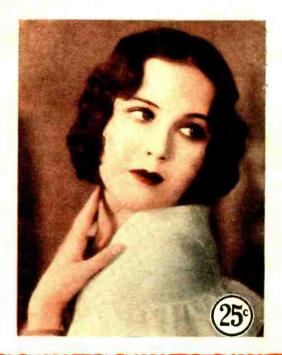
THE APRIL 1930

RADEX

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IN
THIS
ISSUE:

Can You Use Screen Grid Tubes?
A Radio Vision Set for the Home
The Radio DX League of the World
Attaching Head Phones to Modern Sets
Crystal Set Brings in Ninety Stations

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is ready for you &

You will find a true picture of Radio's many opportunities for a good job in this book. Send for a copy. Simply clip and mail the coupon below. There is no obligation. After you have read it you can decide one way or another. I am showing hundreds every year how to make more money in Radio than they were making in other fields. If you are making less than \$50 a week this book will probably show you how you can increase your salary \$1,000 or more in due time also.

Radio's growth is opening many \$50, \$60, \$75 a week jobs every year

Broadcasting stations use engineers, operators, station managers, and pay \$1,800 to \$5,000 a year. Radio manufacturers employ testers, inspectors, foremen, engineers, service men, buyers and managers for jobs paying up to \$15,000 a year. Shipping companies use hundreds of operators, give them world-wide travel and \$85 to \$200 a month besides. Radio dealers and jobbers (there are over 35,000) are continually on the lookout for good service men, salesmen, buyers, managers, and pay \$30 to \$100 a week for good men. Commercial land stations now being built will probably need 1000 trained men in the next two years. Talking movies pay as much as \$75 to \$200 a week to men with radio training. Besides there are opportunities almost everywhere for you to have a spare time or full time radio business of your own-to be your own boss.

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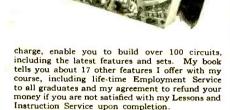
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Dept. OD52
Washington, D. C.

THE APRIL 1930



RADIO EX



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FRED CLAYTON BUTLER

Editor and Publisher

SIXTH YEAR	Contents	NUMBER 38
	ary Brian—Popular Screen Star Recent Paramount-Publix Hour.	
	nes on Modern Receivers, by J. B. Sr here to Attach Them.	nith2
	e of the World steners-in Organize?	3
Radio Sets For the Using the Fa	he Farmarm-Lighting Plants.	4
	ill, Conducted by J. B. Smith nd Your Trouble Here.	6
"Dear Mr. Edito What Our R	eaders Are Thinking About.	
Can I Use Screen	Grid Tubes?	12
	On a Crystal Set, by J. E. Smitheld for Further Experiment.	15
And Now the Rac Out of the L	dio Talkiesaboratory and Into the Home.	17
What's On the A Hour-by-Hor	ir Tonight? ur Index to Chain Programs.	24
Table of Air-Line	Distances	32
Broadcasting Ma	p of U.S. A.	34
	x by Frequenciesed by Dial Numbers and Wave Lengtl	hs. 36
A Complete Inde With Key to L	x by States and Citiesocation of Station on Broadcasting M	50 ap.
A Complete Inde A Log for 75	x by Call Letters0 Stations.	56

Published Monthly Excepting July and August See Subscription Blank on page 34

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Using Headphones on Modern Receivers

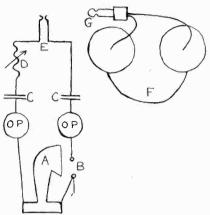
By J. B. SMITH

N most modern receivers no provision is made for connecting a headset and it cannot very well be connected to the regular loudspeaker terminals as the phones would soon be ruined by this practice. However. DX fans, who usually are busy fishing for far off stations late at night, prefer the use of headphones as the signals are more readily detected than with a loudspeaker. The use of phones is also preferable at night as the raucous voice of a speaker is highly objectionable to members of the family who have already The absence therefore, of a headset connection, such as a jack on the panel, has given rise to a problem which many of our readers have presented to us for a solution.

Well, the solution is comparatively simple, and there are two methods that can be followed by any radio fan. Get a 500,000-ohm variable resistor, two .005mfd, fixed condeners and a singlecircuit switch of any type. One terminal of one condenser is connected to one output terminal of the set and the other condenser is similarly connected to the second output terminal. One terminal of the variable resistor is run to the unconnected side of the first condenser. The headphone cord is run to the unconnected side of the second condenser and to the unconnected side of the resistor. The switch is cut in one of the lines supplying the speaker, enabling the user to cut it out.

Instead of connecting the headset cord directly to the condenser and resistor, some fans may desire to install a jack on the panel, from which these connections are made, a plug on the cord making contact with the jack (See Figure A). Similarly, the resistor can be mounted on the panel. The jack and resistor must be well insulated from the panel if the latter is metal, which is the case in most modern receivers. Special fiber bushings and washers are obtainable for the purpose. Unless carefully insulated in this way, serious trouble will result, owing to a feedback from the power

stage, and a direct short-circuit between the B-negative and B-positive.



A loud speaker; B switch; CC .005 fixed condensers; D 500,000-ohm variable resistor; E Jack; F phones; G plug; OP output binding posts. Phones may be attached at E without jack or plug.

Another method of connecting the headphones is to cut them into the circuit directly after the detector tube, or, if desired, after the first audio stage, the advantage of the latter hookup being greater amplification of the signal. Get a three-contact jack of the type that breaks a circuit between two terminals when a plug is inserted. A Carter No. 102A jack is of this type. Connect the lowest lug of the jack to the B-positive terminal of the audio transformer or resistor unit following either the detector or the first audio stage, depending on where it is desired to make the connection. The other lead to this terminal of the transformer supplying the Bpositive, should be left in place.

Remove the lead running from the P-terminal of the transformer or resistor to the P-terminal on the tube socket. Run a lead from the P-terminal on the socket to the top lug of the jack, and another lead from the P-terminal of the transformer to the middle lug of the jack. The wiring is then complete.

(Continued on page 23)

Radio DX League of the World

RGANIZATION is the order of the day. In Radio the manufacturers have their associations, the broadcasters are organized, and the amateurs have their American Radio Relay League. Only the radio users, the listeners-in, the DXers are unorganized. We have received many letters from readers suggesting the formation of a DX Club and we have given the suggestion a great deal of thought. In these letters the writers have given suggestions

Perhaps verifications could all be cleared through the Secretary instead of each member having to write all the different stations.

Bulletin the time on the air of the principal foreign stations.

Work out with the Broadcasters Association harmonious relations relative to verification of reception.

Cooperate with local clubs which have already been established in many cities.



"Well, boys, she was a pretty staunch craft and—" Down in the mess room of the "Spray," Captain Haft popularly called "Old Forty Fathoms," gathers the members of his crew together and spins his yarns of the sea. Every Wednesday at 8:30 p.m., E.S.T., over the CBS.

regarding activities for such an organization which they think would be of great interest and help to DX fans.

Among the suggestions received are the following:

Issue a weekly bulletin of new stations and changes in old ones throughout the world.

Issue a complete corrected list of stations monthly.

Issue a list of world stations quarterly. Provide uniform verification cards for use of members.

Provide club stationery for members' use. Instead of DXers corresponding with each other, letters to be sent to Club Secretary who will compile them and send a multigraphed copy to each member.

Work out plans for reducing interference and man-made static through cooperation of public utility companies.

Create a Club department in RADEX for notes regarding the activities of the members.

Secure the friendly sympathy and cooperation of those broadcasting stations which now fail or delay responding to requests for verification.

Establish contests in reception under official rules similar to those established in their fields by the automobile, aeronautic and sports associations.

Many other activities will suggest themselves to others or will appear as the Club goes on. Now the question is, do the DXers want such a League — a Radio League of the World with members in every land under the sun, united in the great field of international converse? To carry out any such program as that which has been outlined by our correspondents, would require an organization equal in scope to that of the American Radio Relay League for in-This would mean the loyal support of the members and provision of finances necessary to carry on the work in a way its importance justifies. Let us hear from you, DXers of North America. What do you think of the suggestion? What other activities can you see that would be helpful? What would you be willing to pay as dues? Write us promptly in order that the organization plans may go forward during the summer and the League be ready to function at the beginning of the next radio season.

The following quotation from a letter written by Ray E. Everly, Ph.G., Newton, Ills., indicates what DXers are up against in the one matter of securing verifications, "I have followed DXing for over a year now and have a total of 267 stations verified in my RADEX and while that isn't nearly as many as some of the fans have, nevertheless I know what the real DXer wishes he could get.

"What we would like to see is a station check up a verification that is sent to them and to send an Ekko stamp if the necessary dime is enclosed. I have sent as many as three dimes for an Ekko stamp and then did not get it. Even if a person does not send for a stamp he would appreciate a card verifying his reception. I know a station's mail is enormous but all of them like to have people listen to them and it would take but a minute to return a card as KJR. KVI and KDYL do and that surely would be appreciated by the radio fan. Some stations are fine to deal with and send a nice card of thanks for your letter and some never answer you.

"Let RADEX spread the word to all broadcasting stations asking them just to drop a card to an anxious DX fan who has heard them. If a dime is enclosed send us a stamp but anyway send us a printed card with the station's letters."

Radio Sets for Farm Lighting Plants

R 30M a reader in the North-West comes the following inquiry: "We have a 32-volt d.c. farm-lighting plant and would like to get an all-electric receiver and a B-Eliminator that will operate on the current supplied by this plant. Are any such manufactured?"

We suppose there are easily a million farm-lighting plants in operation in this country and Canada, perhaps more. RADEX has a great many readers who live on the farms and we feel we will be serving them by answering this correspondent through our columns.

This reader faces a special problem for he has a d.c. supply where most electric receivers are a.c. Then he has a 32-volt supply where a.c. is usually 110-volt and battery sets are but sixvolt. Upon investigation, however, we find that at least one firm has prepared to meet this situation. We have not tested his product and can only pass on his claims to our readers for their consideration.

This manufacturer is the Kato Engineering Co. of Mankato, Minn. We quote from his statement:

"The Kato Konverter has been perfected to operate an all-electric radio from a 32-volt farm lighting plant. The Kato Konverter is just what the name implies. It 'converts' or changes the electricity from 32-volt at the lighting plant to 110-volt for the radio. That means that you can use the same a.c. radio that is used in city homes.

"Kato Konverters use little current. They have no transformers, taking the current direct from the armature. The filter system is simple and positive, allowing smooth a.c. flow to the set at all times. These Konverters are similar in appearance to one-quarter h.p. motors."

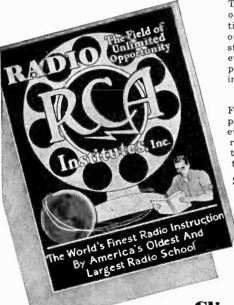
The same company also manufactures both A and B battery 32-volt eliminators, replacing batteries in non-electric sets.

As a rule RADEX does not care to mention products of a particular manufacture as we cannot even tacitly seem to recommend them without the opportunity of a test but in this case we find a single product that seems to fill a very general need.

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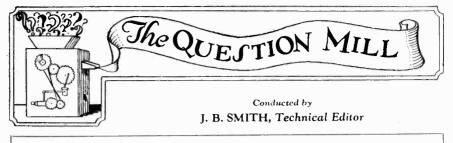
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We are glad to publish replies in this column to questions asked by any reader. We cannot promise, however, to reply by mail to other than yearly subscribers. If you are not a subscriber and desire personal reply, please send your subscription with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

I have a Radiola No. 28 all-electric superheterodyne receiver and have trouble with the stations coming in too broad on the lower end of the dial, which the second harmonic complicates still more. Can I substitute another tuning coil? The loop is a bank-wound affair. Will a S.L.W. condenser help?

Across terminals 6 and 8 you will find a compensating condenser, which is adjustable. While the set is in operation, carefully adjust this condenser until the stations come in more sharply. Do not substitute another oscillator coil as the set is designed to operate on the one already installed. Mechanical difficulties would be encountered if you attempted changing the oscillator condenser to one of the straight-line-wavelength type, as it would be hard to get one of suitable size and shape to fit in your set. It will help to some extent to use a pancake style of loop instead of the bank-wound type.

I have a Radiola No. 64, which I believe to be one of the best sets made, but it does not seem to be entirely perfect. When tuning in certain stations, I often get a little whistle or squeal just before and after the point of tuning the signal in perfectly, and sometimes even at that point, which, of course, slightly interferes with The noise is not a heterodyne reception. whistle caused by other stations, but resembles the whistle caused by a regenerative set. Can I balance the condensers for perfect resonance and what instrument must be used for this purpose? Kindly advise me what to do.

An all-electric superheterodyne receiver such as the Radiola 64 is really too complicated an instrument for a radio layman to adjust, and if he does so he has no claim to the service guarantee which usually accompanies the better grade of receivers. The slight whistle evidenced in tuning, is not entirely a fault but is characteristic of most superheterodyne receivers. However, it may be minimized by careful adjustment of the compensating condenser in the oscillator stage. If the vairable condensers are not properly aligned and balanced such trouble may also occur. In any case, however, it is best to call in the service department of the local concern that handles this make of receiver. as authorized dealers have qualified men especially trained to make such minor adjustments without any guesswork.

I have a seven-tube Fada receiver with an enclosed loop. Station WSPD, Toledo, Ohio, at 1340 kilocycles or 223.7 meters is the lowest station I can get, the dial reading then being zero. On the other hand, station KSD St. Louis, Mo., at 550 kilocycles or 545.1 meters, comes in at 87 on the dial, and the space above this seems entirely wasted. I would like to tune in stations lower than 223.7 meters and would like to know what changes are necessary to be able to do this?

First of all examine the dials and condenser on your set as it is possible that the dials have slipped and are now out of step with the condensers, which would account for your trouble. When the condensers are in mesh, that is, when the whole surface of the rotor plates is fully between the stator plates, the set should tune to approximately 600 meters, and the dial reading should be at its highest point. When the rotor and stator plates of the condensers are entirely separated, the dial reading should be at zero. If you find that the dial reads 87 when the condeners are nearly in mesh which

lower wave lengths than 223.7 meters, by taking a few turns of wire off the loop, one at a time, noting the result after each turn has been removed. If this does not bring entirely satisfactory results, remove the same number of turns from the secondary winding of the tuning coils. However, for that I suggest that you call in the help of a



Here is a scene from "Arabesque," a regular feature of the CBS, which celebrated its first year on the air last month. Written and directed by Yolande Langworthy, this modern "1001 Nights" is considered one of the most popular programs that radio brings. Sunday evenings at 10.30 E.S.T.

would be the case when tuning in station KSD at 545.1 meters, loosen the set-screw that holds the dial in place on the condenser shaft and then change the dial to read 100 when the condensers are fully in mesh. Of course, this procedure will change the logging of your set, and the stations will come in at higher points than before the change was made. If the fault does not lie in the alignment of the dials and condensers, you can shift the stations up a few points on the dials and thus make it possible to get those of

reputable radio service man, acquainted with Fada receivers.

On our Philco all-electric receiver which is a 1929 model equipped with CX\$26 tubes in the r.f. stages, I would like to install screen-grid tubes, as I have heard that better results can be obtained from them. Kindly advise what connections to make.

It is not advisable for the layman to install screen-grid tubes in receivers not especially designed for their use. The advantages of screen-grid tubes are usually exaggerated and the improvement possible by using them would not justify the expense and trouble you would encounter in making the change and the resulting difficulty in balancing the receiver after the change was made.

We are organizing a radio club to promote better radio reception, and we entend to trace and remedy all kinds of interference. Can you suggest a test set for locating interference? Kindly suggest anything that you think will be helpful to us for the purpose.

In the January issue of RADEX, on page 12, you will find a question similar to yours on locating interference, and the answer tells how to use a loop receiver for the purpose. As a help for your club in determining how to prevent and how to eliminate all kinds of interference I suggest that you obtain a copy of "Radio Noises and Their Cure," a booklet that can be obtained for 25 cents from Tobe Deutschmann Corp., Filterette Division. Canton, Another booklet entitled "Better Radio Reception Manual," dealing with interference and its remedy, can be purchased for the same price from the Radio Manufacturers' Association, Inc., 32 West Randolph St., Chicago, Ill. Another book, which goes into considerable detail, is a 350-page volume, entitled "Radio Trouble Shooting," which sells for \$3.00, and can be obtained through RADEX.

I have a model 35 Atwater Kent radio receiver using 135 volts of B-potential and a 9½-volt C battery on the last audio stage in which a UX112 tube is used. The first tube that we used for this stage is not as efficient as it should be but seems to be the only tube we can use without burning out in a comparatively short time. We have tried two or three others of the same type but they have all burned out. What is the trouble?

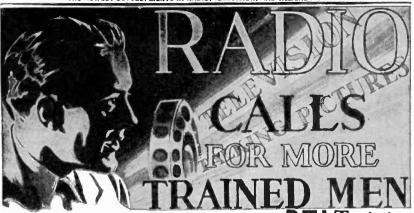
There is no reason why a perfectly good tube of exactly the same type as the old one will not work satisfactorily in your set without burning out so soon. However, the fault may be in the tube socket, owing to a loose prong, which may occasionally shift against another, allowing plate voltage to enter the filament line of the tube, causing it to burn out.

I have a Spartan Equasonne No. 930 receiver and it is impossible to get any distance with it. Besides, it tunes very broad and local stations overlap each other on the dial so that I cannot get between them in order to obtain distant stations. Will you tell me where the trouble lies?

The band-pass filter of your Sparton Equasonne receiver is out of balance. which accounts for the broadness with which you are receiving signals. dinarily, careful adjustment of the trimmer condesers in this section of the receiver will give you the necessary selectivity. However, if such adjustment does not take care of the trouble. the band-pass filter section may be defective and should be tested. This can be done by removing the antenna lead from its usual location and connecting it to the connection between the selector and the amplifier units. With the antenna in this position, signals from the local broadcasting stations should be heard in a jumble provided the amplifier and power convertor are in good condition. If you find the band-pass filter section defective, call in the Sparton dealer and have it replaced or repaired. Increasing the selectivity of the set should enable you to tune between local stations in order to get the distant ones.

Recently I purchased a Brunswick A.C. model 14 receiver equipped with a dunamic speaker. It functions perfectly but there is a hum in the loudspeaker. We have tried some of the remedies given in your recent article entitled "Curing Noises in Radio Receivers" but have thus far not succeeded in eliminating the trouble. My set has two potentiometers or hum balancers and we have adjusted them to the very peak of efficiency. My loudspeaker has 45 volts across the field, and we have tried the method of connecting two condensers in series, across the rectifier output, but have not grounded the frame, as men-The condensers tioned in the article. used were of 600 volts breakdown test, but as the rectifier delivers only 45 volts for the field of the speaker winding, we thought that the condensers were too large for the purpose, and cannot get 50-volt condensers. The voltage supplied to our

(Continued on page 21)



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commented

a month or two ago that "What's on the Air Tonight?" might be omitted in view of the fact that it was subject to frequent change and the daily newspapers carried this material anyway. This letter has stirred up a lot of protests. From Jas. J. Richter, Reading, Pa., comes the following: "It does occupy one-eighth of your standard 64 pages. But how many papers give an accurate, complete program listing all stations? The Graphic, of New York City, doesn't. The Daily News, of Philadelphia, doesn't. And our two local papers, though showing hourby-hour daily programs, give only a few stations."

And N. G. McCreden, of Albuquerque, N. Mex., says: "Please do not discontinue this feature. This is fine for us in towns where the newspapers do not give reliable lists and must be much more appreciated by your many country subscribers who do not get the dailies."

We are convinced that the very large majority of our readers would seriously miss this program feature and it will therefore be continued.

That New Arrangement

But what a hornet's nest we stirred up when we gave the channels in March instead of the call letters. One good friend, Adrian R. Wilson, of Racine, Wis., hails the change thusly: "Say, you may think you are improving your RADEX but I and plenty of others think not. Of course we all make mistakes and I hope you will admit you are not immune. Well, what is the idea of changing the way of listing 'What's on the Air Tonight?' Everybody has become accustomed to using call letters to find what stations they want to tune in so why substitute kilocycles for call letters?

"I am sure this is an experiment on your part and I'm also sure it is not welcomed by your subscribers. In all other respects RADEX has them all beat, so please keep it up to the old standard."

And to add to our cup of sorrow, Joe Onicek, of our own fair city, does this: "The new arrangement is rotten. There is more than one chain station on some channels; how are we going to know which one is carrying the program?"

From Tulsa, Okla., a reader brings up our own previous position: "You have protested against manufacturers marking their dials in kilocycles and I agree with you that this should not be done as very few, if any, radios will tune in correctly using the kilocycle method. Then why list the stations only by kilocycles? I believe you will find that very few radio fans can tell you off hand just what frequency any station has. I know I cannot tell more than six or eight. By listing stations by call letters, one can see at a glance the stations giving a program and can set the dial instantly."

And A. A. Nelson, Laconia, N. H., points out: "With the new plan you never know whether it is a station you can get or not and you tune in a frequency only to find it is some station away off." From Janet E. Cole, Oshkosh, Wis., "I have always liked any changes that you have made in this magazine before, but I do not like this at all."

What To Do

On the above evidence a judge would probably issue an injunction against us immediately, but wait! Here's the other side: "When I first purchased a RADEX in 1928, it was admitted then by all to be the best published, but there has been a 100 per cent improvement since then and the latest, programs in kilocycles, is the peak." So writes an old friend, W. M. Johnson, of Grayville, Ill.

From Battle Creek, Mich., Ray Simmons comments: "I especially desire to congratulate you on the new system of

giving radio programs by kilocycles. I think them very helpful and convenient. Please do not discontinue this wonderful system as it saves a lot of time looking up a station frequency."

So what is a poor editor to do whose principal purpose in life is trying to please his readers? We ask you. It was an experiment, we admit. We do feel that this program feature ought to be arranged in a more convenient manner but it is a very difficult thing to do particularly in view of the fact that we hold the presses each month till the very last minute for this program information and we must then get it in type quickly.

daily in its efforts to improve radio reception and to eliminate interference, it is impossible to issue a call book free from errors. That fact that so few appear in RADEX is a great compliment to your intelligence and industry."

As we mentioned in the March issue, many readers called our attention to the fact that we had moved stations KOMO, KJR and KVI and that these stations denied having moved. The commission adivses us that after they had changed the frequencies of these stations, KJR appealed to the courts and obtained a stay order restraining the Commission from putting the changes

These instrumentalits and vocalists, all descendants of the original race of Aztecs, have established themselves as favorites of the CBS audience.

Kneeling in the center is Luis Samuido, the director of the group, who has forsaken the revolutionary business in Mexico for the healthier and more remunerative work in radio. The two standing are Rafael Almaure and Gilberto De Jesus, while Carlos Carrillo and Juarez H. Garua are shown seated.



Well, we will experiment a little further and see how the arrangement in this number will please our readers.

99.58 Per Cent Perfect

A revised list of stations just issued by the Radio Commission was carefully checked with the March edition. We found a difference in only three stations — WGHP Detroit, WSPD Toledo and KGCU Mandan, N. D. An official of the Commission wrote us that these three stations had been shifted in accordance with their listing in RADEX but after a tryout had been replaced on their former channels and no notice had been sent out. This official added: "Since the Commission is shifting stations almost

into effect. That order is still pending. This explains the discrepancies.

WCHI Unmasked

"In regard to the station that announces itself as WCHI Chicago, I have logged it several times in the last two weeks. Last evening I heard WORD announce. At nine o'clock they signed off; about twenty minutes later I picked up WCHI a few points higher on the dial. This seems to indicate that the latter is not taking the place of WORD." Thus writes Byron Donel, Washington, Pa. Several other correspondents verify this and we have at last discovered that

(Continued on page 13)

Can I Use Screen Grid Tubes? By J. B. SMITH

N circuits especially designed for its use, the screen-grid tube has been found highly successful as its amplification factor is many times greater than the amplification factor of other tubes used for radio-frequency amplifiers. The A.C. screen-grid tube has a standard base with five tips and a fifth connection is provided at the top through a metal cap. Its feature is an extra grid which shields the plate. The usual grid lead is connected to the additional cap on the tube and the screengrid connection is made to the G-terminal on the tube socket. The use of this tube eliminates howling caused by uncontrollable oscillation of the r.f. stages, and it effectively blocks a feedback of the signal, which causes reradiation common to the regenerative type of receivers.

It has been found absolutely necessary to shield this tube effectively and also advisable to shield the grid leads connected to it in order to obtain the desired efficiency. However, screen-grid tubes have an inherent tendency to broaden the tuning of a receiver and special precautions are taken to offset this effect in successful manufacturered sets. It is a matter of considerable dispute whether or not the average radio fan, whose receiver is not equipped with screen-grid tubes, should install them.

From a number of observations, I should emphatically discourage the idea. because of the difficulties involved in making the circuit changes necessary, especially in the case of manufactured receivers, and the consequent trouble encountered in balancing the set after the change has been made. To merely insert the tubes in the present sockets and only make an additional connection, is entirely out of the question; the whole radio-frequency section of the receiver must be rewired, following a special circuit design for use with this type of tube. The r.f. coils must be tapped and blocking condensers must be used. The work of making such changes is all right for the chronic experimenter, who enjoys it, but not for the average radio fan, who desires satisfactory results immediately after making the change. Besides, screen-grip tubes have been hailed to perform miracles which is a highly disappointing illusion, as proved by the fact that there are many receivers not equipped with these tubes which produce better tone quality, are just as selective and have a greater distance range than many of the newer models using screen-grid tubes. This is, of course, not detracting in any way from the value of these tubes, but only goes to show that they will not produce superior results in every circuit.

March Changes

A LARGE number of station changes again this month is evidence that the Radio Commission is still seeking to eliminate interference and better radio conditions. Among the important corrections in RADEX will be found the following:

CJBC Toronto, Ontario, with its four listings is being deleted.

New stations or new call letters include the following: WRDA Buffalo, N. Y.; KGMP Elk City, Okla.; WCSC Charleston, S. C.; WSPA Spartanburg, S. C.; and three as yet unnamed stations in Grant City, Mo., Dodge City, Kansas, and North Platte, Neb.

Changes and corrections in frequencies are CFRC Kingston, Ont., from 1120 to 930; CKPR Midland, Ont., 1120 to 930; KGCU Mandan, N. D., from 1210 to 1200; KFIO Spokane, Wash., from 1230 to 1120; WSPD Toledo, Ohio, from 1240 to 1340; WGHP Detroit, Mich., from 1340 to 1240.

Changes in call letters: WSOA Chicago, to WCHI; KOQ Phoenix, Arix., to KOY; KGRC San Antonio, Tex., to KONO; KFUI Juneau, Alaska, to KFIU; WGTB Columbia, S. C., to WIS; WHDH Gloucester, Mass., to WEPS.

Increases in power are granted to WGBS New York City; WCAE Pittsburgh, KGFW Ravenna, Neb., WGHP Detroit, and KIT Yakima, Wash.

Reductions in power affect WBAP Fort Worth, Tex., KOMO Seattle, Wash., WCSH Portland, Me.

"Dear Mr. Editor"

(Continued from page 11)

WCHI replaces WSOA and not WORD. The change appears in this issue.

"Have also logged a station on 840 keys., WGM, Adamsburg, Pa., which is not listed," adds Mr. Donel. His inquiry and others are answered by Lawrence R. Pavlick, Swissvale, Pa. "Yes. there is a station WGM at Adamsburg. Pa., and they operate on the same channel as WOOP, Jeanette, Pa. have tuned both of these stations on 840, 850 and 870 keys. They both must have some antique transmitting apparatus to vary that much on their frequency, don't you think? The station WGM was on the air in 1924, 1925 and 1926 and then for some reason discontinued broadcasting. I remember, when I first heard them, the announcer would say 'This is station WGM, The World's Greatest Mistake' and I am inclined to think he was right! This station now has a studio in Jeanette also." Neither WGM nor WOOP appear in the records of the Radio Commission. How come?

Other Station Queries

"We are anxious to know the identity of station WCK coming in around 700 meters. It appears to be a police station. We do not locate it in RADEX." Thus comments J. W. Murphy of Akron, Ohio. Most the large cities now have police broadcasting stations assigned to short waves below the broadcasting band. We do not list them for two reasons, first, they are not broadcasting stations, and second, they do not want the general public to tune them in as they desire privacy. They broadcast only to the automobile cruisers as explained in an article in a recent edition.

Writes Cecil Jones, Wichita, Kans: "I have logged a station operating at or around 1440 kcys., the announcer of which gives no information as to identity except to say "The Voice of South Carolina.' Would appreciate information regarding this station." This is WSPA Spartanburg, S. C., a new station on 1420 kcys. It will be found in this month's index.

Some friend whose letter we have lost reports hearing a station with the call letters WKOC, The Knights of Columbus. Can any one identify this station?

C. M. Falconer, of Baltimore, tells us that WEHC at Emory, Va., has recently moved from 1370 to 1200 kcys. No notice from the Commission and we are checking with the station.

"About a month ago I got CJCA Edmonton, Alta., on 930 and you still have it on 580 in the February issue. CKX



Maurice Chevalier, the French musical comedy star, whose work in the talkies has established him as a favorite with the American public, particularly the feminine portion. A short time ago his voice was picked up in Paris and broadcast throughout America over the Columbia network.

Brandon, Man., has also changed to 1010." So we are advised by Keith McVay of Cando, N. D. A list just received from the Canadian government shows no change in these two stations. We are checking.

Frank Scott, of Newark, N. J., receives a letter from the Jarvis Street Baptist Church of Toronto saying: "CJBC has never been on the air and I do not know where the confusion arises as we have been receiving many letters from people saying they receive programs

from our call letters." Another mystery. We are canceling the four calls assigned to CJBC until such time as they become something more than a paper station.

The March Shuffle

"You have shuffled the 1470, 1480 and 1490 kcy, groups all up in the March issue," writes Fay L. Garton, of Blackwell, Okla, And Mrs. Clara Kibblehouse, of West Philadelphia, Pa., writes us to the same effect. On page 63 of the March edition, we warned our readers the Commission was making some lastminute changes. We got notice of them just as we were ready to go to press and as the notice from the Commission read: "It is therefore ordered that the following changes in frequency assignments of stations operating on 1490, 1480, 1470, 1460, 1410, 1370, 1360 and 1310 keys. be, and the same are hereby made, said changes to be effective on and after 3 a.m., Sunday, March 2, 1930," we made the reallocation accordingly. Has some court issued another injunction?

Mr. Garton also says that KFPL Dublin, Tex., advises him that station is only a fifteen-watter and never has been anything else. Now KFPL ought to know, but the Commission in a new list received today, gives them 100 watts. At least they are licensed to use that power, although of course they may not do so. If RADEX gives its readers information 99.58 per cent pure from the Commission records, can man do more?

Hours of Operation Every month we get letters like the following, also from Mr. Garton: "Personally I would like to have a list of stations telling when each station was on the air. I am missing some stations simply because I don't know when to go after them. If you have or ever do have such a list, ship it to me c.o.d." If we thought this information could be worked up satisfactorily, neither labor nor expense would prevent our furnishing it to our readers. But even the Radio Commission does not have this information. Hours of operation are entirely in the control of each station subject to its allotment. When it shares a wave with another stations, the two then apportion the time. These hours are subject to constant change with notice to no one nowhere! Such a list would be out of date before it was printed. Then where could we possibly find room for it? Here is just one sample: A certain station broadcasts during three periods Sunday, five Monday, four Tuesday, four Wednesday, three Thursday, five Friday and six Saturday. This would require a paragraph under each station. Seven hundred paragraphs would take 64 pages and there would be no room for RADEX!

DXtra

Another comment from Mr. Garton: "Information as to when to fish for foreign stations is always worth space in RADEX; don't omit any of that dope that comes in over your leased wire." If you receive a program from a foreign station, let us know the day and hour, we'll publish it.

"I've been listening to a station on 1020 kcys., same as KYW. Is it CMBZ Havana? I've heard him talk Spanish." This from Chris Tom Banakas, Memphis, Tenn. Probably, CMBZ is on 1027.

Earl T. Mills, of Brandon, Man., wants to know what DXers think of the programs they receive from CKX? He seems to think they are pretty bad and says the local fans have been protesting vociferously. Anyone having any comments may address him at 451 Third Street.

Joseph Stokes, Swissvale, Pittsburgh, gives a list of his distant reception and adds, "Four of these were verified without hearing the call letters. All I did was trust to the accuracy of RADEX. I have verified a lot of stations in this way." He adds: "WMAQ and WOR have DX clubs, the former broadcasting every Tuesday, 11:45 to midnight E.S.T. and the latter on Saturdays, at 9:55 p.m. E.S.T."

Short Wavers

Mr. H. N. Fricke, of North Bergen, N. J., wonders, "if any of your readers have had any experience with the Super-Wasp short wave receivers. I was thinking of buying one but I believe that a rather long aerial is necessary to pick up the lower waves or am I wrong? I will have to be content with an aerial of about 100 feet having a fifty foot lead-in." This is about equivalent to (Continued on page 23)

Ninety Stations on a Crystal Set

By J. E. SMITH, National Radio Institute

In the early days of radio broadcasting, thousands of people experienced, perhaps for the first time, the joy of creation. Building their own sets gave them their first outlet for the creative instinct which is dormant in most folks. While a large number of experimenters are still at work, trying out new designs and seeking constantly to improve upon existing sets, most people have given up the pleasure of building their own. The

modern radio receiver is so beautiful in its appointments, so efficient in operationandsoreasonable in price, that only the most inveterate experimenter can hope to equal let alone surpass them. But there are thousands of radio lovers, both young and old, who still feel the urge to build something of their own and yearn to feel again the thrill of hearing distant stations over a device of their own creation.

of their own and yearn to feel again the thrill of hearing distant stations over a device of their own creation.

The success of Alan Leighton in building a crystal set with which he tuned in ninety stations, points the way to a field for experimentation that is not only inexpensive but full of the promise of real thrills. When Mr. Leighton's accomplishment was first given publicity in the Pictorial Mid-Weekly, he was flooded with letters from interested readers in all parts of the continent. Other papers reproduced the story and accompanying

accomplish such wonders.

Verification of reception reports must usually be accomplished by mail but in Mr. Leighton's case, unknown friends all over the country took it upon them-

pictures and the mail grew and then

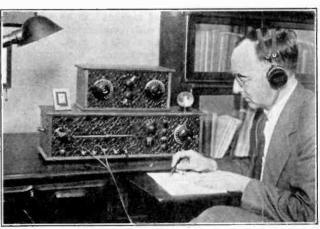
visitors began to come - people from

distant cities who wanted to see the set

which, without batteries or tubes, could

selves to visit broadcasting stations and verify his reception for him. He was overwhelmed with questions as to his aerial and his ground and his crystal and his hook-up. Alan Leighton, closeted in his daily work in the scientific laboratories of the Bureau of Dairy Industry, United States Department of Agriculture, was thus thrown into the spotlight of radiodom.

Modestly, Mr. Leighton denies any



Alan Leighton with his record-breaking crystal set and wavetrap.

special credit for the achievements of this crystal set, contending that it was freakish reception due perhaps to a particularly favorable geographical location, but this did not serve to diminish radio fan interest or lessen the volume of inquiries and applause cards contributed to this modest fan's mail bag. The lowly crystal or piece of galena had been glorified and everywhere other experimenters feel that what Mr Leighton had done they might do.

Just how is it done? Let Mr. Leighton tell the story:

"The original circuit was sent to me by the Carborundum Company. It consists of a .0005 variable condenser in series with the aerial and a slide contact on an 80 turn coil of No. 18 bare copper wire which was wound in such a way that its length was about nine inches, diameter 4 inches. One end of the coil was grounded, the other was connected through the crystal, to the phones to the ground. I added jack switches that permitted me to short out the condenser or use a carborundum crystal or cat-whisker crystal at will. I also had two phone outlets with a switch to short the second pair when not in use.

"In addition to the set proper I used two conventional wave traps, housed in the top box of the set with which to trap out the two local stations. These consisted of a forty turn coil of No. 30 wire wound four inches in diameter and connected to the terminals of .0005 variable condensers. On top of these coils were twelve turn No. 24 wire tapped coils which were in series with the aerial and the set.

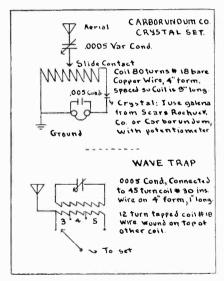
"I regret very much that I tore the set down to try a later model Carborundum Company set and I never got the results that I did with the first one. I am using a tube set, but have carefully saved the panel etc. of the of the old set and shall rebuild it some day. I never had any condenser in the ground circuit.

"The greatest distance that I ever heard was 1,130 miles from Havana, which reception was confirmed. In one of the very early radio magazines I once read of a man who received 1,147 miles with a crystal set so I can't claim the record.

"I also heard Hastings, Nebraska, New Orleans, Toronto and Florida stations and closer stations to the total of slightly less than 100. Through some peculiarity of my set at a slide setting corresponding to a wave length slightly less than that of WGY, I frequently heard KDKA short wave transmission. I remember particularly one night when they were arranging a South African broadcast. I wrote them of the occurrence and received a most courteous letter from Mr. Horne who confirmed the fact that it had been a short wave broadcast.

"My aerial is mounted upon the ridge pole of the bungalow type house in which I live. It consisted at that time of a twenty-two foot pole. I made two wooden triangles three feet in length on each side. One was suspended at the top of the pole, the other at the bottom, the pole passing through the center of each triangle. The aerial wire, No. 12 enamelled copper started at one corner of the top triangle, came down to the lower, went across to another corner, up to the top triangle again over and down again, and then to my set. One solid wire was used directly to the set. It was approximately 100 feet in total length.

"Cottage City is located about a mile from the north-eastern edge of the District of Columbia and has an elevation of about 40 feet above sea level. The strata underlying the top soil at a depth of three to four feet is a coarse wet gravel as if a river once coursed through here. This may explain why my waterpipe ground was so efficient.



"I used a .005 mfd. condenser across the phones. When I shorted out one pair of phones this meant that I had the .005 condenser straight across the Baldwin phones with which I did my listening.

"I omitted to mention a midget condenser which was in parallel with the .0005 condenser of the aerial circuit.

"At the extreme right, as you look at the photograph, is the dial of the aerial condenser. Just to the left of this at the

(Continued on page 63)

And Now The Radio Talkies!

Out of the Laboratory into the Home

YNCHRONIZED sight and sound broadcasting left the laboratory and appeared before the public for the first time recently. A demonstration of equipment now available for home use, was given in the Lauter Auditorium at Newark, N. J., before an interested group composed of the radio trade, the public and the press.

That the demonstration is not so much a technical advance as it is a practical exhibition, is the point emphasized by D. E. Replogle of the Jenkins Television Corporation. It is pointed out that while other demonstrations of radio television or radiovision have been given in the past, the Newark exhibition is the first public demonstration of combined and synchronized sight and sound broadcasting, utilizing equipment now offered to the public for use in the average home within those territories served by an electric power system common with that of the transmitter. Such a demonstration, therefore, is not to be confused with the excellent but costly laboratory demonstrations heretofore staged for the press and engineering groups, without immediate applicability to average home use.

The radio talkie programs for the Newark demonstration were broadcast simultaneously through the Jenkins radio television station. W2XCR at Jersey City, on 139 meters, and the De-Forest radio telephone station, W2XCD The programs originon 187 meters. ated in the Jenkins studio, in the form of sound films and silent films run through the television pick-up apparatus. The sound signals were flashed over direct wire to the radio telephone transmitter at Passaic. Louis A. Witten, wellknown broadcast program announcer, acted as guest announcer for the debut of the radio talkies.

At the receiving end, two separate and distinct radio sets were employed. First a standard broadcast receiver was employed to tune in the radio telephone signals of Station W2XCD on 187 meters, these signals being received on a

standard home broadcast set at the bottom of the tuning dial. Secondly, a Jenkins short-wave receiver, covering the 100-150 meter band, was tuned to the radiovision signals of W2XCR, amplified, and passed on to a battery of standard Jenkins home radiovisors. The radiovisors were mounted on a stand above the heads of the spectators, and properly tilted, so that successive groups



A Jenkins Model 200 Radiovisor in the home. The front of the cabinet contains a shadowbox leading to a large recessed magnifying lens through which the radiovision images are viewed in enlarged form.

of thirty or more persons could follow the pictures flashed by three cabinet radiovisors. The nearby broadcast receiver supplied the sound accompaniment.

The program was one of considerable interest, even though the means rather than the end might well dominate the situation. Dr. Lee DeForest, inventor of the present-day vacuum tube or foundation of radio and other arts, addressed the audience by picture and voice. The possibilities of applying

radiovision to popular broadcast features was demonstrated by two comedians, reproduced half-length, who cracked jokes and sang for the "lookersin." Several half-tone pictures and shadow-graphs followed, with incidental music for some and descriptive announcements of Mr. Witten, for others.

Two Jenkins home radiovisors were shown. Model 200 Radiovisor is in the form of a cabinet with shadowbox and simple control panel, intended for those interested primarily in radiovision enter-The pictures in magnified tainment. form may be followed by several persons at a time. Model 100 Radiovisor is in the form of a simple, exposed assembly, with provisions for changing scanning disks and rotors, adding another form of synchronizing device if desired, and making whatever changes may suit the experimentally inclined. The pictures are so magnified that one or two persons may follow them at a time. of the limited magnification, the pictures are exceptionally bright and clear. The driving mechanism is an unique form of Faraday eddy current motor, which is simple, silent and efficient. Both models depend upon synchronous motors, operating on the same alternating current power system as the transmitter, for automatic synchronization. Due to the extensive Public Service power system and its interconnections with other power systems, a wide and densely populated section of the country can be covered by the Jenkins station in Jersey City, with automatic synchronization.

The Jenkins officials wish to make clear that no technical advance is claimed for the demonstration just given. Better pictures have already been shown to public and press. Better results are being obtained regularly under more favorable However, the demonstraconditions. tion was made under typical, everyday conditions, with equipment that can be bought for the average home in those areas served by the same electric power system. The Jenkins Television Corporation plans to show technical advances from time to time. The recent demonstration was only an introduction to home radiovision, with sound accompaniment.

Reallocation Planned

HE greatest shake-up in frequencies since the earthquake of November 11, 1928, is being hatched. The Radio Commission has accepted the recommendation of its engineers to broaden the distance in frequencies between a number of major stations which, it is felt, are altogether too close both geographically and in kilocycles. Finding it impossible to move the cities geographically, the Commission has addressed the stations to be affected, asking them to show cause why they should not be moved in accordance with the engineer's findings.

Says the Commission: "There are 13 channels involved in the rearrangement. On nine of the thirteen frequencies stations are now suffering from and causing cross-talk with stations on adjacent channels. This interference is due mainly to insufficient frequency separation for the geographical separation between the stations. In some cases the interference has been aggravated by one station installing the most modern equipment and thus extending its service area while the stations on adjacent channels have made no change in equipment. The only course which the Commission can pursue in relieving the existing crosstalk is to change the frequency assignment of the necessary number of stations and thus gain greater frequency separation between the interfering stations.

"The Commission feels this plan when inaugurated will remedy the present difficulty and allow the stations involved to render better service to the public thereby."

Following are the changes proposed to which the Commission hopes to gain the approval and support of the stations concerned. These stations in some cases will have to make extensive changes in their equipment and the reallocation will therefore not take effect for some time. Watch your RADEX for further developments.

_	Present	Proposed
WHAS	820	1020
KTHS-KRLD	_ 1040	1070
WBT	_ 1080	1040

(Continued on page 20)

Regulating the Voltage

O many of the inquiries addressed to The Question Mill indicate that the trouble lies in uneven flow of current to the receiver, and we have had so many requests for information as to voltage regulators, that we have decided to inform our readers of certain devices now on the market. We have not had an opportunity to test any of these devices and therefore cannot recommend them, but we believe their makers to be reputable concerns whose advertisements are appearing regularly in the trade papers. Any good dealer can secure these and probably other devices for any readers who desire to experiment with them.

Our technical editor has often pointed out that the 110-volt current may easily mount to 120 particularly at times other than the early evening when the load is heaviest and that this increase is sufficient to cause serious trouble and annoyance in the operation of an a.c. set. The manufacturers of the devices described claim that their use will provide a smooth, even flow of current to the set regardless of the load condition.

The devices differ materially in form and operation but the description of one will suffice to give an idea of the claims of all

"The new Amperite self-adjusting line control is a recently perfected device constructed in glass bulb form. The Amperite resistance unit is enclosed in a bulb of standard dimensions filled with an inert gas. The operation of this device assures a constant, reliable, instantaneous response to even slight fluctuations in line voltage.

"The Amperite Line Control is provided with the UX type base but with only two prongs. These are the plate and filament prongs which fit into any make of standard UX socket. The two contacts connect directly in series with the primary of the line or power transformer.

"For general radio purposes Amperite Line Controls are designed to handle a fluctuation of about 30 volts (for examples 95 to 125) and to regulate the current (or voltage) to a constancy of within 10 per cent over this range of fluctuation.

"A number of the leading manufacturers of radio sets are now equipping their receivers with Amperite Controls, but any set may be equipped by having the line or power transformer wound or tapped for a primary of 80 volts. Transformers may be secured already tapped in this way in the primary winding."

The Amperite Self-Adjusting Line



"Ugh, Ugh, heap Big Chief" Ben Selvin costumed in complete Indian regalia, conducts his DeVoe Redskins in a program of old and new dance tunes on Thursday evenings at 9:30 E.S.T. over WABC and the Columbia chain.

Voltage Control is manufactured by the Amperite Corporation, 561 Broadway, New York City.

The Vitrohm 507-109A Unit is made by the Ward Leonard Electric Co., Mt. Vernon, N. Y.

There are doubtless other devices descriptions of which have not been received.

Installing Radio in Automobiles in the May RADEX.

The Newark News Club

THERE are a number of radio clubs in the various cities of the United States and an outstanding example is that one of Newark. The Newark News Radio Club, was organized in December, 1927, when 55 enthusiastic readers of the News radio page gathered in the editorial rooms and formed what they believed to be the first club ever banded together solely in the interests of DX reception.

The club has often been referred to as the brain-child of Charlotte Geer, who conducts the Broadcasts Winnowed radio column of the News, and rightfully so, for it was the personal DX experiences which she described that were responsible

for its organization.

The officers of the club have spoken on numerous occasions over WOR and also the NBC chain and each talk resulted in many applications for membership being received, many from far distant points.

Since the club was organized many stations at distant points have cooperated by broadcasting "Courtesy Programs" after midnight at various times, especially for the reception of the members.

The Club meets each first Thursday night monthly, except in July and August. After the business of the club is transacted, entertainment is furnished by radio artists from the various metropolitan stations. Manufacturers of receivers, batteries, tubes, etc., supply speakers who not only give interesting and instructive talks but demonstrate their products as well.

Members of the club may obtain DX qualification certificates in four classes, as follows: "Junior DXer" for logging 100 stations: "Master DXer" for logging 200 stations and having one verification from a station located more than 2,000 miles distant. "Past-Master DXer" for logging 300 stations and have at least five distant verifications. "DX Ace" for logging 400 stations and having at least ten distant verifications.

Once a month the club holds a DX contest for the Newark Evening News

DX Trophy. Members may select any six consecutive hours during the Saturday night designated and must have their lists in the mail not later than the following Monday. All stations listed must be located at least a hundred miles from point of reception and no station can be logged while broadcasting a chain program.

From an interesting letter by John Macaulay, Jr., of Phillipsburg, N. J., we

quote the following:

"We now have a membership of some 600 DXers from all over the North American continent. I attended a club banquet in Newark last Saturday and we had such celebrities of the radio world as Phil Cook, Caroline Gray, Bob Mc-Grimsey, Norman Sweetser, and a host of others.

"We run a column every day in the Newark Evening News devoted to the record of members and other DX gossip"

Reallocation Planned

(Continued from page 18)

WRVA	1110	1150
WAPI-KVOO _	1140	1130
WOWO-WWVA	1160	1180
KOB-KEX	1180	1170
$WJJD_{}$	1130	1090
KYW	1020	1140
WTAM	1070	1080
KMOX	1090	1110
KSL	1130	1090
WHAM	1150	1160
WCAU	1170	820
WMBI-WCBD	1080	1040
WHDI-WDGY	1180	1170

Two for One

The weekly Radio World, the best technical magazine, \$6.00 a year, and RADEX, \$1.75 a year—Both for \$6.00.

The Question Mill

(Continued from page 8)

house-lighting circuit is 120. Would this

make a difference? Receivers designed for use on 110volt lighting circuits often develop a hum if the applied voltage is greater than this. It is highly probable that this is the source of your trouble. Get an automatic voltage regulator, which will reduce the voltage to the proper value and will also take care of fluctuations due to varying loads, at all times keeping the voltage applied to the set at 110. Operating your set at 120 volts will also cause the tubes to burn out prematurely, which can be prevented by using the voltage regulator. If, however, the installation of this device does not entirely eliminate your trouble the pole piece of the speaker should be examined for it is probably out of adjustment. This piece of the speaker is held in place by means of a bolt running through it lengthwise, which must be loosened in order to adjust it. You can readily determine whether or not the pole piece is out of adjustment by pressing the cone of the speaker evenly on both sides toward the front and rear just a trifle while the set is in operation. If this decreases the hum, there is sufficient proof of poor adjustment. Then proceed to correct this fault, taking care to get the pole piece properly centered in the voice coil or rattling will result. This can be done by wrapping a piece of thin cardboard around the pole piece several times until the wrapping fits snugly in the voice-coil frame. tighten the adjusting bolt on the pole piece and remove the cardboard.

Can you supply me with the address of some concern that supplies refills for B-eliminators? I would also like to know if I could add a power tube to my 5-tube Stewart-Warner receiver, which is battery-operated?

Manufacturers usually attach to their products a nameplate bearing their name and address so that replacement parts can be obtained from them. In the absence of a nameplate ask the radio dealer from whom you purchased the eliminator, where replacement parts can be obtained, or tell us what make of eliminator you have and we will supply you with this

information. Many eliminators are assembled from standard parts but there are also a number of manufacturers who employ parts especially designed and fitted to their products. You can add a power tube to your receiver, substituting it for the last audio tube used at present. However, a C-battery of correct voltage for the particular power tube you wish to use must be cut in the grid circuit of the last audio stage. I suggest that you do not use a power tube requiring a high C-bias and would therefore advise the use of a UX112A tube, which requires 9 volts of C-bias at a plate voltage of 135, the latter voltage being obtained by hooking an additional Bbattery to the two used at present, the negative terminal of the additional battery being connected to the 90-volt The change required in the terminal. wiring of the grid circuit is made as follows: Disconnect the lead on the F-negative post of the last audio transformer and substitute a lead connected to the C-battery negative. Then run the first lead, which was disconnected from the transformer, to the positive terminal of the C-battery.

At regular intervals of 2 or 21/4 minutes there is a loud click in my receiver, an allelectric 8-tube set called the "Sky Rover." The click somewhat resembles the snap of a guitar or banjo string. When this happens the reception will almost die out and then in a minute or so there will be another snap and the signal will get louder and louder until it again reaches full strength. I have had this receiver about a year and have always had very good reception, and the trouble has only commenced recently. When I disconnect the ground lead to the set, reception comes in very faintly and the snapping noises are not eliminated, although they are then weak, corresponding to the strength of the signal. When I disconnect the aerial no signals come in at all. Can you advise me where to look for the trouble?

The regularity with which the snapping noises occur in your receiver indicates that in all probability the trouble lies in the set itself, instead of in the aerial and ground circuit, as the noise persists when the aerial is disconnected. The trouble has all the earmarks of an

open grid circuit in the audio stages which would account for the clicks you have experienced. Carefully trace the wiring from the G-terminal of each audio tube for a loose connection or break. If audio transformers are used in your set test the secondary windings for continuity. If your audio amplifier is of the resistance-coupled type, substitute new resistors in the grid circuits. Then trace the lines connected to the F-negative post of the transformers or the corresponding terminals on resistance units, to determine whether they are connected to the ground line of the receiver, as they should be in all-electric receivers. If the cause of the trouble has not been ascertained up to this point, examine the center-tapped resistors which control the grid bias to the audio tubes and most likely one of them will be open, probably burned out. overloaded detector tube having too high a grid resistance, may cause the same trouble.

My radio set is a Radiola No. 16, electrified with 110-volts direct current. Local stations come in too loud. To control the volume I have connected a Pilot Resistograd across the aerial and ground but, of course, this arrangement allows the tubes to burn full. Is there any better method of controlling the volume of the signals which would cause the tubes to burn dimmer? I am located in New York City and the furthest I have tuned in are stations KTHS, WCCO, WOS, WFIW and almost all of the Chicago stations. How much distance can I reasonably expect from this set?

There are several methods of reducing the volume of your receiver. method giving the results you desire, consists of connecting a 3-ohm rheostat in series with the fixed resistor or ballast now found in your A-positive line near the binding post. However, burning tubes too low, or rather below the rated capacity, is injurious to the filaments. according to tube manufacturers and Another method of ballast makers. controlling the volume is to cut a variable resistor such as a Clarostat in the B-positive line supplying plate voltage to the radio-frequency stages. A variable resistor cut in one of the loudspeaker lines will also be capable of cutting down the volume. However, in your case, it might be best to erect a very short aerial and use it in conjunction with the Resistograd arrangement for tuning in local stations, and a long aerial for tuning in distant stations. Your distance record is not particularly alarming, although under good conditions you may, by extremely careful tuning, get farther than 1500 miles.

"Dear Mr. Editor"

(Continued from page 14)

an aerial of 150 feet in length and should be ample for any short wave set.

However, this length may make it difficult to bring in stations in the upper waves of the broadcasting band.

C. S. Wells, 15 Academy Street, Concord, N. H., would like to hear from Leon V. Garland regarding the sort of set on which such excellent results were being secured.

Mrs. C. Kibblehouse, of West Philadelphia, asks for the short wave letters of WHAS at Louisville. Who has received them?

Here we are at the end of our space and we haven't finished half the letters yet. Nothing to do but carry them over to May. We'll just have to find more space somewhere for these interesting comments by RADEX friends.

Attaching Head Phones

(Continued from page 2)

Use soldering lugs under the nuts on the transformer and socket terminals, and solder the leads to the lugs to insure good electrical contact. Inserting the phone plug in the jack disconnects the upper two jack contacts, breaking the plate circuit to the following stages and thus automatically keeping the signal from passing beyond the headphones although the tubes will continue to light.

BOYS

A fine leather football free for only two subscriptions to RADEX.

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ENTER YOUR DIAL NUMBERS IN THESE SPACES

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WHAT'S ON THE AIR TONIGHT?

A WEEKLY CALENDAR

Leading Features of the Network Programs

Time is given by Eastern Standard. For Central Time, subtract one hour; for Mountain Time, two hours; and for Pacific Time, three hours. After the last Sunday in April subtract an additional hour for Daylight Saving Time.

Lists beginning with WEAF and WJZ are the National Broadcasting Co., while those beginning with WABC are the Columbia Broadcasting System.

These programs are correct to April fi	rst but are subject to change daily thereafter
Daily (Except Saturday and Sunday	
6:45-8:00 Tower Health Exercises WEAF WEEI WCAE WFI WRC WGY 8:00-8:15 The Aunt Jemina Man	2:45-3:45 Band of a Thousand Melodies WJZ' WBAL WJR KDKA KWK WAPI KYW WSM
WJZ WBAL WHAM KDKA WJR WBZ WBZA CKGW WRC 8:00-8:30 Organ Reveille WABC WCAU WCAO WHP WJAS WFBL WMAK WHK WKRC WGHP WKBN KOIL KMBC WIBW KFH WBCM WSPD WMT	WWNV WDBJ WBRC WDOD WREC WLAC
WWNC WBRC WDOD WREC WLAC KLRA	KLRA KLZ KVI KFPY 3:30-4:00 Columbia Educational Features
8:30-8:45 Morning Devotions WABC WCAU WHP WFBL WMAK WKRC WGHP KOIL KMBC KFH WBCM WSPD WWNC WDBJ WBRC WDOD WREC WLAC 8:30-9:00 Cheerio WEAF WEEI WCKY WRC WGY WGR	WABC WCAU WCAO WMAL WHP WFBL WMAK WADC WKRC WKBN WFBM WMAQ
WJAR WTAG WCSH WCAE WWJ WOW WDAF KSTP WPTF WAPI KPRC WSB WJAX WTAM WRVA WHAS CKGW 9:30-10:00 Morning on Broadway WABC WMAL WHP WLBW WFBL WKBL WGHP WBBM KMOX KOIL WGL WBC	WKRC WGHP WFBM WMAQ WBBM KMOX W KOIL KMBC WISN WIBW WGL WBCM WSPD WMT WWNC WDBJ WBRC WDOD
WREC WLAC KLRA KDYL 10:00-10:30 Ida Bailey Allen WABC WEAN WNAC WCAU WCAO WMA	7:00-7:15 Amos 'n' Andy WIZ WBZ WBZA WHAM KDKA WJR
WJAS WLBW WFBL WMÁK WĀDC WHK WKRC WGHP WOWO WBBM KMOX KOIL KMBC WISN WCCO WSPD 10:00-11:00 National Home Hour WEAF WEEI WJAR WTAG WCSH WFI WRC WTAM WGY WGR WCAE WWJ WSAI WHO KFKX WCFL	WJAX WIOD 11:30-11:45 Amos' n' Andy KYW KWK WREN WTMJ KSTP WEBC WKY WFAA KPRC WOAI KOA KSL WDAF WMAQ KECA KGO KOMO KGW KHQ WHAS WSM WMC WSB WSMB
11:00-11:30 Forecast School of Cookery WJZ WBZ WBZA WHAM KDKA WLW KWK WREN WJR WGN	Sunday
11:15-11:30 Radio Household Institute WEAF WEEI WTAG WCSH WLIT WRC WGY WGR WCAE WTAM WWJ WSAI KVOO KSD WTMJ KSTP WJAR WHO WDAF WEBC WHAS WSM WMC WHO WAPI WSMB KPRC WOAI WKY KFKX	1:30-2:00 Ballad Hour WLBZ WCAU WCAO WHP WFBL WKBW WADC WKRC WGHP WKBN KMBC WISN WCCO WIBW WBCM WSPD WMT WWNC WDBJ WBRC WFIW WDOD WLAC KLRA KLZ KVI KFPY
12:00-12:30 Columbia Revue WABC WEAN WFAN WCAO WMAL WHP WAS WLBW WFBL WMAK WADC WGHI WKBN WOWO KMBC WCCO WBCM WMT	WHAS KSTP
WWNC WDBJ WBRC WFIW WDOD WREC KLRA KLZ KHJ KFRC KFPY 12:30-1:30 Yoeng's Restaurant Orchestra WABC WEAN WNAC WLBZ WCAU WCAC WMAL WHP WJAS WLBW WFBL WMA! WADC WKRC WGHP KOIL KMBC WCCC KFH WBCM WSPD WMT WWNC WBRC	WABC WEAN WNAC WLBZ WCAU WCAO WMAL WHP WFBL WKBW WADC WKRC WGHP WKBN WFBM KMBC WISN WCCO WIBW WBCM WSPD WMT WWNC WDBJ WBRC WFIW WDOD WLAC KLRA KLZ KDYL KVI KFPY WMAQ KMOX
WFIW WDOD WREC WLAC KLRA KLZ 12:45-1:30 National Farm and Home Hour WJZ WHAM KDKA WJR WLW KSTP WEBC WRVA WPTF WBT WJAX WHAS WSM WMC WSB KVOO WKY WOAL WRC WHO WOW WDAF KPRC WJDX WBAL WBAP WSMB WIOD KFKX KWK WREN KOA WLS	KOIL KMBC WISN WCCO WIBW KFH
1:30-2:00 Harold Stern and Ambassador Orchestra WABC WEAN WLBZ WCAU WCAO WMA WHP WJAS WLBW WFBL WMAK WADO	3:00-4:00 Chicago Symphony Orchestra KSD WOC WOW WDAF KSTP WTMJ

3:00-4:00 National Youth Conference WJZ WBAL WRVA WPTF WSB WOAI	WFIW WDOD WREC KLRA KLZ KDYL
KFAB KDKA WLW KWK WREN KVOO	9.00 9.15 Frank Lattick Maladian
KPRC KSL KGO KGW KOMO WBT WFAA WAPI WJAX	WJZ WBZ WBZA WHAM WKY WJK
	KWK WREN WFAA KPRC WOAI WHAS WSM WTMJ KSTP WMC KOA KYW
3:30-4:00 Conclave of Nations WABC WLBZ WCAU WCAO WMAL WHP	WEBC WIOD KTHS WSMB KPO KOMO
WJAS WFBL WKBW WADC WHK WKRC	
WGHP WKBN WOWO WEBM WMAQ KOIL	8:00-8:30 La Palina Rhapsodizers
KMBC WISN WCCO WIBW KFH WBCM WSPD WMT WWNC WDBJ WBRC WFIW	WABU WEAN WHAU WUAU WUAU WMAL WIAS WLEW WEEL WMAK WADO WHK
WSPD WMT WWNC WDBJ WBRC WFIW WDOD WREC WLAC KLRA KLZ KVI	WABC WEAN WNAC WCAU WCAO WMAL WJAS WLBW WFBL WMAK WADC WHK WKRC WGHP WFBM KMOX KOIL KMBC
4:00-5:00 Cathedral Hour	WISN WIJD WSPD
WABC WEAN WNAC WLBZ WCAU WCAO WMAL WHP WJAS WLBW WFBL WKBW	8:00-9:00 Heroes of the Church WABC WEAN WNAC WHP WFBL WFBM KMOX KMBC WIBW WBCM WSPD WWNC
WADE WHE WERE WERP WERN WOWL	WABC WEAN WNAC WHP WFBL WFBM KMOX KMBC WIBW WBCM WSPD WWNC
WERM KMOX KOIL KMBC WISN WCCO	WBRC WDOD WLAC
	8:15-9:15 Collier's Radio Hour
WDBJ WBRC WFIW WDOD WREC WLAC KLRA KLZ KDYL KVI KFPY	WJZ WBZ WBZA WHAM KDKA WJR KYW KWK WREN KOA KSL KGW
	KOMO KHO KPO KFI WCKY
4:00-5:00 Dr. S. Parkes Cadman WEAF WEEI WJAR WTAG WCSH WGY	8:30-9:00 In a Russian Village WABC WEAN WHAC WFAN WCAO WMAL WHP WJAS WLBW WFBL WMAK WADC WHK WKRC WGHP WKBN WFBM KMOX KOIL KMBC WISN WGL WBCM WSPD WMT WWNC WDBJ WDOD WLAC KLRA
WGR WCAE WOW WRVA WPTF WJAX WBT WSM WMC WSB WKY WOAI	WHP WIAS WERW WERL WMAK WADC
KGO KOMO KHQ WSAI WHAS WAPI	WHP WJAS WLBW WFBL WMAK WADC WHK WKRC WGHP WKBN WFBM KMOX
KVOO KPRC KOA WERC KGW WEIC	KOIL KMBC WISN WGL WBCM WSPD
5:00-5:30 McKesson News Reel	WMT WWNC WDBJ WDOD WLAC KLRA KLZ KDYL KHJ KFRC KVI KFPY
5:00-5:30 McKesson News Reel WABC WEAN WNAC WCAU WMAL WJAS WLBW WFBL WHEC WKBW WADC WHK	\$.30.9-00 Chara and Sanhara Charal Orchastra
WICE WOHP WOWO WMAD KMOX KUIL	WEAF WIAK WIAG WUSH WKU WGI
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KDYL KHJ KFRC KOIN KVI KFPY	KTHS KPRC WOAI WBT WTMJ WJDX WTAM KSTP WLIT WIBO WHO WPTF
KMBC WISN WCCO KFH WSPD WWNC WTAR WDBJ WBRC WDOD WREC WLAC WDSU KRLD KLRA KFJF KTSA KLZ KDYL KHJ KFRC KOIN KVI KFPY 5:00-6:00 Davey Hour WEAF WEEI WJAR WTAG WCSH WFI WRC WGY WGR WCAE WFJC WSAI KSD WOW WDAF WTAM WENR WCC 5:00-6:00 National Religious Service WJZ WBZ WBZA WBAL WHAM KFAB	WTAM KSTP WLIT WIBO WHO WPTF
WRC WGY WGR WCAE WFJC WSAI	WEAF WJAR WTAG WCSH WRC WGY WCAE KSD WHAS WKY WSAI WFJC WSB WBT WMC WSM WFAA WOW WOAI WWJ WSMB WTIC WEBC RVA
KSD WOW WDAF WTAM WENR WOC	WCAE KSD WHAS WKY WSAI WFJC WSB WBT WMC WSM WFAA WOW
5:00-6:00 National Religious Service	WOAI WWJ WSMB WTIC WEBC RVA
	WJDX KVOO WLIT WOC WPTF
5:30-6:00 Sermon by Rev. Donald Grey Barnhouse WABC WEAN WNAC WCAU WCAO WMAL WHP WJAS WLBW WFBL WKBW CFRB WADC WKRC WGHP WOWO WFBM WMAQ	WOAL WWJ WSMB WILE WEBE RVA WJDX KVOO WLIT WOC WPTF 9:00-10:00 Majestic Theatre of the Air WABC WEAN WNAC WCAU WCAO WMAL WJAS WLBW WFBL WMAK WDEL CFRB CKAC WADC WHK WKPC WCHP WOWO
WHP WIAS WIRW WFRL WKBW CFRB	WJAS WLBW WFBL WMAK WDEL CFRB
WADC WKRC WGHP WOWO WFBM WMAQ	CKAC WADC WHK WKRC WGHP WOWO
b:UU-1:UU Catholic Hour	CKAC WADC WHK WKRC WGHP WOWO WFBM WBBM KMOX KOIL KMBC WISN WCCO WIBW WSPD WWNC WSAZ WTAR
WCV WWI KSD WEBC WBT WIOD	WDBJ WBRC WDOD WREC WLAC WDSU
WSM WAPI WKY WJDX KGO KPO	KRLD KLRA KFJF KTSA KLZ KDYL KHJ KFRC KOL KOIN KFPY CNRO
WOR KOA WEIG CKGW	9:15-10:15 Atwater Kent Hour
6:30-7:00 O'Cedar Time WABC WEAN WNAC WCAU WMAL WJAS WLBW WFBL WKBW WADC WHK WKRC	9:15-10:15 Atwater Kent Hour WEAF WEEL WRC WFI WGY WGR
WABC WEAN WNAC WCAU WMAL WJAS WLBW WFBL WKBW WADC WHK WKRC	WOAE WTAM WWJ WSAI WGN KSD WOW KSTP KOA KSL KFI KGW
WGHP WOWO WMAQ KMOX KOIL KMBC	KOMO KPO KHO WSM WMC WSR
7:00-7:30 Durant Heroes of the World	WEAR KPRC WOAL WKY WSMB WBT
WEAF WJAR WTAG WCSH WRC WGY WCAE WFJC WWJ WSAI WLS KSD	WHAS WDAF WHO
WCAE WFJC WWJ WSAI WLS KSD KOA WDAF WEBC WRVA KSTP WPTF	10:00-10:30 Royal's Poet of the Organ WABC WEAN WNAC WCAU WCAO WMAL WJAS WLBW WFBL WKBW WADC WHK
WBT WJAX WIOD WHAS WSM WMC	WJAS WLBW WFBL WKBW WADC WHK
WSB WSMB WKY KPRC WOAI WFAA WGR WEEI WAPI WOW WLIT WTMJ	KOIL KMBC WSPD KLZ KDYL KHJ
Bec Bec Mt Clil W	WJAS WLEW WFBL WKBW WADC WHK WKRC WGHP WOWO WFBM WBBM KMOX KOIL KMBC WSPD KLZ KDYL KHJ KFRC KOL KOIN KFPY
WFAN WMAL WHP WJAS WFBL WKBN KMOX WISN WIBW WBCM WSPD WMT	WEAF WTIC WTAG WFI WCSH WRC WGY WGR WCAE WTAM WWJ WGN KSTP WJAR WTMJ WEBC KOA KGO
WWNC WDBJ WFIW WDOD KLRA KIZ	WGY WGR WCAE WTAM WWJ WGN
KEDO KUI KEDV	WGY WGR WCAE WTAM WWJ WGN KSTP WJAR WTMJ WEBC KOA KGO
T3-30-7-45 Twinplex Twins WABC WEAN WNAC WCAU WCAO WMAL WJAS WLBW WFBL WHEC WADC WKRC WGHP KMOX KOIL WJJD	KGW KOMO KFI KHO WOW WEEL WDAF WFJC WSAI WHO
WASC WEAN WNAU WUAU WUAU WMAL	10:30-11:00 Arabesque
WGHP KMOX KOIL WJJD	WABC WEAN WNAC WCAO WMAL WHP
7:30-8:00 Williams' Oilomatics	WJAS WLBW WFBL WKBW WADC WKRC WGHP WKBN WOWO WFBM WMAQ KMOX
WWW WOA WELL WHAM WLW WREN	KOIL KMBC WISN WIBW KFH WBCM
7:30-8:00 Major Bowes' Family	WSPD WMI WDDJ WDRC WFIN WDOO
WEAF WJAR WRC WGY WCAE WWJ	WLAC KLRA KLZ KDYL KFPY 10:45-11:15 Sunday at Seth Parker's
7:30-8:00 Major Bowes' Family WEAF WJAR WRC WGY WCAE WWJ WSAI WJDX KSD WOW WFJC WIOD WHAS WMC WSB WKY WTAM KTHS	10:45-11:15 Sunday at Seth Parker's WEAF WCAE WHAS WJAX WOW WKY
WOAI WEMB KETP WCSH WTMJ WHO	WWJ WEJC WGY WRU KOA KGO
7:45-8:00 The World's Business WARD WEAN WNAC WCAO WMAI, WIAS	11-00-12-00 Back Home Hour
WLBW WFBL WADC WKRC WGHP WKBN	WABO WMAL WHP WLBW WKBW WADC WGHP WKBN WFBM WISN WCCO KFH
WOAL WENT WISHEST WISH WISH WISH WAS WARD WEAN WNAC WCAO WMAL WJAS WLBW WFBL WADC WKRC WGHP WKBN WMAQ KMOX KOIL KMBC WISN WCCO	WGHP WKBN WFBM WISN WCCO KFH
	0.5.1

3:00-4:00 National Youth Conference

8:00-8:30 Henry-George
WABC WEAN WNAC WCAU WCAO WMAL
WJAS WLBW WFBL WMAK WADC WHK
WKRC WGHP WFBM WMAQ KMOX KOIL
KMBC WISN WCCO WGL KFH WSPD WBCM WSPD WDBJ WFIW WDOD WREC WHK KLRA KFPY 11:15-11:45 Russian Cathedral Choir WEAF WJAX WWJ WOW WBAP KSTP WRC WGR WMC WHO WBAP WGY 8:00-8:30 Voice of Firestone Monday WEAF WEEL WTIC WJAR WTAG WCSH WGY WCAE WGR WWJ WSAI KSD WOC WGW
KTHS WSMB KSTP WTM.
WHAM WSM WMC WSB
KVOO KPRC WOAI WKY
WFAA WJDX CKGW KYW WDAF WIOD WTMJ WEBC WJAX WBT WRVA WFJC WTAM 11:30-11:45 Children's Corner 8:30-9:00 Ingram Shavers WJZ WBZ WB WJR WLW WB | WABC | WEAN | WAAC | WLBZ | WCA | WHP | WJAS | WLBW | WFBL | WM/WKBN | KMBC | WBCM | WMT | WWY | WFIW | WOOD | WREC | KFRC | KVI | KFPY | KFRC | KVI WCAO WMAL WMAK WGHP WWNC WDBJ WBZA WHAM KWK WHAS WREN KDKA KYW WIOD WRVA WJAX WMC KPRC KFAB WBT WOAI WTMJ KOA WSB WKY KTHS WEBC WSM 11:45-12:00 Your Diet 8:30-9:00 Ceco Couriers

WABC WEAN WNAC WCAU WCAO WMAL
WJAS WLBW WFBL WMAK WADC WHK
WKRC WGHP WFBM WMAQ KMOX KOIL
KMBC WCCO WSPD WABC WEAN WNAC WLBZ WCAO WMAL
WHP WJAS WLBW WFBL WMAK WGHP
WKBN WBCM WMT WWNC WDBJ WFIW
WDOD WREC KLRA KVI KFPY 8:30-9:30 A. & P. Gypsies
WEAF WEEI WT) 2:00-2:30 The Honoluluans WJAR WTAG WCSH WGR WCAE WWJ WOC WDAF WTAM WABC WLBZ WFAN WCAO WMAL WHP WJAS WFBL WMAK WADC WGHP WKBN WTIC WLIT WRC WFBM WBBM KOIL WISN WBCM WSPD
WMT WWNC WDBJ WBRC WDOD WREC
WLAC KLRA KLZ KDYL KHJ KFPY WSAI WGN KSD 9:00-9:30 Ted Fiorito and His Orchestra WJZ WBZZ WBZA WHAM KDKA WJR
KYW KWK WREN KSTP WEBC WSM
WMC WSB WSMB KVOO WKY KTHS
KPRC WOAI KOA KSL WCKY WJDX
KGO KECA KGW KHQ KOMO 2:30-3:00 Ann Leaf at the Organ

WABC WEAN WNAC WLBZ
WMAL WHP
WJAS WFBL WMAK WADC
WHK WKRC WGHP WKBN WOWO WFBM
WBBM KOIL KMBC WISN WIBW KFH
WBCM WSPD WMT WWNC WDBJ WBRC
WDOD WREC WLAC KLRA KLZ KDYL KGO KECA KGW KHQ KOMO
9:00-9:30 Physical Culture Magazine Hour
WABC WEAN WNAC WCAU WCAO WMAL
WJAS WLBW WFBL WMAK WADC WHK
WKRC WGHI WMAQ KMOX KOIL KMBC
9:30-10:00 Cheesbrough Real Folks
WJZ WBZ WBZA WHAM KDKA KWK
KYW WLW WJR CKGW WREN KHJ KVI KFPY
3:45-4:00 "Gardening for Recreation"
WJZ KDKA WJR KYW KWK
WHAS WSM WJAX WPTF WRC KSTP WMC 4:00-5:00 U.S. Marine Band WJZ WBAL WREN KWK 9:30-10:00 General Motors Family Party
WEAF WEEI WTIM WJAR WCSH
WLIT WRC WGY WGR WCAE WCFL WRC WTAG WGR WLIT WWJ KSTP WCAE WTAM 4:15-5:00 Pacific Vagabonds KSD WOC WOW WDAF WTMJ WHAS WSM WMC WJAX WFAA KPRC WOAI WEAF KOA KGO KGW KSD WIBO WCSH KSTP WDAF WAPI WSM WHO WGN WSAI WDAF WBZ WBZA KWK WREN WJAX WIOD WJZ KYW WBT WRVA 6:00-6:30 Jan Garber and His Hollywood Orchestra
WABC WHP WLBW WFBL WMAK WADC
WGHP WKBN WBBM KMBC WCCO WGL
KFH WBCM WMT WDBJ WBRC WFIW
WDOD WREC KLRA KLZ KVI KFPY WIOD WHAS WSM WSMB WKY KTHS WMC WSB WAPI KTHS KFI WBAP KPRC WOAI AND KSTP

10:00-10:30 Whittall Anglo-Persians
WEAF WEEI WTIC WJAR WTAG WCSH
WLIT WGY WGR WCAE WFJC WWJ
WSAI KSD WOC WOW WDAF WRC

10:00-10:30 Robert Burns' Panatela Program
WABC WEAN WAC WCAU WCAO
WJAS WLBW WFBL WMAK WCAO
WJAS WLBW WFBL WMAK WADC WHK
WKRC WGHP WOWO WFBM WMAQ KMOX
KOIL KMBC WSPD

12:20-11:00 Empire Builders
WHAM KDKA
WJR
WI.W KPRC WOAL WOAI KOA KGO KOMO WJDX KSTP 6:30-7:00 Yoeng's Restaurant Orchestra
WCAU WMAL WHP WJAS WLBW WMAK
WKRC WGHP WFBM KOIL KMBC WISN
WGL KFH WBCM WWNC WDBJ WBRC
WFIW WDOD KLRA KLZ KVI KFPY 7:15-7:30 The World Today WEAF WJAR WCSH WFI WWJ WSAI KSD WEB WFI WRC WCAE WEBC WBT WSB WSMB WOAL WIDX KSTP 10:30-11:00 Empire Builders WJZ WBZ WBZA KYW KWK WREN WBZA WHAM KDKA WJR WREN WTMJ KSTP WLW WFAA KPRC WOAI KOA KFI KOMO KHQ KGW KYW KWK WEBC WKY KSL KGO KSL KSL KGO KFI KOMO KILE

10:30-11:00 Gold Strand Crussders

WABC WEAN WNAC WCAU WCAO WMAL

WHP WJAS WLBW WFBL WHEC WMAK

WADC WHK WKRC WGHP WOWO WFBM

WADC WHK WKRC WGHP WOWO WFBM KRLD KLRA KFJF KLZ KDYL KHJ KFRC KOIN KVI KFPY 7:30-8:00 Roxy and His Gang
WJZ WBZ WREN WBZA WHAM KWK
WSB WSM WSMB WPTF WIBO WJDX WMAQ KMOX KOIL KMBC WISN WCCO
KFH WSPD WWNC WTAR WDBJ WBRC
WDOD WREC WLAC WDSU KRLD KLRA 7:45-8:00 Back of the News in Washington
WEAF WOC WEBC WJAR WCSH WGR
WSAI KVOO WDAF WCAE WRC WOW KFJF KTSA KLZ KOIN KFPY KDYL KHJ

KOL

KGO

KGW

KSD

KSTP

WABC WEAN WNAC WCAI WLBW WFBL WMAK WHK WKBN WOWO WFBM KOIL	WCAO WMAL WKRC WGHP	WIBW WBCM WSPD WDBJ WBRC WDOD WREC WLAC KLRA KLZ KFPY
WKBN WOWO WFBM KOLL WCCO WIBW KFH WBC! WWNC WDBJ WFIW WDO! KLZ KDYL KFPY 11-30-12:00 Roy Ingraham's Paramou	M WSPD WMT D WREC KLRA	8:30-9:00 Around the World with Libby WZ WBZ WBZA WBAL WHAM KDKA WJR WLW KWK KYW WHAS WSM WMC WSB WSMB KOA KSL KGO KGW KOMO KHQ KĒCA WREN
WABC WEAN WCAO WMA WKBW WADC WGHP WKBI KOIL KMBC WISN WIBW WSPD WMT WWNC WDB. WDOD WREC KLRA KLZ 11:45-12:00 Literary Digest Prohibitio	WOWO WFBM KFH WBCM WBRC WFIW KDYL KFPY	8:30-9:00 Florsheim Frolic WEAF WEEI WJAR WTAG WCSH WFI WRC WGY WGR WCAE WWJ WSAI WGN KSD WOW WDAF WEBC WRVA WBT WJAX WIOD WKY WOAI WBAP WHO WPTF KSTP KPRC
KWK WENR WEN KFAB WTMJ WHAS WSM WMC WAPI WSMB KPRC WFAA	WSB WJDX	9:00-9:30 Eveready Program WEAF WEEI WFI WRC WGY WGR WCAE WTAM WWJ WGN KSD WHO WDAF WHAS WSM WMC WSB WJAR KOA KSL KGO KFI KGW KOMO
9:30-9:45 U.S. Army Band Concert		KHW WSMB WJDX WCSH WFJC WSAI
WABC WMAL WHP WLBV	W WFBL WKBW WGL WBCM WFIW WDOD	9:00-9:30 Johnson and Johnson WJZ WBZ WBZA WBAL WHAM KDKA KYW KWK WLW CKGW WREN 9:00-10:00 Old Gold-Paul Whiteman Hour
11:00-11:15 "Your Child" WEAF WRC WOC WGY WSM KSTP WJAR WTAC WSAI WEBC WPTF WBT WHAS WKY KTHS	WWJ KSD WCSH WCAE WJAX WIOD	WABC WEAN WNAC WCAU WCAO WMAL WHP WJAS WLBW WFBL WHEC WKBW WADC WHK WKRC WGHP WKBN WOWO WFBM WBBM KMOX KOIL KSCJ KMBC WISN WCCO KFH WBCM WSPD WMT
11:00-11:30 Air-Way House Cleaning WABC WEAN WNAC WCAU WJAS WLBW WFBL WHEC WKRC WGHP WOWO WFBM	WCAO WMAL WKBW WADC WBBM KMOX	WWNC WTAR WDBJ WGST WBRC WFIW WDOD WREC WLAC WDSU KRLD KLRA KFJF KTSA KLZ KDYL KHJ KFRC KXA KOIN KFPY 9:30-10:00 Sunoco Show
KOIL KMBC WSPD 4:30-5:00 Auction Bridge Game	WTAG WCSH	WJZ WBZA WBAL WHAM KDKA WJR WCKY KYW CKGW
WLIT WRC WGY WGR WWJ WSAI WGN KSD WDAF WRVA WBT WJAX WMC WSB WAPI KVOC WFAA KPRC WOAI	WCAE WTAM WOC WOW WHAS WSM	9:30-10:00 Happy Wonder Bakers WEAF WJAR WEEI WTAG WCSH WRC WGY WGR WCAE WTAM WFJC WWJ WSAI WIBO KSD WHO WOW WDAF WTMJ KSTP WEBC WRVA WHAS WMC WSB WSMB KVOO WKY WOAI KOA KSL WJDX KGO KOMO KECA KGW
5:30-6:00 Club Plaza Orchestra WFAN WCAO WMAL WHP WKBW WGHP WKBN WOW WCCO WBCM WMT WDOI	WJAS WFBL O WMAQ KMBC O WREC KLRA	KSL WJDX KGO KOMO KECA KGW KHQ WBAP WFI 10:00-10:30 Westinghouse Salute WJZ WBZ WBZA WBAL KDKA WJR
6:30-7:00 Charles Dorenberger's Orch WABC WHP WJAS WLBV WKRC WKBN WOWO WFBM WBCM WDBJ WBRC WFIW KLZ KPRC KVI KFPY	estra V WFBL WKBW I KMBC KFH WDOD KLRA	KYW KWK WEBC WBT WJAX WHAS WSM WMC KECA WAPI WSMB KGW KPRC KOA KSL KGO KHQ KOMO WHAM WREN WRVA WKY WOAI WSB
6:45-7:00 Literary Digest Prohibition I WJZ WBZ WBZA WLW WJR WRVA WPTF WBT	Poll Wham KDKA WJAX WIOD	10:00-10:30 Graybar's, "Mr. and Mrs." WABC WEAN WNAC WCAU WCAO WMAL WJAS WLBW WFBL WKBW WADC WHK WKRC WGHP WKBN WOWO WFBM WBBM
7:00-7:30 Bernhard Levitow's Commo WLBZ WCAO WMAL WHP WKBW WKBN WBCM WMT WDOD KLRA KLZ KFRC 7:00-7:30 Voters' Service	lore Ensemble WJAS WLBW WDBJ WBRC KVI KFPY	WSPD WWNC WTAR WDBJ WST WBRC WDOD WREC WLAC WDSU KRLD KLRA KFJF KTSA KLZ KDYL KHJ KFRC KOL KOIN KFPY
WEAF WJAR WTAG WCSE WSAI WOW WDAF WEBG WSMB WFAA WSB WOAI KOMO KHQ KOA WHO 7:30-8:00 Manhattan Moods	WHAS WMC KGO KGW WJDX	10:30-11:00 Columbia Symphony Orchestra WABC WEAN WNAC WFAN WCAO WMAL WHP WJAS WLBW WFBL WKBW WHK WKBN WBRC WFIW WREC WLAC KLRA 10:30-11:30 Radio-Keith-Orpheum Hour
WLBZ WFAN WCAO WHP WKBN KOIL WIBW WBCN WBRC WDOD WREC WLAC 7:30-8:00 Soconyland Sketches	WLBW WKBW WMT WDBJ KLRA KLZ WCSH WGY	WEAF WEEI WJAR WTAG WCSH WFI WRC WGY WGR WCAE WFJC WWJ WSAI KSD WHO WOW WAPI WSMB WFAA KPRC WOAI WKY KTHS KOA KSL KGO KGW KOMO KHQ WIBO
8:00-8:30 Pure Oil Orchestra WIZ WRAL WHAM KDKA	J WEBC WHAS WSM WSB	WTAM WJDX WTMJ KSTP WRVA WBT WJAX WIOD WHAS WSM WMC WSB WDAF WEBC KECA 11:00-11:30 Ted Weems and His Orchestra WABC WEAN WFAN WCAO WMAL WHP
8:00-8:30 Blackstone Program WABC WEAN WNAC WCAU WHP WJAS WLBW WFBI WGHP KOIL KMBC WRH	J WCAO WMAL , WHEC WKBW M WMT	WLBW WFBL WKBW WGHP KOIL KMBC WISN WIBW KFH WBCM WSPD WMT WDBJ WBRC WFIW WDOD WREC KLRA KLZ KDYL KFPY
8:30-9:00 Romany Patteran WABC WEAN WNAC WCAU WHP WJAS WLBW WFBI	J WCAO WMAL WKBW WADC	11:30-12:00 Phil Spitalny's Music WEAF WFI WGR WFJC WWJ WOW KSD CKGW WDAF

11:00-11:30 The Columbians

WHK WKRC WKBN KMOX KOIL KMBC

Wednesday

10:30-11:00 Interior Decorating
WABC WEAN WNAC WCAU WCAO WMAL
WHP WJAS WLBW WFBL WMAK WADC
WHK WKRC WGHP WOWO WFBM WBBM
KMOX KOIL KMBC WISN WSPD

2:30-3:00 Syncopated Silhouettes

WABC WEAN WNAC WCAU WCAO WMAL
WHP WJAS WFBL WMAK WADC WHK
WKRC WGHP WKBN WFBM WBBM KOIL
KMBC WISN WIBW WGL KFH WBCM
WSPD WMT WWNC WJBJ WBRC WDOD WREC WLAC KLRA KLZ KDYL KVI KFPY

KFPY
2:45-3:45 U.S. Navy Band
WJZ
WBAL KDKA KWK WRVA KOA
5:00-5:15 Columbia Grenadiers
WABC WEAN WFAN WMAL WHP
WMAK WGHP WKBN WMAQ KMOX KMBC
WISN WCCO WSPD WMT
WREC KLRA KLZ
5:00-5:15 National Woman's Party
WJZ
WBAL WHAM WLW
KWK KSTP
WJZ
WBAL WHAM WLW
KWK KSTP
WEBC WBT
WJAX WHAS WMC
WSB
KVOO WBAP WSM KPRC WOAI
KOA KVOO WBAP WSM KPRC WOAI KGO WRC_ WJDX KOMO WSM

TOO-T30 BEEN BARE TO THE WARD WABC WLBZ WMAL WHP WAS WMAK WHK WFBM KOIL WISN WGL WBCW WM WM T WWNC WDB WDOD KLRA KLZ KHJ KFRC WLBW wcco KOIL WISN WWNC WDBJ WBRC KFRC

7:30-7:45 Adventures of Colonel Powell
WABC WLBZ WLBW WFBL KMBC WCCO
WBCM WMT WWNC WDBJ WDOD WLAC
KLRA KLZ KHJ KFRC KVI KFPY

7:45-8:00 The Shoe-Flyer
WABC WEAN WNAC WCAU WCAO WFBL
WHEC WHK WKRC WGHP WFBM WMAQ
KMOX WISN WCCO WDSU KRLD KLZ
KDYL KHJ KFRC KOIN KVI KFPY

7:45-8:00 Wilbur Coon Players
WEAF WTIC WJAR WTAG WCSH WRC
WGY WGR WCAE WFJC WWJ WSAI
WIBO KSD WOC WOW WDAF

8:00-8:30 The Yeast Foamers WBZA WHAM KDKA KYW
WREN KSTP WEBC KFAB 9:00-10:00 U.S. Marine Band WJZ WBZ KWK WLW

8:30-9:00 Forty Fathom Trawlers
WABC WEAN WNAC WCAU WCAO WMAL
WHP WJAS WLBW WFBL WHEC WKBW
WADC WHK WKRC WGHP WFBM WMAQ WADC WHK KMOX WGL WSPD

8:30-9:00 Mobiloil Concert WIAR WTAG WCSH WLIT
WCAE WWJ WSAI KSD
WFJC WTAM KOA KVOO
WOAI WKY KSL WTIC
KSTP WEBC WTMJ WEAF WEEI WRC WGR WOC WOW WFAA KPRC WGN WGY

8:30-9:00 Sylvania Foresters WBZA WHAM KDKA KWK WJZ WBZ WREN KYW KFAB

9:00-9:30 Van Heusen Program
WABC WEAN WNAC WCAU WCAO WMAL
WJAS WLBW WFBL WMAK WADC WHK
WKRC WGHP WOWO WMAQ KMOX KOIL
KMBC WSPD

9:00-9:30 Halsey, Stuart Program WEAF WEEI WJAR W WTAG WCSH WLIT WGR WSAI WRC WGY WCAE WWJ KSTP WBT KSD WOC WOW WJAX WSMB KVOO KPRC KOMO KHQ KGW WTMJ KSL CKGW WHAS WMC WSB WOAI KOA KGO KFI WRVA WSM CKGW

9:30-10:00 Cuckoo KDKA WCKY WIBO WREN KWK WIZ WBZ WBZA WHAM

9:30-10:00 La Palina Smoker WABC WEAN WOVO WMAQ KMOX KOIL
KMBC WISN WCCO WSPD WREC

9:30-10:30 Palmolive Hour WTIC WJAR WTAG WCSH WGR WCAE WTAM WEAF WEEI WLIT WRC WGY WGN KSD WOC WOW WWJ WSAI WWJ WSA1 WGA WDAF WSMB KSTP WSB WBT WJAX WHAS WSM WMC KVOO KPRC WOAL KGW KFI KOMO KOA KSL KGO KHQ WFAA

KHQ WFAA

f0:00-10:30 Philos Hour
WABC WEAN WNAC WCAU WCAO WMAL
WJAS WLBW WFBL WHEC WMAK CFRB
CKAC WADC WHK WKRC WGHP WOWO
WFBM WMAQ KMOX KOIL KMBC WISN
WCCO WIBW WSPD WWNC WTAR WDBJ
WBRC WDOD WREC WLAC WDSU KRLD
KLRA KFIF KTSA KLZ KDYL KHJ
KFRC KOL KOIN KFPY

10:30-11-00 Vincent Lopez and His Orchestra wowo

10:30-11:00 Vincent Lopez and His Orchestra
WJZ WHAM WREN KDKA WLW KWK WBZ WBZA

10:30-11:00 Coca Cola Topnotchers WEAF WEEI WTIC WJAR WTAG WCSH WRC WGR WCAE WWJ WSAI WLIT WBT WJAX WIOD WAPI WSMB WKY KOA KSL KGO KOMO WJDX WGY WYOO CKGW KSTP WEBC WRVA WSM WMC WSB KTHS KPRC WOAL KECA KGW KHQ WDAF CKGW WPTF

10:30-11:00 Grand Opera Concert
WABC WEAN WNAC WCAO WMAL WJAS
WLBW WFBL WMAK WADC WHK WKRC
WGHP WFBM KMOX KOIL KMBC WISN KMBC WISN WWNC WDBJ WIBW WBCM WSPD WMT WWNC WDBJ WBRC WFIW WDOD WREC WLAC KLRA KLZ KDYL KFRC KFPY

| RLZ KDYL KFRC KFFY | RECORD KOIL KMBC WISN WBCM WSPD WMT WCCO WIBW KFH WBCM WSPD WMT WWNC WDBJ WBRC WFIW WDOD WREC KLRA KLZ KDYL KHJ KFRC KFPY KLRA KLZ

Thursday

WBZ WBZA WREN WRC KWK WJZ KSTP

| 11:00-11:15 | Boni and | Ami | WEAF | WJAR | WTAG | WCSH | WLIT | WRC | WTAM | WWJ | WSAI | WTAM | WSAI KYW KSD WOC WEBC WRVA WBT WTMJ KSTP WHAS WJAX WIOD WSM WMC WAPI WSMB KVOO WSB WKY KTHS KPRC WOAL CKGW WJDX KFI KGO KOA KSL KPO KGW KHO

11:30-11:45 Du Barry Beauty Talk
WABC WEAN WNAC WCAU WCAO WMAL
WJAS WLBW WFBL WKBW WADC WHK

9:30-10:00 De Voe Redskins
WABC WEAN WNAC WCAU WCAO WMAL
WJAS WLBW WFBL WKBW WADC WHK
WKRC WGHP WOWO WBBM KMOX KOIL
KMBC WSPD WKRC WGHP WAIU WOWO WBBM KOIL KMBC WISN WSPD 4:00-5:00 U.S. Army Band WCFL WSM KWK WREN KGO KOMO WRC WBZ WSM KGW KOMO WJR WJZ WLW KOA 9:30-10:00 Jack Frost's Melody Moments
WEAF WJAR WTAG WCSH WFI WRC
WGY WGR WCAE WWJ WSAI WTAM WBZA KSTP WSM 9:30-10:00 Maxwell House Melodies WCAE WISY WJZ WBZ WBZA WBAL WHAM KDKA WJR WLW WHAS WSM WJAX WRV WKY KSTP WTMJ WEBC WSM WMC WBT WRVA WSB KYW WSMB WOAI KGO KPRC KOA WTAM KYW KYW KWK 5:15-6:00 Governor Clinton Hotel Orchestra WABC WFAN WMAL WHP WFBL WKBW WGHP WKBN WOWO KMOX KMBC WISN WCCO WBCM WSPD WMT WWNC WDOD WREN KGW KECA WIOD KSL KOMO KHQ WBAP NSD KOMO KRIQ WBAT 10:00-10:30 Voice of Columbia WABC WEAN WNAC WFAN WCAO WMAL WHP WLBW WFBL WKBW WADC WHK WKRC WGHP WKBN KMOX KOIL KMBC WISN WIBW WBCM WSPD WMT WNNC WREC KLRA KLZ 5:30-5:45 The Toddy Party
WEAF WEEI WTIC
WLIT WRC WGY WJAR WTAG WCSH WGR WCAE WFJC KSD WOC WDAF WDBJ WDOD WLAC KLRA KLZ KDYL WSAI KYW WWJ 10:00-11:00 RCA Victor Hour WEAF WEEI WJAR 6:00-6:30 Hotel Shelton Orchestra THOLE SHERON OF CHARLES TRANSPORT OF THE CHARLES THE C WABC WHP WTAG WFJC ŴŴJ WRC WGY WGR WCAE WHK WRVA WHO WSAI KSD WOW WEBC WMT WBT WKY KPRC WOAI
WTMJ WBAP WJAX WIOD
WMC WSB WSMB KYW WREC KLRA KLZ KOA KSL. KVI KFPY 7:00-7:30 Mid-Week Federation Hymn Sing WEAF WCSH WMC WJAR WIBO WJDX WHAS WSM KVOO WDAF WTAM KSTP KGO KHQ WJDX KGW KFI KTHS WHAS WWJ KOMO KHO 7:30-8:00 In the Nation's Capital 10:00-11:00 Atwater Kent Mid-Week Program
WJZ WBZ WBZA WBAL WHAM KDKA
WJR KWK WREN WGN WCKY WEAF WSMB WOLA WEBC WMC WJAR WTAG WRC WSAI WIBO WJDX KOA KPO KGO KGW KECA KOMO KHQ WJAX WBT 10:30-11:00 Columbia Educational Features KPRC WABC WEDAY WNAC WFAN WCAO WMAL
WHP WLBW WFBL WKBW WADC WHK
WKRC WKBN WOWO KMOX KOIL KMBC
WISN WIBW KFH WBCM WSPD WMT
WWNC WDBJ WBRC WFIW WDOD WREC 7:30-8:00 Ward's Tip Top Club WABC WEAN WNAC WCAU WCAO WJAS WFBL WHK WGHP WKBN WMAQ KMOX 8:00-8:15 The Vagabonds -8:15 The Vagabonds
WEAN WNAC WCAO WMAL WLBW WKBW
WKRC WKBN WFBM WISN WIBW KFH
WBCM WMT WDBJ WFIW WDOD WREC WLAC KLRA KLZ KDYL KFRC WLAC KERA KLZ KDYL KFRC KFF1

WABC WEAN WFAN WCAO WMAL WHP
WBW WFBL WKBW WKRC WGHP WFBM
KMBC WISN WIBW WGL KFH WBCM
WSPD WMT WWNC WDBJ WBRC KFPY

11:00-11:30 Conoco Adventures
WLS KWK WDAF WREN WOW
WWW WMC KVOO WKY WFAA KTHS
KPRC WOAI KOA KSL WHAS

11:00-12:00 National Grand Opera
WEAF WFI WRC WGR WWJ
WRAY CKGW WBT WTAM WDAF

11:30-12:00 WII Osborne and His Orchestra
WABC WEAN WFAN WCAO WMAL WHP
WLBW WFBL WKBW WGHP WFBM KOIL
KMBC WISN WCCO WGL KFFH WBCM
WSPD WMT WWNC WDBJ WBRC WFIW
WDOD WREC KLRA KLZ KDYL KFPY 11:00-11:30 Dream Boat KVI KFPY KLZ KHJ KFRC KLRA 8:00-9:00 Fleischmann Hour WEEL WTAG WJAR WEAF WGY WGR WDAF WWJ WJDX WHAS WCAE WFJC WTMJ WBT WMC WSB WRC WHO WJAX WOW WSMB WIOD KOA WSM KECA WKY WSAI KPRC WEBC WRVA KGO KHQ WIBO KSD KSL. KOMO WOAL KHQ WBAP KTHS WAPI CKGW WTAM KGW KSTP WPTF 8:15-8:30 Columbia Educational Features
WABC WEAN WNAC WFAN WCAO WMAL
WJAS WLBW WFBL WKBW WHK WKCC WGHP WKBN WOWO WFBM KOIL WISN WIBW KFH WBCM WMT WWNC WFIW WDOD WREC WLAC KDYL KHJ KFRC KFPY WWNC WCCO WDBJ KLZ KDYL KDS 8:30-9:00 Douglas Shoemakers WABC WEAN WNAC WFAN WCAO WMAL WJAS WLBW WFBL WKBW WADC WHK WKRC WGHP WOWO WMAQ KMOX KOIL WARC WIBW WSPD WWNC WTAR WDBJ KLZ Friday 10:45-11:00 Columbia Salon Orchestra
WABC WEAN WNAC WCAU WCAO WMAL
WLBW WFBL WMAK WADC WHK WGHP
WWNC WDBJ WFIW WDOD WLAC KLRA WIBW WSPD WWNO WDOD WREC WLAC WBRC WRR KFJF 8:30-9:00 Champion Sparkers W.IZ WBZ WBZA WBAL WHAM KDKA WREN WJR. KFAB KLZ WLW WLS KWK 11:00-12:00 NBC Music Appreciation Hour WJZ WEAF WBZ WBZA WI 9:00-9:30 Smith Brothers WBZA WBAL WHAM KWK WREN KFAB WJZ WBZ WBZA WIBO KWK WBAL WHAM KDKA WREN WCKY WJR WIBO KWK MAC WCAO WMAL WABC WEAN WNAC WCAU WCAO WMAL WJAS WLBW WFBL WHEC WKBW WADC WHK WKRC WGHP WOWO WFBM WBBM WMBC WISN WCCO WSPD KWK KDKA WJR WLW WFJC KSL WKY WIOD WSMB WAPI WPTF WLIT WWJ KTHS WEEL WTAG WCSH WJAR WCAE WTAM WOW WDAF WHAS WSM WMC KSTP KPRC WOAL WSB 9:00-9:30 Seiberling Singers WEAF WEEI WJAF WJAX WRVA WEBC WJDX KFKX WSAI WTAG WCSH WFI WJAR 3:00-4:00 U.S. Marine Symphony Orchestra
WEAF WTAM WWJ KSD WHO
KYW WRC WCSH WCAE WTAM WWJ WDAF WRC WGY WGR WOW KSD WHO WOW WSAI KYW KSTP WTMJ WHAS WIOD WSM WMC 4:00-4:30 Light Opera Gems
WABC WEAN WNAC WLBZ WCAU WMAL
WHP WFBL WMAK WADC WGHP WFBM WJAX KOA KGO KFI WSMB WAPI WOAI WSB WRT KOMO KHQ KPRC WKY KGW WBAP KPRC WRVA

WBBM KOIL KMBC WISN WCCO WIBW WGL WBCM WSPD WMT WWNC WDBJ WBRC WDOD WREC WLAC KLRA KLZ KGW KOMO KHO KGO KGO KFI WBAP WLW WMC KDYL KFRC KVI KFPY 10:00-10:30 At the Sign of the Green and White
WABC WEAN WNAC WCAU WCAO WMAL 4:30-5:00 Club Plaza Orchestra "S-3:00 CUBP Flag Orchestra
WABC WNAC WCAU WMAL WHP
WMAK WADC WKRC WGHP KMOX KOIL
KMBC WISN WCCO WIBW WGL WBCM
WSPD WMT WWNC WDBJ WBRC WDOD
WREC WLAC KLRA KLZ KDYL KVI WHP WJAS WLBW WFBL WMAK WADC WKRC WGHP WOWO WMAQ KMOX KOIL WCCO WIBW KFH WGST WRRC WDE WISN WSPD WWNC WBRC WTAR WREC WLAC WDSU KLRA WRR KOIN KFJF KLZ KDYL KHJ KFPY KFRC WQAM WDBO WTOC WDAE KTRH KOL KMBC WISN WCCO WGL WBC WWNC WDOD WREC KLRA KLZ 10:30-11:00 Smith Ballew and His Orchestra WJZ WHAM KDKA KWK WREN WJR KGO KHQ 6:00-6:15 Musical Foursome WABC WKBN KMBC WCM WMT WWNC
WDBJ WBRC WFIW WDOD WREC KLRA
KLZ KFRC KVI KFPY 10:30-11:00 Curtis Institute of Music
WABC WEAN WNAC WCAU WCAO WMAL
WJAS WLBW WFBL WMAK WADC WHK
WKRC WGHP KMOX KOIL KMBC WISN
WIBW WBCM WSPD WMT WWNC WDBJ 6:30-7:00 Don Bigelow and His Orchestra

WCAO WHP WJAS WLBW WFBL WMAK

WKRC WFBM KMBC WISN WGL KFH

WBCM WWNC WDBJ WBRC WFIW WDOD

KLRA KLZ KFRC KVI KFPY WBRC WEIW WDOD WREC WLAC KLRA KDYL KFPY KLZ 11:00-11:15 Hamilton-Brown Sketch Book WJZ WBZ KWK WBZA WHAM KDKA WJR WREN KOA KSL KGO 7:00-7:30 Roy Ingraham's Paramount Orchestra WABC WLBZ WMAL WHP WJAS WMAK WGHP WFBM KOIL WISN WIBO KSL KGO WLBW KOMO KFAB KECA KGW KHQ KOMO KFAB WKY WVOO WBAP WHAS WSM WSMB KTHS WMC WSB KECA WKY WCKY WCCO WJDX WGL WBCM WMT WDOD KLRA KLZ WWNC WDBJ WBRC KHJ KFRC KVI 7:30-3:00 Raybestos Twins
WEAF WTIC WCSH WLIT
WCAE WWJ WSAI WIBO 11:00-11:30 Will Osborne and His Orchestra WABC WEAN WCAO WLBW WFBL WADC WKRC WGHP KOIL KMBO WLIT KOA WIBO KSD WRC KMBC WISN WOW KFPY KFH CKGW WGR WGY WSM WAPI WSMB WHAS WJDX WIBW WGL WBCM WSPD WDAF WMC WMT WWNC WDBJ WREC KLRA KLZ WBRC WFIW WDOD WSB 8:00-9:00 Cities Service Concert Orchestage
WEAF WEEI WTIC WLIT W.
WCAE WTAM WJAH WCSH K.
WOW WDAF KSTP WTMJ W. KDYL WGR KSD WRC 11:00-12:00 Vincent Lopez and His Orchestra KYW WEAF CKGW WSM WGY WOW WDAF WKY WWJ WEBC KOA KGW WFAA KOMO 11:30-12:00 Bert Lown and His Orchestra WOC WSAI WABC WEAN WCAO WLBW WFBL
WGHP KOIL KMBC WISN WIBW
WBCM WSPD WMT WWNC WBBJ
WFIW WDOD WREC KLRA KLZ KGO KGW KHQ WTAG CKGW KECA WHK WOAI KPRC KSL WTAG CKGW RECA
8:309:00 U.S. Army Band Concert
WABC WEAN WNAC WCAO WMAL WJAS
WLBW WFBL WMAK WADC WHK WKRC
WGHP WFBM WMAQ KMOX KOLL KMBC
WIBW KFH WBCM WSPD WDBJ WDOI WBRC WKRC KMBC Saturday 10:00-10:30 Saturday Syncopators
WABC WEAN WNAC WLBZ WCAU WCAO
WMAL WHP WJAS WLBW WFBL WKBW
WHK WGHP WFBM WBBM KMOX KOIL
KMBC WCCO WGL WBCM WSPD WWNC KLZ WLAC KLRA 8:45-9:00 Natural Bridge Program
WJZ WBZ WBZA WI
KWK WRVA WJAX WI
WBT WREN WPTF WHAM KDKA WLW WIOD KFAB WIBO 9:00-9:30 Clicquot Club Eskimos WEAF WEEI WTIC W WLIT WRC WGY W WDOD WLAC KLRA WFIW KDYL WJAR WTAG WCSH WOW WCAE WSAI WGR WDAF WOC 10:30-11:00 Columbia Grenadiers WABC WEAN WNAC WLBZ WCAU WCAO WMAL WHP WJAS WLBW WFBL WKBW WHK WFBM WBBM KMOX KOIL KMBC WCCO WGL KFH WBCM WSPD WWNC KSD WWJ WIBO WKBW 9:00-9:30 Interwoven Pair WJZ WBZA WMC WBZ WHAM KDKA WREN KPRC WFIW WDOD WLAC KLRA WKY WOAI KOA WHAS 11:00 12:00 U.S. Army Band Concert
WABC WEAN WNAC WLBZ
WMAL WHP WJAS WFBL
WFBM KOIL KMBC WIBW
WSPD WMT WWNC WDBJ WJAX KWK WRVA WSM WSB WBT KGŴ KGO KOMO KHQ WAPI KSL WCAU WCAO WSMB WIOD WLW WFAA WJR CKGW WKBW WKBN WEBC KYW KSTP WGL WBCM 9:00-10:00 True Story Hour WABC WEAN WNA WFIW WDOD WCAU WCAO WMAL WHEC WMAK WADC WOWO WMAQ KMOX WEAN WNAC WLBW WFBL WREC KLRA KLZ KHJKFRC 12:00-12:30 Adventures of Helen and Mary WABC WEAN WNAC WFAN W WJAS WFBL WKBW WADC W WFBM KMBC WCCO WIBW WI WJAS WHK WKRC WGHP WMAL WIIP WCCO KFH KTSA KLZ KVI KFPY WISN KOIL KMBC WSPD WGHP WKBN KLRA KFJF KFRC KOIN KRLD KDYL WBCM WMT KHJ KVI WWNC WBRC WFIW WDOD WREC 9:30-10:00 Old Company's Songalogue WEAF WEEI WTIC WJAR WCSH WLIT KFRC KFPY KLZ KHJ 2:00-2:30 Ann Leaf at the Organ
WABC WCAU WCAO WMAL WHP
WFBL WKBW WADC WCHP
WBBM KMOX KOIL WCCO WBCM WSPD
WMT WWNC WDBJ WBRC WDOD WREC WGY 9:30-10:00 Armour Program
W772 WBZ WBZA WJR WRC KYW WREN WEBC WRVA WMC KSTP WSB WSMB WOAI KOA KSL WSM WKY WLAC KLRA KLZ KDYL KPRC KFPY KHJ WHAS KGO WJAX WJDX WHAM KWK 2:30-3:00 Dominion Male Quartet

WABC WEAN WNAC WCAU WCAO WMAL
WHP WJAS WFBL WKBW WADC WHK WBT KFI KGW KOMO WIOD KDKA WTMJ KHQWAPI WKRC WGHP WKBN WOWO WBBM 10:00-10:30 Armstrong Quakers WJZ WBZ WBZA KDKA KYW WREN KPRC WHAN WJR KSTP KMOX KWK KOIL WMT WCCO WIBW WWNC WDBJ KFH WBCM WBRC WDOD WBCM WSPD WTMJ

WOAL KTHS WKY WSMB KOA

KSL

WREC

KDYL KHJ

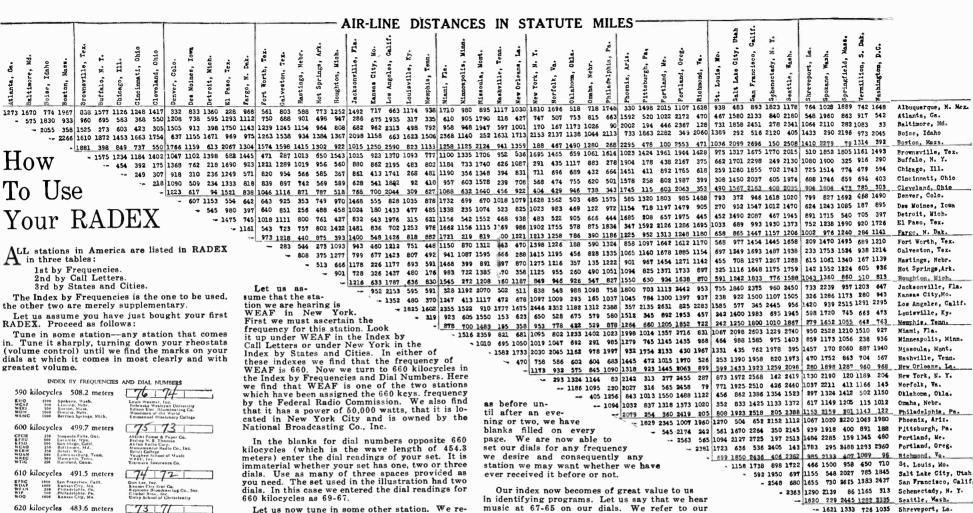
WLAC KLRA KLZ

WEBC WHAS WSM

WSB

WBT

KVOO



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

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

Now we tune in some other station, proceeding

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 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 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 same locality have the same frequency, they are required to divide time. In this case of course it is not possible to 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

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 -220 2445 1222 2335 Seattle, Wash.

- 1621 1333 726 1035 Shreveport, La.

identifying -2216 1055 2105 Spokane, Wash.

stations as we 1042 321 Springfield, Mass.

will not ordinarily 1073 Veraillion, S. Dal.

hear those stations with

500 watts or less unless they are close to our home city.

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

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

72 170 1

Viesoria Broadensting Ass'in.
Winnipeg Grain Erchange
Canadin Narional Rallways
Cassolo Liamus
Stephens Collège
Franzelle on the Air, Inc.
M. A. Lorie Co.
State, Marketing Bureau

Earle C. Anthony, Inc. American Insurance Union

70 | 68 |

69 167

68 166 1

67 165

Omeha Grain Exchange National Broadcasting Co., Inc.

630 kilocycles 475.9 meters

640 kilocycles 468.5 meters

650 kilocycles 461.3 meters

660 kilocycles 454.3 meters

670 kilocycles 447.5 meters

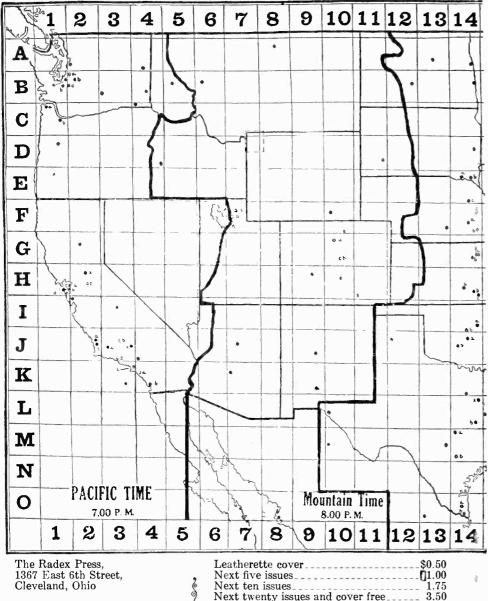
680 kilocycles 440.9 meters

5000 San Francisco, Cal. 5000 Rainigh, N. C.

WAAW 500 Omaha, Nehr. WEAF 50000 New York City

5000 Nashaille Tenn

5000 Los Angeles, Calif. 5000 Columbus, Ohio



	1	2	3	4	5	6	7	8	8	10	11	12	13	1
1367	Radex East 6 land, (th Str			2	Ne Ne	atheret ext five ext ten ext twe	issues issues	3				1.75) ;
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City	and St	tate				v4 3	+		E3					

4:00-4:30 The Aztecs
WABC WEAN WABC WEBN WKBU WKBU WKBW WADC WHK
WGHP WKBN WBBM KOIL KMBC WCCO
WIBW WBCM WSPD WMT WWNC WDBJ
WBRC WDOD WREC WLAC KLRA KLZ
KDYL KHJ KFRC KVI KFPY

4:30-5:00 Yonkers Madrigal Society
WJZ KDKA WLW KYW KWK KSTP
WFAA

4:30-5:00 Club Plaza Orchestra

WABC WEAN WCAU WCAO WMAL WHP
WFBL WKBW WADC WKRC WGHP KMOX
KOIL KMBC WCCO WIBW WBCM WSPD
WMT WWNC WDBJ WBRC WDOD WREC
WLAC KLRA KLZ KDYL KFRC KVI

5:00-5:30 French Trio

WABC WFAN WCAO WMAL WHP WFBL
WKBW WGHP WOWO WMAQ KMOX KMBC
WCCO WBCM WSPD WMT WWNC WDOD
WREC KLRA KLZ KHJ KFRC KVI

5:30-5:45 Quiet Harmonies

WABC WFAN WCAO WMAL WHP WJAS
WFBL WKBW WKRC WGHP WKBN WOWO
WMAQ KMBC WCCO WIBW WBCM WSPD
WMT WWNC WDOD WREC KLRA KLZ
KHJ KPRC KVI KFPY

5:45-6:00 Skinner Concert WEAF WLIT WRC WGY WCAE WSAI KYW KSD WEEI

6:00-6:30 Hotel Shelton Orchestra
WABC WHP WLBW WFBL WKBW WADC
WFBM WBBM KMBC WIBW KFH WBCM
WWNC WDBJ WBRC WFIW WDOD WREC
KLRA KLZ KHJ KFPC KVI KFPY

6:30-7:00 "Ted Husing's Sportslants"

WABC WHP WJAS WLBW WKBW WKRC

WKBN WFBM KOLL KMBC KFH WBCM

WMT WWNC WDBJ WBRC WFIW WDOD

KLRA KLZ KHJ KYI KFPY

7:00-7:15 Floyd Williams
WEAF WEEI WJAR WCSH WGY WWJ
WOW WSM WMC WSB WSMB

7:00-8:00 Bernhard Levitow's Commodore Ensemble

WABC WLRZ WCAO WMAL WHP
WLBW WKBW WKBN WFBM WISN KFH
WBCM WMT WWNC WDBJ WBRC WDOD
KLRA KLZ KHJ KFRC KVI K7PY

7:15-7:30 The Jameses WEAF WTAG WGY WWJ WOW CKGW WJAR

7:15-7:30 RCA Theremin Music
WJZ WREN KWK KFAB KSTP WEBC
WPTF WBT WSM WIOD WHAS WSB
WSMB KVOO KPRC WOAI KOA KSL
WMC KTHS

7:30-8:00 Phil Spitalpy's Music WEAF WJAR WCSH WGY WWJ WHO WRVA WPTF WTAG KSTP

7:30-8:00 The Fuller Man
WJZ WBZ WBZA WBAL WHAM KDKA
WLW KYW CKGW WREN KFAB KWK
KOA KSL KGO KECA KGW KHQ
8:00-8:15 Dixies Circus

WJZ WBZ WBZA KDKA WLW KYW

8:00-8:15 Columbia Educational Features
WABC WEAN WARC WLBZ WCAU WCAO
WMAL WJAS WLBW WFBL WKBW WADC
WKRC WKBN WFBM KOIL KMBC WISN
WCCO WIBW KFH WBCM WSPD WMT
WWNC WDBJ WDOD WREC WLAC KLRA
KLZ KDYL KHJ KFRC KVI KFPY

8:00-8:30 The New Business World
WEAF WJAR WTAG WFI
WGY WGR WWJ WSAI WOW WDAF
WRVA WPTF WBT WMC WSMB KOA
WCAE WOAI KTHS WFIC KSD WHO
WJAX KPRC KGO KGW KHQ KOMO
KECA KSL WCAE KSTP

8:15-8:30 Babson Finance Period
WABC WEAN WNAC WCAU WCAO WMAL
WJAS WLBW WFBL WKBW WADC WHK

WKRC WGHP WOWO WMAQ KMOX KOIL KMBC WCCO WSPD

8:30-9:00 Launderland Lyrics

WEAF WEEI WJAR WTAG WCSH WRC
WGY WGR WCAE WWJ WSAI KSD
WHO WOW WDAF KSTP WEBC WRVA
WBT WJAX WIOD WHAS WSM WMC
WSB WAPI WSMB WKY KTHS WBAP
KPRC WOAI KOA KSL WSBT WIBO

8:30-9:00 The Silver Flute
WJZ WHAM WJR KWK CKGW KOA
KDKA

8:30-9:00 Dixie Echoes

WABC WEAN WLBZ WFAN WCAO WMAL
WJAS WLBW WFBL WKBW WADC WKRC
WGHP WKBN WFBM KMOX KOIL KMBC
WISN WCCO WIBW WBCM WSPD WMT
WWNC WDBJ WBCC WDOD WREC
KLRA KLZ KHJ KVI KPPY

9:00-9:30 Nit Wit Hour

WABC WEAN WNAC WLBZ WCAU WCAO
WMAL WHP WJAS WLBW WFBL WKBW
WADC WHK WKRC WGHP WKBN WOWO
WFBM WMAQ KMOX KOIL KMBC WISN
WCCO WIBW KFH WBCM WSPD WMT
WWNC WDBJ WBRC WFIW WDOD WREC
WLAC KLRA KLZ KDYL KHJ KFRC

 9:00-10:00 General Electric Hour
 WEAF
 WEEI
 WJAR
 WTAG
 WCSH
 WFI

 WRC
 WGY
 WGR
 WCAE
 WTAM
 WWJ

 KSD
 WHO
 WOW
 WDAF
 WTMJ
 WEBC

 WJAX
 WHAS
 WSB
 WBT
 KPC
 WOAI

 WRVA
 WSAI
 KSTP
 WAPI
 WKY
 KOA

 KGW
 KOMO
 KHQ
 KSL
 KGO
 KFI

 WSMB
 WIBO
 WMC
 WFAA

9:30-10:00 Dutch Masters Minstrels
WJZ WBZ WBZA WBAL WHAM KDKA
WLW WJR KWK KYW WREN

11:00-11:30 Roy Ingraham's Paramount Orchestra

WABC WEAN W.BBZ WCAU WCAO WMAL

WHP WLBW WFBL W.RBW WKRC W.GHP

KOIL KMBC WISN WIBW WBCM WMT

WWNC W.DBJ WBRC W.FIW W.DOD W.REC

KLRA KLZ K.DYL K.FPY WADC W.HK

K.NX

11:30-12:00 Guy Lombardo and His Royal Canadians
WABC WCAU WCAO WMAL WHP
WFBL WKBW WKRC WGHP KOIL KMBC
WISN WIBW WBOM WMT WWNC WBRC
WFIW WOOD WREC KLRA KLZ KDYL
KFPY

12:00-1:00 Rudy Vallee and His Orchestra WEAF WRC WTAM KSD WHO KSTP WJAX

4:00-4:30 The Aztecs WABC WEAN WNAC WLBZ WCAU WCAO WMAL WHP WFBL WKBW WADC WHK WGHP WKBN WBBM KOIL KMBC WCCO WIBW WBCM WSPD WMT WWNC WDBJ WBRC WDOD WREC WLAC KLRA KLZ KDYL KHJ KFRC KVI 4:30-5:00 Yonkers Madrigal Society WJZ KDKA WLW KY KYW KWK KSTP WFAA 4:30-5:00 Club Plaza Orchestra
WABC WEAN WCAU WCAO WMAL WHP
WKBW WADC WKRC WGHP KMOX
KOLL KMBC WCCO WIBW WBCM WSPD
WMT WWNC WDBJ WBRC WODD WREC KLRA KLZ WLAC KVI KDYL KFRC 5:00-5:30 French Trio WABC WFAN WCAO WMAL WHP WFBL WKBW WGHP WOWO WMAQ KMOX KMBC WCCO WBCM WSPD WMT WWNC WDOD WCCO WBCM WSPD WMT KLRA KLZ WREC KHJ KFRC KVI KEPY 5:30-5:45 Quiet Harmonies -3:33 Quiet riarmonies
WABC WFAN WCAO WMAL WHP WJAS
WFBL WKBW WKRC WGHP WKBN WOWO
WMAQ KMBC WCCO WIBW WBCM WSPD
WMT WWNC WDOD WREC KLRA KLZ KHJ KFRC KVI KFPY 5:45-6:00 Skinner Concert WEAF WLIT WRC WCAE WSAI WGY WEEI KYW KSD 6:00-6:30 Hotel Shelton Orchestra

WABC WHP WLBW WFBL WKBW WADC
WFBM WBBM KMBC WIBW KFH WBCM
WWNC WDBJ WBRC WFIW WDOD WREC KFPY

3

5

WWNC KLZ KHJ KFRO
KLRA KLZ KHJ KFRO
6:30-7:00 'Ted Husing's Sportslants''
WABC WHP WJAS WLBW WKBW
WKBN WFBM KOIL KMBC KFH
WWNC WDBJ WBRC WFIW
KHJ KVI KFPY WLBW WKBW WKRC KMBC KFH WBCM WDOD

7:00-7:15 Floyd Williams
WEAF WEEI WJAR WCSH WGY
WOW WSM WMC WSB WSMB WWJ

7:00-8:00 Bernhard Levitow's Commodore Ensemble WABC WLBZ WCAO WMAL WHP WLBW WKBW WKBN WFBM WISN WJAS KFH WBCM WMT V KLRA KLZ F 7:15-7:30 The Jameses WWNC WDBJ WBRC WDOD KHJ KFRC KVI KI PY

WTAG WGY WWJ WOW CKGW WEAF WJAR

7:15-7:30 RCA Theremin Music
WJZ WREN KWK KFAB
WPTF WBT WSM WIOD KSTP WEBC WHAS WSB WSMB KVOO KPRC WOAI KOA KSL KTHS WMC.

7:30-8:00 Phil Spitalny's Music WEAF WJAR WCSH WGY WRVA WPTF WTAG KSTP WWJ WHO

7:30-8:00 The Fuller Man WBZ KYW WJZ WBZA WBAL WHAM KDKA CKGW WREN KFAB KWK WLW KECA KGW KOAKSL KGO KHQ 8:00-8:15 Dixies Circus

WJZ WBZ WBZA KDKA WLW KYW

8:00-8:15 Columbia Educational Features WABC WEAN WAS WLBZ WCAU WCAO
WMAL WJAS WLBW WFBL WKBW WADC
WKRC WKBN WFBM KOIL KMBC WISN WCCO WIBW KFH WBCM WSPD WMT WWNC WDBJ WDO KLZ KDYL KHJ WDOD WREC WLAC KLRA KFPY KLZ KFRC KVI

8:00-8:30 The New Business World WEAF WJAR WTAG WFI WTAG WFI WWJ WSA WBT WMO WCSH WRC WEAF WDAF WSAI WOW WGY WGR WPTF WMC WSMB KOA KSD WOAI KTHS WFJC WHO WCAE WJAX комо KPRC KSL KGO KGW KHO WCAE KSTP KECA

8:15-8:30 Babson Finance Period
WABC WEAN WNAC WCAU WCAO WMAL
WJAS WLBW WFBL WKBW WADC WHK

WKRC WGHP WOWO WMAQ KMOX KOIL KMBC WCCO WSPD

8:30-9:00 Launderland Lyrics WEAF WGY WTAG WCSH WRC WEEL WJAR WGR WCAE WWJ WSAI KSD WERC WRVA WHO WOW WDAF KSTP WMC WIOD WHA WSMB WKY WHAS WJAX WSM WRT KTHS WBAP WAPI WSB KPRC WOAI KSL WSBT WIBO KO4

8:30-9:00 The Silver Flute KWK CKGW KOA WIZ WHAM WJR KDKA

8:30-9:00 Dixie Echoes -9:00 Dixide Echoes
WABC WEAN WLBZ WFAN WCAO WMAL
WJAS WLBW WFBL WKBW WADC WKRC
WGHP WKBN WFBM KMOX KOIL KMBC
WISN WCCO WIBW WBCM WSPD WMT WWNC WDBJ WBRC WDOD WREC WLAC KLRA KLZ KHJ KVI KFPY

9:00-9:30 Nit Wit Hour WABC WEAN WNAC WLBZ WCAU WCAO WJAS WLBW WFBL WKBW WKRC WGHP WKBN WOWO WMAL WHP WADC WHK WFBM WMAQ KMOX KOIL WCCO WIBW KFH WBCM WWNC WDBJ WBRC WFIW KMBC WISN WBCM WSPD WMT WBRC WFIW WDOD WREC KFRC WLAC KLRA KLZ KDYL KHJ

9:00-10:00 General Electric Hour WEAF WEEI WJAR WTAG WCSH WFI WTAM WWJ WRC WGY WGR WCAE WOW WDAF WTMJ WHO WEBC KSD WJAX WHAS WSB KPRC WOAI WBT KSTP WRVA WSAI WAPI WKY KOA KGW KOMO KHQ WSMB WIBO WMC KSL KGO

9:30-10:00 Dutch Masters Minstrels
WJZ WBZ WBZA WBAL WHAM KDKA
WLW WJR KWK KYW WREN WLW

9:30-10:00 Around the Samovar | WABC | WEAN | WNAC | WLBZ | WCAO | WMAL | WHP | WJAS | WLBW | WFBL | WKBW | WABC | WKRC | WGHP | WKBN | WWOW | WFBM | WMAQ | KMOX | KOIL | KMBC | WISN | WISW | WHOW | W WDOD WREC WLAC KLRA KLZKDYL KFPY KHJ

10:00-11:00 B. A. Rolfe and His Orchestra WEAF WEEI WJAR WTAG WCSH WFI WRC WGY WGR WCAE WWJ WGN KSD WHO WOW WDAF WIOD KST WGN KSTP WTMJ WSMB WJAX WHAS WSB WBT KPRC WMC WOAI WKY WAPI WSAI WFJC KOA KGO KFI KSL KGW WEBC WJDX WRVA WFAA KOMO KHQ

10:00-11:00 Paramount Publix Hour WABC WEAN WNAC WLBZ WMAL WHP WJAS WLBW WCAU WCAO WLBW WFBL WHEC WHK WKRC WGHP WMAL WHP WKBW CFRB WADC WHK WCAH WKBN WOWO WFBM WBBM KMOX KSCJ KMBC WISN KOIL WCCO WIBW WBCM WSPD WMT WWNC WTAR KFH WDBJ WBRC WFIW WDOD WREC WLAC WDSU KRLD KLRA KFJI KDYL KHJ KFRC KOL KFJF KTSA KLZ KOIN KNX KFPY

11:00-11:30 Roy Ingraham's Paramount Orchestra
WABC WEAN WLBZ WCAU WCAO WMAL
WIPP WLBW WFBL WKBW WKRC WGHP
KOIL KMBC WISN WIBW WBCM WMT
WWNC WDBJ WBRC WFIW WDOD WREC KDYL KFPY KLRA KLZ KNX

11:30-12:00 Guy Lombardo and His Royal Canadians
WABC WCAU WCAO WMAL WHP
WFBL WKBW WKRC WGHP KOIL KM
WISN WIBW WBCM WMT WWNC WB KMBC WWNC WBRC WFIW WDOD WREC KLRA KLZ KFPY

12:00-1:00 Rudy Vallee and His Orchestra WEAF WRC WTAM KSD WHO WJAX KSTP

					50		AIR-	LINE	DIST	ſΑľ	NCE	is i
Atlante, Ge. Baltimore, Md. Bolse, Idaho Boston, Mass. Brownsville, Pex.	Buffalo, N. T. Chicago, Ill. Cincinnati, Ohio Cloveland, Ohio	Denver, Colo. Des Moines, Iowa Detroit, Mich.	El Paso, Tex. Fargo, N. Dak.	Fort Worth, Tex.	Hastings, 1	Hot Springs, Ark. Houghton, Mich.	Jacksonville	Kansas City, Mo. Los Angoles, Galif.	Louisville, Ky. Memphis, Tenn.	Miami, Fla.	Kinneapolis, Minn.	Missoula, Mont.
		1208 738 595	1293 1112	750 6	03 588 88 901		286	675 1935	1174 938 317 335		980 905	895 1 1790
- 2055 358 1525 2266 1610 3	273 603 423 305 1872 1453 1663 1754		1750 1143 969 975					962 2313 1158 663	498 792 1623 1506		948 1140	
- 1881		1766 1159 613		1								
How	1575 1234 1184 1402	1047 1102 1398	688 1445	471 2	87 1013	650 1543	1025	923 1370	1093 777	1100	1335	1706
110 00	454 392 175 249 307		1690 923 1249 571	1221 12 820 9	89 1019 54 566	956 560 585 367		862 2195 413 1741		1184	733 356	1740
rd III			1333 818					541 1892		957		1578
To Use	-			1046 11	16 871	787 518	768		309 627	1088	632	1640
		- 607 1153			25 353		1468	555 828		1732		670 1
Your RA		⇒ 545	980 397 1475 745		51 256 11 800	488 458 761 427		180 1433 643 1976		1338	235	1552
Tour IVE	MILLA	_	·- 1161)		802 1422			1253 978			
				973 12	18 440	875 393	1400	548 1426	818 882	1721	219	819
ALL stations in A	merica are list	ed in RADE	C X	- 2	83 544	273 1093		460 1212		1150	870	
A in three tables:					- 808	375 1277 513 666	799 1178	677 1423 226 1177	807 492 693 591	1468	1087	
1st by Freque					_	- 901	728	326 1437	480 176		722	
2nd by Call L 3rd by States							1216	633 1787	636 830	1545	272	1208
The Index by Frequency		ne to be use		Let u: ne tha		ta.		952 2153	595 591		1192	
the other two are me			tio	n we a	re hea	ring is		- 1352	1825 1602	1247		
Let us assume you		ght your fir				ew Yo			± 319			
RADEX. Proceed as			fre			ascerta this stat				878		
Tune in some stat			es it	up und	ier W	EAF in	the I	ndex b	y		1516	2359
in. Tune it sharply, to (volume control) unt			Oa			under					•	1010
3:-14 -b:-b :4			Ti Inc	dex by	State	es and	Cities	s. In e	ither of			- 1

dials at which it comes in most clearly and with greatest volume.

INDEX BY EREOLENCIES AND DIAL SUBSPICE

INDEX BY FREQUENCIES	AND DIAL NUMBERS
590 kilocycles 508.2 meters	76 174
WCAJ 500 Spokane, Wash, WCAJ 500 Lineuin, Nebe, WEEL 500 Boston, Mass.	Louis Wasmer, Inc.
WEEL 500 Buston, Mass	Nebraska Wesleyan University Edison Elec, lituminating Co.
WEMC 1000 Berrien Springe, Mich.	Entmenuel Milationary College
600 kilocycles 499.7 meters	75 73
CFCH 350 frequels Falls, Ont.	Abilibi Power & Paper Co.
KFSD 500 San Dicto, Calif.	Slahop N. S. Thomas
WCAO 254 Baltimore, MJ.	Airtan Radio Corp. Atonumental Radio Co., Inc.
WOAN 500 Lawrenceburg, Tenn.	Beluit College Vaughan School of Music
	WREG. Inc.
WTIC 250 Hartford, Coun.	Travelera Insuranca Co.
610 kilocycles 491.5 meters	74 72
RFRC 1000 San Prancisco, Calif.	Don Lee, Inc.
WDAF 6000 Knneas City, Mp. WFAN 500 Philadelphia, Pa.	Kansas City Star Co.
	Regulate Broad and the Co., Inc.
WOO 1806 Knness City, Mo.	Unity School of Christianity
620 kilocycles 483.6 mcters	73 7/
KFAD 500 Phoents, Aria. KGW 1000 Portland, Ore.	Electrical Equipment Co.
WDAR 1900 Temps file	
WDHO 1000 Ortsisdo, Fla.	Tampa Fublishing Co.
WLBZ 500 Unver-Forcroft, Me. WTMJ 1000 Milwaukee, Wis.	Railing College, Inc. Thompson L. Guernacy
WIND 1000 Milwaukee, Wie.	Milwaukee Journal
630 kilocycles 475.9 meters	72 70
CFCT 500 Victoria, B. C. CJGX 500 Yorkian, Sask.	Victoria Broadensting Ass'n.
CNRA 500 Moncton, N. B.	Winnipeg Grain Exchange Canadian National Railways
WGSF 500 Columbia, Mo. WGSF 500 Evansellie, Ind.	Stephens College
WMAL 250 Washington, D. C.	Evansville on the Air, Inc. M. A. Leese Co.
WOS 500 Jefferson City, Mo.	State Marketing Bureau
640 kilocycles 468.5 meters	
KFI 5008 Los Angeles, Calif. WAID 5008 Columbus, Ohio	Earle C. Anthony, Inc.
water See Columbus, Ohlo	American Insurance Union
650 kilocycles 461.3 meters	70 68
WSM 5000 Nashville, Tenn.	
	National Life & Accident Inc. Co.
660 kilocycles 454.3 meters	69 167 1
WAAW 500 Omntin, Nebr.	0.10.10.10.10.10.10.10.10.10.10.10.10.10
WEAP 50000 New York City	Omaha Grain Exchange National Broadcasting Co., Inc.
670 kilocycles 447.5 meters	18166
	00 00
WMAQ 5000 Chicago, III.	Chicago Dally News, Inc.
680 kilocycles 440.9 meters	10.16.
	10/100
RPO 5000 San Francisco, Cal. WPTP 5000 Ruletgb, N. C.	Hala Bros. & The Chronicle Durham Life Insurance Co.

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.

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7

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

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

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

Now we tune in some other station, proceeding

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ישפטא זייד ב			Norfolk,	Oklahoma	Oceaha,	hiladelphia	Phoenix,	itteburgh,	ortland,	ortland,	Richmond	÷	Salt	San	Schenectady,	Seattle,	hre h	Spokane,	F.	E	fashington,	
_	Z.	Ne W				ā. 1748		ο.	2015	ρ,	≝ 1628	938	483				764	1028	1889	742	1648	Albuquerque, N. Mex.
117 218	1030 427	1810 747	1696 507	518 753	718 815		1592		1022		470		1580			2180		1960		917	542	Atlanta, Ga.
	1001			1173			2002	194	446	2367	128	731	1858		278	2341	1064	2110	282	1083	33	Baltimore, Md.
	1713			1138		2113	733	1863	2282	349	2060	1389	292	516	2120	405	1433	290				Boise, Idaho
341	1359	188	467	1490	1280				100		471		2099							1314	392	Boston, Mass.
)52	536	1695	1465	659	1061	1614	1023		1961				1317					1852			1493	Brownsville, Tex-
526	1087	291	435	1117	883		1904	178	438		375		1701					1900	325		290 594	Buffalo, N. Y. Chicago, Ill.
394	831	711	696	689	432		1451	411		1765	618		1260 1450			1743		1514 1746		694	403	Cincinnati, Ohio
538	708		474	755	620		1578	258 115		1987 2063	399 353		1567			2035		1804			303	Cleveland, Ohio
156	922	404	429	946 503	738 485	343 1575			1803		1488	793			1618			827			1490	Denver, Colo.
523		1628 1023	983	469	122		1154		1197		905	270			1012			1243			895	Des Moines, Iowa
168	938		522	905	666	444	1685		657		445	452	1490	2087	467	1945	891	1715	540	705	397	Detroit, Mich.
69		1902		578		1834			2126		1695	1033	689	993	1930	1373		1238				El Paso, Tex-
		1213		786	390	1186	1225		1313			658			1157		1002		1240			Fargo, N. Dak.
543	470	1398	1226	188		1324			1642			56B			1445			1470				Fort Worth, Tex. Galveston, Tex.
366		1415		456		1335			1678				1249					1753 1061				Hastings, Nebr.
\$97		1275		357		1222	901		1454			455	1116		1267			1552				Rot Springs, Ark.
.70		1125	955			-	1094	630	1371	1638	897		1242			1588		1360				Houghton, Wich.
	1187	849			1098		1550		1113		953	-	1840					2239				Jacksonville, Fla.
502 172	511 678	838 1097							1300		937	238			1107		326	1286	1173	380	943	Kansas City, Mo.
-	1675			1182					2631		2283	1585	577	345	2445	956		939				Los Angeles, Calif.
153	623	650	528		579				692				1400					1720				Louisville, Ky.
195	358	953	778	422		878			1205		722		1250					1652 2528			763	Memphis, Tenn, Miami, Fla.
821	681	1095	-	1233		1023			1357			,	2098	2503 1585		1403	1	1173				Minneapolis, Minn.
		1019			291				1145		968	1331				395	1	170			1940	Missoula, Mont.
582		l .		1152		1997	1		2133				1390					1752				Nashville, Tenn.
7	470	758		602 575		1090			1445		-		1433				280	1898	1287	960	968	New Orleans, La.
	•	1213		1324			2142		277				1972			2419	1230	2190	120	1189	204	New York, N. Y.
				1186					565		79	771	1925			2440		2211				Norfolk, Va.
						1256			1550			456				1523	1				1150	Oklahoma, Okla.
		un-							1318							1372					1012	Omaha, Nebr. Philadelphia, Pa.
		an vo. v				-	2079			2419			1923			1112					1980	Phoenix, Ariz.
		" -	-	eve	erv				2345				1670			2145		1918				Pittsburgh, Pa.
e.				ow 8		to		•		2563		1094	2127	2725	197	2513	1484	2285	159	1345	480	Portland, Ne.
ou				any			cу						636				1783	295	2488	1291	2360	Portland, Oreg.
d.	sire	an	ıd d	cons	eque	ntly	an	y					1850					2133				Richmond, Va.
				ant				hav	•				1158					1500				St. Louis, Mo.
rı	ecei	ved	it b	efore	e or	not.									1950		1155		2027		3 2437 3 2437	Salt Lake City, Utah San Francisco, Calif.
3111	ind	le v 1	100	beco	mag	of	Cres	t vs	1116	to m				•	2548		1655				5 313	Schenectady, N. Y.
				gran											•	2363	1820				2 2335	Seattle, Wash.
				on o																	6 1035	Shreveport, La.
				cies								i	den	tif	yin	g					5 2105	Spokane, Wash.
				tun								8	tati	ons	8.5	w				124	2 371	Springfield, Mass.
				vo si									will			rdin				•	, 1073	Vermillion, S. Dak.

dentifying programs. Let us say that we hear sic at 67-65 on our dials. We refer to our ex by Frequencies and Dial Numbers and we that we are in tune to 680 kilocycles. On this re there are two stations: KPO at San Franco and WPTF at Raleigh, N. C. Both of these ions have 5000 watts in power. But knowing the is the closer to our set, we can tell almost riably which station we are hearing. The io Commission has had to give the same freacy in most cases to several stations but they distributed them geographically so they ald not interfere. When two stations in the le locality have the same frequency, they are arried to divide time. In this case of course it tot possible to tell which one of the two statis is broadcasting at the particular moment hear it but we do know it is one or the other of

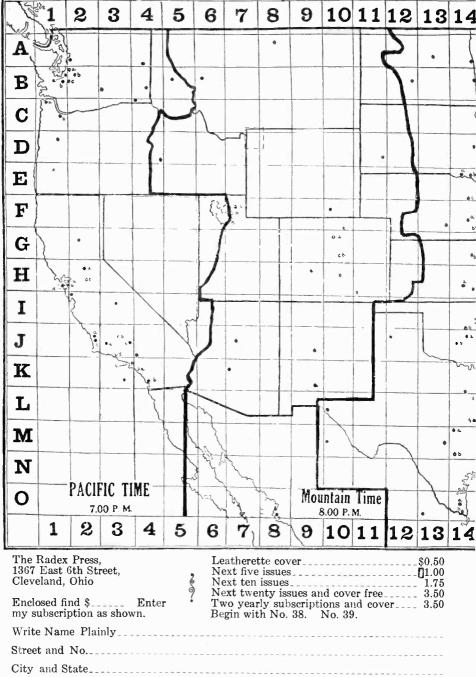
The second column in the index by Frequencies, we have seen, gives the power of the station as assured in watts. This power also aids us in

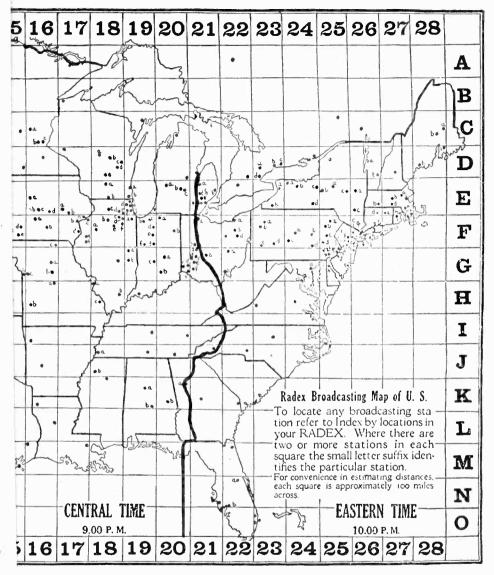
stations as we 1242 371 Springfield, Mass.
will not ordinarily 1073 Yeraillion, S. Dalhear those stations with
500 watts or less unless they are close to our
home city.

The Ladow by Coll Letters also has appears are

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

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





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

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KEY

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

540 kilocycles 555.6 meters

CKX 500 ___ Brandon, Manitoba XFA 50 ___ Mexico City

550 kilocycles 545.1 meters

KFDY 500 Brookings, S. D. St. Louis, Mo. KFUO KFYR 500 Bismarck, N. D. Corvallis, Ore. St. Louis, Mo. Buffalo, N. Y. Cincinnati, Ohio 500 KOAC 1000 KŠD WGR 2N N 500 1000 WKRC ХC 500 XEY 105 Merida, Yucatan

560 kilocycles 535.4 meters

KFDM Beaumont, Texas Denver, Colo. Oakland, Cal. Beloit, Wis. 500 KLZ KTAB 1000 1000 WEBW 500 3D1N 3+N 1N X+ 3S WFI 500 Philadelphia, Pa. Philadelphia, Pa. Chicago, Ill. Philadelphia, Pa. Knoxville, Tenn. Chicago, Ill. Miami, Fla. **WIBO** 1000 WLIT WNOX 500 1000 WPCC 500 -WQAM 1000

570 kilocycles 526.0 meters

KGKO KMTR KXA 250 Wichita Falls, Texas + Wichita Falls, 1exa Hollywood, Cal. Seattle, Wash. Columbus, Ohio Youngstown, Ohio Cazenovia, N. Y. New York City Yankton, S. D. 500 500 WEAO **75**0 WEAU WKBN WMAC WMCA WNAX WNYC WSYR ic 2 500 250 ã 500 1000 $\bar{3}$ New York City Syracuse, N. Y. 500 250 Asheville, N. C. 1000

580 kilocycles 516.9 meters

CFCL CHMA 500 250 Toronto, Ont Edmonton, Alta. CJCA CJSC CKCL 500 Edmonton, Alta. 500 Toronto, Ont. Toronto, Ont. Toronto, Ont. 4 3 4 500 CKNC CKUA CNRE 500 500 Edmonton, Alta. 500 Edmonton, Alta. KGFX KSAC WIBW WOBU 200 Ď Pierre, S. D. Manhattan, Kans. $\tilde{2}_{+C}$ 500 500 Topeka, Kansas Charleston, W. Va. Huntington, W. Va. 250 WSAZ 250 WTAG 250 Worcester, Mass.

Manitoba Telephone System Sria, de Agricultura y Fomento

S. D. State College Concordia Theological Seminary Hoskins-Meyer State Agricultural College Pulitzer Publishing Co. Radio Station WGR, Inc. WKRC Incorporated Partido Socialista del Sureste

Magnolia Petroleum Co.
Reynolds Radio Co., Inc.
Associated Broadcasters
Beloit College
Strawbridge & Clothier
Nelson Bros. Bond & Mortgage Co.
Lit Brothers
Sterchi Bros.
North Shore Congregational Church
Miami Broadcasting Co.

Wichita Falls Broadcasting Co.
KMTR Radio Corp.
American Radio Tel. Co.
Ohio State University
W. P. Williamson, Jr.
Clive B. Meredith
Knickerbocker Broadcasting Co., Inc.
Gurney Seed & Nursery Co.
Dept. of Plants and Structures
Clive B. Meredith
Citizens Broadcasting Co., Inc.

R32

Dominion Battery Co.
Christian and Missionary Alliance
The Edmonton Journal, Ltd.
The Evening Telegram
The Dominion Battery Co.
Canadian National Carbon Co., Ltd.
University of Alberta
Canadian National Railways
Dana McNeil
State Agricultural College
Topeka Broadcasting Assn., Inc.
Charleston Radio Broadcasting Co.
WSAZ, Inc.
Telegram Publishing Co.

590 kilocycles	508.2 meters	8/	MONE
KHQ 1000 X+N WCAJ 500 1	Spokane, Wash. Lincoln, Nebr. Boston, Mass. Berrien Springs, Mich. Omaha, Nebr. Mexico City Lynchburg, Va.	Louis Wasmer, Inc. Nebraska Wesleyan University Edison Elec. Illuminating Co. Emmanuel Missionary College Woodmen of the World Sria. de Industria, Commercio y Trabajo Abe Cohen	670 MTRS. 447.5 DIAL
600 kilocycles	499.7 meters	78	Ca !
CFCH 250 3 CJRM 500 4 CJRW 500 4 CMW 1000 CNRO 500 3 KFSD 500 + WCAC 250 2+ WCAO 250 C WGBS 600 2+ WMT 500 X WOAN 500 1 WREC 500 1+C	Iroquois Falls, Ont. Moose Jaw, Sask. Fleming, Sask. Havana, Cuba Ottawa, Ont. San Diego, Cal. Storrs, Conn. Baltimore, Md. New York City Waterloo, Iowa Lawrenceburg, Tenn. Memphis, Tenn.	Abitibi Power & Paper Co, Jas. Richardson & Sons, Ltd. Jas. Richardson & Sons, Ltd. Columbus Commercial & Radio Co. Canadian National Railways Airfan Radio Corp. Conn. Agricultural College Monumental Radio Inc. General Broadcasting System, Inc. Waterloo Broadcasting Co. WREC, Inc. WREC, Inc.	
610 kilocycles	491.5 meters	13	
CMBY 200 612 KFRC 1000 C WDAF 1000 N WFAN 500 2C WIP 500 2 -WJAY 500 D	Havana, Cuba San Francisco, Cal. Kansas City, Mo. Philadelphia, Pa. Philadelphia, Pa. Cleveland, Ohio	Lino E. Cosculluala Don Lee, Inc. Kansas City Star Co. Keystone Broadcasting Co., Inc. Gimbel Bros. Co. Cleveland Radio Broadcasting Corp.	
620 kilocycles	483.6 meters	12	
KGW 1000 X+N KTAR 500 + WFLA 1000 1+ WLBZ 500 WSUN 1000 1+ WTMJ 1000 +N	Portland, Ore. Phoenix, Arizona Clearwater, Fla. Bangor, Maine St. Petersburg, Fla. Milwaukee, Wis.	Oregonian Publishing Co. KAR Broadcasting Co. Chamber of Commerce Maine Broadcasting Co., Inc. Chamber of Commerce Milwaukee Journal	
630 kilocycles	475.9 meters	70	
CFCT 500 CJGX 500 CNRA 500 KFRU 500 1 WGBF 500 1 WMAL 250 +C WOS 500 1+ XFC 350	Victoria, B. C. Yorkton, Sask. Moneton, N. B. Columbia, Mo. Evansville, Ind. Washington, D. C. Jefferson City, Mo. Jalapa, Ver.	Victoria Broadcasting Association Winnipeg Grain Exchange Canadian National Railways Stephens College Evansville On the Air, Inc. M. A. Leese State Marketing Bureau Goberno Estado de Veracruz	
640 kilocycles	468.5 meters	672	0 0 0 0
CMCF 250 643 -KFI 5000 N -WAIU 500 C WOI 5000 D XFG 2000	Havana, Cuba Los Angeles, Cal. Columbus, Ohio Ames, Iowa Mexico City	Raul Karmen Earle C. Anthony, Inc. American Insurance Union State College of Agriculture Sria, de Guerra y Marina	
650 kilocycles wsm 5000 N	461.3 meters Nashville, Tenn.	National Life & Accident Ins. Co.	
660 kilocycles	454.3 meters	93	
WAAW 500 D -WEAF 50000 N	Omaha, Neb. New York City	Omaha Grain Exchange National Broadcasting Co., Inc.	
670 kilocycles	447.5 meters	6/-	
WMAQ 5000 C XEB 1000	Chicago, Ill. Mexico City	Chicago Daily News, Inc. E. Buen Tono, S. A.	

680 kilocycles	440.9 meters	5 9
KFEQ 2500 D KPO 5000 N WPTF 1000 N 250 CP	St. Joseph, Mo. San Francisco, Cal. Raleigh, N. C. Gueda Springs, Kans.	Scroggin & Co. Bank Hale Bros. & The Chronicle Durham Life Insurance Co. R. E. Campbell and F. L. Stallard
690 kilocycles	434.5 meters	57
CFAC 500 1 CFCN 500 1 CHCA 500 1 CJCJ 500 1 -CKGW 5000 2N CNRC 500 1 -CNRX 5000 2 NAA 1000 VAS 500	Calgary, Alta. Calgary, Alta. Calgary, Alta. Calgary, Alta. Calgary, Alta. Toronto, Ont. Calgary, Alta. Toronto, Ont. Arlington, Va. Louisburg, N. S.	The Calgary Herald Western Broadcasting Co. The Western Farmer Albertan Publishing Co., Ltd. Gooderham & Worts, Ltd. Canadian National Railways Canadian National Railways U. S. Navy Department of Fisheries
700 kilocycles	428.3 meters	55
WLW 50000 N	Cincinnati, Ohio	Crosley Radio Corp.
710 kilocycles	422.3 meters	53 2
KEJK 500 ₩OR 5000	Los Angeles, Cal. Newark, N. J.	R. S. MacMillan Bamberger Broadcasting Service, Inc.
720 kilocycles	416.4 meters	3/2
-WGN 25000 N WLIB 25000 N	Chicago, Ill. Chicago, Ill.	Chicago Tribune Chicago Tribune
730 kilocycles	410.7 meters	50
CHLS 50 1 CHYC 5000 2 CKAC 5000 2C CKCD 50 1 CKFC 50 1 CKMO 50 1 CKWX 100 1 CMK 2000 2 CNRM 5000 2 XEN 1000	Vancouver, B. C. Montreal, Que. Montreal, Que. Vancouver, B. C. Vancouver, B. C. Vancouver, B. C. Vancouver, B. C. Havana, Cuba Montreal, Que. Mexico City	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 General Electric, S. A.
740 kilocycles	405.2 meters	43%
KMMJ 1000 WSB 5000 Ñ	Clay Center, Neb. Atlanta, Ga.	The M. M. Johnson Co. Atlanta Journal Co.
750 kilocycles	399.8 meters	47
TIX 50 -WJR 5000 N	San Jose, Costa Rica Detroit, Mich.	WJR, The Goodwill Station, Inc.
760 kilocycles	394.5 meters	45
KVI 1000 C WEW 1000 D WJZ 30000 N	Tacoma, Wash. St. Louis, Mo. New York City	Puget Sound Broadcasting Co., Inc. St. Louis University Radio Corp. of America, Inc.
770 kilocycles	389.4 meters	40
KFAB 5000 1N -WBBM 25000 1C -WJBT 25000 1S	Lincoln, Nebr. Chicago, Ill. Chicago, Ill.	Nebraska Buick Automobile Co. The Atlass Co., Inc. The Atlass Co., Inc.
780 kilocycles	384.4 meters	42+
CKY 5000 3 CNRW 5000 3 KELW 500 2 KTM 500 2+ WEAN 250 +C WMC 500 +N WPOR 500 1 WTAR 500 1C	Winnipeg, Manitoba Winnipeg, Manitoba Burbank, Cal. Los Angeles, Cal. Providence, R. I. Memphis, Tenn. Norfolk, Va. Norfolk, Va.	Manitoba Telephone System Canadian National Railways Earl L. White Pickwick Broadcasting Corp. The Shepard Co. Memphis Commercial-Appeal WTAR Radio Corp. WTAR Radio Corp.

790 kilocycles	379.5 meters	2/1	
CMHC 500 791 KGO 7500 N WGY 50000 N	Tuinucu, Cuba Oakland, Cal. Schenectady, N. Y.	Frank H. Jones General Electric Co. General Electric Co.	
800 kilocycles	374.8 meters	392	
WBAP 5000 1XN WFAA 5000 1XN	Fort Worth, Texas Dallas, Texas	Carter Publications, Inc. News & Journal	
810 kilocycles	370.2 meters	38 2 KC	
WCCO 7500 C WPCH 500 D	Minneapolis, Minn. New York City	Northwestern Broadcasting, Inc. Eastern Broadcasters, Inc.	
820 kilocycles	365.6 meters		0.7
CMI 500 815 WHAS 10000 N	Havana, Cuba Louisville, Ky.	Instituto Provincial Courier-Journal & Times	
830 kilocycles	361.2 meters	36	
CMGA 300 834 —KOA 12500 N —WEPS 1000 D —WRUF 5000	Colon, Cuba Denver, Colo. Gloucester, Mass. Gainesville, Fla.	Leopoldo V. Figueros General Electric Co. Alfred F. Kleindinst University of Florida	
840 kilocycles	356.9 meters	35	
-CFCA 500 1 CHCT 1000 CKLC 1000 2 CKOW 500 1CMC 500CNRD 1000 2CNRT 500 1 WGM 100 3 WOOP 100 3	Toronto, Ont. Red Deer, Alta. Red Deer, Alta. Toronto, Ont. Havana, Cuba Red Deer, Alta. Toronto, Ont. Adamsburg, Pa. Jeannette, Pa.	Star Publishing & Ptg. Co. G. F. Tull & Ardern .Ltd. Alberta Pacific Grain Co., Ltd. Nestle's Food Co. Cuban Telephone Co. Canadian National Railways Canadian National Railways Oakford-Olympia Park Corp. Oakford-Olympia Park Corp.	
850 kilocycles	352.7 meters	3421	
NBA 750 846 WWL 5000 1	Shreveport, La. Balboa, Canal Zone New Orleans, La.	W. K. Henderson Loyola University	
860 kilocycles	348.6 meters	33	
KFQZ 250 KMO 500 + -WABC 5000 1XC -WBOQ 5000 1X WHB 500 D	Los Angeles, Cal. Tacoma, Wash. New York City New York City Kansas City, Mo.	Taft Radio & Broadcasting Co., Inc. KMO, Inc. Atlantic Broadcasting Corp. Atlantic Broadcasting Corp. WHB Broadcasting Co.	
870 kilocycles	344.6 meters	32	
WENR 50000 1N 1XN	Chicago, Ill. Chicago, Ill.	Great Lakes Broadcasting Co. Agricultural Broadcasting Co.	
880 kilocycles	340.7 meters	3/	
CHCS 10 4 CHML 50 4 CHRC 100 3 CJCB 50 CKCI 22.5 3 CKCV 50 3 CKOC 50 4 CNRQ 50 3 KFKA 500 2+ KLX 500 KPOF 500 2 WCOC 500 + WGBI 250 1 WQAN 250 1 WSUI 500	Hamilton, Ont. Hamilton, Ont. Quebec, Que. Sydney, N. S. Quehec, Que. Quebec, Que. Hamilton, Ont. Quebec, Que. Greeley, Colo. Oakland, Cal. Denver, Colo Meridian, Miss. Scranton, Pa. Scranton, Pa. Iowa City, Iowa	The Hamilton Spectator Maple Leaf Radio Co., Ltd. B. Fontaine N. Nathanson Le "Soleil," Ltd. G. A. Vandry Wentworth Radio & Auto Sply. Co., Ltd. Canadjan National Railways State Teachers College Tribune Publishing Co. Pillar of Fire, Inc. Mississippi Broadcasting Co. Scranton Broadcasters, Inc. Scranton Times University of lowa	

890 kilocycles 336.9 meters CFBO CKCO CMBC 50 St. John, N. B. Ottawa, Ont. 100 887 Havana, Cuba 100 Shenandoah, Iowa Little Rock, Ark. Vermillion, S. D. KFNF 500 2+ KFNF KGJF KUSD WGST WILL WJAR WKAQ WMAZ 250 2+ 1X 500 250 Atlanta, Ga. Urbana, Ill. 250 2+ +N Providence, R. I. San Juan, P. R. 250 500 1+ 250 Macon, Ga. WMMN 250 Fairmount, W. Va. 900 kilocycles 333.1 meters KGBU 500 Ketchikan, Alaska KHJ KSEI WJAX WKY WLBL ċ Los Angeles, Cal. Pocatello, Idaho Jacksonville, Fla. 1000 250 ZZ 1000 Oklahoma City 1000 2000 D Stevens Pt., Y WMAK 750 ČP1 Buffalo, N. Y. WRDA 1000 910 kilocycles 329.6 meters CFQC CJGC CJHS CNRL 500 Saskatoon, Sask. 500 London, Ont. 250 Saskatoon, Sask. 500 London, Ont. CNRS 500 Saskatoon, Sask. XFX 1000 Mexico City 920 kilocycles **325.9** meters CMHD CMX HHK 250 Caibarien, Cuba 250 916 Havana, Cuba Port au Prince, Haiti 1000 KFEL KFXF KOMO Denver, Colo. Denver, Colo. Seattle, Wash. 500 500 1000 Ñ KPRC WAAF 1000 +N D Houston, Texas Chicago, Ill. 500 WBSO WWJ XEX XFF Wellesley Hills, Mass. Detroit, Mich. Mexico City 250 ĎΧ 1000 500 250 Chihuahua, Chih. 930 kilocycles 322.4 meters CFRC 500 3 Kingston, Ont. Halitax, N. S. Wolfville, N. S. Midland, Ont. CHNS 500 _ _ _ CKIC 50 CKPR KFWI 50 3 500 1 San Francisco, Cal. KFWM KGBZ KMA WBRC **5**00 1+ 2+ 2+ Oakland, Cal. 500 York, Nebr. 500 Shenandoah, Iowa +C +C D 500 Birmingham, Ala. WDBJ 250 Roanoke, Va. WIBĞ 50 Elkins Park, Pa. 940 kilocycles 319.0 meters Honolulu, Hawaii Portland, Ore. Portland, Maine Fargo, N. D. 1000 KOIN WCSH WDAY WFIW

1000

1000

1000

950 kilocycles

750

150

500

500

1000

1000

WHA

CMCB

KFWB

KGHL KMBC WRC

500

 $\tilde{\mathbf{x}}$ N

952

C N

Hopkinsville, Ky.

315.6 meters

Madison, Wis.

Havana, Cuba

Hollywood, Cal.

Billings, Mont.

Kansas City, Mo. Washington, D. C.

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C. A. Munro, Ltd. Dr. G. M. Geldert D. Fernandez Cruz Henry Field Seed Co. Church of the Nazarene
University of South Dakota
Georgia School of Technology
University of Illinois The Outlet Co. Radio Corp. of Porto Rico Junior Chamber of Commerce Holt-Rowe Novelty Co.

Alaska Radio & Service Co. Don Lee, Inc. KSEI Broadcasting Association, Inc. City of Jacksonville WKY Radiophone Co. Wisconsin Dept. of Markets WMAK Broadcasting System, Inc. Buffalo Evening News

29 The Electric Shop, Ltd. Free Press Printing Co., Ltd. Radio Service, Ltd.
Canadian National Railways
Canadian National Railways Sria, de Educacion Publica

Manuel A. Alverez Francisco Lavin Republic of Haiti
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 Excelsior, Cia Editorial, S. A. Gobierno Estado de Chihuahua

Queen's University Halifax Herald, Ltd. Acadia Academy Midland Broadcasting Corp. Radio Entertainments, Inc Radio Entertainments, Inc. Educational Broadcasting Corp. Dr. George R. Miller May Seed & Nursery Co. Birmingham Broadcasting Co., Inc. Richardson-Wayland Elec. Corp. St. Pauls P. E. Church

Marion A. Mulrony KOIN, Inc. Congress Square Hotel Co. WDAY, Inc. The Acme Mills, Inc. University of Wisconsin

Jose Fernandez Suviaur Warner Bros. Broadcasting Corp. Northwestern Auto Supply Co., Inc. Midland Broadcasting Co., Inc. Radio Corp. of America

960 kilocycles	312.3 meters	25
CFCR 500 3 CFCY 250 1 CFRB 4000 2C CHCK 30 1 CHWC 500 3 CJBR 500 3 CKCK 500 3 CNRR 500 3 XEE 101	Regina, Sask. Chariottetown, P. E. I. Toronto, Ont. Charlottetown, P. E. I. Pilot Butte, Sask. Regina, Sask. Regina, Sask. Regina, Sask. Pueblo, Pue.	*Sydney I. Robinson The Island Radio Co. Rogers-Majestic Corp., Ltd. W. E. Burke R. H. Williams & Sons, Ltd. Cooperative Wheat Producers, Ltd. Leader Publishing Co., Ltd. Canadian National Railways Ramon Huerta G.
970 kilocycles	309.1 meters	
KJR 5000 D XEH 1000 WCFL 1500 N	Seattle, Wash. Monterey, N. L. Chicago, III.	Northwest Broadcasting System, Inc. Ing. Constantino de Tarnava Chicago Federation of Labor
980 kilocycles	305.9 meters	34
-KDKA 50000 N	Pittsburgh, Pa.	Westinghouse Elec. & Mfg. Co.
000 1-111	202 0	24 1050
990 kilocycles	302.8 meters	Westinghouse Elec. & Mfg. Co. MTRS.
WBZ 15000 1N WBZA 500 1N	Springfield, Mass. Boston, Mass.	Westinghouse Elec. & Mfg. Co. 285.5
1000 kilocycles	299.8 meters	DIAL
WHO 5000 IN WOC 5000 IN XEI 101	Culver City, Cal. Des Moines, Iowa Davenport, Iowa Morellia, Mexico	Los Angeles Broadcasting Co. Central Broadcasting Co. Central Broadcasting Co. Carlos Gutierrez M.
1010 kilocycles	296.8 meters	
CFLC 50 3 CKCR 50 3 CKSH 50 KGGF 500 2 KOW 500 WHN 250 1 WIS 500 CP+ WNAD 500 2 WPAP 250 1 WQAO 250 1 WRNY 250 1	Prescott, Ont. Waterloo, Ont. St. Hyacinthe, Que. Picher, Okla. San Jose, Cal. New York City Columbia, S. C. Norman, Okla. New York City New York City New York City New York City	Radio Association John Patterson City of St. Hyacinthe D. L. Connell, M. D. Pacific Agricultural Foundation Ltd. Marcus Loew Booking Agency George T. Barnes, Inc. University of Oklahoma Calvary Baptist Church Calvary Baptist Church Aviation Radio Station, Inc.
1020 kilocycles	293.9 meters	31
KFKX 10000 1N KYW 10000 1N WRAX 250 D	Chicago, Ill. Chicago, Ill. Philadelphia, Pa.	Westinghouse Elec. & Mfg. Co. Westinghouse Elec. & Mfg. Co. Berachah Church, Inc.
1030 kilocycles	291.1 meters	20/2
CFCF 1650 CJOR 50 CMBW 50 1027 CMBZ 100 1027 CNRV 500	Montreal, Que. Sea Island, B. C. Marianao, Cuba Havana, Cuba Vancouver, B. C.	Canadian Marconi Co. G. C. Chandler Modesto Alvarez Manuel y G. Salas Canadian National Railways
1040 kilocycles	288.3 meters	20
KRLD 10000 1C KTHS 10000 1N WKAR 1000 D -WKEN 1000	Dallas, Texas Hot Springs, Ark. East Lansing, Mich. Buffalo, N. Y.	KRLD Radio Corp. Chamber of Commerce Michigan Agricultural College Radio Station WKEN, Inc.
1050 kilocycles	285.5 meters	195
KFKB 5000 X	Milford, Kansas Hollywood, Cal.	KFKB Broadcasting Assn., Inc. Western Broadcast Co.

1060	Irilon	vo100	282.8 meters	THE BITTE TOWNERS
		ycles		19
KWJJ WBAL	500 10000	iÑ	Portland, Ore. Baltimore, Md.	KWJJ Broadcast Co., Inc. Consolidated Gas Elec. & Pwr. Co.
WJAG WTIC	1000 50000	īÑ	Norfolk, Nebr. Hartford, Conn.	Norfolk Daily News
110	50000	III	Hartiora, Conn.	Travelers Broadcasting Service Corp.
1070	kiloc	ycles	280.2 meters	18支
KJBS WAAT	100	D	San Francisco, Cal.	Julius Brunton & Sons Co.
WAAT	300 50	D D	San Francisco, Cal. Jersey City, N. J. Carthage, Ill. Tuscola, Ill.	Bremer Broadcasting Corp. Superior Broadcasting Service
WDZ WEAR	100	D	Tuscola, Ill.	James L. Bush WTAM and WEAR, Inc.
-WTAM	1000 50000	IND IN	Cleveland, Ohio Cleveland, Ohio	WTAM and WEAR, Inc. WTAM and WEAR, Inc.
1080	kilocy	ycles	277.6 meters	18
₩BT	5000	N	Charlotte, N. C.	Station WBT, Inc.
WCBD WMBI	5000 5000	1	Zion, III. Chicago, III.	Wilbur Glenn Voliva
**********	0000	•	Cricago, III.	Moody Bible Institute
1090	kilocy	vcles	275.1 meters	1734
KFOA	5000	1SX 1CX		Voice of St. Louis, Inc.
KMÒX	5000	1CX	St. Louis, Mo. St. Louis, Mo.	Voice of St. Louis, Inc.
1100	kilocy	cles	272.6 meters	17-2
CMCE	100	1098	Havana, Cuba	Julio E. Power
KGDM WLWL	250 5000	DX 1	Stockton, Cal. New York City	E. F. Peffer Missionary Society of St. Paul
-WPG	5000	i	Atlantic City, N. J.	Municipality of Atlantic City
1110	kilocy	cles	270.1 meters	
KSOO	2000		Sioux Falls, S. D. Richmond, Va.	Sioux Falls Broacasting Assn., Inc.
_WRVA	5000	N	Richmond, Va.	Larus & Bros, Co., Inc.
1120	kilocy	cles	267.7 meters	
CFJC CHGS CJOC	15		Kamloops ,B. C.	N. S. Dalgleish & Sons
CJOC	25 50		Summerside, P. E. 1. Lethbridge, Alta.	R. T. Holman, Ltd. Harold R. Carson
KFIO KFSG	100 500	D	Lethbridge, Alta. Spokane, Wash. Los Angeles, Cal. Inglewood, Cal.	Spokane Broadcasting Corp.
KMIC	500	3	Inglewood, Cal.	Echo Park Evag. Assn. Dalton's, Inc.
KRSC KTRH	50 500	D 2CP	Seattle, Wash. Austin, Texas	Radio Sales Corp. Rice Hotel
WDBO	500	+	Orlando, Fla.	Orlando Broadcasting Co., Inc.
WDEL WHAD	250 250	+ 1	Wilmington, Del. Milwaukee, Wis. Milwaukee, Wis.	WDEL, Inc. Marquette University
WISN WTAW	250 500	1C 2	Milwaukee, Wis.	Evening Wisconsin Co.
	150	СP	College Station, Texas Rayne, La.	Agricultural & Mech. College Ber, Killmer & Bailey
1130	kilocy	cles	265.3 meters	16
KSL	5000	N	Salt Lake City	Radio Service Corp. of Utah
WJJD	20000 1000	Ď.	Mooseheart, Ill. New York City	Loyal Order of Moose International Broadcasting Corp.
XEF	105		Oaxaca, Oax.	Federico Zorrila
1140	kilocy	cles	263.0 meters	163
KVOO	5000		Tulsa, Okla.	Southwestern Sales Corp.
-WAPI	5000	1N 1N	Birmingham, Ala.	Alabama Polytechnic Institute
1150	kilocy	cles	260.7 meters	15
CMHA	200	1154		Jose Ganduxe
WHAM	5000	N	Cienfuegos, Cuba Rochester, N. Y.	Stromberg-Carlson Tel. Mfg. Co.

-wowo 10000 10 -WWVA 5000

Ft. Wayne, Ind. Wheeling, W. Va.

Main Auto Supply Co. West Virginia Broadcasting Corp.

Universal Broadcasting Co.

1170 kilocycles 256.3 meters

WCAU 10000 Muscatine, Iowa Philadelphia, Pa. Norman Baker

1180 kilocycles 254.1 meters

KEX KOB WDGY 5000 20000 1000 WHDI 500

Portland, Ore. State College, N. M. Minneaplis, Minn. Minneapolis, Minn.

Western Broadcasting Co. College of Agriculture & Mech. Arts Dr. George W. Young Wm. Hood Dunwoody, Industry Inst.

1190 kilocycles 252.0 meters

WIĆC WOAI 500 D XN 5000

Bridgeport, Conn. San Antonio, Texas Bridgeport Broadcasting Station, Inc. Southern Equipment Co.

KCYS.

1200

MTRS.

DIAL

249.9

1200 kilocycles 249.9 meters

KBTM KFHA KFJB KFWF CPD 100 Paragould, Ark. Gunnison, Colo. 50 + 100 Marshalltown, Iowa Marshalltown, Iowa St Louis, Mo. Mandan, N. D. Fergus Falls, Minn. Oldham, S. D. Yuma, Colo. Fort Morgan, Colo. 100 KFWF KGCU KGDE KGDY KGEK KGEW KGFJ KGFK 100 X+ 100 15 ğ 50 100 9 100 Los Angeles, Cal. Hallock, Minn. Little Rock, Ark. Lacey, Wash. Santa Maria, Cal. Bellingham, Wash. 50 KGFK KGHI KGY KSMR KVOS KWG 100 + 10 100 ---100 ---100 Stockton Cal. ---KXO WABI WABZ WBBY El Centro, Cal. Bangor, Maine New Orleans, La. Charleston, S. C. 100 ---100 ī 100 75 100 Ponca City, Okla. Rapid City, S. D. Burlington, Vt. Kenosha, Wis. ---WBBZ ---WCAT WCAX WCLO WCOD WEHC WFBC 100 2 100 100 3 100 Harrisburg, Pa. Emory, Va. Knoxville. Tenn. Cincinnati. Ohio 100 50 ---100 Canton, Ohio Green Bay, Wis. Utica, N. Y. 45 WHBC 10 WHBY 100 + 5+ WIBX WIL 100 Utica, N St Louis, Mo. La Salle, III. Decatur, III. 100 WJBC WJBL WJBW WKJC WLAP 100 6 ĕ 100 30 New Orleans, La. Lancaster, Pa. 3 100 Louisville, Ky. Petersburg, Va. St. Louis, Mo. 30 + 5+ WLBG 100 WMAY WMBO WNBW WNBX īŏŏ St. Louis, Mo. Washington, Pa. Carbondale, Pa. Springfield, Vt. Worcester, Mass. La Porte, Ind. 100 4 10 2 X 8 WORC 100 WRAF WRBL WWAE 100 50 Columbus, Ga. Hammond, Ind 100 Guadalajara, Jal. XEA 101

W. J. Beard's Temple of Music Western College of Colorado Marshall Blectric Co., Inc. St. Louis Truth Center. Inc. Mandan Radio Association Jaren Drug Co. J. Albert Loesch and George W. Wright Beehler Elec. Equipment Co. City of Fort Morgan Ben S. McGlashan Lautzenheiser & Mitchell Berean Bible Class St. Martin's College Santa Maria Valley R. R. Co. KVOS, Inc. Portable Wireless Tel. Co., Inc. E. R. Irey and F. M. Bowles First Universalist Church Coliseum Place Baptist Church Washington Light Infantry C. L. Carrell State School of Mines University of Vermont C. E. Whitmore Norman R Hoffman Emory & Henry College First Buotist Church WFBE, Inc. St John's Catholic Church St. Norbert's College WIBX, Inc. Missouri Broadcasting Corp. Hummer Furniture Co. Commodore Broadcasting, Inc. Charles C. Carlson, Jr. Kirk Johnson & Co. American Broadcasting Corp. of Ky. Robert Allen Gamble Kingshighway Presbyterian Church John Brownlee Spriggs Home Cut Glass & China Co. First Congregational Church Alfred Frank Kleindienst The Radio Club, Inc. David Parmer Hammond-Calumet Broadcasting Corp. Alberto Palos Sauza Cerveceria de Durango, S. A.

C. Lerdo Dgo.

1210 kilocycles 247.8 meters

CFCO	100		Chatham, Ont.
CFNB	50		Fredericton, N. B.
CHWK	. 5		Chilliwack, B. C.
CKMC	15		Cobalt, Ont.
CKPC	25		Preston, Ont.
KDFN	100		Casper, Wyo.
KDLR	100		Devils Lake, N. D.
KFOR	100	+	Lincoln, Nebr.
KFVS	100	6	Cape Girardeau, Mo.
KFXM	100	9	San Bernardino, Calif.
KGCR	100	OP	Watertown, S. D.
KGMP	100	CP	Elk City, Okla.
KGNO	100	CP.	Dodge City, Kans.
KMJ	100	=	Fresno, Cal.
KPPC	50	9	Pasadena, Cal.
KWEA	100	3-4	Shreveport, La.
WBAX	100	1	Wilkes-Barre, Pa.
WBBL	100	ā	Richmond, Va.
WCBS	100	2	Springfield, Ill.
WCOH	100	2 3 4 5	Yonkers, N. Y.
WCRW	100	4	Chicago, Ill.
WDWF	100	5	Providence, R. I.
WEBE	100	2	Cambridge, Ohio
WEBQ	100	6	Harrisburg, Ill.
WEDC	100	4 3	Chicago, Ill.
WGBB	100	3	Freeport, N. Y.
WGCM WHBF	100	555	Gulfport, Miss.
	100		Rock Island, Ill.
WHBU	100		Anderson, Ind. Madison, Wis.
WIBA	100 100	3	Dad Davida N. T
WIDI	100	3 1	Red Bank, N. J.
WJBI WJBU WJBY WJW	50	1	Lewisburg, Pa. Gadsden, Ala.
wiw	100		Mansfield, Ohio
WLCI	50		Ithaca, N. Y.
WLSI	100	5	Providence, R. I.
WMAN	50		Columbus, Ohio
WMBG	100		Richmond, Va.
WOCL	25		Jamestown, N. Y.
WOMT	100		Manitowoc Wis
WPAW	100	5	Manitowoc, Wis. Pawtucket, R. I.
WRBQ	100	X+	Greenville, Miss.
WRBU	100	25 1	Gastonia, N. C.
WSBC	100	4	Chicago, Ill.
WSIX	100		Springfield, Tenn.
WTAX	50	2	Streator, Ill.

Western Ontario "Better Radio" Club James S. Neill & Sons, Ltd. Chilliwack Broadcasting Co., Ltd. R. L. MacAdam Wallace Russ Donald Lewis Hathaway Radio Electric Co. Howard A. Shuman Hirsch Battery & Radio Co.

J. C. & E. W. Lee
Cutler's Radio Brdcstg. Service, Inc. Bryant Radio & Electric Co. Melvin A. McCollum James McClatchy Co. Pasadena Presbyterian Church Pasadena Presbyterian Church
William E. Antony
John H. Stenger, Jr.
Grace Covenant Presbyterian Church
H. L. Dewing & Chas, Messter
Westchester Broadcasting Corp.
Clinton R. White
Dutee W. Flint
Roy W. Waller
First Trust & Savings Bank First Trust & Savings Bank Emil Denemark, Inc. Harry H. Carman Great Southern Land Co., Inc. Beardsley Specialty Co.
Citizens Bank
Capital Times
Robert S. Johnson
Bucknell University
Gadsden Broadcasting Co., Inc.
Mansfield Broadcasting Assn.
Lutheran Assn. of Ithere Lutheran Assn. of Ithaca The Lincoln Studios, Inc. General Broadcasting Co. Havens & Martin, Inc. A. E. Newton Francis M. Kadow Shartenburg & Robinson Co. J. Pat Scully A. J. Kirby Music Co. World Battery Co., Inc. 638 Tire & Vulcanizing Co. Williams Hardware Co.

1220 kilocycles 245.8 meters

KFKU KWSC	1000 500	1 X+	Lawrence, Kans. Pullman, Wash.
WCAD	500	$\hat{\mathbf{p}}^{+}$	Canton, N. Y.
WCAE	1000	Ň	Pittsburgh, Pa.
WDAE	1000	·	Tampa, Fla.
WREN	1000	1N	Lawrence, Kans.

University of Kansas State College of Washington St. Lawrence University Gimbel Bros. Tampa Publishing Co. Jenny Wren Co.

1230 kilocycles 243.8 meters

KFQD KGGM	100		Anchorage, Alaska
KGGM	250	+	Albuquerque, N. Mex
KYA	1000		San Francisco, Calif.
WBIS	1000	2	Boston, Mass.
WFBM	1000	1C	Indianapolis, Ind.
WNAC	1000	2C	Boston, Mass.
WPSC	500	D	State College, Pa.
WSBT	500	1	South Bend, Ind.

Anchorage Radio Club New Mexico Broadcasting Co. Pacific Broadcasting Corp. Shepard-Norwell Co. Indianpolis Power & Light Co. Shepard-Norwell Co. Pennsylvania State College South Bend Tribune

1240 kilocycles 241.8 meters

KSAT	1000	1	Ft. Worth, Texas
WACO	1000	1	Waco, Texas
-WGHP	1000	C	Detroit, Mich.

Texas Air Transport Brdcst. Central Texas Broadcasting Co., Inc. American Broadcasting Corp.

1250	kilocy	cles	239.9 meters	115	
KFMX KFOX KIDO WAAM WCAL	1000 1000 1000 1000 1000	2 1+	Northfield, Minn. Long Beach, Cal. Boise, Idaho Newark, N. J. Northfield, Minn.	Carleton College Nichols & Warinner, Inc. Boise Broadcasting Station WAAM, Inc. St. Olaf College Jos. H. Uhalt	
WDSU WGCP	1000 250	2 C 1	New Orleans, La. Newark, N. J.	May Radio Broadcast Corp	
WGMS WLB	500 500	2X 2X	Minneapolis, Minn. Minneapolis, Minn.	Northwestern Broadcasting University of Minnesota	Inc.
WODA WRHM	1000	1 2C CP	Paterson, N. J. Minneapolis, Minn. Little Rock, Ark.	Richard E. O'Dea Minnesota Broadcasting Co Joseph E. Phelps	
1260	kilocy	cles	238.0 meters	//	
KOIL KRGV KVOA KWWG WLBW WTOC	1000 500 500 500 500 500	C 1 D 1 C+	Council Bluffs, Iowa Harlingen, Texas Tucsor, Ariz. Brownsville, Texas Oil City, Pa. Savannah, Ga.	Mona Motor Oil Co. Valley Radio-Electric Corp. Robert M. Riculfi Chamber of Commerce Radio-Wire Program Corp. Savannah Broadcasting Co.	
1270	kilocy	cles	236.1 meters	703	
	1000		Coloredo Springs Colo	W. D. Corley	
KFUM KGCA KOL	50 1000	2D 3	Decorah, Iowa Seattle, Wash. Seattle, Wash.	Charles W. Greenley Seattle Broadcasting Co., I	inc.
KTW KWLC	1000 100	3 2D	Decorah, Iowa	First Presbyterian Church Luther College WASH Broadcasting Corp.	
WASH WEAI WFBR	500 500 250	Ď	Grand Rapids, Mich. Ithaca, N. Y. Baltimore, Md.	Cornell University Baltimore Radio Show, Inc.	a.
WJDX WOOD	500 500	+N 1	Jackson, Miss. Grand Rapids, Mich.	Lamar Life Insurance Co. Walter B. Stiles, Inc.	
1280	kilocy	10100	234.2 meters	10/	
	I	CICS		1 3 7	
KFBB WCAM WCAP WDOD WOAX WRR	1000 500 500 1000 500 500	+ 1 1 +C 1	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Trenton, N. J. Dallas, Texas	Buttrey Broadcast, Inc. City of Camden Radio Industries Broadcast Chattanooga Radio Co., In Franklyn J. Wolff City of Dallas	kcys.
KFBB WCAM WCAP WDOD WOAX WRR	1000 500 500 1000 500 500	+ 1 1 +C 1	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Trenton, N. J.	Buttrey Broadcast, Inc. City of Camden Radio Industries Broadcast Chattanooga Radio Co., In Franklyn J. Wolff	ксуs. 1310
KFBB WCAM WCAP WDOD WOAX WRR 1290 KDYL KFUL KLCN KTSA WEBC	1000 500 1000 500 500 500 500 kilocy 1000 500 50 1000 1000	+ 1 1 + C 1	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Trentom, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa.	Buttrey Broadcast, Inc. City of Camden Radio Industries Broadcast Chattanooga Radio Co., In Franklyn J. Wolff City of Dallas Intermountain Broadcasti Will H. Ford C. L. Lintzenich Lone Star Broadcast Co. Head of Lake Broadcastin Pittsburgh Radio Supply I	MTRS. 228.9 DIAL
KFBB WCAM WCAP WDOD WOAX WRR 1290 KDYL KFUL KICN KTSA WTSA WNBZ	1000 500 1000 500 1000 500 kilocy 1000 500 1000 1000 50	tcles Classics Vcles	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y.	Buttrey Broadcast, Inc. City of Camden Radio Industries Broadcast Chattanooga Radio Co., In Franklyn J. Wolff City of Dallas Intermountain Broadcasti Will H. Ford C. L. Lintzenich Lone Star Broadcast Co. Head of Lake Broadcasting	MTRS. 228.9 DIAL
KFBB WCAM WCAP WDOD WOAX WRR 1290 KDYL KFUL KICN KTSA WBSC WJAS WNBZ 1300 KFH	1000 500 1000 500 1000 500 kilocy 1000 50 1000 1000 50 kilocy 1000 50 kilocy	tland	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Trentom, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Wichita, Kansas	Buttrey Broadcast, Inc. City of Camden Radio Industries Broadcast Chattanooga Radio Co., In Franklyn J. Wolff City of Dallas Intermountain Broadcasti Will H. Ford C. L. Lintzenich Lone Star Broadcast Co. Head of Lake Broadcastin Pittsburgh Radio Supply f Smith & Mace	MTRS. 228.9 DIAL
KFBB WCAM WCAP WDOD WOAX WR 1290 KDYLL KFUL KLCN KTSA WEBC WJAS WNBZ 1300 KFH KFJR KGEF	1000 500 1000 500 1000 500 kilocy 1000 500 1000 1000 500 kilocy 1000 500 1000 500 100	† 1 1 +C 1 rcles C 1 1+C X+N C D rcles 2C 3 4	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Trentom, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Wichita, Kansas Portland, Ore. Los Angeles, Cal.	Buttrey Broadcast, Inc. City of Camden Radio Industries Broadcast Chattanooga Radio Co., In Franklyn J. Wolff City of Dallas Intermountain Broadcasti Will H. Ford C. L. Lintzenich Lone Star Broadcast Co. Head of Lake Broadcasting Pittsburgh Radio Supply f Smith & Mace Radio Station KFH Co. Ashley C. Dixon & Son Trinity Methodist Church	mg Corp. KCYS. 1310 MTRS. 228.9 DIAL
KFBB WCAM WCAP WDOD WOAX WRR 1290 KDYL KICN KTSA WEBC WJAS WBZ 1300 KFH KFJR KGEF	1000 500 1000 500 1000 500 kilocy 1000 500 1000 1000 1000 1000 500 kilocy 1000 500 500	† 1 1 +C 1 vcles C 1 D 1+C X+N C D C 2C 3 4 4 3	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Wichita, Kansas Portland, Ore. Los Angeles, Cal. Los Angeles, Cal. Portland, Ore.	Buttrey Broadcast, Inc. City of Camden Radio Industries Broadcast Chattanooga Radio Co., In Franklyn J. Wolff City of Dallas Intermountain Broadcasti Will H. Ford C. L. Lintzenich Lone Star Broadcast Co. Head of Lake Broadcasting Pittsburgh Radio Supply f Smith & Mace Radio Station KFH Co. Ashley C. Dixon & Son Trinity Methodist Church Bible Institute of Los Ang. M. E. Brown	mg Corp. KCYS. 1310 MTRS. 228.9 DIAL eles
KFBB WCAM WCAP WDOD WOAX WRR 1290 KDYL KFUL KLCN KTSA WEBC WJAS WNBZ 1300 KFH KGEF KTBI KGEF KTBI KTBR WBBR WBUD	1000 500 500 1000 500 1000 500 1000 500 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 500	t l l l l l l l l l l l l l l l l l l l	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Trentom, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Wichita, Kansas Portland, Ore. Los Angeles, Cal. Los Angeles, Cal. Portland, Ore. Rossville, N. Y. New York City	Buttrey Broadcast, Inc. City of Camden Radio Industries Broadcast Chattanooga Radio Co., In Franklyn J. Wolff City of Dallas Intermountain Broadcasti Will H. Ford C. L. Lintzenich Lone Star Broadcast Co. Head of Lake Broadcasti Pittsburgh Radio Supply f Smith & Mace Radio Station KFH Co. Ashley C. Dixon & Son Trinity Methodist Church Bible Institute of Los Ang M. E. Brown People's Pulpit Association Debs Memorial Radio Fun	mg Corp. MTRS. 228.9 DIAL eles nd, Inc.
KFBB WCAM WCAP WDOD WOAX WRR 1290 KDYL KFUL KLCN KTSA WNBZ 1300 KFH KFJR KGEF KTBI KKTBI KTBI KTBI KTBI KTBI KTBI KTB	1000 500 1000 500 1000 500 kilocy 1000 50 1000 1000 50 kilocy 1000 50 kilocy 1000 50 1000 1000 50 1000	† 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Trentom, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Wichita, Kansas Portland, Ore. Los Angeles, Cal. Portland, Ore. Rossville, N. Y.	Buttrey Broadcast, Inc. City of Camden Radio Industries Broadcast Chattanooga Radio Co., In Franklyn J. Wolff City of Dallas Intermountain Broadcasti Will H. Ford C. L. Lintzenich Lone Star Broadcast Co. Head of Lake Broadcastin Pittsburgh Radio Supply f Smith & Mace Radio Station KFH Co. Ashley C. Dixon & Son Trinity Methodist Church Bible Institute of Los Ang. M. E. Brown People's Pulpit Association	MCYS. 1310 MTRS. 228.9 DIAL eles nd, Inc. y, Inc. stitute ng Co.
KFBB WCAM WCAP WDOD WOAX 1290 KDYL KFUL KLCN KTSA WEBC WJAS WNBZ 1300 KFH KGEF KTBI KTBR WBBR WBBR WHAP WHAP WHAZ WIOD WOQ	1000 500 1000 500 1000 500 kilocy 1000 500 1000 1000 1000 500 1000 750 1000 750 1000 500 1000 500 1000 500	t 1 1 +C 1 vcles C 1 D 1+C N C D Vcles 2C 3 4 4 4 3 1 1 1 1 1 1 N 2 2 C	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Trenton, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Wichita, Kansas Portland, Ore. Los Angeles, Cal. Los Angeles, Cal. Portland, Ore. Rossville, N. Y. New York City New York City Troy, N. Y. Miami Beach, Fla. Kansas City, Mo. 228.9 meters	Buttrey Broadcast, Inc. City of Camden Radio Industries Broadcass Chattanooga Radio Co., In Franklyn J. Wolff City of Dallas Intermountain Broadcasti Will H. Ford C. L. Lintzenich Lone Star Broadcast Co. Head of Lake Broadcastin Pittsburgh Radio Supply f Smith & Mace Radio Station KFH Co. Ashley C. Dixon & Son Trinity Methodist Church Bible Institute of Los Ang. M. E. Brown People's Pulpit Association Debs Memorial Radio Fun Defenders of Truth Society Rensselaer Polytechnic Ins Isle of Dreams Broadcasti Unity School of Christiani	MCYS. 1310 MTRS. 228.9 DIAL eles nd, Inc. y, Inc. stitute ng Co.
KFBB WCAM WCAP WDOD WOAX 1290 KDYL KFUL KLCN KTSA WEBC WJAS WNBZ 1300 KFH KGEF KTBI KTBR WBBR WBBR WHAP WHAP WHAZ WIOD WOQ	1000 500 500 1000 500 1000 500 kilocy 1000 50 1000 1000 50 kilocy 1000 50 1000 1000 500 1000 1000 1000 1	t 1 1 +C 1 vcles C 1 D 1+C N C D Vcles 2C 3 4 4 4 3 1 1 1 1 1 1 N 2 2 C	Great Falls, Mont. Camden, N. J. Asbury Park, N. J. Chattanooga, Tenn. Trentom, N. J. Dallas, Texas 232.4 meters Salt Lake City Galveston, Texas Blytheville, Ark. San Antonio, Texas Superior, Wis. Pittsburgh, Pa. Saranac Lake, N. Y. 230.6 meters Wichita, Kansas Portland, Ore. Los Angeles, Cal. Los Angeles, Cal. Los Angeles, Cal. Portland, Ore. Rossville, N. Y. New York City New York City Troy, N. Y. Miami Beach, Fla. Kansas City, Mo.	Buttrey Broadcast, Inc. City of Camden Radio Industries Broadcast Chattanooga Radio Co., In Franklyn J. Wolff City of Dallas Intermountain Broadcasti Will H. Ford C. L. Lintzenich Lone Star Broadcast Co. Head of Lake Broadcasting Pittsburgh Radio Supply f Smith & Mace Radio Station KFH Co. Ashley C. Dixon & Son Trinity Methodist Church Bible Institute of Los Ang. M. E. Brown People's Pulpit Association Debs Memorial Radio Fun Defenders of Truth Society Rensselaer Polytechnic Ins Isle of Dreams Broadcasti	eles nd, Inc. y, Inc. stitute ng Co. lity

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KFUP KFX J KFXR	100	8	Denver, Colo.	Fitzsimmons General Hospital
KFXR	50 100	8 X+	Edgewater, Colo. Oklahoma City	R. G. Howell Exchange Ave. Baptist Church
KGBX	100		St. Joseph, Mo.	Foster-Hall Tire Co.
KGCX KGEZ	100 100	+ X	Wolf Point, Mont.	First State Bank of Vida
KGFW	100		Kalispell, Mont. Ravenna, Neb.	Chamber of Commerce Otto F. Sothman and Roy H. McConnell
KGHG	50	CP	McGehee, Ark.	Chas. W. McCollum
KGMC	100 50	CP	Jerome, Ariz.	Charles C. Robinson
KIT KMED	50		Yakima, Wash. Medford, Ore.	Carl E. Haymond Mrs. W. J. Virgin Robert M. Dean
KRMD	50	9 9 2 7	Shreveport, La.	Robert M. Dean
KTSL KTSM KWCR	100 100	9	Shreveport, La. El Paso, Texas	Houseman Sheet Metal Works, Inc. W. S. Bledsoe & W. T. Blackwell
KWCR	100	7	Cedar Rapids, Iowa	Harry F. Paar
KXRO WAGM	75 50		Aberdeen, Wash.	KXRO, Inc.
WBOW	100		Royal Oak, Mich. Terre Haute, Ind.	Royal Oak Broadcasting Co. Banks of Wabash, Inc.
WRRE	100	ī	Wilkes-Barre, Pa. Joliet, III.	Louis G. Baltimore
WCLS WCSC WDAH	100 100	l CP+	Joliet, III.	WCLS, Inc.
WDAH	100	2	Charleston, S. C. El Paso, Texas	Fred Jordon & Lewis Burk Trinity Methodist Church
WEBR	100	+	El Paso, Texas Buffalo, N. Y.	Howell Broadcasting Co., Inc.
WFBG WFDF	100 100	3	Altoona, Pa. Flint, Mich.	Wm. F. Gable Co.
WFKD	50	4	Philadelphia, Pa.	Frank D. Fallain Foulkrod Radio Engineering Co.
WGAL	15	5X	Lancaster, Pa. Newport News, Va.	WGAL, Inc.
WGH WHAT	100 100	4X	Newport News, Va.	Virginia Broadcasting Co., Inc.
WIBU	100		Philadelphia, Pa. Poynette, Wis.	Virginia Broadcasting Co., Inc. Albert A. Walker William C. Forrest
WJAC	100	3	Johnstown, Pa. Marion, Ind.	Johnstown Automobile Co.
WJAC WJAK WKAV	50 100	6	Marion, Ind. Laconia, N. H.	Marlon Broadcasting Co. Laconia Radio Club
WKBB	100	1	Joliet, III.	Sanders Bros.
WKBC WKBS	100 100		Birmingham, Ala.	R. B. Broyles Furniture Co.
WLBC	50	6	Galesburg, Ill. Muncie, Ind.	Permil N. Nelson Donald A. Burton
WMBO	100		Auburn, N. Y.	Radio Service Laboratories
WNBH WNBJ	100 50		New Bedford, Mass. Knoxville, Tenn.	New Bedford Broadcasting Co.
- WOBT	100	Ŧ-	Union City, Tenn.	Lonsdale Baptist Church Tittsworth's Radio & Music Shop
WOL	100	5	Washington, D. C.	American Broadcasting Co.
WRAW WRBI	100 20	5	Reading, Pa. Tifton, Ga.	Avenue Radio & Electric Shop
WRK	100		Hamilton, Ohio	Kent's Furniture and Music Store Hamilton Radio Service
WSAJ WSJS	100 100	ČP	Grove City, Pa. Winston-Salem, N. C.	Grove City College
•				Winston-Salem Journal Co.
1320	kilocy	cles	227.1 meters	9-2
KGHB	500		Honolulu, Hawaii	Honolulu Broadcasting Co., Ltd.
KGHF	250	X+	Pueblo, Colo.	C. P. Ritchie & J. E. Finch
KGIQ KGMB	250 506	1	Pueblo, Colo. Twin Falls, Idaho Honolulu, Hawaii	Radio Broadcasting Corp. Honolulu Broadcasting Co., Ltd.
KID	500	1+	Idaho Falls, Idaho	Jack W. Duckworth, Jr.
WADC WSMB	1000 500	1+ C N	Akron, Ohio New Orleans, La.	Jack W. Duckworth, Jr. Allen T. Simmons
WSWID	300	14	New Orleans, La.	Saenger Theatre & Maison Blanche Co.
1330	kilocy	cles	225.4 meters	9
KGB	250		San Diego, Cal.	Pickwick Broadcasting Corp.
KSCJ WDRC	1000	1C+X	Sioux City, Iowa	Perkins Bros. Co.
WSAI	500 500	Ň	New Haven, Conn.	Doolittle Radio Corp.
WTAQ	1000	1	New Haven, Conn. Cincinnati, Ohio Eau Claire, Wis.	Crosley Radio Corp., Lessee Gillette Rubber Co.
1340	kilocy	cles	223.7 meters	232
	-			8-4
KFPW KFPY	50 1000	CX	Siloam Springs, Ark. Spokane, Wash.	Rev. Lannie W. Stewart
WCOA	500		Pensacola, Fla.	Symons Broadcasting Co. City of Pensacola
→WSPD	500	C+	Toledo, Ohio	Toledo Broadcasting Co.
40-0		-		

Greater St. Louis Broadcasting Corp. Baruchrome Corp. Italian Educ. Broadcasting Co., Inc. Standard Cahill Co., Inc. Madison Square Garden Brdcstg. Corp.

222.1 meters

St. Louis, Mo. New York City New York City New York City New York City

1350 kilocycles

1360 kilocycles 220.4 meters

1000	4X	Long Beach, Cal.
500		Butte, Mont.
1000	4	Pasadena, Cal.
1000	C	Syracuse, N. Y.
500	1+	Chicago, Ill.
500	1+	Gary, Ind.
300		Vicksburg, Miss.
	500 1000 1000 500 500	500 1000 4 1000 C 500 1+ 500 1+

C. Merwin Dobyns KGIR, Inc. Pasadena Star-News The Onondaga Co., Inc. Oak Leaves Broadcasting Station, Inc. Johnson-Kennedy Radio Corp. Delta Broadcasting Co.

1370 kilocycles 218.7 meters

KFJM 100 KFJZ 100 KFLX 100 KGAR 100 KGAR 100 KGGAR 50 KGGAR 50 KGFG 100 KGFL 50 KGKL 100 KOH 100 KONO 100 KONO 100 KONS 100 KVL 100 KVL 100 KVL 100 KVL 100 WBTM 100 WBTM 100 WCBM 100 WBTW 100 WHBD 100 WHOF 100	X+5 2	Grand Forks, N. D. Ft. Worth, Texas Galveston, Texas Tucson, Ariz. San Antonio, Texas Dell Rapids, S. D. Oklahoma City Raton, N. M. San Angelo, Texas Ogden, Utah Reno, Nevada San Antonio, Texas Marshfield, Ore. Berkeley, Cal. Seattle, Wash. Kansas City, Mo. Haywood, Cal. Danville, Va. Baltimore, Md. Philadelphia, Pa. Rome, Ca. Fort Wayne, Ind. Mount Orab, Ohio Memphis, Tenn. Calumet, Mich. Jackson, Mich. Jysilanti, Mich. Lexington, Mass. Lynchburg, Va. Tampa, Fla. Patchogue, N. Y. St. Albans, Vt. Ede. Pa. Hattlesburg, Miss. Wilmington, N. C. Racine, Wis. Buffalo, N. Y.
WRAK 50 WRBJ 10 WRBT 100 WRJN 100		Hattlesburg, Miss. Wilmington, N. C. Racine, Wis.

Champlin Refining Co. Leese Bros. KFJI Broadcasters, Inc. University of North Dakota H. C. Meacham George Roy Clough Tucson Motor Service Co. Radio Sam Broadcast Co., Inc. Home Auto Co. Faith Tabernacle Assn. W. E. Whitmore W. E. Whitmore KGKL, Inc., Opr. by Ragsdale Auto Peery Building Co. Jay Peters Eugene J. Roth H. H. Hanseth First Congregational Church Wilson Duncan Broadcasting Co. Leon P. Tenney Clarke Electric Co. Baltimore Broadcasting Corp. Howard R. Miller Dolies Goings Fred C. Zieg F. P. Moler Broadcasting Station WHBQ, Inc. Upper Michigan Broadcasting Co. C. L. Carrell James F. Hopkins Lexington Air Stations
Ed. A. & Philip P. Allen
F. J. Reynolds
Nassau Broadcasting Corp. A. J. St. Antoine

R. Cummins

Woodruff Furniture Co., Inc. Wilmington Radio Association Racine Broadcasting Corp.

1380 kilocycles 217.3 meters

KQV	500	2	Pittsburgh, Pa.
KSO	500	1	Clarinda, Iowa
WKBH	1000	1	La Crosse, Wis.
WSMK	200	2	Dayton, Ohio

Doubleday-Hill Electric Co. Berry Seed Co. Callaway Music Co. Stanley M. Krohn, Jr.

Seneca Vocational School

1390 MTRS. 215.7 DIAL

1390 kilocycles 215.7 meters

KLRA KOY KUOA WHK	1000 500 1000 1000	iC i CX	Little Rock, Ark. Phoenix, Ariz. Fayetteville, Ark. Cleveland, Ohio

Arkansas Broadcasting Co. Nielson Radio & Sporting Goods Co. University of Arkansas Radio Air Service Corp.

			DI PREQUENCIES P	IND DIAL I	TOMBERS	
1400	kilocy	ycles	214.2 meters	12		
KOCW	250	+	Chickasha, Okla.	College for		
WBAA WBBC	500 500	1 2	Lafayette, Ind. Brooklyn, N. Y.	Purdue Uni Brooklyn B	versity roadcasting C	orn.
WCGU WCMA	500	2	Brooklyn, N. Y.	U. S. Broad	casting Corp.	orp.
WCMA	500	1 1	Culver Ind	Culver Mili	tarv Academv	a Inc
WKBF WLTH	500 500	2	Indianapolis, Ind. Brooklyn, N. Y. Brooklyn, N. Y.	The Voice of	s Broadcastin f Brooklyn, I	g, inc.
WSGH	500	2	Brooklyn, N. Y.	Amateur R	adio Specialty	Со.
1410	kilocy	ycles	212.6 meters			
KFLV	500	4	Rockford, Ill.		roadcasters, I	nc.
KGRS WBCM	1000 500	1 C	Amarillo, Texas	Gish Radio James E. D	Service	
WDAG	250	ĭ	Amarillo, Texas	National R	adio & Broade	casting Corp.
WHBL	500	4	Bay City, Mich. Amarillo, Texas Sheboygan, Wis. Lexington, Mass.	Press Pub. (Lexington A	adio & Broade Co. & C. L. Car	rell
WLEX WMAF	500 500	2 2 3	S. Dartmouth, Mass.	Round Hill	s Radio Corp.	
WODX	500	3	Mobile, Ala.	Mobile Bro	adcasting Cor	p.
WSFA WSSH	500 500	3CP 2	Montgomery, Ala. Boston, Mass.	Montgomer Tremont To	ry Broadcastir emple Baptist	ng Corp. Church
	kiloc		211.1 meters	7	T	
	100	4		Benson Pol	ytechnic Insti	tute
KFIF KFIZ KFQU KFQW KFXD	100		Portland, Ore. Fond du Lac, Wis.	Reporter Pr	rinting Co.	
KFOU	100 100	5	Holy City, Cal. Seattle, Wash. Jerome, Idaho	W. E. Riker KFQW, Inc Service Rad		
ŔŦXĎ	50	100	Jerome, Idaho	Service Rad	lio Co.	
KFXY KFYO	100		Flagstaff, Ariz. Abilene, Texas	Mary M. Co T. E. Kirks	ostigan	
KF10 KGFF	100 100	+	Abilene, Texas	KGFF Bros	dcasting Co.	
KGGC KGIW	50	5	Alva, Okla. San Francisco, Cal.	Golden Gat	e Broadcastin	ıg Co.
KGIW	100 100	СP	Trinidad, Colo.	Leonard E.	Wilson Navada Badia	Com
KGIX KGKX	100	CP	Las Vegas, Nevada Sand Point, Idaho	C. E. Twiss	Nevada, Radio and F. H. Mo	Cann
KICK	100		Red Oak, Iowa Minot, North Dakota	Red Oak Ra	adio Corp.	
KLPM	100	444	Minot, North Dakota	E. C. Reine		tion
KORE KTAP	100 100		Eugene, Ore. San Antonio, Texas		adcasting Sta dcasting Co.	tion
KTUE KXL	100	X	Houston, Texas Portland, Ore.	Uhalt Elect	ric	
-WEDH	100 30	4	Portland, Ore. Erie, Pa.	KXL Broad Erie Dispat	casters, Inc.	
WEHS	100	2	Evanston, Ill.	Victor C. C.	arlson	
WFDW WHDL	100	CP	Talladega, Ala.	Raymond C	G. Hammett	
WHIFC	10 100	2	Tupper Lake, N. Y. Cicero, Ill.	George Fran	nklin Bissell oadcasters	
WHIS	100		Bluefield, W. Va.	Daily Teleg	raph	
WIAS	100 50		Ottumwa, Iowa	Poling Elec	tric Co.	
WIBR WILM	100	147	Steubenville, Ohio Wilmington, Del.	George W. I	roadcasting C	o., Inc.
WJBO WKBI	100		New Orleans, La.	Valdemar J Fred L. Sch	ensen	,
WKBI WKBP	50 50	2	Chicago, Ill.	Fred L. Sch	oenwolf	
WLBF	100	155	Battle Creek, Mich. Kansas City, Kas.	Enquirer-N WLBF Bros	dcasting Co.	
WMBC	100	\mathbf{x} +	Detroit, Mich. Joplin, Mo.	Michigan B	roadcasting (Co., Inc.
WMBH	100 10	+	Joplin, Mo.	Edwin Dud	ley Aber	
WMRJ WOBŽ	60	1	Jamaica, N. Y. Weirton, W. Va.	Peter J. Pri J. H. Thom	son	
WSPA WTBO	100 50	*	Spartanburg, S. C. Cumberland, Md.	Voice of Sou	ith Carolina	Com
				Associated	Broadcasting	Corp.
	kilocy	ycles	209.7 meters	62		<u> </u>
KECA KGNF	1000 50 0	CPD	Los Angeles, Calif. North Platte, Neb.	Pacific Deve Herbert Log	lopment Radi an Spencer	o Co.
WBAK	500	1X+	Harrisburg, Pa.	Penna. Stat	e Police	
WBRL	500 500	īĊ	Tilton, N. H.	Booth Radi	o Laboratories	
WCAH WGBC	500	2	Columbus, Ohio Memphis, Tenn.	First Baptis	l Radio Servic st Church	e CO.
WHP	500 500	ÎC 2	Harrisburg, Pa. Memphis, Tenn.	Pennsylvan John Ulrich	ia Broadcastir	ng Co.
KLS	kilocy 250	D	208.2 meters Oakland, Cal.	Warner Bro		
WABO WCBA	500	2	Rochester, N. Y.		s. ctric & Radio	Corp.
WCBA	250	1	Allentown, Pa. Rochester, N. Y.	B. B. Musse	lman	-
WHEC	500	2C	Kochester, N. Y.	Hickson Ele	ctric & Radio	Corp.

	11	NDEX	BY FREQUENCIES		
WMBD WNRC WOKO WSAN WTAD	500 500 500 250 500	3+ 1 3	Peoria Heights, III. Greensboro, N. C. Poughkeepsie, N. Y. Allentown, Pa. Quincy, III.	Peoria Heights Radio Laboratory Wayne M. Nelson Hudson Valley Broadcasting Co. Allentown Call Publishing Co., Inc. Ills. Stock Medicine Broadcasting Co	
1450	kilocy	cles	206.8 meters	64	
KTBS WBMS WCSO WFJC WIBS -WKBO WNJ WSAR WTFI	1000 250 500 500 250 250 250 250 250	1 2 2N 1 1	Shreveport, La. Hackensack, N. J. Springfield, Ohio Akron, Ohio Jersey City, N. J. Jersey City, N. J. Newark, N. J. Fall River, Mass. Toccoa, Ga.	Elliott & Steere WBMS Broadcasting Corp. Wittenberg, College W. F. Jones Broadcast, Inc. New Jersey Broadcasting Corp. Camith Corp. Radio Investment Co. Doughty & Welch Electric Co., Inc. Toccoa Falls Institute	
1460	kilocy	cles	205.4 meters	6	
-KSTP -WJSV	10000 10000	N	St. Paul, Minn. Mt. Vernon Hills, Va.	National Battery Broadcasting Co. Independent Publishing Co.	
1470	kilocy	cles	204.0 meters	5-3-1	
KGA WLAC WTNT	5000 5000 5000	iC i	Spokane, Wash. Nashville, Tenn. Nashville, Tenn.	Northwest Broadcasting System, Inc. Life & Casualty Insurance Co. Tennessee Publishing Co.	
1480	kilocy	cles	202.6 meters	52	
KF JF WKBW	5000 5000	C	Oklahoma City Buffalo, N. Y.	National Radio Mfg. Co. Churchill Evangelistic Assn., Inc.	
1490	kilocy	cles	201.2 meters	34	
KPWF WCHI WCKY WJAZ WORD	5000 5000 5000 5000 5000	CP 1 1N 1	Westminster, Cal. Chicago, Ill. Covington, Ky. Chicago, Ill. Chicago, Ill.	Pacific Western Broadcasting Fed. Radiophone Broadcasting Corp. L. B. Wilson, Inc. Zenith Radio Corp. People's Pulpit Association	
1500	kilocy	cles	199.9 meters	5	
KDB KGFI KGGIZ KGKY KGMD KPCB KPJM KPQ KRTLC KUJT KVEP WCLB WKBV WKBV WKBV WMBA WMBG WMBFI WWPBN WWPBN	100 100 50 100 100 100 100 15 100 100 10	CP 4 4 X 3 3 1 + 1 2 2 + 2 X X 1 1	Santa Barbara, Cal. Corpus Christi, Texas Grant City, Mo. Brownwood, Texas Scottsbluff, Nebr. Roswell, N. M. Seattle, Wash. Prescott, Ariz. Wenatchee, Wash. Santa Ana, Calif. Houston, Texas Longview, Wash. Austin, Texas Portland, Ore. Long Beach, N. Y. Connersville, Ind. Ludington, Mich. Long Island City, N. Y. Boston, Mass. Newport, R. I. Wilkinsburg, Pa. Brooklyn, N. Y. Boston, Mass. Lapeer, Mich. Binghamton, N. Y. Bristol, Tenn. Philadelphia, Pa. Woodside, N. Y.	Santa Barbara Broadcasting Co. Eagle Broadcasting Co., Inc. Grant City Park Corp. Eagle Publishing Co. Hilliard Co., Inc. Dispatch Publishing Co. Wescoast Broadcasting Co. Miller & Klahn Wescoast Broadcasting Co. Pacific Western Broadcasting Houston Broadcasting Co. Columbia Broadcasting Co., Inc. Rice Hotel Schaeffer Radio Co. Arthur Faske Knox Battery & Electric Co. K. L. Ashbacker John N. Brahy Boston Broadcasting Co. LeRoy Joseph Beebe Rev. J. W. Sproul Paul J. Collhofer Boston Broadcasting Co. First M. B. Church Hewitt-Wood Radio Co., Inc. Radiophone Brdcstg. Station, Inc. Wm. Penn Broadcasting Co. Long Island Broadcasting Co. Long Island Broadcasting Co. Long Island Broadcasting Co.	ксуs. 1500 мтгs. 199.9 DIAL

[49]

			II .			
ALABAMA			Santa Ana K-4	100	KREG	1500
Birmingham K-19-a	5000 WA	PI 1140	Santa Barbara J-3 Santa Maria J-2-b	100	KDB	1500
	500 WB		Santa Maria J-2-b Stockton H-2-b	100	KSMR	1200
C-1-1 17 20	100 WK		Stockton 11-2-6	250 100	KGDM KWG	1100 1200
Gadsden K-20-a Mobile L-19	50 WJ 500 WO	BY 1210 DX 1410	Westminster	5000	KPWF	1490
Montgomery K-19	500 WS	FA 1410	CANAL FORM			
Montgomery K-19 Talladega K-20	100 WF	DW 1420	CANAL ZONE			
ALASKA			Balboa	750	NBA	850
Anchorage	100 K/E	OD 1230	COLORADO			
Juneau	100 KF 10 KF	U 1310	li			
Ketchikan	500 KG		Colo. Springs H-10 Denver G-10-b	1000	KFUM	1270
ARIZONA			Denver G-10-B	500 100	KFEL KFUP	920 1310
			li .	500	KFXF	920
Flagstaff J-7 Jerome J-7	100 KF 100 KG	XY 1420 MC 1310	ll .	1000	KLZ	560
Phoenix K-7	500 KO	Y 1390	II.	12500 500	KOA KPOF	830 880
_	500 KT.	AR 620	Edgewater G-10	50	KFXJ	1310
Prescott J-6	100 KP	JM 1500	Fort Morgan G-11	100	KGEW	1200
Tucson L-7	100 KG 500 KV	AR 1370 DA 1260	II Greeley r-10	500	KFKA	880
ARKANSAS	300 101	JA 1200	Gunnison H-9 Pueblo H-11	50 250	KFHA KGHF	1200 1320
Blytheville I-18	50 KL	CN 1290	Trinidad H-10	100	KĞİW	1420
Fayetteville I-16	1000 KU	OA 1390	Yuma G-11	50	KĞEK	1200
Hot Springs J-16 Little Rock J-17	10000 KT	HS 1040	CONNECTICIES			
Little Rock J-17	100 KG	HI 1200	CONNECTICUT			
	250 KG 1000 KLI	JF 890 RA 1390	Bridgeport F-26 Hartford E-26-d	500	WICC	1190
	500 KL	1250	New Haven F-26-b	50000 500	WTIC WDRC	1060 1330
McGehee K-17	50 KG	HG 1310	Storrs	250	WCAC	600
Paragould I-17	100 KB			_		
Siloam Springs I-16	50 KF	PW 1340	DELAWARE			
CALIFORNIA			Wilmington G-25	250	WDEL	1120
Berkeley H-1-a Burbank J-4	100 KR	E 1370	-	100	WILM ,	1420
Culver City K-3	500 KEI 250 KF	JW 780 /D 1000	DISTRICT OF C	OI LIMI	OT A	
El Centro K-5	100 KX	D 1000				
Fresno I-3	100 KM	J 1210	Washington G-24-c	250 500	WMAL WRC	630 950
Hayward H-2 Hollywood K-3	100 KZ 1000 KF	M 1370	I	100	WOL	1310
Hollywood K-3	500 KM	VB 950 TR 570	FLORIDA			
	5000 KN	X 1050	Clearwater N-21	1000	WFLA	620
Holy City I-2	100 KF	QU 1420	Gainesville M-21	5000	WRIIF	830
Inglewood K-4 Long Beach K-4-a	500 KM 1000 KF	IC 1120 OX 1250	Jacksonville M-22 Miami O-23	1000 1000	WJAX WQAM	900 560
	1000 KG	ER 1360	Miami Beach O-23	1000	WIOD	1300
Los Angeles K-3-b	1000 KEC	A 1430	Orlando N-22	500	WDBO	1120
	1000 KE 500 KE 5000 KF	JK 710 640	Pensacola L-19 St. Petersburg N-21	500 1000	WCOA WSUN	1340
	250 KF	OZ 850	Tampa N-22-b	1000	WDAE	620 1220
	500 KFS	SG 1120		100	WMBR	1370
	1000 KG 100 KG	EF 1300 FJ 1200	GEORGIA			
	100 KG 1000 KH	J 1200 J 900	Atlanta K-20-a	250	WGST	890
	500 KT	√1 780	Columbus K 20	5000	WSB	740
Oakland H-1-b	750 KT		Columbus K-20 Macon K-21	50 250	WRBL WMAZ	1200 890
Cantallo II-I-D	500 KF 7500 KG		Rome J-20	100	WFDV	1370
	250 KLS	1440	Savannah K-22	500	WTOC	1260
	500 KL	₹880	Tifton L-21 Toccoa J-21	20 500	WRBI WTFI	1310
Pasadena J-4	1000 KT 50 KPI		10ccoa J-21	500	WILI	1450
1 asacciia j=4	1000 KPS		HAWAII			
Sacramento H-2-a	100 KFI	3K 1310	Honolulu	500	KGHB	1320
San Bernardino J-3	100 KF	ζM 1210		500	KGMB	1320
San Diego K-4-b	500 KFS 250 KG	SD 600 B 1330	IDAILE	500	KGU	940
San Francisco H-1-c	1000 KFI	RC 610	IDAHO			
	500 KFV		Boise D-4	1000	KIDO	1250
	50 KG 100 KJE	GC 1420 IS 1070	Idaho Falls D-7 Jerome E-5	500 50	KEYD	1320
	100 1	20/0	Describe E 7	250	KFXD	1420 900
	5000 KPC	680	Pocatello E-7	230	KOLI	
San Jose I-2	100 KJE 5000 KPC 1000 KY 500 KQ	A 1230	Sand Point A-4 Twin Falls E-5	100 250	KSEI KGKX KGIQ	1420 1320

ILLINOIS				Ottumwa F-17	100	WIAS	1420
Carthage F-17-e	50	WCAZ	1070	Red Oak F-15	100	KICK	1420
Chicago E-19-g	10000	KFKX	1020	Shenanhoah F-15-c	500 500	KFNF KMA	890 930
5 5	10000	KYW	1020	Sioux City E-15	1000	KSCJ	1330
	500 25000	WAAF WBBM	920 770	Waterloo F-17	500	WMŤ	600
	1000	WCFL	970	KANSAS			
	5000	WCHI	1490		100	MCNO	1210
	100 100	WCRW WEDC	1210 1210	Dodge City H-13 Gueda Springs	250	KGNO	680
	50000	WENR	870	Kansas City G-15	100	WLBF	1420
	500	WGES	1360	Lawrence G-15-a	1000 1000	KFKU WREN	1220 1220
	25000 1000	WGN WIBO	720 560	Manhattan G-14-a	500	KSAC	580
	5000	WJAZ	1490	Milford G-14	5000	KFKB	1050
	25000 50	WJBT WKBI	770 1420	Topeka G-14 Wichita H-14-a	500 1000	WIBW KFH	580 1300
	25000	WLIB	720	Wicinta 11-14-8	1000	1(111	1000
	5000	WLS	870	KENTUCKY			
	5000 5000	WMAQ WMBI	670 1080	Covington G-20	5000	WCKY	1490
	5000	WORD	1490	Hopkinsville I-19	1000	WFIW	940
	500	WPCC	560	Louisville H-20	10000	WHAS	820
Cicero E-19	100 100	WSBC WHFC	1210 1420	i	30	WLAP	1200
Decatur G-18	100	WIBL.	1200	LOUISIANA			
Evanston E-19	100	WEHS	1420	New Orleans M-17	100	WABZ	1200
Galesburg F-18-a Harrisburg H-18-b	100 100	WKBS	1310 1210	l	1000 100	WDSU	1250 1420
Harrisburg H-18-b Joliet E-19-f	100	WEBQ WCLS	1310	l	30	W JBO W JBW W SMB	1200
La Salle F-18-d	100 100	WKBB WJBC	1310		30 500	WSMB	1320
Mooseheart E-18-e	20000	WID	1200 1130	Rayne M-17	5000 150	WWL	850 1120
Peoria Heights G-18	500	WJJD WMBD	1440	Shreveport K-16	50	KRMD	1310
Quincy G-17 Rockford E-18-c	500 500	WTAD KFLV	1440 1410	_	1000	KTBS	1450
Rock Island F-17-c	100	WHBF	1210	İ	100 100	KTSL KWEA	1310 1210
Springfield G-18	100	WCBS	1210	1	10000	KWKH	850
Streator F-18-c	50 100	WTAX WDZ	1210 1070	MAINE			
Tuscola G-19-b Urbana G-19-a	250	WILL	890	Bangor C-28-b	100	WABI	1200
Zion E-19-c	5000	WCBD	1080	l -	500	WLBZ	620
INDIANA				Portland D-28-b	500	WCSH	940
Anderson G-20-a	100	WHBU	1210	MARYLAND			
Connersville G-20	100	WKBV	1500	I	10000	WBAL	1060
Culver F-19-d	500	WCMA	1400	Baltimore G-24-a	250	WCAO	600
Evansville H-19 Fort Wayne F-20-b	500 100	WGB F WGL	630 1370	I	100	w CBM	1370
Tott Wayne 1 -20-5	10000	Wowo	1160	Cumberland G-23	250 50	WFBR WTBO	1270 1420
Gary F-19 Hammond F-19	500 100	WJKS WWAE	1360 1200	Cumberiand G-23	30	WIBU	1420
Indianapolis G-19-c	1000	WFBM	1230	MASSACHUSET	TS		
1 -f C 10	500	WKBF	1400	Boston E-27-c	1000	WBIS	1230 990
Lafayette G-19 La Porte F-19-c	500 100	WBAA WRAF	1400 1200	l '	* 500 1000	WBZA WEEI	590
Marion F-20	50	WJAK WLBC	1310	l	100	WLOE	1500
Muncie G-20 South Bend F-20-a	50 500	WLBC WSBT	1310 1230	l	50 1000	WMES WNAC	1500 1230
Terre Haute G-19	100	WBOW	1310	Į.	500	WSSH	1410
Valparaiso F-19-b	500	WRBC	1240	Fall River E-27	250	WSAR	1450
TOWA				Gloucester E-27	1000 500	WEPS WLEX	830 1410
IOWA	F000	Wor		Lexington E-27	100	WLEY	1370
Ames E-16-c Boone E-16	5000 100	WOI KFGQ	640 1310	New Bedford E-27	100	WNBH	1310
Cedar Rapids E-17-a	100	KWCŘ	1310	S. Dartmouth E-27 Springfield E-26-b	500 15000	WMAF WBZ	1410 990
Clarinda E-15-c	500	KSO	1380	Wellesley Hills E-27	250	WBSO	920
Council Bluffs F-15-b Davenport F-17-a	1000 5000	KOIL WOC	1260 1000	Worcester E-27-b	100	WORC	1200
Decorah D-17	50	KĞČA	1270		250	WTAG	580
	100	KGCA KWLC	1270 1270	MICHIGAN			
Des Moines F-16-a Fort Dodge E-16-a	5000 100	WHO	1000 1310	Battle Creek E-20	50	WKBP	1420
Iowa City E-17-b	500	KFJY WSUI	880	Bay City D-21	500	WBCM	1410
Marshalltown E-16-d	100	KFJB KTNT	1200	Berrien Spgs. E-19	1000	WEMC	590 1 370
Muscatine F-17-b	5000	VINI	1170	Calumet B-18	100	WHDF	13/0

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Detroit E-21-g	1000 5000	WGHP WJR	1240 750	NEBRASKA			
East Lansing E-20-b Flint E-21-a	100 1000 1000 100	WWJ WKAR WFDF	1420 920 1040 1310	Clay Center G-14 Lincoln F-14-b	1000 5000 100 500	KMMJ KFAB KFOR WCAJ	740 770 1210 590
Grand Rapids E-20-a Jackson E-20	500 500 100	WASH WOOD WIBM	1270 1270 1370	Norfolk E-14-c North Platte F-13	1000 500	WJAĞ KGNF WAAW	1060 1430
Lapeer E-21 Ludington D-19	100 100 50	WMPC WKBZ	1500 1500	Omaha F-15-a Ravenna F-13	500 1000 100	WAAW WOW KGFW	660 590 1310
Royal Oak E-21-e Ypzilanti E-21-f	50 50	WAGM WJBK	1310 1370	Scottsbluff F-11 York F-13	100 500	KGKY KGBZ	1500 930
MINNESOTA				NEVADA			
Fergus Falls B-15	100	KGDE	1200	Las Vegas I-5 Reno G-3	100 100	KGIX KOH	1420 1370
Hallock A-14 Minneapolis C-16-b	50 7500 1000	KGFK WCCO WDGY	1200 810 1180	NEW HAMPSHI	RE		
	500 500	WGMS WHDI	1250 1180	Laconia D-27	100	WKAV	1310
Northfield D-16	500 1000 1000 1000	WLB WRHM KFMX WCAL	1250 1250 1250 1250	Tilton D-27	500	WBRL	1430
St. Paul C-16-c	10000	KSTP	1460	NEW JERSEY Asbury Park G-26	500	WCAP	1280
				Atlantic City G-25 Camden F-25-f	5000 500	WPG WCAM	1100 1280
MISSISSIPPI				Hackensack F-26 Jersey City F-26-d	250 300	WAAT	1450 1070
Greenville K-17 Gulfport M-18 Hattiesburg L-18	100 100 10	WRBQ WGCM WRBJ	1210 1210 1370	Newark F-25-h	250 250 1000 250 250	WKBO WAAM WGCP	1450 1450 1250 1250
Jackson L-18 Meridian L-18	500 500	WJDX WCOC	1270 880	D. Dar	5000	WNJ WOR	1450 710
Vicksburg K-17	300	WQBC	1360	Paterson F-26-c Red Bank G-26 Trenton F-25	1000 100 500	WODA WJBI Woax	1250 1210 1280
MISSOURI				NEW MEXICO			
Cp. Girardeau H-18-c Columbia G-16-b	100 500	KFVS KFRU	1210 630	Albuquerque J-9 Raton I-11	250 50	KGGM KGFL	1230 1370
Grant City F-15 Jefferson City H-16-a Joplin H-16	50 500 100	KGIZ WOS WMBH	1500 630 1420	Roswell K-10 State College K-9	100 20000	KGMD KOB	1500 1180
Kansas City G-15-b	1000 100	KMBC KWKC	950 1370	NEW YORK			
	1000 500 1000	WDAF WHB WOO	610 860 1300	Auburn E-24 Binghamton E-25	100 50	WMBO WNBF	1310 1500
St. Joseph G-15	2500 100	KFEO KGBX	680 1310	Brooklyn F-26-f	500 500 500	WBBC WCGU	1400 1400
St. Louis H-18-a	5000 500	KFQA KFUO	1090 550		100 500	WLTH WMBQ WSGH	1400 1500 1400
	100 5000	KFWF KMOX	1200 1090	Buffalo E-23-a	100 1000	WEBR WGR	1310 550
	500 1000	KSD KWK	550 1350		5000 1000	WKBW WKEN	1480 1040
	1000 100 100	WEW WIL WMAY	760 1200 1200		750 1000	WMAK WRDA	900 900
	100		1200	Canton D-25	50 500	WSVS WCAD	1370 1220
MONTANA				Cazenovia E-25-b Freeport F-26-1 Ithaca E-24-d	250 500 500	WMAC WCGU WEAI	570 1400 1270
Billings C-8 Butte C-7	500 500	KGHL KGIR	950 1360	Jamaica F-26-f	50 10	WLCI WMRJ	1210 1420
Great Falls A-8 Kalispell A-5	1000 100	KFBB KGEZ	1280 1310	Jamestown E-23-b Long Island City F-26	25 100	WOCL WLBX	1210 1500
Wolf Point A-10	100	KGCX	1310	Long Beach F-26	100	WCLB	1500

New York City F-26	5000	WABC	860	Steubenville F-22	50	WIBR	1420
	250 5000	WBN Y WBOQ	1350 860	Toledo F-21-a Youngstown F-22	500 500	WSPD WKBN	1340 570
	250	WCDA	1350				
	50000 500	WEAF WEVD	660 1300	OKLAHOMA			
	600	WGBS WHAP	600 1300	Alva I-13 Chickasha J-14-b	100 250	KGFF KOCW	1420 1400
	1000 250	WHN	1010	Elk City J-13	100	KGMP	1210
	30000	WJZ WKBQ	760	Enid I-14	100 500	KCRC WNAD	1370 1010
	250 5000	WLWL	1350 1100	Norman J-14-a Oklahoma I-14-b	5000	KFJF	1480
	500	WMCA	570 1350		100 100	KFXR KGFG	1310 1370
	250 500	WMSG WNYC	570		1000	WKY	900
	1000	WOV	1130	Picher I-15	500 100	KGGF WBBZ	1010 1200
	250 500	WPAP WPCH	1010 810	Ponca City I-14 Tulsa I-15	5000	KVOO	1140
	250	WQAO WRNY	1010				
Patchogue F-26	250 100	WPOE	1010 1370	OREGON			
Poughkeepsie F-26-a	500	WOKO	1440	Astoria C-1-a	100 1000	KFJI KOAC	1370 550
Rochester E-24-b	500 5000	WABO WHAM	1440 1150	Corvallis D-1 Eugene D-1	100	KORE	1420
Davis 111- E 26	500	WHEC	1440	Marshfield E-1	100 50	KOOS KMED	1370 1310
Rossville F-26 Saranac Lake D-26	1000 50	WBBR WNBZ	1300 1290	Medford E-1 Portland C-1-b	5000	KEX	1180
Schenectady E-25-c	50000	WGY WFBL	790		100 500	KFIF	1420 1300
Syracuse E-24-c	1000 250	WSYR	1360 570		1000	KF JR KGW	620
Froy E-21-a	500	WHAZ WHDL	1300 1420		1000 50 0	KOIN KTBR	940 1300
Fupper Lake D-25 Utica E-25-a	10 100	WIBX	1200	1	15	KVEP	1500
Woodside F-26 Yonkers E-26	100 100	WWRL WCOH	1500 1210		500 100	KWJJ KXL	1060 1420
		W CO11	1210	DENNICYTUANITA	200		
NORTH CAROL		WWNC	570	PENNSYLVANIA	100	WGM	940
Asheville J-21 Charlotte J-22	1000 5000	WBT	1080	Adamsburg Allentown F-25-c	250	WCBA	1440
Gastonia J-22	100 500	WRBU WNRC	1210 1440	Altoona F-24-c	250 100	WSAN WFBG	1440 1310
Greensboro I-22 Raleigh I-23	1000	WPTF	680	Carbondale F-25	10	WNRW	1200
Wilmington J-24 Winston-Salem I-22	100 100	WRBT WSJS	1370 1310	Elkins Park G-25-c Erie E-23	50 30	WIBG WEDH	930 1420
Willistoff-Saleiff 1-22	100	,,,,,,	1010		50	WRAK	1370
NORTH DAKOT	[A			Grove City F-23-b Harrisburg F-24-d	100 500	WSAJ WBAK	1310 1430
Bismarck B-12	500	KFYR	550		100	WCOD WHP	1200
Devils Lake A-13 Fargo B-14	100 1000	KDLR WDAY	1210 940	Jeannette G-23	500 100	WOOP	1430 840
Grand Forks A-14	100	KFJM KGCU	1370	Johnstown F-23-d	100	WJAC WGAL	1310
Mandan B-12 Minot A-12	100 100	KLPM	1200 1420	Lancaster G-24-a	15 100	WKJC	1310 1200
				Lewisburg F-24-b	100 5 00	WJBU WLBW	1210 1260
OHIO				Oil City F-23-a		WCAU	1170
Akron F-22-b				Philadelphia G-25-0	10000		
	1000	WADC	1320	Philadelphia G-25-d	100	WELK	
	500	WADC WFJC WEBE	1450	Philadelphia G-25-d		WELK WFAN WFI	610 560
Cambridge F-22 Canton F-22-d	500 100 10	WFJC WEBE WHBC	1450 1210 1200	Philadelphia G-25-d	100 500 500 50	WELK WFAN WFI WFKD	610 560 1310
Cambridge F-22 Canton F-22-d	500 100 10 100 500	WFJC WEBE WHBC WFBE WKRC	1450 1210 1200 1200 550	rniadeipnia G-25-u	100 500 500 50 100 500	WELK WFAN WFI WFKD WHAT WIP	610 560 1310 1310 610
Cambridge F-22 Canton F-22-d	500 100 10 100 500 5000	WFJC WEBE WHBC WFBE WKRC WLW	1450 1210 1200 1200 550 700	rniadeipnia G-29-u	100 500 500 50 100 500 500	WELK WFAN WFI WFKD WHAT WIP WLIT	610 560 1310 1310 610 560
Cambridge F-22 Canton F-22-d Cincinnati G-20-e	500 100 10 100 500	WFJC WEBE WHBC WFBE WKRC	1450 1210 1200 1200 550 700 1330 1070		100 500 500 50 100 500 500 100 250	WELK WFAN WFI WFKD WHAT WIP WLIT WPEN WRAX	560 1310 1310 610 560 1500 1020
Cambridge F-22 Canton F-22-d Cincinnati G-20-e	500 100 10 100 500 50000 5000 1000	WFJC WEBE WHBC WFBE WKRC WLW WSAI WEAR WHK	1450 1210 1200 1200 550 700 1330 1070 1390	Pittsburgh F-23-c	100 500 500 50 100 500 500 100 250 50000	WELK WFAN WFI WFKD WHAT WIP WLIT WPEN WRAX KDKA	560 1310 1310 610 560 1500 1020 980
Cambridge F-22 Canton F-22-d Cincinnati G-20-e Cleveland F-22-a	500 100 10 100 500 50000 5000 1000 1000	WFJC WEBE WHBC WFBE WKRC WLW WSAI WEAR WHK WJAY WTAM	1450 1210 1200 1200 550 700 1330 1070 1390 610		100 500 500 50 100 500 500 100 250 50000 500 1000	WELK WFAN WFI WFKD WHAT WIP WLIT WPEN WRAX KOKA KQV WCAE	610 560 1310 1310 610 560 1500 1020 980 1380 1220
Cambridge F-22 Canton F-22-d Cincinnati G-20-e Cleveland F-22-a	500 100 10 100 500 50000 500 1000 1000	WFJC WEBE WHBC WFBE WKRC WLW WSAI WEAR WHK WJAY WTAM WAIU	1450 1210 1200 1200 550 700 1330 1070 1390 610 1070 640	Pittsburgh F-23-c	100 500 500 500 500 500 100 250 50000 5000 1000	WELK WFAN WFI WFKD WHAT WIP WLIT WPEN WRAX KDKA KQV WCAE WIAS	616 566 1316 1316 616 566 1506 1026 986 1386 1226
Cambridge F-22 Canton F-22-d Cincinnati G-20-e Cleveland F-22-a	500 100 10 500 5000 1000 1000 500 5000 500 5	WFJC WEBE WHBC WFBE WKRC WLW WSAI WEAR WHK WJAY WTAM WAIU WCAH WEAO	1450 1210 1200 1200 550 700 1330 1070 1390 610 1070 640 1430 570		100 500 500 500 500 500 100 250 5000 1000 1	WELK WFAN WFI WFKD WHAT WIP WLIT WPEN WRAX KDKA KQV WCAE WJAS WRAS WRAS	610 560 1310 610 560 1500 1020 980 1380 1220 1310 880
Cambridge F-22 Canton F-22-d Cincinnati G-20-e Cleveland F-22-a Columbus G-21-b	500 100 10 500 50000 5000 1000 1000 500 5	WFJC WEBE WHBC WFBE WKRC WLW WSAI WEAA WHK WJAY WTAM WAIU WCAH WEAO WMAN	1450 1210 1200 1200 550 700 1330 1070 610 1070 640 1430 570 1210	Pittsburgh F-23-c Reading F-25-d Scranton F-25-a	100 500 500 500 100 500 100 250 50000 1000 1	WELK WFAN WFI WFKD WHAT WIP WLIT WPEN WRAX KDKA KQV WCAE WJAS WRAS WRAS	610 560 1310 1310 610 560 1500 1020 980 1380 1220 1290 1310 880 880
Cambridge F-22 Canton F-22-d Cincinnati G-20-e Cleveland F-22-a Columbus G-21-b Dayton G-21-e	500 100 10 500 5000 5000 1000 1000 500 5	WFJC WEBE WHBC WFBE WKRC WLW WSAI WEAR WHK WJAY WTAM WAIU WCAH WEAO WMAN WSMK	1450 1210 1200 1200 550 700 1330 1070 610 1070 640 1430 570 1210 1380 1310	Pittsburgh F-23-c Reading F-25-d Scranton F-25-a State College F-24-a Washington F-23	100 500 500 100 500 100 500 100 500 1000 1000 250 250 500 1000	WELK WFAN WFAD WHAT WIP WLIT WPEN WRAKA KQV WCAS WJAS WRAS WRAS WRAS WRAS WRAS WRAS WRAS WR	610 560 1310 610 560 1500 1020 980 1380 1220 1310 880 880 1230 1200
Cambridge F-22 Canton F-22-d Cincinnati G-20-e Cleveland F-22-a Columbus G-21-b Dayton G-21-e Hamilton G-20-d Mansfield F-21 Mount Orab	500 100 10 5000 5000 1000 1000 5000 500	WFJC WEBE WHBC WFBE WKRC WLW WSAI WEAA WHK WJAY WTAM WAIU WCAH WEAO WMAN	1450 1210 1200 1200 550 700 1330 1070 1390 610 1070 640 1430 570 1210 1380	Pittsburgh F-23-c Reading F-25-d Scranton F-25-a State College F-24-a	100 500 500 100 500 100 250 50000 1000 1	WELK WFAN WFAN WHAT WIP WLIT WPEN WRAX KOKA KOV WCAE WJAS WRAW WGBI WQAN WPSC	1370 610 560 1310 1310 610 560 1020 980 1380 1220 1290 1310 880 1230 1210 1310

PORTO RICO					100	KTAP	1420
San Juan	500	WKAQ	890	II .	1000 5000	KTSA WOAI	1290 1190
RHODE ISLAND				Waco L-15-b	1000	WACO	1240
Newport F-27	100	WMBA	1500	Wichita Falls K-14	250	KGKO	570
Pawtucket E-27 Providence E-27-h	100 100	WPAW WDWF	1210 1210	UTAH			
r tovidence E-27-II	250	WEAN	78 0	Ogden F-7-b Salt Lake City F-7-c	100 1000	KLO KD YL	1370 1290
	250 100	WJAR WLSI	890 1210	Sait Dake City 1-7-c	5000	KSL	1130
SOUTH CAROLII		WEST	1210	VERMONT	***	****	
Charleston K-23	NA. 75	WBBY	1200	Burlington D-26-a St. Albans D-26	100 5	WCAX WQDM	1200 1370
	100	WCSC	1200 1310	Springfield D-26-b	10	WNBX	1200
Columbia K-22	500 100	WIS WSPA	1010	VIRGINIA			
Spartanburg J-22 SOUTH DAKOTA		WSPA	1420	Arlington G-24-d	1000	NAA	690
Brookings D-14	500	KFDY	550	Danville I-23	100 100	WBTM	1370
Dell Rapids D-14	500 50	KGDA	550 1370	Emory Lynchburg H-23	100	WEHC WLVA	1370 1370
Oldham D-14	15	KGDY	1370 1200	IJ.	500		590
Pierre D-12 Rapid City D-11	200 100	KGFX WCAT	580 1200	Mt. Vernon Hills Newport News I-24	10000 100	WJSV WGH	1460 1310
Sioux Falls D-14	2000	KSOO	1110	Norfolk I-24	500	WPOR	780
Vermillion E-14-b Watertown	500 100	KUSD KGCR	890 1210	Petersburg H-24	500 100	WTAR WLBG	780 1200
Yankton E-14-a	1000	WNAX	570	Richmond H-24	100	WBBL	1210
TENNESSEE					100	WMBG	1210
Bristol I-22	100	WOPI	1500	Roanoke H-23	5000 250	WRVA WDBJ	1110 930
Chattanooga J-20	1000	WDOD	1280	WASHINGTON			
Knoxville I-20	50	WFBC	1200	Aberdeen B-1	75	KXRO	1310
	50 1000	WNBJ WNOX	1310 560	Bellingham A-1	100	KVOS	1200
Lawrenceburg J-19	500	WOAN	600	Everett A-2 Lacey B-2-b	50 10	KFBL KGY	1370 1200
Memphis J-18-a	500 100	WGBC WHBQ	1430 1370	Longview B-1	100	KUJ KWSC	1500
	500	WMC	780	Pullman B-4 Seattle B-2-a	500 100	KWSC KFQW	1220 1420
	500 500	WNBR WREC	1430 600	Scattle B-2-a	5000	KJR	970
Nashville I-19	5000	WLAC	1470		1000 1000	KOL	1270 920
	5000 5000	WSM WTNT	650 1470		1000	KOMO KPCB	1500
Springfield I-19	100	WSIX	1210	i i	50 1000	KRSC KTW	1120
Union City I-18	100	WOBT	1310		1000	KVL	1270 1370
TEXAS			- 1	Spokane A-4	500 100	KXA	5 7 0
Abilene K-13	100	KFYO	1420	Spokane A-4	1000	KFIO KFPY	1120 1340
Amarillo J-12	1000 250	KGRS WDAG	1410 1410		5000	KGA	1470
Austin L-14-b	500	KTRH	1120	Tacoma B-1-a	1000 500	KHQ KMO	590 860
Beaumont M-16	100 500	KUT KFDM	1500 560	Wenatchee B-3	1000	KVI	760
Brownsville O-14-b	500	KWWG	1260	Yakima B-3	50 50	KPQ KIT	1500 1310
Brownwood L-13	100 500	KGKB WTAW	1500	WEST VIRGINIA			1010
College Sta. M-13 Corpus Christi N-14	100	KGFI	1120 1500	Bluefield H-22	100	WHIS	1420
Dalias L-15-a	10000	KRLD	1040	Charleston H-22	250	WOBU	580
	5000 500	WFAA WRR	800 1280	Fairmont G-23 Huntington G-22	250 250	WMMN WSAZ	890 580
Dublin K-14	100	KFPL	1310	Weirton G-22	60	WOBZ	1420
El Paso L-10	100 100	KTSM WDAH	1310 1310	Wheeling G-22	5000	WŴVA	1160
Fort Worth L-14-a	100	KFJZ	1370	WISCONSIN			
	1000 5000	KSAT WBAP	1240 800	Beloit E-18-b Eau Claire D-17	500 1000	WEBW	560
Galveston M-15-b	100	KFLX	1370	Fond du Lac D-18-d	1000	WTAQ KFIZ	1330 1420
Greenville K-15	500 15	KFUL KFPM	1290 1310	Green Bay D-19 Kenosha E-19	100	WHBY	1200
Harlingen O-14	500	KRGV	1260	La Crosse E-17	100 1000	WCLO WKBH	1200 1380
Houston M-15-a	1000	KPRC	920	Madison E-18-2	75 0	WHA	940
	100 100	KTUE KTLC	1420 1500	Manitowoc D-19	100 100	WIBA WOMT	1210 1210
San Angelo M-12	100	KTLC KGKL	1370	Milwaukee E-19-a	250	WHAD	1120
San Antonio M-14-a	100 100	KGCI KONO	1370 1370		250 1 900	WISN WTMJ	1120 620
	100	00	20,0		1000	" I'MIJ	020

					5000	CVCW	690
Poynette D-18-e	100	WIBU	1310	II.	5000 500	CKGW	580
Racine E-19	100	WRJN WHBL	1370		500	CKOW	840
Sheboygan C-18 Stevens Pt. D-18-b	500	WLBL	1410 900		500	CNRT	840
Stevens Pt. D-18-D	2000 1000	WEBC	1290		5000	CNRX	690
Superior B-17	1000	WEDC	1270	Waterloo	50	CKCR	1010
WYOMING				PRINCE EDWARI	`		
Casper	100	KDFN	1210		,		
Caspei	100			ISLAND	4.50	CDOM.	060
CANI	A T A			Charlottetown	250	CFCY CHCK	960 960
CAN	ADA		- 1	Summerside	30 25	CHGS	1120
ALBERTA			- 1		20	01100	
Calgary	500	CFAC	690	QUEBEC			
Caigary	500	CFAC CFCN	690	Montreal	1650	CFCF	1030
	500	CHCA	690		5000	CHYC	730
	500	CJCJ	690		5000	CKAC	730 730
	500	CNRC	690	0	5000 100	CNRM CHRC	880
Edmonton	250	CHMA	580	Quebec	22	CKCI	880
	500	CJCA	580		50	CKCV	880
	500	CKUA	580 580		50	CNRQ	880
Lethbridge	500 50	CIOC	1120	St. Hyacinthe	50	CKSH	1010
Red Deer	1000	CJOC	840	CACIZATICITETUAN	,		
Aca Beer	1000	CKLC	840	SASKATCHEWAN		o mw	600
	1000	CNRD	840	Fleming	500	CJRW	600 600
				Moose Jaw Pilot Butte	500 500	CJRM CHWC	960
BRITISH COLUM	IRIA			Regina	500	CFCR	960
Chilliwack	5	CHWK	1210	Kegina	500	CIBR	960
Kamloops	15	CHWK CFJC CJOR CHLS	1120	Ť	500	CJBR CKCK	960
Sea Island	50	CJŎR	1030		500	CNRR	960
Vancouver	50	CHLS	730	Saskatoon	500	CFQC	910
	50	CKCD	730 730		250	CJHS CNRS	910 910
	50	CKFC CKMO	730 730	Yorkton	500 500	CJGX	630
	50 100	CKWX	730	Torkton	300	CJGA	000
	500	CNRV	1030	HAITI			
Victoria	500	CFCT	630	Port au Prince	1000	HHK	920
				_			
MANITOBA				MEXICO	350	VEE	920
Brandon	500	CKX	540	Chihuahua	250 250	XFF XES	1200
Winnipeg	5000	CKY	780	C. Lerdo, Dgo. Guadalajara, Jal.	101	XEA	1200
	5000	CNRW	780	Islana Ver	350	XFC	630
VEW POINCEMIC	NTZ			Jalapa, Ver. Merida, Yucatan Mexico City	105	XEY	550
NEW BRUNSWIC		OFNIB	1210	Mexico City	1000	XEB	670
Fredericton	50	CFNB CNRA	1210		1000	XEN	730
Moneton	500 50	CFBO	630 890		500	XEX	920
St. John	30	CI DO	070		50	XFA XFG	540 640
NICTIA COOMIA				1	2000 1000	XFI	590
NOVA SCOTIA					1000	XFX	910
Halifax	500	CHNS	930	Monterrey, N. L	1000	XEH	970
Louisburg	500 50	VAS	690 880	ll Morelia, Mich.	101	XEI	1000
Sydney Wolfville	50	CJCB CKIC	930	Oaxaca, Oax.	105	XEF	1130
WOHVINE	30	CIVIC	,00	Oaxaca, Oax. Pueblo, Pue.	101	XEE	960
ONTARIO				CUBA			
Chatham	100	CFCO	1210	Caibarien	250	CMHD	920
Cobalt	15	CKMC	1210	Cienfuegos	200	CMHA	1150
Hamilton	10	CHCS	880	Colon	300	CMGA	830
	50	CHML	880	Havana	100	CMBC	890
	50	CKOC	880	11	200	CMBY	610
Iroquois Falls	250 500	CFCH CFRC	600 930	11	100	CMBZ	1030 840
Kingston London	500	CJGC	910	11	500 150	CMC CMCB	950
London	500	CNRL	910		100	CMCE	1100
		CKPR	930		250	CMCF	640
Midland	50		890		500	CMI	820
Midland Ottawa	100	CKCO					
Ottawa	100 500	CNRO	600		2000	CMK	730
Ottawa Prescott	100 500 50	CNRO CFLC	600 1010		2000 1000	CMK	600
Ottawa Prescott Preston	100 500 50 25	CNRO CFLC CKPC	600 1010 1210		2000 1000 500	CMK CMW CMX	600 920
Ottawa Prescott	100 500 50 25 500	CNRO CFLC CKPC CFCA	600 1010 1210 840	Marianao	2000 1000 500 50	CMK CMW CMX CMBW	600 920 1030
Ottawa Prescott Preston	100 500 50 25 500 500	CNRO CFLC CKPC CFCA CFCL	600 1010 1210 840 580	Tuinucu	2000 1000 500	CMK CMW CMX	600 920
Ottawa Prescott Preston	100 500 50 25 500 500 4000	CNRO CFLC CKPC CFCA CFCL	600 1010 1210 840 580 960		2000 1000 500 50	CMK CMW CMX CMBW CMHC	600 920 1030 790
Ottawa Prescott Preston	100 500 50 25 500 500	CNRO CFLC CKPC CFCA	600 1010 1210 840 580	Tuinucu	2000 1000 500 50	CMK CMW CMX CMBW	600 920 1030

CFAC 690	CJRM 600	[CMI 820
Calgary, Alta.	Moose Jaw, Sask.	Havana, Cuba
CFBO 890	CJRW 600	CMK 730
St. John, N. B.	Fleming, Sask.	Havana, Cuba
CFCA 840	CJSC 580	CMW 600
Toronto, Ont. CFCF 1030	Toronto, Ont.	Havana, Cuba CMX 920
Montreal, Que. 202	CKAC 730 Montreal, Que.	CMX 920 Havana, Cuba
CFCH 600	CKCD 730	CNRA 630
Iroq's Falls, Ont.	Vancouver, B.C.	Moncton, N.B.
CFCL 580	CKCI 880	CNRC 690
Toronto, Ont.	Quebec, Que.	Calgary, Alta.
CFCN 690 Calgary, Alta	CKCK 960 Regina, Sask.	CNRD 840
CFCO 1210	CKCL 580	Red Deer, Alta.
Chatham, Ont.	Toronto, Ont.	Edmonton, Alta.
CFCR 960	CKCO 890	CNRL 910 3 9
Regina, Sask.	Ottawa, Ont.	London, Ont.
CFCT 630 Victoria, B. C.	CKCR 1010	CNRM 730
CFCY 960	Waterloo, Ont. CKCV 880	Montreal, Que.
Ch'lottet'n.P.E.I.	Quebec, Que.	Ottawa, Ont.
CFJC 1120	CKFC 730	CNRQ 880
Kamloops, B. C.	Vancouver, B.C.	Quebec, Que.
CFLC 1010	CKGW 690 57	CNRR 960
Prescott, Ont.	Toronto, Ont.	Regina, Sask.
Fredericton, N.B.	CKIC 930 Wolfville, N.S.	CNRS 910 Saskatoon, Sask.
CFQC 910	CKLC 840	CNRT 840
Saskatoon, Sask.	Red Deer, Alta.	Toronto, Ont.
CFRB 960	CKMC 1210	CNRV 1030
Toronto, Ont. CFRC 930	Cobalt, Ont.	Vancouver, B.C.
Kingston, Ont.	CKMO 730 Vancouver, B.C.	CNRW 780 Winnipeg, Man.
CHCA 690	CKNC 580	CNRX 690
Calgary, Alta.	Toronto, Ont.	Toronto, Ont.
CHCK 960	CKOC 880	ННК 920
Ch'lottet'n, P.E.I.	Hamilton, Ont.	Port au Prince, H.
CHCS 880 Hamilton, Ont.	CKOW 840 Toronto, Ont.	RBTM 1200
CHCT 840	CKPC 1210	Paragould, Ark. KCRC 1370
Red Deer, Alta	Preston, Ont.	Enid, Okla.
CHGS 1120	CKPR 930	KDB 1500
Sum'rside, P.E.I. CHLS 730	Midland, Ont.	S. Barbara, Cal.
Vancouver, B.C.	CKSH 1010 St. H'cinthe, Que.	KDFN 1210 Casper, Wyo.
CHMA 580	CKUA 580	KDKA 980
Edmonton, Alta.	Edmonton, Alta.	Pittsburgh, Pa.
CHML 880	CKWX 730	KDLR 1210
Hamilton, Ont. CHNS 930	Vancouver, B.C. CKX 540	Devils Lake, N.D. KDYL 1290
Halifax, N.S.	Brandon, Man.	Salt Lake City
CHRC 880	CKY 780	KECA 1430
Quebec, Que.	Winnipeg, Man.	Los Angeles, Cal.
CHWC 960	CMBC 890	KEJK 710
Pilot Butte, Sask. CHWK 1210	Havana, Cuba CMBW 1030	Los Angeles, Cal. KELW 780
Chilliwack, B.C.	Marianao, Cuba	Burbank, Cal.
CHYC 730	CMBY 610	KEX 1180
Montreal, Que.	Havana, Cuba	Portland, Ore.
CJBR 960	CMBZ 1030	KFAB 770
Regina, Sask. CJCA 580	Havana, Cuba	Lincoln, Nebr. KFBB 1280
Edmonton, Alta.	Havana, Cuba 30	Great Fls., Mont.
CJCB 880	CMCB 950	KFBK 1310
Syndey, N.S.	Havana, Cuba	Sacramento, Cal.
CJCJ 690	CMCE 1100	KFBL 1370
Calgary, Alta.	Havana, Cuba CMCF 640	Everett, Wash.
London, Ont. 24	Havana, Cuba	Beaumont, Tex.
CJGX 630	CMGA 830	KFDY 550
Yorkton, Sask.	Colon, Cuba	Brookings, S.D.
CJHS 910	CMHA 1150	KFEL 920
Saskatoon, Sask.	Cienfuegos, Cuba CMHC 790	Denver, Colo. KFEQ 680
Lethbridge, Alta.	Tuinucu, Cuba	KFEQ 680 St. Joseph, Mo.
CJOR 1030	CMHD 920	KFGQ 1310
Sea Island, B.C.	Caibarlen, Cuba	Boone, Iowa

KFH 1300	IA		1	KFUO 550				KGFJ 1200 Los Angeles, Cal.	1 1	1	
Wichita, Kansas	10			St. Louis, Mo. KFUP 1310				KGFK 1200			
KFHA 1200 Gunnison, Colo.				Denver, Colo.				Hallock, Minn.			
KFI 640	1.0	1		KFVD 1000				KGFL 1370		7	
Los Angeles, Cal.	61-	2-		Culver City, Cal.				Raton, N.M.			
KFIF 1420			_	KFVS 1210				KGFW 1310 Ravenna, Nebr.	1 1		
Portland, Ore.				Cape Gir'rd'u, Mo KFWB 950	·			KGFX 580		8	
KFIO 1120 Spokane, Wash.				Hollywood, Cal.			L .	Pierre, S.D.			
KFIU 1310		-	-	KFWF 1200				Pierre, S.D. KGGC 1420			
Juneau. Alaska			1	St. Louis, Mo.				ll San F'ncisco, Cal.			
KFIZ 1420				KFWI 930				KGGF 1010			
Fond du Lac, Wis.			_	San F'ncisco, Cal.				Picher, Okla. KGGM 1230			
KFJB 1200	1			KFWM 930 Oakland, Cal.	Ì		1	Alb'q'rque, N.M.			
Marshalltown, Ia. KFJF 1480		-	-	KFXD 1420				KGHB 1320			
Oklahoma City			-	Jerome, Idaho				Honolulu, T.H.			
KFJI 1370				KEYE 920				KGHF 1320			
Astoria, Ore.				Denver, Colo.				Pueblo, Colo.			_
KFJM 1370				KFXJ 1310				KGHG 1310 McGehee, Ark.]		
Grd. Forks, N.D. KFJR 1300				Edgewater, Colo. KFXM 1210				KGHI 1200			
Portland, Ore.				San Ber'd'no,Cal.				Little Rock, Ark.	1		
KFJY 1310		1		KFXR 1310		-		KGHL 950			
Fort Dodge, Ia.				Oklahoma City				Billings, Mont.			
KFJZ 1370				KFXY 1420				KGIQ 1320			
Ft. Worth, Tex.				Flagstaff, Ariz.				Twin Falls, Ida. KGIR 1360	_		_
KFKA 880 Greeley, Colo.				KFYO 1420 Abilene, Texas				Butte. Mont			
KFKB 1050	177	1		KFYR 550				Butte, Mont. KGIW 1420			
Milford, Kansas	19	3		Bismarck, N.D.				Trinidad, Colo.			
KFKU 1220			1	KGA 1470				KGIX 1420			
Lawrence, Kans.				Spokane, Wash. KGAR 1370				Las Vegas, Nev. KGIZ 1500			
KFKX 1020 Chicago, Ill.				KGAR 1370 Tucson, Ariz.				Grant City, Mo.			
KFLV 1410		-	-	KGB 1330	- 1			KGJF 890			
Rockford, Ill.				San Diego, Cal.				Little Rock, Ark.			
KFLX 1370				KGBU 900				KGKB 1500			
Galveston, Tex. KFMX 1250				Ketchikan, Al'ka. KGBX 1310				Brownwood, Tex. KGKL 1370			
KFMX 1250 N'thfield, Minn.				St. Joseph, Mo.		3		San Angelo, Tex.			
KFNF 890	5.0	I		KGBZ 930	2			KGKO 570			
Shenandoah, Ia.	30	2		York, Nebr.	6			Wichita Fils., Tex			
KFOR 1210				KGCA 1270				KGKX 1420 Sand Point, Ida.	, ,		
Lincoln, Nebr. KFOX 1250				Decorah, Iowa KGCI 1370				KGKY 1500			
Long Beach, Cal.				San Ant'nio, Tex.				Scottsbluff, Nebr.	<u> </u>		
KFPL 1310				KGCR 1210				KGMB 1320			
Dublin, Texas				Watertown, S.D.				Honolulu, T. H.			
KFPM 1310				KGCU 1200				KGMC 1310 Jerome, Ariz.			
Greenville, Tex. KFPW 1340			_	Mandan, N.D. KGCX 1310	_			KGMD 1500	1		
Siloam Spgs., Ark.		1		Wolf P't, Mont.	}			Roswell, N. M.	1		
KFPY 1340				KGDA 1370				KGMP 1210			
Spokane, Wa≤h.				Dell Rapids, S.D.				Elk City, Okla.			
KFQA 1090				KGDE 1200 Ferg's F'lls, Minn				KGNF 1430 No. Platte, Neb.			
St. Louis, Mo. KFQD 1230				KGDM 1100				KGNO 1210			
Anchorage, Alas.				Stockton, Cal.				DodgeCity, Kans.			
KFQU 1420				KGDY 1200				KGO 790		1	
Holy City, Cal.				Oldham, S.D.				Oakland, Cal.			
KFQW 1420	ĺ			KGEF 1300				KGRS 1410 Amarillo, Texas			
Seattle, Wash. KFQZ 860				Los Angeles, Cal. KGEK 1200				KGU 940			
Los Angeles, Cal.			1	Yuma, Colo.				Honolulu, Hawaii		L	
				KGER 1360				KGW 620			
San F'ncisco, Cal. KFRU 630				Long Beach, Cal.				Portland, Ore. KGY 1200			
Krku 630				KGEW 1200 Ft. Morgan, Colo.				Lacey, Wash.			
Columbia, Mo. KFSD 600				KGEZ 1310				[KHJ 900			
San Diego, Cal.				Kalispell, Mont.				Los Angeles, Cal.			
KFSG 1120				KGFF 1420				I KHQ 590			
Los Angeles, Cal.				Alva, Okla.				Spokane, Wash.			
KFUL 1290				KGFG 1370				RICK 1420 Red Oak, Iowa			
Galveston, Tex. KFUM 1270				Oklahoma City KGFI 1500				Lucu Coa, IUwa			_
Col. Spgs., Colo.				C'pus Ch'sti, Tex.							
									1		

KID 1320 Idaho Falls, Ida.		1	KPPC 1210			1	KUJ 1500	1	i	1000
KIDO 1250	-		 Pasadena, Cal. KPQ 1500				Longview, Wash.			
Boise, Idaho			Wenatchee, Wash				KUOA 1390 Fayetteville, Ark	1	1	
KIT 1310			HKPRC 920	·		-	KUSD 890	·		
Yakima, Wash.			 Houston, Texas				Vermillion, S.D.			
KJBS 1070			ILVESIA 1360				KUT 1500			
San F'ncisco, Cal. KJR 970			 Pasadena, Cal. KPWF 1490				Austin, Texas			
Seattle, Wash.	L		KPWF 1490 Westminster, Cal				KVEP 1500 Portland, Ore.			
KLCN 1290			KQV 1380			_	KVI 760			
Blytheville, Ark.			 Pittsburgh, Pa.				Tacoma, Wash.			
KLO 1370	1		KQW 1010				ll KVL 1370			
Ogden, Utah KLPM 1420			 San Jose, Cal. KRE 1370				Seattle, Wash.			
Minot, N. Dak.			KRE 1370 Berkeley, Cal.				KVOA 1260			
KLRA 1390			KREG 1500				Tucson, Arizona KVOO 1140	1	7.0	
Little Rock, Ark.			 Santa Ana, Cal.				Tulsa, Okla,	10	2	
KLS 1440			KRGV 1260				KVOS 1200	,		
Oakland, Cal. KLX 880		-	 Harlingen, Texas KRLD 1040				Bellingh'm, Wash.			
Oakland, Cal.	ł	1	Dallas, Texas	120)		KWCR 1310			
KLZ 560			 KRMD 1310	-		_	Cedar Rapids, Ia. KWEA 1210			-
Denver, Colo.			 Shreveport, La.				Shreveport, La.			
KMA 930	57		KRSC 1120				KWG 1200			
Shenandoah, Ia.	4	7	 Seattle, Wash.				Stockton, Cal.			
KMBC 950 Kan. City, Mo.	25	2	KSAC 580 Manh'tt'n, Kans.				KWJJ 1060			
KMED 1310	-		 KSAT 1240				Portland, Ore. KWK 1350			
Medford, Ore.		,	Ft. Worth, Tex.				St. Louis, Mo.			
KMIC 1120			H KSCJ 1330				ILK W K C: 1370			
Inglewood, Cal. KMJ 1210			 Sioux City, Ia.				Kansas City, Mo.			
Eresno Col			KSD 550 St. Louis, Mo.				KWKH 850	34	-5	
Fresno, Cal. KMMJ 740			 KSEI 900				Shreveport, La. KWLC 1270	21	-	
Clay Ctr., Nebr.			 Pocatello, Idaho				Decorah, Iowa			
KM() 860		_	H KSL 1130				KWSC 1220			
Facoma, Wash.		-67	 Salt Lake City				Pullman, Wash.			
St. Louis, Mo.	17	-1	KSMR 1200 Santa Maria, Cal.				KWWG 1260		1 1	
KMTR 570	4	-7	 KSO 1380				Brownsville, Tex. KXA 570			
Hollywood, Cal.			 Clarinda, Iowa				Seattle, Wash.			
KNX 1050	19	100	KSOO 1110				KXL 1420			
Los Angeles, Cal. KOA 830	100	1	 Sioux Falls, S.D. KSTP 1460				Portland, Ore.			
Denver, Colo.	26		St. Paul, Minn.	0			KXO 1200 El Centro, Cal.			
KOAC 550			KTAB 560				KXRO 1310			
Corvallis, Ore.			 Oakland, Cal.				Aberdeen, Wash.			
KOB 1180 State Coll., N.M.			KTAP 1420				KYA 1230 San F'ncisco, Cal.			
KOCW 1400			 San Antonio, Tex. KTAR 620				San Fincisco, Cal.		_	
Chickasha, Okla.			Phoenix, Ariz.				Chicago, Ill.	21		
KOH 1370			KTBI 1300				KZM 1370			
Reno, Nevada			Los Angeles, Cal.				Hayward, Cal.			
KOIL 1260 Council Bluffs, Ia.			KTBR 1300				NAA 690			
KOIN 940			Portland, Ore. KTBS 1450				Arlington, Va. NBA 850			
Portland, Ore.							Balboa, C. Z.			
COL 1270			Shreveport, La. KTHS 1040	23			TIX 750			
Seattle, Wash.			 Hot Spgs., Ark.	100			San Jose, C. R.			
Seattle, Wash.			KTLC 1500				VAS 690			
KONO 1370			 Houston, Texas KTM 780				Louisburg, N. S. WAAF 920			
San Antonio, Tex.			 Los Angeles, Cal.				Chicago, Ill.			
(OOS 1370			KTNT 1170				WAAM 1250 Newark, N. J.	11	1	
Marshfield, Ore. KORE 1420			 Muscatine, Iowa KTRH 1120				Newark, N. J.	1/_	2	
Eugene, Ore.			KTRH 1120 Austin, Texas				WAAT 1070 Jersey City, N.J.			
KOY 1390			KTSA 1290				WAAW 660			
hoenix, Ariz.			 San Antonio, Tex.				Omaha, Nebr.			
KPCB 1500			KTSL 1310				WABC 860	33		
Seattle, Wash. KPJM 1500			 Shreveport, La. KTSM 1310				New York City	2.1		
rescott, Ariz.			 El Paso, Texas				WABI 1200 Bangor, Maine			
CPO 680			KTUE 1420				WABO 1440			
an F'ncisco, Cal.			 Houston, Texas				Rochester, N.Y.			
KPOF 880 Denver, Colo.			KTW 1270				WABZ 1200			
Jenver, 0010.			 Seattle, Wash.				New Orleans, La.			
		_	 -			- 0				

Wites		
WACO 1240	WCAP 1280	WDWF 1210
Waco, Texas WADC 1320	Asbury Pk., N.J. WCAT 1200	Providence, R.I. WDZ 1070
WADC 1320 Akron, Ohio	Rapid City, S.D.	Tuscola, Ill.
WAGM 1310	WCAU 1170	WEAF 660
Royal Oak, Mich.	Philadelphia, Pa. WCAX 1200	New York City WEAI 1270
WAIU 640 Columbus, Ohio	Burlington, Vt.	Ithaca, N.Y.
	WCAZ 1070	WEAN 780
Birmingham, Ala. 5	Carthage, Itl.	Providence, R.I. WEAO 570
WASH 1270 Gr. Rapids, Mich.	MCBA 1440 Allentown, Pa.	WEAO 570 Columbus, Ohio
WBAA 1400	WCBD 1080	WEAR 1070
Lafayette, Ind.	Zion, Ill. WCBM 1370	Cleveland, Ohio WEBC 1290
WBAK 1430 Harrisburg, Pa.	WCBM 1370 Baltimore, Md.	Superior, Wis.
WBAL 1060 1 00	WCBS 1210	WEBE 1210
Baltimore, Md.	Springfield, Ill.	Cambridge, Ohio WEBQ 1210
WBAP 800 Fort Worth, Tex. 3 9	WCCO 810 Minneap., Minn. 38	Harrisburg, Ill.
WBAX 1210	WCDA 1350	WEBR 1310
Wilkes-Barre, Pa.	New York City WCFL 970	Buffalo, N.Y. WEBW 560
WBBC 1400 Brooklyn, N.Y.	Chicago, Ill.	Beloit, Wis.
WBBL 1210	WCGU 1400 7/	Beloit, Wis. WEDC 1210
Richmond, Va.	Brooklyn, N.Y. / 2 WCH1 1490	Chicago, Ill. WEDH 1420
WBBM 770 Chicago, Ill.	Chicago, Ill.	Erie, Pa.
WBBR 1300	WCKY 1490	WEEI 590
Rossville, N.Y.	Covington, Ky.	Boston, Mass. WEHC 1370
WBBY 1200 Charleston, S.C.	WCLB 1500 Long Beach, N.Y.	Emory, Va.
WRBZ 1200	WCLO 1200	
Ponca City, Okla.	Kenosha, Wis. WCLS 1310	Evanston, Ill. WELK 1370
WBCM 1410 Bay City, Mic	Joliet, Ill.	Philadelphia, Pa.
WBIS 1230	WCMA 1400	WEMC 590
Boston, Mass. WBMS 1450	Culver, Ind. WCOA 1340	Ber'n Spgs., Mich WEPS 830
Hackensack, N.J.	Pensacola, Fla.	Gloucester, Mass 2
WBNY 1350	WCOC 880 2	WENR 870
New York City WBOQ 860	Meridian, Miss. WCOD 1200	Chicago, Ill. WEVD 1300
WBOQ 860 New York City	Harrisburg, Pa.	New York City
WBOW 1310	WCOH 1210	WEW 760 St. Louis, Mo.
Terre Haute, Ind. WBRC 930	Yonkers, N.Y. WCRW 1210	II WEAA 800 12 // 1
Birmingham, Ala 🗸 /	Chicago, Ill.	Dallas, Texas
WBRE 1310	WCSC 1310 Charleston, S.C.	WFAN 610 Philadelphia, Pa.
Wilkes-Barre, Pa. WBRL 1430	WCSH 940	WFBC 1200
Tilton, N.H.	Portland, Maine	Knoxville, Tenn.
WBSO 920	WCSO 1450 Springfield, Ohio	WFBE 1200 Cincinnati, Ohio
Well'l'yH'ls, Mass WBT 1080	WDAE 1220	WFBG 1310
Charlotte, N.C.	Tampa, Fla.	Altoona, Pa. WFBL 1360
WBTM 1370 Danville, Va.	WDAF 610 Kansas City, Mo.	Syracuse, N.Y.
WBZ 990 23	WDAG 1410	WFBM 1230
	Amarilio, Texas WDAH 1310	Indianapolis, Ind.
WBZA 990 Boston, Mass.	WDAH 1310 El Paso, Texas	Baltimore, Md.
WCAC 600	II WDAY 940 1	WFDF 1310 '
Storrs, Conn. WCAD 1220	Fargo, N.D. WDBJ 930	Flint, Mich. WFDV 1370
WCAD 1220 Canton, N.Y.	Roanoke, Va.	Rome, Ga.
WCAE 1220	WDBO 1120	WFDW 1420
Pittsburgh, Pa. WCAH 1430	Orlando, Fla. WDEL 1120	Talladega, Ala. WFI 560
Columbus, Ohio	Wilmington, Del.	Philadelphia, Pa.
WCAJ 590	WDGY 1180	WFIW 940 Hopkinsville, Ky. 2
Lincoln, Nebr. WCAL 1250	Minneap., Minn. WDOD 1280	Hopkinsville, Ky. WFJC 1450
Northfield, Minn.	Chattan'ga, Tenn	Akron, Ohio
WCAM 1280	WDRC 1330	WFKD 1310 Philadelphia, Pa.
Camden, N.J. WCAO 600	N. Haven, Conn. WDSU 1250	WFLA 620
Baltimore, Md.	New Orleans, La.	Clearwater, Fla.

WGAL 1310		,	1	11 11/11/11	1						
Lancaster, Pa.	1			WHIS 1420 Bluefield, W.Va.				WJBW 1200 New Orleans, La			
WGBB 1210 Freeport, N.Y.				WHK 1390	75			WJBY 1210			
WGBC 1430			-	Cleveland, Ohio WHN 1010	1			Gadsden, Ala.		-	
Memphis, Tenn. WGBF 630	1			New York City				Jackson, Miss.			
Evansville, Ind.	170			WHO 1000 Des Moines, Ia.	22		ļ	WJJD 1130 Mooseheart, Ill.	16		
WGBI 880				WHP 1430	105			WJKS 1360	2	171	
Scranton, Pa. WGBS 600			-	Harrisburg, Pa. WIAS 1420	4 10			Gary, Ind. WJR 750	1117	7	
New York City	-			Ottumwa, Iowa				Detroit, Mich.	7./		
WGCM 1210 Gulfport, Miss.			1 .	WIBA 1210 Madison, Wis.	I			WJSV 1460 Mt. Vern. H'ls, V	6		
WGCP 1250 Newark, N.J.				WIBG 930 Elkins Park, Pa.				WJW 1210			
WGES 1360	-			WIBM 1370			_	Mansfield, Ohio WJZ 760	45		
Chicago, Ill. WGH 1310	4			Jackson, Mich.	20.12			New York City	90		
WGH 1310 Newp't News, Va			1	WIBO 560 Chicago, Ill.	9/2			WKAQ 890 San Juan, P.R.			
WGHP 1240	17	31		WIBR 1420				WKAR 1040			
Detroit, Mich. WGL 1370	14	4		Steubenville, O. WIBS 1450			-	E. Lansing, Mich WKAV 1310	-		
Ft. Wayne, Ind.				Jersey City, N.J.				Laconia, N.H.			
WGM 840 Adamsburg, Pa.				WIBU 1310 Poynette, Wis.			- 1	WKBB 1310 Joliet, Ill.			
WGMS 1250				WIBW 580	04		\neg	WKBC 1310			
Minneap., Minn. WGN 720	75	1		Topeka, Kansas WIBX 1200	0			Birmingham, Ala WKBF 1400	-		
Chicago, Ill.	21	-2-		Utica, N.Y.				Indianapolis, Ind			
WGR 550 Buffalo, N.Y.	96			WICC 1190 Bridgeport, Conn.	113	专		WKBH 1380 La Crosse, Wis.			
WGST 890	1			WIL 1290				WKBI 1420			
Atlanta, Ga. WGY 790	771			St. Louis, Mo. WILL 890	6.0			Chicago, Ill. WKBN 570	-0.0		
Schnec'd'y, N.Y.	41			Urbana, Ill.	30	2		Youngstown, O.	85		
WHA 940 Madison, Wis.				WILM 1420 Wilmington, Del.				WKBO 1450 Jersey City, N.J.	10 .	21	
WHAD 1120				WIOD 1300				WKBP 1420	4		
Milwaukee, Wis. WHAM 1150				Miami Bch., Fla. WIP 610				Battle Crk., Micl WKBQ 1350			
Rochester, N.Y.	15			Philadelphia. Pa.				New York City			
WHAP 1300 New York City	10			WIS 1010 Columbia, S. C.				WKBS 1310 Galesburg, Ill.			
WHAS 820	27	1		WISN 1120				WKBV 1500			
Louisville, Ky. WHAT 1310	2/	7		Milwaukee, Wis. WJAC 1310				Connersville, Ind WKBW 1480	- 6		
Philadelphia, Pa.				Johnstown, Pa.				Buffalo, N.Y.	52	<i>-</i>	
WHAZ 1300 Troy, N.Y.				WJAG 1060 Norfolk, Nebr.				WKBZ 1500 Ludington, Mich			
WHB 860				WJAK 1310				WKEN 1040	20		
Kansas City, Mo. WHBC 1200				Marion, Ind. WJAR 890			-	Buffalo, N.Y. WKJC 1200	20		
Canton, Ohio				Providence, R.I.				Lancaster, Pa.			
WHBD 1370 Mt. Orab, O.				WJAS 1290 Pittsburgh, Pa.	10	4		WKRC 550 Cincinnati, O.	19%		
WHBF 1210				WJAX 900	20	-		WKY 900			
Rock Island, Ill. WHBL 1410	-			Jacksonville, Fla. WJAY 610	00			Oklahoma City WLAC 1470	-3		
Sheboygan, Wis.				Cleveland Ohio	15			Nashville, Tenn.	50		
WHBQ 1370 Memphis, Tenn.				WJAZ 1490 Chicago, Ill.	_	1	- 1	WLAP 1200 Louisville, Ky.			
WHBU 1210				WJBC 1200	1			WLB 1250			
Anderson, Ind. WHBY 1200	-			La Salle, Ill. WJBI 1210	-		-	Minneap., Minn. WLBC 1310			
Green Bay, Wis. WHDF 1370				Red Bank, N. J.				Muncie, Ind.			
Calumet, Mich.				WJBK 1370 Ypsilanti, Mich.				WLBF 1420 Kansas City, Ks.			
WHDI 1180				WJBL 1200				WLBG 1200			
Minneap., Minn. WHDL 1420			-	Decatur, Ill. WJBO 1420	-			Ettrick, Va. WLBL 900	-		
TupperLake, N.Y.				New Orleans, La.	-137			Stevens Pt., Wis.			
WHEC 1440 Rochester, N.Y.	162			WJBT 770 Chicago, Ill.	441			WLBW 1260 Oil City, Pa.	11		
WHFC 1420				WJBU 1210	T .			WLBX 1500			77.7
Cicero, Ill.				Lewisburg, Pa.				L.I.City, N.Y.			
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Bangor, Me Waterloo, lowa Waterloo, lowa WNAC 1230 WNAC 1230 Boston, Mass. WLC1 1210 WNAC 1230 Boston, Mass. WNAD 1010 Norman, Okla WPAP 1010 Norman, Okla WPAP 1010 Pawtucket, R.I. WPCC 560 Chicago, Ill. WNAD 1310 WPAP 1310 WPAP 1310 WPAP 1310 WPAP 1310 WPAP 1310 WPAP 1310 WPAP 1310 WPAP 1310 WPAP 1310 WPAP 1310 WPAP 1310 WPAP 1310 WPAP 1310 WPAP 1310 WNBD 1310 WNBD 1310 WNBD 1310 WNBD 1310 WNBD 1310 WNBD 1310 WNBD 1310 WNBD 1310 WNBD 1310 WNBD 1310 WNBD 1310 WNBD 1310 WNBD 1310 WPOE 1370 Patchogue, N.Y. WNBD 1310 WNBD 1310 WPOE 1370 Patchogue, N.Y. WNBD 1310 WPOE 1370 Patchogue, N.Y. WNBD 1320 WPSC 1230 Springfield, Vt. WNBC 1230 Springfield, Vt. WNBC 1230 Springfield, Vt. WNBC 1230 Springfield, Vt. WNBC 1330 WQAM 560 New York City WNBZ 1230 SaranacL'ke, N.Y. WNBZ 1230 SaranacL'ke, N.Y. WNBZ 1330 WQAM 560 New York City WNAS 560 WAS 560 WQAM 560 New York City WNAS 1230 WNAS 123			
W.	WLBZ 620	WMT 600	Omaha, Nebr.
W. W. 1.00	WLC1 1210	WNAC 1230	WOWO 1160
Description, Mass. New York City WLEY 1370 New York City WLEY 1370 New York City WPAX 570 Pawtucket, R.1. WMRX 1370 WNAX 570 Pawtucket, R.1. WMRX 1370 WNB 1370 WNB 1370 WNB 1370 WNB 1370 WNB 1370 WNB 1370 WPOR 130 New York City WPBN 1310 WPBN 1310 WPBN 1310 WPBN 1310 WPBN 1310 WPBN 1310 WNB 1430 WPBN 1310 WPBN 1	Ithaca, N.Y.		
W. W. W. W. W. W. W. W.			New York City
Wilst	WLEY 1370	II WNAX 570	WPAW 1210
Chicago, III	WLIB 720	WNBF 1500	
Pulladelphia, Pa. New York City WhB 1310 New York City WhB 1310 WhB	Chicago, Ill.	Bingh'mt'n, N.Y.	Chicago, Ill.
Wide 1500		New R'df'd, Mass.	
W.S. 870 Chicago, Ill. W.Shington, Pa.	WLOE 1500	WNBJ 1310	WPEN 1500
Washington, Pa. Washington, Pa. Washington, Pa. Wilsil 1210 WNBR 1430 WNBR 1430 WNBR 1430 WNBR 1430 WNBW 1200 WNBX 1200 WNAX 1410 WNOX 560 WNDX 1190 WNDX 1410 Boston, Mass.	Knoxville, Tenn.		
WISH 1210	Chicago, Ill. 32		Atl'ntic City, N.J.
W. W. W. W. W. W. W. W.	WLSI 1210		
Brooklyn, N.Y. Carbondale, Pa. World, Va. World Worl		WNBW 1200	WPOR 780
Cynchburg, Va. Springfield, Vt. W.LW 700 Cincinnati, Ohio W.NIZ 1290 Saranacl./ke, N.Y. Raleigh, N.C. W.PTF 680 Raleigh, N.C. Raleigh, N.C. W.PTF 680 Raleigh, N.C. W.PTF 680 Raleigh, N.C. Raleigh, N.C. Raleigh, N.C. W.PTF 680 Raleigh, N.C. Ra	Brooklyn, N.Y.	Carbondale, Pa.	
W. W. 700	WLVA 1370	Springfield Vt	State College, Pa.
New York City New York Cit	WLW 700	WNBZ 1290	WPTF 680 - 0
New York City	Cincinnati, Ohio		Raleigh, N.C.
WMAC 570 Cazenovia, N.Y. WMAF 1410 S.D'rtm'th, Mass. WMAK 900 Suffato, N.Y. WMAK 630 WMAK 630 WMAK 630 WMAK 630 WMAK 630 WMAK 630 WMAK 670 WMAK 670 WMAK 670 WMAK 670 WMAK 670 WMAK 1200 WMAK 1310 WMAY 1200 WMAK 1310 WMAK 1370 St. Ababas, Vt. WMAF 1200 St. Louis, Mo. WMOBI 580 WMAK 1370 St. Ababas, Vt. WMAK 1200 St. Louis, Mo. WMAT 1200 St. Louis, Mo. WMAK 1370 St. Ababas, Vt. WMAK 1310 St. WMAK			Miami, Fla.
WMAF 1410 WNRC 1440 WQAO 1010 New York City WQBC 1360 New York City New York City WQBC 1360 New York City Ne	WMAC 570	WNOX 560	WQAN 880
S. D'rtm'th, Mass. Greensboro, N.C New York City WABC 1360 WMAK 900 Suffalo, N.Y. WADA 600 San Antonio, Tex. WQBC 1360 WQBM 1210 Columbus, Ohio Columbus, Ohio Columbus, Ohio Chicago, Ill. WABT 1310 WABT	Cazenovia, N.Y.		WQAO 1010
WAK 900 WNYC 570 WQBC 1300 Wolf 1300 Wol		Greensboro, N.C.	New York City
WAAI 190 WOAI 1190 WQBZ 1420 WQBM WAShington, D.C. WAShington, D.C. WAShington, D.C. WOAN 600 Law'nceb'g, Tenn WQAX 1280 Trenton, N.J. WASHINGTON, D.C. WASHINGTON, D.C. WQAM 1370 St. Louis, Mo. WOBT 1310 Union City, Tenn WRAK 1370 Erie, Pa. WRAW 1310 WRAK 1370 Erie, Pa. WRAW 1310 WRAK 1370 Erie, Pa. WRAW 1310 WRAW 1300 WRA	WMAK 900	WNYC 570	
Washington, D.C. San Antonio, Tex. Weirton, W.Va. WMAN 1210 Law'nceb'g, Tenn WQDM 1370 Columbus, Ohio Trenton, N.J. WARF 1200 Chicago, Ill. WORT 1310 WRAK 1370 WMAY 1200 Union City, Tenn WWAK 1370 St. Louis, Mo. WOB 1310 WRAK 1370 WMAY 1200 Union City, Tenn WO Charlest'n, W.Va. WMBA 1500 Davenport, Iowa WOC 1000 Newport, R.I. WOC 1210 WRAW 1310 Peading, Pa. WRAX 1020 Philadelphia, Pa. Philadelphia, Pa. WRBI 1310 WRBI 1310 Detroit, Mich. WODA 1250 Paterson, N.J. WMB 1400 WODX 1410 WODX 1410 Wolf, Ala. WODX 1410 WRBL 1200 Columbus, Ga. WRBL 1200 Columbus, Ga. WRBQ 1210 Garley, Ill. WOOK 1410 WRBQ 1210 Wolf, Ala. WOOK 1410 WRBT 1370 WRB 1 1500 WOK 1 140 WRBT 1370 WRB 1 1500 WASA 100 WRBT	WMAL 630	WOAL 1190	WQBZ 1420
Columbus, Ohio Chicago, Ill. Caw'nceb'g, Tenn WAAX 1200 Chicago, Ill. WAAY 1200 Chicago, Ill. WORT 1310	Washington, D.C.		Weirton, W.Va.
WAGE Color Chicago, Ill. WOAX L280 Chicago, Ill. WOBU St. Louis, Mo. WOBU L210 WRAX 1020 Philadelphia, Pa. WRBI 1310 Tifton, Ga. WRBI 1310 WRBI 1310 WRBI 1370 WRBI 1370 WRBI 1200 Columbus, Ga. WWBG L210 Columbus, Ga. WWBG L210 Columbus, Ga. WWBG L210 Columbus, Ga. WOW St. Louis, Molie, Ala. WOKO L440 WRBQ L210 Creenville, Miss. WOKO L440 WRBG L210 Creenville, Miss. WOKO L310 WOWN L310 WRBI L370 WRBI L370 WWBI L370 WWBI L370 WWBI L370 WWBI L370 WWBI L370 WWBI L370 WWININGTON, N.C. WWBI L370 WWOI L370 WWC St. WOOD L370 Gr. Rapids, Mich. WOOP S40 Jeannette, Pa. WOOP S40 Jeannette, Pa. WOOP L300 WREC 600 WREC	WMAN 1210 Columbus Obio		
White Word	WMAQ 670 /	WOAX 1280	WRAF 1200
St. Louis, Mo WMAZ 890 WMAZ 890 WMAZ 890 WMACN, Ga. WMBA 1300 Charlest'n, W.Va. WOC 1000 WRAX 1020 WRAX 1020 Davenport, Iowa WOCL 1210 WRBI 1310 Davenport, Iowa WOL 1210 WRBI 1310 Davenport, Iowa WOL 1210 WRBI 1310 Davenport, Iowa WOL 1210 WRBI 1310 Davenport, Iowa WODA 1250 Paterson, N.J. WODA 1250 WRBI 1370 WRBI 1370 WODX 1410 WRBU 1200 Columbus, Ga. WRBQ 1210 Greenville, Miss. WRBT 1370 Wilmington, N.C. WRBT 1370 Wilmington, N.C. WRCD 1310 WAShington, D.C. WRCD 1310 WOMT 1210 WAShington, D.C. WRCD 950 WAShington, D.C. WRCD 950 WAShington, D.C. WRDA 900 Buffalo, N.Y. WOOD 1270 Gr. Rapids, Mich. WOOP 840 WRDA 900 Buffalo, N.Y. WRDA 1370 WREC 600 WRDA 1250 WRDA 1250 WRED Chicago, Ill.			
WMAZ 890 Macon, Ga. Charlest'n, W.Va. WMBA 1500 Newport, R.I. WOC WMBC 1420 Detroit, Mich. WOCL WMBD 1440 Peoria Hghts., Ill. WODA WMBG 1210 Richmond, Va. WODX WMBH 1420 Joplin, Mo. WOKO WMBJ 1500 Wilkinsburg, Pa. WOL WMBJ 1500 Wilkinsburg, Pa. WOM WMBJ 1500 Wilkinsburg, Pa. WOM WMBJ 1500 Wilkinsburg, Pa. WOM WMBJ 1500 Womaring, Pa. WOM WOD 1270 Gr. Rapids, Mich. WOP WMBQ 1500 Brooklyn, N.Y. WOOP WMB 130 Reading, N.Y. WREC WMMD 1300 Memphis, Tenn. WOP <th></th> <th>Union City, Tenn / O</th> <th>Erie, Pa.</th>		Union City, Tenn / O	Erie, Pa.
WMBA 1500 Newport, R.I. WMBC 1420 Detroit, Mich. WMBC 1420 Detroit, Mich. WMBD 1440 Peoria Hghts., Ill. WODA 1250 Paterson, N.J. WODX 1410 Mobile, Ala. WODX 1410 Greenville, Miss. WRBI 1370 Hattiesburg, Miss. WRBI 1200 Columbus, Ga. WRBI 1370 WRBI 1200 Greenville, Miss. WRBI 1370 WRBI 1200 Greenville, Miss. WRBI 1370 WRBI 1210 Gastonia, N.C. WRBI 1210 Gastonia, N.C. WROM 1210 Gastonia, N.C. WROM 1210 Washington, D.C. WRC 950 Washington, D.C. WRC 950 Washington, D.C. WRDA 900 Brooklyn, N.Y. WOOP 1270 Gr. Rapids, Mich. WROOP 340 Jeannette, Pa. WROOP 340 Jeannette, Pa. WREC 600 Memphis, Tenn. WMC 780 Woop 1300 Memphis, Tenn. WROM 1300 WRS 710 WRIS 1300 WOR 710 WRIS 1300 WOR 710 WRIS 1300 WROT 1400 WRNY 1010 Newark, N.J. WORE 1400 WRNY 1010 Newark, N.J. WORE 1300 WRNY 1010 Newark, N.J. WRIS 1300 WRNY 1010 New York City WRIS 1300 WRNY 1010 New York City WRIS 1300	WMAZ 890	WOBU 580	
Davenport, R.I. Davenport, Iowa WMBC 1420 Detroit, Mich. WMBD 1440 Damestown, N.Y. WODA 1250 WRBI 1310 Tifton, Ga. WRBI 1370 Paterson, N.J. WRBI 1370 Paterson, N.J. WRBI 1370 WRBI 1370 Paterson, N.J. WRBI 1200 Columbus, Ga. WRBI 1200 Columbus, Ga. WRBI 1370 WWMBI 1500 WOL 1310 WOL 1310 Wolden WOL 1310 Wolden WODA WRBI 1210 Gastonia, N.C. WRBI 1210 Gastonia, N.C. WOMM 1310 Wolden WODA WRBI 1370 WOMM WRBI 1370 WOMM WRBI 1370 WODD 1270 WRDA 900 Washington, D.C. WRDA 900 Washington, D.C. WRDA 900 Buffalo, N.Y. WWBI 1370 WOOP 840 WREC 600 W	Macon, Ga. WMBA 1500	11 WOC 1000	WRAX 1020
WMBC 1420 Detroit, Mich. Jamestown, N.Y. WMBD 1440 Peoria Hghts, Ill. WODA WMBG 1210 Richmond, Va. WODX WMBH 1200 Richmond, Va. WOI WMBH 1200 Joplin, Mo. WOKO WMBI 1080 Chicago, Ill. WOKO WMBJ 1500 Wilkinsburg, Pa. WOL WMBU 1210 Washington, D.C. WRRBU WOMT 1210 Washington, D.C. WRC WOMT 1210 WoMBQ 1310 Auburn, N.Y. WOMT WMBQ 1500 Brooklyn, N.Y. WOOD WMBQ 1500 Brooklyn, N.Y. WOOD WMBR 1370 Pannette, Pa. WREC WMC 570 New York City WOPI WOO 1500 <tr< th=""><th>Newport, R.I.</th><th>Davenport, Iowa</th><th></th></tr<>	Newport, R.I.	Davenport, Iowa	
WMBD 1440 Peoria Hghts, Ill. WODA 1250 Paterson, N.J. WODX 1410 Mobile, Ala. WRBL 1200 Columbus, Ga. WRBD 1210 Greenville, Miss. WRBL 1210 Greenville, Miss. WRBL 1210 WRGO 1440 WRGO 1440 WRGO 1440 WRBT 1370 WRBU 1210 Greenville, Miss. WRBL 1210 WRGO 1440 WRBU 1210 Greenville, Miss. WRDA 900 Greenville, Miss. WREC 600 Greenville, Miss. Greenville, Miss. Greenville, Miss. WREC 600 Greenville, Miss. Greenville, Miss. Greenville, Miss. Greenville, M	WMBC 1420		
WMBG		WODA 1250	WRBJ 1370
Richmond, Va. Mobile, Ala. Mobile, Ala. Wol 640 WRBQ 1210 Joplin, Mo. Ames, Iowa WOKO 1440 WRBT 1370 WRBU 1210 Wol Mobile, N.Y. Wol Mobile, N.Y. Wol 1310 Wol Mobile, N.Y. Wol 1310 Wol Mobile, N.Y. Wol 1310 Wol Wol 1210 Washington, N.C. WRBU 1210 Washington, N.C. WRBU 1210 Wol	Peoria Hghts., Ill.	Paterson, N.J.	Hattiesburg, Miss.
WH WH WH WH WH WH WH WH		Mobile, Ala.	Columbus, Ga.
WMBI 1080	WMBH 1420	WOI 640	WRBQ 1210
Pighkeepsie, N.Y. Wilmington, N.C. Wold 1310 Wold 1310 Wold 1310 Washington, D.C. Wold Wilkinsburg, Pa. Wold 1310 Washington, D.C. Wold Wold 1210 Washington, D.C. Wold Joplin, Mo.		WRBT 1370	
Wilkinsburg, Pa. WMBO 1310 Auburn, N.Y. WMBQ 1500 Brooklyn, N.Y. WMBR 1370 Tampa, Fla. WMC 780 Memphis, Tenn. WMC 570 New York City WMES 1500 Boston, Mass. WMMN 890 Fairmont, W.Va. WMRN 1500 Lapeer, Mich WMC 1500 Lapeer, Mich WMRD 1500 Lapeer, Mich WRR 1280 Dallas, Texas WRUF 830 Gainesville, Fla WWV 1110	Chicago, Ill.	P'ghkeepsie, N.Y.	Wilmington, N.C.
WMBO T310 WOMT 1210 Auburn, N.Y. Manitowoc, Wis. WRC 950 WMBQ 1500 Brooklyn, N.Y. WRDA 900 Brooklyn, N.Y. WOOP Buffalo, N.Y. WREC 600 MMBR 1370 WOOP 840 Memphis, Tenn. WREC 600 Memphis, Tenn. WOPI 1500 Memphis, Tenn. WREN 1220 Memphis, Tenn. WOQ 1300 WRHM 1250 New York City WOR 710 WRJN 1370 Newark, N.J. WOR 710 WRJN 1370 Newark, N.J. WOR 1200 WRK 1310 Fairmont, W.Va. WOR 1490 WRK 1310 Lapeer, Mich WOR 1490 WRNY 1010 Lapeer, Mich WOS 630 Useff's'n City, Mo. WRR 1280 WMSG 1350 WOV 1130 WRYA 1110 WWY			
WMBQ 1500 Brooklyn, N.Y. WOOD 1270 Buffalo, N.Y. WREC 600 Memphis, Tenn. WOOP 1500 Memphis, Tenn. WOOR 780 Memphis, Tenn. WOOR 780 Memphis, Tenn. WOOR 1500 Memphis 1300 Memphis 1400 Memphis 1400 Memphis 1400 Memphis 1400 Memphis 1400 Memphis 1300 Memphis 13	WMBO 1310	WOMT 1210	WRC 950
Buffalo, N.Y. WMBR 1370 Gr. Rapids, Mich. WOOP 840 WREC 600 Memphis, Tenn. WWOC 780 Memphis, Tenn. WWOQ 1300 Memphis, Tenn. WWCQ 1300 Memphis, Tenn. WWCQ 1300 Memphis, Tenn. WWCQ 1300 Memphis, Tenn. WREN 1220 Lawrence, Kans. WRHM 1250 Minneap., Minn. WWRMS 1500 Morester, Mass. WWR 710 Racine, Wis. WWR 1310 Racine, Wis. WWRC 1200 WWRY 1310 Mewark, N.J. WORC 1200 WRNY 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WRHM 1310 Memphis, Tenn. WREN 1310 Memphis, Tenn. WREN 1310 Memphis, Tenn. WRHM 1320 Memphis, Tenn. WREN 1310 Memphis, Tenn. WREN 1310 Memphis, Tenn. WRHM 1320 Memphis, Tenn. WREN 1310 Memphis, Tenn. WREN 1250 Minneap., Minn. WRIN 1310 Memphis, Tenn. WREN 1310 Memphis, Tenn. WREN 1310 Memphis, Tenn. WREN 1320 Memphis, Tenn. WREN 1250 Memphis, Tenn. Memphis, Tenn. WREN 1250 Memphis, Tenn. Memphis, Te	Auburn, N.Y.	Manitowoc, Wis.	
WMBR 1370 Jeannette, Pa. WREC 600 Memphis, Tenn. WREN 1220 Memphis, Tenn. WOQ 1300 Memphis, Tenn. WOQ 1300 Memphis 1500 Memphis 1600 Memph	Brooklyn, N.Y.		Buffalo, N.Y.
WMC	WMBR 1370	WOOP 840	II WREC 600
Bristol, Tenn. WMCA 570 WOQ 1300 WRMM 1250 WRMM 1500 WOQ 1300 WRMM 1250 Minneap., Minn. WOQ 1300 WRJN 1370 WRJN 1010 WRNY 1010		WOPI 1500	WREN 1220
New York City Kansas City, Mo	Memphis, Tenn.	Bristol, Tenn.	
WMES 1500 Boston, Mass. WRJN 1370 Racine, Wis. WMMN 890 Work 1200 Work 1310 Hamilton, Ohio WMPC 1500 Lapeer, Mich WMRJ 1420 Jamaica, N.Y. WMSG 1350 New York City WWSG 1350 New York City Well Work Work WRJN 1010 New York City WRJ 1300 WR			
WMMN 890	WMES 1500	WOR 710	WRJN 1370
Work 1420 Jamaica, N.Y. Work City Boston, Mass.	Newark, N.J.	WRK 1310	
WORD 1430 Lapeer, Mich WORD 1430 New York City WRR 1280 Jamaica, N.Y. WMSG 1350 New York City WOV 1130 New York City WRUF 830 Gainesville, Fla. Gain	Fairmont, W.Va.		Hamilton, Ohio
WMRJ 1420 WOS 630 Jamaica, N.Y. WOS 1350 WoV 1130 WoV WOV 1130 Wov W	WMPC 1500	WORD 1490	
Jamaica, N.Y. WMSG 1350 New York City Jeff's'n City, Mo. WOV 1130 New York City Dallas, Texas WRUF 830 Gainesville, Fla. WRVA 1110	WMRJ 1420	WOS 630	WRR 1280
New York City	Jamaica, N.Y.	Jeff's'n City, Mo. 20	Dallas, Texas
WRVA 1110	WMSG 1350		Gainesville, Fla.
Richmond, Va.	INCW LOLD CITY		WRVA 1110
			Richmond, Va.

WSAI 1330	WSVS 1370	WWVA 1160 1// /-
Cincinnati, Ohio	Buffalo, N.Y.	Wheeling, W.Va. 7
WSAJ 1310	WSYR 570	XEA 1200
Grove City, Pa.	Syracuse, N.Y.	Guadalajara, Jal.
WSAN 1440	WTAD 1440	XEB 670
Allentown, Pa.	Quincy, Ill.	Mexico City
WSAR 1450	WTAG' 180	XEE 960
Fall River, Mass.	Worcester, Mass.	
WSAZ 580		Pueblo, Pue.
Hunt'gton, W.Va.	WTAM 1070 Cleveland, Ohio	Oaxaca, Oax.
WSB 740	WTAQ 1330	XEH 970
Atlanta, Ga.	Eau Claire, Wis.	
WSBC 1210	WTAR 780	Monterey, N.L.
Chicago, Ill.	Norfolk, Va.	XEI 1000
WSBT 1230	WTAW 1120	Morelia, Mich.
South Bend, Ind.	College Sta., Tex.	XEN 730
WSFA 1410	WTAX 1210	Mexico City
Montgomery, Ala	Streator, Ill.	XES 1200
WSGH 1400	WTBO 1420	C. Lerdo, Dgo.
Brooklyn, N.Y.		XEX 920
WSIX 1210	Cumberland, Md	Mexico City
Springfield, Tenn.		XEY 550
WSJS 1310	Toccoa, Ga.	Merida, Yucatan
	WTIC 1060	XFA 540
WinstSal., N.C.	Hartford, Conn.	Mexico City
	WTMJ 620	XFC 630
	Milwaukee, Wis.	Jalapa, Ver.
WSMB 1320	WTNT 1470	XFF 920
New Orleans, La.	Nashville, Tenn.	Chihuahua, Chih.
WSMK 1380 7 3	WTOC 1260	XFG 640
Dayton, Ohio	Savannah, Ga.	Mexico City
WSPA 1420	WWAE 1200	XFI 590
Spartanburg, S.C.	Hammond, Ind.	Mexico City
WSPD 1340 Toledo, Ohio	WWJ 920 Detroit, Mich. 28	XFX 910 /40
	Detroit, Mich. 28	
WSSH 1410	WWL 850	ST AT 10N 16 0
Boston, Mass.	New Orleans, La	3/0
WSUI 880	WWNC 570 Asheville, N.C.	
Iowa City, Ia.	Asheville, N.C.	
WSUN 620	WWRL 1500	
St. Petersb'g, Fla.	Woodside, N.Y.	
		12

The Short Wave Stations

		The Short Wave Stations		
Call	Station	Owner City and State	Meters	Watts
WIXAA	WRAH	Stanley N. Read Providence R I	111 0101 0	75
WIXAB	WCSH	Congress Square Hotel Co. Portland, Maine	63.79	250
WIXAE	WBZ	Westinghouse Elec. & Mfg. CoSpringfield, Mass.	70.0	200
WIXAF	WEEI	Edison Elec. Illuminating CoBoston, Mass.	10.0	
WIXAG		Edison Elec. Illuminating CoBoston, Mass.		
WIXY	WBRL	Booth Radio LaboratoriesTilton, N. H.	105-109	250
W2XA	WRMU	Yacht, "MU-1" Grebe Co New York	100-100	200
W2XAC	WGY	General Electric CoSchenectady, N. Y.		
W2XAD	WGY	General Electric CoSchenectady, N. Y.	19.56	
W2XAE	WGY	General Electric CoSchenectady, N. Y.		
W2XAF	WGY	General Electric CoSchenectady, N. Y.	31.48	
W2XAG	WGY	General Electric CoSchenectady, N. Y.		
W2XAH	WGY	General Electric CoSchenectady, N. Y.		
W2XAK	WGY	General Electric Co. Schenectady N V		
W2XAL	WRNY	Aviation Radio Station, IncNew York	49.67	500
W2XAO		Atlantic Broadcasting Co New York	105.9	100
W2XAQ	WOR	L. Bamberger Co	65.4	50
W2XAW	WGY	General Electric Co. Schenectady, N. Y.		
W2XBA	WAAM	WAAM, Inc Newark N .	65.18	50
W2XBH	WCGU	Chas. G. Ungar Coney Island, N. Y. Baruchrome Corp. New York City	54.02	150
W2XBR	WBNY	Baruchrome CorpNew York City	49.83	
-W2XCD	_	DeForest Radio Co. Passiac, N. J. Atlantic Broadcasting Co. Richmond Hill, N. Y.	187.30	
W2XE	WABC	Atlantic Broadcasting Co	49.02	50
W2XZ		National Broadcasting CoBellmore, L. I.	49.15	50000
W3XAU	WCAU	Universal Broadcasting Co Philadelphia, Pa.	49.50	
W3XK		C. Francis Jenkins LabsWashington, D. C.		
W3XL	WJZ	Radio Corp. of AmericaBound Brook, N. J.	59. 96	30000
W3XN		Bell Telephone Laboratory Whippany, N. J.		
W4XD	WSM	Nat'l Life & Accident Ins. Co Memphis, Tenn.	31.43	
W4XE	******	William Justice LeeWinter Park, Fla.	200.	250
W6XA	KNX	Los Angeles ExpressLos Angeles, Cal.	107.1	100
W6XAD	KFWO	Lawrence MottAvalon, Cal.	53.07	100
W6XAF	KNRC	Clarence B. JuneauSanta Monica, Cal.	108.2	100
W6XAI	KGGM	Los Angeles Radio Club Los Angeles, Cal.	66.04	50
W6XAK	KFWH	F. W. Morse Chico, Cal.	108.2	50

[62]

KFQZ KRLO KJBS KHJ KGO	L. E. Taft Hollywood, Cal. Freeman Lang Los Angeles, Cal. J. Brunton & Sons San Francisco, Cal. Times-Mirror Co. Los Angeles, Cal.	105.9 32.	250 50
KJBS KHJ	J. Brunton & Sons San Francisco, Cal.		50
KHJ	Times-Mirror Co Los Angeles Cal		
		104.1	50
	General Electric CoOakland, Cal.	10-40	10000
	Nelson Radio CoSan Diego, Cal.	106.	50
KFSG	Air-Fan Radio Corp. Los Angeles, Cal.	108.2	250
KFBC	W. K. Azbill San Diego, Cal.		
KFQU	W. E. Riker Holy City, Cal.	31-106	50
KFWB	Warner Bros. Picture StudioLos Angeles, Cal.	40-105	50
KGER	C. Merwin Dobyns Long Beach, Cal.	48.86	
KFVD	McWhinnie Electric Co Venice, Cal.	105.	50
KGO	General Electric Co Oakland, Cal.	23.35	10000
KFPY	Symons Investment CoSpokane, Wash.		
KWJJ	Wilbur Jerman, Inc. Portland, Ore.		100
KJR	Northwest Radio ServiceSeattle, Wash.	105.2	
KJR	Northwest Radio ServiceSeattle, Wash.		
WHAM	Stromberg-Carlson Tel. Mfg. Co Rochester, N. Y.		
WLW	Crosley Radio CorpCincinnati, Unio		500
WJR	WJR, Inc Detroit, Mich.		75
WHK	Radio Air Service CorpCleveland, Ohio		500
WEAO	Ohio State UniversityColumbus, Ohio		250
KDKA	Westinghouse Elec. & Mfg. CoPittsburgh, Pa.		40000
KDKA	Westinghouse Elec. & Mfg. CoPittsburgh, Pa.		500
KDKA	Westinghouse Elec. & Mfg. CoPittsburgh, Pa.		
WCFL	Federation of Labor Chicago, Ill.		
WNAL	R. J. Rockwell Omaha, Nebr.		50
WENR	Great Lakes Broadcasting CoChicago, Ill.		
KOIL	Mona Motor Oil CoCouncil Bluffs, Iowa	61.06	500
	KFQÜ KFWB KGER KGER KGO KFPY KWJJ KJR WHAM WLW WJR WHK WEAO KDKA KDKA KDKA KDKA WCFL WNAL	KFBC W. K. Azbill San Diego, Cal. KFQU W. E. Riker Holy City, Cal. KFWB Warner Bros. Picture Studio Los Angeles, Cal. KGER C. Merwin Dobyns Long Beach, Cal. KFVD McWhinnie Electric Co. Venice, Cal. KGO General Electric Co. Oakland, Cal. KFPY Symons Investment Co. Spokane, Wash. KWJJ Wilbur Jerman, Inc. Portland, Ore. KJR Northwest Radio Service Seattle, Wash. KJR Northwest Radio Service Seattle, Wash. KJR Northwest Radio Service Seattle, Wash. WHAM Stromberg-Carlson Tel. Mfg. Co. Rochester, N. Y. WLW Crosley Radio Corp. Cincinnati, Ohio WJR, Inc. Detroit, Mich. WHK Radio Air Service Corp. Cleveland, Ohio WEAO Ohio State University Columbus, Ohio WEAO Westinghouse Elec. & Mfg. Co. Pittsburgh, Pa. KDKA Westinghouse Elec. & Mfg. Co. Pittsburgh, Pa. KDKA Westinghouse Elec. & Mfg. Co. Pittsburgh, Pa. KDKA Westinghouse Elec. & Mfg. Co. Pittsburgh, Pa. KCFL Federation of Labor Chicago, Ill. WNAL R. J. Rockwell Omaha, Nebr. WENR Great Lakes Broadcasting Co. Chicago, Ill.	KF9G Air-Fan Radio Corp. Los Angeles, Cal. 108.2 KFBC W. K. Azbill San Diego, Cal. KFQU 31-106 KFWB W. E. Riker Holy City, Cal. 31-106 KFWB Warner Bros. Picture Studio Los Angeles, Cal. 40-105 KGER C. Merwin Dobyns Long Beach, Cal. 40-105 KGFPY McWhinnie Electric Co. Venice, Cal. 105. KGO General Electric Co. Oakland, Cal. 23.35 KFPY Symons Investment Co. Spokane, Wash. 105.9 KWIJ Wilbur Jerman, Inc. Portiand, Ore. 53-54 KJR Northwest Radio Service. Seattle, Wash. 105.2 KJR Northwest Radio Service. Seattle, Wash. 105.2 WHAM Stromberg-Carlson Tel. Mfg. Co. Rochester, N. Y. WLW WLW Crosley Radio Corp. Cincinnati, Ohio 49-50 WJR WJR, Inc. Detroit, Mich. 32. WHK Radio Air Service Corp. Cleveland, Ohio 66.04

February Puzzle

HETHER our puzzle fans found this cross-call too difficult because of the number of cases in which a letter was not keyed both ways, or whether these teasers have lost their flavor, we do not know. The number contributing solutions to this puzzle dropped sharply and we will therefore use the space heretofore occupied by cross-calls with something that may interest our readers more.

The solution of the puzzle that appeared in February is given below:

WHK
KITWW
WOLKKMA
WLWLGCMCK
KOCWKNXNKOA
WOAIWWOEWKWSC
WIPIWWCKWDPWWKY
KGWFLAWJZWBNY
WHAWHAPWWAE
WAAWAWSRO
WPGHKVL
HHKBS
WEW
X

Copies of RADEX have been mailed to those who sent in correct solutions. We found a number of instances where two different stations would answer the descriptions and we are considering either solution correct.

P.S.—Answers to the March puzzle

are beginning to pour in, which indicates that the trouble lay with the February puzzle rather than lack of interest on the part of readers. Watch for another puzzle therefore, in the May number.

Ninety Stations on a Crystal Set

(Continued from page 16)

top is the knob of the midget condenser, under that the jack switch that shorted the aerial condenser, but I seldom used it, under that are the two jacks that switched either to the cat-whisker crystal or the Carborundum.

"Next to the left, at the top, is the housing of the crystal and under that the Carborundum control. I got the greatest sensitiveness from the catwhisker crystal. Further to the left is the slide contact of the coil and under that are the binding posts of the phone outlets, between which is the jack switch that shorted out the second pair of phones.

"At the extreme left is the contact switch that enabled me to vary the capacity of the phone condensers and which I seldom used.

"The upper cabinet housed wo wave traps."

If this issue of RADEX has pleased you, won't you add to your neighbor's pleasure by telling him about it?

FAVORITE PROGRAMS

· C	D: 1	TAVORII			
me Station	Dials	Feature AILY	Time Station	Dials WEDNES	Feature DAV
	D/	AILI		WEDNES	DAI
					-1-1
	SUN	NDAY	-	THURSE	DAY
	1 1	1		7. 1	
	-				
	MON	NDAY		FRIDA	Y
	THE	SDAY		SATURD	4 37
1 1	TUE	JUAI		SATURD	A I
1 1			4		

RADIO

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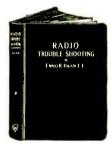
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