## THE SEPTEMBER 1932



THE ALL-WAVE RADIO MAGAZINE


Sunday Time on the Air for All Stations Short Wave Stations of the World by Countries What the New Season Offers in All-Wave Receivers The New Fall Hour-by-Hour Chain Programs Do Verifications Really Verify?

# SEPTEMBER DX CALENDAR 

| 1 - THURSDAY |  |  | 16 - FRIDAY - Continued |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11:00 IST | CHWK | Chilliwack, B. C. | 12:00-2:00 PSTT | CFJC | Kamloops, B. C. |
| 12:00- 2:30 EST | WMIL | Rrooklvn. N. Y. | 1:00-3:00 EST | CKCL | Toronto. Ont. |
| 2 -FRIDAY |  |  | 11:00-12:00 CST |  |  |
| 11:30-1:00 MST | KGEK | Yuma. Colo. |  | WKY CliwX | Oklahoma City: Vancouver R. |
| 11:30-12:30 CST | WCAJ | Lincoln, Nel. | 11:30 PS'T |  |  |
| 12:00-2:00 PST | CFJC | Kamloops. B. C. | 11:30 ESTT | KDKAWR13Z | Pittshureh. Pia. |
| 1:00-3:00 EST | CKCL | Toronto, Ont. | $\begin{aligned} & 11: 30-2: 00 \mathrm{CST} \\ & 12: 00-2: 00 \mathrm{EST} \end{aligned}$ |  | Ponca City, Okla. Columbus, Ohio |
| 3-SATURDAY |  |  |  | WCAH |  |
| 11:00-12:00 CST | WKY | Oklahoma City | 12:00-2:00 EST | WWRE | Scranton, Pa. |
| 11:30 PST | ChWX | Yancouver, B. C. | 12:30-2:30 CST | $\begin{aligned} & \text { WWRL } \\ & \text { WOW } \end{aligned}$ | Woodside N. Y |
| 11:30 EST | KDIKA | Pittsburgh, Pa | 1:00 ES'T | KQU | Pittshurgh, P'z. Fikhart. Inil. |
| 11:30-2:00 CST | WBBZ | Ponca City, Okla | 1:010-5:00 $\mathrm{CST}^{\text {d }}$ | WJAK |  |
| 12:00-2:00 EST | WCAH | Columbus, Ohio |  |  |  |
| 12:00- 2:00 EST | WGBI | Scranton, Pa. | 18 - SUNDAY |  |  |
| 12:00 EST | WWRL | Woodside, N Y | 12:00- 1:00 ENT | WSAZ | Huntington, W, Va. |
| $\begin{array}{r} 12: 30-2: 30 \mathrm{CST} \\ 1: 00-5: 00 \mathrm{CST} \end{array}$ | $\begin{aligned} & \text { WOW } \\ & \text { WAL } \end{aligned}$ | Omara, Neh. <br> Elkhart. Ind. | 19 - MONDAY |  |  |
| 4-SUNDAY |  |  | 10:30-10:45 CST | $\begin{aligned} & \text { WMAQ } \\ & \text { KOY } \\ & \text { WMIL } \end{aligned}$ | Chicago, Ill. <br> Phoenix, Ariz. <br> Brooklyn, N. Y |
| 12:00-1:00 Es' ${ }^{7}$ | WSAZ | Huntington, W. Vic. | 12:00- 2:30 1/ST |  |  |
| 5-MONDAY |  |  | $\begin{aligned} & \text { 20-TUESDAY } \\ & 11: 00-12: 00 \text { ('ST } \\ & \text { 12:00-2:00 J'ST } \end{aligned}$ | $\begin{aligned} & \text { XEH } \\ & \text { CF.JC } \end{aligned}$ |  |
| 10:30-10:45 CST | WMAQ | Chicaga. 111 |  |  | Monterrey, Mex Kamloops, B. C |
| 12:00- $2: 00 \mathrm{MST}$ | KOY | Phoenix, Ariz. |  |  |  |
| 12:00- 2:30 EST | WMIt, | Brooklut N. Y. | 21 - WEDNESDAY WHBT |  | Shehoygan, Wis. Vancouver, B. C. |
| 6 - TUESDAY |  |  |  |  |  |  |
| 11:00-12:00 CST | XEH | Monterres, Mex. | 22 - THURSDAY |  |  |
| $\begin{gathered} \text { 12:00- } 2: 00 \text { PST } \\ 3: 00 \end{gathered}$ | WOPI | Brisiol. Temi. |  |  |  |  |
| 7 -WEDNESDAY |  |  | 23-FRIDAY |  |  |
| 11:00-12:00 CST | WHBL | Sheboygan, Wis. |  |  |  |  |  |
| 11:30 l'ST | Ckw. | Vancouver. B. C. | 11:30-12:30 (\%)T |  | Yuma, Colo. <br> Lincoln, Neb. <br> Kamloops. B. C. <br> Toronto, Ont. |
| 8 - THURSDAY |  |  | 12:00-2:00 Ps' |  |  |
| 12:00-2:30 E | WMIL, | Brooklyr, N. Y. | 1:00-3:00 LNT |  |  |
| 9—FRIDAY |  |  | 24-SATURUAY |  |  |
| 11:30-1:00 MST | KGEK | Yuma, Colo. | 11:00-12:00 ('ST |  | Oklahoma City <br> Vancouver, B. C. <br> Pittsburgh, Pa. <br> Ponca City, Okla. <br> Vermillion, S. D). <br> Columbus, Ohio <br> Scranton, Pa. <br> Woodside. N. Y <br> Omaha, Nebr. <br> Pittsburgh, Pr. <br> Flkhart Ind. <br> Devils Lake. N. D. |
| 12:30-12:30 CST | CFJC | Lincoln, .eb. | $\begin{array}{ll}\text { 11:30 } \\ 11: 30 & \text { PST }\end{array}$ |  |  |
| 1:00-3:00 EST | CkCl | Toronto, Onit. | $\begin{aligned} & \text { 11:30-2:00 (ST } \\ & 12: 00 \end{aligned}$ |  |  |
| 10 - Saturuay |  |  |  |  |  |
| 11:00-12:00 CST | WKY | Oklahoma City | 12:00-2:00 Fs' |  |  |
| 11:30 PST | CKWX | Vancouver, B. C. | 12:00-2:00 EST |  |  |
| 11:30- $2 \cdot 00$ CST | KDFA | Pittsburgh, Pa |  |  |  |
| $\begin{aligned} & \text { 11:30- 2:00 CST } \\ & 12: 00 \text { CST } \end{aligned}$ | WUSD | Ponca (ity, Okta. | 12:30-2:30 CST |  |  |
| 12:00-2:00 ES $\top$ | WCAH | Columbus, Ohio | $\begin{aligned} & 1: 00 \mathrm{FST} \\ & \text { 1:00-5:00 C'S' } \end{aligned}$ |  |  |
| 12:00- 2:00 EST | WGBI | Scranton, Pa . | 2:00-4:00 ("NT |  |  |
| 12:00 EST | WWRL | Woodside, N. Y. | $\begin{aligned} & \text { 25—SUNDAY } \\ & 12: 00-1: 001 \mathrm{EsT} \end{aligned}$ | WSA\% |  |
| 12:30-2:30 CST | WOW | Omaha, Nelr. |  |  | Hantington. W. Va. |
| $\begin{aligned} & \text { 1:00 } \quad \text { EST } \\ & 1: 00-5: 00 \text { CST } \end{aligned}$ | $\begin{aligned} & \text { KQV } \\ & \text { WJAK } \end{aligned}$ | Pittsburgh. Pat. Clkhart Ind | 26 - MONDAY |  |  |
| 11 - SUNDAY |  |  | $\begin{aligned} & 12: 00-2: 10 \mathrm{MST} \\ & 12: 00-2: 30 \mathrm{HST} \\ & 2: 00-3: 00 \mathrm{MST} \end{aligned}$ |  | Chicago, III. <br> Phoenix. Ariz. <br> Brooklyn. N. Y. <br> Denver. Colo. |
| 12:00-1:00 EST | WSA\% | Huntinuton, W. Vit. |  |  |  |
| 12 - MONDAY |  |  |  |  |  |
| 10:30-10:45 CST | WM1 | Chicago, Ill. | $\begin{aligned} & \text { 27- TUESDAY } \\ & 11: 00-12: 00 \text { (NT } \\ & 12: 00-2: 00 \mathrm{PS}^{\prime} \\ & 1: 30-2: 30 \mathrm{CS}^{\prime} \end{aligned}$ | $\begin{aligned} & \mathrm{XEH} \\ & \mathrm{ClJC} \\ & \text { WCu, } \end{aligned}$ | Monterrey, Mex Kamloops, B. C Janesville. Wis |
| $\begin{aligned} & \text { 12:00- 2:00 MST } \\ & 12: 00-2: 30 \text { ESS } \end{aligned}$ | WMIL | Phoenix, Ariz. Brooklyn. N. Y. |  |  |  |
| 13 - TUESDAY |  |  |  |  |  |
| 11:00-12:00 CST | XEH | Monterrey, Mex. |  |  |  |
| 12:00-2:00 PST. | CFJC | Kamloons, B. C. | 29-WEDNESDAY <br> 11:00-12:00 CST | WHBI <br> CKWX | She rovgan, Wis. Vancouver. B. C. |
| 14 WEDNESDAY 11:00-12:00 CST | WHBL | Sheboygan, Wis. |  |  |  |
| 11:30 I'ST | CKWX | Vancouver, B. C. | $\begin{aligned} & 29-\text { THURSDAY } \\ & 12: 00-12: 30 \text { EST } \end{aligned}$ | WMII. | Brooklvir. N. Y. |
| 3:00-5:00 CS' ${ }^{\text {c }}$ | KFBI | Abilene, Kans. |  |  |  |
| 15 - THURSDAY <br> 12:00- :30 EAT | WMII. | Brooklvn. N. Y. | 30-FRIDAY$1130-1: 00 \mathrm{MST}$$11: 30-12: 30 \mathrm{CST}$$12: 00-2: 00 \mathrm{PST}$$1: 00-3: 00 \mathrm{EST}$ | $\begin{aligned} & \text { KGEK } \\ & \text { WCA.I } \\ & \text { CFJC } \\ & \text { CKCL } \end{aligned}$ | Yuma, Colo, Lincoln, Neb. hamloops, B. C. Toronto, Ont |
| 16 - FRIDAY <br> 11:30-1:00 MST <br> 11:30-12:30 CST | KGEK | Yuma, Colo. Lincoln, Nebr |  |  |  |

# Opportunities 

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Don't spend your life on a dull, hopeless iob! Don't be satisfied to work for $\$ 20$ or $\$ 30$ a week. Get started in Radio - the biggest money-making game on carth.

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H. C. Lewis, Pres. RADIO DIV. Founded 1899 COYNE ELECTRICAL SCHOOL 500 S. Paulina St., Dept. 62-4K, Chicago, 111. Mail Coupon Today for All the Facts

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## SEPTEMBER 1, 1932




REG. U, S. PATENT OFFICE
FRED CLAYTON BUTLER
Editor and Publishen


NINTH YEAR

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## THE RADEX PRESS, INC.

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[^1]
## LET's LISTEN to All the WAVES

FOR a number of years radio listeners have tuned their sets to the broadcasts made within the limits of the 200 to 550 meters wave band. If they wished to hear the fascinating short waves between 15 and 200 meters, it became necessary to use a special set made for the purpose. Then arrived an era of the short-wave "Adapter," which prevented standard broadcast receivers from being discarded when short waves were tuned in. Soon the "Converter" appeared, and this device quickly became combined with the broadcast receiver in a more sightly and efficient arrangement. But radio engineers still were not satisfied; they wanted a compact receiver capable of tuning in all stations on both short and long waves with the same simplicity displayed in modern radio broadcast receivers.

Now the goal has been reached, and we have the single-control "all-wave" receiver capable of tuning within the limits of 15 to 550 meters. And this fall and winter will see still greater improvement, and the development of worldwide radio reception on all waves. A twist of a dial and the setting of a wave selector knob tunes instantly from some short-wave station half way around the world to a favorite nearby broadcast studio. When a modern "all-wave" receiver is used the listener changes queikly by means of the wave changing knob through several groups of wave bands. This presents one extra operation which is very simple. The purpose is mentioned more fully at another point.

## The All-Wave Receiver

At the present time much short-wave and all-wave reception is in the hands of the professional listener and other enthusiastic fans who are more seriously inclined, such as the many thousands of real DXers who tune carefully from station to station in search of records and thrills of distance. Many listeners in the broadcast class do not understand or realize the possibilities of short-wave reception and the international all-wave radio thrills that abound in the air.

The New Sets<br>By B. FRANCIS DASHIELL

And it is for this reason that a number of large radio concerns have not as yet commenced the commercial production of all-wave sets; they continue to cater to the wants of the large class of broadcast listeners. But a number of other and more progressive radio set builders, we might say, are working seriously in designing remarkably efficient allwave receivers for a large and growing class of buyers. The coming winter months will see more and more of the strictly broadcast listeners turning to the fascination of all-wave reception.

## Changing Coils

It is a difficult thing to design a satisfactory radio set embodying superheterodyne principles that will operate on alternating current and bring in clearly all short waves between 15 and 200 meters. When this was first accomplished by means of changeable or "plug-in" coils in tuned radio frequency circuits the feat was hailed by delight. But, at


Virginia Rea, who gained fame as "Olive Palmer," is returning to radio as featured soloist with Paul Whiteman. NBC-WEAF, Aug. 26th and every third Friday thereafter.
last, this operation has been eliminated by the development of single control tuning and a switching method of remarkable efficiency, which is used in principle on all of the modern 'allwave" receivers. The sole remaining barrier is that which is set up by nature, for static, serious fading, and the strange skip phenomenon, are conceded on all hands to be with us always. Man may never overcome their disheartening effects.

## Automatic Band Selection

Without question the important feature in all-wave receivers is the modern wave changing method. We all know that it is far from practicable to use only one large inductance coil to cover all wave bands below 200 meters as is now done in the broadcast set for the 200-550 meters wave band. Manually operated coils of the plug-in variety, as previously used in adapters and converters, solved the coil problem for a while. Then was developed, first for a converter about a year or so ago, a method of wave changing by mounting the individual coils on a chassis with a switching arrangement so they could be cut in or out at will. This scheme, of course, has been known for a long time, but its inherent fault was the distributed capacity and other effects in the leads and switch and coil dead-ends which spoiled all attempts at efficient tuning on the shorter waves.

The modern all-wave receiver accomplishes its tuning through a single dial control. There are no additional movements for the purpose of adjusting the tuning condensers or to compensate for inequalities in capacities in critical lowwave circuits. This is a remarkable achievement, and the only additional controls operate volume, local-distance, and power. The coil switching system automatically takes care of all waveband changes, and is controlled by a four point switch lever or knob on the panel. The moving of this lever permits the listener to change immediately to any one of the short-wave groups into which the circuit is divided: Namely, 15-25 meters, $25-60$ meters, $60-200$ meters, and the standard 200-550 meters broadcast channel.

If a station, say, of 46 meters is to be tuned in, the switch lever is set on the 25-60 meters coil, and the dial tuned to the 46 meters short-wave figures of the proper sector. Great care of calibration in the newer all-wave sets is such that stations will be found very close to the actual frequency ratings. When a set is used as a regular broadcast receiver the switch is set to the $200-550$ meters coil position, and the dial calibration between 550 and 1500 kilocycles used. The whole method is so simple that a child can tune to any desired frequency in the all-wave bands.

There are a number of excellent "AllWave" radio receivers on the market, and, without doubt, more will be seen during the winter and at the usual radio shows. The following list presents a few of the outstanding characteristics of the well-known receivers which have actual performance records of amazing distant station logs.

## Some of the New Sets

The new Scott (E. H. Scott Radio Laboratories, Inc., 4450 Ravenswood Ave., Chicago, Ill.) de-luxe all-wave receiver covers the wave bands between 15 to 550 meters. It has 12 tubes in all, nine of which are in the tuner proper, and three in the audio and power unit. The tuner has one tuned radio-frequency stage, first and second detectors, oscillator, three intermediate-frequency stages, two audio-frequency stages with push-pull amplification.

The Pilot company (Pilot Radio \& Tube Co., Lawrence, Mass.) has a

remarkable all-wave set known as the "Dragon." It is a superheterodyne of compact construction and uses but six tubes. It covers the wave bands from 18 to 550 meters with nine coils and single control. Its outstanding achievement is the wave changing switch of 46 contacts which moves to four positions. The unused "catacomb" coils are automatically and electrically isolated from the circuit so as to avoid all dead-end losses.

The Lincoln (Lincoln Radio Corporation, 329 South Wood Street, Chicago, Ill.) de-luxe receiver (SW 33) covers the entire all-wave band with single dial control between 15 to 550 meters. The dial has a variable ratio to enable critical tuning on the short waves. The set uses volume control, 11 tubes, and three stages of push-pull give it remarkable signal strength on weak and distant stations. A visual meter tells when the set has been tuned to its greatest resonance and efficiency. This tends to reduce all background, or the noise level, to a minimum, and the signal may better be heard.

## The Hammarlund Comet



The Hammarlund (Hammarlund-Roberts, Inc., 424 West 33rd St., New York City) all-wave set is known as the "Comet," and it covers the band between 15 and 550 meters. The circuit employs eight tubes with single control. The Stewart-Warner Company, and the Midwest Radio Corporation, build all-wave receivers, but some of these, as well as those by other manufacturers, use the older scheme of two-dial tuning, which means the set is a combination of converter and broadcast receiver in one cabinet.

For a description of the new SilverMarshall 728-SW all-wave receiver, see (Continued on page 18)

# WHAT YOU NEED TO SUCCEED INRADIO 



Courtesy oj the National Broadcasting Company
Radto is a highly specialized business. As it develops it is becoming more exacting in its demands. But radio is the modern fieid of opportunity for those who keep step with its progress!

There is a great need for trained nen in the radio industry. There is no place for untrained men. Experience must be accompanied by technical knowledge.

A pioneer in home study, the Iaternational Correspondence Schools have kept pace with the times and offer courses which give practical instruction in fundamentals and latest developments alike. The courses were prepared and are constantly revised by the Who's Who of Radio!

Composed of 24 basic divisions, the Complete Radio Course covers the whole field of radio. The I. C. S. Radio Servicing Course was prepared specially for men who wish to become service experts, and win over competition. The I. C. S. Radio Operating Course is vital to mastery of operating and transmitting.
We will be pleased to send you details of any or all of these subjects. Just mark and mail the cou-pon-the information will be fonvarded at once. Do it today - now!

[^2]
## Do Verifications Really VERIFY?

WHAT a tempest in a tea-pot was stirred up by the publication in the May and June issues of this magazine, of the claims of certain reception. We refer particularly to those of Messrs. Halpern, Lilley and Caddell. We have received a dozen or more letters from DXers whose emotions were mightily aroused. Most of these were too peevish to print and all of them would fill two or three editions of this journal, one correspondent alone requiring nine pages of typewritten matter properly to relieve his feelings. Why all the excitement and ill-temper? Every reader certainly has the right to object to any and all claims published in RADEX but why get so excited about it?

These critics accuse your Editor of knowing nothing whatever about DXing or he would know what is possible and what is not. Let us say here that there is no man in the world wise enough to know whether any claim of DX reception is possible or not. Radio is altogether


Adele Vasa, diminutive soprano, on the Columbia Cathedral Hour

How Shall We<br>Prove Reception?

too peculiar to he analyzed. Probably every DXer in the country has at some time or other brought in a certain station which he had never before nor since been able to get. Now according to these good critics, if a listener tunes in any station he should always thereafter be able to produce that station. Some of these writers even suggest that committees be appointed to visit the claimant and insist that he tune a station in as proof that he once had it. That would be like a fisherman saying: "Come out to the river tomorrow and I will pull in a forty pound muscallonge" or the golfer inviting his friends to watch him next Tuesday afternoon make a hole in one!

## Is There a Yard-Stick?

Another favorite argument is, if a New Zealand station can be brought in in Brooklyn why can't it be brought in in California, which is much nearer. There are still listeners who think of DXing in terms of distance. According to them, no one further from the station than they themselves are can possibly bring in a station they cannot get. This argument is so far-fetched that it is useless to try to meet it. Everyone who ever turned a dial has brought in certain stations of lower power or greater distance than those ordinarily received. One writer went so far as to claim that no Japanese station could be heard east of the Mississippi River. Just how he figured that the Jap's signals stop at the Mississippi is not known. Another admitted that 1000 -watt Australians might be heard in the eastern part of the country but nothing smaller. If 1000 watts can come through why not 900 or 800 or even 100 or 50 ? Just how does one go about it to figure the wattage necessary to carry signals a certain distance?

The editor freely confesses that he cannot look at a record and say definitely that it is or is not true. There are certain spots in the country where it seems to be impossible for KDKA to be heard. Should
the editor before publishing a report of the reception of KDKA try to decide whether or not it is possible for KDKA to be heard in that particular vicinity? It is manifestly absurd for this magazine to try to prove the authenticity of the claims that are published and certainly we do not intend to do so.

## Counting the Tubes

Another favorite formula of the critics is to calculate possibility of reception upon the number of tubes in a set. If, they argue, a ten-tube set doesn't get a certain station, how then can one with only two tubes? The writer has brought in a certain minor Cuban station with a one-tube set of his own construction which station he has never been able to bring back with eight and even twelve tubes in exactly the same location and using the same aerial and ground. Who will explain this and how would your editor go about it trying to decide the validity of a claim of such reception?

The writer is fast coming to the conclusion that every radio signal in the world is present in the ether everywhere and that as our knowledge of radio science advances and our sets become more and more sensitive, we will pick up signals we have never had before just as each new and greater telescope brings out stars that we never knew existed.

What Would a Lie Profit?
While there may be some so-called DXers who lie about their catches, we feel sure the number of such is extremely small. Can one imagine a coin collector going around bragging about possessing some rare coin which he does not own or a stamp collector claiming to have a rare stamp which he never even saw? If certain readers claim reception they never made, they will destroy themselves sooner or later. Give them rope enough and they will hang themselves. But a claim of reception that seems to be properly verified is DX news and as such it belongs in RADEX and there it will be found. If it is a dishonest claim, that is too bad and we are very sorry but we do not purpose keeping $D \mathrm{X}$ news from our readers for fear some unearned credit will go to a faker.

The sad thing about all these letters


Mary Roberts Rinehart's famous story, "Tish," is now on the air - NBC-WJZ three times weekly. "Tish" Marion Barney, center; "Lizzie," Helen Lowell, left; "Aggie," May Buckley, right.
is that they take the position that verifications do not verify. They point out that Halpern, Lilley, and Caddell may have some wireless amateur in the various countries send them code messages giving them sufficient information upon which to base a claim of reception. They accuse these DXers of getting information regarding programs from the magazines published in various countries. RADEX receives these magazines from England to Australia and never yet have we received one that contained a program that was not already over before the magazine got here. It is not RADEX that will destroy DXing, even though it occasionally published a dishorest claim. If DXing is destroyed it will be by those who take the position that verifications do not verify. Let the impression become general that stamps and verifications are worth nothing and where does that leave DX?

This discussion has brought many letters of commendation as well as condemnation and other verifications of most unusual reception. We had intended to publish these here but perhaps it would be better to play safe and reproduce them under Ripley's wellknown title of "Believe it or Not."

# Little Stories of the BIG Stars 

THE McCravy Brothers, of Laurens, South Carolina, may sing songs of the south and of the soil, but they insist most emphatically that they are not hillbillies.

Frank and James never did much radio work before they came to the N.B.C. studios for an audition. They had been on local stations in different parts of the country at various times, but for the most part they were busy with recording contracts. Their phonograph records, incidentally, have passed the two million mark.

The boys have been singing together ever since Jim, the younger, graduated from Furman University, in South Carolina. Since that time they have appeared in forty-one states before various


Harmonizing heart songs in their soft Southern manner, the McCravy Brothers, Jim and Frank, are heard cach Monday and Tuesday, 11 p.m., EDST., Sunday, 8 p.m., over NBCWJZ network.
clubs and at church benefits. They also have been on the Chautauqua circuit.

Although their air programs consist mostly of unique song duets with occasional solos, they entertain their friends

## "Betty's" Page of Radio Gossip

off the air in other ways. Frank is an accomplished amateur magician and likes to tell stories in Negro dialect. Jim plays the violin and guitar.

They were persuaded to come north for an audition by Louis Katzman, an NBC artist, who was associated with them in a recording studio. A surprising feature to the boys is the fact that much of their fan mail has come from New England and other northern areas. They expected to hear mostly from the south.

You have probably noticed that they offer sentimental, modern spirituals and semi-religious songs. They sing no "hot" tunes or "low-down stuff." They write many of their own numbers and do the arranging of their old favorites.

Nor are their activities limited to the business of entertaining. Frank has carried on an active political career. He has already served two years in the South Carolina General Assembly and has begun his second term. "So you see," says Frank, "we don't get much spare time, with the legislative sessions and everythin' but when we do get a day or so off we spend it fishin' or huntin'."

The McCravy Brothers may be heard over the NBC-WJZ network Sundays at 8 p.m., EDST, Mondays and Tuesdays at 11 p.m., EDST.

Among the winners of the annual radio popularity contest, conducted by the Radio Editor of the New York Daily Mirror, were:

Norman Brokenshire, veteran announcer, with a total of 176,831 votes to lead the announcers' division and to take clear supremacy in the number of ballots accorded any entrant.

Ruth Etting, star of "Music That Satisfies," was made "Queen of Radio," with 96,510 votes. Other Columbia winners were Morton Downey in the male singers' group; Myrt and Marge in the talking skit division, and the Boswel! Sisters in the harmony team section.

The victory achieved by Myrt and Marge was particularly outstanding because that program was off the air during the time the contest was being held.

Some of the NBC victors were Harry Richman, "King of Radio;" Rudy Vallee, "the most popular orchestra leader," and Baby Rose Marie, "Princess of the Air."

Perhaps one of the reasons why Guy Lombardo's music comes over the air so well is that before each performance Guy, himself, supervises studio arrangements. A good many minutes before the other Royal Canadians reach their broadcasting chamber, their leader is on the job adjusting microphones and personally placing the chairs of his musicians.

George Burns and Gracie Allen received an hilarious welcome upon their return from the west, where they had been making a picture with Bing Crosby, Eddie Lang, and other stars, called "The Big Broadcast." In the movie, George will be seen and heard as the studio manager, while Gracie will be seated at the information desk. Imagine the answers to fans' questions! Incidentally, Gracie, who knows her public, says that she'd rather have more fans in the summer than in the winter months - because, after all, fans are so much nicer to turn on when it's warm.

Isham Jones has written many tunes, yet often is prevented by circumstances from airing them over the Columbia network. CBS rules require band leaders to submit selections in advance, with "first come, first served," to avoid monotony. New York conductors get the jump on Isham, who must mail his choices from Atlantic City. Invariably another has beaten him to his own compositions. Isham Jones, a pioneer in the popular field, has authored such hits as "I'll See You in My Dreams," "It Had to Be You" and "Indiana Moon." More recently, he went on a song-writing spree that produced three current successes - "I Can't Believe It's True," "Let's Try Again" and "If You Were Only Mine."

## Their First Jobs

Fred Uttal, the announcer, was an electrician and locksmith's helper, earning more in tips than in salary.

William Hall lent his stentorian tones to selling newspapers.

Col. Lemuel Q. Stoopnagle "pushed" lumber in his father's lumber yard.

Louis Dean clerked in his grandfather's general store at Valleyhead, Alabama, his remuneration being all the candy he could take without being seen.

Ruth Etting sang and danced in the chorus of a Chicago night club in order to earn her tuition for the Academy of Design.

Buddy Rogers worked for his father on the Olathe (Kansas) Mirror as reporter and printer's devil.

Ben Alley worked with a West Virginia road gang.

Freddie Rich played the piano fourteen hours a day in a New York movie house, earning eight dollars a week.

Singin' Sam left home to join a minstrel troupe and became known as the "Boy Basso."

Frank Knight ran messages for a banking house in St. John's, Newfoundland.

Kate Smith, as a result of winning several "Wednesday Night" contests, earned her first money in local vaudeville appearances. She was just eleven.

Harry von Zell sold hot-dogs at the beach in Venice, Calif.

Morton Downey sold candy, newspapers and magazines to commuters on the N.Y., N.H. \& H. railroad.

The Boswell Sisters made an appearance in a New Orleans theater, but only two of them. The third was still too young.

Before Jack Fulton, the Croon Prince of Paul Whiteman's band, brought his trombone and tenor to radio he was a laundryman in his home town of Phillipsburg, Pa .

[^3]
# TROUBLES Common to All SETS 

The Technical Editor Comments and Advises

## Volume Control Wears Out

The volume control on my Philco 87 set seems to wear out too frequently and soon becomes noisy. Why is this? Also, when I turn the dial of the set I get loud crackling and sputtering noises.

There seems to be no good reason for the volume control wearing out as it does. It is a very simple form and carries no current, being a 10,000 ohm resistance connected between the aerial and ground with a sliding contact lever attached to the radio frequency or antenna coil. But this form of control will become noisy as soon as it is worn or loose and does not make a smooth sliding contact. Perhaps its construction is light and it does not stand constant manipulation. You must use a regulation ungrounded aerial with this set.

Noises heard when the dial is turned are caused by bits of dirt and dust between the plates of the variable condensers. The remedy is to clean between the plates. Also make sure that the plates do not rub at certain points. Examine the contacts between the rotor plates and the frame. All traces of grease and oil should be removed from the shaft. The contacts should be firm and electrically and mechanically continuous, for the least looseness will cause crackling sounds when the dial is turned.

## The Two-Volt Pentodes

I have a new Crosley 8-tube "Playboy" receiver which uses the 2-volt tubes with an Air-Cell battery. It uses two -30s in pushpull, but I am wondering whether I can change these $-30 s$ to -33s (pentodes) in much the same way that -45 s are changed to -47s. What do you recommend in mu case?

Of course you must not lose sight of the fact that this is a new and modern set and the tubes used in it are found to be best by the manufacturer. We believe however that the pentodes could be substituted for the -30 s , or even -31 s (power amplifiers) in place of the -30 s
and the contemplated -33 s . This arrangement might prove better than the two -33s in push-pull. When pentodes are used it is not always necessary to use the push-pull circuit, but simply one -33 alone. But there is a matter of $B$ battery and filament drain on the air-cell battery. The -31 s require 135 volts on the plate whereas the -30 s require only 90 . The -31 s need a C bias of $221 / 2$ volts, but the -30 s take only 4.5 volts. The filament of the -31 will consume twice as much A battery as the -30 tube, and the -33 pentode still more. Therefore it is battery economy and essential current drain watchfulness to use the -30 s instead of -31 s and -33 s . Two -31s will draw . 15 amperes more than two -30s. Your set as it now is will draw close to .47 ampers and when you add that needed for the -31 tubes or -33 pentodes the total consumption will be more than .62 to .70 amperes. The AirCell battery should never have a current drain in excess of 60 amperes. For this reason we do not recommend any change in the tubes used in push-pull, and we doubt very much whether additional tone and volume will be worth the battery exhaustion that is sure to follow.

## More About Two-Volt Tubes

I use a Radiola model 20 set with four -99 tubes and one -20 power tube. The dry cells I use run down too fast. But since I have a 32-volt Delco light plant I am wondering if $I$ can change to the two-volt tubes and use this 32-volt supply or if an Air-Cell battery would be best.

The Air-Cell battery would be best for its voltage is very regular and constant. If you used the 32 -volt supply it would be necessary to use a carefully built resistance and then the low voltage tubes might be subjected to serious fluctuations at times. If you get an AirCell battery you will need to replace the -99 s with -30 s and the -20 with a -31 tube. The new tubes will not draw as much current as the older ones. The $B$ battery and C bias characteristics of the old -99 s and -20 tube will be close enough to the two-volt tubes so that no


Frederic William Wile, the famous political analyst of the CBS. Photo copyright by Harris \& Euing.
change will be called for. Turn the present rheostats full way on, or remove them entirely, for no resistance is needed. A one ohm resistor may be placed in series with the Air-Cell battery for the first few weeks, or until the initial excess voltage has dropped to normal.

Slow Heating and Fading
Why does my Zenith 52 set give a mushy and weak sound when it is first turned on? It takes about a minute for it to clear up. The volume drops several times and then comes back by itself, but I usually turn up the volume to bring back the music which does not stop entircly when it weakens.

The tubes heat slowly and take some time to get in action. Perhaps they are old and need replacing. Your service man can test them and advise you. The fading in volume may be due to the natural cause, but we assume you are familiar with that. If it is in the set, and since the volume seems to indicate this, we suggest that you either replace or clean and grease the volume control, as explained in a preceding answer. Perhaps your current supply tends to fluctuate somewhat and causes the drop in volume.

## Non-Oscillating at All Frequencies

I have a two-tube regenerative set that has brought in 200 radio stations. It oscillates only from 750 to 1200 kilocycles. How can I make it regenerate over the balance of the broadcast band so as to get additional stations?

Regenerative receivers frequently fail to oscillate over the higher frequencies, but seldom over the range you have mentioned. Not knowing the particular circuit you are using we are not able to advise you as to mechanical changes in your arrangement. But, the usual trouble is that the adjustable coil or tickler does not develop sufficient feed-back or coupling on the higher waves. On the shorter waves a smaller tickler will do the work, while on higher waves a larger tickler is needed. It is suggested that you add about 25 per cent more turns of wire to your present tickler, or slightly increase the $B$ battery voltage on the plate of your detector tube if it can be done without causing the set to whistle or howl.

## Changing Power Tubes

How can I substitute $a-45$ tube for the -71 A now in my Atwater Kent Model 44 set? I am anxious to get more power from this receiver.

Remove the -71A tube from the socket and open either the red-green or black-green wire leading to one of the filament contacts of the socket. Insert a 2 -ohm resistance unit in series with the circuit. This reduces the 5 -volt supply to 2.5 volts required for the present -45 tube in place of the -71A. But as the -45 takes six times the amperage required by the -71 A it may be that this circuit can not stand the extra current drain. If heating in the power unit or resistance and wires is noticed there is no alternative but to replace the -71A tube.

The wiring of your set is such that the change can only be made at some sacrifice of proper $B$ voltage and C bias required by the -45 . It is not practicable, however, to make alterations in the power pack or voltage divider to correct this deficiency.

## Screen Grid Regeneration

$M_{y}$ Pilot Wasp A.C. receiver uses a -27 tube for detector. How can I change to
a -24 screen-grid tube so as to control the regeneration in an easier manner?

There are two general methods of rewiring your circuit for the -24 tube and variable screen-grid voltage, namely the potentiometer method and the bleeder or series method. With the former the end leads of a potentiometer are connected to the 45 -volt positive and negative ends of this portion of the power unit or B battery, and the slider goes to the screen-grid terminal of the tube socket. The potentiometer should have a value of about 50,000 ohms. Bypass the screen terminal with the usual $1 / 4$ to $1 / 2$ mfd. condenser. The grid, plate, filaments and cathode of the -24 tube are wired in the conventional manner.

The bleeder or series method is a controlled circuit using a 100,000 ohm variable resistance in series with the 45 -volt positive screen grid lead, with a bypass condenser inserted as indicated above.

## 25 Cycle Current

I expect to move to another locality where only 25-cycle alternating current is available. As my present Philco radio set uses 60 cycle current I should like to know what changes may be necessary in my set to adapt it to 25 cycles?

Your set cannot give satisfaction on 25 cycles. The slower alternations will not give the same voltage or amperage and the filtering portion of the set will not smooth out all the hum. The transformer in the power pack may need replacing with one wound differently for increased efficiency when 25 cycles are used. We advise you to write the Engineering Department of the Philadelphia Storage Battery Co., Philadelphia, Pa., and obtain their recommendations. As sets are made for both 25 and 60 cycle current, we are confident the makers can furnish the necessary changes.

## Control Trouble

When I turn up the volume of my set the signal or music cuts on and off, and seems loud then weak. There is considerable noise when working the control. What is the trouble?

You have not given the make of your set, but we believe that the volume control is defective. If it is of the wirewound type we suggest that you clean
the surface of the wire and the sliding arm, and then place a bit of clock oil on the wire and rub it over carefully. If the control is of the carbon type it may be packed and need replacing. You might also examine the tubes and sockets for loose or poor contacts.

Tuning Adjustment
I undertook to clean the condensers, etc., of my Gloritone receiver, but it now tunes too broadly, some stations are out of position on the dial, and it tends to howl at times. Why is this and how can I make it as good as it was at first?

Some displacement occurred when you cleaned the set. It is easy to do this. Make sure you do not have the control-grid and screen-grid connections reversed, and also that the proper control-grid (top) wires are connected to the proper tubes. If any of the coil connections are reversed this will cause a shifting of the dial readings.

It is quite possible that in the attempt to clean and adjust the tuning condensers you have permitted the dial to slip on the condenser shaft. The condensers may have gotten out of line due to displacement in the direction of rotation, or in an "off-center" displacement - back and forth - due to loose plate construction, uneven centering, or one or more bent plates. The celluloid band with its calibrations may have become displaced around the dial surface. Check these points carefully, and make sure you have replaced all connections correctly.

If the howling again reappears test the 0.1 mfd . condenser connected between the two detector plate resistors, and also the ground and grid connections. The condenser can be tested by shunting another across it temporarily.

## Antenna Compensator

My Zenith, model 35, receiver, has a control that is built like a variometer which puzzles me. Beyond 1200 kcs . I am compelled to manipulate it in order to get signals at their best. What is the purpose of this device?

It is an antenna compensator because it balances to some extent the ability of your antenna to carry all frequencies of the broadcast band at the same time.
(Continued on page 33)

## "BELIEVE IT OR NOT"

PRESENTING as we do this month, some most unusual reports of reception of far-distant stations, and in view of the discussion as to the authenticity of other claims published in recent issues of this magazine, it seems quite appropriate to borrow Mr. Ripley's famous phrase as the title of this article. And speaking of "Rip," did you see his cartoon of May 8th, last in which he reproduced a picture of William MacDonald, 644 Fourth Ave., Chula Vista, California? According to Ripley, Mr. MacDonald has heard 1225 stations in 65 countries on his radio! There's a record. In a letter to RADEX, Mr. MacDonald says: "During the past nine years that I have been DXing, I have never written a line myself for publication. I happened to be situated in a most excellent location, and having the time and the patience to develop the natural resources of the situation, I have a.ttracted thousands of radio fans who came to my home to hear a little distance that


Ed Sullivan, celebrated Broadway columnist, now in "Gem Highlights," CBS Sunduys, 10 p.m., EDST.

More Difficult<br>Diet for DXers

could not be heard elsewhere. The 'Believe It or Not' feature alone has brought me to date over 40,000 letters so please tell your readers that it would be physically impossible for me to reply to those who write in but that I appreciate their interest.
"I do not profess to know anything more about radio than anyone else, relying wholly upon natural elements, namely, a good location and equipment that is maintained at the highest point of efficiency. My set is an now-out-of-date Magnaformer and is no better than hundreds of like sets except that it was carefully constructed, a feature that I have found to be lacking in the vast majority of kit sets that have come under my observation."

## Radio Gardens of Eden

It would seem that, just as there are "blind spots" in which radio reception is practically impossible, so there are locations favored of the gods in which sets may reach out to unbelievable distances. Undoubtedly Mr. MacDonald is located in one of these gardens of Eden of Radio. Our readers will recall that other great California DXer whose marvelous records have appeared in this magazine from time to time, Mr. Ollie Ross, of Vallejo, Caliiornia. We have another interesting letter from Mr. Ross from which we quote:
"I certainly enjoyed the article about the Doubting DXers. There are thousands of DXers who think that if they cannot tune in a certain station, why it is impossible for anyone to do so." Mr. Ross goes on to quote some of his most unusual receptions and sends us the verifications he received in confirmation of them. One of them is from C46 of Montivideo, Uruguay, then a 50 -watter. We quote from their letter in their own vernacular: "On the hour and the day that you say, we played the two phonograit reproductions. Re the large distance that we are separate from your country
( $10,500 \mathrm{~km}$.) we would estimate that you please confirmating the trasmition that we above explain also if you can heard daily or temporaly or anything particulars that you think convenient at the conclusion of that so we can publicate on one of daily paper in our city." Another written entirely by hand is from TJW, a 12 -watter in Hamilton, Bermuda: "Received your very kind letter and would like to let you know how much we appreciated your writing us. It is almost impossible to believe that you could have received our broadcast, as our station is probably the smallest commercial broadcasting station in the world with an output of only twelve watts, and your letter from California came as a most pleasant surprise to us in Bermuda. Our station was started to provide entertainment for our local residents during the summer months when we are bothered by static excessively . . ." Another is from Prague, Czecho-Slovakia, although the name of the station is not given: "We have indeed sent, on the 21st ult., a program with the violin recitals you have received as well as the regular announcement of program you mentioned."

## Here's a Real Record

"Some time before leaving for Europe on my recent trip," Mr. Ross goes on, "I tuned in on station WOKO, Poughkeepsie, N. Y., about 10:00 a.m. PST., or 1:00 p.m., EST., and sent for verification which was sent back to me via air mail. Their curiosity was aroused by this daytime reception and they wrote asking various questions concerning the reception of their station as well as to make of set I used, etc., and mentioned the fact that they considered it almost a miracle that I should receive their program so well at that time of day. I decided to try to show them a real miracle and so I tuned them in every day for a solid week from 11:00 a.m. to 2:00 p.m., PST. and had the entire week of reception verified. Over 2,000 miles across the continent, daytime reception, day after day for a whole week is really a feat unbelievable but it is true nevertheless." We agree with Mr. Ross. Due to some atmospheric freak, some one low-powered and far-distant station may
come in once on any set never to be tuned in again, but to tune in a 500 -watt station in the middle of the day - not once, but seven days in succession -on a frequency (then 1440) used by four other stations, including a Californian, certainly requires a "Believe It or Not." Here is the verification:
'"Thanks for your very complete and descriptive letter of our programs for one week. It is indeed gratifying to get such a report from you. I must say that you either live in a very wonderful location or have something in the line of a receiving set of which I have not heard. If all the radio listeners made the effort and submitted comprehensive reports to stations such as you have, it would be about the most gratifying thing in the world for the broadcaster."

## Two More Claim 2ZI

The report of the reception of the 10 -watt 2ZI in Hastings, New Zealand, by Karl J. Halpern, of Brooklyn, N. Y., in the May RADEX sent a dozen DXers on the warpath with tomahawks waving. Now comes Robert R. Rawstron, of Claremont, N. H. (and incidentally Frank A. Johnson, of Chicago) to share


Dean of Chicago announcers, Harlow Wilcox, of the CBS


Jacques Fray and Mario Bragoiotti, piano duo heard each Friday over CBS at 10:15 p.m. Mondays at 9:45 p.m., EDST.
with Mr . Halpern the ignominy of this reception! Says Mr. Rawstron: "Browsing through the midsummer issue and noting that ye olde slieptic is once more in print, brings back memories of my first RADEX in September, 1930. I saw records printed therein which I doubted very, very much. To one who has never heard a foreign station, doubting the reception of one who has is a very natural reaction; so I am sure those whose records were assailed will hold no permanent antipathies. To further close the discussion regarding Mr. Halpern's $2 Z I$ reception, will say that I am one of the U.S. trio who has verifications from 2ZI. Mr. Halpern heard him first, then Frank A. Johnson, of Chicago, and lastly the writer."

## "In Every Way Correct"

Following we quote from Mr. Rawstron's verification: "We must apologize for not answering your report of the 25th of January, 1932, on our broadcast of that date, but we have been to quite a deal of trouble getting this verified as to time, etc., and find it to be in every way correct. Now, sir, we wish to thank
you for this report, and strangely enough by the same mail we received a report from Mr. F. A. Johnson, of Chicago, on another broadcast which is also correct in every detail. This brings our total to three American reports now and we are 'tickled to death' to think that our station, which is rated in power at only fifteen watts, should reach U.S.A." To this 2ZI adds: "To Whom It May Concern: This is to verify that the report of R. R. Rawstron, of Claremont, N. H., was mailed to us less than seven hours following his 2ZI reception and on the same day by his local postmark." Mr. Rawstron states that a later letter from 2ZI gives the information that Mr . Johnson has just submitted a report of a second reception giving him two verifications for this small station.

## A Letter from 3GL

Upon receipt of letters questioning the reception of 3 GL , Geelong, Australia, by Richard D. Caddell, Pittsburgh, we wrote to that station asking if they felt sure from Mr. Caddell's report that he had actually received them. They write: "We can quite understand that Mr. Caddell's claim to have picked up our station would create a good deal of comment. Although Mr. Caddell did not give a detailed report of our programme, he gave sufficient for us to accept his word that he had picked the station up. Although our power is only 50 watts, this is the aerial rating and would mean 150 or 200 watts input, and as we have also received a report from a listener in Philadelphia and another in Vancouver, we are quite willing to believe that Mr. Caddell has been successful in bringing in our station. Geelong is situated about 45 miles from Melbourne on the sea coast and we receive many reports from New Zealand about 1200 miles away, and Western Australia nearly 2,000 miles away. In regard to Mr. Heuter (of Philadelphia) we received a report from him in December advising us that he picked up our station but as were were not satisfied, we asked for a further report which he has since sent us and we believe that it is correct."

From George Lilley, West Chester, Pa., whose report of reception of LR-5, a 500 -watter in Buenos Aires, Argentine,
was among those criticized, comes a defense of Mr. Caddell and a fair summary of the controversy. He writes: "As far as Caddell and his Rio de Janeiro verifications are concerned, I feel perfectly sure that he really received those stations. Although I do not know Mr. Caddell personally, I have no doubt as to the accuracy of his reception. I realize that the early evening hours are best for reception from South America and that those stations can be heard so early in the evening. The reception is very logical as when it is 9 p.m., EST., it is 11 p.m. in Rio de Janeiro. I myself heard CX-26, Montivideo, Uruguay, at 7 p.m., EST. Because the average fan cannot get the Pacific Coast at this time of day (because it is only 4 p.m., PST., and broad daylight there) he fails to see how a more distant station in South America can be tuned in at that time of day. The answer is, of course, that it is later than $7 \mathrm{p} . \mathrm{m}$. at the point of transmission and there is darkness all the way between the transmission and reception points. A fan may reason that when he can just pick up a whisper from some Pacific coast station, how in the world can another fellow receive a station not only as far as the Pacific, but also all the way across the Pacific. His conclusion is that it can't be done. His conclusion may seem logical but it just isn't correct.
"There are those in the DX game who may use false methods in obtaining their verifications. However, I think that a careful study of the verification will in most cases show up the owner. There are those who cheat in any game; they are not only hurting themselves, but making the sport of the real DXer a hard one to travel. I think myself that the cheaters are very few; the skeptics seem to be the more numerous. Some fellows just will not believe that something can be done which they cannot do, and even when shown positive proof, they will say 'No.'"

More Verifications for the 2-Tuber
Mr. Lilley submits more of his verifications and while they have no bearing on his reception of LR-5, they do indicate a successful DXer. We quote from a few of them:
"We have looked up our records and the times mentioned by you, which synchronize with 8:24 p.m. to 8:30 p.m. (our time) show that 2BL was just concluding a Church Service and the short prayer of about one minute's duration, was the benediction. This service was broadcast from the Killara Congregational Church and you are to be congratulated on your excellent reception on a two-tube receiver." 2BL is located in Sydney, Australia, and broadcasts on 855 kcs . with 1000 watts.
"We thank you for your letter dated 8th May reporting having received our station on that date. We have checked up on our Station Log and find details given by you to be correct. Your report is a most interesting one and, seeing that your set is only a two tube, our engineers consider your reception of this station to be phenomenal." This is from 4BH, Brisbane, Australia, on 1380 kes. with 600 watts.
"We are in receipt of your letter of the 1st ultimo reporting reception of our 3LO programme which checks up with our log." 3 LO is in Melbourne, Australia, on 800 kcs ., with 1000 watts.
"We are in receipt of your letter postmarked April 5th reporting reception from $4 R K$ on this same morning. Reference to our log confirms your report and we have pleasure in congratulating you." 4 RK is in Rockhampton, Australia, on 910 kes. with 2000 watts.

Here's One from New Zealand
We will now close this discussion by quoting from a letter regarding reception the other way around, that is by a reader in Dunedin, New Zealand, of the U.S.A. stations. This reader is F. H. A. Bartlett, operator of Radio Station 4 ZO and vicepresident of the New Zealand DX Club. He begins by saying: "I came into contact with your wonderful publication through hearing KFEQ in St. Joseph, Mo. They published my report in the local newspaper and a radio fan there (Mr. Jacob N. Mitchell) sent me out a copy. I live in the city of Dunedin, but do not do much of my DXing there as there is generally too much interference from power lines, electric trams, etc. I therefore go out of town during the (Continued on page 18)

## The Puzzle Page

IN spite of the three months given to find the correct solutions to the June puzzles, only a few readers succeeded in solving all of them. The designer's solution of No. 1 was:

WWWKWWNW
MONTREAL
TLJMRWAS
Several readers solved this problem correctly with the word "Brooklyn."

In the mathematical puzzle, No. 2, RADEX was transposed into 07518 and PRESS into 60144.

It was the palindrome, No. 3, which gave most of our readers their trouble. Several reported that it couldn't be worked and one usually suceessful solutionist offered to take a year's subscription if a solution was possible. (Note to the Circulation Manager: Add one more subscription.) Here is the correct answer: WMCA, CJCJ, WWVA, KWCR, CKCR, KWEA WWAE, WKRC, KCRC, WKAV, WWJ, CJCA, CMW.

Following is the correct solution of the No. 4 Cross-call:

> CKWO JOKK
> CKWX O WORK
> AOK HRB LOW
> WKBV WA BW WGBB
> CKY KF OS HIX
> YWNC IS AV WWSW
> AHW KVL SBH
> AWIS O WBAA
> KPCB WJBK

We warned our readers several months ago that the puzzle well was running dry. The Editor himself has only a vacuum left and the desired help from our readers has not been forthcoming. There are only a limited number of calls that may be used in forming crosscall puzzles particularly in the corners of the squares and new cross-calls are becoming more or less repetitive of those that have gone before. We will however continue to publish from time to time those which are submitted by our readers materially different from those already published. The offer of free copies of RADEX, however, is withdrawn, as the

solution of a single cross-call is too simple a task.

The " $G$ " puzzle is submitted this month by Edward L. Walters, Roanoke, Va. In this problem Mr. Walters has concealed the names of four states. All of the calls appeared in the June issue.

## Key

Across

## Down

A blue with one k.w.
A blue with one k.w.
Holt-Rowe Broadeasting.
NBC with 500.
Westinghouse.
1st, 3rd and 4th in B. C.
Ditto in Pennsylvania.
CBS.
750 watts.
Last two of agricultural school.
2nd and 4th in B. C.
In I-26.
Columbia on 1430.
Down towards zero.

24 A newspaper with 250 watts
25 Middle letters of two.
26 Last two of a high school.
27 On 1200.
28 A mining school.
47 A tobacco station.
48 Methodist university.
49 A music company.
51 First two of five.
521 st , 3 rd and 4 th of Illinois station.
53 First three of London station.
54 In G-7.
56 First two of radio news.
58 On 1310.

## "Believe It or Not" <br> (Continued from page 16)

week-ends to a place 14 miles along the coast from Dunedin. The receiver used is a Majestic Model 21, 8 -tube superhet and I have yet to hear a receiver that will drag in the DX like this one.
"My verified stations to date are 207 from all parts of the world, but mostly from your country. Some of the best 'scalps' are the following 100 -watters: WLBF, Kansas City, Kans.; KCRC, Enid, Okla.; KFBK, Sacramento, Calif.; KFJM, Grand Forks, N. D.; KFJY, Fort Dodge, Iowa; KFQU, Holy City, Calif.; KFXD, Nampa, Idaho; KGBX, St. Joseph, Mo.; KGCX, Wolf Point, Mont.; KGFF, Shawnee, Okla.; KGFJ, Los Angeles, Calif.; KICK, Red Oak, Iowa; KJBS, San Francisco, Calif.; KMJ, Fresno, Calif.; KPCB, Seattle, Wash.; KRE, Berkeley, Calif.; KREG, Santa Ana, Calif.; KWCR, Cedar Rapids, Iowa; KWG, Stockton, Calif.; KXO, El Centro, Calif.; KXRO, Aberdeen, Wash.; KFOR, Lincoln, Nebr.; KFXR, Oklahoma City; KGEK, Yuma, Colo.; CKMO, Vancouver, B. C.; CKOV, Kelowna, B. C.; and the 50 -watt KGFX, Moorhead, Minn."
There, you skeptics, mull that over. That would be a good $\log$ for a DXer in Kansas. There they are, hundred-watters, practically all on crowded frequencies. If a DXer in New Zealand can pile up a list like that with a Model 21 Majestic, what could he do with a Model 60? Altogether Mr. Barnett has verified 138 stations in the U.S., seven in Canada, and two in Mexico. Other countries heard are Russia, France, Spain, Germany, Siam, South Africa, British India, Holland and Japan with 11 stations in the last named country.

Let's Try All Waves
(Continued from page 5)
another article in this issue, "A Dub Tries the Short Waves."

While modern all-wave receivers are capable of remarkable results and, with patient manipulation, will reward the listener with international reception, it should be remembered that no one can tune to stations on short waves as easily as on the higher broadcast waves. The considerably greater frequency of the short-wave signal makes it more difficult to tune the circuit to perfect resonance. Tuning must be done very slowly, for a station can be passed over without knowing it. A signal may seem too weak to hear, but with careful adjustment and tuning it can be brought out quite loud.

But fading often is very bad on the short waves, and stations may be missed during the period of faded or minimum signal strength. Stations also are limited to certain portions of the short-wave dial, and these spots must be located after careful search. Not many distant stations above 35 meters are heard during the day, and very few below 25 meters after dark. Below 15 meters the waves are very short and respond only to experimental and specially designed receivers and aerials.

The time of foreign broadcasts must be watched carefully since few of them are heard after 8 or 9 p.m. EST. Anyone expecting to tune immediately to London, New Zealand, Paris, Rome, or South America, will surely be disappointed. There is little that is consistent about the very short waves from afar, and it may be weeks before stations can be located, but once found and logged, they can be picked up easily during their hours of broadcasting at any time in the future. Ship to shore, police and amateur broadcasts should be heard easily on the higher portions of the short-wave dial, and, of course the standard broadcast waves will be heard as always.

Various kinds of aerials may be used for the all-wave sets, some ranging from 20 to 100 feet in length. It is best to experiment because of the location and type of receiver in use.

## Old FRIENDS and New IDEAS

## With the Inventors and Manufacturers

ASYSTEM whereby as many as 3,000 radio receiving sets can operate independently on the same antenna without interfering with each other has been perfected, according to an announcement by the Western Electric Company. By adding further apparatus, the number of sets can be increased indefinitely without impairing the quality of reception. The sets can be of any make the individual chooses. A city's roofs freed of the fire hazard and the unsightly tangle of innumerable individual antennas thus becomes a scientific possibility.

The system is designed primarily for hotels, apartments and other multiple dwellings and is aimed to overcome the increasing problems which dwellers in such buildings face in obtaining good antenna facilities for their radios at reasonable cost. Modified forms of the system have also been designed to operate a much smaller number of radio sets. The same technical improvements devoted to the large community receiving system are embodied in these smaller forms and are made available on a scale that is suitable even for the individual home owners and his one radio set.

The system was designed by engineers of Bell Telephone Laboratories and employs the principles used in long distance telephone circuits.
"B" Power for Auto Radio
Making the automobile radio all-electric and thus getting rid of the B battery nuisance, has long been an ambition of

radio engineers. Now comes the $P$. R. Mallory \& Co., Inc., of Indianapolis, with their "Elkonode" which they claim will provide the same high quality and dependable reception from automobile radios that is secured from all-electric sets in the home. The device is compact - 10 in . $x 7$ in. $\times 31 / 4 \mathrm{in}$.- and may be placed in any one of a dozen places in and about the car. It uses no water, has no rotary parts and does not set up interference. It is energized by the "A" battery of the car which, in turn, is, of course, constantly renewed by current from the automobile generator. No additional switch is required to operate the eliminator.

The Balkeit


The new Balkeit Junior manufactured by Balkeit Radio Co., North Chicago, Ill., employs a full-sized dynamic speaker, with a hum bucking coil, three-gang ballbearing variable condenser, and dry electrolytic condenser, with full-vision illuminated dial. It uses the new series tubes - one '57 triple-grid amplifierdetector, one '58 triple-grid super control amplifier, one ' 47 output pentode and one ' 80 rectifier. It is 10 in . wide, $151 / 2 \mathrm{in}$. high and 8 in . deep.

## Radio Watches the Baby

An ingenious father has installed a miniature broadcasting system near his
baby's cradle so that the slightest sound in the nursery is transmitted through the radio set to the parents in the living room. All the apparatus required is a Universal Baby Mike and a Junior Input Stage both of which are manufactured by the Universal Microphone Co., Ltd., Inglewood, Calif. They are said to be extremely simple and inexpensive. The microphone is so sensitive that if the radio set is placed in the mother's bedroom she can hear the steady, even breathing of her child.

## Using Ground Waves

From the factory of the Western Coil \& Electrical Co., at Racine, Wisconsin, comes the "Radiodyne Groun-tenna" which is claimed to bring in distant stations strongly and clearly with great selectivity and minimum interference. It takes the signals from the ground and hence is non-directional. It can be used of course, with any type of set. It attaches direct to the set and hence the antenna system follows the set when it is moved from one place to another. There is an inner metallic cylinder which

picks up the signals from the ground and transfers them to an inductance coil. The cylinder and coil together act as a condenser building up the signal strength. A high resistance in series with the ground lead, blocks radio-frequency impulses, forcing them through cylinder and coil. This resistor also serves, it is said, to pass eddy currents from set to ground thus minimizing hum. The same company manufactures the "Radi-aerial" which is claimed to have the capacity of the average outside aerial 75 feet in length. It too takes the signals from the ground.


The Simplex
A new long and short wave set is introduced by The Simplex Radio Co., Sandusky, Ohio. It is their Model P and is made for either direct or alternating current. It is a superheterodyne with five tubes and is said to have ten-kilocycle selectivity with extraordinary range. It is but nine inches wide and 12 inches high and weighs but 13 pounds. It tunes from 550 to 4000 kilocycles and is equipped with tone control, static suppressor, built-in antenna and provision for phonograph connection. The dial is illuminated and is calibrated in kilocycles.

## All Waves and Television

An All-Wave Radio with television is being produced by W. C. Rawls \& Co., Bankers Trust Building, Norfolk, Va. Of this set the manufacturers say: "The Rawls Short Wave Unit in connection with the broadcast receiver, has been especially designed for long distance short wave reception from 15 to 200 meters, the superbeterodyne circuit incorporating nine tubes. To switch from one s.w. band to another, a click of the panel switch and the change is made automatically. In the broadcast receiver six tubes are used - two ' 35 s multi mu, one ' 24 A detector, one ' 27 and one ' 47 pentode output with ' 80 rectifier. The eight-inch dynamic speaker handles the tremendous output of the pentode tube without distortion. In the television receiver eight tubes are used.
(Continued on page 29)

# After the Editor's VACATION 

HOW do you do, ladies and gentlemen, how DO you do?" Norman Brokenshire's famous greeting seems appropriate after this absence of three months. We hope you have had a pleasant summer and that you are looking forward to an interesting radio fall and winter. In this interim RADEX has not been idle and celebrates its entry into its ninth year with a number of new features which your Editor feels, will add greatly to your convenience and satisfaction.

Questionnaires covering a number of subjects were sent to all broadcasting stations in North America and the response was quite gratifying. The official data of the Radio Commission regarding frequency, power, owners, etc., was verified and corrected and much more detailed information regarding the policy of verification was secured.
In order to present fully the information gathered, we are adopting new symbols for the Index by Frequencies. These permit us to convey a vast amount of data in very little space. The actual policy of stations regarding stamps ought to save our DXers considerable money in dimes. The new information on miscellaneous chains should aid in identification of stations received. With the increase in postage to three cents in the

Back to Business as Usual

United States as well as in Canada, Cuba and Mexico, makes it more than ever essential that listeners send return postage or coins for their verifications. Stations which failed to reply to the questionnaire or to certain questions are marked with the small " $z$." Replies are still being received and the Index will be corrected from time to time.

In response to hundreds of requests from our readers, we are at last giving the time on the air for all stations. It being impossible to give the space necessary to include the time for the entire week, we have adopted the plan of giving the time for Sunday in the September issue, Monday in October, Tuesday in November, etc. Readers should therefore be sure to save the next seven editions of this magazine and thus have the time on the air for all stations for every day of the week.

On the inside front cover of this issue will be found the September calendar of special DX programs. This covers those stations which will have, during September, special programs for DXers particularly those outside their regular broadcasting hours. We know this feature will be especially welcome to our DXers.

Don't be alarmed. This is only "Bill and Jane." Their adventures are recounted each weekday morning except Saturday at 7:45 EDST over UJZ.

[21]

Many stations indicated on their questionnaire that they would give such programs irregularly during the winter. A second inquiry is being sent to such stations asking for specific information in advance of their programs and the information received will be incorporated in future calendars.

The inclusion of short wave information and articles necessitates the increase in pages in this issue to eighty as compared with 68 a year ago and 64 in 1930. We feel sure our readers will be gratified by this increase in the service rendered by their favorite radio magazine. We do hope that they may in turn reciprocate by telling their friends about the pleasure they derive from it and thus enable us to extend our sphere. What a wonderful thing it would be if each reader were to secure one new reader and thus double our circulation at one fell swoop.

## A New Map of the World

To assist in this doubling we have designed and published a new device which we feel sure each reader will want to add to his radio equipment. This is the RADEX Radio Map of the World and Time Converter. They will agree, we are sure, that this is one of the most convenient, informing and clever devices they have ever seen. A small cut of the Converter appears on the inside back cover. The dial is merely turned until
the particular hour is opposite a particular zone and the Converter then shows the current time in every zone of the world. Thus, if you live in the Mountain Standard Time zone and you desire to convert 8:00 p.m. into New Zealand time, you turn 8:00 p.m. opposite MST. and at once you see that it is $3: 30$ tomorrow afternoon in N.Z. The hours of twilight, darkness and dawn are graphically shown in their relation to these hours. Or, if you desire to tune in a program in Honolulu at 9:00 p.m., their time, and you want the EST. time for tuning, you turn 9:00 p.m. opposite the Hawaii zone and at once you see that it is $2: 30$ tomorrow morning in EST.

On the double page inside spread of the converter is a large map of the world with all the principal cities shown and with the time zones correctly drawn. This map is six times the size of this page of RADEX. At the top of each zone is a number corresponding to the numbers shown in the outer circumference of the Converter. On the back cover is a list of all the countries of the world with the call letters assigned to each and the zone number which either locates the country on the map or the time zone on the Converter. All in all, this map and converter make a big contribution of radio information. And the price is but 25 cents or free with a year's subscription.

So much for business; now let's see

# INSURE YOUR RADIO ENJOYMENT 

SEND THIS BLANK TODAY
The Radex Press, 5005 Euclid Avenue, Cleveland, Ohio.
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Write Name Plainly
Street and Number
what our readers are thinking and doing.

Some months ago we published a letter from a reader in the Bronx, N. Y., regarding a new aerial he had erected. We are advised that when other readers wrote him for information regarding this aerial, he notified them that he had had the material printed and would have to charge one dollar for it. This magazine is published for and in the interests of the radio listeners and we strongly object to any reader trying to make money out of other readers. If they have information of so much value that they have to make a charge for it, we urge them to keep it to themselves in future. From now on we shall have to insist upon diagrams and full data on any home-made set or aerial so that if our readers are interested in it, it can be published for the benefit of all.

This same fellow in the Bronx is trying another "racket" upon our readers and probably upon those of other magazines as well. He sends them a card stating that their name recently appeared in a prominent magazine and that he will send them a clipping for a quarter. If they bite, he sends them a clipping from RADEX which, of course, they have already seen. We are powerless to prevent such petty graft except to warn our readers against responding to this fellow's bait.

## Defends CMCY

"Permit me to say a few words in behalf of Mr. M. D. Autran, Calle G No. 215, Vedado, Havana, Cuba, over whom our comrade, Mr. P. E. Donnelly, 901 Third Ave., Los Angeles, Calif., has let out a cry of warning (April RADEX, page 20)," writes Rudolph Kure, 3633 Vine St., Cincinnati, Ohio. "I have exchanged several letters with Mr. Autran, owner of Station CMCY, and received the pleasant impression of dealing with a fine fellow. He has mailed me not one, but two, verifications. He has also given me, at my request, complete specifications of his mighty efficient plant. How many broadcasters would bother about doing that for an humble DX fan? I am convinced the fault lies not with him but perhaps with us DXers. I can recall M. D. Autran telling me that on several

"Whispering Jack Smith" has returned to the air over NBC-WJZ, Monday, Wednesday and Thursday, 10:15 p.m., EDST.
occasions mail destined for him has been forwarded to wrong stations instead (there are so many broadcasters in Havana), on account of either illegible or else insufficiently or otherwise faultily addressed fan mail. He has urged me likewise to be sure and write his full and correct address and write it in plain, clear print."

## No Increases Shown

'I would like to know whether the following stations have changed their power or not," requests F. S. Keeble, 323 Ozark St., Hot Springs, Ark. "KVOO, WSB, WRUF, KOA, WHAS and WSM. Since XER has been on the air, I have had interference from it in getting WSB, but lately I get WSB clearly and loudly without this interference even before the sun goes down. I also get KVOO louder and clearer than ever. WRUF and KOA both operate on 830 kcys., but along toward evening I get WRUF clearly and loudly till 7:30 p.m., CST., when it goes off the air. I can't get KOA till the former station vacates the channel. In this connection, I would like to state that something should be done about KWKH broadcasting off its wave lergth. It jumps from 830 to 870 kcys. and very seldom completes a
program on its assigned frequency of 850 kcys. I know this condition is not caused by any fault in my set, for I have a very good Atwater Kent, Model 55, and have just recently had the set tested and a new set of Cunningham tubes installed."

## New Australian List

"I am enclosing herewith a copy of an authentic list of the Australian broadcasting stations that I had the pleasure of receiving from Mr. Robinson, Manager for the Queensland group," writes Fred W. Janssen, 118 S. Santa Cruz St., Ventura, Calif. "It gives the address of the stations also, and I thought that perhaps you would care to print it in your coming issue of RADEX for the benefit of your readers interested in transPacific reception. As you no doubt know, the trans-Pacific stations will start coming through again in the month of September, and it might be well for the fans to have some authentic dope on them."

If we aren't able to find space in this issue for Mr. Janssen's list, it will appear in an early edition of this magazine.

Shake-Up Coming in Canada
As the daily press has noted at considerable length, a great shake-up is coming in the Dominion of Canada. The Government is taking over all broadcasting along the lines of the British Broadcasting System. A number of the Canadian stations will doubtless disappear and Ian Murdoch, 17 Main Street, Grimsby, Ontario, has this suggestion to make: "Those readers who hear some of the Canadian stations so regularly that they consider them like locals and do not have them verified, ought to verify them all at once for they may be deleted in the coming reallocation and DXers will then lose them entirely. It is rumored that Canadian stations will go on 690,1050 and 1100 kes. When they do readers may find it difficult, because of their interference, to hear stations they now get regularly on those waves such as KFBI and KNX on 1050. DXers ought therefore to see that such stations as these are verified now while they can get them clearly." Mr. Murdoch's log now stands at 855 and he would like to know if he is anywhere near the point where he might
claim the DX championship of Canada. How about it, Canadian DXers?

The United States Civil Service Commission asks us to warn our readers against paying money for "coaching courses" in preparation for the Federal civil service examinations. They say: "Schools which sell such courses under present conditions accept money under false pretenses. Comparatively few appointments are being made in the Federal civil service. Vacancies which must be filled are filled by the transfer of those already in the service or the reinstatement of those who have been in the service. Money paid for civil service coaching courses at this time might almost as well be thrown to the four winds."

## Another Outlaw?

From Earl R. Roberts, 105 Gomber Ave., Cambridge, Ohio, comes the report of a new station of which the FRC gives no record. Can it be another outlaw? "It's WAIR, located in New Philadelphia, Ohio, just 40 miles northeast of Cambridge. Heard it first last Saturday (July 9th), from 3:50 p.m. to 5:30 on 885 kes.; Sunday noon on 1040, and Monday on 860 . It comes in fairly loud, so must use around 50 watts. Plays records usually and announces only every half-hour." In a later letter, Earl says he has received a verification from WAIR "The Voice of the Air" signed by Ray Wilson and operated by the Eastern Ohio Air Service Co. on 850 kes., daylight only. Their schedule is 9:30 a.m.-1:30 p.m.; 3-305:30 p.m., EST. Their transmitter is latest type Master-Oscillator Amplifier circuit employing a type 520 tube in output stage and radiates about one ampere. Earl counts this as his 802 nd station. No. 801 was his farthest off 3LO, Melbourne, approximately 9,937 miles. The last season boosted Earl's log from 570 to 802 -a mighty good record.

## Some Little Kinks

A very simple little change will often improve the reception from a set - this is to pull out the plug from the electric line and put it back the other way. There are two wires leading to an electric light outlet. One of these goes direct to the generator at the central power-plant. The other usually goes to the ground.

The plug which you insert into the lightsocket or outlet has two prongs. With many sets it makes an important difference how these prongs are inserted. If your set hums or fades badly or if snapping a light on affects the volume, try pulling these prongs out and inserting them into the opposite holes of the socket.

Joseph Stokes, 7318 Woodlawn Ave., Swissvale, Pa., writes of a little stunt he tried which added a number of stations to his log. "I use a Silver No. 30 and can greatly increase the sensitivity by removing the shield. This causes the set to oscillate and by careful manipulation of the volume control, many more stations can be logged. Try this, you
of broadcast stations in the United States," comments Frank E. Switalski, 2819 Victoria Ave., Cincinnati, Ohio. "XEF (formerly XER) of Villa Acuna, Mexico, operates with 75,000 , and the most powerful broadcaster in the world is at Warsaw, Poland, with 158,000 watts on the long waves. The Federal Radio Commission has just authorized WLW, Cincinnati, to test a transmitter in about a year with 500,000 watts."

A new station, XENT, is rumored for Neuvo Laredo, Mexico, to use $150 \mathrm{k} . \mathrm{w}$. power. It is said it will be built by Norman T. Baker, formerly of KTNT at Muscatine, Iowa, who had a,run-in with the FRC and lost out.

Jane, Helen and Patti Pickens, NBC's harmony irio, 7 p.m. Sunday, 9 p.m. Saturday, EDST., NBCWJZ.

seekers of Japan. "Using this method I log from 30 to 50 stations every noon from Boston to Gainesville. ${ }^{*}$ Mr. Stokes writes that a member of their club, the World Radio Reception Club, visited Richard Caddell to check up on his article in the May RADEX and witness that Radioloa 60 in operation. Mr. Stokes says the visitor came away disgusted - with his own G.E. Super. Joseph reports rumors of a new station in Florence, Italy, using $20 \mathrm{k} . \mathrm{w}$. on 599 kes. and another new one ir France using $7 \mathrm{k} . \mathrm{w}$. on 671 kcs . He says EAJ7 in Barcelona, Spain, is working on 1190 kcs . and will soon use wither six or ten kilowatts.
" 50,000 watts is the maximum power

The biggest station in the world, so far as power is concerned, is announced for Junglinster, Luxemburg. It will use 200 k.w. on 1250 kcs .

From J. E. Beardshaw, Bacacay 2547, Dept. 2, Buenos Aires, Argentina, comes the following: "We are very advanced on radio here, and three broadcasts, LR5, LR4 and LR3, have bought new transmitters of great power, which are just now mounting. I noticed three mistakes RADEX with respsect to the waves of LS3, LR6 and LS9, which are as follows: 630 kcys. in place of 1270 , more or less; 865 in place of 990 , and 1270 in place of 1386 , respectively."
"Am writing to express my apprecia(Continued on page 27)

# A Dub Tries the SHORT Waves 

THE first reaction of the beginner on the short waves is one of disappointment. Used as he is to turning the dial carelessly and picking up the broadcast band stations without effort, he finds it difficult to reconcile himself to the delicate tuning necessary to bring in the short wave signals. For most of the short-wave stations must be tuned to the sharpness of a razor edge.

The broadcast band signals usually come in well above the noise level, but with the short waves, the noises seem to be always with us so much so that others in the room are apt to find they have business elsewhere. When signals are heard, however, they can by patient manipulation be brought out well above the noise level. Another unpleasant byproduct of the short waves is the code which in recent years has pretty well disappeared from the broadcast band. In the short waves, as the dials are turned, one is constantly passing through these code bands with more or less annoyance. Television signals too are picked up frequently with their high-pitched staccato.

We have given you the worst side of the picture at the beginning for that is the way the neophyte will find it when first experimenting with the short waves. One has to learn to "play" the short waves with the same patience and persistence he would require to play a musical instrument. The writer has had his set too short a time to acquire the necessary skill and knowledge the short waves require. A later article will set forth the actual results he is able to get in the high frequency bands.

## The Editor's New Set

The set that was purchased was the Silver-Marshall 728-SW - a brand new design just out of the laboratories and workshop of Silver-Marshall, Inc., 64016451 West 65th Street, Chicago. This set was chosen on a sort of an "eenymeeny" basis without any tests of this or competing receivers. A detailed description of this set - the newest product of a well-known maker -should be of interest.

## A B. C. L. Turns <br> to the High Frequencies

The illuminated drum-dial is divided into four bands of four colors. One of these, numbered in kilocycles, covers the broadcast band from 550 to 1500 . The other three bands are numbered in megacycles (thousands of kilocycles) which we believe to be the ideal method of indicating the short-wave frequencies and one that will ultimately be adopted by all manufacturers in preference to either kilocycles or meters. The yellow scale covers the frequencies from 1550 to 4800 kcs ; the green from 3600 to $10,000 \mathrm{kcs}$; and the orange from 9600 to $25,350 \mathrm{kcs}$. Any one of the four bands may be brought into use instantly by turning a knob to one of the four colors marked thereon.

## How It Operates

The S-M 728 -SW has six control knobs. One turns the dial by friction vernier action. At the extreme left is the knob which combines the on-off switch and the volume control. These two knobs are used on either the b.c. or the s.w. bands. For the b.c. band only one of the other knobs is used that of the tone-control. This control is quite effective, a very marked difference in the pitch of the tones appearing as it is turned. This control seems to eliminate a great deal of static by turning it to the bass notes.

In short-wave operation, the scaleknob is turned to the band desired. The center knob is a noise suppressor with an action somewhat similar to that of a local-distance switch on some b.c. receivers. The next knob to the right is a non-critical auxiliary short-wave trimmer and is used to bring out the signals clearly after the dial is set. The b.c. dial is very well calibrated there being only a very slight discrepancy between stations at the upper and lower parts of the b.c. band and their marked frequencies. The set is quite critical in the b.c. band and selective within ten kilocycles even with the powerful local stations. WTAM
can be tuned out on 1070 and WBT on 1080 and WTIC on 1060 tuned in without interference.

## Can be Tuned Visually

Due to the sharp selectivity of the set, the dial must be set with great accuracy in order to get a full and perfect tone. This result is materially aided by a visual tuning meter just above the dial. The hand of this meter swings violently to the right as a signal is passed in turning the dial. In tuning a station in, the set will be perfectly synchronized to the signal when this hand is as far to the right as it will go. Stations may, in fact, be tuned in silently by this meter alone. With the volume control turned down and the dial revolved, this meter hand will swing when a signal is passed. If the dial is set for any one of these signals with the hand to the extreme right and then the volume control is turned up, the station will come in perfectly synchronized - tuned in by sight alone.

In short wave operation, the band is chosen by the selector, the volume control is set and the noise-suppressor placed at a point that will give the greatest volume with minimum noise. The dial is turned very slowly and when a signal is heard, the trimmer knob is turned right and left until the signals are brought out with the greatest clearness.

This particular set is mounted in a very beautiful console with doors. It has two speakers in order to cover the entire tone scale and to pass the great volume the twelve tubes providesaid to be over eight watts of undistorted power. In the b.c. band, the set uses ten tubes - a '58 detector and '56 oscillator, an i.f. amplifier using two '58 tubes, a '56 A. V. C. tube, '56 second detector, a ' 45 first audio or driver stage and a push-pull ' 45 output stage with, of course, an ' 82 mercury vapor rectifier tube. For the short waves, an additional '58 first detector and '56 oscillator are brought into play.

The first few days' operation brought in only a few identified short-wave stations - two or three of the relay stations, police stations in several cities, a number of airport stations and numerous amateurs. In a later article we will describe the results that are secured after this
listener has acquired some experience in the operation of the short-wave portion of the set.

## With the Editor <br> (Continued from page 25)

tion of the many friendships and acquaintances that I have made through the medium of your magazine RADEX," says John M. Lennon, 122 Linden St., Camden, N. J. 'I have made many friends by letter and even some by personal contact. When my inquiries were printed in RADEX I received many replies from all over this country and Canada. These enabled me to increase my total of stations and this is primarily the aim of all DXers."
"Every radio magazine we pick up these days is chain, chain, chain," complains John H. Malone, Sparland, Ill. "The program listing is bad enough. Why do you insist on so much chain stuff? If you must go 'stationish' tell us of the artists on the smaller stations. You'd at least be different."

## Those VE Short-Wavers

From Harvey Kees, Beulah, N. Dak.: "Last night, in the feature 'Short Wave Chat' from CJRW, the speaker stated that VE9JR operates on 25.50 meters with an output of 2000 watts and VE9CL operates on 48.85 meters with an output of about 3500 watts. These two stations operate alternately, relaying the program of C.JRW. He also said that VE9JR (formerly CJRX) was Canada's first s.w. broadcasting station. The operators of these stations do not seem to have much faith in long distance on the broadcast band but they have quite a few short wave DX broadcasts."
"XEF, Villa Acuna, Mexico, has NOT taken the place of XER," postcards Rudolph Kure, 3633 Vine St., Cincinnati, Ohio. "XER is still broadcasting. A few nights ago at exactly 10 p.m., EST., XEF signed off saying: 'Please stand by for our sister station XER,' and then XER took the air."
"I have a Zenith super 8 set. It has two ' 45 power tubes. Will it help to get greater distance if I replace the ' 45 s with '47s?'' asks Harry R. Kenny, 607 Mt. Vernon St., Camden, N. J. We
doubt if the 47 's would increase the range; the only noticeable difference would be in the tone. What do our readers think? Harry has received 315 stations in ten months. He uses an aerial of 65 feet, including lead-in. He would like to hear from other DXers.

Here's a tip from Ray E. Everly, 102 W. Washington St., Newton, Ill., which we haven't been able to verify officially: "KFDM, Beaumont, Texas, 560 kes., is moving to Port Arthur, Texas. It will have studios in Port Arthur Radio College and has been leased by Port Arthur Broadcasting Co. The college has a s.w. station W5YH."
"Speaking of my favorite magazine, here's a suggestion for the cover," suggests Murray D. Bryce, R.M.D. 1, Royal Oak, V. I., B. C., Canada. "No, I'm not particularly wanting a picture of a radio station, but a very ornamental cover would be a good picture of Ethel Shutta (Mrs. George Olsen) who sings so well with her husband's fine orchestra. If you saw Eddie Cantor's picture 'Whoopee' you will surely remember Miss Shutta."

The war of the newspapers against radio is further intensified by the New Orleans newspapers which, it is reported, have discontinued their radio programs and are ignoring the existence of radio. Will the newspapers of other cities follow this example?

## MOONSHINE and

By ROBERT S. STEPHAN Radio Editor, The Cleveland Plain Dealer

IN a somewhat barren, air-cooled studio in the heart of Manhattan today, I sat with a crowd of the curious and tried to recall the beauties of southern mountains as I watched Lulu Vollmer's cast portray over the air the 100 th episode of the popular serial, "Moonshine and Honeysuckle."

It is a far cry from the moderndressed Broadway actor and actress to the boy in galluses and the girl in homespun. But even with this modern Fifth Avenue setting the spirit of "Moonshine and Honeysuckle" intrigues you.

Louis Mason, a rather tall and very friendly Kentuckian does the leading role of Clem Betts. A similar role in Lulu Vollmer's "Dunce Boy" gave Mason his big chance with the late David Belasco.

He has been a part of the theater since boyhood.

## Strauss a Veteran

Robert Strauss plays the role of Pink Freeze. He is rather short and slightly bald. Another veteran of the speaking stage, he has played Cleveland many times, doing comic characterizations with Fritz Leiber's Shakespeare company. Strauss also has done the role of Inch Spencer with the Stebbins Boys.

Anne Elstner plays the role of Cracker


The cast of "Moonshine and Honeysuckle." Our readers will have to decide for themselves which is which. We don't know.

## Honersuckle

Gaddis and tells me she also does the roles of Myra, Ma Carter and Ma Betts. Sara Haden plays the part of the Whining Piney Hyatt and Therese Marie Wittler, a very personable young actress does the role of Gypsy Carter. These three young women are former Theater Guild stars.

A big, six-foot strapping fellow, Bradley Barker, makes those sounds of the birds, the cackle of the chickens, and Barks of "Bones," and finishes a busy half hour by playing the role of a doctor.

The program's theme song is played by four musicians, two violinists, a cellist and pianist. Add to these a sound effect man who bangs doors, a director who flits in and out of the studios like Hamlet's ghost, and the usual announcer and you have "Moonshine and Honeysuckle."

The cast is friendly, chatting informally with guests before and after the broadcast. Louis Mason was doing an impromptu dance today as the ensemble played the interlude after the first half of the sketch. The entire cast reads the lines of the sketch from script and the male members are bespectacled when working before the mikes.

## Cooper Dies

Mason tells me that Claude Cooper, who played the role of Peg Leg Gaddis, died a few days ago. Perhaps you recall that gruff, old diction of his over the air. It was due, Mason says to the creeping paralysis which had affected his lower jaw and later caused his death. Although several actors have tried out for the Gaddis role, Miss Vollmer is undecided whether to continue it since Cooper did such an excellent portrayal of this character.

Mason tells me that the Moonshine and Honeysuckle cast will be going on the road soon. Stage appearances will be made in costume with scenic background. At present, Miss Vollmer is wondering if "Cracker" and "Clem" should be married in the story. What do you think?
"Moonshine and Honeysuckle" has enjoyed unusual popularity on the air. It is one of the first radio series ever at-
tempted by a recognized Broadway playwright. Miss Vollmer is the author of "Sunup" and other Broadway shows. The series began when Louis Mason said to her one day: "You know, Miss Lulu, write something which is really the mountains - something with moonlight and the smell of honeysuckle in it." Miss Vollmer lived with the mountain people of the south and at the age of ten cried herself to sleep because she wasn't a mountaineer's child. They could fight, swear and chew, but she had to be "'a little lady." It took Miss Vollmer one hour to write the first sketch of this series. Now she spends nearly a week on each episode.

## Old Friends and New Ideas

(Continued from page 20)
The duralumin lens disc is 16 inches in diameter and is driven by a heavy-duty synchronous motor with switch and framing device operated from the front panel. The picture is projected on a screen in the panel and is large enough for a group to sit by and enjoy."


The Rawls All-Wave and Television Receiver

# On All the Waves with Our DXERS 

IT seems to be customary for the RADEX family to write to the editor, so here's my contribution," says Richard Abrahams, 1310 Hutton St., Troy, N. Y. "I'm probably a rather recent arrival into the circle, but no less enthusiastic than the Radexers who grew up with the magazine. I was introduced to it last September while looking for a radio magazine written primarily for the public which just 'listens.' I am a student at the Rensselaer Polytechnic Institute at Troy and, while there during the winter, I like to do a little DXing on a Sunday morning using a Dubilier 600 which I bought last fall. In this time I managed to hear 162 stations, which I don't consider to be a poor record, considering the quality of the receiver. My best catches were WQDX, KICK, WBBZ, CMBD and KOY. I would like to correspond with anyone using a Dubilier 600 receiver."

## A Good Report from Wisconsin

"I have been DXing about a month or so less than two years and to date my log contains 719 stations," reports Paul L. King, 1523 Madison St., Madison, Wis. "All my verifications are in and the season brought me four new ones from across the seas. They include 2CO of Corowa, Australia, from which I received two verifications on different programs about two weeks apart, one program of an hour and a half duration; 4 BH , Brisbane, Australia, 600 watts; 3GL, Geelong, Australia, 50 watts; and the last one from Munich, Germany. The German has no call letters, but operates on 560 kcys. with 1700 watts. I heard numerous other foreigners, mostly from Australia or New Zealand, but the weather or some of the various other troubles which best DXing prevented my getting enough for verification. One morning I managed to pick up what I thought was the famous 2 LO , but I could understand only a word here and there. One of the catches which I record, 3 GL , is so unusual that my claim may be disputed by some. However, I have their verification, along with the others

## Reports, Complaints and Et Cetera

named, before me as I write and I shall welcome examination of it at any time. The Munich letter was written entirely in German and as I am not well acquainted with that language, I had to have it translated for me before I was sure what it contained."

## Heard a New Brazilian

"I have just written to the Radio Club of Brazil at Rio de Janeiro, advising them, in accordance with their request to listeners-in, that I picked up their program very clearly," comments W. F. Rendell, MacDonald Club, St. Johns, Nfld. "Experimental station PRBA has just concluded a program of Brazilian music broadcast on 31.58 meters. I heard them for an hour at $9: 15$ p.m. Nfld. Daylight Saving Time (7:45 p.m., EDST.) My set is an 8-tube G.E. Super heterodyne (long wave) with a 3 -tube converter attached for short wave. My aerial is 12 feet of bell wire strung across the room, and my ground is a radiator."

Joe Maertz, 3118 West Scott St., Milwaukee, Wis., reports the reception of 5 CK of Adelaide. We quote from his verification: "We have your report of May 10th and in reply are glad to say that the station you heard was 5CK, the central regional station of the National Broadcasting Service, which relays the 5 CL Adelaide programmes. The call-sign for both stations is ' 5 CL Adelaide and 5CK.' 5CK is located at Crystal Brook, 100 miles north, by airline, from Adelaide. The input power is $15 \mathrm{k} . \mathrm{w}$. and aerial power $71 / 2 \mathrm{k} . \mathrm{w}$. , wavelength 472 metres, frequency 625 kc . It has now been in operation about four months."

Samuel F. Owens, 233 Roberts Ave., Glenside, Pa., also reports reception of 5 CK .

Waiting for the New Season
"Well, it seems good to write you again, for the starting of DX with RADEX is soon at hand," greets Arthur Collins, 68 Amber St., Buffalo, N. Y.
"I am waiting anxiously for the opening issue in September, as there are many changes in stations and kilocycles. I open the season with a fairly good list of verifications from last winter's efforts. Here are some of my best (and all verified): 2YA, Wellington, N. Z.; 4QG, Brisbane, Australia; 1BC, Caracas, Venezuela ( 960 kcys., 5 KW power; their hours are 7-8 a.m.; 10:30 a.m.-2 p.m.; 5-11 p.m., EST.); 10AB, Moose Jaw, Sask. (25 watts power), and 30 Californian stations. My log is 428 stations to date. I would like to have correspondence with DXers and may be able to help them on some tips. I have an RCA model R50, 10 -tube pentode and at present am using a 300 -foot aerial and six grounds (one of them the Ross copper)."

## Some Good Records

'I've been DXing since 1926 and have 546 stations logged, but ap until now I've only verified the low-powered and distant ones," writes Leo Shelly, 125 Lake St., St. Catherines, Ont. 'Starting now, I'm trying to verify every single one. We own a Sparton Equasone with seven tubes, and our old set was a Guilfillan neutrodyne battery set. In your May issue you asked if the call letters CKOW were ever used. I heard them one night two years ago and CKOW was used. Nestle's Milk Company were the owners, probably accounting for the KOW in the call."
"I started DXing last October and from October 31st to April, 1932, I have logged 340 stations and have verifications from 274 so far," reports H. Burstrom, 899 Alhambra Road, Cleveland, Ohio. "Included in my list are 17 Canadians, 4 Mexican, 6 Cubans, both in Honolulu, and also have logged 21 100 -watt, 1050 -watt, two 25 -watt, two 15 -watt and one 10 -watt. I have a 1930 Philco 8-tube neutrodyne and the only aerial I have had is an Elimino on top of my cabinet. But for ground I have two pipes 8 -feet deep and rock salt buried around them. Both pipes have one wire soldered to ground wire."
"Have just finished reading my second copy of RADEX and do not see how I have done without the little book," writes E. L. Kimmons, 309 Leland St., Austin, Texas. "Have only been DXing
about nine months, but have nothing much to brag about. My location is very unfavorable for distant reception. Only logged 306 stations, with about 180 verified. About the best catch was 10 AB on their last DX program. I am thinking of getting a shortwave receiver and think the new department devoted to the short waves will be a great help to the fellows, on these frequencies."

## Has Tried 'Em All

A regular experimental laboratory is Clyde W. Ham, 1002 S. Lafayette Street, Shelby, N. C. He says he has tried five different Majestics, Zeniths, DeForests, RCA-Victors and Kolsters, and now he has a Silver-Marshall G-6 Super with ten tubes. His log for last season included 2LO London; Stuttgart, Germany; seven JO's in Japan; four Australians; three Zealanders; HIX, VPN and RUS in North America, and a whole String of B.C. stations in Cananda and the U.S. Even at that he thinks he has a poor location. Anyone with a $\log$ of almost 800 should kick on his location!
"My log is up to 722 with 465 verified," reports Lester Reinmund, 1120 So. 76th St., West Allis, Wis. "I started DXing the latter part of December, 1929, and until last winter the most distant catch I made was WKAQ, Porto Rico. Now I have verified stations from Hawaii, Japan, Australia, and New Zealand. The above countries did not come in only once but I could receive them on any decent morning. I have verifications from JOBK, 4QG, 2YA, 2BL, and 4BC, a 600-watter."

Heard Airplanes Describe Fire
"During the spring I received my second and third airplanes direct," reports Alden P. Bowser, 358 Pleasant St., Brockton, Mass. "They were circling over the Quincy fire and talking about it. I would like to identify them. Reception has been good this summer and my best catches are KWSC, KGMB, XEB, KROW, KOIN, and others. Does anyone know the location of Tuinucu in Cuba? I have looked on large maps and have been unable to find it. My total to date is 438 stations and going up."
"I am beginning my second DXing season with a $\log$ of 543 stations," says

Paul E. Jolicoeur, 93 Sewall St., Augusta, Maine. "This is not so bad considering the fact that I live in a remote section of the country. I have logged every state but Wyoming, and I am sure that can be accomplished now that they have changed frequencies. Here is the line-up: 47 Canadians, 17 Mexicans, 19 Cubans, Porto Rico, Haiti, and Santo Domingo. I would like to hear from owners of the Stromberg-Carlson Model 19."
"Am proud of my record of 450 -plus stations logged in less than three months," boasts Roberts U. Densmore, 910 74th St., Kenosha, Wis. "As a high school student I have little time for DXing, but have verified $10 \mathrm{AB}, 25$ watts, Moosejaw, Sask.; KGEK, 100 watts, 1200 kcys., Yuma, Colo, and a number of others. Have 44 states logged and patiently await the other four. Have an 8 -tube Lyric, which does fine in spite of weather and location."
"Reception has been very good here the last three months on long and short waves," advises Anthony Arsenault, P.O. Box 444, Summerside, P. E. I., Can. "On a 3-tube shortwave receiver, using 201B tubes, I have heard Australia, Italy, Germany, Switzerland, France, England, South America, and Cuba. What I like best on short wave are the 20 and 75 -meter amateur phones. My best DX 20 -meter phone is in California. I heard it on a Sunday afternoon."
"Since beginning DX on the short waves two years ago," Clement Van Velsor, 1033 Sanford Ave., Irvington, N. J., reports, "I have logged 26 countries: U.S.A., England, Holland, Germany, Canada, Honduras, Argentina, Italy, Colombia, British Guiana, Mexico, Australia, Morocco, Vatican State, France, Spain, Ecuador, Japan, Venezuela, Cuba, Chile, Hawaii, Brazil, Bermuda, Denmark, and Switzerland."
"A letter from JQAK states that they now use the 645 kcy . channel, having relinquished the 760 kcy . channel in March," advises Robert R. Rawstron, 296 Main St., Claremont, N. H. "This season's best catches include 2ZI, JQAK, 4YA, KZRM, 4RK, 2GD, 3BO (first trans-Pacific report), $2 \mathrm{UW}, 10 \mathrm{AB}$, and after two years of effort, WSMK has finally weakened and sent me a verifica-
tion. Total stations now 726, with 592 verified."

## All-Wave Better Than Converters

"I have a Philco superhet nine-tube short and long wave set. I have tried three short wave converters but this Philco set is the only one I have had any success with," comments Eugene Chilson, 5610 Franklin St., Omaha, Nebr. He has had 38 police stations, 12 U.S. s.w. broadcasters and a grand total of 303 stations since November, 1931. Eugene would like to correspond with other 14 -year-olds.

Archie Ferrie, 38 Humbercrest Blvd., Toronto, Ont., says he is a short wave DXer with a b.c. set! He has received WMP, WRDS, W3XJ, W3XK, W2XAR and WIXAU on his b.c. receiver. He wants information on VE3EW which he heard calling W3RUX or something like that. They came in on 1520 kes.
"Here is my record since January 1, 1932, when I discovered RADEX and became interested in DXing," says Leo J. Halpin, 17 Minder St., Rochester, N. Y. ''22 police stations and 372 other stations, or a total of 394 stations. All stations were received on a 6-tube Sparton. Would like to correspond with other DX fans."

## CKTB Reaches Across Ocean

'Our local station, CKTB, received letters from England, Scotland and Ireland in answer to their only DX program," advises Leo Shelly, 125 Lake St., St. Catharines, Ont. "How's that for 500 watts? They use CKOC's transmitter, but they seemed to get a greater response than CKOC, which was on the same night. How come?"
"I thought you might like to hear from another 14-year-old DXer," writes Murray Bryce, Route 1, Royal Oak, V.I., B.C., Can. "My set is a 4-tube battery set about five years old. In five months I have had 173 stations, with 94 over 1000 miles, and 30 over 2000. Among my catches are six Japs and eight Mexicans. You might be interested to know that WTAM is by far the best received of any distant station."
"I have just recently purchased a Brunswick S-126 Model (1929) with a Philco converter," writes Arthur Foerster, 1213 Bosart Ave., Indianapolis, Ind.
"I immediately became a DX fan and purchased your magazine. It has been a great help, for I have already logged 368 stations, many of them verified (291 in fact)."
"I have been in the DX game for two years and have logged, on a two-tube set of my own build, 524 stations in the broadcast band," reports Kazimir Nowotarski, 2484 Thurman Ave., Cleveland, Ohio. "I have logged 12 in Cuba, eight in Mexico, 28 in Canada, and 45 stations on the Pacific coast."
"My log has increased since last October to April 13 th by 245 , all verified," reports Hedley Simmonds, 23 Clyde St., Hamilton, Ont. "Complete log 672 with 602 verified to date and 15 yet to hear from. The rest are deleted."
"I have a total of 446 stations on my Philco 7-tube set; over 400 are varified. I have 20 from California, 13 from Cuba, 10 from Mexico, and the only station in Porto Rico and the one station in Hamilton, Bermuda, which is only $71 / 2$ watts. All of these are verified," John S. Wyborski, 3011 Agate St., Philadelphia, Pa .
"I have logged 128 stations on a onetube home-made receiver," writes Clyde Pauley, Penn Ave. and 24th St., Owens, W. Va. "On short wave I have VE9GW, VE9DR, W3XAL, W9XF, W1XAZ, W2XZ, W2XBR and W8XK."
"I have a log of 310 stations, every frequency, and 41 states," says Joseph Fee, 822 Peralta St., Pittsburgh, Pa., and adds that WQDX has changed its call letters to WTDX.
"Since writing my last letter I have received three very nice specific verifications, namely, from $4 Y A, 4 R K$ and 5CL," reports Clyde W. Ham, 1002 S. Lafayette St., Shelby, N. C.
"I received KFQD, Anchorage, Alaska, the night of July 2nd, at 1:30 a.m., and held them until 2 a.m. Have written for verification," states R. M. Ballard, Visalia, Calif.

## Radio Troubles

## (Continued from page 12)

The device is naturally more critical in adjustment on the high frequencies, or shorter waves, as you state. It is intended


Here's the way you heard those conventions. A page-boy with new lapel mike rusned to each speaker to catch his eloquence.
to be operated just as you have described. A station is first tuned in and the compensator is then set for maximum volume, and the volume control adjusted to suit the listener. Although apparent shifting of stations is possible to a limited degree with this compensator, it does not improve the selectivity of the set very much.

## Set Cuts On and Off

My Knight 8 receiver lend to cut on and off at times after it has been turned on. Can you tell me why this is?

It is likely that the set has a defective power switch with a poor contact that varies greatly in resistance. Also, the prongs of some of the tubes may not be fitting perfectly in their scckets, and when they warm up cause expansions that cause momentary breaks in the circuit. This is particularly true in the speaker-plate and grid circuits to the sockets and tubes. Look for a broken or loose connection in the leads to the caps of the screen-grid tubes, as well as in the volume control itself.

## Broadcast Band vs. Short Waves

T10 tell the truth, although I have a good SW receiver, I seldom listen on the short waves because DX is not as good there as it is on the B.C. band.

The above statement may seem rather strange, but here is my definition of DX as I understand it. DX is the reception of stations near or far which are seldom received on the ordinary receiver, due to low power, distance, or poor conditions for reception. For instance, the reception of Australians on the broadcast band, especially low-powered one, is very good DX for this state, as I very seldom hear of anyone in Michigan who has heard even the high-powered Australians. However, any short-wave receiver, if it is any good at all, will tune in VK2ME and VK3ME. Therefore, I think that the latter should not be considered DX.

Due to the wavelength employed, it is as natural to tune them in as it is for a B.C. receiver in this district to hear WGN or WTMJ. Also, the reception of the S.W. Australians on six feet of antenna, as advertised by one very wellknown maker of a 12 -tube all-wave superhet, is not phenomenal because of the fact that short waves do not require nearly as large an aerial for optimum reception. Nevertheless, if I were financially able, I would not hesitate to buy this set, not because it will tune in VK2ME with a six-foot antenna, but because of its fraction of a microvolt sensitivity on the B.C. band, along with very low background noise.

My reason for listening to short waves at all is the same as that for which I usually listen to B.C. stations; i.e., entertainment. I never listen to a S.W. station unless it has at least fair speaker volume and such stations are not very numerous on a 3 -tube set even if it does use two screen grids and a pentode. However, I have logged in addition to amateur phones all over the U.S.A. and Canada, VK2ME, VK3ME, HKA, HKD, HKF, HKC, PRADO, YVQ, LSN, CMCI, EAQ, G5SW, Pontoise on about 25.5, GBW, and Zeesen on 19.72. There is nothing unusual about this list; anyone with a good S.W. re-

## T. Colegrove Writes of His Experiences

ceiver ought to hear these and many more. However, even short waves have given me a thrill once in a while. For instance, the first Australian ham I heard on 40 meters was with 1-tube, a '99.

It may interest you to know that my B.C. log is up to 564 now and includes every state in the Union, all but one province in Canada, three of the four stations in Brisbane, and all of the stations in at least half a dozen states.

I am going to try for some long wave European DX this winter, as the National Company has just brought out coils extending my range to 2000 meters.

Here is my idea for an antenna. Erect as long an antenna as possible, also as high as possible. Of course about 500 feet is as long as is necessary for B.C. reception; 150 feet is high enough. Then, if your receiver is not selective enough, place a variable condenser in series with your antenna and regulate the length of your antenna to that amount at which you can hear the station you wish to receive without interference. Bend one of the plates so that, at maximum capacity, the condenser is shorted out of the circuit. This is very useful for early morning reception when great sensitivity but not much selectivity is required. In some receivers it is possible to tune the antenna circuit for maximum reception in this manner, especially where a ground is used. In fact, a long aerial actually decreases the volume in these sets on the lower part of the B.C. band. Some of the later type superheterodynes seem to have sufficient selectivity to give 10 kc. separation, regardless of antenna length. A counterpoise seems to give better selectivity than a ground on some receivers.

If most DX is wanted, wire a jack into the detector output so that the phones can be plugged in there. Many signals can be heard on the phones which would not actuate the grid of the first audio tube. Signal to background noise ratio is also reduced in this manner.

## WHAT'S ON THE AIR TONIGHT?

Fill in calls and dial numbers for those stations through which vou best receive the three chains. You can then quickly to the one that has the feature you want.
COLUMBIA (C)
WABC
NATIONAL, Re.l(R) ... WEAF
NATIONAL, Blue (B) _- _ WJZ

| Call | Dial | Call | Dial |
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| Call | Dial | Call | Dial |
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TIME - ED Eastern Daylight Saving; E Eastern Standard; C Central Standard; M Mountain Standard,
For Pacific Time subtract one hour from Mountain. Stations are Arranged Alphabetically.

## MONDAY

ED-8:30 a_m., E-7:30, C-6:30, M-5:30 R - Cheerio
CFCF CKGW KFYR KPRC KSTP KTBS WAPI WBEN WCAE WCFL WCKY WCSH WDAF WEAF WEEI WFBR WFI WFLA WGY WIBA WIOD WIS WJAR WJAX WJDX WKY WOAI WOW WPTF WRC W'RVA WSB HSM WNMH WTAG WTAM WWJ WWNC
ED-9:00 a.m., E-8:00, C-7:00, M-6:00 C - Little Jack Litile
CFRB CKOK KFH KFJF KMBC KTRH WA,AB W ABC WBCM WHIG WBRC WBT WCAH WDAF WDBJ WDBO WDOD WDR( WDSI WEAN WFBL WFEA WCHR WGET WHAS WHEC WH1 WJAS WKBN WLBW WMAL WMBD WOKO WORC WPG WQAM WSFA WSPD WTAQ WTAR WTOC WWVA
ED-10:15 arm., E-9:15, C-8:15, M-7:15 B-Clara, Lu'n' Em
KDKA KlYK KOA KOII, KPRC KSL KNTP KVOO kNK WAPI WBAL WBZ WBZA WCKY WDAY WEBC IFAA WFLA WGAR WHAM WIBA WIOD WI WJAX WJDX WJR WJZ WKY WMC HOAI WPTF WREN WRVA WSB WSM WSMB WTMJ WWNC
ED-12:30 p.m., E-11:30, C-10:30, M-9:30 C-Columbia Revue
CFRB CKOK KDYL KFAB KトBK KFH KFJF KFRC KHJ KLIA KL/ KOL KRLD KSCJ KTRH KYOR WABC WBBM WBIG WBT WCAH WCAO WDBJ WDBO WDOD WDRC WDSU WEAN WFAN WFBL WFEA WGR WGST WHAs WHEC WIBW WIP WISN WJAS WKBH WKBN WLBW WMAL WNAC WNAX WNOX WODX WOKO WOHC WWWO WPC WQAM WREC WSFA WTAC WTAR WTOC WWVA
ED-1:30 p-m., E-12:30, C-11:30, M-10:30 B - National Farm and Home Hour KDKA KFYR KOA KOIL KPRC KSTP ITTBS KTHS KVOO KWCR. KWK IKY WAP1 WBAL WBT/ WBZA WCKY WDAF WDAY WEBC WFAA WFIA WGAR WHAM WHO WIBA WIOD WIS WJAX W,IDX WTIR WJZ WKY WLW WMC WOAI WOC WOW WPTF WRC WREN WRYA WSB WSM WSMB WTMJ WWNC
ED-5:15 p.m., E-4:15, C-3:15, M-2:15 $\mathbf{R}$ - Whiteman's Rhythm Boys
WBEN WCAE WCSH WEAF WEEI WENR WFBR WGY WJAR WLIT WRC WGAI WTAG WTAM WW.

ED-5:30 p.m., E-4:30, C-3:30, M-2:30 R - Andy Sannella and Orchestra CFCF KEX KGA KJK KOA KPO KSD KSTP KTBS WBEN WDAF WEAF WEBC W(YY WIOD W.JAR WJDX WKY WMAQ WOW WRC WGM W'TAG WTAM W'IIC WWJ WWNC
E.D-5:45 p.m. E-4:45, C-3:45, M-2:45 B-Little Orphan Annie
KDIK WBAL WBZ WBKA WJR WJZ
ED-6:00 p.m. E-5:00, C-4:00, M-3:00 C-Irene Beasley
CFRB CKOK KDYL KFAB KrH KFJF KLRA KMBC KSCJ KTRH KVOR WAAB WABC WBRM WTIG WBRC WBT WDAE WDBJ WDBO WDOD WDRC WDSU WFAN WFBL WHEA WGST WHAS WIBW WIP WISN WJAS WKBH WKBW WLBW WMAL WNAX WNOX WOKO WORC WOWO WQAM WIREC WSFA WTIQ WTAR WTOC
R-Waldorf-Astoria Orchestra
KSD KYW WBEN WCAE WDAF WEAF WEEI WJBR WGY WIOD WJAR WMAQ WRC WSM WTAG WWJ WWNC
ED-6:15 p.m., E-5:15, C-4:15, M-3:15 C - Reis and Dunn
CFRB CKOK KDB KDYL KFAB KFH KLRA KLK KMBC KRLD KSC. KTIRH WAAB WABC WBIG WBRC WBT WCAH WCAO WDAF WDBT WIBO WDOD WDRC WDSU WEAN WFAN WFBl, WHEA WGR WGIST WHAS WHEC WIIP WIBW WIP WISN W,JAS WKBH WKBN WLBW K NAX WNOX WOKO WORC WOWO WQAM WREC WSFA WTAQ WTAR WTOC
ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C-Vaughn DeLeath
KIIA WAAB WABC WBIG WBRC WDAL WDBJ WDBG WIOOD WDSL WFEA W'GST WORC WREC WSFA WTAR WTOC
ED-6:45 p.m., E-5:45, C-4:45, M-3:45 C-The Funnyboners
CFRB CKOK KDYL KFAB KFH KFJF KLRA KLZ KSCJ KTRH WAAB WABC WBHM WBIG WBRC WBT WCAH WCAO WCAU WDAE WIDR. W WDBO WDOD WGST WHAS WII' WISN WJAS WKBH WKISN WKBW WLBW WXAX WNOX WOKO W ORC WOWO WQAM WREC HSPA WSPD WTAQ WTAK WTOC WWTA R - Donald Novis, Tenor
KECA KEX KFSD KGA KJR KOA KI'O KSD WAPl WEAF WFBR WHI WHO WIS WMAQ WOC WSAI WSB WSM WWJ WWNC

B-Lowell Thomas
CKGW KDKA WBAL WBZ WBZa WGAR WHAM NJH W.JZ WLW ED-7:00 p-m., E-6:00, C-5:00, M-4:00 C Myrt and Marge KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGR WJAS WKRC WMAL WNAC WOKO WSPD WWVA
R-Harriet Lee and Her Leaders
KFI KFSD KGO KIIQ KOA WBEN WEAF WJAR WMAQ WTAG B-Amos 'n' Andy
('KGW KDKA WBAL WBZ WBZA WCKY WJAX WIZ WLW WPTF WRC WRVA
ED-7:15 p.mı, E-6:15, C-5:15, M-4:15 C-Isham Jones and Orchestra CKOK KFH KMBC KMOX KSCJ KTRH WALC WBCM WBIG WBRC WB'T WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDR( WEAN WFBL WGR WCST WIIEC WHP WISN WJAS WKBJ WKBN WMAL WNAC WNAX WNOX WOKO WORC WOWO WQAM WREC WSFA WTAQ WTOO
$\mathrm{B}-\mathrm{Ta}$ styeast Jesters
KDKA WBAL WBZ WBZA WCKY WJZ
ED-7:30 prm., E-6:30, C-5:30, M-4:30 R - Maxwell House Program
WBEN WCAE WCSH WEAF WEEI WFBR WFLA WGY WIOD WIS WJAR WJAX WLIT WPTF WRC WRVA WSAI WTAG WTIC WWNC

## B - Stebbins Boys

KDKA KHI KGO KGW KHQ KOA KOMO KSL KWK WHAL WB7, WBKA WCKY WENR WGAR WHAM WJR WJZ WREN
ED-7:45 p.m., E-6:45, C-5:45, M-4:45 C-Tito Guizar, Tenor
CFRB CKOK KFAB KFH KLZ KMTC KRLD KSCJ KTRH WABC WBBM WBCM WBIG WBRC WBT WCAH WCAO WCAV WDAE WDBJ WDBO WDOI WDRC WEAN WFTBL. WFBM WFEA WGR WCST WHAS WHEC WHK WHP WISN WJAS WKBN WMAL WN\&C WNAX WNOX WODX WOKO WORC WQAM WREC WSFA WSSID WTAQ WTAR WTOC WWVA

## R-The Goldhergs

KSD WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WGY WJAR WIIT WOW WRC WSAI WTAG WTAM WW.J
B-Billy Jones and Ernie Hare
KDKA KOII, KPRC KWK WAPI WlBAL WBZ WBZA WCKY WFAA WFIA WGAR WHAM WIOD WIS WJAX WIDX W.FZ WKY WMAQ

## Monday-Continued

WMC WOAI WPTF WIREN WRVA WSB WSM WSMB WWNC
ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C-Edwin C. Hill
CFRB CKOK KDYL KFAB KFJF KFI'Y KFRC KGB KHJ KMBC KOH KOL KRLD KSC.J K'TRH KVI WABC WACO WBCM WBIG WBRC WBT WCAO WCCO WDAE WDBI WDBO WDOD WDRC WDSU WEAN WFAN WFBL WFBM WGL WGR WGST WHEC WHK WHP WIP WISN WKBH WKBN WMAL WNAC WNAX WNOX WODX WOKO WOAM WSFA WTAQ WTAR WTOC WWVA

## R - Soconyland Sketches

WBEN WCSH WEAF WEEI WGY WJAR WTAG WTIC

## B-Carnation Contented Program

KDKA KOIL KWK WBAL WCKY WHAM W.JR W.JZ WIS WREN ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C-Singin' Sam
CKOK KMBC KMOX WABC WADC WCAO WCAI WCCO WDRC WEAN WFBL WFBM WGN WGF WHK WJAS WKlZC WMAL WNAC WOKO WSI'D
ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C-Kate Smith, La Palina
CKOK KFAB KFH KFJF KMBC KMOX WABC WADC WBCM WCAH WCAO WCAU WCCO WFBL WFBM WGN WGR WHAS WHEC WHK WISN WJAS WKBN WKRC WMAL WOKO WSPD

## $\mathbf{R}$ - Voice of Firestone

CFEF CKGW KPRC KSD KTBS KTHS KVOO WAPI WBEN WCAE WCSH WDAF WEAF WEEI WFAA WPBR WFLA WGY WHO WIOD WIS WJAR WIAA WJDX WKY WLIT WMAQ WMC WOAI WOC WOW WPTF WRC WRYA WSAI WSB WSM WSMB WTAG WTAM WTIC WW.J WWNC

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

 C-Col. Stoopnagle and Budd CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAS WFBL WGN WGR WHK WIAS WKRC WMAL WNAC WOKO WSPD
## ED-9:00 p-m., E-8:00, C-7:00, M-6:00

 R-A. \& P. GypsiesKS1) WBEN WCAE WCSH WEAF WEEI WGY WHO WIIAR What WMAQ HOC WOW WRC WSAI WTAG WTAM WTIC WW.J
B-Sinclair Wiener Minstrels
KDKA KFYR KOIL KPRC KSTP KTBS KVOO KWCR KWK WBAL WBZ WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WIDX WJZ WKY WLS WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMI WWNC
ED-9:15 p.m., E-8:15, C-7:15, M-6:15 C-Mills Brothers
CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WHAS WHIFC WIIK WJAS WKBW WKRC WMAL WNAC WOKO WSPD
ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C-Surprise Package
CFRB CKOK KDYI, KPBK KFH KFJF KERC KHJ KLRA KLZ KMBC KRLD KSCI FTRH FYOR WABC WBBM WBCM WRIG WBRC WBT

WCAH WCAO WCAU WCCO WDAE WDB. WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA WHAS WHEC WHK WIBW WISN WJAS WKBH WKBW WLBW WMAI, WNAC IV NAX WNOX WODX WOKO WORC WQAM WREC WSPD WTAQ WTAR WTOC
R-General Motors Program
KFI KPYR KGO KGW KHO KOA KOMO KPRC KSD KSL KSTP WBEN WCAE WCSH WIDAF WEAF WEEI WENR WFAA WFBR WGY WHO WJAR WKY WLIT WMC WOAI WOC WOW WRC WSAI WSB WSM WTAG WTAM WTIC WTAJ WWJ B-Jack Benny, Geo. Olsen
CFCF CKGW KDKA KOIL KVCR KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW WMAQ WREN
ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C-Music That Satisfies
CKOK KDB KDYL KERN KFBL KFH KFJF KFPY KFRC KGB KHJ KLRA KIZ KMBC KMJ KMOX KOH KOIN KOL KRLD KTRH KTSA KYI KWG WABC WADC WBRC WBT WCAO WCAU WCCO WDBJJ WDRC WDSU WEAN WFBL WFBM WGN WGST WHAS WHEC WHK WISN WJAS WKBW WLRC WLAC WLBZ WMAL WMBG WMT WNAC WOKO wOWO WPG WREC WRUF WSID WTAR

## R-National Radio Forum

KISI KFYR KGHL, KGIR KGO KGW KOA KOMO KPRC KSD KSL KSTP KTBS KVOO WBEN WCSH WDAY WEAF WREC WEEI WENR WFLA WGY WHO WIBA WIOD WJAR WJDX WKY WLIT WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WTAG WTAM WWJ WUNC

## B-Phillips Lord, Country Doctor

CFCF CKGW KDEA KOIL KWCR KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WMAQ WREN
ED-10:15 p.m., E-9:15, C-8:15, M-7:15 B - Whispering Jack Smith
KDKA KOLL KWCR KWK WBAL WBZ WBZA WGAR WHAM WJZ WLW WMAQ WREN
ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C-Guy Lombardo and Orchestra
CFRB CKOK KDYL KFBK KFH KFJF KFRC KHJ KLRA KLZ KMBC KMOX KOL KRID KSCJ KTRH KVOR WAAB WABC WBCM WRIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WrBM WFEA WGST WHEC WHK WHP WIBW WJAS WKBH WLBW WLBW WMAL WMBD WNAX WNOX WODZ WOKO WORC WOWO WQAM WREC WSPD WTOC

## B-"Tish"

CFCF KlYYR KSTP KTBS KVOO KHCR KYW WBLL WCKY WEBC WHAM WIBA WIOD WIS WJAX WJZ WREN WSM WWNC
ED-10:45 p.m., E-9:45, C-8:45, M-7:45 C-Myrt and Marge
CKOK KDYL KFBK KFPY IVRC KHJ KLZ KMBC KMJ FOIN KOL WBBM WCCO WHAs
B-Jane Froman and Orchestra
KWCR KYW WBAL WCKY WHAM W.IZ WREN

ED-11:00 p-m., E-10:00, C-9:00, M-8:00
C-Howard Barlow's Symphony
CFRB CKOK KDYL hFAB KFBK KFJF KFRC KHJ KLRA KMBC KMOX KSCJ KTRH KVOR WAAB WABC WBCM WBIG WBRC WBT WCAH WCAO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WGST WHAS WHK WHP WIBW WJAS WKBN WKBW WLBW WMAL WMBD WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSFA WSPD WTOC
$\mathbf{R}$ - Paul Whiteman and Orchestra.
WEAF WEEI VFBR WJAR WLIT WRC
B-Amos 'n' Andy
KFI KFSD KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTHS KWK WBAP WChY WDAF WENR WGAR WHAM WJR WKY WMAQ WMC WOAI WREN WSB WSM WSMB WTMJ
ED-11:15 p.m., E-10:15, C-9:15, M-8:15 R - Maxwell House Program
KFI KFSD KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTI K'TAR KT'BS KTHS WAPI WBAP WDAF WENR WHO WJDX WKY WMC WOAI WOC WSB WSM WSMB WTAM WTMJ WWJ

## B-Summer Symphony

CFCF KTBS KWCR WBAL WCKY WENR WHAM WIOD WJZ WREN WSB
ED-11:30 p.m., E-10:30, C-9:30, M-8:30 C - Charles Carlile, Tenor
CKOK KFBK KFJF KFRC KLRA KMBC KMOX KSCJ KTRH KVOR WAAB WABC WBCM WBIG WBRC WBT WCCO WDAE WDB.J WDBO WDOD WDRC WDS WEAN WFBM WGST WHAS WHEC WHP WJAS WKBN WKBW WLBW WMAI. WMBD WNAX WNOX WOKO WORC WOWO WQAM WREC WSFA WSPD IVTAR WTOC

## R - Voice of Firestone

KFI KFSD KFYR KGHL KGIR KGO KGU KGW KHQ KOA KOMO KSL KSTP KTAR WDAY WEBC WIBA WTMJ
ED-11:45 p.m., E-10;45, C-9:45, M-8:45
C-Freddie Martin's Orchestra
CFRB CKOK KDYL KPAB KFBK KFJF KFRC KHJ KLRA KMBC KOL KSC.T KГRI K KOR WAAB WABC WBCM WBIG WBRC WBT WCAH WCAO WCCO WDAE WDB. WDBO WDOD WDRC WDSU WEAN WFAN WFRL WPBM WGL WGST WHAS WHEC WHP WIBW WIP WISN WKBN WKBW WLBW WMAL WMBD WNAX WNOX WOKO WORC WQAM WREC WSFA WSPD WTAR WTOC WWVA
R - Baron Lee and Orchestra
WEAF WFEI WF13R WJIR WRC WTIC
ED-12:00 m., E-11:00, C-10:00, M-9:00 C-Eddie Duchin and Orchestra CKOK KDYL KYıB KFBK KFH KFIF KIRA LMBC KMOX KOL KRLD KSC.J KTIII Klor WABC WBCM WBRC WBT WCAH WCAL WCCO WDAE WDB.J WDBO WDOD WDS WEAN WFBL WFBM WGL WGST WHAS WHEC WHP WIBW WISN WKBN WKBW WLBW WMAL. WMBD WNAC' WNAX WNOX WOKO WPG WQAM WREC WSFA WSPD WTAR WTOC WWVA

# Monday-Continued 

ED-12:05 a.m., E-11:05, C-10:05, M-9:05 R - Buddy Rogers and Orchestra KSTP WAPI WCAE WCKY WDAF WDAY WEAF WENR WIOD WLIT WMAQ WRC WTAM WWJ
ED-12:30 a.m., E-11:30, C-10:30, M-9:30 B-Clyde McCoy's Orchestra
KOIL KWCR WBaL WJR WJZ WLW B-Billy Jones and Ernie Hare
KFI KFSD KGO KGW KHQ KOA kOMO KSL KTAR

## TUESDAY

ED-8:30 a.m., E-7:30, C-6:30, M-5:30 R - Cheerio, See Monday
ED-9:00 a.m., E-8:00, C-7:00, M-6:00 C-Little Jack Little, See Monday
ED-10:15 a.m., E-9:15, C-8:15, M-7:15
B - Clara, Lu 'n' Em, See Monday
ED-12:30p.m., E-11:30, C-10:30, M-9:30 C - Columbia Revue, See Monday
ED-1:30 p.m., E-12:30, C-11:30, M-10:30 B - National Farm and Home, See Mon. $\overline{\text { ED-5:45 p.m., E-4:45, } \mathbf{C - 3 : 4 5 , ~} \overline{\mathbf{M}-2: 45}}$ B - Little Orphan Annie, See Monday
ED-6:00 p.m., E-5:00, C-4:00, M-3:00 C- Irene Beasley, See Monday
R - Waldorf-Astoria Orch., See Mon.
ED-6:30 p.in., E-5:30, C-4:30, M-3:30 C- Jack Miller and Orchestra
KLLA WABC WBIG WBRC WDBJ WDBO WDOD WDSU WFEA WGST WNOX WORC WREC WSFA WTAR W TOC
B-Sheer Romance, Drama
KDKA KFI KFYR KGO KOA KOIL KSTP KTBS KWCR WBAL WHAM WIBA WIOD WJDX WJZ WKY WLW WMC WREN WSM WWNC
ED-6:45 p.m., E-5:45, C-4:45, M-3:45 R - Back of the News in Washington KFI KFSD KGHL KGIR KGO KOA KSD GTAR WAPI WEAF WFBR WFI WIOD WIS WJAR WIDX WMAQ WOW WPTF WRC WSM WSMB WTAG WWNC
B - Lowell Thomas, See Monday
ED-7:00 p.m., E-6:00, C-5:00, M-4:00 R - Mid-Week Hymn Sing
KFI KGIR KGO KOA KSD KTAR WAPI WBEN WEAF WJAR WJDA WMAQ WSAI WSMB WTAG
C-Myrt and Marge, See Monday
B - Amos ' $n$ ' Andy, See Mondiay
ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C-Keenan and Phillips, Piano
CFHB CKOK KFH LLZ KMBC KOH KSCJ KTRH KTSA KYOR WABC WACO WBCM WBIG WBRC WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WGR WGST WHAS WHEC WHP WISN WJAS WKBH WKBN WMAL WNAC WNAX WNOX WOKO WORC WOWO WQAM WREC WSFA WSPD WTAQ WTOC

## ED-7.30 p.m., E-6:30, C-5:30, M-4:30

 R-Ray PerkinsKSD KYW WBEN WCAE WCSH WEAF WEEI WFBR WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG WTAM WWJ

## B-Stebbins Boys, See Monday

ED-7:45 p.m., E-6:45, C-5-45, M-4:45 C-Chase \& Sanborn, Georgie Price CKOF KMBC KMOX WABC WBBM

WCAO WCAI WGR WHK WJAS WKRC WNAC WOKO
R - The Goldbergs, See Monday
B-Gene Austin, Tenor
CFCF KDKA KGO KOIL WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WKY WMAQ WMC WREN ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C-Edwin C. Hill, See Monday
R-Blackstone, Sanderson-Crumit
KSD KSTP KYW WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG WTAM WW.J
ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C - Abe Lyman and Orchestra
CKOK KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WFBM WGN WGR WHK WJAS WKRC WMAL WNAC WOKO WSPD
ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C - Kate Smith, See Monday
R - Walter Smith and Orchestra
KSD WCSH WDAF WEAF WEEI WFBR WFI WGY WHO WJAR WOC Wre WSAI WTAG WTAM WTIC WW.J
ED-8:45 p.m., E-7:45, C-6:45, M-5:45

## B - Rosa Low, Song Recital

CKGW KDKA KEX KFYR KJR KOIL KPO KSTP KTBS KVOO WBAL WGar Wham WIba wiod WJr WJZ WKY WMAQ WREN
ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C-Jay C. Flippen-cies
CFRB CKOK KDYL KFAB KFBh KFH KFJF KFPY KHJ KLleA KLZ KMBC KMOX KOL KRLD KTRH KVOR WABC WACO WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WIOD WDRC WDSU WFBL WFBM WFEA WGL WGST WHAS WHEC WHP WIBW WISN WJAS WKBH WKBN WKBW WMAL WNAC WNAX WNOX WODX WORC WQAM WREC WRUF WSPD WTAQ WTAR WTOC WWVA

## $\mathbf{R}$ - National Artists' Series

CKGW KEX KGA KJR KOA KPO KTAR KTBS WBEN WCAE WCSH WDAF WEAF WFBR WFI WFLA WGY WHO WIOI WJAR WKY WMAQ WMC WOAI WOC WTAG WTAM WWNC
B-Household Program
KDKA KWIK WBAL WBEN WBZ WBZA WEBC WHAM WIBA WJR WJZ WLS WTMJ
ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C-Eno Crime Club
Chol KMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WHK WJAS WKIBW WKRC WMAL WNAC WSPD
R-Ed Wynn-Don Voorhees
CFCF KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTBS KVOO WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSMB W'TAG WTAM WTMJ WWJ WWNC
B - Friendship Town
KDKA KOIL KWK KYW WBAL WBZ WBZA WGAR WHAM WJR WJZ WREN

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C - Music That Satisfies, See Monday R - Lucky Strike Dance Hour KFI KFSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTBS KTHS KVOO WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WENR WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WMC WOAI WOC WOW WRC WIRVA WSAI WSH WSM WSMB WTAG WTAM WTMJ WWJ WWNC
B - Phillips Lord, Sec Monday
ED-10:15 p.m., E-9:15, C-8:15, M-7:15 C-Musical Fast Freight
CKOK KFH KFJF KLRA KMBC KMOX WAAB WABC WADC WBBM WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEAN WFBL WFBM WHK WJAS WKBW WKRC WMAL WOKO WOWO WQAM WSPD WTOC B-Sigmund Spaeth, Tune Detective CFCF KWCR WBZ WBZA WGAR WJZ
ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C-Isham Jones and Orchestra CFIRB CKOK KDYL KFBK KFH KFJF KFRC KGB KHJ KLRA KLZ KMBC KOH KSCJ KTRH KTSA KVI KVOR WAAB WABC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WIDBJ WDBO WDOD WDRC WDSU WEAN WIBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WJAS WKBH WKBN WKBW WLBW WMAL WMBD WNAX WNOX WODX WOKO WORC WOWO WPG WQAM WREC WSI'D WTOC

## B - Tish See Monday

ED-10:45 p.mn., E-9:45, C-8:45, M-7:45
C-Myrt and Marge, See Monday
B - Jane Froman and Orch., See Mon.
ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C-Columbia Symph. Orch., See Mon.
B - Amos ' $n$ ' Andy, See Monday
ED-11:15 p.m., E-10:15, C-9:15, M-8:15 B - Cesare Sodero Concerto Orchestra CFCF CKGW KDKA KEX KFYR KGA KJR KOA KPO KSTP KTBS KWCR WBAL WCKY WENR WFLA WHAM WIOD WIS WJAX WJZ WKY WRC WREN WSM WWNC ED-11:30 p-m., E-10:30, C-9:30, M-8:30 C-Little Jack Little
CFRB CKOK KDYL KFAB KFBK KFH KFJF KFPY KFRC KGB KH,J KLRA KLZ KMBC KMOX KOH KOL KRLD KSCJ KTRH KTSA KVI KYOR WAAB WABC WACO WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDSU WFBL WFBM WGST WHAS WHEC WHK WHP WIBW WISN WKRN WKBW WLBW WMAL WMBD WNAX WNOX WORC WOWO WQAM WREC WSFA WSPD WTAR WTOC

## R-Jack Denny and Orchestra

KSD HCAE WDAF WEAF WEEI WFBR WFI WJAR WMAQ WTAM WWJ
ED-11:45 p.m., E-10:45, C-9:45, M-8:45 C-Freddie Martin's Orch., See Mon. ED-12:00 m., E-11:00, C-10-00, M-9:00 C-Harold Stern and Orchestra CKOK KDYL KFAB KFH KFJF KFPY KFRC KiGB KLRA KLZ KMBC KMOX KOII KSC. KTRH

## Tuesday-Continued

KYOR WABC WACO WBCM WBRC WBT WCAH WCAU WDAE WDBJ WDBO WDOD WDSU WEAN WFBM WGST WHAS WHEC WHP WIBW WISN WKBN WKBW WLBW WMBD WNAC WNAY WNOX WOKO WOWO WQAM WREC WSFA WSPD WTAR WTOC
ED-12:05 a.m., E-11:05, C-10:05, M-9:05 R - Paul Whiteman and Orchestra
CFCF KEX KGA KGO K(iW KHQ KJR KPO KTBS HBEN WCAL WDAF WEAF WFAA WFBR WFLA WGY WhY WMAQ WMC WOW WRC WSB WSM WTAM WWJ WWNC ED-12:30 p.m., E-11:30, C-10:30, M-9:30 B-Chas. Agnew and Orchestra KWCR WBAL WHAM WJR WJZ WMAQ WREN

## WEDNESDAY

ED-8:30 a.m., E-7:30, C-6:30, M-5:30 R - Cherrio, Ser Monday
ED-9:00 a.m., E-8:00, C-7:00, M-6:00 C-Little Jack Little, See Monday
ED-10:15 a.m., E-9:15, C-8:15, M-7:15 B - Clara Lu'n' Eni, See Monday
ED-12:30 p.m., E-11:30, C-10:30, M-9:30 C-Columbia Revue, See Mondav
ED-1:30p.m., E-12:30, C-11:30, M-10:30 B - National Farm and Home, See Mon. ED-5:45 p.m., E-4:45, C-3:45, M-2:45 B - Little Orphan Annie, See Monday
ED-6:00 p.m., E-5:00, C-4:00, M-3:00 C-Irene Beasley, See Monday
R - Waldorf-Astoria Orcli., See Monday ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C-William Vincent Hall
KLKA WAAB WABC WBIG WBRC WDAE WDBJ WDBO WDOD WDSU WFEA WGST WORC WREC WSFA WTAR WTOC
R-Harding Sisters, Organ-Piano
KEX KFSD KGA KJR KTBS WAPI WEAF WFBR WFI WIOD WJAR WMAQ WMC WRC WSAI WTAG WWJ

## B-Dandies of Yesterday

KEX KGA KGHL KJR KOA KOIL, KWCR WBAL WGAR WJZ WLW WMaQ WREN WSM
ED-6:45 p.m., E-5:45, C-4:45, M-3:45 C-Funnyboners, See Monday
R - Donald Novis, See Monday
B - Lowell Thomas, Ser Monday
ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C - Myrt and Marge, See Monday
B - Amos ' $n$ ' Andy, See Monday
ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C-Melodeers, Male Quartet
CKOK KFH KH.J KLZ KMBC KMOX KOH KSCJ KTRH KYOR WABC WACO WBCM WBIG WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN Wrbl wGR WGST WHAS WHEC WHP WISN WJAS WKBH WKBN WMAL WNAC WNAX WNOX WOKO WORC WOWO WQAM WREC WSFA WSPD WTAQ WTOC

## B - Royal Vagabonds, Ward Wilson

KDKA KFI KGO KGW KHQ KOA KOIL KOMO KPRC KWK WAPI WBAL WBZ WBZA WCKY WEBC WGAR WIOD WJAX WJDX WJZ WKY WMAQ WMC WOAI WPTF

WREN WRVA WSB WSM WSMB WTMJ WWNC
ED-7:30 p.m., E-6:30, C-5:30, M-4:30 R-Maxwell House Program, See Mon. B - Stebbins Boys, Sce Monday
ED-7:45 p.m., E-6:45, C-5:45, M-4:45 C-Connie Boswell
CFRB CKOK KFAB KFH KFPY KHJ KLZ KMBC KOH KRLD KSCJ KTRFI KVOR WABC WACO WBCM WBIG WBRC WBT WCAH WCAO WCAU WDRJJ WDBO WDRC WDSU WEAN WFBL WFBM WFEA WGR WGET HHAS WHEC WHK WHP WISN W,JAS WKBN WNAC WNAX WNOX WODX WOKO WORC WOWO WQAM IRREC WSFA WSPD WTAQ WTAR WTOC WWVA
R - The Goldbergs, See Monday
B - Billy Jones \& Ernie Hare, Spe Mon. ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C-Edwin C. Hill See Monday R-Big Time, Johnny Hart
LSD WBEN WCAE WCSH WDAF WEAF WEEL WFBR WGY WHO WJAR WLIT WIS WOC WOW WRC WSAI WTAG WTAM WTIC WWJ
B - American Taxpayers' League
KDKA KFSD KlYR KGIR KGO KOA KOIL KOMO KTAR KTBS GWCR KWK HYW WBAL WDAY WFAA WFLA WIBA WIOD WJAX WJDX W.JZ WKY WMC WOAI WPTr WREN WSM WWNC
ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C-Sing'm' Sam, Sce Mouday
ED-8:30, p.m., E-7:30, C-6:30, M-5:30 C-Kate Smith, Sce Monday
B - Jack Frost Melody Moments
KDKA WBAL WGAR WHAM WJR WJZ WLS WLW
ED-8:45 p.m. E-7:45 C-6:45 M-5:45 C-Col. Stoopnagle and Budd, See Monday
ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C-Guy Lombardo-Burns and Allen
CKOL KFJF KMBC KMOX KTRH KTSA WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WHK WJAS WKBW WKRC WMAL WNAC WOKO WOWO WRR WSPD
R - Goodyear Program
KFYR KPRC KSD KSTP KTHS KYOO KYW WBEN WCAE WCSH WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WSMR WTAG WTAM WTIC WTMJ WWJ WWNC
B-Island Boat Club Dance
KDKA KWK WBAL WBZ WBZA WGAR WHAM WJR WJZ HLW WMAQ WREN
ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C Eno Crime Club, Ste Tuesday

## R-Mobiloil Concert

KFI KFY! KGO KGW KHQ KOA KOMO KPRC KSI KSL KSTP KTAR KVOO WBEN WCAE WCSH WDAF WDAY WLAF WEBC WEEI WENR WIAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WIDX WKY WLIT WMC WOAI WOC WOW WRC WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC
B-Jack Benny, Geo. Olsen, See Mon.

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C-Music That Satisfies, See Monday R-Corn Cob Pipe Club
KFI KGHL KGIR KGO KGW KHQ KOA KOMO KSD KSL WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WGY WHO WJAR WLIT WOC WOW WRC WRVA WSAI WTAG WTAM WTIC WWJ
B - Phillips Lord, See Monday
ED-10:15 p.m., E-9:15, C-8:15, M-7:15 C- Adventures in Health
CKOK KMBC KMOX KRLD WAAB WABC WADC WBBM WCAO WCAU HCCO WDRC WDSU WEAN WFBL WHAS IIHK WJAS WKBW WKRC WMAL WOKO WOWO WSPD
B - Whispering Jack Smith, See Mon.
ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C-Isham Jones and Orch., See Tues, R - Archer Gibson, Organist
KECA KEX KiFYR KGA KGHL KGIP K.JR KOA KPO KSL KTBS WCAE WCSH WEAF WEBC WGY WIBA WIOD WJAR WLIT WMC WPTF WWNC
P-Tish, Seo Monday
ED-10:45 p.m., E-9:45, C-8:45, M-7:45 C-Myrt and Marge, See Mond:ly
B - Jane Froman and Orch., Stee Mon. ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C-Colunibia Symph. Orch., See Mon. R - Nellie Revell
CFCF CKGW KSD WEAF WGY WLIT WRC IWWJ
B - A mos 'n' Andy, See Monday
$\overline{\text { ED-11:15 p.m., E-10:15, C-9:15, M-8:15 }}$ R - Maxwell House, See Monday
B - Cesare Sodero's Orch., See Tuesday C-Ozzie Nelson and Orchestra
CFRB CKOK KDYL KFAB KFJF KFPY KFRC KGß KLRA KLZ KMPC KMOX KOH KRLD KSC. KTRH KTSA KVI KVOR WAAB WABC WACO WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDIBJ WDBO WDOD WDRC WDSU WEAN WГBM WGST WHAS WHEC WHK WHP WIBW WISN WKBW WLBW WMAL WMED WNAX WNOX WOKO WORC WOWO WQAM WREC WSFA WSPD WTAR Wroc
ED-11:30 p.m., E-10:30, C-9:30, M-8:30 C-Charles Carlile, See Monday
ED-12:00 m., E-11:00, C-10:00, M-9:00 C-Eddie Duchin and Orch., See Mon. B - Baron Lee and Orchestra
KDKA KOIL KWCR WBAL WCKY WJZ WMAQ WRC
ED-12:05 a.m., E-11:05, C-10:05, M-9:05 R - Buddy Rogers, See Monday
ED-12:30 a.m., E-11:30, C-10:30, M-9:30 C-Duke Ellington and Orchestra
CKOK KDYI KFAB KFH KF,JF KLRA KLZ KMBC KOH KTRH KVOR WABC WACO WBCM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBI WDBO WDOD WDSU WEAN WFBL WFBM WGST WHAS WHEC WHP WIBW WISN WKBW WLBW WMAL WMBD WNAC WNAX WNOX WOKO WQAM WREC WSFA WSJD WTAR WTOC
B - Jones and Hare, See Monday

## THURSDAY

ED-8:30 a.m., E-7:30, C-6:30, M-5:30 R-Cheerio, See Monday

## Thursday-Continued

ED-9:00 a.m., E-8:00, C-7:00, M-6:00 C-Little Jack Little, See Monday
ED-10:15 a.m., E-9:15, C-8:15, M-7:15 B - Clare, Lu' 'n' Em, See Monday
ED-12:30p.m., E-11:30, C-10:30, M-9:30 C-Columbia Revue, See Monday
ED-1:30p.m., E-12:30, C-11:30, M-10:30 B - National Farm and Home, See Mon. ED-5:15 p.m., E-4:15, C-3:15, M-2:15 R-Whiteman's R hythm Boys, See Mori. ED-5:45 p.m., E-4:45, C-3:45, M-2:45 B - Little Orphan Annie, See Monday
ED-6:00 p.m., E-5:00, C-4:00, M-3:00 C-Irene Beasley, Sec Monday
R-Waldorf-Astoria Orch,, See Monday
ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C - Jack Miller and Orch., See Tucsday B-Old Songs of Church
KEX KFSD KGA кJR KOA KOII. KPO GTBS KWCR WBAL WGAK W.JZ WKY WLW WMAQ WREN

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 B - Lowell Thomas, See Monday
ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C - Myrt and Marge, See Monday R-Clyde Doerr, Sasophone Octet
KGO KOA WAPI WBEN WEAF WFI WJAR WMAQ WTAM
B - Amos 'n' Andy, See Monday
ED-7:15 p-m., E-6:15, C-5:15, M-4:15 B - Ward Wilson, See'Wednesdas
ED-7:30 p.m., E-6:30, C-5:30, M-4:30
R - Ray Perkins, See Tuesday
B - Stebbins Boys, See Monday
ED-7:45 p.m., E-6:45, C-5:45, M-4:45
C - Georgie Price, See Tuesday
R - The Goldbergs, See Monday
B - Gene Austin, See Tuesday
ED-8:00 p.m, E-7:00, C-6:00, M-5:00
C-Edwin C. Hill See Monday
R-Fleischmann, Rudy Vallee
CFCF CKGW KFI KFYR RGO KGW KHQ KOA KOMO hPRC KSO KSI KSTP KTAR KVOO WAPI WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFI WFLA WGY WHO WIOD WIIAR WJAX WJDX WKY WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WW.J
B-Regimentalists, Male Chorus
KOIL KWCR KWK WBZ WBZA WENR WGAR WHAM WJZ
ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C - Abe Lyman and Orch., See Tuesday B-Sigmund Spaeth, Song Sleuth
KDKA KOIL KWK WBZ WBZA
WGAR WHAM WJR WJZ WLS WLW WREN
ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C -Gerardine Program
CKOK KMBC KMOX WAAB WABC WADC WCAO WCAI WDRC WFBL WFBM WGN WGR WHK WJAS WKRC WMAL WOWO WSPD
B-Rin Tin Tin Thriller
KDKA IOII KWK WBZ WBZA WGAR WHAM WJZ WLS WLW WREN
ED-9:00 p.m., E-8:00, C-7:00, M-6:00 R-School Room Frolics KFYR KGHL KGIR KOA KPRC KSD KSL KSTP KTBS KTHS KVOO WAPI WBAP WBEN WCAE WCSH WDAF WDAY WEAF WERC WEEI

WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR W,IAX WJDX WKY WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTMJ WW, WWNC
ED-9:15 p.m., E-8:15, C-7:15, M-6:I5 C-Mills Bros., See Monday
ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C-Love Story Hour
CKOK IMBC KMOX WABC WADC WCAO WCAU WDRC WEAN WFBL WGN WHK WJAS WKBW WKRC WMAL WNAC WSPD
R-G. Washington Coffee Concert
CFCF CKGV KSD WBEN WCAE WCSH WDAF WEAF WEFI WFAR WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG WTAM WWJ B-Thompkins Corners
KDFA KFL KFSD KGO KGW KHQ KOA KOIL KOMO KPRC KSL KSTP KTAR KWCR KWK KYW WAPI WBAL WBAP WBZ WBZA WEBC WFLA WGAR WHAM WIOD WJAX WJDX WJR WJZ WKY WLW WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC
ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C-Music That Satisfies, See Monday R-Lucky Strike, See Tuesday
B - Phillips Lord, See Monday
ED-10:15 p.m., E-9:15, C-8:15, M-7:15
C-Musical Fast Freight, See Tuesday B - Whispering Jack Smith, See Mou.
ED-10:30 p.m., E-9:30, C-8:30, M-7:30
C-Isham Jones and Orch., See Tues.
ED-10:45 p.m., E-9:45, C-8:45, M-7:45
C-Myrt and Marge, See Monday
B - Jane Froman and Orch., See Mon.
ED-11:00 p.m., E-10:00, C-9:00, M-8:00
C -- Columbia Symph. Orch., See Mon.
R -- Paul Whiteman and Orch., See Mon.
B-Amos ' $n$ ' Andy, See Monday
ED-11:15 p.m., E-10:15, C-9:15, M-8:15
B - Cesare Sodero's Orch., See Tuesday
ED-11:30 p.m., E-10:30, C-9:30, M-8:30
C-Little Jack Little, See Tues day
ED-11:45 p-m., E-10:45, C-9:45, M-8:45
C-Ozzie Nelson and Orch., See Wed.
ED-12:00 m., E-11:00, C-10:00, M-9:00 C-Noble Sissle and Orchestra
CKOK KDYL KFAB KFBF KFH KFJF KFPY KFRC KLRA KLZ KMBC KMOX KOH KOL KRLD KSCJ KTRH KTSA KVI KVOR WABC WBCM WBRC WBT WCAH WCAU WCCO WDAE WDBJ WDBO WDOD WDSU WEAN WFBI. WFBM WGST WHAS WHEC WHP WIBW WISN WKBN WKBW WLBW WMBD WNAC WNAX WNOX WODX WOKO WOWO WQAM WREC WSPD WTAR WTOC
ED-12:05 a.m., E-11:05, C-10:05, M-9:05 $\mathbf{R}$-Tom Gerun and Orchestra
KRX KGA KGHI, KJR KPO KSD KSTP KTAR KTBS WCKY WDAF WEAF WENR WIOD WRC WTIC WWJ
ED-12:30a.m., E-11:30, C-10:30, M-9:30 B-Pacific Serenader 3
GFYR KOA KOIL KPRC KTBS KTHS KVOO KWCR WBAL WENR WFLA WHAM WIBA WJR WJZ WKY WLW WMC WREN WSM WSMB WVNC

## FRIDAY

ED-8:30 a.m., E-7:30, C-6:30, M-5:30 R-Cheerio, See Monday
ED-9:00 a-mn., E-8:00, C-7:00, M-6:00 C - Little Jack Little, See Monday
ED-10:15 a.m., E-9:15, C-8:15, M-7:15 B-Clara, Lu' $n$ ' Em, See Monday ED-12:30 p.m., E-11:30, C-10:30, M-9:30 C-Columbia Revue, See Monday
ED-1:30 p.m., E-12:30, C-11:30, M-10:30 B - National Farm and Home, See Mon. ED-5:45 p.m., E-4:45, C-3:45, M-2:45 B - Little Orphan Annie, See Monday
ED-6:00 p.in., E-5:00, C-4:00, M-3:00
C-Irene Beasley, See Monday
R-Waldorf-Astoria Orch., See Monday
ED-6:15 p.m., E-5:15, C-4:15, M-3:15 B-Graham Prince and Orchestra
KFYR KOIL KSTP K'TBS KWCR WBAL WHAM WIBA WJZ WKY WLW WMAQ WREN
ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C-Vaughn DeLeath, See Moliday
ED-6:45 p.m., E-5:45, C-4:45, M-3:45 $\mathrm{C}-$ Madison Singers
CFRB CKOK KDYI KFAB KFH KFJF KLRA KLZ KOH KSCJ KTRH KTSA WAAB WABC WBCM WBIG WBRC WCAI WCAO WDBJ.J WDBO WDOD WDSU WFBL WGST WHAS WHEC WHP WISN WJAS WKBH WKBW WI,BW WNAX WNOX WOKO WORC WOWO WQAM WREC WSFA WSPD WTAQ WTAR WTOC WWVA
R-Merry Madcaps Dance Orchestra KGO KOA KSD WCAE WEAF WIOD WJAR WRC WTAG WTIC WWJ
B - Lowell Thomas, see Monday
ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C-Myrt and Marge, Soe Monday
B - Amos' $n$ ' Andy, See Monday
ED-7:15 p.m., E-6:15, C-5:15, M-4:15
C-Isham Jones, See Monday
B - Ward Wilson, See Wednesday
ED-7:30 p.m., E-6:30, C-5:30, M-4:30
R-Maxwell House Program, Sce Mon.
B - Stebbins Boys, See Monday
ED-7:45 p.m., E-6:45, C-5:45, M-4:45
C-Connie Boswell, See Wednesday
R - The Goldbergs, See Monday
B - Billy Jones \& Ernie Hare, See Mon.
ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Edwin C. Hill, See Monday

## R-Cities Service Orchestra

CKGW KOA KPRC KSD KSL, KSTP KTBS KTHS KVOO KYW WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WGY WHO WJAR WKY WIIT' WOAI WOC WOW WRC WSAI WTAG WTAM WTIC WTMJ WWJ
B-Nestle's Program
KDKA KOIL KWK WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WIS WREN
ED-8:15 p.m., E-7:15, C-6:15, M-5:15 C-Singin' Sam, See Monday
ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C-Andre Kostelanetz' Orchestra
CFRB CKOK KFAB KFBK KFJF KFPY KGB KH.J KLRA KMBC KMOX KOH KSC.J KTRH KVI KYOR WABC WBIG WBRC WBT WCAH WCAO WCAU WDAE WDB, WDBO WDOD WDRC WDSU WEAN WFBM WFEA WGL WGR WHAS

## Friday-Continued

WHEC WHP WISN WJAS WKBH WMAL WNAC WNAX WNOX WOKO WORC WPG WQAM WREC WSPI) WTAQ WTAR WTOC WWVA
B - Candle Lightin' Time
KDKA KOIL KTBS WBAL WB\% WBZA WCKY WFAA WFLA WGAR WHAM WIOD WJAX WJR WIZ WKY WMAQ WMC WOAI WREN WSB WSM

## ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C-Kodak Week-End Hour

CKOK KLZ hMBC KMOX WABC WADC WCAO WCAU WCCO WIDRC WEAN WFBL WFBM WGN WHEC WHK WJAS WKBW WKRC WMAL WNAC WOKO WSPD

## R-Cliquot Club

KSD WBEN WCAE WCSH WDAF WEAF WEEI WFBR WGY WHO WJAl WLIT WMAQ WOC WOW WRC WSAI WTAG WTAM WTIC WWJ

## B-First Nighter

KFSD KOA KSL KSTP KTAR WEBC WJZ WTM.
ED.9:30 p.m., E-8:30, C-7:30, M-6:30 C - To the Ladies
CKOK KMBC KMOX KRLD WABC WADC WCAO WCAU WCCO WDRC WEAN WFBL WFBM WGN WGST WHAS WHK WJAS WKBW WKRC WMAL WNAC WOKO WSPD

## R-Pond's Program

KSD WBEN WCAE WCSH WDAF WEAF WENR WFBR WGY WHO WJAR WLIT WOC WOW WRC WSAI WTAG WTAM WWJ

## B - Armour Program

KDKA KFI KGO kGW KHQ KOA KOIL KOMO KPRC IKSL KSTP KWK WAPI WBAL WBZ WBZA WEBC WFAA WGAR WHAM WIOD WJAX WJR WJZ WKY WMAQ WMC WOAI WREN WRVA WSB WSM WSMB WTMJ WWNC
ED-9:45 p.m., E-8:45, C-7:45, M-6:45 C- Jay C. Flippen, 4 Eton Boys
CFRB CKOK KDYL KFBK KFH KFJF KFRC KHJ KLRA KI Z KMBC KMOX KOH KOL KRLD KSCJ KTRII KVI kVor WABC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WIDB, WDBO WDOI) WDRC WDSU WEAN WFBL WFBM WFEA WGL WCST WHAS WHP WIBW WISN WJAS WKBH WKBW WIBW WMAL WNAC WNAX WNOX WOKO WORC WQAM WREC WSFA WSPD WTAQ WTAR WTOC

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

 C - Music That Satisfies, Set Monday R - Paul Whiteman and OrchestraKFI KFYR KGO kGW liHO KOA KOMO KSD KSL KSTP WBEN HCAE WCSI WDAF WDAY WEAF WEBC WELI WFBR WGY WHO WJAR WLJT woc wow wRC WRVA WSAl WTAG WTAM WTIC WTMJ WWJ
B - Phillips Lord, Sce Monday
ED-10:15 p.m., E-9:15, C-8:15, M-7:15 C-Fray and Braggiotti
CFRB CKOK KDYL KFH KPPY KFRC KGB KLZ ISMBC KOH KOL KRLD KECJ KTRH KVI WAAB WABC WBCM WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN

WFBI WFBM WFEA WGST WHAS WHFC WHK WHP WIBW WJAS WKBH WIBBW WIBW WMAL WNAX WNOX WOKO WORC WOWO WQAM WREC WSFA WSPD WTOC B-Song Fellows, Male Quartet
CKGW KDKA KOlL KTBS KWCR WBAL WGAR WHAM WIOD WJ\% WKY WMAU WMC WSM
ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C- Guy Lombardo and Orch., See Mon. R-RKO Mystery Drama
CFCF CliGW KFI KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSI KSTP KTAR K゙TBS WAPI WBEN WCAE WCSH WDAF WDAY WEAF WEBC WLEEI WENR WFAA WFBR WFIA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLIT WMC WOC WOW WRC WRVA WSAI WSB WSM WSMB WTAG WTAM W'TIC WTMJ WWJ WWNC
ED-10:45 p.m., E-9:45, C-8:45, M-7:45
C - Myrt and Marge, See Monday
B - Jane Froman and Orch., See Mon.
ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C-Columbia Symp. Orch., See Monday B - Amos 'n' Andy, See Monday
ED-11:15 p.mı., E-10:15, C-9:15, M-8:15
R - Maxwell House, See Monday
B - Cesare Sodero's Orch., See Tuesday
ED-11:30 p.m., E-10:30, C-9:30, M-8:30
C-Charles Carlife, See Monday
ED-11:45 p.m., E-10:45, C-9:45, M-8:45
C-Freddie Martin's Orch., See Mon.
ED-12:00 m., E-11:00, C-10:00, M-9:00 C-Ozzie Nelson and Orchestra CKOK KDYL KFAB KFH KFJF KFPY KFRC KLRA KLZ KMBC KMOX KOH KOL KSCJ KTRH KTSA HABC WACO WBCM WBRC WBT WCAH WCAU WDAE WDBJ WIDBO WDOD WDSU WFAN WFBM WGL WGST WHAS WHEC WHP WIBW WISN WKBW WLBW WMBD WNAC WNAX WNOX WODX WOKO WPG WQAM WREC WSPl) WTAR WTOC IVIVA
B - Baron Lee and Orch., See Wed.
ED-12;30 a.m., E-11:30, C-10:30, M-9:30 C-Duke Ellington and Orch., See Wed. B - Jones and Hare, See Monday

## SATURDAY

ED-8:30 a.m., E-7:30, C-6:30, M-5:30 R - Cheerio, See Monday
ED-9:00 a.m., E-8:00, C-7:00, M-6:00 C-Little Jack Little, See Monday ED-1:30 p.m., E-12:00, C-11:30, M-10:30 B - National Farm and Home, See Mon. ED-5:15 p.m., E-4:15, C-3:15, M-2:15 R-Whiteman's Rhythm Boys, See Mon. ED-5:30 p.m., E-4:30, C-3:30, M-2:30 R - Andy Sannella, See Mondiy ED-5:45 p.m., E-4:45, C-3:45, M-2:45 B - Little Orphan Annie, See Monday
ED-6:00 p.m., E-5:00, C:4:00, M-3:00 R - Waldorf-A storia Orch., See Monday B-Little German Band
KDKA KEX KFSD KFYR KGA K.IR KOA KPO hTAR KTBS KWCR WBAL WFLA WGAR WIBA WIOD WII\% WKY WREN WSB WWNC
ED-6:30 p.m., E-5:30, C-4:30, M-3:30 C - Jack Miller and Orch., See Tuesdya R-Opry House Tonight
KEX KYSD KGA KJR KOA KPO

KTBS WCAE WEAF WIBA WKY WMC WRC WSM WTAM WWNC
ED-6:45 p.m., E-5:45, C-4:45, M-3:45 C-Ozzie Nelson and Orchestra CFRB CKOK KDYL KFAB KFBK KFH KFJF KFPY KFRC KGB KHJ KLRA KIZ KMOX KOH KOL KSCJ KTRH KTSA. KVI KYOR WABC WACO WBBM WBCM WBIG WBRC WBT WCAH WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFAN WFBL WFEA WGST WHAS WHLEC WHP WIBW WIP WISN WJAS WKBH WKBW WIBW WNAC WNAX WNOX WORC WOWO WQAM WREC WSFA WSPD WTAQ WTAR WTOC WWVA
R - Donald Novis, See Monday
ED-7:00 p.m., E-6:00, C-5:00, M-4:00 B - Amos' $n$ ' Andy, See Mondry
ED-7:15 p.m., E-6:15, C-5:15, M-4:15 C-William Vincent Hall
CFRB ChOK KFBK KFH KFPY KFRC KGB KHJ KLZ KMBC KMOX KOH KOL KSCJ KTRH KTSA KVI KVOR WABC WACO WBBM WBCM WBIG WBRC WBT WCAO WCAC WCCO WDAE WDBJ WDBO WDOD WDSU WEAN WGR WGST WHAS WHEC WHP WIBW WISN WJAS WKBH WNAC WNAX WNOX WOKO WORC WOWO WQAM WREC WSFA WSI'D WTAQ WTAR WTOC WWVA B - Frankie Masters and Orchestra
KOIL KWCR WBAL WCKY WIOD WJZ
ED-7:30 p.m., E-6:30, C-5:30, M-4:30 V-Keenan and Phillips
CFRB CKOK KFAB KFBK KFH KFJF KFPY KFRC KGB KHJ KLZ KMBC KOL KRLD KSCJ KTRH KTSA KVI kYOR WABC WACO WBBM WBCM WBIG WBRC WBT WCAO WCAU WDAE WDB.J WDBO WDOD WDSU WEAN WFBL WFEA WGL WGR WGST WHAS WHP WIBW WISN WJAS WMAL WNAC WNAX WNOX WOKO WORC WQAM WREC WSFA WSPI WTAQ WTAR WTOC WWVA
B-Cuckoo Program, Ray Knight
CKGV KEX KGA KJR KOA KTBS kWCR WBAL WFIA WGAR WHAM WIBA WJDX WJR WIT WREN WRVA WSB WSM WWNC
ED-7:45 p.m., E-6:45, C-5:45, M-4:45 C-Do Re Mi, Female Trio
CFRB KFAB KFBK KFPY IFFRC KGB KHJ KLZ KMBC KOH KOL KRLD KSCJ KTRH KVI KVOR WABC WACO WBBM WBCM WBIG WRRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDSU WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHP WIBW WISN WJAS WNAC WNAX HNOX WOLO WORC WOWO WQAM WREC WSFA WSPD WTAQ WTAR WTOC WWVA
K - The Goldbergs, Sec Monday
ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C-Edwin C. Hill, See Monday
R - Harlem Fantasy
KFI KGO KGW KHQ KOA KOMO KSD FSL KSTP KYOO WBEN WCAE WCSH WDAF WEAF WLEI WFBR WYI WGY WHO WIOD WIS W.JAR WKY WMAQ WOC WOW WRC WSAI WTAG WTAM WW.J WWNC

## Saturday-Continued

KDKA KOIL KWCR WCKY WGAR WHAM WJR WJZ WLS WREN
$\overline{\text { ED-8:15 p.m., E-7:15, C-6:15, M-5:15 }}$ C-Vaughn DeLeath
CFRB CKOK KDYL KFAB KJBK KFH KFJF KFPY K「RC hGB KHJ KLZ KMBC KOH KOL KSC. KTRH KYI KVOR WABC WACO WBCM WBIG WBRC WCAO WCAU WCCO WDBJ WDBO WDOD WDSU WEAN WFBL WFEA WGR WGST WHP WJAS WKBH WMAL WNAC WNAX WNOX WOKO WORC WOWO WQAM WSFA WSPD WTAQ WTAR W'TOC WWVA
ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C-U.S. Army Band
CFRB CKOK KDYL KFBK KFH KFJF KPPY KFRC KGB KHJ KLRA KL\% KMBC KMOX KOI KOL KRLD KSC, KTRH KVI KVOR WABC WACO WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDSU WEAN WFBL WFBM WFEA WGI, WGR WGST WHAS WHEC WHK WHP WISN WJAS WKBH WLBW WMAL WNAC WNAX WNOX WOKO WORC WPG WQAM WREC WSFA WTAQ WTAR WTOC WVVA

## R-K-7, Drama

KFI KFYR KGO KGW KOA KOMO KSD KSL KSTP KTBS KVOO KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WHBR WII WFLA WGY WHO WIBA WIOD WJAR WJAX WKY WOC WOW WRC WSAI WSM WTAG WTAM WWJ WWNC

## B - Dance with Countess d'Orsay

CFCF CKGW KDKA KWK WBAJ. WBZ WB'LA WGAR WHAM W.JR WJZ WMAQ WREN
$\bar{E} \bar{D}-9: 00$ p.m., E-8:00, C-7:00, M-6:00 C-Ann Leaf at Organ
CFRB CKOK KDYL KFAB KFBK KFH KFJF KFRC KGB KHJ KLRA KLZ KMBC KOH KOL KSCJ KTRH KVI KVOR WABC WACO WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAF, WDBJ WDBO WDOI) WDSU WEAN WFBL WFBM WFEA WGL WGST WHAS WHEC WHK WHP WIBW WISN WJAS WISBH WKBW WLBW WMAL WNAC WNAX WNOX WOKO WORC WPG WQAM WREC WTAQ W'TAR WTOC WWVA

## R-National Light Opera

CFCF CKGW WBKN WCAE WCSH WDAF WEAF WEEI WFBR WFI WFLA WGY WHO WIOD WJAR WKY WMAQ WMC WOC WRC WSAI WSB WSM WTAG WTAM WWJ WWNC

## B - Gus Van, Pickens Sisters

KDKA KOIL KPRC KWCR KWK WAPI WBAL WBAP WBZ WBZA WGAR WHAM WJDX WJR WJZ WLS WMC WREN WSB WSM WSMB
ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C-Isham Jones and Orchestra
CFRB CKOK KDYL KFBK KFII KFJF KFPY KFRC KGB KHJ KLlRA KL\% KMBC KMOX KOH KOL KSCJ KTRH KVI KVOR WABC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDSU WEAN WFBL WFBM WHEA WGL WGST WHEC

WHK WHP WIBW WISN WJAS WKBW WLBW WMAL WNAC WNAX WNOX WOKO WORC WPG WQAM WREC WSFA WSPD WTAQ WTAR WTOC WWVA
ED-10-00 p.m., E-9:00, C-8:00, M-7:00 C - Music That Satisfies, See Monday R - Lucky Strike, See I'uesday
ED-10:15 p.m., E-9:15, C-8:15, M-7:15 C - Public Affairs lnstitute
KDYL KFBK KFH KFJF KFPY KFRC KGB KHJ KLRA KI, KMBC KMOX KOH KOL KSCJ KTRH KTSA KVI KVOR WAAB WABC WBBM WBCM WBIG WBRC WBT WCAO WCCO WDAE WDBJ WDBO WDOD WISSU WEAN WFBM WFEA WGST WHAS WHEC WHP WIBW WJAS WKBH WKBW WLBW WMAL WNAX WNOX WOKO WORC WOWO WPG WQAM WREC WSFA WSPD WTOC
ED-10:45 p.m., E-9:45, C-8:45, M-7:45 B - Twenty Fingers of Harmony
CFCF CKGW KDKA WCKY WGAR WHAM WJZ WREN
ED-11:00 p.m., E-10:00, C-9:00, M-8:00 R — Ralph Kirbery, Dream Singer CFCF CKGW WCAE WEAF WFBR WFI WFLA WGY WIOD WIS WRC WTAG WTAM WWJ WWNC
B - Amos 'n' Andy, Sce Monday
ED-11:15 p-m., E-10:15, C-9:15, M-8:15 B - Cesare Sodero's Orch., Sce Tuesday ED-11:30 p.m., E-10:30, C-9:30, M-8:30 C - Harold Stern and Orchestra CFRB CKOK KDYL KFAB KFBK KFH KFJF KFPY KFRC KGB KHJ KLRA KLZ KMBC KMOX KOH KRID KSCJ KTRH KTSA KVI KYOR WAAB WARC WBCM WBT WCAO WCCO WDAE WDRJ WDBO WIOOD WDRC WDSU WEAN WFAN WFBM WGL WGST WHAS WHEC WHP WIBW WIP WISN WKBW WLBW WMAI WMBD WNAX WNOX WODX WOKO WORC WQAM WREC WSPD WTAR WTOC WWVA R - Paul Whiteman and Orchestra
KSD WCAE WCKY WEAF WEFI WFI WGY WJAR WMAQ WRC WTAM UWJ
ED-12:00 m., E-11:00, C-10:00, M-9:00 C - Guy Lombardo and Orchestra
CKOK KDYL, KFAB KFBK KFJF KFPY KFRC KGB KHJ Kl.RA KLZ KMBC KMOX KOH KOL KRLD KSCJ KTRH K'l'SA KVI KVOR WABC WBC'M WBRC WHT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDSU WEAN WFBL WPBM WGL WGST WIIAS WHEC WIIK WHP WIBW WISN WKBW WLBW WM LL WMBD WNAC WNAX WNOX WODS WOKO WQAM WREC WSPD WTAR WTOC WWVA

## B - Jack Denny and Orchestra

KWCR WBAL WHAM W.I\% WRC WREN
ED-12:05 a.m., E-11:05, C-10:05, M-9:05

## R - Buddy Rogers, See Monday

ED-12:30 a.m., E-11:30, C-10:30, M-9:30
B - Charles Agnew Orch., See Tuesday

## SUNDAY

ED-11:30 a.m., E-10:30, C-9:30, M-8:30 R - Major Bowes Family
KEX KVYR KGA KJR KOA KPO KSL KSTP KTBS WAPI WCSH WDAF

WEAF WFLA WGY WIOD WLIT WMAQ WMC WPTF WRC WSM WTAM WWJ WWNC
ED-12:00 n., E-11:00, C-10:00, M-9:00 C-Voice of St. Louis
CFLB KDYL KFAB KFBK KFJF KFRC KLRA KMBC KMOX KOL KSCJ K'TRH KYOR WAAB WABC WBRC WCAH WCCO WIDAE WDBJ WDBO WDOD WDRC WDSU WFBI WFEA WGR WGST WHAS WHP WIBW WJAS WKBII WKBN WMAL WMBD WNAX WNOX WODX WOKO WORC WOWO WPG WQAM WREC WTAQ WTAR WTOC WW YA ED-12:30 p.m., E-11:30, C-10:30, M-9:30 C - Reis and Dunn
CFRB KDYL KFAB KFBK KFJF KFRC KHJ KLRA KMBC KMOX KOL KRLD KSCJ KTRH KYOR WAAB WABC WBBM WBRC WCAH WCAU WCCO WDAE WDBI WDBO WDOD WDSU WFBL WFEA WGR WGST WHAS WHP WIBW WJAS WKBH WKBN WMAL WMBD WNAX WNOX WOIDX WOKO WORC WPG WQAM WREC WSFA WTAQ WTAR WWVA

## R - Siliver Flute

WBEN WCKY WDAF WEAF WFI WGY WHO WJAR WOC WRC WTAG WTAM
B - Summer Idylls, Catharine Field KEX KFIR KGA KJR KOA KPO KWCR KWK WBAI, WENR WCAR WIOD WJZ WkY WLW WREN WSM
ED-12:45 p.m., E-11:45,C-10:45, M-9:45 C - Emery Deutsch and Orchestra CFRB CKOK KDYL KFAB KFBK IFF,JF KFRC KHJ KLRA KMBC KOL KRLD KSCJ KTRH KVOR WAAB WABC WBBM WBCA WBRC WCAH WCAU WCCO WDAE WDBJ WDBO WDOD WDSU WFBL WGK WGST WHAS WHEC WIBW WISN WIAS WKBH WKBN WIBW WMAL WMBD WODX WOKO WORC WOWO WPG WQAM WREC WSFA WTAQ WTAR WWVA
ED-1:00 p.m., E-12:00, C-11:00, M-10:00 $\mathbf{R}$ - Garcia s Marimba Band
KEX KFYR KGA KJR KOA KPO KSI KTAR KTBS WBEN WCAE WCKY WDAF WDAY WBAF WFI WFLA WGY WHO WIOD WJAR WMAQ WOC WTAM WWJ WWNC
ED-1:15p.m., E-12:15, C-11:15,M-10:15 C-Four Clubmen
CFRB CKOK KDYI KFAB KFBK KFJF KFRC KHJ KOL KSCJ KVOR WAAB WABC WBBM WBCM WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFBL WGl? WGST WHAS WHEC WHK WHP WIBW WISN WJAS WKBH WKBN WLBW WMAL WMBD WODX WOKO WOWO WPG WQAM WREC WSPD WTTAQ WTAR WWVA
ED-1:30 p.m., E-12:30,C-11:30, M-10:30 R-Great Composers (Symphony) CKGW KFI KFYR KGO KGW KOA KOMO KSTP KTBS KTHS WBEN WCAE WDAF WDAY WEAF WELI WFAA WFBR WFI WFLA WGY WJAR WIIT WMAQ WOAI WRC WSAI WSM WSMB WTAG WTAM WWJ WWNC
B-Clyde Doerr's Saxophone Octet KDKA KFI KFSD KGO KHQ KOA

## Sunday-Continued

KOMO KWCR WBAL WDAY WGAR WHAM WJZ WLW
ED-2:00 p.m., E-1:00, C-12:00, M-11:00 C-Thirty-Minute Men
CFRB CKOK KDYL KFAB KFBK K户JF KMBC KMOX KOL KSCJ KTRH KYOR WABC WBBM WBCM WBRC WBT WCAO WCAU IVCCO WDAE WIDB.J WDBO WDOD WDRC WDSU WEAN WPBL WFBM WFEA WGR WGST WHAS WHEC WHK WHP WIBW WISN WJAS WKBH WKBN WIBW WMAL WNAC WNOX WODX WOKO WORC WOWO WQAM WSFA WTAQ WTAR WTOC WWVA
ED-2:30 p.m., E-1:30, C-12:30, M-11:30 C-Ann Leaf at Organ
CFRB CKOK KDYY, KFAB KFJF GFRC KHJ KMOX KOL KSCJ KTRH KVOR WABC WBBM WBCM WBRC WBT WCAI WCAO WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFEA WGL WGR WGST WHAS WHEC WHK WHP WIBW WISN WJAS WKBH WLBW WMAL WNAC WNOX WODE WOKO WORC WQAM W'SPD WTAQ WTAR WTOC WHYA

## R - Moorshine and Honeysuckle

KSD WCAE WCRY WCSH WDAF WEAF WEEI WFBR WGY WHO WJAL WLIT WMAQ WOC WOW WRC WTAG WTAM WWJ

## B-Yeast Foamers

KDKA KFI KP'SD KFYR KGHL GGO KGW KHQ KOIL KOMO KSTP KTAR KTHS KYOO KWCR KWF KYW WAPI WBAL WBZ WBZA WDAY WEBC WFAA WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDK WJR WJZ WLW WPTF WREN WRVA WSB WSM WSMB WTM.J WWNC

## ED-3:00 p.m., E-2:00, C-1:00, M-12:00

 C-Symphonic HourCFRB CKOK KDYL KFAB KFH KF.JF KFRC KHJ kLRA KMBC KMOX KOL ESCJ KTRH KVOR WABC WBCM WBIC WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGL WGR WGST WHAS WHEC WHE WHP WIBW WISN WJAS WKBH WKBN WMAL WMBD WNAC WNOX WODX WOKO WORC WQAM WREC WTAQ WTAR WTOC WWVA

## R-Gus Arnheim and Orchestra

KFI kFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTBS KTHS KVOO KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WGY WHO WIBA WJAR WKY WLIT WOAI WOC WOW WRC WSAI WTAG WTAM WTMJ WWJ

## B - Picadilly Circus

KDEA KOIL KWCR KWK WBAL WCKY WFLA WGAR WIOD WJDA WJR WIJ WREN WSM WWNC ED-3:30 p.m., E-2:30, C-1:30, M-12:30 R - National Sunday Forum
KFYR KFHL KGIR KGO KGW KHQ KOA KPRC KSL KSTP KTAR KTBS KYOO KYY WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFAA WFBR WFLA WGY WIBA WIOD WIS WJAR WJAX WJDX WKY WOAI WOW WPTF WRC

WRVA WSAI WSB WSM WSMB WTAG WTAM WWJ WWNC

## B-48th Highlanders Military Band

 CKGW KDKA KOIL IVVCR WBAL WBZ WBZA WGAR WHAM WJR WJZ WLW WMAQ WRENED-4:00 p.m., E-3:00, C-2:00, M-1:00 C-Cathedral Hour
CFRB ChOK KDYL KFAB KFBK KFH KFJF KFRC KHJ KLRA KMBC KMOX KOL KSCJ KTRH KVOR WABC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDB. WDBO WDOD WDRC WDGU WEAN WFRL WFBM WFEA UCR WGST WHAS WHEC WHK WHP WIBW WIEN WJAS WKBH WKBN WMAL WMBD WNAC WNOX WODX WORO WORC WOWO WQAM WREC WSFA WSPD WTAQ WTAR WTOC WWYA

## R-Iodent Program

KFI KFSD KFYR HGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTBS KTHS KVOO KYW WAPI WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDA WKY WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM wTMJ WWJ WWNC
B - Temple of Song
KDKA KOLL KWCR WBAL WBZ WBZA WCKY WFLA WGAR WIIAM WJIR WJZ WMAQ WREN
ED-4:30 p.m., E-3:30, C-2:30, M-1:30 B - Highlights of Bible
KDLA KFSD KFYR KGIL KGIR KGO KGW KHO KOIL KOMO KPlRC KSL KsTP KTAR KTBS kTHS kVOO KWCR KWK WAPI WBAL WBZ WBZA WCKY WDAY WEBC WENR WFAA WFLA WGAR WIBA WIOD WIS WJDX W.IR WJZ WKY WAIC WOAI WPTF WREN WRVA WSB WSM WSMB WWNC
ED-4:45 p.in., E-3:45, C-2:45, M-1:45 R-Pastels, String Quartet
Cl゙GW KSD WBLEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WFI WGY WHO WJAR WOC WOW WRC WSAI WTAG WTAM
ED-5:00 p.m., E-4:00, C-3:00, M-2:00 C-Irene Beasley, Round Towners
CFRB CKOK KDYL KFAB KFBK KDH KFJF KFRC KHJ KLIRA KMBC KMOX KOL KRLD hiscJ KVOR WABC WBCA WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WHP WIBW WISN WJAS WKBH WKBN WLBW WMBD WNAC WNOX WODX WOKO WORC WOWO WQAM WREC WSFA WSPD WTAQ WTAR WTOC WWVA

## B - World of Religion

KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOIL KPRC KTAR KTBS KTHS KyOO KWCR KWK KYW WAPI WBAL WBAP WBZ WBZA WCKY WDAY WEBC WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJZ WMC WOAI WPTF WREN WRVA WSB WSMB WWNC

ED-5:15 p.m., E-4:15, C-3:15, M-2:15 R - Kremlin Art Quintet
CKGH WCAF WCSH WEAF WEEI WENR WFBR WFI WGY WJAR WRC WTAG

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

 C-Poet's Gold, David RossCFRP CKOK KDYL JFBK KFH KFJF KFRC KHJ KLRA KMBC KMOX KOL KRLD KSCJ KVOR WABC WBCM WBIG WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WEAN WFBI, WFBM WFEA WGR WGST WHAS WHEC WHP WIBW WISN WJAS WKBH WLBN WLBW WNAC WNOX WODA WOKO WORC WQAM WREC WSFA WSPD WTAQ WTAR WTOC WWVA

## R - Pop Concert, Walter Logan

KFSD KGO KGW KHQ KOA KSTP KTAR KTBS WAPI WBEN WCAE WCSH WDAF WEAF WEBC WEEI WFNR WFBR WFI WFLA WGY WHO WIOj WJAR WKY WMC WOC WOW WRC WRVA WSAI WSB WSM WTAG WTAM WWJ WWNC

## B-Road to Romany

KOIL KWCR KWK KYW WGAR WHAM WJR WJZ WLW WREN
ED-5:45 p.m., E-4:45, C-3:45, M-2:45 C-Little Jack Little
CFRB CKOK KDYI KFBK KFI IFFJF KFPC KH, KLRA KMBC KOL KRLD KSCJ KVOR WABC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WEAN WFBL WFBM WPEA WGR WGST WHAS WHEC WHK WHP WIBW WISN WJAS WKBH WKBN WLBW WNAC WNOX WODX WOLO WORC WQAM WREC WSFA WSPD WTAQ WTAR WTOC IIWVA
ED-6:00 p.m., E-5:00, C-4:00, M-3:00 C-Ballad Hour
CFRB CKOK KDYL KFAB KFRK KFJF KFRC KHJ KLRA KMOX KOL KRLD KSCJ KVOR WABC WBCM WBIG WBRC WBT WCAH WCAO WCAU WCCO WDAE WDB. $J$ WDOD WDRC WDSU WEAN WFRL WFBM WFEA WGL WGR WGST WHAS WHEC WHK WHP WIBW WJAS WKBH WKBN W LBW WMAI WNAC WNOX WODX WOKO WORC WPG WQAM WREC WSFA WSPD WTAQ WTAR WTOC WWVA

## R-Catholic Hour

KEX KFSD KFYR KGA KGHL KGIR KJR KOA KPO KPRC KSTP KVOO WAPI WBAP WBEN WCAE WCSH WDAF WEAF WEBC WEEI WENR WFBR WFLA WGY WHO WIBA WIOD WJAR WJAX WJDX WKY WLIT WMC WOAI WOC WOW WRC WRVA WSAI WSM WSMB WTAG WTAM WWJ WWNC

## B - Paul Whiteman and Orchestra

KGW KOIL KWCR KWh WBAL WBZ WBZA WCKY WGAR WHAM WJR WJZ WMAQ WREN
ED-6:30 p.m., E-5:30, C-4:30, M-3:30

## C - Roses and Drums

CEOK KMBC KMOX KRLD WAAB WABC WADC WBBM WCAO WDSU WFBM WGR WGST WHK WJAS WKRC WMAL

## R-Sweetheart Days

KEX KFSD KGA KJR KPO KTAR

## Sunday-Continued

WBEN WCAE WEAF WEEI WFRR WFLA WGY WIOD WIS WJAR WJAX WLIT WRYA WTAG WTAM
ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C-Four Eion Boys
CKOK KDYL KFAB KPBK KFH KFJF KFPC KHJ KMBC KMOX KOL KRLD KSCJ KTRH KVOR WABC WBBM WBCM WBIG WBRC WBT WCCO WDAE WDBJ WIBBO WDOD WDRC WDSU WEAN WPAN WFBL WFBM WFEA WGL WGK WGST WHAS WHEC WHP WIBW WIP WISN WJAS WKPH WKBN WLBW WMAL WNAC WNAX WNOX WODX WOLO WPC WPG WQAM WREC WSFA WSPl WTAQ WTAR WTOC WWVA

## R - Donald Novis, Tenor

KFSD KFYR KGO KGW KHQ KOA KSL KSTP KTAR KTBS KVOO WREN WCSH WDAF WEAF WEBC WEES WFBR WFLA WGY WHO WIBA WIOD WJAR WJDX WKY WLIT WMAQ WOC WOW WSAI WSM WTAG WTAM WWJ WWNC B-Pickens Sisters
CKGW KOLL WBAL WCKY WHAM WJZ WMAQ WREN

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

 C - Chicago KnightsCKOK KDYL KPAB KFH KPJF KFRC KH. KMBC KMOX KOL KRLD KSC. KTRH KVOR WABC WBCM WBIG WBRC WBT WCAH WCAC WCCO WDAE WDBJ WDRO WDOD WDRC WDSL WEAN WFBL WFBM WrEA WOL WGR WCST WHAS WHEC WIP WIBW WISN WJAS WKBHE WKBN WHBW WMAL WNAC WNAX WNOX WODX WOKO WORC WQAM WREC WSFA WSID WTAQ WTAR WTOC WWVA
ED-7:30 p.m., E-6:30, C-5:30, M-4:30 R-Orchestral Gems
KSD WBEN WCAE WDAF WEAF WFBR WGY WJAR WLS WOW wsal wTag wTIC Wws
B - Commodores, Male Quartet CFCF KDKA KFI KFSD KFYR KGO KHQ KOA KOIL KSL KSTP KTAR KTBS KWCR KWK WAPI WBAL WFLA WGAR WHAM WLOD WJR WJZ WKY WIS WLW WLEEN WRVA WSB WSM WWNC
ED-7:45 p.m., E-6:45, C-5:45, M-4:45 C - Theo Karle, Tener
CKOK KDYL KFAB KFH KF.JF KFRC KHJ KMBC KMOX KOL KRLD KSC'J KTRH KVOR WABC WBCM WBIG WBRC WBT WCAH WCAU WCCO WDAE WDBJ WDBO WDOD WDRC WDSU WFBL WFBM WFEA WGL WGR WGST WHAS WHEC WHK WHP WIRW WISN WTAS WHBH WLBW WMAL WNAC WNAX WNON WODX WOKO WORC WPG WQAM WREC WSFA WSPD WTAQ WTAR WTOC WVVA
ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C - William Vincent Hall CKOK KDYL KFAB KFH KPJF KFRC KHJ KMBC KMOX KOL KSCI KTRH KVOR WABC WBCM WBIG WBRC WBT WCAH WCAU WCCO WDAE WIDBJ WDBO WIDOD WDRC WDSU WEAN WFBM WFEA WGL WGR WGST WHAS WHEC WHP WIBW WISN WJAS WKBH

WKBN WLBW WMAL WNAC WNAX WODX WOKO WORC WQAM WREC WSFA WSPD WTAR WTOC WWVA

## R - Chase and Sanborn Hour

CFCF CKGW KFI KPSD KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL. KSTP KTAR KTHS KYOO WAPI WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WPAA WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WJDX WKY WLIT WIS WMC WOAI WOC WPTA WRC WRYA WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ WWNC

## B - McCravy Brothers

KDKA KOIL KTBS KVOO KWCR KWK WBAL WFLA WGAR WHAM WIS WJR WTZ WKY WMAQ WOAI WREN WWNC
ED-8:15 p.m., E-7:15, C-6:15, M-5:15 B - New York Concert Orchestra KIDKA FOIL KWCR WBAL WGAR WJR WJZ WLW WREN
ED-9:00 p.m., E-8:00, C-7:00, M-6:00 R-Our Government, David Lawrence KPRC KSD KTBS KVOO WAPI WEAF WENR WFAA WFBR WFI WFIA WGY WHO WIOD WIS WJAR WJDD WKY WMC WOC WOW WPTE WRE WRVA WSAT WSB WSM WSMB WTAG WUNC

## B - Enna Jettick Melodies

CFCF (KGW KDKA KFI KFSD KFYP KGHL KGIR KGO KCW KHQ KOA KOIL KOM() KSTP KTAR KWCR KWK KYW WBML WBZ WBZA WCKY WDAY WEBC WGAR WHAM WIBA WIIAX WJR WJZ WREN WRVA WTMJ
ED-9:15 p.m., E-8:15, C-7:15, M-6:15 R - Album of Familiar Music
KFI KTED KFYR KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTHS WAPI WBEN WCAE WCSH WDAY WFAF WEBC WENR WFAA WIPR WFI WFLA WGY WHO WIBA WIOD WJAR WJDX WKY WMC WOAI WOC WOW WRC WSAI WSB WSA WSMB WTAG WTAM WTMJ WWJ
ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C-Pennzoil Parade
CKOK KFJF KLla KMBC KMOX KTSA WABC WADC WBRC WBT WCAO WCAU WCCO WDRC WEAN WIPL WGN WGR WGST WHEC WHK WJAS WKRC WLAC WLBZ WMAL WNAC WOKO WSPD
ED-9:45 p.m., E-8:15, C-7:45, M-6:45 R - Sheaffer Lifetime Review
CKGW KSD WBEN WCAE WCSH WDAF WEAF WEEI WENR WFBR WPI WGY WHO WJAR WOC WOW WRC WSAI WTAG WT.AM WTIC wIVJ

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

 C-Gem Highlights, Jack Denny CKOK KIZ KMBC KMOX KRLD WAAB WABC WADC WBBM WBT WCAO WCAU WCCO WDRC WDSU WIISL WFBM WGST WHK WJAS WKBW WKRC WMAL WOKO WSPDED-10:15 p.m., E-9:15, C-8:15, M-7:15 R-L'Heure Exquise
CKGW KSD KSTP LTRS WHEN WCAE WCSH WDAF WEAF WEEI WFBR WFI WFLA WGY WHO

WJAR WKY WOC WRC WRYA WSAL WSMB WTAG WTAM WTIC WWJ WWNC
B - Old Singing Master
KDhA KFI KCO KGW KHQ KOA ROLL KOMO KSL KWK WBAL WBZ WB/A WGAR WHAM WJR WJZ WLW WMAQ WREN
ED-10:45 p.m., E-9:45, C-8:45, M-7:45 R - Sunday al Seth Parker's
CFCF KRCA KFSD KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC 1 LS KNL KSTP KTAR KTBS KYH UAPI WBEN WC'AE WCSH WDAF WDAY WEAF WEBC WEEL WFAA WEBR WFI WFLA WGY Who WIBA WIOD WIS WTAR Whax WJDA VKY WMC WOAI WOC WOW WPTF WRC WRVA WSAI WSB WSM WTAM WTM.I WV.I
ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C- The Gauchos
CFRB CKOK KDYL KPAB KFBK KみH KFFF KFRC KH, KLLA KMBC にMOX EOL KRLD KSCJ KTRH KGOR WAAB WABC WBCA WRRC WHT WCAH WCCO WDAE WDBJ WDBO WIDOD WDRC WUSU WEAN WPAN WFBL WFBM WGL WGR WHAS WHK WHP WIRW WIP WISN WJAS WKBN WLAW WMAL WMBD WNOX WOKO WPG WQAM WREC WSFA WSPD WTAR WTOC
B - Malik Mystery Drama
KOL KWCI WBAL WCKY WHAM W.I\% WMAQ WREN

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 R-Beau Balladeer
KFI KGHL KGO KGW KHQ KSTP KTBS WCAE WEAE WFBR WFI WFLA WGY WHO WIOD WJAR W.JDX WMAQ WOC WOW WRC WAAI WSAE WSMB WTAM WWJ WWNC
ED-11:30 p.m., E-10:30, C-9:30, M-8:30 C-Ozzie Nelson and Orchestra
CFRB CKOK KLRA WABC WBCM WBRC WBT WCAV WCCO WDAE WJDBJ WDBO WDOD WDRC WDSU WEAN WPBL WGL WGR WHEC WHP WISN WKBN WLBW WMAL WNAC WNOX WOKO WQAM WSFA WSPD WTAR WTOC

## C-Pennzoil Parade

KDYL KERN KFBK KFPY KFRC KGB KHJ KLZ KMJ KOIN KOL KYI KWG

## R-Mood Oriental

KFI KFSD KFYR KGAL KGO KGW KHQ KOA KOMO KSTP KTAR KTBS WCAE WDAF WEAF WEBC WPBR WFI WGY WIBA WIAR WMAQ WOW WrC WSB WSM WTAM WWJ
$\overline{\mathrm{ED}}$-12:00 m., E-11:00, C-10:00, M-9:00 $\mathrm{C} \rightarrow$ Gus Arnheim and Orchestra
CKOK KFAB KFBK KPH KFJF KLRA K\&CJ KTRH WABC WBCM WBRC WBT WCAH WCAU WCCO WDAE WDBJ WDBO WDOD WDSU WEAN WFBM WGL WGR WHAS WHEC WHK WHP WIBW WISN WKBN WLBW WMAL WMBD WNAC WNAX WNOX WOKO WQAM WREC WSFA WSPD WTAR WTOC B-Wm. Stoess and Orchestra
KGHL KGO KGW KOA KOIL KOMO KSTP KTHS KWCR WDAY WENR WFLA WGAR WHAM WIOD WJR WJZ WKY WIW WMC WREN WSB WWNC

## CLASSIFIED INDEX to CHAIN PROGRAMS

## Time in Eastern Daylight Standard

## BANDS

48tit Highlanders, 3:30 p.m.. Sunday. B. Garcia's Marimba Band. 1:00 p.m.. Sunday. R. Little German Band. 6:00 p.m., Saturday, B.
U.S. Army Band, 8:30 p.m., Saturday, C.

## CHILDREN

Lady Next Door, 4:45 p.m.. daily, ex. Sat. and Sun.; 4:30 p.m. Saturday, R.

Little Orphan Anmie, 5:45 p.m., daily, ex. Sunday, B.

## CONCERTS

Ballad Hour. 6:00 p.m., Sunday, C.
Howard Barlow Symphony, 11:00 p.m.. daily, ex. Saturday and Sunday, C.
Cities Service, 8:00 p.m., Friday, R
Gauchos, 11:00 p.m., Sunday, C.
Great Composers, 1:30 p.m., Sunday, R.
Andre Kostelanetz, 8:30 p.m., Friday, C.
Kremlin Art Quintet. 5:15 p.m., Sunday. R.
L'Heure Exquise, 10:15 p.m., Sunday, R.
Walter Logan, 5:30 p.m.. Sunday. R.
Mobiloil, 9:30 p.m., Wednesday, R.
Mood Oriental, 11:30 p.m., Sunday. IR.
National Light Opera, 9:00 p.m., Saturday, R.
New York Orchestra. 8:15 p.m.. Sunday, B.
Orchestral Gems, 7:30 p.m., Sunday, R.
Pastels. String Quartet, 4:45 p.m., Sunday, R.
Cesare Sodero 11:15 p.m., daily, ex. Sun. and Mon.. B
Summer Symphony, 11:15 p.m., Monday. B.
Sweetheart Days, 6:30 p.m., Sunday, R.
Symphonic Hour, 3:00 p.m., Sunday, C
Waldorf-Astoria, 6:00 p.m. daily, ex. Sunday, R.
G. Washington, $9: 30$ p.m., Thursday, R.

## DANCE BANDS

Charles Agnew, 12:30 a.m. Tuesday and Saturday, B
Gus Arnheim, 3:00 p.m. Sun., R; 12 mid., Sun., C.
Ben Bernie, 9 p.m., Tuesday; 12:30 a.m., Wednesday R.
Jack Denny, 11:30 p.m., Tuesday, R; 12 mid., Saturday, B 10:00 p.m.. Sunday, C.
Clyde Doerr, 7:00 p.m., Thursday, R; 1:30 p.m., Sunday. B.
Duke Ellington, $12: 30$ a.m., Wednesday, Friday, C.
Tom Gerun, 12 mid.. Thursday, R.
Lloyd Huntley, 12:30 a.m., Sunday, B.
Island Boat Club. 9:00 p.m., Wednesday, B
Isham Jones. 7:15 p.m., Mon. and Fri.; 10:30 p.m., Tues., Wed., Thurs.; 9.30 p.m., Sat., C.
Baron Lee. 11:45 p.m., Monday, R; 12 mid., Wednesday and Friday. B.
Guy Lombardo. 10:30 p.m., Mon., Fri.; 9:00 p.m.. Wed.; 12:00 mid.. Saturday, C.
Lucky Strike. 10 u.nı., Tues., Thurs. and Sat., R
Abe Lyman, $8: 15$ p.m. Tuesday and Thursday, C.
Freddie Martin, 11:45 p.m., Mon., Tues., Fri., C.
Frankic Masters. 7:15 p.m.. Saturday, B.
Clyde MeCoy, 12:30 a.m.. Monday, B.
Merry Madcaps. 6:45 p.m., Friday, R.
Jack Miller, 6:30 p.m. Tues. Thurs. and Sat., C.
Ozzie Nelson. 11:30 p.m., Sun.; 11:45 p.m., Wed. and Thurs. ; 12:00 mid.. Fri., 6:45 p.m., Sat.. C.
George Olsen, 9:30 p.m.. Monday and Wednesday, B
Pacific Screnaders, 12:30 a.m.. Thursday, B.
Graham Prince, 6:15 p.m., Friday. B.
Buddy Rogers. 12 mid.. Mon., Wed. and Sat., R.
Andy Sanella, 5:30 p.m., Monday and Saturday, ir
Noble Sissle. 12:00 mid., Thursday, C.
Waiter Smith, $8: 30$ p.m.. Tuesday, R.
Harold Stern. 12:00 mid., Tues.: 11:30 p.m., Sat.. C.
William Stoess, $12: 00$ mid., Sunday B.
Rudy Vallec, 8:00 p.m. 'Thursday, R.
Paul Whiteman, 11 p.m.. Mon. Thurs.; $12: 05$ a.m., Tues.; 10:00 p.m., Fri.; 11:30 p.m., Sat., R; 6:00 p.m., Sun., B.

## DIALOG

Amos 'n' Andy. 7:00 and 11:00 p.m.. daily. ex. Sunday, B Biz Time, 8:00 p.m., Wednesday. R.

## DIALOG - Continued

Burns and Allen, 9:00 p.rn., Wednesday, C
Clara, Lu 'n' Em. 10:15 a.m. daily, ex. Sat. and Sun., B
Cuckoo, Ray Kniegt, 7:30 p.m., Saturday, B.
Funnyboners, 6:45 p.m.. Monday and Wednesday. C.
Jones and Hare, 7:45 p.m. and 12:30 a.m., Mon., Wed and Fri., B.
Opry House, 6:30 p.m.. Saturday. R.
Ray Perkins. 7:30 p.m., Tuesday and Thursday. R.
Reiss and Dunn 12:30 p.m. Sun.; 6:15 p.m.. Mon., C.
Stebbins Boys. 7:30 p.m. daily. cx. Sat. and Sun. B.
Col. Stoopnagle and Budd, 8:45 p.m., Mon. and Wed., C.
Tastyeast Jesters, 7:15 p.m., Monday. B.
Tish, 10:30 p.m., Monday. Tuesday and Wednesday, B
Ward Wilson, 7:15 p.m., Wed., Thurs. and Fri, B.

## DRAMA

Eno Crime Club, 8:30 p.m., Tues. and Wed.. C
First Nighter, 9:00 p.m., Friday, B
Friendslip Town. 9:30 p.m., Tuesday, B.
Goldbergs, 7:45 p.m., daily, ex. Sunday, R.
K-7. 8:30 p.m., Saturday. R.
Phillips Lord, 10:00 p.m., daily, ex, Sat.and Sun.. B.
Love Story Hour, 9:30 p.m., Thursday, C.
Malik Mystery. 11:00 p.m., Sunday, B'
Moonshine ard Honeysuckle. 2:30 p.m.. Sunday, R.
Myrt and Marge. 7:00 and 10:45 p.m., daily, ex. Sat. and Sun., C.
Pin Tin Tin, 8:30 p.m., Thursday, B.
RKO Mystery, 10:30 p.m., Friday, R.
Roses and Drums, 6:30 p.m., Saturday, C.
Sheer Romance. 6:30 p.m. Tuesday, B.
Soconyland Sketches. 8:00 p.m. Monday, R.
Thompkins Corner, $9: 30$ p.m., Thursday, B

## PIANO AND ORGAN

Fray and Braggiotti, 10:15 p.m., Friday, C
Archer Gibson, 10:30 p.m., Wednesday. R.
Harding Sistrrs. 6:30 p.m.. Wed., R.; 10:45 p.rn., Sat., B.
Keenan ant Phillips, 7:15 p.m., Tues.; 7:30 p.rn., Sat. C. Ann Leaf, 2:30 p.m., Sunday; 9:00 p.m., Saturday, C.

## POPULAR PROGRAMS

A \& P Gypsies, 9:00 p.m.. Monday, R.
Armour Program, 9:30 p.m., Friday. B.
Jack Benny. 9:30 p.m., Monday and Wednesday, B.
Major Bowes, 11:30 a.m., Sunday. R.
Carnation Contented. 8:00 p.m.. Monday, B.
Chise and Sanborn. 8:00 p.m.. Sunday, R.
Cliequot Club, 9:00 p.m.. Friday, R.
Columbia Revue, 12:30 p.m., daily. ex. Sat. and Sun., C
Countess d'Orsay, 8:30 p.m. Saturday, B.
Enna Jettick Melodies. 9:00 p.m. Sunday. B.
Jay C. Elippen, 9:00 p.m., Tues.. $9: 45$ p.m.. Fri., C.
Jack Frost Melody. 8:30 p.m.. Wednesday, B.
General Motors. 9:30 p.m., Monday, R.
Gerardine Program, 8:30 p.m.. Thursday, C.
Goodyear Program, 9:00 p.m., Wednesday, R.
Harlem Fantasy. 8:00 p.m.. Saturday, R.
Houschold Program. 9:00 p.m.. Tuesday, B.
Kodak Week-End. 9:00 p.m., Friday, C.
Maxwell House, 7:30 and 11:15 p.m., Mon., Wed and Fri R.
Musical Fust Freight, 10:15 p.m.. Tues. and Thurs., C.
Nestle's Program, 8:00 p.m.. Friday, B.
Pennzoil Parade, $9: 30$ and 11:30 p.m.. Sunday, C.
Picadilly Circus, 3:00 p.m.. Sunday, B.
Pond's Program, 9:30 p.m., Fridary, R.
IRoad to Romany. $5: 30$ p.m., Sunday, B
School Room Frolics, 9:00 p.m.. Thursday, R
Sheaffer Revipw $9: 15$ p.m.. Sunday, R.
Silver Flute, 12:30 p.m.. Sunday, R.
Sincluir Wiener Minstrels, $9: 00$ p.m., Monday, B
Ed Wynn, 9:30 p.m., Tuesday, IR.
Yeast Foamers, 2:30 p.m. Sunday, B

## QUARTETS

Candle Lightin＇Time，8：30 p．m．．Friday．B．
Commodores， $\mathbf{7}: 30 \mathrm{p} . \mathrm{m} .$. Sunday，B．
Corn Cob Pipe Club， 10 p．m．，Wednesday．R．
Dandies of Yesterday．6：30 p．m．．Wednesday，B
Four Clubmen， $1: 15$ p．m．．Sunday．C．
Four Eton Boys，7：00 p．m．Sun．；9：45 p．m．，Fri．．C．
Melodeers，7：15 p．m．，Wednesday．C．
Mills Bros．9：15 p．m．，Monday and Thursday，C．
Regimentalists，8：00 p．m．Thursday．B．
Song Fellows，10：15 p．m．，Friday，B．

## RELIGIOUS

Cathedral Hour， $4: 00$ p．m．Sunday，C．
Catholic Hour，6：00 p．in．，Sunday．R
Chicago Knights．7：15 p．m．．Sunday，C．
Highlights of Bible，4：30 p．m．，Sunday，B．
Mid－Week Hymn Sing，7：00 p．m．，Tuesday，R．
National Sunday Forum，3：30 p．m．，Sundav．R．
Old Songs of Church，6：30 p．m．，Thursday，B．
Seth Parker．10：45 p．m．，Sunday，R．
World of Religion，5：00 p．m．，Sunday．B．

## SINGERS

Gene Austin，7：45 p．m．，Tuesday and Thursday．B．
Irene Beasley，5：00 p．m．，Sun．；6：00 p．m．，daily，ex．Sat． and Sun．．C．
Beau Balladeer，11：15 p．m．，Sunday，R．
Connie Boswell， $7: 45$ p．m．．Weduesday and Friday，C．
Boswell Sisters，10：00 p．m．，Mon．；9：00 p．m．．Thurs．．C．
Charles Carlile，11：30 p．m．，Mon．，Wed．and Fri．，C．
Richard Crooks，Firestone，8：30 and 11：30 p．m．．Mon．．R．
Vaughn DeLeath，6：30 p．m．，Mon．and Fri．；8：15 p．m．， Sat．．C．
Do Re Mi，7：45 p．m．，Saturday，C．
Ruth Etting．10：00 p．m．，Wed．；and 9：00 p．m．，Sat．，C．
Catharine Field， $12: 30$ p．m．，Sunday．B．
Jane Froman， $4: 00$ p．m．，Sun．，R；10：45 p．m．，daily．ex．
Sat and Sun．，B．
Tito Guizar，7：45 p．m．，Mon．；9：30 p．m．，Fri．，C．
William Vinuent Hall．8：00 p．rn．．Sun．；6：30 p．m．，Wed．； 7：15 p．m．，Sat．C．

SINGERS－Continued
Theo Karle， $7: 45$ p．m．，Sundiay．C．
Ralph Kirbery，11：00 p．m．，Saturday．R．
Harriet Lee，7：00 p．m．，Monday，R．
Little Jack Little． $5: 45$ p．m．．Sun．： $9: 00 \mathrm{a} . \mathrm{m}$ ，daily．ex．Sun．； 11：30 p．m．，Tues．and Thurs．，C
Rosa Low．8：45 p．m．．Tuesday，B．
Madison Singers，6：45 p．m．．Friday，C．
McCravy Bros．，8：00 p．m．，Sunday．B．
Frank Munn，9：15 p．m．，Sunday．R．
Donald Novis，7：00 p．m．，Sun．；6：45 p．m．，Mon．，Wed．and Sat．，R．
Old Singing Master，10：15 p．m．．Sunday，B．
Pickens Sisters．7：00 p．m．，Sun．；9：00 p．m．．Saturday．B．
Georgie Price，7：45 p．m．．Tuesday and Thursday，C．
Sanderson－Crumit，8：00 p．m．．Tuesday，R．
Singin＇Sam．8：15 p．m．．Mon．，Wed．and Fri．．C．
Kate Smith， $8: 30$ p．m．，Mon．，Tues．and Wed．，C．
Strect Singer．9：00 p．m．，Tues．；10：00 p．m．，Fri．，C．
Temple of Song，4：00 p．m．，Sunday．B．
Three Keys，10：45 p．m．，Sun．；10：30 p．m．，Thurs．，Fri．and Sat．，B．
Gus Van， $9: 00$ p．m．．Saturday，B．
Whispring Jack Smith，10：15 p．m．．Mon．，Wed．and Thurs．，B．
Whiteman＇s Rhythm Boys，5：15 p．m．．Mon．，Thurs and Sat．，R．

## TALKS

Adventures in Health． $10: 15 \mathrm{p} . \mathrm{m}$ ．Wednesday．C
Cheerio，8：30 p．m．daily，except Sunday，R．
William Hard 6：45 p．m．，Tuesday，R．
Edwin C．Hill，8：00 p．m．．daily，ex．Sunday，C．
David Lawrence，9：00 p．m．，Sunday，R．
National Farm and Home．1：30 p．m．，daily，ex．Sun．．B
Ports Gold．5：30 p．r．．Sunday．C．
Public Affairs Institute， $10: 15$ p．m．．Sat．．C．
Nellie Revell，11：00 p．m．，Wednesday．R．
Sigraund Spacth，10：15 p．m．，Tues．；8：15 p．m．，Thurs．，B．
Taxpayers＇League，8：00 p．m．，Wednesday．B．
Lowell Thomas．6：45 p．m．，daily．ex．Sat．and Sun．，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． $\mathrm{R}-\mathrm{C}$ indicates Remote Control．Where space permits，names of hotels or other buildings used in announce－ ments are shown in parenthesis．These are not mail addresses．

## Second Column Symbols

a Verifics reception for return postage
b Verifies only occasionally．

## c Does not verify．

d Verification 25 c ；reply card 10 c ，
e Sends Ekko stamp for 10 c ．
$f$ Sends Ekko stamp for 5 c ．
> $g$ Sends Ekko stamp for postage．
> ${ }_{h}$ Sends Ekko stamp for postage．
> i Sends own station stamp for 5 c ．
> $j$ Sends own station stamp for postage
> $k$ Has no stamps．
> z Failed to reply．

## Fourth Column Symbols

These stations are synchronized
National＂Blue＂Network．
Columbia network．
Daytime only．
Dn Daytime with occasional evening hours
Trans－Canada network．
Canadian National Raidways network
G All Canadian networks．
H Yankee network．
Orange and gold networks
$K$ Mexican networks．
L Canadian Pacific Ry network（Dominion）
M Canadian Radio Corp network
N National＂Red＂and＂Blue＂networks．
$P$ Has construction permit only．

[^4]
## NOTICE OF COPYRIGHT

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FOR KEY TO SYMBOLS SEE PAGE 45

540 kilocycles<br>CKOK ae 5000 CG<br>555.6 meters<br>Windsor, Ont.



Essex Broadcasters, Ltd.

| KFDY | ae | 500 | (1 |
| :--- | ---: | ---: | ---: |
| KFUO | ae | 500 | $2($ |
| KFYR | ah | 1000 | $1 N$ |
| KOAC | ak | 1000 |  |
| KSD | ak | 500 | 2R |
| WDEV | ae | 500 | D |
| WGR | ae | 1000 | C |
| WKRC | ak | 1000 | C |
|  |  |  |  |
| 560 |  |  |  |


| KFDM | ak | 500 |
| :--- | :--- | ---: |
| KLZ | ae | 1000 |
| KTAB | ae | 1000 |
| WFI | ae | 500 |
| WIBO | ae | 1000 |
| WLIT | $z$ | 500 |
| WNOX | ak | 1000 |
| WPCC | ak | 500 |
| WQAM | ae | 1000 |


| (1) |
| :---: |
|  |  |
|  |
| (1.5)a |
|  |
| C(2) |
| Sa |
| C |

(1)

- $\overline{\mathrm{R}}$ (1.5)a

1R
$\stackrel{\mathrm{Sa}}{\mathrm{C}}$

Brookings, S. D.
St. Louis, Mo.
St. Louis, Mo. Evangelical Lutheran Church
Bismarck, No. Dakota Meyer Broadcasting Co.
Corvallis, Ore.
St. Louis, Mo.
Waterbury, Vt.
Buffalo, N.' Y.
Cincinnati, Ohio

## 46

South Dakota State College

Oregon State Agricultural College Pulitzer Publishing Co.
Harry $G$. Whitehill
Buffalo Broadcasting Corp.
WKRC, Inc., Hotel Alms

570 kilocycles

| KGKO | $z$ | 250 |
| :--- | :--- | ---: |
| KMTTR | $z$ | 500 |
| KVI | ae | 500 |
| TGW | $z$ | 50 |
| WEAO | ae | $\mathbf{5 5 0}$ |
| WKBN | ak | 500 |
| WMCA | ak | 500 |
| WNAX | ae | 1000 |
| WNYC | ak | 500 |
| WSYR | ak | 250 |
| WWNC | ae | 1000 |


| (.5) | Wichita Falls, Texas |
| :--- | :--- |
| C | Hollywood, Calif. <br> Tacoma, Wash. |
| $\mathbf{1}$ | Guatamala <br> Columbus, Ohio |
| 1 C | Youngstown, Ohio |
| $\mathbf{C}$ | New York, N. Y. |
| 3 | Yankton, S. D. |
| R2a | New York, N. Y. <br> Syracuse, N. Y. |
| N | Asheville, N. C. |

Wichita Falls Broadcasting Co. KMTR Radio Corp
Puget Sound Broadcasting Co.
Ohio State University
WKBN Broadcasting Corp.
Knickerbocker Broadcasting Co., Inc. House of Gurney, Inc.
Dept. of Plant \& Structures Clive B. Meredith Estate (WMAC) Citizens Broadcasting Co., Inc.

Sabine Broadcasting Co., Inc.
Reynolds Radio Co., Inc
Associated Broadcasters, Inc.
WFI Broadcasting Co.
Nelson Bros. Bond \& Mtg. Co. Lit Bros. Store
So. Carolina Broadcasting Co., Inc.
North Shore Congregational Church
Miami Broadcasting Co.

580 kilocycles

| CFCL | agj | 500 | Sa |
| :--- | :--- | ---: | :--- |
| CFCY | ae | 500 | E |
| CIMMA | $z$ | 250 | 4 S |
| CKCL | agj | 500 | a |
| CKUA | ak | 500 | $4 F$ |
| KMJ | ak | 500 | CT |
| KSAC | ak | 500 | $2(1)$ |
| WDBO | ae | 250 | CU |
| WIBW | ae | 1000 | C2 |
| WOBU | $a k$ | 250 | $1(.5)$ |
| WSAZ | $a k$ | 250 | $1.5)$ |
| WTAG | ae | 250 | R(.5) |

Toronto, Ont.
The Dominion Battery Co.
Charlottetown, P. E. I. Island Radio Broadcasting Co., Ltd.
Edmonton, Alta.
Toronto, Ont.
Edmonton, Alta.
Fresno, Calif.
Manhattan, Kans.
Orlando, Fla.
Topeka, Kans.
Charleston, W. Va.
Huntington, W. Va.
Worcester, Mass.

Christian \& Missionary Alliance
The Dominion Battery Co.
University of Alberta
McClatchy Radio Stations (Fresno Bee)
State Agricultural College
Orlando Broadcasting Co., Inc.
Capper Publications
WOBU, Inc., Ruffner Hotel
WSAZ, Inc.
Worcester Telegram Pub. Co., Inc.

## 590 kilocycles 508.2 meters

| CJGC | ae | 5000 | $595 G Z$ |
| :--- | :--- | :--- | :--- |
| KHQ | ak | 1000 | N(2) |
| WCAJ | ae | 500 | 1 |
| WEEI | ak | 1000 | R |
| WKZO | ae | 1000 | D |
| WOW | aeh | 1000 | $1 R$ |

London, Ont. Spokane, Wash. Lincoln, Neb.
Boston, Mass.
Kalamazoo, Mich.
Omaha, Neb.


Free Press Printing Co., Ltd.
Louis Wasmer, Inc.
Nebraska Wesleyan University Edison Electric Illuminating Co.
WKZO, Inc., Burdick Hotel
Woodmen of the World



620 kilocycles 483.6 meters
KGW ae 1000 N Portland, Ore.
KTAR ae 500 NJ(1)
WFLA ae $1000 \quad \mathrm{Na}(2.5) \quad$ Clearwater, Fla.
$\begin{array}{llrlll}\text { WLBZ } & z & 500 & \mathrm{C} & & \text { Bangor, Maine } \\ \text { WSUN } & \text { ae } & 1000 & \mathrm{Na}(2.5) & \mathrm{St} . \text { Petersburg, }\end{array}$
WSUN ae $1000 \quad \mathrm{Na}(2.5) \quad$ St. Petersburg, Fla.
WTMJ ae $1000 \quad \mathrm{~N}(2.5) \quad$ Milwaukee, Wis.

Oregonian Publishing Co
KTAR Broadcasting Co.
Florida West Coast Bdet. Co., Inc.
Maine Broadcasting Co., Inc.
Florida West Coast Bdetg. Co., Inc. Journal Company


## 640 kilocycles 468.5 meters

| CHRC | ak | 100 | 645aG | Quebec, Que. |
| :--- | ---: | ---: | :--- | :--- |
| CKCI | ck | 100 | $645 a$ | Quebec, Que. |
| CKCR | ak | 100 | $645 G$ | Waterloo, Ont. |
| KFI | ah | 50000 | N1 | Los Angeles, Calif. |
| WAIU | ae | 500 | 1 | Columbus, Ohio |
| WOI | ae | 5000 | D | Ames, Iowa |

CHRC, Ltd., Victoria Hotel
Le Soleil, Ltd.
Mitchell \& Liddle
Earle C. Anthony, Inc.
American Insurance Union
State College of Agriculture
650 kilocycles 461.3 meters
KPCB ae 100 ....- Seattle, Wash.


Queen City Broadcasting Co.
WSM aej 50000 N Nashville, Tenn.

660 kilocycles 454.3 meters

| CHWK | ak | 100 | 665 | Chilliwack, B. C. |
| :--- | :--- | ---: | :--- | :--- |
| CJRM | $z$ | 500 | 665 | Moose Jaw, Sask. |
| CJRW | $z$ | 1000 | 665 | Fleming, Sask. |
| CMAF | $z$ | 500 | $-\cdots$ | Havana, Cuba |
| CMCO | $z$ | 250 | $-\cdots$ | Havana, Cuba |
| RUS | $z$ | 500 | 664 | Salvador |
| WAAW | $z$ | 500 | D | Omaha, Neb. |
| WEAF | ak | 50000 | R | New York City |

Chilliwack Broadcasting Co., Ltd.
Jas. Richardson $\&$ Sons, Ltd.
Jas. Richardson $\&$ Sons, Ltd.
International Broadcasting Co.
J. L. Stowers

Republic of E1 Salvador
Omaha Grain Exchange
National Broadcasting Co., Inc.
670 kilocycles 447.5 meters
WMAQ ae 5000 N

## INDEX BY FREQUENCIES AND DIAL NUMBERS

680 kilocycles 440.9 meters

| KFEQ | ae | 2500 | D |
| :--- | :--- | :--- | :--- |
| KPQ | ak | 5000 | N |
| WPTF | ae | 1000 | N Dn |
| XFG | $z$ | 2000 | 683.3 |

St. Joseph, Mo.
San Francisco, Calif
Raleigh, N. C.
Mexico, Mexico

Scroggin 8 Co. Bank
National Broadcasting Co., Inc.
Durham Life Insurance Co.
Sria. de Guerra y Marina

| 690 | kil | yc |  | meters | 57 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CFAC | ak | 500 | 1G | Calgary, Alta. | Calgary Herald, Ltd. Rogers-Majestic Corp., Ltd. |  |  |
| $\rightarrow$ CFRB | ae | 10000 | CM | Toronto, Ont. |  |  |  |
| CJCJ | ak | 500 | 1LE | Calgary, Alta. | Alb | Publishing Co | , Ltd. |
| NAA | $z$ | 1000 |  | Arlington, Va. | U. S |  |  |
| VAS | $z$ | 2000 | 685 | Glace Bay, N. S. | Can | Marconi Co. |  |
| XET | ck | 500 |  | Monterrey, Mexico | Cad | adio Difusora | Mexicana S. A. |
| VCX | $z$ | 100 |  | Halifax, N. S. | Sam | ightship |  |



720 kilocycles 416.4 meters
WGN ak 25000 C
Chicago, Ill.
$\square$
WGN, Inc., Drake Hotel
730 kilocycles 410.7 meters

| CHLS | ak | 100 | lb |
| :--- | :---: | ---: | :--- |
| CHYC | $z$ | 5000 | Sa |
| CKAC | ak | 5000 | CaM |
| CKCD | $z$ | 100 | 1 l |
| CKFC | ak | 50 | 1 |
| CKMO | $z$ | 100 | 1 |
| CKWX | ak | 100 | 1 l |
| CMK | aeh | 5000 |  |
| XEF-XER $z$ | 75000 | $\mathbf{7 3 5}$ |  |

Vancouver, B. C.
Montreal, Que.
Montreal, Que.
Vancouver, B. C.
Vancouver, B. C.
Vancouver, B. C.
Vancouver, B. C.
Havana, Cuba
Villa Acuna, Mexico

## 740 kilocycles 405.2 meters

| CJCA | ae | 500 | $745 E L$ | Edmonton, Alberta |
| :--- | :--- | ---: | :--- | :--- |
| KMMJ | bk | 1000 | Dn | Clay Center, Neb. |
| WSB | aeh | 5000 | N | Atlanta, Ga. |
| WHEB | $z$ | 250 | D | Portsmouth, N. H. |

W. G. Hassell (Province B1dg.) Northern Electric Co., Ltd. La Presse Publishing Co., Ltd.
Vancouver Daily Province
United Church of Canada
Sprott-Shaw Radio Co.
Western Broadcasting Co., Ltd.
National Broadcasting Co. of Cuba
Villa Acuna Broadcasting Co., Inc.



| 770 | kilocycles | 389.4 | meters |  |
| :--- | :--- | :--- | :--- | :--- |
| KFAB | ae | 5000 | 1C | Lincoln, Neb. |
| WBBM | ae | 25000 | 1C | Chicago, Inl. |

780 kilocycles 384.4 meters

| CKY | $z$ | $\mathbf{5 0 0 0}$ |  |
| :--- | :--- | ---: | :--- |
| KELW | aeh | $\mathbf{5 0 0}$ | $\mathbf{2}$ |
| KTM | ae | $\mathbf{5 0 0}$ | $2(1)$ |
| WEAN | ak | $\mathbf{2 5 0}$ | CH(.5) |
| WMC | ak | $\mathbf{5 0 0}$ | N (i) |
| WPOR | aeh | $\mathbf{5 0 0}$ | b |
| WTAR | aeh | $\mathbf{5 0 0}$ | bC |
| XEZ | $z$ | $\mathbf{5 0 0}$ | $\ldots$ |

Winnipeg, Man. Burbank, Calif. Los Angeles, Calif. Providence, R. I. Memphis, Tenn. Portsmouth, Va.
Norfolk, Va.
Mexico, Mexico

Edmonton Journal, Ltd.
M. M. Johnson Co. ( $\mathrm{R} / \mathrm{C}$ Lincoln)

Atlanta Journal, Biltmore Hotel
Granite State Broadcasting Co.

|  |  |
| :--- | :--- |
| American Radio Tel. Co. <br> St. Louis University <br> National Broadcasting Co., Inc. |  |
| KFAB Broadcasting Co.  <br> WBBM Bdctg. Corp. (Wrigley Bldg.)  <br>    |  |

Manitoba Telephone System
Magnolia Park, Ltd.
Pickwick Broadcasting Corp., Ltd.
Shepard Broadcasting Service, Inc.
Memphis Commercial Appeal, Inc.
WTAR Radio Corp. (Norfolk)
WTAR Radio Corp.
Joaquin Capilla

## INDEX BY FREQUENCIES AND DIAL NUMBERS

790 kilocycles

|  |  | 150 |
| :--- | :--- | ---: |
| CMBS | $z$ | 150 |
| CMBT | $z$ | 150 |
| CMHC | $z$ | 250 |
| KGO | ak | 7500 |
| WGY | ak | 50000 |

379.5 meters

|  | Havana, Cuba |
| :--- | :--- |
| Havana, Cuba |  |
| Tuinucu, Cuba |  |

Enrique Artalejo
Emilio Perera
Frank H. Jones
General Electric Co. (Opr. NBC)
General Electric Co.


Carter Publications, lnc. Dallas News-Dallas Journal

Maritime Bdetg. Co., Ltd. Oprs.
Canadian National Railways
Ayre \& Sons, Ltd.
Northwestern Broadcasting, Inc.
Eastern Broadcasters, Inc.
Gobierno del Estado de Aguascalientes

820 kilocycles 365.6 meters

| CMGC | $z$ | 30 | $\cdots$ |
| :--- | :--- | ---: | :--- |
| WHAS | aj | 25000 |  |
| C | Matanzas, Cula |  |  |
| Louisville, Ky. |  |  |  |

Oscar S. Mechoso
The Louisville Times Co., Inc.

830 kilocycles 361.2 meters

| KOA | ak | 12500 | NJ |
| :--- | :--- | ---: | :--- |
| WEEU | ak | 1000 | D |
| WHDH | $z$ | 1000 | DY |
| WRUF | ae | 5000 | DnC |

Denver, Colo.
Reading, Pa. Boston, Mass. Gainesville, Fla.

| 36 |
| :--- |
| General Electric Co. (NBC Opr.) |
| Berks Broadicasting Co. |
| Matheson Radio Co., Inc. |
| State of Florida (Univ. of Fla.) |

General Electric Co. (NBC Opr.)
Berks Broadcasting Co
State of Florida (Univ. of Fla.)

840 kilocycles 356.9 meters

| CKGW | ae | 5000 | NEa |
| :--- | :--- | ---: | :--- |
| CKILC | ak | 1000 | G |
| CMC | $z$ | 500 | $\bar{L}^{-}$ |
| CPRY | ae | 5000 | $\mathbf{L}^{2}$ |
| XEFD | $z$ | 300 | 845 |

Toronto, Ont.
Red Deer, Alta.
Iavana, Cuba
Toronto, Ont.
Tiajuana, Mexico


Gooderham \& Worts, Ltd.
Alberta Pacific Grain Co., Ltd.
Cuban Telephone Co.
Canadian Pacific Co., Royal York Hotel Carlos de la Sierra

850 kilocycles 352.7 meters

| CMJE | $z$ | 20 | 856 | Camaguey, Cuba <br> KWKI |
| :--- | :--- | ---: | :--- | :--- |
| ae | 10000 | 1 | 1 | Shreveport, La. |
| WWL | ak | 5000 | 1DnX | New Orleans, La |


|  |
| :--- |
| $\left.\begin{array}{l}\text { Manuel Fernandez } \\ \text { Hello World Broadcasting Corp. } \\ \text { WWL Development Co. (Loyola Univ.) }\end{array}\right)$ |

860 kilocycles 348.6 meters

| WABC | ae | 50000 | aC |
| :--- | :--- | ---: | :--- |
| WBOQ | ae | 50000 | a |
| WHB | ae | 500 | D |
| XFX | $z$ | 500 | 867 |

New York City
New York City
Kansas City, Mo.
Mexico City, Mexico

|  |  |
| :--- | :--- |
| Atlantic Broadcasting Corp. |  |
| Atlantic Broadcasting Corp. (tests) |  |
| $\quad$WHB Broadcasting Co. |  |
| Secretaria de Educacion Publica |  |

870 kilocycles 344.6 meters

| WBCN | ak | 50000 | Na | Chicago, I11. |
| :--- | :--- | ---: | :--- | :--- |
| WENR | ak | 50000 | Na | Chicago, I11. |
| WLS | ae | 50000 | Na | Chicago, I11. |
| XFF | $z$ | 500 | 875 | Chihuahua, Mexico |

Great Lakes Bdctg. Co., NBC Opr Great Lakes Bdetg. Co. NBC Opr. Agricultural Broadcasting Co.
Gobierno del Estado de Chihuahua

| CHML | ae | 50 | 4G | Hamilton, Ont. |
| :---: | :---: | :---: | :---: | :---: |
| CJCB | ak | 100 | G | Sydney, N. S. |
| CKCV | ak | 100 |  | Quebec, Que. |
| CKPC | ak | 100 | 4 L | Preston, Ont. |
| KFKA | ak | 500 | 2(1) | Greeley, Colo. |
| KLX | ae | 500 |  | Oakland, Calif. |
| KPOF | ae | 500 | 2 | Denver, Colo. |
| WCOC | ae | 500 | (1) | Meridian, Miss. |
| WGBI | ah | 250 | Q1 | Scranton, Pa. |
| WQAN | ak | 250 | 1 | Scranton, Pa. |
| WSUI | ae | 500 |  | Iowa City, Iowa |

Maple Leaf Radio Co., Ltd.
Nathansan's Radio Headquarters
Vandry, Inc.
Cyrus Dolph
Mid-Western Radio Corp.
Tribune Publishing Co.
Pillar of Fire
Mississippi Broadcasting Co., Inc.
Scranton Broadcasters, Inc.
Scranton Times
State University of Iowa

## INDEX BY FREQUENCIES AND DIAL NUMBERS

| 890 | kilocycles |  |  | 9 neters |
| :---: | :---: | :---: | :---: | :---: |
| CFBO | $z$ | 500 |  | St |
| CKCO | 2 | 100 | 3 | Ottawa, Ont. |
| CKPR | ak | 50 | 3G | Fort William, Ont. |
| CMCF | ak | 250 | 1 | Havana, Cuba |
| CMX | ae | 3000 | 1 | Havana, Cuba |
| KARK | ak | 250 |  | Little Rock, Ark. |
| KFNF | ak | 500 | 2(1) | Shenandoah, Iowa |
| KSEI | ae | 250 | (.5) | Pocatello, Idaho |
| KUSD | ae | 500 | 2 | Vermillion, S. Dak. |
| VOGT | $2 /$ | 100 |  | Wabana, N. F. |
| WGST | ae | 250 | C(.5) | Atlanta, Ga. |
| WILL | ak | 250 | 2(.5) | Urbana, IIl. |
| WJAR | ae | 250 | (.5) R | Providence, R. I. |
| WMMN | aeh | 250 | (.5) | Fairmont, W. Va. |

C. A. Munro, Ltd.
Dr. G. M. Geldert
Dougall Motor Car Co., Ltd.
Raoul Karman, Casa DelaPorte
Casa "Lavin" Francisco A.Lavin, Adm.
Arkansas Radio \& Equipment Co.
Henry Field Company
Radio Service Corporation
University of South Dakota
The Gaiety Theatre
Sousthern Broadcasting Co.
University of Illinois
The Outlet Co.
Holt-Rowe Broadcasting Co.
C. A. Munro, Ltd.

Dr. G. M. Geldert
Dougall Motor Car Co., Ltd.
aoul Karman, Casa DelaPorte
Casa 'Lavin' Francisco A.Lavin, Adm
Arkansas Radio \& Equipment Co.
Renry Field Company
Radio Service Corporation

The Gricty Theatre
品
The Outlet Co
Holt-Rowe Broadcasting Co.



| 920 kilocycles 325.9 meters |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMCD | aeh | 250 | 925 | Havana, Cuba | Angel Bertematy y G |  |
| HHK | $z$ | 250 1000 | 925 | Havana, Cuba | Antonio Ginard |  |
| KFEL | ak | 500 | 1 | Denver, Colo. | Repue O'Fallon (Albany | lotel) |
| KFXF | ${ }^{z}$ | 500 | N | Denver, Colo | Colorado Radio Corp. |  |
| KPRC | ${ }_{\text {aj }}$ | 1000 | $N(2.5)$ | Seattle, Wash. | Fisher's Blend Station, |  |
| WAAF | ak | 500 |  | Chicago, Ill | Drouston Printing Co, | ouston Post) |
| WWS | ae | 500 1000 | D | Babson Park, Mass. | Broadcasting Service | g Co. |


| 930 kilocycles 322.4 meters |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CFCH | ${ }^{\text {aj }}$ | 100 | 3LM | North Bay, Ont. | North | Supplies, L |  |
| CKX | ${ }_{\text {ak }}$ | 500 |  | Kingston, Ont. | Queen's | University |  |
| CMJF | $z$ | 225 |  | Camaguey, Cuba | Manitobe | Telephone Sy | stem |
| KFWI | ${ }_{\text {aj }}^{\text {aj }}$ | 500 500 |  | San Francisco, Calif | Radio En | terrainment | Ltd. |
| KMA | ae | 500 | 2(1) | York, Neb. | Dr. Geo. | R. Miller |  |
| KROW | ak | 500 | 1(1) | Oakland, Calif. | Earle. ${ }_{\text {Educatio }}$ | ay Seed \& Nur | ery Co. |
| WBRC WDBJ | ak | 500 250 | ${ }_{C}^{C}(1)$ | Birmingham, Ala. | Birming | am Bdetg. Co. | Inc. |
| WIBG | aeh | 25 | ${ }_{\text {D }}$ | Roanoke, Va. Glenside, Penna. | Times-Wo | orld Corp. <br> c. Keswick |  |
| 940 kilocycles 319.0 meters |  |  |  |  |  |  |  |
| KOIN | zk | 1000 | CT |  | KOIN, Inc. (New Heathman Hotel) |  |  |
| WAAT | ae | 300 |  | Jersey City, N. J. |  |  |  |
| WDAY | ae | 1000 | ${ }_{\mathrm{N}}{ }^{\mathbf{R}}$ (2.5) | Fortland, Maine | Congre | quare Hotel |  |
| WFIW | ae | 1000 | C | Fargo, No. Dakota | WFAY, | (Black Bld |  |
| WEO | ak | 1000 | D | Madison, Wis. | Universi | of Wisconsin |  |
| XEO | $z$ | 5000 |  | Mexico City, Mexico | National | Revolucionario | Party |



970 kilocycles 309.1 meters
KJR ae $5000 \quad \mathrm{~N} \quad$ Seattle, Wash.
WCFL ak 1500 RX Chicago, I11.

Northwest Broadcasting System, Inc. Chicago Federation of Labor

980 kilocycles 305.9 meters
CFCN ak 10000 985FL Calgary, Alberta KDKA ak 50000 B Pittsburgh, Pa.

The Voice of the Prairies, Ltd.
Westinghouse Elec. 8 Mfg. Co.

990 kilocycles 302.8 meters

| CMGF | $z$ | 50 | 987 | Matanzas, Cuba <br> WBZ <br> ak |
| :--- | :--- | ---: | :--- | :--- |
| WBZA | ak | 1000 | BA | Boston, Mass. |
| WA | Springfield, Mass. |  |  |  |
| XEK | $z$ | 101 | BA | Mexico City, Mexico |
| - | $z$ | 500 | DP | Tupelo, Miss. |

Bernabe R. de la Torre
Westinghouse Elec. 8 Mfg . Co.
Westinghouse Elec. 8 Mfg . Co.
Arturo Martinez
Arturo Martinez
Britt A. Rogers, Jr.

## 296.8 meters

Wolfeville, N. S. Acadia University
Havana, Cuba
So. Coffeyville, Okla.
San Jose, Calif.
New York City
Columbia, S. C.
Norman, Okla.
New York City
New York City
New York City

Los Angeles Broadcasting Co.
Central Broadcasting Co.
Central Broadcasting Co.
York Broadcasting Co.
Jesus R. Benavides
Alfonso Zorilla B.
Rafael T. Carranza
Feliciano Lopez Islas
Salvador Sandhez
Juan G. Buttner \& Leo Allande
Antonio Garza Castro y J. T. Perez
Juventino Sanchez
Feliciano Lopez Istas
Baltasat Pazos Sosa
Ciro Molina
Partido Socialista S. E.

| CKIC | $z$ | 50 |  |
| :--- | :--- | ---: | :--- |
| CMBZ | ak | 150 | $-\cdots$ |
| KGGF | ak | 500 | 2 |
| KQW | ae | 500 | T |
| WIN | $z$ | 250 | 1 |
| WIS | 日e | 500 | N(1) |
| WNAD | ae | 500 | 2 |
| WPAP | $z$ | 250 | 1 |
| WQAO | $z$ | 250 | 1 |
| WRNY | $z$ | 250 | 1 |




|  |  |  |  | 285.5 |
| :---: | :---: | :---: | :---: | :---: |
| ${ }_{\text {CMJG }}^{\text {KFI }}$ | ${ }_{\text {ae }}^{\text {a }}$ | 50 5000 | Dn |  |
| KNX | ${ }_{\text {ae }}$ | 5000 | X |  |
| Xes | ${ }_{\text {adk }}$ | 500 | 1055 K | Tampico, Me |

Jose Antonio Lefran
Farmers \& Bankers Life Ins. Co.
Western Broadcast Co.
Hugo Molina Font
Wendell Cox

| 106 |  | cyc |  | 282.8 meters |
| :---: | :---: | :---: | :---: | :---: |
| WBJJ | ae | 500 10000 | ${ }^{\text {Dn }}$ | Portland, Ore. Baltimore, |
| ${ }_{\text {WJAG }}^{\text {WTIC }}$ | ak | 1000 50000 | ${ }_{\text {Dn }}$ | $\stackrel{\text { Nor }}{ }$ |
| WTIC | ak | 50000 | IR | Hartford, Conn |







| 1120 kilocycles |  |  |  | 267.7 meters |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{CFCA}_{\text {CFIC }}$ | ${ }_{\text {ak }}^{\text {ak }}$ | 500 100 | ${ }_{\text {EL }}^{\text {EL }}$ | $\xrightarrow{\text { Toronto, Ont }}$ Kamloons. B . | Toronto Daily Star The Kamloops Sentinel |  |  |
| CHGS | ce | 100 |  | Kammoops, ${ }^{\text {Sum }}$ S. C. |  |  |  |
| CFIO | ${ }_{\text {ak }}^{\text {ak }}$ | 100 |  | Lethbridge. Alta. |  |  |  |
| KFSG | ${ }_{\text {ak }}^{\text {a }}$ | 500 | D | Spokane, | Spokane Br | roadcasting |  |
| KRKD | ${ }_{\text {ak }}^{\text {aeh }}$ ak | 500 100 | ${ }^{3}$ | Los Ans | Daiton's. | (Arca |  |
| KTRH | ak | 500 | 2 C | Houst | K | corp.(Wash | (Rice Hotel) |
| WHEL | ${ }_{\text {aje }}^{\text {aje }}$ | ${ }_{250}^{250}$ | ${ }_{\text {c }}^{\text {(1.5) }}$ | Wilmington, | Inc. |  |  |
| WISN | ${ }^{\text {a }}$ | 250 | ${ }_{2} \mathrm{C}$ | Milwaukee, | Even |  |  |
|  |  |  |  | Collese Station, Texas | icultura | al \& Mech | ollege |




# 1150 kilocycles 

| CMGI | $z$ | 30 | $\ldots$ |
| :--- | :--- | ---: | :--- |
| CMHJ | ae | 75 | .--- |
| CMJH | ak | 50 | - |
| WHAM | ae | $\mathbf{5 0 0 0}$ | B |
| XEA | ak | 500 | K1155 |
| 10-AT | $z$ | 25 | 1155 |

## 260.7 meters

Colon, Cuba Cienfuegos, Cuba Ciego de Avila, Cuba Rochester, N. Y.
Guadalajara, Mexico Trail, B. C.

Armando Lizama
Victorino Lopez (Hotel Bristol)
Luis Marauri Mendoza
Stromberg-Carlson Tel. Mfg. Co.
Radiofonografica de Guadalajara,S.A.
Trail Amateur Radio Assn.


## 1170 kilocycles <br> WCAU ae 10000 C <br> 256.3 meters <br> Philadelphia, Pa.



1180 kilocycles 254.1 meters

| CMW | ae | 1500 | 1185 |
| :--- | :--- | ---: | :--- |
| KEX | ak | 5000 | 2 N |
| KOB | ae | 10000 | 2 |
| WDGY | ak | 1000 | Dn |
| WINS | ne | 500 | $-\cdots$ |
| WMAZ | ak | 500 | - |

IIavana, Cuba Portland, Ore. $A$. M Minneapolis, Minn.
New York City
Macon, Ga.

1190 kilocycles WOAI aeh 50000 N

## 252.0 meters

San Antonio, Texas

Troncoso y Gil
National Broadcasting Co.
N. M. Coll. of Agr. \& Mechanical Arts George W. Young
American Radio News Corp.
Southeastern Broadcasting Co.

1200 kilocycles

| CKOV | ak | 100 |  |
| :---: | :---: | :---: | :---: |
| CMGB | $z$ | 30 | 1205 |
| KBTM | ak | 100 | D |
| KERN | $z$ | 100 | C |
| KFJB | 2 | 100 | (.25) |
| KFWF | $z$ | 100 | 5 |
| KFXD | ae | 100 |  |
| KGDE | ae | 100 | (.25) |
| KGDY | 2 | 100 |  |
| KGEK | ak | 100 | 9 |
| KGEW | ak | 100 | 9 |
| KGFJ | ae | 100 |  |
| KGHI | 2 | 100 |  |
| KGVO | ak | 100 |  |
| KMLB | $z$ | 100 | D |
| KVOS | $z$ | 100 |  |
| KWG | aeh | 100 | CT |
| WABI | ak | 100 |  |
| WABZ | $z$ | 100 | 1 |
| WBBZ | ak | 100 |  |
| WB1IS | $z$ | 100 | 4 |
| WCAT | $z$ | 100 |  |
| WCAX | $z$ | 100 |  |
| WCLO | ak | 100 |  |
| WCOD |  | 100 | 3 |
| WFAM | $z$ | 100 |  |
| WFBE | ak | 100 | (.25) |
| WHBY | ak | 100 |  |
| WIBX | $z$ | 100 | (.3) |
| WIL | ae | 100 | 5 (.25) |
| WJBC | ae | 100 |  |
| WJBL | ae | 100 | 6 |
| WJBW | ak | 100 | 1 |
| WKJC | ac | 100 |  |
| WLAP | ck | 100 | (.25) |
| WNBO | aeh | 100 |  |
| WNBW | $z$ | 10 |  |
| WORC | ak | 100 | CH |
| WPHR | ae | 100 | (.25) |
| WRBL | $z$ | 100 |  |
| WWAE | $z$ | 100 | 8 |
| $10-\mathrm{AB}$ | $z$ | 25 |  |
| 10-AK | ak | 15 |  |
| 10-BI | ak | 25 |  |
| 10-BP | ak | 25 | 1199 |
| 10-BQ | ak | 15 |  |
| $10-\mathrm{BU}$ | $z$ | 15 | -..-- |

Kelowna, B. C.
Matanzas Cuba Paragould, Ark. Bakersfield, Calif. Marshalltown, Iowa
St. Louis, Mo. Nampa, Idaho Fergus Falls, Minn. Huron, S. D. Yuma, Colo. Ft. Morgan, Colo. Los Angeles, Calif. Little Rock, Ark. Missoula, Mont. Monroe, La Bellingham, Wash. Stockton, Calif. Bangor, Maine New Orleans, La. Ponca City, Okla. Huntsville, Ala. Rapid City, S. D. Burlington, Vt. Janesville, Wis. Harrishurg, Pa. South Bend, Ind. Cincimnati, Ohio Green Bay, Wis. Utica, N. Y St. Louis, Mo. LaSalle, Ill.
Decatur, 111.
New Orleans, La. Lancaster, Pa . Louisville, Ky. Silverhaven, Pa . Carbondale, Pa. Worcester, Mass. Petersburg, Va. Columbus, Ga. Hammond, Ind. Moose Jaw, Sask. Stratford, Ont. Prince Albert, Sask. Wingham, Ont. Brantford, Ont. Canora, Sask.

Okanagan Broadcasters, Ltd.
Jose Anorga
Beard's Temple of Music
Bee Bakersfield Broadcasting Co.
Marshall Electric Co., Inc.
St. Louis Truth Center, Inc.
Frank E. Hurt (R/C Boise)
Jaren Drug Co.
Voice of South Dakota
Beehler Electrical Equipnent Co.
City of Fort Morgan
Ben. S. McGlashan
O. A. Cook

Mosby's, Inc.
Liner's Broadcasting Station, Inc. KVOS, Inc.
McClatchy Newspapers
First Universalist Society
Samuel D. Reeks
C. L. Carrell (R/C various cities)

The 1 Iutchens Co.
State School of Mines
Burlington Daily News
WCLO Radio Corr. (R C Beloit)
Kevstone Broadcasting Corp.
South Bend Tribune
The Post Publishing Co. Opr St. Norbert College (Bellin Blilg.) WIBX, Inc.
Missouri Broadcasting Corp.
Kaskaskia Broadcasting Co.
Commodore Broadeasting, Inc.
C. C. Carlson

Lancaster Bdetg. Service, Inc. American Broadcasting Corp. of Ky. Spriggs Symplex (Washington, Pa.)
Home Cut Glass \& China Co.
A. F. Kleindienst

## WLBG, Inc.

WRBL Radio Station Inc.
Hamnond-Calumet lidetg. Corp.
Moose Jaw Radio Assn.
M. I. Higgins Elec. \& Radio Co.

Prince Albert Radio Club
W. T. Cruickshank

Tom Brown \& Harold Brown Canora Radio Assır.

## INDEX BY FREQUENCIES AND DIAL NUMBERS

| 1210 |  | ycl |  | .8 meters |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| CFCO | ak | 250 | 8G | Chatham, Ont. | John Beardall (Wm. Pitt Hotel) |
| CFNB | $z$ | 50 |  | Fredericton, N. B. | James S. Neill \& Sons, Ltd. |
| CJOR | ak | 500 |  | Vancouver, B. C. | George C. Chandler |
| CKMC | $z$ | 100 | 8 | Cobalt, Ont. | R. L. McAdam |
| KASA | ak | 100 |  | Elk City, Okla. | E. M. Woody (Casa Grande Hotel) |
| KDLR | ak | 100 |  | Devils Lake, N. Dak. | KDLR, Inc. |
| KFJI | ak | 100 |  | Klamath Falls, Ore. | KFJI Broadcasters, Inc. |
| KFOR | ak | 100 100 | (.25) | Lincoln, Neb. | Howard A. Shuman |
| KFVS | ae | 100 | 6 | Cape Gir | Southwestern Hote1 Co. |
| KFXM | ak | 100 | 9 | San Bernardino, Calif. | J. C. \& E. W. Lee |
| KGCR | ah | 100 |  | Watertown, S. Dak. | Greater Kampeska Radio Co |
| KGNO | ak | 100 |  | Dodge City, Kans. | Dodge City Broadcasting Co. |
| KGY | ak | 100 |  | Olympia, Wash. | KGY, Inc. (Capitol Park Bldg.) |
| KPPC | ak | 50 | 9 | Pasadena, Calif. | Pasadena Presbyterian Church |
| WWEA | ${ }_{\text {z }}$ | 100 100 |  | Shreveport, La. | Hello World Broadcasting Corp. |
| WBAX | ae | 100 | 1 | Wanesville, Ohio | WALR Broadcasting Corp. |
| WBBE | $z^{2}$ | 100 | 7 S | Richmond, Va. | John H. Stenger, Jr. (Morris Bldg.) <br> Grace Covenant Pres. Church. |
| WCBS | ak | 100 | 2 | Springfield, Ill. | Chas. H. Messter \& Harold L. Dewing |
| WCRW | ae | 100 | 4 | Chicago, Ill. | Clinton R. White |
| WEBQ | ae | 100 | 6 | Harrisburg, 111. | First Trust \& Savings Bank |
| WEDC | 2 | 100 | 4 | Chicago, Ill. | Emil Denemark, Inc. |
| WFAS | $\mathrm{z}^{\text {ak }}$ | 100 100 | 3 3 | White Plains, N. Y. | Westchester Broadcasting Corp. |
| WGCM | ae | 100 | 5 | Greeport, ${ }^{\text {Gulfport, }}$ Miss | Harry M. Carman |
| WHBF | ae | 100 |  | Rock Island, Inl. | Beardsley Specialty Co. (Harms Hotel) |
| WHBU | aj | 100 |  | Anderson, Ind. | Anderson Broadcasting Corp. |
| WHET | ak | 100 |  | Troy, Ala. | Troy Broadcasting Co. |
| WIBU | $z$ | 100 |  | Poynette, Wis. | Wm. C. Forrest |
| WJBI | ak | 100 | 3 | Red Bank, N. J. | Monmouth Broadcasting Co., Inc. |
| WJBU | ae | 100 | 1 | Lewisburg, Pa . | Bucknell University |
| WJBY | $z$ | 100 |  | Gadsen, Ala. | Gadsen Broadcasting Co., Inc. |
| WJEJ | $z$ | 100 | PD | Hagerstown, Md. | A. V. Tidmore |
| WJWFI | ae | 100 100 |  | Mansfield, Ohio | John F, Weimer |
| WMBG | aj | 100 | ${ }_{7}^{5(.25)}$ | Greenville, Miss. | J. Pat Scully Havens \& Martin |
| WMRJ | ak | 100 | 3 | Jamaica, N. Y. | Peter J. Prinz |
| WOCL | ak | 50 |  | Jamestown, N. Y. | A. E. Newton |
| WOMT | ae | 100 |  | Manitowoc, Wis. | Francis Mangin Kadow |
| WPAW | $z$ | 100 | a | Providence, R. I. | Cherry \& Webb Broadcasting Co. |
| WPRRO | $z$ | 100 100 | a | Providence, R. I. | Cherry \& Webb Broadcasting Co. |
| WQSBC | $z$ | 100 | 4 | Thomasville, Ga. | Stevens Luke |
| WSEN | ak | 100 | 4 | Columbus, Ohio | World Battery Co., Inc. |
| WSIX | , | 100 |  | Springfield, Tenn. | 638 Tire \& Vulcanizing Coneca Hotel) |
| WSOC | ae | 100 |  | Gastonia, N. C. | WSOC, Inc. |
| WTAX | $z$ | 100 | 2 | Springfield, Ill. | WTAX, Inc. |
| XEX | $z$ | 500 |  | Mexico City, Mexico | Excelsior, Cia Editorial S. A. |

## 1220 kilocycles

| KFKU | ae | 500 | 1 |
| :---: | :--- | ---: | :--- |
| KTW | $z$ | 1000 | 2 |
| KWSC | ae | 1000 | $2(2)$ |
| WCAD | ak | 500 | D |
| WCAE | ae | 1000 | R |
| WDAE | ak | 1000 | C |
| WREN | ak | 1000 | $1 B$ |

## 245.8 meters

Lawrence, Kans.
Seatlle, Wash.
Pullman, Wash.
Canton, N. Y.
Pittsburgh, Pa.
Tampa, Fla.
Lawrence, Kans.

| $1 \cdot 2$ |
| :--- |
| University of Kansas |
| First Presbyterian Church |
| State College of Washington |
| St. Lawrence University |
| WCAE, Inc. and Sun-Telegraph |
| Tampa Daiy Times (Tampa Terrace) |
| Jenny Wren Co. |



# INDEX BY FREQUENCIES AND DIAL NUMBERS 

| KTAT | $\mathbf{z}$ | 1000 | 1 | Fort Worth, Texas |
| :---: | :---: | ---: | :--- | :--- |
| KTFI | ak | 500 |  | Twin Falls, Idaho |
| WACO | ak | 1000 | 1 C | Waco, Texas |
| WKAQ | $z$ | 1000 |  | San Juan, P. R. |
| WXYZ | $z$ | 1000 | $\cdots$ | Detroit, Mich. |

Texas Air Transport
Radio Broadcasting Corp. of Idaho
Southwest Broadcasting Co.
Radio Corp. of Porto Rico
Kunsky-Trendle Broadcasting Corp.

## 1250 kilocycles 239.9 meters

| KFMX | aj | 1000 | 2 |
| :--- | :--- | ---: | :--- |
| KFOX | ae | 1000 | CT |
| WAAM | ae | 1000 | $1(2.5)$ |
| WCAL | ae | 1000 | 2 |
| WDSU | ak | 1000 | C |
| WGCP | ak | 250 | 1 |
| WLB | ak | 1000 | 2 |
| WODA | $z$ | 1000 | 1 |
| WRHM | ae | 1000 | 2 |
| XEFA | $z$ | 250 | $\ldots$ |

Northfield, Minn. Long Beach, Calif. Newark, N. J.
Northfield, Minn. New Orleans, La. Newark, N. J. Minneapolis, Minn. Paterson, N. J.
Minneapolis, Minn.
Mexico City, Mexico

Carleton College
Nichols \& Warinner, Inc.
WAAM, Inc.
St. Olaf College
Jos. H. Uhalt
May Radio Broadcasting Co.
University of Minnesota
Richard E. O'Dea
Minnesota Broadcasting Corp.
Manuel F. Murguia


1270 kilocycles

| CMCU | $z$ | 150 | $\ldots$ |
| :--- | :--- | ---: | :--- |
| CMCW | $z$ | 150 |  |
| KGCA | ak | 100 | D2 |
| KOL | ae | 1000 | CT |
| KVOR | ae | 1000 | C |
| KWLC | ak | 100 | D2 |
| WASH | ak | 500 | a |
| WEAI | ae | 1000 | D |
| WFBR | ae | 500 | R |
| WJDX | ak | 1000 | N |
| WOOD | ak | 500 | a |

236.1 meters

Havana, Cuba
Havana, Cuba
Decorah, Iowa
Seattle, Wash.
Colora Seattle Broadcasting Co.
Decorah Lowas, Col. Reynolds Radio Co., Inc.
Grand Rapids, Mich. Kunsky-Trendle Broadcasting Corp.
Ithaca, N. Y. Cornell University
Baltimore, Md. Baltimore Radio Show, Inc.
Jackson, Miss. Lamar Life Insurance Co.
Grand Rapids, Mich. Kunsky-Trendle Broadcasting Corp.

## 1280 kilocycles 234.2 meters

| KFBB | aeh | 1000 | (2.5) | Great Falls, Mont. |
| :--- | :--- | ---: | :--- | :--- |
| WCAM | aeh | 500 | 1. | Camden, N. J. |
| WCAP | ae | 500 | 1C | Asbury Park, N. J. |
| WDOD | ae | 1000 | C(2.5) | Chattanooga, Tenin. |
| WIBA | ae | 500 | N(1) | Madison, Wis. |
| WOAX | aeh | 500 | 1 | Trenton, N. J. |
| WRR | aeh | 500 | C | Dallas, Texas |

Buttrey Broadcast, Inc.
City of Camden (City Hall Tower)
City of Camden (City Hall Tow.
Wadio Industries Broadcast Co.
Badger Broadcasting Co., Inc.
Trenton Broadcasting Co.
City of Dallas (Hilton 1-Iotel)
KCYS.
1300
MTES.
230.6

| KDYL | ak | 1000 | $C$ |
| :--- | :--- | ---: | :--- |
| KFUL | ak | 500 | 1 |
| KLCN | $z$ | 50 | D |
| KTSA | ae | 1000 | $1 \mathrm{C}(2.5)$ |
| WEBC | ae | 1000 | N(2.5) |
| WJAS | ak | 1000 | $\mathrm{C}(2.5)$ |
| WNBZ | $z$ | 50 | D |

## 232.4 meters

Salt Lake City, Utah
Galveston, Texas
Blytheville, Ark.
San Antonio, Texas
Superior, Wis.
Pittsburgh, Pa.
Saranac Lake, N. Y.

Intermountain Broadcasting Corp. News Publishing Co.(Buccaneer Hotel) C. L. Lintzenich
C. L. Lintzenich Star Broadcast Co. (Plaza Hotel)

Head of the Lakes Broadcasting Co. Pittsburgh Radio Supply House Smith \& Mace

## 1300 kilocycles

| CMKJ | $z$ | 20 | $\ldots$ |
| :--- | :--- | ---: | :--- |
| KFAC | $z$ | 1000 | - |
| KFH | ae | 1000 | C |
| KFJR | ag | 500 | 3 |
| KTBR | $z$ | 500 | 3 |
| WBBR | aej | 1000 | 1 |
| WEVD | ae | 500 | 1 |
| WFAB | $z$ | 1000 | 1 |
| WHAZ | ae | 500 | 1 |
| WIOD | $z$ | 1000 | N |
| WOQ | ae | 1000 | -- |
| XEM | $z$ | 250 | - |

## 230.6 meters

Guantanamo, Cuba Los Angeles, Calif.
Wichita, Kans.
Portland, Ore.
Portland, Ore.
Brooklyn, N. Y.
New York City
New York City
Troy, N. Y.
Miami, Fla.
Kansas City, Mo.
Tampico, Tams, Mex

## Luis Morlote

Los Angeles Broadcasting Co. Wichita Eagle-Hotel Lassen Ashley C. Dixon-KFJR, Inc. M. E. Brown

Peoples Pulpit Assn.
Debs Memorial Radio Fund, Inc.
Defenders of Truth Society, Inc.
Rensselaer Polytechnic Institute
Isle of Dreams Broadcasting Corp.
Unity School of Christianity
Maria T. de Gutirrez

INDEX BY FREQUENCIES AND DIAL NUMBERS


## 1320 kilocycles 227.1 meters

| KGHF | ak | 250 | (.5) |
| :--- | :--- | ---: | :--- |
| KGMB | ak | 250 | C |
| KID | ae | 250 | $(.5)$ |
| WADC | ae | 1000 | C |
| WSMB | ae | 500 | N |

Puehlo, Colo Honolulu. Hawaii Idaho Falls, Idaho Akron, Ohio New Orleans, La.
C. P. Ritchie \& J. E. Finch Honolulu Broadcasting Co. KID Broadcasting Co., Inc. Allan T. Simmons WSMB, Inc.


\section*{1340 kilocycles 223.7 meters <br> | CMCR | $z$ | 150 | 1345 | Havana, Cuba |
| :--- | :--- | ---: | :--- | :--- |
| KFPY | ae | 1000 | CT | Spokane, Wash. <br> WCOA <br> agj |
| WSPD | ae | 1000 | C |  |
| Wensacola, Fia. |  |  |  |  |}

Gilberto Gessa Lopez
Don Lee, Inc. (Pickwick Hotel)
KMO, Inc. (Hotel Winthrop)
Perkins Bros. Co.
WDRC, Inc.
The Crosley Radio Corp.
The Gillette Rubber Co.

Aurelio Hernandez
Symons Bdetg. Co. (Symons Bldg.) Pensacola Bdctg. Co. (San Carlos Hot.) Toledo Bdctg. Co.(Com. Perry Hotel)

## INDEX BY FREQUENCIES AND DIAL NUMBERS

## 1350 kilocycles 222.1 meters

| CMCY | ak | 500 | 1355 | Havana, Cuba |
| :---: | :---: | :---: | :---: | :---: |
| KIDO | ak | 1000 |  | Boise, Idaho |
| KWK | ae | 1000 | B | St. Louis, Mo. |
| WAWZ | ae | 250 | 1 | Zarephath, N. J |
| WBNX | ae | 250 | 1 a | New York City |
| WCDA | $z$ | 250 | 1 | New York City |
| WEHC | ae | 500 | D | Emory, Va. |
| WMSG | ae | 250 | 1 a | New York City |

```
M. D. Autran
C. G. Phillips &: Frank Hill
Thomas Patrick, Inc. (Hotel Chase)
Pillar of Fire
New York Met. Broadcasting Corp.
Italian Educ. Bderg. Co., Inc.
Emory & Henry College
New York Met. Broadcasting Corp.
```


## 1360 kilocycles 220.4 meters

| KGER | ah | 1000 |  |
| :--- | :--- | ---: | :--- |
| KGIR | ak | 500 | NJ |
| WCSC | $z$ | 500 | - |
| WFBL | ak | 1000 | C(2.2) |
| WGES | ae | 500 | $1(1)$ |
| WJKS | agj | 1000 | $1 Z$ |
| WQBC | ak | 500 | $\ldots$ |

Long Beach, Calif.
Butte, Mont.
Charleston, S. C.
Syracuse, N. Y.
Chicago, Ill.
Gary, Ind.
Vickshurg, Miss.

Consolidated Bdetg. Co. (R/C Los An.) KGIR, Inc.
So. Carolina Broadcasting Co., Inc.
Onondaga Radio Broadcasting Corp
Oak Leaves Broadcasting Station, Inc.
Johnson-Kennedy Radio Corp.
Delta Bdetg. Co.(Post-IIerald Station)

## 1370 kilocycles 218.7 meters

| CMGE | $z$ | 30 | 1375 |
| :---: | :---: | :---: | :---: |
| KCRC | ak | 100 | 2(.25) |
| KFBL | aj | 50 | 3 |
| KFJM | zk | 100 |  |
| KFJZ | ae | 100 |  |
| KFLX | $z$ | 100 |  |
| KGAR | ae | 100 | (.25) |
| KGDA | ak | 100 |  |
| KGFG | $z$ | 100 | 2 |
| KGFL | zk | 100 | 4 |
| KFKL | ak | 100 |  |
| KICA | $z$ | 100 | 4 CP |
| KMAC | ak | 100 |  |
| KONO | ak | 100 | 5 |
| KOOS | ae | 100 |  |
| KRE | ak | 100 |  |
| KUJ | ak | 100 | D |
| KVL | $z$ | 100 | 3 |
| KWKC | z | 100 |  |
| WBTM | $z$ | 100 |  |
| WCBM | ae | 100 | Z(.25) |
| WDAS | aeh | 100 | (.25) |
| WESG | $z$ | 50 |  |
| WGL | aeh | 100 | C |
| WHBD | bk | 100 |  |
| WHBQ | ak | 100 |  |
| WHDF | ak | 100 | (.25) |
| WIBM | aeh | 100 |  |
| WJBK | ae | 50 | $1 Q$ |
| WJTL | $z$ | 100 |  |
| WLEY | aeh | 100 | (.25) |
| WLVA | ck | 100 | 7 |
| WMBR | ak | 100 |  |
| WPFB | $z$ | 100 |  |
| WQDM | $z$ | 100 |  |
| WRAK | ak | 100 | 6 |
| WRAM | ae | 100 |  |
| WRDO | ae | 100 |  |
| WRJN | ae | 100 |  |
| WSVS | $z$ | 50 |  |
| XEFZ | ae | 100 |  |
| ------ | $z$ | 100 | 6 |

Cardenas, Cuba Enid, Okla.
Everett, Wash. Grand Forks, N. Dak.
Fort Worth, Texas
Galveston, Texas Tucson, Arizona Mitchell, S. Dak. Oklahoma City
Santa Fe e, N. Mex.
San Angelo, Texas
Clovis, New Mexico
San Antonio, Texas
San Antonio, Texas
Marshfield. Ore.
Berkeley, Calif.
Walla Walla, Wash.
Scattle, Wash.
Kansas City, Mo.
Danville, Va.
Baltimore, Md.
Philadelphia, Pa.
Glens Falls, N. Y.
Fort Wayne, Ind.
Mount Orab, Ohio
Memphis, Tenn.
Calumet, Mich.
Jackson, Mich.
Detroit, Mich.
Atlanta, Ga.
Lexington, Mass.
lynchburg, Va. Tampa, Fila. Hattiesburg, St. Albans, Vt. Williamsport, Pa. Wilmington, N. C. Augusta. Maine Racine, Wis.
Buifalo, N. Y.
Coyoacan, Mexico
Williamsport, Pa .

Genaro Sebater
Enid Radiophone Co. (Oxford Hotel)
Leese Bros.
University of North Dakota
Fort Worth Broadcasters, Inc.
George Roy Clough
Tucson Motor Service Co.
Mitchell Broudcasting Corp.
Oklahoma 13roadcasting Co., Inc.
$K G F L$, Inc.
KGKL, Inc. (St. Angelus Hotel)
W. E. Whitmore

Walmac Co., Inc. (Blue Bonnet Stud.)
Mission Broadcasting Co.
H. H. Hanseth, Inc. (Hall Bldg.)

First Cong. Church of Berkeley
KUJ, Inc. (Marcus Whitman Iotel)
KVL, Inc.
Wilson Duncan Broadcasting Co.
Piedmont Broadcasting Corp.
Baltimore Broadcasting Corp.
WDAS Bdetg. Sta., Inc. (Elks Hotel)
W. N. Parker and H. H. Metcalfe
F. C. Zieg
F. P. Moler

Station W1HBQ, Inc. (Hotel Claridge)
Upper Michigan Broadcasting Co.
WHMM, Inc. (Otsega llotel)
James F. Hopkins, Inc. (Curtiss Bldg.)
Oglethorpe University
Lexington Air Station
Lynchburg Broadcasting Corp.
F. J. Reynolds

KCYS.
1380
Hattieshurg Broadesting Co.
A. J. St. Antoine \& E. J. Regan , MTRS.
C. R. Cummins (Penn Central Bldg.)

Wilmington Radio Assn., Inc.
WRDO, Inc. (Augusta liouse)
Racine Bdctg. Corp. (Hotel Racine)
Seneca Vocational School
Manuel Zetina
Sun-Gazette Broadcasting Co.

## 1380 kilocycles 217.3 meters

| CMJC | $z$ | 75 | 1382 |
| :--- | :--- | ---: | :--- |
| KOH | ak | $\mathbf{5 0 0}$ | C |
| KQV | ak | 500 | 2 |
| KSO | $z$ | 500 |  |
| WKBH | aj | 1000 | 1 IC |
| WSMK | ak | 200 | 2 |
| XETB | $z$ | 125 | $\ldots$ |

Camaguey, Cuba
Reno, Nevada
Pittsburgh, Pa.
Clarinda, lowa
LaCrosse, Wis.
Dayton, Ohio
Torreon, Coah., Mex.

Feliciano Isaac
McClatchy Newspapers
KQV Bdetg. Co. (Investment Bldg.)
lowa Broadcasting Co
WKBH, Inc. (Radio Bldg.)
Stanley M. Krohn, Jr.
Jose A. Berumen

# INDEX BY FREQUENCIES AND DIAL NUMBERS 

## 1390 kilocycles 215.7 meters

| CMCG | $z$ | 30 | 1395 |
| :--- | :--- | ---: | :--- |
| CMCH | ak | 100 | 1395 |
| CMCD | $z$ | 15 | 1395 |
| CMDB | $z$ | 40 | 1395 |
| KLRA | ae | 1000 | $1 C$ |
| KOY | ae | 500 | C |
| KUOA | bk | 1000 | 1 |
| - WHK | ae | 1000 | C |

$\square$
Havana, Cuba
Havana, Cuba
Havana, Cuba
Havana, Cuba
Little Rock, Ark.
Phoenix, Arizona
Fayetteville. Ark.
Cleveland, Ohio

Havana, Cuba
Havana, Cuba
Havana, Cuba
Havana, Cuba Little Rack, Ark.
Phoenix, Arizon
Cleveland, Ohio

Jose Justo Moran
Wifredo \& Hum. Fontanals Sanchez Martinez-Madicu
Julio Powers
Arkansas Broadcasting Co.
Nielson Radio \& Sporting Goods Co.
Southwestern Hotel Co. (Ft. Smith)
Radio Air Service Corp. (Higbee Store)

| 1400 | kilo | yc |  | 214.2 me |
| :---: | :---: | :---: | :---: | :---: |
|  | ${ }_{z}^{\text {ae }}$ | 500 250 | (5) | Ogden, Utah |
| Wbat | ${ }_{\text {ak }}$ | 500 |  | Lafa |
| WCGU | ${ }_{\text {ak }}^{2}$ | 500 | $\frac{2}{2}$ | Broo |
| WFOX | ${ }_{z}^{\text {ak }}$ | 500 500 |  | Culver |
| WKBF | ${ }_{\text {a }}$ | 500 | 1w |  |
| WLTH | ${ }^{\text {a }}$ h | 500 |  | Bro |

Interstate Bcg. Corp. (Hotel Bigelow)
College for Women
Purdue University
Brooklyn Broadcasting Corp.
United States Broadcasting Corp.
General Broadcasting, Inc.
Paramount Broadcasting Co.
Indianapolis Broadcasting, Inc.
Voice of Brooklyn, Inc.
La Voz Latino

## 1410 kilocycles 212.6 meters

| KFLV | ak | 500 | 4 |
| :--- | :--- | ---: | :--- |
| KGRS | ae | 1000 | 1 |
| WAAB | ae | 500 | CH |
| WBCM | $z$ | 500 | C |
| WDAG | ae | 1000 | 1 |
| WHBL | ae | 500 | 4 |
| WHIS | ak | 250 | 2 |
| WODX | ea | 500 | $3 C U$ |
| WRBX | $z$ | 250 | 2 |
| WSFA | ak | 500 | $3 C$ |

Rockford, Ill.
Amarillo, Texas
Boston, Mass.
Bay City, Mich.
Amarillo, Texas
Sheboygan, Wis.
Bluefield, W. Va.
Mobile, Ala.
Roanoke, Va
Montgomery, Ala.
$\square$
Rockford Broadcasters, Inc.
E. B. Gish

Bay State Broadcasting Corp.
James E. Davidson
National Radio \& Bdctg. Corp.
The Press Publishing Co.
Daily Telegraph
Mobile Broadcasting Corp.
Richmond Development Corp.
Montgomery Broadcasting Co., Inc.

## 1420 kilocycles 211.1 meters

| KABC | ak | 100 |  |
| :---: | :---: | :---: | :---: |
| KBPS | aj | 100 | 4 |
| KCMC | ak | 100 |  |
| KFIZ | ak | 100 |  |
| KGFF | ak | 100 |  |
| KGGC | $z$ | 100 | 5 |
| KGIW | $z$ | 100 | 1 |
| KGIX | ak | 100 |  |
| KGKX | $z$ | 100 |  |
| KICK | $z$ | 100 | Y |
| KIDW | $z$ | 100 | 1 P |
| KORE | aeh | 100 |  |
| KUMA | ak | 100 |  |
| KWCR | ae | 100 | B |
| KXL | ae | 100 | 4 |
| KXYZ | ak | 100 |  |
| WAGM | ae | 100 |  |
| WEHS | ak | 100 | a |
| WELL | $z$ | 50 |  |
| WENC | ak | 100 | D |
| WERE | ae | 100 |  |
| WFDW | ae | 100 |  |
| WHDL | aeh | 100 | D |
| WHFC | ae | 100 | a |
| WILM | ae | 100 |  |
| WJBO | $z$ | 100 | D |
| WJMS | ak | 100 | D |
| WKBI | ak | 100 | a |
| WLBF | ae | 100 |  |
| WMAS | $z$ | 100 |  |
| WMBC | ae | 100 | (.25) |
| WMBH | 2 | 100 | (.25) |
| WPAD | ak | 100 |  |
| WSPA | aeh | 100 | (.25) |
| WTBO | ae | 100 | (.25) |

## 1430 kilocycles

$\begin{array}{llrl}\text { KECA } & \text { ah } & 1000 & \mathrm{~N} \\ \mathrm{KGNF} & \text { ak } & 500 & \mathrm{D}\end{array}$

| KGNF | ak | 500 | D |
| :--- | :--- | :--- | :--- |
| WBAK | ak | 500 | $1(1)$ |

209.7 meters

Los Angeles, Calif. North Platte, Neb. Harrisburg, Pa.

Alamo Betg. Co., Inc. (Texas Theatre)
Student Body Benson Polytech. School
Texarkana Gazette \& Daily News
Reporter Printing Co.
KGFF Bdctg. Co. (Aldridge Hotel)
Golden Gate Broadcasting Co.
Leonard E. Wilson
J. M. Heaton

Sand Point Broadcasting Co.
Red Oak Radio Corp.
Southwest Broadcasting Co.
Frank L. Hill \& Curtis $\mathrm{G}^{\text {. Phillips }}$
Dr. Albert H. Schermann
Cedar Rapids Broadcast Co.
KXL Broadcasters(Hotel Multnomah)
Harris County Broadcast Co.
Aroostook Broadcasting Corp.
WEHS, Inc.
Enquirer-News Co.
Americus Broadcast Co
Erie Bdctg. Corp. (Lawrence Hotel)
Raymond C. Hammett (Alabama Hot.)
Tupper Lake Broadcasting Co., Inc.
WHFC, Inc.
Delaware Broadcasting Co.
Valdemar Jensen
WJMS, Inc. (St. James Hotel)
WKBI, Inc
WLBF Bdctg. Co. (Aladdin Hotel) Albert S. Moffet
Michigan Broadcasting Co.
Edwin Dudley Aber
Paducah Bdetg. Co. (Ritz Hotel)
The Voice of South Carolina
Associated Broadcasting Corp.

| Earle C. Anthony, Inc. |
| :--- |
| Great Plains Broadcasting Co. <br> Pennsylvania State Police |

## INDEX BY FREQUENCIES AND DIAL NUMBERS

| WCAH | ae | 500 | CA | Columbus, Ohio |
| :--- | :--- | :--- | :--- | :--- |
| WFEA | ae | 500 | CH | Manchester, N. H. |
| WHEC | ae | 500 | CA | Rochester, N. Y. |
| WHP | ak | 500 | 1CA(1) | Harrisburg, Pa. |
| WNBR | ae | 500 |  | Memphis, Tenn. |
| WOKO | ae | 500 | CA | Albany, N. Y. |

Commercial Radio Service Co.
New Hampshire Broadcasting Co.
WHEC, Inc. (Roch. Sav. Bank Bldg.)
WHP, Inc. (Harrisburg Telegraph)
Memphis Bdetg. Co. (WGBC)
WOKO, Inc. (Hotel Ten Eyck)

| CMBI | $z$ | 30 | 1444 | Havana, Cuba |
| :--- | :--- | ---: | :--- | :--- | :--- |
| CMBL | ak | 20 | 1444 | Havana, Cuba |
| CMBN | $z$ | 30 | 1444 | Havana, Cuba |
| KDFN | ak | 500 | $\ldots$ | Casper, Wyo |
| KLS | ae | 250 | D | Oakland, Calif. |
| WBIG | ae | 500 | C(I) | Greensboro, N. C. |
| WCBA | ah | 250 |  | Allentown, Pa. |
| WMBD | ae | 500 | $3 C(1)$ | Peoria, Ill. |
| WSAN | $z$ | 250 | a | Allentown, Pa. |
| WTAD | ak | 500 | 3 | Quincy, Ilil. |

Francisco Mayorquin
Julio C. Hidalgo
Armando Romeu
Donald L. Hathaway
Warner Bros.
No. Carolina Broadcasting Co., Inc. B. Bryan Musselman

Peoria Broadcasting Co.
Allentown Call Publishing Co., Inc.
Illinois Broadcasting Corp.

1450 kilocycles

| KTBS | ae | 1000 | N |
| :--- | :--- | ---: | :--- |
| WBMS | ak | 250 | 1 |
| WGAR | ak | 500 | B |
| WHOM | ae | 250 | 1 |
| WNJ | ak | 250 | 1 |
| WSAR | aeh | 250 | - |
| WTFI | ak | 500 | - |

## 206.8 meters

Shreveport, La. Hackensack, N. J. Cleveland, Ohio Jersey City, N. J. Newark, N.J.
Fall River, Mass. Athens, Ga.

Tri-State Bdctg. System, Inc.
WBMS Broadcasting Corp.
WGAR Broadcasting Co., Inc.
New Jersey Broadcasting Corp.
The Radio Investment Co., Inc.
Doughty \& Welch Electric Co., Inc.
Liberty Broadcasting Co.

1470 kilocycles

| KGA | ak | 5000 | B |
| :--- | :--- | :--- | :--- |
| WLAC | ae | 5000 | C |

205.4 meters

St. Paul, Minn. Washington, D. C.


1480 kilocycles

| KFJF | ae | $\mathbf{5 0 0 0}$ | C |
| :--- | :--- | :--- | :--- |
| WKBW | ae | 5000 | C |

## 202.6 meters

Oklahoma City, Okla. Pan American Bdetg. System, Inc. Buffalo, N. Y. Buffalo Broadcasting Corp.

Northwest Broadcasting System
Life \& Casualty Insurance Co.

WCKY ae 5000 N

## 1500 kilocycles

| CMBQ | $z$ | 50 |  |
| :---: | :---: | :---: | :---: |
| CMBR | 2 | 15 |  |
| KDB | ak | 100 | CT |
| KGFI | aj | 100 | (.25) |
| KGFK | ak | 50 |  |
| KGIz | $z$ | 100 |  |
| KGKB | bk | 100 |  |
| KGKY | ck | 100 |  |
| KNOW | ak | 100 |  |
| KPJM | $z$ | 100 |  |
| KPQ | aj | 50 |  |
| KREG | ak | 100 |  |
| KXO | $z$ | 100 |  |
| WFDV | ak | '100 |  |
| WHEF | ak | 100 | (.25) |
| WKBV | $z$ | 100 |  |
| WKBZ | ak | 100 |  |
| WLOE | $z$ | 100 | (.25) |
| WMBQ | 2 | 100 | , |
| WMIL | ak | 100 | 1 |
| WMPC | ak | 100 |  |
| WNBF | ae | 100 |  |
| WOPI | ae | 100 |  |
| WPEN | ae | 100 | (.25) |
| WRDW |  | 100 |  |
| WSYB | aeh | 100 |  |
| WWRL | ak | 100 | , |
| WWSW | ae | 100 | X |

## 201.2 meters

Covington, Ky.

## 1490 kilocycles

## 199.9 meters

Havana, Cuba
Havana, Cuba
Santa Barbara, Calif.
Corpus Christi, Texas
Moorhead, Minn.
Grant City, Mo. Tyler, Texas
Scottsbluff, Neb.
Austin, Texas
Prescott, Arizona
Wenatchee, Wash.
Santa Ana, Calif.
E1 Centro, Calif.
Rome, Ga.
Kosciusko, Miss.
Connersville, Ind.
Ludington, Mich.
Boston, Mass.
Brooklyn, N. Y.
Brooklyn, N. Y.
Lapeer, Mich.
Binghamton, N. Y. Bristol, Tenn.
Philadelphia, Pa.
Augusta, Ga.
Rutland, Vt.
Woodside, N. Y.
Pittsburgh, Pa.

Gali-Sardinas
Tomas Basail
Santa Barbara Broadcasters, Ltd.
Eagle Broadcasting Co., Inc.
Red River Broadcasting Co., Inc.
Grant City Park Corp.
East Texas Broadcasting Co.
Hilliard Co., Inc.
KUT Bdetg. Co. (Driskill 1 Iotel)
A. P. Miller

Wescoast Broadcasting Co.
J. S. Edwards
I. R. Irey and F. M. Bowles

Rome Broadcasting Corp.
Attala Milling \& Produce Co.
William O. Knox
K. L. Ashbacker

Boston Broadcasting Co.
Paul J. Gollhofer
Arthur Faske
First Methodist Protestant Church
Howitt-Wood Radio Co., Inc.
Radiophone Bdetg. Station WOPI
Wm. Penn Broadcasting Co.
Musicove, Inc.
Philip Weiss Music Co.
Long Island Broadcasting Corp.
Walker \& Downing Radio Corp.

KCYS.

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

| ALABAMA <br> Anniston O-22 <br> Birmingham O-21 | Watts 100 | WFDW | Kcys. |  | Santa Barbara M-2 Stockton J-2 | Watts |  | Kcys. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1420 |  | 100 | KDB | C | 1500 |
|  | 5000 | WAP | N | 1140 |  | 250 | KGDM |  | 1100 |
|  | 500 | WBRC | C | 9.30 |  | 100 | KWG | C | 1200 |
|  | 100 | WKBC |  | 1310 |  |  |  |  |  |
| Gadsen O-21 | 100 | WJBY |  | 1210 | COLORADO |  |  |  |  |
| Huntsville N-21 | 100 | WBHS |  | 1200 | Colorado Springs K-1I | 1000 | KVOR | C | 1270 |
| Mobile Q-20 Montgomery | 500 | WODX | C | 1410 | Denver K-11 | 500 | KFEL |  | 920 |
| Troy P-21 | 500 100 | WIIEA |  | 1210 |  | 500 | KFXF |  | 920 |
|  |  |  |  |  |  | 1000 12500 | KLZ | $\stackrel{\mathrm{C}}{\mathrm{N}}$ | 560 830 |
| ALASKA |  |  |  |  |  | 500 | KPOF |  | 880 |
| Anchorage Ketchikan | 250 | KFQD |  | 1230 | Fort Morgan J-11 | 100 | KGEW |  | 1200 |
|  | 500 | KGBU |  | 900 | Grand Junction K-9 | 100 | KFXJ |  | 1310 880 |
| ARIZONA |  |  |  |  | Lamar L-12 | 100 | KIDA |  | 880 1420 |
|  |  |  |  |  | Pueblo L-11 | 250 | KGHF |  | 1320 |
| Jerome M-6 Phoenix N-6 | 100 | KCIR J |  | 1310 | Trinidad L-1I | 100 | KGIW |  | 1420 |
|  | 500 | KOY | C | 1390 | Yuma J-12 | 100 | KGEK |  | 1200 |
| Prescott M-6 | 500 100 | KTAR | N | $\begin{array}{r}620 \\ 1500 \\ \hline\end{array}$ | CONNECTICUT |  |  |  |  |
| Tucson 0-7 | 100 | KGAR |  | 1370 | Bridgeport H-27 | 250 | WICC |  | 00 |
|  | 500 | KVOA |  | 1260 | Hartford H-27 | 500 | WDRC | C | 1330 |
| Yuma O-5 | 100 | KUMA |  | 1420 | Hartiord H-27 | 50000 | WTIC | R | 1060 |
| ARKANSAS |  |  |  |  | Storrs II-28 | 250 | WCAC |  | 600 |
| Blytheville M-19 | 50 | KLCN |  | 1290 | DELAWARE |  |  |  |  |
| Fayetteville M-16 | 1000 | KUOA |  | 1390 |  | 250 | WDEL |  | 1120 |
| Fort Smith N-16 | 100 | KFPW |  | 1210 | Wimington $\mathrm{J}-26$ | 100 | WILM |  | 1420 |
| ${ }_{\text {Hot Spring }}$ L-17 | 10000 | KTISS | N | 1040 |  |  | Wra |  |  |
| Little Rock N-17 | 250 | KGRHI |  | 890 1200 | DISTRICT OF | OLU | MBIA |  |  |
|  | 1000 | KlRA | C | 1390 | Washington J-26 | 10000 | WJSV | C | 1460 |
| Paragould M-18 | 100 | KBTM |  | 1200 |  | 250 | WMAL | C | 630 |
| Texarkana O-17 | 100 | KCMC |  | 1420 |  | 500 | WRC | R | 950 |
| CALIFORNIA |  |  |  |  |  | 10 | WOL |  | 1310 |
| Bakersfield L-3 | 100 | KERN | C | 1200 | FLORIDA |  |  |  |  |
| Berkeley J-2 | 100 | KRE |  | 1370 | Clearwater R-24 | 1000 | WFLA | N | 620 |
| Beverly lills M-3 | 500 | KMPC |  | 710 | Gainesville Q-24 | 5000 | WRUF | C | 830 |
| Burbank M-3 | 500 | KELW |  | 780 | Jacksonville Q-24 | 1000 | WJAX | N | 900 |
| El Centro $\mathrm{N}-4$ | 100 | KXO |  | 1500 | Miami T-25 | 1000 | WIOD | N | 1300 |
| Fresno K-2 | 500 | KMJ | C | 580 |  | 1000 | WQAM | C | 560 |
| Hollywood M-3 | 500 | KMTR |  | 570 | Orlando R-24 | 250 | WDBO | C | 580 |
|  | 5000 | KNX |  | 1050 | Pensacola Q-21 | 500 | WCOA |  | 1340 |
| Long Beach M-3 | 1000 | KFOX | C | 1250 | St. Petersburg S-24 | 1000 | WSUN | N | 620 |
| Los Angeles M-3 | 1000 | KGER |  | 1.360 | Tampa R-24 | 1000 | WDAE | C | 1220 |
|  | 1000 1000 | KECA | N | 1430 1300 |  | 100 | WMBR |  | 1370 |
|  | 50000 | KFI | N | 640 | GEORGIA |  |  |  |  |
|  | 500 | KFSG |  | 1120 | GEOR |  |  |  |  |
|  | 250 | KFVD |  | 1000 | Americus P-22 | 100 | WENC |  | 1420 |
|  | 1000 | KFWB |  | 950 | Athens O-23 | 500 | WTFI |  | 1450 |
|  | 100 | KGFJ |  | 1200 | Atlanta O-22 | 250 | WGST | C | 890 |
|  | 1000 | KHJ | C | 900 |  | 100 | WJTL |  | 1370 |
|  | 500 | KRKD |  | 1120 |  | 5000 | WSB | N | 740 |
|  | 500 | KTM |  | 780 | Augusta O-23 | 100 | WRDW |  | 1500 |
| Oakland J-1 | 250 | KLS |  | 1440 | Columbus O-22 | 50 500 | WRBL |  | 1200 1180 |
|  | 500 | KLX |  | 880 | Macon O-23 Rome N -22 | 500 100 | WMAZ WFDV |  | 1180 1500 |
|  | 500 | KROW KPPC |  | 930 1210 | Rome $\mathrm{N}-22$ Savannah O-24 | 100 500 | WFDV WTOC | C | 1500 1260 |
|  | 100 | KFBK |  | 1310 | Thomasville Q-22 | 100 | WQDX |  | 1210 |
| San Bernardino M-3 | 100 | KFXM |  | 1210 |  |  |  |  |  |
| San Diego N-3 | 500 | KFSD | N | 600 | HAWAII |  |  |  |  |
| San Francisco J-1 | 500 1000 | KGB | C | 13.30 | Honolulu | 250 | KGMB | C | 1320 |
|  | 1500 | KFWI |  | 610 930 |  | 1000 | KGU | N | 750 |
|  | 100 | kGGC |  | 1420 | IDAHO |  |  |  |  |
|  | 7500 | KGO | N | 790 | IDAHO |  |  |  |  |
|  | 100 | KJBS |  | 1070 | Boise G-5 | 1000 | KIDO |  | 1350 |
|  | 5000 | KPO |  |  | Idaho Falls G-7 | 250 | KID |  | 1320 |
|  | 1000 | KTAB |  | 560 | Nampa G-5 | 100 | KFXD |  | 1200 |
| San Jose J-1Santa Ana M-3 | 1000 500 |  | N | 1230 | Pocatello I $\mathrm{I}^{\text {-7 }}$ | 250 | KSEI |  | 890 |
|  | 500 100 | KQW KREG |  | 1010 1500 | Lewiston E-5 | 100 | KGKX |  | 1420 |
|  | 100 | KREG |  | 1500 | Twin Falls H-6 | 500 | KTFI |  | 1240 |

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

| ILLINOIS | Watts |  |  | Kcys. | KANSAS | Watts |  | Kicys. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carthage J-18 Chicago I-20 | 50 | WCAZ |  | 1070 | Abilene K-14 | 5000 | KFBI |  | 1050 |
|  | 10000 | KFKX |  | 1020 | Coffeyville M-15 | 500 | KGGF |  | 1010 |
|  | 10000 | KYW | N | 1020 | Dodge City L-13 | 100 | KGNO |  | 1210 |
|  | 500 | WAAF |  | 920 | Kansas City K-16 | 100 | WLBF |  | 1420 |
|  | 25000 | WBBM | C | 770 | Lawrence K-16 | 500 | KFKU |  | 1220 |
|  | 1500 | WCFL | R | 970 |  | 1000 | WREN | B | 1220 |
|  | 100 | WCRW |  | 1210 | Manhattan K-15 | 500 | KSAC |  | 580 |
|  | 100 | WEDC |  | 1210 | Topeka K-16 | 1000 | WIBW | C | 580 |
|  | 50000 | WENR | N | 870 | Wichita L-15 | 1000 | KFHI | C | 1300 |
|  | 500 | WGES |  | 1360 720 |  |  |  |  |  |
|  | 25000 | WGN | C | 720 | KENTUCKY |  |  |  |  |
|  | 1000 | WIBO |  | 560 | KENIUCKY |  |  |  |  |
|  | 20000 | WJJD |  | 1130 | Covington K-22 | 5000 | WCKY | N | 1490 |
|  | 50000 | WLS | N | 870 | Hopkinsville M-20 | 1000 | WFIW | C | 940 |
|  | 5000 | WMAQ | N | 670 | Louisville L-21 | 25000 | WHAS | C | 820 |
|  | 5000 | WMBI |  | 1080 |  | 100 | WLAP |  | 1200 |
|  | 500 | WPCCC |  | 560 1210 | Paducah M-19 | 100 | WPAD |  | 1420 |
|  | 100 | WSBC |  | 1210 |  |  |  |  |  |
| Cicero I-20 | 100 100 |  |  | 1420 | LOUISIANA |  |  |  |  |
|  | 100 | WKBI |  | 1420 | Monroe P-18 | 100 | KMLB |  | 1200 |
| Decatur K-19 | 100 | WJBL |  | 1209 | New Orleans R-19 | 100 | WABZ |  | 1200 |
| Galesburg J-18 | 100 | WKBS |  | 1310 |  | 1000 | WDSU | C | 1250 |
| Harrisburg L-19 | 100 | WEBQ |  | 1210 |  | 100 | WJBO |  | 1420 |
| Joliet I-19 | 100 | WCLS |  | 1310 |  | 100 | WJBW |  | 1200 |
|  | 100 | WKBB |  | 1310 |  | 500 | WSMB | N | 1320 |
| La Salle J-19 | 100 | WJBC |  | 1200 |  | 5000 | WWL |  | 850 |
| Peoria J-19 | 500 | WMBD | C | 1440 | Shreveport P-17 | 100 | KRMD |  | 1.310 |
| Quincy K-18 | 500 | WTAD |  | 1440 |  | 1000 | KTBS | N | 1450 |
| Rockford I-19 ${ }^{\text {Rock Island I-18 }}$ | 500 100 | KFLV |  | 1410 |  | 100 | KWEA |  | 1210 |
| Springfield K-19 | 100 100 | $\begin{aligned} & \text { WHBF } \\ & \text { WCB } \end{aligned}$ |  | 1210 |  | 10000 | KWKH |  | 850 |
|  | 100 | WTAX |  | 1210 | MAINE |  |  |  |  |
| Tuscola K-20 | 100 | WDZ |  | 1070 |  |  |  |  |  |
| Zion I-20 | 250 5000 | WILL |  | 890 1080 | Augusta F-28 Bangor F-29 | 100 100 | WRDBI |  | 1370 1200 |
|  | 5000 | WCBD |  | 1080 |  | 500 | WLBZ | C | 620 |
| INDIANA |  |  |  |  | Portland F-28 | 1000 | WCSH | R | 940 |
| Anderson J-21 | 10) | WHBU |  | 1210 | sque lsle D-29 | 100 | WAGM |  | 1420 |
| Connersville K-21 | 100 | WKBV |  | 1500 | MARYLAND |  |  |  |  |
| Culver I-20 | 500 | WCMA |  | 1400 | MAR YLAND |  |  |  |  |
| Elkhart I-21 | 50 | WJAK |  | 1310 | Baltimore J-26 | 10000 | WBAL | I | 1060 |
| Evansville L-20 | 500 | WGBF |  | 630 |  | 250 | WCAO | C | 600 |
| Fort Wayne J-21 | 100 | WGL | C | 1370 |  | 100 | WCBM |  | 1370 |
|  | 10000 | WOWO | C | 1160 |  | 500 | WFBR | R | 1270 |
| Gary I-20 | 1000 | WJKS |  | 1360 | Cumberland J-25 | 100 | WTBO |  | 1420 |
| Hammond I-20 | 100 | WWAE |  | 1200 | Hagerstown J-25 | 100 | WJEJ |  | 1210 |
| Indianapolis J-21 | 1000 | WFBM | C | 1230 |  |  |  |  |  |
|  | 500 | WKBF |  | 1400 | MASSACHUS | TS |  |  |  |
|  | 250 500 | WJED |  | $\begin{array}{r}600 \\ 1400 \\ \hline\end{array}$ | Babson Park G-28 | 500 | WBSO |  | 920 |
| Lafayette $\mathrm{J}-20$ Muncie J-21 | 500 50 | WLBC |  | 1310 | Boston G-2; | 500 | WAAB | C | 1410 |
| South Bend I-20 | 100 | WFAM |  | 1200 |  | 25000 | WBZ | B | 990 |
|  | 500 | WSBT | C | 1230 |  | 1000 | WEEI | R | 590 |
| Terre Haute K-20 | 100 | WBOW |  | 1310 |  | 1000 100 | WHDC |  | 830 1500 |
| IOWA |  |  |  |  |  | 1000 | WNAC | C | 1230 |
| Ames I-17 | 5000 | WOI |  | 640 | Fall River H-28 | 250 | WSAR |  | 1450 |
| Boone 1-17 | 100 | KFGQ |  | 1310 | Lexington G-28 | 100 | WLEY |  | 1370 |
| Cedar Rapids I-18 | 100 | KWCR | B | 1420 | New Reciford 1 -28 Springfield $\mathrm{H}-27$ | 1000 | WNBH | B | 1310 990 |
| Clarinda J-16 | 500 | KSO |  | 1380 | Springliela $\mathrm{H}-27$ | 100 | WMAS |  | 1420 |
| Council Bluffs J-16 | 1000 | KOIL | B | 1260 | Worcester G-28 | 100 | WORC | C | 1200 |
| Decorah H-18 | 5000 | WOC | R | 1000 | Worcester G-28 | 250 | WTAG | R | 580 |
|  | 100 | KGCA |  | 1270 |  |  |  |  |  |
|  | 5000 | KWLC |  | 1270 | MICHIGAN |  |  |  |  |
| Des Moines $\mathrm{I}-17$ Iowa City I-18 | 5000 500 | WHO | R | $\begin{array}{r}1000 \\ 880 \\ \hline 18\end{array}$ | Battle Creek I-21 | 50 | WELL |  | 1420 |
| Marshalltown I-17 | 100 | KFJB |  | 1200 | Bay City 1-22 | 500 | WBCM | C | 1410 |
| Ottumwa J-17 | 100 | WIAS |  | 1310 | Calumet E-19 | 100 | WHIDF |  | 1370 |
| Red Oak J-16 | 100 | KICK |  | 1420 | Detroit H-22 | 50 | WJBK |  | 1370 |
|  |  |  |  |  |  | 10000 | WJR | B | 750 1420 |
| Shenandoah J-16 | 500 500 | KMA |  | 890 930 |  | 1000 | WWJ | R | 1420 920 |
| Sioux City I-15 | 1000 | KSCJ | C | 1330 |  | 1000 | WXYZ |  | 1240 |
| Waterloo I-17 | 500 | WMT | C | 600 | East Lansing H-21 | 1000 | WKAR |  | 1040 |

INDEX BY LOCATIONS WITH MAP KEY
Columbia: C. National: Red, R; Blue, B; Both, N.


INDEX BY LOCATIONS WITH MAP KEY
Columbia: C. National: Red, R; Blue, B; Both, N.

| Saranac Lake F-26 Schenectady G-27 Syracuse G-25 | Watts |  | Kcys. 1290 |  |  | Watts |  | Kcys. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 50 | WNBZ |  |  | Portland E-3 | 5000 | KEX | N | 1180 |
|  | 50000 | WGY | R | 790 |  | 100 | KBPS |  | 1420 |
|  | 1000 | WFBL | C | 1360 |  | 500 | KFJR |  | 1300 |
|  | 250 | WMAC |  | 570 |  | 1000 | KGW | N | 620 |
| Syracuse G-25 | 250 | WSYR | R | 570 |  | 1000 | KOIN | C | 940 |
| Troy G-27 | 500 | WHAZ |  | 1300 |  | 500 | KTBR |  | 1300 |
| Tupper Lake F-26 | 100 | WHDL |  | 1420 |  | 500 | KWJJ |  | 1060 |
| Utica G-26 | 100 | WIBX |  | 1200 |  | 100 | KXL |  | 1420 |
| Woodside I-27 | 100 | WWRL |  | 1500 |  |  |  |  |  |
| White Plains I-27 | 100 | WFAS |  | 1210 | PENNSYLVA |  |  |  |  |
| NORTH CAROLINA |  |  |  |  | Allentown I-26 | 250 | WCBA |  | 1440 |
|  |  |  |  |  |  | 250 | WSAN |  | 1440 |
| Asheville M-23 | 1000 | WWNC | N | 570 | Altoona I-25 | 100 | WFBG |  | 1310 |
| Charlotte M-24 | 25000 | WBT | C | 1080 | Carbondale H-26 | 10 | WNBW |  | 1200 |
| Gastonia M-24 | 100 | WSOC |  | 1210 | Erie H-24 | 100 | WERE |  | 1420 |
| Greensboro M-24 | 500 | WBIG | C | 1440 | Glenside I-26 | 25 | WIBG |  | 930 |
| Raleigh M-25 | 1000 | WPTF | N | 680 | Grove City I-24 | 100 | WSAJ |  | 1310 |
| Wilmington N -26 | 100 | WRAM |  | 1370 | Harrisburg I-25 | 500 | WBAK |  | 1430 |
| Winston-Salem M-24 | 100 | WSJS | C | 1310 |  | 100 | WCOD | C | 1200 1430 |
| NORTH DAKOTA |  |  |  |  | Johnstown J-24 | 100 | WJAC |  | 1310 |
|  |  |  |  |  | Lancaster I-26 | 100 | WGAL |  | 1310 |
| Bismarck F-13 | 1000 | KFYR | N | 550 |  | 100 100 | WKJC |  | 1200 1210 |
| Devils Lake E-14 | 100 | KDLR |  | 1210 | Lewisburg 1-26 | 100 500 | WJBU |  | 1210 1260 |
| Fargo F-15 | 1000 | WDAY | N | 940 | Philadelphia I-26 | 500 10000 | WCAU | C | 1260 1170 |
| Grand Forks E-15 | 100 | KFJM |  | 1370 | Philadelphia 1-26 | 100 | WDAS | C | 1370 |
| Mandan F-13 | 250 | KGCU |  | 1240 |  | 500 | WFAN | C | 610 |
| Minot E-13 | 250 | KLPM |  | 1240 |  | 500 | WFI | R | 560 |
|  |  |  |  |  |  | 100 | WHAT |  | 1310 |
| OHIO |  |  |  |  |  | 500 | WIP | C | 610 |
| Akron 1-23 | 1000 | WADC | C | 1320 |  | 500 | WLIT | R | 560 1500 |
| Canton I-23 | 10 | WHBC |  | 1260 |  | 250 | WRAX |  | 1020 |
| Cincinnati K-22 | 100 | WFBE |  | 1200 |  | 100 | WTEL |  | 1310 |
|  | 1000 | WKRC | C | 550 | Pittsburgh J-24 | 50000 | KDKA | B | 980 |
|  | 50000 | WLW | B | 700 |  | 500 | KQV |  | 1380 |
|  | 500 | WSAI | R | 1330 |  | 1000 | WCAE | R | 1220 |
| Cleveland I-23 | 500 | WGAR | B | 1450 |  | 1000 | WJAS | C | 1290 |
|  | 1000 | WHK | C | 1390 |  | 100 | WWSW | C | 1500 |
|  | 500 | WJAY |  | 610 | Reading I-26 | 1000 | WEEU |  | 830 |
|  | 50000 | WTAM | R | 1070 |  | 100 | WRAW |  | 1310 |
| Columbus J-22 | 500 | WAIU |  | 640 | Scranton H-26 | 250 | WGBI |  | 880 |
|  | 500 | WCAH | C | 1430 |  | 250 | WQAN |  | 880 |
|  | 750 | WEAO |  | 570 | Silverhaven J-24 | 100 | WNBO |  | 1200 |
|  | 100 | WSEN |  | 1210 | State College I-25 | 500 | WPSC |  | 1230 |
| Dayton J-22 Mansfield J-22 | 200 100 | WSMK |  | 1380 1210 | Wilkes-Barre I-26 | 100 | WBAX |  | 1210 |
| Mount Orab K-22 | 100 | WHBD |  | 1370 | Williamsport I-25 | 100 | WRAK |  | 1370 |
| Toledo I-22 | 1000 | WSPD | C | 1340 |  | 100 |  |  | 1370 |
| Youngstown I-23 | 500 | WKBN | C | 570 | York J-26 | 1000 | WORK |  | 1000 |

PHILIPPINES

| Cebu | 500 | KZRC | 937.5 |
| :--- | ---: | :--- | ---: |
| Manila | 1000 | KZKA | 1110 |
|  | 50000 | KZRM | 618.5 |

PORTO RICO
San Juan W-34 1000 WKAQ 1240
RHODE ISLAND

| Providence H-28 | 250 | WEAN | C | 780 |
| :--- | :--- | :--- | :--- | ---: |
|  | 250 | WJAR | $\mathbf{R}$ | 890 |
|  | 100 | WPAW | 1210 |  |
|  | 100 | WPRO | 1210 |  |

SOUTH CAROLINA

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



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


INDEX BY LOCATIONS WITH MAP KEY

| JALISCO | Watts |  | Kcys. <br> 1155 | Watts Kcys. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Guadalajara, Jal. X-10 | 0500 | XEA |  | Cienfuegos W-25 | 75 | CMHJ | 1150 |
| MICHOACAN |  |  |  | Colon W-24 ${ }^{\text {Guantanamo }}$ X-28 | 30 | CMGI | 1150 |
| Morelia, Mich. Y-12 | 150 | XEI |  | ${ }_{\text {Guantanamo }}^{\text {Gavane }} \mathrm{W}-23 \mathrm{X}-28$ | 20 500 | CMKJ | 1300 660 |
| Morelia, Mich. Y-12 | 150 | XEI | 1310 |  | 500 | CMBC | 965 |
| NEUVO LEON |  |  |  |  | 150 | CMBD | 965 |
| Monterrey, N. L. U-13 | 100 | XEFB | 1315 |  | 225 30 | CMBG | 1070 |
|  | 1000 | XEH | 1132 |  | 20 | CMBL | 1444 |
|  | 500 | XET | 690 |  | 30 | CMBN | 1444 |
| OAXACA |  |  |  |  | 50 | CMBQ | 1500 |
| Oaxaca, Oax. AA-14 | 105 | XEE | 1000 |  | 15 150 | CMBR | 1500 790 |
| PUEBLA |  |  |  |  | 150 | CMBT | 790 |
| Puebla Z-13 | 101 | XEV | 1000 |  | 150 | CMBW | 1140 |
| QUERETARO |  |  |  |  | 150 | CMBZ | 1010 |
|  |  |  |  |  | 500 | CMC | 840 |
| Queretaro X-12 | 40 | XEFS | 1000 |  | 150 | CMCA | 1235 |
| TAMAULIPAS |  |  |  |  | 150 | CMCB | 1070 925 |
| N. Laredo S-13 |  |  |  |  | 250 | CMCF | 925 890 |
|  | 101 | XEFE | 1000 |  | 30 | CMCG | 1395 |
|  | 200 10000 | XEP | 1400 |  | 100 | CMCH | 1395 |
| Reynosa, Tams. T-14 Tampico, Tams. | 10000 500 | XED | 965 730 |  | 250 | CMCJ | 6630 |
|  | 500 | XES | 1055 |  | 15 | CMCM | 1395 |
| VERA CRUZ |  |  |  |  | 250 | CMCN | 925 660 |
| Jalapa Y-14 | 100 | XETC | 1000 |  | 1000 | CMCQ | 1140 |
| Vera Cruz, Ver. Z-14 | 500 | XETF | 630 |  | 150 150 | CMCR | 1345 1270 |
| YUCATAN | 100 | XEU | 1007 |  | 150 | CMCW | 1270 |
|  |  |  |  |  | 500 | CMCY | 1355 |
| Merida, Yuc. X-19 | 10 | XEFC | 1050 |  | 40 | CMDB | 1395 |
|  | 105 | XEY | 1000 |  | 5000 | CMK | 730 |
|  |  |  |  |  | 250 | CMQ | 630 |
| WEST INDIES |  |  |  |  | 1500 | CMW | 1185 |
| BAHAMA |  |  |  | Matanzas W-24 | 3000 30 | CMX | 890 1205 |
|  |  |  |  |  | 30 | CMGC | 820 |
| Nassau, U-26 | 500 | VPN | 610 |  | 50 | CMGF | 987 |
| CUBA |  |  |  | Pinar del Rio W-22 | 150 | CMGH | 1040 |
| Caibarien W-25 | 250 | CMHD | 950 | Santa Clara W-25 | 200 | CMAB | 1249 1030 |
| Camaguey W-26 | 75 | CMJC | 1382 | Santiago X-28 | 150 | CMKC | 1034 |
|  | 20 | CMJE | 856 | Tuinucu | 250 | CMHC | 790 |
|  | 225 | CMJF | 930 |  |  |  |  |
|  | 50 | CMJG | 1050 | DOMINICAN R | PUB | IC |  |
| Cardenas W-24 <br> Ciego de Avila W-26 | 50 | CMJL | 960 | Santo Domingo X-31 | 1000 | HIX | 630 |
|  | 30 | CMGE | 1375 |  |  |  |  |
|  | 50 112 | CMJH <br> CMJI | 1150 1335 | Port at Prince X-30 | 1000 | HHK | 920 |

TIME CONVERSION TABLE

| Allantic | Eastern | Central | Mountain | Pacific | Atlantic | Eastern | Central | Mountain | Facific |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $12: 00$ | $11: 00$ | $10: 00$ | $9: 00$ | $8: 00$ | $7: 00$ | $6: 00$ | $5: 00$ | $4: 00$ | $3: 00$ |
| $1: 00$ | $12: 00$ | $11: 00$ | $10: 00$ | $9: 00$ | $8: 00$ | $7: 00$ | $6: 00$ | $5: 00$ | $4: 00$ |
| $2: 00$ | $1: 00$ | $12: 00$ | $11: 00$ | $10: 00$ | $9: 00$ | $8: 00$ | $7: 00$ | $6: 00$ | $5: 00$ |
| $3: 00$ | $2: 00$ | $1: 00$ | $12: 00$ | $11: 00$ | $10: 00$ | $0: 00$ | $8: 00$ | $7: 00$ | $6: 00$ |
| $4: 00$ | $3: 00$ | $2: 00$ | $1: 00$ | $12: 00$ | $11: 00$ | $10: 00$ | $9: 00$ | $8: 00$ | $7: 00$ |
| $5: 00$ | $4: 00$ | $3: 00$ | $2: 00$ | $1: 00$ | $12: 00$ | $11: 00$ | $10: 00$ | $9: 00$ | $8: 00$ |
| $6: 00$ | $5: 00$ | $4: 00$ | $3: 00$ | $2: 00$ |  |  |  |  |  |


| CFAC | 690 Calgary, Alta. | CKCO | 890 Ottawa, On | CMDB | 1395 Havana, Cuba. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Silent. | CKCR | 645 Waterloo, On | CMGB | 1205 Matanzas, Cuba. |
| CFBO <br> CFCA | 890 St. John, N.B. |  | 10 a.m.-1 p.m.; 5-10:30 p.m., | CMGC | 820 Matanzas, Cuba. |
|  | 1120 Toronto, Ont. |  | EST | CMGE | 1375 Cardenas, Cuba. |
|  | 11 a.m.-noon; 5:30-10:30 p.m., | CKCV | 880 Quebec, Que. | CMGF | 987 Matanzas, Cuba |
|  | EST. |  | Slient. | CMGH | 1040 Matanzas. Cuba. |
| CFCF | 1030 Montreal | CKFC | 730 Vancouver. B. C. | CMGI | 1150 Colon, Cuba. |
|  | 7-11:15 p.m., EST. | EKGW | 840 Toronto, Ont. | CMHC | 790 Tuinucu, Cuba. |
| CFCH | 930 North Bay, Ont. |  | 10:45 a.11.-11:15 p.m. EST | CMHD | 950 Caibarien, Cuba |
|  | 11 a.m.-12:30 p.m.; 5-6 p.m.; 8:15-9:15 p.m., EST. | CKIC | 1010 Wolfville, N. S. | CMHI | 1030 Santa Clara, Cuba. |
|  |  | CKLC | 840 Red Deer, Alta. |  | $11 \mathrm{a} . \mathrm{m} .-1$ p.m. ; 8-10 p.m., EST. |
| $\begin{aligned} & \text { CFCL } \\ & \mathrm{CFCN} \end{aligned}$ | 580 Toronto, Ont. |  | 5:30-7:15 p.m., MST | CMHJ | 1150 Cienfuegos, Cuba. |
|  | 985 Calgary, Alta | CKMC | 1210 Cobalt, Ont. |  | 11 凤.m.-2 p.m.; 7-10 p.mn., EST. |
|  | 11 a.m.-10:30 p.m., M | CKMO | 730 Vancouver. B. C. | CMJC | 1382 Camaguey, Cuba. |
| CFCO | 1210 Chatham, Ont. | CKNC | 960 Toronto, On | CMJE | 856 Camaruey, Cuba. |
|  | 9:15 a m. 9 9:30 p.m., EST. |  | 11 a.m. 3 p.m.; 5-11:15 p.m., | CPEJF | 930 Camaruey, Cuba |
| CFCT | ${ }_{11}^{630}$ 11.m.-12:15 p.m.; $7-9$ p.m., |  | EST. | CMJG | 1050 Camaguey, Cuba. |
|  |  | CKOC | 635 Hamilton, Ont. 8 a.m.-10:30 p.m., EST. | CMJH | 1150 Cicgo de Avila, Cuba 10 a.m.-2 p.m.; G-10 p.n., EST |
|  | PST. <br> 580 Charlottetown, P. E. I. <br> 11 a.m.-12:30 p.m.; 4-5:30 p.ra.; 7-8:30 p.m., AST. | CKOK | 8 a.m.-10:30 p.m., EST <br> 540 Windsor Ont. | CMJI |  |
| CFCY |  | CKOV | 8 a.m.-mid., EST. <br> 1200 Kelowna, B. C. |  | $10 \text { a.m. } 1: 30 \text { p.m.; } 6-10 \text { p.m. }$ |
| CFJC | 1120 Kamloops, B. C. <br> 12:30-2 p.m., PS'T. |  | ```11 а.m.-1:30 p.m.; 7:30-9 p.m., PST.``` | CMJL CMK | 960 Camaguer, Cuba. |
|  |  |  |  |  | 730 ILavana, Cub |
| CFLC | 915 Preseott, Ont. | CKPC | 880 Preston, Ont. |  | 10-noon: 6 p.in.-mid., EST. |
|  |  |  | 8:30-10 p.m. EST | CMKC | 1034 Santiago. Cuba |
| CFNB | 1210 Fredericton, N. B. | CKPR | 890 Ft. William, Ont. | CMKJ | 1300 Guantanamo, Cuba. |
| CFQC | 910 Saskatoon, Sask. |  | 5-9 p.m., EST. | CMQ | 630 Havana, Cuba. |
| CFRB | 690 Toronto, Ont. | CKTB | 635 St. Catherines, Ont | CMW | 1185 Havana, Cuba. |
|  | 10:30 a m.m.mid., EST |  | Noon-1 p.m.; 6-6:30 p.m., EST. |  | $10 \mathrm{a} . \mathrm{mm} .3 \mathrm{p}$.m., EST. |
| CFRC <br> CHCK | 930 Kingston, Ont | CKUA | 580 Edmonton, fita. | CMX | 890 Havana, Cuba |
|  | 960 Charlottetown, P. E. I. |  | 3:30-4:30 p.m., MST |  | 11 a.m.-2 p.m.; 8-10 p.m., EST. |
|  | 10:45 a.m. $12: 30$ p.m.; 2-3:30 | CKW | 730 Vancouver. B | CNRA | 630 Moncton. N. B. |
|  | p.m., AST. |  | Noon-1:30 p.m.; 5:30-6:30 p.m.; |  | 9:30-11 p.m. A |
| CHGS | 1120 Summerside, P. E. I. <br> 11 a.m.-noon; 5:30-8:15 p.m., AST. |  | 9-11:30 p.m., PST. | CNRH | 815 Halifax, N.S. |
|  |  | CKX | 930 Brandon, Man. |  | 600 Ottawa, Ont. |
| CHLS |  |  | 6:45-8:30 p.m. | CNRV | 8:30-11 p.m |
|  | $\begin{aligned} & 730 \text { Vanec } \\ & \text { Silent. } \end{aligned}$ | CK |  | CNRV | 2-3:30; 5:30-8:30 p.m. PST. |
| $\begin{aligned} & \text { CHMA } \\ & \text { CHML } \end{aligned}$ | 580 Edmonton | CMAB | 1249 Pinar de | CPRY | 840 Toronto, Ont. |
|  | 880 Hamilton, Ont. | CMAF | 660 Havana, Cuba. |  | 4-4:30 \%.m., EST'. |
|  | 11 a.m.-12:30 p.m.; 7-8:30 p.m., EST. | CMBC | 965 Havana, Cuba | $\begin{aligned} & \text { HHK } \\ & \text { HIX } \end{aligned}$ | 920 Port an Prince, Haiti. |
|  |  |  | ${ }_{965}$ - ${ }^{\text {Havana, Cuba. }}$ |  | 630 Santo Domingo. |
| CHNS | 915 Halifax, N. S. | CMBD |  | KABC | $\begin{aligned} & \text { 2:10-3:40 p.m.. EST. } \\ & \text { 1420 San Intonio, Tex. } \\ & \text { S:30 a m. }-2 \text { p.m.; } 7-11: 30 \text { p.m., } \\ & \text { CST. } \end{aligned}$ |
|  | 7 p.m.-mid, AST. | CMBG | 1070 Havana. Cuba. |  |  |
| CHRC | 645 Quebser, (que. | CMBI | 1444 Yavana. Cuba. |  |  |
|  | Noon-mid. EST. | CMBL | 1444 Havata, Cuba. | KARK |  |
| CHWC | 960 Regina. Sa |  | 7-9 p.m.. EST. |  | 890 Little Rock. Ark. |
|  |  | CMBN | 1444 Havana, Cuba. | KASA | 8-10 u.m.; 5 -9 p.m., CST. |
| CHWK |  | CMBQ | 1500 ILavana, Cuba. |  | 1210 Flk City Okla. |
|  | Silent. | CMBR | 1500 Ilavana, Cuba. |  | 7 a.m.-9 p.m., CST. |
| $\begin{aligned} & \text { CHYC } \\ & \text { CJCA } \end{aligned}$ | 730 Montreal, Que. | CMBS | 730 Havana, Cuba. | KBPS | 1420 Portland, Ore. |
|  | 745 Edinonton, Alta | CMBT | 790 Havana, Cuba. |  | Silent |
|  | 11 a.m.-12:30 p.m., MST. | CMBW | 1140 Havana. Cula. | KBTM | 1200 Paragould, Ark. <br> 7:30 a.m.-noon; 4-6:15 p.m. CST. |
| CJCB | 880 Sydney, N. S. | CMBY | 1235 Ilavana, Cuba. |  |  |
|  |  | CMBZ. | 1010 Havana. Cuba. |  |  |
| CJCJ | $\begin{aligned} & \text { 690 Calgary, Alta. } \\ & 9: 30-10: 45 \text { a.m.; } 6-7: 15 \text { p.m. } \\ & \text { MST. } \end{aligned}$ |  | 9-10:30 a.m.; 6-7 p.m., İST. | KCMC | 1420 'Texarkana, Ar |
|  |  | CMC | 840 Mavana. Cuba. |  | 8-9 a.m.; 11 a.m.-1:15 p.m.; |
|  |  | Cinca | 1235 Havana. Cuba. |  | 5-6:30 p.m.. CST. |
| CJGC | $\begin{aligned} & 595 \text { London, Ont. } \\ & 11 \text { a.m.-12:30 p.m.; 6:30-8:30 } \end{aligned}$ | CMCB | 1070 Havana, Cula. <br> 11 a.m.-1 p.m.; 9 p.m.-mid., | KCRC | 1370 Cuid, Okla. |
|  |  |  |  |  | 11 a.m.,-3 p.m., CST. 1310 Jerome, Ariz. |
|  | p.m. EST. Sask |  | ${ }_{925}^{\text {EST }}$ Havana, Cuba. | KCRJ |  |
| CJGX |  | CMCD |  |  | Silent. |
|  | 1120 Lethibridge, Alta. |  | Noon-3 p.m.; 8 p.m.-mid., EST. 890 Havana, Cuba. | KDB | 1500 Santa Rarbara, Calif. |
| $\begin{aligned} & \mathrm{CJOC} \\ & \mathrm{CJOR} \end{aligned}$ |  | CMCF |  |  |  |
|  | 1210 Vancouver. B. C. |  | 10 a.m. 1 p.m., EST. | KDFN | 1440 Casper. Vy |
|  | 10:30 a.m.-noon; 3-9 p.m., PST. | CMCG | 1395 Havana, Cuba. | KDF |  |
| CJRM CJRW | 665 Moose Jaw, Sask. | CMCH | 1395 Havana, Cuba. | K DKA |  |
|  | 665 Fleming. Sask. |  | ${ }_{630} 63$ H.mavana, Cuba. |  | 10:55 a.m.-mid., EST. |
| CKAC | 730 Montreal, Que. | CMCJ |  | KDLR | 1210 Devils Lake, N. D. |
|  | 1-11 p.m., Es'r. |  | 1395 Havana, Cuba. |  | Silent. |
| $\begin{aligned} & \text { CKCD } \\ & \text { CKCI } \end{aligned}$ | 730 Vancouver, B. C. | CMCN | 925 Havana, Cuba. | KDYL | 1290 Salt Lake City. Utah. <br> 6:30 a.m.-1 a.m. next day, MST. |
|  | 645 Quebec, Que. | CMCO | 660 Havana, Cula. |  |  |
|  | Silent. | CMCQ | 1140 Havana, Cuba. | KECA |  |
| CKCK |  | CMCR | 1345 Havana, Cuba. |  | 1430 Los Angeles, Calif. 9 a m-11 p.m. PST. |
|  | 10 a.m. 4 p.m.; 9 p.m.-nid., MST. | CMCU | 1270 Havana, Cuba. | KELW | 9 a.ra.-11 p.m., PST. <br> 780 Burbank, Calif. |
|  |  | CMCW | 1270 Havana. Cuba. |  | 1200 Bakersfield, Calif. |
| CKCL | 580 Toronto. Ont. 5:15-8 p.m., EST. | CMCY | 1355 Havana, Cuba. <br> 8:30-10:30 p.m., EST'. | KERN |  |


| K EX | 1180 Portland, Ore. | KFSG | 1120 | KGFW | 1310 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| KFAB | 8 a.m.-noon; 1 p.m.-mid., PST. 770 Lincoln, Neb. |  | 10:30 a.m.-12:45 p.m.; 2:30-4:30 | KGFX | 8 a.m. -noon; 2:30-5 p.m., CST. |
|  | $9 \mathrm{a} . \mathrm{mn} .-10: 30 \mathrm{p} . \mathrm{m}$., CST. | KFUL | 1290 Galveston, Texas. | KGGC | ${ }_{1420}^{630} \stackrel{\text { Pierre, }}{\text { San Francisco, Calif. }}$ |
| KFAC | 1300 Los Angeles, Calif. |  | 9:15-10:45 a.m.; 1-6:30 p.m.; | KGGF | 1010 Coffevville, Kans. |
| KFBB | 1280 Great Falls, Mont. |  | 9:30-mid.. CST. |  | 1-5 p.m. CST. |
|  | 9:30 a.m.-1:30 p.m.; 6:30-10 | KFUO | 550 St. Louis, Mo. | KGGM | 1230 Albuquerque, N. M. |
|  | p.m. MST. |  | 8:30 a.m.-12:30 p.mı.; 3-4:30 |  | $10 \mathrm{a} . \mathrm{m} .2 \mathrm{p} . \mathrm{m}$, , MST. |
| KFBI | 1050 Milford, Kins. |  | n.m.: 9:15-10:30 p.rn., CST. | KGHF | 1320 Pueblo, Colo. |
| KFBK | ${ }^{8} 813$ atm, CST. | KFVD | 1000 Los Angeles Calif. |  | 10:30 a.m. $3: 30 \mathrm{p} . \mathrm{m} ., \mathrm{MST}$. |
| KFBL | 1370 Everet. W | KFVS | 1210 Cape Girardeau, Mo. |  | 1200 Little Rock, Ark. |
|  | $6 \mathrm{a} . \mathrm{m} .-1$ p.m. ${ }^{\text {7-9:30 p.m., PST. }}$ |  | 9 a.m.-4 p.m.; 9:30 p.m.-mid., CST. | KGHL | 950 Billings, Mont. <br> 10 a.m.-4 p.m.; 5:30-11 p.m. |
| KFDM | 560 Beaumont, Texas. | KFWB | 950 Los Angeles, Calif. |  | MS'. |
|  | Silent. |  | 8 a.m.-11 p.m., PST. | KGIR | 1360 Butte, Mont. |
| KFDY | 550 Brookings, S. D. | KFWF | 1200 St. Louis, Mo. |  | $9 \mathrm{a} . \mathrm{m} .-\mathrm{mid}$. MST. |
|  | Silent. | KFWl | 930 San Francisco, Calif. | KGIW | 1420 Trinidad, Colo. |
| KFEL | 920 Denver, Colo. |  | 2:30-6 p.ra.; 7:45-9 p.m., PST. | KGIX | 1420 Las Yegas, Nev. |
|  | 10a.m.-7:30 p.m., MST | KFXD | 1200 Nampa, Idaho. |  | Silent. |
| KFEQ | 680 St. Joseph, Mo. |  | 10 a.m.-6:30 p.m., MST. | KGIZ | 1500 Grant City, Mo. |
|  | 11:30 a.m.-7:45 p.m., CST. | KFXF | 920 Denver Colo. | KGKB | 1500 Tyler, Texas. |
| $\mathrm{KFFH}^{\mathrm{KFG}}$ | 1310 Boone. Iowa. | KFXJ | 1310 Grand Junction. Colo. |  | 9:45 a.m.-2 p.m.; 7-9:30 p.m., |
| KFH | 1300 Wichita, Kans |  | $8 \mathrm{a} . \mathrm{m} .-2 \mathrm{p} . \mathrm{m} . ; 6$-9 p.m., MST. |  | CST. |
|  | 8-11 a.m.; 1-7 p.m.; 9-11 p.m., | KFXM | 1210 San Bernardino, Calif. | KGKL | 1370 San Angelo, Te |
| KFI |  |  | 3-6 p.m. PST. |  | 8:45 a.m.-2 p.m.; 7-9:30 p.m., |
|  | 6:30 a.m.-mid., PST. | KFYO | 1310 Oklahoma City, Okla. |  |  |
| KFIO | 1120 Spokane Wash | KFYR | 1310 Lubbock, Texas. | KGKO | 570 Wichita Falls, Texas. |
|  | $8 \mathrm{a} . \mathrm{m}$-sunset. PST. | KFYR | 550 Bismarck. N. D. | KGKX | 1420 Lewiston, Idaho. |
| KFIZ | 1420 Fond du Lac, Wis. | KGA | 1470 | KGKY | 1500 Scottsbluff, Neb. |
|  | Silent. |  | 8 a.m.-mid., PST. | KGMB | 1320 Honolulu, Hawaii. |
| KFJB | 1200 Marshalltowi, Jowa. | KGAR | 1370 Tucson, Ariz. |  | 11 a.m.-noon; 5:45-9:30 p.m. |
| KFJF | 1480 Oklahorna City, Oklit. |  | 11 at.m.-11 p.m., MST. |  |  |
|  | $7 \mathrm{a} . \mathrm{m} .-1 \mathrm{a} . \mathrm{m}$ next day, CST. | KGB | 1330 San Diego, Calif. | KGNF | 1430 North Platte, Neb. |
| KFJ | 1210 Klamath Falls, Ore. |  | 8 a.m.-mid. PST. |  | 10:30 a m.moon; 2-4 p.m. MST. |
|  | ${ }^{9}$ a.m. 970 p.m. PST. ${ }^{\text {a }}$ | KGRU | 900 Ketchikan, Alaska. | KGNO | 1210 Dodge City, Kans. |
| KFJM | 1370 Grand Forks, N. D. | KGBX | 1310 St. Juseph, Mo. |  | $2-3$ p.m., MST. |
| KFJR | ${ }^{9} 1300$ a.m.-9 p.m. $\mathrm{m} . \mathrm{CST}$. |  | 7:30 a.m.-1 p.m.; 3:30-10 p.m., | KGO | 790 San Francisco, Calif. |
|  | Silent. | KGBZ |  |  | 8 a.m.-mid., PST. |
| KFJZ | 1370 Fort Worth, Texas. |  |  | KGRS | 1410 Amarillo, Texas. |
|  | 7:30 a.m.-11 p.m., CST. |  | 4:30-6 p.m.; 7-8:30 p.m., CST. |  | 6-10 a.m.; 11 a.m.-3 p.m.; 5-7:30 <br> p.m. 10 p.m.-mid., CST |
| KFKA | 880 Greeley, Colo. | KGCA | 1270 Decorah, Iowa. | KGU | 750 Honolu |
|  | Silent. |  | 10:45 a.mi.-noon, CST. (Nov.- |  | $9 \text { a.m.'- noon; } 3: 15 \text { p.m. }-10 \text {. }$ |
| KFKU | 1220 Lawrence, Kans. $4-5$ p.m. CST. |  | April). |  | (Zone 5) |
| KFKX | $4-5$ p.m. CST. <br> 1020 Chicago Ill. | KGCR | 1210 Watertown, S. D. | KGVO | 1200 Missoula, Mont. |
| KFLV |  |  | 9 a.m.-2 p.m., Cs 1 |  | 10 a.m. 6 p.m., MST. |
|  | 10 a.m.-2:30 p.m.; 6-9:30 p.m | KGCU | 1240 Mandan. N. D. 10:45 a.m.-12:30 p.m | KGW | 620 Portland. Ore. |
|  | CST. |  | p.m.; 7-9 p.m., CST. | KGY | 1210 Olympia, Wash |
| KFLX | 1370 Galveston, Texas. | KGCX | 1310 Wolf Point. Mont. |  | Silent. |
| KFMX | 1250 Northfield, Minn. |  | 1-2 p.m. MST. | KHJ | 900 I.os Angeles, Calif. |
|  | ${ }_{8} 780 \mathrm{p} . \mathrm{ml}, \mathrm{CST}$. | KGDA | 1370 Mitchell, S. D. |  | 8 a.m.-mid., PST. |
| KFNF | 890 Shenandoah, Iowa. <br> 8-9:30 a.m.; 10:45 a.m.-noon; |  | Silent. 1200 | KHQ | 590 Spokane, Wash. |
|  | 2-8 p.m. CST |  |  |  | $9 \mathrm{am} . \mathrm{m}$. -mid., PST'. |
| KFOR | 1210 Lincoln, Neb. | KGDM | 1100 Stockton. Calif. | KICA | 1370 Clovis, N. M. |
|  | 8-10:15 a.m.; 1:30-3:30 p.m.; |  | 6 a.m.-sunset, P'ST. | KICK | 1420 Red Oak, Iowa. |
|  | 4:30-8 p.m., CS'T. | KGDY | 1200 Huron, S. D. | KID | 1320 Idaho Falls, Idaho. |
| KFOX | 1250 Long Beach. Calif. | KGEK | 1200 Yuma, Colo. |  | $7 \mathrm{a} . \mathrm{m} .10 \mathrm{p} . \mathrm{m} ., \mathrm{MST}$. |
|  | 6 a.m.-miduight. PST. |  | 2-4 p.m., MST. (Oct. 1st). | KIDO | 1350 Boise, Idaho. |
| KFPL | 1310 Dublin, Texas. | KGER | 1360 Long Beach, Calif. |  | 9 a.m. 4 p.m., MST. |
|  | Silent. |  | 7 a.m.-midnight, PST | KIDW | 1420 Lamar, Colo. |
| KFPM | 1310 Greenville. Texas. | KGEW | 1200 Ft. Morgan, Colo. | KIT | 1310 Yakima, Wash |
|  | Silent. 1210 Fort Smith art |  | 11 a.m.-noon, MST. |  | $9 \mathrm{a} . \mathrm{m} .-2$ p.m.; 6:45-10:30 p.m.. |
| KFPW | 1210 Fort Smith, Ark. | KGEZ | 1310 Kalispell, Mont. |  | PST. |
|  | 10 a.m. 2 p.m.; 5-10:30 p.m., |  | 8 a.mn.-9 p.m., MST'. | K JBS | 1070 San Francisco, Calif. |
| KFPY | 1340 Spokane | KGFF | 1420 Shawnee, Okla |  | Mid. to local sunset, PST. |
|  | 9 a.m.-rnid., PST. | KGFC | $10: 15$ a.m. 9 p.m., CST. | KJR | 970 Seattle, Wash. |
| KFQD | 1230 Anchorage, Alaska. | KGFI | 1500 Corpus Christi, Texas | KLCN | 1290 Riythevill |
|  | 5-7 p.m. (Zone 6) |  | 8:30-9:30 a m. ${ }^{\text {a }}$ I1 a m.moon; | KLO |  |
| KFRC | 610 San Francisco, Calif. |  | 8-9 p.m., CST. |  | $9 \mathrm{a} . \mathrm{m} .-10: 30 \mathrm{p} . \mathrm{m}$. |
|  | 8 a.m.-mild., PST. | KGFJ | 1200 Los Angeles, Calif. | KLPM |  |
| KFRU | 630 Columbia, M |  | 24 hours daily. |  |  |
|  | 7:30 a.m.-noon; 4:45-5:30 p.m., | KGFK | 1500 Moorhead, Minn. |  | 9-11:45 a.m.; 1:30-2:30 p.m.; 5-8 p.m., CST. |
| KFSD | CSI. |  | 9 a.m. 9 p.m., CsT. | KLRA |  |
| KFSD | 600 San Dicgo, Calif. | KGFL | 1370 Santa Fe, N. M. |  | 8-11 am. 1-5 m. 6:30-11 |
|  | 8 a.m.-11 p.m., PST. |  | Noon-2 p.m., MST. |  | p.m., CST. |



WAIU 640 Columbus, Ohio.
8 a.m.-local sunstt. EST
WALR 1210 Zanesville, Ohio. 10 a.m.-10 p.m.. ES'T.
WAPI 1140 Birmingham, Ala
9 a.m. $7: 45$ p.m.; 8:15 p.m.mid. CST
WASH 1270 Grand Rapids, Mich. 9 a.m.-11 p.m., CST.
WAWZ 1350 Zarephath, N. J. 6-9 a.m.; 11 a.m.-12:30 p.m.; 3-4:30 p.m.; 7:30-9 p.m., EST.
WBAA 1400 Lafayette, Ind. Silent.
WBAK 1430 Harrisburg, Pa. Silent.
WBAL 1060 Baltinore, Md. 7 a.m.-mid., EST.
WBAP 800 Fort Worth, Texas.
10 a.m.-noon; 3-6 p.m.; 9:30mid. CST.
WBAX 1210 Wilkes Barre, Pa. 1-11 p.m., EST.
WBBC 1400 Brooklyn, N. Y.
WBBL 1210 Richmond, Va.
WBBM 770 Chicago. Ill.
8:45 a.m. 10 p.m.; 11:30 p.m.2 a.m., CST.
WBBR 1300 Brooklyn, N. Y.
8-11 a.m.; 3-8 p.m., EST
WBBZ 1200 Ponca City, Okla.
7 a.m. 7 j.m. CST.
WBCM 1410 Bay City. Mich.
WBEN 900 Buffalo, N. Y.
9 a.m.-mid., EST.
WBEO 1310 Marquette, Mich.
WBHS 1200 Muntsville. Ala.
WBIG 1440 Greensboro, N. C.
$9: 45$ a.m. 10 p.m., EST.
WBMS 1450 Hackeusack, N. J.
Noon-2 p.ra.; 5:45-7:30 p.m., EST.
WBNX 1350 New York City.
12:30-3 p.m. $4: 30-6$ p.m., EST.
WBOQ 860 New York City.
WBOW 1310 Terre Haute, Ind. 9 : $2 . \mathrm{m} .-11$ p.m., CST.
WBRC 930 Birmingham, Ala. 10 a.m.-11:30 p.m.. CST.
WBRE 1310 Wiikes Barre. Pa.
WBSO 920 Babson l'ark, Mass.
WBT 1080 Charloite, N. C.
8 a.m.-mid., EST.
WBTM 1370 Danville Va.
WBZ 990 Boston, Mass.
10 a.m.-mid., EST.
WBZA 990 Springfield, Mass
10 a.m.-mid. EST.
WCAC 600 Storis, Corin
Silent.
WCAD 1220 Canton, N. Y. Silent.
WCAE 1220 Pittsburgh. Pa .
10:30 a.m.-mid., ESTT.
WCAH 1430 Colurnhus, Ohio.
8 a.m.-mid., Es'T.
WCAJ 590 Lincoln. Neb.
8:30-9 a.m.; 11 a.m.-12:30 p.m.; 6-7 D.m.. CST
WCAL 1250 Northfield. Minn.
8:15-9:30 a.m.; 3-4 p.m., CST.
WCAM 1280 Camden, N. J.
10:15 ª.1n.-12:30 p.m.; 3-5 p.m., EST.
WCAO 600 Baltimore, Md.
9 a.m.-mid., EST.
WCAP 1280 Asbury Park, N. J. 9-10:15 a-m.; 8-9 p.m., EST.

WCAT 1200 Rapid City, S. D.
WCAU 1170 Philudelphia, Pa.
9 a.m.-1 a.m., EST.
WCAX 1200 Burhngton, V't.
WCAZ 1070 Carthage, Ill. Silent.
WCBA 1440 Allentown Pa .
10 a.m.-noon; 5:30-11:30 p.m.,
WCBD 1080 Zion, Ill.
6-11 a.m.; 3:30-local sunset, CST.
WCBM 1370 Baltimore, Md. 9:30 a.m.-11 p.m., EST.
WCBS 1210 Springfield, Ill.
10:45 a.m. -2 p.m.; 7-i:30 m.m., CST.
wCCO 810 Minneapolis, Minn.
9 a.m.-11 p.m., CST.
WCDA 1350 New York City.
WCFL 970 Chicago. Ill.
8 a m.-mid. CST.
WCGU 1400 Brooklyn. N. Y. 10:30 a.m.-noon; 7-9 p.m.. EST.
WCKY 1490 Covington, Ky.
11 a.m.-mid. CST.
WCLO 1200 Janesrille Wis.
10 a.m.-noon, CST.
WCLS 1310 Joliet, III.
9 a.m.-2 p.rn.; 6-8 p.m., CST.
WCMA 1400 Culver, Ind.
6:30-9:30 a.m.; 10:30 p.m.-mid., CST.
WCOA 1340 Pensacola, Fla .
10:30 a.m.-3 p.m., CST.
WCOC 880 Meridian. Misa
9:30 a.m.-3:30 p.m.; 5-11 p.m., Cs'T.
WCOD 1200 Harrishurg, Pa .
2nd and 4th Sundays, 11 a.m.noon; other Sundays 12:157:15 p.m., EST.
WCRW 1210 Chicago III.
11:30 a.m.-1:30 p.m.; 6-7 p.m.; 9-10 p.m.. CST.
WCSC 1360 Charleston, S. C.
WCSH 940 Portland, Maine.
10:30 a.m.-noon; 1-11:25 p.m., EST.
WDAE 1220 Tarapa, Fla.
8 a.m.-mid., EST.
WDAF 610 Kansas City, Mo.
8 a.m.-11 p.m., CST.
WDAG 1410 Anarillo. Texiss. 10-11 a.m.: 3-5 p.m.; 7:30-10 p.m., CST.

WDAH 1310 El Paso, Texas.
WDAS 1370 Philadelphia. Pa.
9 a.m. 10:30 p.m., EST.
WDAY 940 Fargo, N. D.
8 a.m.-11 p.m., CST.
WDBJ 930 lioanoke. $V$ a.
8 a.m.-mid., EST.
WDBO 580 Orlando, Fla. 7 a.m.-mid., EST.
WDEL 1120 Wilmington, Del. 10:30 a.m.-1:30 p.m.; 6-10 p.m., EST.
WDEV 550 Waterbury, Vt. 10:30 a.m.-noon, EST.
WDGY 1180 Minneapolis, Minn. 6:30 a.m.-8:15 p.m., CST.
WDOD 1280 Chattanooga, Tenn. 7 a.m. -11 p.m., CST.
WDRC 1330 Hartford, Conn. 10 a.m.-mid., EST.
WDSU 1250 New Orleans, La. 7 a.m.-11:45 p.m., CST.

WDZ 1070 Tuscola, III.
9 a.m.-5 p.m. CST.
WEAF 660 New York City.
8 a.m.-1 a.m., EST.
WEAI 1270 Ithaca, N. Y.
Variable.
WEAN 780 Providence, R. I.
8 a.m. 1 a.m., EST.
WEAO 570 Columbus, Ohio.
WEBC ${ }^{\text {Silent. }} 1290$ Superior, Wis.
WEBQ 1210 Harrisburg. Ill.
6-9 a.m.; - 4-9:30 p.m., CST
WEBR 1310 Buffalo, N. Y.
10 a.m. 1 a.m., EST.
WEDC 1210 Chicago, III.
WEEI 590 Boston, Mass
10 a.m.-11:30 p.m., EST.
WEEU 830 Reading, Pa.
10 a.m. $7: 30$ p.m.. EST.
WEHC 1350 Emory, $V$ a.
8:30-9 atm.; 11 a.m.-noon; 2:303:30 p.m., EST.
WEHS 1420 Cicero. III.
4-8 p.m. CST.
WELL I420 Battle Creek, Mich.
WENC 1420 Anjericus, Ga.
9 a.m.-1 p.m.; 5-local sunset. EST.
WENR 870 Chicago, III.
8 a.m. $-12: 30$ p.m. $: 3: 30-6$ p.m.; 8 p.m.-1 a.m., CST.
WERE 1420 Erie. Pa.
11 a.m.-2:30 p.m.; 5:30-10:30 p.m. EST.

WESG 1370 Glens Falls, N. Y
WEVD 1300 New York City.
11 a.m.-3 p.m.; 8-9 p.m.; 10-11 p.ra., EST.

WEW 760 St. Louis, Mo.
9:30 a.m.-5:30 p.m.. CST.
WEXI. 1310 Royal Oak, Mich.
9 a.m.-9 p.in., EST.
WFAA 800 Dallas, Texas.
7:30-10 a.m.; noon-3 p.m.; 69:30 p.m., CST.
WFAB 1300 New York City.
WFAM 1200 South Bend. Ind.
WFAN 610 Philadelphia, Pa.
9 a.m.-mid., EST.
WFAS 1210 White Plains, N. Y.
6-9 p.m., EST.
WFBE 1200 Cincinnati, Ohio.
8 a.m.-11 p.m.. EST.
WFBG 1310 Altoona, Pa.
10:30 a.m.-12:30 p.m.; 2:30-4:30 p.m.; 6:15-11 p.m., EST.

WFBL 1360 Syracuse, N. Y.
8 a m.-mid. EST.
WFBM 1230 Indianapolis .Ind.

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\text { 7:30-10:30 a.m.; } 1 \text { p.m.-mid., }
$$ CST.

WFBR 1270 Baltimore, Md.
9 a.m.-mid., EST.
WFDF 1310 Flint, Mich.
6-11 p.m. CST.
WFDV 1500 Rome, Ga.
9 a.mn.-3 p.m.; 6-9 p.m., CST.
WFDW 1420 Anniston. Ala.
10 a.m.-12:30 p.m. ; 5-10 p.m. CST.
WFEA 1430 Manchester, N. H.
9 a.m.-11 p.m., EST.
WFI 560 Philadelphia, Pa.
1-2 p.m.; 4:30-6 p.m.; 9-mid., EST

WFIW 940 Hopkinsville, Ky.
7 a.m.-noon; 12:30-4 p.m.; 5mid., CST.
WFLA 620 Ciearwater, Fla.
8 a.m.-mid. EST.
WFOX 1400 Brooklyn, N. Y.
WGAL 1310 Lancaster, Pa.
8-9:30 a.m., EST.
WGAR 1450 Cleveland, Ohio.
7 a.m.-1 a.m., EST.
WGBB 1210 lirceport, N. Y.
WGBF 630 Evansville, Ind.
9:30 a.m. 4 p.m.; 6-11 p.m., CST.
WGBI 880 Scranton, Pa .
12:01-2 a.m., EST.
WGCM 1210 Gulfport, Miss.
11 a.m.-12:30 p.m.; 3-6 p.m., CST.
WGCP 1250 Newark, N. J.
7:30-10 a.m.; 12:30-6:30 p.m.; $9-$ mid. EST.
WGES 1360 Chicago. Iil
8-10:30 a.m.; 11:45 a.m.-1 p.m.; 6:15-8 p.m.; 11 p.m.-2 a.m., CST:
WGH 1310 Newport News. Va
10 t.m.-5 p.m.; 6-10 p.m., EST.
WGL 1370 Fort Wayne, Ind.
1:30 p.m.-mid., CST'.
WGN 720 Chicago, Ill.
9 a.m.-1:30 a.m., CST.
WGR 550 Buffalo, N. Y.
9 a.m.-1 a.m., EST.
WGST 890 Atlanta, Gia.
wGY $\quad 7$ a.m.-mid., EST. 790 Schenectady, N. Y.
8 a.m.-1 a.m., EST.
WHA 940 Madison. Wis.
Silent.
WHAD 1120 Milwaukee, Wis.
9:30-10:15 a.m.; 4-5 p.m., CST.
WHAM 1150 Rochester. N. Y.
11 a.m.-mid., EST.
WHAS 820 Louisville, Ky.
7 a.m.-mid., CST.
WHAT 1310 I'biladelphia, Pa .
WHAZ 1300 Troy, N. Y.
Silent.
WHB 860 Kansas City, Mo.
6 a.m.-6:30 p.m.. CST.
WHBC 1260 Canton, Ohio.
2:15-3 p.m., EST.
WHBD 1370 Mt. Orab, Ohio.
7-11 a.m.; noon-5 p.m.; 6-9 p.m., EST.

WHBF 1210 Rock Island, Ill.
Silent.
WHBL 1410 Sheboygan, Wis. 9-10 a.m., CST.
WHBQ 1370 Memphis, Tenn. 10:30 a.m. -9 p.m., CST.
WHBU 1310 Anderson, Ind.
8:15 a.m.-9 p.m., CST.
WHBY 1200 Green Bay, Wis.
10 a.m.-9 p.m., CST.
WHDF 1370 Calumet. Mieh.
10:30 a.m. -3 p.m.; 5-8:15 p.m., CST.
WHDH 830 Boston, Mass.
WHDL 1420 Tupper Lahc, N. Y.
11:15 a.m.-2:15 p.m., EST.
WHEB 740 Portsmouth, N. H. 10 a.m.-noon; 2-5 p.m., EST.
WHEC 1430 Rochester, N. Y. 8 a.m.-mid., LST.
WHEF 1500 Kosciusko, Miss.
WHET 1210 Troy, Ala.
9 a.m.-noon; 2-4 p.m., CST.

WHFC 1420 Cicero, Ill.
8 a.m. -4 p.m.; 8 p.m.- 1 a.m. CST.
WHIS 1410 Bluefield, W. Va.
9-1:40 a.m.; noon-3 p.m., EST.
WHK 1390 Cleveland, Ohio.
8 a m.-mid., EST'.
WHN 1010 New York City.
WHO 1000 Des Moines, Iowa.
WHOM 1450 Jersey City, N. J.
10:30 a.m.-noont 2-5:45 p.m., 9:30-mid., EST.
WHP 1430 Harrisburg, Pa.
9 a.m.-1 a.m. EST.
WIAS 1310 Ottumwa, Ioxa.
10 a.m.-2:30 p.m.; $5-7$ p.m., CST.
WIBA 1280 Madison, Wis.
9 a.m. $-11: 30$ p.m.. CST.
WIBG 930 Glenside, Pa .
Daybreak to sunset, EST.
WIBM 1370 Jackson, Mich.
9 a.m.-2:30 p.m., СST.
WIBO 560 Chicago. Ill.
7:30-10 a.m.; 12:30-7 p.m., CST.
WIBU 1210 Poynette, Wis.
WIBW 580 Topeka, Kans.
8 a.m.-11 p.m., CST.
WIBX 1200 Utica, N. Y.
WICC 600 Bridgeport. Conn.
9:30 a.m. 11:30 p.w., EST.
WIL 1200 St. Louis, Mo.
11 a.m.-6 p.m.; 8 p.m.-mid., CST.
WILL 890 Úrbana, Ill.
9:30-10:30 a.m., CST.
WILM 1420 Wilmington, Del.
9 a.m.-noon; 6-10 p.m., EST.
WINS 1180 New York City.
8 a.m.-10:15 p.m., EST.
WIOD 1300 Miami, Fla.
WIP 610 Philadelphia, Pa .
9 a.m.-mid., EST.
WIS 1010 Columbia. S. C.
10 a.m.-noon; 5:30-11 p.m., EST.
WISN 1120 Milwaukee, Wis.
8:30 a.m. -4 p.m.; 5 p.m.-mid, CST.
WJAC 1310 Johnstown. Pa.
4:30-6:15 p.m., EST.
WJAG 1060 Norfolk, Neb.
10:15 a.m. $-3: 30$ p.m.. CST.
WJAK 1310 Elkhart, Ind.
4:30 p.m., mid., CST.
WJAR 890 Providence, R.I.
11 a.m.-mid., EST.
WJAS 1290 Pittsburgh, Pa .
9 a.m.-11:30 p.m., EST.
WJAX 900 Jacksonville. Fla.
9:15-10:15 a.m., EST.
WJAY 610 Cleveland, Ohio.
WJBC 1200 LaSalle, Ill.
9:45-10:45 a.m., CST.
WJBI 1210 Red Bank. N. J.
Silent.
WJBK 1370 Detroit, Mich.
7 a.m.-11 p.m., EST.
WJBL 1200 Decatur, Ill.
8:45-9:45 a.m.; 10:45 a.m.-noon; 6-9:30 p.m.. CST.
WJBO 1420 New Orleans, La.
WJBU 1210 Lewisburg, Pa .
8 a.m.-1 p.m., EST.
WJBW 1200 New Orleans, La.
8-10 a.m.; 1-5 p.m.; 9 p.m.-mid., CST.
WJBY 1210 Gadsden, Ala.

WJDX 1270 Jackson. Miss.
12:30-10 p.m., CST.
WJED 600 Indianapolis, Ind.
WJEJ 1210 Lagerstown, Md.
WJJD 1130 Chicago, IIl. 6 a.m.-8:30 p.m., CST.
WJKS 1360 Gary, Ind.
10:30-11:45 а.пи.; 1-6:15 p.m.; 8-11 p.mn., CST.
WJMS 1420 Ironwood, Mich.
WJR ${ }^{9}$ a.m.-7: 55 m. m . CST
8 a.m.-1 a.m., EST.
WJSV 1460 Washington, D. C.
7:30 a.m.-1 a.m., EST.
WJTL 1370 Athanta, Ga.
WJW 1210 Mansfield, Ohio.
10:15 a.m.-noon; 6:30-9 p.m., EST.
WJZ $\quad 760$ New York City.
8 :a, 1n. -1 a.m., EST.
WKAQ 1240 San Juan P. R.
WKAR 1040 East lansing, Mich. Silent.
WKAV 1310 Laconia, N. H.
9 a.m.-1 p.m.; $3-8$ p.m., EST.
WKBB 1310 Joliet. IIt. $2-6$ p.m.. CST.
WKBC 1310 Birningham. Ala,
WKBF 1400 Indianapolis, Ind. !:30 a.m. $10: 30$ p.m., CST.
WKBH 1380 LaCrosse, Wis.
9 a.m.-10 p.m., CS'T.
WKBI 1420 Cicero, ill. Silent.
WKBN 570 Youngstown, Ohio. 9 a.m.-mid. EST.
WKBS 1310 Galesburg, Ill.
WKBV 1500 Connersville, Ind. Silent.
WKBW 1480 Buffalo, N. Y.
9:30 a.m.-11 p.m., EST.
WKBZ 1500 Ludington, Mich. Silent.
WKFI 1210 Greenville, Miss.
WKJC 1200 Lancaster Pa.
Occasional church services.
WKRC 550 Cincinnati, Ohio. 6:45 a.m.-mid., EST.
WKY 900 Oklahorna City, Okla.
8 a.m.-11 p.m., CST.
wKzo 590 Kalamazoo, Mich.
9 a.m.-8:15 p.m., CST.
WLAC 1470 Nashville, Tenn. 7 a.m.- 11 p.m., CST.
WLAP 1200 Louisville, Ky.
WLB $\quad 1250$ Minneapolis, Minn. Silent.
WLBC 1310 Muncie, Ind.
7 a.m. $-4: 30 \mathrm{p} . \mathrm{m} .$, CST.
WLBF 1420 Kansas City, Kans. 9 a.m. 10 p.m., CST.
WLBL 900 Stevens Point, Wis. Silent.
WLBW 1260 Oil City, Pa. 10 a.m. 1 a a.m., EST.
WLBZ 620 Bangor, Maine.
WLEY 1370 Lexington, Mass.
12:30-1:30 p.m., EST.
WLIT 560 Philadelphia, Pa.
2-4:30 p.m.; 6-9 p.m.; mid.-1 a.m.. EST.

WLOE 1500 Boston, Mass.
WLS 870 Chicago, Ill.
12:30-3:30 p.m.; 6-8 p.m., CST.
WLTH 1400 Brooklyn, N. Y.
1:30-4:30 p.m.; 10:30 p.m.-1:30 a.m., EST.

WLVA 1370 Lynchburg, Va.
11 a.m.-3 p.m., EST.
WLW 700 Cincinnati, Ohio.
8a.m.-12:30 a.m., EST.
WLWL 1100 New York City.
WMAC 570 Syracuse, N. Y.
WMAL 630 Washington, D. C
9 a.m.-mid., EST.
WMAQ 670 Chicago, Ill.
9 a.m.-11 p.m.; mid.-1 a.m.,
WMAS 1420 Springfield, Mass
WMAZ 1180 Maron, Ga.
10 a.m.-3:30 p.m., EST.
WMBC 1420 Detroit. Mich.
10:30 a.m.-mid. EST.
WMBD 1440 Peoria, Ill.
8 a.m.-noon; 1:30-3:30 p.m.; 8:30-mid.. CST.
WMBG 1210 Richmond, Va.
Silent.
WMBH 1420 Joplin, Mo.
WMBI 1080 Chicago, Ill.
4-5 p.m. CST.
WMBO 1310 Auburn, N. Y.
10:45-11:30 a.m.; 2-9 p.m., EST.
WMBQ 1500 Brooklyn, N. Y.
WMBR 1370 Tampa, Fla.
6:45 a.m.-1 p.m., EST.
WMC 780 Memphis, Tenn
8 a.m.-11 p.m., CST.
WMCA 570 New York City.
9 a.m.-2 a.m., EST.
WMIL 1500 Brooklyn, N. Y.
9 a.m.-2:30 a.m., EST.
WMMN 890 Fairmont, W. Va.
10 a.m.-9 p.m., EST.
WMPC 1500 Lapeer, Mich.
10 a.m.-2 p.m.: 3:30-6 p.m.; 7:30-11 p.m., EST.
WMRJ 1210 Jamaica, N. Y.
9 p.m.-mid., EST.
WMSG 1350 New York City. Silent.
WMT 600 Waterloo, Iowa.
7 a.m.-11 p.m., CST.
WNAC 1230 Boston, Mass.
8 a.m.-1 a.m., EST.
WNAD 1010 Norman, Okla.
Silent.
WNAX 570 Yankton, S. D.
8 a.m.-mid. CST.
WNBF 1500 Binghamton, N. Y.
II a.m.-noon; 6-9 p.m. EST.
WNBH 1310 New Bedford Mass.
10 a.m.-10:15 p.m., EST.
WNBO 1200 Silverhaven, Pa.
9 a.m.-noon; 3-6 p.m.; 9 p.m.mid., EST.
WNBR 1430 Memphis, Tenn.
9:30 a.m.-1 p.m.; 5-9 p.m.. CST.
WNBW 1200 Carbondale, Pa.
WNBX 1200 Springfield, Vt. Silent.
WNBZ 1290 Saranac Lake, N. Y.
WNJ 1450 Nerrark, N. J.
7:45-10:30 a.m.; 7:30-9:30 p.m., EST.
WNOX 560 Knoxville, Tenn. 9 a.m.-11 p.m., CST.
WNYC 570 New York City. Silent.
WOAI 1190 San Antonio, Texas. 11 a.m.-4:30 p.m.; 6:15-9:15 p.m. CST.

WOAX 1280 Trenton. N.J. 12:30-3 p.m.; 5-8 p.m.; 9 p.m.mid., EST.

WOBU 580 Charleston, W. Va.
3-7:30 p.m., EST.
WOC 1000 Davenport, Iowa.
9 a.m.-11 p.m.. CST.
WOCL 1210 Jamestown, N. Y.
11 a.m.-11 p.m., EST.
WODA 1250 Paterson, N.J.
WODX 1410 Mobile, Ala.
10 a.m.- $9 \mathrm{p} . \mathrm{m} .$, CST.
WOI 640 Ames, Iowa.
Silent.
WOKO 1430 Albany, N. Y.
wol 9 a.m.-1 a.m. EST.
WOL 1310 Washington, D. C.
10 a.m. 3 p.m., EST.
WOMT 1210 Manitowoc, Wis. Silent.
WOOD 1270 Grand Rapids, Mich.
9 a.m.-11 p.m., CST.
WOPI 1500 Bristol, Tenn.
10 a.m.-2 p.m.; 5-9 p.m., EST.
WOQ 1300 Kansas City, Mo.

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\text { 7-8 a.m.; } 10 \text { a.m. }-1 \text { p.m. } ; 7-9
$$ p.m.; 11 p.m.-mid., CST.

WOR 710 Newark, N. J. 6:45 a.m.-mid., ES'T.
WORC 1200 Worcester, Mass.
9 a.m.-11 p.m., DST.
WORK 1000 York, Pa.
WOS $\quad$ 630 J.m.-local sunset, EST.
wov 630 Jefferson City, Mo.
WOW 1130 New York City
790 Omaha, Neb.
7:30-8:30 a.m.; 9-11 a.m.; 12:306 p.m.; 7-11:30 p.m., CST.
WOWO 1160 Fort Wayne. Ind.
7:30 a.m.-7:45 p.m.; 9:15 p.m.mid., CST.
WPAD 1420 Paducah, Ky.
7-9 a.m.; 10 a.m.-2 p.m.; 310:30 p.m., CST.
WPAP 1010 New York City.
WPAW 1210 Providence. R. I.
WPCC 560 Chicago, Ill.
10 a.m.-12:30 p.m.; 7 p.m.-mid., CST.
WPCH 810 New York City.
8 a.m.-7:30 p.m., EST.
WPEN 1500 Philadelphia, Pa.
7:30 a.m.-10:30 p.m.. EST.
WPFB 1370 Hattiesburg, Miss.
WPG 1100 Atlantic City, N. J.
9 a.m.-3:15 p.m.; 6-8 p.m.; 9:15 p.m.-1 a.m., EST.

WPHR 1200 Petersburg, ${ }^{2}$ a.
10:45 a.m.-1:30 p.m.; 5-9 p.m., EST.
WPOR 780 Norfolk, Va.
WPRO 1210 Providence, R. I.
WPSC 1230 State College, Pa.
10:55 a.m.-1 2:10 p.m., EST.
WPTF 680 Raleigh, N. C.
10:30 a.m.-9:15 p.m., EST.
WQAM 560 Miami, Fla.
8 a.m.-mid., EST.
WQAN 880 Scranton, Pa .
Silent.
WQAO 1010 New York City.
WQBC 1360 Vicksburg, Miss.
10 a.m. -9 p.m. CST.
WQDM 1370 St. Albans, V't.
WQDX 1210 Thomasville, Ga.
WRAK 1370 Williamsport, Pa.
$10: 30$ a.m.-noon; 4-5 p.m.; 7:15-10:30 p.m. EST.
WRAM 1370 Wilmington, N. C.
10 a.m.-noon; 7-9 p.m., EST.

WRAX 1020 Philadelphia, Pa.
8 a.m.-local sunset, EST.
WRBL 1200 Columbus, Ga.
WRBX 1410 Roanoke, $\mathrm{V}_{\mathrm{a}}$.
WRC 950 Washington, D. C.
WRDO 1370 Augusta, Maine. 6-10 p.m., EST'.
WRDW 1500 Angusta, Ga.
WREC 600 Memphis, Tenn.
WREN 1220 Lawrence, Kans. 7 a.m.-mid, CST.
WRHM 1250 Minneapolis, Minn. 9:30 a.m.-3 p.m.; 4-7 p.m.; 8 p.m.-1 a.m.. CST.

WRJN 1370 Racine, Wis.
9 a.m. $-10: 30$ p.m., CST.
WRNY 1010 New York City.
WROL 1310 Knoxville, Tenn. 4-9 p.m. CST.
WRR 1280 Dallas, Texas. 7 a.m.-11 p.m., CST.
WRUF 830 Gainesville, Fla. 9 a.m.-8:15 p.m. EST.
WRVA 1110 Kichmond, Va. 10 a.m.-11:15 p.m., EST.
WSAI 1330 Cincinnati, Ohio.
12:30-11 p.m., EST.
WSAJ 1310 Grove City, Pa. 4:30-5 p.m., EST.
WSAN 1440 Allentown, Pa.
WSAR 1450 Fall River, Mass.
Silent.
WSAZ 580 Huntington, W. Va.
7:30 p.m.-1 a.m., EST.
WSB $\quad 740$ Atlanta, Ga.
6:55 a.m.-11:30 p.m., EST.
WSBC 1210 Chicago, III.
WSBT 1230 South Bend, Ind.
WSEN 1210 Columbus, Ohio.
10 a.m.-11 p.m., EST.
WSFA 1410 Montgomery, Ala. 7:30 a.m.-local sunset; 9-11:30 p.m. CST.

WSIX 1210 Springfield, Tenn.
WSJS 1310 Winston-Salem, N. C.
8 a.m.-mid., EST.
WSM 650 Nashville, Tenn.
9:30 a.m. -11 p.m., CST.
WSMB 1320 New Orleans, La.
7 a.m.-mid., CST.
WSMK 1380 Dayton, Ohio.
8 a.m.-mid., EST.
WSOC 1210 Gastonia, N. C.
9:30 a.m. $-9: 30$ p.m., EST.
WSPA 1420 Spartanburg, S, C.
7:30 a.m.-10 p.m., EST.
WSPD 1340 Toledo, Ohio.
WSUI 8 a.m.-mid., EST.
WSUI 880 Iows City, Iowa.
WSUN 6-7 p.m.; 9:15-9:45 p.m., CST.
WSUN 620 St. Petersburg, Fla
WSVS 8 a.m.-mid., EST.
WSYB 3500 Buffalo, N. Y
wSYR 10-11 a.m., EST.
WSYR 570 Syracuse, N. Y.
11 a.m.-10 p.m. EST.
WTAD 1440 Quincy, Ill.
Noon-1:30 p.m.; 3:30-8:30 p.m., CST.
WTAG 580 Worcester, Mass.
10:45 a.m.-11:15 p.m., EST.
WTAM 1070 Cleveland, Ohio.
6:59 a.m.-1 a.m., EST.
WTAQ 1330 Eau Claire, Wis.
8 a.m. 6 p.m., CST.
WTAR 780 Norfolk, Fa .
8 a.m.-mid., EST.
WTAW 1120 College Station, Texas.

WTAX 1210 Springfield Ill
WTBO 1420 Cumed 10:30 a.m. 12:30 p.m. ES'
WTEL 1310 Pbiladelphia, Pa 12:30-3 p.m.; 5-8 p.m., EST.
WTFI 1450 Athens, Ga
8 a.m.-5 p.m.; 7:45-9:30 p.m., EST
WTIC 1060 Hartford, Conn.
7:30 p.m.-mid., EST.
WT JS 1310 Jackson, Tenn. 8:45 a.m.-noon; 1-3:15 p.m. CST.
WTMJ 620 Milwaukee, Wis. 8 a.m.-12:30 a.m., CST.
WTOC 1260 Savannah, Ga 8 a.m.-mid., EST.
WTSL 1310 Laurel, Miss
WWAE 1200 Hammond, Ind.
WWJ 920 Detroit, Mich. 8 a.m.-mid., EST.
WWL 850 New Orleans, La. 10 a.m.-7:45 p.m., CST.
WWNC 570 Asheville, N. C. 7 a.m.-mid., CST.
WWRL 1500 Woodside, N. Y. $1-6$ p.m., EST.
WWSW 1500 Pittsburgh, Pa. 9:30 a.m.-10:45 p.m.. EST
WWVA 1160 Wheeling, W. Va. 7:45 a.m.-9 p.m., EST.
WXYZ 1240 Detroit. Mich.
XEA 1155 Guadalajara, Mex. 11 a.m.-noon; 2-3 p.m.; 5-11 p.m., CS'I.

XEB 1030 Mexico City, Mex 8 a.m.-mid. CST.
XEC 1000 Toluca, Mex. XET

XED 965 Reynosa, Mex.
XEE 1000 Oaxaco, Mex.
XEF 735 Villa Acuna, Mex. 24 hours daily.
XEFA 1250 Mexico City, Mex.
1315 Monterrey, Mex.
8 a.m.-3 p.m., CST.
XEFC 1050 Merida, Mex.
XEFD 845 Tijuana, Mex.
XEFE 1000 Laredo, Mex.
XEFI 1000 Chihuahua, Mex.
XEFS 1000 Queretaro, Mex.
Silent.
XEFZ 1370 Coyoacan, Mex.
8-10 p.in., CST
XEG 1070 Mexico City, Mex
XEH 1132 Monterrey, Mex.
10 a.m.-12:30 p.m., CST.
1310 Morelia, Mex.
8:30-10 1.m., CST.
EEJ 1000 Juarez, Mex
9 a.m. 4 p.m.; 6-11 p.m., CST
MEK 990 Mexico City, Mex.
XEL 1000 Saltillo, Mex.
10 a.m.-1:30 p.m., CST
XEM 1300 Tampico, Mex.
XEN 711 Mexico City, Mex.
g-10 a.m.; 1-3 p.m.; 7 p.m.-mid. $\mathrm{CS}^{\prime} \mathrm{T}$.
XEO 940 Mexico City, Mex
XEP 1400 Jaredo, Mex
XEQ 750 Juarez, Mex.
9 a.m.-2 p.m.; 5-11 p.m., MST.
735 Villa Acuna, Mex.
24 hours daily.
XeS 1055 Tampico, Mex.
Noon-2 p.m., CST.

XET
XETA
XETB
XETC
XETF

690 Monterrev. Mex.
9 a.m.-2 p.m.; 6-10 p.m., CST
1149 Mexico City, Mex.
1380 Torrcon, Mex
1000 Jalapa, Mex.
630 Veracruz. Mex.
7-8 a.m.; noon-3 p.m.; 8-11 p.m., CST
XETG 1000 Torreon, Mex.
XETQ 1230 Mexico City, Mex.
XETR 610 Mexico City, Mex.
XEU 1007 Veracruz, Mex.
$7-8$ a.m.; nootı-4 ן.m.; 8 p.m.* mid CST.
XEV 1000 Puebla, Mex.
XEW 910 Mexico City, Mex.
XEX 1210 Mexico City, Mex.
XEY 1000 Merida, Mex.
XEZ 780 Mexico City, Mex.
XFC 810 Aguascalientes, Mex.
XFF 875 Chihuahua, Mex.
XFG 683.3 Mexico City, Mex.
XFX 867 Mexico City. Mex.
10-AB 1200 Moose Jaw, Sask.
10-AK 1200 Stratford, Ont.
Silent.
10-AT 1155 Trail, B. C.
10-BI 1200 Prince Albert, Sask.
3-4 p.m. ; 7-8:30 p.m. MST.
10-BP 1199 Wingham, Ont.
10:30 a.m.-noon; 4:15-5:15 p.m.; 6:45-8:20 p.m.. EST'.
10-BQ 1200 Brantford, Ont.
11 m.m.-12:30 p.m.; 1:30-2 p.m.;
7-8:30 р.m., EST.
10-BU 1200 Canora, Sask.

## The Foreign Short Wave Stations

With Frequencies in Megacyeles, Wave Lengths in Meters and Power in Waits. Letters in parentheses are the calls assigned to the country by international agreement. Data in parentheses followed by a question-mark is conflicting information froin other authorities. The help of our readers is urgently requested in checking these discrepancies, not from other lists but from letters from the stations in question. The zone given is for use with the RADEX Time Converter. It also indicates the location on the RADEX World Map. (Note: A megacycle is a thousand kilocycles; thus 3.750 megs. equal 3750 kilocycles.)



BELGIUM, Europe (ONA-OTZ) Zone 26
Brussels
ORG 9.598 15.62 Tesis 11-11:30 a.m., LST.
ORK $10.340 \quad 28.99$ Pbones OPM 2-4, 9-11 a.m., 3-6 p.m., EST.

BERMUDA, North America (VPA-VSZ, ZBA-ZJZ) Zone 18 Hamilton

VRT-ZFA $5.045 \quad 59.42$ Phones WNB - GMBJ nights.
$9.500 \quad 31.56$
VRT-ZFB $10.060 \quad 29.80$ Phones WNB daytime.
BRAZIL, South America (PPA-PYZ) Zones $18-20$
Porto Alegre
PRAG $8.450 \quad 35.48 \quad 8: 30-9$ a.m., EST.
Rio de Janeiro
 3 p.m., EST. (19:50?)
BRITISH GUIANA, South America (VPA-VSZ, ZBA-ZJZ) Zone 18
Georgetown
VlRY 6.84043 .83 Wed., $7: 15-9: 15$ p.m., EST., Sun. 5:45 p.m. (6724i?)
BRITISH MALAYA, Asia (VPA-VSZ, ZBA-ZJZ) Zone 40 Johore Baru
VS3AB ${ }^{\text {Johr }} 7.055 \quad 42.50$
CANARY ISLANDS, Africa (EAA-EHZ) Zone 27
Teneriffe
EAlR58 7.207 41.60 Sat.-Sun. 4:30-6 p.m. CHILE, South America (CAA-CEZ) Zone 16
Santiago

CEC 19.673 15.24 Phones LSR-HJY il a.m., 4 p.m. EST
CHINA, Asia (XGA-XUZ) Zone 42
Hongkong
$\begin{array}{rrr}\ldots \ldots \ldots & 9.373 & 31.97 \\ \text { Kiangsu } & 10.250 & 29.25\end{array}$
XCTE $\quad 5.000 \quad 59.96$ (XGTE?) Chinese Triode Electric Co., Mon. and Fri.
COLOMBIA, South America (HJA-HKZ) Zone 16 Barranquilla
HKD $5.996 \quad 50.00$ Elias J. Pellet. Apartado 715, daily 7:45-10:30 p.m., Mon.Wed. 8-10:30 p.m.. Sun. 7:45:8:30 p.m., EST. (5835? 5837? 5990? 5050? 6240?) 15 w.
HKA 6.131 48.90 Jesus Amortegui P., A partado 765. daily 8-10 p.m., ex. Mon., Wed., Fri. (6138? 6160? 6246? 6250?) 50 w.

City-Call Megs. Meters
HKD 6.993 42.87 Mon., Wed., Fri. 7:45-10 p.m., Sat. 2-4 a.m., Sun. 7:45-8:30 p.m., EST.

Bogota
HKC 6.205 48.35 Universal Radio Corp., Columbia Radio Corp. (6270? 6275?) 200 w.
HKM $6.625 \quad 45.25$ R. Jaramillo, Apartado 188, 8:30-10:30 p.m., ex. Sur., FST. (6600?) 250 w.
$\begin{array}{lll}\mathrm{HKX} & 7.140 & 41.99\end{array}$
$\begin{array}{lll}\mathrm{HKF} & 7.143 & 41.95\end{array}$
$\mathrm{HKF} \quad 7.610 \quad 30.40$ Laboratorio Radio Elec-trico-Westinghouse, Apartado 317 (7550? 7616?) 7-11 p.m., EST
HKF $8.690 \quad 34.50 \quad 5 \mathrm{j} 7 \mathrm{p} . \mathrm{m} ., 11$ p.m.,-1 a.m., EST. (8692?)
HJY $18.444 \quad 16.25$ All American Cables Tests CEC Santiago daily 6 p.m. Phones CEC-LST 11 a.m., 4 p.m

HJY ${ }^{19.850} 30.20$ Phone OCl evenings irreg. All-American Cables.
Cali
HKS $\quad 6.378 \quad$ 47.00 Sres. Riva Hiros Abt. 10 p.m. 7.122 42.10 Sres. Riva Hnos (7295?)

Manizales
HKT $7.139 \quad 42.00$ Roberto Baena, P. O. 76, Thurs. $7-8$ p.m. Sat. 11-Mid. EST. Tests 11-noon. 4-6 p.m., EST. 25 w.
Medellin
HKO $5.925 \quad 50.60$ Columbian Radio Corp. Hotel Europa, Mon., Wed., Fri. 8-10 p.m., Tues. Thurs., Sat. 6-8 p.m., EST. (5900?) 200 w .
HKN 7.105 42.20 Santiago Gaviria, Parque Berrios, No. 188, 8-10 p.m., 30 w
$\begin{array}{lll}\mathrm{HKN} & 11.712 \quad 25.59\end{array}$
Tunja
HKB $\quad 5.879 \quad 51.00$ Abt. 10 p.m., EST. irreg.

## COSTA RICA, North America (TIA-TIZ) Zone 14

Electra Cartago
TIRA 6.080 49.31 Compania Radiografica
TIRA
Heredia
TI4NRH 9.670 31.00 Amando Cespedes Marin. Daily, ex. Sat.-Sun., 10-11 p.m. (9734?)
TLANRH 10.238 29.3 Amando Ceapedes Marin. Mon., Wed. 7:30-8:30 p.m., Thurs, Sat. $9-10 \mathrm{p}$, m., EST. (10240? 10600?) 7.5 w .
TI4NRH 15.066 19.90 Sat. $11-$ noon, $4-5$ p.m., 10-11 p.m.. Sun., Mon. 11-noon, 4-5 p.m.

## San Jose

TITR $\quad 11.790 \quad 25.43$ Margarita M. de Girton
CUBA, North America (CLA-CMZ) Zone 16
Cienfuegos
CM6DW $\quad 7.300 \quad 41.07$
$\begin{array}{crllll}\text { Havana } & & & & & \\ \text { CMCI } & 6.058 & 49.50 & 9-11 & \text { p.m., EST. } & \\ \text { CM2MK } & 7184 & 41.75 & & \\ \text { CM2MK } & 9.350 & 32.07 & 5-9 & \text { p.m., EST. (9360?) } \\ \text { CM2LA } & 10.013 & 29.94 & & & \\ \text { Matanzas } & & & & & \\ \text { CM5RY } & 7.312 & 41.00 & \text { Sat. } & 10: 15-11: 30 & \text { p.m., }\end{array}$
Tuinucu
$\begin{array}{lll}\text { CM6XJ } & 15.000 & 19.99\end{array}$
CZECHO-SLOVAKIA, Europe (OKA-OKZ) Zone 28
Podebrady
$\begin{array}{lll}\text { OKI } 21.000 & 14.28\end{array}$
$\begin{array}{lll}\begin{array}{lll}\text { Prague } \\ \text { OK1MPI }\end{array} & 5.169 & 58.00\end{array}$
OKiMPT 5.172 58.00 Tue.-Fri. 1-3:30 p.m., 8:30-10:30 p.m.. EST.
DENMARK, Europe (OUA-OZZ) Zone 23
Copenhagen
OZ7R 3.560 84.22 Tues., Fri. after 6 p.m.
OXO-OXZ $6.057 \quad 49.50$ ( 6090 kes ?)
$077 \mathrm{MK} \quad 9.375 \quad 31.98$
OXO-OXZ $9.488 \quad 31.60$
$\begin{array}{lll}\text { OZ7RL } & 9.500 & 31.56\end{array}$
OXO-OXZ $15.300 \quad 19.53$



FRENCH INDO-CHINA, Asia (F) Zone 40
Saigon (Chi-Hoa)
F3ICD $6.131 \quad 48.90 \quad 106$ Boulevard Charner Chi-Hoa 6:30-10:30 a.m., daily, FST. (6120?)
F3ICD 11.776 25.46 Sats. 10:30 a.m.-12:30 p.m., EST. 12 kw .

FZG ${ }_{12} .000 \quad 24.99$ Time sigs. 2-2:05 p.m., EST. (12010?)
FZG $\quad 13.010 \quad 23.04$

| F3ICD | $15.750 \quad 19.03$ |
| :--- | :--- | :--- |

$\begin{array}{llll}\text { FZR } & 16.200 & 18.51 & \\ \text { FZS } & 18.310 & 16.38 & \text { Suns. } 1-3 \text { p.m., EST. }\end{array}$

| FZA | 18.365 | 16.32 |  |
| :--- | :--- | :--- | :--- |
| FSR | 20.680 | 14.50 | Phones. |

GERMANY, Europe (D) Zone 28
Berlin (Konigswusterhausen)
DJC $\quad 6.020 \quad 49.80$ Deutsche Reichspost.


DJB $\quad 15.200 \quad 19.72$ Deutsche Reichspost,
Mon. 10-11 p.m.
$\begin{array}{lllll} \\ \mathrm{DJE} & & 15.300 & 19.60 & 7 \text { a.m., EST. } \\ & 17.760 & 16.88 & \text { Deutsche Reichspost. }\end{array}$ 42.530 7.05 Telefunken Co. Tues., Thurs. 11:30 a.m.-1:30 p.m., Es'T'.
Colthen
D4AFF 6.875 43.60 Sun. 4-6 a.m., Tues. and Fri. noon-2 p.m.
Doeberitz

| DOA | 3.620 | 82.82 |  |
| :---: | :---: | :---: | :---: |
| 2-3 p.m., EST. |  |  |  |
|  |  |  |  |
| DOA | 7.230 | 41.47 |  |
| DOA | 7.930 | 37.81 | Reichpostzentralamt, Ber- |
| lin, 1-3 p.m. |  |  |  | Eberswalde

7.410 40.46 Mon., Thurs. 1-2 p.m.,

EST.
Nauen
$\begin{array}{lrrl}\text { DIQ } & 5.144 & 58.33 & \text { (9642?)(10285?) } \\ \text { DGK } & 6.675 & 44.91 & \text { Tests WEJ } 9 \text { p.m. EST. } \\ \text { DIZ } & 10.150 & 29.58 & \text { Press code daily: Spanish, }\end{array}$ 6 p.m.; English, 7 p.m.; German, 7:50 p.m.; English, 2:30 p.m.; German, 5 p.m.: Sundays, Spanish, 6 p.m.; German, 7:50 p.m.; Spanish, 9:30 p.m., EST.

DHC 10.160 (11.435?

DFA 19.240 15.58 Phones XDA 10 a.m.-2 p.m., irreg.

DIH ${ }^{\text {p.,., }} \underset{19.950}{15.03}$ News in code: English, 6:15 a.m.; French, 8:30 a.m., and 11 a.m.; Suns., French 8:30 a.m., EST.
$\mathrm{DHO} \quad 20.028{ }^{14.97}$ Phone LSG 7-11 a.m., irreg.
DWG
$20.140 \quad 14.88$ Tests 10 a.m.-3 p.m., EST

$\begin{array}{lcl}\text { City-Call } & \text { Megs. } & \text { Meters } \\ \begin{array}{c}\text { Hilversum } \\ \text { PCJ }\end{array} & 9.590 & 31.26 \text { N. V. Phillips Radio, Ex- }\end{array}$ per. Station (Eindhoven?)
PCJ $15.220 \quad 19.71$ N. V. Phillips Radio, Exper. Sta.
Huizen
PHI $\quad 17.775 \quad 16.87$ N. V. Phillips Radio, Under constn. Transmission for E. Indies.
PHO $17.775 \quad 16.87$ Diily ex. Tues. 7-9 a.m EST.
Kootwijk


PCV $17.830 \quad 16.82$ With Java 6-9 a.m. Sats. 9:40 a.m. (17836?)
$\begin{array}{lll}\text { PCK } & 18.400 & 16.29 \\ \text { PDM } & 18.600 & 16.12\end{array}$
HONDURAS, Central America (HRA-HRZ) Zone 14
Tegucigalpa
$\begin{array}{lll}\text { HRB } & 6.005 & \text { 49.96 Daily ex.Sun. 7-11p.m.(?) }\end{array}$ Mon., Wed., Fri., Sat. 5-6 p.m., 9-mid. (6170?) (6000?) 2500 w .
HUNGARY, Europe (HAA-HAZ) Zone 28
Budapest
$7.220 \quad 41.53$ Budapest Technical School, M.R.C. Tues., Thurs., Sat. 2:30-3:10 a.m., EST.

Szekesfehervar
HAT $9.125 \quad 32.86$
INDIA, Asia (VTA-VWZ) Zone 37-38
Bombay
WD $6.110 \quad$ 49.07 Mon., Wed., Fri. 12:301:15 p.m., EST.
Calcutta
VUC 11.870 25.27 Indian State Broadest. Service, 9:45-10:45 p.m., 8-9 3.m., EST.
ITALY, Europe (I) Zone 28
Coltana
IAC $12.760 \quad$ 23.50 Testing irreg.
Rome
I3RO $\quad 3.750 \quad 79.95$ Daily 3-5 p.m., EST.
IRRO $\quad 6.220 \quad 48.20 \quad 9000 \mathrm{w}$.
I1AX $\quad 6.667 \quad 45.00$
IMA $\quad 6.900 \quad$ 43.45 Daily noon-2 p.m., EST.
I2RO 11.800 25.40 11 a.m.-12:30 p.m., 3-5:30 p.m., EST. (11811?) (11810?) (11:30 a.m. to 5:30 p.m.?)

Turin

$$
3.750 \quad 79.95
$$

JAPAN, Asia (I) Zone 44
Kemika wa-Cho
J1AA $\quad 7.876 \quad 38.07$ Tests KEL irreg. (9862?)
J1AA $\quad 13.074 \quad 22.93$ Exp. tests irreg.

J1AA $\quad 15.760 \quad 19.02$ Exp. early a.m. (15120?)
$\begin{array}{ccc}\text { Tokyo } & 7890 & 38.00\end{array}$
J1AA $\quad 8.100 \quad 37.01$ Tests $5-8$ a.m., IST
$\begin{array}{rrrr}\text { (Kemikawa?) } & 12.090 & 24.80 & 5-8 \text { a.m., EST. }\end{array}$
$\begin{array}{lllll} & \text { JiAA } & & 12.090 & 24.80 \\ & 5-8 \text { a.m., FST. } \\ & 15.760 & 19.02 & \text { Beam transm. to } 10 \text { a.m. }\end{array}$ $\begin{array}{lll}J 1 A A & 17.380 & 17.25\end{array}$
JAVA, Oceania (PKK-POZ, UIA-UKZ) Zone 40

## Bandoeng

PLE 18.820 15.93 Phone to Holland PCK Tues., Fri. 5:40-10:40 i.m., EST. (18860?)
PMY $5.143 \quad 58.30$ Phones Australia 11 a.m., Tues., 8:40-10:10 a.m., EST. (5799?) 2000 w.

PLV $\quad 9.410 \quad$ 31.86 Phones Australia and Sumatra 4-8 a.m., Tucs. 8:40-10:40 a.m. 80 kw . $\begin{array}{lll}\text { PLE } & 9.410 & 31.86\end{array}$
PLW $\quad 9.480 \quad 31.63$ Phones Australia 3-8 a.m., irreg.
PLR $10.630 \quad$ 28.20 Works Holland and France weekdays after 7 a.m.; sometimes after 9.30 .


Cily-Call Megs. Meters
Nuevo Laredo
X26A $7.370 \quad 40.68$ 9-10 a.m., 11-noon, 1-2, 4-5, 7-8 p.m., EST. Tests after midnight. DX program 11 p.m., Wed.
X26A 7.612 39.39 Thurs. 11-noon EST. (7661 kes.?)
MOROCCA, Africa (CNA-CNZ) Zone 26
Casablanca
$\begin{array}{lll}\text { CN8MC } & 5.875 & 50.94\end{array}$
CN8MC 6.250 47.97 Relays Rabat Mon. 3-4 p.m., Tues. $7-8$ a.m.. $3-4$ p.m. ( 6336 kes.?)

F8MC $6.875 \quad 43.61$ (CN8MC?) ( $10710 \mathrm{kes} . ?)$
Rabat
$6.877 \quad 43.60$
$9.290 \quad 32.27$ Radio Maroc. 6 k.w. Sun. 3-5 p.m., werkdays, irreg CNR $12.820 \quad 23.38$ Phones St. Assise 5 a.m.. 8 a.m., Suns. 7:30-9 a.m., Daily 5-7 a.m. (12600 kes.?) 2500 w .
NEW ZEALAND, Oceania (ZKA-ZMZ) Zone 19
Christchurch ZI3ZC 6.000 49.97 Tues., Thurs., Fri., 10 p.m.-mid. EST.

Weilington


ZLW 18.340 16.35 Phones VK2ME irreg.
NORWAY, Europe (LAA-LNZ) Zone 28
Bergen $\begin{array}{lll}\text { LGN } & 9.600 & 31.23\end{array}$
PERU, South America (OAA-OCZ) Zone 16
La Punta


POLAND, Europe (SPA-SRZ) Zone 28
Posen EATH? 8.90033 .69 Sun., Wed. 11:30 a.m.-5 p.m., EST. EATH? $10.800 \quad 27.76 \quad 11: 30$ a.m., $5: 30$ p.m., EST.
Poznan $\begin{array}{llllll}\text { SiR1 } & 9.570 & 31.33 & \text { Tues. } 12: 45 & \text { p.m., } 3: 45\end{array}$ p.m., Thurs. 12:30-7 p.m., EST. 100() w. 9.83630 .49

PORTUGAL, Europe (CSA-CUZ) Zone 20
Lisbon CT1AA $6.990 \quad 42.89$ Fri. 4-6 p.m. ES'T. (6995 kcs.?) 2000 w CTIAA 9.592 31.26 Tues., Thurs., Fri. 4- $\mathbf{-}$ p.m. $\begin{array}{lll}\text { CTIBO } & 10.710 \quad 28.00\end{array}$
roumania, Europe (CVA-Cl'Z) Lone 28
Bucharest YOi? $\quad 6 \quad 6.000 \quad 49.97 \quad 300 \mathrm{w}$. Universitaire, Wed., Sat. 2-5 p.m., EST.
SIAM, Asia (HSA-HSZ) Zone 40
Bangkok $\begin{array}{lllll}\text { HS2PJ } & 6.080 & 49.31 & 6-6: 30 & \text { a.m., EST }\end{array}$ HSP2 7.300 41.07 Administration des Postes et Telegraph Tests Mon. 8 a.m.-11 a.m., EST. 2500 w. HSP'2 9.500 31.56 Administration des Postes et Telegraph 9 -11 a.m., daily ( 9640 kcs .?) HS4PJ $\quad 8.100 \quad 37.01$ $\begin{array}{lllllll}\text { HS2PJ } & 10.167 & 29.48 & & & & \\ \text { HS1PJ } & 17.750 & 16.89 & 7-10: 30 & \text { a.m., } & 1-3 & \text { p.m., }\end{array}$ EST.
SPAIN, Europe (EAA-EHZ) Zone 26
Barcelona EAJ25 6.000 49.97 Barcelona Radio Club, Sat. 9-10 p.m., EST.


Megs. Meters
kes.?)
$\begin{array}{lll}\text { EAJ } & 15.760 & 19.02\end{array}$
EAR110 6.976 43.00 Tues., Sat. 5:30-7 p.m., Fri. $7-8$ p.m., EST.
EAR125 7.020 $42.716-7 \mathrm{pm}$., EST. ( 70.5 kes ? )
EAQ $\quad 9.862 \quad 30.10$ Apartado 951. Daily 7:30kes.?)
EAJ7 $10.090 \quad$ 29.70 Union Station EAJJ7 5:306:30 p.m., irreg. LSY $7-11$ a.m. irreg. ( 19720 kcs ?)
STRAITS SETTLEMENT, Asia (VPA-VSZ, ZBA-ZJZ)
Sion
VSIAB 7.195 41.6: Mon., Wed., Fri. 9:3011 a.m., EST. (7260 kes.?)
Matra, asia (PKO-POZ, ULA-ULZZ) Zone 40
Medan
m. 8 a.m.

PK4PA $59.964 \quad 5.00$
CDEN, Europe (S.LA-SMZ) Zolle 28
alshorg
$\begin{array}{lll}\text { SAS } & 11.760 & 25.50\end{array}$

EST
AJ $\quad \begin{array}{rlll}6.065 & 49.44 & 6: 30-7 & \text { a.m. } 11 \text { a.m. }-4: 30\end{array}$ 11 a.m. $4: 30$ p.m. Holidays, 5 a.m. 5 p.m., FST.
SWITZERLAND, Europe (HBA-HBZ) Zone 28 erne 0 C 9.130 32.84 6:30 a.m.-5:00 p.m. EST.
Geneva
BI $\quad 7.790 \quad 38.49$ Tests $3-5$ p.m. irreg. HBJ $14.550 \quad 20.60$
$\begin{array}{lll}\text { Harich } \\ \text { HB9XD } & 3.488 & 85.92\end{array}$
HB9XD 7.220 41.53 1st-3rd Suns. 7 a.m., 2 n.m. FST'. ( $7229 \mathrm{kcs}$. ?)
HB9XD $9.380 \quad 31.96$
TUNIS, Africa (F) Zone 28
F8KR 3.750 79.95 See Algeria
F8RR ${ }^{7.005} 42.80$ Sec Algeria.
NION OF SOUTH AFRICA (\%SA-ZUZ) Zone 30
Durban
$\begin{array}{lll}\text { ZTD } & 7.400 \quad 40.52\end{array}$
ZTJ 6.072 49.37 African Brdestg. Co. Ldd P. O. Box 4559 (JB?) 5-7 a.m. 9:30-1] a.m., 1-3:30 p.m. (6070 kes.?) (6098 kes.?')

2T.J $\quad 7.329 \quad 40.90$ 9:30 a.m.-2:30 p.m., EST.
Khabarovsk
RW15 $4.273 \quad 70.20$ Comm. du Peuple PTT. Far East Radio Station, Daily 3-9 a.m., EST. 20 RW15 8.570 $34.98 \quad$ 5-7:30 a.m., EST
ningrad
$8.3 .33-35.98$
$10.510 \quad 28.53$ (10526 kes.?)
Minsk
RW62 150 w. ${ }^{6.420 ~ 46.70 ~ C o m m . ~ d u ~ P e u p l e ~ P T T ~}$


## The Summer's Changes

| 550 | WDEV | Waterbury. Vt., 50 to 500 |
| :---: | :---: | :---: |
| 570 | KVI | Tacourt, Wash., 1000 to 500 |
| 580 | KMJ | Frosio, Calif., 100 to 500 |
| 630 | CNRA | Moncton, N. B., 500 to 700 |
| 635 | CKOC | H:amilton, Ont., 500 to 1000 |
|  | CKTB | St. Catherines, Ont., 500 to 1000 |
| 650 | WSM | Nashville, Tenn., 5000 to 50000 |
| 730 | CMH | Havana, Cuba, 3150 to 5000 |
| 750 | KGU | Honolulu. Hawaii, 1000 to 2500 |
| 760 | KXA | Seattle, Wash., 500 to 250 |
| 840 | CKGW | Toronto. Ont., 10000 to 5000 |
| 850 | WWL | New Orieans, La., 10000 to 5000 |
| 880 | CJCB | Sydney, N. S., 50 to 100 |
|  | CKCV | Quebec, Que., 50 to 100 |
| 890 | CMX | Havana, Cuba, 500 to 3000 |
| 940 | UHA | Madison, Wis. 750 to 1000 |
| 030 | CMHI | Santa Clara. Cuba. 30 to 200 |
| 080 | WBT | Charlotte, N. C.. 5000 to 25000 |
| 110 | KSOO | Sioux Falls, S. D., 2500 to 1000 |
| 120 | CHGS | Summerside, P. E. I., 500 to 100 |
|  | KRSC | Seattle, Wash., 50 to 100 |
| 150 | CMHJ | Cienfuegos, Cuba, 40 to 75 |
|  | CMJH | Ciego de Avila, Cuba, 15 to 50 |
| 155 | XEA | Guadalajara, Mex., 101 to 500 |
| 180 | K0B | Albuquerque, N. M., 20000 to 10000 |
| 185 | CMW | Havana. Cuba, 1400 to 1500 |
| 200 | WBHS | Iuntsville, Ala., 50 to 100 |
|  | WTAP | Louisville, Ky., 250 to 100 |
|  | 10-BP | Wingham, Ont., 15 to 25 |
| 210 | KIPW | Fort Smith, Ark.. 50 to 100 |
|  | WGCM | Gulfport, Miss., 1000 to 100 |


| 1240 | WKAQ | San Juan, P. R., 500 to 1000 |
| :---: | :---: | :---: |
| 1270 | KGCA | Decorah, Iowa, 50 to 109 |
| 1310 | KRMD | Shreveport, La.. 50 to 100 |
|  | XEI | Morelia, Mex., 101 to 150 |
| 1315 | XEFB | Monterrey, Mex., 00 lo 100 |
| 1335 | CMJI | Cicgo de Avila, Cuba., 5 to 112 |
| 1355 | CMCY | Havana, Cuba, 250 to 500 |
| 1370 | KGFL | Sunta Fe, N. M., 50 to 100 |
| 1395 | CMCH | Havana, Cuba, 20 to 100 |
| 1450 | WHOM | Jersey City, N. J., 500 to 250 |
| 1500 | WKıZ | Ludington, Mich., 50 to 100 |
|  |  | DELETED |
| 545 | CNRL | Iondon, Ont. |
| 330 | CHCS | Hamilion. Ont. |
| 690 | CNRX | Toronto, Ont. |
| 730 | CNRM | Montreal, Que |
| 780 | CNRW | Winnipeg. Man. |
| 818 | XFI | Mexico City, Mex. |
| 840 | CNRD | Red Deer. Alta. |
| 880 | CNRQ | Quebec, Qua. |
| 910 | CNPS | Saskatoon, Sask. |
| 960 | CJBR | Regina, Sask. |
|  | CNRR | Regina, Sask |
| 1120 | CNPT | Toronto, Ont. |
| 1200 | WFBC | Knoxville, 'Tenn. |
|  | WNBX | Springfield, Vt. |
| 1210 | WLCI | Ithaca, N. Y. |
| 1370 | HPB | Tegucigalpa, Hond |
| 1490 | WCHI | Chicigo. Ill. |
| 1500 | WLBX | Long Island City, N. Y. |
| 1500 | WMBA | Newport. R. I. |
|  |  | FREQUENCY |
| 550 | WDEV | Waterbury. Vt., fron 1420 |
| 570 | WNYC | New York City from 810 |
| - 580 | KMJ | Fresno, Calif., from 1210 |
| 580 | WDR0 | Orlando, Fla.. from 1120 |
| 750 | VowR | St. Johns, N. F., from 675 |
| 810 | WPCH | New York City, from 570 |
| 890 | KSEI | Pocatello. Idaho, from 900 |
| 1055 | XES | Tampico, Mex. from 890 |
| 1150 | CMHJ | Cienfuegos, Cuba, from 1125 |
|  | CMJH | Ciego de Avila, C'uba, from 1017 |
| 1155 | XFA | Guadalajara, Mex., fromt 1000 |
| 1185 | CMW | Havami. Cuba from 583 |
| 1200 | KGVO | Missoula. Mont., from 1420 |
| 1210 | KFPW | Fort Smith. Ark., from 1340 |
|  | WGCM | Gulfport, Miss., from 590 |
| 1210 | WKAQ | San Juan. P. R., from 890 |
| 1260 | WHBC | Canton, Ohio, from 1200 |
| 1310 | XEI | Morelia, Mex., from $10 \sharp 0$ |
| 1335 | CMJI | Ciego de Avila, Cuba, from 1260 |
| 1355 | CMCY | Havana, Cuba, from 1345 |
| 1370 | XEFZ | Coyoacan, Mex., from 1500 |
|  |  | LOCATION |
| 930 | WIBG | Glenside, Pa, from Elkins Park, $\mathrm{Pa}_{\text {a }}$ |
| 1050 | KFBI | Abilene Kans. from Milford, Kans |
| 1210 | WFAS | White Plains, N. Y.. from Yonkers, N. Y. |
| 1370 | KGFL | Santa Fe. N. M., from liaton, N. M |
| 1420 | KGKX | Lewiston, Idaho, from Sard Point, Idaho |
|  | KUMA | Yuma, Ariz., from Flagstaft, Ariz. |
| 1460 | WJSV | Washington, D. C., from Alexandria, Va. |
| 540 | CKOK | CALLS <br> Windsor, Ont., from CKWO |
| 860 | CMAF | Havana, Cuba, from CMDC |
| 1200 | WPHR | Pctersburg, Va., from WLBG |
| 1210 | Kasa | Elk City. Okla. from KGMP |
|  | WFAS | White Plains, N. Y., from WCOH |
|  | WTiFI | Greenvilie. Miss., from WRBQ |
| 1370 | XEFZ | Coyoacan, Mex., from XETZ |
| 1420 | KUMA | Yuma, Ariz, from hFsi |
|  |  | NEW |
| 600 | WJED | Indianapolis, Ind. |
| 893 | VOGT | Wabana, N. F. |
| 1210 | WHET | Troy, Ala. |
|  | WJEJ | Hagerstown, Md. |
| 1420 | KIDW | Lamar, Colo. |
|  | WMAS | Springfield, Mass. |
|  |  | CHAINS |
| 570 | WSYR | Syracuse, N. Y., new NBC |
| 620 | WSUN | St. Petershurg, Fla, new NBC |
| 1120 | WHAD | Milwaukee, Wis., new CBS |


| 1130 | KSL | Salt Lake City, Utah, new CBS. |
| :---: | :---: | :---: |
| 1210 | KMJ | Fresno, Calif., new CBS |
| 1280 | WCAP | Asbury Park, N. J., new CBS |
| 1460 | WJSV | Washington, D. C., new CBS |
|  |  | Permit to Change Frequency |
| 1310 | KFYO | Lubboek, Texas, to 1420 |
|  |  | Permit to Change Power |
| 970 | WCFL | Chicago, III. 1500 to 5000 |
| 1050 | KNX | Hollywood, Calif., 50010 to 25000 |
|  |  | Permit to Change Location |
| 830 | WIIDH | Boston, Mass., to Sauyus, Mass. |
| 1260 | WLBW | Oil City, Pa., to Lrie, Pa |
| 1310 | KGBX | St. Joseph. Mo., to Springlield, Mo. |

## Questions and Answers

0N page 12 , June issue, you publish an extract from a letter received from Mr. Caddell," comments Ian Murdoch, 17 Main St. W., Grimsby, Ont. "In it he states that he heard V.JN calling VJNS. In the latest issue of QST, published by the Amateur Radio Relay League, I happened to notice a list of the series of calls issued to amateurs. For curiosity, I looked up Australia to see what the Hams use. I find that they are assigned the series from VHA to VMZ, and that the amateur prefix used was VK. As J and K are often mistaken for each other, no doubt Mr. Caddell received VKN. Of course, I can't guarantee that. In all my short-wave work I've never run across an Aussie amateur. Trygre Njaa's report on 2YA on a onetube set is possible, but it sure does stretch one's imagination to receive a Zedder on a one-tube set in North Dakota. An' how! However, nothing is impossible these days. especially by the amateur who frequently does the impossible because he doesn't know it's impossible. Tell Mr, R. V. Heinzelmann that undoubtedly he heard KWSC on March 23rd. They broadcast special code-practice lessons for any amateurs or would-be amateurs who happen to be listening. It's a swell program, having heard it twice myself last winter. Maybe Mr. Harold S. Rubens heard CMCJ, as they put on a couple of early morning programs this spring. Edward L. Walters probably received WLAP as they have been testing on 1010 kcys. for some time. The calls are somewhat similar in pronunciation. My log now stands at 1737 stations. Of course, it's a combination of SW and BB. Have in the proximity of 1000 stations on the broadcast band now. Just recently received verifications
from station VUB, Bombay, India, operating on 840 keys. with 3000 watts. This was heard on March 29th at approximately 6 a.m. Haven't heard of anyone else verifying this yet."
"I noticed in your last issue that Mr. R. LaRocque, of Worcester, Mass., wanted information about VE9LP," writes H. A. Jamison, 24 Glencairn, Toronto, Ont. "It is owned by CKAC and is used during the winter to broadcast the hockey games. It is used so that CKAC can use its full time for its schedule. It is CKAC's old station and I think uses 750 watts. (You can verify it from your back issues). It hasn't any definite location, but the last broadcast was on 930 keys. I want to thank you for that picture of Jack Denny. It's the first one I've seen that really resembles him. I guess you will have noticed by this time that broadcasting in Canada is likely to become national. I don't know just how it will turn out, but we'll soon see."
"On the evening of August 1st, I received on my 9 -tube Stromberg-Carlson Neutrodyne, a station announced as WKW someplace in Tennessee," says Richard Umbach, 2526 East Drive, Fort Wayne, Ind. "This station was on either 1490 or 1500 and was received from 10:15 to $10: 30$ p.m., EST. A man was giving a political speech from which it seemed that he was seeking the nomination as Governor of Tennessee. I would appreciate it very much if you could inform $m$ e if there is such a station or whether I heard the call letters wrong." WKW is a s.w. station in Rocky Point, N. Y. It is hardly likely this could have been your station and we find no station in Tennessee nor on 1490 or 1500 whose call could have been heard as "WKW." Perhaps some of our other readers can help you.
"Miss M. Stannard, 522 Sunset Ave., Rockford, Ill., would like to know the station which broadcasts the program known as the 'Four Horsemen,'" says Carroll H. Weyrich, 6 N. Gorman Ave., Baltimore, Md. "I have a verification from station WMAZ, Macon, Ga., 1180 kcys., in which they state that the 'Four Horsemen of Harmony' are on the air each evening from 7-7:30 p.m., EST."
"Can any of your readers tell me what station broadcast a program of old time music at about 1:30 a.m., CST., April 10, 1932?" asks Raymond Sereikas, 3243 So. Emerald Ave., Chicago, Ill. "This old-time fiddlers' orchestra was called the 'Rough Riders.' The call letters sounded something like WO-. I couldn't get it clearly. WFIW was interfering."
"Does KEJ call Coco Head every night?" inquires Harold Wagner, 908 E. 6th St., Erie, Pa. "I have been getting a station with chain programs whose announcer says he is broadeasting for stations K- and -- in Honolulu. I don't know what his call letters are, but they sounded like KEJ. This station announces about a minute ahead of the regular time, and comes in best from 10:15-10:45 p.m., EST."

Short wave programs from Central America soon will be broadcast from a new 50,000 -watt radio station to be built at Villa Fuente, three miles from Piedras Negras. Permit for the $\$ 75,000$ station has been secured. Two 300 -foot towers, similar to those at XER, Dr. J. R. Brinkley's station in Villa Acuna, Coahuila, will be erected. Studios will be maintained at Piedras Negras and Eagle Pass.
"May I inform you that CKOW is not broadcast from Toronto, Ont.," informs D. McNeil, 60 Chestnut Ave., Hamilton, Ont. "CKGW and CPRY are the 840 ke. Toronto stations. Mr. T. Hill must be mistaken."
"I would like to hear from other DXers, especially those who have received our local 100-watter, KREG," requests Victor Rowland, 520 Virginia St., Santa Ana, Calif.

Fred B. Murray, $35121 / 2$ Pine Grove Ave., Chicago, Ill., would like to hear from other owners of the Star Raider, 13 -tube receivers.

## The October Radex

will have a list of the S-W stations arranged by frequencies. There will be a new list of the TransPacific Broadcast Stations - Japan, Australia and New Zealand - arranged by frequencies. The Call Letter Index will give the time of all stations for Mondays and there will be an October Calendar of Special DX programs. Order a copy now from your newsdealer or use the blank on page 22 .


## Something Every DXer Will Want

JUST turn the dial to the hour of the day in vour zone and instantly the time is shown for all conntries in the world. Simple as a pushbutton. The location of twilight, darkness and dawn is graphically shown. Tells you when to tune your time for a program in any part of the world. Size, $11 \times 11$ inches.

On the double page inside is a big map of the world (the size of six pages of RADEX) with all the principal cities and the time zones plainly shown.

On the back is a list of all countries of the world with the call letters assigned to each and the zone key for use on the Converter.

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Many Radio Experts Make $\$ 50$ to $\$ 100$ a Week
Over 300,000 jobs have been created by Radio's growth, and thousands more will be created by its continued development. Many men and young men with the right training-the kind of training I give you in the N. R. I. course have stepped into liadio at two and three times their former salaries.

## Many N.R.I. Men Have made $\$ 200$ to $\$ 1000$

 in spare time while learningThe day you anroll with me I'd! show roul how to do 28 jobs, common in most erery neighorhood, for sparetime mones. I give you the hlans and ideas that have made $\$ 200$ to $\$ 1.000$ for N. M. I. stulents in their spare time while studving. My course is famous as the course that ways for itsclf.

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J. E. SMITH, President National Radio Institute, Dept. : JJO Washington, D. C.
Dear Mr. Smitli: Send me rour free book. I umderstand this refuest does not obligate me and that no sulesman will call.
$\qquad$
ADDRESS
CITY $\qquad$


[^0]:    H. C. LEWIS, President

    Radio Division, Coyne Electrical School 500 S. Paulina St., Dept. 62-4 K, Chicago, III. Dear Mr. Lewis:

    Send me your Big Free Radio Book and all details of your Special Offer, including your "Pay After Graduate" offer.
    Name.

    - Address.
    

[^1]:    "Entered as second-class matter April 23, 1931, at the post office at Cleveland, Ohio, under the Act of March 3, 1879."

[^2]:    INTERNAT ONAL CORRESPONDENCE SCHOOLS
    Box 2872, Scranton, Pa.
    Without cost or obligation, please tell me all about the NEW RADIO CGURSE. Name.

    Age......
    Street Address
    City...................................State...
    If you reside in Canata. send
    to the International forrespond coupon Canadian. Ltd Montreal. Canadian, Ltd., Montreal, Canada

[^3]:    Last-minute notice comes that Ben Bernie and "all the lads" will switch to NBC-WEAF Tuesday nights beginning September 13th. East of Salt Lake City, the time will be 9:00 to 9:30 EDS T.; west of Salt Lake, 12:30 a.m., EDST. Forty stations will carry the contract with the "Alma Malter" for 52 weeks.

[^4]:    Q Great Lakes network
    R National＂Red＂netwo：k
    $S$ Sunday only．
    T Don Lee System．
    U Dixie network．
    $\vee$ Maritime Broadcasting network．
    W Curtis－Indiana network．
    X Has permit to increase power
    $Y$ Has permit to change location
    Has permit to change frcquency
    a－b－c．Small letters show stations using same transmitter．
    1－2－3．Figures denote stations sharing time
    No information

