tubes. It may need replacing. The bleeder is shunted with a 1 mfd. condenser which may be defective. Other condensers in the screen-grid and plate circuits should be tested and replaced.

Set Starts Off Weak

When my ten tube Victor model

R-54 set has been turned off for several hours, and is switched on, the volume is very weak. Only local stations will come in. It acts as though it were trying to cut through a fog. If the hand is placed on the antenna coil, or on the control grid connected with this coil, the signals will come in with normal strength. Sometimes turning the switch on and off a few times will accomplish the same result. When the set is working normal, placing the hand on the coil or control grid weakens the signal strength. The trouble only happens after the set has been off for some time, and is very noticeable every morning.

It is possible that the grid return resistor in this set, leading to the automatic volume control plate, which has a resistance of 500,000 ohms, or to the ground through two more 500,000 ohm resistors in series, is defective.

Other possible causes are: Open or shorted antenna coil; or a break in the lower connection to this coil; the same condition in any one of the grid coils, or r.f. secondaries; or in the a.v.c. intermediate resistor of 500,000 ohms. Beyond these causes, other than broken wires leading to the grids of the tubes, or a defective tube or grid cap, there is little else in this receiver that could cause such a situation.

Hum in Philco 112

I have a Philco model 112. It has a terrible humming or buzzing noise. The local stations drown out the noise, but the less powerful stations are distorted by the hum and buzz. At night it is necessary to turn the volume control completely off. This noise is different at different frequencies. All tubes are new.

The effect you observe during tuning seems to indicate radio-frequency trouble. It may be caused by the break down, opening or short-circuiting of any one of the many bypass condensers or resistors in the entire circuit which embraces the radio-frequency tubes and transformers.

We think that the trouble can be

localized by first testing the power supply outlets for proper noise or hum filtering, and then starting from the last audio tube grid stage with a telephone headset and advancing backward into the signal circuit until the noise no longer appears.

By this elimination method, the radio or audio stage in which the trouble occurs can be quickly ascertained, and then all the parts making up that particular stage or unit of the circuit may be tested by substitution or electrical and mechanical examination. Noises of this kind are difficult to locate, but we feel sure that if a systematic test throughout the circuit is made, you will arrive at the cause.

Dial Center Is Dead

I have a Majestic model 90 radio. It has developed some trouble which is annoying. At approximately the middle point on the dial, or about 850 kcs., all stations disappear. The last station to come in is at 860 kcs. Stations between 1500 and 860 kcs. are received, but between 860 and 540 kcs. they are not received. Even static is absent here.

Possibly the condenser plates or the shaft, or some rotary member of the condenser tuning unit, shorts to the grounded side in that portion of the condenser that tunes below 850 kilocycles. The shaft may be worn in such a way that it moves back and forth and thus shifts the rotor plates at the lower frequencies. Since signals are all cut out, the plates must move in a very irregular manner.

We suggest that you check for a short between condenser plates when the tuning is below 850 kilocycles, and if this does not show the trouble investigate the other points above mentioned. Often, in cases of this kind, an entire new condenser gang unit will be needed to correct the trouble, for it may be next to impossible to readjust an old condenser to tune evenly and cause the dial to track perfectly. The Majestic 90 has five variable condensers in its single gang unit.

Sparton Tubes

Can I use either the 484 or 485 Sparton type tubes in my Sparton 69 receiver?

You can use the 485 Sparton tube in place of the 484 now used in your receiver. The 485 consumes just about the same current as the 484, and less than the 484A type. Generally speaking, the 484 and 485 are interchangeable, for they both are used as detectors and amplifiers. You may use the 485s in place of the 484s in the five radio-frequency stages, and in the detector stage of the Sparton 69, if you wish. Either the 484 or 485 Spartons can be replaced with the 485 Sylvania tube.

Our Short Wave Converter

I have tried connecting a .00025 mfd. fixed condenser in the grid lead to the 58 detector tube used in your short-wave converter described in the June, 1933, issue of RADEX. It has improved reception quite a bit. Why was this? Should I permit the condenser to remain permanently?

The detector used in our converter is a power or bias type requiring no grid lead or condenser. The latter type of detector is more sensitive, but will stand less load and is very unstable and critical in its operation. In a converter of this kind, such critical operation is frowned upon by experimenters and radio engineers. However, there is no objection to the use of a grid condenser and leak if the user of the converter is a careful tuner and manipulator. If the tube has just a trace of gas in it, this leak idea will work to perfection and greatly improve the sensitivity of the unit. But, if you use the grid condenser, we suggest that a 2 to 5 megohm grid leak resistor be connected between the grid of the 58 (tube side of the condenser mentioned) and its cathode.

Some of these days you are going to be lucky enough to pick up a foreign station. Keep a copy of the DX Log of the World handy so you can identify it when it comes.

Short Wave SHORTS

“TONIGHT I had a bit of reception which I am sure can be used by s. w. fans as a test of the selectivity of their receivers,” points out Clement Van Velsor, 1033 Sanford Ave., Irvington, N. J. “I own a Scott Deluxe which has excellent selectivity. About 6 p. m. I had DJA, 31.38 meters, coming in fine, W1XAZ, 31.36 m., and GSC, 31.30 m., each easily separated from the other and with no cross-talk or interference of any kind. I am curious to know how many can get three such closely located stations all at the same time with no trouble, as I did and still have the fine tone my set has. Many sets have 10 kc. selectivity on the b.c. band but how many have that same degree on short waves? Since 31.38 equals 9560 kc. and 31.36 equals 9567 kc., therefore I have 7 kc. selectivity.”

“On s. w. the Midwest is a marvel,” thinks Werner Alf Howald, 632 S. Fetterly Ave., Los Angeles, Calif. “I get amateurs, police and airport stations from coast to coast. Following are some of the s. w. stations which come in regularly under any conditions: W8XK on 48.83, 25.25, 19.72, and sometimes on 13.93; W2XE on 49.02 and 25.36; W3XAU on 49.50 and 31.28; W1XAL, W2XAF, W9XAA, W1XAZ, W3XAL, W3XL. Foreigners are VE9GW, VE9JR, VK2ME, VK3ME, RV15, J1AA, PLV, EAQ, FYA, GSA-B-C-D-E, GAA on 14.72 testing with LSY. XETE, PSK, PRBA, LSX, LSM, LSY, and most all of the Central and South American s. w. broadcast stations. I logged both the U. S. Battleships California and Lexington. I would like to hear from anyone owning a 1934 Midwest and all letters will be answered in German, French, Italian, or English.”

“Saturday evening, Feb. 24, I tuned in a mysterious station that seemed to be testing,” advises Stuart Leland, 82 St. John Place, New Canaan, Conn. “The person speaking

was whistling a series of Vs in code and talking to another party that was reporting reception. The call was something like VENX and the station was located in Nova Scotia. He gave the wave length as 181.8 meters. Due to poor modulation, it was exceedingly difficult to understand the actual conversation. The time was 7:30 to 7:45 p. m. Est. Have you any information on this one?" Perhaps some of our Nova Scotian readers can identify this one.

"I am certainly pleased with my Midwest B-16," exclaims Herman C. Webb, P. O. Box 72, Baker, Ore. "Every morning for the last month I have tuned in GSB in England with even too much volume. I have also tuned in a number of other foreign stations besides most of the s.w. stations in the eastern states. On the b.c.b. I have logged 110 stations in the U. S., Canada and Mexico and getting more every day. I have tuned in police broadcasts as far away as the eastern time zone, and airplanes and amateurs all over the country."

"On the short waves, I have received LSN-X-Y in Argentine; PPU, Brazil; VK2ME - 3ME, Australia; CP5, Bolivia; CNR-ZSS, Africa; 9 in Canada, 11 in Colombia; 2 in Costa Rica, 3 in Ecuador; 1 in France, 8 in Germany, 14 in England, 3 in Hawaii, 2 in Guatemala, 3 in Italy, 1 in Japan, 1 in Madeira, 4 in Mexico, 1 in Nicaragua, 1 in Poland, 1 in Portugal, 1 in Spain, 5 in Venezuela, 2 in Switzerland, 2 in Santo Domingo." This fine report comes from Clyde I. Boyer, 5713 N. 7th St., Philadelphia, Pa.

"I have again turned in my set for a new one which I think will be the last," is the optimistic opinion of Richard Pulford, 41 Ives Street, Waterbury, Conn. "I now have a 711 model Atwater Kent and does it bring them in! It has a wonderful tone and certainly is all they recommend it to be. I have been listening to Rabat all afternoon. The other night I picked up COC, Havana on 6.001 and they wanted listeners to write to them. Address, P. O. Box 98, Ha-

vana, Cuba. Is this a new station?"

"Although my 4-tube Majestic is operated with no aerial whatsoever and with a ground only to a radiator, several times during the past week, I heard clearly and loudly G6RX at Rugby, England. G6RX is on the air between 10 and 11 p.m., EST." So reports R. S. Rothschild, 36 Morris Dorm., University of Pennsylvania, Philadelphia. "G6RX was between 3.200 and 3.500 megs. and not on a frequency of 4.972 as listed."

"Purchased a Model 16 Philco several months ago and have had excellent results," says R. W. Chabot, 1614 South E. St., Elwood, Ind. "Davenport, Zeesen and Caracas are among the regulars for steady entertainment. Received VK3ME twice but both times it was too noisy to enjoy. Am using a 7-foot length of copper tubing standing in one corner of the room for my s.w. antenna, however it is no good for b.c. reception."

From Thos. Anderson, 449 McIntyre Street, Regina, Sask.: "Davenport on the 25 and 31 m. and Pontoise on 25 are much the best of the Europeans; they come in seven days a week. HJ1ABB comes in regularly R8. VQ7LO and CT3AQ have been coming in fair but not regularly. I had RNE (RW50) for 35 minutes on Monday, Jan. 29. I picked him up when Pontoise left the air at 12:15 MST."

"I have a bit of information on KJTY which may help those who have not yet logged the ship," writes Clair E. Fultz, 17 Fifteenth Ave., Columbus, Ohio. "I often hear them testing with LSX which relays the messages to WEF which also uses the call W2XBJ. On the evening of Dec. 29, I was able to get the ship direct. They were on frequency number seven which I found to be on the 22 meter band but when they shifted to No. 11, I was unable to locate them."

"I would appreciate any information concerning KIIQ which I heard testing with recordings on about 123 meter," says Frank Pieratt, 216 East Grand, Ponca City, Okla. "I have

picked up GSA-B-D-E, G6RX-RI, DJA-C-D, I2RO, HVJ, Pontoise, PHI, OXY, Rabat, and 14 SAs. I have 84 commercials including KKP, KEQ, KAZ, YVQ, ZFA, FTM, PSF, VK2Me-3ME."

"I am very well pleased with my Spartan converter," reports Kenneth Buxton, 282 Elgin St., Sarnia, Ont. "Here is a list of my catches: VK2ME, PSK, HJB, Pontoise, DJC-D-L, TGX, I2RO, GSB-C-D-E-F, PHI, EAQ, HBP, RNE, YV3BC and KJTY. There were two others who heard KJTY with me and they marvelled at how clear he came through."

"We surely enjoy our 11-tube Philco all-wave," write Mr. and Mrs. Blaine Byers, 1106 N. Poplar, Wichita, Kans. "It surely brings them in. Here are a few we have received: DHC, EAQ, Buenos Aires, ZIJ, HB9D. We get KJTY regularly. On the broadcast band we get WJZ like a local."

"Boxed in by KFRC, four blocks west, KYA, five blocks south, KGGC, four blocks south-east, and KJBS, four blocks south, my reception is not so good," complains C. T. Rothweiler, 500 Leavenworth, San Francisco, Cal. "Have heard W8XK, VE9GW, W1XAZ, W2XAF, W8XAO, J1AA and VE9CL."

"On the s. w. I have verified PMY, F31CD, G5BY, G5SW, VK2ME, VK3ME, GBP, YV3BC, YV1BC, and recent catches are PK1MK, HIX, HC2RL, PRADO, GSE-D-A-B, DJD, YV2AM, PHI, CT3AQ, CP5, RNE, EAQ, RV15, J1AA, and Pontoise (25.2 m)" reports Don H. Townsend, 602 Churchill St., Fallon, Nev.

"There is one station that has me puzzled," announces Henry O'Brien, 37 Bishop St., East Haven, Conn. "It is on 29 meters. I got it Jan. 22 and it gave a call like a siren. Then every ten minutes the announcer would ring some chimes but everything he said was in Spanish."

"Have raised my list of stations from 352 to 392 in the last ten days," postcards Phil E. Lockwood, 315 No. 7th St., Yakima, Wash. "PSK in Rio de Janeiro, is regular

each afternoon from 4:00-4:30 p.m., PST., announcing and signing off in English. Boy, you must have the circulation! I have received so many letters in response to my letter published in January RADEX. Would especially like to hear from Midwest 16 owners."

Tuning *the* AERIAL

I AM a minister, serving as a district superintendent, which takes me away from home much of the time. Consequently I have little time for experimentation. I have been interested in radio, however, since I built my first crystal set back in 1921 and I still have a trunk-full of junk which I have not the heart to dispose of. I have been a reader of RADEX for about two years and, while I have no time for applying all that I read, I assure you that I look forward eagerly to its monthly visits and, in imagination at least, participate in the joys and sorrows of the DXers and the radio-experimenters." This is the interesting preamble to a letter from J. Roswell Flower, 14 W. Lincoln Ave., Lititz, Pa.

"I have been experimenting with wave-traps. I took an old Freshman coil and hooked the secondary in parallel with an 11-plate condenser, mounting the condenser and coil in a tin can. This helped considerably. One day, while experimenting, I pulled the condenser and coil out of the can and, to my amazement, the signal strength doubled. The tin can was absorbing fifty per cent of the radio energy of my antenna. So I canned the can, mounted the condenser and coil on a piece of hard rubber and screwed it on the bottom of my radio cabinet. You can hardly imagine the difference in reception with this arrangement. In the daytime I can bring in stations that cannot possibly be heard without the trap. KFI can be heard any night after twelve in spite of interference from WSM. Without the trap I rarely reached any point farther west

than St. Louis. I figure that my present arrangement tunes the antenna system so that I get the maximum out of it."

Mr. Flower attaches the aerial and ground to the ends of the primary coil while the ends of the secondary are attached to the aerial and ground posts of his set. The condenser is bridged across the secondary coil.

In Foreign Lands

WE receive many inquiries from readers in distant countries asking where they can find RADEX on sale. For their information, we are giving below the places at which the latest issues may be found. In Canada and the U. S., of course, this magazine is carried by all the larger newsstands and bookstores.

Great Britain

Arthur C. Baker, 10 Lansdowne Road,
Sales, Cheshire, England.

New Zealand

R. Conner, P. O. Box 140,
Palmerston North
Te Aro Book Depot, Ltd., 64 Courtenay
Place,
Wellington, N. Z.

Costa Rica

Carlos Federspiel & Co., Apartado 1088
San Jose

Alaska

F. J. Hunt, 207 Front St.,
Ketchikan

Canal Zone

Lewis Service, Drawer B,
Ancon

J. L. Beverhoudt, P. O. Box 5041,
Cristobal

Cuba

Diamond News Co., Centro Asutirino
Bldg., San Jose St. Side,
Havana

Hawaii

Wall-Nichols Co., 69-74 King St.
Honolulu

Philippines

Philippine Education Co., 101-103
Escoto,
Manila

Puerto Rico

Carlos M. Colon, Apartado 236,
Ponce
Waldrop Photographic Co., 9 San
Justo St.,
San Juan

British West Indies

Novelty Trading Co., 8 Musgrave Ave.
Kingston, Jamaica

China

China News, 447 Szechuen Road,
Shanghai

Dutch West Indies

Leo W. Baldwin, Care Pan America
Oil Co., P. O. Box 192,
Aruba

Italy

Giulio Pacinelli Gioranli Urgenti,
Roma, Ferrevia

Mexico

American Book Store, S. A. Avenida
Madero, 25,
Mexico City

L. F. Poston & Co., Sucursal B. de
Correos,
Monterrey, N. L.

La Sanora S. A., Apt. 1439—Comerico,
25 Tampico, Tamps.

Venezuela

R. G. Letcher, Torre A. Madrices, 23,
Caracas

Newfoundland

Dominion Distributors Co., Mitchell
Bldg., Water St.
St. John's

Haiti

E. P. Pawley,
Port-au-Prince

Skimming the DX Milk

"MANY are the nights the flesh is too weak to answer the call of the spirit to pursue that fascinating hobby of DXing," sighs Luther E. Grim, 505 S. Main St., Red Lion, Pa. "After spending eight hours wiping the dust of sanded shellac from the entire surface of more than 500 radio cabinets and anticipating another day and 500 more cabinets, there is no wonder the flesh doesn't answer the call. However, I have managed to push my log from 586 to 641 stations. I find that 30 of that number have been deleted. Among those added this season are XEFO, XEN, XEB, HIX, LR5, 2BL, 4QG, Radio Normandie, Fecamp, France."

"For Christmas I received a Crosley Dual 4 Model 169, and right then and there I became a confirmed DXer," confesses Kenneth W. Cranford, 16 W. Elmwood Place, Minneapolis, Minn. "To date (January 13) I have received 78 stations. Among my best are WODX, WRC, WSB, WQBC, XEAW, SER, WCOC, WABI, KWEA, KFI and KNX. I also have 95 amateurs, 18 police and 10 airport stations all over the country. I am 15 years old and would like to hear from other DXers with my type of radio."

Another reader who got the great thrill that comes with the first other-continent station is Richard J. Southward, 1417 Oakmont St., Toledo, Ohio. "On Monday, Feb. 5, I was up early trying to log some of the stations on the frequency check and at 5:45 a. m. EST on 570 kc. I picked up an R4 to R5 signal very clear on the loud speaker. At 6:01 a. m. very clear and distinct came the big announcement—2YA, Wellington, New Zealand. It was my first T-P on the b. c. band." Richard now has LR5, YV1BC and 2YA in the overseas section of his log.

"My b. c. log now stands at 156 with five Japs and LR5 as best catches," adds up C. E. Hansen, 502 West First, Julesburg, Colo. "The Japs come in good but fade quite frequently. Have not heard any Aussies to date but will keep trying. My s. w. log is at 20 with HC2RL, HJ1ABB and YV3BC as the best. EAQ has faded out here lately but maybe this is due to my changing my aerial from E and W to N and S. Have hooked up a Philco three-purpose antenna and it sure is keen. It eliminates a lot of noise. Am using a Midwest B-16-34 and like it fine."

"How many can get WSB, XER and CKAC when all are on at the same time and with no cross-talk?" wonders Clement Van Velsor, 1033 Sanford Ave., Irvington, N. J. "I can do that on my Scott Deluxe any night unless conditions are very bad. I can also get WBT's carrier in the afternoon with WLWL blazing away, WENR around five p. m. alongside WABC and WWL or KWKH on the other side of our local in the early evening is nothing unusual. This set can out-select any other receiver I have ever heard."

The peculiar quirks in aerials is illustrated by Warren E. Winkley, P. O. Box 12, Hughson, Calif., when he says: "The other day I put another twist of wire around the insulator to take up some slack in my aerial and this increased the reception of northern stations one hundred per cent." Warren has three aerials, 80, 200

and 320 feet in length respectively. Each of them will bring in certain stations better than the others. He needs only two Japs to complete the JOs. One morning in January he heard 27 of them in quick succession.

"I have a fine little 5-tube set of unknown make," prefaces Clifford Van Tassel, 154 Washington Ave., Pleasantville, N. Y. "I started DX in a systematic way early in December, 1933, and my log now stands at 296 stations. I have logged 106 100-watters and nine 50s and WIBG when it was 25 watts. Among my most distant catches of 100 watts are KFXJ, KFYO, WMBH and many others in the south and southwest. It seems I get the greatest distance from the southwest as I am able to tune in KFI any night when WEAJ is off the air."

From H. L. Higgins, Box A-55, Port-au-Prince, Haiti, comes this brief report: "I have an RCA-Victor, Model R-28-P, 5-tube set, with police and amateur short wave band. Just to see what I could do, Saturday evening, Feb. 3, between nine and one o'clock in the morning, I logged around 60 stations on the b. c. band, 14 police and three amateurs that I heard identify. I am no 'fan' in the accepted sense of the word but am interested in getting the most out of my set."

Albert James Cabral, 9 Conant St., Provincetown, Mass., closed his first year of DX on Feb. 15, with a log of 475 stations in the U. S., 32 in Canada, 14 in Mexico, 12 in Cuba, two in Great Britain, three in France, two in Germany, one each in Spain, Italy, Newfoundland, Miquelon Island, Czechoslovakia, Africa, New Zealand, Australia and the West Indies. He also has Columbia, Venezuela and three in Buenos Aires. He uses a Majestic 7-tube superhet, Model 331. That's a pretty hot pace for the first year.

"I have just bought a new RCA-Victor 8-tube all-wave and in the four days I have had it, I have logged LSY, KASA, XIG, CM2AM, HC2RL, KAZ, GSE, HJ1ABB, YVQ, EAQ,

Pontoise, and the 'Seth Parker' station KNRA. Pontoise, London and Zeesen come in in fine shape. EAQ, Madrid, is good for two hours so loud that it can be heard all over the house." This report comes from W. H. Lewis, 1328 Delaware St., Leavenworth, Kans. If these four days are any criterion, Mr. Lewis has some big times ahead of him.

"On Saturday morning, Feb. 17, I heard a station broadcasting on 700 kcs.," states Edmund M. Neel, P. O. Box 365, Duncan, V. I., B. C. "It was received between 12:30 and 1:30 a. m. PST. It could not have been W8XO because the Crosley station was coming in loud that night and this station was very faint, R2 strength. No Japs were audible at all that particular morning. I would be very glad to find out if the Newfoundland, Stockholm or Brazilian stations were broadcasting at that hour on the 17th."

"Last Christmas I bought a little portable radio," comments Carl L. Kennedy, 1034 N. Bever St., Wooster, Ohio. "It is called 'Imperial' and is made by the Belmont Company of Chicago. With an aerial about 25 feet long, sometimes merely thrown out of the window, and sometimes just put around my room as I now have it, I have had splendid reception. Since the first of the year I have logged 263 stations in 44 states, Canada, Mexico, Cuba, and Porto Rico."

"Since November, 1932, I have increased my verifications from 190 to 352," comments J. Drake, 1920 Athol St., Regina, Sask. "I now have verifications from Australia, New Zealand, Japan, Colombia and Venezuela. The other morning I had a real thrill when KFPM came in with good strength. I use a Philco 96, and as this is a t.r.f. set, the selectivity is not as good as it could be. This morning I picked up KWTO, 560, Springfield, Mo. W8XO sure comes in here when testing."

(Continued on page 79)

HOW to TUNE

(Continued from page 38)

to the dial numbers you have entered as described above, you will see instantly that this must be 800 kcs. and you are hearing either WBAP or WFAA which use the same transmitter as indicated by the small "a" in the fourth column.

If RADEX is used in this way, those whose dials are marked from 0 to 100 will enjoy the same convenience as those whose dials are marked in kilocycles, in fact a greater convenience than many as too many dials marked in kilocycles are not accurate and therefore a real puzzle to read.

NEUTRALIZING

(Continued from page 26)

mers for another maximum signal response.

Adjusting Segment Plates

If considerable adjustment is necessary on either the 1,000 or 1,400 kcs., setting, and the condenser does not prove sensitive and selective over the entire range, some further work must be done. Readjustment at one end of the dial may mean poor tuning at the other end. This is a common occurrence noticed by many owners of radio receivers. If each variable condenser in the gang unit is constructed with a slotted end-plate, as explained before, the capacity can be changed for one particular frequency band without disturbing the other bands. An adjustment such as this cannot be made by a trimmer condenser. Some receivers have thumb screws which bend the plates toward or away from the outer stator plate—that is, just some portion of the plate area is bent to change the capacity at that particular portion of the surface. In other types of condensers the split segments must be bent either by the finger or with some insulated tool. Even the old style solid plate variable con-

densers can be adjusted by a careful manipulation of the outer rotor plate with the fingers.

Set the dial to about 1,200 kcs., and adjust the small trimmers for maximum response. Then reset the dial to 600 kcs., *but* now readjust for maximum response by bending the plate segments toward or away from the adjacent stator plate. At this setting the rotor plates will be almost in mesh with the stator plates. The segments of the end plates which come out first when turning the dial are the ones that should be manipulated and adjusted. Then set the dial to 1,000 kilocycles and bend those segments still in mesh. *Do not touch the segments that have already emerged from the stator plates.* A little more readjustment of the trimmers may now be necessary before correct alignment is attained. The plate bending method is used by circuits that have no trimmer condensers shunted across their tuning condensers—the latter now having the split segments in one end plate.

(The alignment of all-wave receivers and sets using a single tube as oscillator and first detector, as well as the alignment of intermediate-frequency stages and tracking adjustments for superheterodyne receivers, will be discussed next month.)

DX CLUB Meeting

(Continued from page 24)

my verification from LR5, Radio Excelsior, Buenos Aires, Arg. They said that they possess the highest twin commercial towers in the world for the suspension of their aerial."

"I have a few new stations to report," comments Earl R. Roberts, 628 South 7th St., Cambridge, Ohio, "the best being Beromunster, Switzerland, and Fecamp, France. Heard Beromunster January 11, just after WSM signed off at 1:00 a. m. with the N.N.R.C. DX tips. Fecamp came in December 30, from 2:15 to 2:52 a. m. EST., with some interference from KGB. P.P. came in really good

January 9, 10 and 11, as they come on the air at 2:10 a. m. The new XEAC, Agua Caliente, B. C., Mexico on about 820 kcs., came in fine several mornings. My total log stands at 1017, all heard on the same old '26 battery set, not counting amateurs."

"At the present time I have just 1000 stamps in my Ekko album," writes Wm. A. Stead, 736 West 181st St., New York, N. Y., "representing verifications of my reports to radio stations on the broadcast channels. Of course, there are a great many stations that do not issue stamps, and when verification letters are received by me, I send them to the Ekko Company, whereon they furnish the stamps. My log stands at 1080 stations, and I have logged every state in the Union, every province of Canada, and also European, Cuban, Mexican, South American and Alaskan stations."

"I do most of my DXing on Sunday mornings," remarks Clarence Wakefield, Wiarton, Ont. "I did get up a few times for the F.R.C. tests. Haven't received any European or T-P.'s, except 2YA, Wellington, N. Z., who verified my report. Have also had CX-26 and LR5, but no veris from them as yet. My radio is a Sparton Model 931, 9-tube, 1929, still going strong. I have had the tubes replaced and the voice coil. Have two aeriels, one east-west and one north-south and the latter is just as good as the former. I have 425 stations, but 30 have been deleted. My ground just now is a car radiator and a rod buried about three feet in the ground, very efficient."

"Poste Parisien is heard well nearly every morning except Sunday on its new frequency of 959 kc. at 2:15 EST," reports Fred Burleigh, 142 Converse Ave., Meriden, Conn. "Since my last letter I have jumped my log to 545 all on the b. c. b. Best catches are 4RK, HJN, HIX, VOAS, CHAB, CJRM, 10BQ, 10BP, CKIC, WKAQ, XEFB, XEFV, and Radio Normandie. All these on a 6-tube, Model 31, Majestic of 1930."

WHAT'S ON THE AIR TONIGHT?

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

COLUMBIA.....(C)	
Call	Dial

NATIONAL, Red (R)	
Call	Dial

NATIONAL, Blue.(B)	
Call	Dial

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

RADEX is the only publication listing stations in alphabetical order for your convenience. While these programs are correct at the time of going to press changes are made from time to time.

MONDAY

E-8:00 p.m., C-5:00, M-4:00, P-3:00

C — Buck Rogers in 25th Century
CKLW WAAB WABC WADC WBT
WCAO WCAU WDRC WEAN WHK
WJSV WKBW WOKO

R — Waldorf Astoria Orchestra
KDYL KFYR KOA KPO KPRC KSD
KSTP KTBS KTHS KVOO WAPI
WBEN WCAE WCSH WDAF WDAY
WEAF WEBC WFAA WFLA WHO
WIBA WIOD WIS WJAR WJAX
WJDX WKY WMAQ WMC WOAI
WOC WRC WRVA WSAI WSB WSM
WSMB WSOB WTAG WWJ WWNC

B — U. S. Army Band
KOIL KSO KWCR KWK KYW WBAL
WBZ WBZA WCKY WENR WHAM
WJZ WMAL WREN WSYR

E-8:15 p.m., C-5:15, M-4:15, P-3:15

C — Bobby Benson; Sunny Jim
WAAB WABC WCAU WDRC WEAN
WFBL WGR WHEC WHK WLBZ
WMAS WOKO WORC

E-8:30 p.m., C-5:30, M-4:30, P-3:30

R — Irene Beasley, Songs
KGO KOA WAPI WBEN WCKY
WEAF WFBR WGY WHO WJDX
WMC WOC WSAI WSB WSM WSMB
WSOC WTAG WWJ

C — Sam Robbins and Orchestra
CKLW KLRB KLZ WAAB WADC
WBIG WBRC WCAO WDAE WDBJ
WDBO WDOD WDRC WDSU WFBL
WFBA WGST WHBC WHP WICC
WJAS WJSV WKBN WKBW WLAC
WLWB WLBZ WMAS WMBG WOKO
WORC WQAM WREC WSFA WSJS
WSPD WTAR WTOC

E-8:45 p.m., C-5:45, M-4:45, P-3:45

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

E-7:00 p.m., C-8:00, M-5:00, P-4:00

C — Myrt and Marge
CKLW KRLD WABC WADC WBT
WCAO WCAU WDAE WDRC WDRC
WEAN WFBL WGR WHK WJAS
WJSV WKRC WNAC WOKO WQAM
WSPD WTOC WWVA

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

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

C — Just Plain Bill
CFRB CKLW WABC WCAO WCAU
WGR WHK WJSV WKRC WNAC

R — Billy Bachelor; Ray Knight
WEAF WGY WJAR WRC WTAG
WTAM WWJ

B — Baby Rose Marie, Songs
KDKA WBAL WBZ WBZA WHAM
WJZ WMAL WSYR

E-7:30 p.m., C-6:30, M-5:30, P-4:30

C — Music in the Air
WABC WCAO WCAU WDRC WEAN
WFBL WFEA WGR WHEC WICC
WJAS WJSV WLBZ WNAC WOKO
WORC

R — Mollo Show
KSD WBEN WCAE WCSH WDAF
WEAF WFBR WGY WHO WJAR
WMAQ WOC WOW WRC WTAG
WTAM

B — George Gershwin; Katzman's Orch.
KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WENR WHAM
WJR WJZ WMAL WREN WSYR
WLW

E-7:45 p.m., C-6:45, M-5:45, P-4:45

C — Boake Carter; Philco
CKLW KMBC KMOX WABC WBBM
WBT WCAO WCAU WCCO WGR
WHAS WHK WJAS WJSV WNAC

R — The Goldbergs
WBEN WCAE WCSH WDAF WEAF
WEEL WENR WFBR WGY WJAR
WLIT WOW WRC WSAI WTAG
WTAM WWJ

E-8:00 p.m., C-7:00, M-6:00, P-5:00

C — Happy Bakers
CKLW WABC WADC WCAH WDRC
WFBN WGN WGR WHEC WHK
WICC WJSV WMAS WMBG WMT
WNAC WORC WSPD WWVA

B — Sealed Power Side Show
KDKA KFYR KOIL KPRC KSO
KSTP KTBS KTHS KVOO KWCR
KWK WBAL WBZ WBZA WDAY
WEBC WFAA WGAR WHAM WIBA
WJDX WJR WJZ WKY WLS WMAL
WMC WOAI WSB WSM WSMB
WSYR WTMTJ

R — Soconyland Sketches
WBEN WCAE WCSH WEAF WEEL
WGY WJAR WSAI WTAG WTAM
WTIC

E-8:15 p.m., C-7:15, M-6:15, P-5:15

C — Edwin C. Hill
CKLW KMBC KMOX WABC WADC
WCAO WCAU WCCO WDRC WEAN
WFBL WFBN WGN WGR WHK
WJAS WJSV WKRC WNAC WOKO
WSPD

E-8:30 p.m., C-7:30, M-6:30, P-5:30

C — Bing Crosby; Mills Brothers
CKLW KDB KERN KFBC KFFY
KPRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KSL KYI KWG
WABC WADC WCAO WCAU WDRC
WEAN WFBL WFBN WGN WGR
WHAS WHK WJAS WJSV WKRC
WNAC WOKO WOWO WSPD

R — Voice of Firestone
CFRC CRCT KFYR KPRC KSD
KTBS KTHS KVOO WBEN WCSH
WDAF WDAY WEAF WEBC WEEL
WFAA WFBR WFLA WGY WHO
WIOD WIS WJAR WJAX WJDX
WKY WLIT WLW WMAQ WMC
WOAI WOC WOW WRC WRVA WSB
WSM WSMB WSOB WTAG WTAM
WTIC WTMJ WWJ WWNC

B — Djer Kiss Recital

KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WCKY WGAR
WJZ WLS WMAL WREN WSYR

E-8:45 p.m., C-7:45, M-6:45, P-5:45

B — Red Davis—Dramatic Sketch
KDKA WBAL WBZ WBZA WHAM
WJR WJZ WLS WSYR

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

C — Philadelphia Symphony Orchestra
CKLW KDB KERN KFBC KFB
KFFY KPRC KGB KHJ KLRB KLZ
KMBC KMJ KMOX KOH KOIN
KOL KOMA KSL KTRH KTSA
KVI KWG WABC WADC WBBM
WBRC WBT WCAH WCAO WCAU
WCCO WDAE WDBJ WDBO WDRC
WDSU WEAN WFBL WFBN WGR
WGST WHAS WHEC WHK WIC
WISN WJAS WJSV WKRC WLZ
WLWB WMBG WMT WNAC WOKO
WOWO WPG WQAM WREC WRR
WSPD WTAR WTOC

R — A. S. P. Gyles
KSD WBEN WCAE WCSH WDAF
WEAF WEEL WGY WHO WJAR
WLIT WMAQ WOC WOW WRC
WSAI WTAG WTAM WTIC WWJ

B — Sinclair Minstrels
KDKA KFYR KOA KOIL KPRC
KSO KSTP KTBS KTHS KVOO
WBRC WKB WBAL WBZ WBZA
WDAY WEBC WFAA WFLA WGAR

MONDAY—(Continued)

WHAM WIBA WIOD WIS WJAX
WJDX WJR WJZ WKY WLS WLW
WMC WOAI WPTF WREN WRVA
WSB WSM WSMB WTMJ WWNC

E-9:15 p.m., C-8:15, M-7:15, P-6:15

C — Fray and Braggiotti
CKLW KFH KLRA KLZ KMBC
KMOX KOIN KOMA KSCJ KTRH
KTSA KVOR WABC WACO WBNS
WBRC WCAO WCCO WDAE WDBJ
WDBO WDOD WDRC WDSU WFBM
WFEA WGST WHAS WHEC WHK
WHP WIBW WICC WISN WJAS
WKBW WKRC WLAC WLBW WLBZ
WMAS WMBD WMBG WMT WNAC
WNAX WODX WOKO WORC WQAM
WREC WSBT WSJS WSPD WTAR
WTOC

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

C — The Big Show
CFRB CKLW KDB KERN KFBK
KFYP KFRK KGB KHJ KLZ KMBC
KMJ KMOX KOIN KOL KRLD
KSL KVI KWG WABC WADC
WBMM WBT WCAH WCAO WCAU
WCCO WDRC WDSU WEAN WFBL
WFBM WHAS WHK WICC WJAS
WJSV WKBW WKRC WLAC WNAC
WOKO WOVO WREC WSPD WTAR

R — Del Monte Ship of Joy

KDYL KOA KPRC KSD KSTP
KTBS KVOO WBNB WCAE WCSH
WEAF WEBC WEEI WFAA WFBR
WFLA WGY WHO WIOD WIS
WJAR WJAX WKBF WKY WLIT
WMAQ WOAI WOC WOW WRVA
WSAI WTAG WTAM WTMJ
WWJ WWNC

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

C — Wayne King and Orchestra
CKLW KALE KDB KERN KFRK
KGB KHJ KLZ KMBC KMOX
KOIN KOL KSL KWG WAAB WABC
WADC WBMM WCAO WCAU WCCO
WDRC WEAN WFBL WFBM WGR
WHAS WHK WJAS WJSV WKRC
WOKO WOVO WSPD

R — Contented Program

CFOP CRCT KDYL KFI KFYP
KGO KGW KHQ KOA KOMO KPRC
KSTP WCSH WDAE WEBC WEEI
WFBR WJAR WLIT WMC WOAI
WRC WSP WSM WTAG

E-10:30 p.m., C-9:30, M-8:30, P-7:30

B — Henri Deering, Concert Pianist

KFYP KOIL KPRC KSO KSTP
KTBS KVOO KWCR WBAL WBZ
WBZA WCKY WEBC WFAA WHAM
WIBA WJDX WJZ WKY WMAL
WOAI WREN WSB WSM WSMB
WSYR

R — National Radio Forum

CRCT KSD WAPI WBNB WCAE
WCSH WDAE WEAF WEEI WFBR
WGY WHO WJAR WJDX WLIT
WLW WMAQ WMC WOC WOW
WRC WSB WSMB WTAG WTAM
WTIC WWJ

C — Mark Warnow; Connie Gates

CKLW KLRA KMOX KOMA KSCJ
KTRH KTSA KVOR WAAB WABC
WACO WADC WBIG WBNS WBRC
WCAO WDAE WDBJ WDBO WDOD
WDRC WDSU WEAN WFEA WGR
WGST WHEC WHP WIP WISN

WJAS WJSV WKBN WKRC WLAC
WLBW WLBZ WMAS WMBD WMBG
WMT WNAX WODX WORC WOWO
WPG WQAM WREC WSBT WSJS
WSPD WTOC

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

C — Myrt and Margie
KDB KERN KFBK KFYP KFRK
KGB KHJ KLRA KLZ KMBC KMJ
KMOX KOIN KOL KOMA KSL
KVI KWG WBBM WBRC WCCO
WDSU WFBM WGST WHAS WLAC
WODX WREC

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

B — Amos 'n' Andy
KDYL KFI KGO KGW KHQ KOA
KOIL KOMO KPRC KSTP KTBS
KWK WBAF WDAF WENR WKY
WMAQ WMC WOAI WREN WSB
WSM WSMB WTMJ

C — Freddie Rich and Orchestra

CKAK CKLW KFAB KFH KLRA
KLZ KMBC KSCJ KTRH KTSA
KVOR WAAB WABC WACO WADC
WBRC WBT WCAH WCAO WCCO
WDAE WDBJ WDBO WDOD WDRC
WDSU WEAN WFBM WFEA WGST
WHEC WIBW WICC WIP WISN
WJAS WJSV WKBN WKBW WLAC
WLBW WLBZ WMAS WMBD WMBG
WMT WOKO WORC WQAM WREC
WSBT WSJS WSPD WTAR

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

C — News Service

CFRB CKAK CKLW KFAB KFH
KLRA KLZ KOMA KSCJ KTRH
KTSA KVOR WAAB WABC WACO
WADC WBMM WBNS WBRC WCAO
WDAE WDBJ WDOD WDRC WDSU
WFBL WGST WHEC WHP WIBW
WIP WISN WJSV WKBN WKBW
WKRC WLAC WLBW WLBZ WMAS
WMBD WMBG WMT WNAX WODX
WOKO WORC WPG WREC WSJS
WSPD WTAR WTOC

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

R — Voice of Firestone

KDYL KFI KFSD KGHF KGIR KGO
KGU KGW KHQ KOA KOMO KTAR

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

B — Sealed Power Side Show

KDYL KFI KGHF KGIR KGO KGW
KHQ KOA KOMO KTAR

C — Leon Belasco and Orchestra

CKAK CKLW KLRA KLZ KMBC
KMOX KOMA KSL KTRH KTSA
WABC WBRC WCAU WDOD WEAN
WFBL WFBM WGST WHAS WHP
WIBW WICC WJAS WJSV WKBW
WKRC WLAC WLBW WMAS WNAC
WOKO WQAM WRE C WSJS WSPD
WTOC

TUESDAY

E-8:00 p.m., C-5:00, M-4:00, P-3:00

C — Buck Rogers, See Monday

R — Waldorf Astoria, See Monday

E-8:15 p.m., C-5:15, M-4:15, P-3:15

C — Bobby Benson, See Monday

E-8:30 p.m., C-5:30, M-4:30, P-3:30

R — Mid-Week Hymn Sing

KDYL KFYP KGIR KPO KPRC
KTBS KTBS KVOO WDAY WEAF
WFAA WFI WGY WHO WIBA WIS
WJAX WJDX WMAQ WOI WOC
WRC WSAI WTAG WWNC

C — Mary Eastman; Evan Evans
CKLW KLRA WAAB WABC WADC
WBT WCAO WCAU WDAE WDBJ
WDBO WDRC WDSU WFEA WGST
WHEC WICC WJAS WJSV WKBN
WLBW WLBZ WMAS WMBG WOKO
WORC WQAM WREC WSJS WSPD
WTAR

E-8:45 p.m., C-5:45, M-4:45, P-3:45

C — Little Italy

WAAB WABC WCAO WCAU WDRC
WEAN WHEC WHIP WKBW WOKO

R — Cherio Musical Mosaics

KDYL KOA KPO KSD WKY
WEAF WEEI WFBM WFLA WGY
WHO WIOD WIS WJAR WJAX
WJDX WMAQ WOC WOW WRVA
WSAI WSM WSOC WTAG WWJ
WWNC

B — Lowell Thomas, See Monday

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

C — Myrt and Margie, See Monday

B — Amos 'n' Andy, See Monday

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

C — Just Plain Bill, See Monday

R — Billy Bachelor, See Monday

B — You and Your Government

KDKA KECA KEK KFSD KFYP
KGA KGHF KGIR KJR KOA KOIL
KPCR KTAR KTBS KTBS KVOO
KWCR KWK KYA WAPI WBZ WBZA
WKY WFLA WHAM WIBA WIS
WJDX WJZ WMAL WOAI WPTF
WREN WSMB WWNC

E-7:30 p.m., C-6:30, M-5:30, P-4:30

C — Silver Dust Serenaders

WABC WCAU WDRC WFBL WGR
WHEC WJAS WMAS WOKO WORC
WWVA

R — Green Brothers; Arlene Jackson

KSD WCSH WEAF WJAR WMAQ

E-7:45 p.m., C-6:45, M-5:45, P-4:45

C — Boake Cartier, See Monday

R — Goldberg, See Monday

B — Grace and Eddie Albert

KDKA KFYP KOIL KPRC KSTP
KTBS KWCR KWK WBAF WBZ
WBZA WENR WFLA WGAR WHAM
WIBA WIS WJZ WKY WMAL WRVA
WSYR WWNC

E — 8:00 p.m., C-7:00, M-6:00, P-5:00

C — Little Jack Little

CKLW KFI KLRA KMBC KMOX
KOM A KTAT KTUL WABC WADC
WBMM WCAH WCCO WDRC WFBM
WGR WHAS WHK WICC WISN
WJSV WMAS WMBG WMT WNAC
WREC WRN WSPD WWVA

R — Leo Reisman's Orchestra

KDYL KFI KGO KGW KHQ KOA
KOMO KSD WBNB WCAE WCSH
WEAF WEEI WFBM WFI WGY WHO
WJAR WKBW WLS WMAQ WOC
WOW WRC WSAI WSB WSM WSMB
WTAG WTAM WTMJ WWJ

B — Eno Crime Clues

KDKA KWK WBAL WBZ WBZA
WGAR WHEAM WJR WJZ WLW
WMAL WMAQ WREN

E-8:30 p.m., C-7:30, M-6:30, P-5:30

C — Voice of Experience

CKLW KMBC KMOX WABC WBMM
WBT WCAO WCAU WDRC WEAN
WGR WHAS WHK WJAS WJSV
WKRC WNAC

TUESDAY—(Continued)

R — Wayne King and Orchestra
 KPRC KSD KSTP WBNB WCAE
 WCBH WDAF WFAF WVEE WFAA
 WFI WGY WHO WJAR WKBF
 WKY WMAQ WMC WOAI WOC
 WOV WRC WSAI WSB WSM WSBM
 WTAG WTAM WTMJ WWJ
B — Horlick's Adventures in Health
 CRCT KDKA KOIL KSO KWK
 WBAL WBZ WBZA WGAR WHAM
 WJR WJZ WLS WLW WREN

E-8:45 p.m., C-7:45, M-8:45, P-5:45
B — Bavarian Peasant Band
 KDKA KOIL KSO KWCR KWK
 WBAL WBZ WBZA WGAR WHAM
 WJR WJZ WLS WLW WMAL WREN
 WSYR

C — Raymond Paige and Orchestra
 KDB KFH KLRA KLZ KMOX KOIN
 KOMA KSCJ KSL KTRH KTSB
 KVOR WABC WACO WADC WBNS
 WCAO WCAU WCCO WDAE WDBJ
 WDOD WDOD WDRS WDSU WEAN
 WFBL WFBM WFEA WGR WGST
 WHAS WHEC WHP WIBW WICC
 WISN WJAS WJSV WKBN WLAC
 WLWB WLWZ WMAS WMBG WMT
 WNAX WODX WOKO WORC WPG
 WQAM WREC WRSB WSJS WSPD
 WTAR WTOC

E-9:00 p.m., C-8:00, M-7:00, P-8:30
R — Ben Bernie and Orchestra
 KFYR KOA KPRC KSD KSTP
 WBAP WBNB WCAE WCBH WDAY
 WFAF WVEE WFBF WFI WGY
 WHO WJAR WKY WLW WMAQ
 WMC WOAI WOC WOV WRC
 WRVA WSB WSM WSBM WTAG
 WTAM WTMJ WWJ

B — Household Musical Memories
 KDKA KSO KWK WBAL WBZ WBZA
 WHAM WJR WJZ WKBF WLS
 WREN WSYR
C — Phila. Symphony, See Monday

E-9:15 p.m., C-8:15, M-7:15, P-8:15
C — Ruth Etting; Johnny Green
 CKLW KDB KERN KFBK KFH
 KFPY KPRC KGB KHJ KLRA KLZ
 KMBC KMJ KMOX KOIN KOL
 KOMA KSCJ KSL KTRH KTSB KVI
 KWG WABC WADC WBBM WBRC
 WBT WCAH WCAU WCAU WCCO
 WDAE WDRS WDSU WEAN WFBL
 WFBM WGST WHAS WHEC WHK
 WIBW WICC WISN WJAS WJSV
 WKBW WKRC WLAC WMBD WMT
 WNAC WOKO WOV WQAM WREC
 WRR WSPD WTAR WTOC

E-9:30 p.m. C-8:30, M-7:30, P-8:30
R — Texaco Fire Chief Program
 KDYL KFI KFSD KFYR KGHL
 KGIR KGO KGW KHQ KOA KOMO
 KPRC KSD KSTP KTRH KTBS
 KVOO WBAP WBNB WCAE WCBH
 WDAF WDAY WFAF WVEE WVEE
 WFBF WFI WFLA WGY WHO WIEA
 WIOD WIS WJAR WJAX WJDX
 WKY WLW WMAQ WMC WOAI
 WOC WOV WPTF WRC WRVA
 WSB WSM WSBM WTAG WTAM
 WTMJ WWJ WWNC

B — Eddie Duchin and Orchestra
 KDKA KOIL KSO KWCR KWK
 WBAL WBZ WBZA WCKY WENR
 WGAR WHAM WJR WJZ WMAL
 WREN WSYR
C — Minneapolis Symphony Orchestra
 CKLW KDB KERN KFBK KFPY

E-9:30 p.m. C-8:30, M-7:30, P-8:30
R — Texaco Fire Chief Program
 KDYL KFI KFSD KFYR KGHL
 KGIR KGO KGW KHQ KOA KOMO
 KPRC KSD KSTP KTRH KTBS
 KVOO WBAP WBNB WCAE WCBH
 WDAF WDAY WFAF WVEE WVEE
 WFBF WFI WFLA WGY WHO WIEA
 WIOD WIS WJAR WJAX WJDX
 WKY WLW WMAQ WMC WOAI
 WOC WOV WPTF WRC WRVA
 WSB WSM WSBM WTAG WTAM
 WTMJ WWJ WWNC

B — Eddie Duchin and Orchestra
 KDKA KOIL KSO KWCR KWK
 WBAL WBZ WBZA WCKY WENR
 WGAR WHAM WJR WJZ WMAL
 WREN WSYR
C — Minneapolis Symphony Orchestra
 CKLW KDB KERN KFBK KFPY

KPRC KGB KHJ KLZ KMBC KMJ
 KMOX KOIN KOL KOMA KRLL
 KSL KVI KWG WABC WADC WBBM
 WBRC WBT WCAO WCAU WCCO
 WDRS WDSU WEAN WFBL WFBM
 WHAS WHK WJAS WJSV WKBW
 WKRC WMBG WMT WNAC WNAX
 WOKO WOV WSPD

E-10:00 p.m., C-9:00, M-8:00, P-7:00

C — Camel; Glen Gray's Orchestra
 CKLW KDB KERN KFBK KFH
 KFPY KPRC KGB KHJ KLRA KLZ
 KMBC KMJ KMOX KOIN KOL
 KOMA KRLL KSCJ KSL KTRH
 KTSB KVI KWG WAAB WABC
 WACO WADC WBBM WBIG WBRC
 WBT WCAH WCAO WCAU WCCO
 WDAE WDBJ WDBO WDOD WDRS
 WDSU WFBL WFBM WFEA WGST
 WHAS WHEC WHK WHP WIBW
 WICC WJAS WJSV WKBH WKBN
 WKBW WJRC WLAC WLWZ WMAS
 WMBD WMBG WMT WNAX WODX
 WOKO WORC WOV WPG WQAM
 WREC WRSB WSPD WTAR WTOC

R — Cruise of Seth Parker
 KDYL KFI KFSD KFYR KGHL
 KGIR KGO KGW KHQ KOA KOMO
 KPRC KSD KSTP KTRH KTBS
 WAPI WBAP WBNB WCBH WDAF
 WDAY WFAF WFAF WVEE WFBF
 WFI WFLA WGY WHO WIEA WIOD
 WIS WJAR WJAX WJDX WKY
 WLW WMAQ WMC WOAI WOC
 WOV WRC WRVA WSB WSM
 WSBM WTAG WTAM WWJ WWNC
B — Ray Perkins; Harold Stokes
 KDKA KOIL KSO KWCR WBAL
 WBZ WBZA WCKY WENR WGAR
 WHAM WJR WJZ WMAL WREN
 WSYR

E-10:30 p.m., C-9:30, M-8:30, P-7:30

C — Harlem Serenade
 CKLW KFH KLRA KOMA KRLL
 KSCJ KTRH KTSB KVOR WAAB
 WABC WACO WADC WBIG WBRC
 WBNS WCAO WDAE WDBJ WDOD
 WDOD WDRS WDSU WEAN WFEA
 WGR WGST WHEC WIP WISN
 WJAS WJSV WKBH WKRC WLWB
 WLWB WMAS WMBD WMBG WMT
 WNAX WODX WORC WOV WPG
 WQAM WREC WRSB WSPD WTOC
R — Madame Sylvia—Beauty Talk
 KDYL KFI KGO KGW KHQ KOA
 KOMO KSD KSTP WBNB WFAF
 WERC WVEE WGY WHO WIEA
 WMAQ WOC WRC WTAG WWJ

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

C — Myrt and Marge, See Monday

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

B — Amos 'n' Andy, See Monday
C — Charles Carille, Tenor
 CFRB CKAC CKLW KFAB KFH
 KLRA KLZ KMBC KMOX KSCJ
 KTRH KTSB KVOR WAAB WABC
 WACO WADC WBT WC-HA WCAO
 WCCO WDAE WDBJ WDBO WDRS
 WDSU WEAN WFBL WFBM WGST
 WHAS WHEC WHK WIBW WIP
 WISN WJAS WJSV WKBH WKBW
 WLAC WLWB WLWZ WMAS WMBD
 WMBG WMT WOKO WORC WPG
 WQAM WREC WSBT WSJS WSPD
 WTAR WWVA

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

C — News Service! See Monday

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

C — Ozzie Nelson and Orchestra
 CFRB CKLW KFH KLRA KTSB
 KMBC KOMA KSL KTRH KTSB
 WABC WADC WBRC WCAO WDBJ
 WDRS WDSU WEAN WFBL WFBM
 WGST WHK WHP WIBW WISN
 WJSV WKBW WLAC WLWB WMBD
 WMBG WMT WNAC WOKO WORC
 WQAM WREC WSBT WSJS WTAR
 WTOC WWVA

B — Richard Himber and Orchestra
 CFDF KDYL KFYR KOIL KPO KSO
 KSTP KWGR KWK WAPI WBAI
 WBZ WBZA WCKY WDAY WVEE
 WENR WFLA WHAM WIEA WIOD
 WIS WJDX WJZ WMAL WMC
 WREN WRVA WSB WSM WSBM
 WSYR WWNC

E-11:45 p.m., C-10:45, M-9:45, P-8:45

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

WEDNESDAY

E-8:00 p.m., C-5:00, M-4:00, P-3:00

C — Buck Rogers, See Monday

R — Waldor / Astoria, See Monday

B — Westminster Choir
 KOIL KSO KWCR KWK WBAL
 WCKY WGAR WHAM WJZ WMAL
 WREN WSYR

E-8:15 p.m., C-5:15, M-4:15, P-3:15

C — Bobby Benson, See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30

R — International News Service
 KFSD KGA KGHL KGIR KJF KOA
 KPO KPRC KSD KTBS WAPI WBNB
 WDAF WDAY WFAF WFBF WGY
 WIEA WIS WJAX WJDX WOL
 WRC WWNC

B — Irene Beasley, Contralto
 KGO KOA KPRC KSO KTBS KVOO
 KWCR WBAL WBAP WCKY WENR
 WGAR WJZ WOA I WREN

C — Enoch Light and Orchestra
 CKLW KLRA WABC WADC WBIG
 WBRC WCAO WDAE WDBJ WDOD
 WDOD WDRS WDSU WFEA WGST
 WHEC WHP WICC WJAS WJSV
 WKBH WLWB WLWZ WMAS WMBG
 WOKO WORC WQAM WREC WSFA
 WSJS WSPD WTAR WTOC

E-8:45 p.m., C-5:45, M-4:45, P-3:45

B — Lowell Thomas, See Monday

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

C — Myrt and Marge, See Monday

B — Amos 'n' Andy, See Monday

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

C — Just Plain Bill, See Monday

R — Billy Bachelor, See Monday

B — John Herrick, Bartitone
 KDKA KOIL KSO KWCR KWK
 WBAL WBZ WBZA WCKY WENR
 WHAM WJZ WMAL WSYR

E-7:30 p.m., C-5:30, M-5:30, P-4:30

C — Music in Air, See Monday

R — Mollo Show, See Monday

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

WEDNESDAY—(Cont'd)

B — Irene Rich in Hollywood
KDKA WBAL WBZ WBZA WKCY
WENR WJZ WMAL WMC WSB WSM
WSMB WSYR

E-8:00 p.m., C-7:00, M-6:00, P-5:00
R — Jack Pearl, Baron Munchausen
CFCF KDYL KFI KFYYR KGO KGW
KHQ KOA KOMO KSD KTAR KTBS
KV00 WDAF WBEN WCAE WKCY
WCSH WDAF WDAY WFAE WEBC
WEEI WFBR WGY WHO WIBA
WJAR WJXZ WLIT WMAQ WMC
WMAQ WMC WOI WOV WRC WSAI
WSMB WTAG WTAM WTIC WTMJ
WVJ WVNC

C — Happy Bakers, See Monday
B — Eno Crimo, See Tuesday

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

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — Albert Spalding, Conrad Thibault
CFRB CKAC CKLW KDB KERN
KFBB KFPY KFRC KGB KHJ
KLRA KLZ KMBC KMJ KMOX
KOLN KOL KOMA KSL KTAT
KTRH KTSa KVI KWG WABC
WBRC WCAO WCAU WCCO WDOD
WDRG WDSU WEAN WFBL WFBM
WGN WGR WGST WHAS WHK
WJAS WJW WKRC WLAC WMT
WNAC WOKO WORC WOWO WREC
WRR

B — Dangerous Paradise, Drama
CFCF KDKA KOIL KSO KWCR
KWK WBAL WBZ WBZA WGAR
WHAM WJR WJZ WLS WMAL
WREN WSYR

R — Wayne King and Orchestra
KSD WBEN WCAE WCSH WFAE
WFBR WGY WJAR WKBF WLIT
WMAQ WOW WRC WSAI WTAG
WTAM WVJ

E-8:45 p.m., C-7:45, M-6:45, P-5:45
B — Red Davis, See Monday

E-9:00 p.m., C-8:00, M-7:00, P-6:00
R — Ipana Troubadours
KDYL KFI KGO KGW KHQ KOA
KOMO KPRC KSD KSTP KTBS
KTBS KV00 WAPI WBAP WBEN
WCAE WCSH WDAF WFAE WFAA
WFBR WGY WHO WIOD WIS
WJAR WJAX WJZ WLIT WMAQ
WMC WCAI WOC WOW WRC
WRVA WSAI WSB WSM WSMB
WTAG WTAM WTMJ WVJ

C — Philadelphia Symphony, See Mon.
B — Ray Knight and Cuckoos
KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WKCY WGAR
WHAM WJR WJZ WKBF WLS
WMAL WREN WSYR

E-9:15 p.m., C-8:15, M-7:15, P-6:15
C — Alexander Woolcott
CKLW KFH KLRA KLZ KMBC
KMOX KOMA KSCJ KSL KTRH
KTSa KVOA WABC WACO WADC
WBRC WBT WCAH WCAO WCCO
WDAE WDBJ WDBO WDRG WDSU
WEAN WFBM WFEA WGST WHAS
WHBC WISN WJAS WJW WKBW
WLAC WLWB WLWZ WMAS WMBD
WMBG WMT WOKO WORC WQAM
WREC WSBT WSJS WSPD WTAR

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — Guy Lombardo—Burns and Allen
CKLW KDB KERN KFBB KFPY
KFRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KOMA KRLL
KSL KTRH KTSa KVI KWG WABC
WADC WBT WCAO WCAU WCCO
WDRG WEAN WFBL WFBM WGN
WJAS WJW WJW WKBW WKRC
WNAC WOKO WORC WOWO WSPD

R — Fred Allen's Revue
KPRC KSD KSTP KTBS KV00
WBEN WCAE WCSH WDAF WFAE
WIBC WEEI WFBR WGY WIOD
WIS WJAR WJAX WKY WLIT WLW
WMAQ WMC WOI WOV WRC
WRVA WSB WSMB WTAG WTAM
WTMJ WVJ

B — John Charles Thomas
KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KSO KWCR KWK
WBAL WBZ WBZA WKCY WENR
WGAR WHAM WJR WJZ WKBF
WMAL WREN WSYR

E-10:00 p.m., C-9:00, M-8:00, P-7:00
C — Old Gold—Ted Fiorito and Orch.
CKLW KDB KERN KFBB KF0R
KFPY KFRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOH KOIN
KOL KOMA KRLL KSCJ KSL
KTRH KTSa KVI KVOA KWG
WABC WACO WADC WBIW WBRC
WBT WCAH WCAO WCAU WCCO
WDAE WDBJ WDBO WDOD WDRG
WDSU WEAN WFBL WFBM WFEA
WGN WGST WHAS WHBC WHK
WHP WIBW WICC WISN WJAS
WJW WKBB WKBW WKRC WLAC
WLWB WLWZ WMAS WMBD WMBG
WMT WNAC WNAK WOKO WORC
WOWO WPG WQAM WREC WSPD
WTAR WTOG

R — Corn Cob Pipe Club
KDYL KFI KFYYR KGHL KGIR
KGO KGW KHQ KOA KOMO KSD
KSTP WBEN WCAE WCSH WDAF
WDAY WFAE WEBC WEEI WENR
WFBR WGY WHO WIBA WJAR
WLIT WLW WOC WOW WRC
WRVA WTAG WTAM WTIC WTMJ
WVJ

B — Vincent Lopez and Orchestra
KDKA KOIL KPRC KSO KTBS
KWCR KWK WAPI WAVE WBAL
WBZ WBZA WKCY WFAA WFLA
WGAR WHAM WIOD WIS WJAX
WJDX WJZ WKBF WKY WMAL
WMAQ WMC WOI WPTF WREN
WSB WSM WSMB WSOC WSYR
WVNC

E-10:30 p.m., C-9:30, M-8:30, P-7:30
B — Conoco Tourist Adventures
KDKA KDYL KFYYR KOA KOIL
KPRC KSO KWCR KWK WBAL
WKCY WDAY WEBC WENR WFAA
WGAR WHAM WIBA WJR WJZ
WKY WMAL WREN WRVA WSYR
WTMJ

C — Andre Kostelanetz Presents
CKLW KLRA KMBC KOMA KSCJ
KTRH KTSa KVOA WABC WABC
WACO WADC WBIW WBNB WBRC
WCAO WDAE WDBJ WDBO WDOD
WDRG WDSU WEP WFEA WGR
WGST WHBC WHP WIP WISN
WJAS WJW WKRC WLAC WLWB
WLWZ WMAS WMBD WMBG WMT
WNAK WODX WORC WOWO WPG
WQAM WREC WSBT WSJS WSPD
WTOG

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

E-11:00 p.m., C-10:00, M-9:00, P-8:00
B — Amos 'n' Andy, See Monday
C — Five Spirits of Rhythm
CFRB CKAC CKLW KFAB KFH
KLRA KLZ KMBC KMOX KSCJ
KTRH KTSa KVOA WAAB WABC
WACO WADC WBRC WBT WCAO
WCCO WDAE WDBJ WDBO WDRG
WDSU WEAN WFBL WGST WHAS
WHBC WIP WISN WJAS WJW
WKBW WLAC WLWB WLWZ WMAS
WMBD WMBG WMT WOKO WORC
WPG WQAM WREC WSBT WSJS
WSPD WTAR

E-11:15 p.m., C-10:15, M-9:15, P-8:15
B — Ray Knight and Cuckoos
CFCF KDYL KFI KFSD KGHL KGO
KGW KHQ KOA KOMO KPRC WAPI
WBAP WFLA WKY WMC WOI
WRVA WSB WSMB WSOC
C — News Service, See Monday

E-11:30 p.m., C-10:30, M-9:30, P-8:30
C — Little Jack Little
KLRA WABC WBRC WBT WCAO
WDAE WDBJ WDBO WDRG WDSU
WEAN WGST WICC WIP WJW
WLAC WLWZ WMAS WMBG WNAC
WORC WPG WQAM WREC WSJS
WTAR

E-12:30 a.m., C-11:30, M-10:30, P-9:30
R — Fred Allen's Revue
KDYL KFI KGO KGW KHQ KOA
KOMO

THURSDAY

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

R — Waldorf Astoria, See Monday
B — Richard Himber and Orchestra
KOIL KSO KWCR WBAL WBZ WBZA
WKCY WENR WHAM WJR WJZ
WMAL WREN WSYR

E-8:15 p.m., C-5:15, M-4:15, P-3:15
C — Bobby Benson, See Monday

E-8:30 p.m., C-5:30, M-4:30, P-3:30
R — John B. Kennedy
KDYL KFYYR KOA KPO KPRC KSD
KTBS KTBS KV00 WAPI WDAY
WFAE WFBR WFI WGY WHO WIBA
WIS WJAX WJDX WMAQ WMC
WOR WRC WSAI WSB WSMB WTAG
WVJ WVNC

C — Tito Guizar, Tenor
CKAC CKLW KLRA WAAB WABC
WADC WBRC WBT WCAO WCAU
WDAE WDBO WDOD WDSU WFEA
WGR WGST WHBC WICC WJAS
WJW WKBW WLAC WLWB WLWZ
WMAS WMBG WOKO WORC WQAM
WREC WSJS WSPD WTAR

E-8:45 p.m., C-5:45, M-4:45, P-3:45
R — Grandmother's Trunk
KDYL KOA KPO KSD WFAE WFBR
WFI WGY WHO WIS WJAX WMAQ
WOC WRC WSAI WTAG WVJ
WVNC

B — Lowell Thomas, See Monday
C — Little Italy, See Tuesday

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

THURSDAY—(Cont'd)

E-7:15 p.m., C-6:15, M-5:15, P-4:15
R — **Just Plain Bill**, See Monday
R — **Billy Bachelor**, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30
B — **Romantic Melodies; Don Ameche**
KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KSO KWCR KWK
WBZ WBZA WCKY WENR WJZ
WMAL WREN WSYR
R — **Molle Show**, See Monday
C — **Silver Duet**, See Tuesday

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

E-8:00 p.m., C-7:00, M-6:00, P-5:00
R — **Rudy Vallee and Orchestra**
CFCC CRCT KDYL KFI KFYR KGO
KGW KHQ KOA KOMO KPCC KSD
KSTP KTRR KTHS WAPI WBAP

WBEN WCAE WCSH WDAF WDAY
WBAF WBEW WEEL WFRB WFI
WFLL WGY WHO WIOD WJAR
WJAX WJDX WKY WLW WMAQ
WMC WQI WOC WOV WPTF WRC
WRVA WSB WSM WSMB WTAG
WTAM WTMJ WWJ
C — **Freddie Rich Entertains**
CFRC CKLW KFH KLRA KMOX
KGIN KSCJ KSL KTRH KVOR
WABC WACO WADC WBIG WBNS
WBRC WCAO WCCO WDAE WDBJ
WDOD WDOD WDRC WDSU WEAN
WFAN WFEA WGR WHEC WIBW
WICG WIP WISN WIAS WJSV
WKBN WKRC WLAC WLWB WLWB
WMAS WMBG WMT WNAC WOKO
WORC WPG WQAM WREC WSBT
WSFA WSJS WSPD WTAR WTOG

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — **Voice of America**
CKLW KMBC KMOX WABC WADC
WBMM WCAO WCAU WDRC WEAN
WFBL WGR WHAS WHK WIAS
WJSV WKRC WNAC WOKO WOWO
WSPD
B — **Hortlick's**, See Tuesday

E-8:00 p.m., C-8:00, M-7:00, P-6:00
R — **Maxwell House Showboat**
KDYL KFI KFSD KGO KGW KHQ
KOA KOMO KPCC KSD KSTP KTRR
KTBS WAPI WBAF WBEW WCAE
WCKY WCSH WDAF WEA WEEI
WFRB WFI WFLL WGY WHO WIOD
WIS WJAR WJAX WJDX WKY
WMAQ WMC WQI WOC WOV
WRC WRVA WSAI WSB WSM WSMB
WTAG WTAM WTMJ WWJ WWNC
B — **Death Valley Days—Drama**
KDKA KOIL KSO KWCR KWK
WBAL WBZ WBA WGR WHAM
WJR WJZ WLS WLW WMAL WREN
WSYR
C — **Philadelphia Symphony**, See Mon.

E-9:15 p.m., C-8:15, M-7:15, P-6:15
C — **Emery Deutsch and Orchestra**
CKLW KLRA KMOX KOMA KSCJ
KTRH KTSR KVOR WAAB WABC
WACO WADC WBVB WBNS WBRC
WCAO WDAE WDBJ WDOD WDOD
WDRC WDSU WEAN WFEA WGR
WGST WHEC WHP WISN WJAS
WJSV WKBK WKRC WLAC WLWB
WLWB WMAS WMBD WMBG WMT
WNAX WODX WORC WPG WQAM
WREC WSJS WSPD WTOG

E-9:30 p.m., C-8:30, M-7:30, P-6:30
C — **Fred Waring's Orchestra**
CKLW KDB KFBK KFH KFRC
KGB KHJ KLRA KLZ KMBC KMOX
KGR KOIN KOMA KRLD KSCJ
KSL KTLU KVI KVOR WABC WACO
WADC WBMM WBIG WBRC WBT
WCAH WCAO WCAU WCCO WDAE
WDBJ WDOD WDOD WDRC WDSU
WDEAN WFBL WFBM WFEA WFLA
WGST WHAS WHEC WHK WHP
WIBW WICC WJAS WJSV WKBK
WKBW WKRC WLAC WLWB WLWB
WMAS WMBD WMBG WMBR WMT
WNAC WNAX WODX WOKO WORC
WOWO WPG WQAM WREC WSJS
WSPD WTAR WTOG
B — **Eddie Duchin**, See Monday

E-10:00 p.m., C-8:00, M-8:00, P-7:00
R — **Paul Whiteman and Orchestra**
KDYL KFI KFYR KGO KGW KHQ
KOA KOMO KPCC KSD KSTP KTBS
KTHS KVVO WBAF WBEW WCAE
WCSH WDAF WDAY WEA WECB
WEEI WFRB WFLA WGY WHO
WIBA WIOD WIS WJAR WJAX
WJDX WKY WLW WMAQ WMC
WOAI WOC WOV WRC WRVA WSB
WSM WSMB WTAG WTAM WTMJ
WWJ WWNC

B — **Hands Across the Border**
CFAC CFBO CFCC CFCH CFCC
CFCC CFCC CFCC CFCC CFCC
CFCC CHAB CHGS CHNS CHRC
CHWC CHWK CJCA CJCB CJCJ
CJGX CJOC CJRM CJRW CKCH
CKCK CKNC CKOC CKOV CKPC
CKPR CKUA CKX CKY CRCC CRCS
CRCT CRVC CFCC KDKA KOIL KSO
KWCR WBAL WBZ WBZA WCKY
WGR WHAM WJR WJZ WMAQ
WREN WSYR
C — **Camel Program**, See Tuesday

E-10:30 p.m., C-9:30, M-8:30, P-7:30
C — **Evan Evans, Baritone**
CKLW KLRA KMOX KOMA KSCJ
KTRH KTSR KVOR WAAB WABC
WACO WADC WBVB WBNS WBRC
WCAO WDAE WDBJ WDOD WDOD
WDRC WDSU WEAN WFEA WGR
WGST WHEC WHP WISN WJAS
WJSV WKBK WKRC WLAC WLWB
WLWB WMAS WMBD WMBG WMT
WNAX WODX WORC WPG WQAM
WREC WSJS WSPD WTOG
B — **Archer Gibson, Organist**
KDKA KSO KWCR KYW WBAL WBZ
WBZA WCKY WGR WHAM WJZ
WMAL WREN

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

E-11:00 p.m., C-10:00, M-9:00, P-8:00
B — **Amos 'n' Andy**, See Monday
R — **Viola Philo, Soprano**
WCAE WCSH WEA WFI WFLA
WGY WIOD WIS WOW WRVA
WTAM WWNC

C — **Vera Van, Contralto**
CFRB CKAC CKLW KDB KFAB
KFH KLRA KLZ KMBC KOMA
KTRH KTSR KVOR WAAB WABC
WACO WADC WBMM WBNS WCAO
WCCO WDAE WDBJ WDOD WDOD
WDRC WDSU WEAN WFBL WFBM
WFEA WGST WHAS WHEC WHK
WHP WIBW WICC WIP WISN WJAS
WJSV WKBK WKBW WLAC WLWB
WLWB WMAS WMBD WMT WNAX
WODX WOKO WORC WQAM WREC
WSBT WSJS WSPD WTAR WTOG
WWWVA

E-11:15 p.m., C-10:15, M-9:15, P-8:15
C — **News Service**, See Monday

FRIDAY

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C — **H. V. Kaltenborn**
CFRB CKLW KLRA WAAB WABC
WADC WBIG WBT WCAO WCAU
WDAE WDBJ WDOD WDRC WDSU
WFEA WGST WHEC WHK WICC
WJSV WLAC WLWB WLWB WMBG
WOKO WORC WQAM WREC WSFA
WSJS WSPD WTOG
R — **Waldorf Astoria**, See Monday

E-8:15 p.m., C-5:15, M-4:15, P-3:15
C — **Bobby Benson**, See Monday

E-6:30 p.m., C-5:30, M-4:30, P-3:30
R — **Irene Beasley**, See Monday
R — **Edith Murray, Songs**
CKAC CKLW KLRA WAAB WABC
WADC WBRC WBT WCAO WCAU
WDBJ WDOD WDOD WDRC WDSU
WFEA WGST WHEC WHK WJAS
WKBK WLAC WLWB WLWB WMAS
WMBG WOKO WORC WQAM WREC
WSJS WSPD WTAR

E-6:45 p.m., C-5:45, M-4:45, P-3:45
C — **Zoel Parenteau's Orchestra**
CKLW WAAB WABC WBT WCAU
WDRC WEAN WFBL WFEA WHEC
WJSV WKBW WLWB WOKO
B — **Lowell Thomas**, See Monday

E-7:00 p.m., C-6:00, M-5:00, P-4:00
C — **Myrt and Marge**, See Monday
B — **Amos 'n' Andy**, See Monday
R — **Morton Bowe, Tenor**
KSD WBEN WCAE WCSH WDAF
WBAF WBEW WFRB WGY WHO
WJAR WLIT WMAQ WOC WOW
WRC WTAG WTAM WTIC WWJ

E-7:15 p.m., C-6:15, M-5:15, P-4:15
C — **Just Plain Bill**, See Monday
R — **Billy Bachelor**, See Monday

E-7:30 p.m., C-6:30, M-5:30, P-4:30
C — **Music in Air**, See Monday.
B — **George Gershwin**, See Monday

E-7:45 p.m., C-6:45, M-5:45, P-4:45
B — **Gus Van; Arlene Jackson**
KDKA WBAL WBZ WBZA WCKY
WENR WJZ WMAL WMC WSB WSM
WSMB WSYR
C — **Boake Carter**, See Monday
R — **Goldbergs**, See Monday

E-8:00 p.m., C-7:00, M-6:00, P-5:00
C — **Happy Bakers**, See Monday
R — **Cities Service Concert**
CRCT KDYL KOA KPCC KSD KTBS
KTHS KYW WBEN WCAE WCSH
WDAF WEA WECB WEEI WFAA
WFRB WGY WHO WJAR WKY WLIT
WOAI WOC WOW WRC WRVA WSAI
WTAG WTAM WTIC WTMJ WWJ
B — **Nestle's with Ethel Shutta**
KDKA KWK WBAL WBZ WBZA
WCKY WGR WJR WJZ WLS WMAL
WSYR

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

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C — **March of Time**
CKLW KDB KERN KFBK KFYR
KFRC KGB KHJ KLZ KMBC KMJ

FRIDAY—(Continued)

KMOX KOIN KOL KSL KTRH KVI KWG WABC WCAO WCAU WCCO WDRS WDSU WEAN WFBL WFBM WGN WGR WGST WHAS WHK WJAS WJSV WKRC WNAC WOKO WSPD
B — Dangerous Paradise, See Wed.

E-8:45 p. m., C-7:45, M-8:45, P-5:45
B — Red Davis, See Monday

E-9:00 p. m., C-8:00, M-7:00, P-8:00
B — Phil Harris and Orchestra
CFCE KDKA KDYL KFI KGHL KGIR KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WAPI WBAL WBZ WBZA WCKY WFAA WGAR WJZ WKY WLS WMAL WQAI WREN WSB WSM WSMB WSYR

C — Philadelphia Symphony, See Mon.
R — Frank Munn; Abe Lyman
KSD WHEN WCSH WFAE WEEI WGBR WGY WJZ WLIT WMAQ WQW WRC WSAI WTAG WTAM WWJ

E-9:15 p. m., C-8:15, M-7:15, P-8:15
C — Ruth Etting, See Tuesday

E-9:30 p. m., C-8:30, M-7:30, P-8:30
C — Jack Denny; Jack Whiting
CFRB CKAK CKLW KDB KERN KFBK KFH KFYR KFRC KGB KHJ KLRA KILZ KMBC KMOJ KMOX KOIN KOL KOMA KRLL KSCJ KSL KTRH KTSa KVI KWG WABC WADC WBBM WBRC WBT WCAO WCAU WCCO WDOD WDRS WDSU WEAN WFBL WFBM WGST WHAS WHK WJAS WKRC WLAC WMBG WMT WNAC WOKO WOWO WREC WSPD WTAQ WTAR WTOC

B — Armour Program; Phil Baker
KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTAR KWK WAPI WBAL WBZ WBZA WBC WENR WFAA WGAR WHAM WIOD WJAX WJR WJZ WKY WMC WOA WREN WRVA WSB WSM WSMB WTMJ WWNC
R — One Night Stand; Pick and Pat
KSD WHEN WCAE WCSH WDAF WFAE WFRB WGY WJAZ WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WWJ

E-10:00 p. m., C-9:00, M-8:00, P-7:00
C — Swift Revue—Olsen and Johnson
CKLW KDB KERN KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLL KSCJ KSL KTRH KVI KWG WABC WADC WBBM WBRC WBT WCAO WCAU WCCO WDRS WEAN WFBL WGST WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WREC

R — First Nighter—Drama
CRCT KDYL KFI KGO KGW KHQ KOA KOMO KPRC KSD KSTP WAPI WBEN WCAE WCSH WDAF WFAE WBC WEEI WFRB WGY WBC WJAZ WKY WLIT WMAQ WOA WOC WOW WRC WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ

E-10:30 p. m., C-9:30 M-8:30, P-7:30
B — Mario Cozzi, Baritone
KDKA KFYR KOIL KSO WAPI WBAL WBZ WBZA WCKY WDAF

WEBC WFLA WBAM WIBA WIOD WIS WJAX WJR WJZ WREN WSB WSM WSYR WWNC

C — Mary Eastman, Soprano
KLRA KOMA KRLL KSCJ KTRH KTSa KVOR WAAB WABC WACO WADC WBNS WBRC WCAO WDAE WDBJ WDOD WDRS WDRS WDSU WEAN WFLA WGR WGST WHEC WHP WIP WIS WJAS WJSV WKRC WLAC WLWB WLWB WMAS WMBD WMBG WMT WNAX WODX WORC WOWO WQAM WREC WSJS WSPD WTOC

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

E-11:00 p. m., C-10:00, M-9:00, P-8:00
B — Ames 'n' Andy, See Monday
C — Charles Carille, Tenor
CKAK CKLW KDB KFH KLRA KLZ KOMA KSL KTRH KTSa KVOR WAAB WABC WACO WADC WBG WBNS WBRC WCAO WDAE WDBJ WDOD WDRS WDSU WEAN WFAE WGST WHEC WIBW WICC WIP WJAS WJSV WKBW WLAC WLWB WLWB WMAS WMBG WODX WOKO WORC WPM WQAM WREC WSJS WSPD WTAR WTOC

E-11:15 p. m., C-10:15, M-9:15, P-8:15
C — News Service, See Monday

SATURDAY

E-1:45 p. m., C-12:45, M-11:45, P-10:45
R-B Metropolitan Opera
CFCE CRCT KDKA KDYL KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KOMO KPRC KSD KSO KSTP KTAR KTBS KTHS KVOO KWCR KWK KYW WAPI WAVE WBAL WBAP WBEN WBZ WBZA WCAE WCKY WCSH WDAF WDAY WFAE WBC WEEI WFAA WFRB WFI WFLA WGAR WGY WHAM WHO WIBA WIOD WIS WJAZ WJAX WJDX WJR WJZ WKBW WKY WLIT WLW WMAL WMAQ WMC WOA WOC WOW WPTF WRC WREN WRVA WSB WSMB WSOC WSYR WTAG WTAM WSM WTIC WTMJ WWJ WWNC

E-8:00 p. m., C-5:00, M-4:00, P-3:00
C — Meet the Artist
CFRB CKLW KFH KLA KMBC KOMA KSL KTRH KTSa KVOR WAAB WABC WACO WADC WBBM WBG WBRC WCAO WCCO WDBJ WDSU WFBL WFAE WGR WGST WHAS WHS WHK WHP WIBW WICC WIP WIS WJAS WJSV WLAC WLWB WLWB WMBG WMT WOKO WQAM WREC WSBT WSEA WSJS WTAQ WTAR WTOC WVVV

R — Waldorf Astoria, See Monday
B — Al Pearce and His Gang
KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTBS KTHS KVOO KWCR KYW WBAL WBZ WBZA WCKY WDAY WBC WFLA WHAM WIBA WIOD WIS WJAX WJDX WJR WJZ WKY WMAL WMC WOA WREN WSB WSM WSYR WWNC

E-6:15 p. m., C-5:15, M-4:15, P-3:15
C — Tommy McLaughlin
CKLW WAAB WBT WCAO WCAU WCCO WDRS WDSU WGR WGST WHAS WHK WJAS WKRC

E-8:30 p. m., C-5:30, M-4:30, P-3:30
C — Frederic William Wile
CKLW KLRA WAAB WABC WBG WBRC WCAO WCAU WDAE WDBJ WDOD WDOD WDRS WDSU WFBL WFAE WGLC WGST WHEC WHP WJSV WKBW WLAC WLWB WLWB WMAS WMBG WOKO WORC WQAM WREC WSJS WSPD WTAR WTOC

R — Richard Himber and Orchestra
KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS KTHS KVOO WCAE WDAF WDAY WFAE WBC WFLA WHO WIBA WIOD WIS WJAZ WJAX WJDX WKY WMAQ WMC WOA WOC WRC WSB WSM WTAG WTAM WWJ WWNC

E-8:45 p. m., C-5:45, M-4:45, P-3:45
B — Flying with Capt. Al Williams
WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WSYR

E-7:00 p. m., C-6:00, M-5:00, P-4:00
B — John Herrick, Baritone
KDKA KOIL KSO KWCR KWK WBAL WCKY WGAR WJZ WKBW WMAL WMAQ

C — Elder Michaux Congregation
CFRB CKLW KFH KLA KLZ KSCJ KSL KTRH KTSa KVOR WABC WACO WADC WBG WBRC WCAO WCAU WDAE WDBJ WDOD WDRS WDSU WFBL WFAE WGLC WGR WGST WHEC WHP WIBW WICC WJAS WJSV WLWB WLWB WMAS WMBG WMT WOKO WORC WQAM WREC WSJS WSPD WTAR WTOC WVVV

E-7:15 p. m., C-6:15, M-5:15, P-4:15
R — Religion in the News
KFI KFYR KGO KGW KHQ KOA KOMO KSD KTBS WAPI WBEN WCAE WDAF WFAE WEEI WFAA WFAE WFI WFLA WGY WHO WIBA WIOD WIS WJAZ WJAX WLW WMC WOA WOC WRC WSM WSMB WTAG WTAM

E-7:30 p. m., C-6:30, M-5:30, P-4:30
C — Silver Dust, See Tuesday
B — F. O. B. Detroit
KDKA KGIL KWCR KWK KYW WBAL WBZ WBZA WCKY WGAR WHAM WJAZ WJR WJZ WMAL WREN WSYR

E-7:45 p. m., C-6:45, M-5:45, P-4:45
C — Isham Jones and Orchestra
CFRB CKLW KFH KLA KOMA KRLL KSCJ KTRH KTSa KVOR WABC WACO WADC WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDOD WDRS WDSU WEAN WFBL WFAE WGR WGST WIBW WICC WJAS WJSV WLAC WLWB WLWB WMAS WNAC WOKO WORC WQAM WREC WSJS WSPD WTAR WVVV

E-8:00 p. m., C-7:00, M-6:00, P-5:00
C — 45 Minutes in Hollywood
CKLW KLZ KMBC KMOX KSL KTAT KTRH KTSa WABC WACO WBBM WCAH WCAO WCAU WCCO WDRS WEAN WFBL WGR WHEC WHE WJAS WJSV WKRC WNAC WOKO WRR WSPD
R — George Olsen and Orchestra
KDYL KFI KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTBS KVOO KYW WBEN WCSH WDAF

SATURDAY—(Cont'd)

WEAF WEBC WEEI WFBR WFLA
WGY WIBA WIOD WIS WJAR WJAX
WJDX WOAI WOW WRC WSB WSM
WSMB WTAG WTAM WWJ WWCN

B—Artin America

KDKA KDYL KFI KFYZ KGO KGW
KHQ KOA KOMO KPRC KSO KSTP
KTBS KV00 KWK WBZ WBZA
WEBC WFLA WIBA WIOD WIS
WJAX WJDX WJZ WMAL WMAQ
WOAI WREN WSB WSM WSMB

E-8:15 p.m., C-7:15, M-6:15, P-5:15

R—Boston Symphony Orchestra
KSD KYW WBEN WCSH WDAF
WEAF WEEI WFBR WGY WJAR
WOW WRC WTAG WTAM WWJ

E-8:30 p.m., C-7:30, M-6:30, P-5:30

B—Sous Les Ponts de Paris
KDYL KFI KFYZ KGO KGW KHQ
KOA KOMO KPRC SO KSTP KTBS
KWK WAPI WBAL WDAY WEBC
WFLA WGAR WHAM WIBA WIOD
WIS WJAX WJDX WJR WJZ WKY
WMAL WMC WREN WRVA WSB
WSM WSMB WSYR WWCN

E-8:45 p.m., C-7:45, M-6:45, P-5:45

C—Trade and Mark
CKLW KDB KERN KFBK KFPY
KFRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KSL KVI KWG
WAB WABC WADC WBBM WCAO
WCAU WCCO WDRG WEAN WHAS
WHK WJAS WJSV WKBW WKRC

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

C—Philadelphia Symphony, See Mon.
R—Donald Novis; Frances Langford
KDYL KFI KFYZ KGO KGW KHQ
KOA KOMO KPRC KSD KSTP
KTBS KTBS WAPI WBAF WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WEEI WFBR WFI WFLA
WGY WIBA WIOD WIS WJAR
WJAX WJDX WKY WLW WMAQ
WMC WOAI WOW WPTF WRC
WRVA WSB WSMB WTAG WTAM
WTMJ WWJ WWCN

E-9:15 p.m., C-8:15, M-7:15, P-6:15

C—Alex Woolcott, See Wednesday

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

B—Eddie Duchin, See Tuesday
C—George Jessel; Vera Van
CKLW KDB KERN KFBK KFH
KFPY KFRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOIN KOL
KOMA KRLD KSCJ KSL KTRH
KTSa KVI KWG WABC WADC
WBBM WBNS WBRC WBT WCAO
WCAU WCCO WDAE WDRG WDSU
WEAN WFBL WFBM WGL WGST
WHAS WHCC WHK WIBW WICC
WJAS WJSV WKBW WKRC WLAC
WMAS WMBD WMBR WMT WNAC
WOKO WQAM WREC WSPD WTAQ
WTAR WTCO

R—Beatrice Fairfax; Dramas

KDYL KFI KGO KGW KHQ KOA
KOMO KSD WBEN WCAE WCSH
WDAF WEAF WEEI WFBR WFI
WGY WJAR WLW WMAQ WOW
WRC WTAG WTAM WWJ

E-10:00 p.m., C-9:00, M-8:00, P-7:00

R—B. A. Rolfe and Orchestra
CRCT KDYL KFI KGO KGW KOA
KOMO KSD KSTP WBAF WBEN

WCAE WCSH WDAF WEAF WEEI
WFBR WFI WGY WHO WJAR WJAX
WLW WMAQ WOAI WOC WOW
WRC WRVA WSB WSMB WTAG
WTAM WTMJ WWJ

C—Byrd Expedition

CKLW KDB KERN KFBK KFH
KFPY KFRC KGB KHJ KLRA
KMBC KMJ KMOX KOIN KOL
KOMA KRLD KTRH KTSa KVI
KWG WAB WABC WACO WADC
WBBM WBRC WBT WCAO WDAU
WCCO WDAE WEAN WGST WHAS
WHCC WHK WHP WIBW WJSV
WKBW WKRC WLAC WLW WMBG
WMT WOKO WORC WQAM WREC

E-10:30 p.m., C-9:30, M-8:30, P-7:30

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

C—H. V. Kaltenborn

CFRB CKLW KLZ KMBC KOMA
KRLD KSCJ KSL KTRH KTSa
KVOR WAAB WABC WADC WBIG
WBRC WBT WCAH WCAO WDBJ
WDRG WDSU WEAN WFBM WFEA
WGST WHEC WHP WIBW WIP
WISN WJAS WJSV WKBW WLW
WBZ WMAS WMBD WMBG WMT
WODX WORC WPG WQAM WREC
WSBT WSJS WSPD WTAQ WTCO
WWVA

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

C—Guy Lombardo and Orchestra
CFRB CKLW KLRA KLZ KMBC
KMOX KOMA KTRH KTSa KVOR
WAAB WABC WADC WBIG WBRC
WCAO WCAU WCCO WDBJ WDSU
WEAN WFBL WFBM WGST WHAS
WHP WIBW WICC WISN WJAS
WJSV WKBW WLAC WLW WLZ
WMBD WMBG WMT WOKO WPG
WQAM WREC WSBT WSJS WTAQ
WTCO

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

C—News Service, See Monday

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

C—Ted Fio Rito and Orchestra
CFRB CKLW KLRA KLZ KMBC
KOMA KSL KTRH KTSa KVOR
WABC WADC WBRC WCAO WDBJ
WDSU WEAN WFBL WFBM WGST
WHEC WHP WIBW WIP WISN
WJSV WKBW WLAC WLW WLZ
WMBD WMBG WMT WNAC WOKO
WPG WQAM WREC WSBT WSJS
WTCO

R—One Man's Family

CFRF KDYL KFYZ KOA KPO KPRC
KSD KSTP KTBS KTBS KV00
WBEN WCAE WDAF WDAY WEAF
WFBR WFI WFLA WGY WHO WIBA
WIOD WIS WJAR WJAX WJDX WKY
WMAQ WMC WOAI WOC WOW
WRC WRVA WSAI WSB WSMB
WTAG WTAM WWJ WWCN

B—Paul Whiteman and Orchestra

KOIL KSO KWCR KWK KYW WBAL
WBZ WBZA WCKY WGAR WHAM
WJZ WLW WMAL WREN WSYR

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

C—Little Jack Little
CKLW KFH KLZ KMBC KMOX
KOMA KRLD KSCJ KTRH LTA
WABC WCAU WEAN WFBL WHAS
WHP WIBW WICC WISN WJSV

WKBW WLBW WMAS WMBD
WNAC WOKO WSBT WSPD

R—Hollywood on the Air

CFRF KDYL KFYZ KOA KPO KPRC
KSD KSTP KTBS KTBS KV00
WBEN WCAE WDAF WDAY WEAF
WFBR WFI WFLA WGY WHO WIBA
WIOD WIS WJAR WJAX WJDX WKY
WMAQ WMC WOAI WOC WOW WRC
WRVA WSAI WSB WSMB WTAG
WTAM WWJ WWCN

B—Jack Benny and Orchestra

KOIL KSO KWCR KWK KYW WBAL
WBZ WBZA WCKY WGAR WHAM
WJR WJZ WLW WMAL WREN
WSYR

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

B—Vincent Lopez and Orchestra
KOIL KSO KWCR KWK KYW WBAL
WBZ WBZA WCKY WGAR WHAM
WJR WJZ WLW WMAL WREN
WSYR

SUNDAY

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

R—Major Bowes' Capitol Family
KDYL KFI KOA KPRC KSTP
KTBS KV00 WAPI WCAE WDAF
WDAY WEAF WEBC WFAA WFBR
WFLA WGY WHO WIOD WJAR
WJAX WKY WMAQ WMC WOAI
WOC WRC WRVA WEAI WSBM
WTAG WTAM WWCN

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

C—Salt Lake Tabernacle Choir
CKLW KLRA KLZ KMBC KOMA
KSL KTRH KTSa KVOR WABC
WACO WADC WBSG WBRG WCAO
WCCO WDBJ WDRG WDSU WEAN
WFBL WFEA WGN WGR WGST
WHB WHEC WHP WIBW WICC
WISN WJAS WJSV WLAC WLW
WMBD WMT WNBC WOKO WORC
WPG WQAM WSBT WSFA WSJS
WTAQ WTAQ WWVA

E-12:15 p.m., C-11:15, M-10:15, P-9:15

R—Gordon String Quartet
WCSH WEAF WEEI WFBR WFI
WJAR WRC WTAG
B—Baby Rose Marie
KDKA WBAL WBZ WBZA WHAM
WJR WJZ WLW WMAL WSYR

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

B—Radio City Concert
CFRF CRCT KDKA KDYL KFI
KFYZ KGO KGW KHQ KOA KOIL
KOMO KPRC KSO KV00 WAPI
WBAL WBZ WBZA WCKY WDAY
WEBC WGAR WHAM WIS WJDX
WJR WJZ WKY WMAL WOAI WREN
WSMB WSYR WWCN

R—Chicago Round Table

WBEN WCSH WDAF WEAF WEEI
WFBR WFI WGY WHO WJAR
WOC WOW WRC WSAI WTAG
WTAM WWJ

C—Tito Guizar, Tenor

CKLW WABC WCAU WDRG WEAN
WFEA WGR WHK WICC WKRC
WLW WMAS WNAC WORC WSPD

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

C—Madison Ensemble
CFRB CKAC CKLW KLRA KLZ
KMBC KOMA KSCJ KSL KTRH
KTSa KVOR WABC WACO WADC
WBRC WBT WCAH WCAO WCAU
WDAE WDBJ WDDO WDSU WFBL

SUNDAY—(Continued)

WGR WGST WHAS WHEC WLWB
WISN WJAS WJSV WKBW WLAC
WMBD WMT WNAC WOKO WORC
WPG WQAM WREC WSJS WSPD
WTAR WVA

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

C—Church of the Air
CFRB CKLW KLRA KLZ KOMA
KTRH KTSB KVOR WAAB WABC
WACO WADC WCCO WDBJ WDRC
WDSU WFBL WGR WGST WHAS
WHEC WHP WIBW WJAS WJSV
WLAC WLWB WMT WOKO WPG
WQAM WREC WSBT WSJS WTAQ
WTAR WTCO WVA

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

B—National Youth Conference
KDKA KFI KFSD KFYR KGHL
KGRB KGO KGW KHQ KOA KOIL
KOMO KPRC KSO KTAR KTBS
KVOO KWCR KWK WAPI WBAL
WBZ WBZA WDAY WECB WFAA
WGAR WIBA WIOD WIS WJAX
WJDX WJR WJZ WMAL WQAI
WREN WRVA WSB WSM WSMB
WSYR WVNC

C—Lazy Dan, Minstrel Man
CKLW KMBC KMOX KRLD WABC
WBMM WCAE WCAO WCAU WCCO
WHAS WHK WJAS WJSV WKBW
WKRC WMBG

R—Miss Babo's Surprise Party
KSD WBEN WCAE WCSH WDAF
WEAF WEEL WFBW WFI WGY WJO
WJAR WMAQ WOC WOV WRC
WSAI WTAG WTAM WWJ

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

C—Broadway Melodies; Helen Morgan
CFRB CKLW KDB KFPY KFRG
KGB KHJ KLZ KMBC KMOX KOIL
KOL KRLD KSL KVI WABC WBMM
WCAO WCAU WCCO WDSU WHK
WJAS WJSV WKBW WKRC WLAC
WNAC

R—Gene Arnold and Commodores
KDYL KFI KGO KGW KHQ KOA
KOMO KORO KVOO WBEN WCAE
WCSH WEAJ WECB WEEL WFAA
WFBW WGY WIBA WJAS WKY
WLW WMAQ WQAI WOV WPTF
WRC WRVA WTAG WTAM WWJ
WVNC

B—Bar X Days and Nights
CRCT KDKA KOIL KSO KWCR
KWK KYW WBAL WBZ WBZA
WCKY WGAR WJR WJZ WMAL
WREN WSYR

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

C—Abe Lyman's Orchestra
CFRB CKLW KMBC KMOX WABC
WBMM WCAO WCAU WCCO WDRC
WEAN WFBL WFBM WHEC WHK
WJVB WKBW WKRC WNAC WOKO
R—Cook Travelogues
WAVE WBEN WCAE WEAJ WGY
WJDX WMC WQAI WSB WSM
WSMB WTAM WWJ

B—Rings of Melody
CFRC CRCT KDKA KDYL KFI
KFYR KGO KGW KHQ KOA KOIL
KOMO KPRC KSO KSTP KTBS KTBS
KVOO KWCR KWK KYW WBAL WBZ
WBZA WDAY WECB WFAA WFLA
WGAR WHAM WIBA WIOD WIS
WJAX WJZ WLW WMAL WQAI
WPTF WREN WRVA WSYR WTMJ
WVNC

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

R—Gems of Melody; Muriel Wilson
WBEN WCAE WCSH WDAF WEAJ
WEEL WFBW WGY WJO WJAR
WMAQ WOC WOV WRC WSAI
WTAG WTAM WWJ

E-3:00 p.m., C-4:00, M-1:00, P-12:00

C—New York Philharmonic Orch.
CFAC CFBO CFCC CFCH CFEN
CFGO CFPC CFJC CFNB CFPL
CFQC CHAB CHGS CHNS CHRC
CHWC CHWK CJCA CJCB CJCJ
CJGC CJOC CJRM CJRW CECH
CECK CEKN CEKOC CEKOV CEKPC
CKPR CKUA CKX CKY CRCA
CRCO CRCS CRCT CRCV CFRB
CKLW KFH KLRA KLZ KMBC
KMOX KOMA KSL KTRH KTSB
KVOR WABC WADC WBIG WBRB
WCAO WCAU WCCO WDBJ WDRC
WDSU WEAN WFBM WFEA WGN
WGR WGST WHAS WHEC WHK
WHP WIBW WICC WIP WISN WJAS
WJSV WLAC WLWB WMBD WMBG
WMT WNAC WOKO WORC WQAM
WREC WSBT WSJS WTAQ WTAR
WTCO WVA

R—Wayne King and Orchestra
KDYL KFI KGO KGW KHQ KOA
KOMO KPRC KSD KSTP KVOO
WBEN WCAE WCSH WDAF WEAJ
WEEL WFAA WGY WJO WJAR
WKBW WKY WLIT WLS WLW
WQAI WOC WOV WRC WTAG
WTAM WTMJ WWJ

R—Spartan Triolians
CFRC CRCT KDKA KOIL KSO
KWCR KWK KYW WBAL WBZ
WBZA WCKY WGAR WHAM WJR
WJZ WMAL WREN WSYR

E-3:30 p.m., C-2:30, M-1:30, P-12:30

B—Yeast Foamers; Jan Garber
KDKA KDYL KFI KFSD KFYR
KGHL KGRB KGO KGW KHQ KOA
KOIL KOMO KPRC KSO KTAR
KTBS KTBS KVOO KWCR KWK
KYW WAPI WBAL WBZ WBZA
WDAY WECB WFAA WFLA WGAR
WHAM WIBA WIOD WIS WJAX
WJDX WJZ WKBW WKY WLW
WMAL WMC WPTF WREN WRVA
WSB WSM WSMB WSYR WTMJ
WVNC

R—Swift Garden Program
KSD WBEN WCAE WCSH WDAF
WEAF WEEL WFBW WGY WJAR
WLIT WMAQ WOV WRC WSAI
WTAG WTAM WWJ

E-4:00 p.m., C-3:00, M-2:00, P-1:00

R—John B. Kennedy
CFRC CRCT KYW WBEN WCAE
WDAF WEAJ WFBW WGY WJAR
WOW WRC WSAI WTAG WTAM
WWJ

B—Albert Payson Terhune, Dog Drama
KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KSO KWCR KWK
WBAL WBZ WBZA WHAM WJZ WLS
WREN WSYR

Rev. Charles E. Coughlin
KMOX KSTP KYW WCAO WCAU
WDRC WEAN WFBL WFEA WGAR
WGR WHB WIO WICC WJAS WJR
WLW WLW WMS WNAC WOC
WOL WOR WORC WCKY WOKO

E-4:15 p.m., C-3:15, M-2:15, P-1:15

R—Wildroot; Vee and Johnny
KDYL KFI KFYR KGO KGW KHQ
KOA KOMO KPRC KTBS KVOO

WBEN WCAE WCSH WDAF WDAY
WEAF WECB WEEL WFAA WFBW
WGY WIBA WJAR WKY WLIT WLS
WOAI WOV WRC WSAI WTAG
WTAM WTMJ WWJ

B—Dion Kennedy, Organist

KDKA KDYL KFI KFYR KGHL
KGRB KGO KGW KHQ KOA KOIL
KOMO KPRC KSO KTBS KTBS
KVOO KWCR KWK WAPI WBAL
WBAP WBZ WBZA WDAY WECB
WFLA WHAM WIBA WIOD WIS
WJAX WJDX WJZ WKBW WKY WLS
WMAL WMC WQAI WPTF WREN
WRVA WSB WSM WSMB WSYR
WVNC

E-4:30 p.m., C-3:30, M-2:30, P-1:30

R—Hoover Sentinels
CFRC CRCT KDYL KFI KGO KGW
KHQ KOA KOMO KPRC KVOO
WBAP WBEN WCAE WCSH WDAF
WEAF WECB WEEL WFBW WFI
WGY WIBA WJAR WKY WMAQ
WQAI WOV WRC WTAG WTAM
WWJ

B—Princess Pat Pageant

KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WENR WHAM
WJZ WMAL WREN WSYR

E-5:00 p.m., C-4:00, M-3:00, P-2:00

C—Roses and Drums, Drama
CKLW KFAB KLRA KLZ KMBC
KMOX KOMA KRLD KTRH KTSB
WAAB WABC WADC WBMM WBRB
WCCO WDSU WGST WHAS WHK
WJAS WJSV WKRC WREC

R—Big Ben Dream Drama

WBEN WCAE WCSH WDAF WEAJ
WEEL WFBW WGY WJAR WMAQ
WOW WRC WSAI WTAG WTAM
WWJ

B—National Vespers

KDYL KECA KFSD KFYR KGHL
KGRB KGO KGW KHQ KOA KOIL
KPRC KSO KSTP KTAR KTBS
KVOO KWCR KWK WAPI WBAL
WBZ WBZA WFLA WCKY WDAY
WECB WFLA WGAR WHAM WIBA
WIOD WIS WJAX WJDX WJR WJZ
WKY WMAL WMC WQAI WPTF
WREN WRVA WSB WSM WSMB
WVNC

E-5:15 p.m., C-4:15, M-3:15, P-2:15

R—Waves of Romance; Ted Black
WBEN WCAE WCSH WEAJ WEEL
WGY WJAR WKBW WMAQ WRC
WSAI WTAG WTAM WWJ

E-5:30 p.m., C-4:30, M-3:30, P-2:30

C—Frank Crumit; Julia Sanderson
CKLW KFAB KFH KMBC KMOX
KOMA WAAB WABC WADC WCAH
WCAO WCAU WDRC WDSU WHEC
WFBL WFBM WGR WHEC WHK
WICC WJSV WMAS WOKO WORC
WSPD WTAR WVA

R—Talkie Picture Time—Sketch
WCAE WCSH WDAF WEAJ WEEL
WFBW WFI WGY WJAR WMAQ
WMC WOV WRC WSAI WSM WTAG

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

SUNDAY—(Continued)

E-9:00 p. m., C-5:00, M-4:00, P-3:00

R — Catholic Hour
KDYL KECA KFYR KGHL KGIR
KGW KOA KOMO KPO KPRC
KSTP KTAR KTBS KVOO WAPI
WBAP WBEN WCAE WCSH WDAF
WDAY WEAF WEBC WEEL WFBR
WFLA WGY WGY WHO WIBA
WIOD WIS WJAR WJAX WJDX
WKY WLIT WMC WOAI WOC WOV
WRC WRVA WSAI WSB WSM
WSMB WTAG WTAM WWJ WWCN

B — Cadillac Concert
KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WENR WGAR
WHAM WJR WJZ WLW WMAL
WREN WSXR

C — Songs Mother Used to Sing
CKLW KMBC KMOX WABC WBBM
WCAO WCAU WCCO WFBM WHK
WJAS WJSV WKBW WKRC

E-8:30 p. m., C-5:30, M-4:30, P-3:30

C — Smiling Ed McConnell
CKLW KDB KERN KFAB KFBK
KFH KFPY KFRC KGB KHJ KLZ
KMBC KMOX KOIN KOL KRLL
KSL KVI KWG WAAB WABC WBBM
WBT WCAH WCAU WCCO WDSU
WEAN WFBL WHAS WHEC WHP
WJAS WJSV WKBW WKRC WLAC
WMT WOKO WQAM WSPD WTAR
WWVA

R — Our American Schools
CFBC CRCT KDYL KECA KFSD
KFYR KGW KOMO KPO KPRC KSD
KSTP KTAR KTBS KVOO WAPI
WBAP WBEN WCAE WCSH WDAF
WDAY WEAF WEBC WEEL WFBR
WFLA WGY WHO WIBA WIOD
WJAR WJAX WJDX WKY WLIT
WMAQ WMC WOAI WOC WRC
WRVA WSAI WSB WSM WSMB
WTAG WTAM WWJ WWCN

E-8:45 p. m., C-5:45, M-4:45, P-3:45

C — Ward's Family Theatre
CKLW KMOX WABC WBBM WBRC
WCAH WCAO WDRG WEAN WFBL
WFEA WICC WJAS WKBN WLWB
WMAS WMBR WNAC WOKO WORC
WSFA WWVA

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

R — True Story Court
WBEN WCAE WCSH WDAF WFBR
WGY WJAR WMAQ WOV WRC
WSAI WTAG WTAM WWJ

B — Realsilk; Ted Weems' Orchestra
KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KSO KWCR KWK
WBAL WBZ WBZA WFLA WGAR
WHAM WIS WJR WJZ WIS WLW
WMAL WPTF WREN WRVA WSXR

C — Marx Brothers; Freddie Martin
WABC WBT WCAO WCAU WDRG
WEAN WFBL WFEA WHEC WHK
WICC WJAS WJSV WKBN WLWB
WNAC WOKO WORC WPG WTAR
WWVA

E-7:30 p. m., C-6:30, M-5:30, P-4:30

B — Ozzie Nelson; Joe Penner
KDKA KDYL KFI KFYR KGO KGW
KHQ KOA KOIL KOMO KPRC KSO
KSTP KTAR KVOO KWCR KWK
WBAL WBZ WBZA WDAY WBBB
WFAA WFLA WGAR WHAM WIBA
WIOD WJAX WJDX WJR WJZ WKY
WLW WLW WMAL WMC WOAI
WPTF WREN WRVA WSB WSM
WSMB WTMJ WWJ

C — Ward's Family Theatre

CKLW KMOX WABC WBBM WBRC
WCAH WCAO WDRG WEAN WFBL
WFEA WICC WJAS WKBN WLWB
WMAS WMBR WNAC WOKO WORC
WSFA WWVA

E-7:45 p. m., C-6:45, M-5:45, P-4:45

C — Rin Tin Tin Thriller
CKLW KMOX WABC WCAU WFBL
WFBM WGN WGR WHAS WHK
WJAS WJSV WKRC WNAC

R — Fitch Program; Wendell Hall
CFBC KSD WBEN WCAE WCSH
WDAF WEAF WFBR WGY WHO
WJAR WLIT WMAQ WOC WOV
WRC WSAI WTAG WTAM WWJ

E-8:00 p. m., C-7:00, M-6:00, P-5:00

R — Chase and Sanborn Hour
CFBC CRCT KDYL KFI KFYR KGO
KGW KHQ KOA KOMO KPRC KSD
KSTP KTAR KTHS KVOO WBEN
WCAE WCSH WDAF WDAY WEAF
WBCO WFAA WFBR WFLA WGY
WHO WIOD WIS WJAR WJAX
WJDX WKY WLIT WLW WMAQ
WMO WOAI WOC WOV WPTF WRC
WRVA WSB WSM WSMB WTAG
WTAM WTIC WTMJ WWJ WWCN

C — Evening in Paris
CKLW KLZ KMBC KMOX KOMA
KSL WABC WADC WBBM WCAO
WCAU WCCO WDSU WEAN WFBL
WFBM WGR WGST WHAS WHK
WJAS WJSV WKRC WOKO WSPD

E-8:30 p. m., C-7:30, M-6:30, P-5:30

C — Ford; Fred Waring's Orchestra
CFRB CKAC CKLW KFAB KFH
KLRA KLZ KMBC KMOX KOH
ROMA KRLL KSL KTRH KTSA
KVOR WAAB WABC WAO WADC
WBBM WBIG WBRC WBT WCAH
WCAO WCAU WCCO WDAE WDBJ
WDBO WDOD WDRG WDSU WEAN
WFBL WFBM WFEA WGST WHAS
WHEC WHK WHP WIBW WICC
WISN WJAS WJSV WKBN WKBW
WKRC WLAC WLWB WLWB WMAS
WMBD WMBG WMT WOKO WORC
WOWO WPG WQAM WRBC WSFA
WSPD WTAQ WTAR WTOC WWVA

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

C — Erno Rapee; Nino Martini
CKLW KDB KERN KFBK KFPY
KFRC KGB KHJ KLRA KLZ KMBC
KMJ KMOX KOIN KOL KOMA
KRLL KSGJ KSL KTRH KVI KWG
WABC WADC WBBM WCAO WCAU
WCCO WDRG WDSU WEAN WFBL
WFBM WGR WGST WHAS WHK
WISN WJAS WJSV WKRC WMT
WNAC WNAX WOKO WORC WOWO
WREB WSPD WTAR

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

B — Gulf Headliners
KAKA KPRC KTBS WBAL WBZ
WBZA WFAA WFLA WGAR WHAM
WIOD WIS WJAX WJDX WJR WJZ
WLW WMAL WMC WOAI WRVA
WSB WSM WSMB WSXR WWCN

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

R — Album of Familiar Music
CFBC CRCT KDYL KFI KGO KGW
KHQ KOA KOMO KPRC KSD KSTP
WAPI WBEN WCAE WCKY WCSH
WDAF WEAF WEEL WFAA WFBR

WFI WFLA WGY WHO WIOD WJAR

**WJAX WJDX WKY WMAQ WMC
WOAI WOC WOV WPTF WRC
WRVA WSAI WSB WSM WSMB
WTAG WTAM WTMJ WWJ**

E-9:45 p. m., C-8:45, M-7:45, P-6:45

B — Nat Shilkret and Orchestra
KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WENR WGAR
WHAM WJR WJZ WMAL WREN
WSYR

E-10:00 p. m., C-9:00, M-8:00, P-7:00

R — Chevrolet Program
KDYL KFI KFSB KFYR KGHL
KGIR KGO KGW KHQ KOA KOMO
KPRC KSTP KTAR KTBS WAPI
WBAP WBEN WCAE WCSH WDAF
WDAY WEAF WEBC WEEL WFBR
WFI WFLA WGY WIBA WIOD WIS
WJAR WJDX WKY WMAQ WMC
WOAI WOV WRC WRVA WSB WSM
WSMB WTAG WTAM WTIC WTMJ
WWJ WWCN

C — Pat's Childhood Dramas
CKLW KDB KERN KFAB KFPY
KFRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOL KSL KVI KWG
WAAB WABC WCAO WCAU WCCO
WDRG WFLB WGR WHAS WHK
WJAS WJSV WKRC WOKO

E-10:30 p. m., C-9:30, M-8:30, P-7:30

R — Hall of Fame
KDYL KFI KGO KGW KHQ KOA
KOMO KPRC KTBS KTHS WDAF
WBAP WBEN WCAE WCSH WDAF
WEAF WEEL WFBL WFI WGY
WJAR WJDX WKY WLW WMAQ
WMC WOAI WOV WRC WSM
WTAG WTAM WTIC WWJ

C — Ernest Hutcheson Pianist
CFRB CKAC CKLW KFH KLZ
KMBC KOIN KOMA KRLL KSCJ
KTRH KTSA KVOR WAAB WABC
WACO WADC WBBM WBNB WBRC
WCAO WCCO WDAE WDBJ WDBO
WDOD WDRG WDSU WEAN WFBL
WFEA WGR WGST WHEC WHP
WIBW WICC WIP WISN WJAS
WISN WKBN WKRC WLAC WLWB
WLWB WMAS WMBD WMT WNAX
WODX WOKO WORC WOV WPG
WQAM WREB WSJS WSPD WTAR
WTOC

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

C — H. V. Kaltenborn
CFRB CKAC CKLW KFAB KFH
KLRA KLZ KSCJ KTRH KTSA KVOR
WABC WACO WADC WBRB WBT
WCAH WCAO WCAU WDAE WDBJ
WDBO WDOD WDRG WDSU WEAN
WFBL WFBM WFEA WGR WGST
WHAS WHEC WIBW WICC WIP
WISN WJAS WJSV WKBN WLAC
WLWB WLWB WMAS WMBD WMT
WNAC WOKO WQAM WREB WSBT
WSJS WSPD WTAR

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

C — Little Jack Little
CFRB CKAC CKLW KDB KFAB
KFH KLRA KLZ KOMA KSCJ KTRH
KTSA KVOR WABC WACO WADC
WBBM WBNB WBRC WCAO WCAU
WDAE WDBJ WDBO WDOD WDRG
WDSU WFBL WFBM WGR WGST
WHEC WHEC WHK WHP WIBW
WICC WISN WJAS WJSV WKBN
WKRC WLAC WLWB WLWB WMAS
WMBD WMT WNAC WNAX WOKO
WPG WQAM WREB WSBT WSJS
WSPD WTAR WTOC

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Standard

CONCERTS

Boston Symphony, 8:15 p.m., Saturday, R.
Cadillac Concert, 8:00 p.m., Sunday, B.
Hoover Sentinals, 4:30 p.m., Sunday, R.
Metropolitan Opera, 1:45 p.m., Saturday, R-B.
Minneapolis Symphony, 9:30 p.m., Tuesday, C.
N. Y. Philharmonic, 3:00 p.m., Sunday, C.
Philadelphia Symphony, 9:00 p.m., daily, except Sunday, C.
Radio City, 12:30 p.m., Sunday, B.
Albert Spalding, 8:30 p.m., Wednesday, C.
Waldorf-Astoria Orchestra, 6:00 p.m., daily, except Sun., R.

DANCE BANDS

Leon Belasco, 12:00 mid., Monday, C.
Ben Bernie, 9:00 p.m., Tuesday, R.
Don Bestor, 8:00 p.m., Friday, B.
Ace Brigode, 11:45 p.m., Sunday, C.
Jack Denny, 9:30 p.m., Friday, C; 12:00 mid., Saturday, B.
Eddie Duchin, 9:30 p.m., Tues., Thurs. and Sat., B.
Ted Florio, 10:00 p.m., Wednesday, C.
Jan Garber, 3:30 p.m., Sunday, B.
Glen Gray, 10:00 p.m., Tuesday and Thursday, C.
Green Brothers, 7:30 p.m., Tuesday, R.
Johnny Green, 9:15 p.m., Tuesday and Friday, C.
Phil Harris, 9:00 p.m., Friday, B.
Lennie Hayton, 9:00 p.m., Wednesday, R.
Richard Himber, 6:30 p.m., Saturday, R; 11:30 p.m., Tuesday, B; 6:00 p.m., Thursday, B.
Wayne King, 3:00 p.m., Sunday; 8:30 p.m., Tuesday and Wednesday, R; 10:00 p.m., Monday, C.
Enoch Light, 6:30 p.m., Wednesday, C.
Little Jack Little, 11:15 p.m., Sunday; 8:00 p.m., Tuesday; 11:30 p.m., Wednesday; 12:00 mid., Saturday, C.
Guy Lombardo, 9:30 p.m., Wed.; 10:45 p.m., Sat., C.
Vincent Lopez, 10:00 p.m., Wed.; 12:30 a.m., Sat., B.
Abe Lyman, 9:00 p.m., Friday, R; 2:30 p.m., Sunday, C.
Freddy Martin, 7:00 p.m., Sunday, C.
Ozzie Nelson, 7:30 p.m., Sunday, B; 11:30 p.m., Tuesday, C.
George Olsen, 8:00 p.m., Saturday, R.
Raymond Paige, 8:45 p.m., Tuesday, C.
Zoel Parenteau, 6:45 p.m., Friday, C.
Leo Reisman, 8:00 p.m., Tuesday, R.
Freddie Rich, 11:00 p.m., Monday, C. 0 p.m., Thursday, C.
Sam Robbins, 6:30 p.m., Monday, C.
B. A. Rolfe, 10:00 p.m., Saturday, C.
Nat Shilkret, 9:45 p.m., Sunday, B.
Harold Stokes, 10:00 p.m., Tuesday, B.
Rudy Vallee, 8:00 p.m., Thursday, R.
Fred Waring, 8:30 p.m., Sun.; 9:30 p.m., Thurs., C.
Mark Warnow, 10:30 p.m., Monday, C.
Ted Weems, 7:00 p.m., Sunday, B.
Paul Whiteman, 10:00 p.m., Thurs., R; 11:20 p.m., Sat., B.

DIALOG

Fred Allen, 9:30 p.m. and 12:30 a.m., Wednesday, R.
Amos 'n' Andy, 7:00 and 11:00 p.m., daily, except Saturday and Sunday, B.
Phil Baker, 9:30 p.m., Friday, B.
Burns and Allen, 9:30 p.m., Wednesday, C.
Cuckoo Club, 9:00 and 11:15 p.m., Wednesday, B.
George Jessel, 9:30 p.m., Saturday, C.
Marx Brothers, 7:00 p.m., Sunday, C.
Olsen and Johnson, 10:00 p.m., Friday, C.
Jack Pearl, 8:00 p.m., Wednesday, R.
Joe Penner, 7:30 p.m., Sunday, B.
Ray Perkins, 10:00 p.m., Tuesday, B.
Pick and Pat, 9:30 p.m., Friday, R.
Stoppagnie and Budd, 10:00 p.m., Tues. and Thurs., C.
Ed Wynn, 9:30 p.m., Tuesday, R.

DRAMA

Bar X Days, 2:00 p.m., Sunday, B.
Bobby Benson, 6:15 p.m., daily except Sat. and Sun., C.
Big Ben, 5:00 p.m., Sunday, R.
Billy Batchelor, 7:15 p.m., daily, except Sat. and Sun., R.
Conoco Adventures, 10:30 p.m., Wednesday, B.
Dangerous Paradise, 8:30 p.m., Wednesday and Friday, B.
Red Davis, 8:45 p.m., Monday, Wednesday, Friday, B.
Death Valley Days, 9:00 p.m., Thursday, B.
Eno Crime, 8:00 p.m., Tuesday and Wednesday, B.
Beatrice Fairfax, 9:30 p.m., Saturday, R.
First Nighter, 10:00 p.m., Friday, R.

Goldbergs, 7:45 p.m., daily, except Saturday and Sunday, R.
Grand Hotel, 5:30 p.m., Sunday, B.
Just Plain Bill, 7:15 p.m., daily, except Sat. and Sun., C.
Little Italy, 6:45 p.m., Tuesday and Thursday, C.
March of Time, 8:30 p.m., Friday, C.
Myrt and Marge, 7:00 and 10:45 p.m., daily, except Saturday and Sunday, C.
One Man's Family, 11:30 p.m., Saturday, R.
Patri's Childhood Drama, 10:00 p.m., Sunday, C.
Princess Pat, 4:30 p.m., Sunday, B.
Irene Rich, 7:45 p.m., Wednesday, B.
Rin-Tin-Tin, 7:45 p.m., Sunday, C.
Buck Rogers, 6:00 p.m., Monday to Thursday, inc., C.
Roses and Drums, 5:00 p.m., Sunday, C.
Soonyland Sketches, 8:00 p.m., Monday, R.
Talkie Picture Time, 5:30 p.m., Sunday, R.
Albert P. Terhune, 4:00 p.m., Sunday, B.
True Story Court, 7:00 p.m., Sunday, R.
Ward's Family Theatre, 6:45 and 7:30 p.m., Sunday, C.

PIANO AND ORGAN

Henri Deering, 10:30 p.m., Monday, B.
Fray and Braggiotti, 9:15 p.m., Monday, C.
George Gershwin, 7:30 p.m., Monday and Friday, B.
Archer Gibson, 10:30 p.m., Thursday, B.
Ernest Hutcheson, 10:30 p.m., Sunday, C.
Dion Kennedy, 4:15 p.m., Sunday, B.
Ohman and Arden, 9:30 p.m., Sun., R; 2:30 p.m., Sun., B.

POPULAR PROGRAMS

A. & P. Gypsies, 9:00 p.m., Monday, R.
Album Familiar Music, 9:30 p.m., Sunday, R.
Gene Arnold, 2:00 p.m., Sunday, R.
Miss Babo's Surprise, 1:30 p.m., Sunday, R.
Bavarian Peasant Band, 8:45 p.m., Tuesday, B.
Major Bowes, 11:15 a.m., Sunday, R.
Broadway Melodies, 2:00 p.m., Sunday, C.
Byrd Expedition, 10:00 p.m., Saturday, C.
Chase and Sanborn, 8:00 p.m., Sunday, R.
Cheerio Musical, 6:45 p.m., Tuesday, R.
Chevrolet Program, 10:00 p.m., Sunday, R.
Cities Service, 8:00 p.m., Friday, R.
Colgate House Party, 9:00 p.m., Saturday, R.
Contented Program, 10:00 p.m., Monday, R.
Corn Cob Pipe Club, 10:00 p.m., Wednesday, R.
Cruise of Seth Parker, 10:00 p.m., Tuesday, R.
Del Monte Ship, 9:30 p.m., Monday, R.
Djer Kiss Recital, 8:30 p.m., Monday, B.
Evening in Paris, 8:00 p.m., Sunday, C.
F. O. B. Detroit, 7:30 p.m., Saturday, B.
Fleischmann Hour, 8:00 p.m., Thursday, R.
Forty-Five Minutes in Hollywood, 8:00 p.m., Saturday C.
Gems of Melody, 2:45 p.m., Sunday, R.
Gulf Headliners, 9:00 p.m., Sunday, B.
Hall of Fame, 10:30 p.m., Sunday, R.
Hands Across Border, 10:00 p.m., Thursday, B.
Harlem Serenade, 10:30 p.m., Tuesday, C.
Household Musical, 9:00 p.m., Tuesday, B.
Ipana Troubadours, 9:00 p.m., Wednesday, R.
Jack Frost's Melody, 9:30 p.m., Monday, B.
Andre Kostelanetz Presents, 10:30 p.m., Wednesday, C.
Manhattan Merry-Go-Round, 9:00 p.m., Sunday, R.
Maxwell House Showboat, 9:00 p.m., Thursday, R.
Molle Show, 7:30 p.m., Monday, Wednesday, Thursday, R.
Music on the Air, 7:30 p.m., Mon., Wed. and Fri., C.
National Barn Dance, 10:30 p.m., Saturday, B.
Nestle's Chocolateers, 8:00 p.m., Friday, B.
Old Gold, 10:00 p.m., Wednesday, C.
Palmer House, 10:00 p.m., Tuesday, B.
Al Pearce and Gang, 6:00 p.m., Saturday, B.
Real Silk Show, 7:00 p.m., Sunday, B.
Romantic Melodies, 7:30 p.m., Thursday, B.
Sealed Power Side Show, 8:00 and 12:00 p.m., Monday, B.
Sinclair Minstrels, 9:00 p.m., Monday, B.
Sparton Triolians, 3:00 p.m., Sunday, B.
Swift Garden, 3:30 p.m., Sunday, R.
Swift Revue, 10:00 p.m., Friday, C.
Texaco, 9:30 p.m., Tuesday, R.
Voice of Firestone, 8:30 p.m., Monday, R.
Waves of Melody, 5:15 p.m., Sunday, R.
Yeast Foamers, 3:30 p.m., Sunday, B.

RELIGIOUS

Catholic Hour, 6:00 p.m., Sunday, R.
 Church of the Air, 1:00 p.m., Sunday, C.
 Elder Michaux, 7:00 p.m., Saturday, C.
 Midweek Hymn Sing, 6:30 p.m., Tuesday, R.
 National Vespers, 5:00 p.m., Sunday, B.
 National Youth Conference, 1:30 p.m., Sunday, B.
 Salt Lake Choir, 11:30 a.m., Sunday, C.

SINGERS

Grace and Eddie Albert, 7:45 p.m., Tuesday, B.
 Frances Alda, 6:00 p.m., Tuesday, R.
 Baby Rose Marie, 12:15 p.m., Sun.; 7:15 p.m., Mon., B.
 Irene Beasley, 6:30 p.m., Monday and Friday, R.; 6:30 p.m., Wednesday, B.
 Connie Boswell, 10:00 p.m., Tuesday and Thursday, C.
 Morton Bove, 7:00 p.m., Friday, R.
 Charles Carlile, 11:00 p.m., Tuesday and Friday, C.
 Richard Crooks, 8:30 and 11:30 p.m., every other Mon., R.
 Bing Crosby, 8:30 p.m., Monday, C.
 Jessica Dragonette, 8:00 p.m., Friday, R.
 Mary Eastman, 6:30 p.m., Tuesday, 8:30 p.m., Thursday, 10:30 p.m., Friday, C.
 Ruth Etting, 9:15 p.m., Tuesday and Friday, C.
 Evan Evans, 6:30 p.m., Tuesday; 10:30 p.m., Wednesday and Thursday, C.
 Five Spirits of Rhythm, 10:30 p.m., Tuesday; 11:00 p.m., Wednesday, C.
 Jane Froman, 9:00 p.m., Sunday, C.
 Connie Gates, 10:30 p.m., Monday, C.
 Alex Gray, 8:30 p.m., Thursday, C.
 Tito Guizar, 12:30 p.m., Sunday; 6:45 p.m., Wednesday; 6:30 p.m., Thursday, C.
 Wendell Hall, 7:45 p.m., Sunday, R.
 Annette Hanshaw, 9:00 p.m., Thursday, R.
 Happy Bakers, 8:00 p.m., Mon., Wed. and Fri., C.
 John Herrick, 7:15 p.m., Wednesday; 7:00 p.m., Saturday, B.
 Harriet Hilliard, 7:30 p.m., Sunday, B.
 Arlene Jackson, 7:30 p.m., Tuesday, R.; 2:30 p.m., Sunday; 7:45 p.m., Friday, B.
 Al Jolson, 10:00 p.m., Thursday, R.
 Jeanny Lang, 9:30 p.m., Friday, C.
 Frances Langford, 3:00 p.m., Sun., B; 9:00 p.m., Sat., R.
 Lazy Dan, 1:30 p.m., Sunday, C.
 Madison Ensemble, 12:45 p.m., Sunday, C.
 Nine Martini, 9:00 p.m., Sunday, C.
 Tommy McLaughlin, 6:15 p.m., Saturday, C.
 James Melton, 6:45 p.m., Sunday, C.
 Mills Brothers, 8:30 p.m., Monday, C.
 Helen Morgan, 2:00 p.m., Sunday, C.
 Frank Munn, 9:30 p.m., Sunday; 9:00 p.m., Friday, R.

Edith Murray, 6:30 p.m., Friday, C.
 Gertrude Nielsen, 9:30 p.m., Monday, C.
 Donald Novis, 9:00 p.m., Saturday, R.
 Frank Parker, 9:00 p.m., Monday, R.
 Viola Philo, 11:00 p.m., Thursday, R.
 Virginia Rea, 9:30 p.m., Sunday, R.
 Lanny Ross, 9:00 p.m., Thursday, R.
 Vivien Ruth, 8:00 p.m., Monday, Wednesday and Friday, C.
 Sanderson-Crumit, 5:30 p.m., Sunday, C.
 Ethel Shutta, 8:00 p.m., Friday, B.
 Silver Dust Serenaders, 7:30 p.m., Tues., Thurs. and Sat., C.
 Mary Small, 1:30 p.m., Sunday, R.
 Smiling Ed McConnell, 6:30 p.m., Sunday, C.
 Songs Mother Used to Sing, 6:00 p.m., Sunday, C.
 Tamara, 9:00 p.m., Sunday, R.
 Conrad Thibault, 8:30 p.m., Wed., C; 9:00 p.m., Thurs., R.
 John Charles Thomas, 9:30 p.m., Wednesday, B.
 Lawrence Tibbett, 8:30 and 11:30 p.m., every other Mon., R.
 Trade and Mark, 8:45 p.m., Saturday, C.
 Gus Van, 7:45 p.m., Friday, B.
 Vera Van, 11:00 p.m., Thursday, C.
 Vee and Johnny, 4:15 p.m., Sunday, R.
 Jack Whiting, 9:30 p.m., Friday, C.
 Muriel Wilson, 2:45 p.m., Sunday; 9:00 p.m., Friday, R.

TALKS

Boake Carter, 7:45 p.m., daily, except Sat. and Sun., C.
 Chicago Round Table, 12:30 p.m., Sunday, R.
 Cook Travelogues, 2:30 p.m., Sunday, R.
 Father Coughlin, 4:00 p.m., Sunday, R.
 Flying Capt. Williams, 6:45 p.m., Saturday, B.
 Edwin C. Hill, 8:15 p.m., Mon., Wed. and Fri., C.
 Horlick's Health, 8:30 p.m., Tuesday and Thursday, B.
 International News, 6:30 p.m., Wednesday, R.
 H. V. Kaltenborn, 11:00 p.m., Sunday; 6:00 p.m., Friday; 10:30 p.m., Saturday, C.
 John B. Kennedy, 4:00 p.m., Sun., 6:30 p.m., Thurs., R.
 Meet the Artist, 6:00 p.m., Saturday, C.
 National Radio Forum, 10:30 p.m., Monday, R.
 News Service, 11:15 p.m., daily, except Sunday, C.
 Our American Schools, 6:30 p.m., Sunday, R.
 Religion in News, 7:15 p.m., Saturday, R.
 Robert L. Ripley, 10:00 p.m., Saturday, R.
 Madame Sylvia, 10:30 p.m., Tuesday, R.
 Lowell Thomas, 6:45 p.m., daily, except Sat. and Sun., B.
 Voice of Experience, 8:30 and 11:45 p.m., Tuesday, C.
 Frederic William Wile, 6:30 p.m., Saturday, C.
 Walter Winchell, 9:30 and 11:15 p.m., Sunday, B.
 Alexander Woolcott, 9:15 p.m., Wed. and Sat., C.
 Your Government, 7:15 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 kilowatts, thus (25) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column. Time Zones: A—Atlantic, E—Eastern, C—Central, M—Mountain, P—Pacific, L—Local. A. M. time is shown in light face type.

Second Column Symbols

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

Fourth Column Symbols

- B National "Blue" network.
- C Columbia network.
- D Daytime only.
- Dn Daytime with occasional evening hours
- E Trans-Canada network.
- F Canadian Radio Brodcast. Commission.
- G All Canadian networks.

- H Yankee network.
- J Orange network.
- K Michigan network.
- L Canadian Pacific Ry. network.
- M Central Canada network.
- N National "Red" and "Blue" networks.
- P Has construction permit only.
- R National "Red" network.
- S Sunday only.
- Sy Synchronized.
- T Don Lee System.
- U Dixie network.
- V Maritime Broadcasting network.
- W All-Florida 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.

INDEX BY FREQUENCIES AND DIAL NUMBERS

540 kilocycles 555.2 meters

CJRM	z	1000	F	Moose Jaw, Sask.	M
XEY	z	10	546.8	Merida, Yuc.	

KCY#.
600

550 kilocycles 545.1 meters

KFDY	ae	500	1 (1)	Brookings, S. D.	C.
KFUO	ae	500	2 (1)	St. Louis, Mo.	C. 801 DeMun St.
KFYR	ah	1000	1N (2.5)	Bismarck, N. D.	C. 320 Broadway
KOAC	ak	1000	.....	Corvallis, Ore.	P.
KSD	ak	500	2R	St. Louis, Mo.	C. 12th and Olive Sts.
TISO	ak	250	.....	San Jose, C. R.	C. Apdo. 1354
WDEV	ae	500	D	Waterbury, Vt.	E. Stowe St.
WGR	ae	1000	C	Buffalo, N. Y.	E. Rand Bldg.
WKRC	ak	1000	C	Cincinnati, Ohio.	E. Hotel Alms

DIAL

560 kilocycles 535.4 meters

KFDM	ak	500	(1)	Beaumont, Texas.	C. P. O. Box 825
KLZ	ak	1000	C	Denver, Colo.	M. Shirley-Savoy Hotel
KTAB	ak	1000	.....	San Francisco, Calif.	115 O'Farrell St.
KWTO	ak	500	DR	Springfield, Mo.	C
WFI	ae	500	D (1)	Philadelphia, Pa.	801 Market St.
WIND	ak	1000	C	Gary, Ind.	C. 504 Broadway
WLIT	ak	500	1R (1)	Philadelphia, Pa.	E. Market at 8th St.
WNOX	ak	1000	C (2)	Knoxville, Tenn.	C. Andrew Johnson Hotel
WQAM	ae	1000	CW	Miami, Fla.	E. 327 N. E. First Ave.
XEAO	ak	250	(.15)	Mexicali, B. C.	P. Av. Obregon 1058

570 kilocycles 526.0 meters

FQN	z	250	572	St. Pierre, Miquelon.	Isl.
WCKO	ak	250	(.5)	Wichita Falls, Texas.	C. Box 998
KMTR	ak	500	.....	Hollywood, Calif.	P. 915 N. Formosa Ave.
KVI	ak	500	.....	Tacoma, Wash.	P. Tacoma Hotel
WKBN	ae	500	1C	Youngstown, Ohio.	E. 17 N. Champion St.
WMCA	ak	500	.....	New York, N. Y.	E. 1697 Broadway
WNAX	ak	1000	C (2.5)	Yankton, S. D.	C. 2nd and Capitol Sts.
WOSU	ae	750	1 (1)	Columbus, Ohio.	E.
WSYR	ak	250	B	Syracuse, N. Y.	E. 315 Syracuse Bldg.
WWNC	ae	1000	N	Asheville, N. C.	E. Flatiron Bldg.

580 kilocycles 516.9 meters

CHRC	ak	100	F	Quebec, Que.	E. Victoria Hotel
CKGL	aj	100	M	Toronto, Ont.	E. 444 University Ave.
CKUA	ak	500	.....	Edmonton, Alta.	M. University Campus
CMDD	z	150	588	Havana, Cuba.	E
KMJ	ak	500	CT	Fresno, Calif.	P. VanNess and Calaveras Sts.
KSAC	ak	500	2 (1)	Manhattan, Kans.	C
WCHS	ak	750	(1)	Charleston, W. Va.	E. Ruffner Hotel
WDBO	ae	250	CW	Orlando, Fla.	E. Fort Gatlin Hotel
WIBW	ae	1000	C2	Topeka, Kans.	C. 1100 National Res. Bldg.
WTAG	ae	750	R (1)	Worcester, Mass.	E. 20 Franklin St.
XEPN	ak	50000	585	Piedras Negras, Coah.	Box 3

590 kilocycles 508.2 meters

CMW	ae	1400	595	Havana, Cuba.	E. Paseo de Marti 103
HIX	ak	1500	598	Santo Domingo, D. R.	
KHQ	ak	1000	N (2.5)	Spokane, Wash.	P. Standard Stock Exchange Bldg.
WEEI	ak	1000	R	Boston, Mass.	E. 182 Tremont St.
WKZO	ae	1000	DK	Kalamazoo, Mich.	E. Burdick Hotel
WOW	ae	1000	R	Omaha, Neb.	C. 14th and Farnam Sts.

600 kilocycles 499.7 meters

CFCF	ae	500	F	Montreal, Que.	E. Mount Royal Hotel
CFCO	ak	50	FL	Chatham, Ont.	E. P. O. Box 275
CJOR	ak	500	.....	Vancouver, B. C.	P. 846 Howe St.
KFQD	ck	250	.....	Anchorage, Alaska.	L. 411 4th Ave.
KFSD	ah	1000	N	San Diego, Calif.	P. P. O. Box 228
WCAO	ae	500	2	Stoors, Conn.	E
WJCC	ae	500	C	Baltimore, Md.	E. 811 W. Lanvale St.
WMT	af	500	2 CH	Bridgeport, Conn.	E. Stratfield Hotel
WREC	ak	500	C (1)	Waterloo, Iowa.	C. Lafayette and 3rd St.
			C (1)	Memphis, Tenn.	C. Hotel Peabody Bldg.

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

610 kilocycles 491.5 meters

KFRC	ae	1000	CT	San Francisco, Calif.	1000 Van Ness Ave.
KZEG	ak	1000	618.5	Manila, P. I.	L
KZRM	ak	5000	618.5	Manila, P. I.	L
TIXA	z	7.5	614	San Jose, C. R.	
WDAF	ak	1000	R	Kansas City, Mo.	1729 Grand Ave.
WIP	ae	500	C (1)	Philadelphia, Pa.	8th and Market Sts.
WJAY	ak	500	D	Cleveland, Ohio.	E. Starr Piano Bldg.
XFX	ak	500	.....	Mexico City, D. F.	C. Ave. Argentina y L. G. Obregon

620 kilocycles 483.6 meters

KGW	ae	1000	NJ	Portland, Ore.	P. 325 Alder St.
KTAR	ae	1000	NJ	Phoenix, Ariz.	M. 116 N. Central Ave.
WFLA	ae	1000	Na (2.5)	Clearwater, Fla.	E. Chamber of Commerce Bldg.
WLBZ	ak	500	C	Bangor, Maine.	E. 100 Main St.
WSUN	ae	1000	Na (2.5)	St. Petersburg, Fla.	
WTMJ	ae	1000	N (2.5)	Milwaukee, Wis.	333 W. State St.

630 kilocycles 475.9 meters

CFCY	ae	500	FVE	Charlottestown, P. E. I.	143 Great George St.
CJGX	ck	500	F	Yorkton, Sask.	C
KFRU	ak	500	1	Columbia, Mo.	C. 9th and Elm Sts.
KGFX	z	200	D	Pierre, S. D.	C. 510 Summitt Ave.
WGFB	ae	500	1	Evansville, Ind.	C. 618 1/2 Main St.
WMAL	ak	250	B (.5)	Washington, D. C.	712 11th St. N. W.
WOS	ak	500	1D	Jefferson City, Mo.	Capitol Bldg.
XEMZ	z	30	.....	Tijuana, B. C.	P. Ave. B, 506
XEX	z	50	.....	Monterrey, N. L.	Aldama 932 Sur.
XEZ	ak	500	.....	Merida, Yuc.	C. Calle 58 Nr. 497
XFG	z	2000	638.3	Mexico City, F.	C

640 kilocycles 468.5 meters

CMQ	z	500	645	Havana, Cuba.	E. 25 Nr. 445, Vedado
KFI	ak	5000	1N	Los Angeles, Calif.	1000 So. Hope St.
WJUI	ae	500	1	Columbus, Ohio.	E. Deshler-Wallick Hotel
WOI	ae	5000	D	Ames, Iowa.	C

650 kilocycles 461.3 meters

KPCB	ae	100	.....	Seattle, Wash.	P. 3rd and Pine Sts.
WSM	aej	50000	N	Nashville, Tenn.	C. National Life Bldg.

660 kilocycles 454.3 meters

RUS	z	500	664	San Salvador, E. S.	
WAAW	af	500	D	Omaha, Neb.	C. 733 Grain Exchange Bldg.
WEAF	ak	5000	R	New York, N. Y.	E. 30 Rockefeller Bldg.

670 kilocycles 447.5 meters

WMAQ	ck	5000	N	Chicago, Ill.	C. Merchandise Mart
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680 kilocycles 440.9 meters

CMAF	ak	1000	Havana, Cuba.	E. P. O. Box 66
HJN	ak	500	681	Bogota, Colombia.	
KFEQ	ae	2500	D	St. Joseph, Mo.	C. Robidoux Hotel
KPO	ak	5000	N	San Francisco, Calif.	111 Sutter St.
VAS	z	2000	685	Glace Bay, N. S.	A.
WPTF	ae	1000	DnN	Raleigh, N. C.	E. 324 Fayetteville St.

690 kilocycles 434.5 meters

CFRB	ak	10000	C	Toronto, Ont.	E. 37 Bloor St. W.
CJCJ	ak	100	.....	Calgary, Alta.	M. 9th Ave. and 2nd St. W.
NAA	ak	1000	.....	Arlington, Va.	E. Navy Dept.
XET	ck	500	.....	Monterrey, N. L.	C. Bolivar Nr. 492

700 kilocycles 428.3 meters

VOWR	ak	500	S	St. John's, Nfld.	L. P. O. Box 157
WLW	ak	50000	NX	Cincinnati, Ohio.	E. 1329 Arlington St.

INDEX BY FREQUENCIES AND DIAL NUMBERS

710 kilocycles 422.3 meters

KMPC	ae	500	Dn	Beverly Hills, Calif.	9631 Wiltshire Blvd.
TIFB	z	30	714	San Jose, C. R.	C.
WOR	ak	5000	.....	Newark, N. J.	E. 147 Market St.
XEN	ak	1000	711	Mexico City, D. F.	C. Motolinia 22 Edif. "LaPerla"

720 kilocycles 416.4 meters

WGN	ck	5000	Chicago, Ill. C.	Tribune Tower
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730 kilocycles 410.7 meters

CFPL	z	100	F	London, Ont. E.	
CJCA	ah	1000	F	Edmonton, Alta. M.	10122 100 A. St.
CKAC	ak	5000	C	Montreal, Que. E.	980 St. Catherine St. W.
CMK	ae	2000	.....	Havana, Cuba. E.	Hotel Plaza
XEF-					
XER	ak	15000	735	Villa Acuna, Coh. C.	Apdo. 30

KCYS.
820
DIAL

740 kilocycles 405.2 meters

KMMJ	ae	1000	D	Clay Center, Neb. C.	
WHEB	ak	250	D	Portsmouth, N. H. E.	39 Congress St.
WSB	ah	5000	N	Atlanta, Ga. C.	7 N. Forsyth St.
.....		250	DP	Modesto, Calif. P.	

750 kilocycles 399.8 meters

KGU	aj	2500	N	Honolulu, T. H. L.	Advertiser Square
WJR	ak	10000	B	Detroit, Mich. E.	Fisher Bldg.
XEOK	ak	2500	757	Tijuana, B. C. P.	Calle 5a 312

760 kilocycles 394.5 meters

CMBS	ak	200	765	Havana, Cuba. E.	Calzada y H.
CMCQ	z	1000	767	Havana, Cuba. E.	Vista Alegre Nr. 80, Vibora
KXA	ae	250	(5)	Seattle, Wash. P.	218 Bigelow Bldg.
WBAL	ae	10000	BSy	Baltimore, Md.	
WEW	ae	1000	D	St. Louis, Mo. C.	221 N. Grand Blvd.
WJZ	ck	5000	BSy	New York, N. Y. E.	30 Rockefeller Plaza
XEYZ	z	10000	.....	Mexico City, D. F. C.	Ave. Jaurez 48 Altos

770 kilocycles 389.4 meters

KFAB	ae	5000	CSy	Lincoln, Neb. C.	13th and M Sts.
WBBM	ae	25000	CSy	Chicago, Ill. C.	Wrigley Bldg.

780 kilocycles 384.4 meters

CHWK	ak	100	F	Chilliwack, B. C. P.	Wellington Ave.
CJCS	ae	500	(1) P	Sudbury, Ont. E.	Nickel Range Hotel
CKY	ak	5000	F	Winnipeg, Man. C.	Sherbrooke St.
KELW	ae	500	2	Burbank, Calif. P.	3702 Magnolia Blvd.
KTM	ae	500	2 (1)	Los Angeles, Calif. P.	214 So. Vermont St.
WEAN	ae	500	CH	Providence, R. I. E.	Crown Hotel
WMC	ak	500	N (1)	Memphis, Tenn. C.	Hotel Gayoso
WTAR	ae	500	C	Norfolk, Va. E.	Wainwright Bldg.
XEP	z	500	.....	Mexico City, D. F. C.	Rembrandt 11

790 kilocycles 379.5 meters

CMJK	ak	500	.....	Camaguey, Cuba. E.	Finlay Nr. 3 Altos
KGO	ak	7500	N	San Francisco, Calif. P.	111 Sutter St.
WGY	ak	5000	R	Schenectady, N. Y. E.	1 River Road

800 kilocycles 374.8 meters

TIGP	z	75	.....	San Jose, C. R.	
WBAP	ak	50000	Na	Fort Worth, Tex. 3.	400 W. 7th St.
WFAA	ak	50000	Na	Dallas, Tex. C.	Baker Hotel
XFC	z	350	805	Aguascalientes, Ags.	Government Bldg.

810 kilocycles 370.2 meters

WCCO	ae	5000	C	Minneapolis, Minn.	Nicollet Hotel
WNYC	ak	500	N	New York, N. Y. E.	Centre and Duane Sts.
XEBC	ak	2500	815	Agua Caliente, B. C.	Hotel Agua Caliente

820 kilocycles 365.6 meters

CMGC	z	30	.....	Matanzas, Cuba. E.	Independencia Nr. 56
WHAS	aj	50000	C	Louisville, Ky. C.	3rd and Liberty Sts.

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

830 kilocycles 361.2 meters

CMC	ae	500	835	Havana, Cuba.	E.	Aguila y Dragones
CMGA	z	100	834	Colon, Cuba.	E.	Marti Nr. 19
KOA	ak	12500	N	Denver, Colo.	M.	1370 Krameria St.
LR5	z	20000	.....	Buenos Aires, Arg.	L.	
TIEA	z	7.5	833	San Jose, C. R.	L.	
WBEU	ak	1000	D	Reading, Pa.	E.	533 Penn St.
WHDH	ae	1000	Dn	Boston, Mass.	E.	62 Boylston St.
WRUF	ae	5000	Dn	Gainesville, Fla.	E.	
XETW	dk	500	.....	Mexico City, D. F.	C.	Gante 4, 3 er Piso

840 kilocycles 356.9 meters

CJOC	ak	100	F	Lethbridge, Alta.	M.	Marquis Hotel
CKLW	ae	5000	C	Windsor, Ont.	E.	Guaranty Trust Bldg.

850 kilocycles 352.7 meters

KIEV	ak	100	D	Glendale, Calif.	P.	Glendale Hotel
KWKH	ae	10000	I	Shreveport, La.	C.	Spring and Fannin Sts.
WWL	ae	10000	1Dn	New Orleans, La.	C.	Roosevelt Hotel

860 kilocycles 348.6 meters

TIVL	z	30	869	San Jose, C. R.	C.	
WABC	ae	50000	C	New York, N. Y.	E.	485 Madison Ave.
WHB	ae	500	D	Kansas City, Mo.	C.	Scarritt Bldg.
XEMO	ak	1500	865	Tijuana, B. C.	P.	Ave. B 506

870 kilocycles 344.6 meters

CMCF	ak	250	873	Havana, Cuba.	E.	P. O. Box 647
CMX	ae	1000	875	Havana, Cuba.	E.	Ave. de la Republica 99
WENR	ak	50000	Na	Chicago, Ill.	C.	222 N. Bank Drive
WLS	ae	50000	Na	Chicago, Ill.	C.	1230 W. Washington Blvd.

880 kilocycles 340.7 meters

CJCB	ak	50	F	Sydney, N. S.	A.	318 Charlotte St.
CRCO	ak	1000	F	Ottawa, Ont.	E.	Chateau Laurier Hotel
KFKA	ak	500	2 (1)	Greeley, Colo.	M.	P. O. Box 735
KLX	ae	1000	.....	Oakland, Calif.	P.	Tribune Tower
KPOF	ae	500	2	Denver, Colo.	M.	1845 Champa St.
WCOC	ae	500	(1)	Meridian, Miss.	C.	Box 603
WGBI	ae	500	1	Scranton, Pa.	E.	Select Bldg.
WQAN	ae	250	1	Scranton, Pa.	E.	149 Penn Ave.
WSUI	ae	500	.....	Iowa City, Iowa.	C.	
YV2BC	z	100	882	Caracas, Venez.	L.	

890 kilocycles 336.9 meters

KARK	ak	250	.....	Little Rock, Ark.	C.	212 National Stanad Bldg.
KFNF	ak	500	2 (1)	Shenandoah, Iowa.	C.	407 Sycamore St.
KSEI	ck	250	(.5)	Pocatello, Idaho.	M.	141 S. 6th Ave.
KUSD	ae	500	2	Vermillion, S. D.	C.	
WGST	aeh	250	C (1)	Atlanta, Ga.	C.	Ansley Hotel
WILL	ak	250	2 (.1)	Urbana, Ill.	C.	
WJAR	ae	500	R	Providence, R. I.	E.	Weybossett St.
WMMN	ae	250	(.5)	Fairmount, W. Va.	E.	325 Main St.
XETU	z	100	.....	Pachuca, Hdo.		
XEW	ak	50000	.....	Mexico City, D. F.	C.	Ayuntamiento 54

900 kilocycles 333.1 meters

KGBU	ak	500	.....	Ketchikan, Alaska.	L.	Mile 5, Wards Cove Rd.
KHJ	ae	1000	CT	Los Angeles, Calif.	P.	1076 W. 7th St.
WBEN	ae	1000	R	Buffalo, N. Y.	E.	Hotel Statler
WJAX	aeh	1000	N	Jacksonville, Fla.	E.	Waterworks Park
WKY	ak	1000	N	Oklahoma City, Okla.		Plaza Court Bldg.
WLBL	ae	2500	D	Stevens Point, Wis.	C.	Fox Theatre Bldg.

INDEX BY FREQUENCIES AND DIAL NUMBERS

910 kilocycles 329.6 meters

CMCD	ah	500	915	Havana, Cuba.	E.	Hotel Palace
CMDE	z	150	915	Havana, Cuba.	E.	
CMJF	z	200	.....	Camaguey, Cuba.	E.	
CRCM	ck	5000	F	Montreal, Que.	E.	
TICR	z	75	911	San Jose, C. R.	C.	

920 kilocycles 325.9 meters

HHK	ae	1000	.....	Port-au-Prince, Haiti.		
KFEL	ak	500	1	Denver, Colo.	M.	1728 Stout St.
KFXF	ak	500	1	Denver, Colo.	M.	Continental Oil Bldg.
KOMO	ak	1000	N	Seattle, Wash.	P.	Skinner Bldg.
KPRC	ae	1000	N (2.5)	Houston, Texas.	C.	2204 Shell Bldg.
WBAF	ak	500	D	Chicago, Ill.	C.	836 Exchange Ave.
WBSO	ae	500	D	Babson Park, Mass.	E.	
WWJ	ae	1000	R	Detroit, Mich.	E.	616 Lafayette Blvd.

930 kilocycles 322.4 meters

CFAC	ak	100	.....	Calgary, Alta.	M.	Herald Bldg.
CFCN	ak	100	F	North Bay, Ont.	E.	Capital Theatre Bldg.
CFLC	ae	100	.....	Prescott, Ont.	E.	Doyle Bldg.
CKFC	ae	100	FG	Brantford, Ont.	E.	268 Guelph St.
CKPR	ak	50	F	Fort William, Ont.	E.	Royal Edward Hotel
KFWI	ak	500	1	San Francisco, Calif.		DeYoung Bldg.
KGBZ	ak	500	2 (1)	York, Neb.	C.	
KMA	ak	500	2 (1)	Shenandoah, Iowa.	C.	
KROW	ak	500	1 (1)	Oakland, Calif.	P.	1803 Franklin St.
WBRC	ak	500	C (1)	Birmingham, Ala.	C.	2300 5th Ave.
WDBJ	ae	250	C (.5)	Roanoke, Va.	E.	122 W. Church Ave.

KCYS.

990

DIAL

940 kilocycles 319.0 meters

CMHD	dk	500	945.5	Caibarien, Cuba.	E.	Box 155
KOIN	ak	1000	CT	Portland, Ore.	P.	New Heathman Hotel
VOAS	ak	100	.....	St. John's, Nfld.	L.	Water St.
WAAT	ae	300	D	Jersey City, N. J.	E.	50 Journal Square
WAVE	ak	1000	N	Louisville, Ky.	C.	Brown Hotel
WCSH	ae	1000	R (2.5)	Portland, Maine.	E.	157 High St.
WDAY	ae	1000	N	Fargo, N. D.	C.	118 Broadway
WHA	ak	1000	D	Madison, Wis.	C.	Sterling Hall
XEFO	ak	5000	.....	Mexico City, D. F.	C.	Donato Guerra 14

950 kilocycles 315.6 meters

KFWB	ak	1000	.....	Hollywood, Calif.	P.	6425 Hollywood Blvd.
KGHL	ak	1000	NJ (2.5)	Billings, Mont.	M.	4th and Broadway
KMBC	ak	1000	C	Kansas City, Mo.	C.	Pickwick Hotel
WRC	ae	500	R	Washington, D. C.	E.	National Press Bldg.

960 kilocycles 312.3 meters

CMBD	z	250	965	Havana, Cuba.	E.	Enamorados y Flores
CMCW	ak	150	965	Havana, Cuba.	E.	Fabrica y Aspuru
CMJL	z	50	.....	Camaguey, Cuba.		Cuba Nr. 27
CRCT	ak	5000	NF	Toronto, Ont.	E.	805 Davenport Road
XEAW	ak	10000	965	Reynosa, Tams.	C.	McAllen, Texas
YVIBC	ak	5000	.....	Caracas, Venez.	L.	Apdo. 290

970 kilocycles 309.1 meters

CMGF	ak	100	971.5	Mantanzas, Cuba.	E.	General Betencourt Nr. 105
KJR	z	5000	N	Seattle, Wash.	P.	Skinner Bldg.
WCFL	ae	1500	BX	Chicago, Ill.	C.	666 Lake Shore Drive
WIBG	ae	100	D	Glenside, Pa.	E.	Keswick Bldg.

980 kilocycles 303.9 meters

KDKA	ak	50000	B	Pittsburgh, Pa.	E.	700 Braddock Ave.
XEFE	z	100	985	Nuevo Laredo, Tams.	C.	Km. 4, Carretera Laredo-Monterrey

990 kilocycles 302.8 meters

LR-4	z	12000	.....	Buenos Aires, Arg.	L.	
TITV	z	7.5	999	San Jose, C. R.	C.	
WBZ	ak	50000	BSy	Boston, Mass.	E.	Hotel Bradford
WNZA	ak	1000	BSy	Springfield, Mass.	E.	

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

WJEM	z	500	DP	Tupelo, Miss.	C.
XEAF	z	750	.....	Nogales, Son.	Hotel Central
XEK	ak	100	.....	Mexico City, D. F.	C. Jalapa Nr. 51

1000 kilocycles 299.8 meters

CMBZ	ak	150	1005	Havana, Cuba.	E.	San Rafael 14
CMHI	ak	250	1007	Santa Clara, Cuba.	E.	Independencia Nr. 34
KFVD	ae	250	Dn	Los Angeles, Calif.	P.	645 So. Mariposa Ave.
WHO	ak	50000	R	Des Moines, Iowa.	C.	914 Walnut St.
WORK	ak	1000	D	York, Pa.	E.	13 So. Beaver St.
XEC	z	50	.....	Toluca, D. F.	C.	Independencia Nr. 76
XEFJ	ak	100	.....	Monterrey, N. L.	C.	Morelas 759
XEL	ak	10	.....	Saltillo, Coah.	C.	Escuela Normal

1010 kilocycles 296.9 meters

CHML	aei	50	M	Hamilton, Ont.	E.	Pigott Bldg.
CHWC	ae	500	3F	Regina, Sask.	M.	Rose off 11th
CKCD	ak	100	.....	Vancouver, B. C.	P.	198 W. Hastings St.
CKCK	ak	500	3F	Regina, Sask.	M.	Leader Bldg.
CKCO	z	100	.....	Ottawa, Ont.	E.	272 Summerst St. W.
CKIC	ak	50	.....	Wolfville, N. S.	A.	
CKWX	aeH	100	L	Vancouver, B. C.	P.	801 W. Georgia St.
CMJO	ak	50	.....	Ciego de Avila, Cuba.	C.	Central y Maceo
KGGF	ak	500	2 (1)	Coffeyville, Kans.	C.	8th and Elm Sts.
KQW	ae	500	.....	San Jose, Calif.	P.	87 E. San Antonio
TIGA	z	30	1014	Cartago, C. R.		
WBN	ae	1000	.....	New York, N. Y.	E.	1540 Broadway
WIS	ae	500	N (1)	Columbia, S. C.	E.	1811 Main St.
WNAD	ae	500	2	Norman, Okla.	C.	
XEJ	ak	250	1015	Jaurez, Chih.	C.	Ave. Lerdo 309
XEU	ak	100	.....	Veracruz, Ver.	C.	Vicario 12

1020 kilocycles 293.9 meters

KYW	ak	10000	NY	Chicago, Ill.	C.	310 S. Michigan Ave.
WRAX	ak	250	DZ	Philadelphia, Pa.	E.	22nd and Walnut St.
XES	dk	250	.....	Tampico, Tams.	E.	Aduana Sur 4 Altos

1030 kilocycles 291.1 meters

CFCN	ak	10000	F	Calgary, Alta.	M.	Toronto General Trust Bldg.
CFNB	ae	500	FE	Fredericton, N. B.	A.	Queen St.
CKNC	ak	100	F	Toronto, Ont.	E.	805 Davenport Road
CMKC	z	150	1034	Santiago, Cuba.	E.	J. A. Saco, Alta 23
XEB	ak	10000	.....	Mexico City, D. F.	C.	Buen Tono Nr. 6

1040 kilocycles 288.3 meters

CMBG	z	225	1048a	Havana, Cuba.	E.	Hospital Nr. 100
CMCB	ak	150	1048a	Havana, Cuba.	E.	Metropolitan Bldg.
CMGH	ak	15	.....	Matanzas, Cuba.	E.	Bonifacio Byrne 113
KRLD	ae	10000	1C	Dallas, Texas.	C.	Adolphus Hotel
KTHS	ae	10000	DN	Hot Springs, Ark.	C.	135 Benton St.
WESG	ak	1000	D	Elmira, N. Y.	E.	Mark Twain Hotel
WKAR	ak	1000	D	East Lansing, Mich.	E.	

1050 kilocycles 285.5 meters

CHNS	ae	500	FL	Halifax, N. S.	A.	Lord Nelson Hotel
CMJG	z	50	.....	Carnaguey, Cuba.	E.	Martires Nr. 133
KFBI	ak	5000	Dn	Abilene, Kans.	C.	Box 345
KNX	ak	25000	.....	Hollywood, Calif.	P.	1558 No. Vine St.
VOGY	ak	75	.....	St. John's, Nfld.	L.	Newfoundland Hotel
XEFC	ak	100	.....	Merida, Yuc.	C.	Calle 59, 517

1060 kilocycles 282.8 meters

KWJJ	ak	500	.....	Portland, Ore.	P.	328 Salmon St.
WBAL	ae	10000	1B	Baltimore, Md.	E.	Lesington Bldg.
WJAG	ak	1000	D	Norfolk, Neb.	C.	Hotel Norfolk
WTIC	ak	50000	1R	Hartford, Conn.	E.	26 Grove St.

1070 kilocycles 280.2 meters

KJBS	ae	100	D	San Francisco, Calif.	P.	1380 Bush St.
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INDEX BY FREQUENCIES AND DIAL NUMBERS

WCAZ	ae	100	D	Carthage, Ill. C.	97 1/4 Adams St.
WDZ	ak	100	D	Tuscola, Ill. C.	Star Store Bldg.
WTAM	ck	50000	R	Cleveland, Ohio. E.	1367 E. 6th St.

1080 kilocycles 277.6 meters

VOKW	z	30	1085	St. John's, Nfld. L.	P. O. Box East 5039
WBT	ae	50000	CU	Charlotte, N. C. E.	Wildier Bldg.
WCBD	ae	5000	1Dn	Zion, Ill. C.	Temple Site
WMBI	ae	5000	1Dn	Chicago, Ill. C.	153 Institute Place

1090 kilocycles 275.1 meters

KMOX	ak	50000	C	St. Louis, Mo. C.	Mart Bldg., 12th and Spruce Sts.
XEAI	z	100	.....	Mexico City, D. F.	Ave. Insurgentes 366
XEWV	z	250	1095	Veracruz, Ver. C.	Ave. Independencia 57

1100 kilocycles 272.6 meters

CMHA	z	.....	1103	Sagua la Grande, Cuba.	
CMCU	ak	500	.....	Havana, Cuba. E.	San Francisco 13, Vibora
CRCV	ak	1000	F	Vancouver, B. C. P.	1150 Main St.
KGDM	ak	250	D	Stockton, Calif. P.	Market and California Sts.
TIRCA	ak	500	.....	San Jose, C. R. C.	Apdo. 225
WLWL	ae	5000	1	New York, N. Y. E.	415 W. 59th St.
WPG	ak	5000	1C	Atlantic City, N. J.	Convention Hall
XEA	ak	125	.....	Guadalajara, Jal. C.	Pedro Loza 28
XEFG	ak	250	1105	Mexico City, D. F. C.	Tepic 48

1110 kilocycles 270.1 meters

KSOO	ak	1000	Dn (2.5)	Sioux Falls, S. D. C.	1613 So. Duluth Ave.
WRVA	ae	5000	N	Richmond, Va. E.	22nd and Cary Sts.
XENT	ak	30000	1115	Nuevo Laredo, Tams.	Apdo. 47

1120 kilocycles 267.7 meters

CFTP	z	100	.....	Edmonton, Alta. M.	
CHGS	ae	50	F	Summerside, P. E. I.	Water St.
CHLP	z	100	.....	Montreal, Que. E.	180 St. Catherine E.
CKOC	ae	500	F (1)	Hamilton, Ont. E.	Wentworth Bldg.
CMHJ	ae	60	1125	Cienfuegos, Cuba. E.	Apdo. 57
KFIO	ae	100	D	Spokane, Wash. P.	213 Riverside
KFSG	ag	500	a	Los Angeles, Calif. P.	1100 Glendale Blvd.
KRKD	ae	500	a	Los Angeles, Calif. P.	815 Spring Arcade Bldg.
KRSC	ak	100	D	Seattle, Wash. P.	Washington Athletic Club
KTRH	z	1000	2C	Houston, Texas. C.	Rice Hotel
WDEL	ak	250	(.5)	Wilmington, Del. E.	10th and King Sts.
WHAD	ak	250	1C	Milwaukee, Wis. C.	1217 W. Wisconsin Ave.
WISN	ak	250	1	Milwaukee, Wis. C.	123 W. Michigan Ave.
WTAW	ae	500	2	College Station, Tex.	

1130 kilocycles 265.3 meters

KSL	ae	50000	C	Salt Lake City, Utah.	Vermont Bldg.
TGW	ak	500	X	Guatemala City, Gua. L.	
WJJD	ae	20000	Dn	Chicago, Ill. C.	201 N. Wells St.
WJW	ag	1000	D	New York, N. Y. E.	16 E. 42nd St.
XEH	ak	250	1132	Monterrey, N. L. C.	P. O. Box 147

1140 kilocycles 263.0 meters

CMBJ	z	500	1147	Havana, Cuba. E.	San Lazoro 92
CMBW	ak	600	.....	Havana, Cuba. E.	Obrapia Nr. 13
CMCG	z	500	.....	Havana, Cuba. E.	
KVOO	ae	25000	1N	Tulsa, Okla. C.	Wright Bldg.
WAPI	ae	5000	1N	Birmingham, Ala. C.	Protective Life Bldg.

1150 kilocycles 260.7 meters

CMJH	ak	50	.....	Ciego de Avila, Cuba.	Independencia 89
WHAM	ae	50000	B	Rochester, N. Y. E.	Sagamore Hotel
XED	ak	500	1155	Guadalajara, Jal. C.	Apdo. 197

1160 kilocycles 258.5 meters

WOWO	ae	10000	1C	Fort Wayne, Ind. C.	213 W. Main St.
WVVA	ae	5000	1C	Wheeling, W. Va. E.	Hawley Bldg.

**KCYS.
1160**

DIAL

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

1170 kilocycles 256.3 meters

CMJE z 50
WCAU ae 50000 C

Camaguey, Cuba. E. Plaza de Maceo
Philadelphia, Pa. E. 1622 Chestnut St.

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1180 kilocycles 254.1 meters

CMBN ak 150 1185
CMBX z 1185
CMCJ z 500
KEX ak 5000 2N
KOE ae 10000 2
WDGY ak 1000 Dn
WINS ae 500
WMAZ ak 500

Havana, Cuba. E. Agramonte Nr. 32 Regla
Havana, Cuba. E.
Havana, Cuba. E. Estevez Nr. 4
Portland, Ore. P. 205 Terminal Sales Bldg.
Albuquerque, N. M. M. Box 667
Minneapolis, Minn. C. 909 W. Broadway
New York, N. Y. E. 235 E. 45th St.
Macon, Ga. E. Cotton Ave.

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1190 kilocycles 252.0 meters

HIJ z 15 1195
VE9EK ak 10 1195
YONF ak 400 1195
WQAI ae 50000 N
WSAZ ak 1000 DP
..... z 100

Santo Domingo, D. R. E. Hostos 34
Montmagny, Que. E.
St. John's, Nfld. L. P. O. Box 1355
San Antonio, Texas. C. 1038 Navarro St.
Huntington, W. Va. E. 929 1/2 Fourth Ave.
Waterbury, Conn. E.

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1200 kilocycles 249.9 meters

CHAB ak 100 F
CJAT ak 50
CKTB ae 100 G
CMGB z 30 1205
CMHW z 100
KBTM ak 100 DY
KERN ak 100 CT
KFJB ak 100 (.25)
KFED ae 100
KFXXJ ak 100
KGDE ak 100 (.25)
KGEK ak 100
KGFJ ae 100
KGHI ak 100 (.25)
KGVO ak 100
KMLB ak 100
KSUN ae 100 D
KVOS ak 100
KWG ae 100 CT
WABI ak 100
WBBX ck 100 i
WBBZ ak 100
WBHS z 100 4
WCAT ak 100 D
WCAX ak 100
WCLO ak 100
WFAM ak 100 8C
WFBC ak 100 4 (.25)
WFBE ak 100 (.25)
WHBC ak 100 2
WHBY ak 100
WIBX ae 100 (.3)
WIL ak 100 5 (.25)
WJBC ae 100 6
WJBL ae 100 6
WJBW ae 100 1
WKBO ak 100 3
WKJC ae 100 3
WNBO ae 100 2
WNBW z 10 (.1)
WPHR ak 100 (.25)
WRBL z 100
WWAE ae 100 8
XETH ak 100
YV3BC ak 1000
10-AK ak 15
10-BF ak 15
10-BQ ak 15
10-BU z 15

Moose Jaw, Sask. M. 12 High St. W.
Trail, B. C. P.
St. Catharines, Ont. E. Welland House
Matanzas, Cuba. E. Magdalena Nr. 1
Cienfuegos, Cuba. E.
Jonesboro, Ark. C. Hotel Noble
Bakersfield, Calif. P. Elks Club
Nampa, Idaho. M. 1603 W. Main St.
Grand Junction, Colo. M. 1024 12th Ave. So.
Fergus Falls, Minn. C.
Yuma, Colo. M. 109 W. 2nd St.
Los Angeles, Calif. P. 1417 So. Figueroa St.
Little Rock, Ark. C. Marion Hotel
Missoula, Mont. M. 240 N. Higgins St.
Monroe, La. C. Francis Hotel
Lowell, Ariz. M. Drawer C
Bellingham, Wash. P. Bellingham Hotel
Stockton, Calif. P. Medico Dental Bldg.
Bangor, Maine. E. Park St.
New Orleans, La. C. Marherc Hotel
Ponca City, Okla. C. 407 W. South Ave.
Huntsville, Ala. C.
Rapid City, S. D. C.
Burlington, Vt. E. 203 College St.
Janesville, Wis. C. 200 E. Milwaukee St.
South Bend, Ind. C. 225 W. Colfax Ave.
Greenville, S. C. E. Imperial Hotel
Cincinnati, Ohio. E. Hotel Sinton-St. Nicholas
Canton, Ohio. E. 319 W. Tuscarawas St.
Green Bay, Wis. C. Bellin Bldg.
Utica, N. Y. E. First National Bank Bldg.
St. Louis, Mo. C. Melbourne Hotel
LaSalle, Ill. C. Kaskaskia Hotel
Decatur, Ill. C. 134 S. Water St.
New Orleans, La. C. 2743 Dumaine St.
Harrisburg, Pa. E. 4th and Market Sts.
Lancaster, Pa. E. 16 W. King St.
Silverhaven, Pa. E. Warner State Studio, Washington, Pa.
Carbondale, Pa. E. 50 Main St. No.
Petersburg, Va. E. Medical Arts Bldg.
Columbus, Ga. C. Royal Theatre Bldg.
Hammond, Ind. C. 402 Hammond Bldg.
Puebla, Pue. C. Edificio Alhondiga
Caracas, Venez. L.
Stratford, Ont. E.—151 Ontario St.
Wingham, Ont. E—Box 65.
Brantford, Ont. E. 12 Terrace Hill St.
Canora, Sask. C. Railway Ave. E.

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1210 kilocycles 247.8 meters

CFBO z 100 F
CFNC ak 100 PF

St. John, N. B. A. Canterbury Court.
New Carlisle, Que. A.

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INDEX BY FREQUENCIES AND DIAL NUMBERS

CKBI	ak	100	Prince Albert, Sask.	M.	Orpheum Theatre Bldg.
CKCH	z	100	.....	Hull, Que.	E.	
CKMC	ak	50	.....	Cobalt, Ont.	E.	Box 788
CKOV	ak	50	F.....	Celowna, B. C.	P.	Box 243
CMHK	ak	50	.....	Cruces, Cuba	E.	Apdo. 79
KASA	ak	100	.....	Elk City, Okla.	C.	Casa Grande Hotel.
KDLR	ak	100	.....	Devils Lake, N. D.	C.	1025 3rd St.
KFJF	ak	100	.....	Klamth Falls, Ore.	P.	Willard Hotel.
KFOR	ak	100	(.25)C	Lincoln, Neb.	C.	Box 1537
KFPW	ak	100	.....	Fort Smith, Ark.	C.	1215 Garrison Ave.
KFVS	ak	100	6.....	Cape Girardeau, Mo.	Box 275	
KFCM	ak	100	9.....	San Bernardino, Calif.		California Hotel.
KGCR	ak	100	.....	Watertown, S. D.	C.	312 Citizens Bank Bldg.
KGY	ak	100	.....	Olympia, Wash.	P.	11th and Capitol Way
KIEM	ak	100	.....	Eureka, Calif.	P.	Vance Hotel
KPPC	ak	50	9.....	Pasadena, Calif.	P.	585 E. Colorado St.
KWEA	z	100	.....	Shreveport, La.	C.	Spring and Fannin Sts.
KWVF	z	100	.....	Hilo, Hawaii	L.	
WALR	ae	100	.....	Zanesville, Ohio.		First Trust & Savings Bldg.
WBAX	ae	100	1.....	Wilkes Barre, Pa.	E.	70 S. Main St.
WBBL	ak	100	7S.....	Richmond, Va.	E.	1627 Monument Ave.
WCBS	ak	100	2.....	Springfield, Ill.	C.	208 1/2 S. 5th St.
WCRW	ak	100	4.....	Chicago, Ill.	C.	2756 Pine Grove Ave.
WEBQ	ae	100	6.....	Harrisburg, Ill.	C.	100 E. Poplar St.
WEDC	ae	100	4.....	Chicago, Ill.	C.	3860 Ogden Ave.
WFAS	ak	100	3.....	White Plains, N. Y.	E.	Roger Smith Hotel
WGBB	ak	100	3.....	Freeport, N. Y.	E.	64 S. Grove St.
WGCM	ae	100	(.25)	Mississippi City, Miss.		Great Southern Hotel, Gulfport.
WGNV	ak	100	3.....	Chaster, N. Y.	E.	Orange County.
WHBF	ak	100	.....	Rock Island, Ill.	C.	100 18th St.
WHBU	ah	100	.....	Anderson, Ind.	C.	641 Citizens Bank Bldg.
WIBU	a	100	.....	Poynette, Wis.	C.	RFD 3.
WJBI	ak	100	3.....	Red Bank, N. J.	E.	63-65 Broad St.
WJBY	ak	100	.....	Gadsden, Ala.	C.	112 N. 8th St.
WJEJ	ah	100	D.....	Hagerstown, Md.	E.	Alexander Hotel.
WJW	ak	100	.....	Akron, Ohio.	E.	41 S. High St.
WKFI	ak	100	V.....	Greenwood, Miss.	C.	Box 302.
WKOK	ak	100	1P.....	Sunbury, Pa.	E.	1150 N. Front St.
WMBG	ak	100	7C.....	Richmond, Va.	E.	914 W. Broad St.
WOCL	ak	50	.....	Jamstown, N. Y.	E.	840 N. Main St.
WOMT	ae	100	.....	Manitowoc, Wis.	C.	P. O. Box 325.
WPRO	ak	100	X.....	Providence, R. I.	E.	15 Chestnut St.
WODX	ae	100	.....	Thomasville, Ga.	E.	135 E. Jackson St.
WSBC	ae	100	4.....	Chicago, Ill.	C.	1258 S. Michigan Ave.
WSEN	ak	100	.....	Columbus, Ohio.	E.	144 S. High St.
WSIX	ak	100	.....	Springfield, Tenn.	C.	
WSOC	ae	100	N(.25)	Charlotte, N. C.	E.	Box 730.
WTAX	ae	100	2.....	Springfield, Ill.	C.	416 E. Capitol Ave.
XETZ	z	500	Mexico City, D. F.	C.	Pasaje Yucatan.

KCYS.

1240

DIAL

1220 kilocycles 245.8 meters

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KFKU	ae	500	a	Lawrence, Kas.	C.	109 Fraser Hall.
KTW	ak	1000	S2	Seattle, Wash.	P.	7th Ave. and Spring St.
KWSC	ak	1000	2 (2)	Pullman, Wash.	P.	
WCAD	ak	500	D	Canton, N. Y.	E.	Park St.
WCAE	ak	1000	R	Pittsburgh, Pa.	E.	359 6th Ave.
WDAE	ae	1000	CW	Tampa, Fla.	E.	Tampa Terrace Hotel.
WREN	ak	1000	Ba	Lawrence, Kas.	C.	8th and Vermont Sts.

1230 kilocycles 243.8 meters

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CFOC	z	500	F	Saskatoon, Sask.	C.	
CMBY	z	250	2	Havana, Cuba.	E.	Principe Nr. 33.
CNCA	z	150	2	Havana, Cuba.	E.	Ave. de Italia Nr. 102
KGGM	ak	250	(.5)	Albuquerque, N. M.		Franciscan Hotel.
KYA	ae	1000	N	San Francisco, Calif.	P.	988 Market St.
WFBM	ae	1000	1C	Indianapolis, Ind.	C.	229 N. Pennsylvania St.
WNAC	ak	1000	CH	Boston, Mass.	E.	21 Brookline St.
WSBT	ak	500	1C	South Bend, Ind.	C.	225 W. Colfax Ave.

1240 kilocycles 241.8 meters

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CMAB	z	20	1249	Pinar del Rio, Cuba.	E.	Marti Nr. 101
CMJN	z	50	Camaguey, Cuba.	E.	Martires Nr. 11.
KGCU	ak	250	1	Mandan, N. D.	M.	404 W. Main St.
KLPM	ak	250	1	Minot, N. D.	C.	Box 707.
KTAT	ak	1000	C	Fort Worth, Texas.	C.	Texas Hotel.

CUT OUT ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

KTFI	ae	1000	.....	Twin Falls, Idaho.	M. 262 3rd Ave. W.
WKAQ	ae	1000	.....	San Juan, P. R.	A. Box 358.
WXYZ	ak	1000	K	Detroit, Mich.	E. 300 Madison Theatre Bldg.

1250 kilocycles 239.9 meters

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KFOX	ae	1000	Long Beach, Calif.	P. 220 E. Anaheim St.
WCAL	ah	1000	2	Northfield, Minn.	C.
WDSU	ak	1000	C	New Orleans, La.	C. 400 Baronne St.
WGCP	ak	1000	1 (2.5)	Newark, N. J.	E. 100 Shipman St.
WLB	ak	1000	2	Minneapolis, Minn.	C.
WNEW	ae	1000	(2.5)	Newark, N. J.	E. 1060 Broad St.
WRHM	ak	1000	2	Minneapolis, Minn.	C. 150 E. Grant St.
XEFA	z	500	Mexico City, D. F.	C. Mar Mediterraneo 236, Tacuba

1260 kilocycles 238.0 meters

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KOIL	ak	1000	B	Council Bluffs, Iowa.	C.
KRGV	ae	500	1	Harlingen, Texas.	C. Rio Grande National Life Bldg.
KUOA	ak	1000	D	Fayetteville, Ark.	C. Washington Hotel.
KVOA	ak	500	.....	Tucson, Ariz.	M. Steinfeld Dept. Store.
KWWG	z	500	1	Brownsville, Tex.	C.
WLBW	ae	500	C(1)	Erie, Pa.	E. Reed Hotel, Perry Square.
WNBX	ak	250	D	Springfield, Vt.	E. 39 Main St.
WTOC	ae	500	C	Savannah, Ga.	E. DeSoto Hotel.
XEFT	ak	250	Chihuahua, Chih.	C. Apdo. 157

1270 kilocycles 236.1 meters

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CMBC	ae	150	1	Havana, Cuba.	E. Maximo Gomez Nr. 139.
CMCP	z	150	1	Havana, Cuba.	E.
KGCA	ak	100	2D	Decorah, Iowa.	C. 111 Winnebago St.
KOL	ae	1000	CT	Seattle, Wash.	P. Northern Life Tower
KVOR	ae	1000	C	Colorado Springs, Colo.	M. Mining Exchange Bldg.
KWLC	ak	100	2D	Decorah, Iowa.	C.
WASH	ak	500	Ka	Grand Rapids, Mich.	E. 501 Young Bldg.
WFBR	ae	500	R	Baltimore, Md.	E. 7 St. Paul St.
WJDX	ae	1000	N(2.5)	Jackson, Miss.	C. Lamar Life Bldg.
WOOD	ak	500	Ka	Grand Rapids, Mich.	E. 501 Young Bldg.

1280 kilocycles 234.2 meters

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KFBB	ae	1000	(2.5)	Great Falls, Mont.	M. P. O. Box 1817
WCAM	ae	500	1	Camden, N. J.	E. 18th floor, City Hall.
WCAP	ae	500	1	Asbury Park, N. J.	E. Convention Hall.
WDOD	ae	1000	C(2.5)	Chattanooga, Tenn.	C. Hotel Patten.
WIBA	ae	500	N(1)	Madison, Wis.	C. 111 King St.
WORC	ak	500	CH	Worcester, Mass.	E. 60 Franklin St.
WRR	ak	500	C	Dallas, Texas.	C. Hilton Hotel.
WTNJ	ak	500	1	Trenton, N. J.	E. Stacy Trent Hotel.

1290 kilocycles 232.4 meters

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CMHL	ak	20	Cienfuegos, Cuba.	E. San Carlos 143.
KDYL	ae	1000	NJ	Salt Lake City, Utah.	M. Ezra Thompson Bldg.
KLCN	z	100	D	Blytheville, Ark.	C. Main and Division Sts.
KTSA	ak	1000	C	San Antonio, Texas.	C. Plaza Hotel.
WEBC	ae	1000	N (2.5)	Superior, Wis.	C. 1225 Tower Ave.
WJAS	ak	1000	C (2.5)	Pittsburgh, Pa.	E. Law and Finance Bldg.
WNBC	z	50	D	Saranac Lake, N. Y.	E. P. O. Box 297
WNEL	z	500	P	San Juan, P. R.	A.
XEAC	z	100	1295	San Luis Potosi, S. L.	P.
XFB	ak	1000	Jalapa, Ver.	C.

1300 kilocycles 230.6 meters

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CMKJ	z	20	Guantanamo, Cuba.	E. E. Giro Nr. 11.
HIZ	z	10	Santo Domingo, D. R.	L.
KALE	ak	500	3CT	Portland, Ore.	P. New Heathman Hotel.
KFAC	ae	1000	.....	Los Angeles, Calif.	P. 645 S. Mariposa Ave.
KFH	ak	1000	C2	Wichita, Kans.	C. Wichita Eagle Bldg.
KFJR	ag	500	3	Portland, Ore.	P. 622 Lumbermen's Bldg.
VOAC	z	40	.....	St. John's, Nfld.	L.
WBRR	aej	1000	1	Brooklyn, N. Y.	E. 124 Columbia Heights
WEVD	ak	500	1	New York, N. Y.	E. Hotel Claridge
WFAB	ae	1000	1	New York, N. Y.	E. 154 W. 57th St.
WHAZ	ae	500	1	Troy, N. Y.	E. 8th St.
WIOD	ae	1000	N	Miami, Fla.	E. Herald Bldg.
WOQ	ae	1000	2	Kansas City, Mo.	C. 917 Tracy Ave.

INDEX BY FREQUENCIES AND DIAL NUMBERS

1310 kilocycles 228.9 meters

CFJC	ak	100	FLE	Kamloops, B. C.	P. Box 760.
CHCK	ak	50	.....	Charlottetown, P. E. I.	174 Great George St.
CJKL	z	100	.....	Kirkland Lake, Ont.	E.
CJLS	z	100	.....	Yarmouth, N. S.	A.
CKCV	ak	50	.....	Quebec, Que.	E. 155 St. Paul St.
CMCY	ak	500	1316	Havana, Cuba	E. Ave. de los Pdtes 215
KCRJ	ak	100	D	Jerome, Ariz.	M. Drawer D.
KFBK	ak	100	C	Sacramento, Calif.	P. Sacramento Bee.
KFGQ	ak	100	.....	Boone, Iowa.	C. 924 W. 2nd St.
KFPL	ak	100	.....	Dublin, Texas.	C. Box 176.
KFPM	ae	15	.....	Greenville, Texas.	C. 2109 Park St.
KFYO	ak	100	(.25)	Oklahoma City, Okla.	535 High Tower Bldg.
KGBX	ak	100	(.25)	Lubbock, Texas.	C. Hotel Lubbock.
KGCX	ak	100	(.25)	Springfield, Mo.	C.
KGEZ	aj	100	.....	Wolf Point, Mont.	M.
KGFW	z	100	.....	Kalispell, Mont.	M. 1236 Fourth Ave. E.
KIFH	z	100	.....	Kearney, Neb.	C. Hotel Midway.
KIT	ak	100	.....	Juneau, Alaska.	L.
KMED	ck	100	.....	Yakima, Wash.	P. 109 1/2 E. Yakima St.
KRMD	ak	100	.....	Medford, Ore.	P. Sparta Bldg.
KTSM	ak	100	.....	Shreveport, La.	C. 901 Louisiana St.
KXRO	ak	100	a	El Paso, Texas.	M. P. O. Box 1976.
WAML	ak	100	.....	Aberdeen, Wash.	P. Hotel Morck.
WBEO	ae	100	.....	Laurel, Miss.	C. Magnolia St.
WBOW	ak	100	.....	Marquette, Mich.	C. 146 W. Washington St.
WBRE	ak	100	.....	Terre Haute, Ind.	C. 24 1/2 So. 6th St.
WCLS	ae	100	b	Wilkes Barre, Pa.	E. 16 No. Main St.
WDAH	ck	100	Sa	Joliet, Ill.	C. 301 E. Jefferson St.
WEBR	aeaj	100	(.25)	El Paso, Texas.	M. Box 1976
WEXL	ak	50	.....	Buffalo, N. Y.	E. 735 Main St.
WFBG	ae	100	3	Royal Oak, Mich.	E. 212 W. 6th St.
WFDF	ak	100	K	Altoona, Pa.	E. 12th Ave. and 13th St.
WGAL	ae	100	5	Flint, Mich.	E. Union Industrial Bldg.
WGH	ae	100	.....	Lancaster, Pa.	E. 8 W. King St.
WHAT	ak	100	4	Newport News, Va.	E. 2813 Washington Ave.
WJAC	ae	100	3	Philadelphia, Pa.	E. 872 Public Ledger Bldg.
WLBC	ak	100	6	Johnstown, Pa.	E. Tribune Bldg. Annex.
WLNH	z	100	DP	Muncie, Ind.	C. Anthony Bldg.
WMBO	ak	10	.....	Laconia, N. H.	E.
WNBH	ae	100	(.25)	Auburn, N. Y.	E. Metcalf Bldg.
WOL	ae	100	.....	New Bedford, Mass.	E. 725 Pleasant St.
WRAW	ak	100	5	Washington, D. C.	E. Annapolis Hotel.
WROL	ak	100	.....	Reading, Pa.	E. 533 Penn St.
WSAJ	ae	100	.....	Knoxville, Tenn.	C. 524 S. Gay St.
WSGN	ak	100	(.25)	Grove City, Pa.	E. Main and Broad Sts.
WSJS	ak	100	C	Birmingham, Ala.	2021 Second Ave. No.
WTEL	ah	100	4	Winston-Salem, N. C.	416-420 N. Marshall St.
WTSJ	ak	100	(.25)	Philadelphia, Pa.	E. 3701 N. Broad St.
WTRC	ak	50	(.1)	Jackson, Tenn.	C. Sun Bldg.
XECW	z	10	.....	Elkhart, Ind.	C. Main and Marion Sts.
XEFB	ak	100	1315	Mexico City, D. F.	C. Av. Juarez 104
XEFW	ak	70	.....	Monterrey, N. L.	C. 5 DeMayo 112-07e.
XEI	ak	125	.....	Tampico, Tams.	E. S. D. Miron 6-0r.
				Morelia, Mich.	C. Valla Dolid 137.

1320 kilocycles 227.1 meters

KGHF	ak	250	(.5)	Pueblo, Colo.	M. 113 Broadway.
KGMB	ak	250	C	Honolulu, T. H.	L. 119 Merchant St.
KID	ae	250	(.5)	Idaho Falls, Idaho.	M. Box 487.
WADC	ae	1000	C	Akron, Ohio.	E. Box 29.
WSMB	ak	500	N	New Orleans, La.	C. Maison Blanche Bldg.

1330 kilocycles 225.4 meters

CMJI	ak	45	1335	Ciego de Avila, Cuba.	E. Independencia Nr. 95.
KGB	agj	1000	CT	San Diego, Calif.	P. 1012 First St.
KMO	ak	250	.....	Tacoma, Wash.	P. Hotel Winthrop.
KSCJ	aj	1000	1C(2.5)	Sioux City, Iowa.	C. 415 Douglas St.
WDRC	ae	1000	CH	Hartford, Conn.	E. 11 Asylum St.
WSAI	ak	1000	R(2.5)	Cincinnati, Ohio.	E. 1329 Arlington St.
WTAQ	ae	1000	1C	Eau Claire, Wis.	C. Hotel Eau Claire.

1340 kilocycles 223.7 meters

KFPY	ak	1000	C	Spokane, Wash.	P. Symons Bldg.
KGDY	ak	250	.....	Huron, S. D.	C. 347 Dakota Ave.
KGNO	ak	250	.....	Dodge City, Kans.	C. First National Bank Bldg.
WCOA	ae	500	.....	Pensacola, Fla.	E. San Carlos Hotel.
WFEA	ae	500	C	Manchester, N. H.	E. Carpenter Hotel.
WSPD	ae	1000	C	Toledo, Ohio.	E. 505 Jefferson Ave.

KCYS.

1340

DIAL

ON DOTTED LINES

INDEX BY FREQUENCIES AND DIAL NUMBERS

1350 kilocycles 222.1 meters

CMCNR	z	250	1357	Havana, Cuba.	E.	Reina y Ave. Buen Retiro, Mariano.
GMCN	ak	150	1357	Havana, Cuba.	E.	Milagros 35, Vibora.
KIDO	ak	1000	.....	Boise, Idaho.	M.	Hotel Boise.
KWK	ak	1000	B	St. Louis, Mo.	C.	Hotel Chase.
WAWZ	ae	250	1	Zarephath, N. J.	E.	
WBNX	ae	250	1	New York, N. Y.	E.	101 Park Ave.
WEHC	ae	500	D	Charlottesville, Va.	E.	

1360 kilocycles 220.4 meters

CMJP	ak	75	.....	Moron, Cuba.	E.	Calles Nr. 28.
KGEB	ak	1000	.....	Long Beach, Calif.	P.	435 Pine Ave.
KGIR	ak	500	N (1)	Butte, Mont.	M.	121 W. Broadway.
WCSC	ae	500	.....	Charleston, S. C.	E.	Francis Marion Hotel.
WFBL	ak	1000	C(2.5)	Syracuse, N. Y.	E.	Onondaga Hotel.
WGES	ae	500	.....	Chicago, Ill.	C.	128 N. Crawford Ave.
WQBC	ak	500	.....	Vicksburg, Miss.	C.	Hotel Vicksburg.

1370 kilocycles 218.8 meters

CHSJ	z	100	.....	St. John, N. B.	A.	
CMGE	z	30	1375	Cardenas, Cuba.	E.	Cespedes Nr. 180.
KCGR	ak	100	2(.25)	Enid, Okla.	C.	Oxford Hotel.
KFBL	ae	50	3	Everett, Wash.	P.	2814 Rucker Ave.
KFJM	ak	100	.....	Grand Forks, N. D.	C.	
KFJZ	ae	100	.....	Fort Worth, Texas.	C.	359 Texas Hotel.
KGAR	ae	100	(.25)	Tucson, Ariz.	M.	142-146 S. 6th Ave.
KGFG	bk	100	2	Oklahoma City, Okla.	C.	314 N. W. 2nd St.
KGFL	ak	100	4	Roswell, N. M.	M.	507 No. Main St.
KGKL	ak	100	.....	San Angelo, Texas.	C.	St. Angelus Hotel.
KICA	ak	100	4	Clovis, N. M.	M.	Hotel Clovis.
KLUF	z	100	.....	Galveston, Texas.	C.	3327 Ave. P.
KMAC	ak	100	5	San Antonio, Texas.	C.	Blue Bonnet Hotel.
KONO	ak	100	5	San Antonio, Texas.	C.	St. Anthony Hotel.
KOOS	ae	100	.....	Marshfield, Ore.	P.	Hall Bldg.
KRE	ak	100	.....	Berkeley, Calif.	P.	2345 Channing Way
KSO	ak	100	B(.25)	Des Moines, Iowa.	C.	Register and Tribune Bldg.
KUJ	ak	100	.....	Walla Walla, Wash.	P.	2nd and Rose St.
KVL	ak	100	3	Seattle, Wash.	P.	5th and Virginia St.
KWKC	z	100	.....	Kansas City, Mo.	C.	39th and Main St.
WBTM	ak	100	7	Danville, Va.	E.	427 Main St.
WCBM	ae	100	(.25)	Baltimore, Md.	E.	114 W. Lexington St.
WDAS	ae	100	(.25)	Philadelphia, Pa.	E.	Broadwood Hotel.
WGL	ae	100	C	Fort Wayne, Ind.	C.	213 W. Main St.
WGLC	ak	100	C	Hudson Falls, N. Y.	E.	Colonial Display House.
WHBD	ak	100	.....	Mount Orab, Ohio.	E.	
WHBO	ak	100	.....	Memphis, Tenn.	C.	Hotel Claridge.
WHDF	ak	100	(.25)	Calumet, Mich.	E.	515 Scott St.
WHET	ak	100	D	Dothan, Ala.	C.	North Oak and E. Walnut Sts.
WIBM	ae	100	IK	Jackson, Mich.	E.	Otsego Hotel.
WJBK	ae	50	1	Detroit, Mich.	E.	6559 Hamilton Ave.
WJTL	ae	100	.....	Atlanta, Ga.	E.	
WLEY	ak	100	(1.25)	Lexington, Miss.	E.	Box D.
WLVA	ck	100	7	Lynchburg, Va.	E.	915 Main St.
WMBR	ak	100	.....	Jacksonville, Fla.	E.	907 Florida Ave.
WOC	z	100	P	Davenport, Iowa.	C.	
WPFB	ak	100	.....	Hattiesburg, Miss.	C.	Box 530.
WQDM	ae	100	D	St. Albans, Vt.	E.	16 Kingman St.
WRAK	ak	100	.....	Williamsport, Pa.	E.	244 W. 4th St.
WRAM	ae	100	Z	Durham, N. C.	E.	
WRDO	ae	100	.....	Augusta, Maine.	E.	Augusta House.
WRJN	ae	100	.....	Racine, Wis.	C.	Hotel Racine.
WSVS	ak	50	D	Buffalo, N. Y.	E.	666 E. Delavan Ave.
XEFZ	ae	100	.....	Mexico City, D. F.	C.	Calzada Nonoalco 481.
.....	z	100	P	Sheridan, Wyo.	M.	

1380 kilocycles 217.3 meters

CMJC	z	150	1382	Camaguey, Cuba.	E.	Cisneros y G. Gomez.
KOH	ak	500	C	Reno, Nev.	P.	440 N. Virginia St.
KQV	ak	500	2C	Pittsburgh, Pa.	E.	Chamber of Commerce Bldg.
TGX	z	75	.....	Guatemala City, Guat.		
WKBH	ae	1000	C	LaCrosse, Wis.	C.	409 Main St.
WSMK	ak	200	2	Dayton, Ohio.	E.	4th and Main St.
XETB	z	125	Torreón, Coah.	R.	Corono 317.

1390 kilocycles 215.7 meters

CJRC	z	100	Winnipeg, Man.	C.	
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INDEX BY FREQUENCIES AND DIAL NUMBERS

CMPN z 500 1395
 HII ak 15 1395
 KLRA ae 1000 C
 KOY ae 500 (1)
 WHK ae 1000 C(2.5)

Havana, Cuba, E.
 San Pedro de Macoris, D. R. L.
 Little Rock, Ark. C. Albert Pike Hotel.
 Phoenix, Ariz. M. 621 N. Central Ave.
 Cleveland, Ohio. E. 1311 Terminal Tower.

1400 kilocycles 214.2 meters

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CMCM z 15 1405
 KLO ah 500 C
 KTUL z 250 (.5)
 WARD ak 500 2
 WBAA z 500 1
 WBBC ae 500 2
 WKBF ak 500 1N
 WLTH ak 500 2
 WVFW ak 500 2
 XFEV ae 100

Havana, Cuba. Belas Coain Nr. 639.
 Ogden, Utah. M. Hotel Ben Lomond.
 Tulsa, Okla. C.
 Brooklyn, N. Y. E. 427 Flatbush Ave. Extension.
 Lafayette, Ind. C.
 Brooklyn, N. Y. E. 544 Atlantic Ave.
 Indianapolis, Ind. C. 540 1/2 N. Meridian St.
 Brooklyn, N. Y. E. 307 Washington St.
 Brooklyn, N. Y. E.
 Jaurex, Chih. C. Ave. Lerdo Nr. 521.

1410 kilocycles 212.6 meters

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CKFC ak 50 5
 CKMO aj 100 5
 CMCH ak 50

Vancouver, B. C. P. 734 Davie St.
 Vancouver, B. C. P. Bekins Bldg.
 Havana, Cuba. E. 88 Primellas St., Cerro.
 Amarillo, Texas. C. Bellaire Park.
 Boston, Mass. E. 21 Brookline Ave.
 Bay City, Mich. E. Hotel Wenonah
 Amarillo, Texas. C. Box 306
 Sheboygan, Wis. C. 626-636 Center Ave.
 Bluefield, W. Va. E. Bland St.
 Mobile, Ala. C. Battle House.
 Roanoke, Va. E. 20 Salem Ave. S. E.
 Rockford, Ill. C. 230 Rockford News Tower.
 Montgomery, Ala. C. Jefferson Davis Hotel.

1420 kilocycles 211.1 meters

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CKGB z 100

Timmons, Ont. E.
 San Antonio, Texas. C. Texas Theatre Bldg.
 Portland, Ore. P. East 12th and Hoyt Sts.
 Texarkana, Ark. C. Box 865.
 Fond du Lac, Wis. C. 18-20-22 W. First St.
 Shawnee, Okla. C. Box 724
 San Francisco, Calif. P. 1445 Ellis St.
 Alamosa, Colo. M.
 Las Vegas, Nev. M. P. O. Box 656.
 Lamar, Colo. M. 129 W. Elm St.
 Eugene, Ore. P. 733-Willamette St.
 Yuma, Ariz. M. Box 267.
 Portland, Ore. P. 269 Pine St.
 Waco, Texas. C. Trinity Life Bldg.
 Presque Isle, Maine. E. National Bank Bldg.
 Anniston, Ala. C. 1200 Noble St.
 Hazelton, Pa. E. 708 Hazelton National Bank Bldg.
 Greenville, N. C. E. 403 Evans St.
 Cicero, Ill. C. 6138 W. 22nd St.
 Battle Creek, Mich. E. Kellogg Inn.
 Albany, Ga. C. Rylander Theatre Bldg.
 Tupper Lake, N. Y. E. Iroquois Hotel.
 Cicero, Ill. C. 6138 W. 22nd St.
 Wilmington, Del. E. 920 King St.
 Baton Rouge, La. C.
 Ironwood, Mich. C. St. James Hotel.
 Cicero, Ill. C. 6138 W. 22nd St.
 Louisville, Ky. C. Speed Bldg.
 Kansas City, Kans. C. Huron Bldg.
 Springfield, Mass. E. Hotel Stonehaven.
 Detroit, Mich. E. 7310 Woodward Ave.
 Joplin, Mo. C. 1334 Roosevelt St.
 Muscle Shoals, Ala. C. Box 745, Sheffield.
 Paducah, Ky. C.
 Spartanburg, S. C. E. Ravenel and Avant Sts.
 Cumberland, Md. E. Frederick and Liberty Sts.
 Erie, Pa. E.

1430 kilocycles 209.7 meters

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KBCA ak 1000 N
 KGNF ak 500 D
 KWCR ak 250 B (.5)
 WBAK ak 500 (1)
 WBNS ae 500 C
 WHCC ae 500 C

Los Angeles, Calif. P. 1000 So. Hope St.
 North Platte, Neb. C. 1521 W. 12th St.
 Cedar Rapids, Iowa. C. Montrose Hotel.
 Harrisburg, Pa. E. Capitol Bldg.
 Columbus, Ohio. E. Hotel Fort Hayes.
 Rochester, N. Y. E. 40 Franklin St.

KCY.S.
 1430

DIAL

INDEX BY FREQUENCIES AND DIAL NUMBERS

WHP ak 500 C (.1) Harrisburg, Pa. E. 216 Locust St.
 WNBR ae 500 C Memphis, Tenn. C. Hotel DeVoy.
 WOKO ae 500 C Albany, N. Y. E. Hotel Ten Eyck.

1440 kilocycles 208.2 meters

CMBL ak 200 1445 Havana, Cuba. E. Zapata 150 Entre 6 y 8.
 KDFF ak 500 Casper, Wyo. M. Hotel Townsend.
 KLS ae 250 D Oakland, Calif. P. 2201 Telegraph Ave.
 KXYZ ak 250 Houston, Texas. C. Fannin and Rusk Sts.
 TIFS z 7.5 1441 Cartago, C. R. L.
 WBIG ae 500 C(.1) Greensboro, N. C. E. O. Henry Hotel.
 WBCA aj 250 a Allentown, Pa. E. 39-41 Tenth St.
 WMBD ae 500 3C(1) Peoria, Ill. C. 114 N. Madison Ave.
 WSN aj 250 a Allentown, Pa. E. 39-41 Tenth St.
 WTAD ak 500 3 Quincy, Ill. C. State and 6th Sts.

1450 kilocycles 206.8 meters

CFCT ae 50 Victoria, B. C. P. 630 View St.
 CKX ak 500 F Brandon, Man. C. Box 115.
 KTBS ck 1000 N Shreveport, La. C. Box 1642.
 TIEP z 7.5 San Jose, C. R. L.
 WGAR ak 500 B (1) Cleveland, Ohio. E. Hotel Statler.
 WHOM ae 250 Jersey City, N. J. E. 2870 Hudson Blvd.
 WSR ae 250 Fall River, Mass. E. 10 Bedford St.
 WTFI ak 500 Athens, Ga. E. Costa Bldg.
 XEAB ak 7.5 Neuvo Laredo, Tams. C. 1115 Iturbide St.

1460 kilocycles 205.4 meters

KSTP ae 10000 N (25) St. Paul, Minn. C. Hotel St. Paul.
 WJSV ak 10000 C Washington, D. C. E. Shoreham Bldg.

1470 kilocycles 204.0 meters

KGA ak 5000 N Spokane, Wash. P. 1023 Riverside Ave.
 WLAC ae 5000 C Nashville, Tenn. C. 159 Fourth Ave. N.

1480 kilocycles 202.6 meters

CMBK z 15 1485 Havana, Cuba. E. Paula y Oficios.
 KOMA ak 5000 C Oklahoma City, Okla. C. Biltmore Hotel.
 WKBW ae 5000 C Buffalo, N. Y. E. Rand Bldg.

1490 kilocycles 201.2 meters

WCKY ae 5000 BY Covington, Ky. E. 6th and Madison Sts.

1500 kilocycles 199.9 meters

CRCS z 100 F Chicoutimi, Que. E. No. 4 Rue Larouche.
 KDB ak 100 CT Santa Barbara, Calif. P. 15-17 E. Haley St.
 KGF1 ak 100 (.25) Corpus Christi, Tex. C. Plaza Hotel.
 KGFK ak 100 Y Moorhead, Minn. C. 722 Center Ave.
 KGKB ak 100 Tyler, Texas. C. 115 St. College St.
 KGKY ck 100 Scottsbluff, Neb. M. 1517 1/2 Broadway.
 KNOW ak 100 Austin, Texas. C. 113 E. 7th St.
 KOTN z 100 DP Pine Bluff, Ark. C.
 KPJM ak 100 Prescott, Ariz. M. Box 852.
 KQO aj 100 Wenatchee, Wash. P. Cascadian Hotel.
 KREG ak 100 Santa Ana, Calif. P. 3rd and Sycamore Sts.
 KXO al 100 El Centro, Calif. P. 793 Main Sts.
 WCNW ak 100 1 Brooklyn, N. Y. E. 1525 Pitkin Ave.
 WFDV ak 100 Rome, Ga. C. 10 Third Ave.
 WHEF z 100 P (.25) Kosciusko, Miss. C. 417 W. Adams St.
 WKBW ae 100 East Dubuque, Ill. C.
 WKBZ ak 100 Richmond, Ind. C.
 WKEU ak 100 Ludington, Mich. E. First National Bank Bldg.
 WMBQ ae 100 1 LaGrange, Ga. C. 906 Hill St.
 WMEX z 100 P (.25) Brooklyn, N. Y. E. 95 Leonard St.
 WMPG ak 100 Chelsea, Mass. E.
 WNBK ae 100 Lapeer, Mich. E. 81 Liberty St.
 WOPI ae 100 Binghamton, N. Y. E. Arlington Hotel.
 WPEN ak 100 (.25)AZ Philadelphia, Pa. E. 217 S. Broad St.
 WRDW ae 100 Augusta, Ga. E. 309 Eighth St.
 WSYB ae 100 Rutland, Vt. E. 80 West St.
 WRRL ak 100 1 Woodside, N. Y. E. 58th St. No. 41-30.
 WWSW ae 100 (.25) Pittsburgh, Pa. E. Hotel Schenley.

1510 kilocycles 198.6 meters

CFRC ak 100 Kingston, Ont. E.
 CKCR ak 100 Kitchener, Ont. E. 24 King St. So.

INDEX BY LOCATIONS

Frequency in kilocycles in second column. Night power in watts in third column. Network affiliations in fourth column: C Columbia, R National Red, B National Blue, N National Red and Blue, F Canadian.

ALABAMA				Fresno				Yuma				Nampa			
Anniston				KMJJ	580	500	C	-KGEK	1200	100			-KFED	1200	100
WAMC	1420	100		Glendale				CONNECTICUT				Pocatello			
Birmingham				KIEV	850	100		Bridgeport					KSEI	890	250
-WAPY	1140	5000	N	Hollywood				WICC	600	500	C	Twin Falls			
WBRC	930	500	C	-KFWB	950	1000		Hartford				-KTFI	1240	1000	
-WGSN	1310	100		KMTR	570	500		Storrs				ILLINOIS			
Dothan				-KNX	1050	25000		WACB	600	500		Carthage			
-WHET	1370	100		Long Beach				Waterbury				-WCAZ	1070	100	
Gadsden				-KFOX	1250	1000		1190	100		Chicago			
-WJBY	1210	100		-KGER	1360	1000		DELAWARE				-KXVW	1020	10000	N
Huntsville				Los Angeles				Wilmington				-WAAF	920	500	
WBHS	1200	100		KECA	1430	1000	N	WDEL	1120	250		-WBEM	770	25000	C
Mobile				-KFAC	1300	1000		WILM	1420	100		-WCFL	970	1500	C
-WODX	1410	500	C	KFI	640	50000	N	DISTRICT OF COLUMBIA				-WCRW	1210	100	
Montgomery				KFSG	1120	500		Washington				-WBDC	1210	100	
WSFA	1410	500	C	KFVD	1000	250		-WJSV	1460	10000	C	-WBEN	870	50000	N
Muscle Shoals				-KGFJ	1200	100		WMAL	630	250	B	-WGES	1360	500	
-WNRA	1420	100		-KHJ	900	1000	C	WOL	1310	100		-WGN	720	50000	
ALASKA				-KRKD	1120	500		WRC	950	500	R	-WJJD	1130	20000	
Anchorage				KTM	780	500		FLORIDA				-WLS	870	50000	N
KFQD	600	250		Modesto				Clearwater			-WMAQ	670	5000	N	
Juneau				.....	740	250		WFLA	620	1000	N	-WMBI	1080	5000
KIFH	1310	100		Oakland				Gainesville			-WSEB	1210	100		
Ketchikan				-KLS	1440	250		WRUF	830	5000		Cicero			
KGBU	900	500		KLX	880	100		Jacksonville			-WEHS	1420	100		
ARIZONA				-KROW	930	500		-WJAX	900	1000	N	-WHFC	1420	100	
Jerome				Pasadena				WMBR	1370	100	C	WKBI	1420	100	
KCRJ	1310	100		KPPC	1210	50		Miami			Decatur				
Lowell				Sacramento				WIOD	1300	1000	N	-WJBL	1200	100	
KSUN	1200	100		KFBK	1310	100	C	WQAM	560	1000	C	East Dubuque			
Phoenix				San Bernardino				WDBO	580	250	C	-WKBB	1500	100	
KOY	1390	500	N	KFXM	1210	100		Pensacola			Harrisburg				
-KTAR	620	1000	N	San Diego				WSUN	620	1000	N	-WEBQ	1210	100	
Prescott				KFSD	600	1000	N	Tampa			Joliet				
KPJM	1500	100		-KGB	1330	1000	C	-WDAE	1220	1000	C	-WCLS	1310	100	
Tucson				San Francisco				GEORGIA				LaSalle			
KGAR	1370	100		KFRG	610	1000	C	Albany			WJBC	1200	100		
KVOA	1260	500		KFWI	930	500		-WENC	1420	100	Peoria				
Yuma				KGGC	1420	100		Athens			-WMBD	1440	500	C	
KUMA	1420	100		KGO	790	7500	N	-WTFI	1450	500	Quincy				
ARKANSAS				-KJBS	1070	100		Atlanta			-WTAD	1440	500		
Blytheville				-KPO	680	50000	N	WGST	890	250	Rockford				
KLCN	1290	100		KTAB	560	1000		WJTL	1370	100	-WROK	1410	500		
Fayetteville				-KYA	1230	1000	N	-WSB	740	50000	N	Rock Island			
-KUOA	1260	1000		San Jose				Augusta			-WBFB	1210	100		
Fort Smith				-KQW	1010	500		WRDW	1500	100	Springfield				
-KFPW	1210	100		Santa Ana				WRBL	1200	100	-WCBS	1210	100		
Hot Springs				-KREG	1500	100		WKEU	1500	100	-WTAX	1210	100		
-KTHS	1040	10000	N	Santa Barbara				WMAZ	1180	500	Tuscola				
Jonesboro				KDB	1500	100	C	Savannah			-WDZ	1070	100		
-KBTM	1200	100		Stockton				Thomasville			Urbana				
Little Rock				-KQW	1010	500		-WQX	1210	100	-WILL	890	250		
KARK	890	250		-KKGDM	1100	250		HAWAII				Zion			
-KGHI	1200	100		-KWG	1200	100	C	Hilo			WCBF	1080	5000		
-KLRA	1390	1000	C	COLORADO				Honolulu			INDIANA				
Pine Bluff				Alamosa				KGMB	1320	250	C	Anderson			
KOTN	1500	100		-KGIW	1420	100		-KGV	750	2500	N	-WBHU	1210	100	
Texarkana				Colorado Springs				Idaho			Elkhart				
-KCMC	1420	100		-KQVOR	1270	1000	C	Boise			-WTRC	1310	50		
CALIFORNIA				Denver				Savannah			Evansville				
Bakersfield				-KFEL	920	500		-WIOC	1260	500	WGBF	630	500		
-KERN	1200	100	C	-KFXF	920	500		Thomasville			Fort Wayne				
Berkeley				-KLZ	560	1000	C	-WQDX	1210	100	-WGL	1370	100	C	
KRE	1370	100		-KOA	830	12500	N	HAWAII				-WOWO	1160	10000	C
Beverly Hills				-KPOF	880	500		Hilo			Gary				
-KMPC	710	500		Grand Junction				KWFF	1210	100	-WIND	560	1000	C	
Burbank				KFXJ	1200	100		Honolulu			Hammond				
KELW	780	500		Greeley				KGMB	1320	250	WWAE	1200	100		
El Centro				KPKA	880	500		-KGV	750	2500	Indianapolis				
-KXO	1500	100		Lamar				Idaho Falls			-WFBM	1230	1000	C	
Eureka				-KIDW	1420	100		KID	1320	250	-WKBF	1400	500	N	
-KIEM	1210	100		Pueblo				Muncie			WLBC	1310	100		

INDEX BY LOCATIONS

Richmond WKBV 1500 100	Shreveport KRMD 1310 100 KTBS 1450 1000 N KWEA 1210 100 KWKH 850 10000	Royal Oak WEXL 1310 50	Lincoln KFAB 770 5000 C KFOR 1210 100 C
South Bend WFAM 1200 100 C WSBT 1230 500 C	MAINE Augusta WRDO 1370 100 Bangor WABJ 1200 100 WLBZ 620 500 C Portland WCSH 940 1000 R Presque Isle WAGM 1420 100	MINNESOTA Fergus Falls KGDG 1200 100 Minneapolis WCCO 810 50000 C WDGY 1180 1000 WLB 1250 1000 WRHM 1250 1000 Moorhead KGFK 1500 100 Northfield WCAL 1250 1000 St. Paul KSTP 1460 10000 N	Norfolk WJAG 1060 1000 North Platte KGNF 1430 500 Omaha WAAW 660 500 WOW 590 1000 R Scottsbluff KGY 1500 100 York KGBZ 930 500
IOWA Ames WVOI 640 5000 Boone KFGQ 1310 100 Cedar Rapids KWCR 1430 250 B Council Bluffs KOIL 1260 1000 B Davenport WOC 1370 100 Decorah KGCA 1270 100 KWLC 1270 100 Des Moines KSO 1370 100 B WHO 1000 50000 R Iowa City WSUI 880 500 Marshalltown KFJB 1200 100 Shenandoah KFNF 890 500 KMA 930 500 Sioux City KSCJ 1330 1000 C Waterloo WMT 600 500 C WAS	MARYLAND Baltimore WBAL 1060 10000 B WCAO 600 500 C WCBM 1370 100 WFBF 1270 500 R Cumberland WTBO 1420 100 Hagerstown WJBJ 1210 100	MISSISSIPPI Greenwood WKFI 1210 100 Hattiesburg WPFB 1370 100 Jackson WJDX 1270 1000 N Kosciusko WHEF 1500 100 Laurel WAML 1310 100 Meridian WCOC 880 500 Mississippi City WGCM 1210 100 Tupelo WJEM 990 500 Vicksburg WQBC 1360 500	NEVADA Las Vegas KGIX 1420 100 Reno KOH 1380 500 C NEW HAMPSHIRE Laconia WLNH 1310 100 Manchester WFEA 1340 500 C Portsmouth WHEB 740 250 NEW JERSEY Asbury Park WCAP 1280 500 A Atlantic City WPG 1100 5000 C Camden WCAM 1280 500 Jersey City WAAT 940 300 WHOM 1450 250 Newark WGCP 1250 1000 WNEW 1250 1000 WOR 710 5000 Red Bank WJBI 1210 100 Trenton WTNJ 1280 500 Zarephath WAWZ 1350 250
KANSAS Abilene KFBI 1050 5000 Coffeyville KGGF 1010 500 Dodge City KGN0 1340 250 Kansas City WLBK 1420 100 Lawrence KFKU 1220 500 WREN 1220 1000 B Manhattan KSAC 580 500 Topeka WBW 580 1000 C Wichita KFH 1300 1000 C	MASSACHUSETTS Babson Park WBSO 920 500 Boston WAAB 1410 500 C WBZ 990 50000 B WEEI 590 1000 R WHDH 830 1000 WNAC 1230 1000 C Chelsea WMEX 1500 100 Fall River WSAR 1450 250 Lexington WLEY 1370 100 New Bedford WNBH 1310 100 Springfield WBAZ 990 1000 B WMAS 1420 100 C Worcester WORC 1280 500 C WTAG 580 750 R	MISSOURI Cape Girardeau KFVS 1210 100 Columbia KFRU 630 500 Jefferson City WOS 630 500 Joplin WMBH 1420 100 Kansas City KMBC 950 1000 C KWKX 1370 100 WDAF 610 1000 R WHB 860 500 WQQ 1300 1000 St. Joseph KFEO 680 2500 St. Louis KFUO 550 500 KMOX 1090 50000 C KSD 550 500 R KWK 1350 1000 B WEW 760 1000 WIL 1200 100 Springfield KGBX 1310 100 KWTO 560 500	NEW MEXICO Albuquerque KGGM 1230 250 KOB 1180 10000 Clovis KICA 1370 100 Roswell KGF 1370 100 NEW YORK Albany WOKO 1430 500 C Auburn WMBO 1310 100 Binghamton WNBK 1500 100 Brooklyn WARD 1400 500 WBBC 1400 500 WBBR 1300 1000 WCNW 1500 100 WLTH 1400 500 WMBQ 1500 100 WVFW 1400 500 Buffalo WBN 900 1000 R WBRR 1310 100 C WGR 550 1000 C WKBW 1480 5000 C WSVS 1370 50 Canton WCAD 1220 500
KENTUCKY Covington WCKY 1490 5000 B Louisville WAVE 940 1000 N WHAS 820 50000 C WLAP 1420 100 Paducah WPAD 1420 100	MICHIGAN Battle Creek WELL 1420 50 Bay City WBGM 1410 500 Calumet WHDF 1370 100 Detroit WJBK 1370 50 WJR 750 10000 B WMBK 1420 100 WWJ 920 1000 R WXYZ 1240 1000 East Lansing WKAR 1040 1000 Flint WFDF 1310 100 Grand Rapids WASH 1270 500 WOOD 1270 500 Ironwood WJMS 1420 100 Jackson WIBM 1370 100 Kalamazoo WKZO 590 1000 Lapeer WMPK 1500 100 Ludington WKBZ 1500 100 Marquette WBEO 1310 100	MONTANA Billings KGLH 950 1000 N Butte KGRJ 1360 500 N Great Falls KFBB 1280 1000 Kallispeil KGEZ 1310 100 Missoula KGOV 1200 100 Wolf Point KGXC 1310 100 NEBRASKA Clay Center KMMJ 740 1000 Kearney KGFV 1310 100	
LOUISIANA Baton Rouge WJBO 1420 100 Monroe KMLB 1200 100 New Orleans WBXX 1200 100 WDSU 1250 1000 C WJBW 1200 100 WSMB 1320 500 N WWL 850 10000			

INDEX BY LOCATIONS

Chester		OHIO	WLBW 1260 500 C	Huron	
WGNY 1210 100		Akron	" 1420 100	-KGDY 1340 250	
Elmira		-WADC 1320 1000 C	Glenside	Pierre	
-WBSG 1040 1000		-WJW 1210 100	WIBG 970 100	KGFX 630 200	
Freeport		Canton	Grove City	Rapid City	
WGBB 1210 100		-WHBC 1200 100	-WSAJ 1310 100	-WCAT 1200 100	
Hudson Falls		Cincinnati	Harrisburg	Sioux Falls	
WGLC 1370 100 C		WFBE 1200 100	WBAK 1430 1000	-KSOO 1110 1000	
Jamestown		-WLW 700 50000 N	WHP 1430 500 C	Vermillion	
-WOCL 1210 50		-WSAI 1330 1000 R	WKBO 1200 100	KUSD 890 500	
New York		Cleveland	Hazleton	Watertown	
-WABC 860 50000 C		-WGAR 1450 500 B	WAZL 1420 100	-KGC9 1210 100	
WBNX 1350 250		-WHK 1390 1000 C	Johnstown	Yankton	
WBOQ 860 50000		-WJAY 610 500	-WJAC 1310 100	-WNAX 570 1000 C	
-WEAF 660 50000 R		-WTAM 1070 50000 R	Lancaster	TENNESSEE	
WEVD 1300 500		Columbus	WGAL 1310 100	Bristol	
WFAB 1300 1000		WAIU 640 500	WKJC 1200 100	WOPI 1500 100	
WHN 1010 1000		-WBNS 1430 500 C	Philadelphia	Chattanooga	
WINS 1180 500		-WOSU 570 750	-WCAU 1170 50000 C	-WDOO 1280 1000 C	
-WJZ 760 50000 B		WSEN 1210 100	WDAS 1370 100	Jackson	
-WLWL 1100 5000		Dayton	WFI 560 500 R	-WJTS 1310 100	
WMCA 570 500		-WSMK 1380 200	-WHAT 1310 100	Knoxville	
WNYC 810 500		Mount Orab	WIP 610 500 C	WNOX 560 1000 C	
-WVOV 1130 1000		-WHBD 1370 100	WLIT 560 500 R	-WROL 1310 100	
Rochester		Toledo	WPEN 1500 100	Memphis	
-WHAM 1150 50000 B		-WSPD 1340 1000 C	WRAX 1020 250	-WHBQ 1370 100	
-WHCC 1430 500 C		Youngstown	-WTEL 1310 100	-WMC 780 500 N	
Saranac Lake		-WKBN 570 500 C	Pittsburgh	-WNBR 1430 500	
WNBZ 1290 50		Zanesville	-KDKA 980 50000 B	WREC 600 500 C	
Schenectady		WALR 1210 100	KQV 1380 500 C	Nashville	
-WGY 790 50000 R		OKLAHOMA	-WCAE 1220 1000 R	-WLAC 1470 5000 C	
Syracuse		Elk City	WJAS 1290 1000 C	-WSM 650 5000 N	
-WFBF 1360 1000 C		-KASA 1210 100	-WWSW 1500 100	Springfield	
WSYR 570 250 B		Enid	Reading	-WSIX 1210 100	
Troy		-KCRK 1370 100	-WEEU 830 1000	TEXAS	
WHAZ 1300 500		Norman	-WRAW 1310 100	Amarillo	
Tupper Lake		-WNAD 1010 500	Scranton	-KGRS 1410 1000	
WHDL 1420 100		Oklahoma City	WGBI 880 500	-WDAG 1410 1000	
Utica		-KFXR 1310 100	WQAN 880 250	Austin	
-WIBX 1200 100		-KGGF 1370 100	-WNBO 1200 100	KNOW 1500 100	
WFAS 1210 100		-KOMA 1480 5000 C	Sunbury	Beaumont	
Woodside		-WKY 900 1000 N	WKOK 1210 100	-KFDM 560 500	
WWRL 1500 100		Ponca City	Wilkes-Barre	Brownsville	
NORTH CAROLINA		-WBBZ 1200 100	WBAX 1210 100	KWWG 1260 500	
Ashville		Shawnee	WBRE 1310 100	College Station	
WUNC 570 1000 N		-KGFF 1420 100	Williamsport	-WTAW 1120 500	
Charlotte		Tulsa	WRAC 1370 100	Corpus Christi	
-WBT 1080 50000 C		-KTUL 1400 250	York	-KGFJ 1500 100	
-WSOC 1210 100 N		-KVOO 1140 25000 N	WORK 1000 1000	Dallas	
Durham		OREGON	PHILIPPINES	-KRLD 1040 10000 C	
WRAM 1370 100		Corvallis	Manila	-WFAA 800 50000 N	
Greensboro		KOAC 550 1000	KZEG 618.5 1000	-WRR 1280 500 C	
-WBG 1440 500 C		Eugene	KZRM 618.5 50000	Dublin	
Greenville		KORE 1420 100	PORTO RICO	-KFPL 1310 100	
WEED 1420 100		Klamath Falls	San Juan	El Paso	
Raleigh		KFJI 1210 100	-WKAQ 1240 1000	-KTSM 1310 100	
WPTF 680 5000 N		Marshfield	WNEL 1290 500	-WDAH 1310 100	
Winston-Salem		-KOOS 1370 100	RHODE ISLAND	Fort Worth	
-WSJS 1310 100 C		Medford	Providence	-KFJZ 1370 100	
NORTH DAKOTA		KMED 1310 100	WEAN 780 500 C	-KTAT 1240 1000 C	
Bismarck		Portland	WJAR 890 500 R	-WBAP 800 50000 N	
-KFYR 550 1000 N		KALE 1300 500 C	WPRO 1210 100	Galveston	
Devils Lake		KBPS 1420 100	SOUTH CAROLINA	-KLUF 1370 100	
KDLR 1210 100		-KEX 1180 5000 N	Charleston	Greenville	
Fargo		KFJR 1300 500	-WCSC 1360 500	-KFPM 1310 15	
WDAY 940 1000 N		-KGW 620 1000 N	Columbia	Harlingen	
Grand Forks		KOIN 940 1000 C	WIS 1010 500 N	-KRGV 1260 500	
-KFJM 1370 100		KWJJ 1060 500	Greenville	Houston	
Mandan		-KXL 1420 100	-WFCB 1200 100	-KPRC 920 1000 N	
-KCCU 1240 250		PENNSYLVANIA	Spartanburg	-KTRH 1120 1000 C	
Minot		Allentown	WSPA 1420 100	-KXYZ 1440 250	
KLPM 1240 250		WCBA 1440 250	SOUTH DAKOTA	Lubbock	
		WSAN 1440 250	Brookings	-KFYO 1310 100	
		Altoona	KFDY 250 500	San Angelo	
		WFBG 1310 100		-KGKL 1370 100	
		Carbondale		San Antonio	
		WNBW 1200 10		-KABC 1420 100	
		Erie		-KMAC 1370 100	
				-KONO 1370 100	

INDEX BY LOCATIONS

-KTSA 1290 1000 C
 -WOAI 1190 50000 N
 Tyler
 -KGKB 1500 100
 Waco
 -WACO 1420 100 C
 Wichita Falls
 -KGKO 570 250
 UTAH
 Ogden
 KLO 1400 500 C
 Salt Lake City
 -KDYL 1290 1000 N
 -KSL 1130 50000 C
 VERMONT
 Burlington
 WCAX 1200 100
 Rutland
 WSYB 1500 100
 St. Albans
 WQDM 1370 100
 Springfield
 WNBX 1260 250
 Waterbury
 WDEV 550 500
 VIRGINIA
 Arlington
 NAA 690 1000
 Charlottesville
 -WEHC 1350 500
 Danville
 -WBTM 1370 100
 Lynchburg
 WLVA 1370 100
 Newport News
 -WGH 1310 100
 Norfolk
 WTAR 780 500 C
 Petersburg
 -WPHR 1200 100
 Richmond
 -WBBL 1210 100
 -WMBG 1210 100 C
 -WRVA 1110 5000 N
 Roanoke
 WDBJ 930 250 C
 -WRBX 1410 250
 WASHINGTON
 Aberdeen
 KXRO 1310 100
 Bellingham
 KVOS 1200 100
 Everett
 KFBL 1370 50
 Olympia
 KGY 1210 100
 Pullman
 -KWSC 1220 1000
 Seattle
 -KJR 970 5000 N
 KOL 1270 1000 C
 KOMO 920 1000 N
 -KPCB 650 100
 KRSC 1120 100
 KTW 1220 1000
 -KVL 1370 100
 -KXA 760 250
 Spokane
 KFIO 1120 100
 -KFPY 1340 1000 C
 KGA 1470 5000 N
 KHQ 590 1000 N
 Tacoma
 KMO 1330 250
 KVI 570 500 C

 Walla Walla
 KUJ 1370 100
 Wenatchee
 KPQ 1500 100
 Yakima
 KIT 1310 100
 WEST VIRGINIA
 Bluefield
 -WHIS 1410 250
 Charleston
 -WCHS 580 750
 Fairmont
 -WMMN 890 250
 Huntington
 WSAZ 1190 1000
 Wheeling
 -WWVA 1160 5000 C
 WISCONSIN
 East Claire
 -WTAQ 1330 1000 C
 Fond du Lac
 -KFIZ 1420 100
 Green Bay
 -WBBY 1200 100
 Janesville
 -WCLQ 1200 100
 LaCrosse
 WKBH 1380 1000 C
 Madison
 -WHA 940 1000
 -WIBA 1280 500 N
 Manitowoc
 WQMT 1210 100
 Milwaukee
 -WFAD 1120 250 C
 -WISN 1120 250 C
 -WTMJ 620 1000 N
 Reynette
 -WIBU 1210 100
 Racine
 WRJN 1370 100
 Sheboygan
 -WBL 1410 500
 Stevens Point
 -WLBL 900 2500
 Superior
 -WIBC 1290 1000 N
 WYOMING
 Casper
 -KDPN 1440 500
 Sheridan
 1370 100
 CANADA
 ALBERTA
 Calgary
 CFAC 930 100
 CFCN 1030 10000 F
 CJCJ 690 100
 Edmonton
 CFTF 1120 100
 CJCA 730 1000 F
 CKUA 580 500
 Lethbridge
 CJOC 840 100 F
 BRT. COLUMBIA
 Chilliwack
 CHWK 780 100 F
 Kamloops
 -CFJC 1310 100 F
 Kelowna
 CKOV 1210 50 F
 Trail
 CJAT 1200 50
 Vancouver
 CJOR 600 500
 CKCD 1010 100
 -CKFC 1410 50

CKMO 1410 100
 -CKWX 1010 100
 CRCV 1100 1000 F
 Victoria
 -CFCT 1450 50
 MANITOBA
 Brandon
 -CKX 1450 500 F
 Winnipeg
 C.JRC 1390 100
 CKY 780 5000 F
 NEW BRUNSWICK
 Fredericton
 CFNB 1030 500 F
 St. John
 CFBO 1210 100 F
 CHSJ 1370 100
 NOVA SCOTIA
 Glace Bay
 VAS 685 2000
 Halifax
 CHNS 1050 500 F
 Sydney
 C.JCB 880 50 F
 Wolfville
 CKIC 1010 50
 Yarmouth
 C.JLS 1310 100
 ONTARIO
 Brantford
 -CKPK 930 100 F
 10-BQ 1200 15
 Chatham
 CFCO 600 50 F
 Cobalt
 CKMC 1210 50
 Fort William
 CKPR 930 50 F
 Hamilton
 CHML 1010 50
 CKOC 1120 500 F
 Kingston
 CFRC 1510 100
 Kirkland Lake
 C.JKL 1310 100
 Kitchener
 CKCR 1510 100
 London
 CFPL 730 100 F
 North Bay
 CFCH 930 100 F
 Ottawa
 CKCO 1010 100
 CRCO 880 1000 F
 Prescott
 CFLC 930 100
 St. Catharines
 CKTB 1200 100
 Stratford
 10-AK 1200 15
 Sudbury
 C.JCS 780 500
 Timmins
 CKGB 1420 100
 Toronto
 -CFRB 690 10000 C
 CKCL 580 100
 -CRCT 960 5000 N
 CKNC 1030 100 F
 Windsor
 -CKLW 840 5000 C
 Wingham
 10-BP 1200 15
 PRINCE EDWARD ISLAND
 Charlottetown
 CFCY 630 500 F
 CHCK 1310 50

 Summerside
 CHGS 1120 50 F
 QUEBEC
 Chicoutimi
 CRCS 1500 100 F
 Hull
 CKCH 1210 100 F
 Montmagny
 VE9EK 1195 10
 Montreal
 CFCF 600 500 N
 CHLP 1120 100
 CKAC 730 5000 C
 CRCM 910 5000 F
 New Carlisle
 CHNC 1210 100 F
 Quebec
 CHRC 580 100 F
 CKCV 1310 50
 SASKATCHEWAN
 Canora
 10-BU 1200 15
 Moose Jaw
 -CHAB 1200 100
 -CJRM 540 1000 F
 Prince Albert
 CKBI 1210 100
 Regina
 CHWC 1010 500 F
 -CKCK 1010 500 F
 Saskatoon
 -CFOC 1230 500 F
 Yorkton
 C.JGX 630 500 F
 NEWFOUNDLAND
 St. John's
 VOAC 1300 40
 VOAS 940 100
 VOGY 1050 75
 VOKW 1085 30
 VONF 1195 400
 VOWR 700 500
 MIQUELON
 St. Pierre
 FQN 572 250
 CENTRAL AMERICA
 COSTA RICA
 Cartago
 TIFS 1441 7.5
 TIGA 1014 30
 San Jose
 TIGR 912 75
 TIEA 833 7.5
 TIEP 1450 7.5
 TIFB 714 30
 TIGP 800 75
 TIRCA 1100 500
 TISO 550 250
 TITV 999 7.5
 TIVL 869 30
 TIXA 614 7.5
 GUATEMALA
 Guatemala City
 TGW 1130 500
 TQX 1380 75
 EL SALVADOR
 San Salvador
 RUS 664 500
 MEXICO
 AGUASCALIENTES
 Aguascalientes
 XFC 895 350

INDEX BY LOCATIONS

BAJA CALIFORNIA		JALISCO		CMJE 1170 50		CMCW 965 150	
Agua Caliente		Guadalajara		CMJF 910 200		CMCY 1316 500	
-XEB 815 2500		XEA 1100 125		CMJG 1050 50		CMDD 588 159	
Mexicali		XED 1155 500		CMJK 790 500		CMDE 915 150	
XEAO 560 250		MICHOACAN		CMJL 960 50		CMK 730 2000	
Tijuana		Morelia		CMJN 1240 50		CMPN 1395 500	
XEMO 865 1500		XEL 1310 125		Cardenas		CMQ 645 500	
XEMZ 630 30		NUEVO LEON		CMGE 1375 30		CMW 595 1400	
XEOK 757 2500		Monterrey		Ciego de Avila		CMX 875 1000	
-XEA		XEFB 1315 100		CMJI 1150 50		Matanzas	
CHIHUAHUA		XEFJ 1000 100		CMJJ 1335 45		CMGB 1205 30	
Chihuahua		XEH 1132 250		CMJO 1010 50		CMGC 820 30	
XEFI 1260 250		XET 690 500		Cienfuegos		CMGF 971.5 100	
Juarez		XEX 630 50		CMHJ 1125 60		CMGH 1040 15	
-XEFV 1400 100		PUEBLA		CMHL 1290 20		Moron	
-XEJ 1015 250		Puebla		CMHW 1200 100		CMJP 1360 75	
COAHUILA		XETH 1200 100		Colon		Pinar del Rio	
Piedras Negras		SAN LUIS POTOSI		CMGA 834 100		CMAB 1249 20	
-XEPN 585 50000		San Luis Potosi		Cruces		Sagua la Grande	
Saltillo		XEAC 1295 100		CMHK 1215 50		CMHA 1103 . . .	
XEL 1000 10		SONORA		Guantanamo		Santa Clara	
Torreon		Nogales		CMKJ 1300 20		CMHI 1007 250	
XETB 1380 125		XEAF 990 750		Havana		Santiago	
Villa Acuna		TAMAULIPAS		CMAF 680 1000		CMCK 1034 150	
-XER- 735 150000		Nuevo Laredo		CMBC 1270 150		DOMINICAN	
-XEF		XEAB 1450 7.5		CMBD 965 250		REPUBLIC	
D. F.		XEFE 985 100		CMBG 1048 225		San Pedro de	
Mexico City		XENT 1115 30000		CMBJ 1147 500		Marcoris	
XEAI 1090 100		Reynosa		CMBK 1485 15		HIH 1395 15.	
-XEB 1030 10000		XEAW 965 10000		CMBL 1445 200		Santo Domingo	
XECW 1310 10		Tampico		CMBN 1185 150		HIJ 1195 15.	
XEFA 1250 500		XEFW 1310 70		CMBS 765 200		HIK 598 1500-	
XCFG 1105 250		-XES 1020 250		CMBW 1140 600		HIZ 1300 10.	
XEFO 940 5000		VERACRUZ		CMBX 1185 . . .		HAITI	
XEFZ 1370 100		Jalapa		CMBY 1230 250		Port-au-Prince	
-XEK 990 100		XFB 1290 1000		CMCZ 1005 150		HHK 920 1000-	
XEN 711 1000		Veracruz		CMC 835 500		SOUTH	
XEO 940 5000		XEU 1010 100		CMCA 1230 150		AMERICA	
XEP 780 500		XEWV 1095 250		CMCB 1048 150		ARGENTINE	
XETW 830 500		YUCATAN		CMCD 915 500		Buenos Aires	
XETZ 1210 500		Merida		CMCF 873 250		LR4 990 12000-	
-XEW 890 50000		XEFC 1050 100		CMCG 1140 500		-LR5 830 20000	
XEYZ 760 10000		XEY 546.8 10		CMCH 1410 50		COLOMBIA	
XFG 638 2000		XEZ 630 500		CMCJ 1180 500		Bogota	
XFO 940 5000		WEST INDIES		CMCM 1405 15		HJN 681 500	
XFX 610 500		CUBA		CMCN 1357 250		VENEZUELA	
Toluca		Calbarlen		CMCP 1270 150		Caracas	
XEC 1000 50		CMHD 945.5 500		CMCQ 767 1000		YV1BC 960 5000	
HIDALGO		Camaguey		CMCR 1357 150		YV2BC 882 100	
Pachuca		CMJC 1382 150		CMCU 1100 500		YV3BC 1200 1000	
XETU 890 100							

The DX CREAM

(Continued from page 48)

"Wonder how many fans noticed the wonderful reception on Monday morning, Feb. 5," postcards Joe Stokes, 7318 Woodlawn Ave., Swissvale, Pa. "After I reached home from announcing the KDKA-W8XX tip period about 2:45 a. m., I pulled in 2YA, 4YA, 4QG, KGU, 2CO, 3LO and 2BL."

John Forbes, Arborfield, Sask., would like to have the following stations identified: WLDX, police station in EST zone, heard Jan. 5 on

1596 kc. A station on 1340-50 broadcasting what was apparently Spanish language and music.

"I just got 367 stations in the last 25 days," boasts A. G. Schleiter, 1098-4th Ave., Freedom, Pa., "but I spent several 'all nights' to do it. I got all of these on a Majestic. I have every station in California, except KERN. I missed him on the test."

Twelve-year-old William MacFarland, Jr., 221 Sylvania Ave., Rockledge, Pa., a full-fledged DXer sends his log. He uses a 6-tube Amplex battery set with three tuning dials.

INDEX BY CALL LETTERS

CFAC 830 100	Calgary, Alta.
Calgary Herald.	
CFBO 1210 100	St. John, N. B.
C. A. Munro, Ltd.	
CFCF 600 600	Montreal, Que.
Canadian Marconi Co.	
CFCH 930 100	North Bay, Ont.
Northern Broadcasting Co., Ltd.	
CFCN 1030 10000	Calgary, Alta.
Voice of the Prairies, Ltd.	
CFCO 600 50	Chatham, Ont.
John Beardall.	
CFGT 1450 50	Victoria, B. C.
Victoria Broadcasting Assn.	
CFGY 830 600	Charlottetown, P. E. I.
Island Radio Broadcasting Co., Ltd.	
CFJC 1310 100	Kamloops, B. C.
Review Publishing Co., Ltd.	
CFLC 930 100	Prescott, Ont.
Radio Assn. of Prescott.	
CFNB 1030 600	Fredericton, N. B.
James S. Nell & Sons, Ltd.	
CFPL 730 100	London, Ont.
Free Press & Printing Co., Ltd.	
CFQC 1230 500	Saskatoon, Sask.
Electric Shop, Ltd.	
CFRB 890 10000	Toronto, Ont.
Canadian Radio Corp., Ltd.	
CFRC 1510 100	Kingston, Ont.
Queens University.	
CFTP 1120 100	Edmonton, Alta.
Taylor & Pearson, Ltd.	
CHAB 1200 100	Moose Jaw, Sask.
Moose Jaw Radio Assn.	
CHCK 1310 50	Charlottetown, P. E. I.
J. A. Gesner.	
CHGS 1120 50	Summerside, P. E. I.
R. T. Holman, Ltd.	
CHLP 1120 100	Montreal, Que.
La Patrie Publishing Co., Ltd.	
CHML 1010 50	Hamilton, Ont.
Maple Leaf Radio Co., Ltd.	
CHNC 1210 100	New Carlisle, Que.
Dr. Charles Houde.	
CHNS 1050 600	Halifax, N. S.
Maritime Broadcasting Co., Ltd.	
CHRC 580 100	Quebec, Que.
CHRC, Ltd.	
CHSJ 1370 100	St. John, N. B.
H. P. Robinson.	
CHWC 1010 600	Regina, Sask.
R. H. Williams & Sons, Ltd.	
CHWK 780 100	Chilliwack, B. C.
Chilliwack Broadcasting Co., Ltd.	
CJAT 1200 50	Trail, B. C.
Trail Amateur Radio Assn.	
CJCA 730 1000	Edmonton, Alta.
Edmonton Journal, Ltd.	
CJCB 890 50	Sydney, N. S.
Nathanson's Radio Headquarters.	
CJCJ 690 100	Calgary, Alta.
Albertan Publishing Co., Ltd.	
CJCS 780 600	Sudbury, Ont.
George McLeod Cootes	
CJGX 630 600	Yorkton, Sask.
Winnipeg Grain Exchange.	
CJKL 1310 100	Kirkland Lake, Ont.
O. J. Thorpe & Branchaud.	
CJLS 1310 100	Yarmouth, N. S.
Laurie L. Smith.	
CJOC 840 100	Lethbridge, Alta.
H. R. Carson, Ltd.	

CJOR 600 600	Vancouver, B. C.
G. C. Chandler.	
CJRC 1390 100	Winnipeg, Man.
James Richardson & Sons.	
CJRM 540 1000	Moose Jaw, Sask.
James Richardson & Sons, Ltd.	
CKAC 730 6000	Montreal, Que.
La Presse Publishing Co., Ltd.	
CKBI 1210 100	Prince Albert, Sask.
Prince Albert Radio Club.	
CKCD 1010 100	Vancouver, B. C.
Vancouver Daily Province.	
CKCH 1210 100	Hull, Que.
Dr. J. L. Chabot.	
CKCK 1010 600	Regina, Sask.
Leader-Post, Ltd.	
CKCL 580 100	Toronto, Ont.
Dominion Battery Co., Ltd.	
CKCO 1010 100	Ottawa, Ont.
Dr. G. M. Geldert.	
CKCR 1510 100	Kitchener, Ont.
William C. Mitchell and G. Liddle.	
CKCV 1310 50	Quebec, Que.
Vandry, Inc.	
CKFC 1410 50	Vancouver, B. C.
Radio Service Engineers, Ltd.	
CKGB 1420 100	Timmins, Ont.
R. H. Thompson	
CKIC 1010 50	Wolfville, N. S.
Acadia University.	
CKLW 840 6000	Windsor, Ont.
Western Ontario Broadcasting Co., Ltd.	
CKMC 1210 50	Cobalt, Ont.
R. L. MacAdam.	
CKMO 1410 100	Vancouver, B. C.
Sprott-Shaw Radio Co.	
CKNC 1030 100	Toronto, Ont.
Canadian National Carbon Co., Ltd.	
CKOC 1120 600	Hamilton, Ont.
Wentworth Radio Broadcasting Co., Ltd.	
CKOV 1210 50	Kellowna, B. C.
Okanagan Broadcasters, Ltd., Box 243.	
CKPC 930 100	Brantford, Ont.
Cyrus Dolph.	
CKPR 930 50	Fort William, Ont.
Dougall Motor Co., Ltd.	
CKTB 1200 100	St. Catharines, Ont.
E. T. Sandell.	
CKUA 580 600	Edmonton, Alta.
University of Alberta.	
CKWX 1010 100	Vancouver, B. C.
Western Broadcasting Co., Ltd.	
CKX 1450 600	Brandon, Man.
Manitoba Telephone System.	
CKY 780 6000	Winnipeg, Man.
Manitoba Telephone System.	
CMAB 1249 20	Pinar del Rio, Cuba.
Jose Silveira, Marti No. 101.	
CMAF 680 1000	Havana, Cuba.
International Broadcasting Co., Miramar.	
CMBC 1270 150	Havana, Cuba.
Domingo Fernandez, Maximo Gomez No. 139.	
CMBD 985 250	Havana, Cuba.
Lula Perez Garcia, Enamorados y Flores.	
CMBG 1048 225	Havana, Cuba.
John L. Stowers, Hospital No. 100	
CMBJ 1147 500	Havana, Cuba.
Emilio Perera, Consulado y Virtudes.	
CMBK 1485 15	Havana, Cuba.
Alberto Alvarez, Paula y Oficios.	
CMBL 1445 200	Havana, Cuba.
Julio C. Hidalgo, Zapata 150, 6 y 8, Vedado	

INDEX BY CALL LETTERS

CMBN 1185	150	Havana, Cuba.	CMHW 1200	100	Cienfuegos, Cuba.
G. de Sequeira, Agrimonte No. 32			San Carlos No. 106		
CMBS 765	200	Havana, Cuba.	CMJC 1382	150	Camaguey, Cuba.
Enrique Artalejo, Calzada y H. St.			Feliciano Isaac, Cieneros y G. Gomez.		
CMBW 1140	600	Havana, Cuba.	CMJE 1170	50	Camaguey, Cuba.
Alvarez, Moris y Cia, Obrapia No. 13.			Manuel Fernandez, Plaza de Maceo.		
CMBX 1185	.....	Havana, Cuba.	CMJF 910	200	Camaguey, Cuba.
			John L. Stowers, Hotel Plaza.		
CMBY 1230	250	Havana, Cuba.	CMJG 1050	50	Camaguey, Cuba.
Callejas-Estefani, Principe No. 33.			Jose Antonio Lefran, Martires 133.		
CMBZ 1005	150	Havana, Cuba.	CMJH 1150	50	Ciego de Avila, Cuba.
Manuel y G. Salas, San Rafael No. 14.			Luis Marauri Mendosa.		
CMC 835	500	Havana, Cuba.	CMJI 1335	45	Ciego de Avila, Cuba.
Radio Corp. of Cuba.			Gilberto Gessa Lopez, Independencia 95.		
CMCA 1230	150	Havana, Cuba.	CMJK 790	500	Camaguey, Cuba.
J. M. Gonzales Ave. de Italia No. 102.			Companis Cubana Nacional de Radio S. A.		
CMCB 1048	150	Havana, Cuba.	CMJL 950	50	Camaguey, Cuba.
Metropolitan-Radio de Cuba.			Enrique Artime, Cuba No. 27.		
CMCD 915	600	Havana, Cuba.	CMJN 1240	50	Camaguey, Cuba.
Angel Bertematy.			Ernesto de Ugarriza, Martires 11.		
CMCF 873	250	Havana, Cuba.	CMJO 1010	50	Ciego de Avila, Cuba.
Raoul Karman.			Jose M. Rey, C. Central & Maceo.		
CMCG 1140	500	Havana, Cuba.	CMJP 1360	75	Moron, Cuba.
			Cesar Canall, Callejas No. 28.		
CMCH 1410	50	Havana, Cuba.	CMK 730	2000	Havana, Cuba.
Wifredo y Humberto Fontana's Sanchez.			National Broadcasting Co. of Cuba.		
CMCJ 1180	500	Havana, Cuba.	CMKC 1034	150	Santiago, Cuba.
Rafael Rodriguez, Estevez No. 4.			Pinol Battle y Co.		
CMCM 1495	15	Havana, Cuba.	CMKJ 1300	20	Guantanamo, Cuba.
Aurelio Ballno, Belas Coain No. 639.			Luis Morlote, East Giro 11.		
CMCN 1357	250	Havana, Cuba.	CMPN 1395	500	Havana, Cuba
Antonio Glnard, Reina y Ave. Buen Retiro			Police Headquarters		
CMCP 1270	150	Havana, Cuba.	CMQ 645	500	Havana, Cuba.
Jose A. Yanis			Jose Fernandez, 25 Numero 445.		
CMCQ 767	1000	Havana, Cuba.	CMW 595	1400	Havana, Cuba.
Andres Martinez, Vista Alegre No. 80.			Troncoso y Gil, Paseo de Marti 103.		
CMCR 1357	150	Havana, Cuba.	CMX 875	1000	Havana, Cuba.
Aurelio Hernandez.			Casa "Lavin," Ave. de la Republica 99A.		
CMCU 1100	500	Havana, Cuba.	CRCM 910	5000	Montreal, Que.
Jorge Garcia Serra.			Canadian Radio Broadcasting Commission		
CMCW 955	150	Havana, Cuba.	CRCO 880	1000	Ottawa, Ont.
Villarino y Carvantes			Canadian Radio Broadcasting Commission		
CMCY 1316	500	Havana, Cuba.	CRCS 1500	100	Chicoutimi, Que.
Manuel D. Autran, Ave. de La Pdt s.215.			Canadian Marconi Co., Ltd.		
CMDD 588	150	Havana, Cuba.	CRCT 960	5000	Toronto, Ont.
G. de Sequeira			Canadian Radio Broadcasting Commission.		
CMDE 915	150	Havana, Cuba.	CRCV 1100	1000	Vancouver, B. C.
Radio Aerial Ad.			Canadian Radio Broadcasting Commission.		
CMGA 834	100	Celen, Cuba.	FQN 572	250	St. Pierre, Miq.
L. Valdes Figueroa, Marti No. 19.					
CMGB 1205	30	Matanzas, Cuba.	HHK 920	1000	Port-au-Prince, Haiti.
Jose Anorza, Magdalena No. 1.			Haitian Government.		
CMGC 915	30	Matanzas, Cuba.	HIH 1395	15	San Pedro de M., D. R.
Oscar S. Mechoso, Independencia No. 56.			Domingo Dominguez		
CMGE 1376	30	Cardenas, Cuba.	HIJ 1195	15	Santo Domingo, D. R.
Genaro Sebatier, Cespedes No. 180.			Tuto Baes, Hostos 34		
CMGF 971.5	100	Matanzas, Cuba.	HIX 598	1500	Santo Domingo, D. R.
Bernabe R. de la Torre.			J. R. Saladin, Director General		
CMGH 1040	15	Matanzas, Cuba.	HIZ 1300	10	Santo Domingo, D. R.
Octavio y Julio Alvarez.			Abbes and Garcia		
CMHA 1103	.....	Sagua la Grande, Cuba.	HJN 681	500	Bogota, Colombia
			Government of Colombia, National Library.		
CMHD 945.5	500	Calbarien, Cuba.	KABC 1420	100	San Antonio, Texas.
Manuel Alvarez, M. Escobar 17.			Alamo Broadcasting Co., Inc.		
CMHI 1007	250	Santa Clara, Cuba.	KALE 1300	500	Portland, Ore.
Lavis y Paz.			Kale, Inc., New Heathman Hotel		
CMHJ 1125	80	Cienfuegos, Cuba.	KARK 390	250	Little Rock, Ark.
Victorino Lopes Hontanon.			Arkansas Radio & Equipment Co.		
CMHK 1215	50	Cruces, Cuba.	KASA 1210	100	Elk City, Okla.
Virgilio Villaneuva Fernandez.			E. M. Woody, Casa Grande Hotel.		
CMHL 1290	20	Cienfuegos, Cuba.	KBPS 1420	100	Portland, Ore.
Oscar Zayas, San Carlos 143.			Benson Polytechnic School		

INDEX BY CALL LETTERS

KBTM 1200 100 Jonesboro, Ark. Jay P. Beard.	KFOR 1210 100 Lincoln, Neb. Howard Shuman
KGMC 1420 100 Texarkana, Ark. M. P. Mims, Box 865.	KFOX 1250 1000 Long Beach, Calif. Nicholas & Warinner, Inc.
KGRC 1370 100 Enid, Okla. Enid Radiophone Co.	KFPL 1310 100 Dublin, Texas. C. C. Baxter, Box 176
KGRJ 1310 100 Jerome, Ariz. Chas. C. Robinson, Drawer D.	KFPM 1310 17 Greenville, Texas. New Furniture Co.
KDB 1500 100 Santa Barbara, Calif. Santa Barbara Broadcasters, Ltd.	KFPW 1210 100 Fort Smith, Ark. Southwestern Hotel Co.
KDFN 1440 500 Casper, Wyo. Donald Lewis Hathaway.	KFPY 1340 1000 Spokane, Wash. Symons Broadcasting Co.
KDKA 990 5000 Pittsburgh, Pa. Westinghouse Electric & Mfg. Co.	KFQD 500 250 Anchorage, Alaska Anchorage Radio Club, Inc.
KDLR 1210 100 Devils Lake, N. D. KDLR, Inc., 1025 3rd Street.	KFRG 810 1000 San Francisco, Calif. Don Lee, Inc.
KDYL 1290 1000 Salt Lake City, Utah. Intermountain Broadcasting Corp.	KFRU 630 500 Columbia, Mo. KFRU, Inc., 9th and Elm Sts.
KECA 1430 1000 Los Angeles, Calif. Earle C. Anthony, Inc.	KFSB 600 1000 San Diego, Calif. Alfran Radio Corp., Ltd.
KELW 780 500 Burbank, Calif. Evening Herald Pub. Co.	KFSG 1120 500 Los Angeles, Calif. Echo Park Evangelistic Assn.
KERN 1200 100 Bakersfield, Calif. Bee Bakersfield Broadcasting Co.	KFUO 550 500 St. Louis, Mo. Evangelical Lutheran Church.
KEX 1180 5000 Portland, Ore. National Broadcasting Co.	KFVD 1000 250 Los Angeles, Calif. E. L. Cord, 645 S. Mariposa.
KFAB 770 5000 Lincoln, Neb. KFAB Broadcasting Co.	KFVS 1210 100 Cape Girardeau, Mo. Oscar C. Hirsch, Box 275.
KFAC 1300 1000 Los Angeles, Calif. E. L. Cord, 645 So. Mariposa.	KFWB 950 1000 Hollywood, Calif. Warner Bros. Motion Pictures, Inc.
KFBB 1280 1000 Great Falls, Mont. Buttrely Broadcast, Inc.	KFWI 930 500 San Francisco, Calif. Radio Entertainments, Ltd.
KFBI 1050 5000 Abilene, Kans. Farmers & Bankers Life Ins. Co.	KFXD 1200 100 Nampa, Idaho. Frank E. Hurt, 1024 12th Ave., S.
KFBK 1310 100 Sacramento, Calif. James McClatchey Publishing Co.	KFXF 920 550 Denver, Colo. Colorado Radio Corp.
KFBL 1370 50 Everett, Wash. Leese Bros., 2814 Ruoker Ave.	KFXJ 1200 100 Grand Jct., Colo. Western Slope Broadcasting Co.
KFDM 580 500 Beaumont, Texas. Sablne Broadcasting Co.	KFXM 1210 100 San Bernardino, Calif. Lee Bros. Broadcasting Co.
KFDY 550 500 Brookings, S. D. - South Dakota State College.	KFXR 1310 100 Oklahoma City, Okla. Exchange Avenue Baptist Church.
KFEL 920 500 Denver, Colo. Eugene P. O'Fallon, Inc.	KFYO 1310 100 Lubbock, Texas. Kirksey Bros., Hotel Lubbock.
KFEQ 880 2500 St. Joseph, Mo. Soroggin & Co. Bank	KFYR 550 1000 Bismarck, N. D. Mayer Broadcasting Co.
KFGQ 1310 100 Boone, Iowa. Boone Biblical College.	KGA 1470 5000 Spokane, Wash. Northwest Broadcasting Co., Inc.
KFH 1300 1000 Wichita, Kans. Radio Station KFH Co.	KGAR 1370 100 Tucson, Ariz. Tucson Motor Service Co.
KFI 840 50000 Los Angeles, Calif. Earle C. Anthony, Inc.	KGB 1330 1000 San Diego, Calif. Don Lee Broadcasting System
KFIO 1120 100 Spokane, Wash. Spokane Broadcasting Corp.	KGBU 900 500 Ketchikan, Alaska. Alaska Radio & Service Co., Inc.
KFIZ 1420 100 Fond du Lac, Wis. Reporter Printing Co.	KGBX 1310 100 Springfield, Mo. KGBX, Inc.
KFJB 1200 100 Marshalltown, Iowa. Marshall Electric Co.	KGBZ 930 500 York, Neb. KGBZ Broadcasting Co., 715 Grant Ave.
KFJI 1210 100 Klamath Falls, Ore. KFJI Broadcasters, Inc., Willard Hotel.	KGCA 1270 100 Decorah, Iowa Charles W. Greenley
KFJM 1370 100 Grand Forks, N. D. University of North Dakota.	KGCR 1210 100 Watertown, S. D. Greater Kampeska Radio Corp.
KFJR 1300 500 Portland, Ore. Ashley C. Dixon-KFJR, Inc.	KGCU 1240 250 Mandan, N. D. Mandan Radio Assn.
KFJZ 1370 100 Fort Worth, Texas. Fort Worth Broadcasters, Inc.	KGCX 1310 100 Wolf Point, Mont. E. E. Krebsbach.
KFKA 880 500 Greeley, Colo. Mid-Western Radio Corp.	KQDE 1200 100 Fergus Falls, Minn. C. L. Jaren.
KFKU 1220 500 Lawrence, Kans. University of Kansas.	KQDM 1100 250 Stockton, Calif. E. F. Peffer, 42 S. Calif. St.
KFNF 890 500 Shenandoah, Iowa. Henry Field Co.	KQDY 1340 250 Huron, S. D. Voice of S. D., Inc., 347 Dakota Ave.

INDEX BY CALL LETTERS

KGEK 1200 100 Yuma, Colo.
 Elmer G. Beehler, 109 W. 2nd St.
KGER 1360 1000 Long Beach, Calif.
 Consolidated Broadcasting Co.
KGEZ 1310 100 Kalispell, Mont.
 Donald C. Treloar, Box 1.
KGFF 1420 100 Shawnee, Okla.
 KGFF Broadcasting Co., Inc.
KGFG 1370 100 Oklahoma City, Okla.
 Oklahoma Broadcasting Co., 1113 N. Broadway
KGFI 1500 100 Corpus Christi, Texas.
 Eagle Broadcasting Co., Inc.
KGfJ 1200 100 Los Angeles, Calif.
 Ben S. McGlashan, 1417 S. Figueroa.
KGfK 1500 100 Moorhead, Minn.
 Red River Broadcasting Co., Inc.
KGfL 1370 100 Roswell, N. M.
 KGfL, Inc., 507 N. Main St.
KGfW 1310 100 Kearney, Neb.
 Central Nebraska Broadcasting Corp.
KGfX 630 200 Pierre, S. D.
 Dana McNeil, 510 Summit Ave.
KGgC 1420 100 San Francisco, Calif.
 Golden Gate Broadcasting Co.
KGgF 1010 500 Coffeyville, Kans.
 Hugh J. Powell and Stanley Platz.
KGgM 1230 250 Albuquerque, N. M.
 New Mexico Broadcasting Co.
KGhF 1320 250 Pueblo, Colo
 C. P. Ritchie
KGhI 1200 100 Little Rock, Ark.
 Lloyd Judd Co., Marlon Hotel.
KGhL 950 1000 Billings, Mont.
 Northwestern Auto Supply Co.
KGIR 1360 500 Butte, Mont.
 KGIR, Inc., 121 W. Broadway.
KGiW 1420 100 Alamosa, Colo.
 Leonard E. Wilson, 326 N. Commercial
KGix 1420 100 Las Vegas, Nev.
 J. M. Heaton, Box 656.
KGKB 1500 100 Tyler, Texas.
 East Texas Broadcasting Co.
KGKL 1370 100 San Angelo, Texas.
 KGKL, Inc., St. Angelus Hotel.
KGKO 570 250 Wichita Falls, Texas.
 Wichita Falls Broadcasting Co.
KGKY 1500 100 Scottsbluff, Neb.
 Hilliard Co., Inc., 1517½ Broadway.
KGMB 1320 250 Honolulu, T. H.
 Honolulu Broadcasting Co., 119 Merchant St.
KGnF 1430 500 North Platte, Neb.
 Great Plains Broadcasting Co.
KGNO 1340 250 Dodge City, Kans.
 KGNO Broadcasting Station
KGQ 790 7500 San Francisco, Calif.
 National Broadcasting Co., Inc.
KGRS 1410 1000 Amarillo, Texas.
 E. B. Gish, Bellaire Park.
KGU 750 2500 Honolulu, T. H.
 Advertiser Publishing Co., Ltd.
KGVO 1200 100 Missoula, Mont.
 Mosbys, Inc., 240 N. Higgins.
KGW 620 1000 Portland, Ore.
 Oregonian Publishing Co.
KGy 1210 100 Olympia, Wash.
 KGY, Inc., 11th and Capitol Way.
KHJ 900 1000 Los Angeles, Calif.
 Don Lee Broadcasting System.
KHQ 590 1000 Spokane, Wash.
 Louis Wasmer, Inc.
KICA 1370 100 Clovis, N. M.
 Southwest Broadcasting Co.

KID 1320 250 Idaho Falls, Idaho.
 KID Broadcasting Co., Inc.
KIDO 1350 1000 Boise, Idaho.
 C. G. Phillips & Frank L. Hill.
KIDW 1420 100 Lamar, Colo.
 Lamar Broadcasting Co., Box 688
KIEM 1210 100 Eureka, Calif.
 Harold H. Hanseth, Vance Hotel.
KIEV 650 100 Glendale, Calif.
 Cannon System, Ltd., Glendale Hotel.
KIFH 1310 100 Juneau, Alaska
 Juneau Broadcasting Co.
KIT 1310 100 Yakima, Wash.
 Valley Broadcasters, Inc.
KJBS 1070- 100 San Francisco, Calif.
 Julius Brunton & Sons Co.
KJR 970 5000 Seattle, Wash.
 Fishers Blend Station, Inc.
KLCN 1290 100 Blytheville, Ark.
 C. L. Lintzenloh, Main and Division St.
KLO 1400 500 Ogden, Utah.
 Interstate Broadcasting Co.
KLPM 1240 250 Minot, N. D.
 John B. Cooley.
KLRA 1390 1000 Little Rock, Ark.
 Arkansas Broadcasting Co.
KLS 1440 250 Oakland, Calif.
 Warner Bros., 2201 Telegraph Ave.
KLUF 1370 100 Galveston, Texas.
 Geo. R. Clough, 3327 Ave. F.
KLX 880 1000 Oakland, Calif.
 Tribune Building Co.
KLZ 650 1000 Denver, Colo.
 Reynolds Radio Co., Inc.
KMA 930 500 Shenandoah, Iowa.
 Earl E. May Seed & Nursery Co.
KMAC 1270 100 San Antonio, Texas.
 W. W. McAllister, Blue Bonnet Hotel.
KMBC 950 1000 Kansas City, Mo
 Midland Broadcasting Co.
KMED 1310 100 Medford, Ora.
 Mrs. W. J. Virgin, Sparta Bldg.
KMJ 580 500 Fresno, Calif.
 James McClatchy Co.
KMLB 1200 100 Monroe, La.
 Liners Broadcasting Station, Inc.
KMMJ 740 1000 Clay Center, Neb.
 The M. M. Johnson Co.
KMO 1330 250 Tacoma, Wash.
 KMO, Inc., Hotel Winthrop.
KMOX 1090 50000 St. Louis, Mo.
 The Voice of St. Louis, Inc.
KMPCC 710 500 Beverly Hills, Calif.
 Beverly Hills Broadcasting Corp.
KMTR 570 500 Hollywood, Calif.
 KMTR Radio Corp., 915 N. Formosa Ave.
KNOW 1500 100 Austin, Texas.
 Southwest Broadcasting Co.
KNX 1050 25000 Hollywood, Calif.
 Western Broadcast Co., Inc.
KOA 830 12,500 Denver, Colo.
 General Electric Co., 1370 Krameria St
KOAC 550 1000 Corvallis, Ore.
 Oregon State Agricultural College.
KOB 1180 10000 Albuquerque, N. M.
 Albuquerque Journal, Box 687.
KOH 1380 500 Reno, Nev.
 The Bee, Inc.
KOIL 1260 1000 Council Bluffs, Iowa.
 Mona Motor Oil Co.
KOIN 940 1000 Portland, Ore.
 KOIN, Inc., New Heathman Hotel.

INDEX BY CALL LETTERS

	KOL 1270 1000 Seattle, Wash. Seattle Broadcasting Co.		KTAT 1240 1000 Fort Worth, Texas. Southwest Broadcasting Co.
	KOMA 1480 6000 Oklahoma City, Okla National Radio Manufacturing Co.		KTBS 1450 1000 Shreveport, La. Tri-State Broadcasting System.
	KOMO 920 1000 Seattle, Wash. Fishers Blend Station, Inc.		KTFI 1240 1000 Twin Falls, Idaho. Radio Broadcasting Corp.
	KONO 1370 100 San Antonio, Texas. Mission Broadcasting Co., St. Anthony Hotel		KTHS 1040 10000 Hot Springs, Ark. Chamber of Commerce.
	KOOS 1370 100 Marshfield, Ore. H. H. Hanseth, Hall Bldg.		KTM 780 500 Los Angeles, Calif. Evening Herald Pub. Co.
	KORE 1420 100 Eugene, Ore. Frank L. Hill and Curtis G. Phillippe		KTRH 1120 1000 Houston, Texas. KTRH Broadcasting Co., Rice Hotel.
	KOTN 1500 100 Pine Bluff Ark. William H. Chaplin		KTSA 1290 1000 San Antonio, Texas. Southwest Broadcasting Co.
	KOY 1390 500 Phoenix, Ariz. Nielsen Radio & Sporting Goods Co.		KTSM 1310 100 El Paso, Texas. Tri-State Broadcasting Co., Inc.
	KPCB 850 100 Seattle, Wash. Queen City Broadcasting Co.		KTUL 1400 250 Tulsa, Okla. J. T. Griffin
	KPJM 1500 100 Prescott, Ariz. Frank Mauthe, Box 852		KTW 1220 1000 Seattle, Wash. First Presbyterian Church.
	KPO 880 50000 San Francisco, Calif. National Broadcasting Co., Inc.		KUJ 1370 100 Walla Walla, Wash. KUJ, Inc., Marcus Whitman Hotel.
	KPOF 890 500 Denver, Colo. Pillar Of Fire, 1845 Champa St.		KUMA 1420 100 Yuma, Ariz. Dr. A. H. Schermann, Box 267.
	KPPG 1210 50 Pasadena, Calif. Pasadena Presbyterian Church.		KUOA 1280 1000 Fayetteville, Ark. KUOA, Inc., Washington Hotel.
	KPQ 1500 100 Wenatchee, Wash. Westcoast Broadcasting Co.		KUSD 890 500 Vermillion, S. D. University of South Dakota.
	KPRC 920 1000 Houston, Texas. Houston Printing Co.		KVI 570 500 Tacoma, Wash. Puget Sound Broadcasting Co., Tacoma Hotel.
	KQV 1380 500 Pittsburgh, Pa. KQV Broadcasting Co., Investment Bldg.		KVL 1370 100 Seattle, Wash. KVL, Inc., 5th and Virginia St.
	KQW 1010 500 San Jose, Calif. Pacific Agricultural Foundation, Ltd.		KVOA 1280 500 Tucson, Ariz. Arizona Broadcasting Co., Inc.
	KRE 1370 100 Berkeley, Calif. First Congregational Church.		KVOO 1140 25000 Tulsa, Okla. Southwestern Sales Corp.
	KREG 1500 100 Santa Ana, Calif. The Voice of the Orange Empire, Inc.		KVOR 1270 1000 Colorado Springs, Colo S. H. Patterson
	KRGV 1280 500 Harlingen, Texas. KRGV, Inc.		KVOS 1200 100 Bellingham, Wash. KVOS, Inc., Bellingham Hotel.
	KRKD 1120 500 Los Angeles, Calif Fresalde Broadcasting Corp.		KWCR 1430 250 Cedar Rapids, Iowa. Cedar Rapids Broadcast Co.
	KRLD 1040 10000 Dallas, Texas. KRLD Radio Corp., Adolphus Hotel.		KWEA 1210 100 Shreveport, La. International Broadcasting Corp.
	KRMD 1310 100 Shreveport, La. Radio Station KRMD, Inc.		KWFV 1210 100 Hilo, Hawaii Hilo Broadcasting Co., Ltd.
	KROW 930 500 Oakland, Calif. Educational Broadcasting Corp.		KWG 1200 100 Stockton, Calif. McClatchy Newspapers, Inc.
	KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club.		KWJJ 1080 500 Portland, Ore. KWJJ Broadcast Co., Inc., 328 Salmon St
	KSAC 580 500 Manhattan, Kans. State College of Agriculture.		KWK 1350 1000 St. Louis, Mo. Thomas Patriek, Inc., Hotel Chase.
	KSCJ 1330 1000 Sioux City, Iowa. Perkins Bros. Co., 415 Douglas St.		KWKC 1370 100 Kansas City, Mo. Wilson Duncan Broadcasting Co.
	KSD 550 500 St. Louis, Mo. Pulitzer Publishing Co.		KWKH 850 10000 Shreveport, La. International Broadcasting Corp.
	KSEI 880 250 Pocatello, Idaho. Radio Service Corp., 141 S. 6th Ave.		KWLC 1270 100 Decatur, Iowa. Luther College.
	KSJ 1130 50000 Salt Lake City, Utah. Radio Service Corp. of Utah.		KWSC 1220 1000 Pullman, Wash. State College of Washington.
	KSO 1370 100 Des Moines, Iowa. Des Moines Register & Tribune.		KWTO 580 500 Springfield, Me. KGBX Inc.
	KSOO 1110 1000 Sioux Falls, S. D. Sioux Falls Brdcast Assn, Carpenter Hotel		KWWG 1260 500 Brownsville, Texas. Frank P. Jackson.
	KSTP 1480 10000 St. Paul, Minn. National Battery Broadcasting Co.		KXA 760 250 Seattle, Wash. American Radio Tel. Co., 218 Bigelow Bldg.
	KSUB 1200 100 Lowell, Ariz. Copper Electrical Co.		KXL 1420 100 Portland, Ore. KXL Broadcasters, 280 Pine St.
	KTAB 580 1000 San Francisco, Calif. Associated Broadcasters, Inc.		KXO 1500 100 El Centro, Calif. E. R. Irey and F. M. Bowles.
	KTAR 820 1000 Phoenix, Ariz. KTAR Broadcasting Co.		KXRO 1310 100 Aberdeen, Wash. KXRO, Inc., Hotel Morok.

INDEX BY CALL LETTERS

KXYZ 1440 250 Houston, Texas. Harris County Broadcast Co.	WAGO 1420 100 Waco, Texas. Southwest Broadcasting Co.
KYA 1230 1000 San Francisco, Calif. Pacific Broadcasting Corp.	WADC 1320 1000 Akron, Ohio. Allen T. Simmons, P. O. Box 29.
KYW 1020 10000 Chicago, Ill. Westinghouse Elec. & Mfg. Co.	WAGM 1420 100 Presque Isle, Me. Aroostook Broadcasting Corp.
KZHM 818.5 60000 Manila, P. I. Erlanger and Galinger, Inc. (KZEG)	WAUI 840 500 Columbus, Ohio. Associated Radiocasting Corp.
LR4 990 12000 Buenos Aires, Arg.	WALR 1210 100 Zanesville, Ohio. WALR Broadcasting Corp.
LR5 830 20000 Buenos Aires, Arg.	WAMC 1420 100 Anniston, Ala. R. C. Hammett, 1200 Noble St.
NAA 890 10000 Arlington, Va. United States Navy.	WAML 1310 100 Laurel, Miss. Southland Radio Corp.
RUS 864 500 San Salvador, E. S. Republic of El Salvador.	WAPI 1140 5000 , Birmingham, Ala. WAPI Broadcasting Corp.
TGW 1130 500 Guatemala, Gua. Gobierno de Guatemala.	WARD 1400 500 Brooklyn, N. Y. United States Broadcasting Corp.
TGX 1380 75 Guatemala City	WASH 1270 500 Grand Rapids, Mich. Kunsky-Trendle Broadcasting Corp.
TICR 912 75 San Jose, C. R. Government of Costa Rica.	WAVE 940 1000 Louisville, Ky. WAVE, Inc.
TIEA 833 7.5 San Jose, C. R.	WAWZ 1350 250 Zarephath, N. J. Pillar of Fire.
TIEP 1450 7.5 San Jose, C. R.	WAZL 1420 100 Hazleton, Pa. Hazleton Broadcasting Service, Inc.
TIFB 714 30 San Jose, C. R.	WBAA 1400 500 West Lafayette, Ind Purdue University.
TIFS 1441 7.5 Cartago, C. R.	WBAK 1430 1000 Harrisburg, Pa. Commonwealth of Pennsylvania.
TIGA 1014 30 Cartago, C. R.	WBAL 1080 10000 Baltimore, Md. Consolidated Gas, Elec. Light & Power Co.
TIGP 800 75 San Jose, C. R. Gonzalo Pinto H. Apt. 225.	WBAP 800 50000 Fort Worth, Texas. Carter Publications, Inc.
TIRCA 1100 500 San Jose, C. R. Perry Girton, Apt. 225.	WBAX 1210 100 Wilkes-Barre, Pa John H. Stenger, Jr., 70 S. Main St.
TISO 550 250 San Jose, C. R. P. F. Saborio, Apt. 1354	WBBC 1400 500 Brooklyn, N. Y. Brooklyn Broadcasting Corp.
TITV 999 7.5 San Jose, C. R.	WBBL 1210 100 Richmond, Va. Grace Covenant Presbyterian Church.
TIVL 899 30 San Jose, C. R.	WBBM 770 25000 Chicago, Ill. WBBM Broadcasting Corp., Wrigley Bldg.
TIXA 614 7.5 San Jose, C. R. |	WBBR 1300 1000 Brooklyn, N. Y. Peoples Pulpit Assn.
VAS 895 2000 Glace Bay, N. S. Canadian Marconi Co., Ltd.	WBBX 1200 100 New Orleans, La. Samuel D. Reeks, Marber Hotel.
VESEK 1195 10 Montmagny, Que. J. A. Marquis, P. O. Box 57	WBBZ 1200 100 Ponca City, Okla. C. L. Carrell.
VOAC 1300 40 St. John's, Nfld.	WBCM 1410 500 Bay City, Mich. James E. Davidson, Hotel Wenonah.
VOAS 940 100 St. John's, N. F. Ayre & Sons, Ltd.	WBEN 900 1000 Buffalo, N. Y. WBEN, Inc. (Buffalo Evening News).
VOGY 1050 75 St. John's, N. F. Newfoundland Broadcasting Co.	WBEO 1310 100 Marquette, Mich. Lake Superior Broadcasting Co., Inc.
VOKW 1085 30 St. John's, N. F. Cyril L. Parkins.	WBHS 1200 100 Huntsville, Ala. Radio Station WBHS, Inc.
VONF 1195 400 St. John's, N. F. Dominion Broadcasting Co., Ltd., Box 1355.	WBIO 1440 500 Greenshore, N. C. North Carolina Broadcasting Co., Inc.
VOWR 700 500 St. John's, N. F. Wesley United Church, Box 157.	WBNS 1430 500 Columbus, O. WBNS, Inc.
WAAB 1410 500 Boston, Mass. Bay State Broadcasting Corp., 1 Winter Pl.	WBNX 1350 250 New York, N. Y. Standard Cahll Co., Inc.
WAAF 920 500 Chicago, Ill. Chicago Daily Drivers Journal.	WBOQ 860 50000 New York, N. Y. Atlantic Broadcasting Corp.
WAAT 840 300 Jersey City, N. J. Bremer Broadcasting Corp., 50 Journal Sq.	WBOW 1310 100 Terre Haute, Ind. Banks of Wabash, Inc., 24½ S. 6th.
WAAW 880 500 Omaha, Neb. Omaha Grain Exchange.	WBRC 930 500 Birmingham, Ala. Birmingham Brodstg. Co., Inc.
WABC 880 50000 New York, N. Y. Atlantic Broadcasting Corp.	WBRE 1310 100 Wilkes-Barre, Pa. Louis G. Baltimore, 16 N. Main.
WABI 1200 100 Bangor, Maine. First Universalist Society.	WBSSO 820 500 Babson Park, Mass. Broadcasting Service Organization, Inc.

INDEX BY CALL LETTERS

WBT 1080 50000 Charlotte, N. C. Station WBT, Inc., Wilder Bldg.	WDAY 940 1000 Fargo, N. D. WDA Y, Inc., Black Bldg., 118 Broadway.
WBTV 1370 100 Danville, Va. Piedmont Broadcasting Corp.	WDBJ 930 250 Roanoke, Va. Times World Corp., 122 W. Church Ave.
WBZ 990 50000 Boston, Mass. Westinghouse Elec. & Mfg. Co.	WBOS 580 250 Orlando, Fla. Orlando Broadcasting Co., Inc.
WBZA 990 1000 Springfield, Mass. Westinghouse Elec. & Mfg. Co.	WDEL 1120 250 Wilmington, Del. WDEL, Inc., 10th and King Sts.
WCAG 600 500 Storrs, Conn. Connecticut State College.	WEV 550 500 Waterbury, Vt. Harry C. Whitehill, Stowe St.
WCAD 1220 500 Canton, N. Y. St. Lawrence University.	WDGY 1180 1000 Minneapolis, Minn. Dr. Geo. W. Young, 909 W. Broadway.
WCAE 1220 1000 Pittsburgh, Pa. WCAE, Inc., Sun-Telegraph.	WOOD 1280 1000 Chattanooga, Tenn. WDOD Broadcasting Corp., Hotel Patten.
WCAL 1250 1000 Northfield, Minn. St. Olaf College.	WDR 1330 1000 Hartford, Conn. WDR, Inc., Corning Bldg., 11 Asylum St.
WCAM 1280 500 Camden, N. J. City of Camden, City Hall.	WDSU 1250 1000 New Orleans, La. Jos. H. Ubalt, On Hotel DeSoto.
WCAO 800 500 Baltimore, Md. Monumental Radio Co.	WDZ 1070 100 Tuscola, Ill. James L. Bush.
WCAP 1280 500 Asbury Park, N. J. Radio Industries Broadcast Co.	WEAF 680 50000 New York, N. Y. National Broadcasting Co., Inc.
WCAT 1200 100 Rapid City, S. D. South Dakota State School of Mines.	WEAN 780 500 Providence, R. I. Shepard Broadcasting Service, Inc.
WCAU 1170 50000 Philadelphia, Pa. WCAU Broadcasting Co., 1622 Chestnut.	WEBC 1290 1000 Superior, Wis. Head of the Lakes Broadcasting Co.
WCAX 1200 100 Burlington, Vt. Burlington Daily News, Inc.	WEBQ 1210 100 Harrisburg, Ill. Harrisburg Broadcasting Co.
WCAY 1070 100 Carthage, Ill. Superior Broadcasting Service, Inc.	WEBR 1310 100 Buffalo, N. Y. Howell Broadcasting Co., Inc., 735 Main.
WCBA 1440 250 Allentown, Pa. B. Bryan Musselman, 39-41 10th St.	WEDC 1210 100 Chicago, Ill. Emil Denemark, 3860 Ogden Ave.
WCBD 1080 50000 Zion, Ill. Wilbur Glenn Voliva.	WEED 1420 100 Greenville, N. C. Wm. Avera Wynne.
WCBM 1370 100 Baltimore, Md. Baltimore Broadcasting Corp.	WEEI 590 1000 Boston, Mass. Edison Elec. Illuminating Co.
WCBS 1210 100 Springfield, Ill. WCBS, Inc., 208½ S. 5th.	WEUU 630 1000 Reading, Pa. Berka Broadcasting Co., 533 Penn.
WCCO 810 50000 Minneapolis, Minn. Northwestern Broadcasting, Inc.	WEHC 1350 500 Charlottesville, Va. Community Brdcstg. Corp.
WCFL 970 1500 Chicago, Ill. Chicago Federation of Labor.	WEHS 1420 100 Cicero, Ill. WEHS, Inc., 6138 W. 22nd St.
WCHE 580 750 Charleston, W. Va. WOB, Inc., Refiner Hotel.	WELL 1420 50 Battle Creek, Mich. Enquirer News Co., 7 N. McCamly St.
WCKY 1480 50000 Covington, Ky. L. B. Wilson, Inc.	WENC 1420 100 Albany, Ga. Americus Broadcast Corp.
WCLO 1200 100 Janesville, Wis. WCLO Radio Corp.	WENR 870 50000 Chicago, Ill. Great Lakes Broadcasting Co.
WCLS 1310 100 Joliet, Ill. WCLS, Inc., 301 E. Jefferson St.	WESG 1040 1000 Elmira, N. Y. Elmira Star Gazette, Inc.
WCNW 1500 100 Brooklyn, N. Y. Arthur Faake, 1525 Pitkin Ave.	WEVD 1300 500 New York, N. Y. Jewish Daily Forward, Hotel Claridge.
WCOA 1340 500 Pensacola, Fla. Pensacola Broadcasting Co.	WEW 780 1000 St. Louis, Mo. St. Louis University, 221 N. Grand Blvd.
WCOG 880 500 Meridian, Miss. Mississippi Broadcasting Co., Inc.	WEXL 1310 50 Royal Oak, Mich. Royal Oak Broadcasting Co.
WCRW 1210 100 Chicago, Ill. Clinton R. White, 2756 Pine Grove Ave.	WFAA 800 50000 Dallas, Texas. Morning News and Journal.
WCSC 1360 500 Charleston, S. C. South Carolina Broadcasting Co., Inc.	WFAB 1300 1000 New York, N. Y. Fifth Avenue Broadcasting Corp.
WCSH 940 1000 Portland, Me. Congress Square Hotel Co., 157 High.	WFAM 1200 100 South Bend, Ind. South Bend Tribune, 200 W. Colfax.
WDAE 1220 1000 Tampa, Fla. Tampa Times Co., Tampa Terrace.	WFAS 1210 100 White Plains, N. Y. Westchester Broadcasting Corp.
WDAF 610 1000 Kansas City, Mo. Kansas City Star Co.	WFBC 1200 100 Greenville, S. C. Greenville News-Piedmont Co.
WDAG 1410 1000 Amarillo, Texas. National Radio & Broadcasting Corp.	WFB 1200 100 Cincinnati, Ohio. WFB, Inc., Hotel Sinton.
WDAH 1310 100 El Paso, Texas. Tri-State Broadcasting Co., Inc.	WFBQ 1310 100 Altoona, Pa. Gable Broadcasting Co. 12th Av. & 13th St.
WDAS 1370 100 Philadelphia, Pa. WDAS Broadcastg. Co., Inc. Broadwood Hotel.	WFBL 1380 1000 Syracuse, N. Y. Onondaga Radio Broadcasting Corp.

INDEX BY CALL LETTERS

WFBM 1230 1000 Indianapolis, Ind. Indianapolis Power & Light Co.	WHBY 1200 100 Green Bay, Wis. WHBY, Inc., Bellin Bldg.
WFBR 1270 500 Baltimore, Md. Baltimore Radio Show, Inc.	WHDF 1370 100 Calumet, Mich. Upper Michigan Broadcasting Co.
WFDI 1310 100 Flint, Mich. Flint Broadcasting Co.	WHDH 830 1000 Boston, Mass. Matheson Radio Co., 62 Boylston.
WFDV 1500 100 Rome, Ga. Rome Broadcasting Corp., 10 3rd Ave.	WHDL 1420 100 Tupper Lake, N. Y. Tupper Lake Broadcasting Co.
WFEA 1340 500 Manchester, N. H. New Hampshire Broadcasting Co.	WHEB 740 250 Portsmouth, N. H. Granite State Broadcasting Corp.
WFI 560 500 Philadelphia, Pa. WFI Broadcasting Co., 801 Market.	WHFC 1430 500 Rochester, N. Y. WHEC, Inc., 40 Franklin St.
WFLA 820 1000 Clearwater, Fla. Florida West Coast Broadcasting Co., Inc.	WHEF 1500 100 Kosciusko, Miss. Attala Milling & Produce Co.
WGAL 1310 100 Lancaster, Pa. WGAL, Inc., 8 W. King St.	WHET 1370 100 Dothan, Ala. Troy Broadcasting Co.
WGAR 1450 500 Cleveland, Ohio. WGAR Broadcasting Co., Hotel Statler.	WHFC 1420 100 Cicero, Ill. WHFC, Inc., 6138 W. 22nd St.
WQBB 1210 100 Freeport, N. Y. H. H. Carman, 64 S. Grove St.	WHIS 1410 250 Bluefield, W. Va. Daily Telegraph Printing Co., Inc.
WGBF 630 500 Evansville, Ind. Evansville On the Air, Inc.	WHK 1390 1000 Cleveland, Ohio. Radio Air Service Corp.
WGBI 880 500 Scranton, Pa. Scranton Broadcasters, Inc.	WHN 1010 1000 New York, N. Y. Marous Loew Booking Agency.
WGCM 1210 100 Mississippi City, Miss. Great Southern Land Co., Gulfport, Miss.	WHO 1000 50000 Des Moines, Iowa Central Brdcastg Co., 914 Walnut St.
WGCP 1250 1000 Newark, N. J. May Radio Broadcasting Co.	WHOM 1450 250 Jersey City, N. J. New Jersey Broadcasting Co.
WGES 1360 500 Chicago, Ill. Oak Leaves Broadcasting Station, Inc.	WHP 1430 500 Harrisburg, Pa. WHP, Inc., Harrisburg Telegraph.
WGH 1310 100 Newport News, Va. Hampton Roads Broadcasting Corp.	WIBA 1290 500 Madison, Wis Badger Broadcasting Co., Inc.
WGL 1370 100 Fort Wayne, Ind. F. C. Zieg, 213 W. Main St.	WIBG 970 100 Glenside, Pa. WIBG, Inc., Keawick Bldg.
WGLC 1370 100 Hudson Falls, N. Y. O. T. Griffin & G. F. Bissell.	WIBM 1370 100 Jackson, Mich. WIBM, Inc., Otsego Hotel.
WGN 720 50000 Chicago, Ill. WGN, Inc., Tribune Tower.	WIBU 1210 100 Payonette, Wis. Wm. C. Forrest, R. F. D. No. 3.
WGNV 1210 100 Chester, N. Y. Peter Goelet (Orange County).	WIBW 580 1000 Topeka, Kans. Topeka Broadcasting Assn. Inc.
WGR 550 1000 Buffalo, N. Y. Buffalo Broadcasting Corp.	WIBX 1200 100 Utica, N. Y. WIBX, Inc., 1st Natl. Bank Bldg.
WGST 890 250 Atlanta, Ga. Georgia School of Technology.	WICC 600 500 Bridgeport, Conn. Southern Conn. Broadcasting Corp.
WGY 790 50000 Schenectady, N. Y. National Broadcasting Co., Inc.	WIL 1200 100 St. Louis, Mo. Missouri Broadcasting Corp.
WHA 940 1000 Madison, Wis. University of Wisconsin.	WILL 890 250 Urbana, Ill. University of Illinois.
WHAD 1120 250 Milwaukee, Wis. WHAD, Inc.	WILM 1420 100 Wilmington, Del. Delaware Broadcasting Co., Inc.
WHAM 1150 50000 Rochester, N. Y. Stromberg-Carlson Tel. Mfg. Co.	WIND 590 1000 Gary, Ind. Johnson-Kennedy Broadcasting Corp.
WHAS 820 50000 Louisville, Ky. Courier Journal & Louisville Times.	WINS 1180 500 New York, N. Y. American Radio News Corp.
WHAT 1310 100 Philadelphia, Pa. Curtis-Martin Newspapers, Inc.	WIOD 1300 1000 Miami, Fla. Isle of Dreams Broadcasting Corp.
WHAZ 1300 500 Troy, N. Y. Rensselaer Polytechnic Institute.	WIP 610 500 Philadelphia, Pa. Pennsylvania Broadcasting Co.
WHB 880 500 Kansas City, Mo. WHB Broadcasting Co., Scarritt Bldg.	WIS 1010 500 Columbia, S. C. Station WIS, Inc., 1811 Main St.
WHBC 1200 100 Canton, Ohio. Edw. P. Graham, 319 Tusc. St., W.	WISN 1120 250 Milwaukee, Wis. American Radio News Corp.
WHBD 1370 100 Mount Orab, Ohio. F. P. Moler.	WJAC 1310 100 Johnstown, Pa. WJAC, Inc., Tribune Bldg. Annex.
WHBF 1210 100 Rock Island, Ill. Rock Island Broadcasting Co.	WJAG 1080 1000 Norfolk, Neb. Norfolk Daily News.
WHBL 1410 500 Sheboygan, Wis. Press Publishing Co.	WJAR 690 500 Providence, R. I. Outlet Co., Weybossett St.
WHBQ 1370 100 Memphis, Tenn. Broadcasting Sta. WNBQ, Inc., Hotel Claridge.	WJAS 1290 1000 Pittsburgh, Pa. Pittsburgh Radio Supply House.
WHBU 1210 100 Anderson, Ind. Anderson Broadcasting Corp.	WJAX 900 1000 Jacksonville, Fla. City of Jacksonville.

INDEX BY CALL LETTERS

WJAY 810 600 Cleveland, Ohio. Cleveland Radio Broadcasting Corp.	WLAC 1470 5000 Nashville, Tenn. Life & Casualty Insurance Co.
WJBC 1200 100 LaSalle, Ill. Kaskaskia Broadcasting Co.	WLAP 1420 100 Louisville, Ky. American Broadcasting Corp. of Ky.
WJBI 1210 100 Red Bank, N. J. Monmouth Broadcasting Co., Inc.	WLB 1250 1000 Minneapolis, Minn. University of Minnesota.
WJBK 1370 50 Detroit, Mich. James F. Hopkins, Inc., Curtiss Bldg.	WLBC 1310 100 Muncie, Ind. D. A. Burton, Anthony Bldg.
WJBL 1200 100 Decatur, Ill. Commodore Broadcasting, Inc.	WLBK 1420 100 Kansas City, Kans. WLBK Broadcasting Corp., Huron Bldg.
WJBO 1420 100 Baton Rouge, La. Baton Rouge Broadcasting Co., Inc.	WLBL 900 2500 Stevens Point, Wis. Wisconsin Dept. of Agriculture and Markets.
WJBW 1200 100 New Orleans, La. C. C. Carlson, 2743 Dumaine St.	WLBW 1250 600 Erie, Pa. Broadcasters of Pennsylvania, Inc.
WJSB 1210 100 Gadsden, Ala. Gadsden Broadcasting Co., 112 N. 8th St.	WLBZ 620 600 Bangor, Me. Maine Broadcasting Co., Inc., 100 Main.
WJDX 1270 1000 Jackson, Miss. Lamar Life Insurance Co.	WLEY 1370 100 Lexington, Mass. Albert S. Moffat
WJEJ 1210 100 Hagerstown, Md. Hagerstown Broadcasting Co., Inc.	WLIT 560 600 Philadelphia, Pa. Lit Bros. Broadcasting System, Inc.
WJEM 990 500 Tupelo, Miss. Britt A. Rogers, Jr.	WLNH 1310 100 Laconia, N. H.
WJJD 1130 20000 Chicago, Ill. WJJD, Inc., 201 N. Wells St.	WLS 870 50000 Chicago, Ill. Agricultural Broadcasting Co.
WJMS 1420 100 Ironwood, Mich. WJMS, Inc., St. James Hotel.	WLTH 1400 600 Brooklyn, N. Y. Voice of Brooklyn, Inc.
WJR 760 10000 Detroit, Mich. WJR, Inc., Flaher Bldg.	WLVA 1370 100 Lynchburg, Va. Lynchburg Broadcasting Corp.
WJSV 1460 10000 Washington, D. C. Old Dominion Broadcasting Co.	WLW 700 50000 Cincinnati, Ohio. Crosley Radio Corp.
WJTL 1370 100 Atlanta, Ga. Oglethorpe University.	WLWL 1100 5000 New York, N. Y. Missionary Society of St. Paul.
WJW 1210 100 Akron, Ohio. WJW, Inc., 41 S. High St.	WMAL 630 250 Washington, D. C. National Broadcasting Co., Inc.
WJZ 760 50000 New York, N. Y. National Broadcasting Co., Inc.	WMAQ 670 5000 Chicago, Ill. National Broadcasting Co., Inc.
WKAQ 1240 1000 San Juan, P. R. Radio Corp. of Porto Rico, P. O. Box 358	WMAS 1420 100 Springfield, Mass. WMAS, Inc., Hotel Stonehaven.
WKAR 1040 1000 East Lansing, Mich. Michigan State College.	WMAZ 1180 500 Macon, Ga. Southeastern Broadcasting Co.
WKBB 1500 100 East Dubuque, Ill. Richard W. Hoffman	WMBC 1420 100 Detroit, Mich. Michigan Broadcasting Co.
WKBF 1400 500 Indianapolis, Ind. Indianapolis Broadcasting, Inc.	WMBD 1440 500 Peoria, Ill. Peoria Broadcasting Co.
WKBH 1380 1000 LaCrosse, Wis. WKBH, Inc., 409 Main St.	WMBG 1210 100 Richmond, Va. Havens and Martin, Inc.
WKBI 1420 100 Cicero, Ill. WKBI, Inc., 6138 W. 22nd St.	WMBH 1420 100 Joplin, Mo. W. M. Robertson.
WKBN 670 500 Youngstown, Ohio. WKBN Broadcasting Corp.	WMBI 1080 5000 Chicago, Ill. Moody Bible Institute.
WKBO 1200 100 Harrisburg, Pa. Keystone Broadcasting Corp.	WMBO 1310 100 Auburn, N. Y. WMBO, Inc., Metcalf Bldg.
WKBY 1500 100 Richmond, Ind. Wm. O. Knox, Box 288	WMBO 1500 100 Brooklyn, N. Y. Paul J. Gollhofer, 95 Leonard St.
WKBW 1480 5000 Buffalo, N. Y. Buffalo Broadcasting Corp.	WMBR 1370 100 Jacksonville, Fla. F. J. Reynolds, Carling Hotel
WKBZ 1500 100 Ludington, Mich. Karl L. Ashbacher & Sons.	WMC 780 500 Memphis, Tenn. WMC, Inc., Hotel Gayoso.
WKEU 1500 100 LaGrange, Ga. Radio Station WKEU, 906 Hill St.	WMCA 570 500 New York, N. Y. Knickerbocker Broadcasting Co.
WKFI 1210 100 Greenwood, Miss. J. Pat Scully.	WMEX 1500 100 Chelsea, Mass. The Northern Corp.
WKJC 1200 100 Lancaster, Pa. Lancaster Broadcasting Service, Inc.	WMFN 890 250 Fairmont, W. Va. A. M. Rowe, Inc., 325 Main St.
WKOK 1210 100 Sunbury, Pa. Sunbury Broadcasting Co.	WMPC 1500 100 Lapeer, Mich. First Methodist Protestant Church.
WKRC 550 1000 Cincinnati, Ohio. WKRC, Inc., Hotel Alms.	WMT 500 500 Waterloo, Iowa. Waterloo Broadcasting Co.
WKY 900 1000 Oklahoma City, Okla. Oklahoma Publishing Co.	WNAC 1230 1000 Boston, Mass. Shepard Broadcasting Service, Inc.
WKZO 590 1000 Kalamazoo, Mich. John E. Fetzer, Burdick Hotel.	WNAD 1010 500 Norman, Okla. University of Oklahoma.

INDEX BY CALL LETTERS

WNAX 570 1000 Yankton, S. D.
 The House of Gurney, Inc., 2nd and Capita St.
WNBK 1500 100 Binghamton, N. Y.
 Howitt-Wood Radio Co., Inc.
WNBH 1310 100 New Bedford, Mass.
 New Bedford Broadcasting Co.
WNBO 1200 100 Silver Haven, Pa.
 John Brownlee Spriggs. (Washington, Pa.)
WNBK 1430 600 Memphis, Tenn.
 Memphis Broadcasting Co., Hotel DeVoy.
WNBW 1200 10 Carbondale, Pa.
 WNBW, Inc., 50 Main St., N.
WNBX 1280 250 Springfield, Vt.
 WNBX Broadcasting Corp., 39 Main St.
WNBZ 1290 50 Saranac Lake, N. Y.
 Smith & Mace, 70 Broadway.
WNEL 1290 500 San Juan, P. R.
WNEW 1250 1000 Newark, N. J.
 Wodaam Corp., 1060 Broad
WNOX 560 1000 Knoxville, Tenn.
 WNOX, Inc.
WNRA 1420 100 Muscle Shoals, Ala.
 Kathryn Jones, P. O. Box 745, Sheffield, Ala.
WNYC 810 600 New York, N. Y.
 Dept. of Plant and Structures.
WOAI 1190 50000 San Antonio, Texas.
 Southland Industries, Inc., 1038 Navarro.
WOC 1370 100 Davenport, Iowa
 Palmer School of Chiropractic
WOCL 1210 60 Jamestown, N. Y.
 A. E. Newton, 840 N. Main St.
WODX 1410 500 Mobile, Ala.
 Mobile Broadcasting Corp., Battle House.
WOI 840 5000 Ames, Iowa.
 Iowa State College.
WOKO 1430 600 Albany, N. Y.
 WOKO, Inc., Hotel Ten Eyck.
WOL 1310 100 Washington, D. C.
 American Broadcasting Co., Annapolis Hotel.
WOMT 1210 100 Manitowoc, Wis.
 Francis M. Kadow, Box 326.
WOOD 1270 500 Grand Rapids, Mich.
 Kunsky-Trendle Broadcasting Corp.
WOPI 1500 100 Bristol, Tenn.
 Radiophone Broadcasting Station WOPI, Inc.
WOQ 1300 1000 Kansas City, Mo.
 Unity School of Christianity.
WOR 710 5000 Newark, N. J.
 Bamberger Broadcasting Service, Inc.
WORC 1280 600 Worcester, Mass.
 Alfred F. Kleindienst, 60 Franklin St.
WORK 1000 1000 York, Pa.
 York Broadcasting Co., 15 S. Beaver St.
WOS 830 500 Jefferson City, Mo.
 State Highway Control, Capitol Bldg.
WOSU 670 750 Columbus, Ohio.
 Ohio State University.
WOV 1130 1000 New York, N. Y.
 International Broadcasting Corp.
WOW 590 1000 Omaha, Neb.
 Woodmen of the World, 4th and Farnam.
WOWO 1180 10000 Fort Wayne, Ind.
 Main Auto Supply Co., 213 W. Main.
WPAD 1420 100 Paducah, Ky.
 Paducah Broadcasting Co., Inc.
WPEN 1500 100 Philadelphia, Pa.
 William Penn Broadcasting Co.
WPF 1370 100 Hattiesburg, Miss.
 Otis P. Eure, Box 530.
WPG 1100 5000 Atlantic City, N. J.
 Columbia Broadcasting System.

WPHR 1200 100 Petersburg, Va.
 WLBG, Inc., Medical Arts Bldg.
WPRO 1210 100 Providence, R. I.
 Cherry & Webb Broadcasting Co., 15 Chestnut.
WPTF 680 5000 Raleigh, N. C.
 Durham Life Insurance Co.
WQAM 560 1000 Miami, Fla.
 Miami Broadcasting Co., Inc., 327 N.E. 1st Ave.
WQAN 880 250 Scranton, Pa.
 Scranton Times, 149 Penn Ave.
WQBC 1360 500 Vicksburg, Miss.
 Delta Broadcasting Co., Hotel Vicksburg.
WQDM 1370 100 St. Albans, Vt.
 A. J. St. Antoine and E. J. Regan.
WQDX 1210 100 Thomasville, Ga.
 Stevens Luke, 135 E. Jackson St.
WRAK 1370 100 Williamsport, Pa.
 WRAK, Inc., 244 W. 4th St.
WRAM 1370 100 Durham, N. C.
 Washington-Duke Hotel
WRAX 1310 100 Reading, Pa.
 Reading Broadcasting Co., 533 Penn. St.
WRAX 1020 250 Philadelphia, Pa.
 WRAX Broadcasting Co., 217 S. Broad St.
WRBL 1200 100 Columbus, Ga.
 WRBL Radio Station, Inc.
WRBX 1410 250 Roanoke, Va.
 Richmond Development Corp.
WRC 950 500 Washington, D. C.
 National Broadcasting Co., Inc.
WRDO 1370 100 Augusta, Me.
 WRDO, Inc., Augusta House.
WRDW 1500 100 Augusta, Ga.
 Virgil V. Evans Co., 309 8th St.
WREC 600 500 Memphis, Tenn.
 WREC, Inc., Hotel Peabody.
WREN 1220 1000 Lawrence, Kans.
 Jenny Wren Co., 8th and Vermont St.
WRHM 1250 1000 Minneapolis, Minn.
 Minnesota Broadcasting Corp., 115 E. Grant.
WRJN 1370 100 Racine, Wis.
 Racine Broadcasting Corp., Hotel Racine.
WROK 1410 500 Rockford, Ill.
 Rockford Broadcasters, Inc.
WROL 1310 100 Knoxville, Tenn.
 Stuart Broadcasting Corp., 524 S. Gay.
WRR 1280 500 Dallas, Texas.
 City of Dallas, Hilton Hotel.
WRUF 830 5000 Gainesville, Fla.
 State University.
WRVA 1110 5000 Richmond, Va.
 Larus & Bro. Co., Inc., 22nd and Gary St.
WSAI 1330 1000 Cincinnati, Ohio.
 Crosley Radio Corp., 1329 Arlington.
WSAJ 1310 100 Grove City, Pa.
 Grove City College
WSAN 1440 250 Allentown, Pa.
 WSAN, Inc., 39 10th St.
WSAR 1450 250 Fall River, Mass.
 Doughty & Welch Electric Co., Inc.
WSAZ 1190 1000 Huntington, W. Va.
 WSAZ, Inc., 929½ 4th Ave.
WSB 740 50000 Atlanta, Ga.
 Atlanta Journal, 7 N. Forsyth St.
WSBC 1210 100 Chicago, Ill.
 Gene T. Dyer, 1258 S. Michigan Ave.
WSBT 1230 500 South Bend, Ind.
 South Bend Tribune.
WSEN 1210 100 Columbus, Ohio.
 Columbus Broadcasting Corp., 144 S. High.
WSFA 1410 500 Montgomery, Ala.
 Montgomery Brdg. Co., Inc., Jeff. Dav. H'l.

INDEX BY CALL LETTERS

WSGN 1310 100 Birmingham, Ala. R. B. Broyles, Tutwiler Hotel.	WWSW 1500 100 Pittsburgh, Pa. Walker & Downing Radio Corp.
WSIX 1210 100 Springfield, Tenn. 638 Tire & Vulcanizing Co.	WWVA 1160 5000 Wheeling, W. Va. West Virginia Broadcasting Corp.
WSJS 1310 100 Winston-Salem, N. C. Winston-Salem Journal Co., 416 N. Marshall.	WXYZ 1240 1000 Detroit, Mich. Kinsky-Trendle Broadcasting Corp.
WSM 850 50000 Nashville, Tenn. National Life & Accident Insurance Co.	XEA 1100 125 Guadalupe, Jal. Alberto Pálos Souza. Juan Manuel 383
WSMB 1320 500 New Orleans, La. WSMB, Inc., Malson Blanche Bldg.	XEAB 1450 7.5 Nuevo Laredo, Tams. Homberto Garda.
WSMK 1380 200 Dayton, Ohio. S. M. Krohn, Jr., 4th and Main St.	XEAC 1295 100 San Luis Potosí, S. L. P. Francisco de P. Cabrera.
WSOC 1210 100 Charlotte, N. C. WSOC, Inc., Box 730.	XEAF 990 750 Nogales, Son. Francisco G. Elias, Hotel Central.
WSPA 1420 100 Spartanburg, S. C. Virgil V. Evans, Ravenel and Avant St.	XEAI 1090 100 Mexico City, D. F. Carlos Gonzales Caballero, Insurgentes 366.
WSPD 1340 1000 Toledo, Ohio. Toledo Broadcasting Co., 505 Jefferson	XEAO 580 250 Mexicall, B. C. Luis L. Castro, C. Altamirano 156.
WSUI 980 500 Iowa City, Iowa. State University of Iowa.	XEAW 985 10000 Reynosa, Tams. Internacional Broadcasting Co., S. A.
WSUN 620 1000 St. Petersburg, Fla. Florida Westcoast Broadcasting Co., Inc.	XEB 1030 10000 Mexico City, D. F. El Buen Tono, S. A., Buen Tono No. 6.
WVS 1370 50 Buffalo, N. Y. Seneca Vocational High School.	XEBC 815 2500 Agua Caliente, B. C. Agua Caliente Broadcasting Co.
WSYB 1500 100 Rutland, Vt. Philip Weiss Music Co., 80 West St.	XEC 1000 50 Toluca, D. F. Jesus R. Benavides, Independencia 76.
WSYR 570 250 Syracuse, N. Y. Central New York Broadcasting Corp.	XECW 1310 10 Mexico City, D. F. Maria Elena Bravo de Cordero
WTAD 1440 500 Quincy, Ill. Illinois Broadcasting Corp., State and 6th.	XED 1155 500 Guadalupe, Jal. Cia. Radiofonografica, 16 de Septiembre 13
WTAQ 580 750 Worcester, Mass. Worcester Telegram Publishing Co.	XEF 735 150000 Villa Acuna, Coah. Compania Radiodifusora de Acuna, S. A.
WTAM 1070 50000 Cleveland, Ohio. National Broadcasting Co., Inc.	XEFA 1250 500 Mexico City, D. F. Eduardo Limon Segul, Mediterraneo 236
WTAQ 1330 1000 Eau Claire, Wis. Gillette Rubber Co., Hotel Eau Claire.	XEFB 1315 100 Monterrey, N. L. Jesus Quintanilla, 5 de Mayo Oriente 112.
WTAR 780 500 Norfolk, Va. WTAR Radio Corp., Walnwright Bldg.	XEFC 1050 100 Merida, Yuc. J. Molina Font, Calle 59, 517.
WTAW 1120 500 College Station, Texas. Agricultural and Mechanical College.	XEFE 985 100 Laredo, Tams. Rafael T. Carranza.
WTAX 1210 100 Springfield, Ill. WTAX, Inc., 416 E. Capitol Ave.	XEFG 1105 250 Mexico City, D. F. Ricardo Gonzales Montero, Teplc 43
WTBO 1420 100 Cumberland, Md. Associated Broadcasting Corp., Box 794.	XEFI 1280 250 Chihuahua, Chih. Feliciano Lopez Isles, Ap. 157.
WTEL 1310 100 Philadelphia, Pa. Foulkrod Radio Engineering Co., Inc.	XEFJ 1000 100 Monterrey, N. L. R. Junco de la Vega, C. Morelos Oriente 859.
WTFI 1460 500 Athens, Ga. Liberty Broadcasting Co., Costa Bldg.	XEFO 940 5000 Mexico City, D. F. Partido Nacional Revolucionario.
WTIC 1080 50000 Hartford, Conn. Travelers Broadcasting Service Corp.	XEFV 1400 100 Juarez, Chih. J. Onofre Meza Ave. Lerdo Norte 521.
WTJS 1310 100 Jackson, Tenn. Sun Publishing Co., Sun Bldg.	XEFW 1310 70 Tampico, Tams. J. Expedito Martinez, C. Madero Poniente 19.
WTMJ 820 1000 Milwaukee, Wis. The Journal Co., 333 W. State St.	XEFZ 1370 100 Mexico City, D. F. Manuel Zetina
WTNJ 1280 500 Trenton, N. J. Trenton Broadcasting Co., Stacy Trent Hotel	XEH 1132 250 Monterrey, N. L. Tarnava y Cla, P. Mier 215.
WTOC 1280 500 Savannah, Ga. Savannah Broadcasting Co., Inc., DeSoto Hotel.	XEI 1310 125 Morelia, Mich. Carlos Gutierrez M., F. I. Madero 545
WTRC 1310 50 Elkhart, Ind. Truth Radio Corp., Hotel Elkhart.	XEJ 1015 250 Juarez, Chih. Juan G. Buttner, Ave. Lerdo 309.
WVFW 1400 500 Brooklyn, N. Y. Paramount Brdcstg. Co., 1 Nevins St.	XEK 990 100 Mexico City, D. F. Arturo Martinez. Jalapa No. 51
WWAE 1200 100 Hammond, Ind. Hammond Calumet Broadcasting Corp.	XEL 1000 10 Saltillo, Coah. Antonio Garza Castro, Aldama 59
WWJ 920 1000 Detroit, Mich. Evening News Assn., 616 Lafayette Blvd.	XEMO 865 1500 Tijuana, B. C. Savoy Theatre Bldg., San Diego, Calif.
WWL 850 10000 New Orleans, La. Loyola University, Roosevelt Hotel.	XEMZ 530 30 Tijuana, B. C. Adolfo Labastida, Jr. Av. B 506
WWNC 570 1000 Asheville, N. C. Citizen Broadcasting Co., Inc., Flatiron Bldg.	XEN 711 1000 Mexico City, D. F. Cerveceria Modelo S. A., Motolinia 22.
WWRL 1500 100 Woodside, N. Y. Long Island Broadcasting Corp.	XENT 1115 30000 Nuevo Laredo, Tams. Advertising Dept. P. O. Box 163, Laredo, Tex.

INDEX BY CALL LETTERS

XEOK 760 2500 Tijuana, B. C. Carlos de la Sierra Calle 5 a 312	KEY 548.8 10 Merida, Yuc. Bartolome Garcia Correa
XEP 780 500 Mexico City, D. F. Cia Difusora de Mexico S. A., Rembrandt 11.	KEYZ 760 10000 Mexico City, D. F. Angel M. Diaz, Ave. Juarez 48.
XEPN 686 50000 Piedras Negras, Coah. Piedras Negras Broadcasting Co.	KEZ 630 500 Merida, Yuc. Bartolome Garcia Correa, Calle 58 No. 497.
XER 735 160000 Villa Acuna, Coah. Compania Radiodifusora de Acuna, Apdo. 30	XFB 1290 1000 Jalapa, Ver. Gobierno del Estado de Veracruz.
XES 1020 250 Tampico, Tams. Fernando Sada, Hotel Inglaterra.	XFC 805 350 Aguascalientes, Ags. Gobierno del Estado de Aguascalientes.
XET 690 500 Monterrey, N. L. Cadena Radiodifusora Mexicana, S. A.	XFG 638.3 2000 Mexico City, D. F. Secretaria de Guerra y Marina.
XETB 1380 125 Torreon, Coah. Jose A. Berumen, R. Corona 317.	XFO 840 5000 Mexico City, D. F. National Revolucionario Party.
XETH 1200 100 Puebla, Puc. Ramon Huerta G., Calle 17, Oriente 11.	XFX 610 500 Mexico City, D. F. Secretaria de Educacion Publica.
XETU 890 100 Pachuca, Hdgs. Benito Castillo	YV1BC 980 5000 Caracas, Venz Cia Ama Alamaoen Americana, Apt. 290
XETW 830 500 Mexico City, D. F. Rafael M. Pena, Gante 4, 3er piso	YV2BC 882 100 Caracas, Venz.
XETZ 1210 500 Mexico City, D. F. Jose Alvarez del Villar, 92 Londres 190.	YV3BC 1200 1000 Caracas, Venz. Degwitz & Sibless.
XEU 1010 100 Veracruz, Ver. Fernando Pazos Sosa, Vicario 12.	10-AK 1200 15 Stratford, Ont. M. I. Higgins, 151 Ontario St.
XEW 890 50000 Mexico City, D. F. Cadena Radiodifusora Mexicana S. A.	10-BP 1200 15 Wingham, Ont. W. T. Crulckshank.
XEWW 1095 250 Veracruz, Ver. Esteben Silva, Ave., Independencia 57	10-BQ 1200 15 Brantford, Ont. Tom and Harold Brown.
XEX 630 50 Monterrey, N. L. Luis F. Petit Jean, Aldama 932 Sur.	10-BU 1200 15 Canora, Sask. Canora Radio Assn.

SHORT WAVE RELAY BROADCASTING STATIONS OF NORTH AMERICA

Arranged Alphabetically by the call letters of the Broadcasting Stations which they relay. The frequencies preceded by an asterisk are not in operation at the present time.

CFBO, St. John, N. B. VE9BJ, St. John, N. B. 6,090 kcs., 49.23 meters	CKFC, Vancouver, B. C. VE9CS, Vancouver, B. C. 6,070 kcs., 49.39 meters	WCFL, Chicago, Ill. W9XAA, Chicago, Ill. *17,780 kcs., 16.86 meters *11,840 kcs., 25.32 meters 6,080 kcs., 49.31 meters
CFCF, Montreal, P. Q. VE9DR, Montreal, P. Q. *15,130 kcs., 19.82 meters *11,780 kcs., 25.45 meters * 9,555 kcs., 31.38 meters 6,005 kcs., 49.93 meters	CKIC, Wolfville, N. S. VE9CX, Wolfville, N. S. * 6,015 kcs., 49.85 meters	WEEI, Boston, Mass. WIXAL, Boston, Mass. 15,242 kcs., 19.67 meters 11,780 kcs., 25.45 meters
CFGN, Calgary, Alta. VE9CA, Calgary, Alta. *11,860 kcs., 25.28 meters * 6,030 kcs., 49.72 meters	CRCT, Toronto, Ont. VE9GW, Bowmanville, Ont. *24,380 kcs., 12.30 meters *11,810 kcs., 25.39 meters 6,095 kcs., 49.19 meters	WENR, Chicago, Ill. W9XF, Downer's Grove, Ill. 6,100 kcs., 49.15 meters
CFCY, Charlottetown, P. E. I. VE9EH, Charlottetown, P. E. I. * 6,080 kcs., 49.31 meters	KDKA, Pittsburgh, Pa. W8XK, Saxonburg, Pa. 21,540 kcs., 13.92 meters *17,780 kcs., 16.86 meters 15,210 kcs., 19.71 meters 11,870 kcs., 25.25 meters * 9,570 kcs., 31.33 meters 6,140 kcs., 48.83 meters	WG Y, Schenectady, N. Y. W9XAD, Schenectady, N. Y. 15,340 kcs., 19.55 meters
CHNS, Halifax, N. S. VE9HX, Halifax, N. S. *11,835 kcs., 25.33 meters 6,110 kcs., 49.07 meters	WABC, New York, N. Y. W2XE, Wayne, N. J. 15,280 kcs., 19.62 meters 11,840 kcs., 25.32 meters 6,120 kcs., 48.99 meters	WG Y, Schenectady, N. Y. W2XAF, Schenectady, N. Y. 9,530 kcs., 31.46 meters
CJRC, Fleming, Sask. VE9EL, Middlechurch, Man. * 6,150 kcs., 48.73 meters	WBZ, Boston, Mass. WBZA, Springfield, Mass. WIXAZ, Millis, Mass. 9,570 kcs., 31.33 meters	WIOD, Miami, Fla. W4XB, Miami Beach, Fla. * 6,036 kcs., 49.67 meters
CJRC, Fleming, Sask. VE9JR, Middlechurch, Man. 11,720 kcs., 25.58 meters	WCAU, Philadelphia, Pa. W3XAU, Byberry, Pa. 9,590 kcs., 31.26 meters 6,060 kcs., 49.48 meters	WJZ, New York, N. Y. W3XAL, Boundbrook, N. J. 17,772 kcs., 16.87 meters 6,100 kcs., 49.15 meters
CKCL, Toronto, Ont. VE9AO, Toronto, Ont.		WJZ, New York, N. Y. W3XL, Boundbrook, N. J. 6,425 kcs., 45.66 meters
		WLW, Cincinnati, Ohio. W8XAL, Mason, Ohio. 6,060 kcs., 49.48 meters

AROUND *the* CLOCK

on *the* SHORT WAVES

MIDNIGHT to NOON (EST)

GMT	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	W3XAU W8XX W9XF	VK2ME W9XF	GSB GSD VK2ME	GSB GSD RV15 VQ7LO	PK1WK RV15 VQ7LO	HVJ J1AA RNE RV15 VK2ME VK3ME PK1WK VQ7LO	J1AA RV15 VK2ME VK3ME ZGE	GSF GSG PHI Rabat RV15 VE9GW VK2ME W1XAZ W8XX ZGE	DJB DJD GSF GSG PHI Pont. Rabat VE9DR VE9GW VK2ME W1XAZ W8XX YV2AM ZGE	CP5 DJB DJD GSE GSE PHI Pont. VE9DR VE9GW VK2ME W3XAL YV2AM	CT1AA CP5 DJB DJD GSE Pont. VE9DR VE9GW W1XAL W1XAZ W8XX W3XAL	GSB GSF I2RO Pont. VE9DR VE9JR W1XAL W1XAZ W2XE W8XX W3XAL

NOON to MIDNIGHT (EST)

GMT	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	1:00	2:00	3:00	4:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	GSB GSF I2RO Pont. VE9DR VE9GW VE9JR W1XAL W2XE W3XAL W3XAU W3XL W8XX	GSB GSD I2RO Pont. RNE VE9DR VE9GW VE9JR W1XAL W3XAL W3XL W8XX W9XF	GSA GSB GSD I2RO OXY kRabat VE9DR VE9GW VE9JR W1XAL W3XAL W3XAU W3XL W8XX W9XF	GSA GSB HAT I2RO LSX OXY Pont. Rabat RV59 VE9DR VE9GW VE9JR W1XAZ W2XAD W2XE W3XAL W3XAU W3XL W8XX YV3BC	CT1AA GSA GSB I2RO OXY Pont. Rabat RV59 VE9DR VE9GW VE9JR W1XAZ W2XAD W2XE W3XAL W3XAU W3XL W8XX YV3BC	CT1AA EAQ GSA GSB HBL HBP HIZ I2RO OXY Pont. RV59 VE9DR VE9GW VE9JR W1XAL W2XAD W2XE W3XAL W3XAU W3XL W8XX YV3BC	COC CP5 CT1AA EAQ GSA GSC GSC HBL HBP HJ4ABE HJ1ABB HJ2ABA HJ4ABE OCM PSK Pont. VE9DR VE9GW VE9JR VE9HX VE9JR W1XAL W2XAF W2XE W3XAL W8XX XETE YV1BC YV3BC	COC CP5 EAQ GSA GSC HBL HBP HJ4ABE HJ1ABB HJ2ABA HJ4ABE OCM PSK Pont. VE9DR VE9GW VE9JR VE9HX VE9JR W1XAL W2XAF W2XE W3XAL W8XX XETE YV1BC YV3BC	DJC G6RX HCJB HIX H1A HJ1ABB HJ3ABD HJ4ABE LSX VE9CS VE9DR VE9HX W1XAL W2XAF W2XE W3XAL W8XX XETE YV1BC YV3BC	CP5 DJB HCJB HC2RL HJ 3ABD PRADO VE9DN VE9GW VE9HX PRADO VE9CS VE9DR VE9GW VE9HX VE9JR W1XAL W2XAF W2XE W3XAL W8XX XETE	CP5 DJB HC2RL HJ 3ABD PRADO VE9DN VE9GW VE9HX PRADO VE9CS VE9DR VE9GW VE9HX VE9JR W1XAL W2XAF W2XE W3XAL W8XX XETE	CP5 HJ 4ABB HJ4ABE VE9DN W1XAZ W3XAL W3XAU W8XX W9XF XETE

One Hundred Best S. W. Stations by Calls

Stations marked with an asterisk (*) will not verify. Frequencies are given in megacycles. Times are given in Eastern Standard.

- *British Ships, 13.220, 8.831, 4.174
- *CEC, Chile, 19.878, 15.855
- CGA Canada, 13.296, 9.340
- CNR, Morocco, 12.820
- COC, Cuba, 5.996, 4-6 p.m.
- CP5, Bolivia, 15.300, 9-11 a.m.
- CP5, Bolivia, 6.081, 6:30 to 7:30 or 8 p.m., daily, exc. Sun.; 9-11:30 p.m. daily
- CT1AA, Portugal, 9.592, Tues. and Fri., 4:30-7 p.m.
- CT3AQ, Madeira, Tues., Thurs., 5-6:30 p.m.; Sun. 10:30 a.m.-noon.
- DAF, Germany, 12.394
- DFB, Germany, 17.512
- DIQ, Germany, 10.285
- DJA, Germany, 9.552
- DJB, Germany, 15.190, 8-11 a.m.
- DJC, Germany, 6.017, 8-11 p.m.
- DJD, Germany, 11.753, 8-11 a.m.
- DJL, Germany, 15.110
- EAQ, Spain, 9.862, 5:30-8 p.m.
- EHY, Spain, 10.164
- FTK, France, 15.863
- FTM, France, 19.282
- FZS, Indo-China, 11.983
- *German Ships, 13.135, 10.163, 8.328, 4.174
- GAS, England, 18.304
- GBB, England, 13.500
- GBS, England, 12.148
- GBW, England, 14.550
- GSA, England, 6.050, 6-8 p.m.; 2:45-5:45 p.m.
- GSB, England, 9.510, 2:15-4:15 a.m.; 11 a.m. to 1 p.m.; 1:15-5:45 p.m.
- GSC, England, 9.585, 6-8 p.m.
- GSD, England, 11.750, 2:30-4:30 a.m.; 1:15-2:45 p.m.
- GSE, England, 11.865, 9 a.m. to 1 p.m.
- GSF, England, 15.140, 7-8:45 a.m.; 9-11 a.m.
- GSX, England, 17.770, 7 to 8:45 a.m.
- G6RX, England, 4.972, Testing nights 4:30-8-10 p.m.
- HAT, Hungary, 7.220, Tests Sunday, 4 p.m.
- HLB, Switzerland, 9.580, Sat., 5:30 to 6:15 p.m.
- HBP, Switzerland, 7.872, Sat., 5:30 to 6:15 p.m.
- HC2RL, Ecuador, 6.659, Tues., 9:14 to 11:14 p.m.; Sun., 5:45 to 7:45 p.m.
- HCJUB, Ecuador, 3.998, 8:14 to 10:14 daily, exc. Mon.
- HCK, Ecuador, 5.694, 8 to 11 p.m.
- HIX, Santo Domingo, 5.948, Tues. and Fri., 8 to 10 p.m.; Sun., 7:40 a.m.
- HIZ, Santo Domingo, 6.379, 5-6 p.m.
- HI-1-A, Santo Domingo, 6.272, 8-8:30 a.m.; 12:30-1:30 p.m.; 8-9 p.m.
- *HJB, Colombia, 14.930
- *HJY, Colombia, 18.444
- HJ1AB, Colombia, 6.447, 7:30-10 p.m.
- HJ2AB, Colombia, 8.879, 7:30 to 10 p.m.
- HJ3AB, Colombia, 7.402, 9-11:15 p.m., daily
- HJ4AB, Colombia, 7.139, Sat., 11 p.m. to Mid.; Sun. 3-5 p.m.; Wed., 8-10 p.m.
- HJ4ABE, Colombia, 5.900, 7-11 p.m.
- HJ5AB, Colombia, 6.378
- HJ5ABF, Colombia, 8.271
- HKN, Colombia, 7.138, 8-10 p.m., daily
- *HPF, Panama, 14.545.
- HSP, Siam, 17.719
- HVJ, Vatican City, 15.120, 5 to 5:15 a.m.
- IAC, Italy, 12.785
- I2RO, Italy, 11.800, 11:30 a.m. to 12:30 p.m.; 1:15 to 6 p.m.
- J1AA, Japan, 9.862, 5 to 8 a.m.
- KAY, Philippines, 14.980
- KAZ, Philippines, 9.990
- *KKP, Hawaii, 16.024
- LSN, Argentina, 9.895
- LSX, Argentina, 10.345
- LSY, Argentina, 18.116
- *OCI, Peru, 18.670
- OXY, Denmark, 9.520, 2 to 6:30 p.m.
- PHI, Holland, 11.725, 7:30 to 10 a.m., except Tues. and Wed.
- PK1WK, Java, 6.116, 4:15-6 a.m.
- PLE, Java, 18.820
- PLV, Java, 9.410
- Pontoise, France, 15.454
- Pontoise, France, 15.234, 8-11 a.m., 11.898, 11:15 a.m. to 2:15 p.m.; 3 to 6 p.m., 11.711, 3 to 9 p.m.; 10 p.m. to mid
- *PPU, Brazil, 19.270
- PRADO, Ecuador, 6.618, Thursday, 9-11 p.m.
- *PSF, Brazil, 14.682
- Rabat, Morocco, 12.820, Sun, 7:30 to 9 a.m., 8.218, Sun, 2:30 to 5 p.m.
- Radio-Tarnarive, Madagascar, 6.000, 2:30-4 a.m., Sun., 3-3:45 a.m., daily exc. Sun. and Mon.
- RNE, USSR., 11.923, Testing irregularly
- RV15, Siberia, 4.273, 3-9 a.m., daily
- RV59, USSR, 5.996, 3-6 p.m., daily
- TGA, Guatemala, 14.545
- TIN-TIU, Costa Rica, 14.545
- VE9AO, Toronto, Canada.
- VE9BJ, Canada, 6.090, Irreg.
- VE9CA, Canada, 6.030.
- VE9CS, Canada, 6.074, 8-10 p.m.
- VE9DN, Canada, 6.005, Testing irreg.
- VE9DR, Canada, 6.005, 7:30 a.m. to Midnight; Sun., noon to 11:15 p.m.
- VE9GW, Canada, 6.092, 3 p.m.-midnight
- VE9HX, Canada, 6.110, 5-11 p.m., daily
- VE9JR, Canada, 11.720, Irreg., approx. 9:30 a.m.-10:30 p.m.
- VK2ME, Australia, 10.520, 9.585, Sun., 1 to 3 a.m.; 5 to 11 a.m.
- VK3ME, Australia, 9.503, Wed., 5-6:30 a.m.; Sat., 5-7 a.m.
- VWZ, India, 17.533
- *WNC, U. S. A., 15.055
- W1XAL, U. S. A., 15.242, Sunday, 10 a.m.-1 p.m., 11.780, Sat., 5:30-11 p.m.; Sun., 6:30-8:30 p.m.
- W1XAZ, USA, 9.570
- W2XAD, USA, 15.320, Sun., Mon. Wed., Fri., 4-5 p.m.
- W2XAF, USA, 9.530, 7:45 to 11 p.m.
- W2XE, U. S. A., 15.258, 11 a.m. to 1 p.m., 11.823, 3 to 5 p.m., 6.116, 6 to 11 p.m.
- W3XAL, U. S. A., 17.772, 9 a.m.-3 p.m., except Sat., 6.096, 3 p.m. to midnight, Saturday
- W3XAU, USA, 9.585, Noon to 6 p.m., 6.057, 8 p.m. to 1 a.m.
- W3XL, U. S. A., 6.421, Irregular
- W4XB, U. S. A., 6.040, 4 p.m. to 1 a.m.
- W8XAL, U. S. A., 6.060, Relay WLW irreg.
- W8XK, U. S. A., 21.451, 7 a.m. to 2 p.m., 15.204, 10 a.m. to 4:15 p.m., 11.870, 4:30-10 p.m., 6.140, 4:30 p.m. to 12:30 a.m.
- W9XAA, U. S. A., 6.076, 3 to 6 p.m.
- W9XF, U. S. A., 6.425
- W9XF, U. S. A., 6.100, Silent Sat.; Sun, 1-2:30 p.m.; 4:30-7 p.m.; 9 p.m. to 2 a.m.; other days, 4:30-8 p.m.; 9:30 p.m. to 2 a.m.
- XAM, Mexico, 11.187
- XDS, Mexico, 11.760
- XETK, Mexico, 9.600, 2:30-5 p.m.; 6:30 p.m. to midnight
- *YNA, Nicaragua, 14.480, Phones Hialeah.
- *YVQ, Venezuela, 13.337, Phones Hialeah
- *YVR, Venezuela, 18.296 and 9.168
- YV1BC, Venezuela, 6.112, 5:15 to 10 p.m.
- YV2AM, Venezuela, 7.138, Sun., 8-10 a.m.
- YV3BC, Venezuela, 9.510, 9:30 to 10 p.m., 6.150, 10:30 a.m. to 1 p.m. and 4:30-9:30 p.m.; Sun., 8:30 a.m. to noon and 3-6:30 p.m.
- *ZFA, Bermuda, 5.045
- *ZFB, Bermuda, 10.060
- ZFS, Bahamas, 4.513.
- ZGE, Malaya, 5.996, Tues., Fri., 6:30-8:30 a.m. and Sun., 7-9 a.m.

SHORT WAVE RELAY STATIONS BY CALLS

This list includes only stations broadcasting programs on regular operating schedules. Frequencies are given in megacycles and time indicated is Eastern Standard Time.

<p>CP5, Bolivia, 6.081. 6:30 to 7:30 or 8 p.m., daily, except Sun.; 9-11:30 p.m., daily. 15.300. 9-11 a.m.</p> <p>CT1AA, Portugal, 9.592. Tues., Fri., 4:30-7 p.m. 15.350. 10-11 a.m.</p> <p>DJB, Germany, 15.190. 8-11 a.m.</p> <p>DJC, Germany, 6.017. 8-11 p.m.</p> <p>DJD, Germany, 11.753. 8-11 a.m.</p> <p>EAQ, Spain, 9.862. 5:30-8 p.m.</p> <p>GSA, England, 6.050. 2:45-5:45 p.m.; 6-8 p.m.</p> <p>GSB, England, 9.510. 2:15-4:15 a.m.; 11 a.m. to 1 p.m.; 1:15-5:45 p.m.</p> <p>GSC, England, 9.585. 6-8 p.m.</p> <p>GSD, England, 11.750. 2:15-4:15 a.m.; 1:15-2:45 p.m.</p> <p>GSE, England, 11.865. 9-11 a.m.</p> <p>GSF, England, 15.140. 7-8:45 a.m.; 9 a.m. to 1 p.m.</p> <p>GSJ, England, 17.790. 7-8:45 a.m.</p> <p>G6RX, England, 4.302. 7-10 p.m.</p> <p>HAT, Hungary, 7.220. 4 p.m., Sunday.</p> <p>HBL, Switzerland, 9.595. Sat., 5:30-6:15 p.m.</p> <p>HBP, Switzerland, 7.797. Sat., 5:30-6:15 p.m.</p> <p>HCJB, Ecuador, 4.107. 8:14-10:14, daily except Mon.</p> <p>HC2RL, Ecuador, 6.659. Tues., 9:14-11:14 p.m.; Sun., 5:45-7:45 p.m.</p> <p>HIX, Dominican Rep., 5.948. Tues., Fri., 8-10 p.m.</p> <p>HIZ, Dominican Rep., 6.379. 5-6 p.m.</p> <p>HJ1AB, Colombia, 6.447. 5-10 p.m.</p> <p>HJ3AB, Colombia, 7.402. 7-11:15 p.m.</p> <p>HJ4AB, Colombia, 7.139. Wed., 8-9 p.m.; Sun., 3-5 p.m.</p> <p>HJ4BE, Colombia, 5.900. 7-11 p.m.</p> <p>HKN, Colombia, 7.138. 8-10 p.m.</p> <p>HVJ, Vatican City, 15.120. 5-5:15 and 10-10:30 a.m.</p> <p>I2RO, Italy, 11.800. 11:30 a.m. to 12:30 p.m. and 1:15-6 p.m.</p> <p>J1AA, Japan, 9.862. 5-8 a.m.</p> <p>LSX, Argentina, 10.350. 3-4 and 8-9 p.m.</p> <p>OCM, Peru, 6.233. 7-10 p.m.</p> <p>OXY, Denmark, 6.069. 2-6:30 p.m. 9.520. 2-6:30 p.m.</p> <p>PHI, Holland, 11.725. Mon., Thur., Fri., 7:30-9:30 a.m.; Sat., Sun., 7:30-10 a.m.</p> <p>PK1WK, Java, 6.116. 4:15-6 a.m.</p> <p>Pontoise, France, 11.711. 3-6 p.m.; 6:15 p.m. to midnight.</p>	<p>11.898. 11:15 a.m. to 2:15 p.m.; 3-6 p.m. 15.234. 8-11 a.m.</p> <p>Prado, Ecuador, 6.618. Thurs., 9-11 p.m.</p> <p>PSK, Brazil, 8.180. 7-7:30 p.m. (Relays PRA-3).</p> <p>Rabat, Morocco, 8.218. Sun., 2:30-5 p.m. 12.820. Sun., 7:30-9 a.m.</p> <p>RNE, USSR, 11.923. Sun., 5-6 and 10-11 a.m.</p> <p>RV15, USSR, 4.273. 3-9 a.m.</p> <p>RV59, USSR, 5.996. 3-6 p.m.</p> <p>VE9CS, Canada, 6.070. 8-10 p.m.</p> <p>VE9DN, Canada, 6.005. Saturday night.</p> <p>VE9DR, Canada, 6.005. 7:30 a.m. to midnight.</p> <p>VE9GW, Canada, 6.095. 3 p.m. to midnight.</p> <p>VE9HX, Canada, 6.110. 5-11 p.m.</p> <p>VE9JR, Canada, 11.720. Irreg. between 9 a.m. and 11 p.m.</p> <p>VK2ME, Australia, 9.585. Sun., 1-3 a.m.; 5-11 a.m.</p> <p>VK3ME, Australia, 9.503. Wed., 5-6:30 a.m.; Sat. 5-7 a.m.</p> <p>W1XAL, USA, 11.780. Sat., 5:30-11 p.m.; Sun., 6:30-8:30 p.m.</p> <p>15.242. Sun., 10 a.m. to 1 p.m.</p> <p>W1XAZ, USA, 9.570. 7 a.m. to midnight.</p> <p>W2XAD, USA, 15.340. Sun., Mon., Wed., Fri., 4-5 p.m.</p> <p>W2XAF, USA, 9.530. 7:45-11 p.m.</p> <p>W2XE, USA, 6.120. 6-11 p.m. 11.830. 3-5 p.m. 15.270. 11 a.m. to 1 p.m.</p> <p>W3XAL, USA, 6.100. Sat., 3 p.m. to midnight. 17.780. 9 a.m. to 3 p.m., daily exc. Sat.</p> <p>W3XAU, USA, 6.060. 8 p.m. to 1 a.m. 9.590. Noon to 6 p.m.</p> <p>W3XL, USA, 6.425. Fri., 5:30 p.m. to 1 a.m. 17.300. Fri., 11 a.m. to 5 p.m.</p> <p>W8XK, USA, 6.140. 4:30 p.m. to 12:30 a.m. 11.870. 4:30-10 p.m. 15.210. 10 a.m. to 5:15 p.m. 21.540. 7 a.m. to 2 p.m.</p> <p>W9XF, USA, 6.100. Sat. silent; Sun., 1-2:30 p.m.; 4:30-7 p.m.; 9 p.m. to 2 a.m.; Other days, 4:30-8 p.m.; 9:30 p.m. to 2 a.m.</p> <p>XETE, Mexico, 9.600. 6:30 p.m. to midnight.</p> <p>YV1BC, Venezuela, 6.018. 5:15-10 p.m.</p> <p>YV3BC, Venezuela, 6.150. 4:30-10 p.m.</p>
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TWO HUNDRED DEPENDABLE S. W. STATIONS

Frequencies are shown in megacycles and wavelengths in meters. Key to symbols in parentheses: Capital letters indicate type of service, as follows:

<p>A—Point-to-Point, Condition A, inverted modulation</p> <p>B—Point-to-Point, Condition B, intelligible speech</p> <p>E—Experimental</p> <p>R—Relay (broadcasting)</p> <p>SS—Ship to shore, or, shore to ship</p> <p>Small letters concern verifications as follows:</p> <p>a—Verifies for return postage</p> <p>b—Verifies only occasionally</p> <p>c—Does not verify</p> <p>x—Address given alphabetically in address list</p> <p>y—Address not given</p> <p>z—No information available</p> <p>123—figures indicate key numbers in address list</p> <p>Complete lists of s.w. stations are found in</p> <p>RADEX No. 75, Jan., Foreign stations by Countries</p> <p>RADEX No. 76, Feb., North America by Frequencies</p> <p>RADEX No. 77, Mar., Foreign stations by Frequencies.</p> <p>Megs. Meters Location</p>	<p>4.942 62.70</p> <p>4.972 60.30</p> <p>5.045 59.42</p> <p>5.900 50.82</p> <p>5.948 50.40</p> <p>5.996 50.00</p> <p>6.000 49.97</p> <p>6.005 49.93</p> <p>6.017 49.83</p> <p>6.036 49.67</p> <p>6.045 49.60</p> <p>6.050 49.56</p> <p>6.060 49.48</p> <p>6.069 49.40</p> <p>6.070 49.39</p> <p>6.080 49.31</p> <p>6.081 49.30</p> <p>6.095 49.19</p> <p>6.100 49.15</p>	<p>CZA, Drummondville, P. Q. (SS-a6)</p> <p>G6RX, Rugby, England (E-ax)</p> <p>ZFA, St. George, Bermuda (A-cy)</p> <p>HJ4ABE, Medellin, Colombia (R-ax)</p> <p>HIX, Santo Domingo, D. R. (R-ax)</p> <p>RV59, Moscow, USSR (R-ax)</p> <p>Tananarive, Madagascar (R-ax)</p> <p>YV2BC, Caracas, Venez. (R-z)</p> <p>VE9DN, Drummondville, P. Q. (R-a6)</p> <p>VE9DR, Montreal, P. Q. (R-a6)</p> <p>DJC, Zeesen, Germany (R-a14)</p> <p>W4XB, Miami, Fla. (R-cy)</p> <p>HJ3AB1, Bogota, Colombia (R-ax)</p> <p>GSA, Daventry, Eng. (R-a17)</p> <p>W3XAU, Newton, Sq., Pa. (R-ax)</p> <p>W8XAL, Mason, Ohio (R-ax)</p> <p>OXY, Skamlebaek, Denmark (R-ax)</p> <p>VE9CS, Vancouver, B. C. (R-bx)</p> <p>YV2AM, Maracaibo, Venez. (R-ax)</p> <p>W9XAA, Chicago, Ill. (R-ax)</p> <p>CP5, LaPaz, Bolivia (R-ax)</p> <p>VE9GW, Bowmanville, Ont. (R-ax)</p> <p>W3XAL, Boundbrook, N. J. (R-a37)</p>
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6.110	49.07	W9XF, Chicago, Ill. (R-ax)	9.410	31.86	PLV, Bandoeng, Java (A-a-22)
6.112	49.10	VE9HX, Halifax, N. S. (R-ax)	9.480	31.63	PLW, Bandoeng, Java (A-a-22)
6.116	49.02	YVIBC, Caracas, Venez. (R-ax)	9.503	31.55	VK3ME, Melbourne, Aust. (R-ax)
		HJ1ABD, Cartagena, Col. (R-z)	9.510	31.53	GSB, Daventry, England (R-a-17)
		PK1WK, Bandoeng, Java. (R-ax)	9.520	31.49	XXY, Skamlebaek, Denmark (R-ax)
6.120	48.99	W2XE, Wayne, N. J. (R-ax)	9.530	31.46	W2XAF, Schenectady, N. Y. (R-ax)
6.140	48.83	W8XK, Saxonburg, Pa. (R-ax)	9.570	31.33	W1XAF, Millis, Mass. (R-ax)
6.150	48.78	YV3BC, Caracas, Venez. (R-ax)	9.585	31.28	GSC, Daventry, England (R-a-17)
6.233	48.10	OCM, Lima, Peru (R-ax)			VK2ME, Sydney, Aust. (R-a-3)
6.378	47.00	HJ5ABB, Cali, Colombia (R-by)	9.590	31.26	W2XAU, Newton Sq., Pa. (R-ax)
6.379	47.50	HIZ, Santo Domingo, D. R. (R-ax)	9.592	31.25	CP1AA, Lisbon, Portugal (R-ax)
6.425	46.66	W3XL, Boundbrook, N. J. (ER-a37)	9.595	31.30	HBL, Prangins, Switz. (R-a-30)
6.447	46.50	HJ1ABD, Barranquilla, Col. (R-ax)	9.600	31.23	XETE, Mexico City, D. F. (R-bx)
6.618	45.31	PRADO, Riobamba, Ecuador (R-ax)			YV2AM, Maracaibo, Venez. (R-ax)
6.648	45.10	IAC, Coltano, Italy (SS-a19)	9.609	31.20	DGU, Nauen, Germany (B-a-13)
6.659	45.02	HC2RL, Guayaquil, Ecuador (R-ax)	9.670	31.00	TI4NRH, Heredia, C. R. (R-ax)
6.672	44.94	YVQ, Maracay, Venez. (B-cy)	9.702	30.90	GCA, Rugby, England (A-a-16)
6.675	44.91	DGK, Nauen, Germany (B-a13)	9.750	30.75	VK2ME, Sydney, Aust. (B-a-3)
6.900	43.45	GDS, Rugby, England (A-a16)	9.798	30.60	GCW, Rugby, England (A-a-16)
6.966	43.04	EDO, Madrid, Spain (B-a28)	9.823	30.52	IRM, Rome, Italy (B-a-20)
6.990	42.89	LCL, Jelo, Norway (R-ax)	9.830	30.50	LSI, Buenos Aires, Arg. (B-b-1)
7.138	42.00	HJ4BB, Manizales, Col. (R-ax)	9.862	30.40	EAQ, Aranjuez, Spain (R-a-29)
		HKN, Medellin, Colombia (R-by)			JIAA, Kemikawa-cho, Japan (R-bx)
7.220	43.86	HAT2, Budapest, Hungary (R-ax)	9.895	30.30	LSN, Buenos Aires, Arg. (A-b-1)
7.402	40.50	HJ3ABB, Bogota, Col. (R-by)	9.942	30.15	GCU, Rugby, England (A-a-16)
		HJ3ABD, Bogota, Col. (R-z)	10.014	29.84	SUV, Abu Zabal, Egypt (B-a-10)
7.501	39.97	RKI, Moscow, USSR. (B-cz)	10.060	29.80	ZFB, St. George, Bermuda (A-cy)
7.621	39.34	RIM, Irkutsk, USSR. (B-cz)	10.163	29.50	German Ships
7.685	39.01	TIR, Cartago, Costa Rica (B-b-9)	10.164	29.79	EHY, Madrid, Spain (B-a-28)
7.797	38.47	HBI, Prangins, Switz. (R-b-30)	10.212	29.35	PSH, Rio de Janeiro, Braz. (B-b-5)
7.980	37.57	HBJ, Bangkok, Siam (B-a-27)	10.250	29.25	PMN, Bandoeng, Java (B-a-22)
8.180	36.65	PSK, Rio de Janeiro, Braz. (A-b-4)	10.285	29.15	DIQ, Zeesen, Germany (E-a-13)
		PSK, Rio de Janeiro, Braz. (R-a-38)	10.290	29.14	HPC, Panama City, Pan. (B-cy)
			10.296	29.12	LSL, Hurlingham, Arg. (B-b-1)
8.218	36.36	Rabat, Morocco (R-ax)	10.335	29.01	ZFD, St. George, Bermuda (A-cy)
8.464	35.42	DAF, Norden, Germany (SS-a-15)	10.350	28.98	LSX, Monte Grande, Arg. (B-cy)
8.760	34.34	PNI, Macassar, Celebes (B-z227)			LSX, Monte Grande, Arg. (R-b-2)
8.980	33.39	VWY, Pirkee, India (B-z)	10.410	28.80	PKP, Medan, Sumatra (B-a-23)
9.014	33.26	GCS, Rugby, England (A-a-16)	10.520	28.50	VK2ME, Sydney, Aust. (B-a-3)
9.104	32.93	LST, Olivos, Argentina (B-b-1)	10.613	28.25	EDN, Madrid, Spain (B-a-28)
9.120	32.87	CP6, La Paz, Bolivia (R-ax)			EDX, Madrid, Spain (B-a-28)
9.168	32.70	YVH, Maracay, Venez. (B-ax)	10.850	27.63	DFI, Nauen, Germany (B-a-13)
9.273	32.33	GCB, Rugby, England (A-a-16)	10.990	27.28	ZLT, Wellington, N. Z. (A-ax)
9.340	32.10	CJAZ, Drummondville, P. Q. (A-a-6)	11.187	26.80	XAM, Merida, Yuc. (B-ax)
		XDC, Mexico City, D. F. (B-cy)			

Just a Few KIND WORDS

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and read them all but have not touched them since finding RADEX. It is unbeatable."

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F. Kenneth Mayer, 1607 Hunter Ave., Columbus, Ohio.

11.680	25.67	YVQ, Maracay, Venez. (B-cy)	15.454	19.40	Pontoise, France (R-ax)
11.711	25.60	Pontoise, France (R-ax)	15.863	18.90	FTK, St. Assise, France (B-a-11)
11.720	25.58	VE9JR, Winnipeg, Man. (R-ax)	17.287	17.34	Italian Ships
11.725	25.57	PHI, Huizen, Holland (R-ax)	17.300	17.33	W3XL, Boundbrook, N. J. (E-a-37)
11.750	25.51	GSD, Davenport, England (R-a-17)	17.512	17.12	DFB, Nauen, Germany (B-a-13)
11.760	25.50	XDM-XDS, Chapultepec, D. F. (B-cy)	17.533	17.10	VWZ, Kirkee, India (B-z)
11.780	25.45	W1XAL, Boston, Mass. (R-ax)	17.580	17.05	British Ships
11.800	25.40	I2RO, Rome, Italy (R-bx)	17.719	16.92	HSP, Bangkok, Siam (B-a-27)
11.830	25.34	W2XE, Wayne, N. J. (R-ax)	17.760	16.88	DJE, Zeesen, Germany (E-a-14)
11.865	25.27	GSE, Davenport, Eng. (R-a-17)	17.770	16.87	IAC, Coltano, Italy (SS-b-19)
11.870	25.25	W8XK, Saxonburg, Pa. (R-ax)	17.775	16.87	PHI, Huizen, Holland (R-ax)
11.898	25.20	Pontoise, France (R-ax)	17.780	16.86	W3XAL, Boundbrook, N. J. (R-a-37)
11.923	25.16	RNE, Moscow, USSR. (E-ax)	17.790	16.85	GSG, Davenport, Eng. (R-a-17)
11.935	25.12	FTA, St. Assise, France (B-a-11)	18.116	16.55	LSY, Buenos Aires, Arg. (E-b-2)
11.983	25.02	FZS, Saigon, Indo-China (B-a-12)	18.170	16.50	PMC, Bandoeng, Java (B-a-22)
12.148	24.68	GBS, Rugby, England (A-a-16)	18.237	16.44	FTE, St. Assise, France (B-a-11)
12.241	24.41	GBU, Rugby, England (A-a-16)	18.296	16.39	VVR, Maracay, Venez. (B-cy)
12.394	24.19	DAF, Norden, Germany (SS-a-15)	18.304	16.38	GAS, Rugby, Eng. (A-a-16)
12.780	23.46	GBC, Rugby, England (SS-a-16)	18.400	16.29	PCK, Kootwijk, Holland (B-cy)
12.785	23.45	IAC, Coltano, Italy (SS-a-19)	18.444	16.25	HJY, Bogota, Colombia (B-cy)
12.820	23.38	CNR, Rabat, Morocco (B-ax)	18.611	16.11	GAU, Rugby, Eng. (A-a-16)
		Rabat, Morocco (R-ax)	18.670	16.06	OCL, Valverde, Peru (B-cy)
12.830	23.36	HJA3, Barranquilla, Col. (B-cz)	18.820	15.93	PLE, Bandoeng, Java (E-a-22)
13.135	23.00	German Ships	18.856	15.90	ZSS, Khiphevel, South Afr. (A-z)
13.220	22.68	British Ships	18.963	15.81	GAG, Rugby, England (A-a-16)
13.337	22.48	YVQ, Maracay, Venez. (B-cy)	19.121	15.68	LSM, Hurlingham, Arg. (B-b-1)
13.500	22.09	GBB, Rugby, England (A-a-16)	19.240	15.58	DFA, Nauen, Germany (B-a-13)
13.671	21.93	HAS, Budapest, Hungary (R-az)	19.270	15.57	PPU, Rio de Janeiro, Braz. (B-a-5)
14.450	20.75	GBW, Rugby, England (A-a-16)	19.282	15.55	PTM, St. Assise, France (B-a-11)
14.480	20.70	YNA, Managua, Nicaragua (B-cy)	19.506	15.37	IRW, Rome Italy (B-a-20)
14.545	20.69	HPF, Panama City, Pan. (B-cy)	19.519	15.36	EDX, Madrid, Spain (B-a-28)
		TGF, Guatemala City, Guat. (B-by)	19.678	15.24	CEC, La Granja, Chile (B-cy)
		TIN-TIU, Cartago, C. R. (B-b-9)	19.684	15.23	EAQ, Aranjuez, Spain (B-c-29)
14.682	20.42	PSF, Rio de Janeiro, Braz. (A-b-4)	20.368	14.72	GAA, Rugby, Eng. (A-a-16)
14.930	20.08	HJB, Bogota, Colombia (B-cy)	21.020	14.27	LSN, Hurlingham, Arg. (A-b-1)
14.969	20.03	EDQ, Madrid, Spain (B-a-28)	21.540	13.92	W8XK, Saxonburg, Pa. (R-ax)
15.110	19.84	DJL, Zeesen, Germany (R-a-14)			
15.120	19.83	HVJ, Vatican City (R-ax)			
15.140	19.81	GSE, Davenport, Eng. (R-a-17)			
15.190	19.73	DJB, Zeesen, Germany (R-a-14)			
15.210	19.71	W8XK, Saxonburg, Pa. (R-ax)			
15.234	19.68	Pontoise, France (R-ax)			
15.242	19.67	W1XAL, Boston, Mass. (R-ax)			
15.280	19.62	W2XE, Wayne, N. J. (R-ax)			
15.300	19.70	CP5, La Paz, Bolivia (R-ax)			
15.340	19.55	W2XAD, Schenectady, N. Y. (R-ax)			
15.350	19.53	CT1AA, Lisbon, Portugal (R-ax)			

Short wave fans watch for the April issue of the DX Log of the World. It will be entirely short wave.

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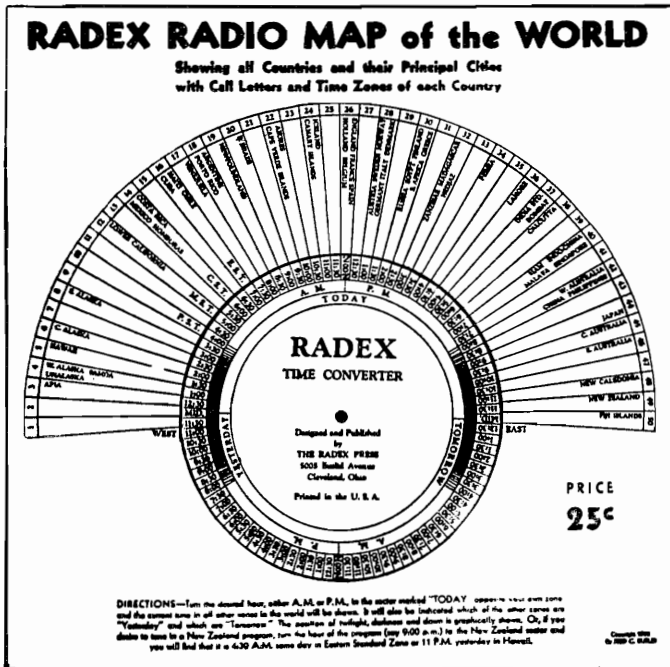
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