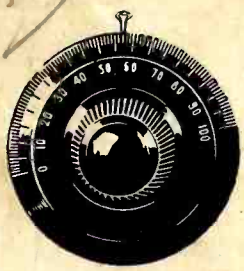
THE MARCH 1930

RADIO INDEX



REG. U. S. PATENT OFFICE

FRED CLAYTON BUTLER
Editor and Publisher

SIXTH YEAR

Contents

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See Subscription Blank on page 34

THE RADEX PRESS
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Short Waves for the Radio Fan

A Great Field for the Experimenter

By J B SMITH

FOR the radio fan as well as the experimenter, short-wave reception is an especially attractive field for long-distance work, for, as is well known to short-wave enthusiasts, much greater distance can be obtained on the lower wavebands than on the regular broadcast wavebands. It is due to the great range of short waves that constant communication with the polar expeditions was possible. At the present time many broadcasting stations are operating on two wave-lengths simultaneously, which is of considerable advantage to the radio fan as he is able to get away from the crowded condition of the broadcast range by tuning in on the same programs at a lower wave-length or higher frequency. The short waves are also valuable because the "side-band cutting" is less severe than it is in the case with the broadcast waves. A third advantage of short-wave reception is that less static and atmospheric disturbances are picked up, making it possible to obtain reception with greater clarity. Furthermore, television broadcasts are being made on the short waves as they are especially adaptable for this purpose.

The simplest method of picking up short waves, and the most practical for the average radio fan, which will eliminate the need of building an entire receiver, is to use a short-wave adaptor. Such an adaptor usually consists of one or two tubes with a separate tuning control, and comes equipped with a cord and adaptor plug which is plugged into the detector socket of the regular broadcast receiver. In this way the audio end of the receiver is utilized. The aerial and ground leads are, of course, also transferred to the aerial and ground binding posts on the adaptor unit. Adaptors designed for either a. c. or d. c. operation can be obtained from radio dealers and mail-order houses at prices from $6.00 to $60.00. They are equipped with a tuning dial and sometimes with variable inductance controls. For best results in bringing in low-wave stations, set of four tuning coils of the interchangeable type, covering the 20, 40, 80 and 150-meter wave-bands, should be used. Adaptor units can be purchased completely assembled and wired, ready to plug into your set, or they can be obtained in kit form, to be wired at home. For the experimenter it will be most satisfactory to build one, as there is more choice in kits than in ready-made units. Some units have a radio-frequency stage preceding the detector, which means two sets of interchangeable coils at a higher cost, but the advantage of a two-tube unit is greater distance than can reasonably be expected from a one-tube unit. In one-tube short-wave receivers regeneration from the detector plate circuit is often employed to build up the signal. A good regenerative circuit, in which the aerial is connected to the plate output of the detector tube, has been used with success, this method of regeneration being known as the "ultra-audion" hookup. However, the disadvantage of regeneration is that there is reradiation from the antenna the moment the detector tube begins to oscillate, and the best working condition of the set is just below the oscillation point. Such reradiation causes interference with radio reception of others in the vicinity when the short-wave receiver is operating directly under the 200-meter band, and other receivers in the neighborhood are getting reception at wave-lengths just above 200 meters. In a two-tube set employing a screen-grid r. f. tube, such trouble is entirely eliminated as the screen-grid tube serves effectively in blocking reradiation.

The interchangeable coils on the market are made to fit suitable bases, and in many cases, they are designed to fit UX tube sockets. In a few instances UY tube sockets are used as coil bases, and in other instances special bases are provided by the manufacturer of the coils. The radio experimenter can also make the coils himself, if he desires, and in this may effect a saving of from $5 to $10.00. The materials required are four

(*Continued on page 18*)

The Stormy Petrel of KWKH

THE following interesting comment on "Old Man" Henderson of KWKH is clipped from the news service of the *Cleveland Plain Dealer*.

"Hello, world! Dawgone ya! Don't go 'way, now! Don't go 'way! Shreevepo't on the air—Shreevepo't everywhere. Dawgone!"

It's the theme song.

Nightly it goes booming through the loud speakers of the nation.

In Detroit, a theater manager, checking up the day's receipts, pauses to listen.

In Kansas City, a father exclaims irritably, "Get away from that radio!" to the daughter about to twirl the dials in a search for Rudy Vallee.

"It's old man Henderson on KWKH!" They all exclaim. "Wonder what he's going to pull tonight."

Some sneer, some are sincere, some speak in terms of amusement.

To the country at large, W. K. Henderson appears in a variety of aspects ranging from blasphemer and clown to crusader and courtier.

In two years, "Hello World" Henderson has become a national character. In the last two months he has become the stormy petrel of the radio world, the champion long wave length cusser.

If fans could meet "Hello World" they would find a rather fussy old man, small and slight with a protruding and wabbly little stomach.

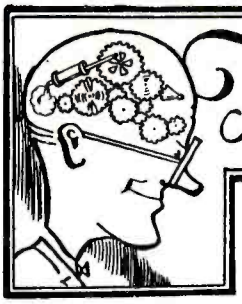
He sits with his cheek almost touching the microphone, grumbling for all the world like an old soldier who refights battles that never occurred.

Each morning the mailmen stagger into the office of KWKH bearing 1,500 to 2,000 letters.

He has a southerner's instinctive flair for the dramatic. He dramatizes his arguments.

He punctuates his invective and oratory with phonograph records. Beyond this he makes no effort at giving entertainment. This fact was placed before the radio commission last February when W. G. Skelly, owner of KVOO Tulsa, Okla., petitioned for full-ti broadcasting on the wave length of kilocycles used by the Shreveport stat

Did you hear the inimitable Milt Gross version of Romeo and Juliet on the Philco Hour recently? Fanny Brice and Henry Burbig presented an uproarious burlesque of the great lovers.



The Editor Thinks~

That the most complaints our readers make concern the failure of announcers to give their call letters frequently. Ruling of the Radio Commission requires a station announcement at least every fifteen minutes. Many announcers have evidently never heard of this ruling for we have had distant stations for the better part of an hour during which time no announcement of call letters was given. It seems to be a strange part of announcer psychology to feel that because he knows who he is, everyone else must know. Good-will and advertising value are two of the most important by-products for which the owners of every station are seeking. It passes understanding why they permit their announcers to pass up golden opportunities for making their station known. It takes but three seconds to give call letters and city and does not in the least detract from the program. On the contrary we like to hear the harmonious "W-L-S Chicago" that comes in nearly every break of that station's program.

* * *

That our readers should like the new arrangement of "What's On the Air" in this month's issue of this magazine. At first they may miss the familiar call letters, but we feel sure that after the new form has been used for a while it will prove much more convenient than the old. We shall await word from our readers regarding it with much interest. We have had many requests that we arrange the stations broadcasting each program in alphabetical order or in the order in which they come in on the dials. We decided that the latter method would be preferable, as one could then start at the end of the dial and turn to each frequency in order. Having decided on this method, it seemed advisable to use the channels rather than the call letters, for where the latter are used, they must first be turned into frequencies. We therefore adopted the plan which will be found in this issue, of using the kilocycle numbers for each feature instead of the call letters. This will prove especially valuable where dials are marked with kilocycles as so many of the modern sets are. We invite comment on the new arrangement after our readers have tried it a few nights.

* * *

That manufacturers of receiving sets are overlooking an opportunity when they fail to furnish with each set sold an accurate and up-to-date list of stations. An index is as necessary to radio as a directory is to a telephone. Many new buyers of radio sets become disgruntled over their failure to receive distant stations and blame their sets when the trouble is that they do not know how really to tune a set. The great lure of a radio set is the ability to tune in any one of a large number of stations and the average user has no idea how to tune his set for any desired frequency. Consequently he uses his set merely as a sort of phonograph, tuning in his local station and letting it go at that. To pack a copy of RADEX with each set when it leaves the factory is hardly feasible, as it might be out of date by the time it passed through the hands of distributor and dealer and reached the customer. And this might lead the buyer to think he had purchased an old set. To meet this situation, we have designed a coupon which may be packed with the set. This coupon may be filled out by the purchaser of the set and mailed to us and entitles him to a free copy of the latest RADEX. These coupons are then redeemed by the manufacturer at the wholesale price. Such a plan should add greatly to the customer's satisfaction with his set.

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Another Intelligence Test

Only Present Stations in This Cross Call Teaser

WELL, that January puzzle certainly was a sticker. Only three readers were able to solve it correctly and copies of RADEX have accordingly been mailed to J. Kenneth Louden, Orangeville, Ontario; Harold Fogelsinger, Buffalo, N. Y., and Raymond M. Bell, Syracuse, N. Y. Mr. Louden writes: "You sure said something when you called it a hard nut to crack. I had to trot out all my old radio logs to solve it and it took me all of three weeks."

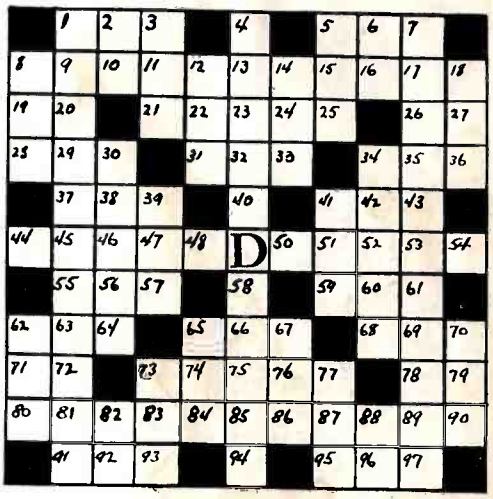
In submitting what was unfortunately an incorrect solution, Cyril P. Engelmeier, of Pittsburgh, Pa., has this to say: "I am very reluctant to admit that our good friend, Mr. Angel, has the best of me in the January Cross-Call. My experience goes back only to February, 1928, and those 1924 and 1926 calls are decidedly unknown to me. Will wait for the one in February and try that as I think it is great fun and very broadening in a radio sense."

Here is the correct solution of the January puzzle:

KWK WJW
WOL NOF
WCX JAB
WGL K KNX
O HHK E
WCK Q WWB
KGW WLB
WHO RAA
XFI WWZ

We suggest that our puzzlers make a practice of comparing the descriptions of calls with the correct solutions and thus get the full benefit of the education in stations.

The puzzle this month is an exceptionally clever one as it is not only perfectly symmetrical, but every space is keyed both ways. It was submitted by Walter H. Roe, of Tiffin, Ohio, to whom a leatherette cover has been mailed as a very slight token of appreciation. Mr. Roe has confined his stations to those at present existing and all of the calls used will be found in this edition of RADEX. Here is the food for thought:



Horizon'al

1- 3. 50,000 watts on a clear channel.
5- 7. Church in the North-West.
8-11. 100 watts in the show-me state.
12-14. In the central part of the Buckeye state.
15-18. In the Wolverine state—last three letters the owner's initials.
19-20. A Mexican station less ten.
21-23. Where they teach farming.
23-25. Changed from 1360 to 1330 in December. Reverse.
26-27. Last two letters from 28-30.
28-30. Ohio station owned by radio service store.
31-33. Owned by a southern city.
34-36, A western broadcasting company.
37-39. On twelve-seventy.
41-43. A publishing company in the North-west.
44-47. 100-watt Bible class.
51-54. 50-watt hardware company. Reverse.
55-57. In a state of only three stations.
59-61. Use the last three letters which pronounce the owner's name.
62-64. Radio telephone company in the North-west.
65-67. A state marketing bureau.
68-70. 1000 watts in one of the peninsula states.
71-72. Middle initials stand for a flour.
73-75. 10 watts in West. Reverse.

75-77. Pacific Coast publishing company.
78-79. First and last letters of a New England station.
80-83. About 229 meters.
83-85. Peery Building Co.
86-89. In J-4.
88-90. A 5000-watt sharing wave with a 10000. Reverse
91-93. One of two 10000 watts on same wave by same owner.
95-97. A State station in Mexico.

Ver'ical

1-29. 100 watts on the Gulf coast.
2-10. In the Flour City. Last two letters.
3-21. 1000 watts on Lake Erie.
4-32. Wheat producers.
5-25. 1000 watts sharing wave with four 250 watts.
6-16. Pickwick Broadcasting Corp. Last two letters.
7-35. In Keystone State. Owner's name is a city.
8-28. 1000 watts sharing wave with a 30,000.
12-31. Owner an organization with the same initials.
14-33. Radio station Inc. in New York.
18-36. A Canadian station sharing wave with a Mexican.
30-56. Chamber of Commerce with 10,000 watts.
34-52. 2190 miles from New York.
37-63. 100 watts at a "point" in the West.
39-57. 100 Watts, a saint and a Broadcasting corp.
41-59. Near the Gulf of California.
43-69. A college station at the same place.
62-80. First three letters of 37-63.
46-64. In a grand place. Last three letters reversed.
65-84. In a Hoosier city which also has a 10,000 watt.
66-94. In the Hudson Valley. Reverse.
67-86. Three 250 and five 500 watts on this wave. Reverse.
42-68. A 1000-watt with five 500 and one 250. Reverse.
69-97. Last three letters are owner's initials.
70-90. Last two letters the initials of the state. Reverse.
73-93. Last two letters abbreviation of another state. Reverse.
77-95. Excelsior in Mexico.
82-92. Last two letters of a 1200 kc. station.
88-96. Reverse two middle letters of a call that tells the state.

There, that will hold our puzzlers for one evening. Get busy if you want to have an extra copy of the April RADEX and incidentally take a post-graduate course in station calls.

This charming lady was born Nagy Janka in Hungary. The English equivalent is Johanna Grosse and she is now the featured organist of WTAM. She first became known to the radio world through her playing at WLW. She came to Cleveland to dedicate the new $40,000 organ for WTAM and remained as a member of the staff.
Miss Grosse has a strange hobby — high diving — for which she has received many medals. She commenced giving concerts at nine years and has devoted her life to music ever since.

Changing to Screen-Grid

Our Technical Editor is preparing an article on this interesting subject for the April issue.

Some Foreign Programs

A NUMBER of our readers kindly call the attention of DXers to programs they have received. These should provide some interesting moments in trying to tune these stations in. Karl Halpern, of Brooklyn, N. Y., reports HHK at Haiti, on the air every day except Sundays and holidays 12:15 to 12:45 p.m. E. S. T., with a musical program, and each Friday 8 to 9 p.m. E. S. T., and each Saturday from 6:45 to 7:15 a.m. E. S. T., with educational lectures and music.

C. M. Falconer, of Baltimore, advises us that at 11 p.m. E. S. T. (10 p.m. C. S. T.) The Mexican Daily News broadcast news in both English and Spanish over station XFX on 910 kcs. with 1000 watts.

Frank A. Johnson, author of the DX article in the February issue, writes that 8WMC at St. Johns, Newfoundland, broadcasts Sunday morning church services on 415 meters with 500 watts and Monday and Thursday nights at 8:30 Atlantic Standard Time, an amateur program. Mr. Johnson contributes information regarding NBA and TIX which we are incorporating in the index. He writes regarding JFAK, Taihoku, Taiwan, Japan, "At exactly 6:40 a.m. C. S. T. (which is 9:40 p.m., or 15 hours later in Japan) they come in with 'Gan—g, gan—g, gan—g' (sound of the Japanese time signals) then give weather conditions, storm reports, latest happenings of the day, tomorrow's program, etc., and close down at ten o'clock, Japanese time. If it's a morning program they say 'Ohayo,' which means "good morning.' Signing off and saying "goodnight,' they say 'Sayonoia,' which means 'good-bye.' The English language instructions reach us here at 3:30 a.m. (a good time to catch them). The announcer comes to the mike at JOAK and then you hear 'J-O-A-K Kochirarva Tokyo Chiwo Hoso-Kyoku de Arimsau' which means JOAK. This is Tokio Central Broadcasting Station."

Leon V. Garland, El Segundo, Calif., writes: "Many on this Coast could get the Japanese stations if they knew where to get them. I will list them below showing comparison with U. S. stations:

JOBK, Osaka, 10,000 watts. Dial same as WJR.

JOHK, Sendai, 10,000 watts. Dial same as WBBM.

JOGK, Kumamato, 10,000 watts. Dial same as KGO.

JOCK, Nagoya, 1,000 watts. Dial same as WCCO.

JODK, Keijo, 1,000 watts. Dial same as WHAS.

JOIK, Sapporo, 10,000 watts. Dial same as KOA.

JOFK, Hiroshima, 10,000 watts. Dial same as KOA.

JOAK, Tokio, 10,000 watts. Dial same as WENR.

Batteries to A.C.

WE greatly regret that an error crept into the article in the January issue, Electrifying Battery Sets. The description of changes in the text did not agree exactly with the cut. Readers interested in changing over old sets operated by batteries to a. c. will please note the following correction:

The last paragraph of the article on page 23 of the January RADEX should read as follows:

The resistors are then installed. The end terminals of the 15-ohm potentiometer are connected across the 1.5-volt filament lines. The center terminal of the potentiometer is connected to one side of a 0 to 750 or 1000-ohm variable resistor, and the other side of the latter is connected to the ground line. One side of the 2000-ohm fixed resistor is connected to the ground line and the other side to the center tap of the 5-volt winding of the transformer. The center tap of the 2.5-volt winding of transformer is connected to the B-positive line supplying detector-plate voltage, which is 45 volts. The resistors can be attached to the subpanel and need not be touched after they have once been adjusted. Two variable resistors for controlling stability and volume are then installed on the panel, these being substituted for rheostats formerly used but now discarded. The stability control is a 0 to 2000-ohm variable resistor. It is cut in the B-positive line supplying the r. f.

(*Continued on page 23*)

R. T. I. QUALIFIES YOU TO MAKE MONEY AND ITS SERVICE KEEPS YOU UP-TO-THE-MINUTE ON THE NEWEST DEVELOPMENTS IN RADIO, TELEVISION, AND TALKING PICTURES

BIG MONEY QUICK—the chance to more than double your salary — is offered to you now. RADIO has leaped to a gigantic industry, employing many, many thousands and loudly calling for *more trained men* to fill the Big-Pay jobs.

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Answer the Call---Get Into This Money-Making Industry Now!

The "R.T.I." famous "3 in 1" Home Training in Radio, Television and Talking Pictures makes it easy for men, young men and boys to get into this new field quickly. R.T.I. home training is practical and easy to understand. It trains your head and hands at the same time. Your opportunities for money-making are unlimited. Your age, amount of education, or experience, make no difference. If you are interested and ambitious you can succeed. You will be ready for a good job or profitable business of your own, even before you finish the training. Remember — you learn at home in your spare time on actual equipment included in fine, big outfits sent you. R.T.I. with all its connections in the industry, keeps you up-to-date and pushing forward all the time.

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$500 EXTRA MONEY IN 2 MONTHS

Your radio course has enabled me to earn over $500 in two months. This is all spare time work, as I have a permanent position with my father in our store. I give you all the credit for the above. —J. NOTTSINGER, R. 1, Box 37, Greenville, Ky.

MAKES $25 A DAY

I make as high as $25.00 per day and have made $600.00 in 2 months from Radio work. That's not so bad when I'm only 19 and in a small town. You did all you said you would and much more.—FLOYD KINSELY, Box 91, St. Joe, Ind.

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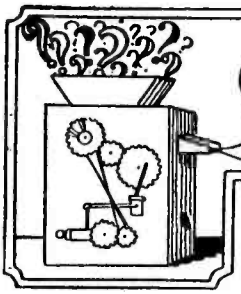


The QUESTION MILL

Conducted by

J. B. SMITH, *Technical Editor*

We are glad to publish replies in this column to questions asked by any reader. We cannot promise, however, to reply by mail to other than yearly subscribers. If you are not a subscriber and desire personal reply, please send your subscription with your question. You will find blank for this purpose on page 34

I would like to know if you can connect a headphone in the plate circuit of the 222 screen-grid tube. I have a Fada five-tube battery set that seems to have a noise in it. When you turn up the volume the set has whistling noise and, of course, this ruins reception. I tested the batteries, aerial and ground and they are O. K., but the whistling noise comes in just the same. What is wrong?

As the output of the screen-grid tube is oscillating at a high frequency—radio frequency—you would get no results whatever if you connected a headset in the plate circuit. Radio-frequency waves cannot be heard by the human ear and they must be converted to audio frequency, which is done by means of a detector. A constant whistling may be due to various causes of which the most frequent are: too high a plate voltage on the r. f. stages or too high detector plate voltage, a high-voltage wire running close to a grid line or near the grid condenser. If you will check these possibilities in your set I think that you will soon discover the trouble. Sometimes a poor tube also causes whistling.

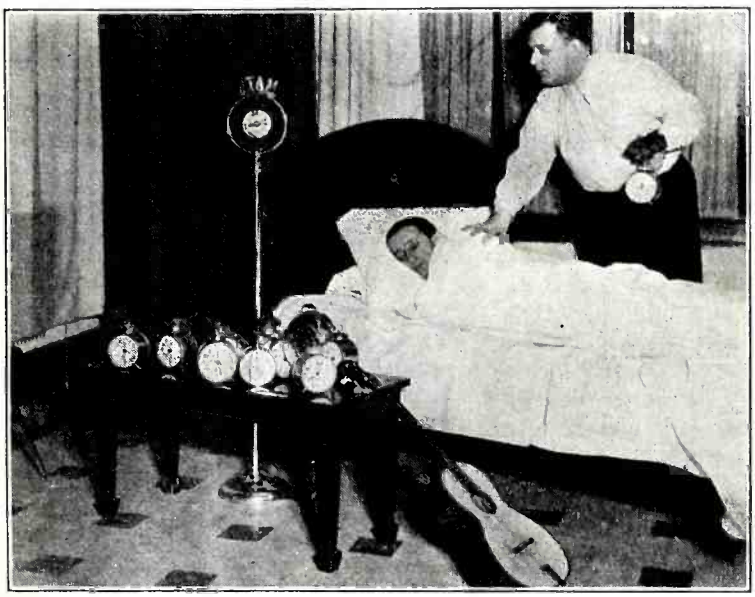
I have an "Aero-dyne" 6 D. C. receiver, which I built two years ago and it has never given the distance that I think it should. Now it seems to be losing sensitiveness and selectivity. I am using a Balkite AB 6-180 eliminator, which is getting noisy. Since the change of wavelength of WTAM and WADC these stations cover up most of the dial where I formerly got other stations. By removing the tubes in the second r. f. stage the volume is sometimes greatly increased. I am using 201A tubes and a 112A tube in the last a. f. stage. There is a hum when I place my hand on the first a. f. transformer. The volume also increases when I connect the variable condenser frame to the ground binding post. What can be done to make it more sensitive and selective, and what will make it give better service and distance?

Evidently your second r. f. stage is not working properly. This may be due to a poor tube, poor contact between the tube and socket, broken connection, touching plates in the variable condenser, or a short-circuited coil. The latter is very seldom the case. I suggest that you replace the old eliminator with a new one or otherwise have the defective parts replaced. Also, have all of your tubes tested, replacing those that are not up to the normal value. Your radio dealer will be glad to do this for you. If you are troubled with broad tuning shorten the length of the aerial. Your main trouble, however, is the second r. f. stage.

I have a Silver-Marshall 740 D. C. receiver, which has given excellent service for the past year, but a short time ago the drain on the B-batteries became too much so I took it to a radio shop to see what could be done about the trouble. They replaced the midget bypass condenser, which is specified in the data on this set as .25-mfd. capacity. They also replaced the bypass condenser, which is 1 mfd., and the tubes. Since this work has been done I am unable to pick up very many stations, or to get the volume on those that I do pick up, most of which are not 500 miles away. Neither do I get any signal from

the stations when turning the dials. The sta ions always come in and out wi hout any warning at all. Before this work was done the set would always squeal whenever a station was close by, or when the distance con rol was turned too far. Now the dis ance con rol, which is a .000075 mfd. midget variable condenser, can be turned clear around wi hou! having any effect on the set a! all. The screen-grid tube or r. f. amplifier tube was not changed but the o her hree were replaced wi h Ux 112A tubes. These three tubes are all the same

toms, as expressed in your letter, your B-batteries are probably getting too low for the efficient operation of the set. This would account for your inability to get distant stations. The batteries should be discarded when they have dropped 15 per cent below their normal voltage when new. Therefore, a 45-volt battery should be discarded when it drops to 38 volts. Also be sure to keep your A-battery up to 1280 specific gravity. A low A-battery will make it impossible to get distance. Then it is well to renew the



It's hard to get up in the morning especially when you have to go on the air at 6:30. Listeners who were anxious to hear them, contributed alarm clocks, but in spite of them Glenn finds it hard to waken Gene. Hear them over WTAM each morning 6:30 to 8:00.

but when they are changed around with each o her there is a great loss in volume.

You mention in your letter that you are now using one screen-grid tube and three UX 112A tubes. Here is one point of difference with the instructions for the No. 740 Silver-Marshall receiver, which state that two 112A tubes and one UX 171A tube should be used, the latter for the second a. f. stage. This is highly important as the connections to the B-batteries or eliminator, and also the C-voltage, as given in the instructions, are especially intended for the UX 171A tube, which requires a 40.5-volt C-bias at 180 volts B, whereas the UX 112A requires only 9 volts. If you have a. c. current in your locality, I suggest that you purchase an eliminator and discard the B-batteries. According to the symptoms, as expressed in your letter, your B-batteries are probably getting too low for the efficient operation of the set. This would account for your inability to get distant stations. The batteries should be discarded when they have dropped 15 per cent below their normal voltage when new. Therefore, a 45-volt battery should be discarded when it drops to 38 volts. Also be sure to keep your A-battery up to 1280 specific gravity. A low A-battery will make it impossible to get distance. Then it is well to renew the screen-grid tube after a year's service. If you follow these simple precautions I am quite certain that your troubles will be over, and you will find that the set is again as sensitive as formerly.

What should the normal flow of plate current be in my se!, which has one r. f. stage using a UX 201A tube, a detector UX 201A, one s!age of audio UX 201A, and a second s!age of audio having two UX 171A tubes in push-pull I use 45 vol!s of B on the de!ector, 90 vol!s on the o!her tubes and 4.5 volts of C-battery.

A 0 to 30 milliammeter is necessary to measure plate current drawn by your receiver, the milliammeter being connected in the negative line to the battery. Your set should not draw more than 27.5 milliamperes as the detector draws 1.5 mils., the other two UX 201A tubes

each draw 2 mils., and each 171A tube draws 11 mils., the latter being supplied with 90 volts of B and proper C bias, which should be 16 volts in this case. Your power tubes are therefore drawing more than two-thirds of the total amount of current. It is advisable to replace the B-batteries with a suitable B-eliminator, which will provide higher voltages. You should have at least 135 volts of B for the 171A tubes, although 180 volts is preferable. With 135 volts of B, a C-bias of 27 volts must be provided, and with 180 volts of B, a C-bias of 40.5 volts.

I have a Philco all-elec'ric 8-'ube No. 86 receiver. Sometimes I can get the local stations without advancing the volume control a' all, bu' at other times I must advance it ha'fway or more before I can hear the signal. When the volume is turned all the way up the se' roars for a minute, then pops and stops for a while, after which it starts all over again. The pilot light flickers sometimes. Distant stations are hard to ge' and are always accompanied by whis ling and howling. I have no aerial bu' have a good water-pipe ground. Where shall I look for the trouble?

The fact that you are using no aerial is the cause of your trouble. Your set is designed for use on an outside aerial. The volume control, in your set, is connected between the aerial and the ground and serves as a stabilizer. Erect a suitable aerial and with a good ground you should get satisfactory reception. At present, you are overloading your first r. f. tube when you advance the volume control.

I would like to know whether screen-grid tubes could be used in my Victoreen 1928 "Universal-Circuit" Superheterodyne receiver, in connection with the 4 r. f. intermediate transformer. Also, what resistor would be best to use. When assembling the receiver I must have made a wrong connection as the oscillator got hot and started to smoke and the switch also became extremely hot. Do you think that the oscillator has been ruined? Would a choke coil, connected to the oscillator, eliminate getting stations at two places on the dial?

To attempt using screen-grid tubes in your Victoreen super-heterodyne would be a positive method of inviting trouble. In other words the installation of these tubes would throw your receiver entirely out of balance, unless numerous circuit changes were made, which is entirely experimental. Your oscillator is perhaps still in good condition provided there are no breaks in the wiring or loose connection at the terminals. No choke coil is advisable at this point. All superheterodyne receivers, except those especially designed to eliminate harmonics, get stations at two points on the dial. It is impossible to remedy this condition in your case.

I have an old 5-tube Apex T. R. F. battery-operated set of which the transformers are burned out, and I am wondering if I can convert this into a short-wave receiver. What radio transformers should I use and how must I proceed to rebuild it?

It is a very easy matter to adapt your set to short-wave reception. Purchase special coils for this purpose from your radio dealer, or a mail-order house, and install them according to instructions which accompany them. You will find that short-wave coils are generally classified in three groups, covering different wavebands, namely, low, intermediate and high, the latter covering the broadcast wavelengths from 200 to 600 meters, or 1200 to 540 kilocycles. The coils to use depends entirely on the waveband you wish to cover. It is preferable to get the type of coils that are interchangeable, and are known as the "plug-in" type. Special sockets are often provided with the coils as they are made to fit a standard tube socket. By using plug-in coils you can cover all wavebands by inserting coils of various sizes, as indicated. Circuit changes are, of course, necessary, but are fully covered in instructions. If your audio transformers are burned out it will be necessary to replace them.

I have a Grebe five-tube battery-operated receiver using C X 301A tubes. I am using an 18-inch cone speaker, but talking and singing is hard to understand as it is greatly distorted. Will this receiver operate a dynamic loudspeaker? Shall I make any changes in the tubes or elsewhere?

Undoubtedly your loudspeaker is largely responsible for your trouble.

Some speakers of the cone type lack the necessary sensitivity for good reception and are easily overloaded, which distorts reproduction. It would, therefore, be advisable to get a speaker of the latest design. You can operate a dynamic loudspeaker if you desire, provided you insert a UX 171A power tube in the last audio stage, using 180 volts of B-supply instead of 135 volts, and a C-bias of 40.5 volts, connecting the negative of the C-battery to the C-negative terminal between the aerial and loop terminals, and the C-positive of the battery to the A-negative terminal on the receiver. A frequent cause of poor reception can be traced to defective tubes, so be sure to renew them when necessary, depending on tests made by your radio dealer. Usually tubes should be replaced at least once every year.

"Our Gang" are now dividing their antics between screen and speaker. They appeared in "Voices from Filmland" over the CBS on January 27th.

I have an R. C. A. Radiola No. 17 and would like to know if I could use a UX 112A tube in the last audio stage. Also please advise me how to get more distance.

Your inability to get distance does not lie in the audio stage. This stage is designed for the use of a 171A tube and proper C-voltage for that tube is provided by the power pack. Consequently substituting a 112A tube would throw the last stage entirely out of balance, and there would be too high a C-voltage for a 112A tube. Greater distance can usually be obtained by proving a long aerial and a perfect ground connection. Of course, distance also depends on the condition of the tubes in the set, and it is therefore advisable to have them tested, replacing those below the normal rating. One of the most important requirements for getting distant stations is very careful tuning, which involves careful manipulation of the variable controls. I have observed different persons operate a receiver, with the result that those experienced in tuning with extreme accuracy could bring in distant stations, which were outside of the range of the average fan.

I am operating a Zenith Model 27 set, which calls for a type B Raytheon rectifier tube for the B-eliminator. The substitution of the BH tube throws the set entirely out of balance as it increased the B-voltage to the r. f. stages from 75 volts, which is normal, to 96 volts. I would like to know where I can purchase a type B rectifier tube. Several dealers have told me that they are not being made any more. If this is true kindly let me know what I can do to reduce the voltage to normal.

To reduce the voltage of your B-supply, when using a BH-type Raytheon rectifier tube as a substitute for the B-type, formerly used, locate the flexible

lead running from the A-supply across the upper portion of the cabinet to the B-supply. Slit the insulation thereby exposing two separate insulated wires. Cut one of them in two and connect the two resulting ends to the terminals of a porcelain receptacle, mounted in a nearby position. Now insert a 60-watt Madza lamp and then make a voltage test from B-negative to B-positive maximum. (This test is made from the brown wire on the Multiplug, which is negative, to the separate miniature plug on the B unit, which is B-positive maximum.) Make this test while the receiver is in operation, with the Multiplug and the single lead to the miniature plug connected, the resulting voltage should be between 170 and 180 volts. If the voltage is above 180, replace the 60-watt lamp with one of the 50-watt size, or a still smaller one, until the correct voltage reading is obtained. This will automatically reduce your r. f. voltage to the proper value, which can then be checked by means of a voltmeter. Inasmuch as the type B Raytheon rectifier tube is no longer available, this is the best method to follow.

I have a five-tube Freshman set which does not work. No signal comes through the loudspeaker although a ringing sound can be heard when any one of the tubes are tapped. When the headset is connected, in place of the loudspeaker, only a noise resembling static can be heard. The set uses Ux 201A tubes. Will you kindly tell me where to look for the trouble?

Your trouble is perhaps a break in the wiring, a loose connection, a broken-down coil, a defective resistor, or one or more poor tubes. Test each coil for open circuits by running the current from a C-battery hooked up in parallel with a small voltmeter. If the needle moves there is a continuity in the circuit under test. Each instrument should be tested in this way. Also examine the plates of the variable condensers to make sure that they are not touching each other.

I have a Magnaformer A. C. 29 receiver with a Mu'er dynamic loudspeaker. There is a bubbling noise in the speaker that sounds like wa'er boiling. This is not very loud but I would rather not have it and would therefore like to know how to eliminate it.

Undoubtedly the bubbling noise in your speaker is caused by an overloaded tube in the last audio stage. This may be due to an incorrect C-voltage on this tube. Check up this voltage to be certain that it corresponds to that advised in the instructions accompanying the receiver. If this is correctly adjusted and the trouble persists, substitute another tube for the one in the last audio stage. Another possible source of your trouble may be too high a grid-leak resistor, which can be overcome by substituting one of lower value.

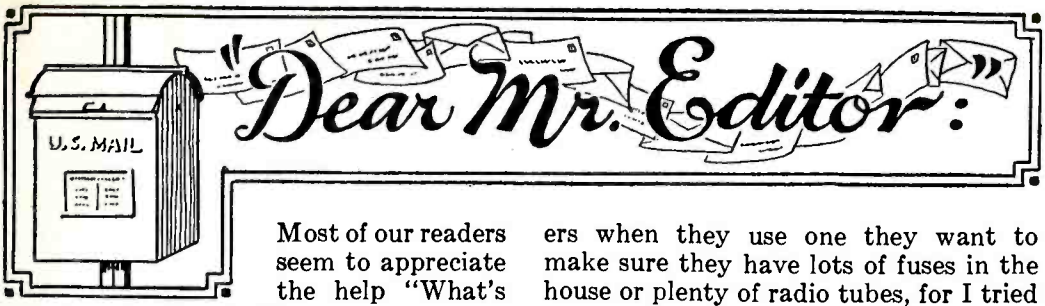
These Pesky Announcers

MY feelings on the technique of station announcers have been becoming stronger and stronger for the past month—since, in fact, we got a new 9-tube screen-grid Philco, and at last I just have to write to somebody in order to relieve my feelings.

I think all announcers should attend a training school, or take a correspondence course in their art—for indeed it is an art. They could at least listen to the announcers as heard on National Broadcasting programs, or to the announcers from such stations as KPO and KGO in California and KSL in Utah.

The climax came tonight when I sat from 5:00 p.m. until 5:30 p.m. with my ear glued to a station. The music was not too strong, so, knowing that it was from a far-off station, I persevered. The announcer said a lot of unimportant things. He would say a few words clearly, then he would run his words together and finally end up in a mumble. If he had enunciated as does Walter Damrosch, I could have heard every word however low the tone. At the half-hour I thought now he will *have* to announce his station. He advertised a sale of radios at half-price, then mentioned telechrons, and then while I was straining ears and brain, he hurriedly stated that he was about to sign off, that he operated at eleven hundred kilocycles, and then he departed, to keep a heavy date I suppose, making no mention of station, country, state or city.

(*Continued on page 20*)



Most of our readers seem to appreciate the help "What's on the Air Tonight?" gives them even though our calendar must necessarily be subject to change without notice. "It is much more satisfactory than the daily papers in this section," writes L. F. Locke, of Woodward, Okla. "I think it would be a big loss if you were to cut it out," comments John H. Lyford, of New Hampton, Iowa. "Of course there are bound to be inaccuracies."

CJBC, with its four different calls, puzzles some readers. Howard B. Hubbard, of Elizabeth, N. J., writes that he has never succeeded in picking them up and asks what time Sundays they broadcast. CJBC is the call of the Jarvis Street Baptist Church of Toronto. They have no station of their own but have been assigned these call letters for use Sundays over any of the four stations named. The power varies also, naturally. Mr. Hubbard also says he has never been able to tune in WJBT although he gets WBBM regularly. This is also listed as a Sunday call. WBOQ is not listed as a Sunday station but Mr. Hubbard has likewise been unable to receive them.

Socket Aerials Dangerous

Wave traps continue to interest a number of readers and we would be glad to receive reports from any who have made the one described in the September issue. Copies of this issue may still be secured by those interested in building their own.

Abel F. Wood complains that at some points on the dial of his Majestic the music seems to waver or become tremolo. This is undoubtedly caused by interference from stations on the next channel and nothing can be done to remedy it outside of another general reallocation. Mr. Wood also comments on the use of the lamp-socket aerial. "Tell your readers when they use one they want to make sure they have lots of fuses in the house or plenty of radio tubes, for I tried one out once to my sorrow and I had only one wire in the socket." These socket-aerials have been considered perfectly safe. Have any other readers had trouble with them?

Noises and Their Cure

"I have a new Brunswick receiver but am unable to get distance satisfactorily due to intense interference," writes Stuart N. Frolick, of Syracuse, N. Y. "I have tried an inside antenna and also an aerial plug, but to no avail. There are two broadcasting stations within a quarter of a mile, while directly across the street is a factory and within half a block a battery-charger, all of which furnish considerable interference." As for the broadcasting stations there are but two remedies—either move the stations or move the set. We can offer no hope beyond this. If Mr. Frolick will send twenty-five cents to the Tobe Deutschmann Corp., Canton, Mass., and secure a copy of their book, "Radio Noises and Their Cure," he will find described therein "filterettes" for each particular interference-causing device. If he will then bring these to the attention of the factory and the battery shop and get their owners to install a suitable filter, the noise from these sources can be lessened.

Special Programs

Francis H. Dexter, of San Juan, Porto Rico, would like to have a list of stations which broadcast a resume of the day's news between the hours of 6 and 9 p.m. Eastern and Central time. Some day we think we shall have to try to publish a classification of programs such as Day's News, Stock Reports, Business Talks, etc., for the use of our business and professional readers. E. J. Overing, Red Cloud, Nebr., wants to know what stations rebroadcast the Arlington time

signals. Who can advise him? These used to be quite common but we do not remember tuning them in lately.

We had an inquiry two months ago for Polish programs. Richard Vanza, of Cleveland, advises us that WJAY broadcasts Polish music from 1 to 2 every afternoon and from 4 to 5 on Sundays. John Costic, Stony Brook, N. Y., reports WICC at 11:30 a.m. Sunday and WAAT at 2:15 and 4:30 daily.

Vallee and Osborne

G. B. Abbaduska, North Chicago, Ill., wants to know if his hunch is correct. He writes: "I have heard an orchestra of Will Osborne's over the CBS several times, last night through WISN at Milwaukee. As you know Rudy Vallee and his orchestra appear over the NBC system on the Fleischman program every Thursday. Now the question is this, are there two different orchestras, one conducted by Will Osborne and one by Rudy Vallee? Their music is just about identical, the voices of Osborne and Vallee are almost the same in both speech and song, and their programs are conducted in the same manner." What do our readers think? We clip from the daily press a news item of a critic who visited Rudy Vallee at his night club in New York the other evening and later called upon Will Osborne at the Grand Central Hotel. "Program and personality very much alike, but Rudy is still best," says this critic.

The New Improvements

The extra column of symbols in the Index by Frequencies has brought us many letters. Some readers want to know what ——— means in this symbol column. These dashes have no meaning; the printer contributed them to hold the space if symbols should be desired later. "The various combinations you use to enable a radio fan to know about the stations, are very cleverly arranged and help to make RADEX a great investment." This from E. O. Cutler, of New York City, who writes that he is greatly pleased with his "Seven Seas" receiver for he recently brought in KNX, KFI and KPO with a forty-foot indoor aerial. James Richter, of Reading, Pa., likes the new arrangement also and adds: "RADEX improves with each issue; one copy arrives and then the next is best." Mr. Richter says that his dealer has a plan for delivering the new copy of RADEX each month and then giving the receiving set the once over at the same time. He says this monthly inspection of tubes and radio is easily worth a dollar and only costs him the price of a new RADEX.

Jobs for the Commission

James J. Butcher, of Bridgeport, N. J., wants us to use our influence with the Radio Commission to stop music from playing while the announcer is giving the call letters. Next to not making any announcement at all, is an announcement that is swallowed up by the orchestra or organ. But we hesitate to add any more troubles to those the Commission now has.

"I want to suggest that you plead with the proper officials to reserve a space of one hundred kilocycles for foreign stations that could be in one space on the dial and not have interference from U. S. stations," is the request of M. D. Fernanzo, of Little Rock, Ark. The Commission struggled long and hard to clear ten channels for U. S. stations and we fear they would quit if they had to clear ten all in a row for foreign ones even if those foreign stations would consent to change their frequencies so they would come within this allocation.

Unhappy Experiments

J. R. S.. of Baltimore, Md., likes the Question Mill. "With its help, I, although the greenest amateur, located and corrected two sources of trouble with my set, when four different service men could not even guess at what was wrong." The same reader tried the line-noise eliminator as described in the September number. He refers to the suggestion for two condensers in series across the power line with a ground lead between them. "I tried this out, leaving my set ground connected and developed such a terrific hum that I shut the set off. I then disconnected my set ground and switched on again. This time there was no hum but when I turned the dial on my telephone I heard it in the loudspeaker

just the same. I also noticed that when I touched my ground connection with the ground lead from the condensers, there was a slight blue spark. Evidently this is another freak appliance which will work on one set and not on another. Have you had any further information concerning it?"

A number of readers have written us that this device had reduced line noises but of course it would have no effect on interference from telephone dial which is an air disturbance. Some of the manufacturers of a. c. sets caution their users against operating the set without the ground connected, and against removing one or more tubes while the set is in operation.

Some DX Records

We have so many letters from readers regarding their reception that it is quite impossible to use them all. We can make but brief reference to a very few. Thomas C. Rogers, of Altoona, Penna., brought in 146 stations in less than two months in one of the worst locations in town. He asks if it is possible to keep readers informed about test programs for the month. We regret that it is not; these tests are not scheduled and licenses covering them are for but ten days. "Quite the best two-bits worth I have got in a long while," comments Mr. Rogers regarding his RADEX.

Mrs. Charles D. Waldron, of Concord, N. H., needs verification from Nevada, Wyoming, Delaware, South Carolina and North Dakota to complete her tour of the states via the air. "The DXers right hand," is her comment.

"I am only 13 years old but a great DX fan," writes Alexander Maley, of Elizabeth, N. J. He asks about WWV, Hadley Field, N. J. This is a government station broadcasting weather reports to aviators and is not a broadcasting station in the usual sense of the word.

"I am located where anything under 1000 miles is a local!" writes V. G. Stevens from Kirkland Lake, Northern Ontario. "But short wave lengths and all I have logged 591 stations." Mr. Stevens would like to see a complete list of all short-wave broadcasting stations. We regret that even the government does not publish such a list except in connection with several thousand other short-wave stations. We are adding to the list in RADEX as fast as we can verify the data given us by readers.

"In three days I have tuned in 40 stations that I never knew broadcast before," says Newton M. Brown, Florence, N. J. Mr. Brown and others ask for information regarding DX clubs which they may join. Will some members of clubs advise us?

"218 stations in the last two months," says George Hennell, of Milwaukee, Wis.

These four artists are heard every week in "Around the Samovar"—a regular feature of the Columbia programs. They celebrated their first anniversary on January 18th. They are Mme. Zinaida Nicolina, soprano, Mlle. Eliena Kazanova, violinist, Eli Spivak, baritone, and Peter Biljo, director of the Balalaika Orchestra.

"1,183,698 miles," is the unique record of B. A. Butts, of Ellensburg, Wash. "273 stations in a little over a year" records F. A. Perkey, Dunbar, Pa. "191 stations from Boston to San Diego and Portland, Ore., to Havana, with a two-tube set and a home-made amplifier," writes Rodney Whitten, of Neosho, Mo.

In five nights, 185 stations, is the best record of J. E. Rimedio, of Dover, Ohio.

"I have a new Philco and have logged 210 stations in less than two months," writes Edw. C. Webber, of Plattsburg, N. Y. M. C. Wissler, Omaha, Nebr., confined at home recuperating from an operation, used a radio for the first time. "With the help of RADEX I have logged 114 different stations in four days, including eighteen West Coast and Six East Coast stations, three Canadian and one Cuban."

Low power stations were reported by many. Orie W. Huddleston, Dublin, Indiana, received KLCN at Blytheville, Ark., when it used but seven and a half watts, WOBT with 15 watts and several hundred-watters. John T. Thacher, of Windsor, Conn., reports a number of low-power stations, among them CFBO of St. Johns, N. B., a fifty-watter, WNBO at Washington, Pa., 15 watts and CHRC at Quebec, 25 watts.

The rest of our letters will have to wait until April.

Short Waves for the Radio Fan

(*Continued from page 2*)

2¾-inch mailing tubes cut down to 8 inches in length, four strips of bakelite, 8 inches long, and four old UX tube sockets. A primary winding of 10 turns of No. 26 double silk-covered copper wire is wound on each tube near the center, and a secondary winding is started one-half inch from the primary winding. For each coil the secondary winding varies as follows: For the 20-meter wave-band, 3 turns; for the 30-meter wave-band, 7 or 8 turns; for the 80 meter wave-band, 15 turns, and for the 150-meter wave-band, 25 turns. The variable condenser to be used with these coils should have .00025-mfd. capacity. The coils are attached to the bakelite strips by means of brass machine screws, using suitable washers and nuts. The UX tube bases are cut down so that only a disk with the extending prongs remain, and the cut-down bases are then attached to the center of the bakelite strip, connections from the coil ends being made to the prongs. It will be found that they are hollow and the ends of the wire can be soldered in them without any difficulty. Of course, similar coil ends should be run to similar prongs, which must be marked accordingly, so that the coils are interchangeable. They are fitted to UX sockets which are attached to the subpanel of the adaptor unit.

Short-wave adaptor kits contain full instruction concerning the wiring of the unit and these should be carefully followed. The above-mentioned instructions for making coils are especially intended for the radio experimenter who has or can readily obtain wiring diagrams for the purpose.

February Changes

AMONG the changes recently made by the Radio Commission are the following:

WKRC, Cincinnati, given construction permit to increase power.

C. P. given for new stations in Lynchburg, Va., Gueda Springs, Kansas; Rayne, La., and Little Rock, Ark. These stations have not yet been assigned call letters.

CHYC, CNRM, WSB increase power to 5000 watts and KFKX and KYW to 10,000. There are also many increases of power among the smaller stations.

KJR is moved from 760 kcs. to 970, KFBB from 1360 to 1280 and the following new stations are listed: TIX, San Jose, Costa Rica, on 750 kcs.; NBA, Balboa, Canal Zone, on 850; KGHG, McGehee, Ark., on 1310; KGMC, Jerome, Ariz., on 1310; KGMB, Honolulu, T. H., on 1320; WFDV, Rome, Ga, on 1370; WQDM, St. Albans, Vt., on 1370; KGMD, Roswell, N. M., on 1500; and KUT, Austin, Texas, on 1500.

WFBL has been given the use of 900 kcs. in addition to 1490 for thirty days.

There are also a number of changes in locations and owners which will be found in the Index by Frequencies.

Tom Lovell, of Belton, Texas, writes that KTRH, Austin, Texas, has been changed from 1120 to KUT on 1500, but the government reports that it was KGDR which was changed to KUT. Who can state definitely?

Several readers report hearing WCHI at Chicago, evidently new call letters for

(*Continued on page 63*)

That Which Is Under the Bed

Radio Brings Faith to the Unbeliever

By W. E. DEATON

THE tall, laughing woman gave Talbot the same answer that had followed him up the long winding path of Turkee Mountain.

"Shore, stranger," she admitted, "yo' contraption speaks for hitself, so t' say, and accepting yo' claims, the price don't seem too tall, but—wal—there ain't nobody 'round these parts got one."

"If you'd buy one," the salesman suggested, "folks from far and near would be coming to listen—"

She chuckled softly, "And my ole man would beat me, 'cause we'd have to feed 'um. No, friend, no hard feelings, but I reckon you'd better foot it on for to find another buyer."

Talbot grinned in spite of himself, "If I had sold one to the Newcombs, or the Twiddys, would you buy one?"

"Hit wouldn't of seemed so new-fangled," she admitted. A sly smile crossed her face; "Ef you sell Ole Man Godless, up top the hill—by crackey! we all'll take one, and I—"

"How much further?" Talbot asked, "I'm right tired. Is Godless his real name?"

"Oh, jest a piece." She gestured over her shoulder. "Naw—we jes call him that, 'count of him hatin' the churchers, and talkin' down all the parsons what call on him."

"You sending me up there to get a taste o' buckshot?" Talbot asked, grinning again.

"Honest, Stranger, he ain't bad! Probably talk yo' arm off, do you let him. Jest don't git him started on 'ligion."

The salesman shouldered his burden wearily, "Remember now—if I sell him, you'll buy one, and help me line up the other folks 'long the road."

"Ef you sell him!" Her laughter followed him along the steep, dusty path.

The 'jest a piece' proved to be an hour's climb under a hot Carolina sun, and the afternoon shadows had grown long before Talbot halooed before the cabin.

An old man, grizzled, heavy-set and active, came out and raised his arm in greeting. A dog raced around the yards barking shrilly and Old Godless caught up a stick and ran him into the rhododendron bushes. "Don't pay no heed to him," he said. Then seeing Talbot's burden, asked, "What you peddlin'? You don't look like no road-store."

Talbot grinned disarmingly, "I'm not a regular. You see, I had a chance to pick up some things mighty cheap. Some things I figured you folks back in the hills would appreciate. I—"

"Ain't no sense standin' in the sun," interrupted Godless, "come in and set a spell." He led the way into the cabin and waved a hand hospitably toward the only chair in the room. He sat on the edge of a bed and began to pack a corncob pipe with tobacco. "You was saying—"

Talbot put down his burden and wiped a damp forehead. "Well—I bought this stuff cheap and I've been walking all day to give you folks the opportunity of getting something that will be a real blessing—"

"You ain't a preaching-man?" Godless cut in.

"No."

"Sound mighty like hit! Talkin' 'bout givin' folks blessings and such. Oh, they come up here to argue with me, but I shuts 'em up quick. I jest say—"

"But—"

"Lemme finish, stranger. I jest asks them; 'Where at is this here God you talkin' 'bout?' and they allus says 'Why, he's everywhere!' and then I gets 'em. I says, 'Is he in this house?' 'Oh yes,' says they; 'Is he under my bed?' and do they say, 'Yes,' I jest lifts up my mattress and show them there ain't nothin' but the springs, and prove them to be liars."

Talbot wiped his forehead again. "I have here something which can make your whole life different; something which will bring the world to your door.

It will be a companion in your lonely moments; a comforter when you're blue, and—"

"I know! I know!" Godless cut in bitterly, "Hit's name is 'Holy Ghost'! Your're jest a preacher under a—"

"Wait!" pleaded Talbot. "You've got me wrong. Let me show you: It's all in this box. I hook these on—simple, isn't it? Now—"

The old man leaned forward in open interest. "What'll yo' contraption do?"

"Now—it's fixed—ready to operate. Suppose you want some music—"

"Well, supposin'? Where do she come from?"

"Right out of the air."

Godless cursed vigorously. "Knew you'd say that! The air in this here house is full of it?"

"Yep."

"I knowed hit!" The old man cried triumphantly. "You're jest the same as the preaching-men. Reckon you'll say hit's under my bed too?"

"Sure."

"There!" Godless threw back the light mattress. "There! You and yo' music, and yo' God is all lies! You be a—"

"Hold on!" Talbot cut in hotly. "You just put this little piece of wire under the bed to catch the music."

The old man obeyed mechanically and the moment the wire touched the springs of the bed, the cabin was flooded with the brief, final chord of an organ. A clear voice followed: "The eyes of the Lord are in every place . . . beholding the good . . . and the evil." This concludes the sunset services from station—"

"How's that for—" Talbot asked jubilantly, then stopped short in amazement, for Godless' face was twitching convulsively. In the half-light his eyes glowed, and the cabin walls sharply echoed the bitterness of his laughter.

"The fool's done said in his heart—" he quoted wearily. "An' I'm the fool—"

"It was just the radio," Talbot explained kindly.

"No! No! Hit were Him, stranger! Him taking the trouble to speak to a po' fool whose mouth done dragged him nigh Hell!" He knelt awkwardly and Talbot stood in embarrassed silence as Godless' hands clasped and unclasped. "Oh Lord!" he began, then stopped. "I—— don't know no words— Me—a long-tongued fool standing in the need of prayer and—"

"Don't feel bad, friend. You—"

The old man checked him. "Stranger you better go. I'll buy yo' machine. Hit showed me the light, but you gotta leave me to figger out my salvation."

"But I—"

"Go 'way! I got sins for to wash away this night."

"These wires—"

"Git out!" Godless screamed, "Leave me to my sorrows! Git!"

* * * * *

It was dusk when Talbot knocked at the cabin half-way down the mountain. The woman came to the door. "Well, stranger—" she said, recognizing him, "Old Man Godless didn't—"

"I sold him," Talbot stated briefly, "I'll be back Monday with a radio for you. I just stopped to tell you—don't ever be calling that man Godless again!"

These Pesky Announcers

(*Continued from page 14*)

It could have been station KGDM California, WLWL New York City, or WPG Atlantic City—but I will never know.

Both my husband and myself are wild enthusiasts and sit up until all hours getting far-off stations. We have had Cuba and Mexico, to say nothing of Canada, Virginia, North Dakota, Chicago, New York, Georgia and even the little station at Bismarck, North Dakota. But it certainly dampens one's ardor to sit for hours listening in spite of static, near-by noises, interference from other stations, etc., only to be disappointed time and time again. Some of these would-be announcers find time to make silly local jokes which cannot greatly appeal to the scattered radio audience. They find time to state street addresses and telephone numbers, to advertise bargain sales and restaurants and night clubs, but try and find out whether they are north, south, east or west, let alone learning the name of the state, city or station.

Perhaps an editorial on the subject would help—if the announcers themselves would read it.

Mrs. C. D. Roeder, Reno, Nev.

Two Sides of the New Pentode Tube

Five-Element Tube Creates Furore in Trade

THE affirmative side is taken by the CeCo Manufacturing Company in the following announcement:

CeCo Engineers Perfect AC Pentode Tube

New Five-Element Tube Three Times as Powerful as Screen Grid—Will Cancel Need for Multi-tube Receivers—Makes Possible Lower Unit Cost for Sets—Called Greatest Advance in Radio Since Three-Element Tube Was Perfected Twenty Years Ago.

In the laboratories of the CeCo Manufacturing Company, Providence, R. I., tube engineers working under the direction of N. O. Williams, vice-president and works manager, after months of experimentation have perfected the AC pentode or five-element tube.

According to Ernest Kauer, president of the company, the pentode tube will represent as great an advance in radio as did the three-element tube back in 1906. Mr. Kauer summarized its principal features as follows:

a—Three times as powerful as the screen grid tube.

b—Capable of being utilized to its full efficiency.

c—Cancels necessity of multi-tube receivers.

d—Will lower manufacturing costs of sets.

e—Will decrease maintenance costs for set owners.

f—Through savings will greatly enlarge radio merchandise market.

Asserts Public Demand

"The public has been asking for receiving sets," said Mr. Kauer, "which do not employ so many tubes. This new development makes it possible to build sets which will satisfy that demand. Bringing, as it is bound to do, more simplicity into radio manufacture and receiver operation and maintenance, it will reduce manufacturing costs, material costs, and therefore costs to the radio public."

Mr. Kauer did not believe that by the use of few-tube instead of multi-tube sets

(*Continued on page 22, column 1*)

THE negative side is presented by The Radio Manufacturers' Association in an announcement headed:

Radio Makers Declare Pentode Tubes Not New Nor Give Better Service

To advise the radio public and industry correctly and authoritatively regarding the "new" pentode radio tube, the Radio Manufacturers' Association, comprising all important manufacturers, today issued a statement regarding the pentode. It was declared neither new nor revolutionary. No improvement in performance can be obtained with pentodes that cannot be had with present tubes, the official statement declared, and it is unlikely that pentodes will replace present tubes this year.

The statement was prepared by Mr. Walter E. Holland, a prominent radio engineer of Philadelphia, and director of the Engineering Division of the Radio Manufacturers' Association, after consultation with other leading radio engineers.

"Nothing New"

"There is nothing new or revolutionary about pentodes," said Director Holland. "No improvement in performance can now be obtained with pentodes that cannot be had with present tubes. A given result is impossible with less tubes, using pentodes, but it is unlikely that the cost of a complete radio receiver would be any less.

"The pentode is used more widely in England because of the greater popularity of battery operated portable sets, and because patent licenses are based on the number of tubes in the receiver. Reduction of number of tubes has, therefore, been more important in England, just as low-powered automobiles are more popular there on account of the license taxes being based upon horsepower of the motor. These factors are not important in this country, so that there is no advantage here at present in either low-powered automobiles, or pentodes."

(*Continued on page 22, column 2*)

the tube division of the radio industry would suffer.

"It means less tubes per family, but a great many more families will own receivers," he said. "The probabilities are that tube sales would be greater than ever."

Mr. Kauer said that the circuit worked out by the CeCo engineers for the use of the new pentode tube would be made available to manufacturers of rado receiving sets without obligation. He added:

"Our general sales manager, Larry Hardy, and Franklin Snow Huddy, assistant to our chief engineer, Mr. Williams, are soon to start out on a visit to set manufacturers, to show them this new tube, how it works, what its possibilities are. Our engineering staff and our engineering facilities are available for cooperation on set-building problems. This is a service tube-makers owe to set makers and we are eager to render all the aid we can."

The new tube is a sort of double screen-grid, having a screen grid around the plate, as is the case with the screen grid of the present; also another screen between the control grid and the cathode. The insertion of this second screen permits a greatly increased amplification; three to four times as great as the screen grid.

Mr. Williams, CeCo's chief engineer, who since his graduation from Pennsylvania State College has spent his entire working life in tube research and manufacture, said the new pentode tube will realize the hopes which were entertained of the so-called screen grid or four-element tube.

"The screen-grid is a very wonderful tube," Mr. Williams said, "but the radio industry has not been able to develop a receiving circuit which permits the use of the tube's full efficiency. Nor is such a circuit likely to be developed. There are too many difficulties in the way.

"The easier method has been to center research on the development of a newer tube which would make possible the building of a circuit capable of getting out of the tube all the power and valuable attributes inherent in it. This is what we have done in the case of the pentode."

Summarizing the development in Europe of the pentode tube and experimental work in this country, Director Holland added:

"The pentode tube has long been known abroad and has found limited commercial use there, especially in England. Many radio receiver and vacuum tube engineers in this country have experimented with this type of vacuum tube, and are thoroughly familiar with its characteristics and possible applications.

"The pentode, as the name implies, has five electrodes, or electrical elements. It has the usual cathode and plate, but between these elements there are three grids or screens as compared with two in the tetrode, commonly known as the screen grid tube.

"The pentodes developed abroad are designed for use in the last audio stage, where we use triode power tubes, such as the 245 and 250 tubes.

Use As RF Amplifier

"There is a possible application of the pentode to radio frequency circuits, but it is unlikely that this type of tube will prove of much practical importance as a radio frequency amplifier. All it could do would be to reduce the number of stages of amplification required for a given sensitivity. The elimination of a stage of radio frequency amplification ordinarily means a reduction in the number of tuned circuits, and such a reduction is impracticable for the reason that a given number of tuned circuits is essential to give the high degree of selectivity needed under the broadcasting conditions existing in this country.

"The pentode power tubes used abroad have greater sensitivity, and, therefore, provide higher amplification per stage than our triode power tubes. This makes it possible to eliminate a stage of audio amplification and work from the detector directly into a single power stage without overloading the detector or the radio frequency amplifier tubes.

Disadvantages Listed

"Another advantage is that it is possible with pentodes to obtain greater undistorted output where the plate voltage is limited, as in battery receivers

and receivers for operation on the 110-volt direct current supply used in certain sections of a few cities.

"Against the above advantages the pentode has a number of disadvantages. It is a most difficult tube to manufacture with uniformity owing to its complexity, and to the fact that it must be exhausted to an extremely high degree of vacuum. Non-uniformity of pentodes will make greater differences in the operation of a radio receiver than with tubes of the present type. It is inherently a high-cost tube.

"In radio receivers for use on the common alternating current supply used for house lighting, the pentode presents a more difficult problem from the standpoint of manufacturing cost than the standard type of power tube. With present power tubes of the 245 type it is almost universal practice to use two tubes connected in push-pull circuit to reduce hum and improve the quality of reproduction.

Pentodes in Push-Pull

"Owing to the high cost of pentodes and the greater complexity of the circuits, it is a question whether it is practical to use pentodes in push-pull. On the other hand, if a single pentode is used to give the same result as two triode power tubes in push-pull, the cost of the filter, required to smooth out the ripple in the rectified alternating current, will come up probably enough to more than offset any possible saving in eliminating the power tube and the usual first stage of audio amplification. In addition a larger and more expensive output transformer would have to be used on account of the high direct current flowing in one direction in the primary winding of the transformer."

Batteries to A. C.

(*Continued from page 8*)

stages, but is not indicated in the drawing. The volume control is a 0 to 25,000 or 50,000-ohm potentiometer, and it is connected to the aerial, ground and primary winding of the tuning coil as indicated.

The diagram and the balance of the text are correct as published.

Jake and Lena

In the skits which Gene and Glenn put on over WTAM, one of the boys plays two parts, that of Jake and also of his wife, Lena. A club of young women recently devoted a lot of thought to this matter before they reached this deduction. But they also insist that the one who takes two parts must have false teeth and must take them out for the Jake role. In the latter, however, they are all wrong, for the young man in question has a perfectly good set of au natural teeth. They are willing to demonstrate this to the young ladies any time they wish to call at WTAM. The pictures of Gene and Glenn appear elsewhere in this issue.

Have You Heard It?

Who is WCHI? The Radio Commission reports no new station in Chicago and as that district is already overcrowded, probably no new station would be licensed there. Ergo, some old station must have changed its call letters unbeknownst to the Commission. R. Morris Pierce, chief engineer of WJAY, informs us that WCHI is probably a successor to WORD, which formerly used the Webster hotel studios now employed by the new WCHI. WORD was a 5000-watt station with its transmitter at Batavia, Ill., and occupied the 1480 kc. channel now being used by WCHI.

Here's a New One

Have you heard station KUKU? We wonder if it has any connection with the Cuckoo program now listed on the WJZ chain for Wednesdays at 9:30 p.m. On this Cuckoo program one finds such things as the Radio Guilded theatre's presentation of "The Face on the Grandfather's Clock" and Mrs. Pennyfeather's personal service for perturbed people. The station also maintains a Kiddies' Komfort bureau, with true stories about unreal people. According to the station manager, anything is apt to happen and therefore it probably will.

WHAT'S ON THE AIR TONIGHT?

A WEEKLY CALENDAR

Leading Features of the Network Programs

Time is given by Eastern Standard. For Central time subtract one hour; for Mountain time, two hours; and for Pacific time, three hours.

Features marked (C) are for the Columbia Broadcasting System; those marked (N) are the National Broadcasting Company. Under each feature are listed the channels (kilocycles) on which that feature may be heard.

These programs are subject to change daily

Daily (Except Saturday and Sunday)

6:45-8:00 Tower Health Exercises (N)
550 560 590 660 790 950 1220

8:00-8:15 The Aunt Jemima Man (N)
690 750 760 950 980 990 1060

8:00-8:30 Organ Reveille (C)
570 580 600 780 860 900 930
950 1170 1240 1260 1280 1290 1340
1390 1430 1490

8:15-8:30 Morning Devotions (N)
550 560 590 660 680 790 820
870 890 900 920 940 950 1080
1220 1480

8:15-8:45 The Headliners (N)
750 760 980 990 1060 1150

8:30-8:45 Morning Devotions (C)
570 600 780 860 930 950 1170
1240 1260 1280 1300 1340 1370 1390
1430 1490

8:30-9:00 Cheerio (N)
550 560 580 590 610 660 680
690 740 790 820 890 900 920
940 950 1070 1080 1110 1140 1190
1220 1460 1480

8:45-9:30 Something for Everyone (C)
550 570 600 670 780 860 900
930 940 1090 1170 1240 1260 1280
1290 1340 1370 1390 1430 1490

9:00-9:15 The Aunt Jemima Man (N)
700 770 870 1220 1350

9:00-10:00 Morning Melodies (N)
590 660 820 920 950 1000 1070
1110 1480

9:30-9:45 Morning on Broadway (C)
550 570 600 630 860 930 940
1090 1240 1260 1280 1290 1340 1370
1390 1430 1470 1490

10:00-10:30 Ida Bailey Allen (C)
550 600 630 770 780 860 950
1090 1160 1170 1230 1240 1260 1290
1320 1340 1390 1470 1490

10:00-11:00 The Manhatters (N)
750 760 970 990 1060 1140 1150
1220 1350 1480

10:45-11:00 Betty Crocker (N)
550 560 580 610 660 790 890
900 920 940 950 1000 1020 1060
1070 1140 1190 1220 1330

10:45-11:00 Food Talk (N)
620 650 680 690 740 750 760
780 900 970 980 990 1080 1110
1140 1150 1220 1290 1300 1320 1350
1460 1480

11:00-11:30 Forecast School of Cookery (N)
700 720 750 760 980 990 1150
1220 1350

11:15-11:30 Radio Household Institute (N)
550 560 580 590 610 620 650
660 740 780 790 820 890 900
920 940 950 1000 1020 1040 1070
1140 1190 1220 1290 1320 1330 1460

11:30-11:45 Lamb Menus (N)
700 750 760 770 980 990 1020
1220 1350

12:00-12:30 Columbia Revue (C)
550 560 570 600 610 630 780
810 860 900 920 930 940 950
1160 1260 1280 1290 1320 1340 1390
1430 1490

12:00-12:45 Twelve o'Clock Trio (N)
550 580 660 920 1300

12:00-12:45 The Luncheon Five (N)
750 760 830 1020 1140 1150 1300

12:30-1:30 Yoeng's Restaurant Orchestra (C)
550 560 570 600 620 630 780
860 900 930 940 950 1160 1170
1230 1240 1260 1280 1290 1300 1320
1340 1390 1410 1430 1490

12:45-1:30 National Farm and Home Hour (N)
590 610 650 680 700 740 750
760 770 780 800 820 830 870
900 920 950 980 990 1000 1020
1040 1060 1080 1110 1140 1150 1190
1220 1270 1290 1300 1320 1350 1460

1:30-2:00 Harold Stern's Orchestra (C)
550 570 600 630 780 860 900
930 1170 1240 1280 1290 1320 1340
1390 1410 1430 1490

2:30-3:00 Ann Leaf at the Organ (C)
550 560 570 580 600 630 770
780 860 900 920 930 950 1090
1120 1160 1170 1230 1240 1260 1280
1290 1300 1320 1340 1390 1410 1430

2:30-3:15 Melody Three (N)
550 590 660 920 950 1000

2:45-3:45 Band of 1000 Melodies (N)
750 760 980 1060 1140 1350

3:00-3:30 Columbia Ensemble (C)
550 560 570 580 600 630 900
920 930 950 1090 1120 1160 1230
1240 1260 1280 1290 1320 1340 1390
1410 1430 1490

3:30-4:00 For Your Information (C)
550 560 570 580 600 630 860
920 930 950 1160 1170 1230 1240
1260 1280 1290 1340 1390 1410 1470

4:00-5:00 U.S. Band Concert (C)
550 560 570 580 600 620 630
770 780 810 860 900 920 930
940 950 1090 1120 1160 1170 1230
1240 1260 1280 1290 1320 1340 1390
1410 1430 1490

5:45-6:00 My Bookhouse Story Time (C)
550 600 630 670 810 860 900
950 1090 1160 1170 1240 1260 1290
1320 1340 1360 1490

6:00-6:30 Black and Gold Room Orchestra (N)
550 660 920 950 1220

6:30-7:00 American Home Banquet (N)
550 560 580 590 660 790 890
920 940 950 1070 1330

7:00-7:15 Amos 'n' Andy (N)
680 690 750 760 900 950 980
990 1080 1110 1150 1300 1480

7:00-7:30 Bernhard Levitow's Ensemble (C)
560 570 580 600 630 810 900
920 930 1120 1230 1260 1280 1290
1340 1370 1390 1410 1430 1490

11:00-12:00 Slumber Music (N)
560 750 760 770 980 1080 1220

11:30-12:00 Amos 'n' Andy (N)
590 610 620 650 670 740 780
790 800 820 830 900 920 1020

1130 1190 1220 1270 1290 1320 1350
1430 1460

Sunday

8:00-9:00 Heroes of the Church (C)
570 780 860 930 950 1090 1230
1280 1410 1430 1490

9:00-10:00 Morning Musicale (C)
570 580 600 780 860 930 1090
1170 1230 1240 1280 1290 1300 1410
1440 1490

10:00-10:50 Land O' Make Believe (C)
570 580 600 780 860 930 950
1230 1280 1290 1300 1490

10:50-11:00 Columbia's Commentator (C)
570 580 600 780 860 930 950
1230 1240 1280 1290 1490

12:30-12:55 The Nomads (N)
760 820 830 950 1060 1350

1:00-2:00 National Light Opera (N)
690 700 750 760 820 950 1060
1130 1290 1350 1460

1:30-1:45 Spanish Dreams (N)
550 590 610 660 920 1220

1:30-2:00 The Aztecs (C)
550 560 570 580 600 630 810
920 930 940 950 1160 1170 1240
1280 1320 1340 1390 1410 1470 1490

1:45-2:00 Godfrey Ludlow, violinist (N)
550 590 660 920 1220

2:00-2:25 Troika Bells (N)
550 660 680 870 900 920 1000

2:00-2:30 Ballad Hour (C)
550 560 570 580 600 620 630
670 810 920 930 940 950 1120
1230 1240 1280 1290 1340 1390 1410
1430 1470 1490

2:00-3:00 Roxy Symphony Concert (N)
620 680 690 700 760 770 800
820 950 980 990 1020 1060 1140
1290 1460

2:30-3:00 Concert Bureau Program (N)
550 580 590 620 660 680 790
870 900 920 940 1000 1130 1290

3:00-4:00 The Jewish Hour (N)
550 660 890 920 940 950 970
1220 1330

3:00-4:00 National Youth Conference (N)
590 620 680 700 740 760 770
780 790 800 900 920 980 1060
1080 1110 1130 1140 1190 1220 1350

3:00-4:00 Chicago Symphony Orchestra (N)
550 590 610 620 720 750 1000
1290 1460

3:00-4:00 Symphonic Hour (C)
550 560 570 580 600 620 630
670 810 860 920 930 940 950
1090 1120 1160 1170 1240 1260 1280
1290 1300 1320 1330 1340 1390 1410
1430 1470 1490

4:00-5:00 Cathedral Hour (C)
550 560 570 580 600 620 630
780 810 860 920 930 940 950
1090 1120 1160 1170 1230 1240 1260
1280 1290 1300 1320 1340 1390 1410
1430 1470 1490

4:00-5:00 Dr. S. Parkes Cadman (N)
550 580 590 610 620 650 660
680 740 780 790 800 820 830
890 900 920 940 970 1000 1080
1110 1140 1190 1220 1270 1290 1330

4:30-5:00 Duo Disc Duo (N)
760 770 980 990 1020 1060 1220

5:00-5:30 McKesson News Reel (C)
550 560 570 600 610 630 670
780 810 860 900 920 930 940
950 1040 1090 1120 1160 1170 1230
1240 1250 1260 1280 1290 1320 1340
1390 1440 1470 1490

5:00-6:00 National Religious Service (N)
700 760 770 830 900 990 1060
1140 1150 1290 1320 1350

5:00-6:00 Davey Tree Hour (N)
550 560 580 590 610 660 790
870 890 940 950 970 1000 1070
1220 1330 1450

5:30-6:00 Rev. Donald G. Barnhouse (C)
550 600 630 670 780 860 950
960 1160 1170 1230 1260 1290 1320
1430 1470 1490

6:00-6:15 Echoes of the Orient (N)
550 590 660 790 920 950 1000

6:15-6:30 Countess Olga Medolago Albani (N)
550 590 660 790 920 950 1000

6:30-7:00 Acousticon Program (C)
550 630 670 780 860 950 1090
1160 1170 1230 1240 1260 1290 1320
1340 1390 1470 1490

6:30-7:00 Old Company's Songalogue (N)
550 560 580 590 660 790 890
940 950

7:00-7:30 Our Romantic Ancestors (C)
560 570 580 600 610 630 920
930 940 1090 1120 1280 1290 1340
1390 1410 1430 1490

7:00-7:30 Durant Heroes of the World (N)
550 560 580 590 610 620 650
660 680 690 740 780 790 800
820 830 870 890 900 920 940
950 1000 1080 1110 1140 1190 1220
1290 1300 1320 1330 1450 1460

7:30-7:45 French Trio (C)
560 570 600 630 860 920 930
940 1090 1120 1260 1280 1290 1340
1390 1410 1430 1490

7:30-8:00 Williams Oilomatics (N)
700 720 750 760 830 990 1060
1130 1150 1220 1350

7:30-8:30 Maj. Bowes' Family (N)
550 590 660 740 780 790 820
890 900 920 950 1000 1040 1070
1190 1220 1270 1300 1320 1330 1450

7:45-8:00 World's Business (C)
550 560 570 580 600 630 670
780 810 860 920 930 940 950
1090 1120 1230 1260 1280 1290 1340
1390 1410 1430 1490

8:00-8:15 Enna Jettick Melodies (N)
590 620 640 650 680 690 700
740 750 760 780 800 820 830
900 920 980 990 1020 1040 1130
1150 1190 1220 1270 1290 1300 1320
1350

8:00-8:30 La Palina Rhapsodizers (C)
550 600 630 640 780 860 900
950 1090 1120 1130 1170 1230 1240
1260 1290 1320 1340 1390 1490

8:15-9:15 Collier's Radio Hour (N)
590 620 640 680 700 750 760
830 920 980 990 1020 1130 1150
1220 1350 1480

8:30-9:00 Sonatron Program (C)
550 560 570 600 610 630 770
780 860 900 940 950 1090 1170
1230 1240 1260 1290 1320 1340 1390

8:30-9:00 Chase & Sanborn Orchestra (N)
550 560 580 590 610 620 660
690 740 780 790 820 870 890
900 920 940 950 1000 1040 1060
1070 1080 1140 1190 1220 1270 1290
1300 1320 1330 1450

9:00-9:15 Our Government (N)
550 560 580 590 650 660 740
780 790 800 820 890 900 920
940 950 1000 1060 1080 1110 1190
1220 1270 1290 1320 1330 1450

9:00-10:00 Majestic Theatre of the Air (C)
550 560 570 580 600 610 630
730 770 780 810 860 900 930
940 950 960 1040 1090 1120 1160
1170 1230 1240 1250 1260 1280 1290
1300 1320 1340 1390 1470 1490

9:15-9:45 Salon Singers (N)
690 760 980 990 1150 1220

9:15-10:15 Atwater Kent Hour (N)
550 560 590 610 620 640 650
660 680 720 740 780 790 800
820 830 900 920 950 1000 1070
1080 1130 1190 1220 1320 1330 1460

10:00-10:30 Royal's Poet of the Organ (C)
550 560 570 600 610 630 770
780 860 900 940 950 1090 1160
1170 1230 1240 1260 1290 1320 1340
1390 1470 1490

10:15-10:45 Studebaker Champions (N)
550 560 580 590 610 620 640
660 720 790 830 890 920 940
950 1000 1060 1070 1220 1290 1460

10:30-11:00 Arabesque (C)
550 560 570 580 600 630 670
780 860 930 940 950 1090 1120
1160 1230 1240 1260 1280 1290 1320
1340 1390 1430 1470 1490

10:45-11:15 Sunday at Seth Parker's (N)
550 590 600 780 790 820 830
900 920 940 950 1000 1220 1300

11:00-12:00 Back Home Hour (C)
560 600 630 810 860 930 940
1090 1120 1170 1230 1240 1260 1280
1300 1320 1340 1390 1430 1470

11:15-11:45 Russian Cathedral Choir (N)
550 590 660 780 790 800 900
920 950 1000

11:45-12:00 Sam Herman, xylophonist (N)
550 590 660 780 800 920 950
1000 1140

Monday

9:30-10:00 Blue Monday Gloom Chasers (C)
550 570 600 630 860 900 930
940 1090 1240 1260 1280 1290 1370
1390 1430 1490

10:30-10:45 Harmonies and Contrasts (C)
600 630 770 780 860 940 950
1090 1160 1230 1260 1280 1320 1340
1390 1430 1470 1490

10:45-11:00 High Gear (C)
630 780 860 900 940 950 1160
1170 1230 1260 1280 1290 1300 1320
1340 1390 1430 1490

11:00-11:15 Mirrors of Beauty (C)
570 600 620 630 780 900 930
940 950 1160 1170 1230 1260 1280
1340 1390 1430 1490

11:15-11:30 Ben and Helen (C)
560 570 600 620 630 780 810
860 900 920 930 940 950 1160
1170 1230 1240 1260 1280 1340 1390
1430 1490

11:30-11:45 Children's Corner (C)
560 570 600 620 630 780 860
900 920 930 940 950 1160 1170
1230 1240 1260 1280 1290 1340 1390
1430 1490

11:45-12:00 Your Diet (C)
560 570 600 620 630 780 860
900 920 930 940 1160 1230 1260
1280 1290 1340 1390 1430 1490

2:00-2:30 The Honoluluans (C)
560 570 600 610 630 770 780
860 900 930 1120 1230 1240 1260
1280 1290 1300 1320 1340 1390 1410
1430 1490

4:00-5:00 U.S. Marine Band (N)
750 760 950 970 1060 1140 1220

4:30-5:00 Pacific Vagabonds (N)
550 560 590 610 620 660 790
830 920 950 1140

5:00-5:45 National Student Federation (C)
550 560 570 600 610 630 670
860 900 930 940 950 1090 1120
1160 1240 1280 1340 1390 1410 1430

6:00-6:30 Mormon Tabernacle Choir (N)
560 650 680 760 770 790 830
920 980 1060 1110 1130 1140 1220
1350 1460

6:00-6:30 Ben Pollack's Orchestra (C)
560 570 600 770 860 900 920
930 940 950 1160 1230 1260 1280
1290 1300 1320 1390 1410 1430 1490

6:30-7:00 Current Events (C)
560 570 600 610 630 860 900
920 930 940 950 1120 1230 1260
1280 1300 1340 1390 1410 1430 1490

7:15-7:30 The World Today (N)
550 560 660 740 890 920 940
950 1080 1190 1220 1270 1290 1320
1330 1450

7:30-8:00 Voices from Filmland (C)
550 560 580 600 610 640 670
810 860 900 920 930 940 950
1040 1090 1120 1200 1230 1240 1280
1290 1320 1340 1390 1410 1430 1470

7:30-8:30 Roxy and His Gang (N)
560 650 680 690 740 760 990
1150 1220 1270 1320 1350

7:45-8:00 Back of News in Washington (N)
550 590 610 620 660 790 890
900 940 950 1000 1140 1220 1290

8:00-8:30 Henry-George (C)
550 600 630 670 780 810 860
900 950 1090 1120 1170 1230 1240
1260 1290 1320 1340 1370 1390 1490

8:00-8:30 Voice of Firestone (N)
550 560 580 590 610 620 650
660 680 690 740 780 790 800
820 890 900 920 940 950 1000
1020 1040 1060 1070 1080 1110 1140
1190 1220 1270 1290 1300 1320 1330
1450 1460

8:30-9:00 Ceco Couriers (C)
550 600 630 670 780 810 860
900 950 1090 1170 1230 1240 1260
1290 1320 1340 1390 1490

8:30-9:00 Ipana Troubadors (N)
620 650 700 740 750 760 770
780 820 900 920 980 990 1020
1040 1080 1110 1150 1190 1220 1290
1300 1320 1350

8:30-9:30 A. & P. Gypsies (N)
550 560 580 590 610 660 720
790 890 920 940 950 1000 1060
1070 1220 1330

9:00-9:30 Physical Culture Magazine Hour (C)
550 600 630 670 780 860 900
950 1090 1170 1230 1240 1260 1290
1320 1340 1370 1390 1490

9:00-9:30 Moment Musicale (N)
590 620 760 790 830 920 980
1130 1150 1220 1320 1350 1460

9:30-10:00 General Motors Family Party (N)
550 560 580 590 610 620 640
650 660 720 740 780 790 800
820 830 890 900 920 940 950
1000 1060 1070 1080 1130 1190 1220
1330 1460

9:30-10:00 An Evening in Paris (C)
550 600 630 670 780 860 900
950 960 1090 1160 1170 1230 1240
1260 1290 1320 1340 1390 1490

9:30-10:00 Chesebrough Real Folks (N)
690 700 750 760 980 990 1020
1150 1220 1350

10:00-10:30 Robt. Burns Panatela Program (C)
550 600 630 670 780 860 900
950 1090 1160 1170 1230 1240 1260
1290 1320 1340 1390 1490

10:00-10:30 Stromberg-Carlson Program (N)
590 620 640 650 740 750 760
780 790 800 820 830 900 920
980 990 1020 1040 1080 1110 1140
1150 1190 1220 1270 1290 1300 1320
1350 1460

10:00-10:30 Whittal Anglo-Persians (N)
550 560 580 590 610 660 790
890 920 940 950 1000 1060 1220
1330 1450

10:30-11:00 Empire Builders (N)
590 620 640 700 750 760 790

800 830 900 920 980 990 1020
1130 1150 1190 1220 1290 1350 1460

10:30-11:00 Strings and Bows (N)
580 660 790 890 920 940 950
1220 1320 1450

10:30-11:30 Voice of Columbia (C)
550 560 570 580 600 630 670
780 810 860 900 930 940 950
1090 1120 1160 1170 1230 1240 1260
1280 1290 1300 1320 1340 1390 1410

11:00-12:00 Bernie Cummins Orchestra (N)
550 590 660 780 790 870 920

11:30-12:00 Jan Garber's Orchestra (C)
560 570 580 600 630 810 860
930 940 950 1120 1240 1260 1280
1290 1300 1340 1390 1470 1490

12:00-1:00 Ted Florito's Orchestra (N)
550 590 650 660 780 900 950
1000 1020 1070 1140

Tuesday

10:15-10:30 Through the Looking Glass (N)
700 750 760 770 980 990 1020
1150 1220 1350

10:30-10:45 A Stroll on the Avenue (C)
570 600 630 770 780 860 940
950 1160 1170 1230 1260 1280 1290
1300 1320 1340 1390 1430 1470 1490

10:45-11:00 Jean Carroll (C)
550 600 630 770 780 860 950
1160 1170 1230 1240 1260 1290 1320
1340 1390 1470 1490

11:00-11:15 The Pot of Gold (C)
560 600 610 620 630 780 860
900 930 940 950 1170 1230 1260
1280 1340 1390 1430 1470

11:00-11:15 Blue Streaks (N)
550 650 660 790 920 950 1070

11:15-11:30 Sen. Arthur Capper (C)
560 570 600 610 620 630 770
780 860 900 930 940 950 1160
1170 1230 1240 1260 1280 1290 1340
1390 1430 1470 1490

11:30-12:00 The Party House (C)
560 570 600 620 780 860 900
920 930 940 950 1160 1170 1230
1240 1260 1280 1290 1340 1390 1430
1470 1490

2:00-2:30 Romany Patteran (C)
560 570 600 630 780 860 930
1120 1170 1230 1240 1260 1280 1290
1300 1320 1340 1390 1410 1430 1470

3:15-4:00 Matinee Gems (N)
680 750 760 800 820 830 900
980 1020 1110 1140 1300 1350

4:00-5:00 Classic Gems (N)
750 760 1020 1140 1150 1350

4:30-5:00 Auction Bridge Game (N)
550 560 580 590 610 650 660
720 740 780 790 800 820 890
900 920 940 950 1000 1040 1060
1070 1080 1110 1140 1190 1220 1330

5:00-5:15 Dancing Melodies (N)
550 790 920 940 950 1110

5:00-5:30 Rhythm Kings (C)
550 560 570 600 610 630 670
810 860 930 940 950 1090 1120
1240 1280 1290 1340 1390 1410 1430
1470 1490

5:15-5:30 The American Flag (N)
550 560 580 610 620 660 740
790 800 820 830 890 900 920
940 950 1000 1070 1080 1110 1140
1220 1450 1460

5:30-6:30 Bert Lown's Biltmore Orchestra (C)
550 560 570 600 610 630 810
930 940 950 1240 1280 1340 1390
1410 1430 1470 1490

6:30-7:00 Yoeng's Restaurant Orchestra (C)
560 570 600 860 920 930 940
950 1120 1160 1230 1260 1280 1290
1300 1340 1390 1410 1430 1470 1490

7:00-7:30 Voters' Service (N)
550 580 590 610 620 660 680
780 790 800 820 830 890 900
920 940 1000 1040 1080 1190 1220
1290 1320 1330

7:00-8:00 Carborundum Hour (C)
670 860 1170 1340 1470

7:30-7:45 Lew White Organ Recital (N)
680 690 950 1060 1220 1350

7:30-8:00 Soconyland Sketches (N)
550 580 590 660 790 890 940

8:00-8:30 Blackstone Program (C)
600 630 780 860 950 1170 1230
1250 1260 1290 1340 1430 1440 1470

8:00-8:30 Pure Oil Concert (N)
620 650 740 750 760 770 780
820 900 980 1020 1060 1080 1110
1150 1220 1270 1290 1300 1350 1460

8:00-8:30 Songs of the Season (N)
550 560 580 660 690 920 950
1220 1330

8:30-9:00 Around the World with Libby (N)
590 620 650 700 740 750 760
780 790 820 830 920 980 990
1020 1060 1130 1150 1220 1320 1350

8:30-9:00 True Romances (C)
550 600 630 780 860 950 1090
1160 1170 1230 1240 1260 1290 1320
1340 1390 1470 1490

8:30-9:00 Florsheim Frolics (N)
550 560 580 590 610 660 720
790 890 900 920 940 950 1000
1080 1110 1190 1220 1290 1300 1330

9:00-9:30 Johnson & Johnson Melodrama (N)
690 700 760 980 990 1020 1060
1150 1220 1350

9:00-9:30 Eveready Program (N)
550 560 590 610 620 640 650
660 720 740 780 790 820 830
890 920 940 950 1000 1070 1130
1250 1270 1320 1330 1450

9:00-10:00 Old Gold-Paul Whiteman Hour (C)
550 560 570 580 600 610 630
770 780 810 860 900 930 940
950 1040 1090 1120 1160 1170 1230
1240 1250 1260 1280 1290 1320 1330
1340 1390 1410 1430 1440 1470 1490

9:30-10:00 Neapolitan Nights (N)
760 980 1060 1150 1220 1480

9:30-10:00 Happy Wonder Bakers (N)
550 560 580 590 610 620 660
740 780 790 820 830 890 900
920 940 950 1000 1070 1110 1130
1140 1190 1220 1270 1290 1320 1330
1430 1450 1460

10:00-10:30 Westinghouse Salute (N)
590 620 640 650 740 750 760
780 790 820 830 900 920 980
990 1020 1060 1080 1110 1130 1140
1150 1190 1220 1290 1300 1320 1350

10:00-10:30 Harbor Lights (N)
550 560 580 590 610 660 790
890 920 940 950 1220

10:00-10:30 Graybar's, Mr. and Mrs. (C)
550 560 570 580 600 610 630
770 780 810 860 900 930 940
950 1040 1090 1120 1160 1170 1230
1240 1250 1260 1280 1290 1320 1340
1390 1470 1490

10:30-11:00 Conclave of Nations (C)
550 560 570 580 600 630 780
860 930 940 950 1090 1160 1170
1230 1240 1260 1280 1290 1320 1340
1390 1410 1430 1470 1490

10:30-11:30 Radio-Keith-Orpheum Hour (N)
550 560 580 590 610 620 640
650 660 740 780 790 800 820
830 890 900 920 940 950 1000
1040 1070 1080 1110 1130 1140 1190
1220 1270 1290 1300 1320 1330 1450

11:00-11:30 Will Osborne's Orchestra (C)
560 570 580 600 610 630 860

930 940 950 1120 1160 1240 1260
1280 1290 1300 1340 1390 1410 1430
11:30-12:00 Phil Spitalny's Music (N)
550 560 590 660 780 920 1140
11:30-12:00 Publix Radio-Vue (C)
550 560 570 580 600 630 780
810 860 930 940 950 1120 1170
1230 1240 1260 1280 1290 1300 1320
1340 1390 1410 1430

Wednesday

9:30-10:00 U.S. Navy Band (C)
550 570 600 630 860 900 930
940 1240 1260 1280 1290 1370 1390
1430 1490
10:00-11:00 National Home Hour (N)
550 560 580 590 660 790 890
920 940 950 970 1000 1020 1070
1220 1330
11:15-11:30 R.S.V.P. (C)
560 570 600 620 630 780 860
900 930 940 950 1160 1170 1230
1240 1260 1280 1290 1340 1390 1430
11:30-11:45 Mr. Fixit (C)
560 570 600 620 630 780 860
900 920 930 940 950 1160 1230
1260 1280 1300 1340 1390 1430 1490
2:00-2:30 Grace Hyde (C)
560 570 600 610 630 770 780
860 900 930 1120 1230 1240 1260
1280 1290 1300 1320 1340 1390 1410
1430 1490
2:30-3:00 Syncopated Silhouettes (C)
550 560 570 580 600 610 630
770 780 860 900 920 930 950
1120 1160 1230 1240 1260 1280 1290
1300 1320 1340 1390 1410 1430 1490
3:30-4:00 Evening Stars (N)
550 560 580 590 650 660 680
690 790 820 890 900 920 1000
1080 1110 1220 1290 1300 1330 1460
4:00-4:30 Musical Album (C)
560 570 580 600 610 620 630
770 780 810 860 900 920 930
940 950 1090 1120 1230 1240 1260
1280 1290 1320 1340 1390 1410 1430
4:00-5:00 The Radio Guide (N)
620 680 690 760 780 790 830
900 920 1040 1060 1130 1140 1300
4:30-5:15 Club Plaza Orchestra (C)
550 560 570 580 600 610 630
670 780 810 860 900 920 930
940 950 1090 1120 1230 1240 1260
1280 1290 1320 1340 1390 1410 1430
5:00-5:15 National Women's Party (N)
590 620 700 740 760 780 790
800 820 830 900 920 950 1060
1080 1140 1150 1190 1270 1290 1350
5:00-5:30 Sky Sketches (N)
550 790 920 940 950
5:15-5:45 Twilight Troubadours (C)
550 560 570 600 610 630 670
810 930 940 950 1120 1240 1280
1340 1390 1410 1430 1490
6:15-6:30 Bill Schudt's Going to Press (C)
560 570 600 860 920 940 950
1260 1280 1290 1300 1320 1340 1390
1410 1490
6:30-7:00 Hotel Paramount Orchestra (C)
560 570 600 770 860 900 920
930 940 950 1120 1230 1260 1280
1290 1300 1340 1390 1410 1430 1490
7:00-7:30 Jeddo Highlanders (N)
550 660 790 890 1060
7:15-7:30 Rise of the Goldbergs (N)
690 760 950 1320 1350
7:30-7:45 Hindermyer & Tuckerman (N)
550 660 890 920 950
7:30-8:00 The Choristers (N)
760 770 780 790 830 920 1220
1320 1350 1460 1480
7:45-8:00 The Eternal Question (N)
550 560 580 590 610 660 790
890 920 940 950 1000 1060 1220
1330 1450
8:00-8:30 The Yeast Foamers (N)
620 700 760 770 980 990 1020
1150 1220 1290 1350 1460
8:00-8:30 East of Cairo (N)
550 580 590 660 780 890 920
940 950 1000
8:00-8:30 Gen. Mills Fast Freight (C)
550 560 570 600 610 630 640
670 780 810 860 900 930 940
950 1040 1090 1120 1170 1230 1250
1260 1280 1290 1300 1320 1330 1340
1390 1470 1490
8:30-9:00 Sylvania Foresters (N)
760 770 980 990 1020 1150 1220
8:30-9:00 Mobiloil Concert (N)
550 560 580 590 610 660 800
830 890 900 920 940 950 1000
1070 1130 1140 1190 1220 1330 1450
8:30-9:00 Forty Fathom Trawlers (C)
550 600 630 670 780 860 1090
1170 1230 1240 1260 1290 1320 1340
1370 1390 1430 1440 1470 1490
9:00-9:30 Halsey-Stuart Program (N)
550 560 580 590 620 640 650
660 690 740 780 790 820 830
890 900 920 940 950 1000 1080
1110 1130 1140 1190 1220 1320 1330
9:00-9:30 U.S. Marine Band Concert (C)
550 560 570 580 600 630 780
860 900 930 940 950 1090 1120
1160 1230 1240 1260 1280 1290 1320
1340 1390 1410 1490
9:30-10:00 Cuckoo (N)
560 760 980 990 1150 1220 1350
9:30-10:00 La Palina Smoker (C)
550 600 630 670 780 810 860
900 950 1090 1120 1160 1170 1230
1240 1260 1290 1320 1340 1390 1490
9:30-10:30 Palmolive Hour (N)
550 560 580 590 610 620 640
650 660 720 740 780 790 800
820 830 890 900 920 940 950
1000 1060 1070 1080 1130 1140 1190
1220 1320 1330 1460
10:00-10:30 Philco Hour (C)
550 560 570 580 600 610 630
670 730 770 780 810 860 900
930 940 950 960 1040 1090 1120
1160 1170 1230 1240 1250 1260 1280
1290 1320 1340 1390 1440 1470 1490
10:30-11:00 Floyd Gibbons (N)
550 580 590 620 650 660 720
790 830 890 900 920 950 1000
1040 1060 1110 1130 1220 1270 1320
1460
10:30-11:00 Grand Opera Concert (C)
550 560 570 580 600 630 670
780 810 860 900 930 940 950
1090 1120 1160 1230 1240 1260 1280
1290 1320 1340 1390 1410 1490
10:30-11:30 St. Regis Hotel Orchestra (N)
760 980 1150 1220 1350
11:00-12:00 Casino Orchestra
550 590 610 660 920
11:00-12:00 Hank Simmons Show Boat (C)
550 560 570 580 600 610 630
780 810 860 900 930 940 950
1120 1160 1230 1240 1260 1280 1290
1300 1320 1340 1390 1410 1490

Thursday

9:00-10:00 U.S. Marine Band (N)
760 950 990 1220 1350
10:00-10:30 Ceresota Program (N)
760 950 970 990 1460
10:30-10:45 Busy Fingers (C)
560 570 600 630 770 780 860
940 950 1120 1170 1230 1240 1260
1280 1290 1300 1320 1340 1390 1430
1470 1490

10:45-11:00 Helen Chase (C)
550 600 630 770 780 860 950
1090 1160 1170 1230 1240 1260 1290
1320 1340 1470 1490

11:00-11:15 Your Child, Grace Abbott (N)
550 580 650 660 790 890 900
920 950 1000 1080 1140 1220 1460

11:00-11:30 Sewing Circle (C)
560 570 600 620 630 780 810
860 900 930 940 950 1120 1160
1230 1260 1280 1340 1390 1430 1470

11:30-11:45 Du Barry Beauty Talk (C)
550 600 630 640 770 780 860
950 1120 1160 1170 1230 1240 1260
1290 1320 1340 1390 1470 1490

2:00-2:30 Thirty-Minute Men (C)
560 570 600 610 630 770 780
860 930 1120 1160 1230 1240 1260
1280 1290 1300 1320 1340 1390 1410
1430 1470 1490

2:30-3:00 American School of the Air (C)
550 560 570 580 600 610 620
630 670 770 780 860 900 920
930 940 950 1090 1120 1160 1170
1230 1240 1260 1280 1290 1300 1320
1340 1390 1410 1430 1470 1490

3:15-3:30 The Magic of Speech (N)
550 590 660 830 950 1290

3:30-4:00 La Forge-Berumen Musicale (N)
550 660 830 920 950 1020 1060

4:00-5:00 U.S. Army Band (N)
700 750 760 790 830 950 970
990 1210

4:00-5:00 Twilight Hour (N)
590 660 920 940 1020

4:30-5:00 Curtain Calls (C)
550 560 570 580 600 610 630
810 860 920 930 940 950 1090
1170 1230 1240 1260 1280 1290 1320
1340 1390 1410 1430 1470 1490

5:00-5:15 Ebony Twins (C)
550 560 570 600 610 630 670
810 860 930 940 950 1090 1120
1240 1280 1340 1390 1410 1430 1470

5:00-5:30 R-K-O Program
550 560 580 590 610 660 790
890 920 940 950 1000 1020 1060
1070 1220 1330 1450

5:30-6:00 Gov. Clinton Hotel Orchestra (C)
550 560 570 600 610 630 670
810 930 940 950 1160 1280 1340
1390 1410 1430 1470 1490

6:00-6:30 Hotel Shelton Orchestra (C)
560 570 600 770 860 920 930
940 950 1160 1230 1260 1280 1290
1300 1320 1340 1390 1410 1430 1470

6:30-7:00 Civic Repertory Theatre (C)
560 570 600 610 860 900 920
930 950 1120 1230 1260 1280 1290
1300 1340 1390 1410 1430 1470 1490

7:00-7:30 Mid-Week Hymn Sing (N)
560 660 780 820 830 890 940

7:30-8:00 Ward's Tip Top Club (C)
570 600 670 780 860 1090 1170
1230 1290 1340 1390 1490

7:30-8:00 Half Hour in Capitol (N)
580 660 780 890 900 950 1190
1290 1320

7:30-8:00 Frontier Days (N)
690 760 770 1220 1350

8:00-8:15 The Vagabonds (C)
560 570 580 600 620 630 780
900 920 930 940 950 1120 1160
1230 1260 1280 1290 1300 1340 1390
1410 1430 1470 1490

8:00-8:30 Golden Gems (N)
760 1150 1220 1350

8:00-9:00 Rudy Vallee's Orchestra (N)
550 560 580 590 620 650 660
680 690 740 780 790 800 820
830 890 900 920 940 950 1000
1040 1070 1080 1110 1130 1140 1190
1220 1270 1290 1300 1320 1330 1430
1450 1460

8:30-9:00 Champion Sparkers (N)
700 750 760 770 870 980 990
1060 1150 1220 1350

8:30-9:00 Manhattan Moods (C)
550 560 570 580 600 610 620
630 780 860 900 920 930 940
950 1090 1120 1230 1240 1260 1280
1290 1300 1340 1390 1410 1430 1470

9:00-9:30 True Detective Mysteries (C)
550 600 630 770 780 810 860
950 1090 1120 1160 1170 1230 1240
1260 1290 1320 1340 1390 1440 1470

9:00-9:30 Smith Brothers (N)
560 750 760 980 990 1060 1150
1220 1350 1480

9:00-9:30 Seiberling Singers (N)
550 560 580 590 610 620 640
650 660 740 780 790 800 820
830 890 900 920 940 950 1000
1020 1070 1080 1110 1140 1190 1220
1300 1320 1330 1460

9:30-10:00 Maxwell House Melodies (N)
590 620 650 700 740 750 760
780 790 800 820 830 900 920
980 990 1020 1060 1080 1110 1130
1150 1190 1220 1290 1300 1320 1350
1430 1460

9:30-10:00 DeVoe Redskins Orchestra (C)
550 600 630 770 780 860 950
1090 1160 1170 1230 1240 1260 1290
1320 1340 1390 1470 1490

9:30-10:00 Jack Frost's Melody Moments (N)
550 560 580 660 790 870 890
920 940 950 1220 1330

10:00-10:30 In a Russian Village (C)
550 560 570 580 600 610 630
770 780 810 860 900 920 930
940 950 960 1090 1120 1160 1170
1230 1240 1250 1260 1280 1290 1300
1320 1340 1390 1440 1470 1490

10:00-11:00 Atwater Kent Program (N)
720 750 760 980 990 1060 1150
1220 1350 1480

10:00-11:00 RCA Victor Hour (N)
550 560 580 590 610 620 640
650 660 740 780 790 800 820
830 890 900 920 940 950 1000
1020 1040 1070 1080 1110 1130 1140
1190 1220 1270 1290 1300 1320 1330
1450 1460

10:30-11:00 National Radio Forum (C)
550 560 570 580 600 610 630
770 780 860 930 940 950 1090
1120 1230 1240 1260 1280 1290 1300
1320 1340 1390 1410 1430 1470 1490

11:00-11:30 Conoco Adventurers (N)
590 610 700 780 800 820 830
870 900 920 1000 1040 1130 1140
1190 1220 1350

11:00-11:30 Dream Boat (C)
550 560 570 580 600 630 780
860 930 940 950 1120 1160 1230
1240 1260 1280 1290 1300 1340 1390
1410 1430 1470 1490

11:00-12:00 National Grand Opera (N)
550 560 590 660 690 920 950
1070 1080 1110

11:30-12:00 Bert Lown's Biltmore Orch. (C)
560 570 580 600 630 780 810
860 930 940 950 1120 1230 1240
1260 1280 1290 1300 1340 1390 1410
1430 1470 1490

Friday

9:15-9:30 Cultural Broadcast for Women (C)
550 570 600 860 900 930 940
1090 1280 1340 1370 1390 1430 1490

10:30-10:45 Three Men in a Tub (C)
560 570 600 630 770 780 810
860 900 940 950 1160 1170 1230
1240 1260 1280 1290 1300 1320 1340
1390 1430 1490

11:00-11:15 Nell Vinick, Beauty Adviser (C)
550 600 630 640 770 780 860
1160 1170 1230 1240 1260 1290 1320
1340 1440 1470 1490
11:00-12:00 NBC Music Appreciation Hour (N)
550 560 580 590 610 620 650
660 680 690 700 720 740 750
760 770 780 790 800 820 830
890 900 920 940 950 980 990
1000 1020 1040 1060 1070 1080 1110
1130 1140 1150 1190 1220 1270 1290
1300 1320 1330 1350 1450 1460
11:15-11:30 Columbia Salon Orchestra (C)
560 570 600 610 620 630 780
860 900 930 940 950 1170 1230
1260 1280 1290 1340 1390 1430 1490
11:30-12:00 The Week Enders (C)
560 570 600 610 620 630 780
810 860 900 920 930 940 950
1160 1170 1230 1260 1280 1290 1340
1390 1430 1490
2:00-2:30 Dominion Male Quartet (C)
560 570 600 610 630 770 780
860 900 930 1120 1160 1230 1240
1260 1280 1290 1300 1320 1340 1390
1410 1430 1490
3:00-4:00 U.S. Marine Symphony Orch. (N)
550 590 660 920 950 1000 1020
4:00-5:00 Pacific Feature Hour (N)
700 760 790 830 920 950 1060
1140 1220 1300 1350
4:30-5:00 Tea Timers (N)
550 660 920 940 950
5:00-5:15 Browsing Among Books (C)
550 560 570 600 610 630 810
860 900 930 940 1090 1280 1290
1340 1390 1410 1430 1490
5:15-5:30 The March of Events (N)
550 620 660 740 820 890 900
920 940 950 1080 1290 1460
5:15-5:45 Bert Lown's Biltmore Orchestra (C)
550 560 570 600 610 630 810
860 900 930 940 950 1120 1240
1280 1290 1340 1390 1410 1430 1490
6:00-6:15 Musical Foursome (C)
560 570 600 610 860 900 920
930 940 950 1260 1280 1320 1340
1390 1410 1430 1490
6:15-6:30 The World in Music (N)
550 590 660 950 1070 1220
6:30-7:00 Will Osborne's Orchestra (C)
560 570 600 770 900 920 930
940 950 1120 1230 1260 1280 1290
1300 1340 1390 1410 1430 1490
7:00-7:30 The Family Goes Abroad (N)
550 560 580 650 660 740 920
1270 1320
7:00-7:30 Hotel Paramount Orchestra (C)
560 570 580 600 620 810 900
920 930 1120 1230 1260 1280 1290
1340 1390 1410 1430 1490
7:30-8:00 Stars of Melody (N)
760 770 780 830 920 1150 1220
1320 1350 1460 1480
7:30-8:00 Raybestos Twins (N)
550 560 590 610 650 660 690
740 780 790 820 830 920 940
950 1060 1140 1220 1270 1320 1330
7:30-8:00 Howard Fashion Plates (C)
780 860 1170 1290 1490
8:00-8:30 Brown-Bilt Footlights (C)
550 560 570 600 610 630 670
780 810 860 900 930 940 950
1040 1090 1160 1170 1230 1250 1260
1280 1290 1300 1320 1340 1390 1430
1430 1440 1470 1490
8:00-9:00 Cities Service Orchestra (N)
550 560 580 590 610 620 660
690 790 800 830 890 900 920
940 950 1000 1020 1060 1070 1130
1190 1220 1290 1330 1430 1460
8:30-9:00 Eversharp Penman (C)
550 600 630 670 780 810 860
900 950 1090 1160 1170 1230 1240
1260 1290 1320 1340 1390 1490
8:45-9:00 Natural Bridge Program (N)
560 700 760 770 900 980 990
1080 1110 1150 1220 1300 1350
9:00-9:30 Cliquot Club Eskimos (N)
550 560 580 590 610 660 790
890 920 940 950 1060 1220 1330
9:00-9:30 Interwoven Pair (N)
590 620 640 650 680 690 700
740 750 760 780 790 800 820
830 900 920 980 990 1020 1080
1110 1130 1140 1150 1190 1220 1290
1300 1320 1350
9:00-10:00 True Story Hour (C)
550 560 570 600 610 630 670
780 810 860 900 920 930 940
950 1040 1090 1120 1160 1170 1230
1240 1250 1260 1280 1290 1300 1320
1340 1390 1440 1470 1490
9:30-10:00 Broadcasting Broadway (N)
550 560 590 610 660 890 920
940 950 1000 1060 1220 1330 1450
9:30-10:00 Armour Program (N)
590 620 640 650 680 740 750
760 780 820 830 900 920 980
990 1020 1080 1110 1130 1140 1150
1190 1220 1270 1290 1300 1320 1350
10:00-10:30 Around the Samovar (C)
550 560 570 580 600 630 670
780 860 900 930 940 950 1090
1120 1160 1170 1230 1240 1260 1280
1290 1320 1340 1390 1410 1490
10:00-10:30 Grand Opera Burlesque (N)
550 580 590 660 690 790 870
920 940 950 1000 1060 1220
10:00-10:30 Armstrong Quakers (N)
590 620 640 650 700 740 750
760 780 790 800 820 830 900
920 980 990 1020 1040 1080 1130
1140 1150 1190 1220 1290 1320 1350
10:30-11:00 Curtis Institute of Music (C)
550 560 570 580 600 630 780
810 860 900 930 940 950 1090
1120 1160 1170 1230 1240 1260 1280
1290 1320 1340 1390 1410 1490
10:30-11:00 Mystery House (N)
550 580 590 610 660 690 920
950 1000 1220
10:30-11:00 Smith Ballew's Orchestra (N)
750 760 790 980 1110 1150 1190
1220 1290 1350
11:00-11:15 Hamilton-Brown Sketch Book (N)
560 590 620 750 760 770 790
830 920 980 990 1130 1150 1220
1350 1430 1480
11:00-11:30 Sleepy Hall's Orchestra (C)
570 580 600 630 780 860 900
930 940 950 1120 1160 1170 1240
1260 1280 1290 1300 1340 1390 1410
11:00-12:00 Hotel St. Regis Orchestra (N)
590 660 690 780 790 870 920
11:30-12:00 Ben Pollack's Orchestra (C)
550 560 570 580 600 630 780
860 930 940 950 1120 1160 1240
1260 1280 1300 1340 1390 1410 1470

Saturday

10:00-10:30 Saturday Syncopators (C)
570 600 620 630 770 780 810
860 940 950 1160 1170 1230 1260
1280 1290 1340 1390 1430 1470 1490
10:30-11:00 Columbia Grenadiers (C)
560 570 600 620 630 770 780
810 860 940 950 1090 1160 1170
1230 1260 1280 1290 1340 1390 1430
1470 1490
11:00-12:00 U.S. Army Band Concert (C)
560 570 580 600 610 620 630
780 860 900 920 930 940 950
1160 1170 1230 1240 1260 1280 1290
1340 1390 1430 1470 1490

12:00-12:30 Adventures of Helen and Mary (C)
550 560 570 580 600 610 630
780 860 900 920 930 940 950
1160 1230 1280 1290 1320 1340 1390
1430 1470 1490

1:30-2:00 Keystone Chronicle (N)
590 610 620 650 700 770 780
820 830 870 900 920 980 1000
1140 1190 1220 1290 1320 1350 1460

2:00-2:30 Scotti Orchestra (C)
560 570 600 630 770 780 810
860 900 930 1170 1230 1240 1260
1280 1290 1300 1320 1340 1390 1410
1430 1470 1490

2:30-3:00 The Gauchos (C)
550 560 570 580 600 630 770
780 810 860 900 920 930 1160
1170 1230 1240 1260 1280 1290 1300
1320 1340 1390 1410 1430 1470 1490

4:00-4:30 The Aztecs (C)
560 570 600 610 630 770 780
810 860 920 930 940 950 1090
1170 1230 1240 1260 1280 1290 1320
1340 1390 1410 1430 1470 1490

4:30-5:00 Club Plaza Orchestra (C)
550 560 570 580 600 610 620
630 810 860 900 920 930 940
950 1090 1170 1230 1240 1260 1280
1290 1320 1340 1390 1410 1430 1470

4:30-5:00 Whyte's Orchestra (N)
560 590 610 660 800 950 1000

5:00-5:30 Women's Aviation Hour (C)
550 560 570 580 600 610 630
670 810 860 900 920 930 940
950 1090 1240 1280 1290 1340 1390
1410 1430 1470 1490

5:00-5:30 The Tea Timers (N)
660 780 920 950 1020 1070 1220

5:30-5:45 Quiet Harmonies (C)
550 560 570 580 600 610 630
670 810 860 900 920 930 940
950 1090 1240 1280 1290 1340 1390
1410 1430 1470 1490

5:30-6:00 Blue Aces (N)
760 780 820 870 1220

5:45-6:00 Dr. Thatcher Clark (C)
550 560 570 580 600 610 860
920 940 1280 1290 1340 1390 1410
1470 1490

6:00-6:30 Hotel Shelton Orchestra (C)
560 570 580 600 610 770 810
860 920 930 940 950 1160 1230
1260 1280 1300 1320 1340 1390 1410
1430 1470 1490

6:30-7:00 Ten Husing's Sportslants (C)
560 570 600 810 860 900 920
930 940 950 1230 1260 1280 1290
1300 1340 1390 1410 1430 1470 1490

7:00-7:15 Floyd Williams, tenor (N)
590 660 740 780 790 890 920
940 1320

7:15-7:30 The Jameses (N)
550 580 590 660 790 890 920

7:15-7:30 RCA Theremin Ether Wave Music(N)
650 680 740 760 770 780 820
830 900 920 1040 1080 1130 1140
1190 1220 1290 1300 1320 1350 1460

7:30-8:00 Phil Spitalny's Music (N)
660 680 690 780 790 890 920
940

7:30-8:00 The Fuller Man (N)
700 760 770 980 990 1020 1060
1150 1220 1350

8:00-8:15 Dr. Arthur Torrance (C)
550 560 570 580 600 610 620
630 780 810 860 900 920 930
950 1120 1160 1170 1230 1240 1260
1280 1290 1300 1320 1340 1390 1410
1430 1470 1490

8:00-8:15 Dixies Circus (N)
700 760 980 990 1020

8:00-8:30 The New Business World (N)
550 560 580 590 610 620 660
680 780 790 830 890 900 920
940 950 1000 1040 1080 1110 1130
1140 1190 1220 1320 1330 1430 1450

8:15-8:30 Babson Finance Period (C)
550 600 630 670 780 810 860
950 1090 1160 1170 1230 1240 1260
1290 1320 1340 1390 1470 1490

8:30-9:00 Dixie Echoes (C)
550 570 580 600 610 620 630
780 810 860 900 920 930 940
950 1090 1120 1230 1240 1260 1280
1290 1300 1340 1390 1410 1430 1470

8:30-9:00 Launderland Lyrics (N)
550 560 580 590 610 650 660
740 780 790 800 820 830 870
890 900 920 940 950 1000 1080
1110 1130 1140 1190 1220 1230 1290
1300 1320 1330 1460

9:00-9:15 Broadway Lights (N)
750 760 980 1220 1350

9:00-9:30 Nit Wit Hour (C)
550 560 570 580 600 610 620
630 670 780 810 860 900 930
940 950 1090 1120 1160 1170 1230
1240 1260 1280 1290 1300 1320 1340
1390 1410 1430 1470 1490

9:00-10:00 General Electric Hour (N)
550 560 580 590 610 620 640
660 740 780 790 800 920 830
890 900 920 940 950 1000 1070
1080 1110 1130 1140 1190 1220 1290
1320 1330 1460

9:30-10:00 Around the Samovar (C)
550 560 570 580 600 620 630
670 780 810 860 900 930 940
950 1090 1120 1160 1170 1230 1240
1260 1280 1290 1300 1320 1340 1390
1410 1430 1470 1490

9:30-10:00 Dutch Masters Minstrels (N)
700 750 760 980 990 1020 1060
1150 1220 1350

10:00-10:30 Ship of Memory (N)
690 760 980 1220 1350 1480

10:00-11:00 Paramount-Publix Hour (C)
550 560 570 580 600 610 620
630 770 780 810 860 900 930
940 950 960 1040 1050 1090 1120
1160 1170 1230 1240 1250 1260 1280
1290 1300 1320 1330 1340 1390 1410
1430 1440 1470 1490

10:00-11:00 Lucky Strike Orchestra (N)
550 560 580 590 610 620 640
660 720 740 780 790 800 820
830 890 900 920 940 950 1000
1080 1130 1140 1190 1220 1270 1290
1300 1320 1330 1450 1460

10:30-11:00 The Miniature Theatre (N)
690 750 760 980 1150 1220 1350

11:00-11:15 Troubadour of the Moon (N)
550 560 590 660 780 1000 1220
1270 1300 1320 1450

11:00-11:30 Guy Lombardo's Orchestra (C)
550 560 570 580 600 620 630
780 860 930 940 950 1120 1160
1170 1240 1260 1280 1290 1340 1390
1410 1430 1470 1490

11:15-12:00 Smith Ballew Orchestra (N)
550 560 590 610 660 780 900
920 1270 1300 1320 1450 1480

11:30-12:00 Hotel Paramount Orchestra (C)
550 560 570 580 600 630 860
930 940 950 1120 1160 1170 1240
1260 1280 1290 1340 1390 1410 1430
1470 1490

12:00-1:00 Rudy Vallee and His Orchestra (N)
550 590 660 780 900 950 1000
1070 1460

Atlanta, Ga.	Baltimore, Md.	Boise, Idaho	Boston, Mass.	Brownsville, Tex.	Buffalo, N. Y.	Chicago, Ill.	Cincinnati, Ohio	Cleveland, Ohio	Denver, Colo.	Des Moines, Iowa	Detroit, Mich.	El Paso, Tex.	Fargo, N. Dak.	Fort Worth, Tex.	Galveston, Tex.	Hastings, Nebr.	Hot Springs, Ark.	Houghton, Mich.	Jacksonville, Fla.	Kansas City, Mo.	Los Angeles, Calif.	Louisville, Ky.	Memphis, Tenn.	Miami, Fla.	Minneapolis, Minn.
1273	1670	774	1967	838	1577	1126	1248	1417	832	833	1360	228	968	561	803	588	773	1252	1492	717	663	1174	938	1710	980
-	575	1830	933	960	695	583	368	550	1208	738	595	1293	1112	750	688	901	498	947	286	675	1935	317	335	610	905
	-	2055	358	1525	273	603	423	305	1505	913	398	1750	1143	1239	1245	1154	964	808	682	962	2313	498	792	958	948
		-	2266	1610	1872	1453	1663	1754	637	1155	1671	969	975	1263	1538	934	1384	1367	2098	1158	663	1623	1506	2368	1140
			-	1881	398	849	737	550	1766	1159	613	2067	1304	1574	1598	1415	1303	922	1015	1250	2590	823	1133	1258	1125
				-	1575	1234	1184	1402	1047	1102	1398	688	1445	471	287	1013	650	1543	1025	923	1370	1093	777	1100	1335
					-	454	392	175	1369	762	218	1690	923	1221	1289	1019	956	560	880	862	2195	483	802	1184	733
						-	249	307	918	310	236	1249	571	820	954	566	585	367	861	413	1741	268	481	1190	356
							-	218	1090	509	234	1333	818	839	897	742	569	589	628	541	1842	92	410	957	603
								-	1223	617	94	1521	838	1046	1116	871	787	518	768	700	2044	309	627	1088	632
									-	607	1153	554	642	643	925	353	749	970	1468	555	828	1035	878	1732	699
										-	545	980	397	640	851	256	488	458	1024	180	1433	477	485	1338	235
											-	1475	745	1018	1111	800	761	427	832	643	1976	315	621	1156	542
												-	1161	543	723	757	802	1422	1481	836	702	1253	978	1662	1156
													-	973	1218	440	875	393	1400	548	1426	818	882	1721	219
														-	283	544	273	1093	943	460	1218	751	448	1150	870
															-	808	375	1277	799	677	1423	807	492	941	1087
																-	513	666	1178	226	1177	693	591	1468	399
																	-	901	728	326	1437	480	176	983	722
																		-	1216	633	1787	636	830	1545	272
																			-	952	2153	595	591	328	1192
																				-	1352	480	370	1247	413
																					-	1825	1602	2355	1522
																						-	319	923	605
																							-	978	700
																								-	1516

How To Use Your RADEX

ALL stations in America are listed in RADEX in three tables:

1st by Frequencies.
2nd by Call Letters.
3rd by States and Cities.

The Index by Frequencies is the one to be used, the other two are merely supplementary.

Let us assume you have just bought your first RADEX. Proceed as follows:

Tune in some station—any station that comes in. Tune it sharply, turning down your rheostats (volume control) until we find the marks on your dials at which it comes in most clearly and with greatest volume.

INDEX BY FREQUENCIES AND DIAL NUMBERS

590 kilocycles 508.2 meters — 76 | 74

KHQ	1000	Spokane, Wash.
WCAJ	500	Lincoln, Nebr.
WEEI	500	Boston, Mass.
WOW	1000	Omaha, Nebr.
WEMC	1000	Berrien Springs, Mich.

Louis Wasmer, Inc.
Nebraska Wesleyan University
Edison Elec. Illuminating Co.
Woodmen of the World
Emmanuel Missionary College

600 kilocycles 499.7 meters — 75 | 73

CFCH	250	Iroquois Falls, Ont.
KFBU	500	Laramie, Wyo.
KFSD	500	San Diego, Calif.
WCAO	250	Baltimore, Md.
WEBW	250	Beloit, Wis.
WOAN	500	Lawrenceburg, Tenn.
WREC	500	Memphis, Tenn.
WTIC	250	Hartford, Conn.

Abitibi Power & Paper Co.
Bishop N. S. Thomas
Airfan Radio Corp.
Monumental Radio Co., Inc.
Beloit College
Vaughan School of Music
WREC, Inc.
Travelers Insurance Co.

610 kilocycles 491.5 meters — 74 | 72

KFRC	1000	San Francisco, Calif.
WDAF	1000	Kansas City, Mo.
WFAN	500	Philadelphia, Pa.
WIP	500	Philadelphia, Pa.
WOQ	1000	Kansas City, Mo.

Don Lee, Inc.
Kansas City Star Co.
Keystone Broadcasting Co., Inc.
Globe1 Broa., Inc.
Unity School of Christianity

620 kilocycles 483.6 meters — 73 | 71

KFAD	500	Phoenix, Ariz.
KGW	1000	Portland, Ore.
WDAE	1000	Tampa, Fla.
WDBD	1000	Orlando, Fla.
WLBZ	500	Dover-Foxcroft, Me.
WTMJ	1000	Milwaukee, Wis.

Electrical Equipment Co.
Oregonian Publishing Co.
Tampa Publishing Co.
Rollins College, Inc.
Thompson L. Guernsey
Milwaukee Journal

630 kilocycles 475.9 meters — 72 | 70

CFCT	500	Victoria, B. C.
CJCX	500	Yorkton, Sask.
CNRA	500	Moncton, N. B.
CYR	250	Macaulan, Man.
KFRU	500	Columbia, Mo.
WGBF	500	Evansville, Ind.
WMAL	250	Washington, D. C.
WOS	500	Jefferson City, Mo.

Victoria Broadcasting Ass'n.
Winnipeg Grain Exchange
Canadian National Railways
Castulo Llamas
Stephens College
Evansville on the Air, Inc.
M. A. Leese Co.
State Marketing Bureau

640 kilocycles 468.5 meters — | |

KFI	5000	Los Angeles, Calif.
WAIU	5000	Columbus, Ohio

Earle C. Anthony, Inc.
American Insurance Union

650 kilocycles 461.3 meters — 70 | 68

WSM	5000	Nashville, Tenn.

National Life & Accident Ins. Co.

660 kilocycles 454.3 meters — 69 | 67

WAAW	500	Omaha, Nebr.
WEAF	50000	New York City

Omaha Grain Exchange
National Broadcasting Co., Inc.

670 kilocycles 447.5 meters — 68 | 66

WMAQ	5000	Chicago, Ill.

Chicago Daily News, Inc.

680 kilocycles 440.9 meters — 67 | 65

KPO	5000	San Francisco, Cal.
WPTF	5000	Raleigh, N. C.

Hale Bros. & The Chronicle
Durham Life Insurance Co.

Let us assume that the station we are hearing is WEAF in New York. First we must ascertain the frequency for this station. Look it up under WEAF in the Index by Call Letters or under New York in the Index by States and Cities. In either of these indexes we find that the frequency of WEAF is 660. Now we turn to 660 kilocycles in the Index by Frequencies and Dial Numbers. Here we find that WEAF is one of the two stations which have been assigned the 660 kcys. frequency by the Federal Radio Commission. We also find that it has a power of 50,000 watts, that it is located in New York City and is owned by the National Broadcasting Co., Inc.

In the blanks for dial numbers opposite 660 kilocycles (which is the wave length of 454.3 meters) enter the dial readings of your set. It is immaterial whether your set has one, two or three dials. Use as many of three spaces provided as you need. The set used in the illustration had two dials. In this case we entered the dial readings for 660 kilocycles as 69-67.

Let us now tune in some other station. We repeat the same procedure in tuning and find that we are hearing, let us say, WOS at Jefferson City. Proceed as before in ascertaining the frequency of WOS. This we find to be 630 kcys. We turn to 630 in the Index by Frequencies and enter our dial readings for this band which on the set we are using was 72-70.

We now have found that the dial numbers for 630 kcys. are 72-70 and the dial numbers for 660 kcys. are 69-67. If we now will set our dials for 70-68 it is obvious we will have our set tuned for 650 kcys. We listen carefully and if they are on the air and within range of our set we will tune in WSM of Nashville at this point. We then enter the dial readings for WSM opposite 650 kcys. Now it is clear that if we reset our dials at 71-69 our set will be tuned to 640 kcys. and at that point KFI of Los Angeles will be heard, always assuming of course that it is on the air and within range of our particular set.

Now we tune in some other station, proceeding

N STATUTE MILES

New Orleans, La.	New York, N. Y.	Norfolk, Va.	Oklahoma, Okla.	Omaha, Nebr.	Philadelphia, Pa.	Phoenix, Ariz.	Pittsburgh, Pa.	Portland, Me.	Portland, Oreg.	Richmond, Va.	St. Louis, Mo.	Salt Lake City, Utah	San Francisco, Calif.	Schenectady, N. Y.	Seattle, Wash.	Shreveport, La.	Spokane, Wash.	Springfield, Mass.	Vermillion, S. Dak.	Washington, D.C.	
17 1030	1810	1696	518	718	1748	330	1498	2015	1107	1628	938	483	893	1823	1178	764	1028	1889	742	1648	Albuquerque, N. Mex.
18 427	747	507	759	815	663	1592	520	1022	2172	470	467	1580	2133	840	2180	548	1960	863	917	542	Atlanta, Ga.
97 1001	170	167	1173	1026	90	2002	194	446	2367	128	731	1858	2451	278	2341	1064	2110	282	1083	33	Baltimore, Md.
31 1713	2153	2137	1138	1044	2113	733	1863	2282	349	2060	1389	292	516	2120	405	1433	290	2196	973	2045	Boise, Idaho
61 1359	188	467	1490	1280	268	2295	478	100	2553	471	1036	2099	2696	150	2508	1410	2279	79	1314	392	Boston, Mass.
52 536	1695	1465	659	1061	1614	1023	1424	1961	1944	1428	975	1317	1675	1770	2015	510	1853	1805	1161	1493	Brownsville, Tex.
26 1087	291	435	1117	883	278	1904	178	438	2167	375	662	1701	2298	249	2130	1080	1900	325	916	290	Buffalo, N. Y.
34 831	711	696	689	432	664	1451	411	892	1765	618	259	1260	1855	702	1743	725	1514	774	479	594	Chicago, Ill.
39 708	568	474	755	620	501	1578	258	802	1987	399	308	1450	2037	605	1974	688	1746	859	694	403	Cincinnati, Ohio
56 922	404	429	946	738	343	1745	115	603	2063	353	490	1567	2163	408	2035	904	1804	478	785	303	Cleveland, Ohio
18 1079	1628	1562	503	485	1575	585	1320	1803	985	1488	793	372	946	1618	1020	799	827	1692	468	1490	Denver, Colo.
23 825	1023	983	469	122	972	1154	718	1197	1479	905	270	952	1547	1012	1470	624	1243	1085	187	895	Des Moines, Iowa
38 938	483	522	905	666	444	1685	208	657	1975	445	452	1490	2087	467	1945	891	1715	540	705	397	Detroit, Mich.
49 986	1902	1755	578	875	1834	347	1592	2126	1286	1695	1033	689	993	1930	1373	752	1238	1990	920	1726	El Paso, Tex.
00 1221	1813	1258	786	390	1186	1225	952	1313	1248	1180	658	865	1447	1157	1206	1002	976	1240	284	1141	Fargo, N. Dak.
13 470	1398	1226	188	590	1324	858	1097	1642	1612	1170	568	977	1454	1445	1658	209	1470	1495	689	1210	Fort Worth, Tex.
66 288	1415	1195	456	828	1335	1065	1140	1678	1885	1154	697	1249	1693	1487	1938	233	1753	1524	938	1214	Galveston, Tex.
97 870	1275	1216	357	135	1222	901	967	1454	1271	1142	455	708	1297	1267	1288	615	1061	1340	167	1139	Hastings, Nebr.
70 358	1125	955	260	490	1051	1094	825	1371	1733	897	325	1116	1648	1175	1759	142	1552	1324	605	936	Hot Springs, Ark.
60 1187	849	946	926	547	827	1550	630	924	1638	870	591	1242	1833	776	1588	1043	1360	860	510	819	Houghton, Mich.
02 511	838	548	988	1098	758	1800	703	1113	2442	953	755	1840	2375	960	2450	733	2239	957	1203	647	Jacksonville, Fla.
72 678	1097	1009	293	165	1037	1045	784	1300	1397	937	238	922	1500	1107	1505	326	1286	1173	280	943	Kansas City, Mo.
77 1675	2446	2352	1182	1312	2388	357	2135	2631	825	2283	1585	577	345	2445	956	1420	939	2515	1291	2295	Los Angeles, Calif.
53 823	650	528	675	579	580	1518	345	892	1953	457	242	1400	1983	695	1945	598	1720	745	663	473	Louisville, Ky.
95 358	953	778	422	529	878	1264	660	1205	1852	722	242	1250	1800	1010	1867	279	1652	1055	648	763	Memphis, Tenn.
21 681	1095	802	1233	1402	1023	1998	1014	1357	2716	831	1067	2098	2603	1229	2740	950	2528	1210	1510	927	Miami, Fla.
95 1050	1019	1047	692	291	985	1279	745	1145	1435	968	464	988	1585	975	1403	859	1173	1056	238	936	Minneapolis, Minn.
82 1733	2030	2045	1102	978	1997	932	1754	2133	430	1967	1331	435	762	1978	395	1457	170	2060	887	1940	Missoula, Mont.
470	758	586	602	604	683	1445	472	1015	1970	526	253	1390	1958	820	1973	470	1752	863	704	567	Nashville, Tenn.
1173	932	575	845	1090		1318	923	1445	2063	899	599	1433	1923	1259	2098	280	1898	1287	960	968	New Orleans, La.
293	1324	1144	83			2142	313	277	2455	287	873	1972	2568	142	2419	1230	2190	120	1189	204	New York, N. Y.
1186	1095	220				2027	316	565	2458	79	771	1925	2510	426	2440	1037	2211	411	1166	145	Norfolk, Va.
405	1256					843	1013	1550	1488	1122	456	862	1386	1354	1523	897	1324	1412	502	1150	Oklahoma, Okla.
1094						1032	837	1318	1373	1020	352	833	1425	1133	1372	617	1149	1205	115	1012	Omaha, Nebr.
2079	254	360	2419	205		808	1923	2518	805	2388	1153	2159	801	1143	122						Philadelphia, Pa.
1829	2345	1007	1960			1270	504	652	2152	1112	1067	1020	2220	1049	1980						Phoenix, Ariz.
545	2174	242				561	1670	2264	350	2145	939	1918	400	891	168						Pittsburgh, Pa.
2563	565					1094	2127	2725	197	2513	1484	2285	159	1345	480						Portland, Me.
2381						1723	636	536	2405	143	1783	295	2488	1293	2360						Portland, Oreg.
699	1850	2436	406	2362		985	2133	407	1099	96											Richmond, Va.
1158	1738	898	1722			466	1500	958	450	710											St. Louis, Mo.
592	1950	697				1155	548	2027	785	1845											Salt Lake City, Utah
2548	680					1655	730	2625	1583	2437											San Francisco, Calif.
2363						1290	2139	86	1165	513											Schenectady, N. Y.
1820	229	2445	1282	2335																	Seattle, Wash.
1621	1333	726	1055																		Shreveport, La.
2216	1055	2105																			Spokane, Wash.
1242	321																				Springfield, Mass.
1073																					Vermillion, S. Dak.

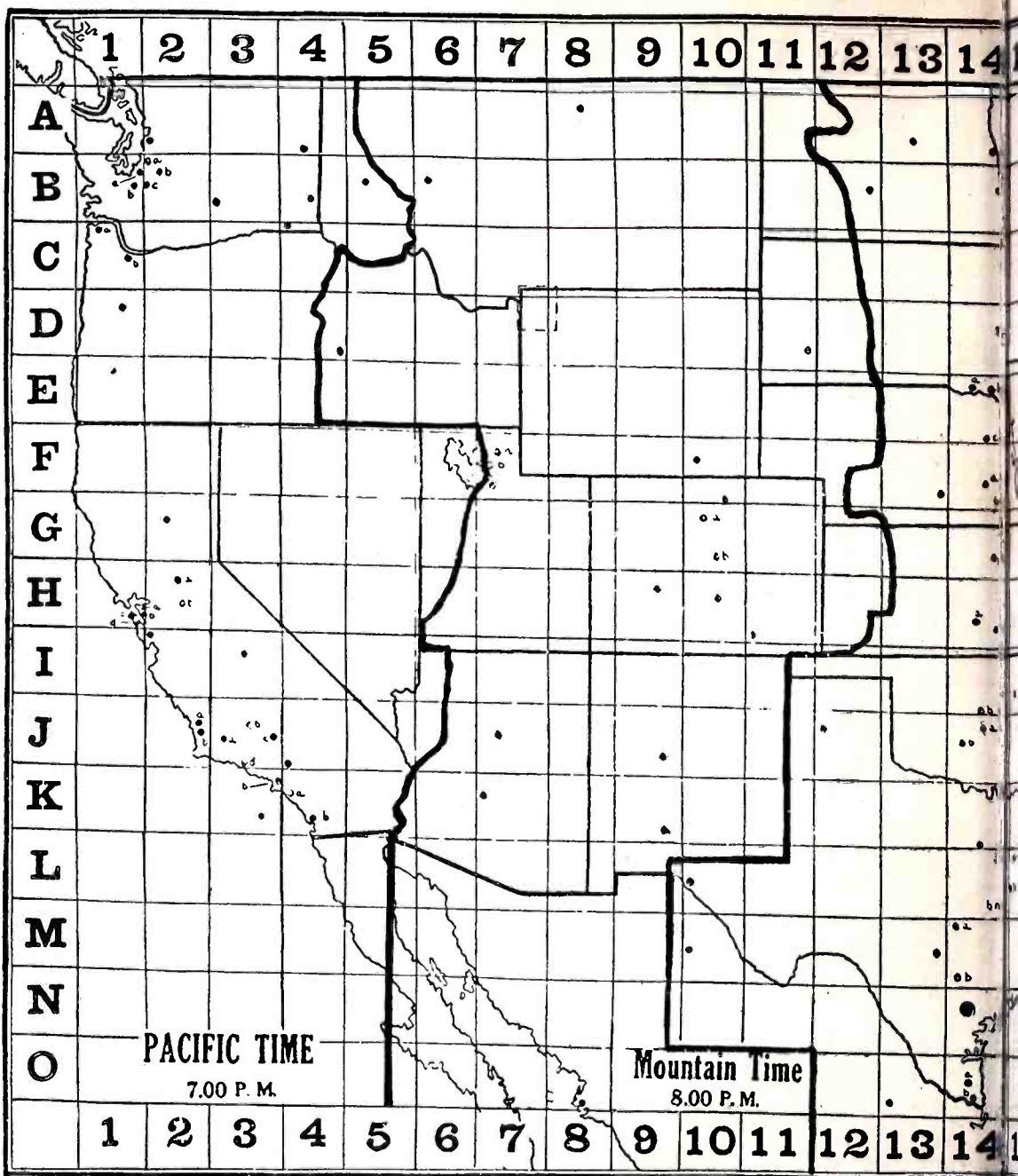
before un-
after an eve-
or two, we have
ks filled on every
e. We are now able to
our dials for any frequency
desire and consequently any
ion we may want whether we have
received it before or not.

ur index now becomes of great value to us
dentifying programs. Let us say that we hear
ic at 67-65 on our dials. We refer to our
x by Frequencies and Dial Numbers and we
that we are in tune to 680 kilocycles. On this
e there are two stations: KPO at San Fran-
o and WPTF at Raleigh, N. C. Both of these
ions have 5000 watts in power. But knowing
h is the closer to our set, we can tell almost
riably which station we are hearing. The
io Commission has had to give the same fre-
ncy in most cases to several stations but they
distributed them geographically so they
ld not interfere. When two stations in the
e locality have the same frequency, they are
ired to divide time. In this case of course it
ot possible to tell which one of the two sta-
s is broadcasting at the particular moment
ear it but we do know it is one or the other of
n.

he second column in the index by Frequencies,
e have seen, gives the power of the station as
sured in watts. This power also aids us in identifying stations as we will not ordinarily hear those stations with 500 watts or less unless they are close to our home city.

The Index by Call Letters also has spaces providing for logging dial numbers but these are provided merely for the convenience of those who want to be able to turn instantly to some favorite station. They may or may not be used as you desire. Remember that it is the Index by Frequencies that we must use to get the most value and pleasure out of our radios.

The Index by Frequencies is now printed with marginal tabs. If you will fill in under the word "dial" your reading for this particular frequency, you can then turn instantly to any frequency desired. Take a pair of shears and cut along the dotted line, as shown.



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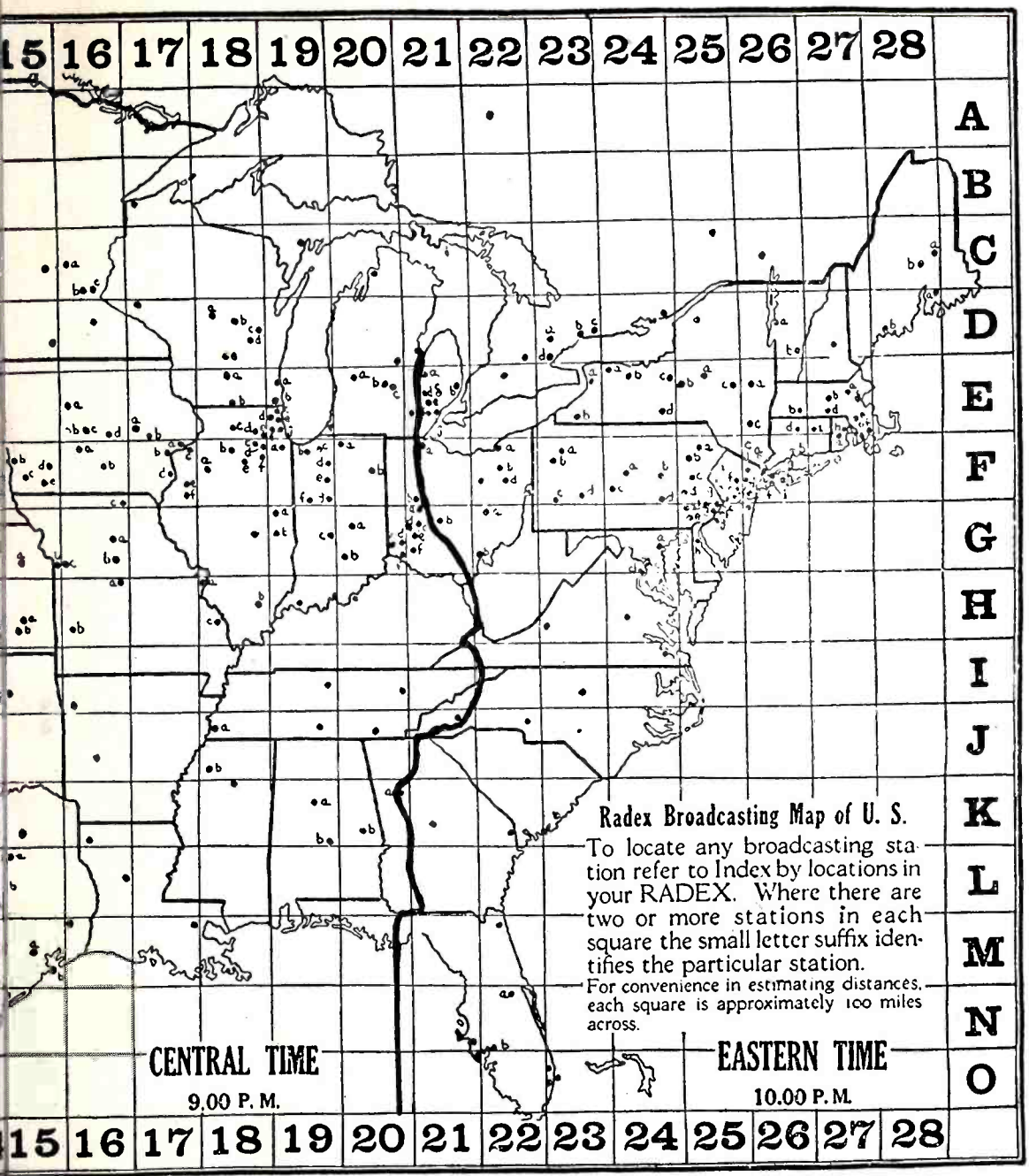
Write Name Plainly _____

Street and No. _____

City and State _____



Radio is in a constant process of change. New developments and changes in stations, are taking place monthly. If you are one of those who like to be intelligent in your interests, you cannot afford to miss a single copy of this magazine.

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INDEX BY FREQUENCIES AND DIAL NUMBERS

KEY

Frequency in kilocycles. Wave lengths in meters. Second column shows power in watts. Third column symbols: D, daytime only. S, Sunday only. Stations dividing time have same small figures. X means station has been granted permit to increase power. + means station has greater power during day. CP indicates station has construction permit only. Some Cuban and Mexican stations have odd frequencies. Correct kilocycles shown in small figures. N means NBC chain. C means Columbia chain.

540 kilocycles 555.6 meters

CKX	500	---	Brandon, Manitoba	Manitoba Telephone System
XFA	50	---	Mexico City	Sria. de Agricultura y Fomento

550 kilocycles 545.1 meters

KFDY	500	1+	Brookings, S. D.	S. D. State College
KFUO	500	2+	St. Louis, Mo.	Concordia Theological Seminary
KFYR	500	1	Bismarck, N. D.	Hoskins-Meyer
KOAC	1000	---	Corvallis, Ore.	State Agricultural College
KSD	500	2N	St. Louis, Mo.	Pulitzer Publishing Co.
WGR	1000	N	Buffalo, N. Y.	Radio Station WGR, Inc.
WKRC	500	XC	Cincinnati, Ohio	WKRC Incorporated
XEY	105	---	Merida, Yucatan	Partido Socialista del Sureste

560 kilocycles 535.4 meters

KFDM	500	X+	Beaumont, Texas	Magnolia Petroleum Co.
KLZ	1000	C	Denver, Colo.	Reynolds Radio Co., Inc.
KTAB	1000	---	Oakland, Cal.	Associated Broadcasters
WEBW	500	3D	Beloit, Wis.	Beloit College
WFI	500	1N	Philadelphia, Pa.	Strawbridge & Clothier
WIBO	1000	3+N	Chicago, Ill.	Nelson Bros. Bond & Mortgage Co.
WLIT	500	1N	Philadelphia, Pa.	Lit Brothers
WNOX	1000	X+	Knoxville, Tenn.	Sterchi Bros.
WPCC	500	3S	Chicago, Ill.	North Shore Congregational Church
WQAM	1000	---	Miami, Fla.	Miami Broadcasting Co.

570 kilocycles 526.0 meters

KGKO	250	+	Wichita Falls, Texas	Wichita Falls Broadcasting Co.
KMTR	500	---	Hollywood, Cal.	KMTR Radio Corp.
KXA	500	---	Seattle, Wash.	American Radio Tel. Co.
WEAO	750	1	Columbus, Ohio	Ohio State University
WKBN	500	1C	Youngstown, Ohio	W. P. Williamson, Jr.
WMAC	250	2	Cazenovia, N. Y.	Clive B. Meredith
WMCA	500	3	New York City	Knickerbocker Broadcasting Co., Inc.
WNAX	1000	---	Yankton, S. D.	Gurney Seed & Nursery Co.
WNYC	500	3	New York City	Dept. of Plants and Structures
WSYR	250	2	Syracuse, N. Y.	Clive B. Meredith
WWNC	1000	C	Asheville, N. C.	Citizens Broadcasting Co., Inc.

580 kilocycles 516.9 meters

CFCL	500	3S	Toronto, Ont.	Dominion Battery Co.
CHMA	250	4	Edmonton, Alta.	Christian and Missionary Alliance
CJBC	500	3S	Toronto, Ont.	Jarvis Street Baptist Church
CJCA	500	4	Edmonton, Alta.	The Edmonton Journal, Ltd.
CJSC	500	4	Toronto, Ont.	The Evening Telegram
CKCL	500	3	Toronto, Ont.	The Dominion Battery Co.
CKNC	500	3	Toronto, Ont.	Canadian National Carbon Co., Ltd.
CKUA	500	4	Edmonton, Alta.	University of Alberta
CNRE	500	4	Edmonton, Alta.	Canadian National Railways
KGFX	200	D	Pierre, S. D.	Dana McNeil
KSAC	500	2+	Manhattan, Kans.	State Agricultural College
WIBW	500	2+C	Topeka, Kansas	Topeka Broadcasting Assn., Inc.
WOBU	250	1	Charleston, W. Va.	Charleston Radio Broadcasting Co.
WSAZ	250	1	Huntington, W. Va.	WSAZ, Inc.
WTAG	250	N	Worcester, Mass.	Telegram Publishing Co.

590 kilocycles 508.2 meters

KHQ	1000	X+N	Spokane, Wash.	Louis Wasmer, Inc.
WCAJ	500	1	Lincoln, Nebr.	Nebraska Wesleyan University
WEEI	1000	N	Boston, Mass.	Edison Elec. Illuminating Co.
WEMC	1000	D	Berrien Springs, Mich.	Emmanuel Missionary College
WOW	1000	1N	Omaha, Nebr.	Woodmen of the World
XFI	1000	---	Mexico City	Sria. de Industria, Commercio y Trabajo
------	500	CP	Lynchburg, Va.	Abe Cohen

600 kilocycles 499.7 meters

CFCH	250	3	Iroquois Falls, Ont.	Abitibi Power & Paper Co.
CJRM	500	4	Moose Jaw, Sask.	Jas. Richardson & Sons, Ltd.
CJRW	500	4	Fleming, Sask.	Jas. Richardson & Sons, Ltd.
CMW	1000	---	Havana, Cuba	Columbus Commercial & Radio Co.
CNRO	500	3	Ottawa, Ont.	Canadian National Railways
KFSD	500	+	San Diego, Cal.	Airfan Radio Corp.
WCAC	250	2+	Storrs, Conn.	Conn. Agricultural College
WCAO	250	C	Baltimore, Md.	Monumental Radio, Inc.
WGBS	350	2+	New York City	General Broadcasting System, Inc.
WMT	500	X	Waterloo, Iowa	Waterloo Broadcasting Co.
WOAN	500	1	Lawrenceburg, Tenn.	WREC, Inc.
WREC	500	1+C	Memphis, Tenn.	WREC, Inc.

610 kilocycles 491.5 meters

CMBY	200	612	Havana, Cuba	Lino E. Cosculluala
KFRC	1000	C	San Francisco, Cal.	Don Lee, Inc.
WDAF	1000	N	Kansas City, Mo.	Kansas City Star Co.
WFAN	500	2C	Philadelphia, Pa.	Keystone Broadcasting Co., Inc.
WIP	500	2	Philadelphia, Pa.	Gimbel Bros. Co.
WJAY	500	D	Cleveland, Ohio	Cleveland Radio Broadcasting Corp.

620 kilocycles 483.6 meters

KGW	1000	X+N	Portland, Ore.	Oregonian Publishing Co.
KTAR	500	+	Phoenix, Arizona	KAR Broadcasting Co.
WFLA	1000	1+	Clearwater, Fla.	Chamber of Commerce
WLBZ	500	---	Bangor, Maine	Maine Broadcasting Co., Inc.
WSUN	1000	1+	St. Petersburg, Fla.	Chamber of Commerce
WTMJ	1000	+N	Milwaukee, Wis.	Milwaukee Journal

630 kilocycles 475.9 meters

CFCT	500	---	Victoria, B. C.	Victoria Broadcasting Association
CJGX	500	---	Yorkton, Sask.	Winnipeg Grain Exchange
CNRA	500	---	Moncton, N. B.	Canadian National Railways
KFRU	500	1	Columbia, Mo.	Stephens College
WGBF	500	1	Evansville, Ind.	Evansville On the Air, Inc.
WMAL	250	+C	Washington, D. C.	M. A. Leese
WOS	500	1+	Jefferson City, Mo.	State Marketing Bureau
XFC	350	---	Jalapa, Ver.	Goberno Estado de Veracruz

640 kilocycles 468.5 meters

CMCF	250	643	Havana, Cuba	Raul Karmen
KFI	5000	N	Los Angeles, Cal.	Earle C. Anthony, Inc.
WAIU	500	C	Columbus, Ohio	American Insurance Union
WOI	5000	D	Ames, Iowa	State College of Agriculture
XFG	2000	---	Mexico City	Sria, de Guerra y Marina

650 kilocycles 461.3 meters

WSM	5000	N	Nashville, Tenn.	National Life & Accident Ins. Co.

660 kilocycles 454.3 meters

WAAW	500	D	Omaha, Neb.	Omaha Grain Exchange
WEAF	50000	N	New York City	National Broadcasting Co., Inc.

670 kilocycles 447.5 meters

WMAQ	5000	C	Chicago, Ill.	Chicago Daily News, Inc.
XEB	1000	---	Mexico City	E. Buen Tono, S. A.

KCYS.
670
MTRS.
447.5
DIAL

CUT OUT ON DOTTED LINES

680 kilocycles — 440.9 meters

KFEQ	2500	D	St. Joseph, Mo.	Scroggin & Co. Bank
KPO	5000	N	San Francisco, Cal.	Hale Bros. & The Chronicle
WPTF	1000	N	Raleigh, N. C.	Durham Life Insurance Co.
------	250	CP	Gueda Springs, Kans.	R. E. Campbell and F. L. Stallard

690 kilocycles — 434.5 meters

CFAC	500	1	Calgary, Alta.	The Calgary Herald
CFCN	500	1	Calgary, Alta.	Western Broadcasting Co.
CHCA	500	1	Calgary, Alta.	The Western Farmer
CJBC	5000	2S	Toronto, Ont.	Jarvis Street Baptist Church
CJCJ	500	1	Calgary, Alta.	Albertan Publishing Co., Ltd.
CKGW	5000	2N	Toronto, Ont.	Gooderham & Worts, Ltd.
CNRC	500	1	Calgary, Alta.	Canadian National Railways
CNRX	5000	2	Toronto, Ont.	Canadian National Railways
NAA	1000	---	Arlington, Va.	U. S. Navy
VAS	500	---	Louisburg, N. S.	Department of Fisheries

700 kilocycles — 428.3 meters

WLW	50000	N	Cincinnati, Ohio	Crosley Radio Corp.

710 kilocycles — 422.3 meters

KEJK	500	---	Los Angeles, Cal.	R. S. MacMillan
WOR	5000	---	Newark, N. J.	Bamberger Broadcasting Service, Inc.

720 kilocycles — 416.4 meters

WGN	25000	N	Chicago, Ill.	Chicago Tribune

730 kilocycles — 410.7 meters

CHLS	50	1	Vancouver, B. C.	W. G. Hassell
CHYC	5000	2	Montreal, Que.	Northern Electric Co., Ltd.
CKAC	5000	2C	Montreal, Que.	La Presse Publishing Co., Ltd.
CKCD	50	1	Vancouver, B. C.	Vancouver Daily Province
CKFC	50	1	Vancouver, B. C.	United Church of Canada
CKMO	50	1	Vancouver, B. C.	Sprott-Shaw Radio Co.
CKWX	100	1	Vancouver. B. C.	A. Holstead & Wm. Hanlon
CMK	2000	---	Havana, Cuba	Cuban Broadcasting Co., Hotel Plaza
CNRM	5000	2	Montreal, Que.	Canadian National Railways
XEN	1000	---	Mexico City	General Electric, S. A.

740 kilocycles — 405.2 meters

KMMJ	1000	---	Clay Center, Neb.	The M. M. Johnson Co.
WSB	5000	N	Atlanta, Ga.	Atlanta Journal Co.

750 kilocycles — 399.8 meters

TIX	50	---	San Jose, Costa Rica	
WJR	5000	N	Detroit, Mich.	WJR, The Goodwill Station, Inc.

760 kilocycles — 394.5 meters

KVI	1000	C	Tacoma, Wash.	Puget Sound Broadcasting Co., Inc.
WEW	1000	D	St. Louis, Mo.	St. Louis University
WJZ	30000	N	New York City	Radio Corp. of America, Inc.

770 kilocycles — 389.4 meters

KFAB	5000	IN	Lincoln, Nebr.	Nebraska Buick Automobile Co.
WBBM	25000	1C	Chicago, Ill.	The Atlass Co., Inc.
WJBT	25000	1S	Chicago, Ill.	The Atlass Co., Inc.

780 kilocycles — 384.4 meters

CKY	5000	3	Winnipeg, Manitoba	Manitoba Telephone System
CNRW	5000	3	Winnipeg, Manitoba	Canadian National Railways
KELW	500	2	Burbank, Cal.	Earl L. White
KTM	500	2+	Los Angeles, Cal.	Pickwick Broadcasting Corp.
WEAN	250	+C	Providence, R. I.	The Shepard Co.
WMC	500	+N	Memphis, Tenn.	Memphis Commercial-Appeal
WPOR	500	1	Norfolk, Va.	WTAR Radio Corp.
WTAR	500	1C	Norfolk, Va.	WTAR Radio Corp.

790 kilocycles — 379.5 meters

CMHC	500	791	Tuinucu, Cuba	Frank H. Jones
KGO	7500	N	Oakland, Cal.	General Electric Co.
WGY	50000	N	Schenectady, N. Y.	General Electric Co.

800 kilocycles — 374.8 meters

WBAP	50000	1N	Fort Worth, Texas	Carter Publications, Inc.
WFAA	5000	1XN	Dallas, Texas	News & Journal

810 kilocycles — 370.2 meters

WCCO	7500	C	Minneapolis, Minn.	Northwestern Broadcasting, Inc.
WPCH	500	D	New York City	Eastern Broadcasters, Inc.

820 kilocycles — 365.6 meters

CMI	500	815	Havana, Cuba	Instituto Provincial
WHAS	10000	N	Louisville, Ky.	Courier-Journal & Times

830 kilocycles — 361.2 meters

CMGA	300	834	Colon, Cuba	Leopoldo V. Figueros
KOA	12500	N	Denver, Colo.	General Electric Co.
WHDH	1000	D	Gloucester, Mass.	Matheson Radio Co., Inc.
WRUF	5000	---	Gainesville, Fla.	University of Florida

840 kilocycles — 356.9 meters

CFCA	500	1	Toronto, Ont.	Star Publishing & Ptg. Co.
CHCT	1000	2	Red Deer, Alta.	G. F. Tull & Ardern, Ltd.
CJBC	1000	1S	Toronto, Ont.	Jarvis Street Baptist Church
CKLC	1000	2	Red Deer, Alta.	Alberta Pacific Grain Co., Ltd.
CKOW	500	1	Toronto, Ont.	Nestle's Food Co.
CMC	500	---	Havana, Cuba	Cuban Telephone Co.
CNRD	1000	2	Red Deer, Alta.	Canadian National Railways
CNRT	500	1	Toronto, Ont.	Canadian National Railways
WOOP	100	---	Jeannette, Pa.	Oakford-Olympia Park Corp.

850 kilocycles — 352.7 meters

KWKH	10000	1	Shreveport, La.	W. K. Henderson
NBA	750	846	Balboa, Canal Zone	
WWL	5000	1	New Orleans, La.	Loyola University

860 kilocycles — 348.6 meters

KFQZ	250	---	Los Angeles, Cal.	Taft Radio & Broadcasting Co., Inc.
KMO	500	+	Tacoma, Wash.	KMO, Inc.
WABC	5000	1XC	New York City	Atlantic Broadcasting Corp.
WBOQ	5000	1X	New York City	Atlantic Broadcasting Corp.
WHB	500	D	Kansas City, Mo.	WHB Broadcasting Co.

870 kilocycles — 344.6 meters

WENR	50000	1N	Chicago, Ill.	Great Lakes Broadcasting Co.
WLS	5000	1XN	Chicago, Ill.	Agricultural Broadcasting Co.

880 kilocycles — 340.7 meters

CHCS	10	4	Hamilton, Ont.	The Hamilton Spectator
CHML	50	4	Hamilton, Ont.	Maple Leaf Radio Co., Ltd.
CHRC	100	3	Quebec, Que.	E. Fontaine
CJCB	50	---	Sydney, N. S.	N. Nathanson
CKCI	22.5	3	Quebec, Que.	Le "Soleil," Ltd.
CKCV	50	3	Quebec, Que.	G. A. Vandry
CKOC	50	4	Hamilton, Ont.	Wentworth Radio & Auto Sply. Co., Ltd.
CNRQ	50	3	Quebec, Que.	Canadian National Railways
KFKA	500	2+	Greeley, Colo.	State Teachers College
KLX	500	---	Oakland, Cal.	Tribune Publishing Co.
KPOF	500	2	Denver, Colo	Pillar of Fire, Inc.
WCOC	500	+	Meridian, Miss.	Mississippi Broadcasting Co.
WGBI	250	1	Scranton, Pa.	Scranton Broadcasters, Inc.
WQAN	250	1	Scranton, Pa.	Scranton Times
WSUI	500	2	Iowa City, Iowa	University of Iowa

KCYS. 880 MTRS. 340.7 DIAL

CUT OUT ON DOTTED LINES

890 kilocycles — 336.9 meters

CFBO	50	---	St. John, N. B.	C. A. Munro, Ltd.
CKCO	100	---	Ottawa, Ont.	Dr. G. M. Geldert
CMBC	100	887	Havana, Cuba	D. Fernandez Cruz
KFNF	500	2+	Shenandoah, Iowa	Henry Field Seed Co.
KGJF	250	---	Little Rock, Ark.	Church of the Nazarene
KUSD	500	2+	Vermillion, S. D.	University of South Dakota
WGST	250	1	Atlanta, Ga.	Georgia School of Technology
WILL	250	2+	Urbana, Ill.	University of Illinois
WJAR	250	+N	Providence, R. I.	The Outlet Co.
WKAQ	500	---	San Juan, P. R.	Radio Corp. of Porto Rico
WMAZ	250	1+	Macon, Ga.	Junior Chamber of Commerce
WMMN	250	+	Fairmount, W. Va.	Holt-Rowe Novelty Co.

900 kilocycles — 333.1 meters

KGBU	500	---	Ketchikan, Alaska	Alaska Radio & Service Co.
KHJ	1000	C	Los Angeles, Cal.	Don Lee, Inc.
KSEI	250	---	Pocatello, Idaho	KSEI Broadcasting Association, Inc.
WJAX	1000	N	Jacksonville, Fla.	City of Jacksonville
WKY	1000	N	Oklahoma City	WKY Radiophone Co.
WLBL	2000	D	Stevens Pt., Wis.	Wisconsin Dept. of Markets
WMAK	750	C	Buffalo, N. Y.	WMAK Broadcasting System, Inc.

910 kilocycles — 329.6 meters

CFQC	500	1	Saskatoon, Sask.	The Electric Shop, Ltd.
CJGC	500	2	London, Ont.	Free Press Printing Co., Ltd.
CJHS	250	1	Saskatoon, Sask.	Radio Service, Ltd.
CNRL	500	2	London, Ont.	Canadian National Railways
CNRS	500	1	Saskatoon, Sask.	Canadian National Railways
XFX	1000	---	Mexico City	Sria. de Educacion Publica

920 kilocycles — 325.9 meters

CMHD	250	---	Caibarien, Cuba	Manuel A. Alverez
CMX	250	916	Havana, Cuba	Francisco Lavin
HHK	1000	---	Port au Prince, Haiti	Republic of Haiti
KFEL	500	1	Denver, Colo.	Eugene P. O'Fallon, Inc.
KFXF	500	1	Denver, Colo.	Colorado Radio Corp.
KOMO	15000	N	Seattle, Wash.	Fisher's Blend Station, Inc.
KPRC	1000	+N	Houston, Texas	Houston Printing Co.
WAAF	500	D	Chicago, Ill.	Drovers Journal Publishing Co.
WBSO	250	DX	Wellesley Hills, Mass.	Babson Statistical Organization, Inc.
WWJ	1000	N	Detroit, Mich.	The Detroit News
XEX	500	---	Mexico City	Excelsior, Cia Editorial, S. A.
XFF	250	---	Chihuahua, Chih.	Gobierno Estado de Chihuahua

930 kilocycles — 322.4 meters

CHNS	500	---	Halifax, N. S.	Halifax Herald, Ltd.
CKIC	50	---	Wolfville, N. S.	Acadia Academy
KFWI	500	1	San Francisco, Cal.	Radio Entertainments, Inc.
KFWM	500	1+	Richmond, Cal.	Educational Broadcasting Corp.
KGBZ	500	2+	York, Nebr.	Dr. George R. Miller
KMA	500	2+	Shenandoah, Iowa	May Seed & Nursery Co.
WBRC	500	+C	Birmingham, Ala.	Birmingham Broadcasting Co., Inc.
WDBJ	250	+C	Roanoke, Va.	Richardson-Wayland Elec. Corp.
WIBG	50	D	Elkins Park, Pa.	St. Pauls P. E. Church

940 kilocycles — 319.0 meters

KGU	1000	---	Honolulu, Hawaii	Marion A. Mulrony
KOIN	1000	C	Portland, Ore.	KOIN, Inc.
WCSH	1000	N	Portland, Maine	Congress Square Hotel Co.
WDAY	1000	---	Fargo, N. D.	WDAY, Inc.
WFIW	1000	C	Hopkinsville, Ky.	The Acme Mills, Inc.
WHA	750	D	Madison, Wis.	University of Wisconsin

950 kilocycles — 315.6 meters

CMCB	150	952	Havana, Cuba	Jose Fernandez Suviaur
KFWB	1000	---	Hollywood, Cal.	Warner Bros. Broadcasting Corp.
KGHL	500	---	Billings, Mont.	Northwestern Auto Supply Co., Inc.
KMBC	1000	C	Kansas City, Mo.	Midland Broadcasting Co., Inc.
WRC	500	N	Washington, D. C.	Radio Corp. of America

960 kilocycles 312.3 meters

CFCR	500	3	Regina, Sask.	Sydney I. Robinson
CFCY	250	1	Charlottetown, P. E. I.	The Island Radio Co.
CFRB	4000	2C	Toronto, Ont.	Rogers-Majestic Corp., Ltd.
CHCK	30	1	Charlottetown, P. E. I.	W. E. Burke
CHWC	500	3	Pilot Butte, Sask.	R. H. Williams & Sons, Ltd.
CJBC	5000	2	Toronto, Ont.	Jarvis St. Baptist Church
CJBR	500	3	Regina, Sask.	Cooperative Wheat Producers, Ltd.
CKCK	500	3	Regina, Sask.	Leader Publishing Co., Ltd.
CNRR	500	3	Regina, Sask.	Canadian National Railways
XEE	101	---	Pueblo, Pue.	Ramon Huerta G.

970 kilocycles 309.1 meters

KJR	5000	D	Seattle, Wash.	Northwest Broadcasting System, Inc.
XEH	1000	---	Monterey, N. L.	Ing. Constantino de Tarnava
WCFL	1500	N	Chicago, Ill.	Chicago Federation of Labor

980 kilocycles 305.9 meters

KDKA	50000	N	Pittsburgh, Pa.	Westinghouse Elec. & Mfg. Co.

990 kilocycles 302.8 meters

WBZ	15000	1N	Springfield, Mass.	Westinghouse Elec. & Mfg. Co.
WBZA	500	1N	Boston, Mass.	Westinghouse Elec. & Mfg. Co.

1000 kilocycles 299.8 meters

KFVD	250	---	Culver City, Cal.	Los Angeles Broadcasting Co.
WHO	5000	1N	Des Moines, Iowa	Central Broadcasting Co.
WOC	5000	1N	Davenport, Iowa	Central Broadcasting Co.
XEI	101	---	Morellia, Mexico	Carlos Gutierrez M.

1010 kilocycles 296.8 meters

CFLC	50	3	Prescott, Ont.	Radio Association
CKCR	50	3	Waterloo, Ont.	John Patterson
CKSH	50	---	St. Hyacinthe, Que.	City of St. Hyacinthe
KGGF	500	2	Picher, Okla.	D. L. Connell, M. D.
KQW	500	---	San Jose, Cal.	First Baptist Church
WGTB	500	+	Columbia, S. C.	George T. Barnes, Inc.
WHN	250	1	New York City	Marcus Loew Booking Agency
WNAD	500	2	Norman, Okla.	University of Oklahoma
WPAP	250	1	New York City	Calvary Baptist Church
WQAO	250	1	New York City	Calvary Baptist Church
WRNY	250	1	New York City	Aviation Radio Station, Inc.

1020 kilocycles 293.9 meters

KFKX	10000	1N	Chicago, Ill.	Westinghouse Elec. & Mfg. Co.
KYW	10000	1N	Chicago, Ill.	Westinghouse Elec. & Mfg. Co.
WRAX	250	D	Philadelphia, Pa.	Berachah Church, Inc.

1030 kilocycles 291.1 meters

CFCF	1650	---	Montreal, Que.	Canadian Marconi Co.
CJOR	50	---	Sea Island, B. C.	G. C. Chandler
CMBW	50	1027	Marianao, Cuba	Modesto Alvarez
CMBZ	100	1027	Havana, Cuba	Manuel y G. Salas
CNRV	500	---	Vancouver, B. C.	Canadian National Railways

1040 kilocycles 288.3 meters

KRLD	10000	1C	Dallas, Texas	KRLD Radio Corp.
KTHS	10000	1N	Hot Springs, Ark.	Chamber of Commerce
WKAR	1000	D	East Lansing, Mich.	Michigan Agricultural College
WKEN	1000	---	Buffalo, N. Y.	Radio Station WKEN, Inc.

1050 kilocycles 285.5 meters

KFKB	5000	---	Milford, Kansas	KFKB Broadcasting Assn., Inc.
KNX	5000	X	Hollywood, Cal.	Western Broadcast Co.

KCYS. 1050 MTRS. 285.5 DIAL

CUT OUT ON DOTTED LINES

1060 kilocycles 282.8 meters

KWJJ	500	---	Portland, Ore.	Wilbur Jerman
WBAL	10000	1N	Baltimore, Md.	Consolidated Gas Elec. & Pwr. Co.
WJAG	1000	---	Norfolk, Nebr.	Norfolk Daily News
WTIC	50000	1N	Hartford, Conn.	Travelers Broadcasting Service Corp.

1070 kilocycles 280.2 meters

KJBS	100	D	San Francisco, Cal.	Julius Brunton & Sons Co.
WAAT	300	D	Jersey City, N. J.	Bremer Broadcasting Corp.
WCAZ	50	D	Carthage, Ill.	Carthage College
WDZ	100	D	Tuscola, Ill.	James L. Bush
WEAR	1000	IND	Cleveland, Ohio	WTAM and WEAR, Inc.
WTAM	50000	1N	Cleveland, Ohio	WTAM and WEAR, Inc.

1080 kilocycles 277.6 meters

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

1090 kilocycles 275.1 meters

KFQA	5000	1S	St. Louis, Mo.	Voice of St. Louis, Inc.
KMOX	5000	1C	St. Louis, Mo.	Voice of St. Louis, Inc.

1100 kilocycles 272.6 meters

CMCE	100	1098	Havana, Cuba	Julio E. Power
KGDM	250	D	Stockton, Cal.	E. F. Peffer
WLWL	5000	1	New York City	Missionary Society of St. Paul
WPG	5000	1	Atlantic City, N. J.	Municipality of Atlantic City

1110 kilocycles 270.1 meters

KSOO	2000	---	Sioux Falls, S. D.	Sioux Falls Broacasting Assn., Inc.
WRVA	5000	N	Richmond, Va.	Larus & Bros, Co., Inc.

1120 kilocycles 267.7 meters

CFJC	15	---	Kamloops, B. C.	N. S. Dalgleish & Sons
CFRC	500	---	Kingston, Ont.	Queen's University
CHGS	25	---	Summerside, P. E. I.	R. T. Holman, Ltd.
CJOC	50	---	Lethbridge, Alta.	Harold R. Carson
CKPR	50	---	Midland, Ont.	Midland Broadcasting Corp.
KFSG	500	3	Los Angeles, Cal.	Echo Park Evag. Assn.
KMIC	500	3	Inglewood, Cal.	Dalton's, Inc.
KRSC	50	D	Seattle, Wash.	Radio Sales Corp.
KTRH	500	2	Austin, Texas	KUT Broadcasting Co.
WDBO	500	+	Orlando, Fla.	Orlando Broadcasting Co., Inc.
WDEL	250	+	Wilmington, Del.	WDEL, Inc.
WHAD	250	1	Milwaukee, Wis.	Marquette University
WISN	250	1C	Milwaukee, Wis.	Evening Wisconsin Co.
WTAW	500	2	College Station, Texas	Agricultural & Mech. College
------	150	CP	Rayne, La.	Ber, Killmer & Bailey

1130 kilocycles 265.3 meters

KSL	5000	N	Salt Lake City	Radio Service Corp. of Utah
WJJD	20000	---	Mooseheart, Ill.	Loyal Order of Moose
WOV	1000	D	New York City	International Broadcasting Corp.
XEF	105	---	Oaxaca, Oax.	Federico Zorrila

1140 kilocycles 263.0 meters

KVOO	5000	1N	Tulsa, Okla.	Southwestern Sales Corp.
WAPI	5000	1N	Birmingham, Ala.	Alabama Polytechnic Institute

1150 kilocycles 260.7 meters

CMHA	200	1154	Cienfuegos, Cuba	Jose Ganduxe
WHAM	5000	N	Rochester, N. Y.	Stromberg-Carlson Tel. Mfg. Co.

1160 kilocycles 258.5 meters

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

1170 kilocycles 256.3 meters

KTNT	5000	---	Muscatine, Iowa	Norman Baker
WCAU	10000	C	Philadelphia, Pa.	Universal Broadcasting Co.

1180 kilocycles 254.1 meters

KEX	5000	2	Portland, Ore.	Western Broadcasting Co.
KOB	20000	2	State College, N. M.	College of Agriculture & Mech. Arts
WDGY	1000	1	Minneaplis, Minn.	Dr. George W. Young
WHDI	500	1	Minneapolis, Minn.	Wm. Hood Dunwoody, Industry Inst.

1190 kilocycles 252.0 meters

WICC	500	D	Bridgeport, Conn.	Bridgeport Broadcasting Station, Inc.
WOAI	5000	XN	San Antonio, Texas	Southern Equipment Co.

1200 kilocycles 249.9 meters

KBTM	100	CPD	Paragould, Ark.	W. J. Beard's Temple of Music
KFHA	50	---	Gunnison, Colo.	Western College of Colorado
KFJB	100	---	Marshalltown, Iowa	Marshall Electric Co., Inc.
KFWF	100	5	St. Louis, Mo.	St. Louis Truth Center, Inc.
KGDE	100	+	Fergus Falls, Minn.	Jaren Drug Co.
KGDY	15	---	Oldham, S. D.	J. Albert Loesch and George W. Wright
KGEK	50	9	Yuma, Colo.	Beehler Elec. Equipment Co.
KGEW	100	9	Fort Morgan, Colo.	City of Fort Morgan
KGFJ	100	---	Los Angeles, Cal.	Ben S. McGlashan
KGFK	50	---	Hallock, Minn.	Lautzenheiser & Mitchell
KGHI	100	---	Little Rock, Ark.	Berean Bible Class
KGY	10	---	Lacey, Wash.	St. Martin's College
KSMR	100	---	Santa Maria, Cal.	Santa Maria Valley R. R. Co.
KVOS	100	---	Bellingham, Wash.	KVOS, Inc.
KWG	100	---	Stockton, Cal.	Portable Wireless Tel. Co., Inc.
KXO	100	---	El Centro, Cal.	E. R. Irey and F. M. Bowles
WABI	100	---	Bangor, Maine	First Universalist Church
WABZ	100	1	New Orleans, La.	Coliseum Place Baptist Church
WBBY	75	---	Charleston, S. C.	Washington Light Infantry
WBBZ	100	---	Ponca City, Okla.	C. L. Carrell
WCAT	100	---	Rapid City, S. D.	State School of Mines
WCAX	100	2	Burlington, Vt.	University of Vermont
WCLO	100	---	Kenosha, Wis.	C. E. Whitmore
WCOD	100	3	Harrisburg, Pa.	Norman R. Hoffman
WFBC	50	---	Knoxville, Tenn.	First Baptist Church
WFBE	100	---	Cincinnati, Ohio	WFBE, Inc.
WHBC	10	4S	Canton, Ohio	St. John's Catholic Church
WHBY	100	---	Green Bay, Wis.	St. Norbert's College
WIBX	100	+	Utica, N. Y.	WIBX, Inc.
WIL	100	5+	St. Louis, Mo.	Missouri Broadcasting Corp.
WJBC	100	6	La Salle, Ill.	Hummer Furniture Co.
WJBL	100	6	Decatur, Ill.	Commodore Broadcasting, Inc.
WJBW	30	1	New Orleans, La.	Charles C. Carlson, Jr.
WKJC	100	3	Lancaster, Pa.	Kirk Johnson & Co.
WLAP	30	---	Louisville, Ky.	American Broadcasting Corp. of Ky.
WLBG	100	D+	Petersburg, Va.	Robert Allen Gamble
WMAY	100	5+	St. Louis, Mo.	Kingshighway Presbyterian Church
WNBO	100	4	Washington, Pa.	John Brownlee Spriggs
WNBW	10	---	Carbondale, Pa.	Home Cut Glass & China Co.
WNBX	10	2	Springfield, Vt.	First Congregational Church
WORC	100	---	Worcester, Mass.	Alfred Frank Kleindienst
WRAF	100	8	La Porte, Ind.	The Radio Club, Inc.
WRBL	50	---	Columbus, Ga.	David Parmer
WWAE	100	8	Hammond, Ind.	Hammond-Calumet Broadcasting Corp.
XBA	101	---	Guadalajara, Jal.	Alberto Palos Sauza
XBS	250	---	C. Lerdo Dgo.	Cerveceria de Durango, S. A.

KCYS.
1200
MTRS.
249.9
DIAL

CUT OUT ON DOTTED LINES

1210 kilocycles 247.8 meters

CFCO	100	---	Chatham, Ont.	Western Ontario "Better Radio" Club
CFNB	50	---	Fredericton, N. B.	James S. Neill & Sons, Ltd.
CHWK	5	---	Chilliwack, B. C.	Chilliwack Broadcasting Co., Ltd.
CKMC	15	---	Cobalt, Ont.	R. L. MacAdam
CKPC	25	---	Preston, Ont.	Wallace Russ
KDFN	100	---	Casper, Wyo.	Donald Lewis Hathaway
KDLR	100	8	Devils Lake, N. D.	Radio Electric Co.
KFOR	100	+	Lincoln, Nebr.	Howard A. Shuman
KFVS	100	6	Cape Girardeau, Mo.	Hirsch Battery & Radio Co.
KFXM	100	9	San Bernardino, Calif.	J. C. & E. W. Lee
KGCR	100	---	Watertown, S. D.	Cutler's Radio Brdcstg. Service, Inc.
KGCU	100	8	Mandan, N. D.	Mandan Radio Association
KMJ	100	---	Fresno, Cal.	James McClatchy Co.
KPCB	100	7	Seattle, Wash.	Wescoast Broadcasting Co.
KPPC	50	9	Pasadena, Cal.	Pasadena Presbyterian Church
KPQ	50	7	Wenatchee, Wash.	Westcoast Broadcasting Co.
KWEA	100	---	Shreveport, La.	William E. Antony
WBAX	100	1	Wilkes-Barre, Pa.	John H. Stenger, Jr.
WCBS	100	2	Springfield, Ill.	H. L. Dewing & Chas, Messter
WCOH	100	3	Yonkers, N. Y.	Westchester Broadcasting Corp.
WCRW	100	4	Chicago, Ill.	Clinton R. White
WDWF	100	5	Providence, R. I.	Dutee W. Flint
WEBE	100	---	Cambridge, Ohio	Roy W. Waller
WEBQ	100	6	Harrisburg, Ill.	First Trust & Savings Bank
WEDC	100	4	Chicago, Ill.	Emil Denemark, Inc.
WGBB	100	3	Freeport, N. Y.	Harry H. Carman
WGCM	100	---	Gulfport, Miss.	Great Southern Land Co., Inc.
WHBF	100	---	Rock Island, Ill.	Beardsley Specialty Co.
WHBU	100	---	Anderson, Ind.	Citizens Bank
WIBA	100	---	Madison, Wis.	Capital Times
WJBI	100	3	Red Bank, N. J.	Robert S. Johnson
WJBU	100	1	Lewisburg, Pa.	Bucknell University
WJBY	50	---	Gadsden, Ala.	Gadsden Broadcasting Co., Inc.
WJW	100	---	Mansfield, Ohio	Mansfield Broadcasting Assn.
WLCI	50	---	Ithaca, N. Y.	Lutheran Assn. of Ithaca
WLSI	100	5	Providence, R. I.	The Lincoln Studios, Inc.
WMAN	50	---	Columbus, Ohio	W. E. Heskett
WMBG	100	---	Richmond, Va.	Havens & Martin, Inc.
WOCL	25	---	Jamestown, N. Y.	A. E. Newton
WOMT	100	---	Manitowoc, Wis.	Francis M. Kadow
WPAW	100	5	Pawtucket, R. I.	Shartenburg & Robinson Co.
WRBQ	100	X+	Greenville, Miss.	J. Pat Scully
WRBU	100	---	Gastonia, N. C.	A. J. Kirby Music Co.
WSBC	100	4	Chicago, Ill.	World Battery Co., Inc.
WSIX	100	---	Springfield, Tenn.	638 Tire & Vulcanizing Co.
WTAX	50	2	Streator, Ill.	Williams Hardware Co.

1220 kilocycles 245.8 meters

KFKU	1000	1	Lawrence, Kans.	University of Kansas
KWSC	500	X+	Pullman, Wash.	State College of Washington
WCAD	500	D	Canton, N. Y.	St. Lawrence University
WCAE	500	XN	Pittsburgh, Pa.	Gimbel Bros.
WDAE	1000	---	Tampa, Fla.	Tampa Publishing Co.
WREN	1000	1N	Lawrence, Kans.	Jenny Wren Co.

1230 kilocycles 243.8 meters

KFIO	100	D	Spokane, Wash.	Spokane Broadcasting Corp.
KFQD	100	---	Anchorage, Alaska	Anchorage Radio Club
KGGM	250	+	Albuquerque, N. Mex.	New Mexico Broadcasting Co.
KYA	1000	---	San Francisco, Calif.	Pacific Broadcasting Corp.
WBIS	1000	2	Boston, Mass.	Shepard-Norwell Co.
WFBM	1000	1C	Indianapolis, Ind.	Indianpolis Power & Light Co.
WNAC	1000	2C	Boston, Mass.	Shepard-Norwell Co.
WPSC	500	D	State College, Pa.	Pennsylvania State College
WSBT	500	1	South Bend, Ind.	South Bend Tribune

1240 kilocycles 241.8 meters

KSAT	1000	1	Ft. Worth, Texas	S. A. T. Flying Service, Inc.
WACO	1000	1	Waco, Texas	Frank P. Jackson
WSPD	500	C+	Toledo, Ohio	Toledo Broadcasting Co.

1250 kilocycles 239.9 meters

KFMX	1000	2	Northfield, Minn.	Carleton College
KFOX	1000	---	Long Beach, Cal.	Nichols & Warinner, Inc.
KIDO	1000	---	Boise, Idaho	Boise Broadcasting Station
WAAM	1000	1+	Newark, N. J.	WAAM, Inc.
WCAL	1000	2	Northfield, Minn.	St. Olaf College
WDSU	1000	C	New Orleans, La.	Jos. H. Uhalt
WGCP	250	1	Newark, N. J.	May Radio Broadcast Corp.
WGMS	500	2X	Minneapolis, Minn.	University of Minnesota
WLB	500	2X	Minneapolis, Minn.	Washburn-Crosby Co.
WODA	1000	1	Paterson, N. J.	Richard E. O'Dea
WRHM	1000	2C	Minneapolis, Minn.	Minnesota Broadcasting Corp.
------	500	CP	Little Rock, Ark.	Joseph E. Phelps

1260 kilocycles 238.0 meters

KOIL	1000	C	Council Bluffs, Iowa	Mona Motor Oil Co.
KRGV	500	1	Harlingen, Texas	Valley Radio-Electric Corp.
KVOA	500	D	Tucson, Ariz.	Robert M. Riculfi
KWWG	500	1	Brownsville, Texas	Chamber of Commerce
WLBW	500	C+	Oil City, Pa.	Radio-Wire Program Corp.
WTOC	500	---	Savannah, Ga.	Savannah Broadcasting Co.

1270 kilocycles 236.1 meters

KFUM	1000	---	Colorado Springs, Colo.	W. D. Corley
KGCA	50	2D	Decorah, Iowa	Charles W. Greenley
KOL	1000	3	Seattle, Wash.	Seattle Broadcasting Co., Inc.
KTW	1000	3	Seattle, Wash.	First Presbyterian Church
KWLC	100	2D	Decorah, Iowa	Luther College
WASH	500	1	Grand Rapids, Mich.	WASH Broadcasting Corp.
WEAI	500	D	Ithaca, N. Y.	Cornell University
WFBR	250	---	Baltimore, Md.	Baltimore Radio Show, Inc.
WJDX	500	+N	Jackson, Miss.	Lamar Life Insurance Co.
WOOD	500	1	Grand Rapids, Mich.	Walter B. Stiles, Inc.

1280 kilocycles 234.2 meters

KFBB	1000	+	Great Falls, Mont.	Buttery Broadcast, Inc.
WCAM	500	1	Camden, N. J.	City of Camden
WCAP	500	1	Asbury Park, N. J.	Radio Industries Broadcast Co.
WDOD	1000	+C	Chattanooga, Tenn.	Chattanooga Radio Co., Inc.
WOAX	500	1	Trenton, N. J.	Franklyn J. Wolff
WRR	500	---	Dallas, Texas	City of Dallas

1290 kilocycles 232.4 meters

KDYL	1000	C	Salt Lake City	Intermountain Broadcasting Corp.
KFUL	500	1	Galveston, Texas	Will H. Ford
KLCN	50	D	Blytheville, Ark.	C. L. Lintzenich
KTSA	1000	1+C	San Antonio, Texas	Lone Star Broadcast Co.
WEBC	1000	X+N	Superior, Wis.	Head of Lake Broadcasting Co.
WJAS	1000	C	Pittsburgh, Pa.	Pittsburgh Radio Supply House
WNBZ	50	D	Saranac Lake, N. Y.	Smith & Mace

1300 kilocycles 230.6 meters

KFH	1000	CP2C	Wichita, Kansas	Radio Station KFH Co.
KFJR	500	3	Portland, Ore.	Ashley C. Dixon & Son
KGEF	1000	4	Los Angeles, Cal.	Trinity Methodist Church
KTBI	750	4	Los Angeles, Cal.	Bible Institute of Los Angeles
KTBR	500	3	Portland, Ore.	M. E. Brown
WBBR	1000	1	Rossville, N. Y.	People's Pulpit Association
WEVD	500	1	New York City	Debs Memorial Radio Fund, Inc.
WHAP	1000	1	New York City	Defenders of Truth Society, Inc.
WHAZ	500	1	Troy, N. Y.	Rensselaer Polytechnic Institute
WIOD	1000	N	Miami Beach, Fla.	Isle of Dreams Broadcasting Co.
WOQ	1000	2	Kansas City, Mo.	Unity School of Christianity

1310 kilocycles 228.9 meters

KFBK	100	---	Sacramento, Cal.	Jas. McClatchy Co.
KFGQ	100	7	Boone, Iowa	Boone Biblical College
KFJY	100	7	Ft. Dodge, Iowa	C. S. Tunwall
KFPL	100	---	Dublin, Texas	C. C. Baxter
KFPM	15	---	Greenville, Texas	The New Furniture Co.
KFUI	10	---	Juneau, Alaska	Alaska Electric Light & Power Co.

KCYS.
1310
MTRS.
228.9
DIAL

CUT OUT ON DOTTED LINES

KFUP	100	8	Denver, Colo.	Fitzsimmons General Hospital
KFXJ	50	8	Edgewater, Colo.	R. G. Howell
KFXR	100	X+	Oklahoma City	Exchange Ave. Baptist Church
KGBX	100	---	St. Joseph, Mo.	Foster-Hall Tire Co.
KGCX	100	+	Wolf Point, Mont.	First State Bank of Vida
KGEZ	100	---	Kalispell, Mont.	Chamber of Commerce
KGFW	50	X	Ravenna, Neb.	Otto F. Sothman and Roy H. McConnell
KGHG	50	CP	McGehee, Ark.	Chas. W. McCollum
KGMC	100	CP	Jerome, Ariz.	Charles C. Robinson
KIT	100	---	Yakima, Wash.	Carl E. Haymond
KMED	50	---	Medford, Ore.	Mrs. W. J. Virgin
KRMD	50	9	Shreveport, La.	Robert M. Dean
KTSL	100	9	Shreveport, La.	Houseman Sheet Metal Works, Inc.
KTSM	100	2	El Paso, Texas	W. S. Bledsoe & W. T. Blackwell
KWCR	100	7	Cedar Rapids, Iowa	Harry F. Paar
KXRO	75	---	Aberdeen, Wash.	KXRO, Inc.
WAGM	50	---	Royal Oak, Mich.	Robert L. Miller
WBOW	100	---	Terre Haute, Ind.	Banks of Wabash, Inc.
WBRE	100	---	Wilkes-Barre, Pa.	Louis G. Baltimore
WCLS	100	1	Joliet, Ill.	WCLS, Inc.
WDAH	100	2	El Paso, Texas	Trinity Methodist Church
WEBR	100	+	Buffalo, N. Y.	Howell Broadcasting Co., Inc.
WFBG	100	3	Altoona, Pa.	Wm. F. Gable Co.
WFDF	100	---	Flint, Mich.	Frank D. Fallain
WFKD	50	4	Philadelphia, Pa.	Foulkrod Radio Engineering Co.
WGAL	15	5	Lancaster, Pa.	WGAL, Inc.
WGH	100	---	Newport News, Va.	Virginia Broadcasting Co., Inc.
WHAT	100	4X	Philadelphia, Pa.	Albert A. Walker
WIBU	100	---	Poynette, Wis.	William C. Forrest
WJAC	100	3	Johnstown, Pa.	Johnstown Automobile Co.
WJAK	50	6	Marion, Ind.	Marion Broadcasting Co.
WKAV	100	---	Laconia, N. H.	Laconia Radio Club
WKBB	100	1	Joliet, Ill.	Sanders Bros.
WKBC	100	---	Birmingham, Ala.	R. B. Broyles Furniture Co.
WKBS	100	---	Galesburg, Ill.	Permil N. Nelson
WLBC	50	6	Muncie, Ind.	Donald A. Burton
WMBO	100	---	Auburn, N. Y.	Radio Service Laboratories
WNBH	100	---	New Bedford, Mass.	New Bedford Broadcasting Co.
WNBJ	50	---	Knoxville, Tenn.	Lonsdale Baptist Church
WOBT	100	+	Union City, Tenn.	Tittsworth's Radio & Music Shop
WOL	100	---	Washington, D. C.	American Broadcasting Co.
WRAW	100	5	Reading, Pa.	Avenue Radio & Electric Shop
WRBI	20	---	Tifton, Ga.	Kent's Furniture and Music Store
WRK	100	---	Hamilton, Ohio	Hamilton Radio Service
WSAJ	100	---	Grove City, Pa.	Grove City College
WSJS	100	CP	Winston-Salem, N. C.	Winston-Salem Journal Co.

1320 kilocycles 227.1 meters

KGHB	500	---	Honolulu, Hawaii	Honolulu Broadcasting Co., Ltd.
KGHF	250	X+	Pueblo, Colo.	C. P. Ritchie & J. E. Finch
KGIQ	250	1	Twin Falls, Idaho	Radio Broadcasting Corp.
KGMB	500	CP	Honolulu, Hawaii	Honolulu Broadcasting Co., Ltd.
KID	250	1X+	Idaho Falls, Idaho	Jack W. Duckworth, Jr.
WADC	1000	C	Akron, Ohio	Allen T. Simmons
WSMB	500	N	New Orleans, La.	Saenger Theatre & Maison Blanche Co.

1330 kilocycles 225.4 meters

KGB	250	---	San Diego, Cal.	Pickwick Broadcasting Corp.
KSCJ	1000	1C+X	Sioux City, Iowa	Perkins Bros. Co.
WDRC	500	---	New Haven, Conn.	Doolittle Radio Corp.
WSAI	500	N	Cincinnati, Ohio	Crosley Radio Corp., Lessee
WTAQ	1000	1	Eau Claire, Wis.	Gillette Rubber Co.

1340 kilocycles 223.7 meters

KFPW	50	D	Carterville, Mo.	Rev. Lannie W. Stewart
KFPY	1000	CX	Spokane, Wash.	Symons Broadcasting Co.
WCOA	500	---	Pensacola, Fla.	City of Pensacola
WGHP	750	C	Detroit, Mich.	American Broadcasting Corp.

1350 kilocycles 222.1 meters

KWK	1000	N	St. Louis, Mo.	Greater St. Louis Broadcasting Corp.
WBNY	250	1	New York City	Baruchrome Corp.
WCDA	250	1	New York City	Italian Educ. Broadcasting Co., Inc.
WKBQ	250	1	New York City	Standard Cahill Co., Inc.
WMSG	250	1	New York City	Madison Square Garden Brdcstg. Corp.

1360 kilocycles 220.4 meters

KGER	1000	4	Long Beach, Cal.	C. Merwin Dobyns
KGIR	500	---	Butte, Mont.	KGIR, Inc.
KPSN	1000	4	Pasadena, Cal.	Pasadena Star-News
WFBL	1000	C	Syracuse, N. Y.	The Onondaga Co., Inc.
WGES	500	1	Chicago, Ill.	Oak Leaves Broadcasting Station, Inc.
WJKS	500	1+	Gary, Ind.	Johnson-Kennedy Radio Corp.
WQBC	300	---	Utica, Miss.	Delta Broadcasting Co.

1370 kilocycles 218.7 meters

KCRC	100	2+	Enid, Okla.	Champlin Refining Co.
KFBL	50	3	Everett, Wash.	Leese Bros.
KFJI	100	---	Astoria, Ore.	KFJI Broadcasters, Inc.
KFJM	100	---	Grand Forks, N. D.	University of North Dakota
KFJZ	100	---	Ft. Worth, Texas	H. C. Meacham
KFLX	100	---	Galveston, Texas	George Roy Clough
KGAR	100	+	Tucson, Ariz.	Tucson Motor Service Co.
KGCI	100	5	San Antonio, Texas	Liberto Radio Sales Co.
KGDA	50	---	Dell Rapids, S. D.	Home Auto Co.
KGFG	100	2	Oklahoma City	Faith Tabernacle Assn.
KGFL	50	---	Raton, N. M.	W. E. Whitmore
KGKL	100	---	San Angelo, Texas	KGKL, Inc., Opr. by Ragsdale Auto
KGRC	100	5	San Antonio, Texas	Eugene J. Roth
KLO	100	+	Ogden, Utah	Peery Building Co.
KOH	100	---	Reno, Nevada	Jay Peters
KOOS	100	---	Marshfield, Ore.	H. H. Hanseth
KRE	100	6	Berkeley, Cal.	First Congregational Church
KVL	100	3	Seattle, Wash.	Arthur C. Dailey
KWKC	100	4	Kansas City, Mo.	Wilson Duncan Broadcasting Co.
KZM	100	6	Haywood, Cal.	Leon P. Tenney
WBBL	100	---	Richmond, Va.	Grace Covenant Presbyterian Church
WCBM	100	+	Baltimore, Md.	Baltimore Broadcasting Corp.
WEHC	100	---	Emory, Va.	Emory & Henry College
WELK	100	---	Philadelphia, Pa.	Howard R. Miller
WFBJ	100	---	Collegeville, Minn.	St. John's University
WFDV	100	CP	Rome, Ga.	Dolies Goings
WGL	100	---	Fort Wayne, Ind.	Fred C. Zieg
WHBD	100	---	Mount Orab, Ohio	F. P. Moler
WHBQ	100	---	Memphis, Tenn.	Broadcasting Station WHBQ, Inc.
WHDF	100	+X	Calumet, Mich.	Upper Michigan Broadcasting Co.
WIBM	100	1	Jackson, Mich.	C. L. Carrell
WJBK	50	1	Ypsilanti, Mich.	James F. Hopkins
WLEY	100	+	Lexington, Mass.	Lexington Air Stations
WMBR	100	---	Tampa, Fla.	F. J. Reynolds
WPOE	100	---	Patchogue, N. Y.	Nassau Broadcasting Corp.
WQDM	5	CP	St. Albans, Vt.	A. J. St. Antoine
WRAK	50	---	Erie, Pa.	C. R. Cummins
WRBJ	10	---	Hattiesburg, Miss.	Woodruff Furniture Co., Inc.
WRBT	100	---	Wilmington, N. C.	Wilmington Radio Association
WRJN	100	---	Racine, Wis.	Racine Broadcasting Corp.
WSVS	50	---	Buffalo, N. Y.	Seneca Vocational School
------	100	CP7	Danville, Va.	L. H., R. H. and A. S. Clarke
------	100	CP7	Lynchburg, Va.	Edw. A. and Philip P. Allen

1380 kilocycles 217.3 meters

KQV	500	2	Pittsburgh, Pa.	Doubleday-Hill Electric Co.
KSO	500	1	Clarinda, Iowa	Berry Seed Co.
WKBH	1000	1	La Crosse, Wis.	Callaway Music Co.
WSMK	200	2	Dayton, Ohio	Stanley M. Krohn, Jr.

1390 kilocycles 215.7 meters

KLRA	1000	1C	Little Rock, Ark.	Arkansas Broadcasting Co.
KOQ	500	---	Phoenix, Ariz.	Nielson Radio & Sporting Goods Co.
KUOA	1000	1	Fayetteville, Ark.	University of Arkansas
WHK	1000	CX	Cleveland, Ohio	Radio Air Service Corp.

KCYS.
1390
MTRS.
215.7
DIAL

CUT OUT ON DOTTED LINES

1400 kilocycles 214.2 meters

KOCW	250	+	Chickasha, Okla.	College for Women
WBAA	500	1	Lafayette, Ind.	Purdue University
WBBC	500	2	Brooklyn, N. Y.	Brooklyn Broadcasting Corp.
WCGU	500	2	Coney Island, N. Y.	U. S. Broadcasting Corp.
WCMA	500	1	Culver, Ind.	Culver Military Academy
WKBF	500	1	Indianapolis, Ind.	Indianapolis Broadcasting, Inc.
WLTH	500	2	Brooklyn, N. Y.	The Voice of Brooklyn, Inc.
WSGH	500	2	Brooklyn, N. Y.	Amateur Radio Specialty Co.

1410 kilocycles 212.6 meters

KFLV	500	4	Rockford, Ill.	Rockford Broadcasters, Inc.
KGRS	1000	1	Amarillo, Texas	Gish Radio Service
WBCM	500	---	Bay City, Mich.	James E. Davidson
WDAG	250	1	Amarillo, Texas	National Radio & Broadcasting Corp.
WHBL	500	4	Sheboygan, Wis.	Press Pub. Co. & C. L. Carrell
WLEX	500	2	Lexington, Mass.	Lexington Air Stations
WMAF	500	2	S. Dartmouth, Mass.	Round Hills Radio Corp.
WODX	500	3	Mobile, Ala.	Mobile Broadcasting Corp.
WSFA	500	3CP	Montgomery, Ala.	Montgomery Broadcasting Corp.
WSSH	500	2	Boston, Mass.	Tremont Temple Baptist Church

1420 kilocycles 211.1 meters

KFIF	100	4	Portland, Ore.	Benson Polytechnic Institute
KFIZ	100	---	Fond du Lac, Wis.	Reporter Printing Co.
KFQU	100	5	Holy City, Cal.	W. E. Riker
KFQW	100	---	Seattle, Wash.	KFQW, Inc.
KFXD	50	---	Jerome, Idaho	Service Radio Co.
KFXY	100	---	Flagstaff, Ariz.	Mary M. Costigan
KFYO	100	+	Abilene, Texas	T. E. Kirksey
KGFF	100	---	Alva, Okla.	KGFF Broadcasting Co.
KGGC	50	5	San Francisco, Cal.	Golden Gate Broadcasting Co.
KGIW	100	---	Trinidad, Colo.	Leonard E. Wilson
KGIX	100	CP	Las Vegas, Nevada	Las Vegas, Nevada, Radio Corp.
KGKX	100	---	Sand Point, Idaho	C. E. Twiss and F. H. McCann
KICK	100	---	Red Oak, Iowa	Red Oak Radio Corp.
KLPM	100	---	Minot, North Dakota	E. C. Reineke
KORE	100	---	Eugene, Ore.	Eugene Broadcasting Station
KTAP	100	---	San Antonio, Texas	Alamo Broadcasting Co.
KTUE	100	X	Houston, Texas	Uhalt Electric
KXL	100	4	Portland, Ore.	KXL Broadcasters, Inc.
WEDH	30	---	Erie, Pa.	Erie Dispatch-Herald
WEHS	100	2	Evanston, Ill.	Victor C. Carlson
WFDW	100	CP	Talledega, Ala.	Raymond G. Hammett
WHDL	10	---	Tupper Lake, N. Y.	George Franklin Bissell
WHFC	100	2	Cicero, Ill.	Triangle Broadcasters
WHIS	100	---	Bluefield, W. Va.	Daily Telegraph
WIAS	100	---	Ottumwa, Iowa	Poling Electric Co.
WIBR	50	1	Steubenville, Ohio	George W. Robinson
WILM	100	---	Wilmington, Del.	Delaware Broadcasting Co., Inc.
WJBO	100	---	New Orleans, La.	Valdemar Jensen
WKBI	50	2	Chicago, Ill.	Fred L. Schoenwolf
WKBP	50	---	Battle Creek, Mich.	Enquirer-News Co.
WLBF	100	---	Kansas City, Kas.	WLBF Broadcasting Co.
WMBC	100	X+	Detroit, Mich.	Michigan Broadcasting Co., Inc.
WMBH	100	+	Joplin, Mo.	Edwin Dudley Aber
WMRJ	10	---	Jamaica, N. Y.	Peter J. Prinz
WQBZ	60	1	Weirton, W. Va.	J. H. Thomson
WTBO	50	X	Cumberland, Md.	Associated Broadcasting Corp.

1430 kilocycles 209.7 meters

KECA	1000	N	Los Angeles, Calif.	Earle C. Anthony, Inc.
WBAK	500	1	Harrisburg, Pa.	Penna. State Police
WBRL	500	---	Tilton, N. H.	Booth Radio Laboratories
WCAH	500	1C	Columbus, Ohio	Commercial Radio Service Co.
WGBC	500	2	Memphis, Tenn.	First Baptist Church
WHP	500	1C	Harrisburg, Pa.	Pennsylvania Broadcasting Co.
WNBR	500	2	Memphis, Tenn.	John Ulrich

1440 kilocycles 208.2 meters

KLS	250	D	Oakland, Cal.	Warner Bros.
WCBA	250	1	Allentown, Pa.	B. B. Musselman
WHEC	500	2C	Rochester, N. Y.	Hickson Electric Co.

WMBD	500	3+	Peoria Heights, Ill.	Peoria Heights Radio Laboratory
WNRC	500	---	Greensboro, N. C.	Wayne M. Nelson
WOKO	500	2	Poughkeepsie, N. Y.	Hudson Valley Broadcasting Co.
WSAN	250	1	Allentown, Pa.	Allentown Call Publishing Co., Inc.
WTAD	500	3	Quincy, Ill.	Ills. Stock Medicine Broadcasting Co.

1450 kilocycles 206.8 meters

KTBS	1000	---	Shreveport, La.	Elliott & Steere
WBMS	250	1	Hackensack, N. J.	WBMS Broadcasting Corp.
WCSO	500	2	Springfield, Ohio	Wittenberg, College
WFJC	500	2N	Akron, Ohio	W. F. Jones Broadcast, Inc.
WIBS	250	1	Jersey City, N. J.	New Jersey Broadcasting Corp.
WKBO	250	1	Jersey City, N. J.	Camith Corp.
WNJ	250	1	Newark, N. J.	Radio Investment Co.
WSAR	250	---	Fall River, Mass.	Doughty & Welch Electric Co., Inc.
WTFI	250	---	Toccoa, Ga.	Toccoa Falls Institute

1460 kilocycles 205.4 meters

KSTP	10000	N	St. Paul, Minn.	National Battery Broadcasting Co.
WJSV	10000	---	Mt. Vernon Hills, Va.	Independent Publishing Co.

1470 kilocycles 204.0 meters

KGA	5000	---	Spokane, Wash.	Northwest Broadcasting System, Inc.
WLAC	5000	1C	Nashville, Tenn.	Life & Casualty Insurance Co.
WTNT	5000	1	Nashville, Tenn.	Tennessee Publishing Co.

1480 kilocycles 202.6 meters

KFJF	5000	C	Oklahoma City	National Radio Mfg. Co.
WKBW	5000	C	Buffalo, N. Y.	Churchill Evangelistic Assn., Inc.

1490 kilocycles 201.2 meters

KPWF	5000	CP	Westminster, Cal.	Pacific Western Broadcasting Fed.
WCKY	5000	1N	Covington, Ky.	L. B. Wilson, Inc.
WJAZ	5000	1	Chicago, Ill.	Zenith Radio Corp.
WORD	5000	1	Chicago, Ill.	People's Pulpit Association
WSOA	5000	1	Chicago, Ill.	Radiophone Broadcasting Corp.

1500 kilocycles 199.9 meters

KDB	100	---	Santa Barbara, Cal.	Santa Barbara Broadcasting Co.
KGFI	100	---	Corpus Christi, Texas	Eagle Broadcasting Co., Inc.
KGKB	100	---	Brownwood, Texas	Eagle Publishing Co.
KGKY	100	CP	Scottsbluff, Nebr.	Hilliard Co., Inc.
KGMD	100	CP	Roswell, N. M.	Dispatch Publishing Co.
KPJM	100	---	Prescott, Ariz.	Miller & Klahn
KREG	100	---	Santa Ana, Calif.	Pacific Western Broadcasting
KTLC	100	X	Houston, Texas	Houston Broadcasting Co.
KUJ	10	3X	Longview, Wash.	Columbia Broadcasting Co., Inc.
KUT	100	CP	Austin, Texas	Rice Hotel
KVEP	15	3	Portland, Ore.	Schaeffer Radio Co.
WCLB	100	1	Brooklyn, N. Y.	Arthur Faske
WKBV	100	+	Connersville, Ind.	Knox Battery & Electric Co.
WKBZ	50	---	Ludington, Mich.	K. L. Ashbacker
WLBX	100	1	Long Island City, N. Y.	John N. Brahy
WLOE	100	2	Boston, Mass.	Boston Broadcasting Co.
WMBA	100	---	Newport, R. I.	LeRoy Joseph Beebe
WMBJ	100	---	Wilkinsburg, Pa.	Rev. J. W. Sproul
WMBQ	100	1	Brooklyn, N. Y.	Paul J. Gollhofer
WMES	50	2	Boston, Mass.	Boston Broadcasting Co.
WMPC	100	---	Lapeer, Mich.	First M. E. Church
WNBF	100	---	Binghamton, N. Y.	Hewitt-Wood Radio Co., Inc.
WOPI	100	---	Bristol, Tenn.	Wilson Radiophone Service Co.
WPEN	100	+	Philadelphia, Pa.	Wm. Penn Broadcasting Co.
WWRL	100	1	Woodside, N. Y.	Long Island Broadcasting Corp.

KCYS. 1500 MTRS. 199.9 DIAL

INDEX BY LOCATIONS WITH MAP KEY

ALABAMA			
Birmingham K-19-a	5000	WAPI	1140
	500	WBRC	930
	100	WKBC	1310
Gadsden K-20-a	50	WJBY	1210
Mobile L-19	500	WODX	1410
Montgomery K-19	500	WSFA	1410
Talladega K-20	100	WFDW	1420
ALASKA			
Anchorage	100	KFQD	1230
Juneau	10	KFUI	1310
Ketchikan	500	KGBU	900
ARIZONA			
Flagstaff J-7	100	KFXY	1420
Jerome J-7	100	KGMC	1310
Phoenix K-7	500	KOY	1390
	500	KTAR	620
Prescott J-6	100	KPJM	1500
Tucson L-7	100	KGAR	1370
	500	KVOA	1260
ARKANSAS			
Blytheville I-18	50	KLCN	1290
Fayetteville I-16	1000	KUOA	1390
Hot Springs J-16	10000	KTHS	1040
Little Rock J-17	100	KGHI	1200
	250	KGJF	890
	1000	KLRA	1390
	500		1250
McGehee K-17	50	KGHG	1310
Paragould I-17	100	KBTM	1200
CALIFORNIA			
Berkeley H-1-a	100	KRE	1370
Burbank J-4	500	KELW	780
Culver City K-3	250	KFVD	1000
El Centro K-5	100	KXO	1200
Fresno I-3	100	KMJ	1210
Hayward H-2	100	KZM	1370
Hollywood K-3	1000	KFWB	950
	500	KMTR	570
	5000	KNX	1050
Holy City I-2	100	KFQU	1420
Inglewood K-4	500	KMIC	1120
Long Beach K-4-a	1000	KFOX	1250
	1000	KGER	1360
Los Angeles K-3-b	1000	KECA	1430
	500	KEJK	710
	5000	KFI	640
	250	KFQZ	850
	500	KFSG	1120
	1000	KGEF	1300
	100	KGFJ	1200
	1000	KHJ	900
	500	KTM	780
	750	KTBI	1300
Oakland H-1-b	7500	KGO	790
	250	KLS	1440
	500	KLX	880
	1000	KTAB	560
Pasadena J-4	50	KPPC	1210
	1000	KPSN	1360
Richmond I-1	500	KFWM	930
Sacramento H-2-a	100	KFBK	1310
San Bernardino J-3	100	KFXM	1210
San Diego K-4-b	500	KFSD	600
	250	KGB	1330
San Francisco H-1-c	1000	KFRC	610
	500	KFWI	930
	50	KGGC	1420
	100	KJBS	1070
	5000	KPO	680
	1000	KYA	1230
San Jose I-2	500	KQW	1010
Santa Ana K-4	100	KREG	1500
Santa Barbara J-3	100	KDB	1500
Santa Maria J-2-b	100	KSMR	1200
Stockton H-2-b	250	KGDM	1100
	100	KWG	1200
Westminster	5000	KPWF	1490
CANAL ZONE			
Balboa	750	NBA	850
COLORADO			
Colo. Springs H-10	1000	KFUM	1270
Denver G-10-b	500	KFEL	920
	100	KFUP	1310
	500	KFXF	920
	1000	KLZ	560
	12500	KOA	830
	500	KPOF	880
Edgewater G-10	50	KFXJ	1310
Fort Morgan G-11	100	KGEW	1200
Greeley F-10	500	KFKA	880
Gunnison H-9	50	KFHA	1200
Pueblo H-11	250	KGHF	1320
Trinidad H-10	100	KGIW	1420
Yuma G-11	50	KGEK	1200
CONNECTICUT			
Bridgeport F-26	500	WICC	1190
Hartford E-26-d	50000	WTIC	1060
New Haven F-26-b	500	WDRC	1330
Storrs	250	WCAC	600
DELAWARE			
Wilmington G-25	250	WDEL	1120
	100	WILM	1420
DISTRICT OF COLUMBIA			
Washington G-24-c	250	WMAL	630
	500	WRC	950
	100	WOL	1310
FLORIDA			
Clearwater N-21	1000	WFLA	620
Gainesville M-21	5000	WRUF	830
Jacksonville M-22	1000	WJAX	900
Miami O-23	1000	WQAM	560
Miami Beach O-23	1000	WIOD	1300
Orlando N-22	500	WDBO	1120
Pensacola L-19	500	WCOA	1340
St. Petersburg N-21	1000	WSUN	620
Tampa N-22-b	1000	WDAE	1220
	100	WMBR	1370
GEORGIA			
Atlanta K-20-a	250	WGST	890
	5000	WSB	740
Columbus K-20	50	WRBL	1200
Macon K-21	250	WMAZ	890
Rome J-20	100	WFDV	1370
Savannah K-22	500	WTOC	1260
Tifton L-21	20	WRBI	1310
Toccoa J-21	250	WTFI	1450
HAWAII			
Honolulu	500	KGHB	1320
	500	KGMB	1320
	500	KGU	940
IDAHO			
Boise D-4	1000	KIDO	1250
Idaho Falls D-7	250	KID	1320
Jerome E-5	50	KFXD	1420
Pocatello E-7	250	KSEI	900
Sand Point A-4	100	KGKX	1420
Twin Falls E-5	250	KGIQ	1320

ILLINOIS

Carthage F-17-e	50	WCAZ	1070
Chicago E-19-g	10000	KFKX	1020
	10000	KYW	1020
	500	WAAF	920
	25000	WBBM	770
	1000	WCFL	970
	100	WCRW	1210
	100	WEDC	1210
	50000	WENR	870
	500	WGES	1360
	25000	WGN	720
	1000	WIBO	560
	5000	WJAZ	1490
	25000	WJBT	770
	50	WKBI	1420
	5000	WLS	870
	5000	WMAQ	670
	5000	WMBI	1080
	5000	WORD	1490
	500	WPCC	560
	100	WSBC	1210
	5000	WSOA	1490
Cicero E-19	100	WHFC	1420
Decatur G-18	100	WJBL	1200
Evanston E-19	100	WEHS	1420
Galesburg F-18-a	100	WKBS	1310
Harrisburg H-18-b	100	WEBQ	1210
Joliet E-19-f	100	WCLS	1310
	100	WKBB	1310
La Salle F-18-d	100	WJBC	1200
Mooseheart E-18-e	20000	WJJD	1130
Peoria Heights G-18	500	WMBD	1440
Quincy G-17	500	WTAD	1440
Rockford E-18-c	500	KFLV	1410
Rock Island F-17-c	100	WHBF	1210
Springfield G-18	100	WCBS	1210
Streator F-18-c	50	WTAX	1210
Tuscola G-19-b	100	WDZ	1070
Urbana G-19-a	250	WILL	890
Zion E-19-c	5000	WCBD	1080

INDIANA

Anderson G-20-a	100	WHBU	1210
Connersville G-20	100	WKBV	1500
Culver F-19-d	500	WCMA	1400
Evansville H-19	500	WGBF	630
Fort Wayne F-20-b	100	WGL	1370
	10000	WOWO	1160
Gary F-19	500	WJKS	1360
Hammond F-19	100	WWAE	1200
Indianapolis G-19-c	1000	WFBM	1230
	500	WKBF	1400
Lafayette G-19	500	WBAA	1400
La Porte F-19-c	100	WRAF	1200
Marion F-20	50	WJAK	1310
Muncie G-20	50	WLBC	1310
South Bend F-20-a	500	WSBT	1230
Terre Haute G-19	100	WBOW	1310
Valparaiso F-19-b	500	WRBC	1240

IOWA

Ames E-16-c	5000	WOI	640
Boone E-16	100	KFGQ	1310
Cedar Rapids E-17-a	100	KWCR	1310
Clarinda E-15-c	500	KSO	1380
Council Bluffs F-15-b	1000	KOIL	1260
Davenport F-17-a	5000	WOC	1000
Decorah D-17	50	KGCA	1270
	100	KWLC	1270
Des Moines F-16-a	5000	WHO	1000
Fort Dodge E-16-a	100	KFJY	1310
Iowa City E-17-b	500	WSUI	880
Marshalltown E-16-d	100	KFJB	1200
Muscatine F-17-b	5000	KTNT	1170
Ottumwa F-17	100	WIAS	1420
Red Oak F-15	100	KICK	1420
Shenanhoah F-15-c	500	KFNF	890
	500	KMA	930
Sioux City E-15	1000	KSCJ	1330
Waterloo F-17	500	WMT	600

KANSAS

Gueda Springs	250		680
Kansas City G-15	100	WLBF	1420
Lawrence G-15-a	1000	KFKU	1220
	1000	WREN	1220
Manhattan G-14-a	500	KSAC	580
Milford G-14	5000	KFKB	1050
Topeka G-14	500	WIBW	580
Wichita H-14-a	1000	KFH	1300

KENTUCKY

Covington G-20	5000	WCKY	1490
Hopkinsville I-19	1000	WFIW	940
Louisville H-20	10000	WHAS	820
	30	WLAP	1200

LOUISIANA

New Orleans M-17	100	WABZ	1200
	1000	WDSU	1250
	100	WJBO	1420
	30	WJBW	1200
	500	WSMB	1320
	5000	WWL	850
Rayne M-17	150		1120
Shreveport K-16	50	KRMD	1310
	1000	KTBS	1450
	100	KTSL	1310
	100	KWEA	1210
	10000	KWKH	850

MAINE

Bangor C-28-b	100	WABI	1200
	500	WLBZ	620
Portland D-28-b	1000	WCSH	940

MARYLAND

Baltimore G-24-a	10000	WBAL	1060
	250	WCAO	600
	100	WCBM	1370
	250	WFBR	1270
Cumberland G-23	50	WTBO	1420

MASSACHUSETTS

Boston E-27-c	1000	WBIS	1230
	500	WBZA	990
	1000	WEEI	590
	100	WLOE	1500
	50	WMES	1500
	1000	WNAC	1230
	500	WSSH	1410
Fall River E-27	250	WSAR	1450
Gloucester E-27	1000	WHDH	830
Lexington E-27	500	WLEX	1410
	100	WLEY	1370
New Bedford E-27	100	WNBH	1310
S. Dartmouth E-27	500	WMAF	1410
Springfield E-26-b	15000	WBZ	990
Wellesley Hills E-27	250	WBSO	920
Worcester E-27-b	100	WORC	1200
	250	WTAG	580

MICHIGAN

Battle Creek E-20	50	WKBP	1420
Bay City D-21	500	WBCM	1410
Berrien Spgs. E-19	1000	WEMC	590
Calumet B-18	100	WHDF	1370

Detroit E-21-g	750	WGHP	340
	5000	WJR	750
	100	WMBC	1420
	1000	WWJ	920
East Lansing E-20-b	1000	WKAR	1040
Flint E-21-a	100	WFDF	1310
Grand Rapids E-20-a	500	WASH	1270
	500	WOOD	1270
Jackson E-20	100	WIBM	1370
Lapeer E-21	100	WMPC	1500
Ludington D-19	50	WKBZ	1500
Royal Oak E-21-e	50	WAGM	1310
Ypzilanti E-21-f	50	WJBK	1370

MINNESOTA

Collegeville C-15	100	WFBJ	1370
Fergus Falls B-15	100	KGDE	1200
Hallock A-14	50	KGFK	1200
Minneapolis C-16-b	7500	WCCO	810
	1000	WDGY	1180
	500	WGMS	1250
	500	WHDI	1180
	500	WLB	1250
	1000	WRHM	1250
Northfield D-16	1000	KFMX	1250
	1000	WCAL	1250
St. Paul C-16-c	10000	KSTP	1460

MISSISSIPPI

Greenville K-17	100	WRBQ	1210
Gulfport M-18	100	WGCM	1210
Hattiesburg L-18	10	WRBJ	1370
Jackson L-18	500	WJDX	1270
Meridian L-18	500	WCOC	880
Utica L-17	300	WQBC	1360

MISSOURI

Carterville H-16	50	KFPW	1340
Cp. Girardeau H-18-c	100	KFVS	1210
Columbia G-16-b	500	KFRU	630
Jefferson City H-16-a	500	WOS	630
Joplin H-16	100	WMBH	1420
Kansas City G-15-b	1000	KMBC	950
	100	KWKC	1370
	1000	WDAF	610
	500	WHB	860
	1000	WOQ	1300
St. Joseph G-15	2500	KFEQ	680
	100	KGBX	1310
St. Louis H-18-a	5000	KFQA	1090
	500	KFUO	550
	100	KFWF	1200
	5000	KMOX	1090
	500	KSD	550
	1000	KWK	1350
	1000	WEW	760
	100	WIL	1200
	100	WMAY	1200

MONTANA

Billings C-8	500	KGHL	950
Butte C-7	500	KGIR	1360
Great Falls A-8	1000	KFBB	1280
Kalispell A-5	100	KGEZ	1310
Wolf Point A-10	100	KGCX	1310

NEBRASKA

Clay Center G-14	1000	KMMJ	740
Lincoln F-14-b	5000	KFAB	770
	100	KFOR	1210
	500	WCAJ	590
Norfolk E-14-c	1000	WJAG	1060
Omaha F-15-a	500	WAAW	660
	1000	WOW	590
Ravenna F-13	50	KGFW	1310
Scottsbluff F-11	100	KGKY	1500
York F-13	500	KGBZ	930

NEVADA

Las Vegas I-5	100	KGIX	1420
Reno G-3	100	KOH	1370

NEW HAMPSHIRE

Laconia D-27	100	WKAV	1310
Tilton D-27	500	WBRL	1430

NEW JERSEY

Asbury Park G-26	500	WCAP	1280
Atlantic City G-25	5000	WPG	1100
Camden F-25-f	500	WCAM	1280
Hackensack F-26	250	WBMS	1450
Jersey City F-26-d	300	WAAT	1070
	250	WIBS	1450
	250	WKBO	1450
Newark F-25-h	1000	WAAM	1250
	250	WGCP	1250
	250	WNJ	1450
	5000	WOR	710
Paterson F-26-c	1000	WODA	1250
Red Bank G-26	100	WJBI	1210
Trenton F-25	500	WOAX	1280

NEW MEXICO

Albuquerque J-9	250	KGGM	1230
Raton I-11	50	KGFL	1370
Roswell K-10	100	KGMD	1500
State College K-9	20000	KOB	1180

NEW YORK

Auburn E-24	100	WMBO	1310
Binghamton E-25	100	WNBF	1500
Brooklyn F-26-f	500	WBBC	1400
	100	WCLB	1500
	500	WLTH	1400
	100	WMBQ	1500
	500	WSGH	1400
Buffalo E-23-a	100	WEBR	1310
	1000	WGR	550
	5000	WKBW	1480
	1000	WKEN	1040
	750	WMAK	900
	50	WSVS	1370
Canton D-25	500	WCAD	1220
Cazenovia E-25-b	250	WMAC	570
Coney Island F-26	500	WCGU	1400
Freeport F-26-1	100	WGBB	1210
Ithaca E-24-d	500	WEAI	1270
	50	WLCI	1210
Jamaica F-26-f	10	WMRJ	1420
Jamestown E-23-b	25	WOCL	1210
Long Island City F-26	100	WLBX	1500

INDEX BY LOCATIONS WITH MAP KEY

New York City F-26	5000	WABC	860
	250	WBNY	1350
	5000	WBOQ	860
	250	WCDA	1350
	50000	WEAF	660
	500	WEVD	1300
	250	WGBS	600
	1000	WHAP	1300
	250	WHN	1010
	30000	WJZ	760
	250	WKBQ	1350
	5000	WLWL	1100
	500	WMCA	570
	250	WMSG	1350
	500	WNYC	570
	1000	WOV	1130
	250	WPAP	1010
	500	WPCH	810
	250	WQAO	1010
	250	WRNY	1010
Patchogue F-26	100	WPOE	1370
Poughkeepsie F-26-a	500	WOKO	1440
Rochester E-24-b	5000	WHAM	1150
	500	WHEC	1440
Rossville F-26	1000	WBBR	1300
Saranac Lake D-26	50	WNBZ	1290
Schenectady E-25-c	50000	WGY	790
Syracuse E-24-c	1000	WFBL	1360
	250	WSYR	570
Troy E-21-a	500	WHAZ	1300
Tupper Lake D-25	10	WHDL	1420
Utica E-25-a	100	WIBX	1200
Woodside F-26	100	WWRL	1500
Yonkers E-26	100	WCOH	1210

NORTH CAROLINA

Asheville J-21	1000	WWNC	570
Charlotte J-22	5000	WBT	1080
Gastonia J-22	100	WRBU	1210
Greensboro I-22	500	WNRC	1440
Raleigh I-23	1000	WPTF	680
Wilmington J-24	100	WRBT	1370
Winston-Salem I-22	100	WSJS	1310

NORTH DAKOTA

Bismarck B-12	500	KFYR	550
Devils Lake A-13	100	KDLR	1210
Fargo B-14	1000	WDAY	940
Grand Forks A-14	100	KFJM	1370
Mandan B-12	100	KGCU	1210
Minot A-12	100	KLPM	1420

OHIO

Akron F-22-b	1000	WADC	1320
	500	WFJC	1450
Cambridge F-22	100	WEBE	1210
Canton F-22-d	10	WHBC	1200
Cincinnati G-20-e	100	WFBE	1200
	500	WKRC	550
	50000	WLW	700
	500	WSAI	1330
Cleveland F-22-a	1000	WEAR	1070
	1000	WHK	1390
	500	WJAY	610
	50000	WTAM	1070
Columbus G-21-b	500	WAIU	640
	500	WCAH	1430
	750	WEAO	570
	50	WMAN	1210
Dayton G-21-e	200	WSMK	1380
Hamilton G-20-d	100	WRK	1310
Mansfield F-21	100	WJW	1210
Mount Orab	100	WHBD	1370
Springfield G-21-c	500	WCSO	1450
Steubenville F-22	50	WIBR	1420
Toledo F-21-a	500	WSPD	1240
Youngstown F-22	500	WKBN	570

OKLAHOMA

Alva I-13	100	KGFF	1420
Chickasha J-14-b	250	KOCW	1400
Enid I-14	100	KCRC	1370
Norman J-14-a	500	WNAD	1010
Oklahoma I-14-b	5000	KFJF	1480
	100	KFXR	1310
	100	KGFG	1370
	1000	WKY	900
	500	KGGF	1010
Picher I-15	100	WBBZ	1200
Ponca City I-14	5000	KVOO	1140
Tulsa I-15			

OREGON

Astoria C-1-a	100	KFJI	1370
Corvallis D-1	1000	KOAC	550
Eugene D-1	100	KORE	1420
Marshfield E-1	100	KOOS	1370
Medford E-1	50	KMED	1310
Portland C-1-b	5000	KEX	1180
	100	KFIF	1420
	500	KFJR	1300
	1000	KGW	620
	1000	KOIN	940
	500	KTBR	1300
	15	KVEP	1500
	500	KWJJ	1060
	100	KXL	1420

PENNSYLVANIA

Allentown F-25-c	250	WCBA	1440
	250	WSAN	1440
Altoona F-24-c	100	WFBG	1310
Carbondale F-25	10	WNBW	1200
Elkins Park G-25-c	50	WIBG	930
Erie E-23	30	WEDH	1420
	50	WRAK	1370
Grove City F-23-b	100	WSAJ	1310
Harrisburg F-24-d	500	WBAK	1430
	100	WCOD	1200
	500	WHP	1430
Jeannette G-23	100	WOOP	840
Johnstown F-23-d	100	WJAC	1310
Lancaster G-24-a	15	WGAL	1310
	100	WKJC	1200
Lewisburg F-24-b	100	WJBU	1210
Oil City F-23-a	500	WLBW	1260
Philadelphia G-25-d	10000	WCAU	1170
	100	WELK	1370
	500	WFAN	610
	500	WFI	560
	50	WFKD	1310
	100	WHAT	1310
	500	WIP	610
	500	WLIT	560
	100	WPEN	1500
	250	WRAX	1020
Pittsburgh F-23-c	50000	KDKA	980
	500	KQV	1380
	500	WCAE	1220
	1000	WJAS	1290
Reading F-25-d	100	WRAW	1310
Scranton F-25-a	250	WGBI	880
	250	WQAN	880
State College F-24-a	500	WPSC	1230
Washington F-23	100	WNBO	1200
Wilkes-Barre F-25-b	100	WBAX	1210
	100	WBRE	1310
Wilkinsburg F-23	100	WMBJ	1500

PORTO RICO			
San Juan	500	WKAQ	890
RHODE ISLAND			
Newport F-27	100	WMBA	1500
Pawtucket E-27	100	WPAW	1210
Providence E-27-h	100	WDWF	1210
	250	WEAN	780
	250	WJAR	890
	100	WLSI	1210
SOUTH CAROLINA			
Charleston K-23	75	WBBY	1200
Columbia K-22	500	WGTB	1010
SOUTH DAKOTA			
Brookings D-14	500	KFDY	550
Dell Rapids D-14	50	KGDA	1370
Oldham D-14	15	KGDY	1200
Pierre D-12	200	KGFX	580
Rapid City D-11	100	WCAT	1200
Sioux Falls D-14	2000	KSOO	1110
Vermillion E-14-b	500	KUSD	890
Watertown	100	KGCR	1210
Yankton E-14-a	1000	WNAX	570
TENNESSEE			
Bristol I-22	100	WOPI	1500
Chattanooga J-20	1000	WDOD	1280
Knoxville I-20	50	WFBC	1200
	50	WNBJ	1310
	1000	WNOX	560
Lawrenceburg J-19	500	WOAN	600
Memphis J-18-a	500	WGBC	1430
	100	WHBQ	1370
	500	WMC	780
	500	WNBR	1430
	500	WREC	600
Nashville I-19	5000	WLAC	1470
	5000	WSM	650
	5000	WTNT	1470
Springfield I-19	100	WSIX	1210
Union City I-18	100	WOBT	1310
TEXAS			
Abilene K-13	100	KFYO	1420
Amarillo J-12	1000	KGRS	1410
	250	WDAG	1410
Austin L-14-b	500	KTRH	1120
	100	KUT	1500
Beaumont M-16	500	KFDM	560
Brownsville O-14-b	500	KWWG	1260
Brownwood L-13	100	KGKB	1500
College Sta. M-13	500	WTAW	1120
Corpus Christi N-14	100	KGFI	1500
Dallas L-15-a	10000	KRLD	1040
	5000	WFAA	800
	500	WRR	1280
Dublin K-14	100	KFPL	1310
El Paso L-10	100	KTSM	1310
	100	WDAH	1310
Fort Worth L-14-a	100	KFJZ	1370
	1000	KSAT	1240
	50000	WBAP	800
Galveston M-15-b	100	KFLX	1370
	500	KFUL	1290
Greenville K-15	15	KFPM	1310
Harlingen O-14	500	KRGV	1260
Houston M-15-a	1000	KPRC	920
	100	KTUE	1420
	100	KTLC	1500
San Angelo M-12	100	KGKL	1370
San Antonio M-14-a	100	KGCI	1370
	100	KGRC	1370
	100	KTAP	1420
	1000	KTSA	1290
	5000	WOAI	1190
Waco L-15-b	1000	WACO	1240
Wichita Falls K-14	250	KGKO	570
UTAH			
Ogden F-7-b	100	KLO	1370
Salt Lake City F-7-c	1000	KDYL	1290
	5000	KSL	1130
VERMONT			
Burlington D-26-a	100	WCAX	1200
St. Albans D-26	5	WQDM	1370
Springfield D-26-b	10	WNBX	1200
VIRGINIA			
Arlington G-24-d	1000	NAA	690
Danville I-23	100		1370
Emory	100	WEHC	1370
Lynchburg H-23	100		1370
	500		590
Mt. Vernon Hills	10000	WJSV	1460
Newport News I-24	100	WGH	1310
Norfolk I-24	500	WPOR	780
	500	WTAR	780
Petersburg H-24	100	WLBG	1200
Richmond H-24	100	WBBL	1370
	100	WMBG	1210
	5000	WRVA	1110
Roanoke H-23	250	WDBJ	930
WASHINGTON			
Aberdeen B-1	75	KXRO	1310
Bellingham A-1	100	KVOS	1200
Everett A-2	50	KFBL	1370
Lacey B-2-b	10	KGY	1200
Longview B-1	10	KUJ	1500
Pullman B-4	500	KWSC	1220
Seattle B-2-a	100	KFQW	1420
	5000	KJR	970
	1000	KOL	1270
	15000	KOMO	920
	100	KPCB	1210
	50	KRSC	1120
	1000	KTW	1270
	100	KVL	1370
	500	KXA	570
Spokane A-4	100	KFIO	1230
	1000	KFPY	1340
	5000	KGA	1470
	1000	KHQ	590
Tacoma B-1-a	500	KMO	860
	1000	KVI	760
Wenatchee B-3	50	KPQ	1210
Yakima B-3	100	KIT	1310
WEST VIRGINIA			
Bluefield H-22	100	WHIS	1420
Charleston H-22	250	WOBU	580
Fairmont G-23	250	WMMN	890
Huntington G-22	250	WSAZ	580
Weirton G-22	60	WQBZ	1420
Wheeling G-22	5000	WWVA	1160
WISCONSIN			
Beloit E-18-b	500	WEBW	560
Eau Claire D-17	1000	WTAQ	1330
Fond du Lac D-18-d	100	KFIZ	1420
Green Bay D-19	100	WHBY	1200
Kenosha E-19	100	WCLO	1200
La Crosse E-17	1000	WKBH	1380
Madison E-18-2	750	WHA	940
	100	WIBA	1210
Manitowoc D-19	100	WOMT	1210
Milwaukee E-19-a	250	WHAD	1120
	250	WISN	1120
	1000	WTMJ	620

Poynette D-18-e	100	WIBU	1310
Racine E-19	100	WRJN	1370
Sheboygan C-18	500	WHBL	1410
Stevens Pt. D-18-b	2000	WLBL	900
Superior B-17	1000	WEBC	1290
WYOMING			
Casper	100	KDFN	1210

CANADA

ALBERTA			
Calgary	500	CFAC	690
	500	CFCN	690
	500	CHCA	690
	500	CJCJ	690
	500	CNRC	690
Edmonton	250	CHMA	580
	500	CJCA	580
	500	CKUA	580
	500	CNRE	580
Lethbridge	50	CJOC	1120
Red Deer	1000	CHCT	840
	1000	CKLC	840
	1000	CNRD	840
BRITISH COLUMBIA			
Chilliwack	5	CHWK	1210
Kamloops	15	CFJC	1120
Sea Island	50	CJOR	1030
Vancouver	50	CHLS	730
	50	CKCD	730
	50	CKFC	730
	50	CKMO	730
	100	CKWX	730
	500	CNRV	1030
Victoria	500	CFCT	630
MANITOBA			
Brandon	500	CKX	540
Winnipeg	5000	CKY	780
	5000	CNRW	780
NEW BRUNSWICK			
Fredericton	50	CFNB	1210
Moncton	500	CNRA	630
St. John	50	CFBO	890
NOVA SCOTIA			
Halifax	500	CHNS	930
Louisburg	500	VAS	690
Sydney	50	CJCB	880
Wolfville	50	CKIC	930
ONTARIO			
Chatham	100	CFCO	1210
Cobalt	15	CKMC	1210
Hamilton	10	CHCS	880
	50	CHML	880
	50	CKOC	880
Iroquois Falls	250	CFCH	600
Kingston	500	CFRC	1120
London	500	CJGC	910
	500	CNRL	910
Midland	50	CKPR	1120
Ottawa	100	CKCO	890
	500	CNRO	600
Prescott	50	CFLC	1010
Preston	25	CKPC	1210
Toronto	500	CFCA	840
	500	CFCL	580
	4000	CFRB	960
	500	CJBC	580
	5000	CJBC	690
	1000	CJBC	840
	5000	CJBC	960
	500	CJSC	580
Toronto	500	CKCL	580
	5000	CKGW	690
	500	CKNC	580
	500	CKOW	840
	500	CNRT	840
	5000	CNRX	690
Waterloo	50	CKCR	1010
PRINCE EDWARD ISLAND			
Charlottetown	250	CFCY	960
	30	CHCK	960
Summerside	25	CHGS	1120
QUEBEC			
Montreal	1650	CFCF	1030
	5000	CHYC	730
	5000	CKAC	730
	5000	CNRM	730
Quebec	100	CHRC	880
	22	CKCI	880
	50	CKCV	880
	50	CNRQ	880
St. Hyacinthe	50	CKSH	1010
SASKATCHEWAN			
Fleming	500	CJRW	600
Moose Jaw	500	CJRM	600
Pilot Butte	500	CHWC	960
Regina	500	CFCR	960
	500	CJBR	960
	500	CKCK	960
	500	CNRR	960
Saskatoon	500	CFQC	910
	250	CJHS	910
	500	CNRS	910
Yorkton	500	CJGX	630

HAITI			
Port au Prince	1000	HHK	920
MEXICO			
Chihuahua	250	XFF	920
C. Lerdo, Dgo.	250	XES	1200
Guadalajara, Jal.	101	XEA	1200
Jalapa, Ver.	350	XFC	630
Merida, Yucatan	105	XEY	550
Mexico City	1000	XEB	670
	1000	XEN	730
	500	XEX	920
	50	XFA	540
	2000	XFG	640
	1000	XFI	590
	1000	XFX	910
Monterrey, N. L	1000	XEH	970
Morelia, Mich.	101	XEI	1000
Oaxaca, Oax.	105	XEF	1130
Pueblo, Pue.	101	XEE	960
CUBA			
Caibarien	250	CMHD	920
Cienfuegos	200	CMHA	1150
Colon	300	CMGA	830
Havana	100	CMBC	890
	200	CMBY	610
	100	CMBZ	1030
	500	CMC	840
	150	CMCB	950
	100	CMCE	1100
	250	CMCF	640
	500	CMI	820
	2000	CMK	730
	1000	CMW	600
	500	CMX	920
Marianao	50	CMBW	1030
Tuinucu	500	CMHC	790
COSTA RICA			
San Jose	50	TIX	750

CFAC 690 Calgary, Alta.
CFBO 890 St. John, N. B.
CFCA 840 Toronto, Ont.
CFCF 1030 Montreal, Que.
CFCH 600 Iroq's Falls, Ont.
CFCL 580 Toronto, Ont.
CFCN 690 Calgary, Alta.
CFCO 1210 Chatham, Ont.
CFCR 960 Regina, Sask.
CFCT 630 Victoria, B. C.
CFCY 960 Ch'lottet'n,P.E.I.
CFJC 1120 Kamloops, B. C.
CFLC 1010 Prescott, Ont.
CFNB 1210 Fredericton, N.B.
CFQC 910 Saskatoon, Sask.
CFRB 960 Toronto, Ont.
CFRC 1120 Kingston, Ont.
CHCA 690 Calgary, Alta.
CHCK 960 Ch'lottet'n,P.E.I.
CHCS 880 Hamilton, Ont.
CHCT 840 Red Deer, Alta.
CHGS 1120 Sum'rside, P.E.I.
CHLS 730 Vancouver, B.C.
CHMA 580 Edmonton, Alta.
CHML 880 Hamilton, Ont.
CHNS 930 Halifax, N.S.
CHRC 880 Quebec, Que.
CHWC 960 Pilot Butte, Sask.
CHWK 1210 Chilliwack, B.C.
CHYC 730 Montreal, Que.
CJBC580-840-960 Toronto, Ont.
CJBR 960 Regina, Sask.
CJCA 580 Edmonton, Alta.
CJCB 880 Syndey, N.S.
CJCJ 690 Calgary, Alta.
CJGC 910 London, Ont.
CJGX 630 Yorkton, Sask.
CJHS 910 Saskatoon, Sask.

CJOC 1120 Lethbridge, Alta.
CJOR 1030 Sea Island, B.C.
CJRM 600 Moose Jaw, Sask.
CJRW 600 Fleming, Sask.
CJSC 580 Toronto, Ont.
CKAC 730 Montreal, Que.
CKCD 730 Vancouver, B.C.
CKCI 880 Quebec, Que.
CKCK 960 Regina, Sask.
CKCL 580 Toronto, Ont.
CKCO 890 Ottawa, Ont.
CKCR 1010 Waterloo, Ont.
CKCV 880 Quebec, Que.
CKFC 730 Vancouver, B.C.
CKGW 690 Toronto, Ont.
CKIC 930 Wolfville, N.S.
CKLC 840 Red Deer, Alta.
CKMC 1210 Cobalt, Ont.
CKMO 730 Vancouver, B.C.
CKNC 580 Toronto, Ont.
CKOC 880 Hamilton, Ont.
CKOW 840 Toronto, Ont.
CKPC 1210 Preston, Ont.
CKPR 1120 Midland, Ont.
CKSH 1010 St. H'cinthe, Que.
CKUA 580 Edmonton, Alta.
CKWX 730 Vancouver, B.C.
CKX 540 Brandon, Man.
CKY 780 Winnipeg, Man.
CMBC 890 Havana, Cuba
CMBW 1030 Marianao, Cuba
CMBY 610 Havana, Cuba
CMBZ 1030 Havana, Cuba
CMC 840 Havana, Cuba
CMCB 950 Havana, Cuba
CMCE 1100 Havana, Cuba
CMCF 640 Havana, Cuba
CMGA 830 Colon, Cuba

CMHA 1150 Cienfuegos, Cuba
CMHC 790 Tuinucu, Cuba
CMHD 920 Caibarien, Cuba
CMI 820 Havana, Cuba
CMK 730 Havana, Cuba
CMW 600 Havana, Cuba
CMX 920 Havana, Cuba
CNRA 630 Moncton, N.B.
CNRC 690 Calgary, Alta.
CNRD 840 Red Deer, Alta.
CNRE 580 Edmonton, Alta.
CNRL 910 London, Ont.
CNRM 730 Montreal, Que.
CNRO 600 Ottawa, Ont.
CNRQ 880 Quebec, Que.
CNRR 960 Regina, Sask.
CNRS 910 Saskatoon, Sask.
CNRT 840 Toronto, Ont.
CNRV 1030 Vancouver, B.C.
CNRW 780 Winnipeg, Man.
CNRX 690 Toronto, Ont.
HHK 920 Port au Prince,H.
KBTM 1200 Paragould, Ark.
KCRC 1370 Oklahoma City
KDB 1500 S. Barbara, Cal.
KDFN 1210 Casper, Wyo.
KDKA 980 Pittsburgh, Pa.
KDLR 1210 Devils Lake,N.D.
KDYL 1290 Salt Lake City
KECA 1430 Los Angeles, Cal.
KEJK 710 Los Angeles, Cal.
KELW 780 Burbank, Cal.
KEX 1180 Portland, Ore.
KFAB 770 Lincoln, Nebr.
KFBB 1280 Great Fls., Mont.
KFBK 1310 Sacramento, Cal.
KFBL 1370 Everett, Wash.
KFDM 560 Beaumont, Tex.

KFDY 550
Brookings, S.D.
KFEL 920
Denver, Colo.
KFEQ 680
St. Joseph, Mo.
KFGQ 1310
Boone, Iowa
KFH 1300
Wichita, Kansas
KFHA 1200
Gunnison, Colo.
KFI 640
Los Angeles, Cal.
KFIF 1420
Portland, Ore.
KFIO 1230
Spokane, Wash.
KFIZ 1420
Fond du Lac, Wis.
KFJB 1200
Marshalltown, Ia.
KFJF 1480
Oklahoma City
KFJI 1370
Astoria, Ore.
KFJM 1370
Grd. Forks, N.D.
KFJR 1300
Portland, Ore.
KFJY 1310
Fort Dodge, Ia.
KFJZ 1370
Ft. Worth, Tex.
KFKA 880
Greeley, Colo.
KFKB 1050
Milford, Kansas
KFKU 1220
Lawrence, Kans.
KFKX 1020
Chicago, Ill.
KFLV 1410
Rockford, Ill.
KFLX 1370
Galveston, Tex.
KFMX 1250
N'thfield, Minn.
KFNF 890
Shenandoah, Ia.
KFOB 1210
Lincoln, Nebr.
KFOX 1250
Long Beach, Cal.
KFPL 1310
Dublin, Texas
KFPM 1310
Greenville, Tex.
KFPW 1340
Carterville, Mo.
KFPY 1340
Spokane, Wash.
KFQA 1090
St. Louis, Mo.
KFQD 1230
Anchorage, Alas.
KFQU 1420
Holy City, Cal.
KFQW 1420
Seattle, Wash.
KFQZ 860
Los Angeles, Cal.
KFRC 610
San F'ncisco, Cal.
KFRU 630
Columbia, Mo.
KFSD 600
San Diego, Cal.

KFSG 1120
Los Angeles, Cal.
KFUI 1310
Juneau, Alaska
KFUL 1290
Galveston, Tex.
KFUM 1270
Col. Spgs., Colo.
KFUO 550
St. Louis, Mo.
KFUP 1310
Denver, Colo.
KFVD 1000
Culver City, Cal.
KFVS 1210
Cape Gir'd'u, Mo
KFWB 950
Hollywood, Cal.
KFWF 1200
St. Louis, Mo.
KFWI 930
San F'ncisco, Cal.
KFWM 930
Richmond, Cal.
KFXD 1420
Jerome, Idaho
KFXF 920
Denver, Colo.
KFXJ 1310
Edgewater, Colo.
KFXM 1210
San Ber'd'no, Cal.
KFXR 1310
Oklahoma City
KFXY 1420
Flagstaff, Ariz.
KFYO 1420
Abilene, Texas
KFYR 550
Bismarck, N.D.
KGA 1470
Spokane, Wash.
KGAR 1370
Tucson, Ariz.
KGB 1330
San Diego, Cal.
KGBU 900
Ketchikan, Al'ka.
KGBX 1310
St. Joseph, Mo.
KGBZ 930
York, Nebr.
KGCA 1270
Decorah, Iowa
KGCI 1370
San Ant'nio, Tex.
KGCR 1210
Watertown, S.D.
KGCU 1210
Mandan, N.D.
KGCX 1310
Wolf P't, Mont.
KGDA 1370
Dell Rapids, S.D.
KGDE 1200
Ferg's F'lls, Minn
KGDM 1100
Stockton, Cal.
KGDY 1200
Oldham, S.D.
KGEF 1300
Los Angeles, Cal.
KGEK 1200
Yuma, Colo.
KGER 1360
Long Beach, Cal.
KGEW 1200
Ft. Morgan, Colo.

KGEZ 1310
Kalispell, Mont.
KGFF 1420
Alva, Okla.
KGFG 1370
Oklahoma City
KGFI 1500
C'pus Ch'sti, Tex.
KGFJ 1200
Los Angeles, Cal.
KGFK 1200
Hallock, Minn.
KGFL 1370
Raton, N.M.
KGFW 1310
Ravenna, Nebr.
KGFX 580
Pierre, S.D.
KGGC 1420
San F'ncisco, Cal.
KGGF 1010
Picher, Okla.
KGGM 1230
Alb'q'rque, N.M.
KGHB 1320
Honolulu, T.H.
KGHF 1320
Pueblo, Colo.
KGHG 1310
McGehee, Ark.
KGHI 1200
Little Rock, Ark.
KGHL 950
Billings, Mont.
KGIQ 1320
Twin Falls, Ida.
KGIR 1360
Butte, Mont.
KGIW 1420
Trinidad, Colo.
KGIX 1420
Las Vegas, Nev.
KGJF 890
Little Rock, Ark.
KGKB 1500
Brownwood, Tex.
KGKL 1370
San Angelo, Tex.
KGKO 570
Wichita Flls., Tex
KGKX 1420
Sand Point, Ida.
KGKY 1500
Scottsbluff, Nebr.
KGMB 1300
Honolulu, T. H.
KGMC 1310
Jerome, Ariz.
KGMD 1500
Roswell, N. M.
KGO 790
Oakland, Cal.
KGRC 1370
San Antonio, Tex.
KGRS 1410
Amarillo, Texas
KGU 940
Honolulu, Hawaii
KGW 620
Portland, Ore.
KGY 1200
Lacey, Wash.
KHJ 900
Los Angeles, Cal.
KHQ 590
Spokane, Wash.
KICK 1420
Red Oak, Iowa

KID 1320
Idaho Falls, Ida.
KIDO 1250
Boise, Idaho
KIT 1310
Yakima, Wash.
KJBS 1070
San F'ncisco, Cal.
KJR 970
Seattle, Wash.
KLCN 1290
Blytheville, Ark.
KLO 1370
Ogden, Utah
KLPM 1420
Minot, N. Dak.
KLRA 1390
Little Rock, Ark.
KLS 1440
Oakland, Cal.
KLX 880
Oakland, Cal.
KLZ 560
Denver, Colo.
KMA 930
Shenandoah, Ia.
KMBC 950
Kan. City, Mo.
KMED 1310
Medford, Ore.
KMIC 1120
Inglewood, Cal.
KMJ 1210
Fresno, Cal.
KMMJ 740
Clay Ctr., Nebr.
KMO 860
Tacoma, Wash.
KMOX 1090
St. Louis, Mo.
KMTR 570
Hollywood, Cal.
KNX 1050
Los Angeles, Cal.
KOA 830
Denver, Colo.
KOAC 550
Corvallis, Ore.
KOB 1180
State Coll., N.M.
KOCW 1400
Chickasha, Okla.
KOH 1370
Reno, Nevada
KOIL 1260
Council Bluffs, Ia.
KOIN 940
Portland, Ore.
KOL 1270
Seattle, Wash.
KOMO 920
Seattle, Wash.
KOOS 1370
Marshfield, Ore.
KORE 1420
Eugene, Ore.
KOY 1390
Phoenix, Ariz.
KPCB 1210
Seattle, Wash.
KPJM 1500
Prescott, Ariz.
KPO 680
San F'ncisco, Cal.
KPOF 880
Denver, Colo.
KPPC 1210
Pasadena, Cal.

KPQ 1210
Wenatchee, Wash.
KPRC 920
Houston, Texas
KPSN 1360
Pasadena, Cal.
KQV 1380
Pittsburgh, Pa.
KQW 1010
San Jose, Cal.
KPWF 1490
Westminster, Cal.
KRE 1370
Berkeley, Cal.
KREG 1500
Santa Ana, Cal.
KRGV 1260
Harlingen, Texas
KRLD 1040
Dallas, Texas
KRMD 1310
Shreveport, La.
KRSC 1120
Seattle, Wash.
KSAC 580
Manh'tt'n, Kans.
KSAT 1240
Ft. Worth, Tex.
KSCJ 1330
Sioux City, Ia.
KSD 550
St. Louis, Mo.
KSEI 900
Pocatello, Idaho
KSL 1130
Salt Lake City
KSMR 1200
Santa Maria, Cal.
KSO 1380
Clarinda, Iowa
KSOO 1110
Sioux Falls, S.D.
KSTP 1460
St. Paul, Minn.
KTAB 560
Oakland, Cal.
KTAP 1420
San Antonio, Tex.
KTAR 620
Phoenix, Ariz.
KTBI 1300
Los Angeles, Cal.
KTBR 1300
Portland, Ore.
KTBS 1450
Shreveport, La.
KTHS 1040
Hot Spgs., Ark.
KTLC 1500
Houston, Texas
KTM 780
Los Angeles, Cal.
KTNT 1170
Muscatine, Iowa
KTRH 1120
Austin, Texas
KTSA 1290
San Antonio, Tex.
KTSL 1310
Shreveport, La.
KTSM 1310
El Paso, Texas
KTUE 1420
Houston, Texas
KTW 1270
Seattle, Wash.
KUJ 1500
Longview, Wash.

KUOA 1390
Fayetteville, Ark.
KUSD 890
Vermillion, S.D.
KUT 1500
Austin, Texas
KVEP 1500
Portland, Ore.
KVI 760
Tacoma, Wash.
KVL 1370
Seattle, Wash.
KVOA 1260
Tucson, Arizona
KVOO 1140
Tulsa, Okla.
KVOS 1200
Bellingh'm, Wash.
KWCR 1310
Cedar Rapids, Ia.
KWEA 1210
Shreveport, La.
KWG 1200
Stockton, Cal.
KWJJ 1060
Portland, Ore.
KWK 1350
St. Louis, Mo.
KWKC 1370
Kansas City, Mo.
KWKH 850
Shreveport, La.
KWLC 1270
Decorah, Iowa
KWSC 1220
Pullman, Wash.
KWWG 1260
Brownsville, Tex.
KXA 570
Seattle, Wash.
KXL 1420
Portland, Ore.
KXO 1200
El Centro, Cal.
KXRO 1310
Aberdeen, Wash.
KYA 1230
San F'ncisco, Cal.
KYW 1020
Chicago, Ill.
KZM 1370
Hayward, Cal.
NAA 690
Arlington, Va.
NBA 850
Balboa, C. Z.
TIX 750
San Jose, C. R.
VAS 690
Louisburg, N. S.
WAAF 920
Chicago, Ill.
WAAM 1250
Newark, N. J.
WAAT 1070
Jersey City, N.J.
WAAW 660
Omaha, Nebr.
WABC 860
New York City
WABI 1200
Bangor, Maine
WABZ 1200
New Orleans, La.
WACO 1240
Waco, Texas
WADC 1320
Akron, Ohio

WAGM 1310
Royal Oak, Mich.
WAIU 640
Columbus, Ohio
WAPI 1140
Birmingham, Ala.
WASH 1270
Gr. Rapids, Mich.
WBAA 1400
Lafayette, Ind.
WBAK 1430
Harrisburg, Pa.
WBAL 1060
Baltimore, Md.
WBAP 800
Fort Worth, Tex.
WBAX 1210
Wilkes-Barre, Pa.
WBBC 1400
Brooklyn, N.Y.
WBBL 1370
Richmond, Va.
WBBM 770
Chicago, Ill.
WBBR 1300
Rossville, N.Y.
WBBY 1200
Charleston, S.C
WBBZ 1200
Ponca City, Okla.
WBCM 1410
Bay City, Mic
WBIS 1230
Boston, Mass.
WBMS 1450
Hackensack, N.J.
WBNY 1350
New York City
WBOQ 860
New York City
WBOW 1310
Terre Haute, Ind.
WBRC 930
Birmingham, Ala
WBRE 1310
Wilkes-Barre, Pa.
WBRL 1430
Tilton, N.H.
WBSO 920
Well'l'y H'ls, Mass
WBT 1080
Charlotte, N.C.
WBZ 990
Springfield, Mass.
WBZA 990
Boston, Mass.
WCAC 600
Storrs, Conn.
WCAD 1220
Canton, N.Y.
WCAE 1220
Pittsburgh, Pa.
WCAH 1430
Columbus, Ohio
WCAJ 590
Lincoln, Nebr.
WCAL 1250
Northfield, Minn.
WCAM 1280
Camden, N.J.
WCAO 600
Baltimore, Md.
WCAP 1280
Asbury Pk., N.J.
WCAT 1200
Rapid City, S.D.
WCAU 1170
Philadelphia, Pa.

WCAX 1200
Burlington, Vt.
WCAZ 1070
Carthage, Ill.
WCBA 1440
Allentown, Pa.
WCBD 1080
Zion, Ill.
WCBM 1370
Baltimore, Md.
WCBS 1210
Springfield, Ill.
WCCO 810
Minneap., Minn.
WCDA 1350
New York City
WCFL 970
Chicago, Ill.
WCGU 1400
Coney Is., N.Y.
WCKY 1490
Covington, Ky.
WCLB 1500
Brooklyn, N.Y.
WCLO 1200
Kenosha, Wis.
WCLS 1310
Joliet, Ill.
WCMA 1400
Culver, Ind.
WCOA 1340
Pensacola, Fla.
WCOC 880
Meridian, Miss.
WCOD 1200
Harrisburg, Pa.
WCOH 1210
Yonkers, N.Y.
WCRW 1210
Chicago, Ill.
WCSH 940
Portland, Maine
WCSO 1450
Springfield, Ohio
WDAE 1220
Tampa, Fla.
WDAF 610
Kansas City, Mo.
WDAG 1410
Amarillo, Texas
WDAH 1310
El Paso, Texas
WDAY 940
Fargo, N.D.
WDBJ 930
Roanoke, Va.
WDBO 1120
Orlando, Fla.
WDEL 1120
Wilmington, Del.
WDGY 1180
Minneap., Minn.
WDOD 1280
Chattan'ga, Tenn
WDRC 1330
N. Haven, Conn.
WDSU 1250
New Orleans, La.
WDWF 1210
Providence, R.I.
WDZ 1070
Tuscola, Ill.
WEAF 660
New York City
WEAI 1270
Ithaca, N.Y.
WEAN 780
Providence, R.I.

WEAO 570
Columbus, Ohio
WEAR 1070
Cleveland, Ohio
WEBC 1290
Superior, Wis.
WEBE 1210
Cambridge, Ohio
WEBQ 1210
Harrisburg, Ill.
WEBR 1310
Buffalo, N.Y.
WEBW 560
Beloit, Wis.
WEDC 1210
Chicago, Ill.
WEDH 1420
Erie, Pa.
WEEI 590
Boston, Mass.
WEHC 1370
Emory, Va.
WEHS 1420
Evanston, Ill.
WELK 1370
Philadelphia, Pa.
WEMC 590
Ber'n Spgs., Mich
WENR 870
Chicago, Ill.
WEVD 1300
New York City
WEW 760
St. Louis, Mo.
WFAA 800
Dallas, Texas
WFAN 610
Philadelphia, Pa.
WFBC 1200
Knoxville, Tenn.
WFBE 1200
Cincinnati, Ohio
WFBG 1310
Altoona, Pa.
WFBJ 1370
Coll'geville, Minn.
WFBL 1360
Syracuse, N.Y.
WFBM 1230
Indianapolis, Ind.
WFBR 1270
Baltimore, Md.
WFDF 1310
Flint, Mich.
WFDV 1370
Rome, Ga.
WFDW 1420
Talladega, Ala.
WFI 560
Philadelphia, Pa.
WFIW 940
Hopkinsville, Ky.
WFJC 1450
Akron, Ohio
WFKD 1310
Philadelphia, Pa.
WFLA 620
Clearwater, Fla.
WGAL 1310
Lancaster, Pa.
WGBB 1210
Freeport, N.Y.
WGBC 1430
Memphis, Tenn.
WGBF 630
Evansville, Ind.
WGBI 880
Scranton, Pa.

WGBS 600 New York City
WGCM 1210 Gulfport, Miss.
WGCP 1250 Newark, N.J.
WGES 1360 Chicago, Ill.
WGH 1310 Newp't News,Va.
WGHP 1340 Detroit, Mich.
WGL 1370 Ft. Wayne, Ind.
WGMS 1250 Minneap., Minn.
WGN 720 Chicago, Ill.
WGR 550 Buffalo, N.Y.
WGST 890 Atlanta, Ga.
WGTB 1010 Columbia, S. C.
WGY 790 Schnec'd'y, N.Y.
WHA 940 Madison, Wis.
WHAD 1120 Milwaukee, Wis.
WHAM 1150 Rochester, N.Y.
WHAP 1300 New York City
WHAS 820 Louisville, Ky.
WHAT 1310 Philadelphia, Pa.
WHAZ 1300 Troy, N.Y.
WHB 860 Kansas City,Mo.
WHBC 1200 Canton, Ohio
WHBD 1370 Mt. Orab, O.
WHBF 1210 Rock Island, Ill.
WHBL 1410 Sheboygan, Wis.
WHBQ 1370 Memphis, Tenn.
WHBU 1210 Anderson, Ind.
WHBY 1200 Green Bay, Wis.
WHDF 1370 Calumet, Mich.
WHDH 830 Gloucester, Mass.
WHDI 1180 Minneap., Minn.
WHDL 1420 TupperLake,N.Y.
WHEC 1440 Rochester, N.Y.
WHFC 1420 Cicero, Ill.
WHIS 1420 Bluefield, W.Va.
WHK 1390 Cleveland, Ohio
WHN 1010 New York City
WHO 1000 Des Moines, Ia.
WHP 1430 Harrisburg, Pa.
WIAS 1420 Ottumwa, Iowa
WIBA 1210 Madison, Wis.
WIBG 930 Elkins Park, Pa.
WIBM 1370 Jackson, Mich.
WIBO 560 Chicago, Ill.
WIBR 1420 Steubenville, O.
WIBS 1450 Jersey City, N.J.
WIBU 1310 Poynette, Wis.
WIBW 580 Topeka, Kansas
WIBX 1200 Utica, N.Y.
WICC 1190 Bridgeport, Conn.
WIL 1200 St. Louis, Mo.
WILL 890 Urbana, Ill.
WILM 1420 Wilmington, Del.
WIOD 1300 Miami Bch., Fla.
WIP 610 Philadelphia, Pa.
WISN 1120 Milwaukee, Wis.
WJAC 1310 Johnstown, Pa.
WJAG 1060 Norfolk, Nebr.
WJAK 1310 Marion, Ind.
WJAR 890 Providence, R.I.
WJAS 1290 Pittsburgh, Pa.
WJAX 900 Jacksonville, Fla.
WJAY 610 Cleveland Ohio
WJAZ 1490 Chicago, Ill.
WJBC 1200 La Salle, Ill.
WJBI 1210 Red Bank, N. J.
WJBK 1370 Ypsilanti, Mich.
WJBL 1200 Decatur, Ill.
WJBO 1420 New Orleans, La.
WJBT 770 Chicago, Ill.
WJBU 1210 Lewisburg, Pa.
WJBW 1200 New Orleans, La.
WJBY 1210 Gadsden, Ala.
WJDX 1270 Jackson, Miss.
WJJD 1130 Mooseheart, Ill.
WJKS 1360 Gary, Ind.
WJR 750 Detroit, Mich.
WJSV 1460 Mt. Vern. H'ls,Va
WJW 1210 Mansfield, Ohio
WJZ 760 New York City
WKAQ 890 San Juan, P.R.
WKAR 1040 E. Lansing, Mich.
WKAV 1310 Laconia, N.H.
WKBB 1310 Joliet, Ill.
WKBC 1310 Birmingham, Ala.
WKBF 1400 Indianapolis, Ind.
WKBH 1380 La Crosse, Wis.
WKBI 1420 Chicago, Ill.
WKBN 570 Youngstown, O.
WKBO 1450 Jersey City, N.J.
WKBP 1420 Battle Crk., Mich
WKBQ 1350 New York City
WKBS 1310 Galesburg, Ill.
WKBV 1500 Connersville, Ind.
WKBW 1480 Buffalo, N.Y.
WKBZ 1500 Ludington, Mich.
WKEN 1040 Buffalo, N.Y.
WKJC 1200 Lancaster, Pa.
WKRC 550 Cincinnati, O.
WKY 900 Oklahoma City
WLAC 1470 Nashville, Tenn.
WLAP 1200 Louisville, Ky.
WLB 1250 Minneap., Minn.
WLBC 1310 Muncie, Ind.
WLBF 1420 Kansas City, Ks.
WLBG 1200 Ettrick, Va.
WLBL 900 Stevens Pt., Wis.
WLBW 1260 Oil City, Pa.
WLBX 1500 L.I.City, N.Y.
WLBZ 620 Bangor, Me.
WLCI 1210 Ithaca, N.Y.
WLEX 1410 Lexington, Mass.
WLEY 1370 Lexington, Mass.
WLIT 560 Philadelphia, Pa.

VLOE 1500 Boston, Mass.
VLS 870 Chicago, Ill.
VLSI 1210 Providence, R.I.
VLTH 1400 Brooklyn, N.Y.
VLW 700 Cincinnati, Ohio
VLWL 1100 New York City
VMAC 570 Cazenovia, N.Y.
VMAF 1410 D'rtm'th, Mass.
VMAK 900 Buffalo, N.Y.
VMAL 630 Washington, D.C.
VMAN 1210 Columbus, Ohio
VMAQ 670 Chicago, Ill.
VMAY 1200 St. Louis, Mo.
VMAZ 890 Macon, Ga.
VMBA 1500 Newport, R.I.
VMBC 1420 Detroit, Mich.
VMBD 1440 Peoria Hghts., Ill.
VMBG 1210 Richmond, Va.
VMBH 1420 Joplin, Mo.
VMBI 1080 Chicago, Ill.
VMBJ 1500 Wilkinsburg, Pa.
VMBO 1310 Auburn, N.Y.
VMBQ 1500 Brooklyn, N.Y.
VMBR 1370 Tampa, Fla.
VMC 780 Memphis, Tenn.
VMCA 570 New York City
VMES 1500 Boston, Mass.
VMMN 890 Fairmont, W.Va.
VMPC 1500 Lapeer, Mich
VMRJ 1420 Jamaica, N.Y.
VMSG 1350 New York City
VMT 600 Waterloo, Iowa
VNAC 1230 Boston, Mass.
VNAD 1010 Norman, Okla
VNAX 570 Yankton, S.D.
VNBF 1500 Bingh'mt'n, N.Y.
VNBH 1310 New B'df'd, Mass.
VNBJ 1310 Knoxville, Tenn.

WNBO 1200 Washington, Pa.
WNBR 1430 Memphis, Tenn.
WNBW 1200 Carbondale, Pa.
WNBX 1200 Springfield, Vt.
WNBZ 1290 SaranacL'ke, N.Y.
WNJ 1450 Newark, N.J.
WNOX 560 Knoxville, Tenn.
WNRC 1440 Greensboro, N.C.
WNYC 570 New York City
WOAI 1190 San Antonio, Tex.
WOAN 600 Law'nceb'g, Tenn
WOAX 1280 Trenton, N.J.
WOBT 1310 Union City, Tenn
WOBU 580 Charlest'n, W.Va.
WOC 1000 Davenport, Iowa
WOCL 1210 Jamestown, N.Y.
WODA 1250 Paterson, N.J.
WODX 1410 Mobile, Ala.
WOI 640 Ames, Iowa
WOKO 1440 P'ghkeepsie, N.Y.
WOL 1310 Washington, D.C.
WOMT 1210 Manitowoc, Wis.
WOOD 1270 Gr. Rapids, Mich.
WOOP 840 Jeannette, Pa.
WOPI 1500 Bristol, Tenn.
WOQ 1300 Kansas City, Mo.
WOR 710 Newark, N.J.
WORC 1200 Worcester, Mass.
WORD 1490 Chicago, Ill.
WOS 630 Jeff's'n City, Mo.
WOV 1130 New York City
WOW 590 Omaha, Nebr.
WOWO 1160 Ft. Wayne, Ind.
WPAP 1010 New York City
WPAW 1210 Pawtucket, R.I.
WPCC 560 Chicago, Ill.
WPCH 810 New York City
WPEN 1500 Philadelphia, Pa.

WPG 1100 Atl'ntic City, N.J.
WPOE 1370 Patchogue, N.Y.
WPOR 780 Norfolk, Va.
WPSC 1230 State College, Pa.
WPTF 680 Raleigh, N.C.
WQAM 560 Miami, Fla.
WQAN 880 Scranton, Pa.
WQAO 1010 New York City
WQBC 1360 Utica, Miss.
WQBZ 1420 Weirton, W.Va.
WQDM 1370 St. Albans, Vt.
WRAF 1200 La Porte, Ind.
WRAK 1370 Erie, Pa.
WRAW 1310 Reading, Pa.
WRAX 1010 Philadelphia, Pa.
WRBI 1310 Tifton, Ga.
WRBJ 1370 Hattiesburg, Miss.
WRBL 1200 Columbus, Ga.
WRBQ 1210 Greenville, Miss.
WRBT 1370 Wilmington, N.C.
WRBU 1210 Gastonia, N.C.
WRC 950 Washington, D.C.
WREC 600 Memphis, Tenn.
WREN 1220 Lawrence, Kans.
WRHM 1250 Minneap., Minn.
WRJN 1370 Racine, Wis.
WRK 1310 Hamilton, Ohio
WRNY 1010 New York City
WRR 1280 Dallas, Texas
WRUF 830 Gainesville, Fla.
WRVA 1110 Richmond, Va.
WSAI 1330 Cincinnati, Ohio
WSAJ 1310 Grove City, Pa.
WSAN 1440 Allentown, Pa.
WSAR 1450 Fall River, Mass.
WSAZ 580 Hunt'gton, W.Va.
WSB 740 Atlanta, Ga.
WSBC 1210 Chicago, Ill.
WSBT 1230 South Bend, Ind.

WSFA 1410 Montgomery, Ala
WSGH 1400 Brooklyn, N.Y.
WSIX 1210 Springfield, Tenn.
WSJS 1310 Winst.-Sal., N.C.
WSM 650 Nashville, Tenn.
WSMB 1320 New Orleans, La.
WSMK 1380 Dayton, Ohio
WSOA 1490 Chicago, Ill.
WSPD 1240 Toledo, Ohio
WSSH 1410 Boston, Mass.
WSUI 880 Iowa City, Ia.
WSUN 620 St. Petersb'g, Fla.
WSVS 1370 Buffalo, N.Y.
WSYR 570 Syracuse, N.Y.
WTAD 1440 Quincy, Ill.
WTAG 580 Worcester, Mass.
WTAM 1070 Cleveland, Ohio
WTAQ 1330 Eau Claire, Wis.
WTAR 780 Norfolk, Va.
WTAW 1120 College Sta., Tex.
WTAX 1210 Streator, Ill.
WTBO 1420 Cumberland, Md.
WTFI 1450 Toccoa, Ga.
WTIC 1060 Hartford, Conn.
WTMJ 620 Milwaukee, Wis.
WTNT 1490 Nashville, Tenn.
WTOC 1260 Savannah, Ga.
WWAE 1200 Hammond, Ind.
WWJ 920 Detroit, Mich.
WWL 850 New Orleans, La.
WWNC 570 Asheville, N.C.
WWRL 1500 Woodside, N.Y.
WWVA 1160 Wheeling, W.Va.
XEA 1200 Guadalajara, Jal.
XEB 670 Mexico City
XEE 960 Pueblo, Pue.
XEF 1130 Oaxaca, Oax.
XEH 970 Monterey, N.L.
XEI 1000 Morelia, Mich.
XEN 730 Mexico City
XES 1200 C. Lerdo, Dgo.
XEX 920 Mexico City
XEY 550 Merida, Yucatan
XFA 540 Mexico City
XFC 630 Jalapa, Ver.
XFF 920 Chihuahua, Chih.
XFG 640 Mexico City
XFI 590 Mexico City
XFX 910 Mexico City

The Short Wave Stations

Call	*Station*	*Owner*	*City and State*	*Meters*	*Watts*
W1XAA	**WRAH**	Stanley N. Read	Providence, R. I.		75
W1XAB	**WCSH**	Congress Square Hotel Co.	Portland, Maine	63.79	250
W1XAE	**WBZ**	Westinghouse Elec. & Mfg. Co.	Springfield, Mass.	70.0	
W1XAF	**WEEI**	Edison Elec. Illuminating Co.	Boston, Mass.		
W1XAG		Edison Elec. Illuminating Co.	Boston, Mass.		
W1XY	**WBRL**	Booth Radio Laboratories	Tilton, N. H.	105-109	250
W2XA	**WRMU**	Yacht, "MU-1" Grebe Co.	New York		
W2XAC	**WGY**	General Electric Co.	Schenectady, N. Y.		
W2XAD	**WGY**	General Electric Co.	Schenectady, N. Y.	19.56	
W2XAE	**WGY**	General Electric Co.	Schenectady, N. Y.		
W2XAF	**WGY**	General Electric Co.	Schenectady, N. Y.	31.48	
W2XAG	**WGY**	General Electric Co.	Schenectady, N. Y.		
W2XAH	**WGY**	General Electric Co.	Schenectady, N. Y.		
W2XAK	**WGY**	General Electric Co.	Schenectady, N. Y.		
W2XAL	**WRNY**	Aviation Radio Station, Inc.	New York	49.67	500
W2XAO		Atlantic Broadcasting Co.	New York	105.9	100
W2XAQ	**WOR**	L. Bamberger Co.	Newark, N. J.	65.4	50
W2XAW	**WGY**	General Electric Co.	Schenectady, N. Y.		
W2XBA	**WAAM**	WAAM, Inc.	Newark, N. J.	65.18	50
W2XBH	**WCGU**	Chas. G. Ungar	Coney Island, N. Y.	54.02	150
W2XBR	**WBNY**	Baruchrome Corp.	New York City	49.83	
W2XCD		DeForest Radio Co.	Passiac, N. J.	187.30	
W2XE	**WABC**	Atlantic Broadcasting Co.	Richmond Hill, N. Y.	49.02	50
W2XZ		National Broadcasting Co.	Bellmore, L. I.	49.15	50000
W3XAU	**WCAU**	Universal Broadcasting Co.	Philadelphia, Pa.	49.50	
W3XK		C. Francis Jenkins Labs.	Washington, D. C.		
W3XL	**WJZ**	Radio Corp. of America	Bound Brook, N. J.	59.96	30000
W3XN		Bell Telephone Laboratory	Whippany, N. J.		
W4XD	**WSM**	Nat'l Life & Accident Ins. Co.	Memphis, Tenn.	31.43	
W4XE		William Justice Lee	Winter Park, Fla.	200.	250
W6XA	**KNX**	Los Angeles Express	Los Angeles, Cal.	107.1	100
W6XAD	**KFWO**	Lawrence Mott	Avalon, Cal.	53.07	100
W6XAF	**KNRC**	Clarence B. Juneau	Santa Monica, Cal.	108.2	100
W6XAI	**KGGM**	Los Angeles Radio Club	Los Angeles, Cal.	66.04	50
W6XAK	**KFWH**	F. W. Morse	Chico, Cal.	108.2	50
W6XAL	**KFQZ**	L. E. Taft	Hollywood, Cal.	66.04	50
W6XAN	**KRLO**	Freeman Lang	Los Angeles, Cal.	105.9	250
W6XAR	**KJBS**	J. Brunton & Sons	San Francisco, Cal.	32.	50
W6XAU	**KHJ**	Times-Mirror Co.	Los Angeles, Cal.	104.1	50
W6XAX	**KGO**	General Electric Co.	Oakland, Cal.	10-40	10000
W6XAZ		Nelson Radio Co.	San Diego, Cal.	106.	50

W6XBA	KFSG	Air-Fan Radio Corp.	Los Angeles, Cal.	108.2	
W6XBE	KFBC	W. K. Azbill	San Diego, Cal.		
W6XBH	KFQU	W. E. Riker	Holy City, Cal.	31-106	
W6XBR	KFWB	Warner Bros. Picture Studio	Los Angeles, Cal.	40-105	
W6XBV	KGER	C. Merwin Dobyns	Long Beach, Cal.	48.86	
W6XBX	KFVD	McWhinnie Electric Co.	Venice, Cal.	105.	5
W6XN	KGO	General Electric Co.	Oakland, Cal.	23.35	10000
W7XAB	KFPY	Symons Investment Co.	Spokane, Wash.	105.9	
W7XAO	KWJJ	Wilbur Jerman, Inc.	Portland, Ore.	53-54	100
W7XC	KJR	Northwest Radio Service	Seattle, Wash.	105.2	
W7XO	KJR	Northwest Radio Service	Seattle, Wash.		
W8XAC	WHAM	Stromberg-Carlson Tel. Mfg. Co.	Rochester, N. Y.	49.50	500
W8XAL	WLW	Crosley Radio Corp.	Cincinnati, Ohio	32.	75
W8XOA	WJR	WJR, Inc.	Detroit, Mich.	66.04	500
W8XF	WHK	Radio Air Service Corp.	Cleveland, Ohio	54.02	250
W8XJ	WEAO	Ohio State University	Columbus, Ohio	25.25	40000
W8XK	KDKA	Westinghouse Elec. & Mfg. Co.	Pittsburgh, Pa.	10-150	500
W8XP	KDKA	Westinghouse Elec. & Mfg. Co.	Pittsburgh, Pa.	62.57	
W8XS	KDKA	Westinghouse Elec. & Mfg. Co.	Pittsburgh, Pa.	49.34	
W9XAA	WCFL	Federation of Labor	Chicago, Ill.	105.	50
W9XAB	WNAL	R. J. Rockwell	Omaha, Nebr.	49.83	
W9XF	WENR	Great Lakes Broadcasting Co.	Chicago, Ill.	61.06	500
W9XU	KOIL	Mona Motor Oil Co.	Council Bluffs, Iowa		

February Changes

(*Continued from page 18*)

an old station, but the Commission makes no report regarding it.

Joseph Stokes, of Pittsburgh, Pa., reports a station WGM at Jeannette, Pa., alternating every Sunday with WOOP. Radio Commission makes no report. C. M. Falconer, of Baltimore, Md., and others, report hearing a station with call letters WBAE. No such station is listed in government reports. Could it be WDAE, at Tampa, Fla.?

And who and where is KUKU?

We have just received notice that 18 stations will have their frequencies changed on March 2nd. These changes will be made in each index but they will be received too late to specify them here. Some fourteen other changes affecting important stations on cleared waves are contemplated. Watch the April issue for this reallocation.

On December 2nd, the Commission sent us a report that they had that day granted the following applications of broadcasting stations: KOMO, Seattle given full time on 970 kcs., KJR, Seattle put on 760 kcs., and KVI, Tacoma, Wash., given full time on 920 kcs Naturally we made these changes in the January issue only to receive a number of letters from our readers protesting the stations were still being received on their old frequencies. One subscriber sends in a letter from KJR stating that they are still on 970, where they have been since 1927. We are taking the statement of the stations and putting them back in their former frequencies in this issue.

It is our ambition to make RADEX not only the most interesting and the most helpful publication of its kind, but to keep it up to the moment and accurate always. Readers can assist us greatly by notifying us promptly of any station that is received contrary to its listing in RADEX. But please make sure you have the last issue. We can then check such reports with the stations concerned and make sure they are entered in the index according to the changes they are actually using.

Pity the Poor Editor

THE final authority in radio is the Federal Radio Commission. Presumably stations make no changes of any kind without its sanction. In a desperate effort to make this magazine 100 per cent correct, we study every report emanating from the Commission and check their records by comparison with the United States Daily, a valuable newspaper devoted entirely to the business of state and national governments. But what is a poor editor to do when he cannot rely on the reports of the Commission?

FAVORITE PROGRAMS

Station	Dials	Feature	Time

DAILY

SUNDAY

MONDAY

TUESDAY

WEDNESDAY

THURSDAY

FRIDAY

SATURDAY

W2XE		
W2XZ		
W3XAU	WJZ	
W3XK		
W3XL		Radio Corporation of America
W3XN		Bell Telephone Laboratories
W4XD	WSM	Nat'l Life & Accident Ins. Co.
W4XE		William Justice Lee
W6XA	KNX	Los Angeles Express
W6XAD	KFWO	Lawrence Mott
W6XAF	KNRC	Clarence B. Juneau
W6XAI	KGGM	Los Angeles Radio Club
W6XAK	KFWH	F. W. Morse
W6XAL	KFQZ	L. E. Taft
W6XAN	KRLO	Freeman Lang
W6XAR	KJBS	J. Brunton & Sons
W6XAU	KHJ	Times-Mirror Co.
W6XAX	KGO	General Electric Co.
W6XAZ		Nelson Radio Co.