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RADIO THEORY MODERN PRACTICE

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What DOES 1932 OFFER in Radio

NTEREST in modern radio receivers is aroused anew each year with the coming of the winter season. Christmas is in the offing, and this is a time when manufacturers present their latest models to the public. While there are many new sets to choose from this fall, it must be said that the recent New York Radio World's Fair exhibited few sets with outstanding features in circuit design. The 1932 trend seems almost generally to be toward functional development and improvement, and practically every radio manufacturer has returned to the incomparable superheterodyne circuit. The new tubes, of course, make their first debut in combination.

Short waves are receiving much attention from set builders. International radio is the demand of the 1932 radio fan. Television is to many the black magic of the hour, and it holds the fascination of impatient thousands. Receivers with built-in short wave sets, and some with television apparatus, have appeared on the market. Short-wave adapters of efficient operation may be bought, and several all-wave sets for hroadcast and short-wave reception are being offered.



Atwater Kent model 82. This is a popular midget superheterodyne set using the variable-mu and pentode tubes with tone control and quick vision dial. The a.c. model sells for \$\$9.80, and the d.c. 2-volt model with "air-cell" battery sells for \$\$4.80.

Survey by B. FRANCIS DASHIELL

Midget receivers, and even a number of super-midgets of few tubes, abound. The latter are of the three and four-tube types, and are suitable only for local and short distance reception. They will fill, however, a certain 1932 demand for low-priced and supplementary sets. Even superheterodyne midgets with as few as



Pilot "All Wave." This is another 11 tube superheterodyne receiver for all waves from 11 to 550 meters in length. There are no coils to change or plug in as a small switch throws quickly from wave length to wave length. It is priced at \$99.50 for the table model which resembles somewhat the standard midget set.

five tubes are shown at reasonable prices. The widespread development of the pentode tube has given new impetus to the midget industry. The variable-mu tube is increasing the popularity and selectivity of practically all the new sets of 1932.

D. C. Sets Returning

Recent years seemed definitely to end the reign of the battery set. Rural demand, as well as an oft-expressed desire for quiet "d.x." reception, has brought about the revival of the direct current cabinet sets. This has been made possible by the development of a 1000-hour "aircell" battery, as well as the new twovolt tubes in screen-grid and pentode styles. The family automobile has not been neglected for one may procure automotive sets using the new six-volt d.c. tubes.

The 1932 receivers are encased in cabinets mostly constructed of wellfinished walnut. Power units and shielding are improved, while the radio set chassis is more rugged. The -80 type tube is universally used for d.c. rectification. Considerable novelty is shown in small table-like sets that have built-in aerials and grounds and which may be



Zenith de-luxe model with automatic or selftuning device. This is a 14-tube superheterodyne receiver with an automatic arrangement which will turn on selected stations and shut them off as soon as finished. Only the pressing of a button sets this self-tuning device in operation. Sells for \$2:0.00.

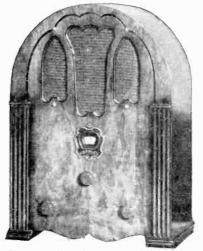
moved easily about. Some sets are combined in a grandfather clock case and require little floor space.

Prices for 1932 are in keeping with the present times. Never before in the history of radio has quality been so high, efficiency so remarkable, and receivers so enduring. Tubes last longer than ever, and, consequently, makers have been overproducing in the mistaken belief that replacements would be made rather frequently. Receivers are often equipped with factory matched sets of tubes. The average cost of a full-size console cabinet super-heterodyne receiver is less than \$75, while midgets are less than \$40. There are luxurious sets having built-in short-wave converters, self-tuning devices, and combination short-wave and television apparatus, which sell for \$200 and more.

It is obvious that every model offered for 1932 cannot be listed herewith. A selected few of those sets which are likely to have a wide appeal in 1932 are briefly analyzed for the readers of RADEX.

Combined broadcast and short-wave receivers with built-in television apparatus are newly offered. They will receive voice and picture broadcasts simultaneously on two different wave lengths. The Baird model sells for \$300, and the Empire State model is similarly priced. The Jenkins Television Corporation is about to offer a short-wave receiver and television machine combined which will sell for slightly more than \$100. Experimental television kits may be had from \$20 and up.

Automobile radios are offered by several makers. There is the Philco "Transitone" which uses seven tubes, including the pentode, and has a steering wheel control. It sells for \$100. The Crosley "Roamio" model 92 has six tubes and sells for \$92. The Majestic



Crosley model "Litlfella." Another midget superheterodyne using five tubes. Sells complete for \$36.36.

"Motor" set with seven tubes and superheterodyne circuit uses the new -38 6-volt d.c. pentode, and sells complete for \$87.00.



Lyric model S-7. This is a 7-tube superheterodyne midget receiver using two -35 tubes, one -27, two -24s, and one -47 pentode. It has a spot light tuning beam of light that moves with the dial pointer to show quickly the station wanted. Complete with tubes for \$69.50.

Stewart-Warner offers a new portable console receiver with self-contained aeria, and ground. It may be plugged in anywhere about the home. It has a full-size superheterodyne circuit with tone control and television terminals. Combined also with a short-wave receiver for world-wide reception. Easily moved about on its small rubber-tired wheels. Sells complete for \$90.75.

Stewart-Warner has a short-wave converter. It is a complete short-wave unit in an attractive midget style cabinet. The set will adapt practically any a.e. radio set, including superheterodynes, to short-wave reception. It is easily attached to the antenna connection of the radio receiver without removing tubes. There is single dial control, and the converter sells complete for \$23.95.

Silver-Marshall model 726 SW. This is a combination superheterodyne receiver covering a range from 10 to 550 meters. It contains 11 tubes. One is a --27 broadcast-wave oscillator; one a 27 short-wave oscillator; one -24 first detector for short waves, and one for long waves; three --355 for intermediate radio frequency; one -27 second detector for all waves; two --47 pentodes in pushpull; and one --80 for rectified d.c. voltages. This set sells complete for \$139.50.

RCA-Victor model "Radiolette." This is a supersmall midget using a tuned radio frequency circuit and four tubes in all. The set is best used for reception from local and strong nearby stations not over 200 miles distant. It uses the new pentode a.e. tube and sells complete for \$37.50.

Fada model 53. This is a Fada quality 7-tube superheterodyne receiver in a full-size console cabinet. It has the new multi-mu and pentode tubes. Priced complete at \$89.50.

RADIO

ThAT No. 1 mathematical puzzle in October attracted much comment. Several readers took us to task for giving them what they termed a "bum start" in our "If A plus B equals C" hint and decided the problem could not be solved from that beginning. We will admit that this was not intended to be the most helpful suggestion possible but nevertheless the problem could have been solved by following that premise to its conclusion. A number of contestants arrived at a sort of a solution by letting 2 equal both F and A. These were incorrect.

In the November contest, No. 1 is described as being not difficult but a lot of work. This would have been a sticker had we not given the frequencies as clues.

The No. 1 puzzle for November was solved in the following manner:

	WGA.L.
.K. P. PC WIB.X. .X.E.T.Y. .C.N.R.R .W.X.Y.Z C.M.G. H K.P.CB W.LB.G .X.E.F.A. W.M.P.C. .KD.B.	
WIB.X. .X.E.T.Y .C.N.R.R. .W.X.Y.Z C.M.G.H. K.P.CB W.L.B.G .X.E.F.A. W.M.P.C. .KD.B.	
.X.E.T.Y. .C.N.R.R. .W.X.Y.Z C.M.G.H. K.P.CB W.L.B.G X.E.F.A. W.M.P.C. .KD.B.	
.C.N.R.R. .W.X.Y.Z C.M.G.H. K.P.CB W.L.B.G .X.E.F.A. W.M.P.C. .KD.B.	
	X.E.T.Y
CM.GH. K.P.CB W.LB.G .X.E.F.A. W.M.P.C .KD.B	
K.P.CB W.LB.G .X.E.F.A. W.M.P.C .KD.B	W.XYZ
WLB.G .X.EF.A W.M.P.C .KD.B	CM.GH.
WLB.G .X.EF.A W.M.P.C .KD.B	K.P.CB
.X.E.F.A. W.M.P.C .KD.B	W L B.G
.KD.B	.X.E. F.A.
.KD.B	W.M.P.C
	KD.B.
	K.GBX
WHB.Q	
.W.J.W.	.W.J.W.

The missing letter in No. 2 was F. Inserting 18 F's gives the following calls: KFJF-XFFKFNF-CFCF-KFH-WFI-

KGFF-WFDF-KFWF-KFXF.

In No. 3, the calls Manuel Miller found in the word "kilowatts" were KLS-KOA -KOIL -KOL -KTAT -KLO -KIT-KTSA -KTSL -KTW -KSL -KSO -WIS-WIAS-WIL-WLIT -WLS -WOAI -WOI -WOL-WOS- and WSAI.

December Puzzles

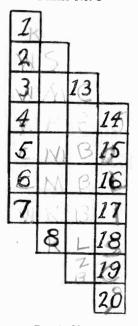
For this month we have a cleverly arranged puzzle designed by Earl R. Roberts, 712 South 9th St., Cambridge, Ohio. If anyone thinks it is easy to

PROBLEMS

invent a puzzle of this kind, let him try to fill these squares with calls of his own. Following are the descriptions of the calls used by Mr. Roberts:

Diagonal

- 1-14 Shares time with a Wisconsin Station.
- 2-15 A 100-watter on 1500.
- 3-16 On 249.9 meters.
- 4-17 In Illinois.
- 5-18 Havana, Cuba.
- 6-19 2,600 miles from 5-18.
- 7-20 Recently moved to another city. Horizontal
- 3-13 An NBC outlet.
- 4-14 Ten watts in the South. 5-15 Deleted last month.
- 6-16 In Cuba.
- 7-17 Shares time with another 100-watter in the same town. 8-18 A daytime in California.
 - Puzzle No. 1



Puzzle No. 2

In the following letter from one of our readers are hidden the calls for a number of stations, reading them either left to right or reversed. Can you find them all?

"I own a Crowley Lowboy, FK-17-A, and we bring in Washington OK. It has a whistle that is most vexing which cannot be tuned out. I cannot explain this. At times it

works well. What will remedy our trouble? We want your advice. We have your RADEX and your new map. Please save our set for us."

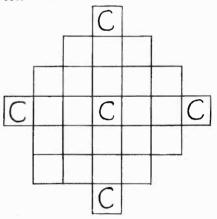
Mr. J. C. Korecky.

Wilmington, Del.

The calls are all found in the Index by Frequencies. Send a list of those you find

Puzzle No. 3

T. J. Johnson, Drawer E, Bowlegs, Okla., is the designer of this puzzle of the five C's. He suggested that no help other than the outline be given, but we fear that would be too difficult. No call is to be used twice and neither vertical nor horizontal calls are to be reversed. In order to make this puzzle somewhat easier, we are giving below the frequencies on which the stations used will be found: 920-860-1390-1400-880-990-960 -1210 -730 -1030 -1180 -1000 -890 -590 -660



Get the correct answer to these three problems to us by December 20th and receive as a reward either the map of North America or a copy of the January RADEX. Subscriptions of successful contestants will be extended one issue when requested.

A little girl sat on top of a picket fence singing at the top of her young voice to the "Blue Devils of France" marching by, and became "The Songbird of the South." Read the story of Kate Smith in the January RADEX.

DIALS AND DIFFICULTIES

Answers by B. FRANCIS DASHIELL

Troublesome Volume Control

I have a Bremer-Tully No. 6 receiver and the volume control cannot be moved far without losing the station or causing distortion. Where may I obtain a copy of this circuit?

The volume control used on your set is a 500,000 ohms rheostat in series with the "B" 90-volt connection and the plates of the first three —26 r.f. tubes. Perhaps the control needs replacing since it seems not to operate the "B" voltage on the tubes. Write to the Bremer-Tully Company, Technical Service Division, Muskegon, Mich., for a circuit diagram.

Variable-Mu Tube Replacements

Is there any advantage in changing my Philco Baby Grand Model 20 superhetrodyne receiver over to the new -35 tubes? Where can I get a wiring diagram of this set?

This set now uses three -24 screen grid tubes with a dual acting volume control that governs signal input and the first and second tube grid bias voltages. To change this set over to the -35 variable-mu tubes would be a difficult task and hardly worth the trouble. However, a set of adapters, such as manufactured by the Alden Company, can be placed in the sockets before inserting the new -35 tubes. A volume control is fitted to the cable connecting the adapters and replaces the present control. Such replacement involves wiring changes because of the difference between the two controls. A wiring diagram may be obtained from the makers, Philadelphia Storage Battery Co., Ontario and C Streets, Philadelphia, Pa.

Light-Socket Antenna

My Atwater Kent model 75 receiver has not worked well since my electric light socket antenna plug became shorted. The volume control got very hot. I had the set tested by a service man but it does not work well.

These antenna devices are apt to cause

trouble if they become short-circuited. It is obvious that a heavy flow of current passed through the antenna-ground and volume control circuit of your receiver. Perhaps some wire or soldered connection was loosened, or the heat damaged the control. It is suggested that the



General Motors model 219. Built in an early English occasional table style with self-contained aerial. It can easily be moved to any location that is near a floor plug. This receiver is a superheterodyne employing seven tubes, and features a tone selector. It sells to \$79.50.

service man make a thorough continuity test with his analyzing machine and locate the seat of short circuit or broken connection within the set.

How's My Antenna?

My antenna is 30 feet high at the house end and only 15 feet at the extreme end. The lead-in comes off the high end, and the full length is 60 feet. The ground is a 5-foot length of rod driven in the ground and surrounded by salt. What do you think of these essentials?

There is an old-fashioned belief that an antenna lead-in wire should come off the lower end and not the higher. We doubt whether it makes any difference in your case. We feel, however, that you will lose some sharpness of tuning because of the length of antenna, and it ought to be reduced to not more than 40 feet. You might raise the low end to the same height as the house end.

But, your ground! Why drive a rod down into a bed of salt? If you have an interior water pipe line make the connection to that, by all means, for water pipes run for miles beneath the ground and afford the best possible connection. If pipes are not available, make a ground of three lengths of new three-quarterinch pipe driven down six feet or more into moist earth, each about five feet apart. Connect with bare copper wire. well soldered, or bolted to the top of each pipe. Water may be poured down into the open tops of the pipes to moisten the earth beneath and make a better ground.

—25 Versus —35 Tubes

I wish to change my R.C.A. model 80 set over from -24s to -35s if feasible. Do you think the adapters now offered the public will be satisfactory? Is there some easier way of changing to the new-35 tubes?

It is suggested that you procure one of the new adapters now on the market used to replace the -24 tubes with variable-mu -35s. This adapter outfit has a new volume control which can be used on your set in the place of the old control as it is necessary to obtain a variation of the grid bias which ranges from 3 to 50 volts. Remove the -24tubes from the sockets — not the detector — and place an adapter in each socket. Then insert the new -35 tubes and the set is ready to use.

Receiver Tunes Broadly

I own a model 50 Steinite receiver that tunes much too broadly. Why is this? Also, how can I change a 5-tube battery set over to screen-grid tubes?

This make of receiver uses a variometer radio-frequency input tuning device which is not always as selective as a set might be. But we feel that your trouble is exceptionally bothersome. Perhaps you have too much antenna, and, if so, we suggest you cut it down to about 30 feet in length, exclusive of lead-in wires. Or you can try a .00025 mfd. fixed condenser in series with the antenna and the receiver terminal the "S" post, or short terminal. This should increase the selectivity considerably. You do not say what make of 5-tube battery set you wish to change to screengrid tubes. But if from —01A tubes to —22s, the task is difficult, as the primaries of the radio-frequency coils must be replaced with windings of greater inductance. Also, rewiring of the sockets, together with a new, flexible grid lead for each tube, will be necessary, not to mention fixed condensers, increased "B" battery voltage, and other items. We doubt whether the change will prove worth-while, for screen-grid circuits must be designed for certain specific tubes.

All Waves on -35s.

How can I change my Scott All-Wave receiver from -24 to -35 variable-mu tubes? Are major changes necessary, and if not please tell me what to do in the way of wiring?

Yours is a complicated receiver using a superheterodyne circuit in which the -24 tubes play the part of first detectors and intermediate radio stage amplifiers. These tubes function in different ways and require certain grid bias, plate voltages, etc. For these reasons it seems to us to be rather impracticable to attempt the change; the wiring would be too complicated, and the gain in selectivity would be slight — very slight in



Westinghouse model WR-15. This 9-tube superheterodyne set is in a novel setting. It has an automatic volume control and makes use of the variable-mu and pentode tubes. It is a grandfather's clock which is electrically operated and radio set combined. It sells complete for \$125.00.

[7]

this particular set. We are confident that the makers of the set would strongly advise against such a change.

Roaring Sounds

My Atwater Kent model 55 cuts on and off at times and is accompanied with a roaring sound. Sometimes touching the antenna terminal stops the roar. How can I remedy the trouble?

It is likely that one of the two -45 tubes in the push-pull audio amplifier fails properly to operate. Examine to see whether they fit snugly in the sockets. Perhaps some other tube is defective; all should be tested, especially the -27 detector. Filter condensers may be defective, or the -80 rectifier tube may not fit its socket perfectly. There may be a loose connection in the volume control and associated resistor unit. The radio frequency circuit, and antenna coil, should be closely examined for open or loose connections.

Steinite Wiring Diagram

I have a Steinite set numbered 87286. It will stop and start right in the midst of a program. Service men say they need a diagram. Where can I procure one?

You have given the serial number of your set and not the model number and



This is Hildegarde, a young German singer, who has been touring the nation on the R KO vaudeville circuit. NBC is arranging to present her on several programs in the near future.

we cannot identify the set among the several models manufactured. Your trouble may be due to looseness in connections to the last audio amplifying tubes. Other than that we feel that a loose wire is present in the set. Have all the tubes tested carefully for performance. A wiring diagram may be had from the makers, who should be able to identify the serial number, if you address the Steinite Manufacturing Company, Fort Wayne, Indiana.

Poor Selectivity and Tone

My Zenith model 34P was overhauled but still does not work perfectly. My antenna is 50 feet of 7-strand wire, and the set tunes broadly. Should I change to shielded wire? Will a small condenser cut down the hum of my set? How can I improve the tone of the set, as well as its range?

We think that your aerial should be cut down to about 30 feet in length, and it may be an advantage to use the shielded lead-in cable between the antenna and the set, provided it is well grounded. A small .00025 mfd. fixed condenser can be connected between the antenna wire and the center connection plug socket of the antenna coil in the set which will sharpen the tuning considerably.

Additional condensers in the power supply are not likely to reduce hum for that circuit has been balanced and designed by the makers. A service test of the parts in the power circuit might show some defects that cause an increased hum.

The tone might be improved by using a pentode -47 tube in place of the -10now in use. All that is necessary is an adapter that can be purchased at any supply place. Nothing can be done to increase the range of a set except to make it more selective and sensitive by providing good tubes and working conditions.

More Pentodes

I have a Radiola model 17 receiver and I think that if I use the -47 pentode in place of the -71A I will get better volume.

The change can not be made unless a new socket is placed in the set or an adapter, such as the Alden, is used. But (Continued on page 29)

BACK OF THE STUDIO SCENES By "Betty"

ERALDED as the truly different radio act, "Myrt and Marge," the backstage story of two girls of the chorus, made its debut over the Columbia network Monday, November 2nd. This series was conceived and written by Myrtle Vail, who plays the role of "Myrt," the worldly-wise veteran of a thousand curtain calls. The part of "Marge," the unsophisticated one who gets her break in the big-time chorus is played by Donna Damerel. Both Miss Vail and Miss Damerel formerly appeared on the stage, but face the "mike" for the first time on this program, which is sponsored by the William Wrigley Jr. Company. It is said that Miss Vail while listening one evening to a story over the air, decided she could write her experiences and make them more interesting than the story she had just heard. Without much delay she wrote a series of her chorus-girl experiences, but then the problem was to whom could she sell them. Just then her eves chanced to fall on a stick of gum, and before long she found herself, trembling, but determined, in Mr. Wrigley's office asking for an interview. The result? A contract was signed, it is rumored, which runs into seven figures. The tragi-comic realistic story of "Myrt and Marge" may be heard every evening except Saturday and Sunday, over the eastern network, from 7:00 to 7:15 E.S.T., and over the Pacific coast network from 1045 to 11:00 p.m., E.S.T.

He Helps Kate

Jack Miller, Columbia's latest "find," with the rich baritone, is heard three times weekly, Tuesday, Thursday and Saturday, at 11 p.m., E.S.T. His theme song, "When the Stars Come Peepin' Through," was written by him the day before his first night broadcast. He is Kate Smith's pianist and arranger; has played for all her broadcasts and stage appearances since January, and is prouder of her success than his own mounting popularity. He is 5 feet, seven



Show business provides the setting for "Myrt ond Marge." "Myrt" (left) is Myrtle Vail, while "Marge" is Donna Damerel.

inches, and weighs 155 pounds. Was born in Dorchester, Mass., 29 years ago. Never took a piano lesson in his life, nor a singing lesson. Didn't know he could vocalize until six years ago. He was working in a Boston music publishing house when an SOS call came for him to fill in on a local broadcasting station, Believing that a half-hour of piano would be monotonous for listeners, he started to sing. He was an instantaneous hit. Engagements with several prominent orchestras followed. He organized his own orchestra in 1928. Was featured at a fashionable Cape Cod dining rendezvous. He picked up his knowledge of orchestral and vocal arrangements in the music house of Boston. Two years ago he played at the State Theatre, in that city, as soloist, orchestra leaders and master-of-ceremonies. He remained one year by popular demand. Last January, Ted Collins, whom he had met in New York through recording work with his band, introduced him to Kate Smith. He was promptly assigned as her official accompanist. Even when she is

accompanied by an orchestra, he is at the piano. Jack is a blond, prefers brown clothes, likes sports, reads detective stories, sleeps nine hours, and says "My ambition is to become a radio artist."

"She Stops the Show"

Mildred Bailey, youthful "blues" singer, was born in Spokane, Wash. At the Edgewater Beach Hotel, where she has been singing with Paul Whiteman's orchestra. Miss Bailey has been a sensation. Petite, dynamic and possessed of a voice of deep power, the western girl has captivated the middle west with her music. When Mildred's school days were over, she landed a job in a Seattle music store. That was much to her liking. Her voice caused people to buy music, many customers came again and again, if not to make purchases, at least to hear Mildred sing the latest tunes of the day in her inimitable manner. Then came a chance to work in Vancouver. She bobbed up at a fashionable club and was soon causing near-riots with her song interpretations. Then to Chicago, where Paul Whiteman heard her deep voice. Unique singing style just matches the rhythm of Whiteman's dance music. There is no better way of describing the effect this new star achieves than by saying "she stops the show." Mildred is five feet, two inches, and weighs 100 pounds: has hazel eyes and black hair: listens to the radio for diversion: owns several chow dogs; sends photographs to her radio admirers and manages to save something out of every pay envelope. She may be heard each Monday and Wednesday over the NBC-WJZ network from 12 midnight to 12:15 a.m., E.S.T.

Mrs. Mills' Four Boys

Have you heard the Mills Brothers? The four young negroes who had been waiting patiently in the reception room of the Columbia Broadcasting System were finally admitted to the office of Ralph Wonders, director of the Artists Bureau. They said they were the Mills Brothers. They said they sang. Wonders, who has his share of unannounced visitors, played a hunch and arranged an immediate audition. The brothers sang only one number. Wonders rushed them into the private office of Wm. S. Paley. President. "With your permission, Mr. Paley," Wonders said, "I'd like you to hear the Mills Brothers." With that brief introduction he signalled to the somewhat startled boys to sing. They did, and so delighted was the executive with their unique vocal renditions that he sent word to Wonders to have them continued. And for more than an hour the four went from one song to another. Three days later they were scheduled for their first broadcast. There was no advance ballyhoo; not a line of print, other than the bare program listing, heralding their network debut. They went on the air "cold," but as soon as their fifteen-minute broadcast was over, the telephone switchboard was flooded with calls from listeners. "Who are they?" . . . "What kind of instruments do they use?" . . . "How do they make themselves sound like an orchestra? ' ' "When can I hear them again?" Their success was immediate, and the four youths were a bit bewildered. They really are brothers. John. 21: Herbert. 19: Harry, 18; and Donald, 17. All the boys were born and raised in Piqua, Ohio, and began singing together when John was but 13, performing for stray pennies and nickels. Then their father set them up as entertainers in his barber shop. hoping to keep the boys off the street. They finally graduated to the local opera house. Last year they moved to Cincinnati, where they immediately won a place on the schedule of a local radio station. When it was suggested that they make a bid for the "big time" broadcasting in New York, they were a bit dubious as to how they would be received, but they finally agreed to go for a try-out if their mother would accompany them. She consented, and to New York they came, they sang, they conquered. Listen-in any Tuesday, Thursday or Saturday evening from 8:00-8:15 E.S.T.

Are you listening to that delightful series of intimate scenes from the lives of "The Goldbergs?" Their story will be in the February RADEX.

CAN I USE the VARIABLE-MU?

Here's How by MR. DASHIELL

MANY readers have called upon us for information relative to the substitution of new variable-mu (--35) tubes for the older (--24) screengrid tubes. As there is a considerable haze of misinformation surrounding the true qualifications of the new --35 tubes, we feel it should be cleared away as much as possible.

The -24 is simply a screen-grid tube with a cathode heater. The new --35 is the same but it shows improvement over the -24 when used only in new circuits especially designed for it. The -24 tube has done well in its place in receivers offered to the radio public up to now. There is no advantage in replacing it by the variable-mu -35 tube in older circuits. There might be a slight tendency toward a gain of better selectivity - there will be no increase in sensitivity. Changes in tubes call for rather radical changes in wiring in the set. Of course, the -35 may be used in place of a -24 simply by inserting it in the socket, but the results will be decidedly discouraging. Such practice is not recommended.

The new tubes take practically the same plate voltage, plate current, screen voltage, socket connections, etc., as the -24s. The positive screen-grid voltage for the -24 is obtained from a device connected to the "B" supply so as to give a variable supply ranging from 0 to 75 volts. This device, or potentiometer, provides a suitable method of volume control. The -35 tube requires a maximum of 90 volts on the screengrid. And its volume is not controlled by variations in the potential of the screen, as is the case with the -24. but by a change in the control-grid (top cap connection) or "C" bias. This negative current varies from -3 to -50 volts, with signal intensity decreasing steadily as the higher negative bias is reached. In the -24 tube this bias usually remains constant at -1.5 volts.

When the -35 tube is used to replace

a -24 it becomes necessary to make some changes in wiring, essentially that of supplying the proper grid or "C" bias for the easy control of volume over a large range of signal voltages. Thus the local-distance switch or antenna potentiometer in the receiver can be discarded. When it is realized that there are about 22 different kinds of volume controls, it can be seen that the chances of having a set with a circuit suitable for changing to the -35 tubes are very remote.

A device known as a variable-mu or -35 adapter has been developed. It consists of several sockets or adapters that fit the regular UY sockets after the -24 tubes have been removed. The -35s are then inserted. A wire connects all adapters to a new volume control which replaces the old control. A loose wire attached to the new control should be grounded to the frame of the chassis. A RADEX reader reported that this change in his Radiola 80 gave excellent results. But care must be exercised in changing with adapters to make sure the old control wiring is so arranged that the change can be made.



Amiable originators of "Jake and Lena," Gene Carroll (left) and Glenn Rowell have signed a long term contract with Quaker Oats for a continuation of their daily broadcasts over the NBC network.

ACROSS the NATION with a Portable By RAYMOND M. BELL



URING the past summer the writer made a motor trip from Pennsylvania to California and return; getting into 23 states, as far north as Idaho and as far south as Texas. A six-tube superheterodyne portable receiver (Radiola 26) with loop aerial was taken along and used daily. A special study was made of daylight reception along the route. Weather and topographical conditions may have played some part, but the results give a fairly reliable cross-section of reception across the country. In all cases, except where stated, reception took place during the davtime.

The start was made from southeastern Pennsylvania where New York, Baltimore and Washington provided the best reception. At night the principal stations east of the Mississippi River could be tuned in. In western Pennsylvania KDKA, WTAM and WLW were heard best, while in north central Ohio WJR replaced KDKA in the above trio. Near Chicago in addition to the many locals WLW and WTMJ were logged. In central Illinois Chicago stations were still the standbys; in addition some other midwest stations were heard with ease.

Farther west, in central Iowa, WMT provided the CBS programs, and a number of other stations in Iowa and surrounding states gave dependable reception. At Omaha besides the locals KFAB, WNAX and WREN were easily tuned in. KFAB, WOW AND KMMJ were mainstays in central Nebraska. There KOA, WENR, WLW and WFAA were loudest at night. In western Nebraska for the first time the number of daylight stations was limited. Only the two Denver chain stations, KOA and KLZ, could be heard. At night it was different for KFI, WLW and many in between were logged with good volume. KWKH came in from the south. In Cheyenne and central Wyoming, Denver provided reception during the day. Western Wyoming was about the only section across the country where nothing could be logged in daytime on the portable, although as the sun was setting KFI, WFAA and KOA were all heard well with the same NBC program from New York. It is interesting to note that the same programs can be heard the whole way across the country because of the networks.

In central Idaho KTFI was heard best. At night all the Rocky Mountain and Pacific Coast stations were logged, with KFI and KNX loudest. Stations as far east as WLW were heard. Down in Ogden, Utah, KLO and the Salt Lake stations were locals. At night stations were heard north to KHQ, east to KOA, south to KTAR, and west to KFI. KFI became the dependable daylight station in southern Nevada. In Los Angeles only locals were heard, although the networks brought programs from all over the world. Many excellent broadcasts were available.

Heading east, Arizona brought KFI and KTAR in best. In Albuquerque, New Mexico, KGGM, the local, was heard. Near the Texas line only WFAA could be heard during the day. At night stations from KFI to WLW were tuned in, with WFAA, WOAI and KOA loudest. In northern Texas, WFAA was best by far, with KGKO and KGRS loud also. Near Oklahoma City besides the locals WFAA and KVOO were heard; and in eastern Oklahoma KVOO, WFAA, WDAF and WIBW were dependable.

In the midst of the Ozarks KMOX was the star performer, while a day later in Kentucky, on the banks of the Ohio, WSM and KSD occupied the stage. At the latter place stations from WJZ to WFAA were heard after darkness had fallen. Near Nashville WSM and WLAC were always available. At night Memphis was among the many cities heard well.



Father and Mother are discussing "Raising Junior." In real life they are Mr. and Mrs. Peter Dison. Daily, except Wednesday, 6:00-6:15 p.m. EST., NBC-WJZ network.

Fifteen miles from WSM an interesting test was made. Although WSM was on 650 keys., KFI 640 keys. and WEAF 660 kcys., were tuned in on an August evening with good speaker volume. The portable easily brought in another western station, KOA, although WHAS was only 10 kcys. away. Crossing the Tennessee mountains, near the Virginia-Tennessee line, WLW was loud day and night, with WHAS and KDKA also coming in well at night. Back in Pennsylvania KFI was tuned in on the portable;

The Month's Changes

- Power Hamilton, Ont., 500 to 100. London, Ont., 500 to 5000. 630 CKOC 910 CNRL
- WBZA 990 Boston, 15,000 to 25,000.
- KFSG 1120 Los Angeles, 500 to 400.
- WOCL 1210
- Jamestown, N. Y., 25 to 50. Yakima, Wash., 50 to 100. 1310 KIT
- WSAI 1330 Cincinnati, Ohio, 500 to 1000.
- 1340CMCY Havana, Cuba, 15 to 100.

Locations

- 1310 KTSL Shreveport, La., to Laurel, Miss. WTFI Toccao, Ga., to Athens, Ga.
- 1450

Owners

- 670 WMAQ Chicago, Ill., to National Broadcasting Co. 1180 WGBS New York, N. Y., to American Radio News
- Corp.
- 1200 KGHI Little Rock, Ark., to O. A. Cook. 1210 WHBU Anderson, Ind., to Anderson Brdestg. Corp 1310 KFJY Ft. Dodge, Iowa, to Cedar Rapids Broad-
- cast Co. 1310
- 1320
- WMBO Auburn, N. Y., to WMBO, Inc. WSMB New Orleans, La., to WSMB, Inc. KWK St. Louis, Mo., to Thomas Patrick, Inc. 1350
- 1430
- WHP Harrisburg, Pa., to Harrisburg Telegraph WTAD Quiney, Ill., to Illinois Brdestg. Corp. 1440
- 1500 KUT Austin, Texas, to KUT Broadcasting Co.

Permit to Move

- 900 WLBL
- Stevens Point, Wis., to Ellis, Wis. State College, N. M., to Albuquerque, 1180 KOB N. M.
- 1200 KSMR Santa Maria, Calif., to Bakersfield, Calif. Chains 970
 - KJR Seattle, Wash., new NBC
- 180 KEX Portland, Ore., new NBC.
 1380 WKBH LaCrosse, Wis., CBS out.
 1470 KGA Spokane, Wash., new NBC.

Frequencies

570	WPCH	New York City, from 810.
630	CHCS	Hamilton, Ont., from 1010.
690	CNRX	Toronto, Ont., from 960.
840	CPRY	Toronto, Ont., from 690.
915	CFLC	Prescott, Ont., from 930.
960	CFCL	Toronto, Ont., from 580.
960	CKCL	Toronto, Ont., from 580.
960	CHCK	Charlottetown, PEL, from 1010
1110	XEH	Monterrey, N. L., from 1132.
1120	CNRT	Toronto, Ont., from 840.
1350	KIDO	Boise, Idaho, from 1250.
		Calls
1180	WGBS	
		New York, N. Y., to WINS (?)
1310	KTSL	Laurel, Miss., to WTSL.
		Deletions
690	CHCA	Calgary, Alta.
690	CNRC	Calgary, Alta.
840	CHCT	Red Deer, Alta.
1010	ITTO ITTO	Trock about, milder,

1210 WDWF Providence, R. I.

Ollie Ross, the famous DXer, whose story appeared in the June issue of this magazine, is now traveling throughout the world. He is testing reception conditions in many countries, particularly of American stations. His first story, written for RADEX, will appear in the January issue.

providing the best long distance reception of the trip.

There are possibilities for interesting conditions of reception with a portable. (Continued on page 18)

LIFE in THOMPKINS' CORNERS

Oak Park, Illinois.

Dear RADEX:

Last night's Chicago Daily News carried an item of news that interested me, and I am sure must have interested countless fans who visit Thompkins' Corners each Monday night with "Real Folks." It was the announcement that Elsie Mae Gordon, who is "Maybelle" with Hank Simmon's Show Boat, stars as "Sneed" with Real Folks.

What interests me and would probably interest many, many radio listeners is, who is the author of these Chesebrough incidents and who are these men and women who so cleverly take the parts of Mayor and Mrs. Thompkins, Elmer, Sneed (such lovable boy characters), Mrs. Jones, the Judge, Mrs. Watts, the Italian, the Swede, the school-teacher, and all the rest who seem real friends visiting us weekly. Could you not tell us about them in RADEX?

Yours truly, (Miss) C.A.B.

So here is the story of "Real Folks."

Twelve years ago George Frame Brown came back from the war, a discharged "Yank" with an identification tag and no job. He tramped the streets of New York as a hungry architect seeking work.

Brown since has built an imaginary town, put people into it, and has gained

Matt and Martha and Elmer and Sneed

fame and fortune under one of the best known aliases in America. He is known to millions as Mayor Matt Thompkins of Thompkins Corners, U.S.A.

Matt Thompkins and his town comprise the central figure and locale of the popular "Real Folks" sketch heard weekly over a National Broadcasting Company network. More than one million fans have written letters to "Thompkins Corners," its folks have been on the air more than three years and are heard from coast to coast.

Brown, who quit drawing lines to speak them, creates the dramalogue and portrays the main character and other roles. He heads the cast of a half-dozen NBC players who pose as the people and even pets of a whole village.

Their activities, ranging from church socials and lodge meetings to weddings and baseball games, have become the concern of countless listeners across the country. Brown presents Thompkins Corners as a typical community of the U.S.A. and molds the character of Matt as "a genuine American and ideal citizen."

He is supported by Edwin M. Whitney (Bill Perkins, village cut-up and



Left: Scene in WJZ studio any Monday night, 10:30-11:00. Left to right: Elsie Mae Gordon, Tommy Brown, George Frame Brown, Virginia Farmer, Edwin Whitney and Phoebe Mackay.

Right: Mayor Matt Thompkins and Martha, his wife, otherwise George Frame Brown and Virginia Farmer. "Prince," the dog), Virginia Farmer (mayor Matt's wife, Martha, and "Grandma" Overbrook), Tommy Brown (Elmer Thompkins' nephew, age 14), Elsie Mae Gordon (Bessie Stevens, village gossip and Sneed Yager, 15, Elmer's pal), Underhill Macy (Tony the Wop and Fred Tibbets, the barber), Phoebe Mackay (Effie Watts, the cockney boarding house keeper).

Brown has built his sketch on the observation that most American communities are cosmopolitan miniatures of the country's big cities. It has therefore, a universal appeal.

Brown and his "Real Folks" did not jump into fame over night. His readjustment after the war was not without struggle.

"After hitting New York on my own, following my return from France, I had to do everything to ward off starvation," Brown recalled, "Any kind of work and welcome. When there wasn't work, I went hungry, I shudder when I see them in the breadlines now. It was only a few years, but — oh well, it's a story common with many.

Through chance I made a Broadway revue as a monologist. I had some success "kidding" radio programs. The revue was broadcast and I learned I had the proper voice. From then on I had all the radio work I could handle."



George Frame Brown at work on "Real Folks" for next Monday night.

Brown was born in Seattle, Wash., thirty-five years ago, the son of southern parents. He grew up fly-fishing and hunting in the mountains, was studying architecture when war broke out, studied at Beaux Arts at the close.

"My father lost his business through extending credit as a wholesale grocer. He is fundamentally a Matt Thompkins, the kindest and most honest man I've known. He kept a real store and it failed. I run an imaginary store and make money. He can't get over that."

The life of Brown typifies the varied



background of his fellow actors. Edwin Whitney adventured through the Spanish-American war after college years. He was a farmer, book agent, laundryman, paperhanger, cowboy and bicycle racer before he toured the Chautauqua circuits with a quartet. He later turned to production and radio where he has had versatile success.

"Real Folks" became an NBC coastto-coast feature this fall with 154th performance.

[15]

How Ted Husing Caught the Football Plays

A MECHANICAL device, through the use of which Ted Husing can determine almost without fail the player or players taking part in every play during a football game, has been perfected by Husing and John E. Norton, master control engineer of the Columbia Broadcasting System, and is now being used by the sports announcer in each of his football broadcasts.

The apparatus is in the form of mechanisms contained in two box-like appliances, with top panels on each keyed to the field order of two football teams. One of the boxes has a series of twentytwo buttons for transmitting signals, the other box has twenty-two corresponding light spaces for receiving the signals. By pressing the proper buttons on the one panel an observer communicates to Husing's receiving panel a detailed enumeration by name and position of the particular players on both contending teams participating in the plays.

The whole apparatus is an answer to a long-felt need for some device whereby Husing could determine at a distance, and particularly in the difficult weather that so often obtains for football contests, the details of the swift moves down the field. On a muddy field, particularly,

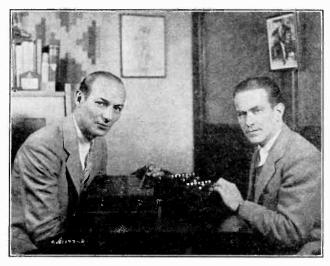
Interesting Electrical Device Used

it was difficult for Husing to see exactly what intricate plays were being made in swift sequence.

The sending part of the device, with its button for each of the players on the teams, is operated by a well-placed observer whose duty it is to watch through strong field glasses with the one object of determining the participants in the play.

This observer is either within hearing distance of Husing's voice as he talks into his microphone, or else is equipped with earphones connected into the microphone circuit. As he listens to the sports announcer's verbal continuity he is able to supply at once, by illuminating the lights in the proper positions on Husing's receiving panel, the names of the players wanted.

For instance, Husing is observing and reporting the sequence of a certain Harvard play. "Barry Wood received the ball," he might say, "and made a short pass to . . . Schereschewsky." In the almost imperceptible pause the observer would have flashed him the required name on the panel.



If you've wondered how Ted Husing manages to watch football games and report them so accurately, read the story.

The receiving panel is, of course, the more interesting of the two. There are twenty-two oblong pieces of translucent glass set into the panel, and arranged in the field order of two football teams. That is, taking one team for example, there are seven pieces arranged on a line to denote the position of left end, left tackle, left guard, center, right guard, right tackle, and right end. On the second line one piece stands alone for quarterback. Behind and to the right and left of this piece are two pieces denoting right halfback and left halfback. And finally, alone in the rear, a piece for the fullback.

Beneath each piece of glass is an electric bulb, carefully screened SO that the bulb when lighted shines only through the one piece of glass immediately above it. Thus when the observer operating the sending instrument, wants to report to Husing that the Harvard quarterback, for instance, received the ball from center and passed it to the right halfback who made a run around the opposing team's right end and was tackled by the opposing team's fullback, he transmits to Husing's panel in the proper order and the lights beneath those positions flash in a corresponding sequence.

The glass pieces on the receiving panel have a ground surface. Husing, at the beginning of the game, writes in pencil on each piece the names of the players. As substitutions are made he merely erases the name on the ground glass, and writes in the new names — a quick and easily done job.

The sets are operated by self-contained dry cell batteries, and are equipped with extra bulbs that can be quickly substituted for any lamps that may burn out beneath the names.

"I want a leatherette cover so I can find my RADEX when I want it," writes one good reader. This is only one of the many advantages of keeping your RADEX in one of the beautiful new slip covers.

Replacing 45's with Pentodes

THE -47 tube may be substituted for -45 power tubes in some few circuits only. Its real ability is shown in circuits especially designed for its use. The pentode may also replace -71 power tubes in battery sets by the use of the new -38. An adapter is available which permits the changes to be made. A twin adapter for use in pushpull combinations is used for both -45s and -38s.

The replacement of -45s by -47s in output stages is not recommended, except in a few cases. The pentode, as explained in the descriptive article about that tube in the October RADEX should be used directly following the detector tube, for it is fed through the output of a single audio-stage working from the plate of the detector. When a receiver has a stage of audio-amplification with a single tube between the detector and push-pull transformer or single output tube, the pentode should not be used. There will be entirely too much input signal voltage, and the results will be poor and frequently dangerous to the output circuit and speaker. Replacements under these conditions are not recommended by manufacturers nor in these columns.

Pentode tubes have their proper place in new circuits. There they operate efficiently and with marked success. But they can seldom be placed in old circuits, for there are very few sets of older make able to feed the output tube (-45)directly from the detector. Not sufficient power can be created in these cases, but the -47 tube is capable of making up the deficiency.

The pentode may be used if the first audio-tube and stage is removed so that the pentode input transformer receives its initial signal voltage directly from the plate of the detector. Otherwise it is a waste of effort and expense to substitute a pentode for other power tubes. Most circuits have been designed for certain power tubes — the output transformers, speaker windings, etc., have all been matched to suit the particular tube characteristics. Any radical changes may result in serious loss of tone and other desirable qualities.

The Alden Products Company, 715 Center Street, Brockton, Mass., are makers of adapters for —47 and —35 tubes in old sets. They are well-known as the makers of many socket devices, and will advise whether their adapters can be used in your old set, and furnish appropriate instructions.

Commission Swings Axe

T begins to look as though a longsuffering public were to have a little I relief. This magazine has received hundreds of protests from readers whose radio enjoyment was being ruined due to scores of stations trying to wedge in on a few points of their dials. In the present congested condition of the ether lanes, it is impossible to build a set so selective that there will not be interference, with its consequent squealing and grumbling, at many points on the dial. The Radio Commission has been altogether too lenient in permitting the existence of stations which ought never to have been born and which have not a single reason to continue their unnecessary lives. The radio law specifically states that stations exist solely for "the public interest, convenience or necessity." Measured with this yard-stick, scores of stations would be found to be about half an inch long.

Last month after lengthy hearings during which the merits of the three stations were fully presented and considered, the Commission ordered stations WIBO and WPCC, both of Chicago, off the air in the interest of station WJKS, Gary, Ind. A little later similar proceedings resulted in an order to discontinue stations WNJ, Newark, and WKBO, Jersey City, in favor of WHOM, Jersey City. Now comes the news that four more stations have been convicted of lack of merit in "public interest, convenience and necessity."

WCHI, Chicago, and WJAZ, Chicago, sharing time with WCKY, Covington, Ky., on 1490 kcys. and all having 5000 watts power, are ordered off the air in favor of the last-named Kentucky station. WIBR, Steubenville, Ohio, and WMBA, Newport, R. I., are eliminated for violating regulations and alleged failure to serve the public interest.

These decisions of the Commission must now run the gauntlet of the Federal courts, but since its legal victories over Dr. John R. Brinkley, the Commission backbone has been considerably stiffened. Congress undoubtedly intended the Commission to have complete powers over the existence of broadcasting stations. True, it would be regrettable if stations were ordered off the air with consequent loss of investment, indiscriminately. but the Commission can set high standards of conduct and then swing the axe unmercifully upon those stations which fail or refuse to live up to the required standard. In this way stations can be eliminated solely because of their own faults and the air will be made safe for the public ear.

Across the Country with Portable (Continued on page 13)

Just a few might be named: camping in an Ohio farm orchard — the landing of Post and Gatty in New York; among the Indiana sand tunes, along Lake Michigan — a band playing in Poznan, Poland; among the Wyoming Rockies — Amos 'n' Andy, the same as ever; in the downtown district of Los Angeles — a broadcast from New York; among the palms of southern California — a musical program from London; on the rim of the Grand Canyon — music from KFI; back in Pennsylvania — a talk by Lindbergh, from Tokyo.

A summary of observations may be interesting. The best reception was provided by KFI, WLW and WFAA, with good speaker volume up to 300 miles in davtime and 1000 miles at night. KOA and most of the other 50 kw. transmitters were dependable within smaller ranges. Although all kinds of country and different weather conditions were encountered, reception was excellent for the most part with very little static. Nearly all of the principal U.S. stations were tuned in. Clear channels and high power were important factors. More of these will do much to improve further radio reception throughout the country.

The Newspaper's Side

On behalf of the harassed newspaper editors, G. R. Johnston, Night Editor of the Jackson Citizen Patriot, Jackson, Mich., writes us as follows:

"Will you please print the newspaper side of the question raised by E. O. Cutler, in the October issue, regarding the omission of the names of the sponsors of radio programs?

"If you could see the thousands of letters and so-called 'news items' which yearly flood newspaper offices with requests and sometimes demands for free publicity, you would not feel so strongly that it is 'small potatoes' for the papers to omit the names of sponsors. If those same sponsors would be fair in their allotment of advertising to the newspapers, there would be a different face on the matter, but most of them feel that they can somehow worm space out of newspapers without a cent of cost, while at the same time their advertising budget provides funds only for radio or magazine advertisements. Newspapers thrive on advertising, just as does the radio and similarly, the magazines. Therefore, when the advertiser takes away the revenue of the paper and awards it to competitors, why should he expect the newspapers to continue to boost his products by giving him free publicity. It's only a measure of selfdefense, as evidenced by the flagrant examples I'm enclosing. Please observe the marked opinion of Marlen Pew, who points out that from 15 to 40 per cent more real news can be given readers by cutting out free publicity.

"If the newspapers continued to publish 'news,' so-called, about the radio sponsors and their products, and the sponsors continued to place their paid advertising elsewhere, there would soon be no newspapers to publish their programs in!

"This newspaper realizes the reader-interest in what is going on in the radio world, and uses the Associated Press condensed compilation, sent us daily. We do not delete sponsors' names if they are inluded, but obviously, we do not feel compelled to put them in. So we often get letters from manufacturers asking why we do not mention 'Rosenblatt's Soap Flake Orchestra,' or 'Solly's Mange Cure Trio,' etc.''

This magazine, too, receives hundreds of requests for free publicity from sponsors of radio programs and their advertising agents. These necessarily all go into the waste basket. It was not to such that we referred in our article in the October number. We referred to the use of sponsors' names when the programs were definitely known by such names. We believe that a newspaper's first duty is to its readers and not to its advertisers or its prospective advertisers. To make things inconvenient or confusing for its readers merely to avoid mentioning some concern's name without getting paid for it, is, we think, a "small potatoes" type of journalism.

Many listeners like and look for, the "True Story" programs. To designate them by the names of the players means just nothing at all. They might better be carried in the radio column merely as "Dialogue." But we think that real journalism consists in giving readers the information they want regardless of whom it helps or hurts.

The Filtered Aerial

Although the antenna is one of the most important parts of radio, this is the first improvement we have seen in aerial wires. It is built on the transformer principle of amplifying signals. A straight inner wire is grounded at either or both ends. Around this is an enameled wire, spirally wound, which goes to set or lead-in. The theory is an excellent one.

Tough on His Game

Golfer (to players ahead): "Pardon me, gentlemen, but would you mind if I played through? I have just heard that my wife has been rushed to the hospital for an operation."—Safe Worker.

The RADEX RADIO CLUB

Many Topics of Interest

THE RADEX family is undoubtedly the greatest radio club in existence and many readers write us of their keen enjoyment of the monthly meetings of the club conducted by the Editor in each issue of this magazine. It really is a fine thing, when you stop to think of it, that hundreds of us can sit down together as we do and talk over the matters in which we are so greatly interested. Radio is an ever-changing art. Although it seems to have reached high peaks, we will undoubtedly look back in twenty vears to the radio of today and smile at its crudeness. Perhaps from the mind of one of our readers may come an idea that will advance the art. That boy over there tinkering with his set may be the Edison of the future. What a wonderful hobby it is.

We open the meeting this month by talking a little shop.

We have received so many letters asking "Will a phone adapter work on my set?" that we give the following explanation: The phone adapter consists of a cord with a connector at one end and a socket-plug at the other. The metal tips of the phone cords are inserted in the connector. The last tube in the set (the power tube) is removed from its socket and the socket-plug is put in its place. The socket-plug has four prongs and therefore can be used only in place of tubes which have four prongs. such as the 245. If there are two 245s in push-pull both tubes are removed from the sockets and the plug or adapter put in either one. This takes the signal off for the phones before it passes through the last or loud-speaker stage, otherwise the volume would be unbearable. The ordinary phone-adapter cannot be used in screen-grid tube sockets as these tubes have five prongs. If your set uses screengrid tubes in the last stage, it will be necessary to get an extra adapter with five prongs. This extra adapter is used between the phone-plug and the socket. Some owners have trouble deciding which tube is the last or power tube. The last stage is the one from which the cords go to the speaker or the opposite end of the set from the antenna. On most sets this is at the right end looking at the set from the back.

Locals Hog Dials

Daniel C. Looby, 141 West Seymour St., Philadelphia, Pa., certainly has his troubles. "At 1:00 a.m. yesterday," he writes, "WCAU covered from 1120 kcs. to 1300 kcs, on my set. WTEL with only 100 watts, covered twelve channels on their test yesterday morning. WCAU's transmitter is about eight miles away and WTEL's about six. WCAU will soon operate with 50,000 watts and, if I don't do something soon, I guess WCAU will be the only station I'll be able to get." About the only relief we can suggest is a good wave trap. Perhaps some other readers in similar locations can give Mr. Looby the benefit of their experience. He has a Philco eight-tube set with a single wire aerial 100 feet long and a 50-foot lead-in. Cutting down the length of the aerial would help some, but would reduce the strength of all his signals. Mr. Looby also experiences a crackling between 1110 and 1310 kcs. which is undoubtedly caused by some electrical interference near him.

Too Much Aerial

Max Plung, 1425 Coney Island Ave., Brooklyn, N. Y., submits his experience with aerials: "I find that the higher the aerial the better. An aerial 150 feet long and about 50 to 100 feet high is just as good and maybe better than a 300-foot aerial lower down. I now have a 120-foot aerial which drops from a 100-foot apartment house to about 35 feet at the leadin. I find this is the best aerial I have ever used. I also have an aerial copied after the one used by the Naval Station at the Brooklyn Navy Yard. It consists of five separate wires all coming to a point at either end of the aerial. The wires are held apart by passing through holes in two six-foot pieces of wood. I find that this aerial is an ideal one for reception on the crowded bands but it hasn't as much volume as the other aerial. Here is an odd thing: When I use both aerials at once, the volume is decreased which goes to prove that the more wire one uses, doesn't mean more volume."

XER Makes a Mess

The new XER at Villa Acuna continues to interest our readers, many of whom are now receiving it regularly. A. H. Abernethy, Daytona Beach, Fla., sends us a letter he has received from the station from which we glean the following: "We were first licensed to operate on 665 kcs. but 735 is a clear channel and we were fortunate enough to obtain that frequency, which is the one we are now operating on definitely. XER is owned and operated by the Villa Acuna Broadcasting Co., Inc., Villa Acuna, Coahuila, Mexico, with studios located at Villa Acuna, Mexico, and in the Roswell Hotel, Del Rio, Texas." Mr. Abernathy adds: "XER is certainly messing up WSB with us. What will happen when WSB gets its fifty kilowatts?" XER was licensed to use 100,000 watts but as it seems to be using 75,000 we are changing our data accordingly.

Those Modest Announcers

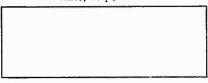
"Why don't you use your persuasive powers on announcers to give just the city only between each selection. If the announcer would only just say 'Baltimore' for instance and I am on 1060 I would know I have WBAL and not WTIC. It would advertise the city to mention its name every few minutes instead of every fifteen as now." This crv of distress comes from Harry Gosman. U. S. Naval Home, Philadelphia, Pa. It is one of the mysteries of an otherwise up-to-date business, why men who own broadcasting stations do not take advantage of their opportunities to advertise that station. It would be such a simple matter to say "Oshkosh" or "Kalamazoo" after each selection, but they just won't do it. They assume either that their station is a neighborhood affair or else that their voices are so well known that everybody in the U. S. must know who they are.

FREE ^v	Your Choice of NINE Meters!
To do your radio work properly you need meters. Here is your opportunity to get them at no extra cost. See the list of nine meters below. Heretofore we have offered the choice of any one of these meters free with an 8-weeks subscription for RADIO WORLD, at \$1, the regular price for such subscription. Now we extend this offer. For the first time you are permitted to obtain any one or more or all of these meters free, by sending in \$1 for 8 weeks' subscription, entitling you to extend the site of the series subscription 26 weeks, entitling you to two meters; \$3 for 26 weeks, \$6 for 52 weeks, entitling you to six meters. Return coupon with remittance, and check off desired meters in squares opposite. RADIO WORLD is the first and only national Radio Weekly. In tenth year. The news of the progress of the entertainment, science and business of radio when it is news. 15c a copy; newsdealers everywhere.	 RADIO WORLD 145 West 45th Street New York N. Y. (Just East of Broadway) Enclosed please find \$for

"Here's a suggestion that should be worth a subscription," offers C. H. Waltner, 120 South Monument Ave., Hamilton, Ohio. "By all means devote one page to classified advertising--For Sale, Exchange, Wanted, etc. It would be appreciated by our subscribers and newsstand purchasers. For instance, I have a Norden-Hauck Super DX-5 short wave set, which with three pairs of coils but no tubes, sells today for \$150. My outfit with six tubes and two additional pairs of coils cost \$193.50. I would like to trade the outfit for either a Silver-Marshall all-wave Super or a Scott." So here is the heading for the suggested column. Send in your items. For the suggestion, we are giving Mr. Waltner this free advertisement.

WANTED, FOR SALE OR EXCHANGE

A Barter column for Our Readers Rate, 5c per word



We Forgot the Ghosts

Several readers call our attention to the fact that we failed to move the "ghost" stations in the Ontario district

The Radex Press.

when the actual stations were moved. The information regarding the changes in Canada came to us just as the November issue was going to press and we made the last minute corrections but we forgot altogether about the ghosts. They are being moved in this edition.

Oliver Cromwell, 783 Eighth Street, Oakland, Calif., says KOH, Reno, Nevada, state over the air that they have been for more than a year the only station in the Silver State. What has become of KGIX, Las Vegas? Have they left the air?

Robert Thornton, President of the Prairie State DX Club, 1450 West 81st St., Chicago, says their club was so enthused over the list of slogans appearing in RADEX that they decided to cooperate by sending all the members had gathered. This club would like to communicate with other DX clubs.

That Ollie Ross Ground

Many inquiries have come in relative to the Ollie Ross ground. This was described in a letter from Mr. Ross published in the Midsummer edition, No. 50. This is the only description we have. A few copies of this issue are still available.

S. H. Parsons, Jr., Box 289, University, Ala., reports that WFDV should be 1370 kcs. instead of 1310. According to our records this station moved from

INSURE YOUR RADIO ENJOYMENT SEND THIS BLANK TODAY

	5 Euclid Avenue, veland, Ohio	
	Enclosed find \$for which send me postpaid my choice of your of the	offers
	One radio map of North America	25c
	One copy of the next RADEX	25c
		\$1.00
	One year's subscription to RADEX, 10 issues, and Radio Map free	1.75
	Two subscriptions to RADEX with one leatherette cover and Radio Map, both free	3.50
	One two-year subscription with leatherette cover and Radio map, both free	3.50
	Leatherette Cover	.50
	Write Name Plainly	
	Street and Number	
54	City and State	

1370 to 1310 during the summer; are we wrong?

The Half-Moon is Found

The inquiry of Robert El Moran, Ottawa, Ontario, in the November issue as to the identity of the "Half-Moon Orchestra," is answered by H. B. Huber, 1352 Liberty St., Harrisburg, Pa., as follows: "This is from WCOD, a 100watt station on top of the Governor Hotel, Harrisburg, Pa. They are on the air from 8:00 a.m. until 11:00 a.m., 3:00 until 6:00 p.m. and 8:00 until 11:30 p.m., EST. During the time they are off the air WKJC, Lancaster, Pa., comes on. The 'Half-Moon Orchestra.' Johnny Derrick, leader, broadcasts every night from 11:00 to 11:30. They put this on from the 'Half-Moon Inn,' a roadhouse located in the Susquehanna valley. This station can certainly put the goods on. They should be heard in the middle of Asia. Try and get them on a Sunday afternoon about 3:00 to 4:00 when they have a United Brethren preacher on with a fifty-kilowatt voice."

Now we have located the 'Half-Moon Orchestra,' perhaps we can find the one that broadcasts from the "Egyptian Ball Room" on about 895 kcs. on October 18th, at 1:00 a.m. It is reported by Jack King, 26 Dunfield Ave., E. Toronto, Ont. One selection was "Now You're In My Arms." Jack wants to exchange hints with other DXers. Just lately he has brought in KECA, CJCA, KTAR and some other good ones.

Some Answers and Questions

"I believe the station C. C. Norton of San Francisco inquires about is KGPL, the Los Angeles police station on 1712 kcs.," suggests Lester R. Reinmund, 1120 South 76th Ave., West Allis, Wis.

"Last Thursday, October 22nd, between 10:05 and 10:15 p.m., PST, I heard a station on 1030 kcs. which I would like to have someone identify," writes Gordon H. Wightman, 1171 32nd Ave., W., Vancouver, B. C. "The announcer was speaking in some foreign language. Every few minutes a cuckoo horn was blown and the announcer would continue to speak. This happened about five times and then the cuckoo horn was sounded twice." Mr. Wightman adds in a postscript, "Last night I tuned in nine Japanese, five Australian and one New Zealand stations, as well as KZRM."

Roger F. Vore, Box 87, Merriam, Kansas, has made an indoor aerial with wires like the spokes in a wheel, taking off his lead-in at the hub. He reports that it works better than his outside



The "Crooning Colonels" of the CBS 5:45-6:00, Mondays. Jack Brooks, left, and Don Ross are accompanied by Leon Bloom and his orchestra.

antenna. He would like to hear from someone who has had good success with a short-wave converter.

Sam Kiamie, 2857 Sampson Ave., New York City, is anxious to identify a station he heard broadcasting what sounded like stock market quotations, on Sunday morning, October 11th, at 5:20 a.m. EST, on about 1000 kcs. It sounded like a European station does on a rebroadcast. Can anyone help him?

Another S O S: "On Tuesday morning, November 1st, at 2:40 a.m. EST, I heard a station on 1230 kcs.; the orchestra was playing the Yale College song. Can anyone identify it for me?" D. Wharton, 22 Elmwood Ave., Rye, N. Y.

J. Edw. Diehm, Jr., Pottstown, Pa., would like to hear from owners of Model 27 Zenith as to their pick-up and distance.

With the MIDNIGHT MARAUDERS

TNCREASE the DX department," is the cry that comes to us from scores of readers. We receive hundreds of letters from DXers every month but it is only from a few that we are able to extract new and interesting ideas. Too many are mere repetitions of what they have done in the way of logging stations. We like to know of our readers' record but we can print but a few each month, not because of lack of space, but because of sameness. Write us about the unusual and different. All over the country DXers are without doubt having thrills and adventures in their midnight meanderings. Tell us about these. They are so much more interesting than mere numbers.

Now the DX Club will please come to order.

Thinks He Got China

"I am somewhat of a DX fan and last night I received a station that has aroused my curiosity," says Virgil Engleman, 1948 E. Jefferson Ave., Detroit, Mich. It may be the same station that several other readers have been asking about. I got it at about 1:30 this morning (Oct. 30th) and held it until they signed off at about 2:00 a.m., E.S.T. It came in between 705 and 710 kcys. A man talked the whole time in some foreign language which I do not think was Spanish. After every few words they rang a bell like he was stressing some point he had brought out. The language sounded kind of gutteral and it may have been a Chinese or Japanese station. I never got one of them so I don't know how they sound when they talk. When they finally signed off they played something that sounded like a train leaving and that was all - no call letters or anything. Mr. Engleman postscripts "I would like to know how much in stamps you have to send in your letter to a foreign station in order for them to acknowledge your reception." Cuba and Mexico and most South American countries are two cents. Canada is three. England is five. In the September RADEX, Richard Douglas, 1125 Krug

The Great DX Hobby

Park Place, St. Louis, Mo., called attention to the International Reply-coupons which can be bought at any postoffice for nine cents each which are good for one full rate letter to any country in the postal union from any other country in the union. They are valid for six months after purchase.

The Canadian Amateurs

10-BP, Wingham, Ont., writes us as follows: "We have always been interested in your great little magazine and since you have taken such a big interest in DX work, we are all the more interested. Last winter you had our DX programs for 10-BP listed and in all we received letters from nearly 600 U.S. listeners who received our tests and, in most cases, these letters referred to RADEX. We, here at 10-BP, feel that the success of our tests was due largely to your fine cooperation. 10-BP has been on the air all summer and now that the fall season is here again, we will give you our schedule of the coming winter so that you may include it in your coming issue. 10-BP operates on 1200 kcys. with a power of 25 watts. Being an amateur broadcast station, it operates without any direct income such as advertising. We are on the air ten hours a week. We will broadcast special DX programs from 1:00 to 2:30 a.m. on the 10th and 25th of December, January and February. These programs will be on 1190 kcys. which is mostly cleared at this period. We will gladly verify reception providing the writer will name at least two selections heard with the time logged. Another important requirement is a three-cent Canadian stamp or cash as U.S. stamps cannot be used here."

Yes, WMIL Verifies

"As a member of the staff of WMIL, allow me to say that every single request for verification is answered personally by Mr. Milton Myrawitz, the operator," asserts Karl J. Halpern, 1435 Coney Island Ave., Brooklyn, N. Y. Mr. Halpern advises us that the World Radio Reception Club of which he is secretary, has arranged for special DX programs from the following stations Saturday morning, December 26th. WDZ, Tuscola, Ill., 1070 kcys., 2:00-2:30 a.m., E.S.T.; WAAB, Boston, Mass., 1410 kcys., 2:00-3:00 a.m., E.S.T.; WBSO, Needham, Mass., 920 kcys., 3:00-4:00 a.m., E.S.T.; WJAY, Cleveland, Ohio, 610 kcys., 2:00-3:00 a.m., E.S.T. Mr. Halpern would like to see RADEX devoted entirely to DX matters. Too bad, but there are other members of the family.

Finds an Error

C. A. Overhiser, Hotel Clarke, Hastings, Nebr., calls our attention to the error in listing KGCX in the Index by Frequencies as Wolf Point, Minn., instead of Montana. He adds: "I have been getting RADEX ever since it first came out, about eight years ago, and this is the first mistake I have ever found in your magazine." We cannot flatter ourselves that this is the first mistake, we have made, but with thousands of kind friends, like Mr. Overhiser, ready and willing to call our attention to discrepencies (which just will creep in now and then) we hope to keep 99.9 per cent perfect. "In the thirty days I have had my new G.E. S-22," goes on Mr. Overhiser, "I have logged 139 new stations on it. I have just started to collect station stamps and would like to hear from other DXers with more experience."

Wants Lima, Peru

The inquiry of A. F. Buschmann, 1044 Barrett Ave., Louisville, Ky., is being answered by Mr. Dashiell in two articles in this issue. "I am using an R.C.A. 9-tube Superhetrodyne," he writes. "I would like to have the information regarding the change in wiring necessary to install 235's in place of my present 224 tubes. If possible, I would also like information concerning the change from the 245's in push-pull to 247's. My set is a year old," adds Mr. Buschmann, "and I have logged 286 stations, including CKWX, VAS, KFVD, KGCX and KGFK. I wonder if any reader of RADEX, in this vicinity, has ever received Japan, New Zealand, Hawaii or

England. My farthest south is XETF, Veracruz. What is the best time to try for OAX at Lima, Peru?"

N.J. Gets KOH in Dogdays

"I have been DXing for 22 months," submits Llovd Rees, Box 64, Ridgewood, N. J., and have a log of 492 stations out of which 260 are verified. My best verification is from KGMB, Honolulu. Another good one is KOH which I heard in August (not a bad catch for the dogdays). They said in their verification that they were really surprised to be heard in New Jersey during the 'off' season of reception. Could you tell me what Mexican or Cuban station is operating on 1125 kcys.? Heard it plainly last evening (Oct. 30th). Was almost as loud as XEO and XEW so it must be 5000 watts or thereabouts. No announcements were given in English." The nearest guess we can make is XEH on 1132. Some of these Mexican stations wander considerably off their path.

Who is WRVE?

W. H. Bradford, P.O. Box 22, Derry, N. H., reports that with his Crosley 5-tube he has logged so far 120 stations, but they include Cuba, Mexico, Canada, and as far away as San Francisco. "Could you give me any information on a call WRVE which I received on about 1500 kcys.? The call was repeated about every five minutes, but that is all I heard." Anyone know WRVE? It may have been WRBE which is often reported from the East. This is the fireboat John Purroy Mitchell, belonging to the City of New York, which has a frequency of 1596 kcys.

Special DX on CKOC

"Station CKOC will broadcast a special DX program on December 12th, beginning at 2:00 a.m., E.S.T., on their new frequency of 630 kcys.," advises W. Dyson, 72 Cambridge Ave., Hamilton, Ont. Reports are desired and if you cannot get Canadian postage, send three pennies, or a nickle. Mr. Dyson wants time of reception and other information about African stations on the b.c. band. He proffers the following to other inquirers: "H. W. Hulburt, Montclair, N. J., probably heard KSCJ at Sioux City. For Herbert Childs, I have a verification from WCHI with the address as 201 N. Wells St., Chicago." Mr. Dyson is awaiting a verification from KOH to complete the full roster of all states and provinces.

The Time Signals

"Here is a tip on NAA," contributes Joseph F. Maertz, 3118 W. Scott St., Milwaukee, Wis. "They are on the air every day except Sundays and holidays, at 10:10 a.m., 3:45 p.m., and 10:00 p.m., E.S.T., with weather reports. Time signals at 11:55-12:00 noon and 9:55-10:00 p.m., E.S.T. I have a nice letter from them. One night I picked up XET after NAA signed off. I also picked up a Cuban station (150 watts) on 1070 the morning of October 30th. I am using a 7-tube Grebe t.r.f."

CMCY Wants Listeners

"Have your friends listen in any Sunday morning from 1:30 to 3:00 a.m., E.S.T., "writes M. D. Autran, G Street, No. 215, Havana, Cuba, to Rudolph Kure, 301 Warner Street, Cincinnati, Ohio. "Atmospheric conditions are improving, so are my programs. Give comment on the kind of programs, music, etc., broadcast. Have friends send in reports. Kindly note some reports come with U.S. stamps, which are not usable here. Not so U.S. coins which are legal tender the same as Cuban coin." CMCY is going to 100 watts with a frequency of 1345 kevs.

Low-Powered Best

"To my mind," comments A. S. Burton, Kamloops, B. C., "the best catches are the low-powered distant stations such as WMMN, Fairmont, W. Va., a fifty-watter, which I have heard quite often. One evening I listened to WDAE, Tampa, Fla., on my National 5 Thrill Box, a short-wave set, and in their verification, the station said I heard them on their sixth harmonic. The new XER comes in here with tremendous volume and absolutely ruins reception of Vancouver stations only 250 miles away."

Shelby Harrison, Box 47, Robinson, Ill., who describes himself as "fourteen years old, a DXer and a RADEX fan," has caught 218 stations in about ten months. He considers his best catch KPCB, Seattle, Wash., with 100 watts power. "They evidently broadcast early Sunday morning because it was 5:00 a.m., C.S.T., when I picked them up," he says. "They came in loud and strong, which seems almost impossible for so low-powered a station."

Porto Rico Without Aerial

Arnold Gee, 1918 E. 66th St., Cleveland, Ohio, reports that he purchased his Imperial Radio last April and since that time has logged 192 stations with WKAQ, Porto Rico, as his best catch. This came in without antenna. Now that he has an aerial he brings in CMK, XER and CMC at 7:00 p.m., E.S.T. Arnold would like to hear from some DX fan who can really get France and England in order to learn the best time to tune for them.

"My hobby is DXing," beings H. G. Taverner, 66 Green St., Augusta, Maine, "and I am using a Dayton Short-Wave adapter in conjunction with an Atwater Kent 44. Results: 33 stations in England, Holland, Mexico, Germany, Italy, Denmark, Spain, France, South America, Java, D. W. I., Cuba, Australia, New Zealand, Indo-China, and many plane and police stations and ships at sea. All with loud speaker volume and on voice. Total number of stations received from both sets is 478, which is a lot of dial twisting."

Harry F. Deibert, R.D. 2, Walnutport, Pa., submits a long list of stations he has heard recently with his dry-cell Radiola Super AR-812, second harmonic, 6 tubes. For an antenna he uses a heavy bare copper wire about 75 feet long buried six inches in the ground, in a moist spot in the form of an "L." He reports this antenna has given the best results of the many he has tried.

Some Good Reports

John Janecko, 83 Easy Street, Uniontown, Pa., wants to correspond with other DXers particularly those living in the mountains. With his 11-tube Philco he has received 300 stations since June, including such good catches as KOY, KTAR, KGCX, KFBB, CMCY and CMBS.

"I like to DX and have a total of 396 stations," writes Walter Dice, 315 Church St., Bridgeville, Pa. "Have had several good catches from the Pacific Coast with two stations of only 100 watts. I now have 45 states, Canada, Mexico, Cuba and Porto Rico."

"On my Philco I have had 445 stations with 252 verifications," states Melvin de Jagar, 106 Llewellyn Ave., Hawthorne, N. J. On his short wave set, Melvin has received HSG, HKC, HRB, PCJ, G5SW, GBS, GBW, GFWV, the latter being the S.S. Majestic when near the English coast.

Wants DX Programs

A. W. Snyder, 3216 West 38th Place, Chicago, Ill., suggests that all DX Clubs send in their notices of special DX programs to RADEX for publication. We will be happy to print such information if it reaches us before the tenth of each month, the date our copy goes to the typesetters. Mr. Snyder reports that WIBO and WPCC may go off the air in November, giving way to WJKS, Gary, Ind.

DX Clubs that desire to have special programs by the Canadian amateur broadcasting stations can arrange them through W. T. Cruickshank of 10-BP, Wingham, Ont., owner of that station. This service is proffered to RADEX by Mr. Cruickshank.

Those Expensive Dimes

With 354 stations in less than a year and 162 verified the last five months, Clayton Huff, 309 North Main St., Martinsville, Ind., is getting ready for the new season. He puts in a good word for WBOQ, WKRC and WIBO who returned his dimes and said they did not issue stamps any longer. But he reports, on the other hand, that KFVS, WSMK, WLAC and WNBO kept his dimes and didn't send stamps.

"I get CMK, Havana, Cuba, every night and XER comes in with great volume," reports Alfred Cachia, 2045 Fifth St., Detroit, Mich. "I have a 7tube Philco which I bought in 1928. I have logged 210 stations from U.S., Canada, Mexico and Cuba."

"I began to DX with my first copy of RADEX on January 2, 1931," reports Fred Litwitz, Jr., 2137 Lewis St., Chicago, Ill. Now I have 231 stations." Mr. Litwitz sends a fine list of Mexican and low-powered U.S. stations. He has not yet brought in Cuba but hopes to soon.

Kenneth Peterson, Pontiac, Mich., has a log of 284 stations. He reports CKOC on 1000 kcys., but we believe this must be because that station has not yet settled down to its new frequency of 1010.

Chris Tom Banakas, 28 N. Claybrook St., Memphis, Tenn., now reports a total of 483 with 23 Mexican and 24 Cubans, as well as Porto Rico, Costa Rica, Honolulu, Peru, and two each from Alaska and Japan.

WDZ, Tuscola, Ill., is having its next DX program on December 20th, from 1:00 to 2:00 a.m., C.S.T., according to a report from Wm. R. Anderson, 852 Manning Ave., Toronto, Ont. Similar information comes to us from Chas. H. Kramer, 1906 Hanover Ave., Allentown, Pa.

Harold S. Johnston, 577 Logan Ave., Toronto, Ont., sends in a long list of stations he has brought in recently. A number of fifty and hundred-watters are included.

NBA Bobs Up Again

"At last I'm able to give you the correct information regarding the station NBA," writes Arthur H. Brackbill, RFD 2, Lancaster, Pa.:

"There is such a station. The studios are located in Panama City and the transmitter is located at Darien. The station which is government owned broadcasts daily from 5:00-6:00 a.m. E.S.T. to ships, etc. Several readers said they received no verification which may be on account of the government not allowing it. The station (NBA) operates on 580 kcys. This information was given me by the Chief Engineer of WKJC, who worked there while in service for the U.S. army. He also showed me a picture of the transmitter as proof. Here's hoping the information is of value to the readers.

"I've been a DXer since the last week in January and have a log of 330 with 176 verified. Have all but six states. My set is an Atwater Kent 42. Would like to hear from other Atwater Kent 42 owners who have exceptional reception. Best catch is KGFJ."

"Verification from G5SW came in after five months of waiting," comments Prof. D. Gadoury, Montreal, Que. "On the broadcast band, I now have 337 logged. On Sunday morning, October 4th, between 1:45 and 2:00 a.m. E.S.T., a station on 705 or 706 kcys. was broadcasting music with announcements in English and what was probably Spanish, too. I cannot believe it was XEN as my dials were set for 706 kcys. Regarding this station, Samuel F. Ownes, Glenside, Pa., wrote me: 'You are not the only one who has been hearing this station on 705 kcys. It has been reported from all over the country with no one seeming to know who it is.'"

The latest Cuban and Mexican lists show no station near 705 than XEN on 711.

"KELW and KTM divide time in this manner." says Fred W. Janssen, 106 S. Santa Cruz St., Ventura, Calif. "KELW, Burbank, Calif., 780 kcys, 500 watts: Daily 1:00-6:00 a.m.: 10:00 a.m.-1:00 p.m.; 5:00-9:00 p.m. P.S.T. KTM, Los Angeles, Calif., Daily 6:00-10:00 a.m.; 1:00-5:00 p.m.; 9:00 p.m.-1:00 a.m., P.S.T. KFI, Los Angeles, 640 kcys, 50,000 watts, is on daily from 6:45 a.m. until midnight, P.S.T. KHJ, Los Angeles, 900 kcvs., 1000 watts, Daily 7:00 a.m. to 1:00 a.m. P.S.T. Sunday 7:00 a.m. to midnight. KMTR, Los Angeles, 570 kcys. 500 watts, Daily 7:00 a.m. to 3:00 a.m. P.S.T.

More About Oslo

I N the October issue we published a letter from LKO at Oslo, Norway, which stated that "there is not and never was any station in Oslo operating on 608 kcys." This seemed to dispose definitely of the issue, but Karl J. Halpern, Pittsburgh, now sends us the original letter he received from Oslo, dated April 16, 1930, which again throws the status of this station into dispute. Here is the letter:

"Your letter of 28th inst. to hand. We beg to say that it is quite possible that you heard Oslo on March 23rd at about 4:30 p.m. E.S.T. It is, however, impossible to absolutely verify a "pick-up" of our programs unless we get fuller details as to programs, pauses and time. Our old Oslo transmitter with only 1.2 kw. in the aerial was actually heard by a score of listeners in the state of Illinois. Our present Oslo station is at present the most powerful transmitter in Europe with 75 kw. in the aerial. The wave is 493.4 m., 608 kcys.

"Thanking you for your kind report,

"Sincerely yours,

"Kringkastingselskapet a/s."

The debate regarding the Oslo station, Norway, still continues. Noel B. Eaton, Ballemena, Oakville, Ontario, writes: "I lived in England for nearly five years and I can distinctly remember hearing Oslo on the regular broadcast band near the top. Mr. Eaton sends us a copy of "World-Radio Station Identification Panels" which would be a most useful publication for our European DXers to have. "World-Radio" is published by the British Broadcasting Corporation of which the publishers say: "To the listener to distant stations it offers an unparallelled service in the provision of programmes, in the publication of an authorative table of wave-lengths, and in the facilities it offers to its readers for the identification of unknown foreign stations, enquiries concerning which are answered either by post or free of charge in the columns of the paper. It is indispensable to anyone who is interested in foreign stations. World-Radio is published every Friday, price 2d." The "Station Identification Panels" are evidently published monthly, the price being one shilling. The information in this book concerning Oslo is typical. It gives the frequency and wave-length, the power, the distance from London, the opening call, the interval signal, the opening and closing signal, the time signal, the sex of the announcer, the closing words and the relay stations. The address of the British Broadcasting Corporation is Savoy Hill, London, W.C. 2.

The Airport Stations

The following lists of airport stations is furnished by Karl Halpern, Pittsburgh, Pennsylvania.

Transcontinental Air Transport and Western Air Express:

WAEF	Newark, N. J.
WAED	Harrisburg, Pa.
WAEB	Columijus, Ohio
KGTR	St. Louis, Mo.
KWS	Amarillo, Texas
KGPL	Kingman, Ariz.
KSI	Los Angeles, Calif
WAEE	Camden, N. J.
WAEC	Pittsburgh, Pa.
WAEA	Indianapolis, Ind.
KSY	Tulsa, Okla.
KSX	Albuquerque, N. M.
KCTL	Los Varge New

The above, Mr. Halpern says, may be heard only at night on 387 meters.

Southern Air Transport:

WQDP	Atlanta, Ga.
WSDB	Jackson, Miss.
KGUF	Dallas, Texas
KGUL	Abilenc, Texas
KGUK	Shreveport, La.
KGUC	Ft. Worth, Texas
KGUG	Big Spring, Texas
KGUA	El Paso, Texas

The above may be heard only at night on 344 meters.

Boeing Air Transport System:

WQDU	Aurora, Ill.
KQM	Des Moines, Iowa
KŔF	Lincoln, Neb.
KQE	Cheyenne, Wyo.
KQD	Salt Lake City, Utah
КĴЕ	Reno, Nev.
KRA	Boise, Idaho
KQQ	Iowa City, Iowa
KMP	Omaha, Neb.
KMR	North Platte, Neb.
KQC	Rock Spring, Wyo.
KKO	Elko, Nev.
KFO	Oakland, Calif.
KDD	Pasco, Wash.

The above may be heard only at night on 376 meters.

Dials and Difficulties

(Continued from page 8)

your set is not designed for the -47 tube, and therefore you cannot receive its greatest benefits. The change is not suggested in the Radiola 17 receiver.

Oscillating Receiver

My model C Fada set persists in breaking into oscillation for a while soon after turning it on. Is the set out of balance and

how can I fix it? Can you send me a wiring diagram?

There are many, many causes of regenerative howls and oscillation. This book could not hold all the reasons to be advanced. Incorrect plate voltage on a tube is an outstanding cause, while lack of proper neutralization can make violent noises. The latter can be corrected by adjusting the balancing and trimming devices or midget condensers attached to the large variable condensers. An screen-grid by-pass condenser open causes oscillation; poor contacts of shields with the chassis as well as other mechanical connections; open grid circuits in some of the tubes; ungrounded metallic covers of audio-transformers: broken wires in the secondaries of radiofrequency coils or in audio transformers and output push-pull transformers; too high voltage on the screen-grid, etc., are sources of excessive regeneration noises in a receiver.

Write to the F. A. D. Andrea Company, Inc., Long Island City, L. I., N. Y., for a copy of the circuit diagram.

Using the Pentode

I wish to use the new -47 pentode tube in my Brandes B-15 receiver in place of the two -45s in push-pull. Do I have to make many changes in wiring?

It is not practicable to use the -47sin place of the -45s in your Brandes receiver. This is due to the fact that your last stage in which the -45s are used is previously fed by a step-up stage with one -27 audio amplifier which would have to be eliminated if the -47s would be used. Therefore, no gain is to be had and the change, besides being complicated, is not quite worthwhile.

Varibale-Mu and Pentode Tubes

How can I change my General Electric model H-31 receiver over to the new -35s and -47s in place of the tubes now is use?

It is not practicable to replace the -24 from the standpoint of efficiency. The change can be made readily by use of an adapter outfit with a new volume control, for your set is constructed so that the alteration can be made. However, the slight gain in selectivity is hardly worth the trouble and expense. The change to pentodes in place of the two -45s used in push-pull will be simple provided the special adapter is used. But in both cases the change to tubes that tend to upset the balance of a circuit designed for something else is not sanctioned by all concerned. The wiring of the circuit permits this change, and that is more than can be said of most other sets.

DX Headphones on Philco

I have a Philco model 70 superheterodyne and have tried to attach a pair of headphones with a switch cutting out the loud speaker, but the results are poor. How shall I improve on my scheme shown in the diagram?

You have not gone at the attachment in the right way, and cut into the wrong wires. Start over again. Remove the speaker unit from the cabinet by disconnecting the cable plug. There are three wires — black and white, green, and yellow. Also, connecting the transformer and voice coil on the cone parts of the fixed unit — are two short wires, one light brown and one yellow. The switch to cut out the speaker must be inserted in either of these two wires, simply by cutting the wire and fastening the two ends to a small switch.

Cut into the insulation of the black and white wire and the green wire of the cable to the plug and attach two leads to each of these two wires. Disregard the yellow wire. Run the two new leads to a single phone jack. The headphones are then plugged into the jack and the switch opened to cut off the speaker as desired.

Automatic Volume Control

My dealer advises against volume control saying that while it has advantages, it has greater disadvantages. He states that when volume is set fairly loud, reception from "mushy" stations would be vastly more disagreeable than fading. I have never tried volume control. What is the truth of its advantages?

We assume that your refer to *automatic* volume control. It has great advantages, and, as your dealer states, certain disadvantages. Much of this is a matter of opinion held by individuals.

However, we claim that automatic volume control is one of the great improvements in radio design, and its advantages far outweigh any noticeable inconveniences. The automatic control sets the average volume of the incoming signals to a pleasing intensity; it cannot become too loud, and when weakened more current flows keeping the strength up to the normal volume. Mushy stations — that interfere and heterodyne - will be with you. Why tune in on them: no one cares to listen to interferences. And stations that are clear will come in smoothly and steadily, never changing to too high nor too low. Another advantage is that when tuning for stations the set cannot boom forth loudly when the peak of some station is passed over by the dial. But weak stations are intensified, and we have an increase in noise level and interferences which are undesirable.

For Christmas

It's going to be a problem to find gifts this year that will be both useful and inexpensive. Why not make it a RADEX Christmas?

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For \$3.50

Two years' subscription to RADEX with a leatherette cover.

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For \$1.75

One year's subscription and the radio map.

For \$1.50

The Headphone Adapters or The Filtered Aerial.

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For \$1.00

Next five issues of RADEX or the Book on Radio Theory and Practice.

For 50 Cents The beautiful leatherette cover.

The Chain Programs

HANGING the form of our weekly programs gave us at least the knowledge that to many thousands of people, this is one of the most important features of our magazine. While we received, perhaps, as many favorable comments on the new plan as we did objections, yet we can readily see that a great many of our readers must have the stations if they are to get the greatest good from the programs. This is particularly true of those living in districts where they cannot readily tune in some nearby powerful station of each chain. Their position is summarized by C. K. Charles, Clearwater, Fla., who says: "Our troubles in following the chain programs are that there are so many that are carried only by groups of station in the various networks. For instance, we have found our local NBC station, WFLA-WSUN, running a program not an NBC main feature, while at the same time WSMB, New Orleans, WOAI, San Antonio, and WENR-WLS, Chicago, would be running entirely different programs, though all are listed as NBC programs. The same occurs on the Columbia stations."

A happy compromise is suggested by Dr. F. S. Taylor, Hastings, Neb., who asks: "Would it not be possible to list one powerful station in each zone, carrying the program?" We are acting on this suggestion but going a step farther. We are giving at least one station in each state, otherwise eliminating the small stations of from 100 to 500 watts. This cuts the list of stations in half and enables us to give twice as many programs as we could do otherwise. At the same time we are keeping the parallel column idea which many liked so well.

If each reader will mark in the blanks at the top of each chain, his dial numbers for those stations upon which he relies for each of the networks, he will find that, nine times out of ten, one of these stations will have the feature he wants and save him the trouble of searching through the list of stations. We give on this page an illustration showing these dial numbers thus entered for a Philco set.

So many of our readers have said that it would add so greatly to their convenience if the calls could be arranged in alphabetical order, that we are trying once more to meet their desires. This is a most arduous task, but we want to do everything in our power to make RADEX of the greatest possible convenience to our readers.

The Mexican List

The Newark News publishes a list of the Mexican stations, supposed to be as of October 7th, which was furnished to them by the Mexican Consul at New York. This list appears to us to be a very old one. Readers who have checked this list against the November RADEX are calling our attention to many supposed errors. The list as published by the Newark News is almost exactly the same list published in RADEX in March, 1931, since which time we have received three new lists from the Mexican Government. For instance, the RADEX list of March, 1931, showed thirteen Mexican stations on 1000 kcys. Official changes removed twelve of these and for five issues we have shown but one Mexican station on 1000. The Newark News list again shows thirteen stations on 1000. It hardly seems probable that the Mexican authorities have again bunched thirteen stations on a single frequency. Until we receive more authentic information, therefore, we continue to show the Mexican stations in accordance with the last official list received from that Government.



N — National

KEY TO CHAIN STATIONS

C — Columbia

Rept. 4	
CFCF	в
1030 N	в
690 C Ckac	в
730 C CKGW	В
840 N	K
980 N	1
KDYL 1290 C	K
KECA 1430 N	K
KEX 1180 N	K
KFAB 770 N	K
KFH 1300 C	К
KFI 640 N	К
KFJF 1480 C	К
KFKX 1020 N	K
KFPY 1340 C	к
KFRC	к
KFSD	к
600 N	W
550 N	W
1470 N	w
1330 C	W
790 N	W
620 N	W
900 C	W
590 N	w
970 N	"
1390 C	
KLZ 560 C KMBC	
950 C	W
KMOX 1090 C	W
KOA 830 N	W
KOH 1380 C	**
KOIL 1260 C	W
KOIN 940 C	W
KOL 1270 C	w
KOMO 920 N	W

-		-
КРО 680	N	Ι
KPRC		
KRLD	N	
1040 KSCJ	C	
1330 KSD	ç	
KSL	N	
KSTP	N	
KTAR	N	
KTHS	N	
1040] KTRH	N	
KTSA	c	
1290 KVI	C	
760 KVOO	C	
	N	
1270 KWK	c	
1350 1 KYW	N	.
	N	.
	C	
860 WACO	С	,
1240 (WADC	c	Ι,
1320 (WAIU	c	
640 (WAPI	c	,
	v	,
	V	,
800 1 WBBM	۷	
	0	
	c	
	v———/	
	C	
1080 (
WBZ-A 990 N WCAE	N	
1220 N	۹	
WCAH 1430 (2	
WCAO 600 (·	1
WCAU 1170 (
		_

WCCO 810	C
WCFL 970	N
WCKY	N
1490 WCSH	
940 WDAE	N
1220 WDAF	C
610 WDAY	N
940 WDBJ 930	N
WDBO	
1120 WDOD	с
1280 WDRC 1330	c
WDSU	с
1250 WEAF	C
660 WEAN	N—
780 WEBC	C
1290 WEEI	N
590 WENR	N
870 WFAA	N
800 WFAN	N
610 WFBL	c
1360 WFBM 1230	C
WFBR 1270	N
WFI 560	N
560 WFIW 940	С
940 WFLA 620	N
620 WGAR 1450	N
WGL 1370	C
WGN 720	C
WGR 550	c
WGST 890	c
WGY 790	N
WHAM 1150	N
WHAS 820	N
WHEC 1430	C
1400	

	-
	1
WHK 1390	c
WHO 1000	N
WHP 1430	c
WIBA 1280	N
WIBO 560	N
WIBW 580	c
WIOD 1300	N
WIP 610	C
WIS 1010	
WISN 1120	C
WJAR 890	N
WJAS 1290	C
WJAX 900	N
WJDX	1
1270 WJJD	N
1130 WJR	C
750 WJZ	N
760 WKBH	N
1380 WKBN	C
570 WKBW	C
1480 WKRC	C
550 WKY	C
900 WLAC	N
1470 WLAP	C
1010 WLBW	C
1260 WLBZ	c
620 WLIT	C
560 WLS	N
870 WLW	N
700 WMAL	N
630 WMAQ	c
670	N
WMC 780	N
WMT 600	c
WNAC 1230	c

WNAX 570 C
570 C
560 C
WOAI 1190 N
WOC 1000 N
WOKO
1430 C
1200 C WOW
590 N
WOWO 1160 C
WPG 1100 C
WPTF
680 N WQAM
560 C
WRC 950 N
WREC 600 C
WREN
1220 N
1280 C
WRVA 1110 N
WSAI 1330 N
WSB
740 N
650 N
1320 N
WSPD 1340 C
WSUN 620 N
WTAG
580 N
1070 N
1330 C
WTAR 780 C
WTIC 660 N
660 N
620 N
WTOC 1260 C
wwj
920 N
570 N
WWVA 1160 C
WXYZ
1240 C

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WHAT'S ON THE AIR TONIGHT?

COLUMBIA_____WABC NATIONAL, Red____WEAF NATIONAL, Blue____WJZ

For quick reference, fill in below the dial numbers at which you best hear the three chains. You can then turn quickly to one that has the feature you want.

ColumbiaWABC	National, Red	WEAF	National, Blue	WJZ
Time is given by Eastern St	tandard; for Central, sub ours; and for Pacific, sub	tract one ho tract three h	our; for Mountain, subtract	
		1		1

DAILY (Except Sunday) 12:30-1:00 Columbia Revue (Except Saturday) KFH KFJF KFPY CFRB KFRC KMOX KGB KHI KVOR KSCJ KVI KOH WABC WDSU WFBL WJAS WQAM WMAL WNAC WPG WTAQ 2:30-3:00 American School of Air (Except Saturday) KDYL KFH KFRC KGB **KFJF** KFPY KHJ KLZ KSCJ KVI KMOX KOH WABC WBT WCAU KVOR WCCO WDSU WFBM WHK WMAL WNAC WIBW WJAS WQAM WTAQ WTOC WPG 7:00-7:15 Myrt and Marge (Except Saturday) KMOX WABC WADC WCAU WJAS WKRC WMAL WNAC WWVA 7:15-7:30 Cremo — Bing Crosby WABC WADC WBT WCAU WHK WJAS WKRC WMAL WNAC WQAM WTAR WTOC 7:30-7:45 Baker, Boswell Sisters (Except Tues., Thurs., Sat.) KFH KMBC KMOX KOIL WADC WCCO WFBL WHK WJAS WKRC WNAC WWYA 7:45-8:00 Camel — Morton Downey KFH KFJF KLRA KMBC KMOX KOIL KRLD KSCJ KFH KEJF KRLD KSCJ KMOX KOIL KRLD KSCJ WABC WACO WADC WBRC WBT WCAU WCCO WDSU WBRM WHK WIBW WJAS WLAC WMAL WNAC WKRC WNAX WQAM WTAR WTOC WWVA 8:00-8:15 Columbians, Freddie Rich KFJF KMBC KOIL KRLD KSCJ WACO WADC WRPC WCAU WCCC (Except Tues., Thurs., Sat.) KFH KFJF KMBC KMOX WABC WBT WFBM WIBW WKRC WHK WNAC WNAX WPG WLAC WTAR 8:00-8:15 The Mills Brothers (Except Mon., Wed. Fri.) KFH KFJF KMOX KMOX KOIL WABC KRLD KSCJ KTSA WACO WADC WCAU WCCO WBRC WBT WDSU WFBL WIBW WFBM WHK WKRC WLAC WJAS WMAL WNAC WNAX WPG WQAM WTAR WTOC 8:15-8:30 Singing Sam, Barbasol KMBC KMOX KOIL, WABC WABC WCAU WCCO WFBL WFBM WCN WHK WJAS WKBW WKRC WMAL WNA

National, Red____ WEAF **DAILY** (Except Sunday) 8:00-8:15 Gene and Glenn-Quaker WBEN WCAE WCSH WEAF WEEI WFI WGY WRC WTAM 8:15-8:30 Morning Devotions KFYR WBEN WCAE WCKY KFYR WBEN WCA WCSH WEAF WFI WFLA WIBA WIOD WHAS WGY WPTF WJAX WJDX WOW WRVA WSUN WWJ WRC 8:30-9:00 Cheerio CKGW KFYR KPRC WAPI WBEN WCAE KSTP WCAE WCKY WAPI WBEN WCSH WDAF WEAF WGY WJDX WDAY WEEI WFI WFLA WHAS WIOD WJAX WMAQ WOAI WOW WRC WRVA WSB WSM WSUN WTAM WWJ WSMB 3:00-4:00 Woman's Radio Review (Except Saturday) KSD KYW WBEN WCAE WCSH WDAF WEAF WRC WGY WOC WOW WTAM WWJ WSAI 4:30-5:00 Phil Spitalny, Tea Dansante WBEN WCAE WEAF KSD WTAM WWJ WGY WOC 6:00-6:30 Waldorf-Astoria Orch. CKGW KGO WAPI WCAI KSD KSL WCAE WEAF WFI WHAS WIOD WIS WJDX WKY WRC WSM 6:45-7:00 Swift - Stebbins Boys (Except Saturday) WCAE WCSH KSD WBEN WEAF WFI WGY WRC WSAI WTAM WWJ Albert — Alice Joy WCSH WDAF WEBC WFLA 7:30-7:45 Prince Albert -KSTP WBEN WDAY WEAF WGY WIBA WEAL WIBA WIOL WIS WIOD ŴŔVA WJAX WLIT WSAI WWNC WTAM WTMJ WWJ 7:45-8:00 The Goldbergs WBEN WCAE WEAF WEN WGY WSAI WTAM WWJ WENR 10:00-11:00 Lucky Strike Dance Hour (Except Mon. Wed., Fri.) KGO KGO KGW KOMO KPRC KFI KHQ KSD KOA KSTP KTAR WCSH WAPI KSL WDAY WBEN WCAE WEBC WENR WFAA WEAF WFI WFLA WGY WIBA WIOD WJAX WJDX WKY WOAI WOC WRC WMC 11:15-11:30 Prince Albert--Alice Joy WAPI KTHS KPRC WBAP KSD WHAS WJDX WKY WMC WOAI WOC WOW WSMB WSB WSM WRVA WSAI WSB WSM WSMB WTAM WTMJ WWJ WSM

WJAX WJDX WLW WMC WPTF WRC WJR WIOD WOC WJZ WREN WOW WSMB WSB WSM 3:30-3:45 The Three Doctors (Except Friday and Saturday) CKGW KFAB KSTP WAPI WDAY WFLA WHAS WJR WJZ WKY WLW WMC WREN WSM 3:45-4:00 Chicago Serenade (Except Friday and Saturday) CKGW KOA KSTP WFLA WGAR WHAM WHAS WJDX WJR WJZ WKY WMC WREN WSM 5:45-6:00 Little Orphan Annie WFLA WGAR WHAM WIOD WJAX WJZ WLW WPTF WPTF WRVA 6:00-6:15 Raising Junior (Except Wednesday) KWK KYW WGAR WHAM WIBA WJZ 6:45-7:00 Literary Digest, Lowell Thomas KDKA WBZA WHAM WJZ WLW 7:00-7:15 Amos 'n' Andy CFCF CKGW KDKA WCKY WFLA WGAR WBZA WGAR WHAM WIOD WJAX WJR WJZ WLW WPTF WRC WRVA 7:15-7:30 Tastyeast Jesters (Except Tues., Wed., Fri.) KDKA WBZA WCKY WFLA WGAR WHAM WIOD WJAX WJZ WPTF WREN WRVA 7:30-7:45 Phil Cook, Quaker Man (Except Saturday) KDKA WBZA WENR WGAR WHAM WJZ WREN WIAM WIZ WILL WILL (Except Mon., Wed., Sat.) KDKA KFAB KPRC KSTP KVOO KWK WBAP WBZA WDAY WEBC WHAM WIBA WJZ WKY WKS WOAI WBAP WBZA WREN WTMJ 10:30-10:45 Clara, Lu and Em (Except Monday) KDKA KWK WBZA WHAM WJR WJZ WBZA WGAR WMAO WREN 11:00-11:15 Amos 'n' Andy KGW KHQ KFAB KGO KSTP KOA KOMO KSL KTHS KWK WBAP WDAH WEBC WENR WHAS WIBA WJDX WKY WMAQ WMC WBAP WDAF

DAILY (Except Sunday)

12:30-1:00 National Farm and Home

KOA KWK KPRC

KYW

WIBA

WDAF WFLA

KDKA KFAB KTHS KVOO

WBZA

WGAR WHAM WHAS

WAPI

Columbia_____WABC National, Red____WEAF 8:30-8:45 Kate Smith - La Palina 8:30-8:45 Kate Smith — La Palina (Except Tuesdays and Fridays) KMBC KMOX KOIL WABC WADC WCAU WCCO WFIBM WGN WHK WJAS WKRC WMAL WOWO 10:45-11:00 Myrt and Marge KDYL KFPY KFRC KHJ KLZ KMBC KOIN WBBM WCCO KDYL KFPY KLZ KOH KOIN KTSA WGN WOWO WTAQ (Except Mon., Wed., Fri.) KFJF WABC WBT WCAU WDSU WNAC WPG WQAM WTOC 11:15-11:30 Street Singer (Except Tues., Thurs., Sat.) WABC WBT WCAU WDSU WNAC WPG WQAM WTOC 11:30-11:45 Camel - Morton Downey KDYL KFPY KLZ KOH KOIN KTSA WGN WOWO 11:45-12:00 Ann Leaf at Organ 11:33-12:00 Ann Leaf at Organ (Except Mondays and Thursdays) KDYL KFH KFJF KFPY KFRC KLZ KOH KVOR WABC WBT WCAU WDSU WFBL WKBW WMAL WNAC WQAM WTOC

SUNDAY

12:00-12:30 Voice of St. Louis CFRB KDYL KFJF KFPY KLZ KSCJ KVI KVOR WABC WBBM WBT WCCO WDSU WFBL WIBW WJAS WMAL WPG WQAM WTAQ 12:30-12:45 International Broadcast CFRB KDYL KFJF KFPY KLZ KOH KSCJ KVI WARC WRT WCAL WDSU WABC WBT WCAU WDSU WFBL WHK WIBW WJAS WMAL WPG WQAM WTAQ WTOC W100 12:45-1:00 Cafe Budapesth CFRB KDYL KFJF KFPY KLZ KOH KSCJ KVI KVOR WABC WBT WCAU WCCO WDSU WFBL WIBW WJAS WMAL WQAM WTAQ WTOC W100-145 Cathedral Hour CFRB KDYL KFJF KLZ KMOX KOH KSCJ KVI WABC WFBL WIBW WJAS WMAL WTAQ WMAL WIAQ 2:00-2:30 Sons of Eli Spirituals KMBC KMOX KOIL KRLD WABC WADC WBBM WBIC WBT WCAU WCCO WDSU WFBL WHK WJAS WKRC WLAC WMAL WNAC WOW 2:30-3:00 Columbia Church of the Air CFRB KDYL KFH KFJF KFPY KFRC KGB KLZ KOH KOL KSCJ KVOR WABC WBT WCCO WDSU WFBL WFBM WIBW WJAS WKBW WMAL WPG WQAM WTAQ 3:00-4:30 N.Y. Philharmonic Orch. CFRB KDYL KFH KFJF KFPY KFRC KGB KHJ KLZ KMOX KOH KSCJ KVI KVOR WABC WBT

11:45-12:00 Cab Calloway's Orch. (Except Tues., Wed., Sat.) KSD WEAF WGY WOW WWJ SUNDAY 1:00-1:30 lsa Kremer with Orch. CFCF CKGW KGO KGW KOA KOMO KPRC KSL KSTP WAPI WBEN WCAE WDAF WDAY WEAF WEBC WENR WFAA WFI WFIA WHAS WIOD WJDX WRC WSM WSMB WTAM WWJ 1:30-1:45 Carveth Wells, Talk KSD WDAY WCAE WDAF 1:30-1:45 Carveth Wells, Ialk KSD WBEN WCAE WDAF WEAF WFI WGY WMAQ WOC WTAM WWJ 1:45-2:15 Old Company's Program CFCF CKGW WBEN WCSH WEAF WFI WGY WRC LAS 2:15 Day Concert 1:45-2:15 Pop Concert 133-2:13 Fop Concert KGO KGW KOA KOMO KPRC KSD KSTP KVOO WAPI WCAE WDAF WDAY WHAS WIBA WKY WOW WSM WSMB WTAM WTMJ ₩WJ 2:15-2:30 Bright Spot—Pettis Or CFCF CKGW KGW KHQ KOA KPO KSD KSL -Pettis Orch KOA KPO KSD KSD KSTP KTAR KVOO KYW WAPI WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFAA WFLA WGY WHA WIOD WJAX WJDX WKY WHAS WLIT WMC WOAI WPTF WRC WMC WOO WOW WRVA WSAI WSB WSM WTAM WTMJ WWJ WSMB 2:30-3:00 Moonshine and Honeysuckle KSD WCAE WCSH WDAF WEAF WGY WLIT WMAQ WOW WRC WTAM WWJ WOW WAC WIAM WWJ 3:00-3:30 Wayne King's Orch. KSD KYW WBEN WCAE WCSH WDAF WEAF WGY WLIT WOC WOW WRC WSAI WTAM WWJ WSAI WTAM WWJ 3:30-4:00 Dr. S. Parkes Cadman KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KVOO KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFAA WFLA WGY WHAS WIOD WIS WJAX WJDX WKY WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSM WSMB WTAM WWJ WWNC 4:00-4:30 Florabeim Fedir 4:00-4:30 Florsheim Frolic 4:00-4:30 Florsheim Froile KGO KGW KHQ KOMO KPRC KTAR KVOO WAPI WBAP WCAE WCSH WDAF WEAF WFLA WGY WIBA WIOD WIS WJDX WKY WMC KOA KTHS WBEN WDAY WHAS WJAX WOAI WOW WPTF WRC WOC WOC WOW WPTF WRVA WSAI WSB WSMB WTAM WWJ WSM WWNC 4:30-5:00 Wonder Program WBEN WCAE WCSII WDAF WEAF WENR WGY WOC WOW WRC WSAI WTAM WWJ 5:00-5:30 Artists' Service Program WBEN WCAE WCSH WDAF WEAF WGY WOC WOW WRC WSAI WTAM WWJ WBEN WCAL NOC WOW WEAF WGY WOC WOW WRC WSAI WTAM WWJ 5:30-6:30 General Electric Program KOA KPRC KSD KSTP r ?4]

National, Blue_____WJZ WOAI WREN WSB WSM WSMB WTMJ 11:15-11:30 Literary Digest, Lowell Thomas KFAB KWK WDAY WEBC WENR WREN WILLAR WILLAR 11:30-11:45 Russ Columbo, Songs KFAB KFYR WGAR WJR WJZ WKY WRC WREN WSB 11:45-12:00 Lew White,"Organ (Except Tuesday and Friday) KFAB KFYR WENR WJZ WRC WREN WSB 12:00-12:15 Mildred Bailey and Jesters Jesters (Except Tuesday and Friday) KDKA KFAB WBAP WENR WGAR WJR WJZ WREN 12:15-1:00 Larry Funk and Orch. WENR WGAR WJR WJZ SUNDAY 11:30-12:15 Morning Musicale

11:30-1	Z:15 Mor	ning Mus	sicale			
KDKA	KEX	KFAB	KGA			
KJR	KOA	KPO	KPRC			
KVOO	KWK	WAPI	WDAY			
WFLA	WHAS	WJZ	WKY			
WLW	WMC	WPTF	WREN			
WSM	WTMJ					
12:15-1	2:30 Ame	erican Cou	incil Inst.			
KFAB	KGO	KOA	WDAY			
WHAM		WJZ	WMAQ			
	15 Walter	Damroso				
KDKA	KFAB	KFYR	KGO			
KGW	KOA	KOMO	KPRC			
KV00	KWK WGAR	WAPI	WBZA			
WFLA		WHAM	WIOD			
WIS	WJAX	WJDX	WJZ			
WKY	WMC	WOAI	WPTF			
WREN	WRVA	WSB	WSMB			
WWNC	;					
2:30-3:0	00 Yeast 1	Foamers				
KDKA	KFAB	KGW	KHQ			
KOA –	KPO	KPRC	KSL			
KSTP	KTAR	KTHS WAPI	KVOO			
KWK	KY₩	WAPI	WBZA			
WEBC	KTAR KYW WFAA	WFLA WIOD	WGAR			
WHAM	WHAS	WIOD	WJAX			
WJDX	WJR	WJZ	WKY			
WLW	WJR WMC	WOAI	WKY WPTF			
WREN	WRVA	WSB	WSM			
WSMB	WRVA WTMJ					
3:00-3:3	80 Nation	al Youth (Conf.			
KDKA	KFAB	KFYR	KGO			
KGW	KHQ	KOA	KOMO			
KPRC	KTÅR	KVOO	KWK			
WAPI	WBZA	WFLA	WHAM			
WIBA	WIOD	WIS	WJAX			
WJDX	WIZ	WKY	WMAQ			
WMC	WJZ WOAI	WPTF	WREN			
WRVA	WSB	WSMB	WWNC			
4.00-4-3	Melodi	as da Fra				
CECE	CKGW	es de Fra KDKA	KFAB			
KWK	KYW	WBZA	WJZ			
WLW	WREN	11 0011				
4:30-5:0		usical Sho	wmon			
CKGW	KDKA	KFAB	KWK			
KYW	WHAM	WJZ	17 14 17			
5.00.5.3	0 Nation	al Vespers				
KDKA	KFAB	KFI	KFYR			
KGO	KGW	KHO	KOMO			
KPRC	KSL	KSTP	KTHS			
KVOO	KWK	WDAY	WEBC			
WFAA	WFLA	WIBA	WIOD			
WIS	WJDX	WJZ	WICV			
WMAQ	WOAI	WPTF	WKY WREN			
WDVA	WSB	WCM	WEMD			
WRVA WWNC	WOD	WSM	WSMB			
WWNC 5:30-6:00 Simoniz Guardsmen						
ə:30-0:0						
VEAD	0 Simonia					
KFAB WHAM	0 Simonia KWK WJZ		WGAR WMAQ			

6:30-7:00 Barnsdall Musical Memories KFH KFJF KLRA KMBC KMOX KOIL KSCJ WCCO WGN WIBW 7:00-7:15 World's Business 1:00-1:15 World's Business KDYL KFH KFJF KFPY KFRC KGB KLZ KMOX KOH KOL KSCJ KVI KVOR WABC WBT WCCO WDSU WFBL WFBM WIBW WJAS WMAL WPG WQAM WTOC W100 7:15-7:30 Charlie and Oscar KMBC KMOX WABC WCAU WCCO WGN WJAS WKRC WNAC WNAC 7:30-8:00 Luden's Novelty Orch. KDYL KLZ KMBC KMOX KOIL KRLD WABC WCAU WCCO WDSU WGN WHK WKRC WMAL WNAC WNAX WKRC WMAL WNAC WNAX 8:00-8:15 Devils, Drugs, Doctors KDYL KFPY KFRC KHJ KLZ KMBC KMOX KOIL KOIN KSCJ KTSA KVI WABC WADC WBRC WCAU WCCO WDSU WFBL WGN WHK WIBW WJAS WKRC WLAC WMAL WNAC 8:15.8:45 Fether Calkin with WEGU WIISW WNAC 8:45-9:00 Angelo Patri, Your Child KMBC KMOX KOIL WABC WADC WCAU WCCO WGN WHK WJAS WKRC WMAL WNAC WOWO Planist CFRB CKAC KDYL KFJF KFPY KGB KLZ KMOX KSCJ KVOR WABC WBT WCAU WDSU WFBL WFBM WHK WIBW WJAS WKBW WMAL WNAC WPG WQAM WTOC 11:00-11:30 The Gauchos-Spanish Program KDYL KFH KFJF KFPY

 Columbia
 WABC
 National, Red
 WEAF

 WCC0
 WDSU
 WFBM
 WHK
 KVOO
 WAPI
 WBAP
 WBAP

 W1BW
 WJAS
 WKBW
 WAAL
 WCAE
 WCSH
 WDAP
 WBAP
 WBAP

 WQAM
 WTAQ
 WTOC
 WEAF
 WCAE
 WCSH
 WDAY
 WDAY

 WQAM
 WTAQ
 WTOC
 WEAF
 WEAF
 WEAF
 WEAF
 WDAY

 G:00-6:30
 Blue
 Coal
 Rerue
 WFLA
 WGY
 WIBA
 WIOD

 CFRB
 WABC
 WCAU
 WIS
 WJAX
 WJAX
 WJD
 WKY

 6:00-6:30
 Knight from Chicago
 WMC
 WOC
 WOC
 WOW

 KDYL
 KFJF
 KFPY
 KFRC
 WPTF
 WRC
 WNC
 WSAI

 KOB
 KHJ
 KLZ
 KMOX
 WSB
 WSMB
 WTAH
 WAI

 KOH
 KOL
 KSCJ
 KVI
 6:30-7:00 Catholic Hour
 6:30-7:00 Catholic Hour

 KOO
 WDAY
 WOAH
 KOA
 KOM
 KOAH
 WRVA WSAI WWJ WWNC 6:30-7:00 Catholic Hour KGO KGW KOA KOMO KPRC KSD KSTP KTAR KTHS KVOO WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBEC WENK WFIA WGY WIBA WIOD WJAX WJDX WKY WIAT WMC WOAI WOC WOW WRC WRVA WSAI WSB WSM WSMB WWJ 7:00-7:30 Through the One WAYA WSAI WSB WSM WSAB WWJ 7:00-7:30 Through the Opera Glass CFCF WCAE WDAF WEAF WFLA WGY WIS WRC WRVA WSAI WWNC 7:30-8:00 lodent Club of the Air KSD WBEN WCAE WCSH WDAF WEAF WGY WLIT WLS WOC WRC WSAI WTAM WWJ 8:00-9:00 Chase and Sanborn CFCF CKGW KPRC KSD KSTP KTHS KVOO WBEN WCAE WCSH WDAF WEAF WEBC WFAA WFLA WGY WHAS WHO WIDD WJDX WKY WLIT WLS WMC WOAI WOW WRC WSAI WSB WSMB WTAM WTMJ WWJ 9:00-9:15 Our Government KSD
 WLAC WMAL WNAC
 9:00-9:15 Our Government

 8:15-8:45 Esther Cad-Kin with Orchestra
 KDS KTHS KVOO WBEN

 Orchestra
 WCSH WEAF WENR WPAA

 KDYL KFJF KGB KLZ
 WFI WFLA WGY WIOD

 KOH KSCJ KVOR WBBM
 WIS WJDX WOC

 WCCO WIBW WNAC
 WRC WSAI WWNC

 8:45-9:00 Angelo Patri, Your Child
 9:15-9:45 Album of Familiar Music

 KMBC KMOX KOIL WABC
 KIAC

 WHK WJAS
 WKC WMAL

 WHK WJAS WKRC WMAL
 KSTP KTAR KTHS WAPI

 WNAC WOWO
 WBEN WCAE WCSH WDAY

 9:00-9:30 Roxy Theatre Symphony
 WEAF WEBC WENR WFI

 KDYL KEFE KEPF KEPC
 WELA WGY WHAS WIBA
 KDYL KFJF KFRC KFRC WFLA WGY WHAS WIBA KLZ KMOX KSCJ KVOR WIGC WSMB WTAM WFJ WBEN WCAE WCSH WDAY WEAF WEBC WENR WFI KDYL KFJF KFPY KFRC WFLA WGY WHAS WIBA KLZ KMOX KSCJ KVOR WIOD WJAX WJJX WKY WBT WCAU WCCO WDSU WOAI WOC WOW WRC WFBM WHK WJAS WNAC WRVA WSAI WSB WSM WQAM WTOC WSMB WTAM WTMJ WWJ 9:30-10:00 Romances of the Sea CFRB KDYL KFPY KFRC KFI KGO KGW KHQ KHJ KLZ KMBC KMOX KOA KOMO KPRC KSD KOLL KOIN KOL WABC KSL KSTP KTAR KYW WAAC WCAU WGN WHK WAPI WBAP WBAP WBAP WEAF WJAS WKRC WMAL WNAC WCSH WDAF WAA WFI 10:00-10:30 Hopper Variety Show WFLA WGY WHAS WIBA KMDL KMOX KRLD KTSA WABC WADC WBBW WCAU WEAA WGY WHAS WIBA 11KMPC KMOX KRLD KTSA WABC WADC WBBW WCAU WEAA WGY WHAS WIBA 11KMPC KMOX KRLD KTSA WABC WADC WBBW WCAU WWA WSAI WSB WSM WHK WJAS WKBW WKRC 10:15-10:45 Ted Weems Orch. WMAL WOWO KFI KGO KGW YFDA WCAC WDY YFPB CKAC KDYY YFPD IV:15-10:45 Led Weens Orch. KFI KGO KGW KHQ KOA KOMO KSTP KTAR KYW WAPI WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFI WGY WHAS WJDX WKY WMC WOAI WRC WSAI WOW WRC WOC WSB WSM WSMB WTAM WTMJ WWJ
 W 1Md
 W Wd

 10:45-11:15
 Sunday at Seth Parker's
 2:30-2:45

 CKGW KGO
 KGW
 KDKA

 KOA
 KPRC
 KSD

 KSTP
 KTAR
 KYW

 KATA
 KYW
 WAPI

 WAPI
 WREN
 WSM

KHQ KOA KOMO KSL KTAR KWK KYW WCKY WDAY WEBC WGAR WIBA WJR WJZ WREN WTMJ 7:15-7:30 Jolly Time Revue KDKA KFI KGO KGW KHQ KOA KOMO KSL KHQ KOA KOMO KSL KSTP KTAR KVOO KWK WDAY WEBC WGAR WHAM WJZ WKY WIS WLW WOAI WREN WTMJ 7:30-8:00 The Three Bakers KDKA KFI KGO KGW KHQ KOA KOMO KPRC KSL KSTP KTAR KVOO KWK KYW WBZA WDAY WEBC WFAA WFLA WGAR WHAM WHAS WIBA WIOD WIAM WIAS WIZ WKY WIW WMC WOAI WPTF WREN WRVA WSB WSM WSMB WTMJ 8:00-8:15 Enna Jettick Melodies CFCF CKGW KDKA KFAB KFI KGW KHQ KOA KOMO KPO KPRC KSL KOMO KPO KPEC KSL KSTP KTAR KTHS KVOO KWK KYW WBZA WDAY WEBC WFAA WFLA WGAR WHAM WHAS WBA WIOD WJDX WJR WJZ WKY WLW WMC WOAI WREN WRVA WSB WSM WSMB WTMJ 8:15-9:15 Collier's Radio Hour KDKA KFI KGW KHQ KOA KOMO KPO KSL KWK KYW WBZA WGAR WHAM WJR WJZ WLW WREN 9:15-9:45 Bayuk Stag Party KDKA KWK KYW WBZA WGAR WJR WJZ WLW WREN 9:45-10:15 Kellogg Slumber Music KDKA KWK KYW WBZA WGAR WHAM WJR WJZ WLW WREN 10:15-10:45 Harbor Lights, Drama KDKA KWK WENR WGAR WHAM WJR WJZ WREN 10:45-11:00 Land of Wonder and Fear KDKA WBZA WHAM WJZ 11:00-11:30 Witherspoon Chorus KDKA KFAB WENR WJR WJZ WREN 11:45-12:00 South Sea Islanders KDKA KFAB KFYR KPRC KSTP KWK WHAM WIBA WJR WJZ WKY WREN WREN WSB 12:00-1:00 Henry Theis and Orch. KFYR KPRC WEBC WENR WGAR WJR WJZ WLW WMC WREN MONDAY

National, Blue____WJZ 6:30-6:45 My Portrait Gabers KFAB WBZA WJZ WREN 6:30-6:45 My Portrait Gallery 6:45-7:00 Adventures, Barbara Wayne KWK WBZA WGAR WJR WJZ WLW WREN

7:00-7:15 Willys-Overland Orch KDKA KFI KGO

KGW

Colun	ıbia		WABC
VEDO	KOD	KLZ	KSCJ
KVOR WDSU WIBW WQAM	WABC WFBL WMAL WTOC	WBT WFBM WNAC	WCAU WHK WPG
WQAM	WMAL	WNAC	wrG
11:30-12 KDYL	2:00 Ben KFH	Bernie au KFJF	nd Orch. KFPY KVOR WCCO WNAC and Orch. KLZ WCCO rgan KLZ WABC WIBW
KGB WABC	KLZ WBT	KSCJ WCAU	KVOR WCCO
WDSU WPG	WIBW WOAM	WMAL WTOC	WNAC
12:00-12 KDYL	:30 Eddi KEJE	e Duchin KFPY	and Orch. KLZ
KVOR	WABC	WCAU	WCCO
12:30-1:	00 Ann L	eaf at O	rgan VI 7
KMOX	KOH	KVOR	WABC
WCAU	MO	NDAY	WIRW
6:45-7:0	MOI 0 Reis ar KFJF KVOR WFBM WQAM 5 Ponpe KMBC WAL WHK WMAL 0 Howar KFH KHJ KSCJ WDSU WDSU WKBW	d Dunn	Comedy KOH
KSCJ	KFJF KVOR	WABC	WBT
WDSU WMAL	WFBM WQAM	WJAS WTOC	WKBW
9:00-9:1 CFRB	5 Pompe KMBC	ian Make KMOX	E-Up Box KOIL WFBL WKBW WOWO
WABC	WADC WHK	WCAU WJAS	WFBL WKBW
WKRC	WMAL	WNAC	WOWO
CFRB	KFH	KFJF	Orch. KFPY KMOX WABC WIBW WTAQ
KOH	KSCJ	KVOR	WABC
WBT WJAS WTOC	WKBW	WFBL WQAM	WTAQ
9:30-10	:00 Bouri	ois Even	ing in
			KFRC
KDYL KHJ KOIL	KFJF KLZ KOIN WBT WFBL WKBW WOWO	KFPY KMBC KRLD WCAU WGN WKRC	KFRC KMOX WABC WCCO
WADC	WBT WFBL	WCAU WGN	WCCO
WADC WDSU WJAS WNAC	WKBW	WKRC	
	0:30 Pana	ntela — C	
KDYL	nbardo KFJF KLZ KOIN WADC WFBL WKBW	KFPY KMBC	KFRC KMOX KTSA WCAU WHK WMAL
KOIL	KOIN	KRLD	KTSA
WABC	WADC WFBL	KRLD WBBM WFBM WKRC	WHK
WJAS WNAC	WKBW WOWO	WKRC	WMAL
10:30-10 CFRB	D: 45 Tosc KDYL	ha Seide KFJF	l, Violinist KFPY KSCJ
KGB KVOR	KLZ WABC	KOH WBT	KSCJ WDSU
WFBL WMAL	WFBM	WIBW WT40	WDSU WKBW WTOC
11:30-12 WARC	2:00 Cuba	n Biltmo	wDSU
WMAL	KOIN WADC WFBL WKBW WOWO 0:45 Tosc KDYL KLZ WABC WFBM WQAM 2:00 Cubz WBT WQAM THE	WTOC	11250
7:30-8:0 KMBC	0 Kalten KMOX WBBM WFBM WNAC	KOIL	WABC
WADC WFBL	WBBM WFBM	WCAU WHK	WCCO WJAS
0:10-0:2	o Sternin	g — Abe	Lyman's
Bar KFJF	vd.		
WABC	KMBC WADC WFBL WJAS	KMOX WCAU WFBM WKRC	KOIL WCCO WGN WMAL
WHK	WJAS	WKRC	
8:30-8:4	KFH KGB	oose Adv	entures KFPY
KFRC	KGB	KHJ	KFPY

Natio	nal, Re	ed	WEAF
WBEN WDAY WFI WHO WJDX WPTF	WCAE WEAF WFLA WIBA WKY WRC	WCSH WEBC WGY WIOD WMC	WDAF
WFI	WFLA	WGY	WDAF WFAA WHAS WJAX WOW
WJDX	WKY	WMC	WOW
WPTF	WRC	WRVA WSMB	WSAI WTAM
WSB WTMJ	WSM WWJ		
WDAF WOC	an WEAF WOW	WENR WRC	WGY WTAM
8-00-8-3	WIOD 0 Socony WCSH 0 Voice of CKGW KVOO WDAF WGY WJAX WMAQ WOW WSAI WTAM 0 A. & P WBEN	NDAY land Ske	tches
WBEN	WCSH	WEAF	WGY
CFCF	CKGW	KPRC	KSD
KTHS WCSH	KVOO WDAF	WBEN	WCAE WFAA
WFLA	WGY	WHAS	KSD WCAE WFAA WIOD WKY WOAI WRC WSM WWNC
WLIT	WMAQ	WMC	WOAI
WOC WRVA	WSAI	WSB	WRU WSM
WSMB	WTAM	WWJ	WWNC
KSD	WTAM 0 A. & P WBEN WEAF WOC WTAM	WWJ Gypsies WCAE WGY WOW WWJ e of the S KGO KOMO KSTP WCSH WCSH WGY WLIT WOC WSB	WCSH
WDAF WMAQ	WEAF	WGY WOW	WCSH WLIT WRC
WSAI	WTAM	WWJ	States
9:30-10: KF1 KHQ KSD WBEN WEAF WJDX WMC	WIASI 600 Parad KFYR KOA KSL	KGO	States KGW KPRC KTAR WDAF WHAS WMAQ
KHQ KSD	KOA KSL	KSTP	KTAR
WBEN	WCAE WFAA WKY WOAI	WCSH	WDAF WHAS
WJDX	WKY	WLIT	WMAQ
WMC WRC	WSAI	WOC WSB WWJ	WOW WSM
WTAM	WSAI WTMJ 9:45 True	WWJ Story —	Mary and
KSD WEAF WOC WWJ	WBEN WENR WRC	WCAE WGY	WCSH WLIT WTAM
WOC	WRC	WSAI	WTAM
11:00-11	:30 Coor WEAF	-Sanders	' Orch.
KSD WWJ			wow
	-	SDAY	
6:30-6:4 KFYR	5 Nick L KOA WCAE	ucas, Tro KSD WDAF WJDX	ubadour KSTP WEAF WOW
		WDAF	WEAF WOW
WWJ	WJAA 0 Mid-W KSTP WEAF WSB		- Sina
KOA	KSTP	WBEN	WCAE
WCSH WSAI	WEAF WSB	W FI WSM	WJDX
8:00-8:3	KSTP WEAF WSB 0 Blacks mit KSTP WCSH WFI WRC 0 Sousa	tone — S	anderson-
KSD	KSTP	KYW	WBEN WEAF WOC WTAM
WEBC	WFI	KYW WDAF WGY WSAI	WEAF
WOW	WRC	WSAI	WTAM
WOW WWJ 8:30-9:0 KPRC WCAE WFI WIOD	0 Sousa	and his B	and WBEN WEAF
WCAE	WCSH	WDAF	WEAF
WFI	W FLA W JA X	WGY	WHAS
WOAI WRVA WSMB	WOC WSAI WTAM 0 McKes KGO KPRC KYHS WCSH	and his E KYW WDAF WGY WJDX WOW WSB WWJ	WRC WSM
WSMB	WTAM	WSB	WOM
9:00-9:3 KFI	Mo McKes KGO	son Mus KHQ	ical Mag. KOA
KOMO	KPRC	KSD	KOA KSL WBEN
WCAE WEAF	KGO KPRC KYHS WCSH WEBC	KVOO WDAF WFI	WBEN WDAY WFLA
WEAF	WEBC	WFI	WFLA

National, Blue____WJZ 2:45-3:00 Piano Moods 2:45-3:60 Piano Moods CKGW KDKA KPO KPRC KSTP WAPI WDAY WHAM WJAX WJDX WJR WJZ WKY WREN WSB WSM 8:30-9:60 Death Valley Days, Drama KDKA KFAB KGO KGW KFI KHQ KFYR Комо KSTP KSL KTAR KWK WEBC WGAR WJZ WLS WBZA WHAM WIBA WREN WTMJ W1MJ 9:00-9:30 Maytag Orchestra KDKA KGO KGW K KOA KOMO KPRC K KVOO KWK WBZA W KHQ KSL WDAY WGAR WHAM WJZ WKY WEBC WFAA WJR WIS WMC WOAI WREN WSM WTMJ 9:30-10:00 Musical Dominos Orch. KDKA KWK KYW WGAR WHAM WJR WBZA WJZ WLW WREN 10:00-10:30 Gold Medal Express KDKA KFI KHQ KOA KGO KGW KOMO KSL KHQ KSTP KTAR KWK WBZA WEBO KYW WEBC WBAP WFLA WGAR WHAM WIOD WJZ WKY WJAX WJR WJZ WKY WMC WREN WRVA WSB WMC WOAI WSM WTMJ WOM WING 10:30-11:00 Chesebrough Real Folks KDKA KFI KGO KGW KHQ KOA KOMO KPRC KTAR KTHS KWK KYW WAPI WBAP WBZA WDAY KHQ KTAR WAPI WEBC WGAR WFLA WHAM WHAS WIBA WIOD WJAX WJR WJZ WREN WRVA WJDX WLW WOAI WSM WSB WOAI WREN WREA WOD WSM WSMB WTMJ 11:00-11:30 Slumber Music WIOD WIS WJR WJZ WWNC WRC TUESDAY ...

3:00-3:30 Music in the Air						
CKGW	KDKA	KFAB	KOA			
KTHS	KVOO	KWK	WAPI			
WBAP	WBZA	WDAY	WEBC			
WFLA	WGAR	WIBA	WIOD			
WIS	WJAX	WJDX	WJR			
WJZ	WKY	WLW	WMC			
WPTF	WRC	WREN	WRVA			
WSB	WSM	WSMB	WWNC			
5:30-5:4	WSM 5 Old Pa WAPI	DDV				
KOA	WAPI	WENR	WHAS			
WJDX	WJR	WJZ	WMC			
WREN	WSM					
7:45-8:0		the New				
KFYR	KGO	KOA	WCKY			
WEBC	WFLA	WIOD	WIS			
WJZ	WRC	WREN				
8:00-8:3	0 Armstr	ong Qual	ers			
KDKA	KFAB	KWK	WBZA			
WHAM	WJR	WJZ	WLS			
WLW	WREN					
8:30-8:4	5 Heel H	ugger Ha	rmonies			
KFI	KGO	KGW	\mathbf{KHQ}			
KOA	KOMO	$_{\rm KSL}$	KTAR			
WHAM	WJZ	WLS	WREN			
9:00-9:3	0 Housel	old Fina	nce Pro-			
grar	n					
KDŘD		WBZA	WHAM			
WJZ		WREN				
9:30-10:	00 Great	Personal	ities			
KDKA	KWK	WBZA	WENR			
	WHAM	WJR	WJZ			
WLW	WREN	WRVA				

 Columbia
 WABC
 National, Red
 WEAF
 National, Blue

 KMBC
 KMOX
 KOH
 KOIL
 WHAS
 WIOD
 WJAX
 WJDX

 KOIN
 KSCJ
 KTSA
 WABC
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 WGN WHK WIBW WJAS WKRC WMAL WNAX WOWO WQAM WTAR 8:45-9:00 Walter Winchell KMBC KMOX KOIL WABC WADC WCAU WFBL WHK WJJS WJJD WKRC WMAL WNAC WOWO 9:00-9:30 Ben Bernie and Orchestra 9:00-9:30 Ben Bernie and Orchestr. KDYL KFH KFJF KFPY KFRC KHJ KMBC KOIL KOIN KTSA WABC WADC WBRC WBT WCAU WCCO WDSU WFBL WGN WHK WJAS WKRC WMAL WNAC WOWO 9:30-10:00 Romances of the Sea 9:30-10:00 Komances of the Sea CFRB KMBC KMOX KOIL WARC WADC WCAU WFBL WGN WHK WJAS WKBW WKRC WMAL WAAC WOWO 10:00-10:15 Modern Male Chorus CPDD FOLV WEW FEIE WKRC WMAD WAR 10:00-10:15 Modern Male Chorus CFRB KDYL KFH KFJF KSCJ KVOR WABC WBT WCCO WDSU WFBL WFBM WIBW WJAS WKBW WMAL WQAM WTOC 10-15-10:30 Star Shoemakers KFPY KFPY 10:15-10:30 Star Sheemakers KDYL KFH KFJF KFPY KFRC KGB KHJ KLZ KMBC KMOX KOH KOIL KOIN KRLD KSCJ WARC WADC WBBM WBRC WBT WCCO WDSU WFBM WHK WIBW WJAS WKRW WHK WIBW WJAS WKRW WKRC WLAC WMAL WNAX WOWO WQAM WTAR WTOC 10:30-10:5 Arabseque. Desert Play CFRB KFH KFJF KGB KOH KVOR WABC WFT WDSU WFBL WFBM WHK WIBW WJAS WKBW WMAL WPG WQAM WTOC 11:00-11:15 Cuban Biltmore Orch. 11:00-11:15 Cuban Biltmore Orch. KFH KFJF KGB KVOR WABC WDSU WFBM WIBW WJAS WKBW WPG WTOC WEDNESDAY 9:00-9:30 Gold Medal Freight KPH KMBC KMOX KOIL KSCJ WABC WADC WCAU WCCO WFBL WFBM WGN WHK WJAS WKBW WKRC WMAL WNAC WOWO 9:30-10:00 Eno Crime Club CFRB KMBC KMOX KOIL WABC WADC WCAU WFBL WHK WJAS WKBW WKRC WMAL WNAC WOWO WQAM WMAL WNAC WOWO WQAM 10:00-10:15 Vitality Personalities KDYL KFJF KFPY KFRC KHJ KLZ KMBC KMOX KOIL KOIN KRLD KTSA KVI WABC WADC WBBM WBRC WBT WCAU WCCO WDSU WFBL WFBM WHK WJA8 WKBW WKRC WLAC WMAL WNAC WOWO 10:15-10:30 Waad Tire Chain 10:15-10:30 Weed Tire Chain Symphony KMBC KMOX KDYL KFJF KLZ KMBC KMOX KOLL KRLD WABC WADC WCAU WCCO WFBL WGN WHK WJAS WLBW WKRC WMAL WOWO 10:30-10:45 Columbia Concerts Program CFRB KDYL KFJF KFPY

WSAI WSB WSM WTAM WTMJ WWJ WSM WSMB 9:30-10:00 The Fuller Man KHQ KOA KGO KGW KOMO KSD KVOO KYW WBAP WBEN WCAE WCSH WDAF WEAF WEBC WFI WGY WKY WOAT WOC WOW WRC KSTP WOW WRC WTAM WTMJ WWJ 11:00-11:15 Lee Morse, Songs CFCF WCAE WEAF WFI WGY WIOD WJAX WTAM WWJ 11:30-12:00 Jack Denny and Orch. CFCF KSD KSTP WBEN WEAF WFI WGY WJAX WOW WRC WOW WICE 12:00-12:30 Rudy Vallee and Orch. KFYR KPRC KSD KSTP WBEN WDAF WEAF WGY WHAS WIBA WOW WRC WSB WUJ WEAT WGAT 8:00-8:15 Snoop and Peep, Comedy CFCF CKGW WBEN WCSH WEAF WGY WLIT WRC WTAM W1AM 8:15-8:30 Ohman-Arden, Piano Duo KSD WBEN WCAE WCSH WDAF WEAF WGY WLS WOC WOW WRC WSAI WTAM WWJ 8:30-9:00 Mobiloil Concert 8:30-9:00 Mobiloi Concert KOA K3D KSTP KVOO KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFAA WGY WHO WIBA WKY WLIT WOAI WOW WRC WSAI WTAM WTMJ WWJ 9:00-9:30 Halsey-Stuart Program CKGW KFI KHQ KOA KGO KGW KOMO KPRC KSD KSL KSTP KVOO KYW WBEN WCAE WCSH WEAF WGY WLIT WMC WOW WRC WHAS WJAX WOAI WOC WRVA WSAI WSMB WTAM WSM WSB WTMJ WWJ 9:30-10:30 Palmolive Hour CKGW KFI KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KVOO KSD KSL WBEN WCAE WCSH WDAF WEAF WFAA WGY WHAS WLIT WIBA WIS WMAQ WOC WOW WSB WSM WMC WOAI WRC WSAL WSMB WTAM WTMJ WWJ WWNC 10:30-11:00 Coca-Cola Program CFCF KFI KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTHS WAPI WBAP WBEN WCAE WCSH WDAF WEAF WEBC WENR WFLA WGY WHAS WIOD WJAX WKY WLIT WOAI WMC WOW WPTF WRC WSAI WSB WSM WRVA WSM WSMB WTAM WTMJ WWJ

KDKA KFAB WENR WGAR WJR WJZ WREN 12:15-1:00 Paul Whiteman and Orchestra KYW WGAR WJZ WREN WEDNESDAY 7:45-8:00 Believe It or Not, Ripley KDKA WBZA WHAM WJZ WPTF WRVA 8:00-8:15 College Memories KFI KGO KGW KHQ KOA KOMO KPRC KSL KSTP KTAR KVOO KWK KYW WCKY WDAY WEBC WFAA WGAR WHAM WHAS WIBA WJDX WJR WJZ WMC WOAI WREN WSB WSM WSMB WTMJ 8:15-8:30 Guy Robertson, Baritone KFAB KOA KPRC KSTP KVOO KWK KSL KYW WBAP WBZA WCKY WDAY WEBC WFAA WFLA WGAR WHAM WHAS WIBA WIOD WIAM WIAS WIA WIO WJAX WJDX WJR WJZ WKY WMC WOAI WPTF WREN WRVA WSB WSM WSMB 8:30-9:00 Jack Frost Melody Moments KDKA WGAR WHAM WJR WJZ WLS WLW 9:00-9:30 Adventures of Sherlock Holmes KDKA KWK WBZA WGAR WHAM WJR WJZ WLS WEAM WJR WJZ WGA WLW WREN 9:30-10-00 9:30-10:00 Dutch Masters Program KDKA KWK WBZA WENR WGAR WHAM WJR WJZ WLW WREN 10:00-10:30 Rochester Civic Orch. KDKA WFLA WGAR WHAM WIOD WIS WJR WJZ WREN WWNC 10:45-11:00 Hollywood Nights KDKA KWK WBZA WENR WGAR WHAM WJR WJZ WREN 11:00-11:30 Slumber Music WIOD WJR WJZ WWNC 12:15-12:30 Coon-Sanders Orch. KFYR KOA KSTP KTHS WENR WGAR WIBA WJR WJZ WMC WREN WSB WTMJ 12:30-1:00 Ernie Holst and Orch. KOA WENR WGAR WJR WJZ WREN WSB WSM THURSDAY 4:15-4:45 U.S. Navy Band WAPI WJDX WJR WREN WSM WJZ 5:00-5:30 Coffee Matinee KDKA KFAB KWK KYW WBZA WGAR WHAM WJZ WLW WREN KYW KVOO WENR WHAS WJDX WJR WJZ WMC WREN WSM 7:45-8:00 Famous Fallacies of Busi-

__ W J Z

10:45-11:00 Paris Night Life KDKA KYW WBZA WGAR WHAM WJZ WREN

11:45-12:15 Dream Pictures

NESS KFI KGO KGW KHQ KOA KOMO KTAR WCKY WEBC WFLA WGAR WIS

Colun	ıbia		WABC
KFRC	KGB	KLZ	KOH
KSCJ	KVOR	WABC	WBT
WCCO	WDSU	WFBL	WFBM
WIBW	WKBW	WMAL	WPG
WQAM	WTAQ	WTOC	
11:00-11	:15 Leon	Belasco'	
KDYL	KFH	KFJF	KFPY
KGB	KLZ	KOH	KSCJ
KVOR	WABC	WDSU	
WIBW	WJAS	WKBW	WPG
WTOC			

THURSDAY

7:30-7:45 Kaltenborn Edits News KMBC KMOX KOIL WABC WADC WBBM WCAU WCCO WFBL WFBM WHK WJAS WKRC WNAC 8:15-8:30 Sterling - Abe Lyman's Band KFJF KMBC KOIL WABC WADC WCAU WCCO WDSU WFBL WHK WJAS WKRC WMAL WNAC WQAM WMAL WNAC WQAM 8:45-9:00 Angelo Patri, Your Child KMBC KMOX KOIL WABC WADC WCAU WCCO WFBL WHK WJAS WKRC WMAL WNAC WOWO WQAM 9:00-9:30 Eugene Ormandy Presents KDYL KFH KFJF KFPY KFRC KGB KHJ KOH KSCJ KVOR WABC WFBM WJAS WKBW WMAL WNAC WPG WTAQ WTOC 9:30-10:00 Love Story KMBC KMOX KOIL WABC WADC WBBM WCAU WFBL WHK WJAS WKBW WKRC WMAL WNAC WOWO 10:00-10:30 Schaffner-Marx 10:00-10:30 Schalmer-Marx Trumpeters KFJF KLZ KMBC KMOX KOIL KRLD WABC WADC WBBM WCAU WCCO WDSU WFBL WFBM WHK WJAS WKBW WKRC WMAL WOWO WKBW WKKU WARAN 10:30-10:45 Peter's Parade KDYL KFJF KFPY KFRC KHI KLZ KOH KOB KHJ KIZ KOH KOB KHJ KLZ KOH KOL KOIN KRLD WABC WADC WBRC WBT WDSU WHK WIBW WJAS WKBW WKRC WLAC WNAX WOWO WOAM WTOC 11:15-11:30 Jack Miller songs KVOR WABC WBT WCAU WDSU WNAC WQAM WTOC 11:45-12:00 Leon Belasco Orchestra KDYL KFH KLZ KOH KSCJ KVOR WABC WBT WCAU WDSU WFBL WKBW WPG WQAM WTOC

FRIDAY

8:30-9:00 March of Time KDVL KLZ KMBC KMOX KOIL WABC WADC WCAU WCCO WGN WHK WJAS WMAL WNAC WOWO 9:00-9:15 Radio Reproductions KMBC KMOX WABC WBBM WCAU WFBL WHK WJAS WKBW WKIC WMAL WNAC 9:15-9:45 Liberty Magazine KFJF KLZ KMBC KMOX KOIL KRLD WABC WBC WBT WCAU WCCO WDSU WFBL WGN WHK WJAS WKBW WKIC WLAC WMAL WNAC 11:00-11:15 Voice of Radio Digest KSD KCSH WEAF WEBC WGY WOW WRC WTAM WWJ

11:30-12:00 Vincent Lopez and Orchestra

Urchestra WAPI WDAF WEAF WENR WIOD WOAI WOC WOW WRC WTAM WWJ 12:30-1:00 Paul Whiteman's Orch. WEAF WOC WRC WTAM WWJ

THURSDAY

6:30-6:45 The World Today WCAE WEAF WFI WIOD 7:00-7:15 Vermont Lumber Jacks WBEN WCAE WCSH WEAF WENR WFI WGY WSAI WWJ 7:15-7:30 Campbell Orchestra CFCF WBEN WCSH WDAF WEAF WFI WOW WRC WSAL 8:00-9:00 Fleischmann - Rudy Vallee CFCF CKGW KGO KGW KHQ KOA KOMO KPRC KSD KSL KSTP KTAR KTHS WAPI WBAP WBEN WCAE WCSH WDAF WEAF WEBC WFI WFLA WGY WHAS WHO WIOD WJAX WJDX WKY WMAQ WMC WOAI WOW WRC WRVA WSAI WSB WSM WSMB WTAM WTMJ WWJ Vallee WTAM WTMJ WWJ 9:00-9:30 Arco Dramatic Musicale 9:00-9:50 Arco Drainate Wdsrau CKGW KGO KGW KHQ KOA KOMO KSD KSL KTAR KYW WAPI WBAP WBEN WCAE WCSH WDAF WEAF WEBC WFI WGAY WDAF WHAS WIOD WJAX WIDX WOAI WKY WMC WOAI WOW WPTF WRC WSAI WSB WSM WOC WRVA WSMB WTAM WTMJ WWJ 9:30-10:00 Adventures of Sherlock Holmes CFCF CKGW KSD WBEN WCSH WDAF WEAF WENR WFI WGY WOC WOW WRC WSAI WTAM WWJ FRIDAY 7:00-7:30 Major Bowes' Family KFYR KOA WCSH WEAF WGY WHAS WJAX WOW WPTF WRC WSAI WSB 8:00-9:00 Cities Service Program KGW CKGW KGO KHQ KOA KOMO KPRC KSD KSTP KTHS KYW KSL. KSL KSTP KTHS KYW WBEN WCAE WCSH WDAF WEAF WEBC WFAA WGY WOC WKY WLIT WOAI WRC WSAI WTAM WOW WTMJ WWJ 9:00-9:30 The Cliquet Club KSD WBEN WCAE WCSH WDAF WEAF WGY WLIT WOW WRC WSAI WOC WWJ 9:30-10:00 Pond's Dance Program KSD WBEN WCAE WCSH WDAF WEAF WENR WGY WLIT WOC WSAI WTAM WOW WRC 10:30-11:00 RKO Theatre of the Air KGO KGW KHQ KOMO KSD KSL KOA KTAR

National, Blue____WJZ WJAX WJZ WLS WPTF WRC WREN WRVA WWNC 8:00-8:15 Dixie Spiritual Singers KDKA KFAB KWK WBZA WCKY WENR WHAM WJR WJZ WLS WREN WRVA 8:15-8:30 Rin-Tin-Tin Thriller KDKA KFAB KWK WBZA WGAR WHAM WJR WJZ WLS WLW WREN 8:30-8:45 Pickard Family WBZA WJR WJZ WLW WREN WLS 9:00-9:30 Black stone, Sanderson-Crumit KDKA WBZA WCKY WHAM WJZ 9:30-10:00 Maxwell House Ensemble KDKA KGO KGW KOA KOMO KSL KGW KHO KSTP KTAR KWK KYW WAPI WBZA WEBC WFLA WHAM WHAS WIOD WJAX WJDX WKY WLW WJR WJZ WMC WREN WRVA WSB WSM WSMB WTMJ 10:00-10:30 A. & P. Gypsies KDKA KWK KYW W WGAR WHAM WJR W WLW WREN WBZA WJZ 10:45-11:00 Paris Night Life KDKA KWK WBZA WGAR WHAM WJZ WREN 12:15-12:30 Earl Hines and Orch. KFYR KOA KPRC KTHS WENR WGAR WJR WJZ WREN WSB WSM FRIDAY ĉ

	:00 Walt		
CFCF	CKGW	KDKA	KFAB
KOA	KPRC	KSD	KSL
KSTP	KTHS	KV00	KWK
KYW	WAPI	WBAP	WBEN
WBZA	WCAE	WCSH	WDAF
WDAY	WEAF	WEBC	WENR
WFLA	WGY	WHAM	WHAS
WIBA	WIOD	WJAX	WHAS WJDX
WJR	WJZ	WKY	WLIT
WMC	WOAI	WOC	WOW
WPTF	WRC	WREN	WRVA
WSAI	WSB	WSMB	WTAM
WTMJ	WWJ		
4:15-5:1	5 Radio (Guild	
CKGW	KFAB	KOA	KPRC
KSL	KVOO	WAPI	WDAY
WEBC	WGAR	WHAM	WHAS
WIBA	WIS	WJAX	WJDX
WJR	WJZ	WKY	WMC
WOAI	WPTF	WRC	WREN
WRVA	WSB	WSM	WSMB
WWNC			
	0 Firesido	e Songs	
KFAB	KFYR	KYŴ	WJDX
WJR	WJZ	WRC	WREN
WSM	WWNC	.,	
	0 Believe	It or No	t, Ripley
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WRVA			
8:00-8:3	0 Nestle'	s Program	n
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WCKY	WGAR	WHAM	WJR
WJZ	WLS	WREN	
	0 Interwo	ven Pair	
KDKA	KFI	KGO	KGW
KHQ	KOA	KOMO	KPRC
KSL	KSTP	KTAR	KWK
KYW	WAPI	WBZA	WCKY
WEBC	WEAA	WGAR	WHAM
WHAS	WIOD	WJAX	WJR
WJZ	WKY	WMC	WOAI

Columbia______WABCNational, Red_____WEAF9:45-10:00 Friendly Five FootnotesWBEN WCAE WCSH WDAYKFJF KLZ KMBC KMOXWBEN WCAE WCSH WDDAYWFJL WABC WBRC WBRCWHAS WIBA WIOD WJAXWBFL WGN WHK WJASWDAU WCO WDBUWFBL WGN WKRC WLAC WMALWJDX WKY WLIT WMCWKBW WKRC WLAC WMALWJDX WKY WLIT WMCWKACWACC WAAC WMALWNACWABC WADC WBTWAA WSAC WABC WBTWID WOW WRCWAAL WAAC WOWO WTAR11:00-10:00 Filsbury Pageant10:45-11:00 Tilo Guizar, TenorKSD KSTP KYW WCAECFRB KFJF KGB KOHKSD KSTP KYW WCAEKSUJ KVOR WABC WBTWDAY WEAF WENR WGYWCAU WDSU WFBL WIBWWDAY WEAF WENR WGYWJAS WKBW WMAL WQAMWOW WRC WSM WTAMWTOCWDAY WEAF WENR WGYWJAS WKBW WTOC7:00-7:15 Nick Lucas, TroubadourKFYF KJF KGB KSCJKYOR WABC WDSUKYOR WABC WDSU WFBLWBWWJAS WKBW WTOC7:00-7:15 Nick Lucas, TroubadourKFYF KJF KGB KSCJKYR KOA WBEN WCAEKYOR WABC WDSU WFBLWBWWJAS WKBW WTOCWSB12:00-12:30 Ben Bernie and Orch.KFYR KOA WBEN WCAEKOH KYOR WABC WCAUWSBWKBW WNACWSBWKBW WNACWSBWKBW WNACWBENWKBW WNACWBEN WCAESATURDAYSATURDAY6:00-6:30 Abrams Barn OrchestraWDAY WEAF6:00-6:30 Abrams Barn OrchestraWDAY WCAC

CFRB KFH KFPY KGB KOH KSCJ KVI KVOR KOH KSCJ KVI KVOR WABC WBT WDSU WFBL WIBW WJAS WQAM WTOC KIM WITH WELL WITH WITH KFH KFJF KFPY KGB FOH KSCJ KVOR WABC WBB WBT WCAU WFBL WFBM WBW WJAS WKBW WNAX WQAM WTOC WKBW 7:00-7:15 Political Situation KDYL KFH KFJF KGB KLZ KOH KSCJ KVI KVOR WABC WBT WCAU WDSU WFBL WFBM WIBW WMAL WTOC 7:30-7:45 Reis and Dunn KDYL KFH KFJF KFPY KMOX KOH KSCJ KVOR WBT WCCO WDSU WFBM WJAS WNAC WQAM 8:15-10:00 Philadelphia Symphony CFRB CKAC KDYL KFH KFJF KFPY KFRC KHJ KFPY KFRC KHJ KMBC KMOX KOH KFJF KLZ KOIN KRLD KSCJ WABC WADC WBRC WCAU WCCO WDSU KOIL KTSA WBT WFBM WGN WFBL WHK WIBW WJAS WKBW WKRC WLAC WMAL WNAC WNAX WOWO WPG WQAM WTAR WTOC 10:00-11:00 Hank Simmons CFRB KDYL KFH KFJF KFPY KFRC KCB KHI KFPY KHJ KFRC KGB KLZ KOH KSCJ KVOR WABC WADC WCAU WCCO WDSU WFBL WHK WIBW WJAS WKBW WMAL WPG WTAQ 11:30-11:45 Leon Belasco and Orch. WABC WBT WCAU WDSU WMAL WQAM 12:00-12:30 Guy Lombardo and Orch. KDYL KFJF KFPY KOH KVOR WABC WCAU WCCO WFBL WIBW WKBW WNAC

WBEN WCAE WCSH WDAY WEAF WENR WFLA WGY WHAS WIBA WIOD WJAX WLIT WMC WOW WRC WSB WSMI WJDX WKY WOAI WOC WOW WRVA WSAI WSB WTAM WTMJ WWJ WSMB 11:00-12:00 Vincent Lopez and Orch. KSD WBEN WEAF WGY WIOD WOW WRC WTAM WWJ WWNC SATURDAY 5:30-5:45 Dandies of Yesterday KSD KSTP KYW WCAE WDAY WEAF WENR WGY WHAS WJDX WKY WOC WOW WRC WSM WTAM WWJ 7:00-7:15 Nick Lucas, Troubadour KFYR KOA WBEN WCAE WCSH WDAY WEAF WENR WFI WJDX WOW WSAI WSB WTAM TIS-7:30 Laws Safeguard Society KGO KOA KOMO KTAR WEBN WCSH WDAY WEAF WEBC WENR WFI WGY WJDX WOAI WOC WOW 7:30-7:45 Breen and de Rose CFCF WBEN WDAF WENR WFI WGY WOC WOW WRC WRVA WSM WTAM WTAM 8:00-8:30 Civic Concerts Service KSD WBEN WCAE WCSH WDAF WEAF WFI WGY WOC WOW WSAI WTAM WWJ 8:30-9:00 Advisory Council on Radio KFI KGO KGW KOA KOMO KPRC KSD KSL KSTP KTAR WCSH WDAF KŠTP KTAR WDAY WEAF WCSH WDAF WEBC WFI WEBC WFLA WGY WHAS WIBA WIOD WIS WJAX WJDX WOW WSAI WTMJ WWJ WOC WSB WSM WWNC 9:00-9:30 Arthur Pryor and Orch. KFI KGW KHQ KGO KOMO KPRC KSTP KTAR KOA KSD WAPI WCSH KSL WBAP WBEN WCAE WDAF WDAY WEAF WDAF WEBC WFI WFLA WJAX WGY WHAS WIOD WJDX WLW WIC WOAI WOC WPT WRC WRVA WSAI WSB WSMB WTAM WTMJ WWJ WPTF 9:30-10:00 Club Valspar CFCF CKGW KPRC KSD KSTP WAPI WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFI WFLA WHAS WIOD WGY WJAX WJDX WKY WOC WOW WMC WOAI WPTF WRC WRVA WSAI WSB WSMB WTAM WTMJ WWJ 11:00-11:15 Lee Morse, Songs KSD WCAE WEAF WFI KSD WCAE WGY WTAM 11:30-12:00 Coon-Sanders' Orch. CFCF KPRC KSD WCAE WDAF WEAF WFI WGY WIOD WMC WOC WOW WSB WRC WTAM WWJ 12:00-12:30 Rudy Vallee and Orch. KOA KPRC KSD WDAY WEAF WGY WBEN WIBA WMC WOW WRC WTAM WWJ

National, Blue____WJZ WREN WRVA WSB WSM WSMB WTMJ 9:30-10:00 Armour Program KDKA KFI KGO KGW KHQ KSL KOA KOMO KPRC KSTP KWK KYW WEBC WGAR WJAX WAPI WBZA WHAM WHAS WIOD WJDX WJR WJZ WKY WLW WMC WOAI WREN WRVA WSB WSM WSMB WTMJ 10:00-10:30 Paul Whiteman's Paint Men KDKA KFI KGO KGW KOA KOMO KPRC KSTP KTAR KVOO KHQ KOA KSL KWK WEBC WENR WIAM WHAS WIOD WJDX WJR WJZ WKY WOAI WREN WRVA WSM WSMB WTMJ 'Melody WRZA WBAP WBZA WDAY KDKA KWK KYW WBZA WGAR WHAM WJR WJZ WREN 11:30-12:00 Jack Denny and Orch. CFCF KFYR KPRC KSTP WEBC WENR WIBA WIS WJR WJZ WREN SATURDAY 1:30-2:00 Paul Whiteman and Orch. CKGW KOA KYW WBZA WGAR WIOD WJZ WREN WSM 7:45-8:00 Hollywood Nights KDKA KFAB KWK KYW WBZA WCKY WGAR WHAM WJR WJZ WREN 8:00-8:30 Danger Fighters, Drama KDKA KFAB KFI KGO KGW KHQ KOA KOMO KHQ KGW KHQ KPRC KSL KOMO KSTP KTAR KPRC KOL KWK WAPI WDAY WHAM WHAS WIBA WIS WMC WDAY WEBC WJDX WJZ WLS WREN WSB WMC WOAI WSM WSMB WTMJ 8:30-9:00 Dance with Countess 8:30-9:00 Canad D'Orsay CFCF CKGW KDKA KWK WBZA WGAR WHAM WJR W17, WLS WLW WRED WREN 9:00-9:30 Chicago Civic Opera CFCF CKGW WHAM WJZ 9:30-10:00 The First Nighter KDKA KFI KGO KGW KHQ KOA KOMO KSL KHQ KOA KOMO KSL KSTP KTAR KWK KYW WBZA WDAY WEBC WGAR WHAM WJR WJZ WLW WREN WTMJ 10:00-10:30 Cuckoo Burlesque Skit CFCF CKGW KWK WBZA WGAR WHAM WJR WJZ WREN 10:45-11:00 Twenty Fingers of Harmony CFCF KDKA WHAM WJR WJZ WREN 11:00-11:30 Slumber Music WHAM WJR WJZ WWNC 12:15-1:00 Paul Whiteman and Orchestra KYW WGAR WJR WJZ WREN

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KEY

Frequency in kilocycles. Wave lengths in meters. Second column symbols: * Verifies receptions 2c; tends station stamp 10c; † Verifies 2c; no stamp; ¢ Sends stamp but does not verify otherwise; ‡ Does not verify; §Did not reply. § Verification 25c, reply card 10c. Third column shows night power in watts. Fourth 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 freque-cies; Correct kilocycles shown in small figures; N means NBC chain; C means Columbia chain; Z has been granted permit to change frequencies; Y given permit to move to another city. Dn — This daylight station may use evening hours under certain conditions. □These stations operate simultaneously. Dashes (...) have no meaning. have no meaning.

540 kilocycles 555.6 mete	rs
CKX † 500 Brandon, Mania XEY 101 547 Merida, Mexico	
550 kilocycles 545.1 mete	rs
KFDY † 500 1+ Brookings, S. D KFUO * 500 2+ St. Louis, Mo. KFYR † 1000 1+N Bismarck, N. D, KOAC † 1000 - Corvallis, Ore. KSD † 500 2N St. Louis, Mo. WGR * 1000 C Buffalo, N. Y. WKRC † 1000 C Cincinnati, Ohi	. S. D. State College Concordia Theological Seminary Meyer Broadcasting Co. State Agricultural College Pulitzer Publishing Co. Buffalo Broadcasting Co.
560 kilocycles 535.4 meter	rs
KFDM*500X+Beaumont, TexiKLZ*1000CDenver, Colo.KTAB*1000	Reynolds Radio Co., Inc. Cal. Associated Broadcasters a. Strawbridge & Clothier Nelson Bros. Bond & Mortgage Co. a. Lit Brothers
570 kilocycles 526.0 meter	rs
KGKO*250+Wichita Falls, TKMTR*500Hollywood, Cal.KXA*500GuatamalaTGW-50GuatamalaWEAO†7501Columbus, OhicWKBN*5001CYoungstown, OlWMAC-2502Syracuse, N. Y.WMAC*5003New York CityWNAX*1000CYankton, S. D.WPCH*500DNew York CityWSYR-2502Syracuse, N. Y.WWNC*1000NAsheville, N. C.	KMTR Radio Corp. American Radio Tel. Co. Ohio State University
580 kilocycles 516.9 meter	rs
CFCY * 500 Charlottetown, J CHMA 250 4S Edmonton, Alta CKUA † 500 4 Edmonton, Alta KGFX 200 D Pierre, S. D. L KSAC ‡ 500 2+ Manhattan, Kar WIBW 1000 2+C Topeka, Kansas WOBU 250 1+ Charleston, W. V. WSAZ 250 1 Huntington, W. WTAG 250 N Worcester, Mass	. Christian and Missionary Alliance University of Alberta Dana McNeil Is. State Agricultural College Topeka Broadcasting Assn., Inc. Va. WOBU, Inc. Va. WSAZ, Inc.

590	kilo	cycle	~ 5	08.2 meters	Γ
CMW		1400	588	Havana Cuba	1
KHO		1000	+N	Spokane, Wash. Lincoln, Nebr. Boston, Mass.	
KHQ WCAJ WEEI	*	500 1000	1 N	Lincoln, Nebr.	
WEEL	† *	1000	D	Kalamazoo, Mich.	
WKZO WOW	*	1000	1N	Kalamazoo, Mich. Omaha, Nebr. Mexico City	
XEZ	*	500	588		
600	kilo	cycle	es 4	99.7 meters	
CNRO		500		Ottawa, Ont.	L
< KFSD	‡ *	500	+N	San Diego, Cal.	
WCAC WCAO	‡ *	250 250	2+ C 2+ C	Storrs, Čonn. Baltimore, Md.	
WICC	*	250	2+	Bridgeport, Conn.	
WMT WREC	*	500 500	+C	Bridgeport, Conn. Waterloo, Iowa Memphis, Tenn.	
	bile	ocycle		91.5 meters	ſ
	*	1000			L
KFRC WDAF	*	1000	C N	San Francisco, Cal. Kansas City, Mo.	
WFAN	*	500	2C 2C	Philadelphia, Pa.	
WIP WJAY	Ť	500 500	D	Philadelphia, Pa. Philadelphia, Pa. Cleveland, Ohio	
-		ocycl	es 4	83.6 meters	ſ
	MIC		-	Havena Cuba	L.
CMCJ KGW KTAR WFLA WLBZ	*	250 1000	+N +N 1+N C	Havana, Cuba Portland, Ore. Phoenix, Arizona Clearwater, Fla.	
KTAR	*	500 1000	+N	Phoenix, Arizona	
WFLA	÷	500	C C		
WSUN	*	$1000 \\ 1000$	1+N +N	St. Petersburg, Fla. Milwaukee, Wis.	
WTMJ					
630	kild	ocycl	es 4	175.9 meters	
CFCT CHCS CJGX CKOC	*	50		Victoria, B. C.	
CHCS		500 500	2+	Hamilton, Ont. Yorkton, Sask.	
CKOC	*	1000	2	Hamilton, Ont. Moncton, N. B.	
CNRA KFRU	*	500 500	1	Columbia, Mo.	
WGBF	;	500	1	Columbia, Mo. Evansville, Ind.	
WMAL WOS	, * *	250 500	+C	Washington, D. C. Jefferson City, Mo.	
640	kild	ocycl	es 4	468.5 meters	ſ
	1/11/	100	645		l
CHRC CKCI CKCR	‡	100	645	Quebec, Que. Quebec, Que.	
CMHI		50 40	645 645	Waterloo, Ont. Cienfuegos, Cuba	
KFI	*	50000	N	Los Angeles, Cal.	
KFI WAIU WOI XFG	*	500 5000	C Dr. D	Ames, Iowa	
XFG		2000	638	Mexico City	
650	kilo	ocycl		461.3 meters	
KPCB WSM	*	$\begin{array}{c} 100 \\ 5000 \end{array}$	Dn N	Seattle, Wash. Nashville, Tenn.	
660	kil	ocycl	es 4	454.3 meters	
CHWK	r +	100	665	Chilliwack B C	
CJRM	; † †	500	665 665	Moose Jaw, Sask.	
CJRM CJRW CMCO CMDO		500 250 500		Moose Jaw, Sask. Fleming, Sask. Havana, Cuba Havana, Cuba	
CMDC	14	500 500	664		
RUS WAAV	/ *	500	D	Omaha, Nebr.	
WEAF WTIC	†	50000 5000		Omaha, Nebr. New York City Hartford, Conn.	
670		ocycl		447.5 meters	
	1/11/	100	669	Santo Domingo	
HIX VOWR	5 *	500	675	St. Johns, N. F. Chicago, Ill.	
WMAG	2 *	5000	N	Chicago, III.	

KCYS. Columbus Commercial & Radio Co. 670 Louis Wasmer, Inc. Nebraska Wesleyan University Edison Elec. Illuminating Co. MTRS. WKZO, Inc. 447.5Woodmen of the World Gonzales Zamacona y Cia. DIAL Canadian National Railways Airfan Radio Corp Conn. Agricultural College Monumental Radio, Inc. Bridgeport Broadcasting Station, Inc. Waterloo Broadcasting Co. WREC, Inc. Don Lee, Inc. Kansas City Star Co. Keystone Broadcasting Co., Inc. Gimbel Bros. Co. Cleveland Radio Broadcasting Corp. Rafael Rodriquez Oregonian Publishing Co. KTAR Broadcasting Co. Chamber of Commerce Maine Broadcasting Co., Inc. Chamber of Commerce Milwaukee Journal Victoria Broadcasting Association The Hamilton Spectator Winnipeg Grain Exchange Wentworth Radio Broadcasting Co. Canadian National Railways Stephens College Evansville on the Air, Inc. M. A. Leese State Marketing Bureau E. Fontaine Le "Soleil," Ltd. John Patterson Arturo Hernandez Earle C. Anthony, Inc. Associated Radiocasting Corp. State College of Agriculture Secretaria de Guerra y Marina Queen City Broadcasting Co. National Life & Accident Ins. Co. Chilliwack Broadcasting Co., Ltd. Jas. Richardson & Sons, Ltd. Jas Richardson & Sons, Ltd. J. L. Stowers Juan Fernandez de Castro Republic of El Salvador Omaha Grain Exchange National Broadcasting Co., Inc. Travelers Broadcasting Service, Inc. Dominican Republic Wesley United Church National Broadcasting Co.

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680 kilocycles 440.9 meters	
KFEQ * 2500 D St. Joseph, Mo. KPO † 5000 N San Francisco, Cal. WPTF * 1000 N Dn Raleigh, N. C. XETF 500 685 Veracruz, Mexico	Scroggin & Co., Bank Hale Bros. & The Chronicle Durham Life Insurance Co. Manuel Angel Fernandez & Cia
690 kilocycles 434.5 meters	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	The Calgary Herald Rogers-Majestic Corp., Ltd. Albertan Publishing Co., Ltd. Canadian National Railways U. S. Navy Canadian Marconi Co. Mexico Music Co., S. A.
700 kilocycles 428.3 meters	
WLW * 50000 N Cincinnati, Ohio	Crosley Radio Corp.
710 kilocycles 422.3 meters	
KMPC * 500 Dn Beverly Hills, Cal. WOR * 5000 Newark, N. J. XEN † 1000 711 Mexico City	R. S. MacMillan Bamberger Broadcasting Service, Inc Cia. Civil de Inversiones
720 kilocycles 416.4 meters	
WGN † 25000 C Chicago, Ill.	Chicago Tribune
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	W. G. Hassell Northern Electric Co., Ltd. La Presse Publishing Co., Ltd. Vancouver Daily Province United Church of Canada Sprott-Shaw Radio Co. A. Holstead & Wm. Hanlon Cuban Broadcasting Co., Hotel Plaza Canadian National Railways Herbert H. Denny y Cia. Dr. John R. Brinkley The M. M. Johnson Co. Atlanta Journal Co.
750 kilocycles 399.8 meters	
WJR † 5000 N Detroit, Mich.	WJR, The Goodwill Station, Inc.
760 kilocycles 394.5 meters KVI * 1000 C Dn Tacoma, Wash. WBAL * 1000 N Baltimore, Md. WEW * 1000 D St. Louis, Mo. WJZ t 30000 N New York City 770 kilocycles 389.4 meters	Puget Sound Broadcasting Co., Inc. Consolidated Gas, Elec. & Power Co. St. Louis University National Broadcasting Co., Inc.
KFAB * 5000 1N Lincoln Nebr.	KFAB Broadcasting Co.
WBBM * 25000 1C Chicago, Ill. WJBT 25000 1S Chicago, Ill.	WBBM Broadcasting Corp. WBBM Broadcasting Corp.
780 kilocycles 384.4 meters CKY - 5000 3 Winnipeg, Manitoba CNRW - 5000 3 Winnipeg, Manitoba KELW * 500 2 Burbank, Cal. KTM * 500 2+ Los Angeles, Cal. WEAN * 250 +C Providence, R. I. WMC 500 +N Memphis, Tenn. WPG 500 1 Norfolk, Va. WTAR * 500 1C Norfolk Va.	Manitoba Telephone System Canadian National Railways Magnolia Park, Ltd. Pickwick Broadcasting Corp. Shepard Broadcasting Service, Inc. Memphis Commercial-Appeal, Inc. WTAR Radio Corp. WTAR Radio Corp.

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	kilo		es d	336.9 meters	31
CFBO CKCC	*	500 100	3	St. John, N. B.	C. A. Munro, Ltd.
CKPR	;	50	3	Ottawa, Ont. Port Arthur, Ont	Dr. G. M. Geldert Dougall Motor Car Corp.
CMCF	*	250		Port Arthur, Ont. Havana, Cuba	Raoul Karman
CMX		500		Havana, Cuba	Francisco Lavin
KFNF	*	500	2+	Shenandoah, Iowa	Henry Field Co.
KGJF KUSD	*	$\frac{250}{500}$	2 -	Little Rock, Ark. Vermillion, S. D.	Church of the Nazarene
WGSI	*	250	+C	Atlanta, Ga.	University of South Dakota Georgia School of Technology
WILL	*	250	2+	Urbana, Ill.	University of Illinois
WJAR	*	250	+N	Providence, R. I.	The Outlet Co.
WKAG	2 * N *	250	+	San Juan, P. R. Fairmount, W. Va.	Radio Corp. of Porto Rico
-WMM XES	\$	250 500	+	Tampico, Mexico	Holt-Rowe Broadcasting Co. Difusora Portena XES
	•				Di usora i ol tena XES
900	K1lO	cycl	es .	333.1 meters	
KGBU	J †	500	C	Ketchikan, Alaska	Alaska Radio & Service Co.
KHJ KSEI	*	1000 250		Los Angeles, Cal.	Don Lee, Inc.
TIC		250		Pocatelli, Idaho San Jose, Costa Rica Buffalo, N. Y.	Radio Service Corp.
WBEN		1000	N N	Buffalo, N. Y.	WBEN, Inc.
- WJAX	*	1000	N	Jacksonville, Fla.	WBEN, Inc. City of Jacksonville WKY Radiophone Co.
WKY	*	1000	N	Oklahoma City	WKY Radiophone Co.
WLBL		2000	DY	Stevens Point, Wis.	Wisconsin Dept. of Markets
910	kilo	cycl	es i	329.6 meters	28-2
CFLC	*	50	915	Prescott, Ont.	Radio Association
CFQC		500	1	Saskatoon, Sask.	The Electric Shop, Ltd.
CHŃS	*	500	3Z	Halifax, N. S. London, Ont. Halifax, N. S. London, Ont.	Halifax Herald, Ltd.
CNRH	r	5000 500	2 3Z	London, Unt. Halifax N S	Free Press Printing Co., Ltd.
CJGC CNRH CNRL	*	5000	2	London, Ont.	Canadian National Railways Canadian National Railways
CNRS		500	1	Saskatoon, Sask.	Canadian National Railways
XEW	†	5000		Mexico City	Mexico Music Co.
920	kilo	cyclo	es (325.9 meters	272
HHK	*	1000		Port au Prince, Haiti	Republic of Haiti
				FOIL au FINCE, Hall	Republic of flatti
KFEL	<u>†</u>	500	1	Denver, Colo.	Eugene P. O'Fallon, Inc.
KFXF	† *	500 500	ī	Denver, Colo.	Eugene P. O'Fallon, Inc. Colorado Radio Corp.
KFXF KOM() †	500 500 1000	ī N	Denver, Colo. Denver, Colo. Seattle, Wash.	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc.
KFXF KOMO) † *	500 500 1000 1000	ī N	Denver, Colo. Denver, Colo. Seattle, Wash.	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co.
KFXF KOMC KPRC WAAF	> † *	500 500 1000	ī	Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill.	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co.
KFXF KOMC KPRC WAAF	D † *	500 500 1000 500 500 1000	I N N D D N	Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill. Needham, Mass. Detroit, Mich.	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drovers' Journal Publishing Co. Babson Statistical Organization, Inc. The Detroit News
KFXF KOMC 	> † *	500 500 1000 1000 500 500	I N D D	Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, III. Needham, Mass.	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drovers' Journal Publishing Co. Babson Statistical Organization, Inc.
KFXF KOMO KPRC WAAF WBSO WWJ XFF		500 500 1000 500 500 1000 250	1 N D D 915	Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill. Needham, Mass. Detroit, Mich. Chihuahua, Mexico	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drovers' Journal Publishing Co. Babson Statistical Organization, Inc. The Detroit News
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KFXF KOMC WPRC WBSO WWJ XFF 930 CFCH CFRC	kilo	500 500 1000 500 500 1000 250 cycle 100 50	i N D N 915 2 S 3	Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, III. Needham, Mass. Detroit, Mich. Chihuahua, Mexico 322.4 meters	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drovers' Journal Publishing Co. Babson Statistical Organization, Inc. The Detroit News Gobierno del Estado de Chihuahua Northern Supplies, Ltd.
KFXF KOMC WAAF WBSO WWJ XFF 930 CFCH CFRC CJCA	kilo	$500 \\ 500 \\ 1000 \\ 500 \\ 500 \\ 1000 \\ 250 \\ cycle \\ 100 \\ 50 \\ 500 \\ 5$	$ \begin{array}{c} 1\\ N\\ +N\\ D\\ N\\ 915\\ 2S\\ 3\\ 3+\\ \end{array} $	Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill. Needham, Mass. Detroit, Mich. Chihuahua, Mexico 322.4 meters North Bay, Ont. Kingston, Ont. Edmonton, Alta.	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drovers' Journal Publishing Co. Babson Statistical Organization, Inc. The Detroit News Goblerno del Estado de Chihuahua Northern Supplies, Ltd. Queen's University The Edmonton Journal, Ltd.
KFXF KOMC WAAF WBSO WWJ XFF 930 CFCH CFRC CJCA CMCE	kilo	$500 \\ 500 \\ 1000 \\ 500 \\ 500 \\ 500 \\ 250 \\ cycle \\ 100 \\ 50 \\ 500 \\ 250 \\ 250 $		Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill. Needham, Mass. Detroit, Mich. Chihuahua, Mexico 322.4 meters North Bay, Ont. Kingston, Ont. Edmonton, Alta. Havana, Cuba	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drovers' Journal Publishing Co. Babson Statistical Organization, Inc. The Detroit News Goblerno del Estado de Chihuahua Northern Supplies, Ltd. Queen's University The Edmonton Journal, Ltd. Angel Bertematy
KFXF KOMC KPRC WAAF WBSO WWJ XFF 930 CFCH CFRC CJCA CMCE	kilo	$500 \\ 500 \\ 1000 \\ 500 \\ 500 \\ 500 \\ 250 \\ cycle \\ 100 \\ 50 \\ 500 \\ 25$	$ \begin{array}{c} 1\\ N\\ +N\\ D\\ N\\ 915\\ 2S\\ 3\\ 3+\\ \end{array} $	Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill. Needham, Mass. Detroit, Mich. Chihuahua, Mexico 322.4 meters North Bay, Ont. Kingston, Ont. Edmonton, Alta. Havana, Cuba	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drovers' Journal Publishing Co. Babson Statistical Organization, Inc. The Detroit News Gobjerno del Estado de Chihuahua Northern Supplies, Ltd. Queen's University The Edmonton Journal, Ltd. Angel Bertematy Antonio Ginard
KFXF KOMC KPRC WAAF WBSO WWJ XFF 930 CFCH CFRC CJCA CMCE	kilo	$500 \\ 500 \\ 1000 \\ 500 \\ 500 \\ 500 \\ 250 \\ cycle \\ 100 \\ 50 \\ 500 \\ 250 \\ 250 \\ 50 \\ 50 \\ 50$	$ \frac{1}{N} + N \\ D \\ D \\ 915 $ $ \frac{3}{3+} \\ 925 \\ 925 $	Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill. Needham, Mass. Detroit, Mich. Chihuahua, Mexico 322.4 meters North Bay, Ont. Kingston, Ont. Edmonton, Alta. Havana, Cuba Havana, Cuba Camaguey, Cuba	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drovers' Journal Publishing Co. Babson Statistical Organization, Inc. The Detroit News Goblerno del Estado de Chihuahua Northern Supplies, Ltd. Queen's University The Edmonton Journal, Ltd. Angel Bertematy Antonio Ginard John L. Stowers
KFXF KOMC WAAF WBSO WWJ XFF 930 CFCH CJCA CMCE CMCE CMCE CMCE CMJF KFWI KGBZ	kilo	$500 \\ 500 \\ 1000 \\ 1000 \\ 500 \\ 500 \\ 250 \\ cycle \\ cycle \\ 500 \\ 250 \\ 250 \\ 500 \\ 250 \\ 500 $	$ \begin{array}{c} 1 \\ N \\ +N \\ D \\ D \\ 915 \end{array} $ $ \begin{array}{c} 3 \\ 3 \\ 925 \\ 925 \end{array} $ $ \begin{array}{c} 3 \\ 925 \\ 925 \end{array} $ $ \begin{array}{c} 1 \\ -1 \\ 21 \end{array} $	Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill. Needham, Mass. Detroit, Mich. Chihuahua, Mexico 322.4 meters North Bay, Ont. Kingston, Ont. Edmonton, Alta. Havana, Cuba Camaguey, Cuba San Francisco, Cal.	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drovers' Journal Publishing Co. Babson Statistical Organization, Inc. The Detroit News Gobierno del Estado de Chihuahua Northern Supplies, Ltd. Queen's University The Edmonton Journal, Ltd. Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc.
KFXF KOMC WAAF WBSO WWJ XFF 930 CFCH CFRC CJCA CMCL CMCL CMCL CMCL CMCL CMCL CMCL CM	kilo	$500 \\ 500 \\ 1000 \\ 1000 \\ 500 \\ 500 \\ 250 \\ Cycle \\ 100 \\ 50 \\ 500 \\ 250 \\ 250 \\ 250 \\ 500 \\ 5$	$ \begin{array}{c} 1 \\ N \\ +N \\ D \\ D \\ 915 \end{array} $ $ \begin{array}{c} 3 \\ 3 \\ 925 \\ 925 \end{array} $ $ \begin{array}{c} 3 \\ 925 \\ 925 \end{array} $ $ \begin{array}{c} 1 \\ -1 \\ 21 \end{array} $	Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill. Needham, Mass. Detroit, Mich. Chihuahua, Mexico 322.4 meters North Bay, Ont. Kingston, Ont. Edmonton, Alta. Havana, Cuba Camaguey, Cuba San Francisco, Cal.	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drovers' Journal Publishing Co. Babson Statistical Organization, Inc. The Detroit News Gobierno del Estado de Chihuahua Northern Supplies, Ltd. Queen's University The Edmonton Journal, Ltd. Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co.
KFXF KOMC WAAF WBSO WWJ XFF 930 CFCH CFCC CJCA CMCL CMCN CMCL KGBZ KMA KROW	kilo	$\begin{array}{c} 500\\ 500\\ 1000\\ 1000\\ 500\\ 1000\\ 250\\ \hline \\ cycle \\ 100\\ 500\\ 500\\ 250\\ 250\\ 250\\ 250\\ 500\\ 50$	$ \begin{array}{c} 1 \\ N \\ +N \\ D \\ D \\ 915 \end{array} $ $ \begin{array}{c} 3 \\ 3 \\ 925 \\ 925 \end{array} $ $ \begin{array}{c} 3 \\ 925 \\ 925 \end{array} $ $ \begin{array}{c} 1 \\ -1 \\ 21 \end{array} $	Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill. Needham, Mass. Detroit, Mich. Chihuahua, Mexico 322.4 meters North Bay, Ont. Kingston, Ont. Edmonton, Alta. Havana, Cuba Camaguey, Cuba San Francisco, Cal.	Eugene P. O'Fallon, Inc. Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. Drovers' Journal Publishing Co. Babson Statistical Organization, Inc. The Detroit News Gobierno del Estado de Chihuahua Northern Supplies, Ltd. Queen's University The Edmonton Journal, Ltd. Angel Bertematy Antonio Ginard John L. Stowers Radio Entertainments, Inc. Dr. George R. Miller May Seed & Nursery Co. Educational Broadcasting Corp.
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INDEX BI TREQUENCIES	AND DIAL NOMBENS	
KGHL 1000 Billings, Mont. KMBC 1000 C Kansas City, Mo. T14NRH 75 948 Heredia, C. R. WRC † 500 N Washington, D. C.	Northwestern Auto Supply Co., Inc. Midland Broadcasting Co., Inc. Armando Cespedes National Broadcasting Co., Inc.	
960 kilocycles 312.3 meters		
CFCL 500 2S Toronto, Ont. CHCK 100 Charlottetown, P. E. CHWC 500 3 Regina, Sask. CJBR 500 3 Regina, Sask. CKCK 7 500 3 Regina, Sask. CKCK 7 500 3 Regina, Sask. CKCK 500 3 Regina, Sask. CKCL CKNC 500 2 Toronto, Ont. CKNC CMBC 150 965 Havana, Cuba CMBD CMBD 150 965 Havana, Cuba CNRR CNRR 500 3 Regina, Sask. XED *	Dominion Battery Co. I. W. E. Burke R. H. Williams & Sons, Ltd. Cooperative Wheat Producers, Ltd. Leader Publishing Co., Ltd. The Dominion Battery Co. Canadian National Carbon Co., Ltd. Domingo Fernandez Luis Perez Garcia Canadian National Railways International Broadcasting Co.	
970 kilocycles 309.1 meters		
970 kilocycles 309.1 meters CMGF 50 977 Matanzas, Cuba KJR * 5000 N Seattle, Wash. WCFL 1500 N Dn Chicago, Ill.	Bernabe R. de la Torre Northwest Broadcasting System, Inc. Chicago Federation of Labor	
980 kilocycles 305.9 meters		CYS.
-CFCN 10000 985 Calgary, Alta. KDKA 50000 N Pittsburgh, Pa. XEFE 101 Laredo, Mexico	Western Broadcasting Co. Westinghouse Elec. & Mfg. Co. Rafael T. Carranza M	040 TRS.
990 kilocycles 302.8 meters		88.3
WBZ-A † 25000 1N Springfield-Boston XEK 101 Mexico City	Westinghouse Elec. & Mfg. Co. DI Arturo Martinez	IAL
1000 kilocycles 299.8 meters		
KFVD*250DnCulver City, Cal.WHO*5000 $1N_{\Box}$ Des Moines, IowaWOC*5000 $1N_{\Box}$ Davenport, IowaXEI*101Morelia, Mexico	Los Angeles Broadcasting Co. Central Broadcasting Co. Central Broadcasting Co. Carlos Gutierrez M.	
1010 kilocycles 296.8 meters		
CKIC 50	Acadia University Modesto Alvarez Manual y G. Salas Powell & Platz Pacific Agricultural Foundation, Ltd. Marcus Loew Booking Agency South Carolina Broadcasting Co., Inc. American Broadcasting Corp. of Ky. University of Oklahoma Palisades Amusement Park Calvary Baptist Church Aviation Radio Station, Inc. Feliciano Lopez Islas	
1020 kilocycles 293.9 meters		
CMJH 15 1017 Ciego de Avila, Cuba KFKX * 10000 IN Chicago, III. KYW * 10000 IN Chicago, III. WRAX † 250 D Philadelphia, Pa.	Luis Marauri Westinghouse Elec. & Mfg. Co. Westinghouse Elec. & Mfg. Co. WRAX Broadcasting Co.	
1030 kilocycles 291.1 meters		
CCF 500 N Montreal, Que. CMKC * 150 1034 Santiago de Cuba CNRV † 500 Vancouver, B. C. XEB † 1000 Mexico City, Mexico XEV 101 1034 Puebla, Mexico	Canadian Marconi Co. M. P. Martinez Canadian National Railways El Buen Tono, S. A. Ciro Molina	
1040 kilocycles 288.3 meters		
KRLD*100001CDallas, TexasKTHS†100001NHot Springs, Ark.WKAR*1000DEast Lansing, Mich.WMAK*1000DnBuffalo, N. Y.	KRLD Radio Corp. Chamber of Commerce Michigan State College Buffalo Broadcasting Corp.	
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1050 kilocycles 285.5	meters	19-2-	[
KFBI * 5000 Dn Milford	l, Kansas ood, Cal.	Farmers & Bankers Life Western Broadcast Co.	Insurance Co.
1060 kilocycles 282.8	meters [
KWJJ * 500 Dn Portlar WBAL * 10000 1N Baltim WJAG * 1000 Dn Norfoll	nd, Ore. Jore, Md. K, Nebr. rd, Conn.	KWJJ Broadcast Co., Ind Consolidated Gas Elec. & Norfolk Daily News Travelers Broadcasting S	2 Pwr. Co.
1070 kilocycles 280.2	meters		
CMBG 150 Havann CMCB 150 Havann KJBS * 100 D San Fr WCAZ * 50 D Cartha WDZ † 100 D Tuscol	a, Cuba a, Cuba ancisco, Cal.	Francisco Garrigo Antonio Capablanca Julius Brunton & Sons C Superior Broadcasting Se James L. Bush National Broadcasting Co	ervice
1080 kilocycles 277.6	meters 🗌		
	tte, N. C. 11.	Station WBT, Inc. Wilbur Glenn Voliva Moody Bible Institute	
1090 kilocycles 275.1	meters]
KMOX * 50000 C St. Lou	nis, Mo. 9, Mexico	Voice of St. Louis, Inc. Antonio Garza Castro	
1100 kilocycles 272.6	meters 🗌	11	· · · · · · · · · · · · · · · · · · ·
KGDM * 250 DX Stockta WLWL * 5000 1 New Ye -WPG * 5000 1C Atlanta	on, Cal. ork City ic City, N. J.	E. F. Peffer Missionary Society of St. WPG Broadcasting Corp.	Paul
1110 kilocycles 270.1	meters 🗌		
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1140 kilocycles 263.0	meters 🗌		
KVOO * 5000 1N Tulsa, (Okla. gham, Ala.	Southwestern Sales Corp. Alabama Polytechnic Ins Manuel Espinosa Tagle	titute
1150 kilocycles 260.7	meters 🗌		
CMCQ 600 Havana CMQ † 250 Havana	, Cuba , Cuba ter, N. Y.	Andres Martinez Jose Fernandez Stromberg-Carlson Tel. N	Afg. Co.
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			11101		1100 (02.10-20-1	
	1160	kil	ocyc	les	258.5 meters	
	WOWO WWVA	*	10000 5000	1C 1C	Ft. Wayne, Ind. Wheeling, W. Va.	
	1170	kil	ocyc	les	256.3 meters	
	WCAU	*	10000	С	Philadelphia, Pa.	
	1180	kil	ocyc	les	254.1 meters	
	KEX KOB WDGY WGBS WMAZ	* * †	5000 20000 1000 500 500	2N 2Y 1 Dn	Portland, Ore. State College, N. M. Minneapolis, Minn. New York City Macon, Ga.	
	1190	kil	ocyc	les	252.0 meters	
	WOAI	*	50000	N	San Antonio, Texas	
	1200	kil	ocyc	les	249.9 meters	
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	KĞĒK	Ť	100	9	Yuma, Colo.	
	KGEW	†	100	9	Fort Morgan, Colo.	
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	KMLB		100	H D Y	St. Louis, Mo. Fergus Falls, Minn. Huron, S. D. Yuma, Colo. Fort Morgan, Colo. Los Angeles, Cal. Little Rock, Ark. Lacey, Wash. Monroe, La. Santa Maria, Cal. Bellingham, Wash. Stockron, Cal	
	KVOS	*	100 100	r	Bellingham, Wash.	
	KWG	*	100	2.2.5	Stockton, Cal.	
	WABI	† *	100	1	Bellingham, Wash. Stockton, Cal. Bangor, Maine New Orleans, La.	
	KGDE KGDY KGEK KGEW KGFJ KGHI KGY KMLB KSMR KVOS KWG WABI WABZ WBBZ	*	100 100	1	Ponca City, Okla.	
	WBHS WCAT WCAX WCLO		50	10CF	Huntsville, Ala.	
	WCAT	† *	100	2	Rapid City, S. D.	
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		† † †	100	3 7 8	Harrisburg, Pa.	
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	WJBC	*	100	6	La Salle, III.	
	₩ JBL	† †	$\begin{array}{c} 100 \\ 100 \end{array}$	1	New Orleans, La.	
	WIL WJBC WJBL WJBW WKJC WLBG	*	100	1 3	New Orleans, La. Ponca City, Okla. Huntsville, Ala. Rapid City, S. D. Burlington, Vt. Janesville, Wis. Harrisburg, Pa. Worcester, Mass. South Bend, Ind. Knoxville, Tenn. Cincinnati, Ohio Canton, Ohio Green Bay, Wis. Utica, N. Y. St. Louis, Mo. La Salle, III. Decatur, III. New Orleans, La. Lancaster, Pa. Petersburg, Va. Washington, Pa. Carbondale, Pa. Springfield, Vt. Worcester, Mass. Cclumbus, Ga. Hammond, Ind.	
	WLBG	*	100 100	+	Petersburg, Va. Washington Pa	
	WNBW	1	100	7	Carbondale, Pa.	
	WNBO WNBW WNBX WORC	† † *	10	2	Springfield, Vt.	
	WORC	*	100 50	7CX	Columbus, Ga.	
-	WWAE XEA	† *	100	8	Hammond, Ind.	
	XEA		101		Guadalajara, Mexico	
	1210	ki	locyc		247.8 meters	
	CFCO	*	100 100	8	Chatnam, Ont. Eredericton N B	
	CIOR	*	500		Vancouver, B. C.	
	CFNB CJOR CKMC		100	8	Chatham, Ont. Fredericton, N. B. Vancouver, B. C. Ccbalt, Ont. Casper, Wyo.	
	KDFN	+	100		Casper, Wyo.	

Western Ontario "Better Radio" Club James S. Neill & Sons, Ltd. G. C. Chandler R. L. MacAdam Donald Lewis Hathaway

3

Main Auto Supply Co. West Virginia Broadcasting Corp.

Universal Broadcasting Co.

Western Broadcasting Co. College of Agriculture & Mech. Arts Dr. George W. Young American Radio News Corp. Southeastern Broadcasting Co., Inc.

Southern Equipment Co.

1 J. W. B. Browne Jose Anorga Pedro Nogueras W. J. Beard's Temple of Music Marshall Electric Co., Inc. St. Louis Truth Center, Inc. Jaren Drug Co. Jaren Drug Co. Voice of South Dakota Beehler Elec. Equipment Co. City of Fort Morgan Ben S. McGlashan KCYS. O. A. Cook St. Marten's College J. C. Liner 1210 MTRS. Santa Maria Radio KVOS, Inc. 247.8Portable Wireless Tel. Co., Inc. Pine Tree Broadcasting Corp. DIAL Samuel D. Reeks C. L. Carrell The Hutchens Co. State School of Mines Burlington Daily News WCLO Radio Corp. Keystone Broadcasting Corp. Alfred Frank Kleindienst South Bend Tribune First Baptist Church Post Publishing Co. St. John's Catholic Church St. Norbert's College WIBX, Inc. Missouri Broadcasting Corp. Kaskaskia Broadcasting Co. Commodore Broadcasting, Inc. Charles C. Carlson, Jr. Lancaster Brdcstg. Service Inc. WLBG, Inc. John Brownlee Spriggs Home Cut Glass & China Co. First Congregational Church Alfred Frank Kleindienst WRBL Radio Station, Inc. Hammond-Calumet, Broad. Corp. Alberto Palos Sauza

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KDLR	†	100		Devil's Lake, N. D.
KFOR	÷.	100	+	Lincoln, Nebr.
KFVS	*	100	6	Cape Girardeau, Mo.
KFXM	ŧ	100	ğ.	San Bernardino, Cal.
KGCR	÷	100	,	
KGNO	*			Watertown, S. D.
	*	100		Dodge City, Kansas
KMJ		100		Fresno, Cal.
KPPC	§*	50	9	Pasadena, Cal.
KWEA		100	$ _{\mathcal{T}} = _{\mathcal{T}}$	Shreveport, La.
WALR	*	100		Zanesville, Ohio
-WBAX	*	100	1	Wilkes-Barre, Pa.
WBBL	+	100	7S	Richmond, Va.
WCBS	*	100	2	Springfield, Ill.
WCOH	*	100	3	Yonkers, N. Y.
WCRW	*	100	4	Chicago, Ill.
-WEBO	*	100	6	Harrisburg, Ill.
WEDČ		100	4	Chicago, Ill.
WGBB	*	100	3	Freeport, N. Y.
WGCM	*	100		Gulfport, Miss.
WHBF	*	100		Rock Island, Ill.
WHBU	+	100		
WIBU	*	100		Anderson, Ind. Poynette, Wis.
WJBI		100	3	Red Bank, N. J.
ŴĴBÛ	*	100	ĭ	
WIEV	*	100	3	Lewisburg, Pa.
WJBY WJW	*		3	Gadsen, Ala.
WLCI	*	100		Mansfield, Ohio
	*	50		Ithaca, N. Y.
WMBG	*	100	7	Richmond, Va.
WMRJ		100	3	Jamaica, N. Y.
WOCL	*	50	-1 + 1 - 1	Jamestown, N. Y.
WOMT	*	100		Manitowoc, Wis.
WPAW	*	100	5	Pawtucket, R. I.
WPRO	*	100	5	Providence, R. I.
WQDX	*	100		Thomasville, Ga.
WRBQ	+	100	+	Greenville, Miss.
WSBC	*	100	4	Chicago, Ill.
WSEN	+	100		Columbus, Ohio
WSIX	*	100		Springfield, Tenn.
WSOC	+	100		Gastonia, N. C.
WTAX	÷.	100	2	Springfield, Ill.
XEX	'	500	-	Mexico City
		000		medico City

1220 kilocycles 245.8 meters

CMBY		350	1225
CMCA		150	1225
KFKU	*	500	1
KTW		1000	
KWSC	*	1000	+
WCAD	*	500	Ď
WCAE	*	1000	N
WDAE	*	1000	С
WREN	*	1000	1N

1230 kilocycles 243.8 meters

KFOD		100	
KGĞM	+	250	+
KYA	×	1000	
WBIS	*	1000	2
WFBM	*	1000	1C
WNAC	*	1000	2C
WPSC	*	500	D
WSBT	†	500	1

1240 kilocycles

CMAB KGCU		$\frac{20}{250}$	1249 3
KLPM	Ť	250	3
KTAT WACO	Ť	1000 1000	1 1C
WXYZ	+	1000	С

1250 kilocycles

2

KFMX	+	1000
KFOX	*	1000

Anchorage, Alaska Albuquerque, N. Mex. San Francisco, Cal. Boston, Mass. Indianapolis, Ind. Boston, Mass. State College, Pa. South Bend, Ind.

241.8 meters

Pinar del Rio, Cuba Mandan, N. D. Minot, N. D. Ft. Worth, Texas Waco, Texas Detroit, Mich.

239.9 meters

Northfield, Minn. Long Beach, Cal.

KDLR, Inc. Howard A. Shuman J. C. & E. W. Lee Greater Kampeska Radio Corp. Dodge City Broadcasting Co. James McClatchy Co. Pasadena Presbyterian Church Pasadena Presbyterian Church Hello World Broadcasting Corp. Roy W. Waller John H. Stenger, Jr. Grace Covenant Pres. Church H. L. Dewing & Chas. Messter Westchester Broadcasting Corp. Clinton R. White First Trust & Sovinger Bank First Trust & Savings Bank Emil Denemark, Inc. Harry H. Carman Great Southern Land Co., Inc. Beardsley Specialty Co. Anderson Broadcasting Corp. Wm. C. Forrest Monmouth Broadcasting Co. Bucknell University Gadsen Broadcasting Co., Inc. Mansfield Broadcasting Co., Inc. Lutheran Assn. of Ithaca Havens & Martin, Inc. Peter J. Prinz A. E. Newton A. B. Newton Francis M. Kadow Shartenburg & Robinson Co. Cherry & Webb Broadcasting Co. Stevens Luke J. Pat. Scully World Battery Co., Inc. Columbus Broadcasting Co. 638 Tire & Vulcanizing Co. WSOC, Inc. WTAX, Inc. Excelsior, Cia Editorial S. A.

Callejas-Cosculluela Manuel Cruz University of Kansas First Presbyterian Church State College of Washington St. Lawrence University WCAE, Inc. Tampa Publishing Co. Jenny Wren Co.

Anchorage Radio Club New Mexico Broadcasting Co. Pacific Broadcasting Corp. Shepard Broadcasting Service, Inc. Indianapolis Power & Light Co. Shepard Broadcasting Service, Inc. Pennsylvania State College South Bend Tribune

E			
	o Martir Radio A		
John B.	Cooley		
	Broadca		
			ing ('o Inc
Central	Trendle	Broade	acting Com
Central Kunsky-	Trendle	Broade	asting Corp.
Central Kunsky-	Trendle	Broade	asting Corp.
Central Kunsky-	Trendle	Broadc	asting Corp.

Nichols & Warinner, Inc.

WAAM WCAL WDSU WGCP WLB WODA WRHM	* † † *	1000 1000 250 1000 1000 1000	1+X C 1 2 1 2	Newark, N. J. Northfield, Minn. New Orleans, La. Newark, N. J. St. Paul, Minn. Paterson, N. J. Minneagolis, Minn.
XEFA		250	2 	Mexico City

1260 kilocycles 238.0 meters

WLBW * 500 C+ Oil City, Pa. WTOC * 500 C Savannah, Ga.			* 5		
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ucson, Arizona rownsville, Texas il City, Pa. avannah, Ga.

1270 kilocycles 236.1 meters

t	50	2D	Decorah, Iowa
÷	1000	С	Seattle, Wash.
÷.	1000	С	 Colorado Springs, Colo.
*	100	2D	Decorah, Iowa
*	500	1	Grand Rapids, Mich.
*	1000	D	Ithaca, N. Y.
	500	N	Baltimore, Md.
*	1000	N	Jackson, Miss.
+	500	1	Grand Rapids, Mich.
	*	† 1000 * 1000 * 100 * 500 * 1000 * 1000 500 * 1000	+ 1000 C * 1000 C * 100 2D * 500 1 * 1000 D - 500 N * 1000 N

1280 kilocycles 234.2 meters

CMCU		150	1285	Havana, Cuba
CMCW		150	1285	Havana, Cuba
KFBB	*	1000	+	Great Falls, Mont.
WCAM	*	500	1	Camden, N. J.
WCAP	*	500	1	Asbury Park, N. J.
WDOD	*	1000	+C	Chattanooga, Tenn.
WIBA	*	500	÷Ν	Madison, Wis.
WOAX		500	1	Trenton, N. J.
WRR	2	500	Ē	Dallas, Texas

1290 kilocycles 232.4 meters

KDYL	+	1000	С	Salt Lake City
KFUL		500	1	Galveston, Texas
KLCN	*	50	D	Blytheville, Ark.
KTSA	+	1000	1+C	San Antonio, Texas
WEBC	*	1000	+N	Superior, Wis.
WIAS	*	1000	C+	Pittsburgh, Pa.
WJAS WNBZ		50	D	Saranac Lake, N. Y.

1300 kilocycles 230.6 meters

KFAC	*	1000	4	Los Angeles, Cal.
KFH	*	1000	2C	Wichita, Kansas
KFIR	*	500	3	Portland, Ore.
KĞEF	*	1000	4	Los Angeles, Cal.
KTBR		500	3	Portland, Ore.
WBBR	*	1000	1	Brooklyn, N. Y.
WEVD	*	500	1	New York City
WHAP	*	1000	1	New York City
WHAZ	*	500	1	Troy, N. Y.
WIOD	*	1000	N	Miami, Fla.
WOO	*	1000	2	Kansas City, Mo.
XETY		2000		Mexico City

1310 kilocycles 228.9 meters

KCRJ	†	100	D	Jerome, Arizona
KFBŘ	Ť	100		Sacramento, Cal.
KFGQ	†	100	7	Boone, Iowa
KFJY	*	100	7	Ft. Dodge, Iowa
KFPL	†	100		Dublin, Texas
KFPM	*	15		Greenville, Texas
KFUP		100	8	Denver, Colo.
KFXJ	+	100	8	Grand Junction, Colo.

WAAM, Inc. St. Olaf College Jos. H. Uhalt May Radio Broadcast Corp. University of Minnesota Richard E. O'Dea Minnesota Broadcasting Corp. Luis F. Murguia

Mona Motor Oil Co. KRGV, Inc. Robert M. Riculfi Herald Pub. Co. Radio-Wire Program Corp. Savannah Broadcasting Co.

Charles W. Greenley Seattle Broadcasting Co., Inc. Reynolds Radio Co., Inc. Luther College WASH Broadcasting Corp. Cornell University Baltimore Radio Show, Inc. Lamar Life Insurance Co. Kunsky-Trendle Broadcasting Corp.

Jorge Garcia Serra Jose Lorenzo Buttrey Broadcast, Inc. City of Camden Radio Industries Broadcast Co. WDOD Broadcasting Corp. Badger Broadcasting Co. WOAX, Inc. City of Dallas

Intermountain Broadcasting Corp. News Publishing Co. C. L. Lintzenich Lone Star Broadcast Co. Head of Lake Broadcasting Co. Pittsburgh Radio Supply House Smith & Mace

KCYS.

1310

MTRS.

DIAL

228.9

Los Angeles Broudcasting Co. Radio Station KFH Co. Ashley C. Dixon - KFJR, Inc. Trinity Methodist Church M. E. Brown People's Pulpit Association Debs Memorial Radio Fund, Inc. Defenders of Truth Society, Inc. Rensselaer Polytechnic Institute Isle of Dreams Broadcasting Corp. Unity School of Christianity Juan Gutierrez, Jr.

Chas. C. Robinson Jas. McClatchy Co. Boone Biblical College Cedar Rapids Broadcast Co. C. C. Baxter The New Furniture Co. Fitzsimmons General Hospital Western Slope Broadcasting Co.

KFXR	+	100	+	Oklahoma City	Exchange Ave. Baptist Church
KGBX	† *	100		St. Joseph, Mo.	KGBX, Inc.
KGCX	+	100	+	Wolf Point, Mont.	First State Bank of Vida
KGEZ	t	100		Kalispell, Mont.	Treloar-Church Broadcasting Co.
KGFW	t	100	Ŷ	Ravenna, Nebr.	Central Nebraska Broadcasting Corp.
KIT	ŧ	100		Yakima, Wash.	Carl E. Haymond
KMED	+	100		Medford, Ore.	Mrs. W. J. Virgin
KRMD	÷	50	9	Shreveport, La.	Robert M. Dean
KTLC	† *	100		Houston, Texas	Houston Broadcasting Co.
KTSM	+	100	2	El Paso, Texas	W. S. Bledsoe & W. T. Blackwell
KWCR	÷	100	7	Cedar Rapids, Iowa	Cedar Rapids Broadcast Co.
KXRO	† † †	100		Aberdeen, Wash.	KXRO, Inc.
WBEO		100	CP	Marquette, Mich.	Lake Superior Broadcasting Ca
WBOW	*	100		Terre Haute, Ind.	Lake Superior Broadcasting Co. Banks of Wabash, Inc.
WBRE		100		Wilkes-Barre, Pa.	Louis G. Baltimore
WCLS	*	100	1	Joliet, Ill.	WCLS, Inc.
WDAH	‡ *	100	ź	El Paso, Texas	Bledsoe & Blackwell
WEBR	*	100	+	Buffalo, N. Y.	Howell Providenting Co. Inc.
WEXL	+	50	1.1	Royal Oak, Mich.	Howell Broadcasting Co., Inc. Royal Oak Broadcasting Co.
WFBG	† *	100	3X	Altoona, Pa.	Wm. F. Gable Co.
WFDF	*	100		Flint, Mich.	Frank D. Fallain
WFDV	† *	100	D	Rome, Ga.	
WGAL	*	100	5	Lancaster, Pa.	Rome Broadcasting Corp. WGAL, Inc.
WGH	*	100		Newport News, Va.	Hompton Boods Breadersting C
WHAT	+	100	4	Philadelphia, Pa.	Hampton Roads Broadcasting Corp
WJAC	† *	100	3	Johnstown, Pa.	Independence Broadcasting Co.
WJAK	*	50	6Y	Elkhart, Ind.	Johnstown Automobile Co.
WKAV	*	100		Laconia, N. H.	Truth Publishing Co., Inc. Laconia Radio Club
WKBB	*	100	1	Joliet, Ill.	Sanders Bros. Radio Station
WKBC	*	100		Birmingham, Ala.	P B Browles Fromiteres Co
WKBS	*	100		Galesburg, Ill.	R. B. Broyles Furniture Co Permil N. Nelson
				Guicoourg, Int.	
WLBC	+	50	6	Muncie Ind	Donald A Burton
WLBC WMBO	ţ	50 100	6	Muncie, Ind. Auburn N Y	Donald A. Burton
WLBC WMBO WNBH	† † *	100	6	Auburn, N. Y.	WMBO, Inc.
WMBO	† † *	100 100	6	Auburn, N. Y. New Bedford, Mass.	WMBO, Inc. New Bedford Broadcasting Co.
WMBO WNBH	*	$100 \\ 100 \\ 100$	6	Auburn, N. Y. New Bedford, Mass. Washington, D. C.	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co.
WMBO WNBH WOL	*	100 100 100 100	6 5X	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa.	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co.
WMBO WNBH WOL WRAW	*	$100 \\ 100 \\ 100$	6 5X	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxville, Tenn.	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co.
WMBO WNBH WOL WRAW WROL WSAJ	*	100 100 100 100 100 100	6 5X	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxville, Tenn. Grove City, Pa.	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College
WMBO WNBH WOL WRAW WROL WSAJ WSJS WTEL	* * * * *	100 100 100 100 100	6 5X	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxville, Tenn. Grove City, Pa. Winston-Salem, N. C.	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co.
WMBO WNBH WOL WRAW WROL WSAJ WSJS WTEL WTIS	* * * * *	100 100 100 100 100 100 100	6 5X	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxville, Tenn. Grove City, Pa. Winston-Salem, N. C Philadelphia, Pa.	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co. Foulkrod Radio Engineering Co.
WMBO WNBH WOL WRAW WROL WSAJ WSJS WTEL	* * * *	100 100 100 100 100 100 100 100	6 5X	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxvile, Tenn. Grove City, Pa. Winston-Salem, N. C. Philadelphia, Pa. Jackson, Tenn.	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co. Foulkrod Radio Engineering Co. Sun Publishing Co.
WMBO WNBH WOL WRAW WROL WSAJ WSJS WTEL WTJS WTSL	* * * * * * *	100 100 100 100 100 100 100 100 100	6 5X 4 + 9	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxville, Tenn. Grove City, Pa. Winston-Salem, N. C Philadelphia, Pa.	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co. Foulkrod Radio Engineering Co.
WMBO WNBH WOL WRAW WROL WSAJ WSJS WTEL WTIS	* * * * * * *	100 100 100 100 100 100 100 100 100	6 5X 4 + 9	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxvile, Tenn. Grove City, Pa. Winston-Salem, N. C. Philadelphia, Pa. Jackson, Tenn.	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co. Foulkrod Radio Engineering Co. Sun Publishing Co.
WMBO WNBH WOL WRAW WROL WSAJ WSJS WTEL WTJS WTSL 1320	* * * kile	100 100 100 100 100 100 100 100 100 100	6 5X 4 9 es	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxville, Tenn. Grove City, Pa. Winston-Salem, N. C. • Philadelphia, Pa. Jackson, Tenn. Laurel, Miss. 227.1 meters	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co. Foulkrod Radio Engineering Co. Sun Publishing Co. G. A. Houseman
WMB0 WNBH WOL WRAW WSJS WTEL WTJS WTSL 1320 KGHF	* * * kile	100 100 100 100 100 100 100 100 100 100	6 5X 4 9 es +	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxville, Tenn. Grove City, Pa. Winston-Salem, N. C. Philadelphia, Pa. Jackson, Tenn. Laurel, Miss. 227.1 meters Pueblo, Colo.	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co. Foulkrod Radio Engineering Co. Sun Publishing Co. G. A. Houseman
WMBO WNBH WQL WRAW WROL WSJS WTEL WTJS WTSL 1320 KGHF KGMB	* * * kile	100 100 100 100 100 100 100 100 100 100	6 5X 4 9 es +	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxville, Tenn. Grove City, Pa. Winston-Salem, N. C. · Philadelphia, Pa. Jackson, Tenn. Laurel, Miss. 227.1 meters Pueblo, Colo. Honolulu, Hawaii	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co. Foulkrod Radio Engineering Co. Sun Publishing Co. G. A. Houseman C. P. Ritchie & J. E. Finch Honolulu Broadcasting Co., Ltd.
WMB00 WNBH WOL WRAW WSJS WTEL WTJS WTSL 1320 KGHF KGMB KID	* * * * * * *	100 100 100 100 100 100 100 100 100 100	6 5X 4 9 es + 1+	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxville, Tenn. Grove City, Pa. Winston-Salem, N. C. · Philadelphia, Pa. Jackson, Tenn. Laurel, Miss. 227.1 meters Pueblo, Colo. Honolulu, Hawaii Idaho Falls, Idaho	 WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co. Foulkrod Radio Engineering Co. Sun Publishing Co. G. A. Houseman C. P. Ritchie & J. E. Finch Honolulu Broadcasting Co., Ltd. KID Broadcasting Co.
WMB00 WNBH WOL WRAW WRAW WSAJ WSJS WTSL 1320 KGHIF KGMB KTFI	* * * * * * *	100 100 100 100 100 100 100 100 100 100	$6 \\ 5X \\ \\ 4 \\ + \\ 9 \\ es \\ + \\ 1+ \\ 1+ \\ 1+ \\ + \\ + \\ + \\ + \\ + $	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxville, Tenn. Grove City, Pa. Winston-Salem, N. C. · Philadelphia, Pa. Jackson, Tenn. Laurel, Miss. 227.1 meters Pueblo, Colo. Honolulu, Hawaii Idaho Falls, Idaho	WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co. Foulkrod Radio Engineering Co. Sun Publishing Co. G. A. Houseman C. P. Ritchie & J. E. Finch Honolulu Broadcasting Co., Ltd. KID Broadcasting Co. Radio Broadcasting Co.
WMB00 WNBH WOL WRAW WSJS WTEL WTJS WTSL 1320 KGHF KGMB KID	* * * kilo	100 100 100 100 100 100 100 100 100 100	6 5X 4 9 es + 1+	Auburn, N. Y. New Bedford, Mass. Washington, D. C. Reading, Pa. Knoxville, Tenn. Grove City, Pa. Winston-Salem, N. C. · Philadelphia, Pa. Jackson, Tenn. Laurel, Miss. 227.1 meters Pueblo, Colo. Honolulu, Hawaii Idaho Falls, Idaho	 WMBO, Inc. New Bedford Broadcasting Co. American Broadcasting Co. Reading Broadcasting Co. Stewart Broadcasting Co. Grove City College Winston-Salem Journal Co. Foulkrod Radio Engineering Co. Sun Publishing Co. G. A. Houseman C. P. Ritchie & J. E. Finch Honolulu Broadcasting Co., Ltd. KID Broadcasting Co.

1330 kilocycles

		•	
KGB	*	500	С
KSCJ	*	1000	1+C
-WDRC	*	500	C
WSAI	*	1000	N
ŴTAQ	*	1000	1C
XEC -		50	1333

1340 kilocycles

CMCG	- 2	30	1345
CMCR		150	1345
CMCY		100	1345
KFPW	ţ.	50	D
KFPY		1000	С
WCOA	*	500	
WSPD	*	1000	C

1350 kilocycles

KIDO	+	1000	
KWK	*	1000	N
WAWZ	*	250	1
WBNX	1.1	250	1
WCDA	*	250	1
WEHC	*	500	D
WMSG		250	1

Pueblo, Colo.
Honolulu, Hawaii
Idaho Falls, Idaho
Twin Falls, Idaho
Akron, Ohio
New Orleans, La.

225.4 meters

San Diego, Cal. Sioux City, Iowa Hartford, Conn. Cincinnati, Ohio Eau Claire, Wis. Toluca, Mexico

223.7 meters

Havana, Cuba Havana, Cuba Havana, Cuba Fort Smith, Ark. Spokane, Wash. Pensacola, Fla. Toledo, Ohio

222.1 meters

Boise, Idaho
St. Louis, Mo.
Zarephath, N. J.
New York City
New York City
Emory, Va.
New York City

30

Don Lee, Inc. Perkins Bros. Co. WDRC, Inc. Crosley Radio Corp., Lessee Gillette Rubber Co. Jesus R. Benavides

Jose Justo Moran Aurelio Hernandez M. D. Autran Southwestern Hotel: Co. Symons Broadcasting Co. City of Pensacola

Toledo Broadcasting Co.

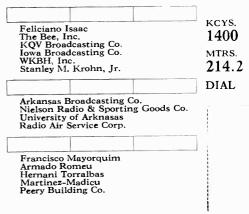


Boise Broadcasting Station Thomas Patrick, Inc. Pillar of Fire Standard Cahill Co., Inc. Italian Educ. Broadcasting Co., Inc. Emory & Henry College Madison Sq. Garden Brdctg. Corp.

KGER	*	2000000000000000000000000000000000000	les	220.4 meters Long Beach, Cal. Butte, Montana
KGIR WCSC	‡	500		Charleston, S. C.
WFBL	*	$1000 \\ 500$		Syracuse, N. Y. Chicago, 111
WGES WJKS WQBC	*	1000	1+ 1+ D	Gary, Ind.
WQBC XETO	† 	500 101	D	Charleston, S. C. Syracuse, N. Y. Chicago, Ill. Gary, Ind. Vicksburg, Miss. Mexico City
1370	kilo	ocycl	es	218.7 meters
CMAC CMGE		30 30	1375 1375	Pinar del Rio, Cuba
CMGH		150		Cardenas, Cuba Matanzas, Cuba
HRB KCRC KFBL	÷.	2300 100	2+	Tegucigalpa, Hond.
KFBL	*	50	ĩ'	Everett, Wash. Astoria, Ore. Grand Forks, N. D. Ft. Worth, Texas Galveston, Texas
KFJI	‡	100 100		Astoria, Ore. Grand Forks N. D.
KFBL KFJI KFJZ KFLX KGAR KGDA	† *	100		Ft. Worth, Texas
KFLX	*	100 100	+	Galveston, Texas
KGDA	+	100	2	Tucson, Arizona Mitchell, S. D.
KGFG KGFL	ţ	100 50		Oklahoma City Raton, N. M
KGKL KMAC KONO	÷	100		San Angelo, Texas
KMAC	ţ	100 100	5 5	San Antonio, Texas San Antonio, Texas
KOOS	*	100		Marshfield, Ore.
KRE	Ť	100 100	6	Oklahoma City Raton, N. M. San Angelo, Texas San Antonio, Texas Marshfield, Ore. Berkeley, Cal. Walla Walla, Wash. Seattle, Wash. Kansas City, Mo. Glens Falls, N. Y. Danville, Va.
KUJ KVL KWKC WBGF		100	3	Seattle, Wash.
WBGF	Ŧ-	100 50		Kansas City, Mo. Glens Falls, N. Y.
WBTM	ŧ	100	7	Danville, Va.
WCBM WELK	*	100 100	+z	Baltimore, Md. Philadelphia, Pa.
WGL	¥.	100	ċ	Fort Wayne, Ind.
WHBD WHBQ	‡	100 100		Mount Orab, Ohio Memphis, Tenn.
	t	100	+	Calumet, Mich.
WIBM	*	100 50	1 1	Detroit, Mich.
WIBM WJBK WJTL WLEY WLVA WMBR		100	1 Y + 7	Tifton, Ga.
WLVA	Ŧ	100 100	7	Lynchburg, Va.
WMBR WPOE	t	100 100	$-1<\infty$	Tampa, Fla.
WQDM	‡ *	100	D	St. Albans, Vt.
WRAK WRAM	*	100 100		Williamsport, Pa.
WRBJ WRDO	Ť	10	X CP	Hattiesburg, Miss.
WRDO	ş	100		Augusta, Maine
WRJN WSVS	*	100 50	2.58	Kansas City, Mo. Glens Falls, N. Y. Danvilie, Va. Baltimore, Md. Philadelphia, Pa. Fort Wayne, Ind. Mount Orab, Ohio Memphis, Tenn. Calumet, Mich. Jackson, Mich. Jackson, Mich. Detroit, Mich. Difton, Ga. Lexington, Mass. Lynchburg, Va. Tampa, Fla. Patchogue, N. Y. St. Albans, Vt. Williamsport, Pa. Wilmington, N. C. Hattiesburg, Miss. Augusta, Maine Racine, Wis. Buffalo, N. Y.
1380	kilo	ocycl		217.5 meters
СМЈС КОН	ť	150 500	1382 C	Camaguey, Cuba Reno, Nevada
KQV	† *	500	2	Pittsburgh, Pa.
KSO	*	500 1000	1 1	Clarinda, Iowa
KOV KSO WKBH WSMK	*	200	2	Pittsburgh, Pa. Clarinda, Iowa La Crosse, Wis. Dayton, Ohio
		ocycl		215.7 meters
KLRA KOY	*	$1000 \\ 500$	1C	Little Rock, Ark. Phoenix, Arizona
KUOA WHK	† *	1000	1 C	Phoenix, Arizona Fayetteville, Ark. Cleveland, Ohio
	kile	ocycl		214.2 meters
CMBI CMBN		30	1405	Havana, Cuba
CMBN		30 15	1405 1405	Havana, Cuba Havana, Cuba Havana, Cuba Havana, Cuba
CMCH CMCM KLO		15	1405	Havana, Cuba Ogden, Utah
KLO	*	500		Ogden, Utah

Consolidated Broadcasting Corp. KGIR, Inc. Lewis Burk Onondaga Radio Broadcasting Corp. Oak Leaves Broadcasting Station, Inc. Johnson-Kennedy Radio Corp. Delta Broadcasting Co., Inc. Ricardo Gonzales Montero

Oscar S. Mechoso Genaro Sebater Alberto Alvarez Enid Radiophone Co. Leese Bros. KFJI Broadcasters, Inc. University of North Dakota Estate of H. C. Meachem George Roy Clough Tucson Motor Service Co. Mitchell Broadcasting Corp. Oklahoma Broadcasting Co., Inc. KGFL, Inc. KGKL, Inc. W. W. McAllister Mission Broadcasting Co. H. H. Hanseth, Inc. H. H. Hanseth, Inc. First Congregational Church KUJ, Inc. KVL, Inc. Wilson Duncan Broadcasting Co. W. N. Parker and H. H. Metcalfe Clarke Electric Co. Baltimore Broadcasting Corp. WELK Broadcasting Station, Inc. Fred Z. Zieg F. P. Moler Broadcasting Station WHBQ, Inc. Upper Michigan Broadcasting Co. WIBM, Inc. James F. Hopkins, Inc. Oglethorpe University Lexington Air Stations Lynchburg Broadcasting Corp. F. J. Reynolds Nassau Broadcasting Corp. A. J. St. Antoine C. R. Cummins Wilmington Radio Association Hattiesburg Broadcasting Co. WRDO, Inc. Racine Broadcasting Corp. Seneca Vocational School



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					AND DIAL NUMBERS
KOCW	*	250	+-	Chickasha, Okla.	College for Wenner
WBAA	+	500	1+	Lafayette, Ind.	College for Women
WBBC	† *	500	2 '	Brooklyn, N. Y.	Purdue University
WCGU	*	500	2	Brooklyn, N. Y.	Brooklyn Broadcasting Corp. U. S. Broadcasting Corp.
WCMA	. †	500	1	Culver, Ind.	General Broadcasting Corp.
WFOX		500	2	Brooklyn, N. Y.	Paramount Broadcasting Co.
WKBF	+	500	1	Indianapolis, Ind. Brooklyn, N. Y.	Indianapolis Broadcasting Inc
WLTH	*	500	2	Brooklyn, N. Y.	Indianapolis Broadcasting, Inc. The Voice of Brooklyn, Inc.
XEP		2500 ·		Laredo, Mexico	La Voz Latino
1410	1 • 1	-		A1A (
1410	K1l	ocycl	les	212.6 meters	73
KFLV		500	4	Rockford III	Paul food Paul T
KGRS	*	1000	î	Rockford, Ill. Amarillo, Texas Boston, Mass.	Rockford Broadcasters, Inc.
-WAAB	*	500	Ĉ	Boston, Mass	Gish Radio Service
WBCM		500	C C	Bay City, Mich.	Bay State Broadcasting Corp. James E. Davidson
WDAG	*	1000	1 4	Bay City, Mich. Amarillo, Texas	National Radio & Broadcasting Corp.
WHBL	*	500	4	Sheboygan, Wis. Bluefield, W. Va.	Press Pub. Co.
WHIS	† *	250	2 3	Bluefield, W. Va.	Press Pub. Co. Daily Telegraph
WODX WRBX	*	500	3	Mobile, Ala.	Mobile Broadcasting Corp.
WSFA	+	250	2 3	Roanoke, Va.	Richmond Development Corp.
WOLA	1	500	3	Montgomery, Ala.	Montgomery Broadcasting Co., Inc.
1420	1-11	ocycl	~~	211 1	
	KII		es	211.1 meters	
KABC	1	100		San Antonio, Texas	Alamo Broadcasting Co.
KBPS		100	4	Portland, Ore.	Benson Polytechnic Institute
KFIZ	*	100		Portland, Ore. Fond du Lac, Wis.	
KFQU	*	100	5	Holy City, Cal.	W. E. Riker
KFQU KFQW KFXD	*	100		Seattle, Wash.	KFQW, Inc.
KEYV	*	100		Nampa, Idaho	W.E. Riker KFQW, Inc. Frank E. Hurt Albert H. Subarman
KFXY KFYO	÷1	100 100	+	Holy City, Cal. Seattle, Wash. Nampa, Idaho Flagstaff, Arizona Abilenc, Texas	
KGFF	÷	100	Ť	Showned Okta	L. E. Kirksey
KGGC	÷	100	5	Shawnee, Okla. San Francisco, Cal.	KGFF Broadcasting Co.
KGIW	÷	100		Trinidad, Colo.	Golden Gate Broadcasting Co.
KGIX	÷.	100		Las Vegas, Nevada	Les Veres Neveda Radio Com
KGKX KGVO	Ť	100			C F Twise and F H MaConn
KGVO	† † † † †	100	D	Missoula, Montana	Leonard E. Wilson Las Vegas, Nevada, Radio Corp. C. E. Twiss and F. H. McCann Mosby's Incorporated Red Oak Radio Corp.
KICK	*	100		Red Oak, Iowa	Red Oak Radio Corp.
KORE	*	100		Eugene, Ore.	Eugene Broadcasting Station
KXL	*	100	4	Missoula, Montana Red Oak, Iowa Eugene, Ore. Portland, Ore. Houston Texas	KXL Broadcasters, Inc.
KXYZ WAGM		100	-		Harris County Broadcast Co.
WDEV		100	CP	Presque Isle, Maine Waterbury, Vt.	Aroostook Broadcasting Corp.
WEDH	*	50 100	D	Waterbury, Vt.	Harry C. Whitehill
WEHS		100	2	Erie, Pa.	Erie Dispatch-Herald
WELL	+	50	x	Cicero, Ill. Battle Creek Mish	weris, me.
WFDW	† *	100		Battle Creek, Mich. Anniston, Ala.	Enquirer-News Co. Raymond G. Hammett
WHFC		100	2	Cicero, Ill.	WHFC, Inc.
WIAS	† *	100		Ottumwa, Iowa	Iowa Broadcasting Co.
WIBR		50		Ottumwa, Iowa Steubenville, Ohio	George W Robinson
WILM	*	100		Wilmington, Del.	George W. Robinson Delaware Broadcasting Co., Inc.
WJBO WJMS WKBI	*	100		New Orleans, La.	Valdemar lensen
WINS	*	100	CPD	Ironwood, Mich.	Marius Johnson
WLBF		100	2	Cicero, Ill.	WKBI, Inc.
WMBC	† *	100 100		Kansas City, Kansas	Marius Johnson WKBI, Inc. WLBF Broadcasting Co.
WMBH		100	+	Kansas City, Kansas Detroit, Mich. Joplin, Mo.	Michigan Broadcasting Co. Inc.
WPAD	ŧ	100	1-	Paducah, Ky.	Edwin Dudley Aber
WSPA	*	100	+	Spartanburg S C	Paducah Broadcasting Co.
WTBO	*	100	÷	Spartanburg, S. C. Cumberland, Md.	Voice of South Carolina Associated Broadcasting Corp.
					sourceatter broadcasting corp.
1430	kild	ocycl	00	209.7 meters	
KEOL		ocy ci			
KECA KGNF	ŧ	1000	N	Los Angeles, Cal. North Platte, Nebr.	Earle C. Anthony, Inc.
WBAK		500 500	D	North Platte, Nebr.	Earle C. Anthony, Inc. Great Plains Broadcasting Co. Penna. State Police
WCAH	‡ *	500		Harrisburg, Pa. Columbus, Ohio	Penna. State Police
WFEA		500	1+ C□ CP	Manahastar N II	Commercial Radio Service Co.
WGBC	*	500	25	Manchester, N. H. Memphis, Tenn. Rochester, N. Y.	Rines Hotel Co.
WHEC	*	500	C□	Rochester N Y	Memphis Broadcasting Co.
WHP	*	500	īČ+	Harrisburg Pa	Hickson Electric & adio Corp.
WNBR	*	500	2	Memphis, Tenn.	WHP, The Harrisburg Telegraph Memphis Broadcasting Co.
woko	†	500	C□	Harrisburg, Pa. Memphis, Tenn. Albany, N. Y.	WOKO, Inc.
					,
1440	kild	ocycl	es	208.2 meters	
KLS	*	250	D	Oakland, Cal.	Warner Bros.
WBIG WCBA	*	500 250	1	Greensboro, N. C.	North Carolina Broadcasting Co.
		200	1	Allentown, Pa.	B. B. Musselman

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WMBD WSAN WTAD	• * * †	500 250 500	3+13	Peoria Heights, III. Allentown, Pa. Quincy, III.	Peoria Broadcasting Co. Allentown Call Publishing Co., Inc. Illinois Broadcasting Corp.	
1450	kil	locyc	les	206.8 meters		
KTBS WBMS WGAR WHOM WKBO WNJ WSAR WTFI	* + * * * *	1000 250 500 250 250 250 250 500	1 N 1 1 1	Shreveport, La. Hackensack, N. J. Cleveland, Ohio Jersey City, N. J. Jersey City, N. J. Newark, N. J. Fall River, Mass. Athens, Ga.	Tri-State Broadcasting System, Inc. WBMS Broadcasting Corp. WGAR Broadcasting Co. New Jersey Broadcasting Corp. Camith Corp. Radio Investment Co. Doughty & Welch Electric Co., Inc. Toccoa Falls Broadcasting Co.	
1460	kil	locyc	les	205.4 meters		
KSTP WJSV	*	10000 10000	N 	St. Paul, Minn. Alexandria, Va.	National Battery Broadcasting Co. Independent Publishing Co.	
1470	kil	locycl	les	204.0 meters		
KGA WLAC	‡ *	5000 5000	N C	Spokane, Wash. Nashville, Tenn.	Northwest Broadcasting System, Inc. Life & Casualty Insurance Co.	
1480	kil	locycl	les	202.6 meters		
KFJF WKBW	*	5000 5000	C C	Oklahoma City Buffalo, N. Y.	National Radio Mfg. Co. Buffalo Broadcasting Co., Lessees	
	kil	ocycl	es	201.2 meters		
TJW WCHI WCKY WJAZ	*	7.5 5000 5000 5000	1 1N 1	Hamilton, Bermuda Chicago, III. Covington, Ky. Chicago, III.	People's Pulpit Association L. B. Wilson, Inc. Zenith Radio Corp.	
1500	kil	ocycl	es	199.9 meters	5	
CMBL CMBQ CMBR KGFI KGFK KGCK KGCK KGCK KGC KUT KXC KCC KUT KXC WDIX WKBY WKBY WKBY WKBY WKBY WMBA WMBA WMBA WMBA WMBA WMBA WMBA WMBA	** +-+** +++** -* +** +** ++*** +**	$\begin{array}{c} 20\\ 50\\ 10\\ 10\\ 10\\ 100\\ 100\\ 100\\ 100\\ 1$	+++++++++++++++++++++++++++++++++++++++	Havana, Cuba Havana, Cuba Havana, Cuba Santa Barbara, Cal. Corpus Christi, Texas Moorhead, Minn. Grant City, Mo. Tyler, Texas Scottsbluff, Nebr. Prescott, Arizona Wenatchee, Wash. Santa Ana, Cal. Austin, Texas El Centro, Cal. Tupelo, Miss. Connersville, Ind. Ludington, Mich. Long Island City, N. Y. Boroklyn, N. Y. Brooklyn, N. Y. Brooklyn, N. Y. Binghamton, N. Y. Bristol, Tenn. Philadelphia, Pa. Augusta, Ga. Rutland, Vt. Woodside, N. Y. Pittsburgh, Pa.	Boston Broadcasting Co. LeRoy Joseph Beebe Paul J. Gollhofer Arthur Faske First M. P. Church Howitt, Wood Radio Co., Inc. Radiophone Brdestg. Station, Inc. Wm. Penn Broadcasting Co. Musicove, Inc. Philip Weiss Music Co. Long Island Broadcasting Corp. William S. Walker	KCYS. 1500 MTRS. 199.9
			•	[53]	Ĩ	DIAL

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ALABAMA	117			San Jose J-1	500	KQW	1010
	Watts	WEDN	Kcys. 1420	Santa Ana M-3	100	KREG	150 0
Anniston O-22 Birmingham O-21	100 5000	WFDW WAPI	11420	Santa Barbara M-2	100	KDB	1500
Diffiningham 0 21	500	WBRC	930	Santa Maria L-2 Stockton J-2	100 250	KSMR KGDM	1200 1100
	100	WKBC	1310	Stockton J-2	100	KWG	1200
Gadsden O-21 Huntsville N-21	100 50	WJBY WBHS	1210 1200				
Mobile Q-20	500	WODX	1410	COLORADO			
Montgomery P-21	500	WSFA	1410	Colorado Springs K-1		KVOR	1270
				Denver K-11	500	KFEL KFUP	920 1310
ALASKA				-	100 500	KFXF	920
	100	VEOD	1220		1000	KFXF KLZ	560
Anchorage Ketchikan	100 500	KFOD KGBU	1230 900	1	12500	KOA	830
Retenikan	300	Robe	300	Fort Morgan J-11	500 100	KPOF KGEW	880 1200
				Grand Junction K-9	100	KFXJ	1310
ARIZONA				Greeley J-11 Pueblo L-11	500	KFKA	880
Flagstaff M-7	100	KFXY	1420	Pueblo L-11	250	KGHF	1320
Jerome M-6	100	KCRJ	1310	Trinidad L-11 Yuma J-12	100 100	KGIW KGEK	1420 1200
Phoenix N-6	500 500	KOY KTAR	1390 620	Tuma j=12	100	ROER	1200
Prescott M-6	100	KPJM	1500	CONNECTICUT	•		
Tucson O-7	100	KGAR	1370	Bridgeport H-27	250	WICC	600
	500	KVOA	1260	Hartford H-27	500	WDRC	1330
					50000	WTIC	660-1060
ARKANSAS				Storrs H-28	250	WCAC	600
Blytheville M-19	50	KLCN	1290	DELAWARE			
Fayetteville M-16 Fort Smith N-16	1000 50	KUOA KFPW	1390 1340		250	WDEL	1120
Hot Springs N-17	10000	KTHS	1040	Wilmington J-26	100	WILM	1420
Little Rock N-17	100	KTHS KGHI	1200				
	250	KGJF KLRA	890	DISTRICT OF	COLU	MBIA	
Paragould M-18	1000 100	KBTM	1390 1200	Washington J-26	250	WMAL	630
I alagouid M-10	100	RDIM	1200		500	WRC	950
CALIFORNIA					100	WOL	1310
-	100	VDE	1270	FLORIDA			
Berkeley J-2 Beverly Hills M-3	100 500	KRE KMPC	1370 710	Clearwater R-24	1000	WFLA	620
Burbank M-3	500	KELW	780	Gainesville Q-24	5000	WRUF	830
Culver City M-3 El Centro N-4	250	KFVD	1000	Jacksonville Q-24	1000	WJAX WIOD	900
El Centro N-4	100	KXO	1500	Miami T-25	1000	WIOD	1300
Fresno K-2 Hollywood M-3	100 1000	KMJ KF WB	1210 950	Orlando R-24	1000 500	WQAM WDBO	[560 1120
Hollywood NI-5	500	KMTR	570	Pensacola Q-21	500	WCOA	1340
	5000	KNX	1050	St. Petersburg S-24	1000	WSUN	620
Holy City K-1	100	KFQU	1420	Tampa R-24	1000	WDAE	1220
Inglewood M-3 Long Beach M-3	500 1000	KMCS KFOX	1120 1250		100	WMBR	1370
Long Death M-5	1000	KGER	1360	GEORGIA			
Los Angeles M-3	1000	KECA	1430		500	WTEI	1450
	$1000 \\ 50000$	KFAC	1300	Athens O-23 Atlanta O-22	500 250	WTFI WGST	1450 890
	400	KFI KFSG	640 1120		5000	WSB	740
	1000	KFSG KGEF	1300	Augusta O-23	100	WRDW	1500
	100	KGFJ	1200	Columbus O-22	50 500	WRBL WMAZ	1200 1180
	1000 500	KHJ KTM	900 780	Macon O-23 Rome N-22	100	WFDV	1310
Oakland J-1	250	KLS	1440	Savannah O-24	500	WTOC	1260
ounding y	500	ĸīx	880	Thomasville Q-22	100	WQDX	1210
	500	KROW	930	Tifton P-23	100	WJTL	1370
Pasadena M-3 Sacramento J-2	50 100	KPPC KFBK	1210 1310	HAWAII			
San Bernardino M-3	100	KFXM	1210		250	KGMB	1320
San Diego N-3	500	KFSD	600 j	Honolulu	1000	KGMB	940
San Francisco I 1	500	KGB	1330				
San Francisco J-1	1000 500	KFRC KFW1	610 930	IDAHO			
	100	KGGC	1420	Boise G-5	1000	KIDO	1350
	7500	KGO	790	Idaho Falls G-7	250	KID	1320
	100 5000	KJBS KPO	1070	Nampa G-5 Pocatello H-7	$ \begin{array}{r} 50\\ 250 \end{array} $	KFXD KSEI	1420 900
	1000	KTAB	560	Sand Point D-6	100	KGKX	1420
	1000	KYA	1230	Twin Falls H-6	250	KTFI	1320

ILLINOIS	Watts		Kcys.	Shenandoah J-16	500 500	KFNF KMA	890 930
Carthage J-18 Chicago I-20	10000	WCAZ KFKX	1070	Sioux City I-15 Waterloo I-17	1000 500	KSCJ WMŤ	1330 600
	500	KYW WAAF	1020	KANSAS			
	1500	WBBM WCFL	770 970	Dodge City L-13	100	KGNO	1210
	100	WCHI WCRW	1490 1210	Kansas City K-16 Lawrence K-16	100 500	WLBF KFKU	1420 1220
		WEDC WENR	1210 870	Manhattan K-15	1000 500	WREN KSAC	1220 580
	500	WGES WGN	1360 720	Milford K-14	5000 1000	KFBI WIBW	1050 580
	1000	WIBO	560 1490	Topeka K-16 Wichita L-15	1000	KFH	1300
	5000 25000 50000	WJAZ WJBT WLS	770	KENTUCKY			
	5000	WMAQ	670	Covington K-22	5000	WCKY	1490
	500	WMBI WPCC	1080 560	Hopkinsville M-20 Louisville L-21	1000 10000	WFIW WHAS	940 820
Cicero 1-20	100	WSBC WEHS	1210 1420	Paducah M-19	250 100	WLAP WPAD	1010 1420
	100	WHFC WKBI	1420 1420		100		
Decatur K-19	100	WJBL WKBS	1200 1310	LOUISIANA	100	KMLB	1200
Galesburg J-18 Harrisburg L-19	100	WEBQ	1210	Monroe P-18 New Orleans R-19	100	WABZ	1200
Joliet I-19	100	WCLS WKBB	1310		1000 100	WDSU WJBO	1250 1420
La Salle J-19 Mooseheart I-19	100 20000	WJBC WJJD WMBD	1200 1130	1	100 500	WJBO WJBW WSMB	1200 1320
Peoria Heights J-19 Quincy K-18	500 500	WMBD WTAD	1440 1440	Shreveport P-17	5000 50	WWL KRMD	850 1310
Rockford I-19 Rock Island I-18		KFLV WHBF	1410 1210	Sinceport	1000 100	KTBS KWEA	1450 1210
Springfield K-19	100 100	WCBS WTAX	1210 1210		10000	KWKH	850
Tuscola K-20	100 250	WDZ	1070	MAINE			
Urbana J-20 Zion I-20		WCBD	1080	Augusta F-28 Bangor F-29	100 100	WRDO WABI	1370 1200
				Portland F-28	500 1000	WLBZ WCSH	620 940
INDIANA	100	WHBU	1210	Presque Isle D-29	100	WAGM	1420
Anderson J-21 Connersville K-21	100	WKBV WCMA	1500 1400	MARYLAND			
Culver I-20 Elkhart I-21	500 50	WJAK	1310	Baltimore J-26	10000 250	WBAL 7 WCAO	60-1060 600
Evansville L-20 Fort Wayne J-21	500 100	WGBF WGL	630 1370		100	WCBM WFBR	1370 1270
Gary I-20	10000 1000	WOWO WJKS WWAE	1160 1360	Cumberland J-25	500 100	WTBO	1420
Hammond I-20 Indianapolis J-21	100 1000	WWAE WFBM	1200 1230	MASSACHUSE	гтs		
Lafayette J-20	500 500	WKBF WBAA	1400 1400	Boston G-28	500	WAAB WBIS	1410 1230
Muncie J-21	50 100	WLBC WFAM	1310 1200		1000 1000	WEEI	590 830
South Bend I-20	500	WSBT WBOW	1230 1310		1000 100	WHDH WLOE	1500
Terre Haute K-20	100	WBOW	1510	Fall River H-28	1000 250	WNAC WSAR	1230 1450
IOWA				Lexington G-28 Needham G-28	100 500	WLEY WBSO	1370 920
Ames I-17 Boone I-17	5000 100	WOI KFGQ	640 1310	New Bedford H-28 Springfield H-27	100 25000	WNBH WBZ-A	1310 990
Cedar Rapids I-18	100 500	KWCR KSO	1310 1380	Worcester G-28	100	WEPS WORC	1200 1200
Clarinda J-16 Council Bluffs J-16	1000	KOIL	1260		250	WTAG	580
Davenport I-18 Decorah H-18	5000 50	WOC KGCA	1270	MICHIGAN			
Des Moines I-17	100 5000	KWLC WHO	1270 1000	Battle Creek I-21	50 500	WELL WBCM	1420 1410
Fort Dodge 1-16 Iowa City I-18	100 500	KFJY WSUI	1310 880	Bay City H-22 Calumet E-19	100	WHDF	1370
Marshalltown I-17 Ottumwa J-17	100 100	KF JB WIAS	1200 1420	Detroit H-22	50 5000	WJBK WJR	1370 750
Red Oak J-16	100	KICK	1420		100	WMBC	1420
				the second s			

East Lansing H-21 1000 WKAR 1000 Las Vegas L-5 100 KCIX Grand Rapids H-21 500 WASH 1270 NEW HAMPSHIRE Laconia G-28 100 WKAV Jackson J-31 100 WBM 1370 NEW HAMPSHIRE Laconia G-28 100 WKAV Kalamazoo L-21 100 WKC2 1500 NEW JERSEY NEW JERSEY Marquette F-13 100 WBC 1310 Asbury Park 1-27 500 WCAP MINNESOTA Fergus Falls F-15 100 KGDE 1200 WRG 1300 Minneapolis G-17 1000 WCCP 1800 Newark 1-27 100 WASI St. Paul G-17 1000 WCM 1250 Newark 1-27 100 WASI Greenville O-18 1000 WCM 1250 NEW MEXICO 100 WOA Greenville O-18 100 WCM 1250 NEW MEXICO 100 WOA 100 WOA 100 WASI 100 <			•			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Detroit H-22	1000 WWJ		NEVADA	Watts	Kcys.
	East Lansing H-21	1000 WKAR	1040		100 KGIX	1420
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		500 WASH	1270			1380
Jackson I-21 Lealenzero I-21 Laper H-22 100 WKAV Manchester G-28 100 WKAV Sto Laper H-22 Laper H-22 100 WKPC 1500 Marchester G-28 100 WKAV Mainteor I-20 100 WKPC 1500 Marchester G-28 500 WCAP Marchester G-28 100 WKRV 1310 Ashury Derk I-27 500 WCAP MINNESOTA 500 WCCD 810 Jersey City I-27 500 WCAP Minneapolis G-17 1000 WCRV 110 Weark I-27 100 WABO Misotia G-17 1000 WCCA 150 WCCP 1000 WCAY Misotia G-17 1000 WCCA 150 WCAY 150 WCAY Misotia G-17 1000 WCAY 1150 Paterson I-27 100 WCAY Misotia G-17 1000 WCAY 1160 WCAY 1160 1160 1160 1160 1160 1160 1160 1160 1160 1160	Ironwood F-18					
	Jackson I-21	100 WIBM	1370			$1310 \\ 1430$
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Lapeer H-22	100 WMPC	1500			
Royal Oak H-22 50 WEXL 1310 Attantic City J-27 5000 WCAM MINNESOTA Fergus Falls F-15 100 KGDE 1200 WEXL 1310 Attantic City J-27 500 WCAM Minneapolis G-17 5000 WCCO 810 Jersey City L-27 300 WAAT Moorhead F-15 1000 WCCO 810 Newark I-27 1000 WABS St. Paul G-17 1000 WCK M 1250 Newark I-27 1000 WCAM MISSISSIPPI Trenton I-26 500 WOAX Zarephath I-27 1000 WCAX Greenville O-18 100 WRBQ 1210 NEW MEXICO Albuquerque N-7 250 WGAX Jackson P-19 100 WTSL 1210 NEW MEXICO State College P-9 20000 KGEL 1200 MISSOURI Congrandeu L-19 100 KGR 1300 KGR 1300 KGEL 100 WGA 1300 WGCA 1300 WGCA 1300<	Marquette F-19			Asbury Park I-27	500 WCAP	1280
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Royal Oak H-22	50 WEXL		Atlantic City J-27		1100
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				Hackensack I-27	250 WBMS	1280 1450
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		100 KGDE 5000 WCCO		Jersey City I-27	300 WAAT 500 WHOM	940 1450
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		1000 WDGY	1180	Newark 1-27	250 WKBO	1450
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		50 KGFK	1500	Newalk 1-27	250 WGCP	1250 1250
St. Paul G-17 10000 WLB 1250 Patterson Patterson 1270 1000 WODA MISSISSIPPI Terenton I-26 500 WOAX 500 WOAX Gulfport Q-19 100 WCBA 1210 NEW MEXICO Albuquerque N-7 250 KGGM 1 Hartiesburg Q-19 100 WCBA 1210 NEW MEXICO Albuquerque N-7 500 KGGFL 1 Laurel P-20 100 WCBA 1270 New MEXICO NEW MEXICO NEW MON1 1 100 KGFL 100 100 KGFL <td>Northfield G-17</td> <td>1000 KFMX 1000 WCAL</td> <td></td> <td></td> <td>250 WNJ</td> <td>1450 710</td>	Northfield G-17	1000 KFMX 1000 WCAL			250 WNJ	1450 710
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	St. Paul G-17	1000 WLB	1250		1000 WODA	1250 1210
Greenville O-18 Gulfport Q-19100WRBQ 1001210 WGCMNEW MEXICOHattiesburg Q-19100WRBJ 1370 Jackson P-191000WIDX 1370 Jackson P-191000WIDX 1370 Jackson P-19500KGGLJaurel P-20100WJDX WOCC1300KGFL500KGFLMeridian P-20500WCCC880NEW YORKMissoula K-17500KGFZ100WMBO1Columbia K-17500KGSZ100WMBC1Columbia K-17500KGSZ100WMBC1Columbia K-17500KGSZ100WMBC1Jopin M-161000KMSC550500WCGU1Jopin M-161000KMSC100WBB100500St. Joseph K-162500KFEQ6801000WGB1St. Joseph K-162500KFEQ6801000WGB1St. Joseph K-162500KGFL1005501000WGB1MONTANA100KGKZ13101000WKK100WKRJ1Bullings F-91000KGRZ1310500WCA500WKRJMissoula E-7100KGEZ1310500WGCA500WKRJMissoula E-7100KGEZ1310500WGCA500WGAMONTANA100KGKA1000KGKA500WCA500WCA <t< td=""><td>10000000</td><td>10000 KSIP</td><td>1460</td><td>Trenton I-26</td><td>500 WOAX</td><td>1280</td></t<>	10000000	10000 KSIP	1460	Trenton I-26	500 WOAX	1280
			1210	Zarephath 1-2/	250 WAWZ	1350
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Gulfport Q-19	100 WGCŇ	1210			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Jackson P-19	10 WRBJ 1000 WJDX	1370 1270	Albuquerque N-7 Raton M-11		1230 1370
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Laurel P-20	100 WTSL 500 WCOC		State College P-9		1180
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Tupelo N-20	100 WDIX	1500	NEW YORK		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		SUU WQBC	1360			1430
			121.0	Binghamton H-26	100 WNBF	1310 1500
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Columbia K-17	500 KFRU	630	Brooklyn I-27		1400 1300
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Grant City J-16 Jefferson City L-17	100 KGIZ 500 WOS			500 WCGU	1400
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Joplin M-16	100 WMBH	1420		500 WLTH	$1400 \\ 1400$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Ransas City R-10	100 KWKC	1370		100 WMBQ 100 WMIL	$1500 \\ 1500$
St. Joseph K-16 1000 WOD 1300 1000 WGR St. Joseph K-16 100 KGBX 1310 5000 WKBW 1 St. Louis L-18 500 KFWF 1200 500 WKBW 1 100 KFWF 1200 500 WKBW 1 1000 WMAK 1 100 KFWF 1200 500 WKBW 1 50 WMAK 1 1000 KEW 760 1000 KEW 760 1 1000 WGR 1 1000 KWK 1350 1 1000 KGWA 1 <td< td=""><td></td><td>500 WHB</td><td></td><td>Buffalo H-24</td><td>1000 WBEN</td><td>900</td></td<>		500 WHB		Buffalo H-24	1000 WBEN	900
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	St. Joseph K-16	1000 WOQ 2500 KEEO			1000 WGR	1310 550
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		100 KGBŽ	1310		1000 WMAK	1480 1040
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	St. Louis L-18	100 KEWE	1200	Canton F-26	50 WSVS 500 WCAD	1370 1220
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		50000 KMOX 500 KSD		Freeport I-27	100 WGBB	1210
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		1000 KWK	1350		1000 WEAI	1370 1270
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	_			Jamaica H-27		1210 1210
Buttle F-7 500 KGIR 1360 New York City I-27 50000 WABC Great Falls E-8 1000 KFBB 1280 250 WBNX 1 Missoula E-7 100 KGEZ 1310 5000 WBOQ 250 WBNX 1 Wolf Point E-11 100 KGCX 1310 500 WEAF 500 WCDA 1 NEBRASKA 500 KFAB 770 30000 WHAP 1 Clay Center J-14 1000 KFAB 770 30000 WJZ 500 WHN 1 Norfolk I-15 1000 KFAB 770 30000 WJZ 500 WMCA 500 WMCA 1000 WMCA 1000 WMSG 1 100 KGVE 100 <td></td> <td>1000 11011</td> <td></td> <td>Jamestown H-24</td> <td>50 WOCL</td> <td>1210 1500</td>		1000 11011		Jamestown H-24	50 WOCL	1210 1500
Great Fails E-8 1000 KFBB 1280 50000 WBOQ Missoula E-7 100 KGEZ 1310 50000 WBOQ Missoula E-7 100 KGVO 1420 5000 WEOQ Wolf Point E-11 100 KGVO 1420 5000 WEOZ NEBRASKA 500 WEVD 1 Clay Center J-14 1000 KMMJ 740 250 WHN 1 Lincoln J-15 5000 KFAB 770 30000 WJZ 500 WKMA 1 Norfolk I-15 1000 WJAG 1060 250 WMSG 1 North Platte J-13 500 KGNF 1430 500 WNYC 1000 WNYC 1000 WOV 1 Ravenna J-14 1000 KGKY 1500 250 WPAP 1000 So00 WPAP 1000 WOV 1 1000 WOV 1 1000 WOV 1 1000 1000	Billings F-9 Butte F-7			New York City I-27	50000 WABC	860
Missoula E-7 100 KGVO 1420 250 WCDA 1 Wolf Point E-11 100 KGCX 1310 50000 WEAF NEBRASKA 500 WEVD 1 500 WEVD 1 Clay Center J-14 1000 KMMJ 740 250 WHAP 1 Lincoln J-15 5000 KFAB 770 30000 WJZ 100 KMNJ 1 Norfolk I-15 1000 WJAG 1060 250 WMSG 1 North Platte J-13 500 KGNF 1430 500 WNYC 1000 North Platte J-13 500 WAW 660 10000 WVYC 1 Ravenna J-14 100 KGFW 1310 500 WPAP 1000 Scottsbulff I-11 100 KGFW 1500 250 WQAD 1000	Great Falls E-8	1000 KFBB	1280		50000 WBOO	1350 860
NEBRASKA 500 WEVD 1 Clay Center J-14 1000 KMMJ 740 1000 WHAP 1 Lincoln J-15 5000 KFAB 770 30000 WJZ 100 KFOR 1210 5000 WLWL 1 500 WCAJ 590 5000 WLWL 1 Nortolk I-15 1000 WJAC 1060 250 WMSG 1 North Platte J-13 500 KGNF 1430 500 WNYC 1000 WOV 1 Ravenna J-14 1000 KGK Y 1500 250 WPAP 14 Scottsbulff I-11 100 KGK Y 1500 220 WQAO 10	Missoula E-7	100 KGVO	1420		250 WCDA	1350 660
NDDRASKA 1000 WHAP 1 Clay Center J-14 1000 KMMJ 740 250 WHN 1 Lincoln J-15 5000 KFAB 770 30000 WJZ 100 KFOR 1210 5000 WLWL 1 Norfolk I-15 1000 WJAG 1060 250 WMSG 1 North Platte J-13 500 KGNF 1430 500 WNYC 0 Omaha J-15 500 WAW 660 1000 WVV 1 Ravenna J-14 100 KGKY 1310 500 WPAP 16 Scottsbulff I-11 100 KGKY 1500 220 WQAO 10		100 KGCX	1310		500 WEVD	1300
					1000 WHAP	1180 1300
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Lincoln J-15	5000 KFAB	740 770		250 WHN 30000 WIZ	1010 760
Norfolk I-15 1000 WJAČ 1060 250 WMSG 1 North Platte J-13 500 KGNF 1430 500 WNYC 0 Omaha J-15 500 WAW 660 1000 WOV 1 Ravenna J-14 100 KGFW 1310 500 WPAP 16 Scottsbluff I-11 100 KGFW 1500 250 WPAP 17 Vork I-15 500 VCPT 1500 250 WQAO 10		100 KFOR	1210		5000 WLWL	1100
Omaha J-15 500 WAAW 660 1000 WOV	Norfolk I-15 North Platta I 13	1000 WJAĞ	1060		250 WMSG	570 1350
1000 WOW 590 250 WPAP 10 Scottsbluff 1-14 100 KGK W 1310 500 WPAP 10 Scottsbluff 1-11 100 KGK Y 1500 250 WQAO 10 Vark 1-15 500 I/CPIT 250 WQAO 10		500 WAAW	660			570 1130
Scottsbluff I-11 100 KGKY 1500 250 WQAO 10	Ravenna J-14	100 KGFW			250 WPAP	1010
250 WRNY 1	Scottsbluff I-11	100 KGKY	1500		250 WQAO	570 1010
			730		250 WRNY	101 0

Patchogue I-27	100	WPOE	1370	Medford G-2	100	KMED	1310
Rochester G-25	5000	WHAM	1150	Portland E-3	5000	KEX	1180
	500	WHEC	1430		100	KBPS	1420
Saranac Lake F-26	50	WNBZ	1290	1	500	KF JR KGW	1300
Schenectady G-27	50000	WGY	790		1000	KGW	620
Syracuse G-25	1000	WFBL	1360		1000	KOIN	940 1300
	250	WMAC	570 570		500 500	KTBR KWJJ	1060
Troy G-27	250 500	WSYR WHAZ	1300		100	KXL	1420
Utica G-26	100	WIBX	1200		100		
Woodside I-27	100	WWRL	1500	PENNSYLVANI			
Yonkers I-27	100	WCOH	1210	FEININGILVAINI	A		
				Allentown I-26	250	WCBA	1440
NODTLL CADO	TNTA				250	WSAN	1440
NORTH CARO				Altoona I-25	100	WFBG	1310
Asheville M-23	1000	WWNC	570	Carbondale H-26	10	WNBW	1200
Charlotte M-24	5000	WBT	1080	Elkins Park I-26 Erie H-24	25 100	WIBG WEDH	930 1420
Gastonia M-24	100	WSOC WBIG	1210	Grove City I-24	100	WSAJ	1310
Greensboro M-24 Raleigh M-25	500 1000	WPTF	1440 680	Harrisburg I-25	500	WBAK	1430
Wilmington N-26	1000	WRAM	1370	indivisioning i so	100	WCOD	1200
Winston-Salem M-24	100	WSJS	1310		500	WHP	1430
				Johnstown J-24	100	WJAC	1310
_				Lancaster I-26	100	WGAL	1310
NORTH DAKO	ТА			I take an I of	100	WKJC	1200
Bismarck F-13	1000	KEYR	550	Lewisburg I-26	100 500	WJBU WLBW	1210 1260
Devils Lake E-14	100	KFYR KDLR	1210	Oil City I-24 Philadelphia I-26	10000	WCAU	1170
Fargo F-15	1000	WDAY	940	I madeipina 1-20	100	WELK	1370
Grand Forks E-15	100	KFIM	1370	N	500	WFAN	610
Mandan F-13	100	KĞCU	1240		500	WFI	560
Minot E-13	100	KLPM	1240		100	WHAT	1310
					500 500	WIP WLIT	610 560
OHIO					100	WPEN	1500
Akron I-23	1000	WADC	1320		250	WRAX	1020
Canton I-23	1000	WHBC	1200		100	WTEL	1310
Cincinnati K-22	100	WFBE	1200	Pittsburgh J-24	50000	KDKA	980
	1000	WKRC	550		500	KOV WCAE	1380
	50000	WLW	700	1	1000	WCAE	1220 1290
or 1 11 m	1000	WSAI	1330		1000 100	W JAS WWSW	1290
Cleveland I-23	500 1000	WGAR WHK	1450 1390	Reading I-26	1000	WEEU	830
	500	WIAY	610	Including I-20	100	WRAW	1310
	50000	WJAY WTAM	1070	Scranton H-26	250	WGBI	880
Columbus J-22	500	WAIU	640		250	WQAN WPSC	880
	500	WCAH	1430	State College I-25	500	WPSC WNBO	1230
	750	WEAO	570	Washington J-24	100 100	WBAX	1200 1210
Devitors I 22	100 200	WSEN WSMK	1210 1380	Wilkes-Barre I-26	100	WBRE	1310
Dayton J-22 Mansfield J-22	100	WIW	1210	Williamsport I-25	100	WRAK	1370
Mount Orab K-22	100	WHBD	1370				
Steubenville J-23	50	WIBR	1420				
Toledo I-22	1000	WSPD	1340	PHILIPPINES			
Youngstown I-23	500	WKBN	570	Cebu	500	KZRC	937.5
Zanesville J-23	100	WALR	1210	Manila	1000	KZKA	1110
				1	500	KZRM	625
OKLAHOMA							
Chickasha N-14	250	KOCW	1400	PORTO RICO			
Enid M-14	100	KCRC	1370	San Juan W-34	250	WKAQ	890
Norman N-15	500	WNAD	1010				
Oklahoma N-15	5000	KFJF	1480				
	100	KFXR	1310	RHODE ISLAN	D		
	100	KGFG	1370			110.00.1	1505
Ponce City M 15	1000	WKY WBBZ	900	Newport H-28	100	WMBA WPAW	1500
Ponca City M-15 S. Coffeyville M-15	100 500	KGGF	1200 1010	Pawtucket H-28 Providence H-28	100 250	WEAN	1210 780
Shawnee N-15	100	KGFF	1420	Frovidence 11-28	250	WIAR	890
Tulsa M-15	5000	KVOO	1140		100	WPRO	1210
OREGON							
	100	LET II	1.170	SOUTH CAROL	LINA		
Astoria D-2 Corvallis E-2	100 1000	KFJI Koac	1370 550	Charleston O-25	500	WCSC	1360
Eugene F-2	1000	KORE	1420	Columbia N-24	500	WIS	1010
Marshfield F-1	100	KOOS	1370	Spartanburg N-23	100	WSPA	1420
				in the second			

SOUTH DAKO	TA Watts	s	Kcys.	VIRGINIA	Watts		Varia
Brookings H-15		KFDY	550	Alexandria K-26	10000		Kcys 1460
Huron H-14	100	KGDY	1200	Arlington J-25	1000	NĂA	690
Mitchell H-14 Pierre G-13	100 200	KGDA KGFX	1370 580	Danville L-25 Emory L-23	100 500	WBTM	1370 1350
Pierre G-13 Rapid City H-12 Sioux Falls H-15	100	WCAT	1200	Lynchburg L-25	100	WEHC WLVA	1350
Sioux Falls H-15	2500	KSOO	1110	Newport News L-26	100	WGH	1310
Vermillion I-15 Watertown G-15	500 100	KUSD KGCR	890 1210	Norfolk L-26	500 500	WPOR WTAR	780 780
Yankton I-15	1000	WNAX	570	Petersburg L-26	100	WLBG	1200
				Richmond K-26	100	WBBL	1210
TENNESSEE					100 5000	WMBG WRVA	1210 1110
Bristol L-23	100	WOPI	1500	Roanoke L-24	250 250	WDBI	930
Chattanooga N-21 Jackson N-20	1000 100	WDOD WTJS	1280 1310		250	WRBX	1410
Knoxsville M-22	50	WFBC	1200	WASHINGTON			
	1000	WNOX	560	Aberdeen D-2	100	KXRO	1310
Memphis N-19	100 500	WROL WGBC	1310 1430	Bellingham C-3 Everett C-3	100 50	KVOS	1200
	100	WHBQ	1370	Lacey D-3	10	KFBL KGY	1370 1200
	500 500	WMC WNBR	780 1430	Pullman E-5	1000	KWSC	1220
	500	WREC	600	Seattle C-3	100 5000	KFQW KJR	1420 970
Nashville M-21	5000	WLAC	1470		1000	ROL	1270
Springfield M-20	5000 100	WSM WSIX	650 1210		1000	KOMO	920
Springheid m-20	100	WOIA	1210		100 50	KPCB KRSC	650 1120
TEXAS					1000	KTW KVL	1220
Abilene P-13	100	KFYO	1420		100 500	KVL KXA	1370 570
Amarillo N-12	1000	KGRŠ WDAG	1420	Spokane D-5	100	KFIO	1120
Austin Q-14	$\begin{array}{c}1000\\100\end{array}$	WDAG KUT	1410	• • • • • • •	1000	KFPY	1340
Beaumont R-17		KFDM	$\begin{array}{r}1500\\560\end{array}$		$\frac{5000}{1000}$	KGA KHQ	1470 590
Brownsville U-15	500	KWWG	1260	Tacoma D-3	500	KMÓ	860
College Sta. Q-15 Corpus Christi S-14	500 100	WTAW KGFI	1120 1500		1000	KVI	760
Dallas P-15	10000	KRLD	1040	Walla Walla E-5 Wenatchee D-4	100 50	KUJ KPO	1370 1500
	50000	WFAA	800	Yakima D-4	100	KIT	1310
Dublin P-14	500 100	WRR KFPL	1280 1310	WEST VIDCINI	•		
El Paso P-9	100	KTSM	1310	WEST VIRGINI Bluefield L-24	-	11/1 11 0	
Fort Worth P-15	100	WDAH	1310	Charleston K-23	250 250	WHIS WOBU	1410 580
Fort worth F-15	100 1000	KFJZ KTAT	1370 1240	Fairmount J-24	250	WMMN	890
	10000	KTAT WBAP	800	Huntington K-23 Wheeling J-24	250 5000	WSAZ WWVA	580
Galveston R-16	100 500	KFLX KFUL	1370 1290	wheeling J-24	3000	wwvA	1160
Greenville O-15		KFPM	1310	WISCONSIN			
Harlingen T-14	500	KRGV	1260	Eau Claire G-18	1000	WTAQ	1330
Houston R-16	1000 100	KPRC KTLC	920 1310	Fond du Lac H-19 Green Bay G-19	100 100	KFIZ WHBY	1420 1200
	5 00	KTRH KXYZ	1120	Janesville I-19 La Crosse H-18	100	WCLO	1200
San Angelo Q-13	100 100	KXYZ KGKL	1420	La Crosse H-18	1000	WKBH	1380
San Antonio R-14		KABC	1370 1420	Madison H-19	750 500	WHA WIBA	940 1280
	100	KMAC	1370	Manitowoc H-20	100	WOMT	1210
	100 1000	KONO	1370 1290	Milwaukee H-19	250	WHAD	1120
	50000	KTSA WOAI	1190		250 1000	WISN WTMI	1120 620
Tyler P-16	100	KGKB	1500	Poynette H-19	100	WTMJ WIBU	1210
Waco Q-15 Wichita Falls O-14	1000 250	WACO KGKO	1240 570	Racine I-20 Sheboygan H-20	$100 \\ 500$	WRJN WHBL	1370 1410
Wielinea Fullo Osti	200	RORO	5/0	Stevens Pt. G-19	2000	WLBL	900
UTAH				Superior F-17	1000	WEBC	1290
Ogden I-7	500	KLO	1400	WYOMING			
Salt Lake City I-7	1000	KDYL	1290	Casper H-10	100	KDFN	1210
	5000	KSL	1130	Casper II-10	100	RDPIN	1210
VERMONT				CAN	ADA		
Burlington F-27	100	WCAX	1200				
Rutland G-27	100	WSYB	1500	ALBERTA	500	OFIC	(00
St. Albans F-27 Springfield G-27	100 10	WQDM WNBX	1370	Calgary B-7	500 10000	CFAC CFCN	690 985
Waterbury F-27		WDEV	1420		500	ĊĴĊĴ	690

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$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Edmonton A-8	250 CH	MI 580	OUEBEC	Watt		Keys	
		500 CJC	A 930	-		CECE		
Red Deer A - 3 1000 CKLC 1440 1000 CNRD 840 BRITISH COLUMBIA 600 CRRC 430 Chilliwack B-3 100 CHWK 665 Chilliwack B-3 100 CHWK 665 Kelowap C-5 100 CKCV 1120 Kelowap C-5 100 CKCV 1120 Soo CJOR 1210 Fleming C-13 500 CJRW 500 CKCV 730 500 CHW 665 500 CKCV 730 500 CJRW 666 500 CKRV 730 500 CJRW 666 Manifore C-3 500 CKRV 730 500 CJRW 660 Manifore D-14 5000 CKX 540 500 CGRA 630 St. John D-30 500 CFNA 630 GUATAMALA Guatamala C-19 50 TGW 50 NeWFOUNDLAND St. Johns A-35 500 COR 840 Mautamala C-19 50 TGW 500 CHW 500	Lettelesides C. 8	500 CKI	JA 580	Montreal E-20				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		100 CJC	C 840				730	
Guebe D-12 100 CHURC 645 Guebe D-12 100 CHURC 645 Guebee D-12 100 CHURC 645 Guebee D-12 100 CRUC 665 CHURC 646 SASKATCHEWAN Featom D-13 500 CIRC 666 South colspan="2">CARC 500 CIRC 666 MANITOBA Fredericton D-29 100 CRNA 630 CIRC 60 NEWFOUNDLAND South colspan="2">CIRC 100 CRNA 630 CINT AL AMERICA COSTA RICA GUEATAMALA GUEATAMALA GUEATAMALA GUEATAMALA GUEATAMALA <th co<="" td=""><td>Red Deel A-6</td><td>1000 CN</td><td>RD 840</td><td></td><td></td><td>CNRM</td><td>730</td></th>	<td>Red Deel A-6</td> <td>1000 CN</td> <td>RD 840</td> <td></td> <td></td> <td>CNRM</td> <td>730</td>	Red Deel A-6	1000 CN	RD 840			CNRM	730
$\begin{array}{c c c c c c c c c c c c c c c c c c c $				Quebec D-27			645	
Chilliwack B-3 100 CHWK 665 Kamloops B-5 100 CFJC 1120 Kelowna C-5 100 CFJC 1120 SASKATCHEWAN Fleming C-13 500 CJRW 665 S0 CKCV 730 50 CKCV 740 50 CK	BRITISH COLU	JMBIA				CKCV	645 880	
Kamboops B-5 100 CFJC 1120 SASKATCHEWAN Vancouver B-3 50 CHLS 730 500 CJRW 665 Sol CJOR 1200 Noose Juw C-11 500 CJRW 665 Sol CJRW 670 Sol CJRW 665 Sol CKC 730 Sol CLRW 665 Sol CKRC 730 Sol CKRW 665 Sol CKRV 730 Sol CRR 630 Victoria C-3 500 CKX 540 Saskatoon B-11 500 CRR 643 MANITOBA Fredericon D-23 500 CKY 780 GUATAMALA COSTA RICA New BRUNSWICK Fredericon D-30 500 CENR 643 Salvador C-12 2300 HRB 1370 St. John D-30 500 CHNS 645 Salvador C-19 500 Reguigalpa CC-21 2300 HRB 1370 Sydney C-32	Chilliwack B-3	100 CH	WK 665		50	CNRQ	880	
Vancouver B-3 50 CHLS 730 Fleming C-13 500 CJRW 665 500 CKCD 730 Moose Jaw C-11 500 CJRW 666 500 CKCD 730 Moose Jaw C-11 500 CJRW 666 500 CKX 730 S00 CJRW 666 500 CKX 730 S00 CJRW 666 500 CKX 730 S00 CJRW 666 Sind CKX 730 S00 CJRW 666 MANITOBA Saskatoon B-11 500 CKR 910 Manninge D-15 5000 CKY 780 CENTRAL AMERICA NEW BRUNSWICK Fredericton D-30 500 CFRA 630 Guatamala CC-19 50 TGW St. Johns A-35 500 CHNS 910 Guatamala CC-19 500 Reguacal pa C-21 2300 HRB 1370 Sydney C-32 1000 CKNC 910 Salvador CC-19 500 Reguacal pa C-21 2300 Reguacalentes W-10 350 Salvador C	Kamloops B-5	100 CF	C 1120	SASKATCHEW	IAN			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Kelowna C-5	100 CK	DV 1200			CIDW	665	
	vancouver B-3			Moose Jaw C-11				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			CD 730	Regina C-12			960	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		50 CK	FC 730		500	CJBR	960	
500 CNRV 1030 Saskatoon B-11 500 CFQC 910 MANITOBA 500 CKX 540 Yorkton B-13 500 CJGX 630 MANITOBA 5000 CKX 540 Yorkton B-13 500 CJGX 630 Manitope D-15 5000 CKX 540 CENTRAL AMERICA COSTA RICA Fredericton D-29 100 CFNB 1210 GUATAMALA Guatamala CC-19 50 TGW 570 NEWFOUNDLAND 500 CFNB 630 GUATAMALA Guatamala CC-19 50 TGW 570 NOVA SCOTIA Glace Bay C-32 10000 VAS 685 Salvador CC-19 500 RUS 664 Malifat E-31 500 CHNB 910 Salvador CC-19 500 RUS 664 ONTARIO Chaham H-22 100 CFCO 1210 MEX Aguascalientes W-10 350 XFF 915 North Bay E-23 100 CKCC 630 COAHUILA Salvador CC-19 100 XER 735 YER 74		100 CKI	VIO 730			CKCK		
Victoria C-3 50 CFCT 630 500 CNRS 910 MANITOBA Brandon D-14 500 CKX 500 CKRS 910 Winnipeg D-15 5000 CKY 780 CENTRAL AMERICA COSTA RICA NEW BRUNSWICK Frederiton D-29 100 CFNB 1210 GUATAMALA GUATAMALA Moncton D-30 500 CRNA 630 GUATAMALA Guatamala CC-19 50 TGW 570 NEWFOUNDLAND St. Johns A-35 500 CNR4 910 Guatamala CC-19 500 RUS 646 Sydney C-32 500 CKNP 910 Salvador CC-19 500 RUS 646 Sydney C-32 500 CKNP 910 Salvador CC-19 500 RUS 646 Mailfax E-31 500 CKNP 910 MEXICO Salvador CC-19 500 RUS 646 St. Johns A-35 500 CKNP 910 Salvador CC-19 500 RUS 646 Hailfax E-31 500 CKCC 800 CHIHUAHUA		100 CK	WX 730	Sockatoon P 11				
Yorkton B-13 500 CJGX 6.30 MANITOBA Brandon D-14 500 CKX 540 S40 CENTRAL AMERICA Winnipeg D-15 5000 CKY 780 CostA 630 NEW BRUNSWICK Frederiton D-29 100 CFNB 1210 GUATAMALA Heredia FF-23 50 TId 944 Moncton D-30 500 CFNB 630 S0 GUATAMALA Guatamala CC-19 50 TGW 570 NEWFOUNDLAND St. Johns A-35 500 VOWR 675 SALVADOR Salvador CC-19 500 RUS 664 Maifax E-31 500 CHN 910 XFC 800 NEWSICO Sydney C-32 1000 CKAC 1010 XEF 910 Sydney C-32 100 CFC 630 CHIHUAHUA ChiHuahua, Chih. R-9 250 XFF 916 ONTARIO 1000 CKCO 630 COAHUILA Saltillo, Coah. U-12 100 XEF 910 Ottawa F-25 50	Victoria C-3			Saskatoon B-II		CNRS	910	
Brandon D-14 500 CKX 540 CENTRAL AMERICA Winnipeg D-15 5000 CNRW 780 COSTA RICA NEW BRUNSWICK Frederiton D-29 100 CFNB 1210 Moneton D-30 500 CFNA 630 St. John D-30 500 CFNB 1210 Moreton D-30 500 CFNA 630 St. Johns A-35 500 VOWR 675 NOVA SCOTIA Glace Bay C-32 10000 VAS 6810 Halifaz E-31 500 CHNS 910 Salvador CC-19 500 RUS Sydney C-32 500 CHNS 910 MEXICO Aguascalientes W-10 350 XFC 805 ONTARIO Chaham H-22 100 CKOC 630 CHIM 800 CHIML 800 CHIML 80 Kingston G-25 50 CFC 910 Chaham A-23 500 CNRL 910 Yilla Acuna R-12 500 CHML 80	victoria C-c			Yorkton B-13			630	
Brandon D-14 500 CKX 540 CENTRAL AMERICA Winnipeg D-15 5000 CNRW 780 COSTA RICA NEW BRUNSWICK Frederiton D-29 100 CFNB 1210 Moneton D-30 500 CFNA 630 St. John D-30 500 CFNB 1210 Moreton D-30 500 CFNA 630 St. Johns A-35 500 VOWR 675 NOVA SCOTIA Glace Bay C-32 10000 VAS 6810 Halifaz E-31 500 CHNS 910 Salvador CC-19 500 RUS Sydney C-32 500 CHNS 910 MEXICO Aguascalientes W-10 350 XFC 805 ONTARIO Chaham H-22 100 CKOC 630 CHIM 800 CHIML 800 CHIML 80 Kingston G-25 50 CFC 910 Chaham A-23 500 CNRL 910 Yilla Acuna R-12 500 CHML 80	MANITORA							
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NEW BRUNSWICK San Jose $FF-23$ 50 TIC 900 Fredericton D-30 500 CFNB 1210 GUATAMALA Guatamala CC-19 50 TGW 570 NEWFOUNDLAND 500 CFBO 890 HONDURAS Tegucigalpa CC-21 2300 HRB 1370 St. Johns A-35 500 VOWR 675 SALVADOR Salvador CC-19 500 RUS 664 Moreton C-31 500 CNRA 685 Tagucigalpa CC-21 2300 HRB 1370 Sydney C-32 1000 VAS 685 Salvador CC-19 500 RUS 664 ONTARIO Chatham H-22 100 CFCO 1210 MEXICO Aguascalientes W-10 350 XFC 805 Kingston G-25 500 CHKL 800 COAHULA CoAHULA Saltilo, Coah. U-12 10 XER 735 North Bay E-23 100 CKCR 890 Fer 1041 Yilla Acuna R-12 -7500 XER <t< td=""><td>in initipeg 5 10</td><td>5000 CNI</td><td>RW 780</td><td>11</td><td></td><td></td><td></td></t<>	in initipeg 5 10	5000 CNI	RW 780	11				
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NEWFOUNDLAND St. Johns A-35 500 VOWR 675 St. Johns A-35 500 VOWR 675 NOVA SCOTIA Glace Bay C-32 10000 VAS 685 MEXIMAND Tegucigalpa CC-21 2300 HIRB 1370 SL Johns A-35 500 VOWR 6750 MEXIMAND Tegucigalpa CC-21 2300 HIRB 1370 MEXIMAND Tegucigalpa CC-21 2300 HIRB 1370 MEXIMAND SALVADOR Salvador CC-19 500 RUS ONTARIO CHIHUAHUA Chatham H-22 100 CFCC 101 XEL 101 XEL 101 XEL 101 XEL 101 <th c<="" td=""><td>St. John D-30</td><td>500 CFI</td><td>3O 890</td><td>Guatamala CC-19</td><td>50</td><td>IGw</td><td>370</td></th>	<td>St. John D-30</td> <td>500 CFI</td> <td>3O 890</td> <td>Guatamala CC-19</td> <td>50</td> <td>IGw</td> <td>370</td>	St. John D-30	500 CFI	3O 890	Guatamala CC-19	50	IGw	370
NEWFOUNDLAND St. Johns A-35 500 VOWR 675 St. Johns A-35 500 VOWR 675 NOVA SCOTIA Glace Bay C-32 10000 VAS 685 MEXIMAND Tegucigalpa CC-21 2300 HIRB 1370 SL Johns A-35 500 VOWR 6750 MEXIMAND Tegucigalpa CC-21 2300 HIRB 1370 MEXIMAND Tegucigalpa CC-21 2300 HIRB 1370 MEXIMAND SALVADOR Salvador CC-19 500 RUS ONTARIO CHIHUAHUA Chatham H-22 100 CFCC 101 XEL 101 XEL 101 XEL 101 XEL 101 <th c<="" td=""><td></td><td></td><td></td><td> HONDURAS</td><td></td><td></td><td></td></th>	<td></td> <td></td> <td></td> <td> HONDURAS</td> <td></td> <td></td> <td></td>				HONDURAS			
St. Johns A-35 500 VOWR 6/3 NOVA SCOTIA Glace Bay C-32 10000 VAS 665 Halifax E-31 500 CNRH 910 Salvador CC-19 500 RUS 664 Sydney C-32 50 CJCB 880 MEXICO 664 Wolfville D-31 500 CNRH 910 MEXICO 664 ONTARIO Chitham H-22 100 CFCO 1210 AGUASCALIENTES Aguascalientes W-10 350 XFC 805 Chatham H-22 100 CKMC 1210 Chihuahua, Chih. R-9 250 XFF 915 Cobalt E-23 100 CKMC 1210 Chihuahua, Chih. R-9 250 XFF 916 Juarez P-9 101 XEJ 857 1000 XEQ 1011 XEL 1091 North Bay E-23 100 CKCQ 890 NET 735 100 CKQ 800 Prescort F-25 50 CFCL 916 Saltillo, Coah. U-12 10 XEL 1091 Villa Acuna R-12 500	NEWFOUNDLA	ND		II	2300	HRB	1370	
NOVA SCOTIA Glace Bay C-32 10000 VAS 685 Halifax E-31 500 CIRK 910 Sydney C-32 500 CIRK 910 Sydney C-32 500 CIRK 910 Sydney C-32 500 CRK 910 ONTARIO C Chatham H-22 100 CFCO 1210 Chatham H-22 100 CFCO 1210 Aguascalientes W-10 350 XFF 915 Chatham H-24 100 CFCO 1210 KEJ 850 Kingston G-25 500 CHCS 630 Chihuahua, Chih. R-9 250 XFF 915 North Bay E-23 1000 CKCO 890 1000 XEB 1091 Prestor H-23 500 CHR 910 Saltillo, Coah. U-12 10 XEF 735 Oroth Bay E-23 100 CKPC 890 Nexico City Y-13 1000 XEB 1031 Prescot F-25 500 CFCA	St. Johns A-35	500 VO	WR 675	regueiguipa de si	2000		10, 0	
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Halifax E-31 500 CHNS 910 MEXICO Sydney C-32 50 CJCB 880 AGUASCALIENTES Wolfville D-31 50 CKIC 1010 AGUASCALIENTES ONTARIO Chatham H-22 100 CFCO 1210 Chatham H-22 100 CKMC 1210 CHIHUAHUA Cobalt E-23 100 CKMC 630 1000 CKOC 630 1000 XEF 915 Juarez P-9 1011 XEJ 850 CHIHUAHUA Kingston G-25 50 CFRC 930 CAC 1000 XEL 1091 North Bay E-23 1000 CKCO 890 Saltillo, Coah. U-12 10 XEL 1091 North Bay E-23 100 CFLC 915 Saltillo, Coah. U-12 10 XEL 1091 North Bay E-23 500 CFLC 915 Saltillo, Coah. U-12 100 XEE 735 Prescott F-25 500 CFLC 916 5000 XEF 104 500 CFCA 11	Glace Bay C-32				-			
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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Hamilton H-24	500 CH	CS 630	Juarez P-9		XEJ		
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Prescott F-25	50 CFI	.C 915		250	XEFA	1250	
500 CFCL 960 5000 XEO 940 5000 CFRB 690 500 XEO 940 5000 CKRU 960 500 XETA 1140 5000 CKGW 840 2000 XETY 1300 500 CKRV 960 5000 XEW 910 500 CNRT 1120 5000 XEZ 588 5000 CPRY 840 2000 XEZ 588 5000 CPRY 840 2000 XFI 816 Vaterloo G-23 50 CKCR 645 1000 XFI 816 PRINCE EDWARD ISLAND Toluca. Y-12 500 XEC 1332 Charlottestown C-31 500 CFCY 580 JALISCO JALISCO	Preston H-23				101	XEK	990	
5000 CFRB 690 500 XETA 1140 500 CKCL 960 100 XETA 1140 500 CKCL 960 100 XETA 1140 500 CKRC 960 100 XETO 1360 500 CKNC 960 -5000 XETY 1300 500 CNRT 1120 500 XEX 911 5000 CNRX 690 500 XEZ 588 5000 CPR Y 840 20000 XFG 633 Waterloo G-23 50 CKCR 645 5000 XFX 860 PRINCE EDWARD ISLAND Toluca. Y-12 50 XEC 1333 Charlottestown C-31 500 CFC Y 580 JALISCO JALISCO	Ioronto G-24							
500 CKCL 960 100 XETO 1360 500 CKGW 840 2000 XETY 1300 500 CKNC 960 -5000 XEW 910 500 CNRT 1120 500 XEW 910 5000 CNRX 690 500 XEZ 588 Waterloo G-23 50 CKCR 645 1000 XFI 816 PRINCE EDWARD ISLAND Toluca. Y-12 50 XEC 1333 Charlottestown C-31 500 CFCY 580 JALISCO JALISCO JALISCO		5000 CFI	RB 690				1140	
5000 CKGW 840 2000 XETY 1300 500 CKNC 960 5000 XEW 910 500 CNRT 1120 500 XEX 1210 5000 CNRX 690 500 XEZ 1280 5000 CPRY 840 2000 XEZ 580 Waterloo G-23 50 CKCR 645 1000 XFI 816 PRINCE EDWARD ISLAND Toluca. Y-12 500 XEZ 1333 Charlottestown C-31 500 CFCY 580 JALISCO JALISCO		500 CK	CL 960		100	XETO	1360	
500 CNRT 1120 500 XEX 1210 5000 CNRX 690 500 XEZ 588 5000 CPRY 840 2000 XFG 633 Waterloo G-23 50 CKCR 645 1000 XFI 818 PRINCE EDWARD ISLAND Toluca. Y-12 50 XEC 1333 Charlottestown C-31 500 CFCY 580 JALISCO JALISCO		5000 CK	GW 840		2000	XETY	1300	
5000 CNRX 690 500 XEZ 588 5000 CPRY 840 2000 XFG 638 Waterloo G-23 50 CKCR 645 1000 XFI 810 PRINCE EDWARD ISLAND Toluca. Y-12 500 XFX 866 Charlottestown C-31 500 CFCY 580 JALISCO		500 CK	NL 960 21 1120				910	
5000 CPR Y 840 2000 XFG 638 Waterloo G-23 50 CKCR 645 1000 XFI 818 PRINCE EDWARD ISLAND 500 CFCY 580 Toluca. Y-12 50 XEC 1333 Charlottestown C-31 500 CFCY 580 JALISCO JALISCO				H	500	XEZ	588	
PRINCE EDWARD ISLAND Toluca. Y-12 500 XFX 860 Charlottestown C-31 500 CFCY 580 JALISCO 1333		5000 CPI	RY 840				638	
PRINCE EDWARD ISLANDToluca. Y-1250 XEC1333Charlottestown C-31500CFCY580JALISCO	Waterloo G-23	50 CK	CR 645				818	
Charlottestown C-31 500 CFCY 580 100 CHCK 960 JALISCO				Toluce V 12		XFX	860	
100 CHCK 960 JALISCO				10/uca. 1-12	30	ABC	1555	
	Charlottestown C-31			JALISCO				
	Summerside C-31				-10 101	XEA	1200	
				<u>II</u>				

(Continued on page 65)

CFAC

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KFDY

erne			
CFAC 690	CJRW 665	CMBZ 1010	CNRD 840
Calgary, Alta.	Fleming, Sask.	Havana, Cuba	Red Deer, Alta.
CFBO 890	CKAC 730	CMC 840 35//	CNRH 910
St. John, N. B.	Montreal, Que. 50		Halifax, N. S.
CFCA 1120	CKCD 730	CMCA 1225	CNRL 910 29 London, Ont. 29
Toronto, Ont. CFCF 1030 7 1	Vancouver, B. C CKCI 645	Havana, Cuba CMCB 1070	CNRM 730
CFCF 1030 Montreal, Que. 2	Quebec, Que.	Havana, Cuba	Montreal, Que.
CFCH 930	CKCK 960	CMCD 925 7	I CNRO 600
North Bay, Ont.	Regina, Sask.		Ottawa, Ont.
CFCL 960 (CKCL 300 PULL	CMCF 890 31	CNRQ 880
Toronto, Ont. CFCN 985 72	Toronto, Ont. CKCO 890	Havana, Cuba 21 CMCG 1345	Quebec, Que. CNRR 960
CFCN 985 Calgary, Alta. 232	Ottawa, Ont.	Havana, Cuba	Regina, Sask.
CFCO 1210			CNRS 910
Chatham, Ont.	Waterloo, Ont.	Havana, Cuba	Saskatoon, Sask.
CFCT 630	CKCV 880	CMCJ 620	CNRT 1129 35 5
Victoria, B. C. CFCY 580	Quebec, Que. CKFC 730	Havana, Cuba CMCM 1405	Toronto, Ont. CNRV 1030
Ch'lottet'n,P.E.I. 20	Vancouver, B. C.	Havana, Cuba	Vancouver, B. C.
CFJC 1120	CKGW 840	CMCN 925	CNRW 780
Kamloops, B. C.	Toronto, Ont. 32	Havana, Cuba	Winnipeg, Man.
CFLC 915	CKIC 1010	CMCO 660	CNRX 600 55 V
Prescott, Ont. CFNB 1210	Wolfville, N. S. CKLC 840	Havana, Cuba CMCQ 1150	Toronto, Ont. CPRY 840
CFNB 1210 Fredericton, N.B.	Red Deer, Alta.	Havana, Cuba	Toronto, Ont. 35
CFQC 910	I CKMC 1210	CMCR 1345	HHK 920
Saskatoon, Sask.	Cobalt, Int.	Havana, Cuba	Port au Prince,H.
CFRB 690 57	CKMO 730	CMCU 1285	HIX 669
Toronto, Ont. CFRC 930	Vancouver, B. C. CKNC 960	Havana, Cuba CMCW 1285	Santo Domingo HRB 1370
Kingston, Ont.	CKNC 960 Toronto, Ont. 25	Havana, Cuba	Tequeigalpa
CHČK 960	CKOC 620 1/1	CMCY 1345	KABC 1420
Ch'lottet'n,P.E.I.	Hamilton, Ont.	Havana, Cuba	San Antonio, Tex.
CHCS 630	CKOV 1200	CMDC 660	KBPS 1420
Hamilton, Ont. CHGS 1120	Kelowna, B. C. CKPC 880	Havana, Cuba CMGA 834	Portland, Ore. KBTM 1200
Sum'rside, P.E.I.	Preston, Ont. 31/	Colon, Cuha	Paragould, Ark.
CHLS 730	CKPR 890	CMGB 1205	KCRC 1370 - //
Vancouver, B.C.	Port Arthur, Ont.	Matanzas, Cuba	Enid, Okla.
CHMA 580	CKUA 580	CMGE 1375 Cardenas, Cuba	I KURJ 1310
Edmonton, Alta. CHML 880	Edmonton, Alta.	CMGF 977	Jerome, Ariz. KDB 1500
Hamilton, Ont.	Vancouver, B. C.	Matanzas, Cuba	S. Barbara, Cal.
CHNS 910	CKX 540	CMGH 1370	KDFN 1210
Halifax, N. S.	Brandon, Man. CKY 780	Matanzas, Cuba CMHC 790	Casper, Wyo.
CHRC 645 Quebec, Que.	Winnipeg, Man	Tuinueu, Cuba	KDKA 980 Pittsburgh, Pa.
CHWC 960	CMAB 1249	CMHD 950	KDLR 1210
Regina, Sask.	Pinar del Rio, Cu	Caibarien, Cuba	Devils Lake, N.D.
CHWK 665	CMAC 1375	CMHI 1110	KDYL 1290
Chilliwack, B. C CHYC 730	Pinar del Rio, Cu CMBC 965	Santa Clara, Cu CMHJ 645	Salt Lake City KECA 1430
Montreal, Que.	Havana, Cuba	Cienfuegos, Cuba	
CJBR 960	CMBD 965	CMJA 1200	Los Angeles, Cal KELW 780
Regina, Sask.	Havana, Cuba	Camaguey, Cuba	Burbank, Cal.
CJCA 930	CMBG 1070	CMJC 1382	KEX 1180
Edmonton, Alta.	Havana, Cuba CMBI 1405	Camaguey, Cuba CMJE 856	Portland, Ore. KFAB 770
Sydney, N. S.	Havana, Cuba	Camaguey, Cuba	Lincoln, Nebr. 44
CJCJ 690	CMBL 1500	CMJF 930	KFAC 1300
Calgary, Alta.	Havana, Cuba	Camaguey, Cuba	Los Angeles, Cal.
CJGC •••• <	CMBN 1405	CMJH 1017 Ciego de Avila, C.	KFBB 1280
London, Ont. CJGX 630	Havana, Cuba CMBQ 1500		Great Fls., Mont. KFBI 1050
Yorkton, Sask.	Havana, Cuba	Havana, Cuba 50	Metterd, Kans.
CJOC 1120	CMBR 1500	CMKC 1034	KFBK 1310
Lethbridge, Alta.	Havana, Cuba	Santiago, Cuba	Sacramento, Cal.
CJOR 1210	CMBS 790	CMQ 1150 Havana, Cuba	KFBL 1370
Vancouver, B. C.	Havana, Cuba CMBT 790	CMW 588 Jd L	Everett, Wash. KFDM 560
Moose Jaw, Sask.	Havana, Cuba	Havana, Cuba	Beaumont, Tex.
CKOK 992	CMBW 1010	CMX 890	KFDY 550
172	Havana, Cuba	Havana, Cuba CNRA 630	Brookings, S. D.
	CMBY 1225 Havana, Cuba	CNRA 630 Moneton, N. B.	
1	CKTB 69		
		CM- 59	
	57		

KFEL

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KQW

NILL			KQW
KFEL 920	KFVS 1210	KGFX 580	KLS 1440
Denver, Colo.	Cape Gir'rd'u, Mo	Pierre, S. D.	Oakland, Cal.
KFEQ 680 St. Joseph, Mo.	KFWB 950 Hollywood, Cal. ZG	KGGĆ 1420 San F'ncisco, Cal.	KLX 880 Oakland, Cal.
KFGQ 1310	KFWF 1200	KGGF 1010	KLZ 560
Boone, Iowa	St. Louis, Mo.	Coffeyville, Okla.	Denver, Colo.
KFH 1300 Wichita Kansas 10	KFWI 930 San F'neisco, Cal. 21/4	KGGM 1230	KMA 930 Prill
Wichita, Kansas KFI 640	KFXD 1420	Albuq'rque, N.M KGHF 1320	Shenandoah, Ia. KMAC 1370
Los Angeles, Cal.	Nampa, Idaho	Pueblo, Colo.	San Antonio, Tex.
KFIO 1120	KFXF 920 00	KGHI 1200	KMBC 950
Spokane, Wash. KFIZ 1420	Denver, Colo. KFXJ 1310	Little Rock, Ark. KGHL 950	Kan. City, Mo. 4. 7 4 KMCS 1120
Fond du Lac, Wis.	Grand Junc., Col.	Billings, Mont.	Inglewood, Cal.
KFJB 1200 12 2/1	KFXM 1210	KGIR 1360 017	KMED 1310
Maishantown, 1a.	San Ber'd no,Cal.	Butte, Mont.	Medford, Ore.
KFJF 1480 Oklahoma City	KFXR 1310 Oklahoma City	KGIW 1420 Trinidad, Colo.	KMJ 1215 Fresno, Cal.
KFJI 1370	KFXY 1420	KGIX 1420	KMLB 1200
Astoria, Ore.	Flagstaff, Ariz.	Las Vegas, Nev.	Monroe, La.
KFJM 1370	KFYO 1420	KGIZ 1500	KMMJ 740
Grd. Forks, N.D KFJR 1300	Abilene, Texas KFYR 550	Grant City, Mo KGJF 890	Clay Ctr., Nebr. 48 KMO 860
Portland, Ore.	Bismarck, N. D.	Little Rock, Ark.	Tacoma, Wash.
KFJY 1310	KGA 1470	KGKB 1500	KMOX 1090 17 3/./
Fort Dodge Ia. KFJZ 1370	Spokane, Wash.	Tyler, Texas KGKL 1370	St. Louis, Mo. KMPC 710
Ft. Worth, Tex.	KGAR 1370 Tucson, Arizona	San Angelo Tex	KMPC 710 Beverly Hills, Cal 534
KFKA 880	KGB 1330	San Angelo, Tex. KGKO 570	KMTR 570
Greeley, Colo.	San Diego, Cal.	Wichita Flls., Tex.	Hollywood, Cal.
KFKU 1220	KGBU 900	KGKX 1420 Sand Point, Idaho	KNX 1050
Lawrence, Kans. KFKX 1020	Ketchikan, Al'ka KGBX 1310	KGKY 1500	Los Angeles, Cal.
Chicago, Ill.	St. Joseph. Mo.	Scottsbluff, Nebr.	Denver, Colo.
KFLV 1410	KGBZ 930 York, Nebr. 27	KGMB 1320	I KOAC 550
Rockford, Ill. KFLX 1370	KGCA 1270	Honolulu, T. H KGNF 1430	Corvallis, Ore. KOB 1180
Galveston, Tex.	Decorah, Iowa	No. Platte, Nebr.	State Coll., N.M.
KFMX 1250	KGCR 1210	KGNO 1210	KOCW 1400
N'thfield, Minn. KFNF 890	Watertown, S. D KGCU 1240	Dodge City, Kas. KGO 790	Chickasha, Okla. KOH 1380
Shenandoah, Ia. 21	Mandan, N. D.	San F'ncisco, Cal. 912	Reno, Nevada
KFOR 1210	VCCV 1210	KGRS 1410	KOIL 1260
Lincoln, Nebr. KFOX 1250	Wolf P't, Mont. KGDA 1370	Amarillo, Texas	Council Bluffs,Ia. // KOIN 940
Long Beach, Cal.	Mitchell, S. D.	KGU 940 Honolulu, Hawaii	Portland, Ore.
KFPL 1310	KGDE 1200	KGVO 1420	KOL 1270
Dublin, Texas	Fergus Falls, Minn	Missoula, Mont.	Seattle, Wash.
KFPM 1310 Greenville, Texas	KGDM 1100 Stockton, Cal.	KGW 620 Portland, Ore.	KOMO 920 Seattle, Wash. 28
KFPW 1340	KGDY 1200	I KGY 1200 I	KONO 1370
Ft. Smith, Ark.	Huron, S. D.	Lacey, Wash.	San Antonio, Tex.
KFPY 1340 Spokane, Wash.	KGEF 1300 Los Angeles, Cal.	KHJ 900 Los Angeles, Cal.	KOOS 1370 Marshfield, Ore.
KFQD 1230	KGEK 1200 -	KHQ 590	KORE 1420
Anchorage, Alas.	Yuma, Colo.	Spokane, Wash.	Eugene, Ore.
KFQU 1420 Holy City, Cal.	KGER 1360	I KICK 1420	KOY 1390 Phoenix, Arizona
KFOW 1420	Long Beach, Cal. 674 KGEW 170	Red Oak, Iowa KID 1320	KPCB 650
Seattle, Wash.	Ft.Morgan, Colu.	Idaho Fails, ^r da.	Seattle, Wash.
KFRC 610 1/2 1	KGEZ 1310	KIDO 1350 Reize Idaho	KPJM 1500
San F'ncisco, Cal. KFRU 630	Kalispell, Mont KGFF 1420	Boise, Idaho KIT 1310	Prescott, Ariz. KPO 680
Columbia, Mo.	Shawnee, Okla.	Yakima, Wash.	San F'ncisco, Cal.
KFSD 600 // //	KGFG 1370	KJBS 1070	IKPOF 880 レンク
San Diego, Cal.	Oklahoma City KGFI 1500	San F'ncisco, Cal. KJR 970	Denver, Colo. <u>3</u> KPPC 1210
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KFUO 550 St. Louis, Mo.	KGFK 1500 Moorhead, Minn.	KLO 1400 Ogden, Utah	Houston, Texas
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KFVD 1000 Culver City, Cal. 2.2.//	KGFW 1310	KLRA 1390 Little Rock Ark	KQW 1010
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KRGV 1260	KWEA 1210	WASH 1270 Gr. Rapids, Mich. 10 70	Rapid City, S. D.
Harlingen, Texas KRLD 1040 7 A	Shreveport, La. KWG 1200	Gr. Rapids, Mich. WAWZ 1350	WCAU 1170
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VQAC KOD	KWKH 850	I WRAP 800	WCBD 1080
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	KWLC 1270	WBAX 1210 Wilkes-Barre, Pa. /2 7/	WCBM 1370
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Salt Lake City KSMR 1200		WDDD 1000	WCFL 970 217
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Phoenix, Ariz. KTAT 1240	Gineago, Inc.	WBHS 1200	Joliet, Ill. WCMA 1400
Ft. Worth. Tex.	KZRC 937.5 Cebu, P. I.	Huntsville, Ala.	Culver, Ind.
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Col. Sp'gs, Colo.	WAIU 640 Columbus, Ohio	WCAM 1280 Camden, N. J.	Chattan'ga, Tenn
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WDZ 1070 Tuscola, Ill. 18 /k	WFOX 1400 Brooklyn, N. Y.		New York City		Jackson, Miss.
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New York City	Lancaster, Pa.	1	Des Moines, Ia.		Mooseheart, Ill. 10 12
WEAI 1270 Ithaca, N. Y. 1074	WGAR 1450	6=	WHOM 1450	614	WJKS 1360 8 2
Ithaca, N. Y. WEAN 780	Cleveland, Ohio WGBB 1210		Jersey City, N. J. WH1' 1430	7 31.7	WJMS 1420
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WEBR 1310 Buffalo, N. Y. 9/2	WGBS 1180 New York City	14	WIBM 1370 Jackson, Mich.		Mansfield, Ohio 12 FC
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Chicago, Ill.	Gulfport, Miss.		Chicago, Ill.	91/2	New York City 79
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Erie, Pa. WEEI 590	Newark, N. J. WGES 1360	111	WIBU 1210	13/1	WKAR 1040
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WEHS 1420	WGN 720	5170	WICC 600	1211	Joliet, Ill. WKBC 1310
Cicero, Ill.	Chicago, Ill.	21/-	Bridgeport, Conn WIL 1200	121	Birmingham, Ala. WKBF 1400
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Battle C'k, Mich.	Atlanta, Ga.		Urbana, Ill.	1	La Crosse, Wis.
WENK 870 27 1	WGY 790 Schenec'dy, N. Y.	1 1	WILM 1420 Wilmington, Del.		WKB1 1420 Cicero, Ill.
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WEVD 1300	WHAD 1120		WIP 610 Philadelphia, Pa.	75	WKBO 1450 Jersey City, N. J.
New York City WEW 760	Milwaukee, Wis. WHAM 1150	151/2	WIS 1010	-1 -7	WKBS 1310
St. Louis, Mo.	Rochester, N.Y.	12/2	Columbia, S. C.	16	Galesburg, Ill.
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Royal Oak, Mich. WFAA 800	New York City WHAS 820	20	Milwaukee, Wis. WJAC 1310		WKBW 1480
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So. Bend, Ind. WFAN 610	Philadelphia, Pa. WHAZ 1300	7.0	Norfolk, Nebr. WJAK 1310	1	Ludington, Mich WKJC 1200
Philadelphia Pa	Troy, N. Y	10	Elkhart, Ind.		Lancaster, Pa.
WFBC 1200 Knoxville, Tenn WFBE 1200	WHB 860		WJAR 890		WKRC 550 91
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		IBD 965 IBG 1070			

SOME STATION SLOGANS

KELW White Spot of the San Fernando Valley. KEX KFAB A Public Service Necessity. Home Sweet Home. KFBL Voice of Puget Sound KFEL The Argonaut Station. Kansas' Finest Hotel. National Institution. KFH KFI KFJB Marshalltown, the Heart of Iowa. Up at Lawrence on the Kaw. Known for Neighborly Folks. KFKU KFNF KFPL Baxter's Place. KFQW KFRU Gateway to Alaska and the Orient Where Friendliness Is Broadcast Daily. The Church of the Air. The City of Perpetual Sunshine. The Gospel Voice. KFSG KFUL KFUO KFXJ America's Scenic Center. KFXM Voice of the Orange Empire. KFYO Breckenbridge, the Dynamo of West Texas. KGAR Way Out on the Desert. KGB Music for the Sick. KGBZ The Swine and Poultry Station. The Voice of the West. KGCU The Beautiful Flathead Valley. KGEZ Voice of West Texas. In the Land of Sunshine. KGFI KGU KGW KGY KHJ Keep Growing Wiser. Where the Cedars Meet the Sea. Kindness, Happiness, Joy. KJBS Voice of the Storage Battery. KLS City of Golden Opportunity. KMA Keep Millions Advised. KMAC Radio Sam at San Antonio. KMED See Crater Lake. KMTR Your Friend in Hollywood KOAC Science for Service. KOIL The Hilltop Studio. The Smoky City Station. KQV KQW KRLD For God and Country. Down Where the Blue Bonnets Grow. KSEI Kummunity Southeast Idaho. KSL Voice of the Intermountain Empire. KSMR The Valley of Gardens. KSO Keep Serving Others KTAB Knowledge, Truth and Beauty. KTM The Station with a Smile. KVI Puget Sound Station. KWSC The Voice of the Cougars. NAA Where the Time Signals Originate. WAAM Sunshine Station. WABI The Pine Tree Wave. WADC Watch Akron Develop Commercially. WAIU Voice of American Insurance Union. WBAK Voice of Pennsylvania. WBAL The Station of Good Music. WBBL Richmond, the Gateway to North and South. WBBR Watch Tower. WBEN Buffalo Evening News Station WBRC Biggest Little Station in the World. WBRC Gueen City of the South. WCAE Where Prosperity Begins. WCAL College on the Hill. WCAO Gateway of the South. WCAU Where Cheer Awaits U WCHI Watch Tower Radio Word. WCMA Voice of Culver. WCSH Voice from Sunrise Land. WDAE Voice of Times at Tampa. WDAF Enemies of Sleep. WDAG Where Dollars Always Grow. WDEL WEAN First City of the First State. We Entertain a Nation. WEEI The Friendly Voice. WFBG Original Gateway to the West. When Feeling Blue, Listen. WFBL WFI WFLA Key City of Industry. WFLA Inviting the World to the Springtime City. WGBB Voice of the Sunrise Trail. WGES World's Greatest Entertainment Service. WGST Southern School with the National Reputation. WIBR Where Investments Bring Results.

WIBW Where Investments Bring Wealth WICC Industrial Capital of Connecticut. WIP-WFAN Watch its Progress, Philadelphia. WJAC Voice of the Friendly City. WJAC Home of the Printers' Devil. WJAX Wonderful Jacksonville. WJBU In the Heart of the Keystone State. WKBF We Keep Building Friendship.

Their Time on the Air THE following information regarding time on the air has been secured from the stations concerned, from newspaper clippings, and from our readers. The times shown can be quickly converted into your own time by use of the following table:

Your Zone		Vhere Time		as	PST
	Engl	CST	MS'		101
EST		Add 1 hr.	Add 2		d 3 hrs.
CST	Subt. 1 hr. Subt. 2 hrs.		. Add 1		12 hrs.
MST	Subt.2 hrs.	Subt.1 hr.		Ado	11 hr.
PST	Subt.3 hrs.	Subt.2 hrs	. Subt. 1	. h r.	<u></u> .
State	Ci	ty	Call	Kcys.	Watts
Arizona	Phoe	enix	KTAR	620	500
	, 7:00 a.m1	1:15 p.m.,			
California	ulvay, 8 a.msu	er City	KFVD	1000 .d DST	250
Mon	, Tucs., Thu	r Sat 6a	m -sunse	10., FOI. t·10 n.m.	-lam
Wed.	Fri., 6 a.m.	-sunset; 9:1	5 p.m1	a.m.	- I U. D
	Ingle	ewood	KMCS	1120	500
	ау, 12:30 р.г	n2 p.m.;	4:30-6-30	p.m.; 1	1 p.m
7 a	m., PST.	m			
Polot	lay, 9 a.m7 ice week, 9 a	a m. Tues. 7.20 r.		. 7	
Data		Angeles			40 0
Sund	ay, 7-12 a.m.				
	lay, 7-9 a.m.	., 2-0 p.m.,	0.00-11	p.m., 10	
Balar	ce week, 7-9	a.m.; 7:30	-11 p.m.		
	San , 7:30 a.m1	Diego	KFSD	600	500
Daily	, 7:30 a. m1	2 mid., PS	Τ.		
a 1		Francisco		610	1000
Sunda	ay, 8 a.m12	mia., PST			
Dany	, 7 a.m1 a.r Stoci		KGDM	1100	250
Daily	, 6 a.msuns		RGDM	1100	200
Colorado	Denv		KFXF	920	500
Sun	Mon., Wed.,	Sat 8.30			1000
12	mid., MST.	0.00	a.iu0 p	·	, b.m'-
Tues,	Thur., Fri.,	8:30 a.m6	p.m.; 7:3	0 p.m9	p.m.
	Denv	/er	KPOF	880	500
Sun,	Mon, Wed.,	7:30-9 a.n	n.; 2:30-4	:30 p.m.	; 7:30-
<u>9</u> p.m	., MST.				
Tues.	Thur., 7:30	-9 a.m.; 2:	30-4:30 p	.m.; 0-8	p.m.
F 11., 6	at 7:30-9 a t programs 2	.m.; 1-2:30	p.m.; 0-8 ~ Mer	p.m.	day in
	n, OctApril.		п. м. эт,	last Tues	suay m
			72374	000	
Iowa Sunda	у, 8-9:15 а.п	andoah 1 · 11 · 15 o •		930 m · 3 4·2	500
6-7	p.m.; 8:30-1	1 nm CS	п1.30 р. Т	ш., о-ж.о	ор.ш.;
Mond	av. 6-7:30 a	1.m.: 9:30	-11 a.m.	12.30-2	D. m. •
3:30)-5 p.m.; 6:3 Fri., 6-7:30	0-12 mid.	,		F
Tues.	Fri., 6-7:30	a.m.; 9:3	0-11 a.m.	; 12:30-2	p.m.;
3:30	J-5 p.m.: 6:3	60-8:30 p.m	۱.		
Wedn	esday, 9:30-1	11 a.m.; 1	2:30 a.m.	-2 p.m.;	3:30-5
p. m	.; 0:30-8:30	p.m.: 10-1	1:30 p.m.		
1 Jurs	day, 9:30-11	a.m.; 12:	50-2 p.m.	; 3:30-5	p.m.
Saturda	y, 6-7:30 a.	.m.; 9:30-1	11 a.m.;	12:30-2	p.m.;

Saturday, 6-7:30 a.m.; 9:30-11 a.m.; 12:30-2 p.m.; 3:30-5 p.m.

State	City	Call	Keys.	
Louisiana Sundar 50	New Orleans	WABZ	1200	100
Sunday, 5-9 Monday, 8 j	p.m., cor.			
Friday, 8 p.				
Balance wee	k, 8 p.m12 mi	d.		
	New Orleans	WWL	850	5000
Sunday, 10	.m7:45 p.m.,	CST.		
Daily, 8 a.m	8:30 p.m.			
Mississippi	Meridian	WCOC	880	500
Sunday, 5-1	1 p.m., CST.			
Daily, 7:30	a.m1:30 p.m.		<i>e</i> .	
-	t and early mor			
New York	New York	WPCH	570	500
	16:30 p.m ES			1000
North Dakota	Bismarck	KFYR.	550	1000
Doily 615	a.m10: 30 p.m. a.m12: 30 p.m.	. 0.51.	n m	
-				1000
Oregon	Portland	KGW	620	1000
Doily 6.20	.m12 mid., PS a.m12 mid.	1.		
Seturday 6	30 a.m1 a.m.			
oaturuay, o	Portland	KOIN	940	1000
Sunday, 8 a	.m11:30 p.m.,			
Daily, 6 a.m				
Pennsylvania	Pittsburgh	WWSW	1500	100
Sunday, 10	a.m10 p.m. E	ST.		
Daily, 9 a.m	111 p.m.			
Saturday, 9	a.m12 mid.			
	Scranton	WQAN	880	250
	, 9-9:30 a.m.;	12:30-1:30	p.m.; 4:	30-5:30
p.m., EST.	12:30-1:30 p.m	· 4·30-5·30	n m • J	Snm-
12 mid.	12.00-1.00 p.m	., 1.00-0.00	p.m., (, p.m.
Thur., Sat.,	12:30-1:30 p.m.	; 4:30-5:30	p.m.	
Texas	Beaumont	KFDM	560	500
Sunday, 8:3	0 a.m10:15 p.r	n., CST.		
Daily, 7 a.n	n2 p.m.; 4:30-1	0 p.m.		
Washington	Bellingham	KVOS	1200	100
Sunday, 9:4	5 a.m9 p.m., 1	PST.		
Daily, 6:45	a.m11 p.m.	77.10		F 0.00
Q.,	Seattle Tues., 8 a.ml	KJR 2 mid 1987	970	5000
Balance wor	k, 6 a.m 12 mi	ащи., гот А	•	
Dalance wet	Seattle,	KRSC	1120	50
	Daily 6 a.m			
CANADA				
Alberta	Calgary	CFAC	_ 690	500
Sunday, 11 a	.m12:30 p.m.;	2:45-5 p.m.	;7-9 p.m	. MST
Monday, 8-	9 a.m.; 11:30 a.	.m1:40 p.n	n.; 3:30-	o p.m.;
9-10:30 p.		·30 a m -1·	15 n.m. •	3.30-6
p.m.: 7-12	2 mid.			
Wednesday.	8-9 a.m.; 11:	30 a.m1:4	5 p.m.;	3:30-6
p.m.: 8:30)-11:30 p.m.			
Friday, 8-9	a.m.; 11:30 a.	m1:45 p.m	1.; 3:30-	6 p.m.;
10-12 mid.	0.0 m + 11-20 -	m 1.45	2.20	6
	-9 a.m.; 11:30 a	.ш1:4ә р.1	n.; s:30-	o p.m.;
7-8 p.m. British Columbia	hilliwack	CHWK	665	100

British Columbia Chilliwack CHWK 100 Daily (except Sunday), 12 noon-7 p.m., PST. Special DX each Friday, midnight-1 a.m. Sat. bec Quebec CHRC 645 100 Quebec Sunday, 12 noon-11 p.m., EST.

Daily, 8 a.m.-2 p.m.; 6 p.m.-12 mid. (Sat. off 11 p.m.)

STATEMENT OF THE OWNERSHIP, MANAGE-MENT, CIRCULATION, ETC., REQUIRED BY ACT OF CONGRESS OF AUGUST 24, 1912

Of Radio Index, published monthly except July and August, at Cleveland, Ohio, for October 1, 1931. State of Ohio

County of Cuyahoga } ss.

Before me, a notary public in and for the State and county aforesaid, personally appeared Fred C. Butler, who, having been duly sworn according to law, deposes and says that he is the Editor and Publisher of the Radio Index, and that the following is to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforcaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor

In that the names and addresses of the published, editor, managing editor, and business managers are: Publisher, Fred C. Butler, 5005 Euclid Ave., Cleveland, O. Managing Editor, Fred C. Butler, 5005 Euclid Ave., Cleveland. O

Business Manager, Fred C. Butler, 5005 Euclid Ave., Cleveland, O.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, com-pany, or other unincorporated concern, its name and address, as well as those of each individual member, must

be given.) Fred C. Butler, doing business as The Radex Press. 3. That the known bondholders, mortgagees and other security holders owning or holding I per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is. (This information is required from daily publications only.)

Fred C. Butler.

Sworn to and subscribed before me this 1st day of October. 1931.

[Seal] R. E. Schmiedel.

(My commission expires April 5, 1932.)

AMATEUR BROADCAST STATIONS IN CANADA

Call	Owner of Station	Location of Station	Kcys.	Meters	Watts
10 AK	Classic Radio Club	151 Ontario St., Stratford, Ont.	1200	250	10
10BU	Canora Radio Association	Railway Ave., East Canora, Saskatchewan	1200	250	15
10BP	Wingham Radio Club	Brunswick Hotel Bldg., Wingham, Ont.	1200	250	15
10BI	Prince Albert Radio Club	331 20th St. West, Prince Albert, Saskatchewan	1200	250	25
10AB	Moose Jaw Radio Association	338 Main St., North Moose Jaw, Saskatchewan	1200	250	25
10BQ	Telephone City Radio Asso.	12 Terrace Hill, Brantford, Ont.	1200	250	5

The World Stations by Frequencies appeared in the November issue. World Stations by Countries were published in October. Next month a list of the Short-Wave Broadcasters of North America.

Time Station	Dials Feature DAILY	Time Station Dials Feature WEDNESDAY
230 NDZ	18:2 Dicember 26	WEDNESDAT
3 WAAB	7.4 /1 /1	
4 WBSD	4.12	
3 KMKY	9 Sunday	
2 WPZ	182 Dumber 20	
2.3010 BP	132 11 25	
5 IKPON	SUNDAY	THURSDAY
- Alk	64 Juticidia	
CHANK	6 Anno 10	
	MONDAY	FRIDAY
	TUESDAY	SATURDAY

HOW TO TUNE A SET CORRECTLY **Read This Page Carefully and You Can Set Your Dials Accurately for Any Station in America**

INDEX BY FREQUENCIES

1000 Spokane, Wash, 500 Lincoln, Nebr. 500 Botton, Maxe. 1000 Omaha, Nebr. 1008 Berrien Springs, Mich.

354 Troquola Falla, Oat. 566 Laramir, Wyo. 506 San Dirgo, Calif. 135 Ballimore, Md. 236 Hei-it, Wis. 500 Lawrenceburg, Tenn. 500 Menupika, Tenn.

590 kilocycles 508.2 meters

600 kilocycles 499.7 meters

610 kilocycles 491.5 meters

620 kilocycles 483.6 meters

630 kilocycles 475.9 meters

640 kilocycles 468.5 meters

650 kilocycles 461.3 meters

660 kilocycles 454.3 meter

670 kilocycles 447.5 meters WMAQ 5000 Chicsgo, Ill

680 kilocycles 4.10.9 meters

RPO 5000 San Francisco, Osf

WAAW 100 Omeha, Nebr.

5004 Los Angeles, Calif.

. Nashville, Tran

See Vieroria, B. C.
 See Verking, Sask.
 Nazarlan, Met.
 See Columbia, Mn. Met.
 Columbia, Mn. J.
 Werhington, D. C.
 Werhington, D. G.
 Werhington, D. G.

1000 San Prancisco Calif 1000 Kansar City, Mo. 300 Philadelphia, Pa. 500 Philadelphia, Pa. 1000 Kansa City, Mo.

A Aife

 \mathbf{A} LL 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

CFCH KFBU

WEBW WOAN WREC

EFRC WDAF WFAN WIP WOQ

R PAD

CYR CFRU WGBF WMAL

WALU

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.

Let us assume that the 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 repeat the same procedure in tuning and find that we are bearing, let us say, WOS at Jefferson City. Pro-ceed 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

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.

AND DIAL NUMBERS
T76 174
Louis Warmer, Inc. Nebraska Wieleyan Unfeerstry Billion bler, Illiumination Co.
Woodmen of the World
Emmanuel Missionary College
Ablithi Power & Paper Co. Bishop N. S. Thomas Airfan Radio Corp. Manumentai Radio Co., Ioc.
Sciol: College Yesshan School of Music
WREC, Inc. Travalare Insurance Co.
74 72
Don Lee, Inc. Expanse City Star Co. Repsione Broadcaseing Co., Inc. Climbel Strue Inc.
Clobel from, Inc. Unity School of Christiantry
73 7/
Electrical Equipment Co. Oregonian Publishing Co.
Tampa Publishing Co. Rollins Cellege, Inc. Thompson L. Guernag
Vieroria Brnadcasting Ass'o
Winniper Grain Electronge Canadian Nacional Railwaye Cantolian Nacional Railwaye Cattolio Llamas Stephens College
Stephens College Branwille on the Afr. Inc. M. A. Leese Co. State Marketing Bureau
Brate, Markering Bureau
Tarle C. Anthony, ine.
American Insurance Union
Mattonal Life & Accident Ins. Co.
69 67
Omeha Grain Fichange National Broadcasting Co., Inc.
681661
Chicago Delly Neva, Inc.
67 65
Male Bros & The Chronicle Surben Life Insurance Co.

Now we tune in some other station, proceeding as before until after an evening or two, we have blanks filled on every page. We are now able to set our dials for any frequency we desire and consequently any station we may want whether we have ever received it before or not.

Our index now becomes of great value to us in identifying programs. Let us say that we hear music at 67-65 on our dials. We refer to our Index by Frequencies and Dial Numbers and we find that we are in tune to 680 that we are in tune to 680 kilocycles. On this wave there are two stations: KPO at San Francisco and WPTF at Raleigh, N. C. Both of these stations have 5000 watts in power. But knowing which is the closer to our set, we can tell almost invariably which station we are hearing. The we are hearing. The Radio Commission has had to give the same frequency in most cases to several stations but they have distributed them geographically so they should not interfere. When two stations in the when two stations in the same locality have the same frequency, they are required to divide the time. In this case, of course, it is not possible to tell which one of the two stations is hered.

tell which one of the two stations is broadcasting at the particular moment we hear it, but we do know it is one or the other of them.

The second column in the Index by Frequencies, as we have seen, gives the power of the station as measured 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 Cail 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 instantiy 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. your reading for this particular frequency. you can then turn instantly to any frequency de-sired. Take a pair of shears and cut along the dotted line, as shown.



Sometimes I think there ought to be a law to make everyone do a little studying every week. I didn't think that a year ago because it looked like all the cards were stucked against me. But I am certainly rolling in the money now. Maybe my story will show you the way to larger earnings also

I Thought Radio Was a Plaything

But Now My Eves Are Opened, and I'm Making Over \$100 a Week!

\$50 a week! Man alive, a year ago I thought anyone making that much was just plain lucky.

Twelve months ago [was just barely getting by. It was the same old story—a little job; a salary as small as the job.

If you had told me that twelve months later I would be making \$100 a week in my own Radio husiness—I'd thought you were crazy.

But I am getting ahead of my story—let me tell you how it all started. I was hard up a year ago because I had been kidding myself—that's all—not because I had to be. I thought a fellow either had to be lucky or have a string of collese degrees a half a mile long to make good money.

One day 1 picked up a magazine and the headline of an ad attracted me because it seemed to fit my case. It said, "I will show you how to start a spare time or full time Radio business of your own WITHOUT CAPITAL."

"They're trying to kid somebody," I thought, "but I'll find out what it is all about anyway."

I wrote in and within a few days received a 64-page book telling about the opportunities in Radio, how I could prepare right at home in my spare time, and how they would show me how to start making money in my neighborhood selling and repairing Radio sets and doing other jobs. It would probably have sounded too good to be true if the promises had not been backed up by 100 letters' from fellows who had taken their course and were very enthusiastic about it.

What has happened since seems almost like a dream to me now. I took their course and in about a month I was ready to start making money in my neighborhood—as much as \$20 and \$30 a week. It wasn't long until I had saved enough money to start a little business of my own.

That business has since grown to the point where I am clearing an average of \$100 a week. All this took place under the watchful guidance of my friends at the National Radio Institute. They also offered to train me for other lines---in case I wasn't interested in having my own business. Broadcasting stations, Radio Manufacturers, Operating on Board Ship Servicing sets, Aircraft Radio, Television and Talking Movies are other fields their training covers. And to think, until the day I wrote for that book, I'd been wailing, "I have never had a chance—will never have one because I have no pull and have never had the advantage of a good education!"

Friend—you may not be as bad off as I was—but think it over—are you satisfied? Are you making as much money as you need? Would you sign a contract to stay where you are for the next ten years, at the same salar? Those are the things you have to think about—because no one is going to make it his business to push you ahead—you must make it your own business.

Take my tip—write for their book. It won't cost you anything—only a two-cent stamp. It shows you a lot of things which I don't believe you know now—a lot of facts and figures on the opportunities in this new fast-growing field. Where the jobs are, what they pay, how to get ready for one. Beginners as well as experienced men are making as much as \$1,000 to \$2,000 a year more as a result of N.R. I, training. You place yourself under no obligation because the book is free and is gladly sent to anyone who is ambitious and wants to get ahead. Just address J. E. Smith, President National Radio Institute, Dept. 1NO, Washington, D. C.

	J. E. SMITH, President, National Radio Institute, Dept. 1NO, Washington, D. C.
	Dear Mr. Smith: Send me your 64-page free book, which gives infor- mation on the opportunities in Radio—Operating on Poard Ship, in Broadcasting Stations, Commercial
	Land Stations, Set Servicing, Radio Manufacturing, Aircraft Radio, Television and Talking Movies. I under- stand this request places me under no obligation and no salesman will call on me.
Ì	Name
	Address.
	CityState

Please mention RADEX