

THE MAY 1934

# RADIO INDEX

THE ALL-WAVE RADIO MAGAZINE



25<sup>c</sup>

30 cents  
in Canada  
Including  
Tax

All the Broadcasting Stations  
of the World  
The Beginners' Story of Radio  
How to Tune the Short Waves  
Mail Addresses of S. W. Stations

No. 79

# MAY DX CALENDAR

In addition to the special DX programs scheduled below, a large number of stations are still testing monthly for the Federal Radio Commission. A list by days and hours was published in March (page 47) and recent changes will be found on page 27 of this issue. Time is given in Eastern Daylight Saving.

## SUNDAY MORNINGS

May 6

1:00-2:00—WTOC, 1260, Savannah  
WWAE, 1200, Hammond  
4:00-5:00—KIT, 1310, Yakima

May 6-27

2:00-4:00—CMCU, 1100, Havana

May 6-13-20-27

11:00-12:00—CMBW, 1140, Havana  
12:00-2:00—CMCD, 925, Havana  
3:00-4:00—KPJM, 1500, Prescott  
4:00-5:00—KGER, 1360, Long Beach  
4:00-6:00—CFJC, 1120, Kamloops

May 13-20-27

12:00-2:30—WIBM, 1370, Jackson, Mich.

May 27

3:30-5:30—CKBI, 1200, Prince Albert

## MONDAY MORNINGS

May 7

4:45-5:00—KUJ, 1370, Walla Walla

May 7-14-21-28

1:30-2:00—KSOO, 1110, Sioux Falls

May 21

12:30-1:00—WGNY, 1210, Chester

## TUESDAY MORNINGS

May 1-8-15-22-29

5:00-6:00—WBNS, 1430, Columbus

May 15

2:00-3:00—KFYR, 550, Bismarck  
4:00-5:00—WBBQ, 1370, Memphis

May 22

3:00-4:00—WSPA, Spartanburg, S. C.

## WEDNESDAY MORNINGS

May 2

3:30-5:00—CHWK, 780, Chilliwack  
5:30-6:00—WCAL, 1250, Northfield

## THURSDAY MORNINGS

May 3

4:00-5:00—WRAW, 1310, Reading

May 24

3:00-6:00—XED, 1155, Guadalajara

## FRIDAY MORNINGS

May 4-11-18-25

10:00-11:00—CMK, 730, Havana  
1:00-3:00—CFCN, 1030, Calgary  
2:00-3:00—KOIL, 1260, Council Bluffs

## SATURDAY MORNINGS

May 5

2:00-3:00—WWAE, Hammond, Ind.

May 5-12-19-26

12:00-3:00—WGES, 1360, Chicago  
5:00-6:00—XEAO, 560, Mexicali

# THE MONTH'S CHANGES IN STATION DATA

## FREQUENCIES

630 KTRH Houston, Texas, from 1120  
680 RDN San Salvador, from 660  
WESG Elmira, N. Y., from 1040  
780 XEYZ Mexico City, from 760  
890 KFYP Spokane, Wash., from 1340  
925 CMCD Havana, Cuba, from 915  
1040 KWJJ Portland, Ore., from 1060  
WTIC Hartford, Conn., from 1060  
1060 KTHS Hot Springs, Ark., from 1040  
1210 XEMZ Tijuana, B. C., from 630  
1260 CFTP Edmonton, Alta., from 1120  
1340 KGR Butte, Mont., from 1360  
1370 KERN Bakersfield, Calif., from 1200  
1500 WDNC Durham, N. C., from 1370

## POWER

560 KWTO Springfield, Mo., 500 to 1000  
630 KTRH Houston, Texas, 1000 to 500  
1190 VONF St. John's, Nfld., 400 to 5000  
1300 WEVD New York, N. Y., 500 to 1000

## NEW

660 XEAL Mexico City  
740 KTRB Modesto, Calif.  
1140 CMCO Havana, Cuba.  
1190 WATR Waterbury, Conn.  
1210 ..... Lansing, Mich.  
1370 KWYO Sheridan, Wyo.  
1420 WLEU Erie, Pa.  
1518 KIFS Ft. Klamath, Ore.

## CALLS

680 RDN San Salvador, from RUS  
1500 WDNC Durham, N. C., from WRAM

## LOCATIONS

1420 WLAP Lexington, Ky., from Louisville

## DELETED

580 CMDD Havana, Cuba.  
730 XER Villa Acuna, Coah.  
750 XEOK Tijuana, B. C.

## OWNERS

CMCG Havana, Cuba, E. Pereda, Los Casa Grande  
KIFS Ft. Klamath, Ore., KFJJ Broadcasters, Inc.,  
(Klamath Falls, Ore.)  
KICK Carter Lake, Iowa, Palmer School of Chiropractic  
KTRB Modesto, Calif., Thos. R. McTammany and Wm.  
H. Bates, Jr.  
KTUL Tulsa, Okla., to Tulsa Broadcasting Co., Inc.  
KWYO Sheridan, Wyo., Big Horn Broadcasting Co.  
WATR Waterbury, Conn., Harold Thomas  
WLEU Erie, Pa., Leo J. Omelian  
WNRA Muscle Shoals, Ala., Muscle Shoals Brdcastg.  
Corp., (Sheffield, Ala.)  
XEAL Mexico City, Mex., Cia Panamericana de Radio.  
Apt. 1903

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**SCOTT ALL-WAVE  
FIFTEEN**

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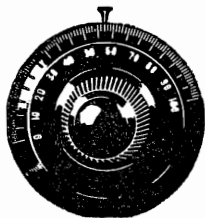
Send me particulars regarding the SCOTT ALL-WAVE FIFTEEN, and PROOF of its vast superiority.

Name .....

Address .....

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

May 1, 1934



# RADIO IN INDEX

Reg. U. S. Patent Office

FRED CLAYTON BUTLER

Editor and Publisher



B. FRANCIS DASHIELL  
*Technical Editor*

PAGE TAYLOR  
*Short Wave Editor*

TENTH YEAR

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

\$1.75 per Year

25c Per Copy

### THE RADEX PRESS, INC.

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

Editorial and Executive Office, Hanna Building, Cleveland, Ohio

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

**ADDRESS ALL CORRESPONDENCE TO CLEVELAND OFFICE**

# The BEGINNERS' STORY of RADIO

PART EIGHT

## The Audio Amplification Circuit

• • • By B. FRANCIS DASHIELL

**I**N THE last chapter we took leave of the audio or low-frequency current just after it emerged from the plate of the detector tube. We now find that it is ready for further amplification and operation of the loud speaker. This current—an average of the many radio-frequency waves that pulse through the plate circuit, can readily be turned into mechanical motion and audible sound waves. That is why we call it an *audio current*. Its relatively slow wave motion has been pictured in "E," Part Seven.

The plate current from the detector is still very weak. Yet it is thousands of times stronger than the original antenna current, for it has been amplified by passing through one or more tube and radio-frequency transformer stages of amplification. (See "E," Part Five). But now we must increase the strength of the detected signal, and, this, too, is accomplished by amplification. The circuit used to increase the original a. f. current coming from the detector tube is called the *audio-frequency amplifier*, just as

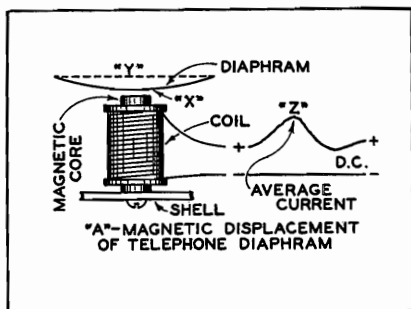
the circuit used to increase the original r. f. current from the antenna was called the radio-frequency amplifier.

We have learned about the *stages* of radio-frequency amplification, using r.f. transformers in the circuit *preceding* the detector; in this chapter we shall read about the stages of audio-frequency amplification using a. f. transformers, that are located in the circuit immediately *following* the detector.

### Building Up the Signal

The characteristics of the current flowing from the detector are the same regardless of whether the receiver is a simple outfit or the most complicated superheterodyne circuit known to radio science. The variations or pulsations of potential may be small, weak, and irregular, but by sending the current through one or more stages of a. f. amplification (a stage consists of a transformer and a tube) we find that larger and more powerful variations in potential are obtained.

Fluctuations in an otherwise evenly flowing current in the plate circuit of a detector tend constantly to vary the magnetic strength of a magnet in a telephone that may be connected in series in the circuit. A vibrating motion is given the diaphragm of the telephone, and variations in current, resulting from a change in the shape of the transmitted r.f. carrier wave (see "E," Part Two), due to vibrations of the microphone in the broadcast studio, causes a similar variation or displacement of the telephone diaphragm. It is then only that audible sound can be heard.



### The Phone Coil

This action may be better described by referring to "A." The signal from the detector is strong enough only to make itself heard when telephones are used. We see a coil of wire wound about a steel magnet; it is wound with thousands of turns of fine wire—number 40, and its resistance may fall between 1,000 and 2,000 ohms. Directly over the end of the magnetic core is a thin, iron disc called the *diaphragm*. The center of the diaphragm is continuously depressed toward the magnet, as indicated at "x." The slightest variation in current flowing through the coil changes the degree of magnetism in the core, and causes the pull on the diaphragm to change accordingly. A pulsation in plate current, shown at "z," will cause the diaphragm to move from "x" to "y." As a result a click is heard in the telephone. And a series of such clicks, having irregular spacing and intensity, will reproduce sounds.

Should the pulsations passing through the telephone coil vary, for instance, at a rate of 6,000 times a second, the diaphragm will also vibrate at the same rate. However, we quickly discover that there is a limit to the speed of mechanical vibration; the pitch of the sound goes higher and higher; inertia can no longer be overcome; and the diaphragm movement finally ceases. This, then, is the limit of mechanical and human reception of audio-frequency sound waves; only electrical vibrations or oscillations can continue on into the higher or radio frequencies.

### Transformer Coupling

When the current output from the plate of a detector tube is amplified through the action of one or more a.f. stages placed in series, the amplification stages are said to be operated in *cascade*. The output of the first tube is *coupled* to the input of the second tube, and so on. Tubes can be grouped together in audio amplification by means of *transformer*, *resistance* and *impedance* coupling. But, since transformer coupling is almost

universally in use, let us study only its action and application to radio in this chapter. Transformer action has been described in detail in Part Three.

Audio transformers have ratios between the number of turns of wire in the secondary and primary windings of from 3 to 1 to about 10 to 1. But the ratio of sound amplification is much greater; for instance, a 3 to 1 transformer may give an audibility of twenty times the original, and two such transformer stages may give an amplification of 400 times. The secondary, which creates the amplified current, is wound with many thousand turns of wire so fine that about 300 strands are laid to each inch. The primary, which receives the current to be amplified, has fewer turns—in the case of the 3 to 1 transformer it has one-third the number of turns in the secondary. About 3000 turns comprise the average primary coil.

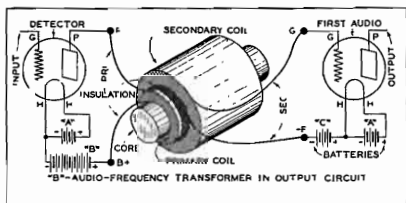
In the a.f. transformer the primary coil is wound over an iron core. The two terminals are marked B and P. A layer of insulating material then is placed over the primary coil. The secondary is wound on with many layers, and the two ends are brought out to the terminals marked -F and G. As indicated in "K" and "L" of Part Three: P is the plate connection to the tube; B goes to the positive "B" battery or d.c. plate supply; G connects to the grid of the tube; and -F attaches to the negative "A" or "C" battery. G will be the outside or ending wire of the secondary, and the inner or starting wire is the -F terminal. The inside end of the primary is marked P, and the ending wire goes to the "B" supply. However, in certain circuits, it may be necessary to reverse the primary connections for best results.

### Use of the "C" Battery

In the foregoing it will be noted that the inner end of the secondary coil is connected to -F which is a negative A or C potential. Since we are dealing with the audio end of the receiver, where sound is being reproduced, we are particularly interested

in the quality of tone and sound. It becomes necessary, therefore, to connect a "C" battery into the grid circuit of the audio tube. Negative biasing of the control grid of an audio tube maintains the grid at a negative potential at all times with respect to the filament. The grid can never become positive; it only fluctuates more or less negative than its normal state when the pulsations of input signal potential are impressed upon the grid. This bias varies from 3 volts to as much as 60 volts for different tubes.

In illustration "B" we see a transformer coupling the detector tube to the first audio tube. This is the *first a.f. transformer*. The a.f. tubes in an audio circuit following the detector are named in the order of their arrangement—first, second, etc. The last is the output or power tube. The r.f. tubes in the radio-frequency circuit preceding the detector are also similarly numbered (see Part Five).



### Action of the Transformer

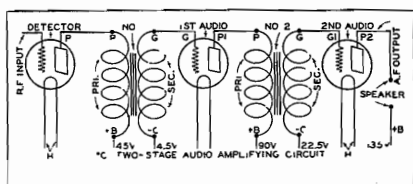
The *average fluctuations* of the rapidly vibrating plate current flow through the primary coil of the transformer shown at "B." A transformer will operate if pulsating or fluctuating direct-current passes through its primary. (This current has been pictured in "E" of Part Seven). An alternating current, then, is induced in the secondary, for we have learned that whenever a primary current is increased in potential value a voltage moving in one direction will be induced in the secondary. And, when the primary current is decreased in potential a voltage moving in the opposite direction will be induced in the secondary. This induced alternating current rises and falls in am-

plitude exactly in harmony with the changes in value of the fluctuating direct-current flowing in and out of the primary coil.

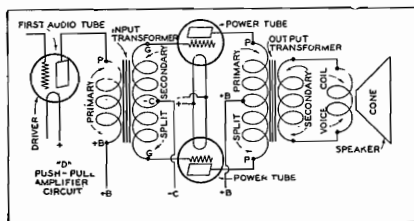
The output of the transformer's secondary coil, therefore, is an amplified current having the same pulsating characteristics as the primary current. Now, if the output from G, of the secondary, is connected to the grid of a second tube it provides a still greater control of a more powerful plate current. So, we see, at the right of the transformer, shown at "B," this second tube, or the *first audio tube*. The plate of this tube can be connected to a pair of headphones, and the volume of sound will be much greater than that heard when only a detector tube is used, as shown, for instance, at "F," in Part Seven. Or the plate can be attached to P of the primary of another, or *second audio transformer*—beginning a *second audio stage*—for further amplification and greater audibility.

### The Complete Audio Circuit

At "C" is shown a diagram of an audio amplifying circuit. It is explained by symbols which have been previously described. The detector plate-current (P) actuates the primary of the audio transformer No. 1, the output of which is impressed upon the grid (G) of the first audio tube. The plate potential of this tube (P1) is maintained at a higher potential than that on the detector, and the amplified grid voltage will give greater control (at G) and more pronounced variations in the plate current. The output (from P1) of the first a.f. tube operates the primary of the second audio transformer No. 2. The induced voltage in the secondary of No. 2 is much greater than



that in the secondary of the preceding transformer (No. 1), and the voltage impressed on the grid (G1) of the second a.f. tube controls even a still greater plate potential (P2) which operates the loud speaker.



### The Power Stage

Most receivers employ the *push-pull* method of audio amplification. At "D" is shown this form of coupling. Two power tubes are connected with their filaments in parallel. The a.f. transformer, shown at the left, is called the *input transformer*; its primary being connected to the plate output of the preceding first audio or *driver* tube, or it may be operated directly from the plate of the detector tube. The *split secondary*, however, has three terminals. One is a center tap (-C or -F); and the two ends (G) connect to the grids of the two power tubes. The plates of these two tubes connect to the outer ends of the *split primary* coil of the *output transformer*, shown at the right; and the center tap connects to the plate or B supply. The secondary of this output transformer feeds an alternating current directly into the loud speaker windings, and thus prevents the fine windings of the speaker voice coil from being burned out by the heavy surges of direct current.

Although two tubes are used in this type of circuit they really provide only single-tube audio amplification. This is because one tube remains idle while the other works. Both alternations to each cycle of the alternating current flowing from the secondary of the input transformer operate the grids of the two tubes alternately—one alternation pushes

while the other pulls. Amplification is not generally increased by the use of the push-pull method, and *twice* the signal input voltage is required. But there is a better reproduction with less hum, and the output circuit provides more than twice the flow of current (measured in milliamperes) of a single tube of similar type. There is little or no distortion even under full volume.

(We have discussed tuning and radio-frequency amplification in Part Five; the detection of signals in Part Seven; and the audio-frequency amplifying circuit in this chapter. Therefore, in the next chapter, we shall be prepared to put the three circuits together to construct a complete tuned radio-frequency receiver.)

#### Queries

1. In what two ways is the aerial current amplified?
2. Of what does one stage of amplification consist?
3. How is the audio current converted into sound?
4. Draw a diagram of an audio transformer with the proper terminal markings.
5. What is the purpose of negative biasing? How is it accomplished?
6. What is push-pull? How is it connected?
7. What is the purpose of push-pull amplification?
8. Explain the operation of phone receiving unit.
9. How is the ratio of transformers calculated?
10. What is a tuned radio frequency (t. r. f.) circuit?

*The Summer Edition of the DX Log of the World is devoted entirely to the short wave stations. It lists several hundred stations by frequencies in megacycles, by wave-lengths in meters, and by calls and countries. On all the principal newsstands at 10 cents.*



# How to Tune *the* SHORT WAVES

• • • By PAGE TAYLOR

**L**AST month, for the benefit of our many new readers, we devoted a few paragraphs to a discussion of some radio expressions which are often heard when tuning a shortwave receiver. A letter from Mr. P. J. Soper, 256 Burroughs Terrace, Union, N. J., suggests that many of our new shortwave readers are old broadcast band DX'ers, and that they must master a new tuning technique before any satisfactory results are accomplished on the shortwaves. Mr. Soper writes:

"Since you published an item from a letter of mine, describing my home-made set, I have had twelve requests for data on construction of it, and other letters asking various questions regarding coils and seeking information about stations and their time on the air. I do not doubt that many of these listeners have very good sets, but not knowing just where and when to tune in, they miss much of what there is to hear, and blame the equipment they have.

"I believe the greatest blame for the disappointment that some fans experience should be put on the radio manufacturers who insert in their advertisements certain phrases, such as 'Consistent Foreign Reception,' 'Listen in to the Whole World,' and 'The World at Your Finger Tips,' and mention any number of countries, such as Fiji Islands, China, etc., as though it was the easiest thing in the world to sit down at a shortwave set and pick up any country at will. Real shortwave fans know how many things must be considered in shortwave reception, and the reason they have any amount of success is because they study the station lists, carefully calibrate their sets so they know where to tune for 31 or 49 meters, and keep a time chart handy to assist them in keeping a station schedule.

"Some listeners expect to hear the stations come in just as they do on the broadcast band, which is, perhaps, the greatest error a prospective shortwave fan can make. It is far better to approach the dials as a pessimist, and by patiently turning the dials a degree at a time, keeping the regeneration control very close to the oscillation point all the time (if a regenerative receiver is used, of course), until some station is heard. A fan only has to receive that first station to know just how the job must be done."

## Locating the Bands

In an article, "Breaking Into the Short Waves," which appeared in this magazine in May, 1933 (No. 69), readers were advised not to tune shortwaves haphazardly, but it was mentioned that on the other hand, one must tune more or less blindly at first, until a few "local" stations are heard. Since, as a rule, shortwave relay broadcasting stations are heard in small groups at separate spots on the dials and not all over the dials, it is necessary first to locate these groups or "bands" by the local, or most easily tuned stations. At the present time, DJB near 9 am, seems to be the best station to locate the 19-meter band, while the 25-meter band is best located by GSD or GSE near 1 pm. W1XAZ will locate the 31-meter band, while the 48-49 meter band is easily found by several stations, such as VE9GW, W2XE or W8XAL. Whenever any of these or other stations are heard, their dial settings should be recorded along with the frequencies of the stations, which will be found in the station lists. After the various bands are located and about ten or twelve stations have been logged, a rough graph can be prepared which will point the way to more desirable stations.

### Charting the Frequencies

On a sheet of graph paper, let the left hand margin represent "Frequency in Kilocycles" and the bottom margin, "Dial Settings." From left to right across the bottom allow one line to represent one degree on the dial, and from bottom to top on the left side let about five lines represent 1000 kilocycles, starting at 2000 kilocycles (2,000 megs.) at the bottom and continuing at 1000 kilocycle intervals to 20,000 kilocycles at the top. A station that has been heard can be located on the graph by placing a dot where the line representing the dial setting crosses the line representing its frequency. When all the stations are placed on the graph, curves should be drawn between the dots. To find a required station by means of these curves it is necessary only to determine at which point the curve crosses the line denoting the frequency of the desired station. This point will be very close to the dial setting for the station. After a large number of stations have been heard a new graph should be made, as it will be considerably more accurate than a rough one drawn from just a few stations.

Equipped with this graph the beginner has made an important step toward the interception of foreign programs. Before tuning, however, several general rules must be observed, not the least important of which is the fact that shortwave stations tune very sharply and careful manipulation of the tuning controls is required. By "carefully," we mean, as Mr. Soper says, *one degree at a time*. On regenerative receivers a whistle will indicate the presence of a station, while on superheterodynes a rushing sound is heard.

#### S. W. in Canada

Many reports have been received on the new Canadian station VE9DN. We are advised by the Canadian Marconi Company that VE9DN works on 6.005 megs. with 2000 watts, re-laying the programs of CFCF. VE9DN is located in Drummondville,

Quebec. VE9DR, which ordinarily relays CFCF, has not been on the air for some time, owing to the fact that certain repairs are necessary. VE9DR was a 50-watt station and was situated in Montreal. The letter from the Canadian Marconi Company continues, "Station CJA2 operates on 9330 kcs. It should be noted that the call letters of this station have been changed to CGA4. This station is used for point-to-point service only, between Drummondville and London, England. Station CJA5, which used to operate on 8975 kcs., is no longer in use. All the shortwave stations which use CFA, CJA and CGA call letters are for point-to-point service and therefore we are not really interested in receiving reports on them."

#### The Commission Stations

Canadian Radio Commission programs are now being broadcast regularly over two shortwave stations at Winnipeg. Arrangements for this shortwave broadcasting were made by the Commission in order that coverage may be secured in parts of Canada not now satisfactorily served by long wave stations. The Winnipeg stations carrying the programs are CJRX, 11,720 kcs., and CJRO, 6,150 kcs. Through this combination of long and shortwave services the Commission is endeavoring to make its programs available in all parts of the country. Listeners should be able to hear one or both of these stations between six o'clock pm and midnight and on Saturday and Sunday afternoons. Reports from listeners on the character of shortwave reception in their districts from the Winnipeg stations would be appreciated by the Commission.

Mr. Maynard Marquardt, Chief Engineer of W9XAA, advises us that the 6080 kcs. frequency is the only one being used at the present time. W9XAA works on Sundays from 11:30 am to 9 am; on Tuesdays, Thursdays and Saturdays from 4 pm to midnight, and on Mondays, Wednesdays and Fridays, from 4:30 to

7 pm, EST. Letters to W9XAA should be addressed to Mr. Marquardt, The Chicago Federation of Labor, 666 Lake Shore Drive, Chicago, Ill. The transmitter is located on Navy Pier.

### A Good Report

"DJB has been coming through as well as could be expected at this time of year," writes Mrs. L. R. Ledbetter, 605 Mattingly St., Vicksburg, Miss. "DJB, as well as the Pontoise station, fades away about 9 am. I know that DJA is operating but cannot say whether they broadcast regularly. I tuned them in at R5 volume at 5:30 pm and the next morning DJB announced their wavelengths as 19.71 and 31.3 meters. CT1AA is coming in again and their modulation is worse than any other, except I2RO, who just doesn't seem to have such a thing as modulation. G6RX still comes through but I can't get Caracas nor Morocco. HJ1ABB is certainly the most enjoyable of the S. A.'s . . . good modulation, very little fading, and really good musical selections with announcements in English often enough. PSK hasn't been so clear for me and their programs seem to consist of talks entirely. EAQ is fine, of course, but their broadcasts aren't much from a musical standpoint. I would like any tip that will help me hear one of the Russians. I find a muddle of code on 50 meters. Is RV59 above or below COC?" COC is not steady and has been reported on both sides of RV59.

### Short Waves Crowded

From Roy E. Robinson, 133 Mitchell St., comes a letter that is typical of many we receive, concerning the congestion in the 48-49 meter band. "It seems to me the shortwave channels are rather cluttered up," he writes. "Take the 49 meter band with W4XB, W8XAL, W9XF, W9XAA, DJC, GSA, HIX, VE9GW, VE9HX, YV1BC, YV3BC, all going at once, and none of them can be tuned in satisfactorily. There are

several code stations that break up DJC and others. I find rather heavy code interference around GSC-DJA-GSB, and down around EAQ. Usually code spoils PHL. Why can't codes and relay stations be divided up so as to eliminate interference? Nearly all the stations seem to bunch around 49 meters while other channels are open. The announcer at RV59 was talking in English the other day and asked for reports, saying they answer all letters and wish suggestions for programs. I understood him to say to address 'Radio Center, Moscow.' Code was interfering so I couldn't get everything."

### Identifying the Spanish Calls

"Last night I was listening to a station on s. w. but did not get the call letters," complains Harold Kricks, Sinking Spring, Pa. "I listened to this station from 7:15 until 10 pm, at which time he signed off. Call letters were given in Spanish every 15 minutes, but not once in



*This smiling miss is June Joy whose voice is heard when Sam Robbins and his orchestra appear on the Columbia air lines. She's small, blue-eyed and raven-haired. Robbins and his orchestra are heard on a sustaining schedule from the McAlpin Grill in New York.*

this length of time did he give them in English. It came in next to HJ1ABB." From program items Mr. Kricks mentions, the station has been identified as HJ5ABD, Cali, Colombia. For the convenience of s. w. listeners in English-speaking countries, many foreign stations announce in our language; this is merely an accommodation on their part and there is no reason why they must do so, any more than W3XAL should be obliged to announce in Spanish. The Spanish alphabet and the nine numerals are easily learned, and with a little practice it will be found that it is somewhat easier to understand call letters given in Spanish than in English, as the Spanish letters are pronounced more distinctly than ours. We will print the Spanish alphabet in the next issue of RADEX.

#### **"Big Ben" Silent**

The deep-throated tones of Big Ben will not be heard from the Daventry stations for a few months, according to an announcement from the station, heard by Clement Van Velsor, 1033 Sanford Ave., Irvington, N. J. It was announced that the bell was in need of an overhauling and cleaning up. In its place, "Big Tom, down the Thames," will be heard.

"I received KWE on 19.4 meters calling JYK in Tokio, Japan, one afternoon about 3 pm," reports James Owen, 1019 W. Webster, Springfield, Mo. "One evening on about 57.2 meters near 9 pm I heard a station which sounded like it might be an amateur, but when he turned the conversation over to the other station he said, "CFL to CFS." According to the May-June-July issue of the DX Log of the World, now on the newsstands, CFL is in Tabouret, P. Q., and CFS is in Toronto. CFS uses A1 emission only.

#### **Amateur Abbreviations**

W. G. Odenwalder, 32 6th Ave., New York City, asks our readers to help him identify a station he heard on a Saturday morning from 1:33 to

1:36 am, announcing as WMES, Lorain, Ohio, 2,550 kcs. "While the pen and paper are handy I would like to air a suggestion that has been bothering me," he adds. "Is it too much to assume that a good part of the RADEX subscribers are new to the field and consequently unfamiliar with the many expressions used? In view of this, I think a list of both professional and amateur abbreviations would be appreciated by the readers. Why not put it up to them for suggestions?"

In response to this request, some of the more common abbreviations and expressions are given in the article "Assorted Information" in the next issue of RADEX.

#### **From a Novice**

"I am a new addition to the ranks of s. w. listeners, having had my Philco allwave set less than three months," contributes R. P. Sloan, 1316 Washington Ave., Fort Worth, Texas. "Among the foreign stations I have listened to are GSA, GSC, and GSE at Daventry; EAQ, Madrid; DJA, Berlin; VK2ME, Sydney; HJ1ABB, Colombia; YV3BC and YV5BMO in Venezuela; PLV, Java, and COC. EAQ I receive with clock-like regularity and room-filling volume. DJA comes in well when I can get it at all. I have had difficulty lately in receiving the Daventry stations, although they came in well last month. VK2ME in Australia, I have heard four times, having listened for them that number of times only. On March 5 I heard XETE, Mexico City, conducting a test between 8:10 and 9:40 pm, saying they would soon be on the air transmitting the programs on KEAL of the Pan-American Radio Broadcasting Co. I would like to hear from owners of the same model set as mine, which is a Philco 44-B."

Joe Stokes of the KDKA DX Club, Hotel Wm. Penn, Pittsburgh, Pa., advises us that the KDKA DX Club is broadcast every Sunday night from 12:30 to 1 am, EST, on three frequencies, 980, 6140 and 11870 kcs.

# of RADEXING

Ellis also of Hughson who adds: "The other evening I heard the new broadcast from KFQD at midnight PST. For about seven minutes they were like a local and then suddenly faded out to a whisper and never did come back as strong as at first." Just another of the peculiarities of radio.

## The JO Announcements

D. L. Davis, Pearl City, Oahu, T. H., sends us a complete list of the —Japanese stations received with his verification and adds: "All 10 kw. JO stations come in here with good signal strength but JOHK, Sendai, on 770, has the most consistent and slightly best signal strength and quality. All JO stations announce very infrequently in English and then usually give only the call letters very quickly once and sometimes twice, and give the location in Japanese. Almost

always, on signing off, the call letters are quickly given once or twice in English. XGOA has a good strong signal and announces frequently in English; it broadcasts considerable English news, music and talks. A lady does most of the announcing and pronounces XGOA as X-HE-HO-A and at times adds 'Nan-king.' 2YA and 3YA are coming in fine on their new frequencies of 570 and 720 respectively. Since the middle of January, all signals both East and West have been stronger and with less fading but static has been unusually heavy here in Hawaii since that time so the strong signals are not of much help. KGU has been staying on the air until 10:45 p. m. Honolulu time on Saturday nights for the last few months. (That is 4:15 a. m. EST) I am using an RCA-Victor R-24-A, and for the last six months I have been trying everywhere to get a schematic diagram of this set."

## His Two Cents' Worth

"This is the first letter I have ever written to any publication. There is something about your delightful magazine that makes a reader want to put in his two cents' worth. It is intimate and informal and I like it." This is the pleasant preamble to a letter from Norman Rogers, 3204 Hull Ave, Bronx, New York City. "Although, as a boy ten years ago when I owned a little two-tube Radiola III, I went in for DX in a haphazard sort of way, pulling in Porto Rico and numerous Texas and some California stations, it wasn't until three months ago when I bought a Philco Model 60 (five tubes) that I decided to make a hobby of DX. Now a Philco 60 isn't exactly the ideal set for DX work; for one thing, it tunes very broadly. WABC can be heard 84 to 89 on the dial. But thus far I have done fairly well. I haven't started writing for verifications as yet but I intend to begin doing so soon. To date I have logged 262 stations but, after next month's frequency tests, this total should jump to around 350. I would like to get in



*Don Ameche, handsome young leading man of countless dramatic programs, is Master of Ceremonies for the Romantic Melodies program. You may hear him each Thursday night on an NBC-WJZ coast-to-coast 7:30 p. m. EDST.*

touch with some DX fans in N. Y. C. especially those who are dabbling with the short waves. I will answer all letters."

From W. H. Turner, 144 Parris Wood Road North, Withington, Manchester, England: "RADEX is fine. I have picked up more of your stations. Am now waiting for veri from XGOA, Nanking, China. It comes in just below Langenberg, a powerful station which operates on 455.9 m. 658 kc. Your best time for picking up XGOA would be around 6 p. m. as we have it around 11:30. I picked up one of your patrol calls last week, a flying squad. It came through on 189 m. There is a little station with a big noise here that would be a good catch for your DXers. It is Juan-les-Pins (Nice, France) 40.2 m. 1249 kc. 200 watts. Lady announcer in French and English. They give very good programs and will answer letters. I have their verification; it's well worth getting—a photo of the artists, views of Monte Carlo, with a short history of the latter in French. If there is anything the boys want to know about over here, I will write them."

#### Believe It or Not

This remarkable DX report comes from Mal B. Crabill, 2933 Sumner St., Lincoln, Nebr. "I turned my dial and a ten-watter in Los Angeles came rolling in. Then as I turned the dial Manila of the Philippine Islands followed in quick succession by France, Germany and Japan. Some amateur in New Zealand was ardently calling CQ. A ship somewhere on the Indian Ocean was broadcasting jazz for the novelty of it. Admiral Byrd had evidently forgotten to shut off his transmitter for I could hear the men talking and laughing among themselves. Then, being in an experimental mood, I removed the rectifying tube from my set and, much to my delight, a station in Madagascar came booming in. A bell was ringing, ringing—

"It was a good thing I woke up as the alarm had almost run down and

the frequency checks were to start in five minutes. I wondered why I didn't get as much kick that morning as I usually do, listening to stations checking frequencies."

"I have just returned from a DX trip," writes Nicholas J. Hock, 20 Burnet St., Newark, N. J. "At 1:12 a. m. EST, WFBR was explaining what happens 'When You're Away'; then five minutes later, WJW gave us a 'Louisiana Hay Ride.' WAVE was next with Johnny Burkhardt, vocalist. XEW gave way to 'There goes my Heart' at 1:36 by KSL. 'The Gypsy Love Song' went on the air waves through KNX at 1:38 while KRLD was advertising Peruna at 1:41. A sketch in Spanish was XEB's program at 1:42 and one minute later came WHO with 'Let's Fall in Love' but WRC said 'It Don't Mean a Thing' at 1:45 which was substantiated by XEW at 1:46 with 'Seven Years with the Wrong Woman.' Then came WLS, KOA, KGO, WBBM, WGN and W8XO: KPO came in at 1:59 then KFI which I left for LR-5 which was my first one from South America so I stuck with them from 2:04 to 3:00."

"Last Wednesday night (March 7) while dial roaming, I was on 780 and heard a man reading letters to the Hudson Bay country so I stayed there and presently he announced CKY Winnipeg," reports F. B. Ritts, Belle Fourche, So. Dak. CKY had just changed to 780 from 910 as announced in last month's issue. "Last Monday night while tuning in KSL, Salt Lake City, there was a very loud station interfering with them, staying till station announcement. You can imagine my surprise when he said KHJ, Los Angeles. Can you explain that?" As KHJ is on 900 and KSL on 1130, we give it up. Some of these harmonics just don't agree with our arithmetic. "I grounded the far end of my aerial," concludes Mr. Ritts, "and you can tell the RADEX world that it increased my power fifty per cent."

## The Army Calls

In response to our query on page 41 of the March issue of this magazine, G. B. Edelen, 211 East John St., Champaign, Ill., writing on stationery of the Military Department of the University of Illinois, says that all ground and mobile stations of the Army used for training purposes use signs of two letters followed by a number, the ROTC at the U. of I. having the call signs BC1, BC2, BF2, etc. "S. W. reception here in central Illinois has been rather poor this past month," his letter continues. "I am unable to receive any but the strongest Europeans, such as Daventry and the Old Reliable, EAQ, and I am just wondering if there are any tuners in close proximity to Champaign who are doing better. I am using a Model 7-D, U. S. Radio & Television 7-tube All waver, and would like to hear from other users of this set."

### S. W. in California

"Shortwave reception has been rather poor out here in the west for the last month or two," advises Henry Espoy, 203 South Catalina St., Los Angeles, Calif. "I have succeeded in logging a few new ones, though. I received COC quite well in the evening a couple of weeks ago but I have not heard them since. There is a new South American station in Maracaibo, Venezuela, whose call letters were at first YV15BMO, but later they were changed to YV5BMO. It comes in well and they are on till about 7 or 7:30 pm daily. I have understood their frequency to be 6070 kcs. There is a new Mexico City station broadcasting on about 49.95 kcs. from 9 till 9:35 pm, when they sign off. They relay XEB in Mexico City, but they never give call letters. KTP on 8120 kcs. or KAZ in Manila often work with KWX or KWY at Dixon around 7 am. PLV-KWY often talk near 7 am. All the time mentioned is PST. The best European now is Radio Coloniale at Pontoise, the best So. American is HJ1ABB in Barranquilla, although



*The Landt Trio and White, one of the most popular vocal combinations on the air, may be heard daily except Sunday at 9:15 a. m. over WEAJ and network. Left to right: Standing, Howard White and Dan Landt; sitting, Karl and Jack Landt.*

LSX comes in very well with their tests with WEF. PSK is good at times."

### News and Notes

Wm. J. Wood, 817 Lake St., Oak Park, Ill., reports that EAQ now signs off at 7 pm, having discontinued the IBC programs. He would like to hear from other owners of the G. E. All Wave receiver, model K-85.

Correspondence from owners of Midwest receivers is requested by C. E. Joynes, 209 Cimmaron Ave., La Junta, Colo. The strange station on 9340 kcs. playing phonograph records is XDC in Mexico City. Mr. Joynes has also heard EAQ, Pontoise, HJ1ABB, YV1BC, XETE, VK2ME and VK3ME.

"I have been a radio fan for 12 years but a shortwave fan for only a few months," writes Harold Lamb, Box 636, New Canaan, Conn. "I cannot understand how I have kept out of this thrill-getting pastime for so long a time. My set is a Philco 16-B. I get the English, German and Italian stations very well, as well as some South Americans. I am almost positive that I have had KFZ on 13,220 kcs. This station I heard signed off before LSX and WEF concluded their transmissions. I would like to correspond with anyone using the same type receiver as mine."

"YV5BMO, 49.39 meters, Maracaibo, Venezuela, announces as 'Ecos del Caribe,' works from 5:30 to 11 pm, gives one stroke on a gong and announces also in English," according to Chas. A. Perdicaro, 7225 New Utrecht Ave., Brooklyn, N. Y. "YNGRG, Granada, Nicaragua, the Granada Radio Club, 44.64 meters, tests after 6 pm. I understand that Amando Cespedes Marin of TI4NRH was operating YNGRG to get it started, but is returning home to put 4NRH back on the air again." Yes, Sr. Cespedes partially dismantled NRH, taking the power supply panel to Nicaragua to put YNGRG on the air. By the time this magazine is off the press, however, it is expected that TI4NRH will be back on the air. Sr. Cespedes built several of the Colombian amateur broadcasting stations, as well as NRH and YNGRG.

Wm. Goadby has moved to 45 East 85th St., New York City, and reports that because of the very severe man-made static he has practically discontinued tuning the broadcast band, using his 8 tube Victor Allwave set for the shortwaves. He peaked his aerial for 31 meters and finds that reception is improved in the 49 meter band as well as the 31 meter band. Mr. Goadby has heard a number of stations, among them IRM in Rome. He would like to correspond with someone who uses as Victor 8 tube.

Two readers report a Spanish-speaking station on 1550 kcs., transmitting every night near 9 pm. Dramas are featured often, and musical selections consist chiefly of Xylophone or marimba selections.

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NBC studio pick-ups: John Charles Thomas was studying medicine at the Baltimore Medical School when the winning of a scholarship at the Peabody Conservatory of Music changed his plan for a career from surgery to singing . . . Eddie Cantor's eldest daughter, Marjorie, handles his fan mail. Marjorie took a course in a business college in order to qualify for the job.

## The Gentle Art

WHAT a year it has been! All kinds of weather and all kinds of reception. But the logs have grown and hundreds have had the thrill that comes but once in a lifetime—the first station from over the big briny. Increased power, better sets and more accurate information regarding hours and frequencies of the foreigners are to be credited for the new hauls. All over the world our readers are adding up their logs and counting the profits. Here are some of the calculations:

"For a week or two reception was so terrible that it was only habit that prompted me to get up and DX," complains Warren E. Winkley, Hughson, Calif. "But now good reception has returned to these parts. In spite of the terrible weather conditions, I have been able to keep increasing my log. It's now at 522 with 107 verified and still growing, thanks to your tips. The Japanese stations are still a novelty to me and I like to sit and listen to them by the hour. The same goes for XGOA, 2YA, 2BL and 3YA. I heard 29 Japs last Saturday morning thus setting a new record for myself. I now need but one—JOUK on 680. It seems miraculous to me the way the 300-watters like JOJK, JOOK and JOFG come in. The following Antipodes stations come in very well: 4BC, 4BH, 4QG, 2CO, 3AR, 4RK, 2BL, 2GB, 2UE, 2YA, 3YA and 4YA. I listen to all the Japs and 'down-under' stations without either aerial or ground. About the Mexicans, XEMO in Tijuana, replacing XEAE, comes in terrifically strong but say they use only 1500 watts. Their schedule is 9 a. m. to 10 p. m. daily PST. For the few who haven't heard XEBC, they have their 'Tom and Jerry' program every night from midnight to 2 a. m. PST. XER has been off the air since Friday night, Feb. 23."

Somewhat similar news regarding the X stations comes from Wm. J.



### Gets Across at Last

"I was successful in logging my first TA on Saturday morning, March 24, when I heard station OFA, Helsinki, Finland, on 890 from 2:30 to 2:41 a. m. EST. I couldn't hold it any longer for it faded away. I distinctly heard the announcer give the call letters OFA, in English with a foreign accent, at 2:32 a. m. Then followed a musical selection till 2:36. At this time a man spoke but, due to fading, I couldn't make head or tail out of it. I'm mighty proud of this catch. My log now stands at 477 stations with 265 verified including LR-4 received in yesterday's mail. All these stations have been heard with an Atwater-Kent." This report from a new member of the "Trans-Atlantic Club" is by Robert W. Botzum, 633 Moss St., Reading, Pa.

"This last month has been terrible for radio reception," complains Luther E. Grim, 505 S. Main St., Red Lion, Pa. "At times when I wanted to listen even to popular programs, I have had to shut off the radio because of some interference that sounds like just plain static. Even the powerful W8XO cannot always fully override the noise. It is small wonder that my log is making little progress. However this month I did add VOAS, KICA and KGDM to raise my total to 658. During January I logged CFRC, CMBZ, CMCM, CMHI, CRCV and CJRM and—best of all—SBH, Heilsberg, Frankfort and I1TO. The latter were heard on January 10th and I haven't heard one of them since. I heard PP and Radio Normandie on both their old and new frequencies."

"In the March issue you advise someone writing in that the German station he heard early in January on 832-835 was Stuttgart," points out Philip R. Nichols, P. O. Box 82, East Hartford, Conn. "I would like to question this because at least two of our members in Hartford and I myself wrote to the Stuttgart station on similar reception before Jan. 15 and we all have received polite refusals

stating that program reported did not check with theirs. They felt sure we received a German station and tried to find out which one but were unable to do so." Philip adds the tip: LR2 has been heard after XEW signed off, twice in the past month.

### From Saskatoon in Saskatchewan

"Saskatoon, "The Hub City of Canada" is close to the geographical center of Canada," points out Charles Hesterman, 610 3rd Ave., N. "We are about 2000 miles from each ocean. Stations from the East are very hard to receive—the 50,000-watt WEAFF is a great rarity to us. Yet I have managed to get a veri from Poste Parisien on 914 kcs. I have the following foreigners all verified: JOCK2, JOAK1, JOAK2, JOHK, JOIK, JOGK, JOQK, JOPK, 2CO, 2UE, 2BL, 3LO, 3AR, 2GB, 4BC, 4RK, 5CK, 5CL, 5DN, 2YA, 2ZP, 3YA, 7ZL, YV1BC, WKAQ, KGU, and have eight more out in the mails. Needless to say, I am very proud of



Nick Lucas, "The Crooning Troubadour," is now heard in his own quarter-hour programs through the Columbia system each Wednesday at 11:00 p. m. EDST and each Friday at 6:30 p. m.

my foreign list caught on a five-year-old Victor t. r. f."

"My 700th verification prompts this first letter to my Alma Mater, RADEX," writes Cyril R. Driscoll, 923 Riggs Ave., Watertown, N. Y. "Reception has been very poor this season, nevertheless, with my orphan Edison, I've been able to add with speaker volume CMJP, VOAS, LR-5, CX-26, Normandie, PP and 103 others to complete 37 states. Also have six TP's. Best catch out of 87 2000-milers is 10-AT. It took me three years to log stations that the beginner this year could have logged in a week through the FRC tests. Circles drawn every 100 miles on my RADEX Map of North America give me distance instantly."

"At 2:50 a. m. March 4, CST, I got CMPN, Havana, Cuba—number 712 in my log," announces F. W. Robinson, Marionville, Mo. "Not bad for a little, old RCA Radiola III, two tubes and phones, is it? By grounding my aerial and using only the lead in from switch to set, I can get up to about 1850 kcs. About half way between the police on 1712 and 1500, I recently picked up an announcer who gave the call three times 2-0-1-Q (two-oh-one-que) Madison, Toledo, Ohio, and another call I received sounded like WPGF. Who can throw any light on these two calls?" WPGF is the police call in Providence, R. I. on 1.71 megs.

Wm. J. Ellis, Hughson, Calif., takes his hat off to KGFJ which recently very courteously arranged with the sponsor of the Nite Owl program to allow KGFJ to remain silent between 12:30 and 1:00 a. m. PST to permit reception of a special DX program from YV3BC, Caracas, Venezuela. Mr. Ellis would like to see every DXer write a letter of appreciation to KGFJ. RADEX too doffs its turban to this station. Bill is learning to distinguish between the Chinese and Japanese languages. Seems to us like the difference between black and blacker. He logged XOST, ZBW and XGOD the a. m. of March 10.

"Here's a tip," proffers Wm. Wheatley, 124-22 Metropolitan Ave., Kew Gardens, N. Y. "If stations who should be on their regular tests by the FRC, aren't on, try for them the third week of the month. I picked up a few at this period and wrote to the FRC asking how come and they said that, owing to a storm or a breakdown at the plant, a station is sometimes unable to conduct its regular test and that the FRC makes a special test, usually the third week of the month."

### Sleep vs DX

"It certainly is too bad that fellow with the brickbat had to lose two hours of valuable sleep. I for one have lost, over a period of some seven years, an average of about five hours a night," counters Joseph L. Hueter, 1610 N. 18th St., Philadelphia. "If one is a real DX fan he doesn't mind wasting a few hours trying for a station even if it doesn't come on the air. I now have 786 verifications covering every continent but Africa and it took plenty of time to get them to say nothing about the money for postage both ways. I have never worked the short waves and have received all the above stations on the regular broadcast band. I find that all but three or four stations in the U. S. will verify if the report is clearly and fully given and if it is correct. A stamp for return postage should always be enclosed."

"Have you had any reports of KIIQ in Los Angeles?" inquires A. E. Glover, 105 College Ave., Pullman, Wash. "On Jan. 14, I listened to them on 2340 with good volume and clarity but occasional fading, between the hours of 10 p. m. and midnight PST. They announced 'This is station KIIQ testing on 2340 kcs.' and requested reports on reception giving a phone number but for two hours they gave no location. Finally at 11:50 they gave station announcement and location. They played phonograph records. Haven't heard them since."

From John M. Wheeler, "Red-

court," Lee-on-the-Solent, Hampshire, England, comes this report of his DX work: "Although I use only three valves and my set is five years old, I have pulled in two Pacific-coasters, KFI and KNX with the latter verified. In all I have 40 U. S. stations, one Canadian and 12 in the Argentine. South Americans can be heard almost any night but the U. S. stations vary with the moon. One day I pulled in WPG at 9:45 p. m. (GMT) which is about the earliest it is possible to have trans-Atlantic reception."

"Reception continues good in northern Oklahoma," advises Frank Pieratt, 216 East Grand Ave., Ponca City, Okla. "In the past month have added 80 new b. c. stations in the U. S. and had the rare good luck to intercept Poste Parisien on Jan. 22 on about 960. Short wave reception has been way below par except on the 49-meter band where GSA, DJC and the South Americans are coming in fairly regularly. Have received two new SA's—LU5CZ in Buenos Aires on about 42.3 and OA4B on 20 m. in Lima, Peru. COC comes in fairly well at times."

#### Some Newsy Notes

"Here is something which might help some of your readers identify a couple of TP's," submits Theron Colegrove, "Sparks" aboard the Tug H. C. Cadmus. "2KY is actually on 1074 and 1YA on 652. They come in fairly well at times when KJBS and KPCB, respectively happen to fade away. My best reception this month was that of I1RO with fair speaker volume before sunset when we were only 800 miles from WOR. I1RO, who is on 713, is on until about 6:20 p. m., EST."

"Just to let you know that I've received Radio Normandy three times on its new frequency," postcards Eugene Giglio, R. D. 1, Rockville, Conn. "Received a verification from them in 20 days. Have had Poste Parisien about 12 or 15 times on 959 and am awaiting my verification. I use a Crosley a. c. 8-tube,



*Lanny Ross is back on board Cap'n Henry's Maxwell House Show Boat after completing his first motion picture "Melody in Spring." Lanny will continue to sing with the Show Boat troupe over an NBC-WEAF nation-wide network each Thursday at 9:00 p. m. EDST, until it is time for him to return to Hollywood to begin work on his second picture.*

more than four years old. I now have 763 stations; best catches, 2BL, 2YA, PP, Fecamp, 10-BI, 10-AB, KFPM, CKMO, VOAS, 10-BP, 10-BQ, and YV1BC. Only 47 stations left in the U. S. to log."

"On Feb. 12 at exactly 2:10 a. m., EST., I tried for Poste Parisien on 960. I didn't really think I would get them but I did and for three nights in succession, always at exactly the same time," reports Captain Horace L. Hall, 280 Broadway, Room 611, New York, N. Y. "First you hear bugles and trumpets at 2:10; then at 2:12 'Hillo, Hillo, Ici est Poste Parisien' and at 2:13 a gong is struck; then the program. I would like to know if any other fan in New York City gets this station."

"Are WKOK, WJEM, KGIX and WMEX on the air yet?" queries Joel H. Armantrout, 602 E. Magnolia St., Fitzgerald, Ga. Joel now has 699 stations logged, has recently joined the CDXR and would like correspond-

ents in the western provinces of Canada and foreign countries. He also asks for information regarding a station calling themselves W2XI, Radio Frequencies, Inc., New York City and a WDL at Fort Worth, Texas.

"Among my catches but not verified are SBH, Horby, Bordeaux-Lafayette, Stuttgart. I have heard these stations on both their old and new frequencies. I find there is not much difference in the reception; they come in just as well on either frequency. Has anyone received a veri from CX-26? My report has been out since Nov. 20, 1933." This report is from Charles Leboeuf, Box 222, North Grosvenordale, Conn.

"Some time ago there was a lot of discussion about the ability of small receivers to bring in DX," recalls John Kojan, Cleveland, O. "I built a two-tube s. w. receiver and now I have verifications from DJC, G6RX, YV1BC, YV3BC, LSX, PSK and EAQ."

"I am using a 5-tube battery t. r. f. set which I have had five years this summer," reports Harvey Scheirer, Jr., Fullerton, Pa. "I built the set with the help of a friend. I use a 100-foot outside aerial. I have a ground in the cellar and one outdoors. Both are pipes driven in the ground to a depth of five or six feet. I have 112 stations logged including such ones as KFI, KPO, KNX, KOA, KSL, XEPN and XER. I have not verified any of my receptions."

"Please arrange a DX program with some Rhode Island station," pleads J. R. Maloney, Ora Short St., Shelby, N. C. "I have all the states except R. I. I am using an 11-tube Majestic with a 150-foot aerial about 60 feet high. I have JOCK-2, JOAK-1, JOHK, 2YA, 2BL, 4QG, LR5, HJN, 5CK, 2CO, 4BC, 2ZM, 4ZP, OFH, HIX, VONF, VOGY, 2UE, and Stuttgart, Germany."

"Trans-Atlantic reception has been very poor in this country during February, but I'm hoping it will improve this month," reports Arthur C. Baker, 10 Lansdowne Rd., Sale, Cheshire,

England. "Could you find space to say that I will be pleased to correspond with any member of the American DX fraternity who would care to write to me?"

"On the morning of Jan. 27, about 2:15 AST., I heard a few minutes of a special program for RADEX from CP-4 on 1040," announces E. L. Peters, Box 65, Westport, Nova Scotia. "About the time I realized who he was, KRLD came on testing, followed shortly by WTIC. CP-4 was about R7-8 while he lasted. Fine courtesy program completely ruined by these two stations."

"Please publish this," implores Ernest H. Griebel, 8 Wayne St., Carbondale, Pa. "On March 8, about midnight, EST., I heard a station on 1200 or 1210 broadcasting a basketball game, but it was very faint, and I could not get the call. I heard it after WWAE signed off. Will some of our readers please tell me what station this was?"

Frank Sekach, 4812 Marlborough Ave., Detroit, Mich., wants a corner set aside for records on crystal sets. Outside the local stations he has received WLW, CJGC, WCCO, WHAS, WENR, KDKA, KMOX.

"With my four-tube Brunswick, I've logged 21 of the states besides three stations in Canada and three in Mexico," says Newell P. Hurd, 218 Broad Ave., Leona, N. J.

*There has long been a crying need for a real Short Wave Log which would exclude the code stations but include all the principal s. w. voice stations of the world. We believe this need has been met in the Summer Edition of the DX Log of the World. Price 10 cents at all newsstands.*

# Neutralization *and* Alignment of RECEIVERS

## 3. Superheterodyne Circuit Alignment

• • • By B. FRANCIS DASHIELL

THE balancing condensers used for neutralization and alignment of tuned radio-frequency receivers are easily found. They are attached to the sections of the condenser gang unit with which they are associated. But in superheterodyne receivers the alignment condensers or trimmers may be found at different locations in the chassis. The intermediate-frequency transformer trimmers may be located within the transformer shielding, but such is not always the case. Because the aligning and trimming condensers may be found in various positions it is not possible to state definitely where they are located.

All superheterodynes are aligned more or less in a similar manner. But each make of radio possesses certain inherent differences in circuit arrangement. This adds to the difficulties of realigning superheterodyne and other complicated radio sets. All-wave receivers are not easily aligned. It is extremely difficult to make the condensers "track" perfectly on all the many wave bands within the limits of the receiver. The work of realigning such sets is best entrusted to some competent and well equipped service shop.

### The I. F. Amplifier

Usually one or two stages of intermediate-frequency amplification will be found in a superheterodyne receiver. But there are a few sets that utilize a third stage. Each of these stages, if the receiver has tuning facilities for alignment, must be adjusted to a definite frequency response. A test oscillator that is tuned

to the peak or intermediate frequency of the receiver should be used. A visual tuning meter placed in series with the second detector plate indicates the degree of response to a maximum signal. Start with the grid circuit of the *second* detector and turn the adjusting screw within the shielded housing of the last i. f. transformer stage to obtain maximum response. Then continue toward the *first* detector. Both the plate and grid circuits may be tuned and they will require adjustment.

The signal from the oscillator is fed into the control grid of the first detector after the antenna and ground terminals of the set have been shorted with a large bypass condenser. The response of the output meter will fall off sharply as soon as the test oscillator is tuned to a slightly higher or lower frequency (less than 5 kilocycles) than the rated intermediate frequency of the set.

### Oscillator Feed Back

In some circuits there is a small trimmer condenser placed in series with the plate of the first detector tube and one coil of the oscillator assembly. This condenser is for the purpose of regulating or balancing the oscillator feed back. It is well known that in most cases the oscillator tube becomes less and less sensitive with use, and will finally stop oscillating. A new tube then is needed, but the replacement calls for a readjustment of the circuit to the new tube's particular sensitivity.

Tune the receiver dial to a station around 600 kilocycles and turn the set screw of the trimmer counter-clock-

wise until the set goes dead. Turn back in a clockwise direction until the station again comes in. Add an additional turn. If the set is found to operate for *any* setting of the condenser it should then be adjusted to a minimum position. The volume control must be turned on full during the making of this adjustment.

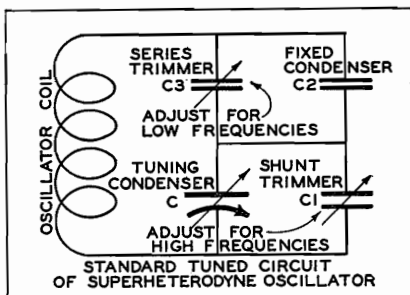
### Oscillator Tracking Adjustment

In a superheterodyne receiver the oscillator frequency is always set *above* the station signal frequency. The spacing will be a certain fixed number of kilocycles no matter what station is being received, and this difference must remain at exactly the same number of kilocycles for every setting of the tuning dial throughout its entire range. The difference between the oscillator and the signal frequencies is, of course, the *intermediate* frequency of the set. For example, if the dial is tuned to a station on 1,000 kilocycles, for a receiver which has an i.f. peak of 175 kilocycles, naturally the oscillator must be adjusted to function at 1,175 kcs. Or, if the dial is tuned to 1,400 kilocycles, the oscillator must function at 1,575 kcs., for proper reception.

This adjustment, in the superheterodyne receiver, is quite difficult to maintain. Since all the condensers are on one shaft, the task may become exasperating, as many set owners have learned to their sorrow. The proper "tracking" of stations on their respective kilocycle readings between both extremes of the dial is one of the most common troubles met with in radio servicing.

### Adjusting the Condensers

After all other sections of the receiver have been correctly adjusted we can then attempt the tracking alignment. There are several applications of the basic oscillator circuit, so, very few definite instructions can be given. A standard circuit is shown in the illustration. There may be many variations in different sets, but the general principle remains the same. However, carefully note that



in all oscillator grid circuits there is a "main" tuning condenser (C) "ganged" upon a single shaft that controls all the tuned circuits. It is *shunted* by a trimmer condenser (C1) of from  $\frac{1}{5}$ th to  $\frac{1}{8}$ th of its value. There is still another trimmer condenser (C3) in *series* with the combination (C and C1), and its value is so large and the amount of its adjustment so small that its capacity frequently is split into a fixed section (C2) and the series variable section (C3). The section C2, however, is not always found in this circuit.

The shunt (C1) and the series (C3) trimmers may be adjusted as follows: Set the receiver dial to 1,400 kilocycles and feed a test oscillator or station signal in the input (antenna and ground), then adjust the shunt condenser (C1) for maximum response of the visual tuning meter connected to the output. Set the receiver dial back to some station on 600 kilocycles and adjust the series or low frequency condenser (C3) for maximum response. The shunt condenser (C1) is for adjusting the high frequency tracking and need not be adjusted when using 600 kcs. The same may be said for the series condenser (C3), which is for adjusting the low frequency tracking, when adjustments are made at 1,400 kilocycles.

Instead of sandpaper for cleaning corrosion from tube pins, use an ordinary ink-eraser. This will clean off any sort of dirt and leave a nicely polished surface.

# Come Behind *the* Scenes

• • • *With* "BETTY"

**F**ROM stenography to stardom—that's the story of Vivien Ruth, nineteen, petite, and brunette, featured with the Happy Bakers over a CBS network every Monday, Wednesday and Friday, from 8:00 to 8:15 p. m., EDST.

A little more than two years ago, Vivien was engaged in secretarial work with a New Jersey business firm. An amateur broadcast over a local New Jersey station brought her to the foreground.

Vivien was born in Passaic, N. J. Her mother is a talented pianist and teacher. Educated in Passaic schools, Vivien was ambitious to become a physical education instructress. She had a natural interest in music and in December, 1930, she had an opportunity to sing over Station WODA, Paterson. The results were so promising that she was invited immediately to make her network debut over CBS the following month. Again she

scored and devoted the next two years to vocal studies, although she appeared numerous times as guest artist on various outstanding programs. Having completed her vocal studies she returned to New York and was at once selected as soloist with the Happy Bakers.

The truth about Ruth: Believes she could be an equally successful nurse or program director . . . has dozens of ardent hobbies . . . collects rare perfumes and specializes in cooking Italian spaghetti . . . is a great reader of history . . . favors sport clothes . . . likes mountains and mountain climbing . . . nominates Bing Crosby as her favorite radio artist, and Helen Hayes as her choice in the movies . . . and, appropriately enough, her favorite song is "Some Day I'll Find You" . . . all her friends call her "Rinky."

## A Musical Miracle Man

George Gershwin was born in Brooklyn, N. Y., 35 years ago and wrote his first hit, "Swanee" when he was 21. He began his musical career by quitting high school to become a song plugger, at \$15 a week, in Broadway's old Tin Pan Alley.

Gershwin has written the music for nearly forty shows and revues, starting with "Half-Past Eight" and "La La Lucille" in 1919 down to the Pulitzer play prize-winner, "Of Thee I Sing." Among his most successful shows in the past decade have been "Lady Be Good," "Song of the Flame," "Oh, Kay!" "Strike Up The Band," and "Funny Face."

He is the author of hundreds of popular songs but, unlike other writers of jazz music, he has distinguished himself as a composer of modern orchestral music in the classical forms, notably "Rhapsody in Blue," which was introduced by Paul Whiteman at Aeolian Hall in 1923; "Concerto in F," which was first



Vivien Ruth



*George Gershwin*

played by the New York Philharmonic, and "An American in Paris."

His series of programs is heard over an NBC (Blue) network each Monday and Friday, at 7:30 p. m., EDST., under the sponsorship of the Health Products Corporation.

#### **An Actress of the Air**

A few years ago Elsie Hitz refused a choice stage part to devote all her time to radio, smiling at astonished friends who said she was throwing away a promising stage career on a doubtful gamble. But she had tried the new medium, found her voice was excellently suited to its peculiar demands, and decided to follow the hunch which led her to forsake the boards.

Radio drama has grown by leaps and bounds since then and has reached new heights of popularity. Elsie was a pioneer and her fortunes have grown along with it. Now her seemingly rash venture is more than justified, for thousands of listeners from coast to coast recognize her as radio drama's leading lady.

Elsie is the heroine of the south seas romance, "Dangerous Paradise,"

heard over an NBC (Blue) network each Wednesday and Friday at 8:30 p. m., EDST. Co-starred is Nick Dawson pictured with Elsie in the accompanying photograph.

Elsie made her stage debut at 14, earning \$45 a week as ingenue for a Cleveland stock company, while she was still in high school. The following year she migrated to New York as a Broadway ingenue and at 16 she had graduated to Broadway leads. After a season of leads with a Boston Stock Company, she returned to New York in 1925 and did her first microphone job when she was cast through a theatrical agency as Magnolia in a radio version of "Show Boat."

Elsie has been featured in such radio dramas as "True Story," "Love Stories," "Arabesque," "Joe Palooka," and "Magic Voice."

Elsie is slight, with light brown hair and large brown eyes . . . is five-feet-three, and weighs 107 pounds.

So popular has "Dangerous Paradise" proved over the air that the author, Carl Bixby, is preparing a narrative version of the scripts which



*Elsie Hitz and Nick Dawson*



the Macaulay Company will publish about the middle of May. In book form it will follow the identical plot used in the radio version and will tell what happened to Gail Brewster, an attractive young newspaper woman, played on the air by Miss Hitz, and Dan Gentry, enacted for the microphone by Nick Dawson, when fate brought them together on the coral beach of Horseshoe Island.

Bixby, an advertising man, was moved to write *Dangerous Paradise* when he decided that he could write a better radio sketch himself than those submitted to him.

### WHAT'S *in a* NAME

Some radio names have been changed in the interest of romance, euphony, numerology, alliteration, dignity and appropriateness to the character being played. Others no doubt have been shortened to leave time for the announcements.

Who's Benny Kubelsky, for instance? Why none other than the suave Jack Benny. Do you long for the return to the air of Edward Iskowitz? Pardon, Eddie Cantor is the name.

Here are some more monickers you'd never recognize: Fred Allen (John F. Sullivan); Ed Wynn (Edwin Leopold); Milton Berle (Milton Berlinger); Tom Howard (Thomas J. Black); Joe Penner (Joseph Pinter); Groucho Marx (Julius Henry Marx); Chico Marx (Leonard Marx); Jack Pearl (John Perlman); Bert Lahr (Isadore Lahrheim); George Burns (Nat Bernstein); Al Jolson (Asa Yoelson); Willie Howard (Willie Lefkowitz).

George Givot grew up in an orphan asylum and never knew his real name, but took the name of a family that adopted him.

The band leaders, too, have taken out a few syllables: George Hall (George Flag Basselli); Little Jack Little (John Leonard); Jacques Renard (Jacob Stavinsky); Abe Lyman (Abe Simon); Ted Weems (William Theodore Weymes); Ben Bernie

(Benjamin Anselowitz); Leon Belasco (Leonid Semanovich Berladsky); Will Osborne (William Oliphant); Ted Lewis (Leopold Friedman); Rudy Vallee (Hubert Prior Vallee); Glen Gray (Glen Gray Knoblauch); Al Katz (Albert George Katzenberger).

Some singers, also, who don't use the name on their birth certificates: Bing Crosby (Harry Lillis Crosby); Singin' Sam (Harry Frankel); Vera Van (Vera Webster); Shirley Howard (Shirley Gins); Sid Gary (Sid Garfunkel); Frank Luther (James Crow); Sophie Tucker (Sonia Abuza); Nick Lucas (Nicholas Lucanese); Helen Morgan (Helen Regan); Ramona (Ramona Davies); Tamara (Tamara Drasin); Jean Sargent (Jean Scull); Harried Hilliard (Peggy Snyder); Arthur (Street Singer) Tracy (Harry Rosenberg); Virginia Rea (Virginia Murphy); Alice Joy (Frances Harriet Holcombe); Gus Van (August von Glahn); Edith Murray (Edith Fernandez); Gypsy Nina (Helen Swan); Priscilla and Rosemary Lane (The Mullican Sisters).

Then there are the teams of Stoopnagle and Budd (F. Chase Taylor and Wilbur Hulick); Amos 'n' Andy (Freeman Gosden and Charles Correll). In fact, these changes extend to all branches of radio: David Ross was Samuel Misch until he became an announcer; Boake Carter should sign his name Harold T. H. Carter. Ann Leaf is Ann Leaf Kleinert; Irving Berlin, Israel Baline; Myrtle Vail; Marge, Donna Damerel; Molly Goldberg, Gertrude Berg; Skippy, Franklin Wissing Adams; Baby Rose Marie, Rose Marie Curlsey; Kenneth Roberts, Saul Trochwon; Voice of Experience, Dr. M. Sayle Taylor.

Ted Fiorito, whose fingers ripple so smoothly over the keyboard when his band broadcasts on the Old Gold program, thinks that smooth ripple is worth \$300,000—that's the amount for which his hands are insured.

# TALKING RADIO

• • • *with the Editor*

**T**HE stations in Hilversum and in Huizen in the Netherlands have a plan for swapping wavelengths every few weeks. Adopting this same plan, RADEX and the DX Log of the World are this month trading places. The log of the broadcast stations of the world which regularly appears in our DX Log quarterly, will be found in this issue of

RADEX instead. The May-June-July issue of the DX Log is being devoted entirely to the short waves. This exchange serves a double purpose. It gives those of our readers who do not get the DX Log, a complete list of the world stations on the broadcast band. And it enables us to issue a *real* Short Wave Log with each station listed both by frequency and by country or call letters. We feel sure this is going to be the best and most complete log of the short wave stations ever issued. It will appear on the newsstands late in April. The price will be ten cents.

Through the hearty cooperation of a special committee of the International DXers Alliance of Bloomington, Illinois, the log of the world broadcast stations is being brought right up to the minute. Many changes have taken place in Europe, South America, Asia and Australasia.

"At 7:10 a. m. Sunday EST (March 4) VK2ME, Sydney, Australia, announced after one record that it was 10:10 p. m. Now was it 10:10 p. m. Saturday, Sunday or Monday?" This inquiry is from a reader who asks that we do not use his name as he doesn't want to be swamped with letters. If our friend had had a RADEX Time Converter, he would have turned the dial to 7:10 a. m. EST and then seen at a glance that it was 10:10 p. m. the same day in Sydney, Australia. This Time Converter tells whether the time any-

where is yesterday, today or tomorrow and takes all confusing calculation out of time conversion. Mr. X goes on: "I had them very clear for perhaps half an hour then had to quit. Why is it I get London so much better when they are coming in than I do other countries? How is it possible to identify a foreign station? Why don't the amateurs give their home town?"

## KIFS Regularly Licensed

Mr. L. E. Shatto, Technician of KFJI, Klamath Falls, Oregon, writes us regarding station KIFS, mention of which was made in a recent article on "outlaw" stations. KIFS is regularly licensed by the FRC to operate on 1518 with 50 watts power output. "At the time Mr. Lehman and Mr. Biller heard KIFS, we were making a test with Klamath Falls in accordance with the rules of the FRC and operating on 1518 kcs. with a plate power input of 100 watts. A program was sent to KFJI from Fort Klamath, Oregon, starting at 9 p. m. that evening as per authority of the FRC," says Mr. Shatto. We are not clear whether KIFS is for temporary use or not but its frequency is so close to the b. c. band that we are including this station in our lists.

"I wish you would augment your list of programs after the eastern stations sign off," suggests Barron Bridges, 527 Maplewood Ave., Ambridge, Pa. "That is, beginning at 11 p. m. list the programs of the 50 kw. stations of the Mountain and Pacific time belts and continue until the California stations sign off." We know it would please many readers if we were able to comply with Barron's request. We give the programs just as late as they are carried by the broadcasting systems. It is quite impossible for us to secure information

regarding the programs of individual western stations far enough in advance for it to appear in this magazine.

### The British Programs

F. Wiseman, 65 Lovaine Place, Newcastle-on-Tyne, England, does not agree with Percy Dodson relative to the value of the British programs as entertainment. He sends us a number of newspaper clippings showing that there is no little dissatisfaction with the methods used by the British Commission, particularly in the matter of censoring the talks given by invited speakers. Mr. Wiseman sums up the difference thus: "The American sponsor is concerned with inducing the greatest number of listeners to tune in his program. He is therefore compelled to put on a program that appeals to the great majority of listeners who thereby get what they want. The BBC programs cater to the highbrow minority and we suffer from a surfeit of chamber music, religious services, dull talks, adult education, readings from classical literature, etc." The tax on each receiving set in Great Britain is about \$2.50 a year. We recall reading that the number of sets there had now reached 6,000,000. This provides the tidy sum of fifteen million dollars annually for the Broadcasting Commission. "This, in my opinion," says our correspondent, "is the main cause of the poor programs from the BBC stations. This tax assures the BBC its income without having to trouble whether the listener is satisfied or not." The development of a new idea is worrying the BBC no little. That is the formation of a broadcasting system in England with sponsored programs along the American plan. They cannot of course use any stations in Britain but they have formed a chain of powerful stations in other countries to broadcast programs in English of course, for the entertainment of the English people. One of the prominent stations used, we understand, is EAQ in Spain. This system is known as the Interna-

tional Broadcasting Club. It is known that a vast number of English listeners are tuning in these programs in preference to those provided by the BBC.

### The New Zealander

Several good readers in New Zealand have sent us clippings regarding the new transmitter of 1YA to be erected near Henderson by the New Zealand Broadcasting Board. It will be twice the strength of 2YA, Wellington, and 20 times the present strength of 1YA. One mast, 500 feet high, takes the place of the usual two masts. This will be five times the height of the present 1YA masts. The mast, known as the BBC half-wave, will be insulated from the ground, a massive insulator carrying the 60-ton weight of the mast. Three radiating conductors will hang from the aerial at the top at equal distances around the mast and will be held at the bottom by anchorages some distance from the base. The great advantage of this type of aerial is that it radiates the maximum energy in a horizontal direction.

What a happy life 2ZR must have. That station in Nelson, N. Z., has a roving commission permitting it to work on any clear channel. If our readers hear it on some frequency other than 1110 they should not jump to the conclusion that RADEX tables are wrong.

Richard S. Croker, State Fisheries Laboratory, Terminal Island, Calif., doesn't agree with the complaints re-

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garding the all-night stations. "After all, I get a kick out of tuning in a distant station through interference. For instance, CKAC when XER was on was something to brag about. And I have heard KWG, KERN, CJOR, KASA and WCBS while KGFJ, 24 miles away, was going full blast. Much more of a thrill than tuning in clear channels." In other words, he thinks the fellow who objects to interference is like the golfer who wants a level field and no traps or bunkers.

#### Aerial Necessary

"I would like to disagree with A. M. Mitchell," says H. Arbic, Acton, Ont. "Aerials are necessary and they must be good too. You cannot get the small stations without an aerial of some kind. Again some stations exhaust all your volume. A DXer could not enjoy radio without the best aerial he can install. If I were satisfied with listening to CFRB, WBEN or WGR, I would not need any aerial. But if I wanted to listen to the string band on WRUF at 7 p. m., I would have to have an aerial. I have tested my Rogers 850 without an aerial of any kind at 9 p. m. I can reach anything with 5000 watts or more for 2250 miles, but there are other stations that are good and some are only 100 watts. If it were possible for me to get up 200 feet with an aerial, I certainly would go up away from interference."

R. D. Schofield of the Wilma Plunge, Missoula, Mont., has been appointed Director of the IDA official stamp exchange and readers of this magazine are invited to obtain stamps through him from all foreign countries. A ten-cent stamp will cost 12 cents, a five-center six cents, a three-center 3½ cents and a two-center 2½ cents. No order for less than a total of fifty cents will be accepted. No correspondence will be answered. Orders will be filled as rapidly as possible but there may be delays due to securing supplies from distant countries.

A technical tip is passed on to our

readers by J. J. Delaney, 51 Wilnot Street, Portland, Maine. "While trying to locate hum and distortion in a Stewart-Warner Model 102, which developed after running the set about five minutes, I found a burned-out electrolytic condenser. Replacing that, however, did not stop the noise. I tried replacing the 47 tube and the noise stopped. After an hour or so the set became distorted again without the hum. I then found that the .25 r. f. grid by-pass condenser had shorted to about 20,000 ohms. I replaced it and the set has been going fine."

#### Making A Game of It

Two ministers living about two blocks apart on the same street became interested in DX at the same time. They had been friendly rivals in all manner of sports, indoor and outdoor, and naturally they became competitors in DX and decided to make a game out of it. They worked out a schedule of credits varying from one point for a station of 5000 watts or more up to 500 miles distant, to twelve points for a station 100 watts or less from 500 to 1000 miles distant. The contest has been going on for a little over two months. In that time one has logged 406 stations for a score of 4775 points and the other 402 stations for a total of 4771 points. "It's a great game," writes one of the friends.

Says a clipping from Ray E. Everly, 102 West Washington St., Newton, Ill.: "A device has been perfected by G. W. Kendrick, Tufts College, Mass., that automatically takes the talk, including advertising chatter, out of radio programs." If this is true some programs are going to have long silent periods in them. But what effect will it have on the sponsors and ultimately on the radio programs?

"I've finally found a way to work a loop with a super," tips Robert Rosengerger, 17 Janssen Place, Kansas City, Mo. "It is very simple—use the loop on the aerial post and a very long aerial on the ground post (about

250 feet at least). I can choose the 100-watter that I want to hear and the others are excluded. I think it's worth trying."

Francis E. Andrew, Box 152, West Liberty, West Va., relays a suggestion by William J. Pryor, 131 N. 17th St., Wheeling, that those who have 400 or more stations on their log, mark the Index by Frequencies to indicate those stations not yet heard. This method provides a clear challenge to tune in these particular stations and saves much time in copying as gradually the list becomes smaller.

G. Lansing Mood, Secretary of the Globe Circlers Radio DX Club, 70 Clinton Place, Hackensack, N. J., writes us that that Club is now issuing a bulletin monthly and not semi-monthly. They issue tip cards weekly in addition to the eight-page monthly bulletin. The headquarters of the Club are at the above address.

Robert Pybus, 4 Highfield Rd., Chorlton-cum-Hardy, Manchester, England, a member of the special committee of the International DXers Alliance which edits the data in the DX Log of the World, sends us a fine report of the present broadcasting situation in Europe. The changes made appear in this issue.

"I received 16 letters from the States and three from Canada regarding my letter in the February **RADEX**," writes Frank Carr, 21 Lowther St., Wanganui, N. Z. Mr. Carr kindly offers to give any information or help to our readers with regard to stations in New Zealand.

Orchids to the Great Atlantic & Pacific Tea Company for limiting their advertising talks to 45 seconds on the A&P Gypsy program.

We have received so many reports of a Mexican on 660 that we assume the proposed XEAL is on the air and we are taking the risk of including it in our indices. XEAL is owned by Cia. Panamericana de Radio and their address is Apartado 1903, Mexico City, D. F., Mex.

*Send 10 cents today for your copy of the S.W. DX Log of the World.*

## Station News

### and Notes

IT IS probable that the frequency tests will be continued during the early part of the summer. A few changes in the revised schedule of these tests as published in our March issue are sent us by the National Radio Club. Eliminate the following stations: WABI Monday, 2:40-3:00; WNBX, 4:10-4:30; WESG, 4:30-4:50; WOOD-WASH, Wednesday 6:00-6:20; WHET, Tuesday 3:10-3:30; WAMC, 3:50-4:10; WAWZ, Saturday 4:10-4:30. Add WCHS, Monday 5:00-5:20; WSVS, 5:10-5:30; WNRA, Tuesday 3:10-3:30; WHET, 3:50-4:10; WAMC, 5:40 to 6:00; KFBB, Wednesday 4:00-4:20; WLAP, Friday 5:50-6:10; WCAP, Saturday 3:50-4:10; WTNJ, 4:10-4:30. KFQD, Monday 5:50-6:10 is now 600 kc. instead of 1230. WCAH, Saturday 4:10-4:30 is now WBNS.

The following new stations are contemplated in Mexico and may appear on the air at any time: XEE, Durango, 1010, 50 w.; XEMC, Yucatan, 630, 500 w.; XEZZ, San Luis Potosi; XEWZ, Mexico City, 1200, 100 w.; XEMA, Tampico, 1330, 50 w.; XEPR, Mexico City, 740, 250 w.; XEAL, Mexico City, 660, 1000 w.; XEOX, Saltillo, 620, 250 w. Several readers have reported a new Spanish-speaking station on about 665. Perhaps XEAL is already on the air.

We have received two lists of the stations in Mexico and find the following discrepancies: XEP on 970 and 780, XEW on 910 and 890, XEFE on 1000 and 985, XEFI on 1000 and 1260, XEFV on 1370 and 1400, XEYZ on 780 and 760. The lists show the following as not operating at present: XEC, XEP, XEFA, XEOK, XETW and XENT. Our old friends, XEF and XER, are missing on both lists. A reallocation is threatened in Mexico for May 15 and we expect to have the changes in the next issue of this magazine.

With VONF going to 5000 watts,

it looks as though a lot of our Radexers would soon add Newfoundland to their roster. VOAS, too, is reaching out. The latter station gives their time on the air as 11 a. m. to 12:30 p. m. and 4:00 to 5:30 p. m. daily with the exception of Sundays and holidays; and Saturday nights from 7:45 to 9:30. Newfoundland time is one and a half hours faster than EST.

Mr. Enrique Guerrero of Station XEB, Mexico City, writes Eugene L. Beebee, 210 Franklin St., W. Jackson, Mich., that he would like to hear regularly from listeners, that they will answer all letters and that they have facilities for reading and answering letters no matter what language they may be written in. "Our local station, WIBM," postscripts Mr. Beebee, "has just opened up a new station and studio right in the heart of the city with a new building of their own. Although they have not increased their power, they should have better tone quality and modulation with possibly a slightly stronger signal, due to the new equipment."

K. Judd, 68 Mayfield Ave., Orpington, Kent, England, sends us the schedule which he received with his verie from 2UE, Sydney. Monday, Tuesday, Thursday and Friday 3:00 to 10:00 p. m. and 11:30 p. m. to 8 a. m. Wednesday 3 to 8 p. m. Saturday 3 p. m. to 9 a. m. and Sunday 3 p. m. to 9, 10 p. m. to 2 a. m. and 3 a. m. to 8 a. m. All times in EST. Mr. Judd has heard within the last few days before writing, KGU, Honolulu, and KIFH, Juneau, Alaska, stations which many DXers in America have striven for in vain.

It is certainly going to be bad news to those interested in "goat-glands" to know that the Mexican government has ordered XER-XEF at Villa Acuna dismantled. A paper in Wichita reports that Dr. John R. Brinkley, operator of the now-silenced XER, has purchased a yacht and may take his broadcasting activities to the high seas *a la* RXXR. The little mat-

ter of securing registry for the yacht remains.

"Beginning March 1, our radio transmissions will take place only on Sundays from 12:30 to 2 a. m. GMT," says a verification from FQN, Miquelon Island, to Stuart B. Leland, 82 St. John's Place, New Canaan, Conn. This information is confirmed in a letter we received from Leon Briand, St. Pierre, Miquelon. This is 8:30 to 10 p. m. AST.

"WAMC is deleted; it was burned down in March, 1933. WBHS and WENC are moving and are off the air at present. WKFI hasn't tested and the time allotted to WENC is being used by WPFB. WHEF is off the air. WJEM and WLEC are not operating yet." These tips come to Ray E. Everly, Newton, Ill., from various correspondents.

"WSPA, Spartanburg, N. C., is giving special programs every Tuesday and Friday morning at 5:00 to 5:30 a. m. EST. WNBW, Carbondale, has removed its transmitter and will not broadcast any more as they cannot renew their license." This gossip comes from Ernest Griebel, Jr., 8 Wayne Street, Carbondale, Pa.

"Our local station CFCT, broadcasts DX programs every weekday at midnight to 1 a. m. PST and on Sunday mornings from midnight to 2 a. m.," tips Fred Knight, Portage and Essen Roads, L. C. 41, Victoria, B. C.

KMAC, San Antonio, Texas, broadcasts NNRC tips every morning at 1:30 EST, and WKBB, East Dubuque, Ill., at 1 a. m. EST., writes A. W. Opel, Executive Secretary of the NNRC.

Stations WARD, WBBC, WLTH and WVFW are under the ban of Examiner Ralph Walker who has recommended their deletion. It remains to be seen whether the FRC approves his recommendation.

The new KTRB in Modesto, Calif., has been heard testing on 740, or so some readers believe. KOTN, Pine Bluff, Ark., has also been heard with a test.

The FRC has authorized a mix-up on the 1040 and 1060 channels for a

period of 90 days beginning April 29. KTHS, Hot Springs, on 1040 and WTIC, Hartford, on 1060, are to trade frequencies. KTHS will operate simultaneously with WBAL and WTIC with KRLD. KTHS will suspend from local sunset to 8 p. m. CST and WBAL will suspend from sunset in Hot Springs to 9 p. m. EST after which time it will synchronize with WJZ on 760 as heretofore. WESG is moved from 1040 to 680 with daytime hours. KWJJ is moved from 1060 to 1040. WJAG remains on 1060.

## *An* ALL WAVE Portable



**T**HIS attractive receiver covers the frequencies from 15 to 560 meters and is said to be the first all-wave compact superheterodyne set. There are four tuning bands which may be selected by means of a switch. These are: 15 to 35 m., 30 to 85 m., 80 to 210 m., and 200 to 560 m. It is intended for use on 110 to 120 volts a. c. A ground connection is not necessary but an outdoor antenna as high as possible is recommended with a length of from 50 to 75 feet including lead-in. Six tubes are used: Oscillator, 6D6; first detector, 78; i. f. stage 78; second detector, 77; output, 42; rectifier, 80.

Our illustration shows this receiver with the front cover removed. The dimensions are 16 by 13 by 8 inches and the weight is about 14 pounds. The portable lists at \$52.50. The manufacturer is the Freed Television and Radio Corp., Long Island City, N. Y.

## Growing up with Radio in ENGLAND

By H. BEADLE\*

**M**Y experience in radio began about six years ago with a one-valve set. I had heard a few sets but had never troubled about them until the old folks purchased a set. After logging stations by roaming around generally, I thought I really must have one of my own so I bought an old two-valve set, tore it down and built up a modern one-valve b. c. receiver.

With this set I heard all Europe on phones. Next came a two-valve set to put the locals on the speaker. By this time the radio bug had begun to bite and my interest has never waned. Then I began to hear of the short waves so I built a three-valve all-wave set. It worked on the broadcast bands (we have two of them in Europe—220 to 550 m. and 1000 to 2000 m.) by means of a dual-range coil worked by a switch. By taking out this dual-range coil and inserting a s. w. coil, one could or should be able to hear s. w. stations.

Well, I was quite a while hearing nothing but Morse until Feb. 18, 1931, when I picked up an American station at 6:45 p. m. I never identified that station but on Feb. 20, I picked up W2XAF on 31.48 m. What a thrill! Heard market reports, news and Jim Brown program for the Brown Wire Co., then Uncle Abe and David. This whetted my appetite for more. Next night I picked up the same station at 10:40 and listened to them until 1:30 the next morning.

Next came good old PCJ then Zeesen. The next USA station was W8XX on March 8, 1931 closely followed by W1XAZ. (That was the first time I ever heard the letter "z" pronounced "zee.") By this time the short waves had got me properly and I wound coils and started to pick up English hams. By the way, I think there have never been such good conditions for recep-

tion of USA s. w. stations as that spring of 1931.

### Roaming Europe

I now have a four-valve radio and a three-valve s. w. set. I can roam Europe with my b. c. set but the thrills of radio come through the s. w. set. Have heard five continents up to now and need only Asia to complete the lot. Among the s. w. stations which I have heard are the following: Prague OKIMP, HVJ, Zeesen, W1XAL, most of the Daventry stations, PRBA, OER2, OXY, W3XAL, W2XE, YV11-BMO, W8XK, W3XL, RW-72, LCL, Radio Nations, CNR, SR-1, W2XAF, W1XAZ, VK2ME, CT1AA, EAQ, FYA, 2RO, RNE and W2XAD. Zeesen, Rome and HVJ have been heard on all their wavelengths. I had never been able to pick up VK2ME till the beginning of last October. Since then and up to Christmas, he was receivable at various strengths every Sunday from 2:30 to 4:30 p.m. GMT. Have now verified him.

Thanks to the short waves, I have been able to hear such outstanding broadcasts as the inauguration of President Roosevelt and the landing of the Italian Air Armada at the World's Fair, Chicago. The inauguration ceremony was heard over W2XAD and it was a splendid transmission.

The USSR station on 25.16 m. is, as Mr. Roy Robinson says—Radio Station RNE and the address Gorki St. No. 17, Moscow, USSR. For U. S. fans, I might mention that whilst listening to the long-wave Moscow station, they announced that there were broadcasts on 25 meters, Sundays at 3.0 Moscow time, (12 noon GMT) and 6.0 p. m. Moscow time (3.0 p.m. GMT) You see Moscow time is three hours ahead of GMT. Actually I have never heard them give the call RW-59, attributed to the 50 m. station. They always say "Hello. Hello. This is Moscow calling." Political talks are given over the 50 m. transmitter in English on Sundays, Mondays, Wednesdays and Fridays from 9.0 p.m. (21.00 GMT) to 10.00 (22.00) GMT.

I am getting to the end now but I might mention in passing that I heard W3XL calling DENNE (Graf Zeppelin) whilst she was over the U. S. and also that I have a verification from the German liner "Bremen"! Best 73s to the US short wave fans.

\*13 Chandos St., Keighley, Yorkshire, England.

## Broadcasters' View of DX Question

"I HAVE read with interest your article entitled 'Bad Practices in Verification May Destroy DX,'" comments A. C. Pritchard, General Manager of WWL. "May I heartily endorse all that was said in that article? Our station receives mail from every state in the Union, from Central and South America, Australia and New Zealand, from Canada of course, and recently quite a lot from Europe. Many hundreds of these letters are requests for verifications but comparatively few of them enclose a postage stamp to cover the cost of a reply.

"This practice seems to have grown in the last year or two and has become such a burden that we are forced this year to announce over the air that we will not send verifications or DX stamps unless postage or currency are sent to cover the cost.

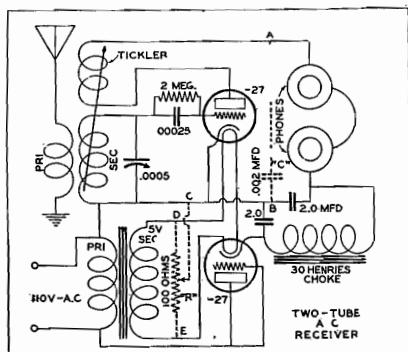
"Many of the letters we receive are most interesting and encouraging but a great many, as stated in your article, give little or no information on which to base a verification. It has been our practice, where obvious effort has been made to give us helpful details, to answer even though return postage has not been sent us.

"I have often wondered whether people who write to a radio station and expect a reply realize the tremendous amount of clerical work involved as well as the cost. It was most encouraging to learn that such a publication as yours and also so many of your correspondents are thinking along this line."



# QUESTIONS *and* ANSWERS

• • • B. FRANCIS DASHIELL, Technical Editor



**I** HAVE built the two-tube a.c. set shown by the enclosed diagram. It works fine but there is a bad a.c. hum. How can I improve the filtering system? Will 56s work better than the -27s? Please indicate the changes you recommend on the diagram.

While this circuit seems to be satisfactory for actual operation, the filter system is inadequate for headphone reception. Also, since there is no "step-up" transformer system you cannot expect to obtain more than 110 volts for the plates of the tube used as a detector. However, with grid-leak detection even this 110 volts may be too much. Frequently such circuits work best with only 45 volts on the plate of regenerative detector. You might experiment with a high resistance rheostat in the plate lead.

However, we suggest a method of neutralizing most of the hum from the circuit provided the source of the hum is not too powerful. Try a 100-ohm potentiometer connected across the secondary of the filament transformer—points "D" and "E," shown in the accompanying illustration. The switch arm of the potentiometer should be connected to the cathode of the detector—point "C." Also, a plate by-pass condenser should be

found very helpful. It should have a capacity of .002 microfarad (2000 micro-microfarads), and be connected between points "A" and "B."

## A.C. Tubes in A-K D-Model

*My Atwater-Kent model D set needs new tubes. Can I replace them by some of the newer types?*

There are no new types that can be used with the model D Atwater-Kent. It is a d.c. set using 3.3 and 5.0-volt tubes, while all the new tubes are a.c. cathode types and not effectively adapted to this type of receiver.

## New Tubes in Philco 70

*Can I use the new tubes in my Philco 70?*

We do not recommend the use of new tubes in this set. The only -27, which might be replaced with a 56, is the oscillator. It is not likely to operate as well with a 56, unless the condensers are readjusted.

## Changing "Push-Pull" Tubes

*Is it possible to change the -31 type tubes, used in push-pull power output in my Lincoln d.c. S-W 10 receiver, over to -30s in order to save the drain on my batteries?*

It is not recommended that these tubes be changed. Volume and tone will be sacrificed. The current consumption rate of the -31 and -30 will not seriously affect the life of the "A" battery. We advise you to permit the set to remain as it is arranged and become reconciled to the very little additional drain on the battery.

## Connecting Volume Control

*There is a defective volume control in my Silver-Marshall 724 d.c. receiver. I have replaced it, but still the volume of the set cannot be varied. What else is there to do?*

The volume control in this set has a resistance of 3,000 ohms. The two

ends are connected between two larger resistors—one of 20,000 ohms (1 watt) and one of 45,000 ohms (1 watt). The control arm connects to the grids of the first -32 type tube, and the third -32 tube. Between the 45,000 ohm resistor, above mentioned, there is still another 45,000 ohm resistor connected to the far side of the -22½ volt C battery and the lead going to the middle tap of the output push-pull audio transformer. This locates the resistors. Although the control may be perfect, it will not work if one of these resistors happens to be defective.

If the negative biasing voltage divider system, of which the volume control is a part, is in perfect condition, there is no reason why the control will not vary the volume of the set.

#### Hum in Philco 90

*A loud hum has appeared in my Philco 90 receiver. It is nearly absent when I remove the -47 power tube and substitute headphones. Why is this?*

This hum may be due to defective -47 power tubes. Have the tubes tested. We do not know which model 90 you have—one uses a single -47 and another uses two -47s in push-pull amplification. These power tubes are fed by a filament winding on the power transformer to heat the filaments. There is a center-tap coming from the middle of this winding. It is grounded in one model, and connected to the 205-ohm end of a long, tubular resistor or voltage divider unit in the other model. The one end of this resistor may be opened, or the grounded connection loose. Another cause for hum is a defective cathode resistor or shorted condenser. Look carefully over all units connected to the audio circuit.

#### Crosley 30-S Is Weak

*I have a Crosley, model 30-S. When the antenna and ground wires are both connected the signals are faint until the ground wire is removed. What can be wrong?*

There is a .003 mfd. condenser

placed between two of the contacts of the ground switch. It may be defective. Also, there is a .00025 mfd. fixed condenser connected between the on-off switch of the receiver and the ground. This may be defective. Try operating the set with this switch-condenser removed. There are many other resistors and condensers in the circuit which should be tested. The volume control consists of a 32,500 ohms resistance unit connected between a 725 ohm and a 3,500 ohm resistor. The control arm is grounded. Check over the control for perfect action.

#### Our S-W Converter on Batteries

*Can the RADEX short-wave converter be used with a 2-volt Airline broadcast receiver that operates on batteries?*

This converter cannot well be used with a 2-volt receiver, for its tubes require a potential of 2.5 volts each, and they draw a total of 2 amperes, which is prohibitive for the Aircell battery. You would require a special storage battery to run the converter. The Aircell gives only 2 volts at a much lower amperage rate.

#### Distortion with A.V.C. Action

*There is a strange distortion in my model 60 Majestic set when the signal fades and the automatic volume control goes into action. How can this be remedied?*

There is natural distortion when a fading signal is increased in intensity by the automatic volume control. At this time there may be some heterodyne effect, and interference will be noticeable. However, since your set has commenced acting in this manner recently, it must be due to receiver trouble.

Fading with distortion and poor sensitivity in this model may be caused by trouble in the 5,700-ohm carbon resistor mounted on the resistor unit, and the two .067 mfd. condensers acting as grid returns to the r.f. tube and first detector. Replace the resistor with one that is wire-wound, and the condensers, if they,



*This attractive young lady is Claire Willis who is currently featured as the vocalist during sustaining programs by Pancho and his orchestra over the WABC-CBS net. Last year Claire's voice was heard with the Travellers Quartet.*

too, are defective. Of course, the a v.c. control tube and its component parts of the circuit should be tested.

#### **Combining Two Sets**

*I wish to use the speaker in my Majestic 90 receiver in connection with a Midwest set that is operated in an adjacent room. Please tell me how to run the necessary wires.*

You cannot connect the speaker of the Majestic to the output of the Midwest. The difference in impedance in the speakers, and the matching of the outputs of the two sets, makes the scheme impracticable. A magnetic speaker, however, can be placed at a distance and connected to the Midwest in the same manner as a pair of headphones.

#### **Philco 70 Cuts Off**

*My Philco 70 seems to cut on and off and grow weak at times after it has commenced operating. How can I overcome this trouble?*

There are a number of reasons why this occurs. A poor tube somewhere

in the circuit will give such symptoms. A loose or expanding contact or joint in the wiring might also cause this cutting off. All points should be examined carefully. All resistors are possible sources of the same trouble. The cutting off of reception may be due to defective coupling condensers that couple the audio stages of this receiver. We suggest looking at the condenser in the cathode circuit of the oscillator tube. This condenser is a .09 mfd., and in the diagram it will be found numbered No. 12. There is another No. 12 in the cathode circuit of the first detector. It may be replaced with a .1 mfd.

#### **Open Antenna Coil**

*There is a loss of volume in my Rogers 850 receiver. But when I attach the antenna wire to the grid cap of the first 58 tube the signal again becomes strong.*

It is likely that the antenna or first radio section of the receiver is not working properly. When you attach the antenna to the grid top with good results it shows that the coil part of the circuit between the grid cap and the antenna proper does not permit the antenna current to flow. This also causes a different dial reading and the set seems out of tune. The antenna coil or first tuning circuit must be tested and repaired.

#### **Amateur Transmitter Interferes**

*There is an amateur radio station in my vicinity. It causes terrible interference in my receiver, yet some of my nearby friends never notice the same trouble. Why is this?*

We think the trouble is a matter of harmonic interference. Your receiver may be peaked with its intermediate frequency at a certain setting that falls within some heterodyne combination created by the transmitter. There are hundreds of mathematical combinations that can occur. Some receivers, for instance, when peaked at 270 kcs., fall within the harmonic range of the U. S. Airways radio beacons and cause all kinds of trouble. While the amateur is oper-

ating most likely on a frequency higher than the range limits of your receiver and true harmonics are impossible, there often is reported the presence of "half" harmonics. If you investigate the intermediate frequencies of your receiver and those of your neighbors you will find that yours is different, and that there is a mathematical relationship, in even fractions ( $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ , etc.), to the frequency used by the amateur. If you can change the trimmer condensers in your set so that the intermediate stages will be peaked at a slightly different frequency, you might eliminate this interference. You have not indicated the type of receiver in use.

#### Receiver "Pounds"

*I have a Radiola 82. When it is turned on it pounds and hammers for about 15 or 20 minutes, and then settles down and acts normally for an indefinite period. Once, after a long night of DX work the set had a hot odor like scorched paper. It has not been right since. Suddenly the volume increases greatly, and after an adjustment has been made for this, it just as suddenly drops down until it cannot be heard until another adjustment is made. What can be wrong?*

We are inclined to believe that one half of the primary of the output transformer has been burned out. This, if the case, will naturally increase the voltage of the other tube and B lead to the push-pull second audio tube, and undoubtedly has resulted also in burning out the series screen resistor of 14,300 ohms that supplies all the screens of the set. This resistor will not work well until it is heated sufficiently. Perhaps some other screen or plate bypass condenser is giving trouble.

#### Set Goes Dead

*I have a Scott 601 receiver. Some times it goes dead after having been turned on for a short time. When turned off, or the dial rotated to zero and back several times, it starts oper-*

*ating. In a short time it again snaps off. The makers advised me to try the 45-volt wire on the power pack on the 90-volt tap on the pack. I did this and the set does not cut off now, but there is a great decrease in the selectivity with the wire so attached. What do you think about using this new connection?*

It is probable that the by-pass condenser on the voltage divider connecting the 45-volt tap to the ground has become shorted. By placing the lead on the 90-volt tap you obtain more than enough voltage which accounts for the decreased selectivity you complain of. This is due to the increased gain in the receiver brought about by higher plate voltage. Check the condenser in question.

#### Converter Dead on Low Waves

*I am using a Stewart Warner short-wave converter with a Westrand 9-tube set. I can not receive any stations past 10,000 kcs. They should be received from there up to 16,000 kcs. Once in a while I get a lot of whistling. The receiver seems to be strong and powerful, selective and sensitive, but when connected to the converter it just does not bring in the stations on the lower waves.*

You can hardly expect consistent operation of this character between 10,000 and 16,000 kilocycles. Many of us are apt to judge short wave reception by our broadcast receiving experience, which is rather unfair. The shorter the waves the more difficult it is to tune them in. And you must admit that when you get down to 18 meters wave length it takes just about a perfect short-wave receiver to get results. There is little in the way of recommendation. Be sure the tubes are in perfect condition. Try several different ones in the detector socket of the converter, for the detector tube is critical in this position. The whistling noises are more or less natural for they appear with interference or regeneration effects within or between the converter and broadcast receiver.

### Using an Auto Radio

*I have a Chevrolet Auto Radio, and I wish to use it for home reception as it seems very powerful. How can I adapt it to a. c. operation? Who makes the set?*

We would not suggest any changes in the tubes or battery arrangement of this circuit, as it is built around the characteristics of these tubes. Its present operation on a battery is quiet. But, if a filament transformer were used to heat the tubes it would be necessary to install hum resistors and center tap windings to prevent annoying hum. It is doubtful whether hum could be entirely eliminated.

This receiver is manufactured by the United Motors Service, Detroit, Michigan.

### "B" Eliminator Hums

*There is a hum in my Atwater Kent receiver which has been converted to use the -30 series of tubes with a "B" eliminator. What can I do to get the hum out of this outfit?*

The hum is caused by the eliminator. Apparently it is not filtering or choking the a. c. ripple from the rectified current. Or hum will be produced when the B voltage falls to a low potential. Try connecting headphones or speaker to the output of the eliminator and see whether hum can be heard. If so, have the eliminator examined and tested for defective filter chokes and condensers. The rectifying tube must also be tested, as it may need replacing.

### Using RADEX S.W. Converter

*I have built your short-wave converter, but now find that the tubes in my receiver operate on 6.3 volts. Can I use that type of tube in the converter?*

It will not be necessary to use different tubes. All you need do is insert a small resistor in series with the leads to the filaments or heaters of the converter tubes to reduce the potential to 2.5 volts. Use a 3-ohm resistor in series with one of the leads.

### Using 2A3 Tube

*I wish to use a 2A3 in place of the -45 in my Remler 17 receiver. Also, can I use phones with this tube?*

The 2A3 is a heavy duty -45 tube. In a push-pull circuit, two 2A3s may be substituted for two -45s. A 2A3 should not be used in a set employing a single -45 without changing the circuit and the output transformer. In your set the change is not recommended. If you use headphones with your receiver (the -45 tube or the 2A3) a single fixed condenser of about 0.25 mfd. capacity and 300 volts test may be used between the phone cord and the plate of the -45 tube. The other cord tip of the headset is grounded.

## A DXer's Diary

By ELMER L. MERTEN\*

September 5. The list of monthly tests was very welcome but as the static stays pretty late here in Colorado, I can't do much until October when the blanket of interference begins to lift.

October 9. The Japs are starting to come in pretty well and also the Aussies and Zedders. I hope to pull in some of the South Americans later in the season. One catch of which I am proud is WOCL, 50 watts, Jamestown, N. Y. It came in very well.

November 27. Was very fortunate this month with the tests. At 1st I succeeded in pulling in WCSH, Portland, Maine, a new state. I need only Vermont, Rhode Island and Delaware. A very interesting thing happened. I picked up WEEU in Reading, Pa., and JOIK in Sappora, Japan, came in so strong that it interfered with reception very seriously. I listened to station 2YA in Wellington, heard them give the reports on cricket matches and the racing results. Also heard a lawyer give his argument to the jury over 2BL, Sydney.

December 3. I heard a station on 830 kcs. announce as LR5, Buenos

Aires. Looked in the new RADEX and, sure enough, there was the notice in the DX Calendar. Five minutes later I heard the call from CHGS, Summerside, P. E. I., 100 watts. The Australians are not coming in so well and 2YA is gone.

January 15. Someone in my neighborhood has a bum heating pad and it is ruining my DX. In between bursts I have been lucky. Picked up CRCS, Chicoutimi, Quebec, 100 watts, and, best of all, I heard CHNC, New Carlisle, Quebec, 100 watts, 2000 miles, while WEDC was on in Chicago. Heard the call three times. I find that I have 215 stations of 100 watts or less.

February 20. One morning this month, I tuned in at least twenty stations in Japan, also XGOA and JODK-2, Korea. The Jap stations came in with full volume on at least eight of them with the same program in English. Heard them give the prices of the New York stock exchange in English. Listened to XGOA until 6:30 MST. Picked up an unknown on about 1350; hope it was France, will try it again.

March 15. Saturday morning I picked up a station on 950 speaking Spanish. I clearly heard the call "Ellay Errey Tres, Buenos Aires" three times. Then I got one on 780 which I am quite sure was LT1, Rosario, but as I wasn't positive, I didn't log it. Heard WTAR on 780 later and JOPK almost drowned it out. My log now totals 630 stations from all continents except Europe and Africa, my farthest being 2BL, Sydney, and my best catch, considering power, CHNC at New Carlisle. I have received every station in the U. S. west of the Mississippi except KGY, KMED, KGGC, KSUN, KFKU, KLCN and I'd like to know when is the best time to get these. I also have them all in Illinois, Indiana, West Virginia, Kentucky and Louisiana and I need one more in Michigan, Wisconsin, Tennessee, Florida and

\*315 E. Fountain Street, Colorado Springs, Colo.

South Carolina and two in Ohio, Mississippi, Alabama and North Carolina.

Editor's Note. Mr. Merten uses a Stewart-Warner, Model 801, which is five years old with no repairs except a little graphite and carbon-tetrachloride on the ribbon of the volume control when it gets noisy. His aerial is 100 feet long, south to north, with a water-pipe ground.

## TUNING S. W. *from the Atlantic*

THE short wave stations of the U. S. do not seem to "get out" over the Atlantic as might be expected, especially those below 25 meters. W8XK on 25 m. was not nearly so good for me in December when I was outbound on this voyage as when homeward-bound in August and September. W8XK on the 49 m. band is useless (or was in December) because of being mixed up with RKK, a powerful code station.

The two NBC stations at Boundbrook, N. J., W3XL and W3XAL, were broadcasting on Friday and Saturday evenings respectively when I crossed in December. They were very satisfactory. I checked them as far as Port Said, Egypt. They were strong and clear. The difference in time prevented my trying them after that.

I could give quite a few instances of freak reception but I keep no log and only use my radio—a LaFayette Model 1020 all-wave—for my own entertainment. While in this port (Calcutta, India) I listen to two stations regularly—PHI, Holland, 25.57 m. who is on at this time from 1:00 to 3:00 p. m. GMT daily except Tuesday and Wednesday, and GSE, 25.3 meters. GSE is more satisfactory for me now than GSB on 31.55 m.

### Gets News Daily

The most satisfactory reception from any of the BBC's Daventry sta-  
*(Continued on page 41)*

# More News from the DX WORLD

## • • • Brief Reports from our Readers

SO MANY of the letters we receive are interesting enough to reproduce in full but lack of the necessary space makes this manifestly impossible. We can only cull the most interesting portion of each letter. Even at that we get two and three months behind due to the great number of newsy and chatty letters we receive. Here is this month's grist from the DX mill:

"My log of up-to-date stations as checked in the December issue totals 570 on the b. c. b. and 203 on the short waves, with over 2500 amateur stations," reports Clyde I. Boyer, 5713 N. 7th St., Philadelphia, Pa. "On the b. c. b. I have logged every state in the U. S., 30 in Cuba, 1 Porto Rico, 18 Mexico, 48 Canada, 2 Australia, 1 Peru, 1 Venezuela, 1 France, 1 Hawaii, 1 Argentine, and thanks to your DX Calendar I picked up LR5 on Dec. 3. I use a Philco Model 112 11-tube and a Midwest converter."

"Have had fair luck this season," believes Fred Roe, Brookings, S. Dak. "Got a verification from 2YA the other day and I'm expecting one from LR5. The rest of my log includes 22 Californian stations with 14 verified, and about half a dozen Mexicans and Canadians. The east coast doesn't come in so good, although I did listen to WHAM about 3:00 p. m. the other day. Am using an aerial about 40 feet high with a Tobe filtered lead-on. It's okay, best results I've ever had. My total log is 290, with 152 verified."

"On Thursday, Jan. 18, I purchased a 6-tube Majestic table radio Model 461, and am so pleased with it that I couldn't resist telling you," enthuses J. Brent Frey, 4410 Wentworth Road, Baltimore, Md. "In eight days I had logged 105 stations. Among these were KFI, KFSD, KNX, KMPC, KGB

and KGO; XER-XEF, XED, XEFO, XENT, XEAE, XEW and XEBC. I have had CMQ, Havana, and CFRB, CKCR, and CKLW in Canada. These are my prize catches, although I have heard several stations in the region around Utah."

"To date I have 136 stations logged in North America, and two outside," writes 15-year-old Charles Kilbury, 416 N. First St., Yakima, Wash. "Have only been DXing since September and my best catches are KGEZ, KGU, WOR, XEYZ, CKLW, CKY, XEAW, KGDM. I have every station 50,000 watts and above in the continent, except WBOQ. I also have all between 10,000 and 50,000 in the U. S., except WJSV and WBAL. I have no aerial, as I tore it down last October so I could make a better one."

"I received a Philco 16-B for Christmas and have been DXing for a little over a month. I am thoroughly satisfied with the set. I have picked up 180 stations in the U. S., Canada and Mexico. On the s. w. I have received EAQ, GSB, HC2RL, HJ1ABB, LSX and Pontoise. I have all the channels except 1510 which I probably never will be able to get." Thus writes Henry Morgan, 710 Linwood Place, St. Paul, Minn.

Here is another who has just celebrated his first anniversary of DX—R. G. Ludwig, 1463 Fernwood Ave., Toledo, Ohio. "I have verified nearly 400 stations including all states except Wyoming and all provinces except New Brunswick. My best catches include 4QG, HJN, Poste Parisien, KGU, LR5, HHK, WKAQ, KFPM, CMGF, KPCB, WIBG and 10-BQ. I use two sets, a Zenith 9-tube and a Radiotrope 10-tube."

"I now have 624 stations in my log," reports Lee F. Blodgett, 917½ W. Montgomery St., Creston, Iowa.

"I have 46 states of the U. S., eight states in Mexico, eight provinces in Canada and Venezuela, Argentine, Puerto Rico, Hawaii, New Zealand, Australia, Japan and Cuba. I have 402 of them verified. I would appreciate any tips I can get on Maine and Rhode Island. I use an 8-tube Earl, Model 22."

"Poste Parisien comes in fine on 961 kc. (not 959) at 2:10 a. m. with their bugle calls," says Don W. Reynolds, 34 Chambers St., Newburgh, N. Y., who adds: "I have Newfoundland, every province in Canada, Argentina, France, Germany, Mexico, Cuba, HIX, FQN, HAL-2,—all on a 5-tube set. I have every state but Wyoming. I now have a 50-foot cage antenna and an inverted L separated by a knife switch."

"Monday morning, Feb. 5, after 1 a. m., I received Gleiwitz, Germany, ITR and IMI in Italy and SBH in Horby, Sweden," says Ed. Olson, 36 Second St., Natick, Mass. "I have also received Fecamp, France, PP Paris, and Frankfurt, Germany, as well as YV1BC and LR-5. It seems to be impossible for me to pull in a T-P station, Alaska or Hawaii. My total log on the b. c. band is 479. I have all states but Wyoming and Nevada."

"I am giving some of the best stations that I have heard on my Scott receiver," contributes Robert Base, 4105 Alto Road, Baltimore, Md. "HHK, 5CK, CFQC, CKY, WCAT, WDAH, KTSM, 2CO, KLX, KXA, KOOS, KRSC, KWG, KLS, CX26, VE9CK, LR5, KRE, KGDM, Poste Parisien, and KMO. My total stations received now total 675 with 513 verified, 55 of which are 2000 miles or more away. I have received 7 in Australia and one in New Zealand but none from Japan."

"On a 5-tube Lafayette Midget in four days," remarks William Reeder, 729 Belvidere Ave., Plainfield, N. J., "I received 95 stations on the b. c. b. and three police stations. My antenna is 45 feet long with a radiator for a ground. Best catches are KSL, KFI,

KPO, WOAI and CFLC (100 watts). I do all my DXing between 5:00 and 8:30 p. m. and never have listened past 10:00 p. m."

"When I last wrote you I had a total of 180 stations," comments John E. Hawkins, Sallisaw, Okla. "My total is now 356, which includes 116 of 100 watts or less. My best ones are KIEM, KERN, KFXM, KWG, KPCB, KJBS, WWRL, WGNV, CJOC, KSUN, 10-BP and WKAQ. I have heard 43 states and would appreciate a tip from anyone on Maine, New Hampshire, Vermont, Delaware and Rhode Island."

"For the past two years I have been DXing with a 7-tube Airline," says James B. Crusan, 424 Smithfield St., Mt. Pleasant, Pa., "and my log contains 534 stations. Can any of your readers tell me what station broadcasts on approximately 540 kcs. between 10:00 and 11:00 p. m. EST nightly? I would also like to have some information concerning KDKA's new DX club. I would like to hear from other DXers using Airline receivers."

"I have logged 323 stations, 60 in the last 18 days," reports Vernon Parker, U. S. Dam 53, Grand Chain, Ill. "I have an RCA Victor Model R7. My best catches are KPCB, and WNBW, a 10-watter. I have logged 25 California stations, and all 9 of the Los Angeles stations. I live close to the mouth of the Ohio River. The only states that I haven't logged are Maine, Maryland, Vermont, Rhode Island and Idaho. Most of my DXing is done down under the river bank at the U. S. Ohio River Dam 53."

"Would like to hear from others with a set like mine," requests Ray G. Garrett, 124 South D. St., Hamilton, Ohio. "I have a Crosley Fiver, one year old, and have logged 225 stations. I have two in Cuba, CMBZ and CMCW, of 150 watts each; four in Mexico, and five in Canada. Best catches are KGIR, KOH, KQW, KROW, WSVS and XEFO. W8XO (WLW) testing with 500,000 watts



spoils my chances each night after 2:00 a. m."

"I haven't been DXing very long, but I have pulled in quite a number of good catches," admits Seymour R. Parker, Meadow View Farm, Hadley, Mass. "My best are CMBZ, KFAB, KFI, KFOX, KGA, KGNO, KHJ, KJB, KNX, KOA, KOY, KPO, KRKD, KROW, KVOB, WDAF, WEBC, WEDC, WEXL, WIBA, WIBM, WJBK, WOAI, WOS, WOW, WPFB, XEPN and XER. I use a Crosley Dual-six super, and it sure can pull them in. At present have 155 stations but have not bothered for verifications."

"I have 407 veris. up to this date and am striving hard for my N. N. R. C. Super Ace this season," remarks Jack Land, 359 Van Buren St., Toledo, Ohio. "Here are some of my latest catches: KTUL, WAVE, CKCR, XEAC, 10-PB, CMW, CMCW, CMJP, CMBZ, CMCN, KOY, KMPC, KQW, KPCB, KLCN, WSAJ, WPEN, WMAS and CKPC. XEAC said recently that they had 2000 verification cards printed and am I glad, as I want one. WCAE, Pittsburgh, is testing daily in the morning."

"I would like to hear from E. M. Weisharr," pleads Morton Meehan, 563 Adams Ave., Elizabeth, N. J. "I do not know his address. WGY sent his verification to me, and possibly they sent mine to him. From April, 1932, to Jan. 29 I have verified 174 stations and at present have 37 more requests out. My best verified catches are WBBZ, 10-BQ, KGCA, CHGS and KWSC. Stations from the midwest are coming in great this year."

"In 1933 I received my most distant station and also the most distant Southern station, LR5, Buenos Aires, 7600 miles from here," writes Frank Wheeler, 406 Eagle Point, Lakeside, Erie, Pa. "I also received the most distant Northern station, CJCA. I now have all states but Wyoming, and all provinces in Canada, but can't get Newfoundland. I now have 42 Pacific Coast stations."

"Please send me your DX Log of

the World," urges Frank A. Kunkel, Box 47, Stanhope, N. J. "I want to keep posted on the foreigners, especially Europe. Have logged four so far, P. P., Normandie, Stuttgart and Heilsberg. Am awaiting veris from the last named three; also LR5, CX26, HJN, KGU and TGW. The last named was heard Sunday morning, Jan. 14, on about 1130 kcs., at 4:00 o'clock."

"I have never seen anything in RADEX about the little five-tube Erla," remarks Harold Shippy, 19 Hillcrest Ave., Wethersfield, Conn. "I think it is a mighty fine set and it sure brings in the stations. I am 14 years old and have been DXing about a year. To date my log stands at 300 stations. For an aerial I use 75 feet of wire across the attic, and use a radiator for a ground."

"I have raised my log from 400 to 552 since September," reports David Greensides, 831 Princess St., Regina, Sask. "I have now logged 429 in the U. S., 36 in Canada, 21 in Mexico, 18 in Japan, 7 in Cuba, 9 in Australia,



*Andre Kostelanetz, nationally-known CBS conductor, in a new three-a-week series for Chesterfield. Mondays, Wednesdays and Saturdays, at 9:00 p. m. EDST*

one in New Zealand, two in South America and one in Porto Rico. I have 17 police, 7 amateurs and two ships at sea. I use a Model D50, 5-tube Sonora."

"I am an early evening DXer," says John J. Swatko, 216 5th Ave., Homestead, Pa. "In the evening hours and Sunday mornings, I have heard 406 stations of which 291 are verified. I use an old R-32 Victor. My antenna is 72 feet long and 38 feet high, running north and south." John would like to hear from any owner of the same set who has tried a wave-trap.

Quick work and fast is reported by Leo Lukasik, 150 Germain St., Buffalo, N. Y. "I bought your magazine last month and started DXing the same day. I have received 201 stations to date. On the short waves I have received GSE, GBB, EAQ, DJB, XDA, WOB and GBU. I am using a new RCA-Victor Globe Trotter, Model 121."

Charles Streuber, 532 W. Glenoaks Blvd., Burbank, Calif., sends us his complete log which is of course too long to print. We note nine stations in Australia, two in Alaska, two in China, two in Cuba, 24 in Japan, Formosa and Korea, two in Germany, two in Great Britain, two in Uruguay and one in Czechoslovakia. A very fine record.

Robert Osborne, Stellarton, Nova Scotia, tells us he has now received 60 European stations. It looks as though radio signals are following the airplane route from Europe to North America. His latest are the Germans on 1348, 1330 and 1267, Copenhagen, Poznan, Katowice, Vienna, and Florence.

"I started DX in April, 1933, and since then I have logged 429 stations," summarizes H. Henry Searles, 349 Broadway, Rochester, N. Y. "I was able to receive and verify LR-5 in Buenos Aires on Dec. 5 on my Regal International Model J. Other good catches are WKAQ, 10-BQ, KLUF, KFDV, CMJK, XEAE and XED."

"Since writing you a year ago I have raised my log from 380 to 460 stations," records Dick Stubbs, Okanagan Mission, B. C. "Among the new ones I have LR5, WKAQ, WCSC, CKNC and WHEB as my best. The T-P's do not seem to be as good here this season as last, but just recently I heard JOBG and JOXK."

"Since November I have received 276 stations," remarks Frank Block, Nemaocolin, Pa. "Would have had more, but haven't tried the frequency checks, except for two hours in two nights when I got 34 out of 37. I own a Philco 91-X and would like to correspond with others owning this same model."

"I purchased a Marconi 8-tube set last September," advises M. Edison MacLeod, Glencoe Station, P. E. I., "and have to date a total of 257 stations in Canada, West Indies, Mexico, and 42 of the United States. Among my best catches, all received on loud speaker, are WSVS, WNBZ, WEXL, CMCD, CMC, WKAQ, XEB and XEFO."

"Have been DXing on a large scale for about two weeks," records Byron Bair, 33 Park Ave., New London, Ohio, "during which time I have logged 94 stations (35 verified) on the b. c. b., 55 police, and about 75 amateur phone stations. I use a Crosley Model 168. My best catches are XER, XEPN, KFI, KNX, KFNF, KFSD, KMA, KWKC and KTUL."

"Using a Philco Model 62 with 6 tubes, I have logged to date 624 stations, verifying 485," reports George Wills, 16 Albert St., St. Catharines, Ont. "Best verified are YV1BC, HJN, HIX, KGU, JOAK, JOCK, JOIK, 2YA, 3LO, 4QG, 2BL, VONF, WKAQ, KFPM and VE9EK. I've sent to CX26 and Poste Parisien and expect answers soon."

James Boyle, 4942 Ellis Ave., Chicago, Ill., has been DXing for three weeks and wants to know if he is doing all right. Here's his list: 40 in U. S., 4 in Canada, 4 in Mexico, one in Hawaii. "Some of my best ones," says James, "are KGMB, KFI,

KOA, CFRB, WAPI, WDAE, WDAY and XEPN. My radio is a Philco 5-tube." Okay, Jimmy!

"In five weeks with my 4-tube Crosley 169, I have logged 180 stations including four in Mexico, ten in Canada and three in California," reports Robert Hoffman, 306 West School Lane, Germantown, Philadelphia.

"I am not as great a DXer as some of those in RADEX," admits Jesse Brant, 431 S. Front St., Milton, Pa., "but I have over 300 stations and every one of the channels. My best are KNX, KFI, KEX, XEAW, XENT, and 10-BP."

## S. W. from the Atlantic

*(Continued from page 36)*

tions is GSA on 49.6 m. from 4:00 to 6:00 p. m. GMT. Since December 17th, when we made Alexandria, Egypt, as our first port of call, I have failed to get the new broadcast at 5:00 to 5:15 p. m. only when I was not on board the ship at the time, which was not very often.

The ports we have made since then are Port Said, Port Suez, Port Sudan in Egypt; Aden in Arabia; Karachi, Bombay, in India. At this moment, here in Calcutta, Henry Hall and the BBC dance orchestra are furnishing good dance music. The reception is most excellent—no static at all. I believe the distance from Calcutta to London by airline is almost 5000 miles. Taking it day after day, I call it good, consistent reception. GSB at times is interfered with by PLV who sends the call PLV-PMD at times.

There are other stations that are received out here regularly. I do not follow them closely as the language used is not English and, excepting music, their programs are not understood. On the broadcast band the station in Colombo, Ceylon, and XGOA, Nanking, China, are easily received here each night.

William S. Vincent,  
New Orleans, La.

## The National Radio Club

WHILE not the largest radio club, the National is by no means the smallest. Our members are scattered from coast to coast in the U. S. and Canada. This club was organized Sept. 1, 1933, by some of the members of the disbanded Buffalo Evening News DX Club together with several members of other clubs. Robert H. Weaver, 603 W. Market St., York, Pa., was elected president. On Jan. 16, 1934, the popular Atlantic Radio Club merged with this new organization followed on Feb. 5, 1934, by the Central DX Club, La Grange, Ill.

The cost of membership is \$1.25 per year and club stationery and stickers can be purchased at a nominal cost. Each week during the DX season, a four-page bulletin is mailed to every member of the club, containing the latest DX news and tips. During its brief existence, the National Radio Club has arranged for no less than 150 special programs.

Keith L. Freas, 73 Delwood Road, Kenmore, N. Y., has charge of the Singleton and Eliminator contest. This is an interesting contest and the club members are finding thrills in trying to outdo the others in verifying stations.

Cooperation with and courtesy to the other clubs and stations are two rules which are never forgotten. The NRC will be ready to back any project to prevent the clashing of DX activities.

The above article is by Luther E. Grim, 505 S. Main St., Red Lion, Pa., newly appointed publicity manager of the NRC.

Bill Brenton, who was doing free-lance announcing on Columbia last year while he continued his graduate studies, is again a regular member of the announcing staff, replacing Louis Dean, who has joined a large eastern advertising agency.

# A Great Japanese Radio Engineer

*An intimate view of Hidewo Kikutani, a well-known Japanese radio engineer, as expressed to the Shortwave Editor of RADEX by W. H. REEKS, Corresponding Secretary of the Chicago Short Wave Radio Club.*

**T**HAT which we call a rose by any other name would smell as sweet," and Kikutani, which in English means "Chrysanthemum Valley," by any other name would continue to be a Japanese gentleman of the highest order. As "Chrys," by which name he is affectionately known among his American friends and which he good-naturedly insists upon being called, an introduction might be necessary, but as Hidewo Kikutani he is known the world over by those interested in shortwave radio transmission, as engineer-in-chief of J1AA, the shortwave station of the Department of Communications of the Japanese Government.

Chrys has the keenest appreciation of humor and wit, and can give and take a joke with a smile that frequently develops into hearty laughter—that infectious sort of laughter that one reads about but seldom hears and in which others are impelled to join, leaving a "keep smiling" sign on their faces for hours afterwards.

When at work or in serious vein, Chrys takes on an air of profound earnestness, which perhaps accounts in part for his success as Chief-Engineer of his Government's radio stations during the past ten years, having taken charge at a very early age, and for the well-deserved promotion that awaits him upon his return to Tokio next July after visiting the important broadcasting and communication organizations of the world.

Perhaps if listeners realized that all correspondence addressed to J1AA in the past was answered by Chrys personally, if a reply was forthcoming, they would understand why all reception reports could not be acknowledged, especially as he was



*This is the extremely modern home of the Kemi-kawa Radio Sending Station, J1AA, located at Kemikawa-Cho, Chiba-Ken, Japan, of which Hidewo Kikutani is Engineer-in-Chief.*

exceedingly busy practically all of the time with matters of major importance. Those who have received confirmation of reception from the Kemikawa Sending Station will agree that Chrys writes English perfectly and that he excels the average American in penmanship. Those who have post card photographs from the station will undoubtedly prize them the more highly when they learn that all such views were not only taken by Chrys with his own cameras, but also developed and printed by him.

Suffice it to say that Mr. Kikutani is one hundred per cent a gentleman; courteous, good-natured, witty, humorous, but withal, dignified. One can but recognize in him a splendid representative of Japan's one hundred millions, who have just recently celebrated the 2,594th year of a dynasty of unbroken succession, and we welcomed him most cordially in Chicago, where for one week he was the guest of the Chicago Short Wave Radio Club, as a messenger of international good-will from the Land of the Rising Sun.

Harsh, raspy or fuzzy tone in the Dynacone speaker may be traced either to loose parts of the speaker or to hardened damping blocks at the ends of the armature in the unit. Replace these with new ones cut from thin rubber such as a bathing cap. Reassemble unit and adjust properly.

# WHAT'S ON THE AIR TONIGHT?

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

COLUMBIA.....(C)	
Call	Dial

NATIONAL, Red (R)	
Call	Dial

NATIONAL, Blue.(B)	
Call	Dial

**TIME: ED** Eastern Daylight; **E** Eastern; **C** Central; **M** Mountain.  
For Pacific Time subtract one hour from Mountain.

While these programs are correct at the time of going to press changes are made from time to time. Due to change to Daylight Saving Time on April 29, some of the stations listed will be unable to carry particular features.

## MONDAY

**ED-6:00 p.m., E-5:00, C-4:00, M-3:00**  
**G — Buck Rogers in 25th Century**  
 CKLW WAAB WABC WADC WBT  
 WCAO WCAU WDRC WEAN WHK  
 WJSV WKBW WOKO  
**B — U. S. Army Band**  
 KOIL KSO KWCR KWK KYW WBAL  
 WBZ WBZA WCKY WENR WHAM  
 WJZ WMAL WREN WSYR

**ED-6:15 p.m., E-5:15, C-4:15, M-3:15**  
**C — Bobby Benson; Sunny Jim**  
 WAAB WABC WCAU WDRC WEAN  
 WFBL WGR WHBC WHK WLBZ  
 WMAS WOKO WORC

**ED-6:30 p.m., E-5:30, C-4:30, M-3:30**  
**R — Irene Beasley, Songs**  
 KGO KOA WAPI WBEN WCKY  
 WFAE WFBR WGY WHO WJDX  
 WMC WOC WSAI WSB WSM WSMB  
 WSOC WTAG WWJ  
**C — Sam Robbins and Orchestra**  
 CKLW KLRA KLZ WAAB WADC  
 WBIG WBRC WCAO WDAE WDBJ  
 WDBO WDOD WDRC WDSU WFBL  
 WFEE WGST WHEC WHP WICC  
 WJAS WJSV WKBW WKBW WLAC  
 WLWB WLBZ WMAS WMBG WOKO  
 WORC WQAM WREC WSFA WSJS  
 WSPD WTAZ WTOG

**ED-6:45 p.m., E-5:45, C-4:45, M-3:45**  
**B — Lowell Thomas**  
 CRCT KDKA WBAL WBZ WPZA  
 WFLA WGAR WHAM WIOD WJAX  
 WJR WJZ WLW WSYR

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

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

**ED-7:15 p.m., E-6:15, C-5:15, M-4:15**  
**C — Just Plain Bill**  
 CRFB CKLW WABC WCAO WCAU  
 WGR WHK WJSV WKRC WNAC  
**B — Baby Rose Marie, Songs**  
 KDKA WBAL WBZ WBZA WHAM  
 WJZ WMAL WSYR

**ED-7:30 p.m., E-6:30, C-5:30, M-4:30**  
**C — Music in the Air**  
 WABC WCAO WCAU WDRC WEAN  
 WFBL WFEA WGR WHBC WICC  
 WJAS WJSV WLBZ WNAC WOKO  
 WORC

**R — Mollie Show**  
 KSD WBEN WCAE WCSH WDAF  
 WFAE WFBR WGY WHO WJAR  
 WMAQ WOC WOW WRC WTAG  
 WTAM

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

**ED-7:45 p.m., E-6:45, C-5:45, M-4:45**  
**C — Boake Carter; Philco**  
 CKLW KMBC KMOX WABC WBBM  
 WBT WCAO WCAU WCCO WGR  
 WHAS WHK WJAS WJSV WNAC  
**R — The Goldbergs**  
 WBEN WCAE WCSH WDAF WFAE  
 WEEI WENR WFBR WGY WJAR  
 WLIT WOW WRC WSAI WTAG  
 WTAM WWJ

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**  
**C — Happy Bakers**  
 CKLW WABC WADC WCAE WDRC  
 WFBL WGN WGR WHBC WHK  
 WICC WJSV WMAS WMBG WMT  
 WNAC WORC WSPD WWVA

**R — Scenically Sketches**  
 WBEN WCAE WCSH WFAE WEEI  
 WGY WJAR WSAI WTAG WTAM  
 WVIC

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

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**  
**C — Bing Crosby**  
 CKLW KDB KERN KFBK KFPY  
 KFRC KGB KHJ KLZ KMBC KMJ  
 KMOX KOIN KOL KSL KVI KWG  
 KXBC WADC WCAO WCAU WDRC  
 WEAN WFBL WFBM WGN WGR  
 WHAS WHK WJAS WJSV WKRC  
 WNAC WOKO WOWO WSPD

**R — Voice of Firestone**  
 CFCE CRCT KFJR KPRC KSD  
 KTBS KTHS KVOO WBEN WCSH  
 WDAF WDAY WFAE WIBC WEEI  
 WFAA WFRB WFLA WGY WHO

WIOD WIS WJAR WJAX WJDX  
 WKY WLIT WLW WMAQ WMC  
 WOAJ WOC WOW WRC WRVA WSB  
 WSM WSMB WSOC WTAG WTAM  
 WTTIC WTMJ WWJ WWNC

**ED-8:45 p.m., E-7:45, C-6:45, M-5:45**  
**B — Babe Ruth; Baseball Comment**  
 KDKA KSO KWCR KWK WBAL  
 WBZ WBZA WCKY WGAR WHAM  
 WJZ WLS WMAL WREN WSYR

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**  
**C — Andre Kostelanetz' Orchestra**  
 CKLW KDB KERN KFBK KFH  
 KFPY KFRC KGB KGBM KHJ  
 KLRA KLZ KMBC KMJ KMOX KOH  
 KOIN KOL KOMA KSL KTAT KTSB  
 KVI KWG WABC WADC WBBM  
 WBNS WBRC WBT WCAO WCAU  
 WCCO WDAE WDBJ WDBO WDRC  
 WDSU WEAN WFBL WFBM WGST  
 WHAS WHEC WHK WICC WISN  
 WJAS WJSV WKBW WKRC WLAC  
 WLWB WMBG WMT WNAC WOKO  
 WORC WOWO WPG WQAM WREC  
 WRR WSPD WTAZ WTOG

**R — A. & P. Gypsies**  
 KSD WBEN WCAE WCSH WDAF  
 WFAE WEEI WGY WHO WJAR  
 WLIT WMAQ WOC WOW WRC  
 WSAI WTAG WTAM WTTIC WWJ

**B — Sinclair Minstrels**  
 KDKA KFJR KOA KOIL KPRC  
 KSO KSTP KTBS KTHS KVOO  
 KWCR KWK WBAL WBZ WBZA  
 WDAY WECB WFAA WFLA WGAR  
 WHAM WIBA WIOD WIS WJAX  
 WJDX WJR WJZ WKY WLS WLW  
 WMC WOAJ WPTF WREN WRVA  
 WSB WSM WSMB WTMJ WWNC

**ED-9:30 p.m., E-8:30, C-7:30, M-6:30**  
**C — The Big Show**

CFRB CKLW KDB KERN KFBK  
 KFPY KFRC KGB KHJ KLZ KMBC  
 KMJ KMOX KOIN KOL KRLD  
 KSL KVI KWG WABC WADC  
 WBBM WBT WCAE WCAO WCAU  
 WCCO WDRC WDSU WEAN WFBL  
 WFBM WHAS WHK WICC WJAS  
 WJSV WKBW WKRC WLAC WNAC  
 WOKO WOWO WREC WSPD WTAZ

**R — Del Monte Ship of Joy**  
 KDYL KOA KPRC KSD KSTP  
 KTBS KVOO WBEN WCAE WCSH  
 WFAE WECB WEEI WFAA WFRB  
 WFLA WGY WHO WIOD WIS  
 WJAR WJAX WKBW WKY WLIT  
 WMAQ WOAJ WOC WOW WRC  
 WRVA WSAI WTAG WTAM WTMJ  
 WWJ WWNC

# MONDAY—(Continued)

**B — Jack Frost's Melody Moments**  
KDKA KALB WENR WGAR WHAM  
WJR WJZ WLW

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**  
**C — Wayne King and Orchestra**  
CKLW KALE KDB KERN KFRC  
KGB KHJ KLZ KMBC KMOX  
KOIN KOI KSL KWG WAAB WABC  
WADC WBBM WCAO WCAU WCCO  
WDRG WDBJ WFBL WFBM WGR  
WHAS WHK WJAS WJSV WKRC  
WOKO WOWO WSPD

**R — Contented Program**  
CFCH CRCT KDYL KFI KFYP  
KGO KGW KHQ KOA KOMO KPRC  
KSTP WCHS WEAJ WEBC WEEI  
WFBR WJAR WLIT WMC WOAI  
WRC WSP WSM WTAG

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**B — Henri Deering, Concert Pianist**  
KFYS KOIL KPRC KSO KSTP  
KTBS KVOO KWOC WBAL WBZ  
WBZA WCKY WEBC WFAA WHAM  
WIBA WIDX WJZ WKY WMAL  
WOAI WREN WSB WSM WSMB  
WSYR

**R — National Radio Forum**  
CRCT KSI WAPI WBBN WCAE  
WCSH WDAF WEAJ WEEI WFBR  
WGY WHO WJAR WJDX WLIT  
WLW WMAQ WMC WOC WOW  
WRC WSB WSMB WTAG WTAM  
WTIC WWJ

**ED-10:45 p.m., E-9:45, C-8:45, M-7:45**  
**C — Myrt and Marge**  
KDB KERN KFBC KFPY KFRC  
KGB KHJ KLRA KLZ KMBC KMJ  
KMOX KOIN KOI KOMA KSL  
KVI KWG WBBM WBRG WCCO  
WDSU WFBM WGST WHAS WLAC  
WODX WREC

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**  
**C — Tito Guizar, Tenor**  
CKLW KFH KLRA KLZ KMBC  
KOMA KTRH KFOR WAAB WABC  
WACO WADC WBNS WBRG WBT  
WCAO WDBJ WDBO WDOD WDRG  
WDSU WFBM WGLC WHAS WHEC  
WHK WHP WIBW WIP WJAS WJSV  
WKBW WLAC WLWB WMBG WOKO  
WPG WQAM WREC WSJS WSPD  
WTAR WTOG

**B — Ames 'n' Andy**  
KDYL KFI KGO KGW KHQ KOA  
KOIL KOMO KPRC KSTP KTHS  
KWK WBAP WDAF WIENR WKY  
WMAQ WMC WOAI WREN WSB  
WSM WSMB WTMJ

**ED-11:15 p.m., E-10:15, C-9:15, M-8:15**  
**C — News Service**  
CFRB CKAC CKLW KFAB KFH  
KLRA KLZ KOMA KSCJ KTRH  
KTSJ KFOR WAAB WABC WCAO  
WADC WBBM WBNS WBRG WCAO  
WDAE WDBJ WDOD WDRG WDSU  
WFBL WGST WHEC WHP WIBW  
WIP WISN WJSV WKBW WKWB  
WKRC WLAC WLWB WMBG WMS  
WMBD WMBG WMT WNX WODX  
WOKO WORC WPG WREC WSJS  
WSPD WTAR WTOG

**ED-11:30 p.m., E-10:30, C-9:30, M-8:30**  
**C — Charlie Davis and Orchestra**  
CFRB CKLW KFH KLRA KLZ  
KMBC KOMA KTRH KFOR WABC  
WADC WBNS WBRG WBT WCAO

WDBJ WDBO WDOD WDRG WDSU  
WEAN WFBM WGLC WHAS WHEC  
WHP WIBW WICC WIP WJAS  
WJSV WKBW WLAC WLWB WLZ  
WMAS WMBG WNAO WOKO WORC  
WPG WQAM WREC WSBT WSJS  
WSPD WTAR

**R — Voice of Firestone**  
KDYL KFI KFSO KGHL KGIR KGO  
KGU KGW KHQ KOA KOMO KTR

# TUESDAY

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

**ED-6:15 p.m., E-5:15, C-4:15, M-3:15**  
**C — Bobby Benson, See Monday**

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

**R — Mid-Week Hymn Sing**  
KDYL KFYP KGIR KPO KPRC  
KTBS KTHS KVOO WDAY WEAJ  
WFAA WFI WGY WHO WIBA WIS  
WJAX WJDX WMAQ WOAI WOC  
WRC WSAI WTAG WWNC

**C — Mischa Roginsky and Ensemble**  
CKLW KLRA WAAB WABC WADC  
WBRG WBT WCAO WDAE WDBJ  
WDBO WDOD WDSU WFEA WGLC  
WGST WHEC WHP WICC WJAS  
WJSV WLAC WLWB WLZ WMAS  
WMBG WOKO WORC WQAM WREC  
WSPA WSJS WSPD WTAR WTOG

**ED-6:45 p.m., E-5:45, C-4:45, M-3:45**

**C — Morton Downey**  
CFRB CKLW KFAB KLRA KLZ  
KMBC KOMA KSCJ KTRH  
KTSJ KFOR WABC WACO WADC  
WBNS WBRG WCAO WCCO WDAE  
WDBJ WDBO WDOD WDRG WDSU  
WFBM WFEA WGLC WGST WHEC  
WHP WIBW WICC WISN WJAS  
WLAC WLWB WLZ WMBG WMT  
WOKO WORC WQAM WREC WSPA  
WSJS WSPD WTAR WTOG WVV

**R — Cheerio Musical Wosals**  
KDYL KOA KPO KSD WCKY  
WEAF WEEI WFBM WFLA WGY  
WHO WIOD WIS WJAR WJAX  
WJDX WMAQ WOC WOW WRVA  
WSAI WSM WSOC WTAG WWJ  
WWNC

**B — Lowell Thomas, See Monday**

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

**C — Myrt and Marge, See Monday**  
**B — Ames 'n' Andy, See Monday**

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

**C — Just Plain Bill, See Monday**  
**B — You and Your Government**  
KDKA KECA KEX KFSO KFYP  
KGA KGHL KGIR KJR KOA KOIL  
KPRC KTRR KTBS KTHS KVOO  
KWCR KWK KYA WAPI WBZ WBZA  
WCKY WFLA WHAM WIBA WIS  
WJDX WJZ WMAL WOAI WPTF  
WREN WSMB WWNC

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

**R — Johnny Russell; Carolyn Rich**  
KSD WCHS WEAJ WFBM WGY  
WJAR WMAQ WRC WSAI WTAM

**C — Silver Dust Serenaders**  
WABC WCAU WDRG WFBL WGR  
WHEC WJAS WMAS WOKO WORC  
WVV

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

**C — Boake Carter, See Monday**  
**R — Goldbergs, See Monday**

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

**R — Little Jack Little**  
CKLW KFH KLRA KMBC KMOX  
KOMA KTAT KTUL WABC WADC  
WBBM WCAH WCCO WDRG WFBM  
WGR WHEC WHK WICC WISN  
WJSV WMAS WMBG WMT WNAO  
WREC WRR WSPD WVV

**R — Leo Reisman's Orchestra**  
KDYL KFI KGO KGW KHQ KOA  
KOMO KSD WBEN WCAE WCHS  
WEAF WEEI WFBM WFI WGY WHO  
WJAR WKBW WLS WMAQ WOC  
WOW WRC WSAI WSB WSM WSMB  
WTAG WTAM WTMJ WWJ

**B — Eno Crime Clues**

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

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

**C — Voice of Experience**  
CKLW KMBC KMOX KTRH WABC  
WBBM WBT WCAO WCAU WCCO  
WDRG WDSU WEAN WFBL WGR  
WHAS WHK WIBW WJAS WJSV  
WKRK WNAO WWO

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

**B — Hudson; Conrad Thibault**  
KOIL KSO KWCR KWK WBAL WBZ  
WBZA WGAR WHAM WJZ WLS  
WLW WMAL WREN

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

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

**C — Raymond Paige and Orchestra**  
KDB KFH KLRA KLZ KMOX KOIN  
KOMA KSCJ KSL KTRH KTSJ  
KFOR WABC WACO WADC WBNS  
WCAO WCAU WCCO WDAE WDBJ  
WDBO WDOD WDRG WDSU WEAN  
WFBL WFBM WFEA WGR WGST  
WHAS WHEC WHP WIBW WICC  
WISN WJAS WJSV WKBW WLAC  
WLWB WLZ WMAS WMBG WMT  
WNAX WODX WOKO WORC WPG  
WQAM WREC WSBT WSJS WSPD  
WTAR WTOG

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

**R — Ben Bernio and Orchestra**  
KFYR KOA KPRC KSD KSTP  
WBAP WBEN WCAE WCHS WDAY  
WEAF WEEI WFBM WFI WGY  
WHO WJAR WKY WLW WMAQ  
WMC WOAI WOC WOW WRC  
WRVA WSB WSM WSMB WTAG  
WTAM WTMJ WWJ

**B — Household Musical Memories**  
KDKA KSO KWK WBAL WBZ WBZA  
WHAM WJR WJZ WKBW WLS  
WREN WSYR

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

**C — Ruth Etting; Johnny Green**  
CKLW KDB KERN KFBC KFH  
KFPY KPRC KGB KHJ KLRA KLZ  
KMBC KMJ KMOX KOIN KOI  
KOMA KSCJ KSL KTRH KTSJ KVI  
KWG WABC WADC WBBM WBRG  
WBT WCAH WCAO WCAU WCCO  
WDAE WDRG WDSU WEAN WFBL

**TUESDAY—(Continued)**

WFBM WGST WHAS WHEC WHK  
WBW WCCG WISN WJAS WJVS  
WKWB WKRC WLAC WMBD WMT  
WNAC WOKO WOWO WQAM WREC  
WRR WSPD WTAR WTOG

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

**R — Texaco Fire Chief Program**  
KDYL KFI KFSD KFYR KGH  
KGR KGO KGW KHQ KOA KOMO  
KPRC KSD KSTP KTAR KTBS  
KVOO WBAP WBEN WCAE WCHS  
WDAF WDAY WFAE WFCB WVEE  
WFBF WFI WFLA WGY WHO WIBA  
WIOD WIS WJAR WJAX WJDX  
WKY WLW WMAQ WMC WOAI  
WOC WOW WPTF WRC WRVA  
WSB WSM WSMB WTAG WTAM  
WTMJ WWJ WWNC

**B — Eddie Duchin and Orchestra**  
KDKA KOIL KSO KWCR KWK  
WBAL WBZ WBZA WCKY WENR  
WGAR WHAM WJR WJZ WMAL  
WREN WSYR

**C — Minneapolis Symphony Orchestra**  
CKLW KDB KERN KFBK KFPY  
KFRC KGB KHJ KLZ KMBC KMJ  
KMOX KOIN KOL KOMA KRLD  
KSL KVI KWG WABC WADC WBBM  
WBRC WBT WCAO WCAU WCCO  
WDRC WDSU WEAN WFBL WFBM  
WHAS WHK WJAS WJVS WKBW  
WKRC WMBG WMT WNAC WNA  
XOKO WOWO WSPD

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

**R — Palmolive Beauty Box**  
KDYL KFI KFSD KFYR KGH  
KGR KGO KJW KHQ KOA KOMO  
KSD KTAR KTBS WAPI WAVE  
WBEN WCAE WCHS WDAY WFAE  
WFCB WVEE WFBF WFLA WGY  
WHO WIOD WIS WJAR WJAX WJDX  
WKY WLW WMAQ WMC WOAI  
WOC WOW WPTF WRC WRVA  
WSM WSMB WSOC WTAG WTAM  
WTMJ WWJ WWNC

**C — Camel; Glen Gray's Orchestra**

CKLW KDB KERN KFBK KFH  
KFPY KFRC KGB KHJ KLRA KLZ  
KMBC KMJ KMOX KOIN KOL  
KOMA KRLD KSCJ KSL KTRH  
KTSA KVI KWG WAAB WABC  
WACO WADC WBBM WBIG WBRC  
WBT WCAH WCAO WCAU WCCO  
WDAE WDBJ WDBO WDOD WDRC  
WDSU WFBL WFBM WFEA WFT  
WHAS WHEC WHK WHP WLB  
WICC WJAS WJVS WKBH WKBN  
WKBW WJRC WLAC WLW WMAS  
WMBD WMBG WMT WNA XOKO  
WOKO WORC WOWO WPG WQAM  
WREC WSJS WSPD WTAR WTOG

**B — Ray Perkins; Harold Stokes**

KDKA KOIL KSO KWCR WBAL  
WBZ WBZA WCKY WENR WGAR  
WHAM WJR WJZ WMAL WREN  
WSYR

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

**C — Conflict; Drama**  
CFRB CKLW KFH KLRA KLZ  
KMBC KOMA KRLD KSCJ KTRH  
KTSA KFOR WAAB WABC WACO  
WADC WBNS WBRC WBT WCAO  
WDAE WDBJ WDBO WDOD WDRC  
WDSU WFBL WFBM WFEA  
WGLC WGST WHEC WHP WICC  
WIP WISN WJAS WJVS WLAC  
WLW WLWZ WMAS WMBG WMBG  
WMT WNAC WODX WOKO WORC

WPG WQAM WREC WSJS WSPD  
WTAR WTOG

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

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**  
**B — Amos 'n' Andy, See Monday**

**C — Harlem Serenade**  
CKLW KFH KLRA KMBC KOMA  
KSL KTRH KTSA KFOR WAAB  
WABC WACO WADC WBNS WBRC  
WBT WCAO WDAE WDBJ WDBO  
WDOD WDRC WDSU WGLC WHAS  
WHEC WHK WHP WIBW WIP  
WJAS WJVS WLWZ WMBG WODX  
WOKO WREC WSJS WSPD WTAR  
WTOG WWVA

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

**ED-11:30 p.m., E-10:30, C-9:30, M-8:30**  
**C — Charles Barnett and Orchestra**

CFRB CKLW KFH KLRA KLZ  
KMBC KOMA KSL KTRH KTSA  
WABC WADC WBRC WCAO WDBJ  
WDRC WDSU WEAN WFBL WFBM  
WGST WHK WHP WIBW WISN  
WJVS WKBW WLAC WLWZ WMBD  
WMBG WMT WNAC WOKO WORC  
WQAM WREC WSBT WSJS WTAR  
WTOG WWVA

**ED-11:45 p.m., E-10:45, C-9:45, M-8:45**  
**C — Voice of Experience**

KDB KERN KFBK KFPY KFRC  
KGB KHJ KLZ KMJ KOIN KOL  
KSL KVI KWG

**WEDNESDAY**

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

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

**ED-6:15 p.m., E-5:15, C-4:15, M-3:15**  
**C — Bobby Benson, See Monday**

**ED-6:30 p.m., E-5:30, C-4:30, M-3:30**  
**R — International News Service**

KFSD KGA KGH KGR KJR KOA  
KPO KPRC KSD KTBS WAPI WBBN  
WDAF WDAY WFAE WFBF WGY  
WIBA WIS WJAX WJDX WOAI  
WRC WWNC

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

**C — Enoch Light and Orchestra**

CKLW KLRA WAAB WADC WBIG  
WBRC WCAO WDAE WDBJ WDBO  
WDOD WDRC WDSU WFEA WGST  
WHEC WHP WICC WJAS WJVS  
WKBN WLWZ WLWZ WMAS WMBG  
WOKO WORC WQAM WREC WSFA  
WSJS WSPD WTAR WTOG

**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**

**B — Amos 'n' Andy, See Monday**

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

**ED-7:30 p.m., E-6:30, C-5:30, M-4:30**  
**C — Music In Air, See Monday**

**R — Mollie Show, See Monday**

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

**R — Goldbarus, See Monday**

**B — Irene Rich in Hollywood**

KDKA WBAL WBZ WBZA WCKY  
WENR WJZ WMAL WMO WSB WSM  
WSMB WSYR

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**  
**R — Jack Pearl, Baron Munchausen**

CFCF KDYL KFI KFYR KGO KGW  
KHQ KOA KOMO KSD KTAR KTBS  
KVOO WAVE WBEN WCAE WCKY  
WCHS WDAF WDAY WFAE WFCB  
WVEE WFBF WGY WHO WIBA  
WJAR WJDX WLIT WMAQ WMC  
WOAI WOW WPTF WRC WSAI  
WSMB WTAG WTAM WTIC WTMJ  
WWJ WWNC

**C — Happy Bakers, See Monday**

**B — Eno Crime, See Tuesday**

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

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**  
**C — Albert Spalding; Conrad Thibault**

CFRB CKAK CKLW KDB KERN  
KFBK KFPY KFRC KGB KHJ  
KLRA KLZ KMBC KMJ KMOX  
KOIN KOL KOMA KSL KTAT  
KTRH KTSA KVI KWG WABC  
WBRC WCAO WCAU WCCO WDBO  
WDRC WDSU WEAN WFBL WFBM  
WGN WGR WGST WHAS WHK  
WJAS WJVS WKRC WLAC WMT  
WNAC WOKO WORC WOWO WREC  
WRR

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

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**  
**R — Wayne King, See Tuesday**

**ED-8:45 p.m., E-7:45, C-6:45, M-5:45**  
**B — Babe Ruth, See Monday**

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**  
**R — Hour of Smiles; Fred Allen**

KPRC KSD KSTP KTBS KVOO  
WBEN WCAE WCHS WDAF WFAE  
WFCB WFBF WGY WIOD WIS  
WJAR WJAX WKY WLIT WLW  
WMAQ WOAI WOW WPTF WRC  
WRVA WSB WSM WSMB WTAG  
WTAM WTIC WTMJ WWJ

**C — Andre Kostelanetz, See Monday**

**B — Ray Knight and Cuckoos**

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

**ED-9:30 p.m., E-8:30, C-7:30, M-6:30**  
**C — Guy Lombardo—Burns and Allen**

CKLW KDB KERN KFBK KFPY  
KFRC KGB KHJ KLZ KMBC KMJ  
KMOX KOIN KOL KOMA KRLD  
KSL KTRH KTSA KVI KWG WABC

**WEDNESDAY—(Cont'd)**

WADC WBT WCAO WCAU WCCO  
WDRB WEN WFBL WFWM WGN  
WHK WJAS WJWS WKWB WKRC  
WNAC WOKO WORC WOWO WSPD

**B — Non-Sp Program**

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

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

**C — Old Gold—Ted Florio and Orch.**  
CKLW KDB KERN KFVK KFOR  
KFPY KPRC KGB KHJ KLRA KLZ  
KMBC KMJ KMOX KOH KOIN  
KOL KOMA KRLD KSCJ KSL  
KTRH KTSB KVI KFOR KGW  
WABC WACO WADC WBIG WBRC  
WBT WCAH WCAO WCAU WCCO  
WDAE WDBJ WDBO WDOD WDRS  
WDSU WEAN WFBL WFPM WFEA  
WGN WGST WHAS WHEC WHK  
WHP WIBW WICC WISN WJAS  
WJWS WKWB WKWB WKRC WLAC  
WLWB WLW WMAS WMBD WMBG  
WMT WNAC WNAZ WOKO WORC  
WOWO WPG WQAM WREC WSPD  
WTAR WTOC

**R — Corn Cob Pipe Club**

KDYL KFI KFPR KGHK KGIR  
KGO KGW KHQ KOA KOMO KSD  
KSTP WBEN WCAE WCHS WDAF  
WDAE WDAE WDAE WEI WENR  
WFRB WGY WHO WIBA WJAR  
WLIT WLW WOC WOV WRC  
WRVA WTAG WTAM WTIC WTMJ  
WWJ

**B — Vincent Lopez and Orchestra**

KDKA KOIL KPRC KSO. KTBS  
KWCR KWK WAPI WAVE WBAL  
WBZ WBZA WCKY WFAA WFLA  
WGAR WHAM WIOD WIS WJAX  
WJDX WJZ WKBF WKY WMAL  
WMAQ WMC WOAI WPTF WREN  
WSB WSM WSMB WSOB WSYR  
WWNC

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

**B — Conoco Tourist Adventures**  
KDKA KDYL KFPR KOA KOIL  
KPRC KSO KWCR KWK WBAL  
WCKY WDAY WEBC WENR WFAA  
WGAR WHAM WIBA WJR WJZ  
WKY WMAL WREN WRVA WSYR  
WTMJ

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

**C — Myrt and Marge, See Monday**

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

**B — Amos 'n' Andy, See Monday**  
**C — Nick Lucas, Songs**  
CKLW KFH KLRA KLZ KMBC  
KOMA KSL KTRH KTSB KFOR  
WAAB WABC WACO WADC WBSN  
WBT WCAO WDAE WDBJ WDBO  
WDOD WDRS WDSU WGLC WHAS  
WHEC WHP WIBW WIP WJAS  
WJWS WLAC WLWB WMBG WODX  
WOKO WOWO WPG WQAM WREC  
WSJS WSPD WTAR WTOC

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

**B — Ray Knight and Cuckoos**  
CFBC KDYL KFI KFSD KGHK KGO  
KGW KHQ KOA KOMO KPRC WAPI  
WBAP WFLA WKY WMC WOAI  
WRVA WSB WSMB WSOB  
**C — News Service, See Monday**

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

**C — Little Jack Little**  
KLRA WABC WBRC WBT WCAO  
WDAE WDBJ WDBO WDRS WDSU  
WEAN WGST WICC WIP WJWS  
WLAC WLWB WMAS WMBG WNAC  
WORC WPG WQAM WREC WSJS  
WTAR

**ED-12:00 mid., E-11:00, C-10:00 M-9:00**

**R — Hour of Smiles; Fred Allen**  
KDYL KFI KGO KGW KHQ KOA  
KOMO

**THURSDAY**

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

**C — Buck Rogers, See Monday**  
**B — Richard Himber and Orchestra**  
KOIL KSO KWCR WBAL WBZ WBAZ  
WCKY WENR WHAM WJR WJZ  
WMAL WREN WSYR

**ED-6:15 p.m., E-5:15, C-4:15, M-3:15**

**C — Bobby Benson, See Monday**

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

**C — Mischa Raginsky, See Tuesday**  
**R — John B. Kennedy**  
KDYL KFPR KOA KPO KPRC KSD  
KTBS KTHS KVOO WAPI WDAY  
WEAF WFBR WFI WGY WHO WIBA  
WIS WJAX WJDX WMAQ WMC  
WOR WRC WSAI WSB WSMB WTAG  
WWJ WWNC

**ED-6:45 p.m., E-5:45, C-4:45, M-3:45**

**C — Sylvia Froos, Songs**  
CFRB CKLW KLRA KOMA KSCJ  
KTRH KTSB KFOR WABC WACO  
WADC WBRC WCAO WCGO WDAE  
WDBJ WDBO WDOD WDSU WFEA  
WGLC WICC WIP WISN WLWB  
WLWB WMBG WOKO WORC WQAM  
WREC WSFA WSJS WTAR WTOC  
**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**  
**B — Amos 'n' Andy, See Monday**

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

**C — Just Plain Bill, See Monday**

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

**B — Romantic Melodies; Don Ameche**  
KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KSO KWCR KWK  
WBZ WBZA WCKY WENR WJZ  
WMAL WREN WSYR  
**R — Mollie Show, See Monday**  
**E — Silver Dust, See Tuesday**

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

**E — Beake Carter, See Monday**  
**R — Goldbergs, See Monday**

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

**C — Raffles, Amateur Cracksmen**  
CFRB CKLW KFH KLRA KLZ  
KSCJ KSL KTRH KTSB KFOR  
WABC WACO WADC WBSN WBRC  
WBT WCCO WDAE WDBJ WDBO  
WDOD WDRS WDSU WEAN WFBL  
WFEA WGLC WHAS WHEC WHK  
WHP WIBW WICC WISN WJAS  
WLAC WLWB WLWB WMAS WMBG  
WMT WNAC WOKO WORC WPG  
WQAM WSBT WSFA WSJS WSPD  
WTAR WTOC WWVA

**R — Rudy Vallee and Orchestra**

CFBC CRCT KDYL KFI KFPR KGO  
KGW KHQ KOA KOMO KPRC KSD  
KSTP KTRH KTHS WAPI WBAP  
WBEN WCAE WCHS WDAF WDAY  
WEAF WEBC WEI WFBR WFI  
WFLA WGY WHO WIOD WJAR  
WJAX WJDX WKY WLW WMAQ  
WMC WOAI WOC WOW WPTF WRC  
WRVA WSB WSM WSMB WTAG  
WTAM WTMJ WWJ

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

**C — Voice of America**  
CKLW KMBC KMOX WABC WADC  
WBMM WCAO WCAU WDRS WEAN  
WFBL WGR WHAS WHK WJAS  
WJWS WKRC WNAC WOKO WOWO  
WSPD

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

**C — Presenting Mark Warnow**  
CKLW KFH KLRA KLZ KMBC  
KMOX KOMA KRLD KSCJ KSL  
KTRH KTSB KFOR WABC WACO  
WADC WBSN WBRC WBT WCAO  
WCAU WCCO WDAE WDBJ WDBO  
WDOD WDRS WDSU WEAN WFBL  
WFPM WFLA WGLC WHAS WHEC  
WHP WIBW WICC WISN WJAS  
WJWS WLAC WLWB WLWB WMAS  
WMBD WMBG WMT WNAC WODX  
WOKO WORC WOWO WPG WQAM  
WREC WSBT WSJS WSPD WTAR  
WTOC

**R — Maxwell House Showboat**

KDYL KFI KFSD KGO KGW KHQ  
KOA KOMO KPRC KSD KSTP KTRH  
KTBS WAPI WBAP WBEN WCAE  
WCKY WCHS WDAF WEAF WEI  
WFBR WFI WFLA WGY WHO WIOD  
WIS WJAR WJAX WJDX WKY  
WMAQ WMC WOAI WOC WOV  
WRC WRVA WSAI WSB WSM WSMB  
WTAG WTAM WTMJ WWJ WWNC

**B — Death Valley Days — Drama**

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

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

**C — Ford; Fred Waring's Orchestra**  
CKLW KDB KFBC KFH KPRC  
KGB KHJ KLRA KLZ KMBC KMOX  
KOH KOIN KOMA KRLD KSCJ  
KSL KTLU KVI KFOR WABC WACO  
WADC WBMM WBIG WBRC WBT  
WCAH WCAO WCAU WCCO WDAE  
WDBJ WDBO WDOD WDRS WDSU  
WEAN WFBL WFPM WFEA WGLC  
WGST WHAS WHEC WHK WHP  
WIBW WICC WJAS WJWS WKBN  
WKWB WKRC WLAC WLWB WLWB  
WMAS WMBD WMBG WMBR WMT  
WNAC WNAZ WODX WOKO WORC  
WOWO WPG WQAM WREC WSJS  
WSPD WTAR WTOC  
**B — Eddie Duchin, See Monday**

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

**R — Paul Whiteman and Orchestra**  
KDYL KFI KFPR KGO KGW KHQ  
KOA KOMO KPRC KSD KSTP KTBS  
KTHS KVOO WBAP WBSN WCAE  
WCHS WDAF WDAY WEAF WEBC  
WEI WFBR WFLA WGY WHO  
WIBA WIOD WIS WJAR WJAX  
WJDX WKY WLW WMAQ WMC  
WOAI WOC WOW WRC WRVA WSM  
WSM WSMB WTAG WTAM WTMJ  
WWJ WWNC  
**C — Camel Program, See Tuesday**



**THURSDAY—(Cont'd)**

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**C— Doris Lorraine; Cadets**  
 KLRA KMOX KOMA KTSA WABC  
 WBRC WBT WCAO WGST WHAS  
 WKRC WLAC WMBR WRWC WRR  
**B— Archer Gibson, Organist**  
 KDKA KSO KWCR KYW WBAL WBZ  
 WBA WCKY WGAR WHAM WJZ  
 WMAL WREN

**ED-10:45 p.m., E-9:45, C-8:45, M-7:45**  
**C— Fray and Braggiotti**  
 CKLW WAAB WABC WADC WCAO  
 WDRC WFBL WFEA WGLC WHEC  
 WJAS WJSV WLAC WLBW WLBZ  
 WOKO WOV WSPD

**C— Myrt and Marge, See Monday**

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**  
**B— Amos 'n' Andy, See Monday**

**C— Vera Van, Contralto**  
 CFRB CKAC CKLW KDB KFAB  
 KFRH KLRA KLZ KMCB KOMA  
 KTRH KTSA KYOR WAAB WABC  
 WACO WADC WBBM WBNS WCAO  
 WCCO WDAE WDBJ WDDB WDDO  
 WDRC WDSU WEAN WFBL WFBM  
 WFEA WGST WHAS WHFC WHK  
 WHP WIBW WICC WIP WISN WJAS  
 WJSV WLAC WKBW WLAC WLBW  
 WLBZ WMAS WMBD WMT WNAX  
 WODX WOKO WORC WQAM WRWC  
 WSBT WSJS WSPD WTAR WTOC  
 WVVVA

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

**ED-11:30 p.m., E-10:30, C-9:30, M-8:30**  
**C— Isham Jones and Orchestra**  
 CFRB CKLW KFH KLRA KLZ  
 KMCB KSL KTSA KYOR WABC  
 WADC WBNS WBRC WBT WCAO  
 WCAU WDAE WDBJ WDDB WDDO  
 WDRC WDSU WEAN WFBL WFBM  
 WGLC WHP WIBW WICC WJAS  
 WJSV WLAC WLBW WLBZ WMAS  
 WMBG WNAC WOKO WORC WPG  
 WQAM WRWC WSBT WSJS WSPD  
 WTAR WTOC WVVVA

**FRIDAY**

**ED-6:00 p.m., E-5:00, C-4:00, M-3:00**  
**C— H. V. Kaltenborn**  
 CFRB CKLW KLRA WAAB WABC  
 WADC WBIG WBT WCAO WCAU  
 WDAE WDBJ WDDB WDDO WDRC  
 WFEA WGST WHEC WHK WICC  
 WJSV WLAC WLBW WLBZ WMBG  
 WOKO WORC WQAM WRWC WSFA  
 WSJS WSPD WTOC

**ED-6:15 p.m., E-5:15, C-4:15, M-3:15**  
**C— Bobby Benson, See Monday**

**ED-6:30 p.m., E-5:30, C-4:30, M-3:30**  
**C— Nick Lucas, Songs**  
 CKLW KLRA KTSA WAAB WABC  
 WACO WADC WBRC WBT WCAO  
 WCAU WDAE WDBJ WDDB WDDO  
 WDRC WDSU WFEA WGLC WHEC WHP  
 WICC WJAS WLAC WLBW WLBZ  
 WMAS WMBG WOKO WORC WQAM  
 WRWC WSFA WSJS WSPD WTAR  
 WTOC

**R— Irene Beasley, See Monday**

**ED-6:45 p.m., E-5:45, C-4:45, M-3:45**  
**C— Zoet Parenteau's Orchestra**  
 CKLW WAAB WABC WBT WCAU  
 WDRC WEAN WFBL WFEA WHEC  
 WJSV WKBW WLBZ WOKO

**B— Lowell Thomas, See Monday**  
**ED-7:00 p.m., E-6:00, C-5:00, M-4: 0**  
**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— Just Plain Bill, See Monday**

**R— Billy Bachelor, See Monday**  
**ED-7:30 p.m., E-6:30, C-5:30, M-4:30**  
**C— Music in Air, See Monday**

**B— George Gershwin, See Monday**

**ED-7:45 p.m., E-6:45, C-5:45, M-4:45**  
**B— Gus Van; Arlene Jackson**  
 KDKA WBAL WBZ WBAZ WCKY  
 WENR WJZ WMAL WMC WSB WSM  
 WSMB WSYR

**C— Boake Carter, See Monday**  
**R— Goldbergs, See Monday**

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**  
**C— Happy Bakers, See Monday**

**R— Cities Service Concert**  
 CRCT KDYL KOA KPRC KSD KTBS  
 KTBS KYW WBNB WCAE WCFH  
 WDAF WFAE WFCB WVEE WFAA  
 WFBY WGY WHO WJAR WKY WLIT  
 WOAI WOC WOV WRC WRVA WSAI  
 WTAG WTAM WTIC WTMJ WJW

**B— Nestle's with Ethel Shutta**  
 KDKA KWK WBAL WBZ WBAZ  
 WCKY WGAR WJR WJZ WLS WMAL  
 WSYR

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**  
**C— Columbia Revue**  
 CKLW KDB KERN KFBK KFPY  
 KPRC KGB KHJ KLZ KMCB KMJ  
 KMOX KOIN KOL KSL KTRH KVI  
 KWG WABC WBBM WCAO WCAU  
 WCCO WDRC WDSU WEAN WFBL  
 WFBM WGR WGST WHAS WHK  
 WJAS WJSV WKRC WNAC WOKO  
 WSPD

**B— Dangerous Paradise, See Wednesday.**

**ED-8:45 p.m., E-7:45, C-6:45, M-5:45**  
**B— Babe Ruth, See Monday**

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**  
**C— Emory Deutsch and Orchestra**  
 CFRB CKLW KFH KLRA KLZ  
 KMCB KMOX KOMA KSCJ KSL  
 KTRH KTSA KYOR WABC WACO  
 WADC WBNS WBRC WBT WCAO  
 WCAU WCCO WDAE WDBJ WDDB  
 WDDO WDRC WDSU WEAN WFBL  
 WFBM WFEA WGLC WHAS WHFC  
 WHK WHP WIBW WICC WISN  
 WJAS WJSV WLAC WLBW WLBZ  
 WMAS WMBD WMBG WMT WNAC  
 WODX WOKO WORC WPG WQAM  
 WRWC WSBT WSJS WSPD WTAR  
 WTOC

**B— Phil Harris and Orchestra**  
 CFOP KDKA KDYL KFI KGHL  
 KGIR KGO KGW KHQ KOA KOIL  
 KOMO KSO KWCR KWK WAPI  
 WBAL WBZ WBAZ WCKY WFAA  
 WGAR WJZ WKY WLS WMAL  
 WOAI WREN WSB WSM WSMB  
 WSYR

**R— Frank Munn; Abe Lyman**  
 KSD WBNB WCFB WFAE WVEE  
 WFBY WGY WJAR WLIT WMAQ  
 WOV WRC WSAI WTAG WTAM  
 WJW

**ED-9:15 p.m., E-8:15, C-7:15, M-6:15**  
**C— Ruth Etting, See Tuesday**

**ED-9:30 p.m., E-8:30, C-7:30, M-6:30**  
**C— Jack Denny; Jack Whiting**  
 CFRB CKAC CKLW KDB KERN

KFBK KFH KFPY KFRC KGB KHJ  
 KLRA KLZ KMCB KMJ KMOX  
 KOIN KOL KOMA KRLD KSCJ KSL  
 KTRH KTSA KVI KWG WABC  
 WADC WBBM WBRC WBT WCAO  
 WCAU WCCO WDDO WDRC WDSU  
 WEAN WFBL WFBM WGST WHAS  
 WHK WIBW WICC WJAS WJSV  
 WKBW WCKY WLAC WMBG WMT  
 WNAC WOKO WOV WRWC WSPD  
 WTAR WTOC

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

**R— One Night Stand; Pick and Pat**  
 KSD WBNB WCAE WCFB WDAF  
 WFAE WFBY WGY WJAR WLIT  
 WMAQ WOC WOV WRC WSAI  
 WTAG WTAM WTIC WJW

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**  
**C— Schlitz Program**  
 KDB KERN KFBK KFPY KFRC  
 KGB KHJ KLRA KLZ KMJ KMOX  
 KOIN KOL KOMA KSL KTRH  
 KTSA KTUL KVI KWG WAAB  
 WABC WADC WBBM WBNS  
 WBT WCAO WCAU WCCO WDRC  
 WDSU WEAN WFBL WHAS WHK  
 WJAS WJSV WKBW WKRC WLAC  
 WOKO WOV WRWC WSPD WTAR

**B— Fulton Oursler, Stories**  
 CFCE CRCT KDKA KOIL KSO  
 KWCR KWK WBAL WBZ WBAZ  
 WENR WGAR WHAM WJR WJZ  
 WKBW WMAL WREN WSYR

**R— First Nighter—Drama**  
 CRCT KDYL KFI KGO KGW KHQ  
 KOA KOMO KPRC KSD KSTP  
 WAPI WBNB WCAE WCFB WDAF  
 WFAE WFCB WVEE WFBY WGY  
 WHO WJAR WKY WLIT WMAQ  
 WOAI WOC WOV WRC WSAI WSB  
 WSM WSMB WTAG WTAM WTIC  
 WTMJ WJW

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**R— Jack Benny; Don Bestor**  
 KDYL KFI KGO KGW KHQ KOMO  
 KPRC KTBS WAE WCFB WDAF  
 WFAE WVEE WFBY WGY WJAR  
 WJDX WKBW WKY WLIT WLW  
 WMAQ WMC WOAI WOV WRC  
 WRVA WSB WSM WSMB WTAG  
 WTAM WTIC WJW

**C— Conflict, See Tuesday**

**B— Mario Gozzi, Baritone**  
 KDKA KFYR KOIL KSO WAPI  
 WBAL WBZ WBAZ WCKY WDAE  
 WFCB WFLA WHAM WIBA WIOD  
 WIS WJAX WJR WJZ WREN WSE  
 WSM WSYR WNNC

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

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**  
**C— Edith Murray, Songs**  
 CKLW KFAB KFH KLRA KLZ  
 KMCB KOMA KSCJ KSL KTRH  
 KTSA KYOR WAAB WABC WACO  
 WADC WBBM WBNS WBRC WBT  
 WCAO WCCO WDAE WDBJ WDDB  
 WDDO WDRC WDSU WGLC WHAS  
 WHEC WHK WHP WIBW WIP  
 WISN WJAS WJSV WLAC WLBW  
 WLBZ WMAS WMBG WMT WNAX  
 WODX WOKO WPG WQAM WRWC  
 WSJS WSPD WTAR WTOC

**B— Amos 'n' Andy, See Monday**

**FRIDAY—(Continued)**

**ED-11:15 p.m., E-10:15, C-9:15, M-8:15**  
**R—One Man's Family, Drama**  
 CF9C KDYL KFYR KOA KPO  
 KP9C KSD KSTP KTBS KTHS  
 KVOO WBEW WCAE WDAF WDAY  
 WFAF WFBR WFI WFLL WGY  
 WHO WIBA WIOD WIS WJAR  
 WJAX WJDX WKY WMAQ WMC  
 WOAI WOC WOW WRC WRVA  
 WSAI WSB WSMB WTAG WTAM  
 WWJ WWNC  
**C—News Service, See Monday**  
**ED-11:30 p.m., E-10:30, C-9:30, M-8:30**  
**C—Isham Jones, See Thursday**

**SATURDAY**

**ED-6:00 p.m., E-5:00, C-4:00, M-3:00**  
**C—Meet the Artist!**  
 CFRB CKLW KFH KLRA KMBC  
 KOMA KSL KTRH KTSB KFOR  
 WAAB WABC WACO WADC WBBM  
 WBIG WBRB WCAO WCCO WDBJ  
 WDSU WFBL WFEA WGR WGST  
 WHAS WHEC WHK WHP WIBW  
 WICC WIP WISN WJAS WJSV WLAC  
 WLWB WLWB WMBG WMT WOKO  
 WQAM WREC WSBT WWSA WSJS  
 WTAQ WTAR WTOC WVVV  
**B—Al Pearce and His Gang**  
 KDYL KFI KFYR KGO KGW KHQ  
 KOA KOIL KOMO KP9C KSO  
 KSTP KTBS KTRH KTSB KFOR  
 KYW WBAL WBZ WBZA WCKY  
 WDAY WBEW WFLA WHAM WIBA  
 WIOD WIS WJAX WJDX WJR WJZ  
 WKY WMAL WMC WOAI WREN  
 WSB WSM WSYR WWNC

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

**ED-6:30 p.m., E-5:30, C-4:30, M-3:30**  
**C—Frederic William Wile**  
 CKLW KLRA WAAB WABC WBIG  
 WBRB WCAO WCAU WDAE WDBJ  
 WDOD WDOD WDRC WDSU WFBL  
 WFEA WGLC WGST WHEC WHP  
 WJSV WKWB WLAC WLWB WLWB  
 WMAS WMBG WOKO WORC WQAM  
 WREC WSJS WSPD WTAR WTOC

**ED-6:45 p.m., E-5:45, C-4:45, M-3:45**  
**B—Flying with Capt. Al Williams**  
 WBAL WBZ WBZA WCKY WGAR  
 WHAM WJR WJZ WSYR

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

**C—Elder Michaux Congregation**  
 CFRB CKLW KFH KLRA KLZ  
 KSCJ KSL KTRH KTSB KFOR  
 WABC WACO WADC WBIG WBRB  
 WCAO WCAU WDAE WDBJ WDOD  
 WDOD WDRC WDSU WFBL WFEA  
 WGLC WGR WGST WHEC WHP  
 WIBW WICC WJAS WJSV WLWB  
 WLWB WMAS WMBG WMT WOKO  
 WORC WQAM WREC WSJS WSPD  
 WTAR WTOC WVVV

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

**ED-7:45 p.m., E-6:45, C-5:45, M-4:45**  
**C—Isham Jones and Orchestra**  
 CFRB CKLW KFH KLRA KOMA  
 KRLL KSCJ KTRH KTSB KFOR  
 WABC WACO WADC WBRB WBT  
 WCAH WCAO WCAU WCCO WDAE  
 WDBJ WDOD WDRC WDSU  
 WEAN WFBL WFBM WFEA WGR  
 WGST WIP WJAX WJDX WJZ  
 WLWB WLWB WMAS WNAC WOKO  
 WORC WQAM WREC WSJS WSPD  
 WTAR WVVV

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**  
**C—Morton Downey Revue**  
 CFRB CKLW KFH KLZ KMBC  
 KMOX KOMA KSL KTAT KTRH  
 KTSB WABC WACO WBBM WBSN  
 WBT WCAO WCAU WCCO WDAE  
 WDOD WDRC WDSU WEAN WFBL  
 WGR WGST WHEC WHK WJAS  
 WJSV WKRC WLAC WMBR WNAC  
 WOKO WQAM WRR WSPD

**ED-8:45 p.m., E-7:45, C-6:45, M-5:45**  
**C—Bard of Erin**  
 CFRB CKLW KFH KLRA KLZ  
 KMBC KOMA KSCJ KSL KTSB  
 KFOR WABC WACO WADC WBSN  
 WBRB WBT WCAO WCCO WDAE  
 WDBJ WDOD WDOD WDSU WEAN  
 WFBL WFBM WFEA WGLC WHK  
 WHP WIBW WICC WIP WISN  
 WJAS WJSV WLAC WLWB WLWB  
 WMAS WMBG WMT WNAC WODX  
 WOKO WORC WOWO WPG WQAM  
 WREC WSBT WSJS WSPD WTAR  
 WTOC

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**  
**C—Andre Kostelanetz, See Monday**  
**R—Donald Novis; Frances Langford**  
 KDYL KFI KFYR KGO KGW KHQ  
 KOA KOMO KP9C KSD KSTP  
 KTBS KTHS WAPI WBAP WBEW  
 WCAE WCSH WDAF WDAY WFAF  
 WBEW WEEL WFBR WFI WFLL  
 WGY WIBA WIOD WIS WJAR  
 WJAX WJDX WKY WLW WMAQ  
 WMC WOAI WOW WPTF WRC  
 WRVA WSB WSMB WTAG WTAM  
 WTMJ WWJ WWNC

**ED-9:30 p.m., E-8:30, C-7:30, M-6:30**  
**B—Eddie Duchin, See Tuesday**  
**R—Beatrice Fairfax; Dramas**  
 KDYL KFI KGO KGW KHQ KOA  
 KOMO KSD WBEW WCAE WCSH  
 WDAF WFAF WEEL WFBR WFI  
 WGY WJAR WLW WMAQ WOW  
 WRC WTAG WTAM WWJ  
**C—Dramatic Guild**  
 CFRB CKLW KFH KLRA KLZ  
 KMBC KMOX KOMA KRLL KSCJ  
 KSL KTRH KTSB KFOR WABC  
 WACO WADC WBBM WBSN WBRB  
 WBT WCAO WCAU WCCO WDAE  
 WDBJ WDOD WDOD WDRC WDSU  
 WEAN WFBL WFBM WFEA WGLC  
 WHEC WHP WIBW WICC WJAS  
 WJSV WLAC WLWB WLWB WMAS  
 WMBD WMBG WMT WNAC WNAX  
 WODX WOKO WORC WQAM WREC  
 WSBT WSJS WSPD WTAR WTOC  
 WVVV

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**  
**R—Terraplane Travelcade**  
 KDYL KFI KGO KGW KHQ KOA  
 KOMO KP9C KSD KSTP WBAP  
 WBEW WCAE WCSH WDAF WFAF  
 WEEL WFBR WFI WFLL WGY  
 WIOD WJAR WJAX WKY WLW  
 WMAQ WOAI WOW WPTF WRC  
 WRVA WSB WSMB WTAG WTAM  
 WTMJ WWJ

**C—Byrd Expedition**  
 CKLW KDB KERN KFBK KFH  
 KFYP KFRC KGB KHL KLRA  
 KMBC KMJ KMOX KOIN KOI  
 KOMA KRLL KTRH KTSB KVI  
 KWG WAAB WABC WACO WADC  
 WBBM WBRB WBT WCAO WCAU  
 WCCO WDAE WEAN WGST WHAS  
 WHEC WHK WHP WIBW WJSV  
 WKWB WKRC WLAC WLWB WMBG  
 WMT WOKO WORC WQAM WREC

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**C—The Playboys; Piano**  
 CFRB CKLW KLRA KLZ KMBC  
 KMOX KOMA KRLL KSCJ KSL  
 KTRH KTSB KFOR WAAB WABC  
 WACO WADC WBSN WBRB WBT  
 WCAO WCAU WCCO WDAE WDBJ  
 WDOD WDOD WDRC WDSU WEAN  
 WFBL WFBM WFEA WGLC WHAS  
 WHP WIBW WICC WISN WJAS  
 WJSV WLAC WLWB WLWB WMAS  
 WMBD WMBG WMT WNAX WODX  
 WOKO WORC WPG WQAM WREC  
 WSJS WSPD WTAR WTOC

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

**ED-10:45 p.m., E-9:45, C-8:45, M-7:45**  
**C—Sylvia Froos, Songs**  
 CFRB CKLW KLRA KLZ KMBC  
 KMOX KOMA KRLL KSCJ KSL  
 KTRH KTSB KFOR WAAB WABC  
 WACO WADC WBSN WBRB WBT  
 WCAO WCAU WCCO WDAE WDBJ  
 WDOD WDOD WDRC WDSU WEAN  
 WFBL WFBM WFEA WGLC WHAS  
 WHP WIBW WICC WISN WJAS  
 WJSV WLAC WLWB WLWB WMAS  
 WMBD WMBG WMT WNAX WODX  
 WOKO WORC WPG WQAM WREC  
 WSJS WSPD WTAR WTOC

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**  
**C—Ted Fiorito and Orchestra**  
 CKLW KFAB KLRA KLZ KMBC  
 KMOX KOMA KSCJ KSL KTRH  
 KTSB KFOR WAAB WABC WACO  
 WADC WBBM WBSN WBRB WBT  
 WCAO WCCO WDAE WDBJ WDOD  
 WDOD WDRC WDSU WFBL WGLC  
 WHAS WHEC WHK WHP WIBW  
 WISN WJAS WJSV WLAC WLWB  
 WMBD WMBG WMT WNAX WODX  
 WOKO WPG WQAM WREC WSJS  
 WSPD WTAR WTOC

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

**ED-11:30 p.m., E-10:30, C-9:30, M-8:30**  
**C—Peter The Great, Drama**  
 CFRB CKLW KLRA KLZ KMBC  
 KOMA KSL KTRH KTSB KFOR  
 WABC WADC WBSN WBRB WBT  
 WCAO WCAU WDAE WDBJ WDOD  
 WDRC WDSU WEAN WFBL WGLC  
 WHEC WHK WHP WIBW WJAS  
 WJSV WLAC WLWB WLWB WMAS  
 WMBG WNAC WOKO WORC  
 WQAM WREC WSJS WSPD WTAR  
 WTOC

**B—Paul Whiteman and Orchestra**  
 KOIL KSO KWCR KWK KYW WBAL  
 WBZ WBZA WCKY WGAR WHAM  
 WJZ WLW WMAL WREN WSYR

**ED-12:00 p.m., E-11:00, C-10:00, M-9:00**  
**C—Gus Arnheim and Orchestra**  
 CFRB CKLW KFH KLRA KLZ  
 KMBC KMOX KOMA KTRH KTSB

**SATURDAY—(Cont'd)**

WBAB WBNS WBRC WCAU WDDD  
 WBEW WFBL WFBM WHAS WHF  
 WISV WJAZ WJIS WLAC  
 WLWB WNCW WQAM WREC WBSB  
 WSJS WSPD WTOG  
**B — Jack Denny and Orchestra**  
 KOIL KSO KWCR KWK KYW WBAL  
 WBZ WBZA WCKY WGAR WHAM  
 WJR WJZ WLW WMAL WREN  
 WSYR

**SUNDAY**

**ED-11:15 a.m., E-10:15, C-9:15, M-8:15**  
**R — Major Bowes' Capitol Family**  
 KDYL KFJR KOA KPRC KSTP  
 KTBS KVOO WAPI WCAE WDAF  
 WDAY WEAF WEBC WFAA WFBR  
 WFLA WGY WHO WIOD WJAR  
 WJAX WKY WMAQ WMC WOAI  
 WOC WRC WRVA WSAI WSBM  
 WTAG WTAM WUNC

**ED-11:30 a.m., E-10:30, C-9:30, M-8:30**  
**C — Salt Lake Tabernacle Choir**  
 CKLW KLRA KLZ KMBC KOMA  
 KSL KTRH KTS KFOR WABC  
 WACO WADC WBIG WBRC WCAO  
 WCCO WDBJ WDRC WDSU WEAN  
 WFBL WFEA WGN WGR WGST  
 WHAS WHEC WHP WIBW WICC  
 WISN WJAS WJVS WLAC WLWB  
 WMBD WMT WNCW WOKO WORC  
 WPG WQAM WSBT WSFA WSJS  
 WTAQ WTAR WWVA

**ED-12:15 p.m., E-11:15, C-10:15, M-9:15**  
**R — Gordon String Quartet**  
 WCSH WEAF WEEI WFBR WFI  
 WJAR WRC WTAG

**B — Baby Rose Marie**  
 KDKA WBAL WBZ WBZA WHAM  
 WJR WJZ WLW WMAL WSYR

**ED-12:30 p.m., E-11:30, C-10:30, M-9:30**  
**B — Radio City Concert**  
 CFBC CRCT KDKA KDYL KFI  
 KFJR KGO KGW KHQ KOA KOIL  
 KOMO KPRC KSO KVOO WAPI  
 WBAL WBZ WBZA WCKY WDAY  
 WEBC WGAR WHAM WIS WJDX  
 WJR WJZ WKY WMAL WOAI WREN  
 WSBM WSYR WUNC

**R — Chicago Round Table**  
 WBEN WCSH WDAF WEAF WEEI  
 WFBR WFI WGY WHO WJAR  
 WOC WOW WRC WSAI WTAG  
 WTAM WWJ

**C — Tito Guizar, Tenor**  
 CKLW WABC WCAU WDRC WEAN  
 WFEA WGR WHK WICC WKRC  
 WLWB WMAS WNCW WORC WSPD

**ED-12:45 p.m., E-11:45, C-10:45, M-9:45**  
**C — H. V. Kaltenborn**  
 CFBC CKLW KLRA KLZ KMBC  
 KOMA KSCJ KTRH KFOR WABC  
 WACO WADC WBNS WBRC WCAO  
 WCAU WCCO WDBJ WDOD WDSU  
 WFBL WGLC WGR WHAS WHEC  
 WIBW WISN WJAS WLAC WLWB  
 WMBD WMT WNCW WNOX WODX  
 WOKO WORC WOW WPG WQAM  
 WREC WSJS WSPD WTAR WTOG  
 WWVA

**ED-1:00 p.m., E-12:00, C-11:00, M-10:00**  
**C — Chorus of the Air**  
 CFBC CKLW KLRA KLZ KOMA  
 KTRH KTS KFOR WAAB WABC  
 WACO WADC WCCO WDBJ WDRC  
 WDSU WFBL WGR WGST WHAS  
 WHEC WHP WIBW WJAS WJVS  
 WLAC WLWB WMT WOKO WPG  
 WQAM WREC WSBT WSJS WTAQ  
 WTAR WTOG WWVA

**ED-1:30 p.m., E-12:30, C-11:30, M-10:30**  
**B — National Youth Conference**  
 KDKA KFI KFSD KFJR KGH  
 KGIR KGO KGW KHQ KOA KOIL  
 KOMO KPRC KSO KTAR KTBS  
 KVOO KWCR KWK WAPI WBAL  
 WBZ WBZA WDAY WEBC WFAA  
 WGAR WIBA WIOD WIS WJAX  
 WJDX WJR WJZ WMAL WOAI  
 WREN WRVA WSB WSM WSBM  
 WSYR WUNC

**C — Lazy Dan, Minstrel Man**  
 CKLW KMBC KMOX KRDL WABC  
 WBBM WCAO WCAU WCCO  
 WHAS WHK WJAS WJVS WKBW  
 WKRC WMBG

**R — Miss Babo's Surprise Party**  
 KSD WBEN WCAE WCSH WDAF  
 WEAF WEEI WFBR WFI WGY WHO  
 WJAR WMAQ WOC WOW WRC  
 WSAI WTAG WTAM WWJ

**ED-2:00 p.m., E-1:00, C-12:00, M-11:00**  
**C — Broadway Melodies**  
 CFBC CKLW KDB KFPY KFRC  
 KGH KHJ KLZ KMBC KMOX KOIN  
 KOI KRLLD KSL KVI WABC WBBM  
 WCAO WCAU WCCO WDSU WHK  
 WJAS WJVS WKBW WKRC WLAC  
 WNAC

**R — Gene Arnold and Commodores**  
 KDYL KFI KGO KGW KHQ KOA  
 KOMO KPRC KVOO WBEN WCAE  
 WCSH WEAF WEBC WEEI WFAA  
 WFBR WGY WIBA WJAR WKY  
 WLW WMAQ WOAI WOW WPTF  
 WRC WRVA WTAG WTAM WWJ  
 WUNC

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

**ED-2:30 p.m., E-1:30, C-12:30, M-11:30**  
**C — Abe Lyman's Orchestra**  
 CFBC CKLW KMBC KMOX WABC  
 WBBM WCAO WCAU WCCO WDRC  
 WEAN WFBL WFBM WHEC WHK  
 WJVS WKBW WKRC WNAC WOKO

**R — Cook Travelogues**  
 WAVE WBEN WCAE WEAF WGY  
 WJDX WMC WSAI WSB WSM  
 WSBM WTAM WWJ

**B — Rings of Melody**  
 CFBC CRCT KDKA KDYL KFI  
 KFJR KGO KGW KHQ KOA KOIL  
 KOMO KPRC KSO KSTP KTBS KTHS  
 KVOO KWCR KWK KYW WBAL WBZ  
 WBZA WDAY WEBC WFAA WFLA  
 WGAR WHAM WIBA WIOD WIS  
 WJAX WJZ WLW WMAL WOAI  
 WPTF WREN WRVA WSYR WTMJ  
 WUNC

**ED-3:00 p.m., E-2:00, C-1:00, M-12:00**  
**C — New York Philharmonic Orch.**  
 CFAC CFBO CFCE CFCH CFEN  
 CFGO CFPC CFJC CFNB CFPL  
 CFQC CHAB CHGS CHNS CHRK  
 CHWC CHWK CJCA CJCB CJCJ  
 CJGX CJOC CJRM CJRW CKCH  
 CKCK CKNC CKOC CKOV CKPC  
 CKPR CKUA CKX CKY CRCA  
 CROC CRCS CRCT CRCV CRRB  
 CKLW KFH KLRA KLZ KMBC  
 KMOX KOMA KSL KTRH KTS  
 KFOR WABC WADC WBIG WBBR  
 WCAO WCAU WCCO WDBJ WDRC  
 WDSU WGAN WFBM WFEA WGN  
 WGR WGST WHAS WHEC WHK  
 WHP WIBW WICC WIP WISN WJAS  
 WJVS WLAC WLWB WMBD WMBG  
 WMT WNCW WOKO WORC WQAM  
 WREC WSBT WSJS WTAQ WTAR  
 WTOG WWVA

**B — Sparton Triolians**  
 CPFC CRCT KDKA KOIL KSO  
 KWCR KWK KYW WBAL WBZ  
 WBZA WCKY WGAR WHAM WJR  
 WJZ WMAL WREN WSYR

**ED-3:30 p.m., E-2:30, C-1:30, M-12:30**  
**B — Yeast Foamers; Jan Garber**  
 KDKA KDYL KFI KFSD KFJR  
 KGHJ KGIR KGO KGW KHQ KOA  
 KOIL KOMO KPRC KSO KTAR  
 KTBS KTHS KVOO KWCR KWK  
 KYW WAPI WBAL WBZ WBZA  
 WDAY WEBC WFAA WFLA WGAR  
 WHAM WIBA WIOD WIS WJAX  
 WJDX WJZ WKBK WKY WLW  
 WMAL WMC WPTF WREN WRVA  
 WSB WSM WMBW WSYR WTMJ  
 WUNC

**R — Swift Garden Program**  
 KSD WBEN WCAE WCSH WDAF  
 WEAF WEEI WFBR WGY WJAR  
 WLIT WMAQ WOW WRC WSAI  
 WTAG WTAM WWJ

**ED-4:00 p.m., E-3:00, C-2:00, M-1:00**  
**R — Romance of Mead, Drama**  
 KFJR WBEN WCAE WCSH WDAF  
 WDAY WEAF WEBC WEEI WFBR  
 WGY WIBA WJAR WLIT WMAQ  
 WOW WRC WSAI WTAG WTAM  
 WWJ

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

**ED-4:15 p.m., E-3:15, C-2:15, M-1:15**  
**B — Dion Kennedy, Organist**  
 KDKA KDYL KFI KFJR KGHJ  
 KGIR KGO KGW KHQ KOA KOIL  
 KOMO KPRC KSO KTBS KTHS  
 KVOO KWCR KWK WAPI WBAL  
 WBAP WBZ WBZA WDAY WEBC  
 WFLA WHAM WIBA WIOD WIS  
 WJAX WJDX WJZ WKBK WKY WLS  
 WMAL WMC WOAI WPTF WREN  
 WRVA WSB WSM WSBM WSYR  
 WUNC

**ED-4:30 p.m., E-3:30, C-2:30, M-1:30**  
**B — Princess Pat Pageant**  
 KDKA KOIL KSO KWCR KWK  
 WBAL WBZ WBZA WENR WHAM  
 WJZ WMAL WREN WSYR

**ED-5:00 p.m., E-4:00, C-3:00, M-2:00**  
**C — Roses and Drama, Drama**  
 CKLW KFAB KLRA KLZ KMBC  
 KMOX KOMA KRLLD KTRH KTRB  
 WAAB WABC WADC WBBM WBBR  
 WCCO WDSU WGST WHAS WHK  
 WJAS WJVS WKRC WREB

**B — National Vespers**  
 KDYL KBCA KFSD KFJR KGHJ  
 KGIR KGO KGW KHQ KOA KOIL  
 KPRC KSO KSTP KTAR KTBS  
 KVOO KWCR KWK WAPI WBAL  
 WBZ WBZA WCFB WCKY WDAY  
 WEBC WFLA WGAR WHAM WIBA  
 WIOD WIS WJAX WJDX WJR WJZ  
 WKY WMAL WMC WOAI WPTF  
 WREN WRVA WSB WSM WSBM  
 WUNC

**ED-5:15 p.m., E-4:15, C-3:15, M-2:15**  
**R — Waves of Romance; Ted Black**  
 WBEN WCAE WCSH WEAF WEEI  
 WGY WJAR WKBK WMAQ WRC  
 WSAI WTAG WTAM WWJ

**ED-5:30 p.m., E-4:30, C-3:30, M-2:30**  
**R — Hoover Sentinels Concert**  
 KSD WBEN WCAE WCSH WDAF  
 WEAF WEEI WFBR WFI WGY  
 WJAR WMAQ WOW WRC WTAG  
 WTAM WWJ

**SUNDAY—(Continued)**

**C — Frank Crumit; Julia Sanderson**  
CKLW KFAB KFPH KMBC KMOX  
KOMA WAAB WABC WADC WCAE  
WCAO WCAU WDRC WDSU WEAN  
WFBL WFBM WGR WHEC WHK  
WICC WJWS WMAS WOKO WORC  
WSPD WTAR WVVVA

**B — Grand Hotel — Drama**

KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KSO KSTP KWCR  
KWK WBAL WBEZ WBZA WCKY  
WIBC WENR WGAR WHAM WJRW  
WJZ WKBF WMAL WREN WSYR  
WTMJ

**ED-6:00 p.m., E-5:00, C-4:00, M-3:00**  
**B — Catholic Hour**

KDYL KECA KFYR KGHL KGIR  
KGW KOA KOMO KPO KPRC  
KSTP KTAR KTBS KVOO WAPI  
WBAP WBEN WCAE WCSH WDAF  
WDAY WEAF WEEB WEEI WENR  
WFBR WFLA WGY WHO WIBA  
WIOD WIS WJAR WJAX WJDX  
WKY WLIT WMC WOAI WOC WOW  
WRC WRVA WSAI WSB WSM  
WSMB WTAG WTAM WWJ WVNC

**ED-6:30 p.m., E-5:30, C-4:30, M-3:30**  
**C — Smiling Ed McConnell**

CKLW KDB KERN KFAB KFBK  
KFPH KFPY KFRC KGB KHJ KIZ  
KMBC KMOX KOIN KOL KRLL  
KSL KVI KWG WAAB WABC WBBM  
WBAP WCAE WCAU WCCO WDSU  
WEAN WFBL WHAS WHEC WHP  
WIAS WJWS WJWB WKRC WLAC  
WMT WOKO WQAM WSPD WTAR  
WVVVA

**B — Our American Schools**

CFBC CRCT KDYL KECA KFSD  
KFYR KGW KOMO KPO KPRC KSD  
KSTP KTAR KTBS KVOO WAPI  
WBAP WBEN WCAE WCSH WDAF  
WDAY WEAF WEEB WEEI WFBM  
WFLA WGY WHO WIBA WIOD  
WJAR WJAX WJDX WKY WLIT  
WMAQ WMC WOAI WOC WRC  
WRVA WSAI WSB WSM WSMB  
WTAG WTAM WWJ WVNC

**ED-6:45 p.m., E-5:45, C-4:45, M-3:45**  
**C — Ward's Family Theatre**

CKLW KMOX WABC WBBM WBRC  
WCAH WCAO WDRC WEAN WFBL  
WFEA WICC WJAS WKBN WLBB  
WMAS WMBR WNAC WOKO WORC  
WSPA WVVVA

**ED-7:00 p.m., E-6:00, C-5:00, M-4:00**  
**B — Silken Strings; Charles Previn**

KDKA KDYL KFI KGO KGW KHQ  
KOA KOIL KOMO KPRC KSO KTBS  
KWCR KWK WBAL WBEZ WBZA  
WIBC WENR WGAR WHAM WIBA  
WIS WJDX WJR WJZ WKY WLS  
WLW WMAL WMC WOAI WPTF  
WREN WRVA WSB WSM WSMB  
WSYR WTMJ

**R — True Story Court**

WBEN WCAE WCSH WEAF WFBM  
WGY WJAR WMAQ WOW WRC  
WSAI WTAG WTAM WWJ

**C — Marx Brothers; Freddie Martin**

WABC WBT WCAO WCAU WDRC  
WEAN WFBL WFEA WHEC WHK  
WICC WJAS WJWS WKBN WLBB  
WNAC WOKO WORC WPG WTAR  
WVVVA

**ED-7:30 p.m., E-6:30, C-5:30, M-4:30**  
**B — Ozkie Nelson; Joe Penner**

KDKA KDYL KFI KFYR KGO KGW  
KHQ KOA KOIL KOMO KPRC KSO  
KSTP KTAR KVOO KWCR KWK  
WBAL WBEZ WBZA WDAY WEEB  
WFAA WFLA WGAR WHAM WIBA

WIOD WJAX WJDX WJR WJZ WKY  
WLS WLW WMAL WMC WOAI  
WPTF WREN WRVA WSB WSM  
WSMB WTMJ WVNC

**C — Ward's Family Theatre**

CKLW KMOX WABC WBBM WBRC  
WCAH WCAO WDRC WEAN WFBL  
WFEA WICC WJAS WKBN WLBB  
WMAS WMBR WNAC WOKO WORC  
WSPA WVVVA

**ED-7:45 p.m., E-6:45, C-5:45, M-4:45**  
**C — Rin Tin Tin Thriller**

CKLW KMOX WABC WCAU WFBL  
WFBM WGN WGR WHAS WHK  
WJAS WJWS WKRC WNAC

**R — Fitch Program; Wendell Hall**

CFBC KSD WBEN WCAE WCSH  
WDAF WEAF WFBM WGY WHO  
WJAR WLIT WMAQ WOC WOW  
WRC WSAI WTAG WTAM WWJ

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**  
**R — Chase and Sanborn Hour**

CFBC CRCT KDYL KFI KFYR KGO  
KGW KHQ KOA KOMO KPRC KSD  
KSTP KTAR KTBS KVOO WBEN  
WCAE WCSH WDAF WDAY WEAF  
WEEB WFAA WFBM WFLA WGY  
WHO WIOD WIS WJAR WJAX  
WJDX WKY WLIT WLW WMAQ  
WMC WOAI WOC WOW WPTF WRC  
WRVA WSB WSM WSMB WTAG  
WTAM WTIC WTMJ WWJ WVNC

**C — Evening in Paris**

CKLW KLZ KMBC KMOX KOMA  
KSL WABC WADC WBBM WCAO  
WCAU WCCO WDSU WEAN WFBL  
WFBM WGR WGST WHAS WHK  
WJAS WJWS WKRC WOKO WSPD

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**  
**C — Ford; Fred Waring's Orchestra**

CFBC CKAC CKLW KFAB KFH  
KLRA KLZ KMBC KMOX KOH  
KOMA KRLL KSL KTRH KTSB  
KVOR WAAB WABC WACO WADC  
WBBM WBIG WBRC WBT WCAH  
WCAO WCAU WCCO WDAE WDBJ  
WDBO WDOD WDRC WDSU WEAN  
WFBL WFBM WFEA WGST WHAS  
WHEC WHK WHP WJBW WICC  
WISN WJAS WJWS WKBN WKBW  
WKRC WLAC WLWB WLBB WMAS  
WMBD WMBG WMT WOKO WORC  
WOW WPG WQAM WREC WSPA  
WSPD WTAQ WTAR WTOC WVVVA

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**  
**C — Patri's Childhood Dramas**

CKLW KDB KERN KFBK KFPY  
KFRC KGR KHJ KLZ KMBC KMJ  
KMOX KOIN KOL KSL KVI KWG  
WAAB WABC WBBM WCAO WCAU  
WCCO WDRC WFBL WGR WHAS  
WHK WJAS WJWS WKRC WOKO  
**R — Manhattan Merry-Go-Round**  
KDYL KFI KGO KGW KHQ KOA  
KOMO KSD WDAF WEAF WFBM  
WFI WGY WHO WJAR WMAQ WOC  
WOW WRC WSAI WTAM WTIC  
WWJ

**B — Gulf Headliners**

KAKA KPRC KTBS WBAL WBEZ  
WBZA WFAA WFLA WGAR WHAM  
WIOD WIS WJAX WJDX WJR WJZ  
WLW WMAL WMC WOAI WRVA  
WSB WSM WSMB WSYR WVNC

**ED-9:30 p.m., E-8:30, C-7:30, M-6:30**  
**C — Ernest Hutcheson, Pianist**

CKLW KFI KLRA KLZ KMOX  
KOMA KSCJ KTRH KVOR WABC  
WACO WADC WBBM WBRC WBT  
WCCO WDBJ WDBO WDOD WDSU  
WFBL WFBM WFEA WGLC WGR  
WGST WHAS WHEC WHP WJBW  
WICC WISN WJAS WLAC WLWB  
WLBZ WMAS WMBD WMT WNAK

WODX WOKO WORC WOWO WQAM  
WREC WSBT WSJS WSPD WTAR  
WTOC

**B — Walter Winchell**

KDKA KOIL KSO KWCR KWK  
WBAL WBEZ WBZA WENR WGAR  
WHAM WJR WJZ WLW WMAL  
WREN WSYR

**R — Album of Familiar Music**

CFBC CRCT KDYL KFI KGO KGW  
KHQ KOA KOMO KPRC KSD KSTP  
WAPI WBEN WCAE WCKY WCSH  
WDAF WEAF WEEI WFAA WFBM  
WFI WFLA WGY WHO WIOD WJAR  
WJAX WJDX WKY WMAQ WMC  
WOAI WOC WOW WPTF WRC  
WRVA WSAI WSB WSM WSMB  
WTAG WTAM WTMJ WWJ

**ED-9:45 p.m., E-8:45, C-7:45, M-6:45**  
**B — Horlick's Health Adventures**

KDKA KOIL KSO KWK WBAL WBEZ  
WBZA WENR WHAM WJR WJZ  
WREN

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**  
**C — Wayne King and Orchestra**

CKLW KDB KERN KFBK KFPY  
KFRC KGB KHJ KLZ KMBC KMJ  
KMOX KOIN KOL KRLL KSL KVI  
KWG WAAB WABC WADC WBBM  
WCAO WCAU WCCO WDRC WDSU  
WFBL WHAS WHK WJAS WJWS  
WKBW WKRC WOKO WOWO WSPD

**R — Chevrolet Program**

KDYL KFI KFSB KFYR KGHL  
KGIR KGO KGW KHQ KOA KOMO  
KPRC KSTP KTAR KTBS WAPI  
WBAP WBEN WCAE WCSH WDAF  
WDAY WEAF WEEB WEEI WFBM  
WFI WFLA WGY WIBA WIOD WIS  
WJAR WJDX WKY WMAQ WMC  
WOAI WOW WRC WRVA WSB WSM  
WSMB WTAG WTAM WTIC WTMJ  
WWJ WVNC

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**C — 45 Minutes in Hollywood**

CFBC CKLW KPH KLZ KMBC  
KMOX KOMA KSL KTAT KTSB  
WABC WACO WBBM WBNS WBT  
WCAO WCAU WCCO WDAE WDBO  
WDRC WDSU WEAN WFBL WGR  
WGST WHEC WHK WJAS WJWS  
WKRC WLAC WMBR WNAC WOKO  
WQAM WRR WSPD

**R — Hall of Fame**

KDYL KFI KGO KGW KHQ KOA  
KOMO KPRC KTBS KTHS WAPI  
WBAP WBEN WCAE WCSH WDAF  
WEAF WEEI WFBM WFI WGY  
WJAR WJDX WKY WLW WMAQ  
WMC WOAI WOW WRC WSM  
WTAG WTAM WTIC WWJ

**ED-11:15 p.m., E-10:15, C-9:15, M-8:15**  
**C — Little Jack Little**

CFBC CKAC CKLW KDB KFAB  
KFH KLRA KLZ KOMA KSCJ KTRH  
KTSB KVOR WABC WACO WADC  
WBBM WBNS WBER WCAO WCAU  
WDAE WDBJ WDBO WDOD WGR  
WDSU WFBL WFBM WGR WGST  
WHAS WHEC WHK WHP WJBW  
WICC WISN WJAS WJWS WKBN  
WKRC WLAC WLWB WLBB WMAS  
WMBD WMT WNAK WNAK WOKO  
WPG WQAM WREC WSBT WJSJ  
WSPD WTAR WTOC

**B — Walter Winchell**

KDYL KFI KFSB KGHL KGIR KGO  
KGW KHQ KOA KOMO KPRC  
KTAR KTBS KTHS WAPI WBAP  
WJDX WKY WMC WOAI WSB WSM  
WSMB

# CLASSIFIED INDEX TO CHAIN PROGRAMS

*Time in Eastern Daylight Saving*

## CONCERTS

Hoover Sentinels, 5:30 p.m., Sunday, R  
Andre Kosteletzky, 9:00 p.m., Mon., Wed., and Sat., C  
Minnesota Symphony, 9:30 p.m., Tuesday, C  
N. Y. Philharmonic, 3:00 p.m., Sunday, C  
Radio City, 12:30 p.m., Sunday, B  
Miecha Raginsky, 6:30 p.m., Tues. and Thurs., C  
Albert Spalding, 8:30 p.m., Wednesday, C

## DANCE BANDS

Gus Arnheim, 12:00 mid., Saturday, C  
Charles Barnett, 11:30 p.m., Tuesday, C  
Ben Bernie, 9:00 p.m., Tuesday, R  
Don Bestor, 10:30 p.m., Friday, R  
Ted Black, 5:15 p.m., Sunday, R; 6:15 p.m., Saturday, C  
Charlie Davis, 11:30 p.m., Monday, C  
Jack Denny, 9:30 p.m., Friday, C; 12:00 mid. Sat., B  
Emery Deutsch, 9:00 p.m., Friday, C  
Bobby Dolan, 8:00 p.m., Friday, B  
Eddie Duchin, 9:30 p.m., Tues., Thurs. and Sat., B  
Ted Fiorito, 10:00 p.m., Wed., 11:00 p.m., Sat., C  
Jan Garber, 3:30 p.m., Sunday, B  
Glen Gray, 10:00 p.m., Tues. and Thurs., C  
Johnny Green, 9:15 p.m., Tues. and Fri., C  
Phil Harris, 9:00 p.m., Friday, B  
Lennie Hayton, 10:00 p.m., Saturday, R  
Richard Himber, 6:00 p.m., Thurs. B; 6:30 p.m., Sat., R  
Isham Jones, 11:30 p.m., Thurs. and Fri.; 7:45 p.m., Sat., C  
Wayne King, 10:00 p.m., Sun. and Mon., C; 8:30 p.m., Tues. and Wed., R  
Enoch Light, 11:45 p.m., Mon. and Tues., C  
Little Jack Little, 11:15 p.m., Sun.; 8:00 p.m., Tues.; 11:30 p.m., Wed., C  
Guy Lombardo, 9:30 p.m., Wednesday, C  
Vincent Lopez, 10:00 p.m., Wednesday, B  
Abe Lyman, 9:00 p.m., Fri., R; 2:30 p.m., Sun., C  
Freddie Martin, 7:00 p.m., Sunday, C  
Ozzie Nelson, 7:30 p.m., Sunday, B  
Raymond Paige, 8:45 p.m., Tuesday, C  
Zoel Parenteau, 6:45 p.m., Friday, C  
Charles Previn, 7:00 p.m., Sunday, B  
Leo Riesenman, 8:00 p.m., Tuesday, R  
Sam Robbins, 6:30 p.m., Monday, C  
Harry Sosnik, 11:45 p.m., Thursday, C  
Rudy Vallee, 8:00 p.m., Thursday, R  
Don Voorhees, 8:30 p.m., Wednesday, C  
Fred Waring, 8:30 p.m., Sun.; 9:30 p.m., Thurs., C  
Mark Warnow, 9:00 p.m., Thursday, C  
Paul Whiteman, 10:00 p.m., Thurs., R; 11:30 p.m., Sat., B  
Victor Young, 10:00 p.m., Sunday, R

## DIALOG

Fred Allen, 9:00 p.m., Wednesday, R  
Amos 'n' Andy, 7:00 and 11:00 p.m., daily, except Sat. and Sun., B  
Phil Baker, 9:30 p.m., Friday, B  
Jack Benny, 10:30 p.m., Friday, R  
Burns and Allen, 9:30 p.m., Wednesday, C  
Cuckoo Club, 9:00 and 11:15 p.m., Wednesday, B  
Gene and Glenn, 7:15 and 11:15 p.m., daily except Sat. and Sun., R  
Lean and Mayfield, 6:45 p.m., Sunday, C  
Marx Brothers, 7:00 p.m., Sunday, C  
Walter O'Keefe, 8:00 p.m., Friday, B  
Jack Pearl, 8:00 p.m., Wednesday, R  
Joe Penner, 7:30 p.m., Sunday, B  
Ray Perkins, 10:00 p.m., Tuesday, B  
Pick and Pat, 9:30 p.m., Friday, R  
Stoopnagle and Budd, 10:00 p.m., Tues. and Thurs., C  
Ed Wynn, 9:30 p.m., Tuesday, R

## DRAMA

Bay X Days, 2:00 p.m., Sunday, B  
Bobby Benson, 6:15 p.m., daily, except Sat. and Sun., C  
Big Show, 9:30 p.m., Monday, C  
Conflict, 10:30 p.m., Tues. and Fri., C  
Conoco Tourist, 10:30 p.m., Wednesday, B  
Dangerous Paradise, 8:30 p.m., Wed. and Fri., B  
Death Valley Days, 9:00 p.m., Thursday, B  
Dramatic Guild, 9:30 p.m., Saturday, C  
Eno Crime, 8:00 p.m., Tues. and Wed., B  
Beatrice Fairfax, 9:30 p.m., Saturday, R

First Nighter, 10:00 p.m., Friday, R  
Goldbergs, 7:45 p.m., daily except Sat. and Sun., R  
Grand Hotel, 5:30 p.m., Sunday, B  
Just Plain Bill, 7:15 p.m., daily, except Sat. and Sun., C  
Myrt and Marge, 7:00 and 10:45 p.m., daily, except Sat. and Sun., C  
One Man's Family, 11:15 p.m., Friday, R  
Patri's Childhood Drama, 9:00 p.m., Sunday, C  
Peter the Great, 11:30 p.m., Saturday, C  
Princess Pat Players, 4:30 p.m., Sunday, B  
Raffles, 8:00 p.m., Thursday, C  
Irene Rich, 7:45 p.m., Wednesday, B  
Rin Tin Tin, 7:45 p.m., Sunday, C  
Buck Rogers, 6:00 p.m., Mon. to Thurs., inc., C  
Romance of Meat, 4:00 p.m., Sunday, R  
Roses and Drums, 5:00 p.m., Sunday, C  
Soconyland Sketches, 8:00 p.m., Monday, R  
Albert Payson Terhune, 4:00 p.m., Sunday, B  
True Story Court, 7:00 p.m., and 12:15 a.m., Sunday, R  
Ward's Family Theatre, 6:45 and 7:30 p.m., Sunday, C

## PIANO AND ORGAN

Henri Deering, 10:30 p.m., Monday, B  
Fray and Braggiotti, 10:45 p.m., Thursday, C  
George Gershwin, 7:30 p.m., Mon. and Fri., B  
Archer Gibson, 10:30 p.m., Thursday, B  
Ernest Hutcheson, 9:30 p.m., Sunday, C  
Dion Kennedy, 4:15 p.m., Sunday, B  
Ohman and Arden, 2:30 p.m., Sun., B; 9:30 p.m., Sun., R  
Playboys, 10:30 p.m., Saturday, C

## POPULAR PROGRAMS

A. & P. Gypsies, 9:00 p.m., Monday, R  
Album Familiar Music, 9:30 p.m., Sunday, R  
Gene Arnold and Commodores, 2:00 p.m., Sunday, R  
Miss Bab-o's Surprise, 1:30 p.m., Sunday, R  
Major Bowes, 11:15 a.m., Sunday, R  
Broadway Melodies, 2:00 p.m., Sunday, C  
Byrd Expedition, 10:00 p.m., Saturday, C  
California Melodies, 8:45 p.m., Tuesday, C  
Chase and Sanborn, 8:00 p.m., Sunday, R  
Cheerio Musical, 6:45 p.m., Tuesday, R  
Chesterfield Program, 9:00 p.m., Mon., Wed. and Sat., C  
Chevrolet Program, 10:00 p.m., Sunday, R  
Cities Service, 8:00 p.m., Friday, R  
Colgate Party, 9:00 p.m., Saturday, R  
Columbia Revue, 8:30 p.m., Friday, C  
Contented Program, 10:00 p.m., Monday, R  
Corn Cob Pipe Club, 10:00 p.m., Wednesday, R  
Del Monte Ship, 9:30 p.m., Monday, R  
Evening in Paris, 8:00 p.m., Sunday, C  
Fleischmann Hour, 8:00 p.m., Thursday, R  
Forty-Five Minutes Hollywood, 10:30 p.m., Sunday, C  
Jack Frost's Melody, 9:30 p.m., Monday, B  
General Tire Program, 10:30 p.m., Friday, R  
Gulf Headliners, 9:00 p.m., Sunday, B  
Hall of Fame, 10:30 p.m., Sunday, R  
Harlem Serenade, 11:00 p.m., Tuesday, C  
Hour of Smiles, 9:00 and 12:00 p.m., Wednesday, R  
Household Musical, 9:00 p.m., Tuesday, B  
Hudson Vocalists, 8:30 p.m., Tuesday, B  
Manhattan Merry-Go-Round, 9:00 p.m., Sunday, R  
Maxwell House Show Boat, 9:00 p.m., Thursday, R  
Molle Show, 7:30 p.m., Mon., Wed. and Thurs., R  
Music on the Air, 7:30 p.m., Mon., Wed. and Fri., C  
National Barn Dance, 10:30 p.m., Saturday, B  
Non-Spi Preravn, 9:30 p.m., Wednesday, B  
Old Gold, 10:00 p.m., Wednesday, C  
Palmolive Beauty Box, 10:00 p.m., Tuesday, R  
Al Pearce and Gang, 6:00 p.m., Saturday, B  
Romantic Melodies, 7:30 p.m., Thursday, B  
Schlitz Program, 10:00 p.m., Friday, C  
Silken Strings, 7:00 p.m., Sunday, B  
Sinclair Minstrels, 9:00 p.m., Monday, B  
Spartan Trolians, 8:00 p.m., Sunday, B  
Swift Garden, 3:30 p.m., Sunday, R  
Terraplane Travelcade, 10:00 p.m., Saturday, R  
Texaco Program, 9:30 p.m., Tuesday, R  
Voice of Firestone, 8:30 and 11:30 p.m., Monday, R  
Waves of Romance, 5:15 p.m., Sunday, R  
Yeast Foamers, 3:30 p.m., Sunday, B

**RELIGIOUS**

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

**SINGERS**

Baby Rose Marie, 12:15 p.m., Sun.; 7:15 p. m., Mon., B  
 Irene Beasley, 6:30 p.m., Monday and Friday, R;  
 6:30 p.m., Wednesday, B  
 Connie Boswell, 10:00 p.m., Tues. and Thurs., C  
 Richard Crooks, 8:30 and 11:30 p.m., every other Mon., R  
 Bing Crosby, 8:30 p.m., Monday, C  
 Morton Downey, 6:45 p.m., Tues.; 8:00 p.m., Sat., C  
 Jessica Dragonette, 8:00 p.m., Friday, R  
 Mary Eastman, 10:45 p.m., Wed.; 8:30 p.m., Thurs., C  
 Ruth Etting, 9:15 p.m., Tues. and Fri., C  
 John Fogarty, 11:00 p.m., Monday, R  
 Sylvia Froos, 6:45 p.m., Thurs.; 10:45 p.m., Sat., C  
 Alex Gray, 8:30 p.m., Thursday, C  
 Tito Guizar, 12:30 p.m., Sun.; 11:00 p.m., Mon., C  
 Wendell Hall, 7:45 p.m., Sunday, R  
 Annette Hanshaw, 9:00 p.m., Thursday, R  
 Happy Bakers, 8:00 p.m., Mon., Wed. and Fri., C  
 John Herrick, 7:00 p.m., Saturday, B  
 Arlene Jackson, 2:30 p.m., Sun.; 7:45 p.m., Fri., B  
 Jeannie Lang, 9:30 p.m., Friday, C  
 Frances Langford, 3:00 p.m., Sun., B; 9:00 p.m., Sat., R  
 Lazy Dan, 1:30 p.m., Sunday, C  
 Doris Lorraine, 10:30 p.m., Thursday, C  
 Nick Lucas, 11:00 p.m., Wed.; 6:30 p.m., Fri., C  
 Nino Martini, 9:00 p.m., Wednesday, C  
 Tommy McLaughlin, 6:15 p.m., Saturday, C  
 James Melton, 6:45 p.m., Sunday, C  
 Frank Munn, 9:30 p.m., Sun.; 9:00 p.m., Fri., R  
 Edith Murray, 11:00 p.m., Friday, C  
 Gertrude Niesen, 9:30 p.m., Monday, C

Donald Novis, 9:00 p.m., Saturday, R  
 Frank Parker, 9:00 p.m., Monday, R  
 Rosa Ponselle, 9:00 p.m., Monday, C  
 Virginia Rea, 9:30 p.m., Sunday, R  
 Lanny Ross, 9:00 p.m., Thursday, R  
 Vivien Rutic, 8:00 p.m., Mon., Wed. and Fri., C  
 Sanderson-Crumit, 5:30 p.m., Sunday, C  
 Ethel Shutta, 8:00 p.m., Friday, B  
 Silver Dust Serenaders, 7:30 p.m., Tues., Thurs. and Sat., C  
 Mary Small, 1:30 p.m., Sun.; 7:00 p.m., Tues., R  
 Smiling Ed McConnell, 6:30 p.m., Sunday, C  
 Grete Stueckgold, 9:00 p.m., Saturday, C  
 Tamara, 9:00 p.m., Sunday, R  
 Conrad Thibault, 8:30 p.m., Tues., B; 8:30 p.m., Wed., C  
 9:00 p.m., Thurs., R  
 Lawrence Tibbett, 8:30 and 11:30 p.m., every other Mon., R  
 Gus Van, 7:45 p.m., Friday, B  
 Vera Van, 11:00 p.m., Thursday, C  
 Jack Whiting, 9:30 p.m., Friday, C

**TALKS**

Boake Carter, 7:45 p.m., daily, except Sat. and Sun., C  
 Chicago Round Table, 12:30 p.m., Sunday, R  
 Columbia News Service, 11:15 p.m., daily, except Sunday, C  
 Cook Travelogues, 2:30 p.m., Sunday, R  
 Flying Capt. Williams, 6:45 p.m., Saturday, B  
 Edwin C. Hill, 8:15 p.m., Mon., Wed. and Fri., C  
 Horlick's Health, 9:45 p.m., Sunday, B  
 H. V. Kaltenborn, 12:45 p.m., Sunday; 6:00 p.m., Friday, C  
 John B. Kennedy, 11:00 p.m., Tues.; 9:30 p.m., Thurs., R  
 Meet the Artist, 6:00 p.m., Saturday, C  
 National Radio Forum, 10:30 p.m., Monday, R  
 Our American Schools, 6:30 p.m., Sunday, R  
 Babe Ruth, 8:45 p.m., Mon., Wed. and Fri., B  
 Stories That Should Be Told, 10:00 p.m., Friday, B  
 Lowell Thomas, 6:45 p.m., daily, except Sat. and Sun., B  
 Voice of Experience, 8:15 and 11:45 p.m., Tuesday, C  
 Frederic William Wile, 6:30 p.m., Saturday, C  
 Walter Winchell, 9:30 and 11:15 p.m., Sunday, B  
 Your Government, 7:15 p.m., Tuesday, B

**ABBREVIATIONS USED IN THIS LOG****Ags. Aguascalientes****Alg. Algeria****Arg. Argentine****Ausl. Australia****Aust. Austria****Belg. Belgium****Bol. Bolivia****Brz. Brazil****Bul. Bulgaria****Cey. Ceylon****Chl. Chile****Chn. China****Chu. Chihuahua****Cib. Columbia****Co. Coahuila****CR. Costa Rica****Cu. Cuba****Cz. Czechoslovakia****DF. Federal District, Mex.****DR. Dominican Republic****Dz. Danzig****Eg. Egypt****Est. Estonia****F. France****Fin. Finland****For. Formosa****G. Germany****GB. Great Britain****Gr. Greece****Gt. Guatemala****Hi. Hidalgo****Hol. Holland****Ht. Haiti****Hun. Hungary****I. Italy****IFS. Irish Free State****In. India****J. Japan****Jal. Jalisco****Ken. Kenya****Ko. Korea****Lat. Latvia****LC. Lower California****Mch. Michoacan****Mnch. Manchuria****Mor. Morocco****NL. Nuevo Leon****Nor. Norway****NZ. New Zealand****Par. Paraguay****Pol. Poland****Por. Portugal****Pu. Puebla****Que. Queretaro****Rum. Rumania****SAf. Union of South Africa****SLF. San Luis Potosi****Sp. Spain****Swe. Sweden****Swi. Switzerland****Tam. Tamaulipas****Tun. Tunisia****Uru. Uruguay****USR. Russia****Ver. Veracruz****Vnz. Venezuela****Yuc. Yucatan****Yug. Yugoslavia**

## INDEX BY FREQUENCIES AND DIAL NUMBERS

Stations in North America are shown in black type. Power is shown in kilowatts, thus .025 is 25 watts. Odd frequencies are given in parenthesis.

Kilocycles in larger type; meters in parenthesis.

### 520 (576.6)

LKH .7 Hamar, Nor. (519)  
OFH 13.2 Viipuri, Fin. (527)  
..... .5 Innsbruck, Aust. (519)  
..... 5. Ljubljana, Yug. (527)

### 530 (565.7)

IBZ 1. Bolzano, I. (536)  
RW24 2. Smolensk, U.S.R. (531)  
..... 16. Wilno, Pol. (536)

### 540 (555.2)

CJRM 1. Moose Jaw, Sask.  
HAL 120. Budapest, Hun. (546)  
KEY .01 Merida, Yuc. (546.8)

### 550 (545.1)

KFDY .5 Brookings, S. D.  
KFUO .5 St. Louis, Mo.  
KFYR 1. Bismarck, N. D.  
KOAC 1. Corvallis, Ore.  
KSD .5 St. Louis, Mo.  
RW48 1.2 Tomsk, U. S. R. (554)  
TISO .25 San Jose, C. R.  
WDEV .5 Waterbury, Vt.  
WGR 1. Buffalo, N. Y.  
WKRC 1. Cincinnati, Ohio  
..... 60. Beromunster, Swi. (556)

### 560 (535.4)

IPA 3. Palermo, I. (565)  
KDFM .5 Beaumont, Tex.  
KLZ 1. Denver, Colo.  
KTAB 1. San Francisco, Calif.  
KWTO 1. Springfield, Mo.  
RW41 1.2 Syktyvkar, U.S.R. (563)  
WFI .5 Philadelphia, Pa.  
WIND 1. Gary, Ind.  
WLIT .5 Philadelphia, Pa.  
WNOX 1. Knoxville, Tenn.  
WQAM 1. Miami, Fla.  
XEAO .25 Mexicali, B. C.  
2CO 7.5 Corowa, Ausl.  
..... 60. Athlone, IFS (565)  
..... 120. Makhatch, U. S. R. (563)

### 570 (526)

FQN .25 St. Pierre, Miq.  
KGKO .25 Wichita Falls, Tex.  
KMTR .5 Hollywood, Calif.  
KVI .5 Tacoma, Wash.  
MYCY 1. Skinkyo, Manch.  
WKBN .5 Youngstown, Ohio  
WMCB .5 New York, N. Y.  
WNAX 1. Yankton, S. D.  
WOSU .75 Columbus, Ohio  
WSYR .25 Syracuse, N. Y.  
WVNO 1. Asheville, N. C.  
2YA 5. Wellington, N.Z.  
..... 100. Stuttgart, G. (574)  
..... 20. Cairo, Eg. (571)  
..... 10. Magnitogorsk, U. S. R. (571)

### 580 (516.9)

CE58 1. Santiago, Chl. (585)

CHRC .1 Quebec, Que.  
CKCL .1 Toronto, Ont.  
CKUA .5 Edmonton, Alta.  
KMJ .5 Fresno, Calif.  
KSAC .5 Manhattan, Kans.  
RW35 10. Astrakhan, U.S.R. (589)  
RW38 1.2 Alexandrovsk. U. S. R.  
WCHS .75 Charleston, W. Va.  
WDBO .25 Orlando, Fla.  
WBW 1. Topeka, Kans.  
WTAG .75 Worcester, Mass.  
XEPN 75. Piedras Ngs. Coah. (585)  
YLZ 15. Riga, Lat. (583)  
ZTB .5 Bloemtn, S. Af. (589)  
ZLZ 3. Hobart, Ausl.

### 590 (508.2)

CMW 1.4 Havana, Cuba (595)  
HIX 1.5 Santo Domingo, D. R.  
JOAK2 10. Tokyo, Jap.  
KHQ 1. Spokane, Wash.  
LS10 3.5 Buenos Aires, Arg.  
RW42 10. Gorki, U. S. R. (598)  
WEEI 1. Boston, Mass.  
WKZO 1. Kalamazoo, Mich.  
WOW 1. Omaha, Neb.  
..... 10. Nijni, U. S. R. (598)  
..... 120. Vienna, Aust. (592)

### 600 (499.7)

CFCF .5 Montreal, Que.  
CFCO .05 Chatham, Ont.  
CJOR .5 Vancouver, B. C.  
KFQD .25 Anchorage, Alas.  
KFSO 1. San Diego, Calif.  
SBD 10. Sundsvall, Swe. (601)  
WCAC .5 Storrs, Conn.  
WCAO .5 Baltimore, Md.  
WICC .5 Bridgeport, Conn.  
WMT .5 Waterloo, Iowa  
WREC .5 Memphis, Tenn.  
XMH5 .6 Shanghai, Chn.  
..... 6.5 R'dio Maroc, Mor. (601)  
..... Cairo, Eg.

### 610 (491.5)

CX4 1. Montevideo, Uru.  
IFI 20. Florence, I.  
JODK2 10. Keijo, Ko.  
KFRK 1. San Francisco, Calif.  
KZEG 1. Manila, P. I. (618.5)  
KZRM 50. Manila, P. I. (618.5)  
RW22 10. Oufa, U. S. R. (617)  
TIXA .0075 San Jose, C. R. (614)  
WDAF 1. Kansas City, Mo.  
WIP .5 Philadelphia, Pa.  
WJAY .5 Cleveland, Ohio  
XFX .5 Mexico City, D. F.  
3AR 5. Melbourne, Ausl.  
..... 10. Murmansk, U.S.R.

### 620 (483.6)

CE62 1. Santiago, Chl. (625)  
JOTK .5 Matsuye, Jap. (625)  
KGW 1. Portland, Ore.  
KTAR 1. Phoenix, Ariz.  
LV3 .35 Cordoba, Arg.  
RW31 10. Ivan-Vozn. U.S.R. (625)  
WFLA 1. Clearwater, Fla.  
WLBZ 5. Bangor, Me.

### 630 (475.9)

WSUN 1. St. Petersburg, Fla.  
WTMJ 1. Milwaukee, Wis.  
XOTN .5 Tientsin, Chn. (625)  
4ZP .5 Jvercergill, N. Z.  
No. 1 15. Brussels, Belg.  
..... 1.2 Trondheim, Nor. (629)

CFGY .5 Charlottetown, P. E. I.  
CJGX .5 Yorkton, Sask.  
JODG .3 Hamamatsu, Jap. (635)  
KFRU .5 Columbia, Mo.  
KGFY .2 Pierre, S. D.  
KTRH .5 Houston, Tex.  
LSB 4.5 Buenos Aires, Arg.  
OKP 120. Prague, Cz. (638)  
RW28 7. Vladivost'k, U.S.R. (636)  
WGBF .5 Evansville, Ind.  
WMAL .25 Washington, D. C.  
WOS .5 Jefferson City, Mo.  
XEX .05 Monterrey, N. L.  
XHZ .5 Merida, Yuc.  
XFG 2. Mex. City, D. F. (638.3)  
5CK 7.5 Crya, Brook. Aus. (635)

### 640 (468.5)

CMQ .5 Havana, Cuba (645)  
JOJK 3. Akita, J. (645)  
KFI 50. Los Angeles, Cal.  
RW17 10. Kazan, U.S.R. (644)  
RW50 1.2 Pensa, U.S.R.  
WAIU .5 Columbus, Ohio  
WOI 5. Ames, Iowa  
YN 15. Lyons, F. (648)  
..... 10. Petrozavodsk, U.S.R.

### 650 (461.3)

CAB 1. Canton, Chn. (658)  
CX6 5. Montevideo, Uru.  
JOCG 3. Asahikawa, J. (655)  
JQAK .5 Dairen, Manch. (652)  
KPCB .1 Seattle, Wash.  
RW46 10. Karaganda, U.S.R. (658)  
WSM 50. Nashville, Tenn.  
IYA .5 Auckland, N. Z.  
..... 60. Langenberg, G. (658)

### 660 (454.3)

CE66 1. Santiago, Ch. (665)  
EJ22 1. Salamanca, Sp. (662)  
NR 50. Manchester, G.B. (668)  
WAAW .5 Omaha, Neb.  
WEAF 50. New York, N. Y.  
XEAL 1. Mexico City, D. F.  
XGOA 75. Nanking, Chn.  
ZTJ 15. Johannesburg, S. Af.  
2FC 5. Sydney, Aus. (665)  
..... 5. Bjornborg, Fin. (662)

### 670 (447.5)

CMB 1. Kwangchow, Chn. (677)  
JFAK 10. Taihoku, For.  
LS4 6. Buenos Aires, Arg.  
MOHB 1. Harbin, Manch. (674)  
MTFY 1. Harbin, Manch. (674)  
RW23 1.2 Grozny, U.S.R. (670)  
WMAQ 5. Chicago, Ill.  
..... 25. Sottens, Swi. (677)

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## 680 (440.9)

<b>CMAF</b>	1.	Havana, Cuba
<b>HJN</b>	1.	Bogota, Col. (681)
<b>JOLK</b>	.5	Fukuoka, J.
<b>JOVK</b>	.5	Hakodate, J.
<b>KFEQ</b>	2.5	St. Joseph, Mo.
<b>KPO</b>	50.	San Francisco, Cal.
<b>RDN</b>	.5	San Salvador, E. S.
<b>RW27</b>	4.	Mak-Kala, U.S.R. (689)
<b>RW46</b>	1.2	Karang., U.S.R. (686.5)
<b>RW74</b>	1.2	Tehebokary, U.S.R.
<b>VAS</b>	2.	Glace Bay, N. S. (686)
<b>WESG</b>	1.	Elmira, N. Y.
<b>WPTF</b>	1.	Raleigh, N. C.
.....	2.5	Belgrade, Yug. (686)

## 690 (434.5)

<b>CFRB</b>	10.	Toronto, Ont.
<b>CJJC</b>	.1	Calgary, Alta.
<b>CX8</b>	1.	Montevideo, Uru.
<b>FPFT</b>	7.	Paris, F. (695)
<b>MAA</b>	1.	Arlington, Va.
<b>XET</b>	.5	Monterrey, N. L.
<b>XGOY</b>	5.	Yunnan, Chn. (698)
<b>GWF</b>	5.	Perth, Aus.

## 700 (428.3)

<b>CE70</b>	1.	Santiago, Chl. (705)
<b>JOKK</b>	.5	Okayama, J.
<b>PRAG</b>	3.	Port Alegre, Brs. (706)
<b>SBA</b>	55.	Stockholm, Swe. (704)
<b>SCN</b>	.25	Malmberget, Swe. (704)
<b>VOWR</b>	.5	St. John's, N. F.
<b>VPB</b>	1.75	Colombo, Cey. (705)
<b>WLW</b>	50.	Cincinnati, Ohio
<b>XHHA</b>	.1	Shanghai, Chn.

## 710 (422.3)

<b>IIRO</b>	50.	Rome, I. (713)
<b>JOJK</b>	3.	Kanasawa, J.
<b>KMPC</b>	.5	Beverly Hills, Cal.
<b>LSI</b>	5.	Buenos Aires, Ar.
<b>TIFB</b>	.03	San Jose, C. R. (714)
<b>WOR</b>	5.	Newark, N. J.
<b>XEN</b>	1.	Mex. City, D. F. (711)

## 720 (416.4)

<b>JFBK</b>	1.	Tainan, For.
<b>JORK</b>	.5	Kochi, J.
<b>RV9</b>	100.	Kiev, U.S.R. (722)
<b>RW28</b>	10.	Vladivostok, U.S.R. (725)
<b>RW52</b>	10.	Simferopol, U.S.R. (725)
<b>WGM</b>	50.	Chicago, Ill.
<b>ZTD</b>	1.	Durban, S. Af. (723)
<b>3YA</b>	2.5	Christchurch, N. Z.

## 730 (410.7)

<b>CFPL</b>	.1	London, Ont.
<b>CJCA</b>	1.	Edmonton, Alta.
<b>CKAC</b>	5.	Montreal, Que.
<b>CMK</b>	2.	Havana, Cuba
<b>CX10</b>	1.	Montevideo, Uru.
<b>EAJ2</b>	3.	Madrid, Sp. (731)
<b>EAJ5</b>	1.5	Seville, Sp. (731)
<b>JOSK</b>	1.	Kokura, J. (735)
<b>LVI</b>	1.5	San Juan, Arg.
<b>5CL</b>	5.	Adelaide, Aus.
.....	20.	Tallin, Est. (731)

## 740 (405.2)

<b>CE74</b>	1.	Santiago, Chl. (745)
<b>KMMJ</b>	1.	Clay Center, Neb.
<b>KTRB</b>	.25	Modesto, Cal.
<b>OFD</b>	.5	Pori, Fin. (749)

<b>RW51</b>	1.2	Naltchik, U.S.R. (748.1)
<b>WHEB</b>	.25	Portsmouth, N. H.
<b>WBB</b>	50.	Atlanta, Ga.
.....	100.	Munich, G.
.....	5.	Marseilles, F. (749)

## 750 (399.8)

<b>HB7PI</b>	1.	Bangkok, Siam
<b>JOBK1</b>	10.	Osaka, J.
<b>KGU</b>	2.5	Honolulu, T. H.
<b>LB7</b>	1.	Buenos Aires, Arg.
<b>OAX</b>	1.5	Lima, Peru
<b>RW64</b>	10.	Vladikav., U.S.R. (752)
<b>VQ7LO</b>	1.	Nairobi, Ken.
<b>WJR</b>	10.	Detroit, Mich.
<b>2YB</b>	.1	New Plymouth, N. Z.
.....	12.	Katowice, Pol. (758)

## 760 (394.5)

<b>CMBS</b>	.2	Havana, Cuba
<b>CMCQ</b>	1.	Havana, Cuba (767)
<b>KXA</b>	.25	Seattle, Wash.
<b>LT4</b>	.17	Mendoza, Arg.
<b>MR</b>	25.	Dventry, G. B. (767)
<b>WBAL</b>	10.	Baltimore, Md.
<b>WEW</b>	1.	St. Louis, Mo.
<b>WJZ</b>	50.	New York, N. Y.
<b>4QG</b>	5.	Brisbane, Aus.

## 770 (389.4)

<b>CX12</b>	1.	Montevideo, Uru.
<b>JOHK</b>	10.	Sendai, J.
<b>KFA</b>	5.	Lincoln, Neb.
<b>RW26</b>	10.	Stalino, U.S.R. (776)
<b>RW36</b>	10.	Arkhangelsk, U.S.R.
<b>VUM</b>	2	Madras, Ind.
<b>WBWM</b>	25.	Chicago, Ill.
<b>1ZH</b>	.04	Hamilton, N. Z.
.....	2.	Toulouse, F. (776)

## 780 (384.4)

<b>CE78</b>	1.	Valparaiso, Chl. (785)
<b>CHWK</b>	.1	Chilliwack, B. C.
<b>GJCS</b>	.5	Sudbury, Ont.
<b>CKY</b>	5.	Winnipeg, Man.
<b>JOJK</b>	.5	Shizuoka, J.
<b>KELW</b>	.5	Burbank, Cal.
<b>KTM</b>	.5	Los Angeles, Cal.
<b>LT1</b>	4.5	Rosario, Arg.
<b>PRAJ</b>	.2	Juis de Fora, Brs. (789)
<b>PRAN</b>	.008	Curityba, Brs. (789)
<b>PRAY</b>	.05	M. das Crus., B. (789)
<b>WEAN</b>	.5	Providence, R. I.
<b>WMC</b>	.5	Memphis, Tenn.
<b>WTAR</b>	.5	Norfolk, Va.
<b>KEYZ</b>	10.	Mexico City
<b>XEP</b>	.5	Mexico City, D. F.
.....	.2	Alexandria, Eg.
.....	120.	Leipsig, G. (785)

## 790 (379.5)

<b>GMJK</b>	.5	Camaguey, Cuba
<b>EAJ1</b>	5.	Barcelona, Sp. (795)
<b>JOJK</b>	10.	Kumamoto, J.
<b>KGO</b>	7.5	San Francisco, Cal.
<b>LR10</b>	8.	Buenos Aires, Arg.
<b>RW37</b>	1.	Moskva, U.S.R. (792.5)
<b>WGY</b>	50.	Schenectady, N. Y.
<b>4YA</b>	.5	Dunedin, N. Z.
.....	16.	Lwow, Pol. (795)
.....	.5	Santiago, Sp. (795)

## 800 (374.8)

<b>LU2</b>	.5	Bahia Blanca, Arg.
<b>TIGP</b>	.975	San Jose, C. R.
<b>SR</b>	50	Falkirk, G. B. (804)

<b>WBAP</b>	50.	Fort Worth, Tex.
<b>WFAA</b>	50.	Dallas, Tex.
<b>XFC</b>	.35	Aguascalientes, A. (805)
<b>3LO</b>	5.	Melbourne, Aus.
.....	20.	Salonica, Gr. (804)

## 810 (370.2)

<b>CX14</b>	1.	Montevideo, Uru.
<b>EAJ4</b>	1.5	Galicia, Sp. (815)
<b>F8GC</b>	1.2	Paris, F.
<b>IMI</b>	5.0	Milan, I. (814)
<b>JOCK1</b>	10.	Nagoya, J.
<b>VUC</b>	3.	Calcutta, In.
<b>WCCO</b>	50.	Minneapolis, Minn.
<b>WNYC</b>	.5	New York, N. Y.
<b>XEBC</b>	2.5	Agua Caliente, L. C.
.....	.....	(815)
<b>ZTC</b>	1.	Cape Town, S. Af.

## 820 (365.6)

<b>CE82</b>	1.	Santiago, Chl. (825)
<b>CMGC</b>	.03	Matanzas, Cuba
<b>LV7</b>	.3	Tucuman, Arg.
<b>RW68</b>	1.5	Tchelia., U.S.R. (824)
<b>RW69</b>	4.	Ijevsk, U.S.R. (825)
<b>WHAS</b>	50.	Louisville, Ky.
<b>XQHB</b>	.1	Shanghai, Chn.
<b>2ZH</b>	.005	Napier, N. Z.
.....	12.	Bucharest, Ru. (823)

## 830 (361.2)

<b>CMC</b>	.5	Havana, Cuba (835)
<b>CMGA</b>	.1	Colon, Cuba (834)
<b>JOJK</b>	1.	Sapporo, J.
<b>KOA</b>	12.6	Denver, Colo.
<b>LL</b>	2.	Paris, Fr. (832)
<b>LR5</b>	20.	Buenos Aires, Arg.
<b>RW39</b>	100.	Moscow, U.S.R. (832)
<b>TIEA</b>	.0075	San Jose, C. R. (833)
<b>WEU1</b>	1.	Reading, Pa.
<b>WHDH</b>	1.	Boston, Mass.
<b>WRUF</b>	5.	Gainesville, Fla.
<b>XETW</b>	.5	Mexico City, D. F.

## 840 (356.9)

<b>CJOC</b>	.1	Lethbridge, Alta.
<b>CKLW</b>	.5	Windsor, Ont.
<b>F31CD</b>	12.	Saigen, Indo.
<b>LT8</b>	.35	Rosario, Arg.
<b>VUB</b>	3.	Bombay, In.
<b>ZBW</b>	2.	Hongkong, C. (845)
<b>2YC</b>	2.	Wellington, N. Z.
.....	100.	Berlin, G. (841)

## 850 (352.7)

<b>CX16</b>	1.	Montevideo, Uru.
<b>EAJ3</b>	1.5	Valencia, Sp.
<b>HSP1</b>	2.5	Bangkok, Siam (857)
<b>JOJK</b>	10.	Hiroshima, J.
<b>KIEV</b>	.1	Glendale, Cal.
<b>KWKH</b>	10.	Shreveport, La.
<b>LKA</b>	.35	Aalesund, Nor.
<b>LKB</b>	1.	Bergen, Nor.
<b>LKP</b>	.7	Porsgrund, Nor.
<b>PRAC</b>	.5	Rio de Janeiro, B. (857)
<b>PRAI</b>	.01	Ribeirao Preto, B. (857)
<b>RW52</b>	10.	Simferopol, U.S.R. (859)
<b>SPTT</b>	15.	Strasbourg, F. (859)
<b>WWL</b>	10.	New Orleans, La.
<b>XOST</b>	.5	Tainan, Chn. (857.1)
<b>XQHA</b>	1.	Shanghai, Chn.
<b>2BL</b>	3.4	Sydney, Aus. (855)
.....	1.	Sofia, Bul.

## 860 (348.6)

<b>CE86</b>	1.	Santiago, Chl. (865)
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LKF .7 Fredrikstad, Nor. (868)  
 LV10 .35 Las Heras, Arg.  
 PRA3 .5 Rio de Janeiro, Brz.  
 TIVL .03 San Jose, C. R. (889)  
 WBC 50. New York, N. Y.  
 HBS .5 Kansas City, Mo.  
 XEMO 1.5 Tijuana, L. C. (895)  
 ..... 1. Santiago, Chl.  
 ..... 16. Poznan, Pol. (868)

**870 (344.6)**  
 CMCF .25 Havana, Cuba (873)  
 CMX 1. Havana, Cuba (875)  
 JOAK1 10. Tokyo, J.  
 LR 50. London, G. B. (877)  
 LR6 3. Buenos Aires, Arg.  
 WENR 50. Chicago, Ill.  
 WLS 60. Chicago, Ill.  
 YNCRG 1.5 Granada Venz

**880 (340.7)**  
 CE88 .1 Valparaiso, Chl. (885)  
 CJB 0.5 Sydney, N. S.  
 CR00 1. Ottawa, Ont.  
 CT1GL .15 Lisbon, Por. (885)  
 KFKA .5 Greeley, Colo.  
 KLF 1. Oakland, Cal.  
 KP0F .5 Denver, Colo.  
 WC0C .5 Meridian, Miss.  
 WGBI .5 Scranton, Pa.  
 WQAN .25 Scranton, Pa.  
 W8UI .5 Iowa City, Iowa  
 XHHV .1 Shanghai, Chn.  
 YV2BC .1 Caracas, Venz. (882)  
 6PR .5 Perth, Aus.  
 IZR .1 Auckland, N. Z.  
 ..... 7. Graz, Aust. (886)

**890 (326.9)**  
 CX18 .75 Montevideo, Uru.  
 KARK .25 Little Rock, Ark.  
 KPNF 1. Shenandoah, Ia.  
 KPFY 1. Spokane, Wash.  
 KBEI .5 Pocatello, Ida.  
 KUSD .5 Vermillion, S. D.  
 MTBY 1.5 Hoten, Mnch. (897)  
 OFA 10. Helsinki, Fin. (895)  
 WGBT .25 Atlanta, Ga.  
 WILL .25 Urbana, Ill.  
 WJAR .5 Providence, R. I.  
 WMMN .25 Fairmont, W. Va.  
 XETU 1. Pachua, Hdo.  
 XEW 50. Mexico City  
 7HO .05 Hobart, Aus.  
 ..... 5.5 Cadiz, Sp. (896)  
 ..... 10. Toulouse, Fr. (895)

**900 (333.1)**  
 CE90 1. Santiago, Chl. (905)  
 JODEK1 10. Keijo, Ko.  
 K8BU .5 Ketchikan, Alas.  
 KHJ 1. Los Angeles, Cal.  
 LV9 .5 Rosario, Arg.  
 W8EN 1. Buffalo, N. Y.  
 WJAX 1. Jacksonville, Fla.  
 WKY 1. Oklahoma City, Okla.  
 WLBL 2.5 Stevens Pt., Wis.  
 XHHI .1 Shanghai, Chn.  
 ZILY 2. Hoten, Mnch.  
 Z2P .105 Wairoa, N. Z.  
 3MA .05 Mildura, Aus.  
 ..... 100. Hamburg, G. (904)

**910 (329.6)**  
 CMDE .15 Havana, Cuba

CMJF .2 Camaguey, Cuba  
 CRGM 5. Montreal, Que.  
 LR2 8.5 Buenos Aires, Arg.  
 RW30 10. Dnepropetrovsk, UBR (913)  
 TIGR .075 San Jose, C. R. (911)  
 4RK 5. Rockhamton, Aus.  
 ..... 5. Limoges, F. (913)

**920 (325.9)**  
 CE92 .1 Tomuco, Chl.  
 CMCD .5 Havana, Cuba (925)  
 HHK 1. Port-au-Prince, Haiti  
 JOQK .5 Niigata, J.  
 KFEL .5 Denver, Colo.  
 KFXF .5 Denver, Colo.  
 KOMO 1. Seattle, Wash.  
 KPRC 1. Houston, Tex.  
 LV2 .3 Cordoba, Arg.  
 OKB 32. Brno, Cz. (922)  
 PRAD .95 Pelotas, Brz.  
 PRAE 1. Sao Paulo, Brz. (921)  
 WAAF .5 Chicago, Ill.  
 W8SO .5 Babson Pk., Mass.  
 WWJ 1. Detroit, Mich.

**930 (322.4)**  
 CFAC .1 Calgary, Alta.  
 CFCH .1 North Bay, Ont.  
 CFCL .1 Prescott, Ont.  
 CKPC .1 Brantford, Ont.  
 CKPR .05 Ft. William, Ont.  
 CT1BO .15 Lisbon, Por. (936)  
 CX20 2. Montevideo, Uru.  
 HBP3 Bangkok, Siam (938)  
 JOAG .5 Nagasaki, J.  
 KFVI .5 San Francisco, Cal.  
 KGBZ .5 New York, Neb.  
 KMA .5 Shenandoah, Ia.  
 KROW .5 Oakland, Cal.  
 WBRG .5 Birmingham, Ala.  
 WDBJ .25 Roanoke, Va.  
 XHHEX .1 Shanghai, Chn.  
 XNPP 1. Peiping, Chn. (937)  
 3UZ .5 Melbourne, Aus.  
 No. 2 15. Brussels, Belg. (932)

**940 (319)**  
 CE94 1. Santiago, Chl. (945)  
 CMHD .5 Cabarion, Cuba  
 JONK .5 Nagano, J.  
 KOIN 1. Portland, Ore.  
 VOAS .1 St. John's, Nfld.  
 WAAT .3 Jersey City, N. J.  
 WAVE .1 Louisville, Ky.  
 WCHS 1. Portland, Maine  
 WDAY 1. Fargo, N. D.  
 WHA 1. Madison, Wis.  
 SBB 10. Goteborg, Swe. (941)  
 XEFO 5. Mexico City (XFO)  
 XHHEE .1 Shanghai, Chn.  
 3ZR .3 Grey-mouth, N. Z.  
 ..... 12. Algiers Alg. (941)

**950 (315.6)**  
 CT1DH .01 Lisbon, Por. (952)  
 KFWE 1. Hollywood, Cal.  
 KQHL 1. Billings, Mont.  
 KMBC 1. Kansas City, Mo.  
 LR3 12. Buenos Aires, Arg.  
 PP 100. Paris, F. (959)  
 RV 10. Paris, F. (959)  
 RW55 1. Engels, UBR. (959)  
 RW40 1.2 Gomel, U.S.R. (959)

WRC .5 Washington, D. C.  
 XOPP 1. Peiping, Chn. (952.3)  
 2GB .3 Sydney, Aus.  
 ..... Cairo, Eg.  
 ..... 60. Breslau, G.

**960 (312.3)**  
 CMBD .25 Havana, Cuba (965)  
 CMCW .15 Havana, Cuba (965)  
 CMJL .05 Camaguey, Cuba  
 CRCT 5. Toronto, Ont.  
 JOCK .3 Kyoto, J.  
 OFC .25 Jacobstad, Fin.  
 PRAP .3 Pernambuco, B. (967)  
 RW13 10. Odessa, U.S.R. (968)  
 RW57 2. Tiraspol, U.S.R. (968)  
 XEAW 10. Raynosa, Tams. (965)  
 XHHF .1 Shanghai, Chn.  
 YV1BC 5. Caracas, Venz.  
 Z2K .15 Palmerston, N. Z.  
 5DN 1. Adelaide, Aus.  
 ..... 20. Granoble, F. (968)  
 ..... 10. Odessa, U.S.R. (968)  
 ..... 2. Oukhta, UBR. (968)

**970 (309)**  
 CMGF .1 Matanzas, Cuba (971.5)  
 CX22 .25 Montevideo, Uru.  
 JOBG .5 Maebashi, J.  
 KJR 5. Seattle, Wash.  
 WCFL 1.5 Chicago, Ill.  
 W1BG .1 Glenside, Pa.  
 WR 50. Cardiff, G. B. (977)  
 XGOD 1. Hangchow, C. (977.5)  
 3BO 2. Bendigo, Aus.

**980 (303.9)**  
 CE98 1. Santiago, Chl. (985)  
 CNO .025 Casablanca, Mor. (988)  
 IGE 10. Genoa, I. (986)  
 JOXK .5 Tokushima, J.  
 KDKA 50. Pittsburgh, Pa.  
 XEAE .8 Tijuana, B. C.  
 XEFE 1. Nuevo Laredo, Tams. (986)  
 ZPT .5 Pretoria, S. Af. (985)  
 2ZJ .25 Gisborne, N. Z.  
 6BY .05 Bunbury, Aus.  
 ..... 2. Craoov, Pol. (986)

**990 (302.8)**  
 JOFG .5 Fukui, J.  
 LR4 12. Buenos Aires, Arg.  
 PFB1 20. Hilversum, Hol. (995)  
 TTV .9075 San Jose, C. R. (999)  
 WBZ 50. Boston, Mass.  
 WBZA 1. Springfield, Mass.  
 WJEM 5. Tupelo, Miss.  
 XEAF .75 Nogales, Son.  
 XEK .1 Mexico City, D. F.

**1000 (299.8)**  
 CMBZ .15 Havana, Cuba (1008)  
 CMHI .25 Santa Clara, Co. (1007)  
 HJ3ABH 1. Bogota, Col.  
 KFVD .25 Los Angeles, Cal.  
 OKR 13.5 Bratislava, Cs. (1004)  
 PRAR .5 Sao Paulo, Brz. (1006)  
 WHO 50. Des Moines, Ia.  
 WORK 1. York, Pa.  
 XEA .25 Guadalajara, Jal.  
 XEC .05 Toluca, D. F.  
 XEFJ .1 Monterrey, N. L.

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**XEL** .01 **Saltito, Coah.**  
**ZP3** .3 **Asuncion, Par.**  
**4GR** .05 **Toowoomba, Ausl.**  
 ..... 35 **Hague, Hol.**

## 1010 (296.9)

**CHML** .05 **Hamilton, Ont.**  
**CHWC** .5 **Regina, Sask.**  
**CKCD** .1 **Vancouver, B. C.**  
**CKCK** .5 **Regina, Sask.**  
**CKCO** .1 **Ottawa, Ont.**  
**CKIC** .05 **Wolfville, N. S.**  
**CKWX** .1 **Vancouver, B. C.**  
**CMJO** .05 **Ciego de Avila, Cuba**  
**CX24** .10 **Montevideo, Uru.**  
**KGGF** .5 **Coffeyville, Kans.**  
**KQW** .5 **San Jose, Cal.**  
**NN** 50. **Manchr., G.B.(1013)**  
**PH9** 6.4 **Amsterdam, Ho.(1013)**  
**TIGA** .03 **Cartago, CR.(1014)**  
**WHN** .1 **New York N. Y.**  
**WIS** .5 **Columbia, S. C.**  
**WNAD** .5 **Norman, Okla.**  
**XEJ** .25 **Juarez, Chih.(1016)**  
**XEU** .1 **Veracruz, Ver.**  
**3HA** .2 **Hamilton, Ausl.**  
 ..... 10 **Tchrngv.,USR.(1013)**

## 1020 (293.9)

**CE102** .25 **Santiago, Chl.**  
**EAJ2** 3 **Madrid, Sp.(1022)**  
**EAJ15** 3 **Barcelona, Sp.(1022)**  
**EAJ19** .7 **Oviedo, Sp.(1022)**  
**KYW** 10. **Chicago, Ill.**  
**WRAX** .25 **Philadelphia, Pa.**  
**XES** .25 **Tampico, Tams.**  
**XHHG** .1 **Shanghai, Ch.**  
**ZUE** 3. **Sydney, Ausl.(1025)**

## 1030 (291.1)

**GFCN** 10. **Calgary, Alta.**  
**GFCN** .5 **Fredericton, N. B.**  
**CKNC** .1 **Toronto, Ont.**  
**CMKC** .15 **Santiago, C.(1034)**  
**CT2GL** 5. **Parede, Por.**  
**LR9** 5. **Buenos Aires, Arg.**  
**XEB** 10. **Mexico City, D. F.**  
 ..... 60. **Heilsberg, G.(1031)**  
 ..... 5. **Parede, Por.(1031)**

## 1040 (288.3)

**CE104** .02 **Magallanes, Chl.**  
**CMGB** .225 **Havana, Cuba (1048)**  
**CMCB** .15 **Havana, Cuba (1048)**  
**CP4** 10. **La Paz, Bol.**  
**CMGH** .015 **Matanzas, Cuba**  
**KRLD** 10. **Dallas, Tex.**  
**KWJJ** .5 **Portland, Ore.**  
**RW70** 10. **Leningrad,USR.**  
**WKAR** 1. **East Lansing, Mich.**  
**WTIC** 50. **Hartford, Conn.**  
**XHHH** .1 **Shanghai, Chn.**  
**5PI** .05 **Port Pirie, Ausl.(1041)**  
 ..... 2.5 **Rennes, F.**

## 1050 (285.5)

**CHNS** .5 **Halifax, N. S.**  
**CMJG** .05 **Camaguey, Cuba**  
**CTIAA** 2. **Lisbon, Por.(1056)**  
**CTIAN** .01 **Lisbon, Por.(1056)**  
**CTIBM** .05 **Lisbon, Por.(1056)**  
**CTIDS** .01 **Lisbon, Por.(1058)**

**CT1EB** .05 **Lisbon, Por.(1056)**  
**CX26** 2. **Montevideo, Uru.**  
**I1BA** 20. **Bari, I.(1059)**  
**KFBI** 5. **Abilene, Kans.**  
**KNX** 25. **Hollywood, Cal.**  
**PRAA** 2. **Rio de Janeiro, Brz.**  
**RW33** 10. **Krasnodar, USR.**  
**SN** 50. **Falkirk, G. B.**  
**VOGY** .075 **St. John's, Nfld.**  
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**4ZM** .05 **Dunedin, N. Z.**  
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## 1060 (282.8)

**CE106** .02 **Santiago, Chl.**  
**CT1GK** 2. **Lisbon, Por.(1063)**  
**KTHS** 10. **Hot Springs, Ark.**  
**LR9** .1 **Rosario, Arg.**  
**RW57** 10. **Tiraspol, USR.(1068)**  
**WBAL** 10. **Baltimore, Md.**  
**WJAG** 1. **Norfolk, Neb.**  
**ZW4** .4 **Wellington, N. Z.**  
**4MB** .05 **Maryborough, Ausl.**

## 1070 (280.2)

**CE107** .1 **Santiago, Chl.**  
**KJBS** .1 **San Francisco, Cal.**  
**LR1** .5 **Buenos Aires, Arg.**  
**WCZA** .1 **Carthage, Ill.**  
**WDZ** .1 **Tuscola, Ill.**  
**WTAM** 50. **Cleveland, Ohio**  
**2KY** 1.5 **Sydney, Ausl.**  
 ..... 12. **Bordeaux, F.(1077)**

## 1080 (277.6)

**JOBK2** 10. **Asaka, J.(1085)**  
**LR3** 3.5 **Rosario, Arg.**  
**SCC** 2. **Falun, Swe.(1086)**  
**VOKW** .03 **St. John's, Nf.(1085)**  
**WBT** 50. **Charlotte, N. C.**  
**WCBD** 5. **Zion, Ill.**  
**WMBI** 5. **Chicago, Ill.**  
**XGOB** .25 **Lo Yang, Chn.**  
**3SH** .05 **Swan Hill, Ausl.**  
 ..... 7 **Zagreb, Yu.(1086)**  
 ..... 5 **Alexandria, Eg.**

## 1090 (275.1)

**CE109** .1 **Vina del Mar, Chl.**  
**CX25** 2. **Montevideo, Uru.**  
**EAJ1** 7. **Barcelona, Sp.(1095)**  
**EAJ7** 7. **Madrid, Sp.(1095)**  
**KMOX** 50. **St. Louis, Mo.**  
**RW75** 10. **Vinnitsa, USR.(1095)**  
**XEAI** .1 **Mexico City, D. F.**  
**XEWV** .25 **Veracruz, Ver.(1095)**  
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## 1100 (272.6)

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**CMHA** .5 **Sagua la Grande, Cu.(1103)**  
**CMCU** .5 **Havana, Cuba**  
**CRCV** 1. **Vancouver, B. C.**  
**INA** 1.5 **Naples, I.(1104)**  
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**TIRCA** .5 **San Jose, C. R.**  
**WLWL** 5. **New York, N. Y.**  
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**XEFG** .25 **Mexico City (1105)**

**XHHS** .1 **Shanghai, Chn.**  
**7LA** .3 **Launceston, Ausl.**  
 ..... 20. **Madona, Lat.(1104)**

## 1110 (270.1)

**HJ3ABD** .05 **Bogota, Col.(1115)**  
**KSOO** 1. **Sioux Falls, S. D.**  
**LS5** 5. **Buenos Aires, Arg.**  
**OKK** 2.6 **Kosice, Cz.(1113)**  
**PRAZ** .05 **Franca, Brz.**  
**WRVA** 5. **Richmond, Va.**  
**XENT** 30. **N. Laredo, Tms.(1116)**  
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**ZZR** .05 **Nelson, N. Z.**  
 ..... 5 **Heliopolis, Eg.**  
 ..... 1. **Thesalonik, Gr.**

## 1120 (267.7)

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**CHLP** .1 **Montreal, Que.**  
**CKOC** .5 **Hamilton, Ont.**  
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**EAJ19** .7 **Oviedo, Sp.(1121)**  
**HAE** 6.2 **Nyiregyhaza, Hun.(1122)**

**KFIO** .1 **Spokane, Wn.**  
**KFSG** .5 **Los Angeles, Cal.**  
**KRKD** .5 **Los Angeles, Cal.**  
**KRSC** .1 **Seattle, Wn.**  
**LV5** .8 **San Juan, Arg.**  
**WDEL** .25 **Wilmington, Del.**  
**WHAD** .25 **Milwaukee, Wis.**  
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## 1130 (265.3)

**CX30** .5 **Montevideo, Uru.**  
**KSL** 50. **Salt Lake City, Utah**  
**SBH** 10. **Horby, Swe.(1131)**  
**TGW** .5 **Guatemala City**  
**WJJD** 20. **Chicago, Ill.**  
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**CMBW** .5 **Havana, Cuba**  
**CMCG** .5 **Havana, Cuba**  
**CMCO** .5 **Havana, Cuba (1145)**  
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**IUTO** 7. **Turin, I.**  
**KVO** 25. **Tulsa, Okla.**  
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**XGCU** 1. **Shanghai, Chn.**  
**3YB** .025 **Melbourne, Ausl.(1145)**  
**4BC** .6 **Brisbane, Aus.(1145)**

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**XED** .5 **Guadalajara, J.(1156)**  
**YV1BMO** .5 **Maraacabo, Venz.(1153)**  
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**CFQC .25** Saskatoon, Sask.  
**CMBY .5** Havana, Cuba  
**CMCA .15** Havana, Cuba  
**KGMM .25** Albuquerque, N. M.  
**KYA 1.** San Francisco, Cal.  
**L88 20.** Buenos Aires, Arg.  
**WFBM 1.** Indianapolis, Ind.  
**WNAE 1.** Boston, Mass.  
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**WGCP 1.** Newark, N. J.  
**WLB 1.** Minneapolis, Minn.  
**WNEW 1.** Newark, N. J.  
**WRHM 1.** Minneapolis, Minn.  
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KUOA	.5	Fayetteville, Ark.
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KFPL	.1	Dublin, Tex.
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KFXR	.1	Oklahoma City
KFYO	.1	Lubbock, Tex.
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WBRE	.1	Wilkes-Barre, Pa.
WCLS	.1	Joliet, Ill.
WDAN	.1	El Paso, Tex.
WDBR	.1	Buffalo, N. Y.
WEXL	.05	Royal Oak, Mich.
WFBG	.1	Altoona, Mich.
WFDF	.1	Flint, Mich.
WGAL	.1	Lancaster, Pa.
WGH	.1	Newport News, Va.
WHAT	.1	Philadelphia, Pa.

1330 (225.4)

CMJI	.045	Cgo. de Avia., Cu. (1335)
CX40	.5	Montevideo, Uru.
K8B	1.	San Diego, Cal.
KMO	.25	Tacoma, Wa.
KSCJ	1.	Sloux City, Ia.
WDR0	1.	Hartford, Conn.
WSAI	1.	Cincinnati, Ohio
WTAQ	1.	Eau Claire, Wis.
4RO	.25	Rockhampton, Aus.
.....	5.	Montpellier, F. (1339)
.....	1.5	Bremen, G.
.....	1.5	Flensburg, G.
.....	1.5	Hanover, G.
.....	1.5	Madgeburg, G.
.....	1.5	Stettin, G.

1280 (234.2)

CE128	.5	Temuco, Chl.
KFB8	1.	Great Falls, Mont.
L7	.2	Punta Alta, Arg.
ON4EX	.1	Ottomont, Belg. (1285)
ON4FG	.1	Dampremy, Belg. (1285)
ON4FO	.1	Brussels, Belg. (1285)
ON4GT	.1	Brussels, Belg. (1285)
ON4RC	.1	Brussels, Belg. (1285)
ON4RG	.1	Ghent, Belt. (1285)
ON4RW	.2	Liege, Belg. (1285)
WCAM	.5	Camden, N. J.
WCAP	.5	Asbury Park, N. J.
WDOD	1.	Chatanooga, Tenn.
WIBA	.5	Madison, Wis.
WORC	.5	Worcester, Mass.
WRR	.5	Dallas, Tex.
WTNJ	.5	Trenton, N. J.
XCBL	.4	Shanghai, Chn.
XEFW	.07	Tampico, Tams.
FR	.05	Sale, Aus.
4ZC	.025	Cromwell, N. Z.
.....	1.	Sao Paula, Brs. (1284)
.....	1.	Aberdeen, G. B. (1285)

1340 (223.7)

CE134	.15	Santiago, Chl.
CW40	.03	Paysandu, Uru.
K8DY	.25	Huron, S. D.
KGR	.5	Butte, Mont.
KNO	.25	Dodge City, Kan.
LKN	.08	Notodden, Nor. (1348)
LKR	.15	Rjukan, Nor. (1348)
WCOA	.5	Pensacola, Fla.
WLEC	.25	Portland, Me.
WSPD	1.	Toledo, Ohio
2XN	.05	Liamore, Aus.
4ZR	.004	Balclutha, N. Z.
2RN	1.2	Dublin, IFS. (1348)
No. 2	4.	Milan, I. (1348)
.....	2.	Radio-Vitus, F. (1348)
.....	4.	Milan, I. (1348)
.....	5.	Salzburg, Aust. (1348)
.....	2.2	Tartu, Est. (1348)
.....	1.7	Loda, Pol. (1348)
.....	.5	Konigsberg, G. (1348)

1290 (232.4)

GMHL	.02	Cienfuegos, Cuba
CX38	.25	Montevideo, Uru.
KDYL	1.	Salt Lake City, Utah
KLCN	.1	Blytheville, Ark.
KTSA	1.	San Antonio, Tex.
WBC	1.	Superior, Wis.
WJAS	1.	Pittsburgh, Pa.

1350 (222.1)

CMCN	.25	Havana, Cuba (1357)
CMCR	.15	Havana, Cuba (1357)

INDEX BY FREQUENCIES AND DIAL NUMBERS

KIDO 1. Boise, Ida.  
 KWK 1. St. Louis, Mo.  
 LKM 1. Tromsø, Nor. (1357)  
 LSG 1.5 Buenos Aires, Arg.  
**WAWZ .25** Zarephath, N. J.  
**WBXN .25** New York, N. Y.  
**WEHC .5** Charlottesville, Va.  
 3KZ 2. Melbourne, Aus.  
 No. 2 1. Turin, I. (1357)  
 ..... 5 Christianssand, Nor. (1357)

1360 (220.4) [ ]

**CMJP .075** Moren, Cuba  
 CW41 .05 San Jose, Uru.  
**KGER 1.** Long Beach, Cal.  
 PRAX 2. R. de Janeiro, B. (1364)  
**WCSC .5** Charleston, S. C.  
**WFBL 1.** Syracuse, N. Y.  
**WGES .5** Chicago, Ill.  
**WQBC .5** Vicksburg, Miss.  
 XQHD 2. Shanghai, Chn.  
 ..... 1.7 Torun, Pol. (1366)

1370 (218.8) [ ]

**CHSJ .1** St. John, N. B.  
**CMGE .03** Cardenas, Cuba (1375)  
 CX42 1. Montevideo, Uru.  
**KCRG 1.** Enid, Okla.  
**KERN 1.** Bakersfield, Calif.  
**KFBF .05** Everett, Wa.  
**KFJM 1.** Grand Forks, N. D.  
**KFJZ 1.** Ft. Worth, Tex.  
**KGAR 1.** Tucson, Ariz.  
**KGFG 1.** Oklahoma City  
**KGFL 1.** Roswell, N. M.  
**KGKL 1.** San Angelo, Tex.  
**KIGA 1.** Clevis, N. M.  
**KLUF 1.** Galveston, Tex.  
**KMAC 1.** San Antonio, Tex.  
**KONO 1.** San Antonio, Tex.  
**KOOS 1.** Marshfield, Ora.  
**KRE 1.** Berkeley, Cal.  
**KSO 1.** Des Moines, Ia.  
**KUJ 1.** Walla Walla, Wa.  
**KVL 1.** Seattle, Wn.  
**KWKC 1.** Kansas City, Mo.  
**KWYO 1.** Sheridan, Wyo.  
 SCF 1.5 Hudiksvall, Swe. (1375)  
**WBTM 1.** Danville, Va.  
**WCBM 1.** Baltimore, Md.  
**WDAS 1.** Philadelphia, Pa.  
**WGL 1.** Ft. Wayne, Ind.  
**WGLC 1.** Hudson Falls, N. Y.  
**WHBD 1.** Mt. Orab, Ohio  
**WHBQ 1.** Memphis, Tenn.  
**WHDF 1.** Calumet, Mich.  
**WHET 1.** Dothan, Ala.  
**WIBM 1.** Jackson, Mich.  
**WJBK .05** Detroit, Mich.  
**WJTL 1.** Atlanta, Ga.  
**WLEY 1.** Lexington, Mass.  
**WLVA 1.** Lynchburg, Va.  
**WMBR 1.** Jacksonville, Fla.  
**WPFJ 1.** Hattiesburg, Miss.  
**WQDM 1.** St. Albans, Vt.  
**WRAK 1.** Williamsport, Pa.  
**WRDO 1.** Augusta, Me.  
**WRJN 1.** Racine, Wis.  
**WVSV .05** Buffalo, N. Y.  
**XEFZ 1.** Mexico City, D. F.  
 3HS .05 Horsham, Ausl.  
 ..... 5 Basle, Swi. (1375)  
 ..... 5 Berne, Swi. (1375)

1380 (217.3) [ ]

CE138 1. Santiago, Chl. (1385)  
**CMJC .15** Comaguay, Cu. (1382)

CW42 .02 Artigas, Uru.  
**KOH .5** Reno, Nev.  
**KQV .5** Pittsburgh, Pa.  
**LU6 .05** Mar del Plata, Arg.  
 SCG .2 Halsingborg, Swe. (1384)  
**TGX .075** Guatemala City, Gua.  
**WKBH 1.** LaCrosse, Wis.  
**WSMK .2** Dayton, Ohio  
**XETB .125** Torreon, Coah.  
**4BH .6** Brisbane, Ausl.  
 No. 2 2. Warsaw, Pol. (1384)

1390 (215.7) [ ]

CE139 .1 Rancagua, Chl.  
**CJRC .1** Winnipeg, Man.  
**CMPN .5** Havana, Cuba (1395)  
**HIH .015** San Pedro de M., D. R. (1396)  
**KLRA 1.** Little Rock, Ark.  
**KOY .5** Phoenix, Ariz.  
**LT10 1.** Santa Fe, Arg.  
**SCR .05** Uddevalla, Swe. (1393)  
**SCS .2** Umea, Swe. (1393)  
**WHK 1.** Cleveland, Ohio  
**2GN .05** Goulburn, Ausl.  
 ..... 01 Valparaiso, Chl.  
 ..... 5. Radio-Lyons, F. (1393)

1400 (214.2) [ ]

**CMCM .05** Havana, Cuba (1405)  
 CW43 .02 Melo, Uru.  
 FFZ .25 Shanghai, Chn.  
**KLO .5** Ogden, Utah  
**KTUL .25** Tulsa, Okla.  
 SCE .2 Halmstad, Swe. (1402)  
**WARD .5** Brooklyn, N. Y.  
**WBAA .5** Lafayette, Ind.  
**WBBC .5** Brooklyn, N. Y.  
**WBKF .5** Indianapolis, Ind.  
**WLTH .5** Brooklyn, N. Y.  
**WVFW .5** Brooklyn, N. Y.  
**XEFV .1** Juarez, Chih.  
**2ZO .05** Palmerston, N. Z.  
**3GL .05** Geelong, Ausl.

1410 (212.6) [ ]

**CKFC .05** Vancouver, B. C.  
**CKMO .1** Vancouver, B. C.  
**CMGH .05** Havana, Cuba  
 CX44 1. Montevideo, Uru.  
 SCW 2. Ornskoldsvik, Swe. (1411)  
**KGRS 1.** Amarillo, Tex.  
**WAAB .5** Boston, Mass.  
**WBCM .5** Bay City, Mich.  
**WDAG 1.** Amarillo, Tex.  
**WHBL .5** Sheboygan, Wis.  
**WHIS .25** Bluefield, W. Va.  
**WIDX .5** Mobile, Ala.  
**WRBX .25** Roanoke, Va.  
**WROK .5** Rockford, Ill.  
**WWSA .5** Montgomery, Ala.  
**2KO .2** Newcastle, Ausl. (1415)

1420 (211.1) [ ]

CE142 1. Santiago, Chl. (1425)  
**CKQB .1** Timmins, Ont.  
 CW44 1. Paysandu, Uru.  
**KABO .1** San Antonio, Tex.  
**KBPS .1** Portland, Ore.  
**KCMC .1** Toxarkana, Ark.  
**KFIZ .1** Fond du Lac, Wis.  
**KGFF .1** Shawnee, Okla.  
**KGCC .1** San Francisco, Calif.  
**KGIW .1** Alamosa, Colo.  
**KGIK .1** Las Vegas, Nev.

**KICK .1** Carter Lake, Iowa  
**KIDW .1** Lamar, Colo.  
**KORE .1** Eugene, Ore.  
**KUMA .1** Yuma, Ariz.  
**KXL .1** Portland, Ore.  
**OFE 1.2** Tampere, Fin.  
**OFR 1.2** Tampere, Fin.  
**WAGO .1** Waco, Tex.  
**WAGM .1** Presque Isle, Me.  
**WAMC .1** Anniston, Ala.  
**WAZL .1** Hazleton, Pa.  
**WEED .1** Greenville, N. C.  
**WEHS .1** Cicero, Ill.  
**WELL .95** Battle Creek, Mich.  
**WENG .1** Albany, Ga.  
**WHDL .1** Tupper Lake, N. Y.  
**WHFO .1** Cicero, Ill.  
**WILM .1** Wilmington, Del.  
**WJBO .1** Baton Rouge, La.  
**WJMS .1** Ironwood, Mich.  
**WKBI .1** Cicero, Ill.  
**WLAP .1** Lexington, Ky.  
**WLBK .1** Kansas City, Kan.  
**WLEU .1** Erie, Pa.  
**WMA3 .1** Springfield, Mass.  
**WMBC .1** Detroit, Mich.  
**WMBH .1** Joplin, Mo.  
**WNRA .1** Muscle Shoals, Ala.  
**WPAD .1** Pappuach, Ky.  
**WSPA .1** Spartanburg, S. C.  
**WTBO .1** Cumberland, Md.  
**XHHK .1** Shanghai Chn.  
**1ZS .05** Auckland, N. Z.  
**3AW .3** Melbourne, Ausl. (1425)  
 ..... 1. Newcastle, G. B. (1429)  
 ..... 2. Bezier, F. (1429)

1430 (209.7) [ ]

CE143 1. Magallanes, Chl.  
**HAE2 1.25** Magyarovar, Hun. (1435)  
**HAE3 1.25** Miskolc, Hun. (1438)  
**HAE4 1.25** Pecs, Hun. (1438)  
**KECA 1.** Los Angeles, Calif.  
**KGNF .5** No. Platte, Neb.  
**KWCR .25** Cedar Rapids, Iowa  
**LP9 1.5** LaPlata, Arg.  
**LS11 .000** Buenos Aires, Arg.  
**RV10 100.** Minsk, USSR. (1438)  
**WBAK .5** Harrisburg, Pa.  
**WBNS .5** Columbus, Ohio  
**WHCC .5** Rochester, N. Y.  
**WHP .5** Harrisburg, Pa.  
**WNBR .5** Memphis, Tenn.  
**WOKO .5** Albany, N. Y.  
**2WL .05** Wollongong, Ausl. (1435)

1440 (208.2) [ ]

**CMBL .2** Havana, Cuba (1445)  
**CS1RS 1.** Oporto, Por. (1448)  
**KDFN .5** Casper, Wyo.  
**KLS .25** Oakland, Calif.  
**KXYZ .25** Houston, Tex.  
**TIFS .0075** Cartago, C. R. (1441)  
**WBG .5** Greensboro, N. C.  
**WCSA .25** Allentown, Pa.  
**WMBD .5** Peoria, Ill.  
**WSAN .25** Allentown, Pa.  
**WTAD .5** Quincy, Ill.

1450 (206.8) [ ]

CE145 1. Rancagua, Chl.  
**CFGT .05** Victoria, B. C.  
**CKX .5** Brandon, Man.  
**CX46 .25** Montevideo, Uru.  
**KTBS 1.** Shreveport, La.

## INDEX BY FREQUENCIES AND DIAL NUMBERS

SCA .15 Boras, Swe.  
 SCI .2 Kalmar, Swe. (1456)  
**TIEP .0075** San Jose, C. R.  
**WGAR .5** Cleveland, Ohio  
**WHOM .25** Jersey City, N. J.  
**WSAR .5** Fall River, Mass.  
**WTFI .5** Athens, Ga.  
**XEAB .0075** Nuevo Laredo, Tama.  
**3ZM .05** Christchurch, N. Z.  
 ..... .01 Valparaiso, Chl.  
 ..... 1.5 Radio-Agen, F. (1456)  
 ..... 10. Pecamp, F. (1456)  
 ..... 10. Normandie, F. (1456)

### 1460 (205.4) [ ]

CE146 .5 Santiago, Chl. (1465)  
 CW46 .03 Tuouarengo, Uru.  
**KSTP .10** St. Paul, Minn.  
**WJSV .10** Washington, D. C.  
 XQHT 1. Shanghai, Chn.  
 ZP5 .15 Asuncion, Par. (1465)  
 7UV .2 Ulverstone, Ausl.  
 ..... 1.5 Dresden, G. (1465)

### 1470 (204) [ ]

**KGA 5.** Spokane, Wash.  
 LU9 .05 Azul, Arg.  
**WLAC 5.** Nashville, Tenn.  
 3AK .05 Melbourne, Ausl.  
 4ZW .05 Dunedin, N. Z.  
 ..... .3 Plymouth, G.B. (1474)  
 ..... .25 Bilbao, Sp. (1477)  
 ..... 1. Bournemouth, G. B. (1474)

### 1480 (202.6) [ ]

**CMBK .015** Havana, Cu. (1485)  
 CW47 .1 Canelones, Uru.  
**KOMA 5.** Oklahoma City, Okla.  
 SCD .2 Gavle, Swe. (1483)  
**WKBW 5.** Buffalo, N. Y.  
 6IX .05 Perth, Ausl.

### 1490 (201.2) [ ]

CX48 2.5 Montevideo, Uru.  
 EAJ28 .25 Bilbao, Sp. (1492)  
 ON4CE .1 Chateleineau, Blg. (1492)  
 ON4EB .1 Antwerp, Blg. (1492)  
 SCT .15 Upsala, Swe. (1492)  
**WCKY 5.** Covington, Ky.  
 ..... 1. Bordeaux, F. (1492)  
 ..... .1 Binche, Blg. (1492)  
 ..... .2 Nimes, F. (1492)  
 ..... .6 Turku, Fin. (1492)

### 1500 (199.9) [ ]

**CRCS .1** Chicoutimi, Que.  
**KDB .1** Santa Barbara, Calif.  
**KGFI .1** Corpus Christi, Tex.  
**KGFK .1** Moorhead, Minn.  
**KGKB .1** Tyler, Texas  
**KGKY .1** Scottsbluff, Neb.  
**KNOW .1** Austin, Tex.  
**KOTN .1** Pine Bluff, Ark.  
**KPJM .1** Prescott, Ariz.  
**KPQ .1** Wenatchee, Wash.

**KREG .1** Santa Ana, Calif.  
**KKO .1** El Centro, Calif.  
 SCM .25 Kristinehamn, Swe.  
**WGNW .1** Brooklyn, N. Y.  
**WDCN .1** Durham, N. C.  
**WFDV .1** Rome, Ga.  
**WHEF .1** Kosciusko, Miss.  
**WKBB .1** E. Dubuque, Ill.  
**WKBV .1** Richmond, Ind.  
**WKBZ .1** Ludington, Mich.  
**WKEU .1** LaGrange, Ga.  
**WMBQ .1** Brooklyn, N. Y.  
**WMEC .1** Chelsea, Mass.  
**WMPF .1** Lapeer, Mich.  
**WBNF .1** Binghamton, N. Y.  
**WOPI .1** Bristol, Tenn.  
**WPEN .1** Philadelphia, Pa.  
**WRDW .1** Augusta, Ga.  
**WSYB .1** Rutland, Vt.  
**WVRL .1** Woodside, N. Y.  
**WWSW .1** Pittsburgh, Pa.  
 2AY .05 Albury, Ausl.  
 ..... 10 Riga, Lat. (1510)

### 1510 (198.6) [ ]

**CFRC .1** Kingston, Ont.  
**CKCR .1** Waterloo, Ont.  
**KIFS .1** Ft. Klamath, Ore. (1518)  
 SCH .25 Jonkoping, Swe. (1515)  
 SCJ .2 Karlskrona, Swe. (1530)  
 ..... .1 Liege Exp. Blg.  
 ..... .1 Verviers, Blg.  
 ..... .1 Verviers, Blg.

## INDEX BY COUNTRIES, STATES AND CITIES Frequency in second column, power in watts in third

ALABAMA	Prescott	El Centro	San Diego
<b>Anniston</b>	KPJM 1500	KXO 1500	KFSD 600
WAMC 1420	100	100	1000
<b>Birmingham</b>	<b>Tucson</b>	<b>Eureka</b>	KGB 1330
WAPI 1140	KGAR 1370	KIEM 1210	<b>San Francisco</b>
WBRC 930	KVOA 1260	500	KFRC 610
WSGN 1310	100	<b>Fresno</b>	KFWI 930
<b>Dothan</b>	<b>Yuma</b>	KMJ 580	KGGC 1420
WHET 1370	KUMA 1420	100	KGO 790
<b>Gadsden</b>	<b>ARKANSAS</b>	<b>Glendale</b>	KJBS 1070
WJBY 1210	<b>Blytheville</b>	KIEV 850	100
<b>Huntsville</b>	KLCN 1290	1000	KPO 680
WBHS 1200	<b>Fayetteville</b>	KFVB 950	1000
<b>Mobile</b>	KUOA 1260	500	KTAB 560
WODX 1410	<b>Fort Smith</b>	25000	KYA 1230
<b>Montgomery</b>	KFPW 1210	<b>Long Beach</b>	<b>San Jose</b>
WSFA 1410	<b>Hot Springs</b>	KFOK 1250	KQW 1010
<b>Muscle Shoals</b>	KTHS 1060	1000	<b>Santa Ana</b>
WNRA 1420	<b>Jonesboro</b>	1000	KREG 1500
<b>ALASKA</b>	KBTM 1200	<b>Los Angeles</b>	<b>Santa Barbara</b>
<b>Anchorage</b>	<b>Little Rock</b>	KECA 1430	KDB 1500
KFQD 600	KARK 890	1000	<b>Stockton</b>
Jumeau	KGHI 1200	KFI 640	KGDM 1100
KIFH 1310	1000	KFSG 1120	250
<b>Ketchikan</b>	<b>Pine Bluff</b>	KFVD 1000	KWG 1200
KGBU 900	KOTN 1500	100	<b>COLORADO</b>
<b>ARIZONA</b>	<b>Texarkana</b>	KGFJ 1200	<b>Alamosa</b>
<b>Jerome</b>	KCMC 1420	1000	KGIW 1420
KCRJ 1310	<b>CALIFORNIA</b>	KHJ 900	<b>Colorado Springs</b>
<b>Lowell</b>	<b>Bakersfield</b>	KRKD 1120	KVOR 1270
KSUN 1200	KERN 1370	500	<b>Denver</b>
<b>Phoenix</b>	<b>Berkeley</b>	KTM 780	KFEL 920
KOY 1390	KRE 1370	250	KFFX 920
KTAR 620	<b>Beverly Hills</b>	<b>Modesto</b>	KLZ 560
	KMPC 710	KTRB 740	KOA 830
	<b>Burbank</b>	<b>Oakland</b>	KPOF 880
	KELW 780	KLS 1440	<b>Grand Junction</b>
		250	KFXJ 1200
		1000	<b>Greeley</b>
		500	KFKA 880
		500	500
		<b>Pasadena</b>	
		KPPC 1210	
		<b>Sacramento</b>	
		KFBK 1310	
		<b>San Bernardino</b>	
		KFXM 1210	

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<b>Lamar</b> KIDW 1420 100	<b>Honolulu</b> KGMB 1320 250 KGU 750 2500	<b>Indianapolis</b> WFBM 1230 1000 WKBF 1400 500	<b>Monroe</b> KMLB 1200 100
<b>Pueblo</b> KGHF 1320 250	<b>IDAHO</b>	<b>Muncie</b> WLBC 1310 50	<b>New Orleans</b> WBBX 1200 100 WDSU 1250 1000 WJBW 1200 100 WSMB 1320 500 WWL 850 10000
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<b>Washington</b> WJSV 1460 10000 WMAL 630 250 WOL 1310 100 WRC 950 500	<b>Cicero</b> WEHS 1420 100 WHFC 1420 100 WKBI 1420 100	<b>Carter Lake</b> KICK 1420 100	<b>Hagerstown</b> WJEJ 1210 100
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<b>Gainesville</b> WRUF 830 5000	<b>Harrisburg</b> WEBQ 1210 100	<b>Decorah</b> KGCA 1270 100 KWLC 1270 100	<b>Boston</b> WAAB 1410 500 WBZ 990 50000 WEEI 590 1000 WHDH 830 1000 WNAC 1230 1000
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<b>Orlando</b> WDBO 580 250	<b>Peoria</b> WMBD 1440 500	<b>Marshalltown</b> KFJB 1200 100	<b>Lexington</b> WLEY 1370 100
<b>Pensacola</b> WCOA 1340 500	<b>Quincy</b> WTAD 1440 500	<b>Shenandoah</b> KFNF 890 500 KMA 930 500	<b>New Bedford</b> WNBH 1310 100
<b>St. Petersburg</b> WSUN 620 1000	<b>Rockford</b> WROK 1410 500	<b>Sioux City</b> KSCJ 1330 1000	<b>Springfield</b> WBZA 990 1000 WMAS 1420 100
<b>Tampa</b> WDAE 1220 1000	<b>Rock Island</b> WHBF 1210 100	<b>Waterloo</b> WMT 600 500	<b>Worcester</b> WORC 1280 500 WTAG 580 750
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<b>Kalamazoo</b> WKZO 590 1000	<b>Billings</b> KGHL 950 1000	<b>Albany</b> WOKO 1430 500	<b>Greenville</b> WED 1420 100
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<b>Ludington</b> WKBZ 1500 100	<b>Kallispell</b> KGEZ 1310 100	<b>Brooklyn</b> WARD 1400 500	<b>NORTH DAKOTA</b>
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<b>Fergus Falls</b> KGDE 1200 100	<b>Clay Center</b> KMMJ 740 1000	<b>WLTH</b> 1400 500	<b>Fargo</b> WDAY 940 1000
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<b>WDGY</b> 1180 1000	<b>KFOR</b> 1210 100	<b>WVFW</b> 1400 500	<b>Minot</b> KLPM 1240 250
<b>WLB</b> 1250 1000	<b>Norfolk</b> WJAG 1060 1000	<b>Buffalo</b> WBBN 900 1000	<b>OHIO</b>
<b>WRHM</b> 1250 1000	<b>North Platte</b> KGNP 1430 500	<b>WBR</b> 1310 100	<b>Akron</b> WADC 1320 1000
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<b>Northfield</b> WCAL 1250 1000	<b>WOW</b> 590 1000	<b>WKBW</b> 1480 5000	<b>Canton</b> WHBC 1200 100
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<b>Greenwood</b> WKFI 1210 100	<b>NEVADA</b>	<b>Chester</b> WGNV 1210 100	<b>WLW</b> 700 50000
<b>Hattiesburg</b> WPFB 1370 100	<b>Las Vegas</b> KGLX 1420 100	<b>Elmira</b> WESG 680 1000	<b>WSAI</b> 1330 1000
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<b>Kosciusko</b> WHEF 1500 100	<b>NEW HAMPSHIRE</b>	<b>Hudson Falls</b> WGLC 1370 10*	<b>WKRC</b> 550 1000
<b>Laurel</b> WAML 1310 100	<b>Laconia</b> WLNH 1310 100	<b>Jamestown</b> WOCL 1210 50	<b>WLW</b> 700 50000
<b>Meridian</b> WCOC 880 500	<b>Manchester</b> WFEA 1430 500	<b>New York</b>	<b>WSAI</b> 1330 1000
<b>Mississippi City</b> WCCM 1210 100	<b>Portsmouth</b> WHEB 740 25*	<b>WABC</b> 860 50000	<b>WGAR</b> 1450 500
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<b>Columbia</b> KFRU 630 500	<b>Jersey City</b> WAAT 940 300	<b>WFAB</b> 1300 1000	<b>WBNS</b> 1430 500
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<b>Kansas City</b> KMBC 950 1000	<b>WNEW</b> 1250 1000	<b>WJZ</b> 760 50000	<b>Dayton</b> WSMK 1380 200
<b>KWKC</b> 1370 100	<b>WOR</b> 710 5000	<b>WLWL</b> 1100 5000	<b>Mount Orab</b> WHBD 1370 100
<b>WDAF</b> 610 1000	<b>Red Bank</b> WJBI 1210 100	<b>WMCA</b> 570 500	<b>Toledo</b> WSPD 1340 1000
<b>WHB</b> 860 500	<b>Trenton</b> WTNJ 1280 500	<b>WNYC</b> 810 500	<b>Youngstown</b> WKBN 570 500
<b>WQQ</b> 1300 1000	<b>Zarephath</b> WAWZ 1350 250	<b>WOV</b> 1130 1000	<b>Zanesville</b> WALR 1210 100
<b>St. Joseph</b> KFEO 680 2500	<b>NEW MEXICO</b>	<b>Rochester</b> WHAM 1150 50000	<b>OKLAHOMA</b>
<b>St. Louis</b>	<b>Albuquerque</b> KGGM 1230 250	<b>WHBC</b> 1430 500	<b>Elk City</b> KASA 1210 100
<b>KFUO</b> 550 500	<b>KOB</b> 1180 10000	<b>Saranac Lake</b> WNBZ 1290 50	<b>Enid</b> KCRC 1370 100
<b>KMOX</b> 1090 50000	<b>Clovis</b> KICA 1370 100	<b>Schenectady</b> WGY 790 50000	<b>Norman</b> WNAD 1010 500
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		<b>Whupper Lake</b> WHDL 1420 100	<b>Ponca City</b> WBBZ 1200 100
		<b>Utica</b>	<b>Shawnee</b> KGFF 1420 100
		<b>White Plains</b> WFAS 1210 100	<b>Tulsa</b>
		<b>Woodside</b> WVRL 1500 100	<b>KTUL</b> 1400 250
		<b>NORTH CAROLINA</b>	<b>KVOO</b> 1140 25000
		<b>Asheville</b>	
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<b>KORE</b> 1420 100		<b>KZEG</b> 618.5 1000	<b>WFLA</b> 800 50000	
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<b>KIFS</b> 1518 100		<b>San Juan</b>	<b>KFPL</b> 1310 100	<b>KKRO</b> 1310 100
<b>Marshfield</b>		<b>WKAQ</b> 1240 1000	<b>El Paso</b>	<b>Bellingham</b>
<b>KOOS</b> 1370 100		<b>WNEL</b> 1290 500	<b>KTSM</b> 1310 100	<b>KVOS</b> 1200 100
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<b>Portland</b>		<b>WEAN</b> 780 500	<b>KEJZ</b> 1370 100	<b>Olympia</b>
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<b>KBPS</b> 1420 100		<b>WPRO</b> 1210 100	<b>WBAP</b> 800 50000	<b>Pullman</b>
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<b>KFJR</b> 1300 500		<b>Charleston</b>	<b>KLUF</b> 1370 100	<b>Seattle</b>
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<b>KOIN</b> 940 1000		<b>Columbia</b>	<b>KFPM</b> 1310 15	<b>KOL</b> 1270 1000
<b>KXJJ</b> 1040 500		<b>WIS</b> 1010 500	<b>Harlingen</b>	<b>KOMO</b> 920 1000
<b>KXL</b> 1420 100		<b>Greenville</b>	<b>KRGV</b> 1260 500	<b>KPCB</b> 650 100
<b>PENNSYLVANIA</b>		<b>WFBC</b> 1200 100	<b>Houston</b>	<b>KRSC</b> 1120 100
<b>Allentown</b>		<b>WSPA</b> 1420 100	<b>KPRC</b> 920 1000	<b>KTW</b> 1220 1000
<b>WCBA</b> 1440 250		<b>SOUTH DAKOTA</b>	<b>KTRH</b> 630 500	<b>KVL</b> 1370 100
<b>WSAN</b> 1440 250		<b>Brookings</b>	<b>KXYZ</b> 1440 250	<b>KXA</b> 760 250
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<b>WIBG</b> 970 100		<b>KSOU</b> 1110 1000	<b>KTSA</b> 1290 1000	<b>Walla Walla</b>
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<b>WSAJ</b> 1310 100		<b>Waterstown</b>	<b>Tyler</b>	<b>Wenatchee</b>
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<b>WKJC</b> 1200 100		<b>Knoxville</b>	<b>KSL</b> 1130 50000	<b>WMMN</b> 890 250
<b>Philadelphia</b>		<b>WNOX</b> 560 1000	<b>VERMONT</b>	<b>Huntington</b>
<b>WCAU</b> 1170 50000		<b>WROL</b> 1310 100	<b>Burlington</b>	<b>WSAZ</b> 1190 1000
<b>WDAS</b> 1370 100		<b>Memphis</b>	<b>WCAX</b> 1200 100	<b>Wheeling</b>
<b>WFI</b> 560 500		<b>WBHQ</b> 1370 100	<b>Rutland</b>	<b>WWVA</b> 1160 5000
<b>WHAT</b> 1310 100		<b>WMC</b> 780 500	<b>WSYB</b> 1500 100	<b>WISCONSIN</b>
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<b>WPEN</b> 1500 100		<b>Nashville</b>	<b>Springfield</b>	<b>Fond du Lac</b>
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<b>WTEL</b> 1310 100		<b>WSM</b> 650 50000	<b>Waterbury</b>	<b>Green Bay</b>
<b>Pittsburgh</b>		<b>Springfield</b>	<b>WDEW</b> 550 500	<b>WBHV</b> 1200 100
<b>KDKA</b> 980 50000		<b>WSLX</b> 1210 100	<b>VIRGINIA</b>	<b>Janesville</b>
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<b>WCAE</b> 1220 1000		<b>Amarillo</b>	<b>NAA</b> 690 1000	<b>LaCrosse</b>
<b>WJAS</b> 1290 1000		<b>KGRS</b> 1410 1000	<b>Charlottesville</b>	<b>KBH</b> 1380 1000
<b>WWSW</b> 1500 100		<b>WDAG</b> 1410 1000	<b>WEHC</b> 1350 500	<b>Madison</b>
<b>Reading</b>		<b>Austin</b>	<b>Danville</b>	<b>WHA</b> 940 1000
<b>WEBU</b> 830 1000		<b>KNOW</b> 1500 100	<b>WBTM</b> 1370 100	<b>WBA</b> 1280 500
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<b>Scranton</b>		<b>KFDM</b> 560 500	<b>WLVA</b> 1370 100	<b>WOMT</b> 1210 100
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<b>WNBO</b> 1200 100		<b>WTAW</b> 1120 500	<b>WTAR</b> 780 500	<b>WTMJ</b> 620 1000
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<b>Wilkes-Barre</b>			<b>Richmond</b>	<b>Racine</b>
<b>WBAX</b> 1210 100			<b>WBBL</b> 1210 100	<b>WRJN</b> 1370 100
<b>WBRE</b> 1310 100			<b>WMBG</b> 1210 100	<b>Sheboygan</b>
<b>Williamsport</b>				<b>WHBL</b> 1410 500
<b>WRAK</b> 1370 100				<b>Stevens Point</b>
				<b>WLBL</b> 900 2500

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CFCN 1030 10000  
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Edmonton  
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CJCA 730 1000  
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Kamloops  
CFJC 1310 100

Kelowna  
CKOV 1210 50

Trall  
CJAT 1200 50

Vancouver  
CJOR 600 500  
CKCD 1010 100  
CKFC 1410 50  
CKMO 1410 100  
CKWX 1010 100  
CRCV 1100 1000

Victoria  
CFCT 1450 50

**MANITOBA**

Brandon  
CKX 1450 500

Winnipeg  
CJRC 1390 100  
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**NEW BRUNSWICK**

Fredericton  
GFNB 1030 500

St. John  
CFBO 1210 100  
CHSJ 1370 100

**NOVA SCOTIA**

Glace Bay  
VAS 685 2000

Halifax  
CHNS 1050 500

Sydney  
CJCB 880 50

Wolfville  
CKIC 1010 50

Yarmouth  
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Brantford  
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10-BQ 1200 15

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CFRC 1510 100

Kirkland Lake  
CJKL 1310 100

London  
CFPL 730 100

North Bay  
CFCH 930 100

Ottawa  
CKCO 1010 100  
CRCO 880 1000

Prescott  
CFCL 930 100

St. Catharines  
CKTB 1200 100

Stratford  
10-AK 1200 15

Sudbury  
CJCS 780 500

Timmins  
CKGB 1420 100

Toronto  
CFRB 690 10000  
CKCL 580 100  
CRCT 960 5000  
CKNC 1030 100

Waterloo  
CKCR 1510 100

Windsor  
CKLW 840 5000

Wingham  
10-BP 1200 15

**PRINCE EDWARD ISLAND**

Charlottetown  
CFCY 630 500  
CHCK 1310 50

Summerside  
CHGS 1120 50

**QUEBEC**

Chicoutimi  
CRCS 1500 100

Hull  
CKKH 1210 100

Montmagny  
VEYEK 1195 10

Montreal  
CFCF 600 500  
CHLP 1120 100  
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New Carlisle  
CHNC 1210 100

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CHRC 580 100  
CKCV 1310 50

**SASKATCHEWAN**

Canora  
10-BU 1200 15

Moose Jaw  
CHAB 1200 100  
CJRM 540 1000

Prince Albert  
CKBI 1210 100

Regina  
CHWC 1010 500  
CKCK 1010 500

Saskatoon  
CFQC 1230 500

Yorkton  
CJGX 630 500

**NEWFOUNDLAND**

St. John's  
VOAC 1300 40  
VOAS 940 100  
VOGY 1050 75  
VOKW 1085 30  
VONF 1195 5000  
VOVR 700 500

**MIQUELON**

St. Pierre  
FQN 574 250

**CENTRAL AMERICA**

**COSTA RICA**

Cartago  
TIFS 1441 7.5  
TIGA 1014 30

San Jose  
TICR 912 75  
TIEA 833 7.5  
TIEP 1450 7.5  
TIFB 714 30  
TIGP 800 75  
TIRCA 1100 500  
TISO 550 250  
TITV 999 7.5  
TIVL 869 30  
TIXA 614 7.5

**GUATEMALA**

Guatemala City  
TGW 1350 500  
TGX 1380 75

**NICARAGUA**

Granada  
YNCRG 870 150

**EL SALVADOR**

San Salvador  
RDN 680 500

**MEXICO**

**AGUASCALIENTES**  
Aguascalientes  
XFC 805 350

**BAJA CALIFORNIA**

Agua Caliente  
XEBC 815 2500

Mexicali  
XEAO 560 100

Tijuana  
XEAE 980 800  
XEMO 865 1500  
XEMZ 1210 30

**CHIHUAHUA**

Chihuahua  
XEFI 1260 250

Juarez  
XEJV 1400 100  
XEJ 1015 250

**COAHUILA**

Piedras Negras  
XEPN 585 75000

Saltillo  
XEL 1000 10

Torreon  
XETB 1380 125

**D. F.**

Mexico City  
XEAI 1090 100  
XEAL 660 1000  
XEB 1030 10000  
XECW 1310 10  
XEFA 1250 500

XEFG 1105 250  
XEFO 940 5000  
XEFZ 1370 100  
XEK 990 100  
XEN 711 1000  
XEO 940 5000  
XEP 780 500  
XETW 83u 500  
XETZ 1210 500  
XEW 890 50000  
XEYZ 780 10000  
XFG 638 2000  
XFO 940 5000  
XFX 610 500

Toluca  
XEC 1000 50

**HIDALGO**

Pachuca  
XETU 890 100

**JALISCO**

Guadalajara  
XEA 1000 250  
XED 1155 500

**MICHOACAN**

Morelia  
XEI 1310 250

**NEUVO LEON**

Monterrey  
XEFB 1315 100  
XEFJ 1000 100  
XEH 1132 250  
XET 690 500  
XEX 630 50

**PUEBLA**

Puebla  
XETH 1200 100

**SAN LUIS POTOSI**

San Luis Potosi  
XEAC 1295 100

**SONORA**

Nogales  
XEAF 990 750

**TAMAULIPAS**

Nuevo Laredo  
XEAB 1450 7.5  
XEF 985 100  
XENTE 1115 30000

Reynosa  
XEAW 965 10000

Tampico  
KEFW 1310 70  
KES 1020 250

**VERACRUZ**

Jalapa  
XFB 1290 1000

Veracruz  
XEU 1010 100  
XEWV 1095 250

**YUCATAN**

Merida  
KEFC 1050 100  
KEY 546.8 10  
KEZ 630 500

**WEST INDES**

**CUBA**

Caibarien  
CMHD 945.5 500

Camaguey  
CMJC 1382 150  
CMJE 1170 50  
CMJF 910 200  
CMJG 1050 50  
CMJK 790 500

INDEX BY LOCATIONS

CMJL	960	50
CMJN	1240	50
<b>Cardenas</b>		
CMGE	1375	30
<b>Ciego de Avila</b>		
CMJH	1150	50
CMJI	1335	45
CMJO	1010	50
<b>Cienfuegos</b>		
CMHJ	1125	60
CMHL	1290	20
CMHW	1200	100
<b>Colon</b>		
CMGA	834	100
<b>Cruces</b>		
CMHK	1215	50
<b>Guantanamo</b>		
CMKJ	1300	20
<b>Havana</b>		
CMAF	680	1000
CMBC	1270	150
CMBD	965	250
CMBG	1048	225
CMBJ	1147	500
CMBK	1485	15
CMBL	1445	200
CMBN	1185	150
CMBS	765	200
CMBW	1140	600
CMBX	1185	500
CMBY	1230	250
CMCZ	1005	150
CMC	835	500
CMCA	1230	150
CMCB	1048	150
CMCD	925	500
CMCF	873	250
CMCH	1410	50
CMCJ	1180	500
CMCM	1405	50
CMCN	1357	250
CMCO	1145	500
CMCP	1270	150
CMCQ	767	1000
CMCR	1357	150
CMCU	1100	500
CMCW	965	150
CMCY	1316	500
CMDE	915	150
CMK	730	2000
CMQ	645	500
CMW	595	1400
CMX	875	1000
<b>Matanzas</b>		
CMGB	1205	30
CMGC	820	30
CMGF	971.5	100
CMGH	1040	15
<b>Moron</b>		
CMJP	1360	75
<b>Pinar del Rio</b>		
CMAB	1249	20
<b>Sagua la Grande</b>		
CMHA	1103	500
<b>Santa Clara</b>		
CMHI	1007	250
<b>Santiago</b>		
CMKC	1034	150
<b>DOMINICAN REPUBLIC</b>		
<b>San Pedro de Marcoris</b>		
HIH	1395	15
<b>Santo Domingo</b>		
HIJ	1195	15
HIX	598	1500
HIZ	1300	10

<b>HAITI</b>		
<b>Port-au-Prince</b>		
HHK	920	1000

**SOUTH AMERICA**  
**ARGENTINE**

<b>Azul</b>		
LU9	1470	50
<b>Bahia Blanca</b>		
LU2	800	500
<b>Buenos Aires</b>		
LR1	1070	500
LR2	910	8500
LR3	950	12000
LR4	990	12000
LR5	830	20000
LR6	870	3000
LR7	750	1000
LR8	1150	5000
LR9	1030	5000
LR10	790	8000
LS1	710	5000
LS2	1190	5500
LS3	630	4500
LS4	670	6000
LS5	1110	5000
LS6	1350	1500
LS7	1310	3000
LS8	1230	20000
LS9	1270	5000
LS10	590	3500
LS11	1430	....

<b>Cordoba</b>		
LV2	880	500
LV3	620	350
<b>LaPlata</b>		
LP9	1430	1500
<b>Las Heras</b>		
LV10	860	350
<b>Mar del Plata</b>		
LU6	1380	50
<b>Mendoza</b>		
LT4	760	170
<b>Punta Alta</b>		
LU7	1280	200
<b>Resistencia</b>		
LT5	1160	500
<b>Rosario</b>		
LT1	780	4500
LT3	1080	250
LT8	840	350
LT9	1060	100
LV9	900	500
<b>San Juan</b>		
LV1	730	1500
LV5	1120	800
<b>Santa Fe</b>		
LT10	1390	100
<b>Tucuman</b>		
LV7	820	300

**BOLIVIA**

<b>La Paz</b>		
CPX	1250	5000
CP4	1040	10000

**BRAZIL**

<b>Curitiba</b>		
PRAN	789	8
<b>Franca</b>		
PAZ	1110	50
<b>Juiz de Fora</b>		
PRAJ	789	200
<b>Mogy das Cruzes</b>		
PRAY	789	50
<b>Pelotas</b>		
PRAD	920	50

<b>Pernambuco</b>		
PRAP	967	300
<b>Porto Alegre</b>		
PRAG	706	3000
<b>Ribeirao Preto</b>		
PRAI	857	10
<b>Rio de Janeiro</b>		
PRAA	1050	2000
PRAC	857	500
PRAK	1153	500
PRAX	1364	2000
PRAX	860	500
<b>Sao Paulo</b>		
PRAE	921	1000
PRAR	1006	500
.....	1284	1000

**CHILE**

<b>Chilnan</b>		
CE113	1130	100
<b>Concepcion</b>		
CE108	1080	100
<b>Magallanes</b>		
CE104	1040	100
CE119	1190	100
CE143	1430	100
<b>Rancagua</b>		
CE132	1325	100
CE139	1390	100
CE145	1450	100
<b>Santiago</b>		
CE58	585	1000
CE62	625	1000
CE66	665	1000
CE70	705	1000
CE74	745	1000
CE78	785	1000
CE82	825	1000
CE86	865	1000
CE90	905	1000
CE94	945	1000
CE98	985	1000
CE100	1005	1000
CE102	1025	250
CE106	1065	500
CE107	1075	100
CE110	1105	100
CE114	1145	100
CE118	1185	100
CE122	1225	100
CE126	1265	100
CE130	1305	100
CE131	1315	100
CE134	1345	150
CE138	1385	100
CE142	1425	100
CE146	1465	500

<b>Temuco</b>		
CE92	920	100
CE128	1280	500
<b>Valparaiso</b>		
CE88	885	100
CE105	1050	100
CE121	1210	100
CE125	1250	100
<b>Vina del Mar</b>		
CE101	1010	100
CE109	1090	105

**COLOMBIA**

<b>Bogota</b>		
HJN	681	1000
HJ3ABD	1115	50
HJ3ABE	1200	100
HJ3ABH	1000	100

**PARAGUAY**

<b>Asuncion</b>		
ZP1	1135	1000
ZP3	1000	300

ZP4	1275	150
ZP5	1465	150

**PERU**

<b>Lima</b>		
OAX	750	1500

**URUGUAY**

<b>Artigas</b>		
CW42	1380	20
<b>Canelones</b>		
CW47	1480	100
<b>Florida</b>		
CW39	1320	75
<b>Melo</b>		
CW43	1400	20

**Montivideo**

CX4	610	1000
CX6	650	5000
CX8	690	1000
CX10	730	1000
CX12	770	1000
CX14	810	1000
CX16	850	200
CX18	890	750
CX20	930	2000
CX22	970	250
CX24	1010	10000
CX26	1050	2000
CX28	1090	2000
CX30	1130	500
CX32	1170	500
CX34	1210	500
CX36	1250	250
CX38	1290	250
CX40	1330	500
CX42	1370	1000
CX44	1410	1000
CX46	1450	250
CX48	1490	2500

<b>Paysandu</b>		
CW40	1340	30
CW44	1420	100

<b>Salto</b>		
CW32	1180	250
CW34	1220	250
CW36	1260	30
CW38	1300	30
<b>San Jose</b>		
CW41	1360	50
<b>Tucumembo</b>		
CW30	1140	....
CW46	1460	30

**VENEZUELA**

<b>Caracas</b>		
YV1BC	960	5000
YV2BC	882	100
YV3BC	1200	1000
YV17BMO		....
.....	1153	....

**EUROPE**  
**AUSTRIA**

<b>Dornbirn</b>		
.....	1294	500
<b>Graz</b>		
.....	886	7000
<b>Innsbruck</b>		
.....	519	500
<b>Klagenfurt</b>		
.....	1294	500
<b>Linz</b>		
.....	1294	500
<b>Salzburg</b>		
.....	1348	500
<b>Vienna</b>		
.....	592	120000

### INDEX BY LOCATIONS

<b>BELGIUM</b>			..... 1492 1000	<b>Magdeburg</b>	..... 1330 1500	<b>Firenze</b>	IFI 610 20000
<b>Antwerp</b>			<b>Fecamp</b>	..... 1456 10000	<b>Munich</b>	IGE 986 10000	
ON4EB 1492 100			<b>Grenoble</b>	..... 968 20000	..... 740 100000	<b>Milan</b>	IMI 814 50000
<b>Binche</b>			<b>Lille</b>	..... 1213 5000	<b>Nurnberg</b>	No. 2 1348 4000	
..... 1492 100			<b>Limoges</b>	..... 913 500	..... 1267 2000	<b>Naples</b>	INA 1104 1500
<b>Brussels</b>			<b>Lyons</b>	..... 648 15000	<b>Stettin</b>	<b>Palermo</b>	IP A 565 3000
ON4FO 1285 100			Y N 1393 5000	<b>Montpellier</b>	..... 574 100000	<b>Rome</b>	I I R O 713 50000
ON4GT 128b 100			<b>Marseille</b>	..... 749 5000	<b>Trier</b>	No. 2 1258 500	
ON4RC 1285 100			<b>Montpellier</b>	..... 1339 5000	<b>GREAT BRITAIN</b>	<b>Trieste</b>	I I T R 1222 10000
No. 1 620 15000			<b>Nice</b>	..... 1249 20000	<b>Aberdeen</b>	<b>Turin</b>	I I T O 1140 7000
No. 2 932 15000			<b>Nimes</b>	..... 1492 200	..... 1285 1000	No. 2 1357 1000	
<b>Chattelineau</b>			<b>Paris</b>	..... 695 7000	<b>Bournemouth</b>		
ON4CE 1492 100			F P T T 810 1200	<b>Cardiff</b>	..... 1474 1000		
<b>Dampremy</b>			F 8 G C 832 2000	W R 977 50000	<b>Daventry</b>		
ON4FG 1285 100			L L 959 100000	W N 1149 50000	<b>MR</b>	<b>LATVIA</b>	
<b>Ghent</b>			P P 959 100000	<b>M R 767 25000</b>	<b>Falkirk</b>	<b>Madonna</b>	..... 1104 20000
ON4RC 1285 100			R V 959 60000	<b>SN 1050 50000</b>	<b>SR 804 50000</b>	<b>Riga</b>	Y L Z 583 15000
<b>Liege</b>			<b>Radio-Agen</b>	..... 1456 1500	<b>London</b>	..... 1510 10000	
ON4RW 1500 100			..... 1456 10000	L N 1149 50000	<b>LN 1149 50000</b>		
<b>Ottomont</b>			<b>Radio-Normandie</b>	..... 1456 10000	L R 877 50000	<b>NORWAY</b>	
ON4EX 1285 100			<b>Radio-Vitus</b>	..... 1348 2000	<b>Manchester</b>	<b>Aalesund</b>	L K A 850 350
<b>Verviers</b>			<b>Rennes</b>	..... 1040 2500	<b>NN 1013 50000</b>	<b>Bergen</b>	L K B 850 1000
ON4CE 1500 100			<b>Strasbourg</b>	S P T T 859 15000	<b>NR 668 50000</b>	<b>Bodo</b>	L K D 1276 500
No. 2 1500 100			<b>Toulouse</b>	<b>MRD 1175 700</b>	..... 1429 1000	<b>LKD 1276 500</b>	
			..... 776 2000	<b>Plymouth</b>	..... 1474 300	<b>Fredrikstad</b>	L K F 868 700
			..... 895 10000	..... 1474 300		<b>LKF 868 700</b>	
			<b>GERMANY</b>	<b>GREECE</b>		<b>Hamar</b>	L K H 519 700
			<b>Augsburg</b>	<b>Thesalonik</b>	..... 1110 1000	<b>LKH 519 700</b>	
			..... 1267 2000	<b>HOLLAND</b>		<b>Kristianssand</b>	L K K 1274 500
			<b>Berlin</b>	<b>Amsterdam</b>		<b>LKK 1274 500</b>	
			..... 841 100000	<b>PH9 1013 6400</b>		<b>Notodden</b>	L K N 1348 80
			..... 1058 500	<b>Bloemendaal</b>		<b>LKN 1348 80</b>	
			<b>Bremen</b>	..... 1220		<b>Porsgrund</b>	L K P 850 700
			..... 1330 1500	<b>Hague</b>	..... 1000 350	<b>Rjukan</b>	L K R 1348 150
			<b>Breslau</b>	<b>Hilversum</b>	<b>P F B I 995 20000</b>	<b>LKR 1348 150</b>	
			..... 950 60000	<b>HUNGARY</b>		<b>LKS 1276 500</b>	
			<b>Cassel</b>	<b>Budapest</b>		<b>LKM 1357 100</b>	
			..... 1195 1500	<b>HAC 546 1200</b>		<b>LKM 1357 100</b>	
			<b>Dresden</b>	<b>HAL 546 120000</b>		<b>Trondheim</b>	..... 629 1200
			..... 1267 250	<b>No. 2 1321 800</b>			
			<b>Flensburg</b>	<b>Magyarovar</b>			
			..... 1330 1500	<b>HAE-2 1438 1250</b>		<b>POLAND</b>	
			<b>Frankfurt</b>	<b>Miskolc</b>		<b>Cracow</b>	..... 986 2000
			..... 1195 17000	<b>HAE-3 1438 1250</b>		..... 1366 1700	
			<b>Freiburg</b>	<b>Nyiregyhaza</b>		<b>Katowice</b>	..... 758 12000
			..... 1195 5000	<b>HAE 1122 6200</b>		<b>Lotz</b>	..... 1348 1700
			<b>Gleiwitz</b>	<b>Pecs</b>		<b>Lwow</b>	..... 795 16000
			..... 1231 5000	<b>HAE-4 1438 1250</b>		<b>Poznan</b>	..... 868 16000
			<b>Hamburg</b>	<b>IRELAND</b>		..... 1098 1500	
			..... 904 100000	<b>Athlone</b>	..... 565 60000	<b>Torun</b>	..... 1366 1700
			<b>Hanover</b>	<b>Belfast</b>	..... 1122 1000	<b>Warsaw</b>	No. 2 1384 2000
			..... 1330 1500	<b>Cork</b>	<b>6 C K 1240 1000</b>	..... 536 16000	
			<b>Hellsberg</b>	<b>Dublin</b>	<b>2 R N 1348 1000</b>		
			..... 1031 60000	<b>ITALY</b>			
			<b>Kaiserslautern</b>	<b>Barl</b>		<b>PORTUGAL</b>	
			..... 1195 1500	<b>I I B A 1059 20000</b>		<b>Lisbon</b>	..... 1056 2000
			<b>Kiel</b>	<b>Bozano</b>		<b>CTIAA 1056 10</b>	
			..... 1292 250	<b>I I B Z 536 1000</b>		<b>CTIBM 1056 50</b>	
			<b>Konigsberg</b>			<b>CTIBO 936 150</b>	
			..... 1348 500				
			<b>Langenberg</b>				
			..... 658 60000				
			<b>Leipsig</b>				
			..... 785 120000				

INDEX BY LOCATIONS

CTIBP	1275	50
CTIDH	952	10
CTIDS	1058	10
CTIEB	1056	50
CTIGK	1063	2000
CTIGL	885	150
<b>Oliveira</b>		
... ..	1304	250
<b>Oporto</b>		
CSIRS	1448	1000
PRPI	1249	1500
<b>Parade</b>		
CTIGL	1031	5000

**ROUMANIA**

<b>Bucharest</b>		
.....	823	12000

**SPAIN**

<b>Barcelona</b>		
EAJ1	795	5000
EAJ15	1022	3000
<b>Bilbao</b>		
EAJ28	1492	250
<b>Madrid</b>		
EAJ2	731	3000
EAJ7	1095	7000
<b>Oviedo</b>		
EAJ19	1022	700
<b>Salamanca</b>		
EAJ22	662	1000
<b>San Sebastian</b>		
EAJ8	1258	3000
<b>Seville</b>		
EAJ5	731	1500
<b>Valencia</b>		
EAJ3	850	1500
Spain has many stations of 100 watts or less on 1492 and 1500 kcs. For complete list see Index by Calls.		

**SWEDEN**

<b>Boras</b>		
SCA	1450	150
<b>Eskestuna</b>		
SCB	1240	200
<b>Falun</b>		
SCC	1086	2000
<b>Goteborg</b>		
SBB	941	10000
<b>Gavle</b>		
SCD	1483	200
<b>Halmstad</b>		
SCE	1402	200
<b>Halsingborg</b>		
SCG	1384	200
<b>Horby</b>		
SBH	1131	10000
<b>Hudiksvall</b>		
SCF	1375	150
<b>Jonkoping</b>		
SCH	1515	250
<b>Kalmar</b>		
SCI	1456	200
<b>Kariskrona</b>		
SCJ	1530	200
<b>Karlstad</b>		
SBK	1312	250
<b>Kiruna</b>		
SCL	1258	200
<b>Kristinehamn</b>		
SCM	1500	250
<b>Malmberget</b>		
SCN	704	250
<b>Malmo</b>		
SBC	1312	1250

<b>Norrkoping</b>		
SB1	1312	250
<b>Orrebro</b>		
SCV	1258	200
<b>Ornskoldsvik</b>		
SCW	1411	200
<b>Saffle</b>		
SCP	1240	400
<b>Stockholm</b>		
SBA	704	55000
<b>Sundsvall</b>		
SBD	601	10000
<b>Trollhattan</b>		
SBJ	1312	250
<b>Uddevalla</b>		
SCR	1393	50
<b>Umea</b>		
SCS	1393	200
<b>Upsala</b>		
SCT	1492	150
<b>Varberg</b>		
SCU	1240	300

**SWITZERLAND**

<b>Basle</b>		
.....	1375	500
<b>Berne</b>		
.....	1375	500
<b>Beromunster</b>		
.....	556	60000
<b>Monte Ceneri</b>		
.....	1167	15000
<b>Sottens</b>		
.....	677	25000

**U. S. S. R.**

<b>Alexandrovsik</b>		
RW38	580	1200
<b>Arkhangelsk</b>		
RW36	770	10000
<b>Astrakhan</b>		
RW35	589	10000
<b>Dnepropetrovsk</b>		
RW30	913	10000
<b>Engels</b>		
RW55	959	1000
<b>Gomel</b>		
RW40	959	1200
<b>Gorki</b>		
RW42	598	10000
<b>Groznyl</b>		
RW23	676	1200
<b>Ijevsk</b>		
RW69	825	4000
<b>Ivanovo</b>		
RW31	625	10000
<b>Karaganda</b>		
RW46	653	10000
RW46	686.5	1200
<b>Kazan</b>		
RW17	644	10000
<b>Kharkov</b>		
RW20	1185	10000
<b>Kiev</b>		
RV9	722	100000
<b>Krasnodar</b>		
RW33	1050	10000
<b>Leningrad</b>		
RW70	1040	10000
<b>Magnitogorsk</b>		
.....	571	10000
<b>Makhatch</b>		
RW27	689	4000
.....	563	120000
<b>Minsk</b>		
RW10	1438	100000
<b>Moskva</b>		
RW37	792.5	1000
RW39	832	100000

<b>Mourmansk</b>		
.....	610	10000
<b>Naitchik</b>		
RW51	748.1	1200
<b>Nijni</b>		
.....	598	10000
<b>Odessa</b>		
RW13	968	10000
<b>Oufa</b>		
RW22	617	10000
<b>Oukhta</b>		
.....	968	2000
<b>Penza</b>		
RW56	640	1200
<b>Petrozavodsk</b>		
.....	648	10000
<b>Simferopol</b>		
RW52	859	10000
<b>Smolensk</b>		
RW24	531	2000
<b>Stalno</b>		
RW26	776	10000
<b>Syktyvkar</b>		
RW41	563	1200
<b>Tcheboksary</b>		
RW74	680	1200
<b>Tchellabinsk</b>		
RW68	824	1500
<b>Tchernigov</b>		
.....	1013	10000
<b>Tiraspol</b>		
RW57	1068	10000
<b>Tomsk</b>		
RW48	554	1200
<b>Vinnitza</b>		
RW75	1095	10000
<b>Vladikavkaz</b>		
RW64	752	10000
<b>Vladivostok</b>		
RW28	635	700
RW28	725	10000

**YUGOSLAVIA**

<b>Belgrade</b>		
.....	686	2500
<b>Ljubljana</b>		
.....	527	5000
<b>Zagreb</b>		
.....	1086	700

**ASIA**

<b>CEYLON</b>		
<b>Colombo</b>		
VPB	705	1750
<b>CHINA</b>		
<b>Canton</b>		
CAB	658	1000
<b>Hangchow</b>		
XGOD	977.5	1000
<b>Hongkong</b>		
ZBW	845	2000
<b>Kwangchow</b>		
CMB	677	1000
<b>Lo Yang</b>		
XGOB	1090	250
<b>Nanking</b>		
XGOA	660	75000
<b>Peliping</b>		
XNPP	937	1000
XOPP	952.3	100
<b>Shanghai</b>		
FFZ	1400	250
XGCU	1140	100
XHHE	940	100

XHFF	960	100
XFHG	1020	100
XFHJ	1040	100
XHHI	900	100
XHHK	1420	100
XHHN	1180	100
XHHS	1200	100
XHHU	1100	100
XHHV	1160	500
XHHW	880	100
XHHX	920	100
XMHY	800	600
XQHA	650	1000
XQHB	820	100
XQHC	1270	500
XQHD	1360	200
XQHT	1460	1000
<b>Soochow</b>		
XGLS	1230	100
<b>Tientsin</b>		
XOTN	625	500
<b>Tsinan</b>		
XOST	857.1	500
<b>Yunnan</b>		
XGOY	698	500

**FORMOSA**

<b>Taihouk</b>		
JFAK	670	10000
<b>Tainan</b>		
JFBK	720	1000

**INDIA**

<b>Bombay</b>		
VUB	840	2000
<b>Calcutta</b>		
VUC	810	2000
<b>Lahore</b>		
VUL	1200	100
<b>Madras</b>		
VUM	770	200

**INDO-CHINA**

<b>Salgon</b>		
F31CD	840	12000

**JAPAN**

<b>Akita</b>		
JOUK	645	300
<b>Asahikawa</b>		
JOCG	655	300
<b>Fukui</b>		
JOFU	990	500
<b>Fukuoka</b>		
JOLK	680	500
<b>Hakodate</b>		
JOVK	680	500
<b>Hamamatsu</b>		
JODG	635	300
<b>Hiroshima</b>		
JOEK	850	10000
<b>Kanazawa</b>		
JOJK	710	3000
<b>Kochi</b>		
JORK	720	500
<b>Kokura</b>		
JOSK	735	1000
<b>Kumamoto</b>		
JOGK	790	10000
<b>Kyoto</b>		
JOOK	960	300
<b>Maebashi</b>		
JOBG	970	500
<b>Matsuye</b>		
JOTK	625	500
<b>Nagano</b>		
JONK	940	500
<b>Nagasaki</b>		
JOAG	930	500
<b>Nagoya</b>		
JOCK-I	810	10000

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<p>JOCK-2 1175 10000  <b>Niigata</b>                      JOOK 920 500  <b>Okayama</b>                      JOKK 700 500  <b>Osaka</b>                      JOBK-1 750 10000                      JOBK-2 1085 10000  <b>Sapporo</b>                      JOIK 830 10000  <b>Sendai</b>                      JOHK 770 10000  <b>Shizuoka</b>                      JOPK 780 500  <b>Tokushima</b>                      JOXK 980 500  <b>Tokyo</b>                      JOAK-1 870 10000                      JOAK-2 590 10000</p> <p style="text-align: center;"><b>KOREA</b></p> <p>KelJo                      JODK-1 900 10000                      JODK-2 610 10000</p> <p style="text-align: center;"><b>MANCHURIA</b></p> <p>Dalron                      JOAK 652 500  <b>Harbin</b>                      MOHB 674 1000                      MTFY 674 1000  <b>Hoten</b>                      MTBY 897 1500                      ZILY 900 2000  <b>Skinkyo</b>                      MYCY 570 1000  <b>SIAM</b>  <b>Bangkok</b>                      HSP1 857 2500                      HSP3 938                      HS7PJ 750</p> <p style="text-align: center;"><b>AFRICA</b></p> <p style="text-align: center;"><b>ALGERIA</b></p> <p>Algiers                      ..... 941 12000</p> <p style="text-align: center;"><b>EGYPT</b></p> <p>Alexandria                      ..... 780 200                      ..... 1080 500  <b>Calro</b>                      ..... 571 20000                      ..... 600                      ..... 950  <b>Hellopolis</b>                      ..... 1110 500</p> <p style="text-align: center;"><b>KENYA</b></p> <p>Nairobi                      VQ7LO 750 1000</p> <p style="text-align: center;"><b>MOROCCO</b></p> <p>Casablanca                      CNO 983 26</p>	<p><b>Rabat</b>                      ..... 601 6500</p> <p style="text-align: center;"><b>TUNISIA</b></p> <p>Tunis                      TUA 1275 500</p> <p style="text-align: center;"><b>UNION S. AFRICA</b></p> <p>Bloemfontaine                      ZTB 589 500  <b>Cape Town</b>                      ZTC 810 1000  <b>Durban</b>                      ZTD 723 1000  <b>Johannesburg</b>                      ZTJ 667 15000  <b>Pretoria</b>                      ZTP 985 500</p> <p style="text-align: center;"><b>OCEANIA</b></p> <p style="text-align: center;"><b>AUSTRALIA</b></p> <p>Adelaide                      5AD 1310 300                      5CL 730 5000                      5DN 960 1000                      5KA 1200 1000  <b>Albury</b>                      2AY 1500 50  <b>Ballarat</b>                      3BA 1300 50  <b>Bendigo</b>                      3BO 970 200  <b>Brisbane</b>                      4BC 1145 600                      4BH 1380 600                      4BK 1290 200                      4QG 760 5000  <b>Bunbury</b>                      6BY 980 50  <b>Canberra</b>                      2CA 1050 50  <b>Corowa</b>                      2CO 560 7500  <b>Crystal Brook</b>                      5CK 635 7500  <b>Geelong</b>                      3GL 1400 50  <b>Goulburn</b>                      2GN 1390 50  <b>Grafton</b>                      2GF 1220 50  <b>Gunnedah</b>                      2MO 1320 50  <b>Hamilton</b>                      3HA 1010 200  <b>Hobart</b>                      7HO 890 50                      7ZL 580 3000  <b>Horsham</b>                      3HS 1370 50  <b>Kalgoorlie</b>                      6KG 1220 100</p>	<p><b>Launceston</b>                      7LA 1100 300  <b>Lismore</b>                      2XN 1340 50  <b>Mackay</b>                      4MK 1190 100  <b>Maryborough</b>                      4MB 1060 50  <b>Melbourne</b>                      3AK 1470 50                      3AR 610 5000                      3AW 1425 300                      3DB 1180 500                      3KZ 1350 200                      3LO 800 5000                      3UZ 930 500                      3YB 1145 25  <b>Mildura</b>                      3MA 900 50  <b>Newcastle</b>                      2HD 1110 200                      2KO 1415 200                      2NC 1245 2000  <b>Perth</b>                      6IX 1480 50                      6ML 1135 300                      6PR 880 500                      6WF 690 5000  <b>Port Pirie</b>                      5PI 1041 50  <b>Rockhampton</b>                      4RK 910 5000                      4RO 1330 250  <b>Sale</b>                      3TR 1280 50  <b>Swan Hill</b>                      3SH 1080 50  <b>Sydney</b>                      2BL 855 3400                      2CH 1210 1000                      2FC 665 5000                      2GB 950 3000                      2KY 1070 1500                      2SM 1270 1000                      2UE 1025 3000                      2UW 1125 1500  <b>Toowoomba</b>                      4GR 1000 50  <b>Townsville</b>                      4TO 1170 100  <b>Ulverstone</b>                      7UV 1460 200  <b>Wagga</b>                      2WG 1155 50  <b>Wangaratta</b>                      3WR 1260 50  <b>Wollongong</b>                      2WL 1435 50</p>	<p style="text-align: center;"><b>NEW ZEALAND</b></p> <p><b>Auckland</b>                      1YA 650 500                      1ZB 1190 50                      1ZJ 1310 50                      1ZR 880 100                      1ZS 1420 50  <b>Balclutha</b>                      4ZR 1340 5  <b>Christchurch</b>                      3YA 720 2500                      3YL 1200 500                      3ZM 1450 50  <b>Cromwell</b>                      4ZC 1280 25  <b>Dunedin</b>                      4YA 790 500                      4ZB 1050 50                      4ZF 1220 7                      4ZL 1220 100                      4ZM 1050 50                      4ZO 1050 25                      4ZW 1470 50  <b>Gisborne</b>                      2ZJ 980 250                      2ZM 1150 110  <b>Greymouth</b>                      3ZE 1300 50                      3ZR 940 300  <b>Hamilton</b>                      1ZH 770 40  <b>Hastings</b>                      2ZL 1240 48  <b>Invercargill</b>                      4ZP 620 500  <b>Manurewa</b>                      IZM 1260 17  <b>Masterton</b>                      2ZD 1170 8  <b>Napier</b>                      2ZH 820 68  <b>Nelson</b>                      2ZR 1110 50  <b>New Plymouth</b>                      2YB 750 100  <b>Palmerston N.</b>                      2ZF 960 150                      2ZO 1400 50  <b>Wairoa</b>                      2ZP 900 108  <b>Wellington</b>                      2YA 570 5000                      2YC 840 200</p>
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<p>CAB Canton, Ch. 658                      CE58 Santiago, Chl. 585                      CE62 Santiago, Chl. 625                      CE66 Santiago, Chl. 665                      CE70 Santiago, Chl. 705                      CE74 Santiago, Chl. 745                      CE78 Santiago, Chl. 785                      CE82 Santiago, Chl. 825                      CE86 Santiago, Chl. 865                      CE88 Valparaiso, Chl. 885                      CE90 Santiago, Chl. 905                      CE92 Temuco, Chl. 920                      CE94 Santiago, Chl. 945                      CE98 Santiago, Chl. 985</p>	<p>CE100 Santiago, Chl. 1005                      CE101 Vina del Mar, Chl. 1010                      CE102 Santiago, Chl. 1020                      CE104 Magallanes, Chl. 1040                      CE105 Vaparaíso, Chl. 1050                      CE108 Santiago, Chl. 1065                      CE107 Santiago, Chl. 1075                      CE108 Concepcion, Chl. 1080                      CE109 Vina del Mar, Chl. 1090                      CE110 Santiago, Chl. 1105                      CE113 Chillan, Chl. 1130                      CE114 Santiago, Chl. 1145                      CE118 Santiago, Chl. 1185                      CE119 Magallanes, Chl. 1190</p>	<p>CE121 Valparaiso, Chl. 1215                      CE122 Santiago, Chl. 1220                      CE125 Valparaiso, Chl. 1255                      CE128 Santiago, Chl. 1280                      CE128 Temuco, Chl. 1285                      CE130 Santiago, Chl. 1305                      CE131 Santiago, Chl. 1315                      CE132 Rancagua, Chl. 1325                      CE134 Santiago, Chl. 1345                      CE138 Santiago, Chl. 1380                      CE139 Rancagua, Chl. 1390                      CE142 Santiago, Chl. 1425                      CE143 Magallanes, Chl. 1430                      CE145 Rancagua, Chl. 1450</p>
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CE146	Santiago, Chi.	1465	CMBZ	Havana, Cuba.	1005	CW48	Tucuaerembo, Uru.	1486
CFAC	Calgary, Alta.	930	CMC	Havana, Cuba.	835	CW47	Canelones, Uru.	1480
CFBO	St. John, N. B.	1210	CMCA	Havana, Cuba.	1230	CX4	Montivideo, Uru.	610
CFCH	Montreal, Que.	930	CMCB	Havana, Cuba.	1048	CX8	Montivideo, Uru.	650
CFGN	North Bay, Ont.	800	CMCD	Havana, Cuba.	925	CX8	Montivideo, Uru.	690
CFGO	Chatham, Alta.	1030	CMCF	Havana, Cuba.	873	CX10	Montivideo, Uru.	730
CFON	Chatham, Ont.	800	CMCG	Havana, Cuba.	140	CX12	Montivideo, Uru.	770
CFOT	Victoria, B. C.	1450	CMCH	Havana, Cuba.	1410	CX14	Montivideo, Uru.	810
CFYF	Charlottetown, P. E. I.	830	CMCI	Havana, Cuba.	1405	CX18	Montivideo, Uru.	850
CFJC	Kamloops, B. C.	1310	CMCM	Havana, Cuba.	1357	CX20	Montivideo, Uru.	890
CFLC	Prescott, Ont.	930	CMCN	Havana, Cuba.	1270	CX22	Montivideo, Uru.	930
CFNB	Fredericton, N. B.	1030	CMCP	Havana, Cuba.	1145	CX24	Montivideo, Uru.	1010
CFPL	London, Ont.	730	CMCQ	Havana, Cuba.	167	CX26	Montivideo, Uru.	1050
CFQC	Saskatoon, Sask.	1280	CMCR	Havana, Cuba.	1357	CX28	Montivideo, Uru.	1096
CFRB	Toronto, Ont.	690	CMCU	Havana, Cuba.	1100	CX30	Montivideo, Uru.	1130
CFRC	Kingston, Ont.	1510	CMCV	Havana, Cuba.	985	CX32	Montivideo, Uru.	1170
CFTP	Edmonton, Alta.	1260	CMCW	Havana, Cuba.	1316	CX34	Montivideo, Uru.	1210
CFAB	Moose Jaw, Sask.	1200	CMCY	Havana, Cuba.	915	CX36	Montivideo, Uru.	1250
CHCK	Charlottetown, P. E. I.	1310	CMGA	Colon, Cuba.	834	CX38	Montivideo, Uru.	1290
CHGS	Summerside, P. E. I.	1120	CMGB	Matanzas, Cuba.	1205	CX40	Montivideo, Uru.	1330
CHLP	Montreal, Que.	1120	CMGC	Matanzas, Cuba.	820	CX42	Montivideo, Uru.	1370
CHML	Hamilton, Ont.	1010	CMGE	Cardenas, Cuba.	1375	CX44	Montivideo, Uru.	1410
CHNC	New Carlisle, Que.	1210	CMGF	Matanzas, Cuba.	971.5	CX46	Montivideo, Uru.	1450
CHNS	Halifax, N. S.	1050	CMGH	Matanzas, Cuba.	1040	CX48	Montivideo, Uru.	1490
CHPR	St. John, N. B.	1370	CMHA	Sagua la Grande, Cuba	1103	EJ41	Barcelona, Sp.	795
CHRC	Quebec, Que.	580	CMHD	Caibarien, Cuba.	945.5	EJ42	Madrid, Sp.	731
CHSJ	St. John, N. B.	1370	CMHI	Santa Clara, Cuba.	1007	EJ43	Valencia, Sp.	850
CHWC	Regina, Sask.	1010	CMHJ	Cienfuegos, Cuba	1125	EJ44	Santiago, Sp.	491
CHWK	Chilliwack, B. C.	780	CMHK	Cruces, Cuba.	1215	EJ45	Seville, Sp.	732
CJAT	Trail, B. C.	1200	CMHL	Cienfuegos, Cuba.	1290	EJ46	Pampeluna, Sp.	1492
CJCA	Edmonton, Alta.	730	CMHW	Cienfuegos, Cuba.	1200	EJ47	Madrid, Sp.	1095
CJCB	Sydney, N. S.	880	CMJ	Camaguey, Cuba.	1382	EJ48	San Sebastian, Sp.	1258
CJCG	Calgary, Alta.	690	CMJE	Camaguey, Cuba.	1170	EJ49	Malaga, Sp.	1492
CJCS	Sudbury, Ont.	780	CMJF	Camaguey, Cuba.	1010	EJ10	Saragossa, Sp.	1500
CJGX	Yorkton, Sask.	630	CMJG	Camaguey, Cuba.	950	EJ11	Tarragona, Sp.	1492
CJXL	Kirkland Lake, Ont.	1310	CMJH	Ciego de Avila, Cuba.	1150	EJ12	Alcoy, Sp.	1492
CJLS	Yarmouth, N. S.	1310	CMJI	Ciego de Avila, Cuba.	1335	EJ13	Palma de Mirca, Sp.	1492
CJOC	Lethbridge, Alta.	840	CMJJ	Camaguey, Cuba.	790	EJ14	Castillon, Sp.	1500
CJOR	Winnipeg, B. C.	800	CMJK	Camaguey, Cuba.	960	EJ15	Barcelona, Sp.	1022
CJRC	Winnipeg, Man.	1390	CMJL	Camaguey, Cuba.	1240	EJ16	Grenada, Sp.	1492
CJRM	Moose Jaw, Sask.	540	CMJO	Ciego de Avila, Cuba.	1010	EJ17	Morcia, Sp.	1492
CKAC	Montreal, Que.	730	CMJP	Moron, Cuba.	1360	EJ18	Logrona, Sp.	1193
CKBI	Prince Albert, Sask.	1210	CKM	Havana, Cuba.	730	EJ19	Oviedo, Sp.	1022
CKCD	Vancouver, B. C.	1010	CKMC	Santiago, Cuba.	1034	EJ20	Sabadell, Sp.	1492
CKCH	Hull, Que.	1210	CKMK	Guantanamo, Cuba.	1300	EJ21	Melilla, Sp.	1492
CKCK	Regina, Sask.	1010	CMPN	Havana, Cuba.	1395	EJ22	Salamanca, Sp.	662
CKCL	Toronto, Ont.	580	CMQ	Havana, Cuba.	645	EJ23	Gandia, Sp.	1492
CKCO	Ottawa, Ont.	1010	CMW	Havana, Cuba.	695	EJ24	Cordoba, Sp.	1492
CKCR	Waterloo, Ont.	1510	CMX	Havana, Cuba.	875	EJ25	Tarrasa, Sp.	1500
CKCV	Quebec, Que.	1310	CNO	Casablanca, Mor.	983	EJ26	Antequerra, Sp.	1500
CKFC	Vancouver, B. C.	1420	CPX	La Paz, Bol.	1250	EJ27	Burgos, Sp.	1492
CKGB	Timmins, Ont.	1410	CP4	La Paz, Bol.	1040	EJ28	Bilbao, Sp.	1492
CKIC	Windsor, N. S.	1010	CRCM	Montreal, Que.	910	EJ29	Alcala de Hrs., Sp.	1500
CKLW	Windsor, Ont.	840	CRCO	Ottawa, Ont.	880	EJ30	Onteniente, Sp.	1500
CKMC	Cobalt, Ont.	1210	CRCS	Chicoutimi, Que.	1500	EJ31	Alicante, Sp.	1492
CKMO	Vancouver, B. C.	1410	CRCT	Toronto, Ont.	960	EJ32	Santander, Sp.	1500
CKNG	Toronto, Ont.	1030	CRCV	Vancouver, B. C.	1100	EJ33	Tarragona, Sp.	1492
CKOC	Hamilton, Ont.	1120	CS1RS	Oporto, Por.	1448	EJ34	Gijon, Sp.	1492
CKOV	Kelowna, B. C.	1210	CT1AA	Lisbon, Por.	1056	EJ35	Villaneva, Sp.	1500
CKPC	Preston, Ont.	930	CT1AN	Lisbon, Por.	1056	EJ36	Jatiba, Sp.	1500
CKPR	Fort William, Ont.	930	CT1BM	Lisbon, Por.	1056	EJ37	Linares, Sp.	1500
CKTB	St. Catharines, Ont.	1200	CT1BP	Lisbon, Por.	936	EJ38	Gerona, Sp.	1500
CKUA	Edmonton, Alta.	580	CT1DH	Lisbon, Por.	1275	EJ39	Badalona, Sp.	1492
CKWX	Vancouver, B. C.	1010	CT1DS	Lisbon, Por.	952	EJ40	Pontevedra, Sp.	1500
CKX	Brandon, Man.	1450	CT1EB	Lisbon, Por.	1058	EJ41	La Corogoa, Sp.	1492
CKY	Winnipeg, Man.	780	CT1G	Lisbon, Por.	1058	EJ42	Lieida, Sp.	1492
CMAB	Pinar del Rio, Cuba.	1249	CT1GL	Parade, Por.	1083	EJ43	Santa Cruz de Tnrfl., Sp.	1492
CMAF	Havana, Cuba.	880	CW30	Tucuaerembo, Uru.	1140	EJ44	Albacea, Sp.	1492
CMB	Kwangochow, Chn.	877	CW32	Salto, Uru.	1180	EJ45	Senia, Sp.	1500
CMBG	Havana, Cuba.	1270	CW34	Salto, Uru.	1220	EJ46	Ceuta, Sp.	1492
CMBD	Havana, Cuba.	965	CW36	Salto, Uru.	1280	EJ47	Valladolid, Sp.	1492
CMBJ	Havana, Cuba.	1048	CW38	Salto, Uru.	1300	EJ48	Pontevedra, Sp.	1492
CMBG	Havana, Cuba.	1147	CW39	Florida, Uru.	1320	EJ49	Toledo, Sp.	1500
CMBK	Havana, Cuba.	1445	CW40	Paysandu, Uru.	1340	EJ50	Las Palmas, Sp.	1500
CMBL	Havana, Cuba.	1485	CW41	San Jose, Uru.	1380	EJ51	Manresa, Sp.	1492
CMBN	Havana, Cuba.	1185	CW42	Artigas, Uru.	1380	EJ52	Badajos, Sp.	1492
CMBN	Havana, Cuba.	765	CW43	Melo, Uru.	1400	FFZ	Shanghai, Chn.	1400
CMBW	Havana, Cuba.	1140	CW44	Paysandu, Uru.	1420	FFT	Paris, F.	695
CMBX	Havana, Cuba.	1185				FQN	St. Pierre, Miq.	574
CMBY	Havana, Cuba.	1230						

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F8GC	Paris, F.	810	KELW	Burbank, Calif.	780	KGIW	Alamosa, Colo.	1420
F31GD	Saigon, Indo.	840	KERN	Bakersfield, Calif.	1370	KGIX	Las Vegas, Nev.	1420
HAC	Budapest, Hun.	546	KEX	Portland, Ore.	1180	KGKB	Tyler, Texas	1500
HAE	Nyiregyhaza, Hun.	1122	KFAB	Lincoln, Neb.	770	KGKL	San Angelo, Texas	1370
HAE2	Magyarovar, Hun.	1438	KFAC	Los Angeles, Calif.	1300	KGKO	Wichita Falls, Texas	570
HAE3	Miskolc, Hun.	1438	KFBB	Great Falls, Mont.	1280	KGKY	Scottsbluff, Neb.	1500
HAE4	Pecs, Hun.	1438	KFBI	Abilene, Kans.	1050	KGMB	Honolulu, T. H.	1320
HAL	Budapest, Hun.	546	KFBK	Sacramento, Calif.	1310	KGNF	North Platte, Neb.	1430
HAL2	Budapest, Hun.	1321	KFBL	Everett, Wash.	1370	KGNO	Dodge City, Kans.	1340
HHK	Port-au-Prince, Haiti	920	KFDM	Beaumont, Texas	560	KGO	San Francisco, Calif.	790
HIH	San Pedro de M., D. R.	1396	KFDY	Brookings, S. D.	550	KGRS	Amarillo, Texas	1410
HIJ	Santo Domingo, D. R.	1195	KFEL	Denver, Colo.	920	KGU	Honolulu, T. H.	750
HIX	Santo Domingo, D. R.	598	KFEQ	St. Joseph, Mo.	680	KGVO	Missoula, Mont.	1290
HIZ	Santo Domingo, D. R.	1300	KFGQ	Boone, Iowa	1310	KGW	Portland, Ore.	620
HJN	Bogota, Colombia	681	KFH	Wichita, Kans.	1300	KGY	Olympia, Wash.	1210
HJ8BD	Bogota, Colombia	1115	KFI	Los Angeles, Calif.	640	KHJ	Los Angeles, Calif.	900
HJ3ABE	Bogota, Columbia	1200	KFIO	Spokane, Wash.	1120	KHQ	Spokane, Wash.	590
HJ3ABH	Bogota, Columbia	1000	KFIZ	Fond du Lac, Wis.	1420	KICA	Claris, N. M.	1370
HSP1	Bangkok, Siam	857	KFJB	Marshalltown, Iowa	1200	KICK	Carter Lake, Iowa	1420
HSP3	Bangkok, Siam	938	KFJI	Klamath Falls, Ore.	1210	KID	Idaho Falls, Idaho	1320
HSP7J	Bangkok, Siam	750	KFJM	Grand Forks, N. D.	1370	KIDO	Boise, Idaho	1350
IFI	Firenze, I.	610	KFJR	Portland, Ore.	1300	KIDW	Lamar, Colo.	1420
IGE	Genoa, I.	986	KFJZ	Fort Worth, Texas	1370	KIEM	Eureka, Calif.	1210
IMI	Milan, I.	814	KFKA	Greeley, Colo.	880	KIEV	Glendale, Calif.	860
INA	Naples, I.	1104	KFKU	Lawrence, Kans.	1220	KIFH	Juneau, Alaska	1310
IPA	Palermo, I.	565	KFNF	Shenandoah, Iowa	890	KIFS	Fort Klamath, Ore.	1518
1BA	Bari, I.	1059	KFOR	Lincoln, Neb.	1210	KIT	Yakima, Wash.	1310
1BZ	Boziano, I.	536	KFOX	Long Beach, Calif.	1260	KJBS	San Francisco, Calif.	1070
1RO	Rome, I.	713	KFPL	Dublin, Texas	1310	KJR	Seattle, Wash.	970
1TO	Turin, I.	1140	KFPM	Greenville, Texas	1310	KLCN	Blytheville, Ark.	1290
1TR	Trieste, I.	1222	KFPW	Fort Smith, Ark.	1210	KLO	Ogden, Utah	1400
JFAK	Taihouku, For.	870	KFPY	Spokane, Wash.	890	KLPM	Minot, N. D.	1240
JFBK	Tainan, For.	720	KFQD	Anchorage, Alaska	600	KLRA	Little Rock, Ark.	1390
JOAG	Nagasaki, J.	903	KFRG	San Francisco, Calif.	610	KLS	Oakland, Calif.	1440
JOAK-1	Tokyo, J.	870	KFRU	Columbia, Mo.	630	KLUF	Galveston, Texas	1370
JOAK-2	Tokyo, J.	690	KFSD	San Diego, Calif.	800	KLX	Oakland, Calif.	880
JOBG	Maebashi, J.	870	KFSQ	Los Angeles, Calif.	1120	KLZ	Denver, Colo.	560
JOBK-1	Osaka, J.	750	KFUO	St. Louis, Mo.	850	KMA	Shenandoah, Iowa	930
JOBK-2	Osaka, J.	1085	KFVD	Los Angeles, Calif.	1000	KMAC	San Antonio, Texas	1370
JOCC	Asahikawa, J.	855	KFVS	Cape Girardeau, Mo.	1210	KMBC	Kansas City, Mo.	960
JOCK-1	Nagoya, J.	810	KFWB	Hollywood, Calif.	950	KMCD	Medford, Ore.	1310
JOCK-2	Nagoya, J.	1175	KFWI	San Francisco, Calif.	930	KMJJ	Fresno, Calif.	580
JODG	Hamamatsu, J.	835	KFXD	Nampa, Idaho	1200	KMLB	Monroe, La.	1200
JODK-1	Keijo, Ko.	900	KFXF	Denver, Colo.	1200	KMMJ	Clay Center, Neb.	740
JODK-2	Keijo, Ko.	610	KFXJ	Grand Jct., Colo.	920	KMO	Tacoma, Wash.	1330
JOFG	Fukui, J.	890	KFXM	San Bernardino, Calif.	1210	KMOX	St. Louis, Mo.	1090
JOFK	Hiroshima, J.	850	KFXR	Oklahoma City, Okla.	1310	KMPC	Beverly Hills, Calif.	710
JOGK	Kumamoto, J.	790	KFYO	Lubbock, Texas	1310	KMTR	Hollywood, Calif.	870
JOHK	Sendai, J.	770	KFYR	Bismarck, N. D.	950	KNOW	Austin, Texas	1500
JOJK	Sapporo, J.	830	KGA	Spokane, Wash.	1470	KNA	Hollywood, Calif.	1050
JOJL	Kanazawa, J.	710	KGAR	Tucson, Ariz.	1370	KOA	Denver, Colo.	850
JOJK	Okayama, J.	700	KGB	San Diego, Calif.	1330	KOAC	Corvallis, Ore.	550
JOLK	Fukuoka, J.	680	KGBU	Ketchikan, Alaska	900	KOB	Albuquerque, N. M.	1180
JONK	Nagano, J.	940	KGBX	Springfield, Mo.	1310	KOH	Reno, Nev.	1380
JOOK	Kyoto, J.	960	KGBZ	York, Neb.	930	KOIL	Council Bluffs, Iowa	1280
JOJK	Shizuoka, J.	920	KGCA	Decorah, Iowa	1270	KOIN	Portland, Ore.	840
JOQK	Niigata, J.	780	KGCR	Watertown, S. D.	1210	KOL	Seattle, Wash.	1270
JORK	Kochi, J.	720	KGCU	Mandan, N. D.	1240	KOMA	Oklahoma City, Okla.	1480
JOSK	Kokura, J.	735	KGCX	Wolf Point, Mont.	1310	KOMO	Seattle, Wash.	820
JOTK	Matsuy, J.	825	KGDE	Fergus Falls, Minn.	1200	KONO	San Antonio, Texas	1370
JOUK	Akita, J.	845	KGDM	Stockton, Calif.	1100	KOOS	Marshfield, Ore.	1370
JOVK	Hakodate, J.	680	KGDY	Huron, S. D.	1340	KORE	Eugene, Ore.	1420
JOXK	Tokushima, J.	980	KG EK	Yuma, Colo.	1200	KOTN	Pine Bluff, Ark.	1500
JOQK	Dairen, Manch.	652	KGER	Long Beach, Calif.	1360	KOY	Phoenix, Ariz.	1390
KABC	San Antonio, Texas	1420	KGEZ	Kallsport, Mont.	1310	KPCB	Seattle, Wash.	650
KALE	Portland, Ore.	1300	KGFF	Shawnee, Okla.	1420	KPJM	Prescott, Ariz.	1500
KARK	Little Rock, Ark.	890	KGFG	Oklahoma City, Okla.	1370	KPO	San Francisco, Calif.	680
KASA	Eik City, Okla.	1210	KGFI	Corpus Christi, Texas	1600	KPPO	Denver, Colo.	680
KBPS	Portland, Ore.	1420	KG FJ	Los Angeles, Calif.	1200	KPPC	Pasadena, Calif.	1210
KBTM	Jonesboro, Ark.	1200	KGFK	Moorhead, Minn.	1600	KPQ	Wenatchee, Wash.	1500
KCMC	Texarkana, Ark.	1420	KGFL	Roswell, N. M.	1370	KPRC	Houston, Texas	920
KCRC	Enid, Okla.	1370	KGFW	Kearney, Neb.	1310	KQV	Pittsburgh, Pa.	1360
KCRJ	Jerome, Ariz.	1310	KGFX	Pierre, S. D.	630	KQW	San Jose, Calif.	1010
KDB	Santa Barbara, Calif.	1500	KGGC	San Francisco, Calif.	1420	KRE	Berkeley, Calif.	1370
KDFN	Casper, Wyo.	1440	KGGF	Coffeyville, Kans.	1010	KREG	Santa Ana, Calif.	1580
KDKA	Pittsburgh, Pa.	980	KGGM	Albuquerque, N. M.	1230	KRGV	Harlingen, Texas	1280
KDLR	Devils Lake, N. D.	1210	KGHF	Pueblo, Colo.	1320	KRKD	Los Angeles, Calif.	1120
KDYL	Salt Lake City, Utah	1290	KGHI	Little Rock, Ark.	1200	KRLD	Dallas, Texas	1040
KECA	Los Angeles, Calif.	1430	KGHL	Billings, Mont.	960	KRMD	Shreveport, La.	1310
			KGIR	Butte, Mont.	1340	KROW	Oakland, Calif.	930



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KRSC	Seattle, Wash.	1120	LS5	Buenos Aires, Arg.	1110	RW24	Smolensk, USSR.	531
KSAC	Manhattan, Kans.	580	LS6	Buenos Aires, Arg.	1350	RW26	Stalino, USSR.	776
KSCJ	Sioux City, Iowa	1330	LS7	Buenos Aires, Arg.	1310	RW27	Makhatch-Kala, USSR.	689
KSD	St. Louis, Mo.	550	LS8	Buenos Aires, Arg.	1230	RW28	Vladivostok, USSR.	635
KSEI	Pocatello, Idaho	890	LS9	Buenos Aires, Arg.	1270	RW28	Vladivostok, USSR.	725
KSL	Salt Lake City, Utah	1130	LS10	Buenos Aires, Arg.	590	RW30	Dnepropetrovsk, USSR.	913
KSO	Des Moines, Iowa	1370	LS11	Buenos Aires, Arg.	1430	RW31	Ivanvoo-Voznesensk, USSR.	625
KSOO	Sioux Falls, S. D.	1110	LT1	Rosario, Arg.	780	RW33	Krasnodar, USSR.	1050
KSTP	St. Paul, Minn.	1460	LT3	Rosario, Arg.	1080	RW35	Astrakhan, USSR.	589
KSUN	Lowell, Ariz.	1200	LT4	Mendoza, Arg.	760	RW36	Arkhangelsk, USSR.	770
KTAB	San Francisco, Calif.	560	LT5	Resistencia, Arg.	1160	RW37	Moskva, USSR.	792.5
KTAR	Phoenix, Ariz.	620	LT8	Rosario, Arg.	840	RW38	Alexandrovsk, USSR.	580
KTAT	Fort Worth, Texas	1240	LT9	Rosario, Arg.	1060	RW39	Moskva Stalina, USSR.	832
KTBS	Shreveport, La.	1450	LT10	Santa Fe, Arg.	1390	RW40	Gomel, USSR.	959
KTFI	Twin Falls, Idaho	1240	LU2	Bahia Blanca, Arg.	800	RW41	Syktyvkar, USSR.	563
KTHS	Hot Springs, Ark.	1060	LU6	Mar del Plata, Arg.	1380	RW42	Gorki, USSR.	598
KTM	Los Angeles, Calif.	780	LU7	Punta Alta, Arg.	1280	RW46	Karaganda, USSR.	663
KTRB	Modesto, Calif.	740	LU9	Azul, Arg.	1470	RW46	Karaganda, USSR.	686.5
KTRH	Houston, Texas	630	LV1	San Juan, Arg.	730	RW48	Tomsk, USSR.	554
KTSA	San Antonio, Texas	1290	LV2	Cordoba, Arg.	920	RW51	Naltchik, USSR.	748.1
KTSM	El Paso, Texas	1310	LV3	Cordoba, Arg.	620	RW52	Simferopol, USSR.	859
KTUL	Tulsa, Okla.	1400	LV5	San Juan, Arg.	1120	RW55	Engels, USSR.	959
KTW	Seattle, Wash.	1220	LV7	Tucuman, Arg.	820	RW56	Penza, USSR.	640
KUJ	Yalla Walla, Wash.	1370	LV9	Rosario, Arg.	900	RW57	Tiraspol, USSR.	1068
KUMA	Wama, Ariz.	1420	LV10	Las Heras, Arg.	860	RW64	Vladikavkaz, USSR.	752
KUOA	Fayetteville, Ark.	1260	MOHB	Harbin, Mnch.	674	RW68	Tcheliabinsk, USSR.	824
KUSD	Vermillion, S. D.	890	MRD	Toulouse, Fr.	1175	RW69	Ijevsk, USSR.	825
KVI	Tacoma, Wash.	570	MTBY	Hoten, Mnch.	897	RW70	Leningrad, USSR.	1040
KVL	Seattle, Wash.	1370	MTFY	Harbin, Mnch.	674	RW74	Tchoboksary, USSR.	680
KVOA	Tucson, Ariz.	1260	MYCY	Skinkyo, Mnch.	670	RW75	Vinnitza, USSR.	1095
KVOO	Tulsa, Okla.	1140	NAA	Arlington, Va.	590	SBA	Stockholm, Swe.	704
KVOR	Colorado Springs, Colo.	1270	OAX	Lima, Peru	750	SBB	Goteborg, Swe.	941
KVOS	Bellingham, Wash.	1200	OFA	Helsinki, Fin.	895	SBC	Malmö, Swe.	1312
KWCR	Cedar Rapids, Iowa	1430	OFC	Jacobstadt, Fin.	1500	SBD	Sundsvall, Swe.	601
KWEA	Shreveport, La.	1210	OFD	Pori, Fin.	749	SBH	Horby, Swe.	1131
KWFW	Hilo, Hawaii	1210	OFE	Tampere, Fin.	1450	SBI	Norrköping, Swe.	1312
KWG	Stockton, Calif.	1200	OFG	Abo, Fin.	1220	SBJ	Trollhattan, Swe.	1312
KWJJ	Portland, Ore.	1040	OFH	Viipuri, Fin.	527	SBK	Karlstad, Swe.	1312
KWK	St. Louis, Mo.	1350	OFR	Tampere, Fin.	1420	SCA	Boras, Swe.	1450
KWKC	Kansas City, Mo.	1370	OKB	Brno, Cz.	922	SCB	Eskestuna, Swe.	1240
KWKH	Shreveport, La.	850	OK K	Kosice, Cz.	1113	SCC	Falun, Swe.	1086
KWLC	Decorah, Iowa	1270	OKP	Praha, Cz.	638	SCD	Gavle, Swe.	1483
KWCS	Pullman, Wash.	1220	OKR	Bratislava, Cz.	1004	SCE	Halmstad, Swe.	1391
KWTO	Springfield, Mo.	580	ON4CE	Chatelaineau, Blg.	1492	SCF	Hudiksvall, Swe.	1375
KWVG	Brownsville, Texas	1260	ON4GE	Verviers, Blg.	1500	SCG	Halsingborg, Swe.	1384
KWYO	Sheridan, Wyo.	1370	ON4EB	Antwerp, Blg.	1492	SCH	Jonkoping, Swe.	1515
KXA	Seattle, Wash.	760	ON4EX	Ottomont, Blg.	1285	SCI	Kalmar, Swe.	1456
KXL	Portland, Ore.	1420	ON4FG	Dampremy, Blg.	1285	SCJ	Karlskrona, Swe.	1530
KXO	El Centro, Calif.	1500	ON4FO	Brussels, Blg.	1285	SCK	Kiruna, Swe.	1258
KXRO	Aberdeen, Wash.	1310	ON4GT	Brussels, Blg.	1285	SCM	Kristinehamn, Swe.	1500
KXYZ	Houston, Texas	1440	ON4RC	Brussels, Blg.	1285	SCN	Malmberget, Swe.	704
KYA	San Francisco, Calif.	1230	ON4RG	Ghent, Blg.	1285	SCP	Safflo, Swe.	1240
KYW	Chicago, Ill.	1020	ON4RW	Liege, Blg.	1500	SCR	Uddevalla, Swe.	1393
KZRM	Manila, P. I.	618.5	PFB1	Hilversum, Hol.	995	SCS	Umea, Swe.	1393
LKA	Aalesund, Nor.	850	PH9	Amsterdam, Hol.	1013	SCT	Upsala, Swe.	1493
LKB	Bergen, Nor.	850	PP	Paris, F.	959	SCU	Varberg, Swe.	1240
LKD	Bodo, Nor.	1276	PRAA	Rio de Janeiro, Brz.	1050	SCV	Örebro, Swe.	1258
LKF	Fredrikstad, Nor.	868	PRAC	Rio de Janeiro, Brz.	857	SCW	Ornskoldsvik, Swe.	1411
LKH	Hamar, Nor.	519	PRAD	Pelotas, Brz.	920	SPPT	Strasbourg, F.	859
LKK	Kristiansand, Nor.	1274	PRAE	Sao Paulo, Brz.	921	TGW	Guatemala, Gua.	1130
LKM	Tromsø, Nor.	1357	PRAG	Porto Alegre, Brz.	708	TGX	Guatemala City	1380
LKN	Notodden, Nor.	1348	PRAI	Ribeirao Preto, Brz.	857	TICR	San Jose, C. R.	912
LKP	Porsgrund, Nor.	850	PRAJ	Juiz de Fora, Brz.	789	TIEA	San Jose, C. R.	833
LKR	Rjukan, Nor.	1348	PRAK	Rio de Janeiro, Brz.	1153	TIEP	San Jose, C. R.	1459
LKS	Stavanger, Nor.	1276	PRAN	Curitiba, Brz.	789	TIFB	San Jose, C. R.	714
LP9	LaPlata, Arg.	1430	PRAP	Pernambuco, Brz.	967	TIFS	Cartago, C. R.	1441
LR1	Buenos Aires, Arg.	1070	PRAR	Sao Paulo, Brz.	1006	TIGA	Cariago, C. R.	1014
LR2	Buenos Aires, Arg.	910	PRAX	Rio de Janeiro, Brz.	1384	TIGP	San Jose, C. R.	806
LR3	Buenos Aires, Arg.	950	PRAY	Mogy das Cruzes, Brz.	789	TIRCA	San Jose, C. R.	1108
LR4	Buenos Aires, Arg.	990	PRAZ	Franca, Brz.	1110	TISO	San Jose, C. R.	550
LR5	Buenos Aires, Arg.	830	PR3	Rio de Janeiro, Brz.	860	TITV	San Jose, C. R.	989
LR6	Buenos Aires, Arg.	870	PRP10	Porto, Por.	1249	TIVL	San Jose, C. R.	869
LR7	Buenos Aires, Arg.	750	RDN	San Salvador, E. S.	680	TIXA	San Jose, C. R.	814
LR8	Buenos Aires, Arg.	1150	RV9	Kiev, USSR.	722	TUA	Tunis, Tun.	1275
LR9	Buenos Aires, Arg.	1030	RV10	Minsk, USSR.	722	VAS	Glaco Bay, N. S.	685
LR10	Buenos Aires, Arg.	790	RW13	Odessa, USSR.	958	VE3EK	Montmagny, Que.	1195
LS1	Buenos Aires, Arg.	710	RW17	Kazan, USSR.	644	VOAC	St. John's, Nfld.	1300
LS2	Buenos Aires, Arg.	1190	RW20	Kharkov, USSR.	1185	VOAS	St. John's, N. F.	940
LS3	Buenos Aires, Arg.	630	RW22	Oufa, USSR.	617	VOGY	St. John's, N. F.	1050
LS4	Buenos Aires, Arg.	670	RW23	Groznyl, USSR.	678	VOKW	St. John's, N. F.	1685

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VONF	St. John's, N. F.	1195	WCSC	Charleston, S. C.	1360	WHBY	Green Bay, Wis.	1200
VOWR	St. John's, N. F.	700	WCSH	Portland, Me.	940	WHDF	Calumet, Mich.	1370
VQ7LO	Nairobi, Ken.	750	WDAE	Tampa, Fla.	1270	WHDD	Boston, Mass.	830
VUB	Bombay, In.	840	WDAF	Kansas City, Mo.	610	WHDL	Tupper Lake, N. Y.	1420
VUC	Calcutta, In.	810	WDAG	Amarillo, Texas	1410	WHDB	Portsmouth, N. H.	740
VUL	Lahore, In.	1200	WDAA	El Paso, Texas	1310	WHDC	Rochester, N. Y.	1430
VUM	Madras, In.	770	WDAS	Philadelphia, Pa.	1370	WHDE	Kosciusko, Miss.	1500
WAAB	Boston, Mass.	1410	WDAY	Fargo, N. D.	940	WHET	Dothan, Ala.	1420
WAAF	Chicago, Ill.	920	WDBJ	Roanoke, Va.	930	WHFC	Cicero, Ill.	1370
WAAT	Jersey City, N. J.	940	WDBO	Orlando, Fla.	580	WHIS	Bluefield, W. Va.	1410
WAAW	Omaha, Neb.	860	WDEL	Wilmington, Del.	1390	WHK	Cleveland, Ohio	1390
WABC	New York, N. Y.	860	WDEY	Waterbury, Vt.	550	WHN	New York, N. Y.	1010
WABI	Bangor, Maine	1200	WDGY	Minneapolis, Minn.	1180	WHO	Des Moines, Iowa	1000
WACO	Waco, Texas	1420	WDNC	Durham, N. C.	1500	WHOM	Jersey City, N. J.	1450
WADC	Akron, Ohio	1320	WDOD	Chattanooga, Tenn.	1280	WHP	Harrisburg, Pa.	1430
WAGM	Presque Isle, Me.	1420	WDRS	Hartford, Conn.	1250	WIBA	Madison, Wis.	1280
WAIU	Columbus, Ohio	640	WDSU	New Orleans, La.	1250	WIBG	Glenside, Pa.	970
WALR	Zanesville, Ohio	1210	WDZ	Tuscola, Ill.	1070	WIBM	Jackson, Mich.	1370
WAMC	Anniston, Ala.	1420	WEAF	New York, N. Y.	680	WIBU	Poynette, Wis.	1210
WAML	Laurel, Miss.	1310	WEAN	Providence, R. I.	780	WIBW	Topeka, Kans.	580
WAPI	Birmingham, Ala.	1140	WEBC	Superior, Wis.	1290	WIBX	Utica, N. Y.	1200
WARD	Brooklyn, N. Y.	1400	WEBQ	Harrisburg, Ill.	1210	WICC	Bridgeport, Conn.	600
WASH	Grand Rapids, Mich.	1270	WEBR	Buffalo, N. Y.	1310	WIL	St. Louis, Mo.	1200
WATR	Waterbury, Conn.	1190	WEDC	Chicago, Ill.	1210	WILL	Urbana, Ill.	890
WAVE	Louisville, Ky.	940	WEED	Wilmington, N. C.	1420	WILLM	Wilmington, Del.	1420
WAWZ	Zarephath, N. J.	1360	WEEI	Boston, Mass.	590	WIND	Gary, Ind.	560
WAZL	Hazleton, Pa.	1420	WEEU	Reading, Pa.	830	WINS	New York, N. Y.	1180
WBAE	West Lafayette, Ind.	1400	WEHC	Charlottesville, Va.	1350	WIOD	Miami, Fla.	1300
WBAK	Harrisburg, Pa.	1430	WEHS	Cicero, Ill.	1420	WIS	Philadelphia, Pa.	610
WBAL	Baltimore, Md.	1080	WELL	Battle Creek, Mich.	1420	WISN	Columbia, S. C.	1010
WBAP	Fort Worth, Texas	800	WENG	Albany, Ga.	1420	WISW	Milwaukee, Wis.	1120
WBAX	Wilkes-Barre, Pa.	1210	WENR	Chicago, Ill.	870	WJAC	Johnstown, Pa.	1310
WBBC	Brooklyn, N. Y.	1400	WESG	Elmira, N. Y.	680	WJAG	Norfolk, Neb.	1060
WBBL	Richmond, Va.	1210	WEVD	New York, N. Y.	1300	WJAR	Providence, R. I.	890
WBBM	Chicago, Ill.	770	WEW	St. Louis, Mo.	760	WJAS	Pittsburgh, Pa.	1290
WBBR	Brooklyn, N. Y.	1300	WEXL	Royal Oak, Mich.	1310	WJAX	Jacksonville, Fla.	900
WBBX	New Orleans, La.	1200	WFAA	Dallas, Texas	800	WJAY	Cleveland, Ohio	610
WBBZ	Ponca City, Okla.	1200	WFAB	New York, N. Y.	1200	WJCB	LaSalle, Ill.	1210
WBCM	Bay City, Mich.	1410	WFAM	South Bend, Ind.	1300	WJCI	Red Bank, N. J.	1200
WBEN	Buffalo, N. Y.	900	WFAS	White Plains, N. Y.	1210	WJCK	Detroit, Mich.	1370
WBEO	Marquette, Mich.	1310	WFBC	Greenville, S. C.	1200	WJCL	Decatur, Ill.	1200
WBHS	Huntsville, Ala.	1200	WFBE	Cincinnati, Ohio	1200	WJBO	Baton Rouge, La.	1420
WBIG	Greensboro, N. C.	1440	WFBG	Altoona, Pa.	1310	WJBW	New Orleans, La.	1200
WBNS	Columbus, Ohio	1430	WFBF	Syracuse, N. Y.	1380	WJBY	Gadsden, Ala.	1210
WBNX	New York, N. Y.	1350	WFBM	Indianapolis, Ind.	1230	WJDX	Jackson, Miss.	1270
WBOQ	New York, N. Y.	850	WFRB	Baltimore, Md.	1270	WJEF	Hagerstown, Md.	1210
WBOV	Terre Haute, Ind.	1310	WFDL	Flint, Mich.	1310	WJEM	Tupelo, Miss.	990
WBRC	Birmingham, Ala.	930	WFDV	Rome, Ga.	1500	WJJD	Chicago, Ill.	1138
WBRE	Wilkes-Barre, Pa.	1310	WFEA	Manchester, N. H.	1430	WJMS	Ironwood, Mich.	1420
WBSO	Babson Park, Mass.	920	WFI	Philadelphia, Pa.	680	WJR	Detroit, Mich.	750
WBT	Charlotte, N. C.	1080	WFLA	Clearwater, Fla.	620	WJSV	Washington, D. C.	1480
WBTM	Danville, Va.	1370	WGAL	Lancaster, Pa.	1310	WJTL	Atlanta, Ga.	1370
WBZ	Boston, Mass.	990	WGAR	Cleveland, Ohio	1450	WJW	Akron, Ohio	1210
WBZA	Springfield, Mass.	990	WGBB	Freeport, N. Y.	1210	WJZ	New York, N. Y.	760
WGAC	Storrs, Conn.	600	WGBF	Evansville, Ind.	630	WKAQ	San Juan, P. R.	1240
WGAD	Canton, N. Y.	1220	WGBI	Scranton, Pa.	880	WKAR	East Lansing, Mich.	1040
WGAE	Pittsburgh, Pa.	1220	WGCM	Mississippi City, Miss.	1210	WKBB	East Dubuque, Ill.	1500
WGAL	Northfield, Minn.	1250	WGCP	Newark, N. J.	1250	WKBF	Indianapolis, Ind.	1400
WGAM	Camden, N. J.	1280	WGES	Chicago, Ill.	1380	WKBH	LaCrosse, Wis.	1380
WGAO	Baltimore, Md.	600	WGH	Newport News, Va.	1310	WKBI	Cicero, Ill.	1420
WGAP	Asbury Park, N. J.	1280	WGL	Fort Wayne, Ind.	1370	WKBN	Youngstown, Ohio	570
WGAT	Rapid City, S. D.	1200	WGLC	Hudson Falls, N. Y.	1370	WKBO	Harrisburg, Pa.	1200
WCAU	Philadelphia, Pa.	1170	WGN	Chicago, Ill.	720	WKBV	Richmond, Ind.	1500
WGAX	Burlington, Vt.	1200	WGRY	Chester, N. Y.	1210	WKBW	Buffalo, N. Y.	1480
WGAZ	Carthage, Ill.	1070	WGNV	Buffalo, N. Y.	550	WKBZ	Ludington, Mich.	1500
WGBA	Allentown, Pa.	1440	WGST	Atlanta, Ga.	890	WKBU	LaGrange, Ga.	1500
WGBD	Zion, Ill.	1080	WGY	Schenectady, N. Y.	790	WKEF	Greenwood, Miss.	1210
WGBM	Baltimore, Md.	1370	WHA	Madison, Wis.	940	WKJC	Lancaster, Pa.	1210
WGBS	Springfield, Ill.	1210	WHAD	Milwaukee, Wis.	1120	WKOK	Sunbury, Pa.	1210
WGCO	Minneapolis, Minn.	810	WHAM	Rochester, N. Y.	1150	WKRC	Cincinnati, Ohio	550
WGFL	Chicago, Ill.	870	WHAS	Louisville, Ky.	820	WKY	Oklahoma City, Okla.	900
WCHS	Charleston, W. Va.	580	WHAT	Philadelphia, Pa.	1310	WKZO	Kalamazoo, Mich.	590
WCKY	Covington, Ky.	1490	WHAZ	Troy, N. Y.	1300	WLAC	Nashville, Tenn.	1470
WCLO	Janesville, Wis.	1200	WHB	Kansas City, Mo.	860	WLAP	Lexington, Ky.	1420
WCLS	Joliet, Ill.	1310	WHBC	Canton, Ohio	820	WLB	Minneapolis, Minn.	1250
WCNW	Brooklyn, N. Y.	1510	WHBD	Mount Orab, Ohio	1370	WLBC	Muncie, Ind.	1310
WCOA	Pensacola, Fla.	1510	WHBF	Rock Island, Ill.	1210	WLBF	Kansas City, Kans.	1420
WCOC	Meridian, Miss.	880	WHBL	Sheboygan, Wis.	1410	WLBL	Stevens Point, Wis.	900
WCRW	Chicago, Ill.	1210	WHBQ	Memphis, Tenn.	1370	WLBZ	Erie, Pa.	1260
			WHBU	Anderson, Ind.	1210		Bangor, Me.	620

## INDEX BY CALL LETTERS

WLEU	Erie, Pa.	1420	WRDW	Augusta, Ga.	1600	XEFJ	Monterrey, N. L.	1000
WLEY	Lexington, Mass.	1370	WREC	Memphis, Tenn.	800	XEFO	Mexico City, D. F.	940
WLIT	Philadelphia, Pa.	560	WREN	Lawrence, Kans.	1220	XEFV	Juarez, Chih.	1400
WLNH	Laconia, N. H.	1310	WRHM	Minneapolis, Minn	1250	XEFW	Tampico, Tams.	1310
WLS	Chicago, Ill.	870	WRJN	Racine, Wis.	1370	XEFZ	Mexico City, D. F.	1370
WLTH	Brooklyn, N. Y.	1400	WRKQ	Rockford, Ill.	1410	XEH	Monterrey, N. L.	1132
WLVA	Lynchburg, Va.	1370	WROL	Knoxville, Tenn.	1310	XEI	Morelia, Mich.	1310
WLW	Cincinnati, Ohio	700	WRR	Dallas, Texas	1280	XEJ	Juarez, Chih.	1016
WLWL	New York, N. Y.	1100	WRUF	Gainesville, Fla.	830	XEK	Mexico City, D. F.	990
WMAL	Washington, D. C.	870	WRVA	Richmond, Va.	1110	XEL	Saltito, Coah.	1000
WMAQ	Chicago, Ill.	870	WSAI	Cincinnati, Ohio	1330	XEMO	Tijuana, L. C.	865
WMAS	Springfield, Mass.	1420	WSAJ	Grove City, Pa.	1310	XEMZ	Tijuana, L. C.	1210
WMAC	Macon, Ga.	1180	WSAN	Allentown, Pa.	1440	XEN	Mexico City, D. F.	711
WMBC	Detroit, Mich.	1440	WSAR	Fall River, Mass.	1450	XENT	Nuevo Laredo, Tams.	1115
WMBD	Peoria, Ill.	1420	WSAZ	Huntington, W. Va.	1190	XEP	Mexico City, D. F.	780
WMBG	Richmond, Va.	1210	WSB	Atlanta, Ga.	740	XEPN	Piedras Negras, Coah.	585
WMBH	Joplin, Mo.	1420	WSBC	Chicago, Ill.	1210	XES	Tampico, Tams.	1020
WMBI	Chicago, Ill.	1080	WSBT	South Bend, Ind.	1230	XET	Monterrey, N. L.	690
WMBQ	Brooklyn, N. Y.	1310	WSEN	Columbus, Ohio	1210	XETB	Torreón, Coah.	1380
WMBQ	Brooklyn, N. Y.	1370	WSFA	Montgomery, Ala.	1410	XETH	Puebla, Pue.	1200
WMBR	Jacksonville, Fla.	1570	WSGN	Birmingham, Ala.	1310	XETU	Pachuca, Hdgo.	890
WMC	Memphis, Tenn.	780	WSIX	Springfield, Tenn.	1210	XETW	Mexico City, D. F.	830
WMCA	New York, N. Y.	670	WSJS	Winston-Salem, N. C.	1310	XETZ	Mexico City	1210
WMEX	Chelsea, Mass.	1500	WSM	Nashville, Tenn.	850	XEU	Veracruz, Ver.	1010
WMNN	Fairmont, W. Va.	890	WSMB	New Orleans, La.	1320	XEW	Mexico City, D. F.	890
WMPC	Lapeer, Mich.	1500	WSMK	Dayton, Ohio	1380	XEWW	Veracruz, Ver.	1095
WMT	Waterloo, Iowa	800	WSOC	Charlotte, N. C.	1210	XEX	Mexico City, D. F.	630
WMAC	Boston, Mass.	1230	WSPA	Spartanburg, S. C.	1420	XEY	Merida, Yuc.	648.8
WMAD	Newman, Okla.	1010	WSPD	Toledo, Ohio	1340	XEYZ	Mexico City, D. F.	790
WMAX	Yankton, S. D.	670	WSUI	Iowa City, Iowa	880	XEZ	Merida, Yuc.	680
WMNF	Binghamton, N. Y.	1500	WSUN	St. Petersburg, Fla.	620	XFB	Jalapa, Ver.	1290
WMNH	New Bedford, Mass.	1310	WSVS	Buffalo, N. Y.	1370	XFC	Aguascalientes, Ags.	805
WMNB	Silver Haven, Pa.	1200	WSYB	Rutland, Vt.	1500	XFG	Mexico City, D. F.	638.3
WMNR	Memphis, Tenn.	1430	WSYR	Syracuse, N. Y.	670	XFO	Mexico City, D. F.	940
WMNBW	Carbondale, Pa.	120P	WTAD	Quincy, Ill.	1440	XFX	Mexico City, D. F.	610
WMNBX	Springfield, Vt.	1280	WTAG	Worcester, Mass.	680	XGCU	Shanghai, Chn.	1140
WMNBZ	Saranac Lake, N. Y.	1290	WTAM	Cleveland, Ohio	1070	XGLS	Soochow, Chn.	1230
WMNL	San Juan, P. R.	1290	WTAQ	Eau Claire, Wis.	1330	XGOA	Nanking, Chn.	660
WMNEW	Newark, N. J.	1250	WTAR	Norfolk, Va.	780	XGOB	Lo Yang, Chn.	1090
WMNOX	Knoxville, Tenn.	580	WTAW	College Station, Texas	1120	XGOD	Hangchow, Chn	877.5
WMNRA	Muscle Shoals, Ala.	1428	WTAX	Springfield, Ill.	1420	XGOY	Yunnan, Chn.	698
WMNYC	New York, N. Y.	310	WTBO	Cumberland, Md.	1210	XHHE	Shanghai, Chn.	940
WMOAI	San Antonio, Texas	1190	WTCL	Philadelphia, Pa.	1310	XHHF	Shanghai, Chn.	980
WMOCL	Jamesstown, N. Y.	1210	WTFI	Athens, Ga.	1450	XHHG	Shanghai, Chn.	1020
WODX	Mobile, Ala.	1410	WTIC	Hartford, Conn.	1040	XHHH	Shanghai, Chn.	1040
WOI	Ames, Iowa	640	WTJS	Jackson, Tenn.	1310	XHHI	Shanghai, Chn.	900
WOKO	Albany, N. Y.	1430	WTMJ	Milwaukee, Wis.	820	XHHK	Shanghai, Chn.	1420
WOL	Washington, D. C.	1310	WTNJ	Trenton, N. J.	1280	XHHM	Shanghai, Chn.	1180
WOMT	Manitowoc, Wis.	1210	WTOC	Savannah, Ga.	1280	XHHN	Shanghai, Chn.	1200
WOOD	Grand Rapids, Mich.	1270	WTRC	Elkhart, Ind.	1310	XHHS	Shanghai, Chn.	1100
WOPI	Bristol, Tenn.	1500	WVFW	Brooklyn, N. Y.	1400	XHHU	Shanghai, Chn.	1180
WOQ	Kansas City, Mo.	1300	WVAE	Hammond, Ind.	1280	XHHV	Shanghai, Chn.	880
WOR	Newark, N. J.	710	WWJ	Detroit, Mich.	920	XHHX	Shanghai, Chn.	920
WORC	Worcester, Mass.	1280	WWL	New Orleans, La.	850	XHMA	Shanghai, Chn.	607
WORK	York, Pa.	1000	WWNC	Asheville, N. C.	570	XNPP	Peiping, Chn.	937
WQS	Jefferson City, Mo.	630	WWRL	Woodside, N. Y.	1500	XOPP	Peiping, Chn.	952.3
WOSU	Columbus, Ohio	570	WWSW	Pittsburgh, Pa.	1160	XOST	Tsinan, Chn.	857.1
WOV	New York, N. Y.	1130	WWVA	Wheeling, W. Va.	1180	XOTN	Tientsin, Chn.	625
WOW	Omaha, Neb.	590	WXYZ	Detroit, Mich.	1240	XQHA	Shanghai, Chn.	850
WOWO	Fort Wayne, Ind.	1160	XEA	Guadalajara, Jal.	1000	XQHB	Shanghai, Chn.	820
WPAD	Paducah, Ky.	1420	XEAB	Nuevo Laredo, Tams.	1450	XQHC	Shanghai, Chn.	1270
WPEN	Philadelphia, Pa.	1500	XEAC	San Luis Potosi, S.L.P.	1295	XQHD	Shanghai, Chn.	1360
WPFB	Hattiesburg, Miss.	1370	XEAE	Tijuana, L. C.	980	XQHT	Shanghai, Chn.	1480
WPG	Atlantic City, N. J.	1100	XEAF	Nogales, Son.	950	YLZ	Riga, Lat.	583
WPHR	Petersburg, Va.	1200	XEAI	Mexico City, D. F.	1090	YN	Lyons, F.	648
WPRO	Providence, R. I.	1210	XEAL	Mexico City, D. F.	850	YNCRG	Granada, Venz.	870
WPTF	Raleigh, N. C.	880	XEAO	Mexicali, L. C.	680	YV1BC	Caracas, Venz.	960
WQAM	Miami, Fla.	580	XEAW	Reynosa, Tams.	955	YV2BC	Caracas, Venz.	892
WQAN	Scranton, Pa.	880	XEB	Mexico City, D. F.	1030	YV3BC	Caracas, Venz.	1200
WQBC	Vicksburg, Miss.	1380	XEBC	Agua Caliente, L. C.	815	YV1BMO	Maracaibo, Venz.	1153
WQDM	St. Albans, Vt.	1370	XEC	Toluca, D. F.	1000	ZBW	Hongkong, Chn.	846
WQDX	Thomasville, Ga.	1210	XECW	Mexico City, D. F.	1310	ZILY	Hoten, Mnch.	900
WRAK	Williamsport, Pa.	1370	XED	Guadalajara, Jal.	1155	ZP1	Asuncion, Par.	1136
WRAP	Reading, Pa.	1310	XEFA	Mexico City, D. F.	1250	ZP3	Asuncion, Par.	1000
WRAX	Philadelphia, Pa.	1020	XEFB	Monterrey, N. L.	1315	ZP4	Asuncion, Par.	1276
WRBL	Columbus, Ga.	1200	XEFC	Merida, Yuc.	1050	ZP5	Asuncion, Par.	1485
WRBX	Roanoke, Va.	1410	XEFE	Laredo, Tams.	985	ZTB	Bloemfontaine, S. Af.	589
WRC	Washington, D. C.	950	XEFQ	Mexico City	1105	ZTC	Case Town, S. Af.	810
WRDO	Augusta, Me.	1370	XEFI	Chihuahua, Chih.	1280	ZTD	Durban, S. Af.	723



# AROUND *the* CLOCK on *the* SHORT WAVES

## MIDNIGHT TO NOON (EST)

GMT	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	W1XAZ W3XAL W3XAU W4XB W8XK W9XF	GSB GSD VK2ME W1XAZ W9XF	GSB GSD VK2ME	RV15 VQ7LO	PK1WK RV15	HVJ J1AA RNE RV15 VK2ME VK3ME PK1WK VQ7LO	HSJ RV15 VK2ME W1XAZ ZGE ZHI	GSF GSG PHI Rabat RV15 VK2ME W1XAZ ZGE	DJA DJB GSF GSG PHI Pont. Rabat VE9GW VK2ME W1XAZ W3XAL	CP5 DJB GSE GSF PHI Pont. VE9GW VK2ME W1XAZ W3XAL	CT1AA CP5 GSE Pont. VE9GW W1XAL W1XAZ W3XAL	GSB GSE VE9GW W1XAL W2XE W3XAL W3XL W8XK W9XAA

## NOON TO MIDNIGHT (EST)

GMT	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	1:00	2:00	3:00	4:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	GSB GSF I2RO Pont. VE9GW W1XAL W2XE W3XAL W3XAU W3XL W8XK W9XAA	GSB GSD I2RO Pont. VE9GW W1XAZ W3XAL W3XAU W3XL W8XK W9XAA	GSA GSB I2RO OXY Rabat VE9GW W1XAZ W3XAU W3XL W8XK W9XF	GSA GSB HAT I2RO LSX OXY Pont. Rabat RV59 VE9GW W2XAD W2XE W3XAU W3XL W8XK	CT1AA GSA GSB I2RO OXY Pont. Rabat RV59 VE9GW W2XAD W2XE W3XAU W3XL W8XK W9XF YV3BC	CT1AA EAQ GSA GSB HBL HBP HC2RL HIZ HC2RL OXY Pont. RV59 VE9GW VE9HX W1XAL W1XAL W1XAL W1XAZ W2XE W3XAL W3XAU W8XK W9XF YV1BC YV3BC	COC CP5 CT1AA EAQ GSA GSC HC2RL HJ1ABB HBL HBP HC2RL HJ1ABB OXY Pont. VE9GW VE9HX W1XAL W2XAF W2XE W3XAL W3XAU W8XK XETE YV1BC YV3BC	COC CP5 GSA GSC HC2RL HJ1ABB HJ2ABA HJ4ABE LSX PSK VE9CS VE9GW VE9HX W1XAL W2XAF W2XE W3XAL W3XAU W8XK XETE YV1BC YV3BC	DJC G6RX HCJB HIX HJ1ABB 4ABB 4ABE LSX VE9CS VE9GW VE9HX W1XAL W2XAF W2XE W3XAL W3XAU W8XK XETE YV1BC YV3BC	CP5 DJC HCJB HC2RL HIX HJ1ABB HJ3ABD HJ4ABE PRADO VE9CS VE9GW W2XAF W2XE W3XAL W3XAU W8XK XETE YV1BC YV3BC	CP5 HC2RL HJ... 3ABD PRADO VE9DN VE9GW VE9HX W1XAL W2XAF W2XE W3XAL W3XAU W8XK XETE	CP5 HJ... 4ABB HJ4ABE VE9DN W1XAZ W3XAL W3XL W8XK XETE

# One Hundred Best S.W. Stations by Calls

Stations marked with an asterisk (\*) will not verify. Frequencies are given in megacycles. Times are given in Eastern Standard.

- \*British Ships, 13.220, 8.831, 4.174  
 \*CEC, Chile, 19.678, 15.855  
 CGA, Canada, 13.296, 9.340  
 CNR, Morocco, 12.820  
 CQC, Cuba, 5.996, 4-6 p.m.  
 CP5, Bolivia, 15.300, 9-11 a.m.  
 CP5, Bolivia, 6.081, 6:30 to 7:30 or 8 p.m., daily, exc.  
 Sun.; 9-11:30 p.m. daily  
 CT1AA, Portugal, 9.992, Tues. and Fri., 4:30-7 p.m.  
 CT3AQ, Madeira, Tues., Thurs., 5-6:30 p.m.; Sun. 10:30 a.m.-noon  
 DAF, Germany, 12.394  
 DFB, Germany, 17.512  
 DIQ, Germany, 10.285  
 DJA, Germany, 9.552  
 DJB, Germany, 15.190, 8-11 a.m.  
 DJC, Germany, 6.017, 8-11 p.m.  
 DJD, Germany, 11.753, 8-11 a.m.  
 DJL, Germany, 15.110  
 EAQ, Spain, 9.862, 5:30-8 p.m.  
 EHY, Spain, 10.164  
 FTK, France, 15.863  
 FTM, France, 19.282  
 FZS, Indo-China, 11.983  
 \*German Ships, 13.135, 10.163, 8.328, 4.174  
 GAS, England, 18.304  
 GBB, England, 13.500  
 GBS, England, 12.148  
 GBW, England, 14.450  
 GSA, England, 6.050, 6-8 p.m.; 2:45-5:45 p.m.  
 GSB, England, 9.510, 2:15-4:15 a.m.; 11 a.m. to 1 p.m.; 1:15-5:45 p.m.  
 GSC, England, 9.585, 6-8 p.m.  
 GSD, England, 11.750, 2:30-4:30 a.m.; 1:15-2:45 p.m.  
 GSE, England, 11.865, 9 a.m. to 1 p.m.  
 GSF, England, 15.140, 7-8:45 a.m.; 9-11 a.m.  
 GSG, England, 17.770, 7 to 8:45 a.m.  
 G6RX, England, 4.972, Testing nights  
 4.302, 8-10 p.m.  
 HAT, Hungary, 7.220, Tests Sunday, 4 p.m.  
 HBL, Switzerland, 9.580, Sat., 5:30 to 6:15 p.m.  
 HBP, Switzerland, 7.872, Sat., 5:30 to 6:15 p.m.  
 HC2RL, Ecuador, 6.659, Tues., 9:14 to 11:14 p.m.; Sun., 5:45 to 7:45 p.m.  
 HCJB, Ecuador, 3.998, 8:14 to 10:14 daily, exc. Mon.  
 HCK, Ecuador, 6.694, 8 to 11 p.m.  
 HIX, Santo Domingo, 5.948, Tues. and Fri., 8 to 10 p.m.; Sun., 7:40 a.m.  
 HIZ, Santo Domingo, 6.379, 5-6 p.m.  
 HI-1-A, Santo Domingo, 6.272, 8-8:30 a.m.; 12:30-1:30 p.m.; 8-9 p.m.  
 \*HJB, Colombia, 14.930  
 \*HJY, Colombia, 18.444  
 HJ1ABB, Colombia, 6.447, 7:30-10 p.m.  
 HJ2ABA, Colombia, 5.879, 7:30 to 10 p.m.  
 HJ3ABD, Colombia, 7.402, 9-11:15 p.m., daily  
 HJ4ABB, Colombia, 7.139, Sat., 11 p.m. to Mid.; Sun., 3-5 p.m.; Wed., 8-10 p.m.  
 HJ4ABE, Colombia, 5.900, 7-11 p.m.  
 HJ5ABB, Colombia, 6.378  
 HJ5ABF, Colombia, 8.271  
 HKN, Colombia, 7.138, 8-10 p.m., daily  
 \*HPF, Panama, 14.545.  
 HSP, Siam, 17.719  
 HVJ, Vatican City, 15.120, 5 to 5:15 a.m.  
 IAC, Italy, 12.785  
 I2RO, Italy, 11.800, 11:30 a.m.-12:30 p.m.; 1:15-6 p.m.  
 J1AA, Japan, 9.862, 5 to 8 a.m.  
 KAY, Philippines, 14.980  
 KAZ, Philippines, 9.990  
 \*KKP, Hawaii, 16.024  
 LSN, Argentina, 9.895  
 LSX, Argentina, 10.345  
 LSY, Argentina, 18.116  
 \*OCI, Peru, 18.670  
 OXY, Denmark, 9.520, 2 to 6:30 p.m.  
 PHI, Ho land 11.725, 7:30 to 10 a.m., except Tues. and Wed.  
 PK1WK, Java, 6.116, 4:15-6 a.m.  
 PLE, Java, 18.820  
 PLV, Java, 9.410  
 Pontoise, France, 15.454  
 Pontoise, France, 15.234, 8-11 a.m.  
 11.898, 11:15 a.m. to 2:15 p.m.; 3 to 8 p.m.  
 11.711, 3 to 9 p.m.; 10 p.m. to mid.  
 \*PPU, Brazil, 19.270  
 PRADO, Ecuador, 6.618, Thursday, 9-11 p.m.  
 \*PSF, Brazil, 14.682  
 Rabai, Morocco, 12.820, Sun., 7:30 to 9 a.m.  
 8.218, Sun., 2:30 to 5 p.m.  
 Radio-Tananarive, Madagascar, 6.00, 2:30-4 a.m.; Sun., 3-3:45 a.m., daily exc. Sun and Mon.  
 RNE, USSR., 11.923, Testing irregularly  
 RV15, Siberia, 4.273, 3-9 a.m., daily  
 RV59, USSR., 5.996, 3-6 p.m., daily  
 TGA, Guatemala, 14.545  
 TIN-TIU, Costa Rica, 14.545  
 VE9AO, Toronto, Canada  
 VE9BJ, Canada, 6.090, Irreg.  
 VE9CA, Canada, 6.030  
 VE9CS, Canada, 6.074, 8-10 p.m.  
 VE9DN, Canada, 6.005, Testing irreg.  
 VE9DR, Canada, 6.005, 7:30 a.m. to Midnight; Sun., noon to 11:15 p.m.  
 VE9GW, Canada, 6.092, 3 p.m.-midnight  
 VE9HX, Canada, 6.110, 5-11 p.m., daily  
 VE9JR, Canada, 11.720, Irreg., approx. 9-30 a.m.-10:30 p.m.  
 VK2ME, Australia, 10.520, 9.585, Sun., 1 to 3 a.m.; 5 to 11 a.m.  
 VK3ME, Australia, 9.503, Wed., 5-6:30 a.m.; Sat., 5-7 a.m.  
 VWZ, India, 17.533  
 \*WNC, U. S. A., 15.055  
 W1XAL, U. S. A., 15.242, Sunday, 10 a.m.-1 p.m.  
 11.780, Sat., 5:30-11 p.m.; Sun., 6:30-8:30 p.m.  
 W1XAZ, USA, 9.570  
 W2XAD, USA, 15.320, Sun., Mon., Wed., Fri., 4-5 p.m.  
 W2XAF, USA, 9.530, 7:45 to 11 p.m.  
 W2XE, U. S. A., 15.258, 11 a.m. to 1 p.m.  
 11.823, 3 to 5 p.m.  
 6.116, 6 to 11 p.m.  
 W3XAL, U. S. A., 17.772, 9 a.m.-3 p.m., except Sat.  
 6.096, 3 p.m., to midnight, Saturday  
 W3XAU, U. S. A., 9.585, Noon to 6 p.m.  
 6.057, 8 p.m. to 1 a.m.  
 W3XL, U. S. A., 6.421, Irregular  
 W4XB, U. S. A., 6.040, 4 p.m. to 1 a.m.  
 W8XAL, U. S. A., 6.060, Relay WLW irreg.  
 W8XK, U. S. A., 21.451, 7 a.m. to 2 p.m.  
 15.204, 10 a.m. to 4:15 p.m.  
 11.870, 4:30-10 p.m.  
 6.140, 4:30 p.m. to 12:30 a.m.  
 W9XAA, U. S. A., 6.076, 3 to 6 p.m.  
 W9XF, U. S. A., 6.425  
 W9XF, U. S. A., 6.100, Silent Sat.; Sun., 1-2:30 p.m.; 4:30-7 p.m.; 9 p.m. to 2 a.m.; other days, 4:30-8 p.m.; 9-30 p.m. to 2 a.m.  
 XAM, Mexico, 11.187  
 XDS, Mexico, 11.760  
 XETE, Mexico, 9.600, 2:30-5 p.m.; 6:30 p.m. to midnight  
 \*YNA, Nicaragua, 14.480, Phones Hialeah  
 \*YVQ, Venezuela, 13.337, Phones Hialeah  
 \*YVR, Venezuela, 18.296 and 9.168  
 YV1BC, Venezuela, 6.112, 5:15 to 10 p.m.  
 YV2AM, Venezuela, 7.138, Sun., 8-10 a.m.  
 YV3BC, Venezuela, 9.510, 9:30 to 10 p.m.  
 6.150, 10:30 a.m. to 1 p.m. and 4:30-9:30 p.m.; Sun., 8:30 a.m. to noon and 3-6:30 p.m.  
 \*ZFA, Bermuda, 5.045  
 \*ZFB, Bermuda, 10.060  
 ZFS, Bahamas, 4.513  
 ZGE, Malaya, 5.996, Tues., Fri., 8:30-8:30 a.m. and Sun., 7-9 a.m.

# ADDRESSES OF SHORTWAVE STATIONS

1. Compañía Internacional de Radio, Defensa 143, Buenos Aires, Argentina.
2. Transradio Internacional, Compañía Radiotelegráfica Argentina, S. A. Buenos Aires, Argentina.
3. Amalgamated Wireless, (A/sia) Ltd., 47 York St., Sydney, N. S. W., Australia.
4. Companhia Radio Internacional do Brasil, Caixa Postal 620, Rio de Janeiro, Brasil.
5. Cia. Radiotelegraphica Brasileira, Caixa Postal 500, Rio de Janeiro, Brasil.
6. Canadian Marconi Co., P. O. Box 1690, Montreal, P. Q., Canada.
7. Compañía Internacional de Radio S. A. (Chile), Casilla 16D, Santiago de Chile.
8. Chinese Government Radio Administration, Sassoon House, Jinkee Road, Shanghai, China.
9. Compañía Radiográfica Internacional de Costa Rica, San Jose, Costa Rica.
10. Marconi Radio Telegraph Co. of Egypt, S. A., P. O. Box No. 795, Cairo, Egypt. (Street address: Radio House, Sharia Elouli).
11. Societe Francaise Radio-Electrique, 79 Boulevard Haussmann, Paris VIII, France.
12. Compagnie Generale de Telegraphie Sans Fil, Bóite Postale 238, Saigon, French Indo-China.
13. Reichspostzentramt, Telegraphentechnisches Reichsamt, Schöneberger Strasse 11-15, Berlin-Tempelhof, Germany.
14. Reichs-Rundfunk Gesellschaft, Haus des Rundfunks, Masurenallee, Berlin-Charlottenburg 9, Germany.
15. Hauptfunkstelle Norddeich, Norden-Land, Germany.
16. The Engineer-in-Chief, G. P. O. (Radio Section), 86 Wood St., London, EC2, England.
17. The British Broadcasting Corp., Broadcasting House, London, W1, England.
18. Parkstaart 29, S'Gravenhage, Holland.
19. Radiomarittimo Coltano Radio IAC, Piza, Italy.
20. Societe Italo Radio, Via Calabria No. 46-48, Rome, Italy.
21. Trens News Agency, 43 Colon St., Mexico, D. F., Mexico.
22. Gouvernements Radio-Dienst, Bandoeng, Java, Netherland East-Indies.
23. Post Telegraaf en TelefoonDienst, Makassar, Celebes, Netherland East Indies.
24. Superintendent of Post and Telegraphs, General Post Office, Wellington, New Zealand.
25. Compañía Peruana de Telefonos, Apartado 986, Lima, Peru.
26. Radio Corp. of the Philippines, Plaza Moraga, Manila, Philippine Islands.
27. Post and Telegraph Department, Bangkok, Siam.
28. Compania Telefonica Nacional de España, S. A., Margall 2, Madrid, Spain.
29. Transradio Española, S. A., Apartado de Correos 951, Madrid, Spain.
30. M. G. Gallarati, Information Section, League of Nations, Geneva, Switzerland.
31. Cuba Transatlantic Radio Corp., Habana, Cuba.
32. Radio Corporation of Cuba, Habana, Cuba.
33. Department of Marine, Radio Branch, Ottawa, Canada.
34. Calgary Herald, Ltd., Southam Bldg., Calgary, Alta.
35. Estación YVQ, Estados Unidos de Venezuela, Servicio Radiotelegrafico, Maracay, Venezuela.
36. Imperial and International Communications, Ltd., Davidson St., Hamilton, Bermuda.
37. The National Broadcasting Co., 30 Rockefeller Plaza, New York, N. Y.
38. Radio Club do Brasil, A. Vox do Brasil, Rio de Janeiro.
39. Technical Director, Royal Hungarian Post, Gyalí St. 22, Budapest, Hungary.
40. Radio Operator (name of ship), Pier 86, 46th St., New York, N. Y.
41. (name of ship), Pier 57, Hudson River, New York, N. Y.
42. North German Lloyd, Pier 42, North River, Foot of Morton St., New York, N. Y.
43. Hamburg-American Lines, Pier 86, North River, West 46th St., New York, N. Y.
44. North German Lloyd, Pier 4, Foot of 58th St., Brooklyn, New York.
45. Canadian Airways, Ltd., (Western Lines), 60 Brock St., Winnipeg, Man., Canada.
46. North-West Telephone Co., Corner 2nd Ave. and Wylie St., Vancouver, B. C., Canada.
47. Laurentian Forest Protective Association, 126 St. Peter St., Quebec, P. Q., Canada.
- CP5: Compañía Radio Boliviana, Casilla 637, La Paz, Bolivia.
- CT1AA: Senhor Abilio Nunes dos Santos, Jr., Av. Antonio Augusto de Aguiar 144, Lisbon, Portugal.
- CT1CT: Senhor Oscar G. Lomelino, Rua Gomez Freire 79, 2-D, Lisbon, Portugal.
- CT3AQ: Thiago D'Aguiar, Funchal, Madeira Islands.
- EA8CF: Radio Club de Tenerife, Alvarez de Lugo 1, Santa Cruz de Tenerife, Canary Islands.
- G6RX: Rugby Radio Station G6RX, Hillmorton, Near Rugby, Warwickshire, England.
- HCJB: Mr. Clarence W. Jones, Transmisora HCJB, Casilla 691, Quito, Ecuador.
- HC2RL: Estación Radiodifusora HC2RL, Dr. Roberto Levi, Apartado 759, Guayaquil, Ecuador.
- HIX: Mr. J. R. Saladin, Director de Radio, Estación Radiodifusora HIX, Santo Domingo, Dominican Republic.
- HIZ: Mr. Geo. Abbes, Estación HIZ, Calle Duarte No. 68, Santo Domingo, Dominican Republic.
- HI1A: Estación HI1A, La Voz del Yaque, Santiago de los Caballeros, Dominican Republic.
- HJ1ABB: Radiodifusora La Voz de Barranquilla de Elias J. Pellet B., Apartado 715, Barranquilla, Colombia.
- HJ2ABA: Sr. Pompello Sanchez, La Voz del Pais, Tunja, Colombia.
- HJ3ABB: Estación HJ3ABB, Apartado 509, Bogotá, Colombia.
- HJ3ABF: Estación HJ3ABF, Calle 15, No. 5-40, Bogotá, Colombia.
- HJ4ABB: Radio Manizales, Sr. Roberto Baena V., Apartado 175, Manizales, Colombia.
- HJ4ABE: Cia. Radiodifusora de Medellin, Emisora HJ4ABE, Medellin, Colombia.
- HJ5ABB: Estación Radiodifusora del Valle HJ5ABB, Apartado 270, Cali, Colombia.
- HVJ: Stazione Radio-Vatican, Pontificia Accademia Della Scienze, Roma-Castina Pio IV, Città del Vaticano.
- I2RO: Ente Italiano per le Audizioni Radiofoniche, Via Asiago N. 10, Rome, Italy.
- J1AA: Kemikawa Radio Sending Station J1AA, Kemikawa-Cho, Chiba-Ken, Japan.
- LCL: Minister du Commerce du Royaume de Norvège, Oslo, Norway.

- LR4: Radio Splendide, Callao 1526, Buenos Aires, Argentina.
- NIROM: N. V. Nederlandsch Indische Radio Omtroep Moatschappij, Tandjong Priok, Zuiderderweg, Batavia, Java, Netherland East-Indies.
- OER2-3: Radio Wein, Oesterreich, Johannisgasse 4-6, Vienna, Austria.
- OPL-M: Radio Station Leopoldville, Leopoldville, Belgian Congo.
- ORG-K: Regie des Telegraphes et des Telephones, Direction des Radiocommunications, Brussels, Belgium.
- OXY: Statsradiofonien, Drifts sledern, Heibersgade 7, Copenhagen, Denmark.
- PHI: N. V. Philips Radio Laboratories, Huizen, Holland.
- PK1WK: Mr. J. F. W. de Kort, Radiohandel, Bragaweg 34, Bandoeng, Java, Netherland East-Indies.
- PRADO: Radiodifusora "El Prado," Apartado 98, Riobaamba, Ecuador.
- Rabat: Direction de L'Office des Postes, des Telegraphes et des Telephones du Maroc, Rabat, Morocco.
- Rdo. Coloniale: Ministère des Postes, Telegraphs et Telephones, Direction de la Radiodiffusion, 98 bis, Blvd. Haussman, Paris, France.
- Rdo. Tananarive: Le Directeur des Postes et des Telegraphes, Tananarive, Madagascar.
- RNE: Commissariat du Peuple des Communications Postales et Electriques de l'URSS, No. 17 Gorki St., Moscow.
- RV59: Trade Union Radio Station, Radio Centre, Palace of Labour, Solianka 12, Moscow, USSR.
- SR1: Radio Poznanski, Plac Wolnosce 11, Rozglosnia, Poznan, Poland.
- TI4 NRH: Sr. Amando Cespedes Marin, Apartado 40, Heredia, Costa Rica.
- VE9BJ: C. A. Munro, Ltd., Canterbury St., St. John, New Brunswick, Canada.
- VE9CA: The Voice of the Prairies, Ltd., Calgary, Alta.
- VE9CS: Radio Service Engineers, Ltd., 734 Davie St., Vancouver, B. C., Canada.
- VE9EH: Island Radio Broadcasting Co., Ltd., 143 Great George St., Charlottetown, P. E. I., Canada.
- VE9GW: Canadian Radio Commission Station VE9GW, R. R. No. 4, Bowmanville, Ont., Canada.
- VE9HX: The Maritime Broadcasting Co., Ltd., P. O. Box 998, Halifax, N. S., Canada.
- VE9JR: James Richardson & Sons, Ltd., Radio Office 155 Royal Alexandra Hotel, Winnipeg, Manitoba.
- VK3LR: Research Section, P. M. G. Department, 61 Little Collins St., C1, Melbourne, Victoria, Australia.
- VK3ME: Amalgamated Wireless, (A/sia), Ltd., Box No. 1272L, Elizabeth St. P. O., Melbourne, Vic., Australia.
- VQ7LO: Imperial and International Communications Ltd., P. O. Box 777, Nairobi, Kenya Colony.
- WTVD: Mr. H. M. McKenzie, St. Thomas, Virgin Islands.
- WTDW: Mr. S. I. Winde, Christiansted, Virgin Islands.
- VUC: Indian State Broadcasting Service, 1 Garstin Place, Calcutta, India.
- WVD: Alaskan Telephone Co., 517 Federal Office Bldg., Seattle, Washington.
- W1XAL: World Wide Broadcasting Corp., Boston, Mass.
- W1XAZ: Westinghouse Radio Stations of New England, Hotel Bradford, Boston, Mass.
- W2XE: Columbia Broadcasting System, Inc., 485 Madison Ave. at 52nd St., New York City.
- W3XAU: WCAU Broadcasting Co., WCAU Bldg., 1622 Chestnut St., Philadelphia, Pa.
- W8XAL: Crosley Radio Corp., 1329 Arlington St., Cincinnati, Ohio.
- W8XK: Westinghouse Radio Station W8XK, Hotel William Penn, Pittsburg, Pa.
- W9XAA: Mr. Maynard Marquardt, Chicago Federation of Labor, 666 Lake Shore Drive, Chicago, Ill.
- W9XF-9XQ: National Broadcasting Co., Inc., Merchandise Mart, Chicago, Ill.
- XAM: Telegrafos Nacionales, Merida, Yucatan, Mexico.
- XETE: Empresa Telefonos Ericsson, S. A., C. Central 3, Colonia del Valle, Mexico, D. F. (or, P. O. Box 1396).
- YV1BC: Broadcasting Caracas, Apartado 290, Caracas, Venezuela.
- YV3BC: Radiodifusora Venezuela YV3BC, Bajos Pasaje Ramella, Caracas, Venezuela.
- ZFS: Office of Superintendent of Telegraphs, Central Bay Street, Nassau, N. P., Bahamas.
- Malayan Amateur Radio Society, c/o ZGE: Institute for Medical Research, Kuala Lumpur, Federated Malay States.

## TWO HUNDRED DEPENDABLE S. W. STATIONS

Frequencies are shown in megacycles and wavelengths in meters. Key to symbols in parentheses: Capital letters indicate type of service, as follows:

- A—Point-to-Point, Condition A, inverted modulation  
 B—Point-to-Point, Condition B, intelligible speech  
 E—Experimental  
 R—Relay (broadcasting)  
 SS—Ship to shore, or, shore to ship

Small letters concern verifications as follows:

- a—Verifies for return postage  
 b—Verifies only occasionally  
 c—Does not verify  
 x—Address given alphabetically in address list  
 y—Address not given  
 z—No information available

123—figures indicate key numbers in address list

Megs.	Meters	Location
4.107	73.00	Quito, Ecuador (R-ax)
4.273	70.65	RV15, Khabarovsk, USSR (R-cy)
4.320	69.40	G6RX, Rugby, England (E-ax)
4.348	68.96	CGA9, Drummondville, P. Q. (B-c-6)
4.465	67.14	CFA2, Drummondville, P. Q. (B-b-6)
4.753	63.08	WOO, Ocean Gate, N. J. (SS-cy)
4.755	63.05	CFU, Rossland, B. C. (B-z)

4.785	66.66	CZA, Drummondville, P. Q. (SS-c-6)
4.972	60.30	G6RX, Rugby, England (E-ax)
5.045	59.42	ZFA, St. George, Bermuda (A-cy)
5.660	51.21	CFU, Rossland, B. C. (B-z)
5.825	51.47	HJA2, Bogota, Colombia (B-cy)
5.900	50.82	CMB1, Havana, Cuba (B-a-31)
5.900	50.82	HJ4ABE, Medellin, Colombia (R-ax)
5.948	50.40	HIX, Santo Domingo, D. R. (R-ax)
5.996	50.00	RV59, Moscow, USSR (R-ax) Tananarive, Madagascar (R-ax)
6.000	49.97	YV2BC, Caracas, Venez. (R-z)
6.005	49.93	VE9DN, Drummondville, P. Q. (R-a6)
6.017	49.83	DJC, Zeesen, Germany (R-a14)
6.040	49.64	W4XB, Miami, Fla. (R-cy)
6.045	49.60	HJ3ABI, Bogota, Colombia (R-ax)
6.050	49.56	GSA, Davenport, Eng. (R-a17)
6.060	49.48	W3XAU, Newtown Sq., Pa. (R-ax) W8XAL, Mason, Ohio (R-ax)
6.069	49.40	OXY, Skamlebaek, Denmark (R-ax)
6.070	49.39	VE9CS, Vancouver, B. C. (R-ax) YV5BMO, Maracaibo, Venez. (R-ax)



6.080	49.31	W9XAA, Chicago, Ill. (R-ax)	9.585	31.28	GSC, Daventry, England (R-a-17)
6.081	49.30	CP5, LaPaz, Bolivia (R-ax)			VK2ME, Sydney, Aust. (R-a-3)
6.095	49.19	VE9GW, Bowmanville, Ont. (R-ax)	9.590	31.26	W3XAU, Newtown Sq., Pa. (R-ax)
6.100	49.15	W3XAL, Boundbrook, N. J. (R-a37)	9.592	31.25	CT1AA, Lisbon, Portugal (R-ax)
		W9XF, Chicago, Ill. (R-ax)	9.595	31.30	HLB, Frangins, Switz. (R-a-30)
6.110	49.07	VE9HX, Halifax, N. S. (R-ax)	9.600	31.23	XE7E, Mexico City, D. F. (R-bx)
6.112	49.10	YV1BC, Caracas, Venez. (R-ax)	9.609	31.20	DTU, Nauen, Germany (B-a-13)
6.116	49.02	HJ1ABD, Cartagena, Col. (R-z)	9.670	31.00	T14NRH, Heredia, C. R. (R-ax)
		PK1WK, Bandoeng, Java (R-ax)	9.702	30.90	GCA, Rugby, England (A-a-16)
6.120	48.99	W2XE, Wayne, N. J. (R-ax)	9.750	30.75	VK2ME, Sydney, Aust. (B-a-3)
6.140	48.83	W8XK, Saxonburg, Pa. (R-ax)	9.798	30.60	GCW, Rugby, England (A-a-16)
6.150	48.78	Y93BC, Caracas, Venez. (R-ax)	9.823	30.50	IRM, Rome, Italy (B-a-20)
6.150	48.75	CJ10, Winnipeg, Man. (R-z-33)	9.830	30.50	LSI, Buenos Aires, Arg. (B-b-1)
6.378	47.00	HJ5AB, Cali, Colombia (R-by)	9.862	30.40	EAQ, Aranjuez, Spain (R-a-29)
6.379	47.50	HIZ, Santo Domingo, D. R. (R-ax)			J1AA, Kemikawa-cho, Japan (R-bx)
6.425	46.66	W3XL, Boundbrook, N. J. (R-a37)	9.895	30.30	LSN, Buenos Aires, Arg. (A-b-1)
6.447	46.50	HJ1ABB, Barranquilla, Col. (R-ax)	9.942	30.15	GUU, Rugby, England (A-a-16)
6.618	45.31	PRADO, Riobamba, Ecuador (R-ax)	10.014	29.84	SUV, Abu Zabal, Egypt (B-a-10)
6.648	45.10	IAC, Coltano, Italy (SS-a19)	10.060	29.80	ZFB, St. George, Bermuda (A-cy)
6.659	45.02	HC2RL, Guayaquil, Ecuador (R-ax)	10.163	29.50	German Ships
6.672	44.94	YVQ, Maracaib, Venez. (B-cy)	10.164	29.79	EHY, Madrid, Spain (B-a-28)
6.675	44.91	DGK, Nauen, Germany (B-a-13)	10.212	29.35	PSH, Rio de Janeiro, Braz. (B-b-5)
6.900	43.45	GDS, Rugby, England (A-a-16)	10.250	29.25	PMN, Bandoeng, Java (B-a-22)
6.966	43.04	EDO, Madrid, Spain (B-a25)	10.285	29.15	DIQ, Zeesem, Germany (E-a-13)
6.990	42.89	LCL, Jeloy, Norway (R-ax)	10.290	29.14	HPC, Panama City, Pan. (B-cy)
7.138	42.00	HJ4AB, Manizales, Col. (R-ax)	10.296	29.12	LSL, Hurlingham, Arg. (B-b-1)
		HKN, Medellin, Colombia (R-by)	10.335	29.01	ZFD, St. George, Bermuda (A-cy)
7.220	43.86	HAT2, Budapest, Hungary (R-ax)	10.350	28.98	LSX, Monte Grande, Arg. (B-cy)
7.402	40.50	HJ3AB, Bogota, Col. (R-by)			LSX, Monte Grande, Arg. (B-b-2)
		HJ3ABD, Bogota, Col. (R-z)	10.410	28.80	PKP, Medan, Sumatra (B-a-23)
7.501	39.97	RKI, Moscow, USSR (B-cz)	10.520	28.50	VK2ME, Sydney, Aust. (B-a-3)
7.621	39.34	RIM, Irkutsk, USSR (B-cz)	10.613	28.25	EDN, Madrid, Spain (B-a-28)
7.785	39.01	TTR, Cartago, Costa Rica (B-b-9)			EDX, Madrid, Spain (B-a-28)
7.797	38.47	HBP, Frangins, Switz. (R-b-30)	10.850	27.63	DFL, Nauen, Germany (B-a-13)
7.980	37.57	HSJ, Bangkok, Siam (B-a-27)	10.990	27.28	ZLT, Wellington, N. Z. (A-ax)
8.180	36.65	PSK, Rio de Janeiro, Braz. (A-b-4)	11.187	26.80	XAM, Merida, Yuc. (B-ax)
		PSK, Rio de Janeiro, Braz. (R-a-38)	11.680	25.67	YVQ, Maracaib, Venez. (B-cy)
8.218	36.36	Rabat, Morocco (R-ax)	11.711	25.60	Pontoise, France (B-ax)
8.464	35.42	DAF, Norden, Germany (SS-a-15)	11.720	25.58	CJRX, Winnipeg, Man. (R-ax)
8.760	34.34	PNI, Macassar, Celebes (B-a22?)	11.725	25.57	PHI, Huizen, Holland (R-ax)
9.014	33.26	GCS, Rugby, England (A-a-16)	11.750	25.51	GSD, Daventry, England (R-a-17)
9.104	32.93	LST, Olivos, Argentina (B-b-1)	11.760	25.50	XDM-XDS, Chapultepec, D. F. (B-cy)
9.120	32.87	CP5, La Paz, Bolivia (R-ax)	11.780	25.45	W1XAL, Boston, Mass. (R-ax)

## The PROOF of the PUDDING

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11.800	25.40	I2RO, Rome, Italy (R-bx)	17.719	16.92	HSP, Bangkok, Siam (B-a-27)
11.830	25.34	W2XE, Wayne, N. J. (R-ax)	17.760	16.88	DJE, Zeesen, Germany (E-a-14)
11.865	25.27	GSE, Davenport, Eng. (R-a-17)	17.770	16.87	IAC, Coltano, Italy (SS-b-19)
11.870	25.25	W8XK, Saxonburg, Pa. (R-ax)	17.775	16.87	PHI, Huizen, Holland (R-ax)
11.898	25.20	Pontoise, France (R-ax)	17.780	16.86	W3XL, Boundbrook, N. J. (R-a-37)
11.923	25.16	RNE, Moscow, USSR. (E-ax)	17.790	16.85	GSF, Davenport, Eng. (R-a-17)
11.935	25.12	FTA, St. Assise, France (B-a-11)	18.116	16.55	LSY, Buenos Aires, Arg. (E-b-2)
11.983	25.02	FZS, Saigon, Indo-China (B-a-12)	18.170	16.50	PMC, Bandoeng, Java (B-a-22)
12.148	24.68	GBS, Rugby, England (A-a-16)	18.237	16.44	FTE, St. Assise, France (B-a-11)
12.241	24.41	GBU, Rugby, England (A-a-16)	18.296	16.39	YVR, Maracaay, Venez. (B-cy)
12.394	24.19	DAF, Norden, Germany (SS-a-15)	18.304	16.38	GAS, Rugby, Eng. (A-a-16)
12.780	23.46	GBC, Rugby, England (SS-a-16)	18.400	16.29	PCK, Kootwijk, Holland (B-cy)
12.785	23.45	IAC, Coltano, Italy (SS-a-19)	18.444	16.25	HJY, Bogota, Colombia (B-cy)
12.820	23.38	CNR, Rabat, Morocco (B-ax)	18.611	16.11	GAU, Rugby, Eng. (A-a-16)
		Rabat, Morocco (R-ax)	18.670	16.06	OCI, Valverde, Peru (B-cy)
12.830	23.36	HJA3, Barranquilla, Col. (B-cz)	18.820	15.93	PLE, Bandoeng, Java (E-a-22)
13.135	23.00	German Ships	18.856	15.90	ZSS, Klipheubel, South Afr. (A-z)
13.220	22.68	British Ships	18.963	15.81	GAG, Rugby, England (A-a-16)
13.337	22.48	YVQ, Maracaay, Venez. (B-cy)	19.121	15.68	LSM, Hurlingham, Arg. (B-b-1)
13.500	22.09	GBB, Rugby, England (A-a-16)	19.240	15.58	DFA, Nauen, Germany (B-a-13)
13.671	21.93	HAS, Budapest, Hungary (R-az)	19.270	15.57	PPU, Rio de Janeiro, Braz. (B-a-5)
14.450	20.75	GBW, Rugby, England (A-a-16)	19.506	15.37	IRW, Rome, Italy (B-2-20)
14.480	20.70	YNA, Managua, Nicaragua (B-cy)	19.519	15.36	EDX, Madrid, Spain (B-a-28)
14.545	20.69	HFP, Panama City, Pan. (B-cy)	19.678	15.24	CEC, La Granja, Chile (B-a-29)
		TGF, Guatemala City, Guat. (B-by)	19.684	15.23	EAQ, Aranjuez, Spain (B-a-29)
14.682	20.42	PSF, Rio de Janeiro, Braz. (A-b-4)	20.368	14.72	GAA, Rugby, Eng. (A-a-16)
14.930	20.08	HJB, Bogota, Colombia (B-cy)	21.020	14.27	LSN, Hurlingham, Arg. (A-b-1)
14.969	20.03	EDQ, Madrid, Spain (B-a-28)	21.540	13.92	W8XK, Saxonburg, Pa. (R-ax)
15.110	19.84	DJL, Zeesen, Germany (R-a-14)			
15.120	19.83	HVJ, Vatican City (R-ax)			
15.140	19.81	GSF, Davenport, Eng. (R-a-17)			
15.190	19.73	DJB, Zeesen, Germany (R-a-14)			
15.210	19.71	W8XK, Saxonburg, Pa. (R-ax)			
15.234	19.68	Pontoise, France (R-ax)			
15.242	19.67	W1XAL, Boston, Mass. (R-ax)			
15.280	19.62	W2XE, Wayne, N. J. (R-ax)			
15.300	19.70	CP5, La Paz, Bolivia (R-ax)			
15.340	19.55	W2XAD, Schenectady, N. Y. (R-ax)			
15.350	19.53	CT1AA, Lisbon, Portugal (R-ax)			
15.454	19.40	Pontoise, France (R-ax)			
15.863	18.90	FTK, St. Assise, France (B-a-11)			
17.287	17.34	Italian Ships			
17.300	17.33	W3XL, Boundbrook, N. J. (E-a-37)			
17.512	17.12	DFB, Nauen, Germany (B-a-13)			
17.533	17.10	VWZ, Kirkee, India (B-z)			
17.580	17.05	British Ships			

For a complete list of the short wave stations of the world, indexed both numerically and alphabetically, see the Summer Edition of the DX Log of the World. Price ten cents at the principal newsstands.

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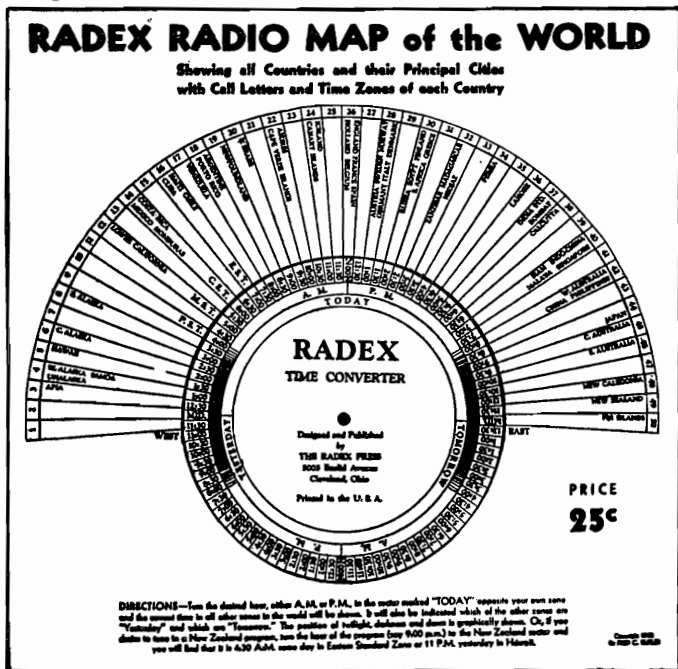
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