

THE MIDSUMMER 1935

RADIO IN INDEX

THE ALL-WAVE RADIO MAGAZINE



25^c

Verifications in the S. W. Field
Converting Old B. C. Sets to S. W.
How and When to Tune the Europeans
Analyzing the Howard "Grand" Receiver

No. 90

N. S. E.

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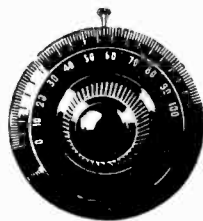
June 1, 1935



RADIO INDEX

Reg. U. S. Patent Office

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ELEVENTH YEAR

NUMBER 90

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With Fred Waring's Pennsylvanians

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Published Monthly Excepting July and August
See Subscription Blank on Page 80

\$1.75 Per Year

25c Per Copy

THE RADEX PRESS INC.

705 Hanna Building,

Cleveland, Ohio, U. S. A.

Entered as second-class matter April 23, 1931, at the post office at Cleveland, Ohio, under the Act of March 3, 1879.

Printed in the U. S. A.

VERIFICATIONS

in the Short Wave Field

• • • By PAGE TAYLOR

THE problem of verifications is a perplexing one to all DXers except ones who prefer not to collect them. New collectors usually have trouble getting them while the seasoned collector has difficulty in knowing whether his verification really verifies when he gets it. In these paragraphs we present a few original thoughts on this much-discussed topic as well as outlining several well-established rules which should be followed by all confirmation-seekers.

Listeners desire and prize their confirmations while broadcasters desire and value reports. Therefore when one writes for a verification he should include enough information of value in his report to compensate the station for the trouble it takes in answering. Accurate reports are reflected in better transmissions, so, in the end it is really the reporting listener who profits from his reports, his profits being in the form of better reception.

"First Catch the Rabbit"

To obtain a verification one must first hear the station; a few so-called DXers write for verifications as soon as they learn of a new station without bothering to tune for it. This sort of chiselling has caused several stations to adopt the practice of ignoring all reports. After tuning in a station it should be positively identified. Sometimes this is a difficult thing to do, but it is much better to refrain from writing altogether than to send a good report to the wrong station.

At least a half hour of the program should be logged, and this log should be as accurate, truthful and

complete as possible. If the station is a North or South American it is usually more convenient for the station directors if all time is converted into Eastern Standard Time, or if the station is on any other Continent, Greenwich Mean Time is the best standard time to use. Thoughtful correspondents, however, use a RADEX Time Converter to change their own time into the local standard time at the station.

Detail Your Report

The names of all musical numbers



Presenting "Margo," charm and beauty adviser on the "Lilac Time with the Night Singer" program, heard over the CBS each Monday from 10:30 to 11:00 p.m., EDST. Before entering radio "Margo," in private life Miss Marjorie Anderson, gained wide recognition as a creative parfumeur (mixer of scents to you). She is featured on the "Lilac Time" broadcast along with the anonymous "Night Singer" and Baron Sven von Hallberg and his Orchestra.

recognized should be given and unfamiliar musical items can be described, as a "fox trot," "tenor solo," "Saxophone and marimbas," etc. Most of the musical numbers heard from South American stations are unfamiliar and their tempo is indescribable, but if one pays close attention to the announcer he can usually catch the name of the dance tune to follow. A list follows the names of various South American dances; listen for these words when listening to announcements: bambuco, bolero, cancion (song), criolla, danzon, fandango, fox (fox trot), habanera, joropo, jota, marcha (march), merangue, pasillo, paso-doble, rhumba, son, tango, and valse (waltz).

Whenever possible, the names of advertisers sponsoring programs should be given; regardless of the language spoken it is oftentimes easy to catch the trade names of various products.

The Signal Data

That the report may be of some value to the station it is necessary that the writer mention, truthfully, how well the station is heard, describing volume by the R Code, quality by the QSA Code, and hazards such as interference, static or fading, by the S, X and N symbols. A list of these symbols, along with other information of value to shortwave listeners, is given in the April issue of RADEX, No. 88.

One should always mention the name and type of receiver he uses, and describe, briefly, his aeri-als. Weather conditions at the receiver should be accurately described.

Always Prepay Reply

Finally, enclose an INTERNATIONAL REPLY COUPON, and, politely request a verification. International Reply Coupons cost nine cents each and can be purchased at any post office. If your own post

office does not have them, they can get them.

When all the above requirements have been met and the letter sent, be patient. Give the station more than sufficient time to reply before writing again. Never under any circumstances write a snappy "follow-up" letter. It makes one feel terribly foolish to receive a sincere and attractive QSL from a broadcaster just a day or so after posting a sassy letter.

Some "Don'ts"

Following are some comments which should be axiomatic:

Do not write on postal cards. These are not intended for use in polite correspondence nor do they require an answer.

Do not send stamps or pennies. They are no good outside your own country.

Do not send self-addressed envelopes. This will require first-class postage if it is used, while most stations have post cards at a cheaper mailing rate. It is also true that foreign letter-heads or cards are of a different size and shape than ours and cannot be fitted into our standard size envelopes.

Take What You Get

"Verification" and "confirmation" are long words so most fans prefer using the letters QSL, which are defined by international radio code as meaning, "I give you acknowledgement of receipt." Such an acknowledgement from a radio station means, broadly, that the person receiving the QSL has heard the station. However, a great many QSL collectors have lately become quite highly technical about the wording of their verifications and refuse to consider a veri as a veri unless it specifically states, in so many words, "You heard our station!" Of course, it is strictly a matter of opinion whether one wishes to consider a QSL as a confirmation of reception or simply a

"thank you" for his report, but we believe fans should be delighted to get any kind of an acknowledgement from a station without being particular how the station words that acknowledgement. Stations are not obligated to answer at all.

The writer believes a good verification should state the fact that the listener heard the station, giving the date heard and other facts, but, we see no good reason why any acknowledgement should be discarded from a QSL collection, nor why their entry should be refused in any competition.

The Ideal Verification

The best verifications we have ever seen are those sent by the National Broadcasting Co; the following is quoted from one in our collection: "In acknowledgement of your communication dated July 11th, we are very pleased to confirm your report of the shortwave transmission of Henry Busse's Castle Farm Orchestra on July 10, 1931, between 12:30 and 1 am, EDST, through W3XL of Bound Brook, N. J."

There can be no doubt about verifications from YV1BC (now YV2RC) of Caracas, Venezuela, which read like this: "Date of your report, Nov. 4, '32. You Have Heard Us! We are pleased to certify that your report about reception of our transmission is correct . . ."

On the Other Hand

We can fill this entire magazine with samples of good verifications, and, we can fill the magazine again with examples of verifications which do not specifically say "reception verified," but which should be equally acceptable as verifications. Thousands of persons claim to have verifications from WLW and W8XAL, still there are those who insist a veri must specifically verify. In addition to giving their operating schedule, QSL cards from W8XAL state, "Acknowledging report of shortwave station W8XAL of

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the Crosley Radio Corporation, Cincinnati, Ohio." We believe that is a good verification and appreciate the fact WLW was good enough to send it to us.

W2XE used to send a brochure entitled, "A Radio Map from the CBS to thank you for writing . . ." No mention is made of any reception, but still, this MUST be considered a verification because it is the standard way in which this station acknowledged reports. If this is not a veri, no one in the world has the old W2XE transmitter (1930-31) verified.

Some QSL's verify by inference, hence XEW: "We appreciate and thank you for your report dated Aug. 25/31 and hope our concerts continue to be interesting to you." Here no direct mention is made of reception but the mention of the concerts infers that the possessor of the card must have heard at least one concert.

Those G Stations

There has been more discontent over the Daventry verifications than any others. Daventry merely sends

thank you cards on which they state they regret they cannot give specific verifications. It is impossible for the British Broadcasting Corporation, to check reports, for many reasons. First, most of their programs are widely re-transmitted throughout the British Empire. Second, each program is transmitted simultaneously over two Daventry transmitters. Third, the programs are printed many weeks in advance in World-Radio, a widely distributed magazine, and in a great many newspapers and magazines throughout the world. Fourth, each program is repeated several times. A recording is made of the original program and the recordings are played on succeeding transmissions. Still, the BBC is good enough to answer letters with an attractive little "thank you" card and for this courtesy they have the commendation of this and most other magazines. The Daventry stations are easily heard; no one needs a QSL from them to prove their reception. A shortwave fan needs only to turn on the radio and tune in Daventry to prove to his doubting friends it can be done. And that, by the way, is the best verification after all. If this magazine were to conduct a short-wave contest we would automatically give every entrant credit for six QSL's from Daventry (GSA, B, C, D, E and F); it would only be necessary that the entrant prove he has a shortwave receiver.

Each Station Has Its Form

Every station has its own method of verifying and any standard communication from a station should be considered as a verification. VE9GW of Bowmanville, Ontario, has a QSL card on which no mention of a correct report is given, but, these cards are rubber-stamped with the statement, "Reception Verified." Hence, a QSL from VE9GW lacking the rubber stamp would not be a verification.

We believe, along with many sta-

tion managers, that any kind of a communication from a radio station can be considered a positive verification unless the communication states or infers the station was NOT heard. Along with our letters we have a few which fail to confirm reception. One of these reads, in part, "We are afraid that the station you listened in might not be our station XGO." Another reads, "In reply, I wish to inform you that H51PJ has been closed down for broadcasting service some time ago and we broadcast now from H5P2, which is now undergoing a series of tests on Mondays. As June 13th happened to be a Sunday, it was not likely therefore that you heard this station." Still another letter said simply, "We wish to inform you that KA1XR is no longer on the air."

Our answer to the question, "When is a Veri a Veri?" is, "A Veri is a Veri unless it positively or inferentially states or suggests the owner of the communication did not hear the station."

Editor's Note: It will be noted that Mr. Taylor takes the opposite view from the Editor in regard to counting verifications "which do not verify." Thus our readers have both sides of the question. "When doctors disagree——"

Will You Help?

NOW that the *DX Log of the World* is to be combined with RADEX, we want to make our list of foreign broadcast stations the most complete in existence.

We want to give the following information in regard to each of them and we ask the help of our readers:

We would like to show frequency, call letters, location, power, owner, mail address, identification signal, signoff signal, and hours on the air.

If you have compiled any of the above information, please forward it to us.

A Brief Farewell to Radio

● ● ● THE DX SUMMARIES

ANOTHER radio year has rolled on like "Ol' Man River" and the summer season is upon us. While the foreign stations on the broadcast band will more or less disappear those who have all wave receivers will find compensation in the greater signal strength of many of the short-wave stations.

We are planning very greatly to increase the service rendered the radio listeners by this magazine commencing with the September issue. Until then, *au revoir*.

Some Aerial Experiments

This report of DX activities comes from Randolph Andrews, P. O. Box 177, La Crescenta, Calif.: "I have had on Airline superhet about four months and have had quite good results. My log so far is 381 stations—bcbs, 121, sw. broadcasters 76, hams, police, airports, etc., 138, code stations 46. Have had no luck with Australians or New Zealanders yet. There is so much interference from Pacific Coast stations, it is difficult to get many of the eastern stations.

"On the sw. I have done fairly well. A few of my best are: HJ4ABE, HJ1ABB, OAX4B-D, PRF5, TIEP, PLV, YV2-3RC, Prado, CJRX-O, VK2-3ME, VK 3LR, YV5RMO, VE9GW, KKH, HC2RL, HP5B, YDA, JVF-M-N-T, COC-H, XEBT and, of course, all the American relay stations and a few of the American phones. My Europeans are GSB-C-D-E, FYA on two frequencies, PHI, DJA-N, and EAQ. All of the above came in very loud and clear. Have also got LSX, HPF, KKP, VLJ-VLZ2, and the new one, HP5J.

"I have put up and pulled down

about ten aerials since the season started and now have found a satisfactory arrangement. I have two aerials, both Zeppelins. One is 75 feet long running N-E and S-W with Giantkiller lead-in. The other is 25 feet long, running SE-NW with lamp-cord lead-in. My ground is two pipes driven three feet into the ground connected by Giantkiller lead-in and kept watered. My 7-tube Airline is very sensitive and selective. I have received hams from all nine districts, Santo Domingo, Cuba, Mexico and Hawaii. However, I miss out on quite a few hams and police as my receiver covers only from 16



Swim or sing! A champion swimmer and a beauty as well turns to singing for her supper as Eleanor Holm is heard as the featured vocalist with her husband's band over the Columbia network. Her husband, as you probably know, is Art Jarrett who recently deserted Hollywood to form his own orchestra. This unique husband and wife team is heard nightly from the College Inn in Chicago.



Ferde Grofe, conductor and composer, who recently signed a contract to wield the baton in the George Burns and Gracie Allen broadcast each Wednesday from 9:30 to 10:00 p.m., EDT, over CBS. Grofe and his orchestra are supported by the Buccaneers male octet.

to 51 m. and from 175 to 550."

When the Dial Slips

"It was with considerable envy that I used to read the accounts of various DXers but with the diligence of myself and the keener ears of my wife, I can now report having heard some of the following stations which seem to be lacking in the commentaries of Kentuckians: CKWX, CKGH, HHK, KFPM, KGBU, KGU, KORE, KRE, KWG, TGX, TIGP, TIVL, NEAI, XEAJ, XEAM, XEZZ. On the sw. Daventry and other European stations come in with local station volume but the Europeans on the bcb. have as yet eluded our most persistent efforts. We are remarkably free from interference, generating our own power and having a doublet antenna 70 feet high. We use a Philco 43. While this letter is being written (9 p. m. EST.) HIZ is coming in fairly clear even above a bad background of static."

This interesting report comes from Henry R. Mortimer, Royaltan, Ky., who has this query: "Can you tell me why a station using a frequency of say 1190 kcs. tunes in on my dial at 1220 and a station using 940 comes in at 970?"

It is not possible to manufacture radio sets in quantities and have each and every one of them tune accurately according to the kilocycle markings of the dial. Where some stations tune too high on the dial and others tune too low, nothing can be done to correct it except to make a new scale for the dial. Where, however, all stations come in either too high or too low, it indicates that the dial has slipped on the shaft. Thus in Mr. Mortimer's case, the two stations named each registers too high. If this is true of most or all stations, the set screw which fastens the dial to the shaft should be loosened, the dial moved slightly on the shaft to the proper point and the set screw tightened.

From Great Britain

Writes R. A. Stansfield, Neward Road, Ripley, Woking, England: "Medium-wave DX with a little four-tube battery radio has been patchy this winter. After several months of poor U. S. A. and Canadian reception things picked up a bit towards the end of March and the good conditions are still with us. April 7th was the peak morning with KWK, WFEA, XEAW, XEW, WDRC, WOKO, etc. as well as old friends like WCAU, WTIC and KSL making the crossing. Others heard in recent months include WREN, WTOC, WAPI, KVOO and XENT. The South Americans who practically monopolized the air during January and February, have faded away except for moderate signals from LR3-5-6 and WNEL and WKAQ."

Our representative in England, Robert Pybus, 4, Highfield Rd., Chorlton-cum-Hardy, Manchester, also reports DX conditions on the

mend with 30 stations heard the first week of April, several at fine volume. "On the sw. 20 m, hams have been coming in till 12:30 a. m. and I have logged plenty, the best being W9JGA in Denver, Colo., W4CRE in Nashville, Tenn., and VE1DC in Moncton, N. B. S. W. broadcasters have been rolling in; the best SA's being YV5RMO, HJ4ABE, HJ3ABH, YV2RC-3RC and PRF5. Have also heard COH once or twice at poor strength. British Summer Time begins April 14th and will make the difference with EST six hours."

Reporting on Both Bands

"In two and one-half months of the past season. I have verified 183 stations on the bcb.," announces Nicholas J. Hock, 20 Burnet St., Newark, N. J. "I verified 59 in 1929 while using a Radiola 18; 128 in 1930; 113 in 1931; 44 in 1932; 30 in 1933; 9 in 1934. From 1930 to 1934 I used a Pada 42 t. r. f. 9-tube. My present set is a Hammarlund Comet-Pro with a peak pre-selector. I have not had much luck with TP reception although I have heard 1YA very faintly. My log now stands at 566 verified of which 61 are over 2000 miles distant. I have logged 618 stations. My best are: PP, Normandie, KFPM, KFXM, KXO, KICA, KGFL, WQBZ, 10-AK, VE9EK, TGW, LR5.

"On the sw. I have heard most of the Europeans, SA's, two in USSR, one each in Japan, India and Java, three in Australia and a few in Canada, Cuba and Mexico. I find my antenna is best for reception from the south and southwest. It is a doublet with each part 42 feet long and a transposed lead 50 feet long. It runs E-W. I use two speakers and have them arranged so that I can use one for each ear thus producing the effect of immense earphones. Besides the doublet antenna, I have two L-type aerials, one 100 feet and the other 200 feet long. I'd be lost without your 'Around the Clock on

the Short Waves.' In order to use this I draw two lines in red over and under the EST times. Who has heard an English-speaking station on 9490 kcs. between five and seven a. m.?"

From the Whole World

Warren C. Reichardt, 5 Grant St., Reading, Mass., submits his complete log which is, of course, much too long to publish. He has 9 in France, 12 in Germany, 4 in Sweden, 4 in Poland, 7 in Italy, 5 in Czechoslovakia, 9 in Central and S. A., 22 in Australia, 3 in New Zealand, 13 in Japan, and one or more in Denmark, Finland, Spain, England, Ireland, Switzerland, Holland, Latvia, Portugal, Africa, Hungary and Hawaii. Certainly a very fine list. "There are three stations which I would like to hear now and those are XGOA, KGBU and KZRM. I wish it were possible to list the addresses of all the foreign bc. stations and mark those who refuse to verify so that we could save a little money on postage. I think the SA's are the poorest both on sw. and b.c. for verifying. It seems to make no difference whether you write in English or Spanish; they still refuse to verify."

A Study in Selectivity

"I am using a Stewart-Warner super and am able to separate WOR from WLW with no interference and WOAI from WFBE (less than a mile from my aerial). At night I push WTIC and WBAL apart and get KNX. On sw. I get GSC easily between W1XAZ and W3XAU and GSA right alongside of W8XAL and VK2ME alongside of W1XAZ. All these come through with no interference." This excellent report of selectivity comes from Barton A. Dowdy, 2903 Warsaw Ave., Cincinnati, Ohio, who "enjoys reading what others are able to receive but I do wish they would list the hours a little more exactly so that some of us can be helped by

their achievements. For instance, if I wanted to tune in 2BL or 2CO or JOAK-1 when should I start tuning, how are they liable to act as regards fading, will they come in over a reasonable amount of QRN, etc." P. S. "Heard JVT the other morning and was really surprised at the clarity and volume of the station." (Editor's Note: But how about the hour you heard them, Barton; and did they fade, etc.?)

One Tube Results

"As the DX season is almost gone, I am submitting some of the results," prefaces Allan Ford, Portneuf Station, Que. "I am now using a -30 tube with two dry-cells in series for A batteries in my one-tube receiver. My antenna is about 128 feet long including lead-in. It runs north-south with lead-in at the south end. It seems to be very efficient on most frequencies. I use a ground only for sw. Unfortunately I pick up a good deal of power-line interference on the bcb. Nevertheless, in seven months, I have compiled a log of 411 bcb. stations! Everyone was identified perfectly and most stations were heard at least twice. On this little one-tuber I have heard, among others, W6XAI, LR5, CP4, CKY, Frankfurt, PP, HJN, CMCD, CMBX, CMBC, XETH, XES, XEU, XEMO, XEWZ, WAIM, 10-AK, XEAF, KOTN, VONF, HHK, KFPW, XELO, and XFX. I sent a report to KADA on Nov. 20 and got the veri 125 days later. I would like to hear from others and will answer all letters. Want to hear particularly from the West Indies and South America."

"Eleven More Months"

"DX here has been mostly nil," laments Warren E. Winkley, Hughson, Calif. "We have had terrible static which spoiled all DX on the bcb. and hampered DX on the sw. However, I did manage to log WDEL, CX26 and KRLC lately bringing my log to 656. Some verifications have drifted in also. They

are WJAS, KOH, ZL1YA, JOCK-1 and JOXK. I hereby claim the record for waiting the longest time for a verification and still receive it. I wrote JOCK-1 on March 11, 1933 and received verie on March 19, 1935, a wait of two years and eight days! I wrote JOXK on January 1, 1933 and received an answer on March 28, 1935, two years, three months and 28 days. Can anyone beat that? Have the boys watch out for XGOK and XGOH, two new Chinese stations. Both will have 10 kw. The first will be on 800 and the second on 560."

Super Power in N. Z.

"I have some very good news for the DXers of the U. S. although it is bad news for the New Zealand DXers," says George E. Bott, 507 Southampton St., E., Hastings, N. Z. "The New Zealand Broadcasting Board has called for tenders for the construction of a new transmitter to replace the existing 2YA. The new station is to have a power of 60,000 watts and will be on the air in about a year. The new station should give a very good signal in the U. S. DX-ing, up to about three weeks ago (March 18) has not been much good in Hastings but has now begun to get better and I have managed to log KQW, KOH, KFBK, WBOQ, XELO, WIBW, 2BH, 3WR, XQHA. I managed to log 19 Europeans and so far have answers from 16 of them. My total number of verifications is now 189."

The Noisiest Location

Looks like we would have to conduct a contest to find the location with the greatest interference. W. J. Brenner, Jr., 64 West Ontario Street, Chicago, thinks he has it. "I am twelve blocks from the world's busiest corner. I am in a forest of steel buildings and in the midst of all kinds of static in the downtown section of Chicago." Yet, in spite of all this, Mr. Brenner has 341 verifications, a few from stations with

10, 15, 25 and 30 watts, many with 100 over 1000 miles away. He has logged every state but six using a 6-tube Fada battery set up to the 250 mark since which time he has had a Philco 47-B. He would like to hear from other afflicted ones on the near north side of Chicago or downtown districts of other cities.

"Here is my log which I started the 12th of November, 1934," submits Fred W. Kroen, 606 Walnut St., Monaca, Pa. "It consists of 446 stations of which 336 are on the bcb. and 110 on sw. This does not include any amateurs, or police. The bcb. includes all the states with the exception of Wyoming. I have around 280 stations verified so far. I have logged 32 in California with 19 verified and reports out to the others. I have a Midwest 16-tube set. My aerial is a double-doublet running east-west. I can bring in Australia on the built-in antenna in the set. I don't know what is wrong with the SA stations. Either they are very slow in answering or they don't answer at all. I heard from only ten out of 26. The last veri I got was from HC2RL and that took 78 days."

Veries that Verify

"Let's keep these DX rules pretty stiff, it's too easy otherwise," maintains John B. Clapham, 7451 Sprague St., Philadelphia. "I strongly disagree with the Plainfield DX Club in respect to counting 'thank you' letters as verifications. Last year, I built a two-tube sw. set. The first European station I heard was GDB. I had no accurate sw. log at the time and I thought the call letters were GBB. I sent for a verie and got the following reply: 'Thank you for your letter regarding your reception of GBB.' According to the Plainsfield DX Club that could be counted as a verification, yet I have never heard GBB on this or any other radio."

"I have had a radio set ever since 1922," observes Blake H. Page, 3045



Bobby Benson, in his ten-gallon hat and full H-Bar-O Ranger regalia, is full of pep and rarin' to go. Just now Bobby and his friends are adventuring in Darkest Africa, as all who follow their hazardous exploits (Monday through Friday at 6:15 to 6:30 p.m., EDST, from WABC) are well aware.

Washington Blvd, Chicago, Ill. "I now have a Scott all-wave 15-tube 1934 model on which I have heard over 700 stations on the bcb. alone. This in spite of the fact that reception in this city of Chicago has its difficulties. We now have or will have pretty soon, five 50,000-watters and these are most or all out here on the West Side. I hear WABC, WOR, WEF, KDKA, WBZ, KMOX, CFRB, all clear as a bell with no interference at all on my Scott. I am using a 30-foot DX 'Lifetime,' a Scott all-wave super-system, and a Lynch Noise-reducing antenna system. I use five rods for a ground and also a water-pipe."

Logs Them Twice

"I started logging on January 5 of this year when I bought a dual-wave Airline covering the bcb. and from six to 17 megs.," supplies I. F. Wolpe, Jr., 841 N. 2nd Ave., Phoenix,

Ariz. "Since that time I've logged 63 sw. and 99 bc. and seven police. I log all stations tentatively the first time I hear them and permanently the second time. Some of what I call by good catches on the sw. are COH, Pontoise, GSB-C-D, HC2RL, HJ1ABB, HJ3ABF, HP5B, JVF, JVT, KKH, KKP, KZGF, Prado, PRF5, TIEP, VE9BJ, VE8GW, VK3LR, CK3ME, WET, WTR, XGW, YDA and four Venezuelans."

"I have verifications from 695 stations" reports Hartley Phillips, RFD 2, Flemington, N. J. "Of these 153 are over 2000 miles away, 23 are in Europe, 15 in Australia, two each in New Zealand and Hawaii. My best are 3BO, 2KO, 2KY, 2GB, 3AR, 4BH, Munich, Berlin, Koln, Bordeaux, Sottens, Parede, Budapest, Bari, Genoa, Milan, Copenhagen and Madrid. My set is a 5-tube Crosley, batteryoperated, with a few improvements. Tubes used are 30's and 34's. The aerial is about 100 feet, east-west. I will be glad to help DXers in identifying the bcb. Europeans and can supply addresses."

From the Pacific N. W.

"I see very few reports from Oregon and Washington and so I thought I would send my log in," says L. R. Underwood, (no address). "I use a Patterson 8 all-wave super and two aerials, a doublet N-S and a conventional L E-W with four copper rods six feet long for a ground. In nine months with my Patterson I have received 101 police, 207 sw., 1209 hams and 309 bcb. Of the latter 27 are J's, 2 China, 4 NZ. and 12 Aussies. Others are KZRM, KGU, KGMB and a splendid veri from LR5. I have had all continents and a total of 34 countries outside of NA."

"Radio reception is practically over for me due to the static and interference starting in here," bemoans Earl R. Roberts, 2308 Roosevelt Ave., Indianapolis, Ind. "I find my log has increased an even 100 stations—from 1053 last year to 1153

now. Verifications from 420 to 647. Only three new foreign stations were heard, KGMB, 1YA, LS2, compared to five last year—CX26, LR4, LR5, Fecamp and Beromunster. Have added 15 new Mexicans, three new Cubans, 18 Canadians, 33 US. Probably my three best catches would be the 10-watt VE9EK, the 20-watt XEE and KGMB."

Rudolph Kure, Cincinnati, relays from the Vicomte de la Brosse, 1 rue Milton, Paris 9°, France, the information that Tour Eiffel is now on 1456 kes. or 206 m. with 5000 watts and wishes reports from American listeners.

Who Can Tell Him?

"I will correspond with anybody who can tell me how to get TA's TP's and SA's," offers Dick Campbell, 72 Griswold St., Delaware, Ohio. Dick is 14 years old and a freshman in high school. "In three months of tuning on my 1935 Knight 5-tube band-spread superheterodyne, I have received a total of 400 stations—359 bcb. and 41 sw. My best on the bcb. are TGW, XFX, KPCB, WMBR, XEBC, CMBS, XEMO, WOCL, KFVD, KTRB, CJAT, XET, WKAQ. On the sw. GSA-B-D-E-F, DJC-D, EAQ, 2ME, JVT, FYA, HBL-P, IRA, HJ1ABB, PHI."

"This has been my best season on the bcb," concludes Russell W. Foss, 52 Linwood St., Lynn, Mass. "I logged 24 Europeans of which the best are Turin, Copenhagen, Nurnburg and Radio-Vitus. LR4-5-6-9 and LS2, all in Argentina, came in several times. YVIRC is the most consistent SA with the exception, perhaps, of LS2. I also heard CX-26 and YV6RV. My best Mexicans are XES, XEWZ and XEMO. Out of 18 Cubans, my best is CMHW. In December CJRM, Moose Jaw, was heard quite frequently and since then CFCN and CKY have been heard, KMPC, KWG, WJBS, KGW, KHQ, KTAR, KROW, KTM, KEX, KECA, KHJ and KIDW are my best US. On the sw. I have

heard JVT, SUV, YDA, VK3ME, VK3LR, CT1GO, ZFD and XAM."

From the Other Dominion

"This is a Newfoundlander saying hello," greets P. J. Walsh, 12 Flower Hill, St. John's. "On December 16, a contest was held featuring 'Iowa on the Air.' I was lucky enough to complete in full the programs of WHO, KFNF and KMA. It is more than three months since the contest but I have not heard anything about it. Has any DXer logged this station: VGNS, the SS New Northland? I caught them in June, 1934, on 770 kcs. when they were broadcasting a program for the SS Belle Isle, both ships being at sea. I have a letter of verification on this event. I have also heard the New Northland broadcasting from Halifax. Montreal and off the coast of Newfoundland. I use a Lyric 5-tube SA5L, 1934, which tunes from 540 to 2000 kcs."

Manuel Alberto Cadilla, P. O. Box 337, San Juan, P. R., is continuing his good work. He now has a total log of 266 with the highlights being PP, LS2, CX26, YV2RC and 54 100-watt stations in the U. S. proper.

"I now have a Scott 15 AW, a real machine," proudly proclaims Eric Butcher, Cokeville, Wyo. "My best off - the - continent stations are VX2ME-3ME-2BL, HIX, OAX4B, JVT, VP6VB, JOFK, PRF5, FYA, DJC, HC2RL, PRADO, HJ4ABE, YV1RC-2RC-3RC. VPD, CT1AA, HJ1ABB, YV5RMO, HP5B, JOQK, JOFK, JVF-E, and the five Daventry stations. My receiver has a special 5-way switch on the panel so I can tune from one aerial to another. A double doublet is used for one."

Good for TP's

"This has been a wonderful season for TP's," exults Victor Young, 83 Emery St., London, Ont. "I have had my share—1YA, 2BL, 5CO, 5CL, 2UE and 4QG. Other good catches on my new Westinghouse 84 are Radio Normandie, Strasburg, WNEL, WKAQ, CJLS, CJCB, CJAT,

W6XA1, KOY, CX26, TGW, HHK, WTAW, KXO. My best, YV1RC, I hear at 8:00 p. m. On the sw. I have heard 80 per cent of the 100 best. I would like to correspond with DX fans anywhere and promise return mail service."

O. Ingmar Oleson, Ambrose, N. Dak., reports in his March-April reception: LR5, 1YA, 4QG and 2BL "all QSA4, R7." Short wave reception is not up to normal but is gradually getting better. Mr. Oleson heard an unidentified station at about 31.5 m. the last letters being LT. He would like to correspond with users of antenna tuners for both beb. and sw. frequencies and will exchange diagrams. He uses the Scott Deluxe.

On the letter head of the Wauwatosa DX League, Wauwatosa, Wisconsin, Dave Stimple, 7439 West Garfield Ave., writes: "My log stands at 331 after a year. Could anyone give me tips on TP and TA stations, on SA's and New Englanders? I invite any owners of a Philco 95 to correspond with me and compare logs especially those in Wisconsin. Our club is two weeks old and has ten members. Yours till VE9EK drowns out WLW."

Who is WLUF?

"What station was transmitting on approximately 1490 kcs. Sunday morning, April 7, at 5:00 o'clock, signing WLUF?" queries Stuart B. Leland, New Canaan, Conn. The modulation and frequency stability were awful. The melody 'Among my Souvenirs' was repeated constantly and unintelligible voice announcements were made frequently." Did anyone else hear this station?

Edward Kocsan, 1445 Franklin St., Johnstown, Pa., writes: "I have piled up a log of 816 stations, receiving about 500 of them this last season. My foreigners include: LR5, TGW, YV1RC, PP, Radio Normandie, HJN, CX26, PTT, IITR, and KGMB. Also VE9EK, 10-AK, KFPM, and all but 58 of the total in the U. S. My

set is a Crosley 157, 10-tube midget superhet. Could anyone furnish me with a schematic diagram of this set?"

"I use a Stromberg-Carlson 60 with a Westinghouse Doublet and does it bring them in?" Bob Calder, Box 647, Kenora, Ont., asks himself. "On the sw. have had every continent but Australia. COH is the best all-around reception here. On the bcb. my best are LR4, 1YA, CKWX and WEXL. My total on the bcb. is about 190. I would like to correspond with DXers in Honolulu and will answer promptly. When does KKH operate?"

What to do with Them

"Many of the fellows that write in requesting correspondents never answer any letters," complains Raphael Geller, 1652 Radcliff Ave., Bronx, N. Y. The word "chiseler" is used pretty often nowadays but sure those deserve it who ask for letters and then fail to answer them. Raphael now has 402 veries but thinks that of LR5 is best of all. He would like to hear from the West Coast.

"Using a four-tube Philco 81, I have acquired a log of 438 stations since August, 1934," adds up Francis Schmidt, 707 Edmond St., Pittsburgh, Pa. "Among these are TGW, KPPM, WKAQ, KNEL, KFVD, KSEI, KGDY, CJLS and HHK, all verified. Reports are out to LR5, 10-AK and others. Haven't heard any TA's or TP's as yet although I have been hearing a weak signal on 650 around 5:30 am. which I believe is 1YA."

"This morning, March 24, through a barrage of static that sounded like a Cuban revolution, I managed to bring in CX-26, Montivideo." reports Frank Wheeler, 406 Eagle Point, Lakeside, Erie, Pa. "I had them from 3:15 a.m. EST (when KNX signed off) until 4:00 a.m. On March 17th, I received HHK R9."

"I have verified 107 stations this

winter, 28 of which are 100-watt or less," totals Lamar Schlicher, 707 South 10th St., Allentown, Pa. "My latest are CMHA, XELO, KFUE, KTRH, KVOA, KASA, XEO, CHCK, WLEU, CKCH, WPAY and WIRE. I use a small midget 5-tube Monarch."

Reports in Short

"I am very anxious to hear from some kids of my own age," remarks Taylor Stewart, 1426 Princeton Ave., Salt Lake City, Utah, but he does not say what age that is. Taylor got a new Stewart-Warner for Christmas and has already logged 200 stations on the bcb. and 350 on the s. w. He had the thrill of picking up "Little America."

"Using a Majestic 90 eight-tubes, I have been able to verify the following stations," submits Charles Leboeuf, Box 222, North Grosvenordale, Conn. "TGW, XEMO, KFAC, CFQC, KFBB, KGNF, CMBC, KFPY, KFSG, CFCH, COA, CJKL, CMCA, COX, W3XCW, CJAT, W6XAI, KXA, CP4, KMPC, LS2, CT1GL, Bordeaux, Renne, Cologne, LR5 and CX26."

"I have a King 7-tube, 1929 model," writes M. T. Whalen, from 1022 7th St., Saskatoon, Sask. "I have logged WDRC, WHAM, WJAX, WBT, WJR, KDKA, W6XAI, W9XBY, CMQ, CMCW and six Mexicans. I have a 100-foot straight aerial with a seven-foot iron rod for a ground. I have logged 154 stations in about eleven months."

"Sunday night, March 30, I couldn't go to sleep so I hid myself to the three-tube Kadette," says E. D. King, 412 Linden Street, Morgantown, West Va. "From 1:00 a.m. to 7:00, I caught 23 new stations from coast to coast, south boundary to north. My three best were KTM, WSYB, and KARK."

C. H. Mann, Karaperi, Cambridge, N. Z., tells us the 3YA Christchurch. on 720 will increase its power from 2500 to 10,000 watts by the end of April and that 4YA Dunedin on 790

(Continued on page 33)

Ozzie Nelson of the "Bakers"

• • • By "BETTY"



OZZIE NELSON was born in Jersey City March 20, 1906. His parents were of Swedish descent, his grandfather being a Swedish nobleman who dropped his title when he came to the United States.

In 1920 when Ozzie was 14 he became the youngest Eagle Scout in the country and with several others was sent to the Olympic games in Antwerp, Belgium. His brother went with him and before the two youngsters came back home they achieved the distinction of singing before the late King Albert of Belgium.

As a Student

His voice showed promise even then but when he tried out for the glee club at Rutgers College he failed to make the grade. In Rutgers he paid all his expenses by organizing a student orchestra for

campus affairs. With all his other activities it was a tough grind but he came through with flying colors. Another source of income was the sale of drawings, mostly humorous, to magazines. In college Ozzie was a star quarterback, intercollegiate welter-weight boxing champion, varsity swimmer, president of the student council and art editor of the college magazine.

After Rutgers he went to New Jersey Law School, continuing to earn his own way by playing every night with an orchestra at a nearby carnival. With a law degree in his pocket he sat down and thought about his career, balanced the advantages of law against music. Music won and he has been an entertainer ever since.

As a Band Leader

He started out to organize another band and began playing at private parties. With his likable grin and clean-cut manner it wasn't hard to get bookings and soon he had more offers than he could accept. College proms and debutante dances built up a reputation for him so quickly that soon he was playing at one of the larger New York hotels and broadcasting.

But he wasn't satisfied just to get to the top. He wanted to stay there. That's why he developed his unusual style of singing. All his spare time went into concentrated thinking on how to make his band stand out from the crowd—make it different from the general run.

As a Duet

He found another voice that fitted in perfectly with this new fresh and youthful style and the voice belonged to Harriet Hilliard. They teamed up as a "boy and girl"

singing duo. Their voices were new to listeners and the night time dance broadcasts from the hotel where Ozzie was playing became a popular feature. In September, 1933, they were signed for the Bakers Broadcasts with Joe Penner over NBC and since then have been heard in this series.

He likes his job, eats up the hard work it took to make his a success and plans to keep on working just as hard. That is the secret of the college boy who couldn't make the glee club and later became a singing star of the airwaves.

* * *

Eddie Canton will return to the air next fall in a new CBS series under the same sponsorship as before. The comedian again will be featured with Dave Rubinoff, Ted Husing and "Pargyakakas." Eddie is at present in Hollywood making a picture tentatively titled "Dreamland," an adaptation from one of Clarence Buddington Kelland's stories, the locale of which will be an amusement park. He plans no vacation this year, saying that "changing from one kind of work to another gives me all the relaxation and variety I need."

* * *

Burgess Meredith, who plays Red Davis in the NBC program of that name, stepped from behind the microphone at Radio City studios recently to open with Katherine Cornell in a new play, "Flowers of the Forest." And did the Broadway critics like Red? Burns Mantle called his performance "outstanding in its colorfulness and force." Robert Garland referring to the play's fantasy, wrote: "In Burgess Meredith's unwavering hands you are apt to believe in it, even as you believe that Mr. Burgess is well up on the honor roll of our gifted younger actors."

* * *

Pet names of some NBC artists: Morton Downey addresses his wife, the former Barbara Bennett, as

"Lover." She retaliates with "Toots." Frank Luther calls his missus, Zora Layman, "Cute," and she salutes him as "Sloo-foot." Paul Whiteman's term of endearment for the beautiful Margaret Livingston is "Maggie," while Don Ross refers to Jane Froman, his better half, as "Bunny-Nose."

* * *

Gertrude Berg, famous for five years as Molly Goldberg of The Goldbergs, has gone back to her girlhood days to find inspiration and ideas for her new serial, "The House of Glass," the scenes of which are laid in a small summer resort in the Catskills. Her father was a Harlem inn-keeper when she was a child and many incidents related in the serial had their origin in her father's hotel.

* * *

Robert Simmons, tenor in the Revelers Quartet, is the only unmarried one of the group. Wilfred Glenn, the bass, has three grown children—one son, a lawyer, another a banker, and a daughter, an actress. Elliott Shaw, the baritone, has two, a girl 16 and a boy 10.

* * *

Mario Cozzi, operatic baritone heard on the NBC networks, was born in Florence, Italy, spent his childhood in South America, and has been a resident of the United States since 1919, becoming a naturalized citizen. His operatic debut was made in his native Italy at La Scala in Milan in 1932. His first singing engagement in America after a career as private secretary to Gatti-Casazza, former director of the Metropolitan Opera, was in the movies.

* * *

Jack Benny and Mary Livingstone are among the greatest home-bodies among all the outstanding radio performers. If the comic pair really want to do something extremely gay, they see a midnight movie. Night-clubs and night-life in general have little appeal for them.

Chatting With Our S. W. Listeners

• • • By PAGE TAYLOR

TWO years ago this department prophesied good reception of the Australian stations VK2 and 3ME, but good reception failed to materialize. A year ago we again stated good reception should obtain from VK2ME, VK3LR and VK3ME and again were disappointed, but we can't go wrong this year. Although these stations are half way 'round the world, they are coming in at the present time with tremendous volume and should continue throughout the summer to put good signals into our loudspeakers.

Mr. H. N. Walker of Brisbane, Australia, tells us VK3ME has increased its schedule, working now from 5 until 6:30 a. m., EST., on Wednesdays, Thursdays and Fridays, and from 5 to 7 a. m. on Saturdays. Mr. Walker continues with the information that VP1A now announces simply as "Radio-Suva" as difficulty had been experienced in reading the call VP1A. This station is located at Suva in the Fiji Islands and is owned by Amalgamated Wireless, (A/sia), Ltd. The frequency is 13070 kc/s.

Two New Stations

"Tonight I may have received a singleton," surmises Edgar L. Koch, 1300 So. 17th St., Milwaukee, Wisc. "This was station HJV, Bogota, Colombia, on about 8.790 megs. or about 35 meters. It was announced as an experimental government station and was in communication with an American amateur. Musical items were broadcast to test modulation."

G. H. Millican, 321 E. 24th Ave., Amarillo, Tex. complains that too few Texans report on shortwave reception, in his detailed report on reception in his locality. "In the 31-meter band," he writes, "there is a new station, HP5J, 9590 kcs., Pana-

ma City. CT1AA, GSB-C, 2ME, 3LR, 3ME, PRF5 and COH are always good. DJA and DJN are weak, probably because their antenna is directed towards Asia. W1XAZ has changed its call letters to W1XK. In the 49-meter band I managed to hear GSL, 6110 kcs. at fair volume on several nights between 9 and 10 p. m., CST although YV2RC and other So. Americans try their best to spoil it. GSA and DJC are pitiful here; too much interference. Above this band YV5RMO and HJ4ABE are best, with OAX4D a poor third."

A New VE Relay

"I wish to report a new station on s. w. which relays the daily programs of CFCN on 1030 kcs." states James Maguire, 312 Devenish Apartments, Calgary, Alta. "This s. w. station is VE9CA on 6030 kcs. with 10 kw. power, working on the following schedule: Thursday, 9 a. m. until 2 a. m. Friday; Sunday, noon to midnight; other days of the week from 9 a. m. until midnight; all times, EST. CFCN and VE9CA announce, 'This is CFCN, the Voice of the Prairie, in Calgary.' I have been to the studios and all through them and would like to say that they have the latest and most up to date equipment. The transmitter is at Strathmore, about 20 miles to the east. Concerning DX from this locality, I might say that conditions as a whole are excellent. Daventry and Pontoise are heard well. DJC is seldom heard out here but that is the fault of so much crowding and no fault of the transmitter. DJN and EAQ both put in nice signals."

A New Haitian

"Last night I listened to a new station on about 9560 kcs. giving call letters which sounded like

HH2R," reports Jerry Duncan, 330 E. Flagler St., Miami, Fla. "The location was given as Port au Prince, Haiti. This was on a Saturday evening between 10:50 and 11:20 p. m., EST. They tested with musical numbers, mostly American. Announced in French and English after each number and gave their address as the Automobile Society. The frequency was about 9560 kcs. It came in R7-9, but of course, I am not far from Haiti and my aerial is beamed in that direction."

"I am still putting up aerials," writes our untiring antenna experimenter Geo. Acker, Wadsworth, Ohio. "The latest is a Tobe and it is the best I have found yet. This kit works well up to about 11,000 kcs., and from there to 23,000 kcs. I have to use my 225 foot flat-top for an antenna and the 175-foot counterpoise. I recently received a veri from Rugby and note a new address for the British fones. Letters for these stations should now be addressed to the Engineer-in-Chief, G. P. O. (Radio Section), Armour House, St. Martin's le Grand, London E. C. 1. Two of our old friends are back on the air, JVM and JVN. These stations replace JVT. Both these stations are better than JVT was at any time during the winter."

Another Texas Report

"I was warned when I moved here that a DX enthusiast would die of a broken heart. Heavy mineral deposits, nearby mountain ranges and dead spots, coupled with almost constant atmospheric conditions make distant reception extremely tricky at times," preambles James Sheppard, El Paso Herald-Post, El Paso, Texas. "However, with good equipment, an RCA Victor 262 and RCA double-doublet aerial, I have been able to snare quite a few of the elusive distant stations from all parts of the world. EAQ, GSC, GSA, 3LR, 3ME and 2ME are like locals here this

month. Pontoise and DJC are constantly picking up and JVT and JVM are as clear as crystals in the mornings until 5 a. m. The Venezuelans and Colombians are beginning to become nuisances. We had very good reception here until the dust storms began to create heavy atmospheric conditions around 31 and 48 meters."

Charles B. Marshall, Jr., 26 Victoria St., Washington, Pa. and Whitney Smith, 53 West End Ave., Pontiac, Mich., report HJ4ABA, "Ecos de la Montana," Medellin, Colombia, on 11,720 megs. Mr. Marshall says, "They make an announcement every half hour in English, saying, 'You are listening to shortwave station HJ4ABA, Medellin.' Mr. Smith reports another Spanish-speaking station close to HJ4ABA, but this is the second harmonic of YV5RMO. This second harmonic came through for a while with perfect quality. "There is also a new Cuban on about 10200 kcs." writes Mr. Smith. "I haven't heard any English spoken but believe the call is CMHB. One evening at about 8 p. m. I picked up CEC, Santiago, Chile, on 10750 kcs. broadcasting Spanish music and announcing entirely in Spanish." Mr. Smith wishes correspondence from DXers.

CMHB on SW.

The new Cuban CMHB was reported by many readers. Raymond Sickler, 420 E. Baird Ave., Barberton, Ohio, says they announce in Spanish and English about every ten minutes, giving their address as P. O. Box 85, Sancti Spiritus, Cuba. Raymond uses a Philco 44 and wants correspondents. Mrs. V. B. Andrews, 8935 Meridian Ave., Cleveland, Ohio, reports CMHB testing between 2:00 and 10:30 p. m. EST., but states they are heard most often around 3 p. m. Mrs. Andrews uses a McMurdo-Silver 5C Communications Receiver. She postcards, "I notice in the DX Log of the World you state

LSX does not verify. I have two veries from them, received in the past two months. They send a white card with LSX in red letters the full width of the card."

"There is plenty of QRM in the 49-meter band, but now it looks as though we will have QRM on 25 meters from the So. Americans," complains John A. Shanks, Russellville, Tenn. "At present I am hearing the harmonics of HJ4ABE and YV5RMO in this band, and the new station HJ4ABA, all of which combine in trying to cover up Pontoise. The French station comes in fairly well, however, until 11 p. m. EST, I have recently received QSL's from HJ2ABC, HJ4ABL and HJ3ABH. HJ2ABC, Cucuta, Colombia, says they have 50 watts on 50.2 meters. HJ4ABL, P. O. Box 50, Manizales, Colombia, gives its schedule as 11-12 noon, 5:30-7:30 p. m. and an English program on Saturdays from 10:30 to 11:30 p. m. EST. This English program is heard, though, from 11:30 until 12:30 or later. The owner-announcer is Mr. A. Van den Enden, a gentleman who seems to overflow with personality. He speaks in a personal way to everyone who writes him. HJ3ABH, "La Voz de la Victor," Bogota, Colombia, is on 6012 kcs. and surely comes in well between 8-11 p. m. EST. Their interval signal is three chimes exactly like those of the NBC."

QSL From YV6RV

Most of our readers have received QSL cards from YV6RV, Valencia, Venezuela, "La Voz de Carabobo." Jack Doherty, 2718 College Ave., Berkeley, Calif. has one, and adds the information that Radio-Suva is heard daily except Saturday between 8:30 and 9:30 p. m. PST. Jack wants correspondents in California. Others reporting YV6RV QSL's are Herbert Hyde, Elmwood, Conn., Oliver Anlie, Philadelphia, Pa., Al Steinmetz, Norristown Pa., John Shanks, Russellville, Tenn., Edward Lesiak,



A new electric musical instrument, the "Photona," which was recently invented and constructed for station WCAU, Philadelphia. Leonard MacClain is shown above at its console. The wide range of tones available in the "Photona" is said to be entirely different from any musical instrument yet produced. (In this respect, it's similar to some of those produced by Major Bowes' Amateurs.)

Scranton, Pa., Geo. Acker. Wadsworth Ohio, Robt. Collins. Westwood, N. J. and Morgan Fashay, Montclair, N. J.

From Russell W. Foss, 52 Linwood St., Lynn, Mass. comes this condensed report: "YVR, 9168 kcs., Maracay, Venezuela, may be heard from 1-3 p. m. EST. I have had YNLF, Managua, Nicaragua, broadcasting on 6000 kcs. HJ4ABA, Medellin, Colombia is now on 11720 kcs. every night. HRM, Tela, Honduras, is a new phone on the low frequency side of the 20 meter amateur band. HJ4ABE, HJ4ABA, HJ3ABD and YV3RC are the best So. Americans here at present. I have a total of 101 s. w. stations on my 5-tube Lafayette, and would like to hear from other users of this set."

"I have 110 s. w. stations, which does not include any police nor ama-

teurs," submits Fred W. Kroen, 606 Walnut St., Monaca, Pa. "I have 26 in South America and have 10 of them verified. I have been tuning for just a short while, having started last November. I believe this is a good record for a 16-tube Midwest."

A French Station About 11,900

"I am listening to a French-speaking station between W8XK and KKQ. I am pretty sure it is Pontoise but how does an Arizona cowboy who speaks English only get enough to verify them when they talk for 45 minutes straight?" inquires I. F. Wolpe, 841 N. 2nd Ave., Phoenix, Ariz. "JVF put in an R9 volume musical program at 1:30 p. m. the other day before phoning KWU. I have been on shortwave only since January, using an Airline 7D with an ordinary 60-foot antenna located in an area where the neighbors love to use their telephones."

Bruce MacKimmie, 620 Murray Hill, Westmount, P. Q., who has a three-tube t.r.f. home-built receiver, reports reception of RNE, VK3LR, LSX, ORK, DIQ and HVJ, as well as the usual So. Americans and Europeans. Bruce tells us that PCJ, Netherlands, broadcasts an English program dedicated to America on Wednesdays, commencing at 7:30 a. m. EST.

The Brazilians

One of the biggest surprises of the month just past was the reception by several readers of verifications from PRF5, Rio de Janeiro, Brazil. Most of these letters were several months overdue. The correct mailing address of PRF5 is Director of the Imprensa Nacional, Rio de Janeiro.

"The station I thought was LU8AB turned out to be PRA8, Radio Club de Pernambuco, Brazil," postcards John M. Wheeler, Redcourt, Lee-on-the-Solent, Hampshire, England. "I have received a verification from them on which they state they transmit simultaneously on 735

kcs. and 6040 kcs., although actually they have been on 6060 kcs. for a long time instead of 6040."

"On shortwaves I have logged a number of relay, police and amateur stations," writes Allan Ford, Portneuf Station, P. Q. "My log of relays stands at 71 with 4 verified. The verified stations are W9XF, DJC, DJD and HC2RL."

Verie From Fiji

While preparing this article a QSL card came from Suva. The face of the card is similar to those from VK3ME. On the right side is a globe with Australia occupying the center, and a large red circle encloses the Fiji Islands. Across the globe are the letters VPD. On the left side of the card is the notation: "Fiji Islands, The Garden of the Pacific. These islands were discovered in 1643 by Tasman and were ceded to Great Britain in 1874. There are a out 250 islands in the group and the total area is about 7100 sq. Mi. The population is 172,000 of which 4300 are Europeans. Principal exports are sugar, copra, bananas, rubber, cotton and shell. Amalgamated Wireless (A/sia) Ltd. operates the wireless services at Fiji. At the principal station, VPD, there are three transmitters. All these stations were designed and built in Australia by AWA., which also owns and operates wireless beam stations, coastal stations, ship stations and shortwave Overseas Broadcasting station 2ME Sydney. Amalgamated Wireless, (A/sia), Ltd., Suva, Fiji." On the opposite side of the card Mr. S. Exon (or Sexon?) writes, "Our only telephony schedule at present is of an experimental nature. We broadcast music and news daily on 13045 kcs. from VPD at 0530/0630 GMT except Sundays." This time, converted to EST, is 12:30 to 1:30 am.

Some DX Reports

"In a former issue of RADEX you did not give the frequency of XECR. I heard this station and believe they

announced the frequency as 7380 kcs," report G. D. Hinson, Jr., 2312 San Gabriel, Austin, Texas. The address of XECR is Secretaria de Relaciones Exteriores, Mexico City, D. F. They work on Sundays only, from 6-7 pm, EST.

"Tonight Pontoise is coming through R9 with a very good musical program. CJRX and HJ4ABA are also coming in well," states Nicholas Hock, 20 Burnett St., Newark, N. J. "The 31 meter band certainly has improved in the last three weeks. All the stations on this band are regular visitors now and my Comet PRO makes the best of them. I held VK2ME from 6:50 until 8 am, better than an hour, with an R8 signal, which is the best reception I have ever had from an Anzac. VK3LR always seems to have a shaky signal, while VK3ME, although steady, never has the volume 2ME has."

"On my G. E., K-80 I have logged 87 foreign stations," submits Earle Johnson, 440 Harrison Ave., Hamilton, Ohio. "This list is a result of a good many hours hard work between the hours of 8 am, and 8 pm. I am doing a 'rest cure' and am not permitted to be occupied at any other hours." Mr. Johnson starts a new log each month, and these 87 stations were logged during April. The list includes CT1CT, DJE, FTA, HIL, HI4D, PRF5, HRP1, HJ1ABJ, and IRJ among the more difficult catches.

"Near the end of January I bought an RCA-Victor 263, 10-tube all wave model, and its performance on both long and short waves has pleased me very much. I feel rather proud of my list of stations, although it is not very impressive," exalts Herman Hills, 237 Morgan St., Tonawanda, N. Y.

These two readers want correspondents:

Chas. E. Dunlop, Box 171, Kirkland Lake, Ont.

John F. Fisk, 238A Florida St., Vallejo, Calif.

"HJ4ABA was inaugurated on

March 25 at 7 p. m. EST giving the address as Ecos de la Montana, Edificio Casa Garces, Medellin, Columbia," reports Manuel Alberto Cadilla, P. O. Box 337, San Juan, Puerto Rico. "Heard CO7HT, Camaguey; LSX talking to New York; HJ3ABH, location not given; HP5J, 9620, Panama; a station in Pernambuco, Brazil, call not understood. Besides these many Europeans and SA's were heard. I2RO is usually on 9360 on Sunday afternoons coming R9. Did you find out anything about BC6XYB, the station at Demerara, Barbados? They have never come in again since I first reported them. Have heard some calls from Santo Domingo who must be amateurs or outlaws as they stay on for very short periods."

The Hungarian Stations

"Reception was great today (April 28)" exults Albert Steinmetz, 411 West Girard Ave., Philadelphia, Pa. "I again picked up HAT and with much better results than before. I held it from 7:03 to 7:54 p.m. EDST, at which time they signed off with the Hungarian national anthem. The time and frequencies of the Hungarian stations are now as follows: HAS-3, 19.52 m., 15,370 kcs., every Sunday 9-10 a.m. EST; HAT-4, 32.88 m., 9125 kcs., every Sunday 6-7 p.m. EST. HAT is quite easy to pick up. I heard it on Easter Sunday for about 20 minutes and again, as stated above, the Sunday following. HAT now has a very beautiful verification card printed in red and green over white (the national colors of Hungary). It is so different from any others. On each is mounted a view of some Hungarian scene.

"I had a catch on April 23 I never had before. They gave the call in Spanish and in perfect English as HKV, Bogota, Colombia, on 8795 kcs. Announced as experimental station testing; asked listeners to write their reports to the Ministry of War, Bogota. I had it from 6:45 p.m. EST to 7:08 at which time, after playing

(Continued on page 33)

With the Members of the I. D. A.

• • • By JAMES T. SPAULDING*

CALLING "CQ" to all DXers. As this is the last issue of RADEX until September and reception is now due for the usual seasonal change, we will omit most of the reports. The season as a whole has been fairly good. Now that bcb. reception is through we are awaiting the arrival of many old friends on sw. The 25 and 30 meter bands are becoming heard again while 49 meters is fading. We, for one, are not sorry. The SA's offer good entertainment, but good reception of Europe and Australia will be very welcome.

* * *

It is in order at this time to again thank RADEX for its generous cooperation. We have made some new members and, judging from reports, RADEX has made many new friends. We also thank everyone who sent in reports. We especially thank D. R. D. Wadia of India and B. E. Mitchell of South Africa.

* * *

For DXers who desire up-to-the-minute tips and news, we recommend W9XBY, 1530 kcs., Kansas City. Tune for them each Wednesday at 12:01 a. m. CST.

* * *

Local IDA chapters are springing up everywhere. New ones are the two in Los Angeles and Beverly Hills and the one in Toledo. Members of the London Chapter, led by H. M. Blaber, recently visited the London Power Station and the International Telephone Exchange. Fine business. H. M.! Anyone desiring information on how to form a local chapter please write headquarters at Bloomington, Ill.

* * *

The offer of a free copy of our magazine, the Globe Circler, is still

open and it may be secured by writing 3524 N. Western Parkway, Louisville, Ky.

* * *

Oliver Amlie, DXer extraordinary, writes: "Anyone who has not yet joined the IDA should do so promptly. I recently had the pleasure of turning over to the IDA the entire membership of the International Amateur and S. W. Fans' Society." Friend Amlie has sent in 130 reports to the three Aussie sw. stations and challenges anybody to beat this record.

* * *

If you have not yet received a long-awaited verie, don't give up. Mrs. Ledbetter of Vicksburg just received a verie from JOXK after 15 months. Maybe we'll get those due from JVF and HJ1ABB sometime!

* * *

Don't forget the second IDA special from HP5B, Radio Panama, 6030 kcs. on June 14th.

* * *

Many have asked for detailed information about membership requirements of the IDA. They may secure this by addressing the writer.

* * *

We hope to announce the winners of the various prizes in the IDA contest in the next issue and so, until September, here's hoping you all the very best of everything, good DX and signing off. *Hasta Luego!*

*3524 N. Western Parkway, Louisville, Ky.

The RADEX Radio Map of the World has a dial on front cover which you turn to the time in your zone and instantly the time for every place in the world is indicated. Price only 25c postpaid anywhere.

Converting Old Sets for S. W. Reception

• • • By B. FRANCIS DASHIELL

A RADIO set may grow old but it seldom wears out. If you replace its tubes, clean out the dust and readjust the circuits, it usually becomes about as good as new. There are thousands of such receivers in existence, many still giving excellent service, but most of them have been shoved away into obscurity to make way for modern, all-wave sets. If these old receivers could be remodeled so as to tune to the short waves, instead of only to the broadcast band, their usefulness would be revived.

A few years ago these short waves were not generally known to the public. The only signals in the short-wave band consisted of amateur and commercial transmissions in code which were of little interest to listeners. Today, however, in the short-wave band, we find interesting police, aviation, amateur and broadcast radiophone conversations and programs. These additional stations are denied the owner of an old broadcast receiver unless he uses a short-wave converter. Many of the readers of RADEX have asked whether their old sets can be converted so as to cover at least a portion of the short-wave band, such as the upper half that is just below the 1,500 kilocycle end of the broadcast dial. Such conversions would make it possible to pick up the police, amateur and aviation broadcasts that operate on 1,700 to 2,400 and 3,800 kilocycles.

Changing the Circuit

When we attempt to change the design of an otherwise satisfactory radio set we are very likely to reduce its efficiency. This is particu-

larly true when inductances (coils) and capacitances (condensers) are altered in size so as to create new tuning ranges so that signals having higher frequencies than those used for broadcast reception can be passed through the circuits. The coils in a broadcast receiver are designed to pass frequencies between 600 and 1,500 kilocycles. When we desire to pass higher frequencies, such as those from 1,500 to 5,000 kilocycles, much smaller coils and condensers will be needed.

However, if the owner of an old set is willing to sacrifice some of its original sensitivity and D-X qualities, it may be possible to alter the circuits so that the short waves down to nearly 40 meters can be received. But some of our readers are doomed to disappointment right here, for much depends upon the type of set to be converted. While it is possible to alter a superheterodyne so that it will tune to short waves, the work will require the services of a skilled radio technician as a careful redesign and balancing of the tuned r.f. and oscillator circuits is required. Also, a new oscillator arrangement must be determined, and for these reasons we do not generally recommend anyone attempting the conversion of a superheterodyne set for short-wave reception.

Using T.R.F. Sets

The tuned-radio-frequency receiver—and there are many thousands of this type still in use—is readily adaptable to variations in its tuning range. Little difficulty should be experienced if one is careful to follow instructions. Perhaps there are certain receivers, such as those of un-

usual design and which may employ involved r.f. transformers with neutralizing coils, which cannot so easily be altered. They need not be entirely ruled out, however.

The coils in a radio receiver determine the wave lengths or frequencies to which it will respond. The size of the coil (number of turns of wire) controls its reactance to the flow of an alternating current. The faster a current alternates the more difficult it becomes for the current to pass through a coil of wire. A coil may present a high resistance to the flow of alternating current and practically none to the flow of direct current. A coil of few turns offers little a.c. resistance to a high frequency, but another coil of many turns will effectively retard the flow of the same current. Thus a coil may be tuned simply by removing or adding turns of wire.

Tuning to Resonance

The fundamental principle of a tuned circuit is that it presents a.c. resistance or reactance to all radio-frequency currents except the one to which it is in tune and therefore offers no resistance. This is a state of resonance and is universally created by changing the capacity of a variable condenser. So, periods of resonance to all frequencies within the tuning limits of the coil will be provided, one at a time, simply by turning the dials. Such is the act of tuning a circuit. In a r.f. receiver at least two or three similar circuits are tuned simultaneously, and resonance appears instantly in each of these tuned circuits.

Because simultaneous tuning occurs in each of these circuits, the signal will pass from one circuit to the next as it is amplified in intensity. It goes through the first, second and third r.f. stages. Each stage consists of a coil, condenser and tube, and all are absolutely identical. So, if there are three r.f. transformer

coils, each will be found to be similar in size and will be wound with the same number of turns of wire.

Size of Coils

The average radio-frequency transformer coil in a t.r.f. receiver will contain from 60 to 75 turns of wire. It is tuned by a variable condenser having a maximum capacity of .00035 to .0005 microfarad (350 to 500 micro-microfarads). Such a combination forms a tuned r.f. circuit that will cover all waves having frequencies ranging from about 500 to 1,500 kilocycles, or 550 to 200 meters. But the large size of this coil prevents it from being tuned to resonance to any signals below 200 meters, its minimum limit.

Matters would be simplified if it were possible to use but one coil of wire in a r.f. transformer to cover all frequencies in the broadcast and short-wave bands. If we make a coil having about 12 turns of wire, it will tune to signals between 15 and 40 meters; if it has 25 turns, it will be resonant between 40 and 80 meters; and, if a still larger coil of 50 turns, it will tune from 80 to 200 meters. We cannot well make a coil that will tune from 15 to 200 meters. Therefore, we cannot replace the r.f. coils that are used for broadcast reception with a coil that will cover the entire band embracing the short waves

Removing Turns of Wire

Simply changing the tuning condenser will not provide reception on the short waves. If you examine your broadcast receiver when it is tuned to a station on approximately 200 meters, or 1,500 kilocycles, you will see that the rotor plates of the variable condensers in the gang unit have become entirely unmeshed from between the stator or stationary plates. The condenser capacity is now at minimum or practically zero. A smaller condenser would reach its zero setting before it tuned down to 200 meters and would fail to cover

the entire broadcast band. Smaller condensers are used on the short-wave band so tuning will be easier with wider selection between stations.

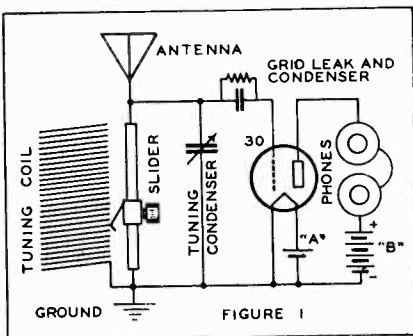
From the foregoing explanations we find that we must reduce the size of the r.f. coils if they are to respond to the shorter waves. But when we do this we also reduce the ability to tune to the top of the regular broadcast band. Let us, for instance, remove a single turn of wire from each of the r.f. coils in the receiver. Then we will see that the station settings on the dial have been changed one or two points. Now remove several turns more from each coil. The response into the upper portion of the short-wave band becomes more pronounced, but the broadcast band moves up on the dial. Perhaps a station that was received at the top of the broadcast band on No. 100, or 550 Kc., of the dial, according to how these old dials are divided, will move off and no longer be heard, but new stations will appear at the bottom of the dial, below 200 meters, or above 1,500 kilocycles.

Variable Coils

A coil that is continuously variable in inductance will tune to all wave lengths. However, its efficiency is not the kind that makes radio engineers happy. In Figure 1 we see a coil of this type used with a single-

tube circuit. Such tuning coils were in use several years ago. It is possible actually to reach far above 5,000 meters and below 100 meters with a coil of this type. Several hundred turns of No. 26 enameled wire are wound on a small tube. A square brass rod fitted with a sliding contact is arranged over the coil, from end to end. By means of the slider single turns of wire can be cut in or out at will. In this manner the inductance of the coil may be varied from minimum at its lower end to maximum at the upper end. This circuit, at least, will prove an interesting experiment in all-wave reception. Its selectivity may prove rather disappointing, however.

This form of tuning coil is impracticable in a multi-tube radio receiver. As we have said before, the usual t.r.f. set contains three r.f. transformer stages. Now, each transformer has two coils—a primary and a secondary. (See Chapter Three of the *Beginners' Story of Radio*, appearing in the December, 1933, issue of RADEX). The primary is not tuned and consists of only a few turns of wire. The secondary has more turns than the primary and, in addition, is tuned to resonance by a variable condenser shunted across the two ends of the coil. The top terminal of the secondary is attached to the control grid of a r.f. tube. The bottom terminal usually is grounded, but does not interest us. When one or more turns of wire are removed from the secondary coil they must be taken from the top end that connects to the grid contact of the tube. The wire in the primary coil must be untouched. A radio set having three r.f. transformers also will have three variable condensers for tuning these three coils. And there will be three tubes—two are r.f. amplifiers and one is the detector. Any changes that are made must be carried out identically throughout all three stages. The secondary coils of



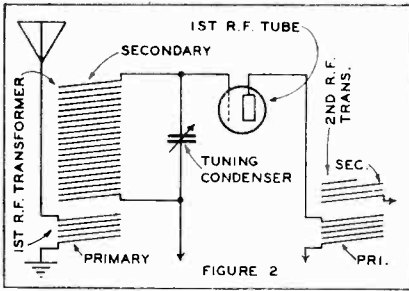


FIGURE 2

the r.f. transformers are easily identified, usually by tracing back the grid lead from the tubes.

The R. F. Transformers

Figure 2 shows a typical stage of radio-frequency amplification. As indicated, it is the first r.f. stage of the set. This is followed, in most cases, by two more similar stages, making three in all. Now, if we replace the secondary coil of this particular r.f. transformer with a larger coil, or add more turns of wire to one end, as indicated in Figure 3, the longer waves may be tuned in—those above 600 meters. Adding about 50 turns of wire may give a tuning range from about 500 to 1,000 meters instead of the usual 200 to 550-meter limits of the coil.

But, if the secondary coil is replaced with a smaller one, of about 40 turns, as shown in Figure 4, the broadcast-band becomes lost, and only shorter waves, such as 75 to 300 meters, can be received. In this case the receiver now becomes partially useless as a broadcast receiver. If the size of the coil is still reduced to about 25 turns, it will respond approximately to waves only between

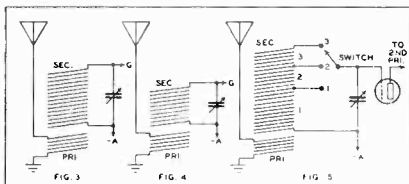


FIG. 3

FIG. 4

FIG. 5

50 and 100 meters. All broadcast signals will now be lost, as well as some of the short waves between 100 and 200 meter.

Dividing The Coils

From this explanation the reader will easily grasp the fact that a single coil cannot provide broadcast and all short-wave reception. Modern all-wave receivers do not operate with single coils to cover the entire wave band. At least four separate coils are used, one for each of the wave bands covered by the receiver. Switches are connected together so they may be operated simultaneously to change the circuits from one coil to another. In Figure 5 we see a simple switching arrangement that tunes a single r.f. coil of a broadcast set by dividing it into three sections. Each section covers some particular portion of the wave band. Section 1 utilizes 25 turns of the coil, counting from the bottom terminal next to the primary coil. This will cover a short-wave band from 40 to 100 meters. Section 2 adds about 15 turns to Section 1 and will tune up to about 200 meters. Section 3 adds the remainder of the original coil and provides the usual broadcast reception from 200 to 550 meters.

If the receiver will permit the addition of tiny 3-point switches of this type to each of the three r.f. secondaries, satisfactory short-wave reception and broadcast reception can be obtained without loss of the characteristics for which the set was originally designed. One complete switch assembly must be placed at each coil. The leads from the switch points (1 and 2 of Figure 5) are carefully soldered to bared spots on the proper turns of wire. Extreme care must be exercised to make all leads from each of the switches exactly the same length. And the points where contacts are made must be identical on all three coils.

Plug-In Coils

Any t.r.f. receiver can be turned into a short-wave receiver simply by removing about 20 turns of wire from the tops of each of the r.f. transformer coils. This will provide reception between approximately 100 meters and 350 meters, covering police and amateur and aviation calls, as well as nearly one-half of the broadcast band. Removal of about 30 turns will give short-wave reception between approximately 70 meters and 200 meters. Removal of more turns is not recommended, for attempts to get down into the 20-40 meter band will result in instability of tuning. The condensers do not require changing, but in order to spread the stations over the condenser from end to end and make tuning much easier the capacity can be reduced by removing two rotor plates from each section.

Another method of providing short-wave reception is to remove all three r.f. transformers from the broadcast set and substitute three 4-contact tube sockets. Connect two contacts of each socket to the two end leads of the primary coil that go back into the set after the transformer was removed. Connect the remaining two contacts to the two leads that came to the secondary coil. Plug-in coils, with two windings—primary and secondary, can now be used to cover the entire short-wave band as well as the broadcast band. This system may be impracticable in some of the earlier neutralized receivers. Three similar sets of coils, wound on plug-in forms having four prongs, will be needed. The coils can be made according to the directions given in Chapter Eleven of the *Beginners' Story of Radio*, published in October, 1934, issue of RADEX.

The Beginner's Story of Radio is only 75c postpaid.

In the Business Office

THE May-June-July-August edition of the *DX Log of the World* went to subscribers and newsstands late in April. This will be the last edition of the *DX Log*. We have decided that it will be to the advantage of our readers to have all the information regarding radio stations of the world in one book instead of two. Beginning with the September issue, we are therefore combining our two publications and the data on the foreign broadcast stations and the short wave stations of the world will hereafter appear in RADEX. Unexpired subscriptions to the *DX Log* will be applied on subscriptions to RADEX. Be sure to watch for the September RADEX. It will be the greatest compendium of radio information ever published in this or any other country. Due to increased costs caused by the NRA codes as well as to the additional material, the subscription price of RADEX will be advanced on September first. Subscriptions will be received at the old rate of \$1.75 per year until the first of September. "A word to the wise is sufficient."

The Iowa Changes

As we stated in our last issue, recent shifts in the stations of the Iowa Broadcasting System had us all mixed up. We are now in position to straighten this matter out. KRNT, Des Moines, 1320 kcs., 1000 watts daytime and 500 watts night is a basic Columbia outlet. KSO, Des Moines, now on 1430 kcs. 500 watts daytime and 250 watts night, is now a basic NBC Blue outlet. WMT, with studios in both Cedar Rapids and Waterloo, on 600 kcs. with 2500 watts days and 1000 watts nights, is likewise a basic NBC Blue outlet. "All three stations have recently installed RCA high-fidelity transmitters. We are now in the process of moving these transmitters and other equipment to new sites away from

their present industrial-section locations. We are installing at the new transmitter site in Des Moines a 370-foot vertical antenna with high-capacity crown, thought to be the most efficient antenna design yet invented. At the new WMT transmitter site nine miles north of Cedar Rapids, we are installing a 400-foot vertical antenna." Thus writes Edward B. Nichols of the IBS.

The New Zealand DX Radio Association of Dunedin very kindly sends us a list of the reallocation of frequencies which will take place in Australia on September first. These will appear in the September issue of this magazine. At first glance it would seem as though almost every station in Australia will change its channel.

We show KOOS, Marshfield, Ore., as a 100-watt station with license for 250 watts daytime. Mr. Walter L. Read, Manager of the station, writes us that they are a daytime station and are therefore a 250 watt station. We are making corrections accordingly. Says Mr. Read further: "We expect to get permission to change to another frequency, either regional or a daytime frequency other than a local channel. We are using a new transmitter with a potential output of 500 watts and hope to make use of this power on a daytime basis in the near future. Naturally we must first get on another frequency and in so doing, it will make it possible for us to schedule more DX programs next fall than are now possible because of the crowded condition of the 1200 channel, with one station (KGFJ) on 24 hours a day. Please list us as 250 watts; hours 8:00 a. m. PST to local sunset."

Station WJR which has been a member of the NBC family "since memory runneth not to the contrary," goes over to the CBS on September 29th, according to advices from William S. Paley, president of Columbia. WJR will replace CKLW



Frances from Florida. Heard from coast to coast each Friday from 9:00 to 10:00 p.m., EDST, is Frances Langford when she stars with Dick Powell in the hour dramatic musical revue, "Hollywood Hotel," over the CBS net. Coming from Lakeland, Fla., to New York three years ago, she doggedly pursued theatrical fame until she found it. Today, as an established radio star, she's making a place for herself in films.

as the CBS outlet in the Detroit area.

From Our Readers

"In regard to the complaint of Mr. Acker of Wadsworth, Ohio, about the amateurs, I am sure it is the set he uses that is causing the disturbance. My set is a t.r.f. 7-tube using 2A5's as output with band-spread — completely a home-made set — and I have never had amateurs on top of each other." This suggestion is from Tom Brandon, 9720 106th St., Edmonton, Alta. Tom wants to join a bc DX club.

Bill Forder, 177 Third Ave., W., North Bay, Ont., sends us a newspaper clipping to the effect that CJKL, Kirkland Lake, has been raised from 100 to 1000 watts. There is a possibility of a still further increase. The purpose is to give better service to the "North Country."

The change will not take place for two months.

William Ellis of Hughson, Calif., received an up-to-date list of the Chinese stations from Mr. E. Pan, Engineer of XGOD. He forwarded the list to us in time to correct the summer edition of the *DX Log of the World*. Thanks to Messrs. Pan and Ellis, our readers may have an accurate list of the Chinese broadcast stations.

E. J. Strub of Iowa City, Iowa, sends us an old log book of 1923 which he has just run across. It shows about 560 stations in operation even at that early date. Most of these have long since disappeared from the air.

Ray La Roque, Secretary of the New England Radio Club, Worcester, Mass., notifies all concerned that it seems best to discontinue the activities of that organization permanently.

If any reader has a copy of the schematic diagram of the Lincoln all-wave SW-34, H. C. Chestnut, 88 Bailey Ave., Plattsburg, N. Y., would appreciate an opportunity to copy it.

And now Radio, with our full consent, takes its bow and gives way to baseball and golf and tennis and motoring. We wish everyone a happy vacation and "So long until September."

Daylight Saving Time

THE cities and towns which observe daylight saving time are shown below. In the U. S. the fast time continues until the last Sunday in September.

CONNECTICUT—Bridgeport, Hartford, New Britain, New Haven, Waterbury.

DELAWARE—Wilmington.

GEORGIA—Atlanta.

ILLINOIS—Chicago and suburbs, Cicero, Waukegan.

INDIANA—Elkhart, Fort Wayne, Gary, Hammond, Muncie, Richmond, South Bend.

MAINE—Augusta, Bangor, Portland.

MASSACHUSETTS—Observance required by State law.

MICHIGAN—Practically every community follows Eastern Standard Time all year.

MISSISSIPPI—Jackson.

NEW HAMPSHIRE—Laconia, Manchester, Portsmouth.

NEW JERSEY—Asbury Park, Atlantic City, Jersey City, Newark, Red Bank, Trenton.

NEW YORK—Albany, Brooklyn, Buffalo, Freeport, Jamestown, Long Island City, New York, Plattsburgh, Saranac Lake, Troy, Utica. In Rochester daylight saving was defeated by a referendum but many factories and offices start the day an hour earlier.

OHIO—Due to demands for daylight saving in cities, towns and villages outside the Eastern Time Zone, the entire state was put on Eastern Standard Time April 3, 1927 by order of the Interstate Commerce Commission.

PENNSYLVANIA—Allentown, Erie, Johnstown, Lancaster, Philadelphia, Pittsburgh, Reading, Scranton.

RHODE ISLAND—Entire state.

HAWAII—Honolulu and entire territory.

CANADA—Brantford, Ont. (June 30-Aug 31); Chicoutimi, Que. (May 4-Sept. 28); Fort William, Ont.; Halifax, N. S. (June 1-Sept. 29); Hamilton, Ont. (May 4-Sept. 14); Hull, Que.; Kingston, Ont.; Moncton, N. B.; Montreal; Ottawa; Quebec; Regina, Sask.; St. Catharines, Ont.; St. John, N. B.; Toronto; Yorkton, Sask. (all year).

EUROPE—Great Britain and Northern Ireland (April 13-Oct. 5); France (March 25-Sept. 29); Belgium (seven months from April 7); The Netherlands (May 15-Oct. 6); Portugal (March 30-Oct. 6).

SOUTH AMERICA—Argentina (Oct. 1-March 30).

Order Coming in Cuba

IT WILL be a real satisfaction to our readers to know that at last order is due to come out of the chaos in Cuba. We are speaking of conditions in the air and not in politics. Broadcasting in the Island Republic, so far as control is concerned, is still where it was in the United States back in 1928. Our Department of Commerce under the then Secretary, Herbert Hoover, did attempt a sort of extra-legal control but Cuba has had no radio legislation whatever.

The Director of Radio in Cuba, Dr. Nicholas G. Mendoza, writes us frankly of the radio conditions there. From his interesting letter we glean the following facts:

About a year ago a radio act was hurriedly thrown together with por-

tions of it taken from our own law as well as those of Uruguay, Argentina, Mexico and Spain. This law vested all powers in a single person, the Radio Director, and gave no right of appeal. This law existed less than a month and a commission was appointed to draft a new one. This Commission has been at work ever since and has just now submitted its work to the Government.

The broadcasters of Cuba, like those of the United States, opposed any law even where it was for their own good. They were brought out of this state of mind by the simple expedient of letting everybody broadcast who wanted to and at any time they wished. Soon chaos became so intolerable that the broadcasters themselves cried quits and asked for the enactment of controlling legislation. As a result, on February 28th, every one of Havana's thirty stations had to go on the air, for the first time, completely rebuilt with two buffer stages and frequency crystal control. At that time there were only three stations throughout the Island actually operating on their assigned frequencies. All others moved about at pleasure.

One station was authorized to use 3500 watts but actually used less than 250. Another with 500 watts never used over 80. Stations with 1000 watts shared time with 250-watters while 80-watters were granted full time. Under the direction of Dr. Mendoza, tests were made at each station and the actual averages published. The stations were then evidently licensed for the actual power they were using. This accounted for the odd figures in the power rating at which we poked a little fun in the April issue. It seems to have been a very sensible procedure, however, and much better than to license at ratings that did not exist.

No new licenses are now being issued. At the present time 58 applications for short-wave broadcasting

licenses are on file.

When we commented rather flip-pantly on the latest reallocation we assumed it was just another wholesale shift but we are very glad that it appears to be the first step in a real governmental control of radio conditions in Cuba. Chaos in that Island not only interferes with proper radio reception in a great portion of the United States but listeners here delight in many of the Cuban programs. We pay tribute, therefore, to the men who are bringing order in the air in Cuba.

About My Equipment

● ● ● By OLIVER AMILE*

MY ARTICLE in the May issue of this magazine brought numerous inquiries as to the type of my antenna that I would like to answer here. I use the single strand type, 100 feet long. It is No. 12 double rubber covered with 40 foot lead-in. I attached an insulator to one end and another just 100 feet away with the other 40 feet to the set. I find East-West gives me the best reception. The aerial should not be cut but should be run in one piece direct to the antenna post. My aerial is now six years old, but due to the rubber covering, it is uncorroded and as fresh as the day it was put up.

While an aerial is a necessary part of radio reception, I think the biggest factor is a good receiver. I can receive Australian, South American and European stations on the speaker without either antenna or ground.

I think the Australians are the most interesting stations I hear. I have submitted 132 reports of reception to them. The best time to listen to these stations is from 5:15 a. m. until 6:30-7:30 and even 8:30 a. m. depending upon atmospheric conditions. On March 8th, 1935, VK3ME went on the air Wednesday,

Thursday, Friday and Saturday from 5 to 7 a. m. VK3LR is on Monday to Saturday from 3:15 to 7:30 a. m. VK2ME, Sundays, from 1 to 3 a. m. and 5:00-11:30 a. m. All times are EST. Australian stations are glad to verify your reception and send a card.

The most discussed station today is VPD of Suva, Fiji Island. This station operates on two watts and is on the air daily except Sundays from 12:30 to 1:30 a. m. EST. (VPJA is not correct; I have seen a card dated Aug. 5, 1929 and have one of my own dated March 22, 1935 and both cards are the same—VPD). Fiji has a population of 170,000 and owns three beam stations, ship to shore.

*56 City Line Ave., Overbrook, Philadelphia, Pa.

A Lone DXer in Sweden

• • • By John S. Bohm,*

I WAS much delighted to have your letter asking for a little article about DXing in Sweden. However I think I am not able to write interesting articles good enough for publication. Besides this, my English is not as good as I would like it because I haven't studied for a very long time. However I will do my best.

DX on the broadcast band is not general in Sweden; in fact I am not acquainted with another Swedish DXer. I have had some articles about my experiences published in the Swedish radio papers but I have never heard from people in this country that were interested in the same hobby. Nearly all of my verifications read: "Yours is the first report received from Sweden or "We have never before heard from your country."

DX is at its best here during the winter months, October to January, that is for reception of North Ameri-



John S. Bohm of Sweden

can stations. South Americans are well received during all times of the year, in summer quite as well as in winter. The US stations best received are KOA, KNX, KPO, KSL, KMOX and WIOD. Those are much better than the big East-Coasters like WTIC and WCAU. KOA and KNX are heard with great clarity every night at 01.00-03.00 our time during November and December. In fact at that time, only these two stations are heard; sometimes there is no trace of the other big US stations. Remember that 01.00-03.00 a. m. our time is 4:00-6:00 p. m. Pacific Standard Time when it may be daylight over half the United States.

Sweden seems to be a good location for signals from the stations located on the Pacific Coast. My list of verified US stations includes quite a few low-powered ones. Here is my list of verified stations in North and

South America, Asia and Africa:
 CKAC, CKCK, CRCK, CP4, KDKA,
 KFDM, KFI, KFXM, KGIR, KIT,
 KMON, KNX, KOA, KOH, KPO, KSL,
 KWG, KWK, KWKH, KXL, KYW,
 LR4, LR5, LR6, LS2, KZRM, KTFI,
 VAS, WAAB, WABC, WAPI, WBAP,
 WBBM, WBCM, WBNX, WBT, WBZ,
 WCAU, WCCO, WCFL, WCSH,
 WFAF, WEBC, WEEI, WENR,
 WFBL, WGN, WGY, WHAM, WHAS,
 WHK, WHP, WIOD, WJAX, WJBW,
 WJDX, WJSV, WJZ, WKAQ,
 WKBW, WLS, WLW, WMAS,
 WMBD, WNAC, WOAI, WOC,
 WOWO, WPG, WROK, WRVA,
 WSAI, WSB, WSM, WTAM, WTIC,
 WTJS, WWVA, XEAW, XEW,
 XENT, XER, YV1BC, Algiers, Cairo.

I belong to two DX Clubs, the International DXers Alliance and the Universal Radio DX Club, being the only Swedish member of either club. My present receivers are a six-tube Telefunken superhet and a five-tube Philips Superinductance. They are both very good DX sets. My home is located in middle Sweden about 300 miles from the Arctic Circle—a mountainous district. I am very interested in collecting postage stamps and will be glad to exchange stamps with American collectors, 73's to all the fellows.

*Box 511, Malung, Sweden.

While many performers have changed their broadcasting technique in the decade in which radio has come of age, Whispering Jack Smith, the soft-voiced baritone, has stuck, with success, to his original crooning methods. Jack started out as a whisperer and the idea hasn't got into the discard, not by any means! He's still a favorite with network listeners the country over and has proved to his own satisfaction that whispering pays. Smith has become famous as a singer, despite the fact that he started his career as a pianist.

The New Zealand DX Club

THOUGH New Zealand is only a tiny country, tucked away on its own in the South Pacific Ocean, it can boast of possessing one of the finest DX clubs in the world—the New Zealand DX Club. Inaugurated in 1930 by the "Radio Record," New Zealand's radio programme weekly, the Club has grown at an amazing rate until it now has a membership of over 1550, including no less than 73 overseas members in all parts of the world.

There are 16 branches of the Club established throughout the country, each with its own secretary and committee to arrange regular meetings, organize various DX competitions, and generally look after the interests of the Club. Every month each branch secretary forwards a report of his branch's activities to headquarters for publication in the Club's official organ, which is now the "N. Z. Radio Times." This magazine, which features technical and practical radio articles as well as DX news, is published monthly.

In all, there must be over thirty trophies, ranging from medals to silver cups, offered for competition among dxers belonging to the various branches, so there is no lack of interest at the monthly meetings. Every dxer's ambition, however, right from the time he logs his first DX station, is to win the New Zealand DX Challenge Cup. This trophy was donated to the Club by headquarters three years ago, and is competed for every six months. The dxer entering the largest log of verified overseas stations operating on the broadcast band has his name inscribed on the Cup, is awarded an engraved silver miniature, and is given the title of DX champion of New Zealand for the succeeding six months.

The trophy has been won seven

times now, and the following winning totals show the intense interest that is taken in the Competition. The Cup was won first with a log of 89 stations. Succeeding totals were:—142, 227, 291, 366, 417, 500, 546, 602. If not a world's record, the last total must come very close to being one, especially when it is remembered that New Zealand is 1200 miles from the nearest continent and 6000 miles from America. One remarkable fact about this contest is the large number of European verifications that are entered. The last winner had no less than 28, and New Zealand is 13,000 miles from Europe.

Life membership for the Club costs only 2/6d, which includes a membership certificate and a neatly designed badge, brightly finished in the Club colours of red, blue and gold, while the annual subscription to the Club's magazine is 10/- per year, post free. DXers in any part of the world are cordially invited to join. Any further particulars can be obtained by writing the Secretary, Box 1680, Wellington New Zealand.

Chatting About S. W.

(Continued from page 21)

records only, they stood by trying to contact W2KO, Flushing, L. I., on a two-way conversation."

"I have a FB veri from VPD, Suva, Fijis, of which I am very proud as they advise me that my report is one of the most complete they have ever received from the US. I am using a Grunow 1151 with Perfect Phone Adapter for weak signals. DX all continents and 35 countries." Thus reads a postcard from G. T. Magee, 2809 South 13th Ave., Birmingham, Ala.

Last Minute News Flashes

The Budapest, Hungary station has advanced its broadcasting schedule an hour. HAS3, 15370 kcs. transmits on Sundays only from 9-10 am., EST. and HAT4, 9125 kcs. works on Sundays only from 6-7 pm, EST. These

stations have an attractive new QSL card.

HCJB, "La Voz de Los Andes," Quito, Ecuador has changed over to its summer frequency of 8214 kcs. Reports on reception of this station are especially desired by Mr. Clarence Jones, whose address is Casilla 691, Quito. HCJB is on the air daily from 7:15 to 9:15 pm, and sometimes later.

A new Ecuadorian station being heard daily between 8 and 10 pm is HC2AT at Quayaquil. Their address is Casilla 872, and the frequency, 8400 kcs.

We are pleased we can advise readers that XEBT now verifies correct reports with a very attractive card printed in red and lavender.

Mr. J. G. Leitch, Technical Supervisor of WCAU-W3XAU tells us that W3XAU will be heard an hour later than the time given in our list of 100 Best, due to Eastern Daylight Saving Time taking effect.

The DX Summaries

(Continued from page 14)

Kcs. will increase from 500 to 10,000 watts by November.

"I am coming to the close of another DX season with a log of 237," observes Richard W. Fales, Intervale Ave., Roslyn, N. Y. "I am very proud of KBPS, KFAC, HHK, PP and 10-AK. I would be glad to correspond and will answer all letters."

Nelson D. Harper, 73 Chestnut Street, Geneva, Ohio, has received a very attractive "diploma" from LR5, Buenos Aires, covering his reception of the NNRC special at 4:00 am. January 8th.

From Billie Prater, Wilder, Tenn.: "I have received 438 heb. stations with 108 veries. My radio is an old Atwater Kent 60C (about 1927). My best are KPCB, KGCX, XFX, KGFJ, CMBC, CMBX, WELL, KVI, KGEX and KGFL."

BACK ISSUES AVAILABLE

We have the following back issues of RADEX which we can supply at the price of 25c per copy, five for \$1.00, or ten or more at 17½c.

- No. 28 April, 1929
 No. 38 November, 1929
 No. 34 December, 1929
 No. 41 September, 1930
 Getting Rid of Interference
 Those Bothersome Noises
 No. 42 October, 1930
 High Frequency Interference
 No. 43 November, 1930
 Multiple Speakers
 No. 44 December, 1930
 Adding a Tone Control
 Wave Trap and Selectivity
 No. 45 January, 1931
 No. 46 February, 1931
 Reducing the Effect of Static
 Grounds and Aerials
 No. 47 March, 1931
 Set Operation and Adjustment
 Neutralizing Oscillation
 No. 48 April, 1931
 Fighting Static
 Faults of Superhetrodynes
 No. 49 May, 1931
 No. 50 June, 1931
 No. 51 September, 1931
 Can Static be Eliminated?
 Slogans of the Stations
 No. 52 October, 1931
 No. 53 November, 1931
 Does Radio Offer Life Work?
 No. 54 December, 1931
 No. 55 January, 1932
 Buying and Servicing a New Set
 No. 56 February, 1932
 Tuning Thrills Outside the B. C. Band
 No. 57 March, 1932
 No. 58 April, 1932
 Getting Rid of Radio Noises
 Aerial and Ground Experiments
 No. 59 May, 1932
 Hum and Its Remedy
 A Long-Wave Converter
 No. 60 June, 1932
 Opinions of Experts on Aerials and Grounds
 No. 61 September, 1932
 Let's Listen to All the Waves
 No. 62 October, 1932
 Verifications are the Heart of DX
 No. 63 November, 1932
 Modern Battery Receivers D. C.
 No. 64 December, 1932
 The Last Word in Battery Sets A. C.
 Using New Tubes in Place of Old
 No. 65 January, 1933
 Just What are Harmonics?
 No. 66 February, 1933
 Using Phones
 Short Wave Antennas
 No. 67 March, 1933
 Building Radio into the Home
 No. 68 April, 1933
 Building a Line Filter
 No. 69 May, 1933
 Building a S. W. Converter
 Making your own Noise Filter Part 2
 No. 70 June, 1933
 Building a S. W. Converter Part 2
 No. 71 September, 1933
 The Midget Receivers
 No. 72 October, 1933
 Importance of Good Ground
 Static-Reducing Antennas
 Beginner's Story, Part 1
 No. 73 November, 1933
 Cleaning up the Old Set
 Beginner's Story, Part 2
 No. 74 December, 1933
 Gypping the Radio Buyer
 Beginner's Story, Part 3
 No. 75 January, 1934
 Proper Reports Bring Verifications
 Using Microphones and Phono Pickups
 Beginner's Story, Part 4
 No. 76 February, 1934
 Using Microphones and Pickups, Part 2
 The Long Wave Stations of the World
 Beginner's Story, Part 5
 No. 77 March, 1934
 Aerials and Better Reception
 Neutralizing and Aligning
 Beginner's Story, Part 6
 No. 78 April, 1934
 Neutralizing and Aligning, Part 2
 Beginner's Story, Part 7
 No. 79 May, 1934
 Neutralizing and Aligning, Part 3
 How to Tune the Short Waves
 Beginner's Story, Part 8
 No. 80 June, 1934
 When Signals Cut Off and On
 Beginner's Story, Part 9
 No. 81 September, 1934
 Beginner's Story, Part 10
 No. 82 October, 1934
 Is Your Antenna 100%? Part I
 As I See the Short Waves
 Beginner's Story, Part 11
 No. 83 November, 1934
 Is Your Antenna 100%? Part 2
 Tuning a S. W. Converter
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 Analyzing the Midwest Receiver
 Beginner's Story, Part 13
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 Analyzing the McMurdo Silver Set
 The Beginner's Story, Part 14
 The Short Waves are Thrill Bands
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 Analyzing the Skyrider
 S. W. for New All-Wave Owners
 Beginner's Story, Part 15
 No. 87 March, 1935
 Which is the Best Antenna?
 Analyzing the "Magic Brain"
 No. 88 April, 1935
 Tracking Radio Noise Down
 Analyzing the Hammarlund Comet-Pro
 Symbols Used in Short Waves
 The Radex Press Inc., 705 Hanna Bldg.,
 Cleveland, Ohio

How Many Tubes Make a Radio Set?

• • • By B. FRANCIS DASHIELL

PERHAPS most of us have wished to build a radio set having a great array of tubes and unlimited amplification. But when we realized that tube noises and static also would be amplified it appeared that a long impressive row of tubes might not be so good after all. Finally the "Midwest" set with its sixteen tubes appeared, and we thought *that* certainly was a lot of tubes. Then came an eighteen-tube "Imperial Radio Crafters" receiver, and also a Zenith "Stratosphere" set with twenty-five tubes!

But this article is about a new set that has nineteen tubes. It really is an interesting circuit, and the Howard "Grand" receiver is not as complicated at it might sound. Its makers feel that nineteen tubes are needed to do all the things they have decided are required of an ultra-modern radio set.

An All-Wave Set

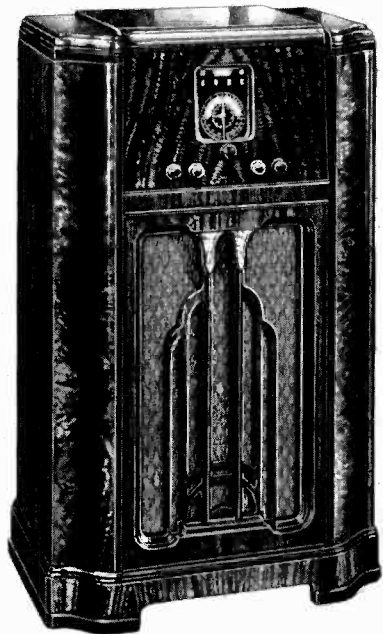
The Howard "Grand" covers the entire radio broadcasting band. Its top band takes in European and American broadcasts between 390 and 150 kilocycles. The second band covers the standard broadcasts between 1,600 and 540 kilocycles. A third band embraces the amateur, police and aviation signals between 5,500 and 1,600 kilocycles. And the fourth and last band covers foreign and domestic short-wave broadcasts from 18,000 to 5,500 kilocycles.

Selectivity is remarkable, and it makes possible the easy separation of all short-wave stations. A band-spread unit actually spreads any station over a full half-inch of the dial. The signal-to-noise ratio has been increased to a point where the only noise heard is that caused by internal thermal activity within the tubes.

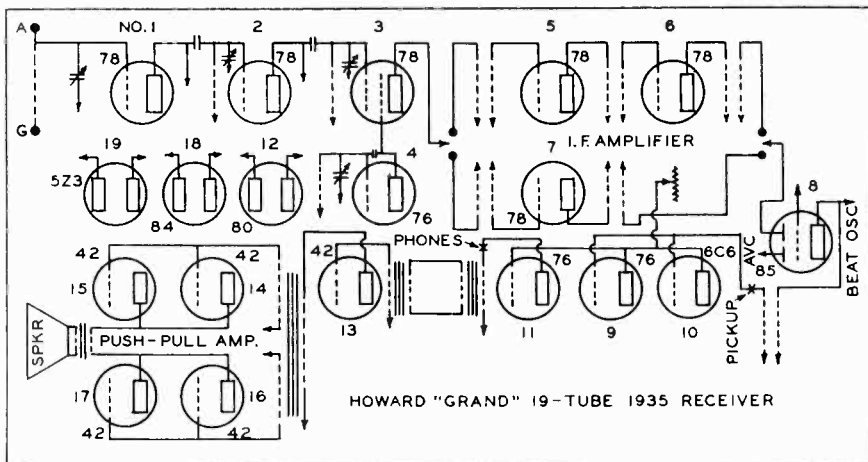
Three Separate Units

Automatic volume control holds up weak, fading, distant signals, and it has been designed so as to have a slight delay in its action. Its operation on the short waves is just as efficient as on the broadcast band. A large Jensen speaker provides high tone fidelity from the lowest notes to those having 7,500 cycles. The output into the speaker is 20 watts of undistorted power. A plug-in jack is provided for those who wish to use headphones and cut out the loud speaker, and it is also possible to plug in a phonograph pickup device.

This circuit is composed of three separate units. There is a 12-tube tuner; a 5-tube power amplifier; and



The Howard "Grand" Receiver



a 2-tube power-pack rectifier and filter. Each chassis is made of cadmium-plated steel. A rectangular dial on the tuner chassis is fully lighted, and the four wave bands are indicated by four lights so the operator will always know the wave band that is being used.

The Nineteen Tubes

Let us look at the nineteen tubes in this circuit, as shown in our diagram. No. 1 is a type 78 short-wave r.f. amplifier, and is used only on the short-wave bands. No. 2 is a 78 straight r. f. amplifier that is used on all the bands. On the short waves these tubes provide a two-stage pre-amplifier; and a one-stage on the broadcast band. No. 3 is a type 78 first detector, and No. 4 is a type 76 oscillator tube. Band changing switches shift the three sets of r.f. coils and the one set of oscillator coils to either of the four wave bands. The four tubes complete the radio-frequency element of the receiver.

The output of the first detector may be fed into either of two separate intermediate-frequency amplifier systems. This is a novel departure in radio design. The channel shown at the top of the diagram utilizes two type 78 tubes—Nos. 5 and 6. This

provides two i.f. amplifying stages. The second i.f. channel, just below the first channel, consists of one i.f. tube, a type 78, indicated by No. 7. The first system controls the selectivity of the circuit and gives high-gain amplification for short-wave and weak, distant stations; the second system is a low-gain amplifier for high-fidelity reception from nearby broadcasting stations.

Bass-Note Amplification

The output of either i.f. system is fed into the type 85 second detector or mixer tube—No. 8. The diode plates of this tube are used for both detection and automatic volume control. And the triode section becomes a beat oscillator for receiving all unmodulated code signals and heterodyning very weak signals so they can be identified.

Following the second detector is a type 76 tube—No. 9. It is the first audio-frequency amplifier. Then a type 6C6 tube, No. 10, operates parallel to No. 9, as a bass-note amplifier. A tone-control switch regulates this tube and provides low-frequency amplification when desired. The output of this combined stage is fed to the second a.f. tube, a type 76—No. 11. A volume control is

placed at this point. These tubes complete the tuner chassis, with the exception of a type 80 full-wave rectifier (No. 12) that furnishes power for the other eleven tubes.

The Power Amplifier

The power amplifier has five type 42 tubes—Nos. 13, 14, 15, 16 and 17. One—No. 13, is used as a driver, and the remaining four operate in a parallel push-pull system. These tubes operate as a Class A Prime amplifier. A potentiometer is employed in this circuit as a hum balancer, and it must be adjusted by ear to a point where no hum can be heard.

The separate power unit utilizes a type 5Z3 and type 6Z4 or 84 rectifier. These are Nos. 18 and 19. This unit supplies the power required for the speaker fields and the tubes in the power amplifier. The 5Z3 furnishes high voltage and has its own filter system, while type 84 also has a filter system and provides biasing voltage for the grids of the type 42 power tubes.

THE MONTH'S CHANGES

NEW

850	TLEP	San Jose, C. R.
930	TIRH	San Jose, C. R.
1000	TIGH	San Jose, C. R.
1050	TIFA	San Jose, C. R.
1100	TIRC	San Jose, C. R.
1200		High Point, N. C.
1310		Lafayette, La.
1370	KAST	Astoria, Ore.
1441	TIFS	Cartago, C. R.

DELETE

550	TISO	San Jose, C. R.
714	TIFB	San Jose, C. R.
800	TIGP	San Jose, C. R.
835	TIVL	San Jose, C. R.
911	TICR	San Jose, C. R.
1100	TIRCA	San Jose, C. R.
1210	KWEV	Hilo, Hawaii
1310	KFFM	Greenville, Texas

FREQUENCIES

706	RDN	San Salvador, E. S., from 680.
890	WILL	Urbana, Ill., from 580
1210	WCBS	Springfield, Ill., from 1420
1430	KSO	Des Moines, Iowa, from 1320

POWER

560	KWTO	Springfield, Mo., 1000 to 5000
890	WMMN	Fairmont, W. Va., 250 to 500
1200	KOOS	Marshfield, Ore., 100 to 250

CALLS

1210	KVSO	Ardoore, Okla., from KIUO
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The Frequency Allocation

WE PRESENT herewith the second diagram showing the division of the radio spectrum. The first appeared in our May issue and others will appear in later editions.

For this excellent picture of the radio bands, we are indebted to Radio Retailing, the publication of the dealer and serviceman.

For key to symbols see May issue.

A New All-Wave Tuning Coupler



FOR the approach of summer with its increased static, the Muter Company, 1255 South Michigan Ave., Chicago, presents a new all-wave tuning coupler to meet the demand for an efficient yet inexpensive unit to match up any radio set with a doublet antenna system.

With this coupler it is not necessary to purchase a complete doublet antenna. Instructions accompanying the device permit the home-construction of an inexpensive doublet using insulators and wire such as may be found in any radio store. The Muter coupler is said to be equally efficient on both the sw. bands and the bcb. Changeover from sw. to bc. is accomplished instantly by means of a simple switching arrangement.

368 - 515		549 - 1548		1550 - 2156	
Gov	to	Gov	549	BE	1550
368	(M)	BR	550	1552	to
369	to	550	to	1568	(M)
374	Gov	BC	630	BE	1570
375	AV	640	to	1572	to
376	to	680	to	1576	1580
390	to	Canada	690	Gov	to
392	to	BC	700	1588	to
392	to	720	to	1592	to
392	to	Canada	730	1600	1600
392	to	740	to	IGE	1602
392	to	740	to	BP	1604
392	to	770	to	PS BP	1608
398	to	770	to	PS EX	1612
400	to	BR	780	EX	1616
402	to	790	to	BP	1620
404	to	830	to	PS BP	1624
406	to	830	to	PS EX	1628
408	to	Canada	840	PS FI	1632
410	to	850	to	P A	1636
412	to	870	to	S V	1640
414	to	880	to	PS BP	1644
416	to	900	to	BP	1648
418	to	Canada	910	GE	1652
422	to	920	to	P P	1656
424	to	950	to	M S	1660
425	to	Canada	960	P	1664
426	to	970	to	S	1668
432	to	1000	to	PM PS	1672
434	to	1010	to	PS GE	1676
436	to	1020	to	PS	1680
440	to	Canada	1030	to	1696
442	to	1040	to	PS GE	1700
444	to	1110	to	1704	to
446	to	BR	1120	1712	to
448	to	1130	to	1716	to
450	to	1190	to	Amateur	to
452	to	1200	to	2000	to
454	to	L	1210	TV Gov	2004
456	to	1220	to	2008	to
457	to	BR	1300	to	2016
458	to	1310	to	TV BP	2020
460	to	1320	to	2024	to
462	to	1360	to	2048	to
464	to	1370	to	2052	to
466	to	1380	to	2056	to
468	to	1410	to	TV BP	2060
470	to	1420	to	2064	to
472	to	1430	to	2084	to
474	to	1490	to	2088	to
476	to	1500	to	2092	to
478	to	1504	to	2096	to
480	to	1530	to	2100	to
482	to	1532	to	2104	to
484	to	1548	to	2108	to
486	to	BE	1530	SH	to
498	to	1532	to	2144	to
500	to	1532	to	Gov BP	2148
502	to	1548	to	BP	2152
514	to	SH	2156	SH	2156
515	to				

ANALYZING Some Radio Troubles

••• By THE TECHNICAL EDITOR

I HAVE a Clarion 5-tube model 510 receiver. Once in a while the volume dies out completely, and the only way I can make the sound come back is to tap the grid cap on the 58 tube. After a while it again quits. I have had it to a shop and it only worked two days before it started its old tricks again. Can you help me?

It appears to us that some high-value resistor, such as is used in the control-grid circuits, has become defective. At these times it intermittently opens or short circuits. Quite often the coupling condensers in the audio system will be found responsible for trouble such as you mention. The fact that you can restore the action temporarily simply by touching the grid cap with a moistened finger, which improves conductivity, indicates a defective coupling condenser or grid resistor.

An ordinary test and sometimes a precision test, under operating conditions, seldom will disclose such trouble. This very likely accounts for the fact that the shop could not remedy the trouble. We recommend in such cases the replacement of the several grid resistors and coupling condensers of the audio system with new units having the same electrical values but slightly higher power ratings. Although you may renew one or more perfectly good units, the cost is slight and the trouble in this way can be reached without hours of tedious testing.

Image Frequencies

I have a Midwest five-tube set. It tunes to the usual broadcast band and also the 19 to 54-meter wave band. A repeating of signals is found on almost the whole 40-meter amateur band, as well as on all short-wave stations.

I get a station on its regular point on the dial and then it reappears at a spot about 10 points away, and just as loud. This applies only on the short-wave band. Can you explain why this is?

These image frequencies are due to combinations of the incoming carrier frequency with the oscillator frequency which produce an intermediate frequency to which the i. f. amplifier happens to be tuned. For example, if you are receiving a carrier wave of 10,000 kilocycles or 10 megacycles, the oscillator in your receiver will be producing a continuous wave of 10,465 kilocycles when we assume the i. f. amplifier to be peaked at 465 kilocycles—a standard. Now, if the receiver is tuned to a point on the dial corresponding to a signal of 9,070 kilocycles, the oscillator will be producing this frequency *plus* the i. f., which is 465 kilocycles, totaling 9,535 kilocycles. This differs with our original 10,000 kilocycle station wave by 465 kilocycles, and since the signal is not weakened by the previous tuning units, it reaches the first detector with sufficient energy to reproduce a signal that passes through the 465 kilocycle

Use Headphones for Short-Wave!

Sensitive signals from "half way" round the world come in best on headphones. TRIMM Featherweights are the phones the experts use. Ask your dealer or write the factory.



TRIMM

Radio Mfg. Co.
Dept. BX6
1528 Armitage
Avenue
Chicago, U. S. A.

channel of the i.f. amplifier. Dozens of such combinations can be calculated, and actual stations will be found broadcasting on these predetermined frequencies.

This condition is hard to remedy in certain receivers that are not fitted with preselector circuits. The design of the r. f. system must be revised. This, of course, is expensive and impracticable. Ordinarily radio engineers look upon the reception of image frequencies as something beyond the scope of small and popular makes of radio sets.

Intermittent Reception

I have a 9-tube Rogers-Magestic, 1931 model. When listening to a station, either local or distant, it will suddenly reduce volume to a mere whisper behind a low buzz. This will continue for an indefinite time and just as suddenly bang back to normal, the whole process repeating at irregular intervals.

Intermittent reception is by far the most baffling trouble to be experienced by servicemen. No definite statement can be made regarding the exact source of such trouble as it is generally necessary to make extensive tests of the entire receiver both as to the external wiring such as antenna, power cord, etc.; and surface inspection of the receiver, including shielding as well as the various parts of the r.f. system and the power supply.

Any one of a great many high-value resistors and by-pass condensers may short-circuit or break open and thus account for this sort of trouble. The problem becomes increasingly difficult as the serviceman must wait sometimes many hours before this condition will occur. It does no good to test each part separately for when the set is operating normally all parts show perfect condition. A careful check of the parts mentioned or complete replacement will correct your trouble.

Neutralizing Stewart-Warner 901

I own a model 901 Stewart-Warner receiver. I think it needs realignment and would like your advice how to go about this operation: also, how can I add automatic volume control; and what tube changes do you advise. What is a good aerial system to use with this set?

This receiver is a tuned radio-frequency circuit using three r.f. stages ahead of the detector. The tubes are triodes and, therefore, neutralization is necessary. There are three neutralizing condensers associated with the grid circuits of the r.f. tubes which must be adjusted in accordance with standard practice.

Turn on the receiver and remove the first r.f. tube. Place a small section of a soft-drink straw over one of the heater prongs and replace the tub in its socket again. Tune in a low powered station somewhere above 1,000 kcs., and reduce the volume until the station is just audible. Now, adjust the first neutralizing condenser (that is the one having one terminal attached to the grid lead of the first r.f. tube) for minimum signal response. Increase the volume and again find the minimum or null point in the range of the neutralizing condenser. Repeat this procedure for the other two r.f. tubes one at a time in their proper order, and full neutralization will be obtained.

Then, tune the set to 1,400 kcs., and adjust each trimmer condenser for maximum signal, starting from the detector in this case, and repeat for all tubes at 1,000 and 600 kcs. This gives proper alignment of the r.f. stages.

This circuit is not adapted to automatic volume control. The tubes are of the triode type and not of the vario-mu type, such as would be needed for a.v.c. If you wish to use newer types of tubes, such as the 35, 51, or 58 types, you will find it necessary to replace the entire r.f. cir-

cuit. This in turn would require certain fundamental changes in the power supply. The entire job would be expensive, complicated, and not justified by the results obtained.

Any of the standard shielded-lead and doublet antenna systems will be suitable for the elimination of man-made static in this set. Previous issues of RADEX have covered the subject very thoroughly.

Philco Transitone

I should like to use newer tubes in my Philco model 5 Transitone auto receiver. Is the chicken-wire antenna provided with most cars the best antenna to use with this set? My set at times reproduces noises somewhat similar to the code signals. They are very loud and cover the entire broadcast band. How can you account for this?

There are no later type tubes than those used in the model 5 Transitone auto receiver made by Philco. No more highly perfected equivalents or tubes of later design for these purposes are now on the market. For this reason we cannot make the recommendations you desire.

The so-called chicken-wire antenna makes about the best antenna that it is possible to have without spoiling the appearance of the car by erecting antenna wires over the top and to the ends.

The noise to which you refer may often be traced to an intermittent howl or oscillation due usually to a faulty coupling condenser in the audio stage. Reduced emission of one of the tubes in the audio system will also have this effect. It is advisable to check both of these conditions.

Bad Filter Condenser

I have a Sparton model 931 set that has irregular volume. Sometimes the signals are loud, then weak, and frequently stop abruptly. I am using a Tobe filterizer in the antenna, and the trouble occurs when this particular antenna is in use. It does not occur when

the old, straight antenna is connected. The volume comes back if I snap a switch somewhere in the house. I think the Filterizer antenna is erected as it should be.

We feel that your trouble is caused by some form of severe leakage in the filterizer, such as a condenser. Any electrical impact produced by one of the three things mentioned in your letter will temporarily heal the condenser only to allow it to break down again when conditions permit. The cure, of course, is the replacement of the defective condenser or entire antenna or receiver filterizer unit. Or the units can be returned to the makers for examination and repair. You will find the Tobe Deutschmann Corporation reliable and willing in this respect.

Crosley Voltages

Can you help me out with my Crosley Super Buddy-Boy model 122 receiver? I have found that the voltages on the plates are only around 20 while the voltages on the screens are about 100. I cannot find out anything about this set and what its various voltages should be.

The Crosley model 122 is a 7-tube superheterodyne set. The a.c. voltages for the tube filaments, with the exception of the rectifier should vary from 2.3 to 2.5. That for the rectifier is 4.6 to 5.0 volts. The d.c. plate voltages of the first r.f. and the i.f. amplifiers should be 170 to 200 volts; for the oscillator 28 to 38 volts; for the first and second detectors, 185 to 215 volts; for the output from the power tube, 260 to 300 volts; and the rectifier a.c. voltage to each plate is 280 to 320.

The screen voltages for the first r.f. and i.f. amplifiers should be from 45 to 55; for the first and second detectors, 60 to 80 volts; for the oscillator, 80 to 100 volts; and for the output power tube, 260 to 300 volts.

The control-grid biasing voltages should be, for the r.f. and i.f. amplifiers, 1.5 to 2.5 volts; the first de-

lector, 6.0 to 8.0 volts; for the second detector, 8.0 to 10.0 volts; and for the power tube, 18.0 to 22.0 volts.

These voltage limits are to be measured with speaker connected, volume control on full, and line voltage proper at about 117 volts. Measure plate and screen voltages with a high-resistance d.c. voltmeter.

Lightning Arrester On RCA

My RCA all-wave antenna has no provision for a lightning arrester, although I have been told that one is used with this system. Where is the arrester connected and how can I get one?

The RCA antenna all-wave system has provision for lightning arresters, but this device does not come as regular equipment. It is purchased extra. There are two lightning arresters which are fastened on the outside of the building at a point where the antenna lead-in is attached. The end of the transmission line connects to the arresters and then continues indoors through an insulating tube to the receiver. An outside ground wire then runs to the arresters. If lightning should hit, or severe induction occur, the arresters carry off the discharge into the earth without damage to the receiver.

Shadow Tuning

If possible, I should like to add a shadow or visual tuning device to my old Graybar model 770 receiver. Please tell me where I can get the device and how to connect it in the set.

Shadow tuning calls for a certain device used on some receivers. It is a tiny vane that moves so as to widen or narrow a slit through which light passes. The width of the shadow indicates that the circuit is tuned to resonance. Also, a meter with indicating hand that swings to the extreme end to indicate complete tuning, is used for the purpose. These devices may be procured from most radio supply houses, such as the Radolek Co., and the Allied Radio

Co. of Chicago, or the Wholesale Radio Co., of New York.

Connect the meter or device in series with the wire leading from the bottom of the coil connected in the plate circuit of the first 24 tube in the radio-frequency amplifying stage of the Graybar model 770 receiver. Simply cut this wire and insert the resonance meter.

Summer Noises

WITH the coming of warm weather, the increased use of electric fans and refrigerators will bring with it new problems in the way of radio interference. Although the radio and electrical industries are making a concerted drive against interference-creating devices and many municipalities have passed anti-noise ordinances, there are still countless numbers of sparking motors to contend with.

The most effective attack on the noise problem is to isolate the offending machine and to equip it with a simple filter consisting merely of two fixed condensers in series, with the outer connections across the motor brushes and the center connection grounded to the motor frame. However, in the majority of cases encountered by radio set owners and service men, the source of the interference cannot be readily located.

The only possible cure in cases of this kind is the use of an interference filter consisting of both by-pass condensers and radio-frequency chokes, according to William Bailey, of the Cornell-Dubilier Corporation, who has had considerable experience with the noise problem. This filter is connected to the line cord of the receiver, and in nine cases out of ten it is very effective because it prevents the noise from entering the receiver through the power line, which is its usual carrier.

Of course, no line filter will eliminate or even reduce noise that is picked up by the aerial or its lead-in.

How to Tune-in the Europeans

• • • By D. C. STENT*

IT IS far more difficult for America to get English stations than it is for England and Europe to get American stations, for the latter come in best after the European stations have closed down for the night, so we have no interference from nearby stations. On the other hand the European stations, which are so dear to the American DX'er close down before the American local stations, and so all the work of the American DX fan must be done with the locals working or in the early hours of the morning, as far as b.c.b. reception is concerned.

The best thing to do then, in that case, is to investigate all the heterodyne whistles. Much can be gained by finding out the source of heterodyne whistles on a station the location of which is already known. Very often, of course, they will be caused by a station on the same continent as the local, but quite often, as a background to the strong signal a feeble "Foreigner" emanating from Europe can be heard. Thus the DX'er's motto should be "Suspect All Heterodynes."

An easier and more reliable way of getting the Europeans, however, is to wait until the early-morning European stations come on the air. The following stations come on the

air at 00.30 EDST: Berlin, Breslau, Hamburg, Moscow, and sometimes a few other German stations. At 01.00 the following stations commence transmitting: Cologne, Deutschlandsender, Frankfurt, Königsberg, Leipzig, Munich, and Stuttgart. Prague commences at 01.45, and Poste Parisien, a station well heard in the USA, starts transmitting at 04.00 EDST, as do Radio Normandie and many other European stations. By 05.00 EDST nearly all the European stations are transmitting, but in USA they will be fading out, as a great part of the journey is in daylight. The best time to listen, then, is between midnight and five AM, EDST.

A few hints as to identification, etc., might be useful.

All the German stations announce as Reichsender Leipzig, Reichsender Stuttgart, etc., but it should be borne in mind that Munich is pronounced in German as München.

Radio Paris announces: "Ici le Poste Nationale, Radio Paris."

Prague announces: "Allo, Praha, Polski Radio."

The Northern group of Italian stations announce as: Abbiamo trasmesso, Radio Torino, (Turin) Milano (Milan) etc.

The British stations are fairly easy to identify, on account of the accent, intonation, etc., but it should be remembered that several alternative programmes are transmitted, and the location of the station is not announced. Thus the announcer at London Regional says: "This is the Regional Programme", and the announcer at the Midland Regional says: "This is the Midland Programme" Often the station in one "region" relays the programme of another region, thus we have the Midland Regional station transmit-

A line filter is the easiest thing to try first, as it can be plugged into service in a few seconds. If the noise continues, it is not reaching the set through the electric wires, and the erection of an antenna of the noise-reducing type should be considered. Radio dealers sell line filters on a trial basis, as they know conditions vary a great deal. A filter may be 100 per cent effective in one house and not effective at all in another.

ting the Studio Orchestra of the Scottish Regional station. Therefore the Midland Regional announcer will say: "The next part of the Midland programme will be announced from Scotland," and almost immediately will be heard: "This is the Regional programme from Scotland. We have now a programme of light music by the Scottish Studio Orchestra." All this shows that it is impossible to be too careful in identifying the British stations when the programmes and announcements are so interchanged.

It has been wrongly understood in the past that certain stations in Europe have call-letters. This is a fallacy. No. B.C.B. stations in Europe except CTIGL announces any call letters. The call of Poste Parisien is Poste Parisien, and not PP. Radio Normandie is not RN, and London Regional is not LR. The Italian stations have call-letters, such as Rome, IIRO, Triestre, IITR, etc., *but these are never used.*

* "Esperance". High Road, Whetstone, London, N. 20, England.

Singletons and Eliminators

THE listeners listed below hold verifications from the stations given which so far no other reader of this magazine has been able to duplicate. Those at the head of the list have held their positions for several months. Is it possible that they are the only persons in North America who hold verifications from the stations claimed? If you can eliminate any of them by producing a similar verification, notify us and your name will be entered as an Eliminator. Do not send verifications but be sure you can produce them if called upon.

SINGLETONS

- ZTD Durban, South Africa. Claimed by C. E. Lowe, Merced, Calif.
 ZZP, Wairoa, New Zealand. Claimed by Charles Hesterman, Saskatoon, Sask.

- 2YC, Wellington, N. Z. Claimed by Harold Alexson, Vancouver, B. C.
 JOBG, Maebashi, Japan. Claimed by R. W. Schofield, Missoula, Mont.
 VUG, Delhi, India. Claimed by Robert Slosson, Milwaukee, Wis.
 CX18, Montevideo, Uruguay. Claimed by Marvin D. Dixon, Shelby, N. C.
 LR8, Buenos Aires, Argentina. Claimed by Murray D. Bryce, Royal Oak, B. C.
 2XN, Lisimore, Australia. Claimed by Roy N. Licari, Aikenwood, N. J.
 KZ1B, Manila, P. I. Claimed by James Blase, Bronx, N. Y.
 The following are submitted as singletons by John A. Shanks, Russellville, Tenn.: 4ZW, 4BK, 5AD, and 7ZL.
 2GN, Goulburn, Aust. Claimed by Guy B. Welsh, Reynoldsville, Pa.
 The following are claimed by Kenneth Page, Silver Creek, N. Y.: VP-N, VCX.
 4TO, Townsville, Aust., by Joel Armantrout, Fitzgerald, Ga.
 The following are claimed by Warren C. Reichardt, Reading, Mass.: Radio Vitis, Gleiwitz, Halmstad, Falun, Craeow, EAJ-15, Kosice.
 11PA, Palermo, Italy, claimed by Robert Osborne, Stirlarton, N. S.
 Brussels, Belgium, claimed by Don Reynolds, Newburgh, N. Y.
 4AY, Ayr, Australia, by Wm. H. Ansell, Regina, Sask.
 3KZ, Melbourne, Aust., by Evan B. Roberts, Danvers, Mass.
 3TR, Sale; 2WL, Woolongong. 4RO Rockhampton, and Riga, Latvia, by Chas. H. Hesterman, Saskatoon, Sask.

ELIMINATORS

- 2CA claimed by W. Pollard, eliminated by Warren C. Reichardt, Reading, Mass.
 2HD and 2GO claimed by Kenneth Page, eliminated by Warren C. Reichardt and John A. Shanks, Russellville, Tenn.
 4RK claimed by Joel Armantrout, eliminated by Whitney Smith, Pontiac, Mich.
 JQAK, Dairen, Mich., claimed by Chas. Hesterman, eliminated by Clyde E. Lowe, Merced, Calif.
 OER3, Vienna, claimed by Lincoln A. Wood, eliminated by Chas. Hesterman, Saskatoon, Sask.

Previously Eliminated

- 2KY, 3KZ, SBH, SBA, HAL, 4BC, Trieste, JOLK, 3BO and 6PH.
 Langenburg, OKB, 5CL, 3AR, 2FC, 2KG, 3LO, 7UV, Copenhagen CTIGL, 3HA, 2BI, 2UE, 5CK.

Advise the Editor

COMBINING the *DX Log of the World* with RADEX, beginning with the September issue, will require a reallocation of space among the various features of this magazine.

The data as shown in pages 45 to 80 inclusive of this issue, will be continued and expanded. But we would like to know the wishes of our readers as to the other features.

On page 79 we print a blank where by you can indicate those features which you would like to see continued and improved. Will you not fill out this blank and mail it to the Editor?

WHAT'S ON THE AIR TONIGHT

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

COLUMBIA.....(C)	
Call	Dial

NATIONAL, Red (R)	
Call	Dial

NATIONAL, Blue (B)	
Call	Dial

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

RADEX is the only publication listing stations in alphabetical order for your convenience. While these programs are correct at the time of going to press, changes are made from time to time.

MONDAY

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

C — Buck Rogers; 25th Century
CKLW WAAB WABC WBCN WCAO
WCAU WFBL WHEC WHK WJAS
WJSV WKBW WKRC WOKO

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

B — Lowell Thomas
CFCF CRCT KDKA WBAL WBZ
WBZA WFLA WGAR WHAM WIOD
WJAX WJR WJZ WLW WMAL
WRVA WSYR

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

B — Amos 'n' Andy
CRCT KDKA WBAL WRZ WBZA
WFLA WIOD WJZ WMAL WPTT
WRVA

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

B — Tony and Gus
KDKA WBAL WBZ WBZA WCKY
WENR WFIL WFLA WHAM WIOD
WIS WJAX WJZ WMAL WPTT
WSOC WSYR WTAR WWNC

R — Stories of Black Chamber
KYW WBNB WCAE WCSH WFAF
WEEI WGY WJAR WMAQ WRC
WSAI WTAG WTAM WVIC

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

C — The O'Neills
WABC WCAO WCAU WDRC WFBL
WGR WHEC WHP WJAS WJSV
WMAS WOKO WORC WWVA

C — Buck Rogers; 25th Century
KMBC KMOX KRLL KTRH KTSA
WBBM WBT WCCO WDSU WFBM
WGST WHAS WMBG

B — Red Davis; Drama
KDKA KOIL KPRC KSO KSTP
KTBS KWCR KWK WAVE WBAL
WBZ WBZA WEBC WENR WFLA
WHAM WIBA WIOD WIS WJAX
WJDX WJZ WKY WMAL WMC
WPTT WREN WRVA WSB WSM
WSMB WSYR WTAR WWNC

R — Easy Aces
KSO KYW WCAE WCSH WFAF
WGY WMAQ WOW WRC WSAI
WTAG WTAM WWJ

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

C — Boake Carter for Philco
CKLW KMBC KMOX WABC WBBM

WBT WCAO WCAU WCCO WGR
WHAS WIKK WJAS WJSV WNAC

B — Dangerous Paradise; Drama
KDKA KOIL KSO KTBS KVOO
KWCR KWK WBAL WBZ WBZA
WENR WFAA WGAR WHAM WJR
WJZ WKY WMAL WQAI WREN
WSB WSM WSMB WSYR

R — Uncle Ezra
KYW WBNB WCAE WCSH WDAF
WEAF WEEI WGY WJAR WMAQ
WOW WRC WSAI WTAG WTAM

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

R — Richard Himber and Orchestra
KPRC KSD KTBS KVOO WBAP
WBNB WCAE WCSH WDAF WFAF
WEEI WFAA WGY WHO WJAR
WKY WMAQ WQAI WOC WOW
WRC WSAI WTAG WTAM WVIC

C — Variety Show
CKLW KDB KERN KFPY KFCR
KGB KHJ KLZ KMBC KMJ KMOX
KSL KWG WABC WADC WBBM
WCAO WCAU WDRC WEAN WFBL
WFBM WGR WHAS WHK WJAS
WJSV WKRC WNAC WOKO WSPD

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

R — Voice of Firestone
CFCF CRCT KFYR KPRC KSD
KSTP KTBS KVOO KYW WAVE

WBNB WCAE WCSH WDAF WDAY
WEAF WEBC WEEI WFBF WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKBF WKY WMAQ
WMC WQAI WOW WPTT WRC
WRVA WSB WSM WSMB WSOC
WTAG WTAM WTAR WVIC WTMJ
WWJ WWNC

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

R — A & P Gypsies
KSD WBNB WCAE WCSH WDAF
WEAF WEEI WGY WHO WJAR
WLIT WMAQ WOC WOW WTAG
WTAM WVIC WWJ

B — Sinclair Greater Minstrels
KDKA KFI KFSB KFYR KOA KOIL
KPO KPRC KSO KSTP KTAR KTBS
KTBS KVOO KWK WBAL WBZ
WBZA WDAY WEBC WFAA WFLA
WGAR WHAM WIBA WIOD WIS
WJAX WJDX WJR WJZ WKY WLS
WLW WMC WQAI WPTT WREN

WRVA WSB WSM WSMB WSOC
WTAR WTMJ WWNC

C — Six-Gun Justice; Drama
KDB KGB KHJ KRNT WAHC
WDAE WDOD WGST WIBX WJSV
WKBW WLAC WOC WORC WTOC

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

C — The Big Show
CKAC CKLW KFAB KLZ KMBC
KMOX KSL WABC WADC WBBM
WBNB WBT WCAO WCAU WCCO
WDRC WDSU WEAN WFBL WFBM
WHAS WHK WICC WJAS WJSV
WKBW WKRC WNAC WOKO
WOW WREC WSPD

R — Otto Harbach Musical Show
KDYL KFI KFYR KGO KGW KHQ
KOA KOMO KPRC KSD KSTP
KTBS KVOO WBNB WCAE WCSH
WDAF WDAY WEAF WEBC WEEI
WFAA WFBF WFLA WGY WHO
WIBA WIOD WIS WJAR WJAX
WJDX WKY WLIT WLW WMAQ
WMC WQAI WOC WOW WPTT WRC
WRVA WSAI WSB WSM WSMB
WTAG WTAM WTMJ WWJ WWNC

B — Princess Pat Players
KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WCKY WENR
WGAR WHAM WJR WJZ WMAL
WREN WSYR

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

C — Wayne King and Orchestra
CKLW KDB KERN KFAB KFBK
KFPY KFCR KGB KHJ KLZ KMBC
KMJ KMOX KIN KOL KRLL
KSL KVI KWG WAAB WAHC WADC
WBBM WBNB WCAO WCAU WCCO
WDRC WDSU WEAN WFBL WFBM
WHAS WIKK WIBV WJAS WJSV
WKBW WKRC WOKO WSPD

R — Contented Program
CFCF CRCT KDYL KFI KFYR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP WBNB WCAE WCSH
WDAF WEAF WEBC WEEI WFAA
WFBF WGY WHO WJAR WKY
WLIT WLW WMAQ WMC WQAI
WOC WOW WRC WSB WSM WTAG
WTAM WVIC WTMJ WWJ

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

C — Lilac Time; Night Singer
CKLW KDB KERN KFBK KFPY

MONDAY (Continued)

KFCR KGB KHJ KLZ KMJ KMOX KOIN KOI KRLL KSL KVI WABC WBBM WCAO WFBL WFBN WGR WHAS WHK WJAS WJSV WKRC

R — Max Baer — Drama

KFI KFSB KFYR KGHL KGIR KGW KHQ KOMO KPO KSD KTAR KTBS KTHS KVOO KYW WAVE WCAE WCSH WDAF WDAY WFAE WFCB WFLA WGY WHIO WIBA WIOD WIRE WIS WJAR WJAX WJDX WMC WOW WPTF WRC WRVA WSAI WSM WSOB WTAG WTAM WTAR WWJ WWNC

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

KDYL KFI KGW KHQ KOA KOIL KOMO KPO KPBC KSTP KTBS KWK WKY WENR WGAR WHAM WJR WKY WOAI WREN WSM WSMH WSYR WTMJ

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 B — Tony and Gus

KDYL KFI KFSB KFYR KGHL KGIR KGW KHQ KOA KOIL KOMO KPO KSO KSTP KTAR KTBS KTHS KWK WAPI WAVE WDAY WFCB WFAA WGAR WIBA WIRE WJDX WJR WMT WOAI WREN WSM WSMH WTMJ

ED-11:30 p.m., E-10:30, C-9:30, M-8:30 R — Voice of Firestone

KDYL KFI KFSB KGHL KGIR KGU KGW KHQ KOA KOMO KPO KTAR

TUESDAY

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

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 B — Lowell Thomas, See Monday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 B — Amos 'n' Andy, See Monday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 B — Tony and Gus, See Monday

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 C — Buck Rogers, See Monday

R — Easy Aces, See Monday

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

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Frank Munn; Gustav Haenschen

CKLW KMBC KMOX WABC WADC WBBM WCAO WCAU WDRS WEAN WFBL WFBN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO

R — Leo Reisman and Orchestra

KFYR KPRC KSD KSTP KTBS KV00 WAVE WBAP WBEN WCAE WCSH WDAF WDAY WFAE WFCB WEEI WFBR WFI WFLA WGY WIBA WIOD WIS WJAR WJAX WJDX WKBK WKY WMAQ WMC WOC WOW WPTF WRC WSH WSM WSMB WSOB WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

B — Eno Crime Clues

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

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

C — Abe Lyman; Vivienne Segal
CFRB CKLW KMBC KMOX WABC WADC WBMM WCAO WCAU WCCO WDRS WEAN WFBL WFBN WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO WOW WSPD

R — Wayne King and Orchestra

KPRC KSD KSTP WBEN WCAE WCSH WDAF WFAE WEEI WFAA WFI WGY WHO WJAR WKBK WKY WMAQ WMC WOAI WOC WOW WRC WSAI WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ

B — Edgar Guest; Welcome Valley

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

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

C — Bing Crosby
CKLW KDB KERN KFBC KFPY KPBC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLL KSL KTUL KVI KWG WABC WADC WBBM WBT WCAO WCAU WCCO WDRS WDSU WEAN WFBL WFBN WGST WHAS WHK WJAS WJSV WKBW WKRC WNAC WOKO WOWO WREC WSPD

R — Ben Bernie and Orchestra

KFYR KOA KPBC KSD KSTP KTBS WBAP WBEN WCAE WCSH WDAY WFAE WFI WFBR WFI WGY WJAR WDX WKY WMAQ WMC WOAI WOC WWC WSB WTAG WTAM WTIC WTMJ WWJ

B — Red Trails; Drama

KDKA KDYL KFI KGW KHQ KOA KOIL KPO KSO KWCR KWK WBAL WBZ WBZA WCKY WFI WHAM WJR WJZ WKBK WLS WMAL WREN WSYR

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

C — Phil Spitalny's Orchestra

CKLW KDB KERN KFBC KFBC KFPY KPBC KGB KHJ KNRC KMJ KMOX KOIN KOL KSL KVI KWG WABC WADC WBBM WCAO WCAU WCCO WDRS WEAN WFBM WHAS WHK WJAS WJSV WKBW WKRC WNAS WNAC WOKO WOWO WSPD

R — Ed Wynn; Eddie Duchin

KDYL KFI KFSB KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPBC KSD KSTP KTAR KTBS KTHS KV00 WAVE WBAP WBEN WCAE WCSH WDAF WDAY WFAE WFCB WEEI WFBR WFI WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKBK WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOB WTAG WTAM WTIC WTMJ WWJ WWNC

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

C — Glen Gray; Walter O'Keefe

CKLW KFBC KFH KLRA KMBC KMOX KOMA KRLL KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBG WBS WBRB WBT WCAO WCAU WDAE WDAE WDBJ WDBO WDNC WDDO WDRS WDSU WEAN WFBL WFBN WFAE WGST WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBN WKBW WKRC WLAC WLWB WLZ WNAS WMBD WMBG WMBR WMT WNAC WNAX WOKO WORC WOPG WQAM WREB WREB WSAF WSJS WSPD WTOC

R — Palmolive Beauty Box

CPCF CRCT KDYL KFI KFSB KFYR KGHL KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KTAR KTBS KV00 WAVE WBAP WBEN WCAE WCSH WDAF WDAY WFAE WFCB WEEI WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WDX WKBK WKY WLW WMAQ WMC WOAI WOC WOW WPTF WRC WRVA WSB WSM WSMB WSOB WTAG WTAM WTMJ WWJ WWNC

B — Fibber McGee and Molly

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

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

C — Fray and Braggiotti

CKLW KDB KERN KFBC KFBC KFPY KPBC KGB KHJ KLRA KLZ KMJ KMOX KOIN KOL KRLL KHNT KSL KTRH KTSB KTUL KVI KWG WABC WBBM WBSN WBRB WBT WCAO WCAU WCCO WDRS WDSU WFBL WFBN WGR WHAM WHAS WHK WJAS WJSV WKRC WLAC WMIB WMBR WNAC WNAX WOC WOKO WQAM WREC

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

C — Advisory Council

CKAC CKLW KFH KGB KGKO KHJ KLRA KLZ KMBC KOH KOL KOMA KRLL KTRH KTSB KVI KVOR WABC WADC WALA WBBM WBG WBSN WBT WCAO WDAE WDBJ WDBO WDNC WDDO WDRS WEAN WFLA WFAE WGR WGST WHAS WHEC WHK WHP WIBX WICC WKBN WKRC WLAC WLZ WNAS WMBG WMBR WNOX WOC WOKO WORC WPG WQAM WREB WSBT WSJS WSMK WSPD WTOC

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

B — Amos 'n' Andy, See Monday

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

C — Dance Orchestra

CKAC CKLW KDB KFH KGKO KLRA KLZ KOH KOMA KRLL KTRH KTSB KVOR KWKH WABC WACO WADC WALA WBSN WBRB WBT WCAO WDAE WDBJ WDBO WDNC WDRS WDSU WFAE WHEC WHK WHP WIBW WJAS WJSV WKBW WKBG WLAC WLWB WLZ WNAS WMBG WMBR WMT WNAC WNAX WNOX WOKO WORC WPG WQAM WSBT WSAF WSJS WSPD WTOC WVA

B — Tony and Gus, See Monday

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

C — Dance Orchestra

CFRB CKAC CKLW KFH KGKO KLRA KLZ KMBC KOH KOMA KRLL KSCJ KTRH KTSB KVOR KWKH WABC WADC WBBM WBSN WBRB WBT WCAO WCAU WDAE WDBJ WDBO WDNC WDDO WDRS WDSU WEAN WFBL WFAE WHEC WHK WHP WIBW WICC WISN WJAS WJSV WKBW WKRC WLAC WLWB WLZ WNAS WMBD WMBR WMT WNAC WNAX WNOX WORC WPG WQAM WSBT WSAF WSJS WSPD WTOC WVA

R — Leo Reisman and Orchestra

KDYL KFI KFSB KGIR KGU KGW KHQ KOA KOMO KPO KTAR

WEDNESDAY

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

ED-6:45 p.m., E-5:45, C-4:45, M-3:45
B — Lowell Thomas, See Monday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00
B — Amos 'n' Andy, See Monday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15
R — Black Chamber, See Monday
B — Tony and Gus, See Monday

ED-7:30 p.m., E-6:30, C-5:30, M-4:30
C — Buck Rogers, See Monday

B — Red Davis, See Monday

C — The O'Neill's, See Monday

R — Easy Aces, See Monday

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

B — Dangerous Paradise, See Monday
R — Uncle Ezra, See Monday

ED-8:00 p.m., E-7:00, C-6:00, M-5:00
R — One Man's Family

CFCF CRCT KDYL KFI KFYR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAI KTRB KVVO
WAVE WBAF WBNB WCAE WCKY
WCSH WDAF WJAY WFAE WFGC
WHEI WFBF WFLA WGY WHO
WIBA WIOD WIS WJAR WJAX
WJDX WKY WLIT WMAQ WMC
WQAI WOC WOW WPTF WRC
WRVA WSAI WSB WSM WSMB
WTAG WTAM WTC WTMJ WWJ
WVNC

B — Hal Kemp and Orchestra
KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WGAR WHAM
WJR-WJZ WLS WLW WML WREN
WSYR

C — Johnny and His Foursome
CKLW KMBC KMOX KRNT WABC
WADC WBBM WCAO WCAU WDRS
WEAN WFBL WFBM WHAS WHK
WJAS WJSV WKBW WKRC WQAM
WOKO WOWO WSPD

ED-8:15 p.m., E-7:15, C-6:15, M-5:15
C — World Peace Foundation

CKLW KDB KFBK KFH KFPY
KPRC KGB KHJ KLRA KMBC
KMOX KOH KOI KRLL KTRH
KTSa KTUL KVOR KWG KWKH
WABC WACO WADC WAlA WBBM
WBIG WBRC WBT WCAO WCAU
WCCO WDAE WDBJ WDBO WDRS
WEAN WFBL WFBM WGR WGST
WHAS WHK WJAS WJSV WKRC
WMBG WNAC WNOX WOKO WQAM
WREC WSJS WSPD WTOC

ED-8:30 p.m., E-7:30, C-6:30, M-5:30
C — Everett Marshall; Victor Arden

CKLW KDB KERN KFBK KFPY
KTRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOI KOMA KRLL
KSL KVI KWG WABC WADC
WBBM WBT WCAO WCAU WDRS
WDSU WEAN WFBL WFBM WGR
WHAS WIBW WJAS WJSV WKRC
WLAC WNAC WOKO WOWO WSPD

R — Wayne King, See Tuesday

B — House of Glass; Drama
KDKA KOIL KSO WBAL WBZ
WBZA WFIL WFLA WGAR WHAM
WIOD WIS WJAX WJZ WLS WML
WMT WPTF WREN WRVA WSOB
WSYR WTAI WVNC

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

R — Fred Allen

KPRC KSD KSTP KTBS KVVO
WBEN WCAE WCHS WDAF WFAE
WFCB WHEI WFBF WGY WIOD
WIS WJAR WJAX WKY WLIT
WLW WMAQ WMC WQAI WOW
WPTF WRC WRVA WSB WSM
WSMB WTAG WTAM WTC WTMJ
WWJ

B — John Charles Thomas

KDKA KDYL KFI KGW KHQ KOA
KOIL KOMO KPO KSO KWK WBAL
WBZ WBZA WCKY WENR WGAR
WHAM WIIE WJR WJZ WLS
WML WMT WREN WSYR

ED-10:00 p.m., E-9:00, C-8:00, M-7:00
C — George and Gracie

CKLW KDB KERN KFBK KFPY
KPRC KGB KHJ KLZ KMBC KMJ
KMOX KOIN KOI KOMA KRLL
KSL KTRH KTSa KVI KWG WABC
WADC WBBM WBIG WBT WCAO
WCAU WCCO WDRS WDSU WEAN
WFBL WFBM WHK WJAS WJSV
WKBW WKRC WNAC WOKO WORC
WOWO WSPD

R — Guy Lombardo and Orchestra

KPRC KSD KTBS KTHS KVVO
WAVE WBEN WCAE WCHS WDAF
WFAE WHEI WFAA WFBF WFLA
WGY WHO WIOD WIS WJAR WJAX
WJDX WKBF WKY WLIT WLW
WMAQ WMC WQAI WOC WOW
WPTF WRC WRVA WSB WSM
WSMB WTAG WTAM WTC WWJ
WVNC

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

C — Howard Barlow, Norman Gordon

CFRB CKAC CKLW KDB KFH
KGKO KHJ KLRA KLZ KMBC
KOH KOMA KRLL KSCJ KTRH
KTSa KVOR KWKH WAAB WABC
WACO WADC WAlA WBBM WBIG
WBRC WBT WCAO WCAU WDAE
WDBJ WDBO WDNC WDOO WDRS
WDSU WEAN WFBL WFBM WFEA
WGLC WGR WHEC WHP WIBW
WICC WISN WJAS WJSV WKRC
WLAC WLWB WMAS WMBD
WMBR WMT WNOX WOKO WORC
WQAM WSBT WSFA WSJS WTOC

R — Ray Noble and Orchestra

KDYL KFI KGW KHQ KOA KOMO
KPO KSD KYW WAPI WAVE WBEN
WCAE WCHS WFAE WHEI WFBF
WGY WHO WJAR WJDX WKBF
WLW WMAQ WMC WOW WRC
WSB WSM WSMB WTAG WTAM
WTC WWJ

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

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

C — Dance Orchestra

KLRA WAHC WAlA WBRC WBT
WCAO WCAU WDBJ WDBO WDNC
WEND WDOO WDRS WDSU WEAN
WFEA WJSV WLAC WLBB WMBR
WNAC WNOX WORC WPG WQAM
WSEA WSJS WTOC

B — Tony and Gus, See Monday

ED-11:30 p.m., E-10:30, C-9:30, M-8:30
C — Dance Orchestra

KLRA WAHC WAlA WBRC WBT
WCAO WCAU WDBJ WDBO WDNC
WDOO WDRS WDSU WEAN WFEA
WICC WISN WJSV WLAC WLBB
WMAS WMBR WNAC WNOX WORC
WPG WQAM WSEA WSJS WTOC

C — Voice of Experience

KDB KERN KFBK KFPY KFRG
KGB KHJ KLZ KMJ KOIN KOI
KSL KVI KWG

B — House of Glass, Drama

KDYL KFI KFYR KGW KHQ KOA
KOMO KPO KPRC KTBS KTHS
WAPI WAVE WDAY WDCB WFAA
WIBA WIIE WJDX WKY WMC
WQAI WSB WSM WSMB WTMJ

ED-12:00 p.m., E-11:00, C-10:00, M-9:00

R — Fred Allen

KDYL KFI KGO KGW KHQ KOA
KOMO

THURSDAY

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

ED-6:45 p.m., E-5:45, C-4:45, M-3:45
B — Lowell Thomas, See Monday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00
B — Amos 'n' Andy, See Monday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15
B — Tony and Gus, See Monday

ED-7:30 p.m., E-6:30, C-5:30, M-4:30
C — Buck Rogers, See Monday

R — Mollie Minstrels

KSD KYW WBEN WCHS WDAF
WEAF WGY WHO WJAR WMAQ
WRC WSAI WTAG WTAM WWJ

B — Floyd Gibbons

KDKA KOIL KSO WBAL WRZ
WBZA WENR WFIL WFLA WHAM
WIOD WIS WJAX WJZ WML
WMT WPTF WREN WSOB WSYR
WTAI WVNC

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

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

R — Rudy Vallee and Orchestra

CFCF CRCT KDYL KFI KFYR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAI KVVO WAPI
WBAF WBNB WCAE WCHS WDAY
WEAF WEGC WHEI WFBF WFI
WFLA WGY WHO WIOD WIS
WJAR WJAX WJDX WKY WLW
WMAQ WMC WQAI WOC WOW
WPTF WRC WRVA WSB WSM
WSMB WTAG WTAM WTC WWJ
WVNC

C — Kate Smith

CKLW KDB KERN KFAB KFBK
KFPY KTRC KGB KHJ KLZ KMBC
KMJ KMOX KOIN KOI KSL KVI
KWG WABC WADC WBBM WCAO
WCAU WCCO WDRS WEAN WFBL
WFBM WGR WHAS WHK WJAS
WJSV WKRC WMAS WNAC WOKO
WSPD

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

C — Freddie Rich Entertainers

CKLW KMBC KMOX WABC WADC
WBBM WCAO WCAU WDRS WEAN
WFIL WFBM WGR WHAS WHK
WJAS WJSV WKRC WNAC WOKO
WOWO WSPD

ED-9:00 p.m., E-8:00, C-7:00, M-6:00
C — Glen Gray; Walter O'Keefe

CKLW KFAB KFH KLRA KMBC
KMOX KOMA KRLL KSCJ KTRH
KTSa KTUL KWKH WABC WACO
WADC WAlA WBBM WBIG WBSN
WBRC WBT WCAO WCAU WCCO
WDAE WDBJ WDBO WDOO WDRS

THURSDAY (Continued)

WDSU WEAN WFBL WFBB WFEA
WGST WHAS WHEC WHK WHP
WIBW WICC WISN WJAS WJSV
WKBN WKBW WKRC WLAC
WLWB WLWB WMA5 WMBD
WMBG WMBR WMT WNAC WNAX
WOKO WORC WOWO WPG WQAM
WREC WSPA WSJS WSPD WTOG

R — Maxwell House Show Boat
KDYL KFI KPSD KGHJ KGIR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAR KTBS WAPI
WAVE WBAP WVEN WCAE WCHS
WDAF WFAE WEEI WFBR WFLA
WGY WJO WIOD WIS WJAR
WJAX WJXD WKB WKY WLW
WMAQ WMC WOI WOC WOW
WRC WRVA WSAI WSB WSM
WSMB WTAG WTAM WTIC WTJW
WWJ WWCN

B — Death Valley Days; Drama
KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WGAR WHAM
WJR WJZ WLS WLW WMAL WREN
WYSR

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

C — Fred Waring's Pennsylvanians
CFRB CKLW CHCM KDB KERN
KFAB KFBK KFH KFPY KPRC
KGB KGKO KHJ KLRA KLZ KMBC
KMJ KMOX KOH KOIN KOL KOMA
KRLD KSCJ KSL KTRH KTSB
KTUL KVI KVOR KWG WABC
WACO WADC WALA WBBM WBIG
WBNS WBRC WBT WCAO WCAU
WCCO WDAE WDBJ WDBO WDNC
WDDO WDRC WDSU WEAN WFBL
WFBM WFEA WGLC WGST WHAS
WHEC WHK WHP WIBW WICC
WISN WJAS WJSV WKBN WKBW
WKRC WLAC WLWB WLWB WMA5
WMBD WMBG WMBR WMT WNAC
WNAX WNOX WOKO WORC WOWO
WPG WQAM WREC WSPA WSJS
WSPD WTOG

B — Mexican Musical Tours
KDKA KOIL KSO WBAL WBZ
WBZA WCKY WENR WFIL WGAR
WHAM WJZ WMAL WMT WREN

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

R — Paul Whiteman's Music Hall
CFCF CRCT KDYL KFI KFYP
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAR KTBS KTHS
KV00 WAPI WAVE WBAP WVEN
WCAE WCHS WDAF WDAY WFAE
WFAE WEEI WFBR WFLA
WGY WJO WIBA WIOD WIS WJAR
WJAX WJXD WKB WKY WLW WMAQ
WMC WOI WOC WOW WPTF
WRC WRVA WSB WSM WSMB
WTAG WTAM WTIC WTJW WWJ
WWNC

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

C — Horace Heidt and Orchestra
CKLW KDB KERN KFAB KFBK
KFPY KPRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOIN KOL
KRLD KRNT KSL KTRH KTSB
KTUL KVI KWG WAB WBBM
WBNS WBRC WBT WCAO WCAU
WCCO WDRC WDSU WFBL WFBM
WGR WGST WHAS WHK WJSV
WKRC WLAC WMBG WMBR
WNAC WNAX WOC WOKO WQAM
WREC

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

B — Amos 'n' Andy, See Monday

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

C — Dance Orchestra
CFRB CKAC CKLW KDB KFH
KGKO KLRA KLZ KOH KOMA
KRLD KSCJ KTRH KTSB KVOR
KWKH WABC WACO WADC WALA
WBBM WBNS WBRC WBT WCAO
WCCO WDAE WDBJ WDBO WDNC
WDDO WDRC WDSU WEAN WFBL
WFBM WFEA WGLC WHEC WHK
WHP WIBW WISN WJAS WJSV
WKBN WKRC WLAC WLWB WLWB
WMA5 WMBD WMT WNAC WNAX
WNOX WOKO WORC WPG WQAM
WSBT WSFA WSJS WSPD WTOG
WVVA

B — Tony and Gus, See Monday

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

C — Glen Gray; Walter O'Keefe
KDB KERN KFBK KFPY KPRC
KGB KHJ KLZ KMJ KOH KOIN
KOL KSL KVI KVOR KWG

FRIDAY

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

C — H. V. Kaltenborn
CKLW KFH KGKO KLZ KMBC KOH
KOMI KRLD KSCJ KSL KTRH
KVOR KWKH WAAB WABC WBBM
WCAO WCAU WDNC WDRC WFBL
WGLC WHEC WHK WISN WJAS
WJSV WKBW WLAC WLWB WMT
WOKO WORC WSPD

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

B — Lowell Thomas, See Monday

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

B — Amos 'n' Andy, See Monday

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

R — Black Chamber, See Monday

B — Tony and Gus, See Monday

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

B — Red Davis, See Monday

C — The O'Neill's, See Monday

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

C — Boake Carter, See Monday

B — Dangerous Paradise, See Monday

R — Uncle Ezra, See Monday

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

R — Cities Service Concert
CRCT KDYL KOA KPRC KSD
KSTP KTBS KTHS KV00 KYW
WBAP WVEN WCAE WCHS WDAF
WFAE WNBC WEEI WFAA WFBR
WGY WHO WJAR WKY WLIT
WOAI WOC WOW WRC WRVA
WSAI WTAG WTAM WTIC WWJ

B — Irene Rich; Drama

KDKA KDYL KFI KGW KHQ
KOIL KOMO KPO KSO KTAR
WAVE WBAL WBZ WBZA WGAR
WHAM WIRE WJR WJZ WLS
WMAL WMC WMT WREN WSB
WSM WSYR

C — Leith Stevens' Harmonies

CFRB CKLW KDB KERN KFAB
KFBK KFH KFPY KPRC KGB
KHJ KLRA KLZ KMBC KMJ KMOX
KOL KOIN KOL KOMA KRLD KSCJ
KSL KTRH KTSB KVI KWG WABC
WADC WBBM WBNS WBRC WBT
WCAO WCAU WCCO WDAE WDBJ
WDRS WDSU WEAN WFBL WFBM
WGR WGST WHAS WHEC WHK
WJAS WJSV WKRC WLAC WLWB
WMBG WMBR WNAC WNOX
WOKO WORC WQAM WREC WSPD

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

B — Morton Downey
KOIL KSO WJZ WBZA WCKY
WFIL WHAM WIRE WJZ WLS
WMAL WMT WREN WSYR

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

B — Ruth Etting; Red Nichols
KDKA KOIL KSO KWK WBAL
WBZ WBZA WCKY WFIL WGAR
WHAM WJR WJZ WLS WMAL
WMT WREN WSYR

C — True Story Court

CKLW KMBC WABC WADC WBBM
WCAO WCAU WCCO WDRC WEAN
WFBL WGR WHK WJAS WJSV
WKRC WNAC WOKO

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

C — Hollywood Hotel
CFRB CKAC CKLW KDB KERN
KFAB KFBK KFH KFPY KPRC
KGB KGKO KHJ KLRA KLZ KMBC
KMJ KMOX KOH KOIN KOL KOMA
KRLD KSCJ KSL KTRH KTSB
KTUL KVI KVOR KWG KWKH
WABC WACO WADC WALA WBBM
WBIG WBNS WBRC WBT WCAO
WCAU WCCO WDAE WDBJ WDBO
WDNC WDDO WDRC WDSU WEAN
WFBL WFBM WFEA WGST WHAS
WHEC WHK WHP WIBW WIXX
WICC WISN WJAS WJSV WKBI
WKBN WKRC WLAC WLWB WLWB
WMA5 WMBD WMBG WMBR WMT
WNAC WNAX WNOX WOKO WORC
WOWO WPG WQAM WREC WSBT
WSPA WSJS WSPD WTOG

R — Frank Munn; Abe Lyman

KSD WHEN WCAE WCHS WDAF
WFAE WEEI WFBR WGY WJAR
WLIT WLW WMAQ WOW WRC
WTAG WTAM WWJ

B — Beatrice Lillie

CFCF CRCT KDKA KDYL KFI
KGW KHQ KOA KOIL KOMO KPO
KPRC KSO KTHS KWCR KWK
WAPI WAVE WBAL WCKY WFLA
WGAR WHAM WIOD WIS WJAX
WJDX WJZ WKY WLIT WLS WMAL
WMC WPTF WREN WSB WSMB
WSYR WTAR WWNC

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

R — Pick and Pat

KSD WHEN WCAE WCHS WDAF
WFAE WFBR WGY WHO WJAR
WLIT WMAQ WOC WOW WRC
WSAI WTAG WTAM WTIC WWJ

B — Armour Program; Phil Baker

KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KPRC KSO
KSTP KTAR KWK WAPI WAVE
WBAL WBZ WBA WNBC WENR
WFAA WFLA WGAR WHAM WIOD
WJAX WJR WJZ WKY WMO WOI
WREN WRVA WSB WSM WSMB
WTMJ WWNC

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

R — First Nighter; Drama

KDYL KFI KGO KGW KHQ KOA
KOMO KPRC KSD KSTP WVEN
WCAE WCHS WDAF WFAE WNBC
WEEI WFAA WFBR WGY WHO
WJAR WKY WLIT WLW WMAQ
WMC WOI WOC WOW WRC WSB
WSM WSMB WTAG WTAM WTIC
WTMJ WWJ

C — Richard Himber and Orchestra

CKLW KFAB KFH KMBC KMOX
WAAB WABC WADC WBBM WBNS
WBT WCAO WCAU WCCO WDBC
WDSU WFBL WFBM WGST WHAS

FRIDAY (Continued)

WHK WJAS WJSV WKBW WKRC
WOKO WSBT WSPD

ED-10:30 p.m., E-9:30, C-8:30, M-7:30
R — Joe Cook; B. A. Rolfe
CFCE CRCT KDYL KFI KFSD
KFYR KGHJ KGIJ KGW KHIQ
KOA KPO KPRC KSTP KTR
KTBS KTHS KYW WAPI WAVE
WBEN WCAE WCSH WDAF WDAY
WEAF WEBC WEEI WFAA WFB
WFLA WGY WHIO WIBA WIOD
WIS WJAR WJAX WJDX WKY
WMAQ WMC WOW WPTF WRVA
WSAI WSMB WSOC WTAG WTAM
WTIC WWJ WWNC

C — Col. Stoopnagle and Budd
CKLW KGB KGKO KIJ KLRA
KMBC KOH KOL KOMA KRLD
KSCJ KVI KVOR KWKH WAAB
WABC WACO WBBM WBIG WBNS
WBT WCAO WCAU WCCO WDCS
WDBJ WDNC WDOD WDRC WDSU
WEAN WFBL WGR WHAS WHFC
WHIP WICC WJAS WJSV WKRC
WLAC WMAS WMBD WMBG WMT
WNOX WROC WPG WQAM WSPA
WSJS WTOP

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

ED-11:15 p.m., E-10:15, C-9:15, M-8:15
C — Dance Orchestra
KLRA WABC WALA WBRC WBT
WCAO WDAE WDBO WDNC WDOD
WDRC WDSU WEAN WFEA WHK
WJSV WLAC WLBZ WMAS WNA
C WNOX WORC WPG WQAM WSPA
WSJS WTOP

B — Tony and Gus, See Monday

ED-12:30a.m., E-11:30, C-10:30, M-9:30
C — Richard Himber and Orchestra
KDB KERN KFBK KFPY KFR
KGB KIJ KLZ KMJ KOIN KOL
KSL KVI KWZ

SATURDAY

ED-6:00 p.m., E-5:00, C-4:00, M-3:00
C — Frederic William Wile
CKAC CKLW KDB KERN KFBK
KFIY KFCR KGB KIJ KLRA KLZ
KMJ KMOX KOIN KOL KRLD
KSL KTRH KTSB KVI KWG WAAB
WABC WALA WBBM WBIG WBNS
WBRC WBT WCAO WCAU WCCO
WDAE WDBJ WDBO WDNC WDOD
WDSU WFLB WFBM WGR WGST
WHAS WHFC WHK WICC WJSV
WKRC WMBR WNOX WQAM
WREC WTOP

ED-7:00 p.m., E-6:00, C-5:00, M-4:00
C — Soconyland Sketches
WABC WDRG WEAN WGR WICC
WLBZ WMAS WNAO WOKO WORC

ED-7:30 p.m., E-6:30, C-5:30, M-4:30
C — Victor Arden and Orchestra
CFRB CKAC CKLW WABC WBBM
WCAO WCAU WFBL WHK WJAS
WNAO WROK

ED-7:45 p.m., E-6:45, C-5:45, M-4:45
R — Thornton Fisher Sports Review
KDYL KFYR KOA KSD KSTP
KYW WAPI WAVE WBEN WCAE
WCSH WDAY WEAF WEBC WFLA
WGY WHIO WIBA WIOD WIS
WJAR WJAX WJDX WMAQ WMC
WOW WPTF WRC WRVA WSAI

WSB WSMB WSOC WTAG WTAM
WTAR WTIC WWJ WWNC

ED-8:00 p.m., E-7:00, C-6:00, M-5:00
C — Modern Minstrels
CFRB CKAC CKLW KDB KERN
KFBK KFPY KFRK KGB KIJ
KLRA KLZ KMBC KMJ KMOX
KOIN KOL KOMA KRLD KSL
KTRH KTSB KVI KWG WABC
WBBM WBEA WCAO WCAU WCCO
WDOD WDRC WDSU WEAN WFBL
WFBM WGR WGST WHAS WHK
WIBW WJAS WJSV WKRC WLAC
WMT WNAO WROC WRC WREC
WSPD

R — Lucky Strike; Lennie Hayton
KDYL KFI KFSD KFYR KGHJ
KGIJ KGU KGW KHIQ KOA KOMO
KPO KPRC KSD KSTP KTR
KTBS KYW WAPI WAVE WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WEEI WFBR WFLA WHIO
WHIO WIBA WIOD WIRE WIS
WJAR WJAX WJDX WKY WLW
WMAQ WMC WOAI WOW WPTF
WRC WSB WSMB WSOC WTAG
WTAM WTAR WTIC WWNC

ED-9:00 p.m., E-8:00, C-7:00, M-6:00
R — Radio City Party

KDYL KFI KFYR KGW KHIQ KOA
KOMO KPO KPRC KSD KSTP
KTBS KTHS KYW WAPI WAVE
WBAP WBEN WCSH WDAF WDAY
WEAF WEBC WEEI WFBR WFLA
WGY WHIO WIBA WIOD WIS
WJAR WJAX WJDX WKY WLW
WMAQ WMC WOAI WOW WPTF
WRC WRVA WSB WSMB WSOC
WTAG WTAM WTAR WTIC WTMJ
WWJ WWNC

ED-9:30 p.m., E-8:30, C-7:30, M-6:30
C — Melody Masterpieces
CKLW KFH KMBC KMOX WAAB
WABC WADC WBBM WBNS WBT
WCAO WCAU WCCO WDRC WDSU
WEAN WFBL WFBM WGST WHK
WJAS WJSV WKBW WKRC WOKO
WSBT WSPD

B — National Barn Dance
KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WGAR WHAM
WJR WJZ WKFB WLS WMAL
WREN WSYR

R — Al Jolson; Victor Young
KDYL KFI KFSD KFYR KGHJ
KGIJ KGW KHIQ KOA KOMO KPO
KSD KSTP KTR KVI WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WEEI WFBR WFLA WGY
WHIO WHIO WIBA WIOD WIS WJAR
WJAX WMAQ WOW WPTF WRC
WRVA WSAI WSOC WTAG WTAM
WTAR WTIC WTMJ WWJ WWNC

ED-10:30 p.m., E-9:30, C-8:30, M-7:30
C — California Melodies
CFRB CKLW KDB KFH KGKO
KHJ KLRA KLZ KMBC KOH KOMA
KRLD KSCJ KTRH KTSB KVOR
KWKH WAAB WABC WACO WADC
WALA WBT WCAO WCAU
WCCO WDAE WDBJ WDBO WDNC
WDOD WDRC WDSU WEAN WFBL
WFBM WFEA WGLC WGR WHEC
WHP WIBW WICC WISN WJAS
WJSV WKRC WLAC WLBW WLBZ
WMAS WMBD WMT WNAO WNOX
WOKO WORC WPG WQAM WSBT
WSPA WSJS WSPD WTOP WWVA

R — Let's Dance
KFIY KPRC KSD KTBS KTHS

KVOO KYW WAVE WBAP WBEN
WCAE WCSH WDAY WEAF WEBC
WEEI WFAA WFBR WFLA WGY
WIBA WIOD WIS WJAR WJAX
WJDX WKY WLW WMAQ WMC
WOAI WOW WRC WSB WSMB
WTAG WTAM WTAR WTIC WTMJ
WWJ WWNC

ED-11:00 p.m., E-10:00, C-9:00, M-8:00
B — National Barn Dance
KDYL KFI KGO KGW KHIQ KOA
KOMO WAVE WJDX WLS WMC
WSB WSMB

ED-11:30 p.m., E-10:30, C-9:30, M-8:30
C — Dance Orchestra
CKAC CKLW KLRA WAAB WABC
WBT WDAE WDBJ WDBO WDOD
WDRC WDSU WFBM WGLC WGR
WHFC WHP WIBW WJAS WJSV
WKRC WLAC WORC WQAM WSBT
WSPA WSJS WTOP

ED-12:00p.m., E-11:00, C-10:00, M-9:00
C — Dance Orchestra
CKAC CKLW KDB KFH KGKO
KLRA KLZ KMBC KOH KOMA
KTRH KTSB KWKH WABC WBNS
WCAU WDBO WDNC WDOD WEAN
WFBL WFBM WGLC WHP WIBW
WICC WJSV WKBW WKRC WLAC
WLBW WNAO WNOX WOKO WPG
WQAM WSBT WTOP

SUNDAY

ED-11:30 a.m., E-10:30, C-9:30, M-8:30
C — Salt Lake Tabernacle Choir
CKLW KFH KGKO KLRA KLZ
KOH KRLD KSCJ KSL KTHS
KTSB KWKH WABC WACO WADC
WALA WBBM WBNS WCCO WDAE
WDBO WDBO WDRC WDSU WEAN
WFBL WFBM WFLA WGLC WHK
WHP WIBW WICC WISN WJAS
WJSV WLAC WLBZ WMBD WMBG
WNOX WROC WRC WQAM WREC
WSPA WSPD

R — Major Bowes' Family
KDYL KFYR KOA KPRC KSTP
KTBS KVOO WAPI WCAE WDAF
WDAY WEAF WEBC WFAA WFB
WFLA WGY WHIO WIOD WJAR
WJAX WKY WMAQ WMC WOAI
WOC WRC WRVA WSAI WSMB
WTAG WTAM WWNC

ED-12:15p.m., E-11:15, C-10:15, M-9:15
R — What Home Means to Me
KDYL KFI KGW KHIQ KOA KOMO
KPO KPRC KTSB KTHS KVOO
KYW WBAP WBEN WCAE WCSH
WEAF WEEI WFBR WGY WHIO
WHIO WIRE WJAR WKY WMAQ
WOAI WOW WRC WSAI WTAG
WTAM WTIC

ED-12:30p.m., E-11:30, C-10:30, M-9:30
C — Romany Trail
CKLW KMBC KMOX WABC WADC
WBBM WCAO WCAU WDRC WEAN
WFBL WFBM WGR WHAS WJAS
WJSV WKH WKRC WMAS WNAO
WOKO WORC WOW WSPD

B — Radio City Symphony
CFCE CRCT KDKA KDYL KFI
KFIY KGO KGW KHIQ KOA KOIL
KOMO KPRC KSO KVOO WAPI
WBAL WBZ WBAZ WCKY WDAY
WEBC WGAR WHAM WIS WJDX
WJR WJZ WKY WMAL WOAI
WREN WSMB WSYR WWNC

SUNDAY (Continued)

ED-1:00p.m., E-12:00, C-11:00, M-10:00
C — Church of the Air
CFRR CKLW KFH KGKO KIJJ KLRH KLZ KOH KRLD KSCJ KSL KTRH KTSK KWAH WAAB WABC WACO WALA WBBM WBIG WBNS WBT WCAO WCCO WDAE WDBJ WDBO WDNC WDOO WDRG WDSU WFLB WFLC WGR WHFC WHP WIBW WJAS WJSV WKRC WLAC WLAW WLWB WMBR WMT WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WWVA

ED-1:30p.m., E-12:30, C-11:30, M-10:30
C — Mary Eastman; Evan Evans
CKLW KFAB KFH KLZ KMBC KMOX KOMA KRLD KSCJ KSL WABC WADC WBBM WBNS WBT WCAO WCCO WDRG WFLB WFBM WGR WHAS WHK WJAS WJSV WWOV

ED-2:00 p.m., E-1:00, C-12:00, M-11:00
C — Lazy Dan, Minstrel Man
CKLW KDH KERN KFAB KFBK KFPY KPRC KGB KIJJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KVI KWG WABC WADC WBBM WBNS WBT WCAO WCAU WCCO WDBJ WDRG WDSU WEAN WFLB WFBM WGST WHAS WHEC WHK WIBW WJAS WJSV WKBW WKRC WLAC WMBG WMT WNAC WWOV

B — Your English
KDKA KDYL KFI KFYR KGW KHQ KOA KOIL KOMO KPO KSO KSTP KVOO KWK WBAL WBZ WBZA WCKY WENR WFAX WFLB WGAR WIRE WJR WJZ WKY WMAL WMT WOAI WREN

R — Sally of The Talkies
WAPI WBEN WCAE WCSH WDAF WFAF WEEL WPHR WGY WHO WJAR WJDX WLIT WMAQ WMC WOC WOW WRC WSAI WSB WSM WSMB WTAG WTAM WWJ

ED-2:30 p.m., E-1:30, C-12:30, M-11:30
C — Eddie Dunstetter at Organ
CKLW KDB KERN KFAB KFBK KFPY KPRC KGB KIJJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KSL KVI KWG WABC WADC WBBM WBT WCAO WCAU WCCO WDBJ WDRG WDSU WEAN WFLB WFBM WGST WHAS WHEC WHK WIBW WJAS WJSV WKBW WKRC WLAC WMBG WMT WNAC WWOV

B — Lux Program; Dramas
KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KTHS KTHS KVOO KWCR KWK WBAL WBZ WBZA WDAY WDBC WFAX WGAR WHAM WIBA WJR WJZ WKY WLW WMAL WOAI WPTF WREN WRVA WSYR WTAR

ED-3:30 p.m., E-2:30, C-1:30, M-12:30
R — Penthouse Serenade
KDYL KFI KGO KGW KHQ KOA KOMO KSD WBEN WCAE WCSH WDAF WFAF WEEL WFBR WGY WHO WJAR WLIT WLW WMAQ WOC WOW WRC WTAG WTAM WTTIC WWJ

C — Howard Barlow Symphony
CFRR CKAC CKLW KDB KERN KFAB KFBK KFH KFPY KPRC

KGK KGKO KHJ KLRA KLZ KMBC KMOX KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSK KVI KVOR KWG KWKH WAAB WABC WACO WADC WALA WBBM WBIG WBNS WBRG WBT WCAO WCCO WCOA WDAE WDBJ WDBO WDNC WDOO WDRG WDSU WEAN WFLB WFLM WGST WHAS WHK WHR WIBW WICC WJAS WJSV WKHN WKBW WKRC WLAC WLWB WMAS WMBD WMBG WMBR WNOX WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC

ED-4:00 p.m., E-3:00, C-2:00, M-1:00
C — St. Louis Parade
CFRR CKAC CKLW KDB KERN KFAB KFBK KFH KFPY KPRC KGB KGKO KIJJ KLRH KLZ KMBC KMOX KOIN KOL KOMA KRLD KSCJ KSL KTRH KTSK KVI KVOR KWG WAAB WABC WACO WADC WALA WBBM WBIG WBNS WBRG WBT WCAO WCCO WDAE WDBJ WDBO WDNC WDOO WDRG WDSU WEAN WFLB WFBM WGST WHAS WHK WHP WIBW WICC WJAS WJSV WKBW WKBW WKRC WLAC WLWB WMAS WMBD WMBG WMBR WNOX WOKO WORC WPG WQAM WRLE WSBT WSFA WSJS WSPD WTOC

ED-4:30 p.m., E-3:30, C-2:30, M-1:30
R — Harry Reser and Orchestra
CFRC CRCT KTHS KTHS KVOO KYW WBAP WBEN WCAE WCSH WDAF WFAF WEEL WFBR WGY WJAR WKY WMAQ WOAI WRC WSAI WTAG WTAM WTTIC WWJ

ED-4:45 p.m., E-3:45, C-2:45, M-1:45
R — Dream Drama
WBEN WCAE WCSH WDAF WFAF WEEL WPHR WFI WGY WJAR WMAQ WRC WSAI WTAG WTAM WTTIC WWJ

ED-5:00 p.m., E-4:00, C-3:00, M-2:00
C — Country Church of Hollywood
CKLW KFH KLRA KLZ KMBC KMOX KOMA KRLD KSL KTRH KTSK KTUL WAAB WABC WADC WBBM WBIG WBRG WBT WCAO WCAU WCCO WDOO WDRG WDSU WEAN WFLB WFBM WGR WGST WHAS WHEC WHK WIBW WJAS WJSV WKBW WKRC WLAC WLWB WMAS WMBG WOKO WORC WWOV WREC WSPD

B — Roses and Drums
KDKA KOIL KPRC KSO KTHS KWCR KWK WBAL WBAP WBZ WBZA WENR WGAR WHAM WJR WJZ WKY WLW WMAL WOAI WREN WSYR

R — Rhythm Symphony
KDYL KFI KGW KOA KOMO KPO KPRC KTHS WAPI WAVE WBAP WBEN WCSH WDAF WFAF WFCB WEEL WFBR WFLA WGY WIBA WJDX WJAR WJAX WJDX WLIT WMAQ WMC WOAI WPTF WRC WRVA WSAI WSB WSM WSMB WTAG WTAM WTTIC WWJ

ED-5:30 p.m., E-4:30, C-3:30, M-2:30
C — Frank Crumit; Julia Sanderson
CKLW KFH KMBC KMOX KOMA KTUL WAAB WABC WADC WBNS WCAO WCAU WDRG WDSU WEAN WFLB WFBM WGR WHAS WHEC

WHK WIBX WICC WJSV WMAS WOKO WORC WSPD WWVA

R — Tony Wans
CFRC CRCT KDYL KFI KFSB KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTHS KTHS KVOO KYW WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WFAF WFCB WEEL WFBR WGY WHO WIBA WJDX WJZ WJAR WJAX WJDX WKHF WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSMB WTAG WTAM WTAR WTTIC WTMJ WWJ WYWC

ED-5:45 p.m., E-4:45, C-3:45, M-2:45
B — Becker's Dog Chats
KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KWCR KWK WHAL WBZ WBZA WENR WJAR WHAM WJR WJZ WMAL WREN WSYR

ED-6:00 p.m., E-5:00, C-4:00, M-3:00
C — National Amateur Night
CFRR CKLW KDB KERN KFBK KFPY KPRC KGB KIJJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WBBM WBNS WBT WCAO WCAU WCCO WDRG WDSU WFLB WFBM WGST WHAS WHEC WHK WJAS WJSV WKBW WKRC WOKO

ED-6:30 p.m., E-5:30, C-4:30, M-3:30
C — Smilin' Ed McConnell
CKLW KDB KERN KFAB KFBK KFPY KPRC KGB KIJJ KLZ KMJ KMOX KOIN KOL KRLD KSL KVI KWG WAAB WABC WBBM WBNS WBRG WBT WCAU WCCO WDRG WDSU WEAN WFLB WFBM WFAE WGST WHAS WHK WHP WICC WISN WJAS WJSV WKBW WKRC WLAC WLWB WLWB WORC WQAM WREC WWVA

B — Compana Grand Hotel
KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KSO KSTP KWCR KWK WBAL WBZ WBZA WBCB WENR WGAR WHAM WJR WJZ WMAL WREN WSYR WTMJ

ED-6:45 p.m., E-5:45, C-4:45, M-3:45
C — Voice of Experience
CKLW KMBC KMOX WAAB WABC WBBM WBT WCAO WCAU WCCO WDRG WEAN WFLB WHAS WHK WJAS WJSV WKBW WKRC WNAC WWOV WWVA

ED-7:00 p.m., E-6:00, C-5:00, M-4:00
B — Jack Benny; Don Bestor
KDKA KDYL KFI KGO KGW KHQ KOA KOIL KOMO KPRC KSO KSTP KWCR KWK WBAL WBAP WBZ WBZA WBCB WGAR WHAM WIBA WJDX WJR WJZ WKY WLW WLW WMAL WMC WOAI WREN WSB WSM WSMB WSYR WTMJ

C — Roadways of Romance
KDB KERN KFBK KFPY KPRC KGB KIJJ KLZ KMBC KMOX KOIN KOL KSL KVI KWG WABC WBBM WCAO WCAU WCCO WDRG WFLB WGR WHAS WHK WJAS WJSV WKRC WNAC WOKO

ED-7:30 p.m., E-6:30, C-5:30, M-4:30
B — Joe Penner; Ozzie Nelson
KDKA KDYL KFI KFYR KGO KGW KHQ KOA KOIL KOMO KPRC

SUNDAY (Continued)

KSO KSTP KTAR KVOO KWCR
KWK WBAL WBZ WBZA WDAY
WEBC WFAA WFLA WGAR WHAM
WIBA WIOD WJAX WJDX WJWR
WJZ WKY WLS WMAL WMC WOAI
WPTF WREN WRVA WSB WSM
WSMB WSYR WTMJ

R — American Radiator Musical

WBEN WCAE WCSH WFAE WFBR
WGY WJAR WMAQ WOW WRC
WSAI WTAG WTAM WWJ

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

R — Fitch Program; Wendell Hall
CFCF KSD WBEN WCAE WCSH
WFAE WFBR WGY WHO WJAR
WKBK WLIT WMAQ WOC WOW
WRC WSAI WTAG WTAM WTIC
WWJ

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

C — Ethel Merman; Al Goodman
CKLW KDB KERN KFAB KFBC
KFPY KFRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOIN KOL
KOMA KRLL KSL KTRH KTSa
KTUL KVI KWG WAAB WABC
WADC WBBM WBRC WBT WCAO
WCAU WCCO WDRG WDSU WEAN
WFBL WFBM WGR WGST WHAS
WHK WJAZ WJSV WKRC WOKO
WOW WSPD

R — Major Bowes' Amateur Hour

CFCF CRCT KDYL KFI KFYZ
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAR KVOO WAPI
WAVE WBEN WBZ WBZA WCAE
WCSH WDAF WDAY WFAE WEBC
WFAA WFBR WFLA WGY WHO
WIOD WIS WJAR WJAX WJDX
WKY WLIT WLW WMAQ WMC
WOAI WOC WOW WPTF WRC
WRVA WSB WSM WSMB WTAG
WTAM WTIC WTMJ WWJ WWCN

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

C — Gulf Headliners
CKLW KLRA KRLL KTRH KTSa
WABC WACO WADC WALA WBIG
WBNS WBHC WBT WCAO WCAU
WDAE WDBJ WDIO WDOD WDRC
WDSU WEAN WFEA WGST WHAS
WHEC WHK WJAZ WJSV WKRC
WLAC WLWB WMAS WMIB WMBR
WNAC WOKO WORC WOWO WQAM
WRC WSPD WTOG

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

C — Ford Symphony
CFRB CKLW KDB KERN KFBC
KFH KFPY KFRC KGB KGKO
KHJ KLRA KLZ KMBC KMJ
KMOX KOH KOIN KOL KOMA
KRLL KBCJ KSL KTRH KTSa
KTUL KVI KVOR KWKH WABC
WACO WADC WALA WBBM WBIG
WBNS WBRC WBT WCAO WCAU
WCOO WDAE WDBJ WDIO WDNC
WDOD WDRG WDSU WEAN WFBL
WFBM WFEA WGLC WGR WGST
WHAS WHEC WHK WHI WBIW
WIBX WICC WISN WJAZ WJSV
WKBH WKBN WKRC WLAC
WLWB WLWB WMAS WMBR WMT
WNAC WNAX WNOX WOKO WORC
WOWO WQAM WSBT WSPA WSJS
WSPD WTOG WWVA

R — Manhattan Merry-Go-Round

CFCF KDYL KFI KGO KGW KHQ
KOA KOMO KSD KSTP WDAF
WFAE WJBC WFBR WFI WGY
WHO WJAR WMAQ WOC WOW
WRC WSAI WTAG WTAM WTIC
WTMJ WWJ

B — Silken Strings; Charles Previn

KDKA KDYL KFI KGO KGW KHQ
KOA KOAI KOIL KOMO KPRC KSO
KSTP KWCR KWK WBAL WBAP
WBZ WBZA WEBC WGAR WHAM
WIBA WJR WJZ WKY WLS WLW
WMAL WREN WSYR WTMJ

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

R — Album of Familiar Music
CFCF CRCT KDYL KFI KGO
KGW KHQ KOA KOMO KPRC KSD
KSTP KVOO WBEN WCAE WCSH
WDAF WFAE WFEA WFLA WFBR
WFI WFLA WGY WHO WIOD WIS
WJAR WJAX WJDX WKY WMAQ
WMC WMO WOC WOW WPTF
WRC WRVA WSAI WSB WSM
WSMB WTAG WTAM WTMJ WWJ
WWNC

B — Walter Winchell

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

ED-9:45 p.m., E-8:45, C-7:45, M-6:45

R — Adventures of Sherlock Holmes
KDKA KOIL KSO KWCR WBAL
WBZ WBZA WCKY WENR WFIL
WGAR WHAM WJR WJZ WMAL
WREN WSYR

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

R — The Gibson Family
KDYL KFI KFYZ KGW KHQ KOA
KOMO KPO KSTP KYW WBEN
WCAE WCSH WDAF WDAY WFAE
WEBC WFBR WGY WHO WIBA
WLW WMAQ WOW WRC WTAG
WTAM WTIC WTMJ WWJ
C — Wayne King, See Monday

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

C — Fray and Braggiotti
CKAC CKLW KFH KGKO KHJ
KLRA KLZ KMBC KOH KRLL
KSCJ KTRH KTSa KVOR KWKH
WABC WACO WADC WALA WBIG
WBNS WBT WCAO WCAU WCCO
WDAE WDBJ WDIO WDNC WDOD
WDRG WDSU WEAN WFBL WFBM
WFEA WGLC WGR WHCC WHP
WIBW WICC WISN WJAZ WJSV
WKRC WLAC WLWB WLWB WMAS
WMBD WMBR WMT WNAX WNOX
WOKO WORC WPG WQAM WREC
WSBT WSPA WSJS WSPD WTOG

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

C — Dance Orchestra
CFRB CKAC CKLW KFH KGKO
KLRA KLZ KOH KRLL KSCJ
KTRH KTSa KVOR KWKH WABC
WACO WADC WBBM WBNS WBT
WCAO WCAU WCCO WDAE WDBJ
WDBO WDNC WDOD WDRG WDSU
WEAN WFBL WFEA WGLC WGR
WHCC WHK WHP WIBW WISN
WJAZ WJSV WKRC WLAC WLWB
WLWB WMAS WMBD WMBR WMT
WNAC WNAX WNOX WOKO WORC
WPG WQAM WREC WSBT WSPA
WSJS WSPD WTOG

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

B — Walter Winchell
KDYL KFI KFSD KGHL KGR
KGW KHQ KOA KOMO KPO KPRC
KTAR KTBS KTHS WAPI WAVE
WBAP WJDX WKY WMC WOAI
WSB WSM WSMB

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

B — Jack Benny; Don Bestor
KDYL KFSD KGR KGU KHQ
KOA KOMO KTAR

ED-12:00 p.m., E-11:00, C-10:00, M-9:00

Rev. Charles E. Coughlin
WCAO WCAU WDRG WEAN WFBL
WFEA WGAR WGR WHO WICC
WIND WJAZ WJR WLWB WLW
WMAS WNAC WNBH WOC WOKO
WOL WORC WORC

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Daylight Saving

C—Columbia; R—National (Red); B—National (Blue)

*These features are correct at the time of going to press,
but changes are being made daily.*

CONCERTS

Howard Barlow Symphony, 3:30 p.m. Sunday, C
Frd Concert, 9:00 p.m. Sunday, C
Radio City Music Hall, 12:30 p.m. Sunday, B

DANCE BANDS

Victor Arden, 8:30 p.m. Wednesday; 7:30 p.m. Sat., C
Leon Belasco, 9:30 p.m. Friday, B
Ben Bernie, 9:00 p.m. Tuesday, R

Don Bestor, 7:00 and 11:30 p.m. Sunday, B
Eddie Duchin, 9:30 p.m. Tuesday, R
Lud Glushin, 9:30 p.m. Monday, C
Al Goodman, 9:30 p.m. Monday, R; 8:00 p.m. Sunday,
C
Glen Gray, 10:00 p.m. Tuesday; 9:00 and 11:30 p.m.
Thursday, C
Ferde Grofe, 10:00 p.m. Wednesday, C
Lennie Hayton, 8:00 p.m. Sat., R

Horace Heidt, 10:30 p.m. Thurs., C
 Richard Himber, 8:00 p.m. Monday. R; 10:00 and
 12:30 p.m. Friday, C
 Hal Kemp, 8:00 p.m. Wednesday, B
 Wayne King, 8:30 p.m. Tues. and Wed., R; 10:00 p.m.
 Sunday and Monday, C
 Let's Dance, 10:30 p.m. Saturday R
 Guy Lombardo, 10:00 p.m. Wednesday, R
 Abe Lyman, 9:00 p.m. Friday. R; 8:30 p.m. Tuesday, C
 Ozzie Nelson, 7:30 p.m. Sunday, B
 Red Nichols, 8:30 p.m. Friday, B
 Ray Noble, 10:30 p.m. Wednesday, R
 Charles Previn, 9:00 p.m. Sunday, B
 Leo Reisman, 8:00 and 11:30 p.m. Tuesday, R
 Harry Reser, 4:30 p.m. Sunday, R
 Freddie Rich, 7:30 p.m. Sun.; 8:30 p.m. Thursday, C
 B. A. Rolfe, 10:30 p.m. Friday, R
 Phil Spitalny, 9:30 p.m. Tuesday, C
 Leith Stevens, 8:00 p.m. Friday, C
 Rudy Vallee, 8:00 p.m. Thursday, R
 Fred Waring, 9:30 p.m. Thursday, C
 Paul Whitman, 10:00 p.m. Thursday, R

DIALOG

Fred Allen, 9:00 and 12:00 p.m. Wednesday, R
 Amos 'n' Andy, 7:00 and 11:00 p.m. daily, except
 Sat. and Sun., B
 Phil Baker, 9:30 p.m. Friday, B
 Jack Benny, 7:00 and 11:30 p.m. Sunday, B
 Block and Sully, 9:30 p.m. Monday, C
 Joe Cook, 10:30 p.m. Friday, R
 Easy Aces, 7:30 p.m. Mon., Tues. and Wed., R
 Fibber McGee and Molly, 10:00 p.m. Tuesday, B
 George and Gracie, 10:00 p.m. Wednesday, C
 Lou Holtz, 10:00 p.m. Thursday, B
 Beatrice Lillie, 9:00 p.m. Friday, R
 Walter O'Keefe, 10:00 p.m. Tuesday; 9:00 and 11:30
 p.m. Thursday, C
 Joe Penner, 7:30 p.m. Sunday, B
 Ray Perkins, 6:00 p.m. Sunday, C
 Pick and Pat, 9:30 p.m. Friday, R
 Stoopnagle and Budd, 10:30 p.m. Friday, C
 Uncle Ezra, 7:45 p.m. Mon.; Wed., Fri., R
 Ed Wynn, 9:30 p.m. Tuesday, R

DRAMA

Max Baer, 10:30 p.m. Monday, R
 Black Chamber, 7:15 p.m. Mon., Wed. and Fri., R
 Dangerous Paradise, 7:45 p.m. Mon., Wed. and Fri., B
 Red Davis, 7:30 p.m. Mon., Wed., and Fri., B
 Death Valley Days, 9:00 p.m. Thursday, B
 Dream Drama, 4:45 p.m. Sunday, R
 Eno Crime Clues, 8:00 p.m. Tuesday, B
 First Nighter, 10:00 p.m. Friday, R
 Grand Hotel, 6:30 p.m. Sunday, B
 Sherlock Holmes, 9:45 p.m. Sunday, B
 Home on the Range, 9:00 p.m. Wednesday, B
 House of Glass, 8:30 and 11:30 p.m. Wednesday, B
 Lux Program, 2:30 p.m. Sunday, B
 One Man's Family, 8:00 p.m. Wednesday, R
 The O'Neills, 7:30 p.m., Mon., Wed., Fri., C
 Princess Pat Players, 9:30 p.m. Monday, B
 Red Trails, 9:00 p.m. Tuesday, B
 Irene Rich, 8:00 p.m. Friday, B
 Buck Rogers, 6:00 and 7:30 p.m. Mon. to Thurs.,
 Inc., C
 Roses and Drums, 5:00 p.m. Sunday, B
 Sally of the Talkies, 2:00 p.m. Sunday, R
 Six-Gun Justice, 9:00 p.m. Monday, C
 Soconyland Sketches, 7:00 p.m. Saturday, C
 Tony and Gus, 7:15 and 11:15 p.m. daily, ex. Sat. and
 Sun., B
 True Story Court, 8:30 p.m. Friday, C
 Welcome Valley, 8:30 p.m. Tuesday, B

POPULAR PROGRAMS

A & P Gypsies, 9:00 p.m. Monday, R
 Album Familiar Music, 9:30 p.m. Sunday, R
 American Radlator Musical, 7:30 p.m. Sunday, R

Major Bowes, 11:30 a.m. Sunday; 8:00 p.m. Sunday, R
 California Melodies, 10:30 p.m. Saturday, C
 Cities Service Concert, 8:00 p.m. Friday, R
 Contented Program, 10:00 p.m. Monday, R
 Fleischmann Variety, 8:00 p.m. Thursday, R
 Gibson Family Musical, 10:00 p.m. Sunday, R
 Gulf Headliners, 8:30 p.m. Sunday, C
 Otto Harbach Musical Show, 9:30 p.m. Monday, R
 Hollywood Hotel, 9:00 p.m. Friday, C
 Lilac Time, 10:30 p.m. Monday, C
 Lucky Strike, 8:00 p.m. Saturday, R
 Manhattan Merry-Go-Round, 9:00 p.m. Sunday, R
 Maxwell House Show Boat, 9:00 p.m. Thursday, R
 Mexican Musical Tours, 9:30 p.m. Thursday, B
 Mollie Minstrels, 7:30 p.m. Thursday, R
 National Amateur Night, 6:00 p.m. Sunday, C
 National Barn Dance, 9:30 and 11:00 p.m. Saturday, B
 Palmolive Beauty Box, 10:00 p.m. Tuesday, R
 Penthouse Serenade, 3:30 p.m. Sunday, R
 Radio City Party, 9:00 p.m. Saturday, R
 Rhythm Symphony, 5:00 p.m. Sunday, R
 Roadways of Romance, 7:00 p.m. Sunday, C
 Sinclair Minstrels, 9:00 p.m. Monday, B
 Voice of Firestone, 8:30 and 11:30 p.m. Monday, R
 Tony Wons, 5:30 p.m. Sunday, R

SINGERS

Lois Bennett, 10:00 p.m. Sunday, R
 Marlo Chalmee, 7:15 and 11:15 p.m. daily, ex. Sat. and
 Sun., B
 Bernice Claire, 8:00 p.m. Tues., C; 9:00 p.m. Friday, R
 Norman Cordon, 10:30 p.m. Wednesday, C
 Bing Crosby, 9:00 p.m. Tuesday, C
 Morton Downey, 8:15 p.m. Friday, B
 Jessica Dragonette, 8:00 p.m. Friday, R
 Mary Eastman, 1:30 p.m. Sunday, C
 Ruth Etting, 8:30 p.m. Friday, B
 Foursome, 8:00 p.m. Wednesday, C
 Wendell Hall, 7:45 and 11:00 p.m. Sunday, R
 Annette Hanshaw, 10:00 p.m. Tuesday; 9:00 and 11:30
 p.m. Thurs., C
 Helen Jepson, 10:00 p.m. Thursday, R
 Al Jolson, 9:30 p.m. Saturday, R
 Lazy Dan, 2:00 p.m. Sunday, C
 Elizabeth Lennox, 8:30 p.m. Wednesday, C
 Everett Marshall, 8:30 p.m. Wednesday, C
 Maxine, 9:30 p.m. Tuesday, C
 James Melton, 9:30 p.m. Monday, R
 Ethel Merman, 8:00 p.m. Sunday, C
 Frank Munn, 9:30 p.m. Sunday; 9:00 p.m. Friday, R;
 8:00 p.m. Tuesday, C
 Gertrude Niesen, 9:30 p.m. Monday, C
 Frank Parker, 7:00 and 11:30 p.m. Sunday, B
 Lanny Ross, 9:00 p.m. Thursday, R
 Sanderson-Crumit, 5:30 p.m. Sunday, C
 Vivienne Segal, 8:30 p.m. Tuesday, C; 9:30 p.m. Sun-
 day, R
 Smilin' Ed McConnell, 6:30 p.m. Sunday, C
 Kate Smith, 8:00 p.m. Thursday, C
 Conrad Tibbault, 9:00 p.m. Thurs.; 10:00 p.m. Sun., R
 John Charles Thomas, 9:00 p.m. Wednesday, B

TALKS

Advisory Council, 10:45 p.m. Tuesday, C
 Becker's Dog Chats, 5:45 p.m. Sunday, B
 Boake Carter, 7:45 p.m. daily, except Sat. and Sun., C
 Rev. Charles E. Coughlin, 12:00 mid. Sunday
 Thornton Fisher, 7:45 p.m. Saturday, R
 Floyd Gibbons, 7:30 p.m. Thursday, B
 H. V. Kaltenborn, 6:30 p.m. Friday, C
 Lowell Thomas, 6:45 p.m. daily, except Sat. and
 Sun., B
 Voice of Experience, 6:45 p.m. Sunday; 11:30 p.m.
 Wednesday, C
 Frederic William Wile, 6:00 p.m. Saturday, C
 Walter Winchell, 9:30 and 11:15 p.m. Sunday, B
 World Peace Foundation, 8:15 p.m. Wednesday, C
 Your English, 2:00 p.m. Sunday, B

Radio Reception on the High Sea

●●● By Wolff M. Henius

RADIO reception on the open sea is not always a pleasure. As I write this I am enroute from Los Angeles to Manila, P. I., and will proceed from there to British India via the Dutch East Indies, Singapore and Ceylon.

I am equipped with a Philco 28-C for both a.c. and d.c., 115 volts. Nearly all ships afloat have 220 volts d.c. so a resistor is necessary to reduce the output from the mains. The best I have found is a 330-ohm resistor cord made by the Ohmite Mfg. Co. in Chicago.

Though many contrivances have been manufactured and advertised to eliminate static, I do not believe anything can do it especially in the tropics. Static, however, is not the worst enemy of radio on board ship. This lies in the ship itself, its iron structure, its many electric pumps, exhaustors, generators and especially electric fans. All of these fans are inevitably switched on as soon as the weather gets real hot and their noise

is so intense and constant that any radio reception is impossible.

My aerial consists of about fifty feet of plain copper wire with a direct lead-in to the cabin. The longer the aerial is, the better the reception and likewise the worse the static. A lightning arrester must be used in order to prevent the tubes from being ruined. DX fans should equip themselves with a watch or clock set to Eastern Standard Time. Most programs are listed in EST and tuning is made much easier.

Two or three days out of Los Angeles, I received KFI, KPO, KGO, KNX and KSL very clearly but after that time the noise from the generator became so strong that I only occasionally logged one of these stations after nightfall so that I switched entirely to the s.w. band ranging from four to thirteen megacycles.

We are now off Manila, about 6500 miles away from the Pacific Coast, but I still receive daily either day or night, the following s.w. stations: W8XK on 11.87, 10.75 and 6.14 megs. according to the time; W2XAF, XEBT, CJRX, CJRO, W8XAL and W9XF.

KEY TO SYMBOLS

As Shown in the Index by
Frequencies and Dial Numbers

Frequency is given in kilocycles; wavelength in meters. Night power is shown in watts in third column. Daytime power is shown in parenthesis in fourth column in kilowatts, thus (.25) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column.

Second Column Symbols

- a Verifies reception for return postage.
- b Verifies only occasionally.
- c Does not verify.
- d Verification 10c; letter 25c.
- e Sends Ekko stamp for 10c.
- f Sends Ekko stamp for 5c.
- g Sends Ekko stamp for postage.
- h Sends own station stamp for 10c.
- i Sends own station stamp for 5c.
- j Sends own station stamp for postage.
- k Has no stamps.
- m Verifies for 5c.
- n Weather or time only.
- z No information available.

Fourth Column Symbols

- A American Broadcasting System.

- B National "Blue" network.
- C Columbia network.
- D Day time only.
- Dn Day time with occasional evening hours.
- F Canadian Radio Brdstg. Commission.
- N National "Red" and "Blue" networks.
- P Has construction permit only.
- R National "Red" network.
- S Sunday only.
- Sy Synchronized.
- X Has permit to increase power.
- Y Has permit to change location.
- Z Has permit to change frequency.
- a-b-c. Small letters show stations using same transmitter.
- 1-2-3. Figures denote stations sharing time.
- No information.

INDEX BY FREQUENCIES

540 kilocycles

CJRM ak 1000 F

Moose Jaw, Sask.

550 kilocycles

CFNB ak 1000 F
 KFUD ae 500 2 (1)
 KFYZ ae 1000 N (5)
 KOAC ak 1000 N (5)
 KSD ak 1000 2R (5)
 K TSA ak 1000 C (5)
 WDEV ae 500 D
 WGR ae 1000 C
 WKRC ak 1000 C (2.5)
 WSWA z 500 DP

Fredericton, N. B.
 St. Louis, Mo.
 Bismarck, N. D.
 Corvallis, Ore.
 St. Louis, Mo.
 San Antonio, Texas
 Waterbury, Vt.
 Buffalo, N. Y.
 Cincinnati, Ohio
 Staunton, Va.

560 kilocycles

KFDM ak 500 (1)
 KLZ ak 1000 C (2.5)
 KTAB ak 1000
 KWTO ak 5000 D
 TGW ak 10000 565
 WFIL ae 1000 B
 WIND ak 1000 (2.5)
 WNOX ak 1000 C (2)
 WOAM ae 1000 C
 XEAO ak 250 (1.5)

Beaumont, Texas
 Denver, Colo.
 San Francisco, Calif.
 Springfield, Mo.
 Guatemala City
 Philadelphia, Pa.
 Gary, Ind.
 Knoxville, Tenn.
 Miami, Fla.
 Mexicali, B. C.

570 kilocycles

KGKO ak 500 C (1)
 KMTR ak 500
 KVI ak 1000
 WKBN ae 500 1C
 WMCA ak 500 A
 WNAK ak 1000 C (5)
 WOSU ak 750 1 (1)
 WSYR ak 250 B
 WWNC ae 1000 N

Wichita Falls, Texas
 Hollywood, Calif.
 Tacoma, Wash.
 Youngstown, Ohio
 New York, N. Y.
 Yankton, S. D.
 Columbus, Ohio
 Syracuse, N. Y.
 Asheville, N. C.

580 kilocycles

CHRC ak 100 F
 CKCL ak 100 F
 CKUA ak 500
 KMJ ak 1000 C
 KSAC ak 500 2 (1)
 WCHS ak 500 (1)
 WDBO ae 1000 C
 WIBW ak 1000 C2 (5)
 WTAG ae 500 R (1)

Quebec, Que.
 Toronto, Ont.
 Edmonton, Alta.
 Fresno, Calif.
 Manhattan, Kans.
 Charleston, W. Va.
 Orlando, Fla.
 Topeka, Kans.
 Worcester, Mass.

590 kilocycles

KHQ ak 1000 N (2.5)
 WEEL ak 1000 R
 WKZO ae 1000 D
 WOW ae 1000 R (5)
 XEPN ak 50000

Spokane, Wash.
 Boston, Mass.
 Kalamazoo, Mich.
 Omaha, Neb.
 Piedras Negras, Coah.

600 kilocycles

CFCF ae 400
 CJOR ak 500
 CMW ak 100
 CRCW z 1000 F
 FON z 250 609
 KFSD ae 1000 N
 WCAC ak 500 2
 WCAO ae 500 C (1)
 WICC ae 500 2 C (1)

Montreal, Que.
 Vancouver, B. C.
 Havana, Cuba
 Windsor, Ont.
 St. Pierre, Miquelon
 San Diego, Calif.
 Storrs, Conn.
 Baltimore, Md.
 Bridgeport, Conn.

WMT af 1000 B (2.5)
 WREC ak 1000 C (2.5)

Cedar Rapids, Iowa
 Memphis, Tenn.

610 kilocycles

KFRC ak 1000 C (5)
 KINY z 250 P
 WDAF ak 1000 R (5)
 WIP ae 500 A (1)
 WJAY ae 500
 XFX ak 500

San Francisco, Calif.
 Juneau, Alaska
 Kansas City, Mo.
 Philadelphia, Pa.
 Cleveland, Ohio
 Mexico City, D. F.

620 kilocycles

KGW ak 1000 N (5)
 K TAR ae 1000 N
 WFLA ae 1000 Na
 WHJB ak 250 (.5)
 WLWZ ak 500 C (1)
 WSUN ae 1000 Na (1)
 WTMJ ae 1000 N (5)

Portland, Ore.
 Phoenix, Ariz.
 Clearwater, Fla.
 Greensburg, Pa.
 Bangor, Maine
 St. Petersburg, Fla.
 Milwaukee, Wis.

630 kilocycles

CFCY ae 1000 F
 CJGX ak 500 F
 CKOV ak 100 F
 KFRU ak 500 1 (1)
 KGFY ak 200 D
 WGBF ae 500 1
 WMAL ak 250 B (5)
 WOS ak 500 1D
 WPRO ak 250 A
 XEZ z 500 ..

Char't'w'n, P.E.I.
 Yorkton, Sask.
 Kelowna, B. C.
 Columbia, Mo.
 Pierre, S. D.
 Evanville, Ind.
 Washington, D. C.
 Jefferson City, Mo.
 Providence, R. I.
 Merida, Yuc.

640 kilocycles

CMBY z 125
 KFI ak 50000 N
 WAU ae 500
 WOI ae 5000 D
 XEOX ak 250

Havana, Cuba
 Los Angeles, Calif.
 Columbus, Ohio
 Ames, Iowa
 Saltillo, Coah.

650 kilocycles

WSM ae 50000 N

Nashville, Tenn.

660 kilocycles

CMCX z 250
 WAAW ak 500 D
 WEA F ak 50000 R

Havana, Cuba
 Omaha, Neb.
 New York, N. Y.

670 kilocycles

WMAQ ck 50000 N

Chicago, Ill.

680 kilocycles

CMCO z 250
 KFEQ ae 2500 D
 KPO ak 50000 N
 VAS akn 2000 685
 VOWR ck 500 681
 WPTF ae 1000 dnN (5)

Havana, Cuba
 St. Joseph, Mo.
 San Francisco, Calif.
 Glace Bay, N. S.
 St. John's, Nfld.
 Raleigh, N. C.

690 kilocycles

CFRB ae 10000 C
 CJCJ ak 100 F
 NAA akn 1000
 XET ck 500

Toronto, Ont.
 Calgary, Alta.
 Arlington, Va.
 Monterrey, N. L.

700 kilocycles

RDN z 500 706
 WLW ak 500000 N

San Salvador, E. S.
 Cincinnati, Ohio

INDEX BY FREQUENCIES

710 kilocycles

KMPC ae 500
 KPCB ae 250
 WOR ak 50000
 XEN ak 1000 711

Beverly Hills, Calif
 Seattle, Wash.
 Newark, N. J.
 Mexico City, D. F.

720 kilocycles

WGN ck 50000

Chicago, Ill.

730 kilocycles

CPPL ak 100 F
 CJCA ah 1000 F
 CKAC ak 5000 C
 CMAF ak 250
 XEBC ak 5000

London, Ont.
 Edmonton, Alta.
 Montreal, Que.
 Havana, Cuba
 Agua Caliente, L. C.

740 kilocycles

KMMJ ae 1000 D
 KTRB ak 250 D
 WHEB ak 250 D
 WSB ah 50000 N
 XELC z 100

Clay Center, Neb.
 Modesto, Calif.
 Portsmouth, N. H.
 Atlanta, Ga.
 Mexico City, D. F.

750 kilocycles

CMCW dk 117
 KGU aj 2500 N
 WJR ak 1000 B

Havana, Cuba
 Honolulu, T. H.
 Detroit, Mich.

760 kilocycles

CMJK ak 150
 KXA ae 250 (.5)
 WBAL ae 10000 BSy
 WEW ae 1000 D
 WJZ ck 50000 BSy
 XEOK z 2500 765

Camaguey, Cuba
 Seattle, Wash.
 Baltimore, Md.
 St. Louis, Mo.
 New York, N. Y.
 Tijuana, L. C.

770 kilocycles

CMBS ak 130
 KFAB ae 10000 CSy
 WBBM ae 50000 CSy

Havana, Cuba
 Lincoln, Neb.
 Chicago, Ill.

780 kilocycles

CHWK ak 100 F
 CKSO z 1000 F
 KELW ae 500 2
 KFDY ae 1000 D
 KFOD ck 250
 KGHJ ak 1000 N (2.5)
 KTM ak 500 2 (1)
 WEAN ae 500 C
 WMC aj 1000 N (2.5)
 WTRAR ae 500 N (1)
 XEYZ z 10000

Chilliwack, B. C.
 Sudbury, Ont.
 Burbank, Calif.
 Brookings, S. D.
 Anchorage, Alaska
 Billings, Mont.
 Los Angeles, Calif.
 Providence, R. I.
 Memphis, Tenn.
 Norfolk, Va.
 Mexico City, D. F.

790 kilocycles

CMOA z 72
 KGO ak 7500 N
 WGY ak 50000 R

Havana, Cuba
 San Francisco, Calif.
 Schenectady, N. Y.

800 kilocycles

WBAP ak 50000 Na
 WFAA ak 50000 Na
 WTBO ae 250 D

Fort Worth, Tex.
 Dallas, Tex.
 Cumberland, Md.

810 kilocycles

CMCF ak 250 815
 CMHW z 100
 WCCO ae 50000 C
 WNYC ak 1000 N
 XFC z 350

Havana, Cuba
 Cienfuegos, Cuba
 Minneapolis, Minn
 New York, N. Y.
 Aguascalientes, Ags.

820 kilocycles

WHAS aj 50000 C
 XETW dk 500

Louisville, Ky.
 Mexico City, D. F.

830 kilocycles

CMC ae 500 835
 KOA ak 50000 N
 WEUU ak 1000 D
 WHDH ae 1000 Dn A
 WRUF ae 5000 Dn

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

840 kilocycles

CFOC ak 1000 F
 CMQ z 500
 CRCT ak 5000 F
 VOGY ak 400
 XEP z 500
 XEXX z 500 845

Saskatoon, Sask.
 Havana, Cuba
 Toronto, Ont.
 St. John's, Nfld.
 Mexico City, D. F.
 Mexico City, D. F.

850 kilocycles

KIEV aj 250 D
 TIEP z 500
 WESG ak 1000
 WWL ae 10000
 WWPA z 250 DP

Glendale, Calif.
 San Jose, C. R.
 Elmira, N. Y.
 New Orleans, La.
 Clarion, Pa.

860 kilocycles

WABC ae 50000 C
 WHB ae 1000 D
 XEMO ak 2500 865

New York, N. Y.
 Kansas City, Mo.
 Tijuana, B. C.

870 kilocycles

WENR ak 50000 Na
 WLS ae 50000 Na

Chicago, Ill.
 Chicago, Ill.

880 kilocycles

CFJC ak 100 F
 CRCO ak 1000 F
 KFKA ak 500 2 (1)
 KLX ae 1000
 KPOF ak 500 2
 WCOO ae 500 (1)
 WGBI ae 500 1
 WPHR z 500 D
 WQAN ae 250 1
 WSUI ae 500 (1)

Kamloops, B. C.
 Ottawa, Ont.
 Greeley, Colo.
 Oakland, Calif.
 Denver, Colo.
 Meridian, Miss.
 Scranton, Pa.
 Petersburg, Va.
 Scranton, Pa.
 Iowa City, Iowa

890 kilocycles

CJIC z 100 D
 KARK ak 250 (.5)
 KFNF ak 500 2 (1)
 KSEI ck 250 (.5)
 KUSD ae 500 2
 WBAA ak 1000 D
 WILL ak 1000
 WGST ach 250 C (1)
 WJAR ae 500 R
 WMMN ae 500 (1)
 XEW ak 50000

S. Ste. Marie, Ont.
 Little Rock, Ark.
 Shenandoah, Iowa
 Pocatello, Idaho
 Vermillion, S. D.
 W. Lafayette, Ind.
 Urbana, Ill.
 Atlanta, Ga.
 Providence, R. I.
 Fairmont, W. Va.
 Mexico City, D. F.

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900 kilocycles

KGBU ak 500
KHJ ae 1000 C (5)
WBEN ae 1000 R
WFMD z 500 DP
WJAX aeh 1000 N
WKY ae 1000 N
WLBL ak 2500 D
WMFI z 500 DP
WTAD ak 500 D

Ketchikan, Alaska
Los Angeles, Calif.
Buffalo, N. Y.
Frederick, Md.
Jacksonville, Fla.
Oklahoma City, Ok.
Stevens Point, Wis.
New Haven, Conn.
Quincy, Ill.

910 kilocycles

CJAT ak 250 F
CRMC ak 5000 F
XENT ck 60000

Trail, B. C.
Montreal, Que.
Nuevo Laredo, Tams.

920 kilocycles

CMX ae 650
HHK ae 1000
KFEL ak 500 2
KOMO ak 1000 N
KPRC ae 1000 N (5)
KVOD ak 500 2
WAFF ak 500 D
WBOS ae 500 D
WPEN ak 250 (.5) 1
WRAX ak 250 1 (.5)
WSPA ae 1000 D
WWJ ak 1000 R
XEAA z 200
XEFE z 250

Havana, Cuba
Port-au-Prince, Haiti
Denver, Colo.
Seattle, Wash.
Houston, Texas
Denver, Colo.
Chicago, Ill.
Babson Park, Mass.
Philadelphia, Pa.
Philadelphia, Pa.
Spartanburg, S. C.
Detroit, Mich.
Mexicali, B. C.
Nuevo Laredo, Tams.

930 kilocycles

CFAC ak 100 F
CFCH ak 100 F
CFLC ae 100 F
CHNS ae 1000 F
CKPC ae 100 F
CKPR ak 100 F
KGBZ ak 1000 2 (2.5)
KMA ak 1000 2 (2.5)
KROW ak 500 (1)
TIRH z 50
WBRC ak 1000 C
WDBJ ae 1000 C

Calgary, Alta.
North Bay, Ont.
Prescott, Ont.
Halifax, N. S.
Brantford, Ont.
Fort William, Ont.
York, Neb.
Shenandoah, Iowa
Oakland, Calif.
San Jose, C. R.
Birmingham, Ala.
Roanoke, Va.

940 kilocycles

CMBC de 195
CMKM z 100
KGIN ak 1000 C (5)
VOAS ak 100
WAAT ae 500 D
WAVE ae 1000 N
WGSB ae 1000 R (2.5)
WDAY ae 1000 N (5)
WHA ak 2500 D
XEFO ak 5000

Havana, Cuba
Manzanillo, Cuba
Portland, Ore.
St. John's, Nfld.
Jersey City, N. J.
Louisville, Ky.
Portland, Maine
Fargo, N. D.
Madison, Wis.
Mexico City, D. F.

950 kilocycles

CRCS ak 100 F
KFWB ak 1000 (2.5)
KHSL z 250 DP(5)
KMBC ak 1000 C
VONF ak 5000
WRC ae 500 R (1)

Chicoutimi, Que.
Hollywood, Calif.
Chico, Calif.
Kansas City, Mo.
St. John's, Nfld.
Washington, D. C.

960 kilocycles

CKY ak 15000 F
CMCD ah 180
CMJL z 50
XEAM z 50
XEAW ak 10000

Winnipeg, Man.
Havana, Cuba
Camaguey, Cuba
Nuevo Laredo, Tams.
Reynosa, Tams.

970 kilocycles

KJR z 5000 N
WCLF ae 1500 B
WIBG ak 100 D

Seattle, Wash.
Chicago, Ill.
Glenside, Pa.

980 kilocycles

KDKA bk 50000 B

Pittsburgh, Pa.

990 kilocycles

WBZ ak 50000 BSy
WBZA ak 1000 BSy
XEK ak 100
XES dk 250

Boston, Mass.
Springfield, Mass.
Mexico City, D. F.
Tampico, Tams.

1000 kilocycles

CMBZ ak 120
KFVD ak 250 Dn
TIGH z 500
WHO ak 50000 R

Havana, Cuba
Los Angeles, Calif.
San Jose, C. R.
Des Moines, Iowa

1010 kilocycles

CHML aei 50 F
CHWC ak 500 3F
CKGD ak 100
CKCK ak 500 3F
CKCO z 100
CKIC ak 50
CKWX ak 100 F
CMJG z 50
KGGF ak 1000 2
KOW ae 1000
TIGA z 30 1014
WHN ae 1000
WIS ae 1000 N (2.5)
WNAD ae 1000 2 (1)
XEAF z 250
XEU ak 250

Hamilton, Ont.
Regina, Sask.
Vancouver, B. C.
Regina, Sask.
Ottawa, Ont.
Wolfville, N. S.
Vancouver, B. C.
Camaguey, Cuba
Coffeyville, Kans.
San Jose, Calif.
Cartago, C. R.
New York, N. Y.
Columbia, S. C.
Norman, Okla.
Nogales, Sonora
Veracruz, Vera.

1020 kilocycles

KYW ak 10000 R
XEJ ak 1250

Philadelphia, Pa.
Juarez, Chih.

1030 kilocycles

CFGN ak 10000 F
CKLW ae 5000 C
CMCY ak 1000
XEB ak 10000

Calgary, Alta.
Windsor, Ont.
Havana, Cuba
Mexico City, D. F.

1040 kilocycles

CMGH ak 15
KRLD ae 10000 C
KWJJ ak 500
WKAR ak 1000 D
WTIC ak 50000 R

Matanzas, Cuba
Dallas, Texas
Portland, Ore.
East Lansing, Mich.
Hartford, Conn.

1050 kilocycles

CFGO ak 100 F
CRCK z 1000 F
KFBI ak 5000 Dn
KNX ak 50000
TIFA z 75

Chatham, Ont.
Quebec, Que.
Abilene, Kans.
Hollywood, Calif.
San Jose, C. R.

1060 kilocycles

CMK ae 1500
KTHS ae 10000 N
VOAC z 40 1065
WBAL ae 10000 B
WJAG ak 1000 D
XEA ak 125

Havana, Cuba
Hot Springs, Ark.
St. John's, Nfld.
Baltimore, Md.
Norfolk, Neb.
Guadalajara, Jal.

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1070 kilocycles

CMHA z 50
 KJBS ak 500 Dn
 WCAZ dk 100 D
 WDZ ak 100 D
 WTAM ck 50000 R

Sagua la Grande, C.
 San Francisco, Calif.
 Carthage, Ill.
 Tuscola, Ill.
 Cleveland, Ohio

1080 kilocycles

WBT ae 50000 C
 WCBD ak 5000 1Dny
 WMBI ae 5000 1Dn
 XEMA z 50

Charlotte, N. C.
 Waukegan, Ill.
 Chicago, Ill.
 Tampico, Tams.

1090 kilocycles

KMOX ak 50000 C

St. Louis, Mo.

1100 kilocycles

CRCV ak 1000 F
 KGDM ak 1000 D
 KWKH ak 10000 C
 TIRC ak 75
 WLWL ae 5000 1
 WPG ak 5000 1C
 XEFG ak 250 1105

Vancouver B. C.
 Stockton, Calif.
 Shreveport, La.
 San Jose, C. R.
 New York, N. Y.
 Atlantic City, N. J.
 Mexico City, D. F.

1110 kilocycles

CMCO z 150
 KSOO ak 2500 Dn
 WRVA ae 5000 N
 XELO z 10000

Havana, Cuba
 Sioux Falls, S. D.
 Richmond, Va.
 Piedras Negras, Co.

1120 kilocycles

CHLP z 100
 CHSJ ae 100 F
 CKOC ae 500 F (1)
 CKX ak 100 F
 CMGF ak 100
 KFIO ak 100 D
 KFSG ag 1000 a
 KRKD ae 1000 a (2.5)
 KRSC ck 100 D
 WDEL ak 250 (.5)
 WSNL ak 250 (1)
 WMFH z 500 DP
 WTAW ae 500

Montreal, Que.
 St. John, N. B.
 Hamilton, Ont.
 Brandon, Man.
 Matanzas, Cuba
 Spokane, Wash.
 Los Angeles, Calif.
 Los Angeles, Calif.
 Seattle, Wash.
 Wilmington, Del.
 Milwaukee, Wis.
 Boston, Mass.
 College Station, Tex.

1130 kilocycles

CMJI ak 45
 KSL ae 50000 C
 WJJD ak 20000 Dn
 WOV ag 1000 D

Ciego de Avila, Cuba
 Salt Lake City, Utah
 Chicago, Ill.
 New York, N. Y.

1140 kilocycles

CMBG z 325
 KVOO ak 25000 1N
 WAPI ae 5000 1N

Havana, Cuba
 Tulsa, Okla.
 Birmingham, Ala.

1150 kilocycles

CMJF z 200
 WHAM ae 50000 B
 XEH ak 250
 XEWZ z 100

Camaguey, Cuba
 Rochester, N. Y.
 Monsterey, N. L.
 Mexico City, D. F.

1160 kilocycles

WOWO ae 10000 1C

Fort Wayne, Ind.

WWVA ak 5000 1C
 XED ck 500
 XEFL z 5000 P

Wheeling, W. Va.
 Guadalajara, Jal.
 Tijuana, B. C.

1170 kilocycles

CMBD z 163
 WCAU ae 50000 C

Havana, Cuba
 Philadelphia, Pa.

1180 kilocycles

CMJO ak 50
 KEX ak 5000 2N
 KOB ae 10000 2
 VE9EK ak 10 1185
 WDBGY ak 1000 D (5)
 WINS ae 1000
 WMAZ ak 1000
 XEFA z 500

Ciego de Avila, Cuba
 Portland, Ore.
 Albuquerque, N. M.
 Montmagny, Que.
 Minneapolis, Minn.
 New York, N. Y.
 Macon, Ga.
 Mexico City, D. F.

1190 kilocycles

HJZ z 15 1195
 WATR ak 100 D
 WOAI ak 50000 N
 WSAZ ak 1000

Santo Domingo, D. R.
 Waterbury, Conn.
 San Antonio, Texas.
 Huntington, W. Va.

1200 kilocycles

CHAB ak 100 F
 CKTB ak 100 F
 CMGJ ak 500
 KADA ak 100 D
 KBTM ak 100 D
 KFJB ak 100 (.25)
 KFJD ae 100 (.25)
 KFXJ ak 100 (.25)
 KGDE ak 100 (.25)
 KGEK ak 100
 KGFI ae 100
 KGHJ ak 100 (.25)
 KMLB ak 100
 KOOS ae 250 D
 KSUN ck 100 D
 KVOS ak 100
 KVG ak 100 C
 WABI ak 100
 WAIM z 100
 WBBZ ak 100
 WBNO ck 100 1
 WCAT ak 100 D
 WCAX ak 100
 WCLO ak 100
 WFAM ak 100 8
 WFBE ak 100 (.25)
 WIBC ak 100 2
 WIBY ak 100 (.25)
 WIBX ak 100 (.3) C
 WIL ak 100 (.25)
 WJBC ak 100 6
 WJBL ae 100 6
 WJBW ak 100 1
 WKBO ak 100 3 (.25)
 WKJC ae 100 3 (.25)
 WLVA ak 100 (.25)
 WMPC ak 100 (.25)
 WRRL ak 100
 WWAE ae 100 8
 10-AK ak 15
 10-BP ak 25
 z 100 PD

Moose Jaw, Sask.
 St. Catharines, Ont.
 Havana, Cuba
 Ada, Okla.
 Jonesboro, Ark.
 Marshalltown, Iowa
 Nampa, Idaho
 Grand Junction, Col.
 Fergus Falls, Minn.
 Sterling, Colo.
 Los Angeles, Calif.
 Little Rock, Ark.
 Monroe, La.
 Marshfield, Ore.
 Lowell, Ariz.
 Bellingham, Wash
 Stockton, Calif.
 Bangor, Maine
 Anderson, S. C.
 Ponca City, Okla.
 New Orleans, La.
 Rapid City, S. D.
 Burlington, Vt.
 Janesville, Wis.
 South Bend, Ind.
 Cincinnati, Ohio
 Canton, Ohio
 Green Bay, Wis.
 Utica, N. Y.
 St. Louis, Mo.
 Bloomington, Ill.
 Decatur, Ill.
 New Orleans, La.
 Harrisburg, Pa.
 Lancaster, Pa.
 Lynchburg, Va.
 Lapeer, Mich.
 Columbus, Ga.
 Hammond, Ind.
 Stratford, Ont.
 Wingham, Ont.
 High Point, N. C.

1210 kilocycles

CHNC ak 100 F
 CJCU z 50
 CKBI ak 100 F
 CKCH ak 100 F
 CKMC ak 50

New Carlisle, Que.
 Aklavik, N. W. T.
 Prince Albert, Sask.
 Hull, Que.
 Cobalt, Ont.

INDEX BY FREQUENCIES

CMHI	ak	150	.....	Santa Clara, Cuba
KASA	ck	100	.....	Elk City, Okla.
KDLR	ak	100	.....	Devils Lake, N. D.
KFJL	ak	100	.....	Klamath Falls, Ore.
KFOR	ak	100	(.25)C	Lincoln, Neb.
KFPW	ak	100	.....	Fort Smith, Ark.
KFVS	ae	100	6 (.25)	Cape Girardeau, Mo.
KFXM	ak	100	9	San Bernardino, Cal.
KGY	ak	100	.....	Olympia, Wash.
KIEM	ak	100	.....	Eureka, Calif.
KIUL	z	100	P	Garden City, Kans.
KPPC	ak	50	9	Pasadena, Calif.
KVSO	z	100	DP	Ardmore, Okla.
KWEA	z	100	.....	Shreveport, La.
KWTN	ak	100	.....	Watertown, S. D.
WALR	ak	100	.....	Zanesville, Ohio
WBAX	ae	100	1	Wilkes Barre, Pa.
WBBL	ak	100	S	Richmond, Va.
WBRB	ak	100	3	Red Bank, N. J.
WCBS	ak	100	.....	Springfield, Ill.
WCOL	ak	100	.....	Columbus, Ohio
WCRW	ae	100	4	Chicago, Ill.
WEBQ	ae	100	6 (.25)	Harrisburg, Ill.
WEDC	ae	100	4	Chicago, Ill.
WFAS	ak	100	3	White Plains, N. Y.
WGBB	ae	100	3	Freeport, N. Y.
WGCM	ae	100	(.25)	Mississippi City
WGNV	ak	100	3	Chester, N. Y.
WHBF	ak	100	(.25)	Rock Island, Ill.
WHBU	ak	100	(.25)	Anderson, Ind.
WIBU	ak	100	(.25)	Poynette, Wis.
WJBY	ak	100	.....	Gadsden, Ala.
WJEL	ah	100	D	Hagerstown, Md.
WJIM	z	100	(.25)	Lansing, Mich.
WJW	ak	100	.....	Akron, Ohio
WKOK	ak	100	1	Sunbury, Pa.
WMBG	ak	100	C (.25)	Richmond, Va.
WMFG	z	100	P	Hibbing, Minn.
WMFN	z	100	P	Clarksdale, Miss.
WOCL	ak	50	.....	Jamestown, N. Y.
WOMT	ae	100	.....	Manitowoc, Wis.
WPAX	ae	100	D	Thomasville, Ga.
WSBC	ae	100	4	Chicago, Ill.
WSIX	ak	100	.....	Springfield, Tenn.
WSOC	ak	100	N (.25)	Charlotte, N. C.
WTAX	ak	100	.....	Springfield, Ill.
XEE	z	50	.....	Durango, Dgo.
XEFV	ak	100	.....	Juarez, Chih.
XETH	ak	100	.....	Puebla, Pue.

1220 kilocycles

CMJE	z	50	.....	Camaguey, Cuba
KFKU	ae	1000	a	Lawrence, Kas.
KTW	ak	1000	S2	Seattle, Wash.
KWSC	ae	1000	2 (5)	Pullman, Wash.
WCAD	ak	500	D	Canton, N. Y.
WCAE	ak	1000	R	Pittsburgh, Pa.
WDAE	ae	1000	C (2.5)	Tampa, Fla.
WREN	ak	1000	Ba(5)	Lawrence, Kas.
XETF	z	12	.....	Veracruz, Ver.

1230 kilocycles

CJOC	ak	100	F	Lethbridge, Alta.
CMGB	ak	112	.....	Havana, Cuba
KGBX	ak	500	.....	Springfield, Mo.
KGGM	ak	250	(5)	Albuquerque, N. M.
KYA	ae	1000	N	San Francisco, Calif.
WFBM	ae	1000	C	Indianapolis, Ind.
WNAC	ak	1000	C (2.5)	Boston, Mass.
XEFJ	ak	100	.....	Monterrey, N. L.

1240 kilocycles

CJCB	ak	1000	F	Sydney, N. S.
CMHB	z	30	.....	San Spiritus, Cuba
KGCU	ak	250	1	Mandan, N. D.
KLPM	ak	250	1	Minot, N. D.
KTAT	ak	1000	C	Fort Worth, Texas
KTFI	ae	1000	.....	Twin Falls, Idaho
WKAO	ae	1000	.....	San Juan, P. R.

WXYZ	ak	1000	.....	Detroit, Mich.
XEAI	z	100	.....	Mexico City, D. F.
XEKL	z	500	.....	Leon, Guan.
XELA	z	50	.....	Saltillo, Coah.

1250 kilocycles

CMCG	z	162	1255	Havana, Cuba
CMCK	z	150	.....	Santiago, Cuba
KFOK	ae	1000	.....	Long Beach, Calif.
WCAL	ah	1000	2 (2.5)	Northfield, Minn.
WDSU	ak	1000	C	New Orleans, La.
WHBI	ak	1000	a (2.5)	Newark, N. J.
WLB	ak	1000	2	Minneapolis, Minn.
WNEW	ae	1000	a (2.5)	Newark, N. J.
WTCN	ak	1000	2 (5)	Minneapolis, Minn.

1260 kilocycles

CFRN	ak	100	.....	Edmonton, Alta.
KGVO	ak	1000	.....	Missoula, Mont.
KOIL	ak	1000	B (2.5)	Council Bluffs, Iowa
KPAC	ak	500	D	Port Arthur, Texas
KRGV	ak	500	.....	Weslaco, Texas
KUOA	ak	1000	D	Fayetteville, Ark.
KVOA	ak	500	.....	Tucson, Ariz.
WHIO	ae	1000	R	Dayton, Ohio
WNBX	ak	1000	D	Springfield, Vt.
WTOC	ae	1000	C	Savannah, Ga.

1270 kilocycles

CMGP	z	150	.....	Havana, Cuba
CMHD	dk	250	.....	Calhoun, Cuba
HIX	ak	1000	.....	Santo Domingo, D. R.
KGCA	ak	100	2D	Decorah, Iowa
KOL	ae	1000	C (2.5)	Seattle, Wash.
KVOR	ae	1000	C	Colorado Spgs., Colo.
KWLC	ak	100	2D	Decorah, Iowa
WASH	ak	500	a	Grand Rapids, Mich.
WBR	ae	500	R	Baltimore, Md.
WJDX	ae	1000	N (2.5)	Jackson, Miss.
WOOD	ak	500	a	Grand Rapids, Mich.
XEG	z	500	.....	Ensenada, B. C.
XFB	ak	1000	.....	Jalapa, Ver.

1280 kilocycles

KFBB	ae	1000	(2.5)	Great Falls, Mont.
WCAM	ae	500	1	Camden, N. J.
WCAP	ae	500	1	Asbury Park, N. J.
WDOE	ae	1000	C (5)	Chattanooga, Tenn.
WIBA	ae	1000	N	Madison, Wis.
WORC	ak	500	C	Worcester, Mass.
WRR	ak	500	.....	Dallas, Texas
WTNJ	ak	500	1 A	Trenton, N. J.
XEMX	z	12	.....	Mexico City, D. F.

1290 kilocycles

KDYL	ak	1000	N	Salt Lake City, Utah
KLCN	z	100	D	Blytheville, Ark.
KTRH	ak	500	C (5)	Houston, Texas
WEBC	ae	1000	N (2.5)	Superior, Wis.
WJAS	ak	1000	C (2.5)	Pittsburgh, Pa.
WNBZ	z	100	D	Saranac Lake, N. Y.
WNEL	ak	500	.....	San Juan, P. R.

1300 kilocycles

CMKJ	z	20	.....	Guantanamo, Cuba
HIZ	z	10	.....	Santo Domingo, D. R.
KALE	ak	500	3C	Portland, Ore.
KFAC	ak	1000	.....	Los Angeles, Calif.
KFH	ak	1000	C2	Wichita, Kans.
KFJR	ag	500	3	Portland, Ore.
WBRR	ae	1000	1	Brooklyn, N. Y.
WEVD	ak	1000	1	New York, N. Y.
WFAB	ae	1000	1	New York, N. Y.
WFBC	ak	1000	(5)	Greenville, S. C.

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WHAZ ae 500 1
WIOD ae 1000 N

Troy, N. Y.
Miami, Fla.

WDRC ae 1000 C (2.5)
WSAI ak 1000 R (2.5)
WTAQ ae 1000 1

Hartford, Conn.
Cincinnati, Ohio
Eau Claire, Wis.

1310 kilocycles

CHCK ak 50
CJKL z 100
CJLS z 100
CKCV ak 50 F
KCRJ ak 100 D
KFBK ak 100 C
KFPL dkh 100 (.25)
KFFR ak 100 (.25)
KFYO ak 100 (.25)
KGCX ak 100 (.25)
KGEZ aj 100
KGFW ak 100
KIT z 100 (.25)
KIUJ z 100
KMED ck 100 (.25)
KRMD ak 100
KROC z 100 P
KTSM ak 100
KXRO ak 100
WAML ak 100
WBEO ae 100
WBOW ak 100
WBRE ak 100
WCLS ae 100
WCMI z 100 DP
WDAH ak 100 S
WEBR ae 100 (.25)
WEXL ak 50
WFBG ae 100 3
WDFD am 100
WGH ae 100 (.25)
WHAT ak 100 4
WJAC ae 100 3
WLBC ak 50 6 (.1)
WLNH ak 100 D
WMBO ak 100
WMFF z 100 D
WNBH ae 100 (.25) C
WOL ae 100 (.25) A
WRAW ak 100
WROL ak 100
WSAJ ae 100
WSGN ak 100 (.25)
WSJS ak 100 C
WTAL z 100 P
WTEL ah 100 4
WTJS ak 100 (.25)
WTRC ak 50 6 (1.1)
XEAJ z 15
XEC z 50
XECW z 10
XEFC ak 100
XEFW ak 250
XELM z 15
XETB z 125
XEX ak 125
..... z 100 P

Charlottetown, P.E.I.
Kirkland Lake, Ont
Yarmouth, N. S.
Quebec, Que.
Jerome, Ariz.
Sacramento, Calif.
Dublin, Texas
Oklahoma City, Ok.
Lubbock, Texas
Wolf Point, Mont.
Kalispell, Mont.
Kearney, Neb.
Yakima, Wash.
Santa Fe, N. Mex.
Medford, Ore.
Shreveport, La.
Rochester, Minn.
El Paso, Texas
Aberdeen, Wash.
Laurel, Miss.
Marquette, Mich.
Terre Haute, Ind.
Wilkes Barre, Pa.
Joliet, Ill.
Ashland, Ky.
El Paso, Texas
Buffalo, N. Y.
Royal Oak, Mich.
Altoona, Pa.
Flint, Mich.
Newport News, Va.
Philadelphia, Pa.
Johnstown, Pa.
Muncie, Ind.
Laconia, N. H.
Auburn, N. Y.
Plattsburg, N. Y.
New Bedford, Mass.
Washington, D. C.
Reading, Pa.
Knoxville, Tenn.
Grove City, Pa.
Birmingham, Ala.
Winston-Salem, N.C.
Tallahassee, Fla.
Philadelphia, Pa.
Jackson, Tenn.
Elkhart, Ind.
Cazaca, Camp.
Tijuana, B. C.
Mexico City, D. F.
Merida, Yuc.
Tampico, Tams.
Mineral del Monte
Torreón, Coah.
Monterrey, N. L.
Lafayette, La.

1340 kilocycles

KFPY ak 1000 C
KGDY ak 250 D
KGNU ak 250
WCOA ak 500 C
WFEA ae 500 C (1)
WSPD ae 1000 C (2.5)
XFD z 250
.....

Spokane, Wash.
Huron, S. D.
Dodge City, Kans.
Pensacola, Fla.
Manchester, N. H.
Toledo, Ohio
Orizaba, Ver.

1350 kilocycles

CMCA z 435
KIDO ak 1000 (2.5)
KWK ak 1000 B (5)
WAWZ ae 500 1 (1)
WBNX ae 250 1

Havana, Cuba
Boise, Idaho
St. Louis, Mo.
Zarephath, N. J.
New York, N. Y.

1360 kilocycles

CMJH ak 50
KGER ak 1000
KGR ak 1000 N (2.5)
WCSC ae 500 (1)
WFBL ak 1000 C (5)
WGES ae 500 1
WQBC ak 1000 D
WSBT ak 500 1

Ciego de Avila, Cuba
Long Beach, Calif.
Butte, Mont.
Charleston, S. C.
Syracuse, N. Y.
Chicago, Ill.
Vicksburg, Miss.
South Bend, Ind.

1370 kilocycles

CKCW z 100 F
CMGE z 300
KAST z 100 DP
KCRK ak 100 2 (2.5)
KELD z 100 P
KERN ak 100
KFGO ak 100
KFJM ak 100 (.25)
KFJZ ae 100
KFRO z 100 D
KGAR ae 100 (.25)
KGFQ bk 100 2
KGFL ak 100 4
KGKL ak 100 (.25)
KICA ak 100 4
KLUF z 100 (.25)
KMAC ak 100 5
KONO ak 100 5
KRE ak 100 (.25)
KRKO ak 50 1
KSLM z 100
KUJ ak 100
KVL ak 100 1
KWKC z 100
KWYO ak 100
WABY ak 100 A
WAGF ak 100 (.25)
WBTM ak 100 (.25)
WCBM ae 100 (.25) A
WDAS ae 100 (.25)
WGL ak 100 C
WHBQ ak 100
WHDF ak 100 (.25)
WIBM ak 100 (.25)
WJTL ae 100
WLLH ak 100 (.25)
WMBR ak 100 C
WMFD z 100 DP
WMFO z 100 DP
WOC z 100 C (2.5)
WPAY ak 100
WPFB ak 100
WQDM ae 100 D
WRAK ak 100 (.25)
.....

Moncton, N. B.
Cardenas, Cuba
Astoria, Ore.
Enid, Okla.
El Dorado, Ark.
Bakersfield, Calif.
Boone, Iowa
Grand Forks, N. D.
Fort Worth, Texas
Longview, Texas
Tucson, Ariz.
Oklahoma City, Ok.
Roswell, N. M.
San Angelo, Texas
Clovis, N. M.
Galveston, Texas
San Antonio, Texas
San Antonio, Texas
Berkeley, Calif.
Everett, Wash.
Salem, Ore.
Walla Walla, Wash.
Seattle, Wash.
Kansas City, Mo.
Sheridan, Wyo.
Albany, N. Y.
Dothan, Ala.
Danville, Va.
Baltimore, Md.
Philadelphia, Pa.
Fort Wayne, Ind.
Memphis, Tenn.
Calumet, Mich.
Jackson, Mich.
Atlanta, Ga.
Lowell, Mass.
Jacksonville, Fla.
Wilmington, N. C.
Decatur, Ala.
Davenport, Iowa
Pottsmouth, Ohio
Hattiesburg, Miss.
St. Albans, Vt.
Williamsport, Pa.

1320 kilocycles

CMCK z 100 P
CMOX z 250
KGHF ak 500
KGBM ak 250 C
KID ae 250 (.5)
KRNT ak 500 C (1)
WADC ae 1000 C (2.5)
WORK ak 1000
WSMB ak 1000 N

Havana, Cuba
Havana, Cuba
Pueblo, Colo.
Honolulu, T. H.
Idaho Falls, Idaho
Des Moines, Iowa
Akron, Ohio
York, Pa.
New Orleans, La.

1330 kilocycles

CMHK z 250
KGB ag 1000 C (2.5)
KMO ak 250
KSCJ aj 1000 1C (2.5)

Cruces, Cuba
San Diego, Calif.
Tacoma, Wash.
Stour City, Iowa

INDEX BY FREQUENCIES

WRDO ae 100 Augusta, Maine
 WRJN ak 100 Racine, Wis.
 WSVS ak 50 D Buffalo, N. Y.
 XEFZ ae 100 Mexico City, D. F.
 XEI ak 125 Morelia, Mich.
 XEZZ z 100 San Luis Potosi, SLP

1380 kilocycles

CMBX ak 171 Havana, Cuba
 CMJC z 150 Camaguey, Cuba
 KOH ak 500 C Reno, Nev.
 KOV ak 500 2 Pittsburgh, Pa.
 WALA ae 500 C (1) Mobile, Ala.
 WKBH ae 1000 LaCrosse Wis.
 WMFE z 250 PD New Britain, Conn.
 WSMK ak 200 C Dayton, Ohio

1390 kilocycles

CJRC ck 100 F Winnipeg, Man.
 HIH ak 15 1395 San Ped. de Macoris, DR
 KLRA ae 1000 C (2.5) Little Rock, Ark.
 KOY ae 500 (1) Phoenix, Ariz.
 WHK ae 1000 C (2.5) Cleveland, Ohio

1400 kilocycles

CMGC z 100 Matanzas, Cuba
 KLO ae 500 C Ogden, Utah
 KTUL ak 500 C(1) Tulsa, Okla.
 TGX ak 150 Guatemala City, Gt.
 WARD ae 500 2 Brooklyn, N. Y.
 WBBC ae 500 2 (1) Brooklyn, N. Y.
 WIRE ak 500 R (1) Indianapolis, Ind.
 WLTH ak 500 2 Brooklyn, N. Y.
 WVFW ak 500 2 Brooklyn, N. Y.

1410 kilocycles

CKFC ak 50 5 Vancouver, B. C.
 CKMO ag 100 5F Vancouver, B. C.
 CMCR z 122 Havana, Cuba
 KGRS ae 1000 1 (2.5) Amarillo, Texas
 WAAB ak 500 C Boston, Mass.
 WBCM ae 500 Bay City, Mich.
 WDAG ae 1000 1 (2.5) Amarillo, Texas
 WHBL ae 500 4 Sheboygan, Wis.
 WHIS ak 250 2(5) Bluefield, W. Va.
 WRBX ae 250 2 (5) Roanoke, Va.
 WROK ak 500 4 Rockford, Ill.
 WSFA ak 500 C (1) Montgomery, Ala.

1420 kilocycles

CKGB ak 100 Timmins, Ont.
 CKNC ak 100 F Toronto, Ont.
 CMCI z 30 Colon, Cuba
 KABC ak 100 San Antonio, Texas
 KABB z 100 D Aberdeen, S. Dak.
 KAPS ak 100 4 Portland, Ore.
 KCMC ak 100 Texarkana, Ark.
 KFIZ ak 100 Fond du Lac, Wis.
 KCFE ak 100 Shawnee, Okla.
 KGCC ak 100 San Francisco, Cal.
 KGIW ak 100 1 Alamosa, Colo.
 KGIX ak 100 P (2.5) Las Vegas, Nev.
 KIDW z 100 1 Lamar, Colo.
 KIUN z 100 P Pecos, Texas
 KORE ae 100 Eugene, Ore.
 KRLC z 100 Lewiston, Idaho
 KUMA ak 100 Yuma, Ariz.
 KWBG z 100 P Hutchinson, Kans.
 KXL ae 100 4 (2.5) Portland, Ore.
 WACO ak 100 C Waco, Texas
 WAGM ae 100 Presque Isle, Maine
 WAZL ak 100 2 Hazleton, Pa.
 WEED ak 100 3 Rocky Mount, N. C.
 WEHC ae 100 3 (2.5) Charlottesville, Va.

WEHS ak 100 a Cicero, Ill.
 WELL ak 100 Battle Creek, Mich.
 WGPC ak 100 Albany, Ga.
 WHDL ak 100 D Olean, N. Y.
 WHFC ae 100 a* Cicero, Ill.
 WILM aj 100 2 Wilmington, Del.
 WJBO z 100 Baton Rouge, La.
 WJMS ak 100 Ironwood, Mich.
 WKBI ak 100 a Cicero, Ill.
 WLAP ak 100 (2.5) Lexington, Ky.
 WLEF ak 100 Kansas City, Kans.
 WLEU z 100 (2.5) Erie, Pa.
 WMAS ak 100 C (2.5) Springfield, Mass.
 WMBC ae 100 (2.5) Detroit, Mich.
 WMBH ak 100 (2.5) Joplin, Mo.
 WMFJ z 100 P Daytona Beach, Fla.
 WNRA ak 100 D Muscle Shoals, Ala.
 WPAD ak 100 (2.5) Paducah, Ky.
 WPRP z 100 P (2.5) Ponce, P. R.
 WWC z 1000 P Spartanburg, S. C.
 XEAZ z 7 Guanajuato, Gto.
 XEFB ak 100 Monterrey, N. L.
 z 100 P Parkersburg, W. Va.

1430 kilocycles

CMJP ak 75 Moron, Cuba
 KECA ak 1000 (5) Los Angeles, Calif.
 KGNF ak 1000 D North Platte, Neb.
 KSO ae 250 B (5) Des Moines, Iowa
 WBNS ae 500 C (1) Columbus, Ohio
 WHEC ae 500 C (1) Rochester, N. Y.
 WHP ak 500 C (1) Harrisburg, Pa.
 WNBR ae 500 C (1) Memphis, Tenn.
 WOKO ae 500 C (1) Albany, N. Y.

1440 kilocycles

KDFN ak 500 Casper, Wyo.
 KLS ae 250 D Oakland, Calif.
 KXYZ ak 1000 Houston, Texas
 TIFS z 7.5 (1441) Cartago, C. R.
 WBIG ae 500 C (1) Greensboro, N. C.
 WBCA aj 500 a Allentown, Pa.
 WMBD ae 500 C (1) Peoria, Ill.
 WSAN aj 500 a Allentown, Pa.
 XEFI ae 250 Chihuahua, Chih.

1450 kilocycles

CFCT ae 75 Victoria, B. C.
 CHGS ae 50 F Summerside, P.E.I.
 KTBS ck 1000 N Shreveport, La.
 WGAR ak 500 B (1) Cleveland, Ohio
 WHOM ae 250 Jersey City, N. J.
 WSAR ae 250 Fall River, Mass.
 WTFI ak 500 Athens, Ga.

1460 kilocycles

CMKF z 30 Holquin, Cuba
 KSTP ae 10000 N (2.5) St. Paul, Minn.
 WJSV ak 10000 C Washington, D. C.

1470 kilocycles

KGA ak 5000 N (2.5) Spokane, Wash.
 WLAC ak 5000 C Nashville, Tenn.

1480 kilocycles

KOMA ak 5000 C Oklahoma City, Ok.
 WKBW ae 5000 C Buffalo, N. Y.

1490 kilocycles

WCKY ae 5000 B Covington, Ky.

INDEX BY LOCATIONS

1500 kilocycles

CMCN	z	162	.....
KDB	ak	100	C
KGFI	ak	100	(.25)
KGFK	ak	100	Y
KGKB	ak	100	.....
KGKY	ck	100	(.25)
KNOW	ak	100	.....
KOTN	ak	100	D
KPJM	ak	100	.....
KPLC	z	100	P
KPO	ak	100	(.25)
KREG	ak	100	.....
KXO	ae	100	.....
WCNW	ak	100	1 (.25)
WDNC	ak	100	C
WGAL	ae	100	(.25)
WHEF	z	100	(.25)
WJBK	ae	100	(.25)
WKBB	ae	100	(.25)
WKBV	ak	100	.....
WKBZ	ak	100	(.25)
WKEU	ak	100	.....

Havana, Cuba	.....
Santa Barbara, Calif.	.....
Corpus Christi, Tex.	.....
Moorhead, Minn.	.....
Tyler, Texas	.....
Scottsbluff, Neb.	.....
Austin, Texas	.....
Pine Bluff, Ark.	.....
Prescott, Ariz.	.....
Lake Charles, La.	.....
Wenatchee, Wash.	.....
Santa Ana, Calif.	.....
El Centro, Calif.	.....
Brooklyn, N. Y.	.....
Durham, N. C.	.....
Lancaster, Pa.	.....
Kosciusko, Miss.	.....
Detroit, Mich.	.....
E. Dubuque, Ill.	.....
Richmond, Ind.	.....
Muskegon, Mich.	.....
Griffin, Ga.	.....

WMBO	ae	100	1	Brooklyn, N. Y.
WMEX	ak	100	(.25) A	Boston, Mass.
WNBF	ae	100	(.25) C	Binghamton, N. Y.
WOPI	ae	100	.....	Bristol, Tenn.
WRDW	ak	100	.....	Augusta, Ga.
WRGA	ak	100	(.25)	Rome, Ga.
WSYB	ak	100	.....	Rutland, Vt.
WTMV	z	100	P	East St. Louis, Ill.
WWRL	ak	100	1 (.25)	Woodside, N. Y.
WWSW	ae	100	(.25)	Pittsburgh, Pa.
.....	z	100	P	St. Louis, Mo.

1510 kilocycles

CFRC	ak	100	.....	Kingston, Ont.
CKCR	ak	100	.....	Waterloo, Ont.

1530 kilocycles

WIXBS	z	1000	A	Waterbury, Conn.
W9XBY	z	1000	.....	Kansas City, Mo.

1550 kilocycles

W2XR	z	1000	.....	Long Isl. City, N. Y.
W6XAI	z	1000	.....	Bakersfield, Calif.

INDEX BY LOCATIONS

Frequency in kilocycles in second column. Night power in watts in third column. Net work affiliations in fourth column: C Columbia, R National Red, B National Blue, N National Red and Blue, F Canadian, A American.

ALABAMA				Hot Springs				Modesto				Pueblo			
Birmingham				KTHS	1060	10000	N	KTRB	740	250		KGHF	1320	500	
WAPI	1140	5000	N	Jonesboro				Oakland				Sterling			
WBRC	930	1000	C	KBTM	1200	100		KLS	1440	250		KGEK	1200	100	
WWSN	1310	100		Little Rock				KLX	880	1000		CONNECTICUT			
Decatur				KARK	890	250		KROW	930	1000		Bridgeport			
WMFO	1370	100		KGHI	1200	100		Pasadena			WICC	600	500	C	
Dothan				KLRA	1390	1000	C	KPPC	1210	50		Hartford			
WAGF	1370	100		Pine Bluff				KFBK	1310	100	C	WDRC	1330	1000	C
Gadsden				KOTN	1500	100		Sacramento				WTIC	1040	5000	R
WBJV	1210	100		Texasarkana				KFXM	1210	100		New Britain			
Mobile				KCMC	1420	100		San Bernardino				WMFE	1380	250	
WALA	1380	500	C	CALIFORNIA				San Diego				New Haven			
Montgomery				Bakersfield				KFSD	600	1000	N	WMFI	900	500	
WSFA	1410	500	C	KERN	1370	100	C	KGB	1330	1000	C	Storrs			
Muscle Shoals				W6XAI	1550	1000		San Francisco				WCAC	600	500	
WNRA	1420	100		Berkeley				KFRG	610	1000	C	Waterbury			
ALASKA				KRE	1370	100		KGCC	1420	100		WATR	1190	100	
Anchorage				Beverly Hills				KGO	790	7500	N	WIXBS	1530	1000	A
KFOD	780	250		KMPC	710	500		KJBS	1070	500		DELAWARE			
Juneau				Burbank				KPO	680	5000	N	Wilmington			
KINY	610	250		KELW	780	500		KTAB	560	1000		WDEL	1120	250	A
Ketchikan				Chico				KYA	1230	1000	N	WILM	1420	100	
KGBU	900	500		KHSL	950	250		San Jose			DISTRICT OF COLUMBIA				
ARIZONA				El Centro				KQW	1010	1000		Washington			
Jerome				KXO	1500	100		Santa Ana			WJSV	1460	1000	C	
KCRJ	1310	100		Eureka				KREG	1500	100		WMAL	630	250	B
Lowell				KIFM	1210	100		Santa Barbara			WOL	1310	100	A	
KSUN	1200	100		KJMF	580	1000	C	KDB	1500	100	C	WRC	950	500	R
Phoenix				Glendale				Stockton			FLORIDA				
KOY	1390	500		KIEV	850	250		KGDM	1100	1000		Clearwater			
KTAR	620	1000	N	Hollywood				KWG	1200	100	C	WFLA	620	1000	N
Prescott				KFWB	950	1000		COLORADO				Daytona Beach			
KPJM	1500	100		KMTR	570	1000		Alamosa			KVOR	1270	1000	C	
Tucson				KNX	1050	5000	0	Colorado Springs			Denver				
KGAR	1370	100		Long Beach				KFEL	920	500		Gainesville			
KVOA	1260	500		KFOX	1250	1000		KLZ	560	1000	C	WRUF	830	5000	
Yuma				KGER	1360	1000		KOA	830	5000	N	Jacksonville			
KUMA	1420	100		Los Angeles				KPOF	880	500		WJAX	900	1000	N
ARKANSAS				KECA	1430	1000		KVOD	920	500		WMBR	1370	100	C
Blytheville				KFCF	1300	1000		Grand Junction			Miami				
KLNC	1290	100		KFI	640	5000	N	KFJ	1200	100		WIOD	1300	1000	N
El Dorado				KFSG	1120	1000		KFKA	880	500		WQAM	560	1000	C
KELD	1370	100		KFVD	1060	250		Greeley			Orlando				
Fayetteville				KGJFJ	1200	100		KFA	880	500		WDBO	580	1000	C
KUOA	1260	1000		KHFJ	900	1000	C	Lamar			Pensacola				
Fort Smith				KRDK	1120	1000		KIDW	1420	100		WCOA	1340	500	C
KFPW	1210	100		KTM	780	500									

INDEX BY LOCATIONS

St. Petersburg WSUN 620 1000 N	Peoria WMBD 1440 500 C	Garden City KIUL 1210 100	Fall River WSAR 1450 250
Tallahassee WTAL 1310 100	Quincy WTAD 900 500	Hutchinson KWBG 1420 100	Lowell WLLH 1370 100
Tampa WDAE 1220 1000 C	Rockford WROK 1410 500	Kansas City WLBK 1420 100	New Bedford WNBH 1310 100 C
GEORGIA			
Albany WGPC 1420 100	Rock Island WHBF 1210 100	Lawrence KFKU 1220 1000	Springfield WBZA 990 1000 B
Athens WTFI 1450 500	Springfield WCBS 1210 100	Wren WREN 1220 1000 B	WMAA 1420 100 C
Atlanta WGST 890 500 C	WTAX 1210 100	Manhattan KSAC 580 500	Worcester WORC 1280 500 C
WGTL 1370 100	Tuscola WDZ 1070 100	Topeka WIBW 580 1000 C	WTAG 580 1000 R
WSB 740 50000 N	Urbana WILL 890 1000	Wichita KFH 1300 1000 C	MICHIGAN
Augusta WRDW 1500 100	Waukegan WCBW 1080 5000	KENTUCKY	
Columbus WRBL 1200 100	INDIANA		
Griffin WKUE 1500 100	Anderson WHBU 1210 100	Ashland WCMI 1310 100	Calumet WHDG 1370 100
Macon WMAZ 1180 1000	Eikhart WTRC 1310 50	Covington WCKY 1490 5000 B	Detroit WJBK 1500 100
WRGA 1500 100	Evansville WGBF 630 500	Lexington WLAP 1420 100	WJR 750 10000 B
Savannah WTOC 1260 1000 C	Fort Wayne WGL 1370 100 C	Louisville WAVE 940 1000 N	WMBC 1420 100
Thomasville WPAX 1210 100	WOWO 1160 10000 C	WHAS 820 50000 C	WWJ 920 1000 R
HAWAII			
Honolulu KGMB 1320 1000 C	Gary WIND 560 1000	Paducah WPAD 1420 100	WXYZ 1240 1000
KGU 750 2500 N	Hammond WWAE 1200 100	LOUISIANA	
IDAHO			
Boise KIDO 1350 1000	Indianapolis WFBM 1230 1000 C	Baton Rouge WJBO 1420 100	East Lansing WKAR 1040 1000
Idaho Falls KID 1320 250	WIRE 1400 500 R	Lafayette ... 1310 100	Filint WFDF 1310 100
Lewiston KRLC 1420 100	Muncie WLBC 1310 50	Lake Charles KPLC 1500 100	Grand Rapids WASH 1270 500
Nampa KFXD 1200 100	Richmond WKBV 1500 100	Monroe KMLB 1200 100	WOOD 1270 500
Pocatello KSEI 890 250	South Bend WFAM 1200 100	New Orleans WBNO 1200 100	Ironwood WJMS 1420 100
Twin Falls KTFI 1240 1000	WBSB 1360 500 C	WDSU 1250 1000 C	Jackson WIBM 1370 100
ILLINOIS			
Bloomington WJBC 1200 100	Terre Haute WBOV 1310 100	WJWB 1200 100	Kalamazoo WKZO 590 1000
Carthage WCAZ 1070 100	West Lafayette WBAW 890 1000	WSMB 1320 1000 N	Lansing WJLM 1210 100
Chicago	IOWA		
WAAF 920 500	Ames WOI 640 5000	WDL 850 10000	Lapeer WMPK 1200 100
WBBM 770 50000 C	Boone KFGQ 1370 100	Shreveport KRMJ 1310 100	Marquette WBEO 1310 100
WCFL 970 1500 B	Cedar Rapids WMT 600 1000 B	KTBS 1450 1000 N	Muskegon WKBY 1500 100
WGRW 1210 100	Council Bluffs KOIL 1260 1000 B	KWEA 1210 100	Royal Oak WEXL 1310 50
WEDC 1210 100	Davenport WOC 1370 100 C	KWKH 1100 10000 C	MINNESOTA
WENR 870 50000 N	Decorah KGCA 1270 100	MAINE	
WGES 1360 500	KWLC 1270 100	Augusta WRDO 1370 100	Fergus Falls KGDE 1200 100
WGN 720 50000	Des Moines KRNT 1320 500 C	Bangor WABI 1200 100	Hibbing WMFG 1210 100
WJJD 1130 20000	KSO 1430 250 B	WLBZ 620 500 C	Minneapolis WCCO 810 50000 C
WLS 870 50000 N	WHO 1000 50000 R	Portland WCSH 940 1000 R	WCOG 1180 1000
WMAQ 670 50000 N	MARYLAND		
WMBI 1080 5000	Iowa City WSUI 880 500	Baltimore	WDLB 1250 1000
WWSB 1210 100	Marshalltown KFJB 1200 100	WBAL 1060 10000 B	WTCN 1250 1000
MISSISSIPPI			
Cleere WEHS 1420 100	Shenandoah KFNF 890 500	WCAO 600 500 C	Moorhead KGFK 1500 100
WHFC 1420 100	KMA 930 1000	WCBM 1370 100 A	Northfield WCAL 1250 1000
WKBI 1420 100	Sioux City KSCJ 1330 1000 C	WFBZ 1270 500 R	Recheater KROC 1310 100
DELAWARE			
Decatur WJBL 1200 100	KANSAS		
East Dubuque WKBB 1500 100	Abilene KFBI 1050 5000	Cumberland WTBO 800 250	St. Paul KSTP 1460 10000 N
East St. Louis WTMV 1500 100	Coffeyville KGGF 1010 1000	Frederick WFMD 900 500	MISSISSIPPI
Harrisburg WEBQ 1210 100	Dodge City KGNO 1340 250	Hagerstown WJEJ 1210 100	Clarksdale WMFN 1210 100
Joliet WCLS 1310 100	MASSACHUSETTS		
		Babson Park WBSO 920 500	Hattiesburg WPFB 1370 100
		Boston	Jackson WJDX 1270 1000 N
		WAB 1410 500 C	Kosciusko WHEF 1500 100
		WBZ 990 50000 B	Laurel WAML 1310 100
		WEEI 590 1000 R	Meridian WCOC 880 500
		WHDH 830 1000 A	
		WMEX 1500 100 A	
		WMFH 1120 500	
		WNAC 1230 1000 C	

INDEX BY LOCATIONS

Mississippi City	Atlantic City	Rochester	Youngstown
WGMC 1210 100	WPG 1100 5000 C	WHAM 1150 5000 B	WKBN 570 500 C
Vicksburg	Camden	WHEC 1430 500 C	Zanesville
WQBC 1360 1000	WCAM 1280 500	Saranac Lake	WALR 1210 100
MISSOURI			
Cape Girardeau	Jersey City	WNBZ 1290 100	OKLAHOMA
KFVS 1210 100	WAAT 940 500	WGY 790 5000 R	Ada
Columbia	WHOM 1450 250	Schenectady	KADA 1200 100
KFRU 630 500	Newark	Syracuse	Ardmore
Jefferson City	WHBI 1250 1000	WFBL 1360 1000 C	KVSO 1200 100
WOS 630 500	WNEW 1250 1000 A	WSYR 570 250 B	Elk City
Joplin	WOR 710 50000	Troy	KASA 1210 100
WMBH 1420 100	Red Bank	WHAZ 1300 500	Enid
Kansas City	WBRB 1210 100	Utica	KCRC 1370 100
KMBC 950 1000 C	Trenton	WIBX 1200 100 C	Norman
KWKK 1370 100	WTNJ 1280 500 A	White Plains	WNAD 1010 1000
WDAF 610 1000 R	Zarephath	WFAS 1210 100	Oklahoma City
WHB 860 1000	WAWZ 1350 500	Woodside	KFXR 1310 100
W9XBY 1530 1000	NEW MEXICO		
St. Joseph	Albuquerque	WRWL 1500 100	KGFG 1370 100
KFEQ 680 2500	KGGM 1230 250	NORTH CAROLINA	
St. Louis	KOB 1180 10000	Asheville	KOMA 1480 5000 C
KFUO 550 500	Clovis	WNWC 570 1000 N	WKY 900 1000 N
KMOX 1090 50000 C	KICA 1370 100	Charlotte	Ponca City
KSD 550 1000 R	Roswell	WBT 1080 50000 C	WBBZ 1200 100
KWK 1350 1000 B	KGFL 1370 100	WSOC 1210 100 N	Shawnee
WEW 760 1000	Santa Fe	Durham	KGFF 1420 100
WIL 1200 100	KIUF 1310 100	WDNC 1500 100 C	Tulsa
1500 100	NEW YORK		
Springfield	Albany	Greensboro	KTUL 1400 500 C
KGBX 1230 500	WABY 1370 100	WBG 1440 500 C	KVOO 1140 25000 N
KWTO 560 5000	WOKO 1430 500 C	High Point	OREGON
MONTANA			
Billings	Raleigh	1200 100	Astoria
KGHL 780 1000 N	WPTF 680 1000 N	Rocky Mount	KAST 1370 100
Butte	WEED 1420 100	Wilmington	Corvallis
KGIR 1360 1000 N	WMFO 1370 100	Winston-Salem	KOAC 550 1000
Great Falls	WWSJ 1310 100 C	Bismarck	Eugene
KFBZ 1280 1000	WARD 1400 500	KFYR 550 1000 N	KORE 1420 100
Kallispell	WBBC 1400 500	Devils Lake	Klamath Falls
KGEZ 1310 100	WBRR 1300 1000	KDLR 1210 100	KFJI 1210 100
Missoula	WCNW 1500 100	Fargo	Marshfield
KGVO 1260 1000	WLTH 1400 500	WDAY 940 1000 N	KOOS 1200 250
Wolf Point	WMBQ 1500 100	Grand Forks	Medford
KGCX 1310 100	WVFW 1400 500	KFJM 1370 100	KMED 1310 100
NEBRASKA			
Clay Center	Buffalo	Mandan	Portland
KMMJ 740 1000	WBEN 900 1000 R	KGCC 1240 250	KALE 1300 500 C
Kearney	WEBR 1310 100	Minot	KBPS 1420 100
KGFW 1310 100	WGR 550 1000 C	KLPM 1240 250	KEX 1180 5000 N
Lincoln	WKBW 1480 5000 C	OHIO	KFJR 1300 500
KFAB 770 10000 C	WVS 1370 50	Akron	KGW 620 1000 N
KFOR 1210 100 C	Canton	WADC 1320 1000 C	KOIN 940 1000 C
Norfolk	WCAD 1220 500	WJW 1210 100	KWJ 1040 500
WJAG 1060 1000	Chester	Canton	KXL 1420 100
North Platte	WGNY 1210 100	WHBC 1200 100	PENNSYLVANIA
KGNF 1430 1000	Elmira	Cincinnati	Allentown
Omaha	WESG 850 1000	WFBE 1200 100	WCBA 1440 500
WAAW 660 500 R	Freeport	WKRC 550 1000 C	WSAN 1440 500
WOW 590 1000 R	WGBB 1210 100	WLW 700 500000 N	Altoona
Scottsbluff	WOCL 1210 50	WSAI 1330 1000 R	WFBG 1310 100
KGKY 1500 100	Long Island City	Cleveland	Clarion
York	W2XR 1550 1000	WGAR 1450 500 B	WWPA 850 250
KGBZ 930 1000	New York	WHK 1390 1000 C	Erie
NEVADA			
Las Vegas	WABC 860 50000 C	WJAY 610 500	WLEU 1420 100
KGIX 1420 100	WBNX 1350 250	WTAM 1070 50000 R	Glenside
Reno	WBOQ 860 50000	Columbus	WIBG 970 100
KOH 1380 500 C	WEAF 660 50000 R	WAIU 640 500	Greensburg
NEW HAMPSHIRE			
Laconia	WEVD 1300 1000	WBNS 1430 500 C	Grove City
WLNH 1310 100	WFAB 1300 1000	WCOL 1210 100	WSAJ 1310 100
Manchester	WHN 1010 1000	WOSU 570 750	Harrisburg
WFEA 1340 500 C	WINS 1180 1000	Dayton	WHP 1430 500 C
Portsmouth	WJZ 760 50000 B	WHIO 1260 1000 R	WKBO 1200 100
WHEB 740 250	WLWL 1100 5000	WSMK 1380 200 C	Hazleton
NEW JERSEY			
Asbury Park	WMCA 570 500	Portsmouth	WAZL 1420 100
WCAP 1280 500	WNYC 810 1000	WPAY 1370 100	Johnstown
	WOV 1130 1000	Toledo	WJAC 1310 100
	Olean	WSPD 1340 1000 C	Lancaster
	WHDL 1420 100		WGAL 1500 100
	Plattsburg		WKJC 1200 100
	WMFF 1310 100		Philadelphia
			KYW 1020 10000 R
			WCAU 1170 50000 C

INDEX BY LOCATIONS

WDAS 1370 100	Memphis	Waterbury	Janesville
WFL 560 1000 B	WHBO 1370 100	WDEV 550 500	WCLO 1200 100
WHAT 1310 100	WMC 780 1000 N	VIRGINIA	LaCrosse
WIP 610 500 A	WNB 1430 500	Arlington	WKBH 1380 1000
WPEN 920 250	WREC 600 1000 C	NAA 690 1000	Madison
WRAX 920 250	Nashville	Charlottesville	WHA 940 2500
WTEL 1310 100	WLAC 1470 5000 C	WEHC 1420 100	WBA 1280 1000 N
Pittsburgh	WSM 650 50000 N	Danville	Manitowoc
KDKA 980 50000 B	Springfield	WBTM 1370 100	WOMT 1210 100
KQV 1380 500	WSIX 1210 100	Lynchburg	Milwaukee
WGAE 1220 1000 R	TEXAS	WLVA 1200 100	WISN 1120 250 C
WJAE 1290 1000 C	Amarillo	Newport News	WTMJ 620 1000 N
WWSW 1500 100	KGRS 1410 1000	WGH 1310 100	Poynette
Reading	WDAG 1410 1000	Norfolk	WIBU 1210 100
WREW 830 1000	Austin	WTAR 780 500 N	Racine
WRAW 1310 100	KNOW 1500 100	Petersburg	WRJN 1370 100
Scranton	Beaumont	WPHR 880 500	Sheboygan
WGHI 880 500	KFDM 560 500	Richmond	WHBL 1410 500
WOAN 880 250	College Station	WBBL 1210 100	Stevens Point
Sunbury	WTAW 1120 500	WMBG 1210 100 C	WLBL 900 2500
WKOK 1210 100	Corpus Christi	WRVA 1110 5000 N	Superior
Wilkes-Barre	KGFI 1500 100	Roanoke	WEBC 1290 1000 N
WBAX 1210 100	Dallas	WDBJ 930 1000 C	WYOMING
WBRE 1310 100	KRLD 1040 1000 C	WRBX 1410 250	Casper
Williamsport	WFAA 800 50000 N	Staunton	KDFN 1440 500
WRAK 1370 100	WRR 1280 500	WSVA 550 500	Sheridan
York	Dublin	WASHINGTON	KWYO 1370 100
WORK 1320 1000	KFPL 1310 100	Aberdeen	CANADA
PORTO RICO	El Paso	KXRO 1310 100	ALBERTA
Ponce	KTSM 1310 100	Bellingham	Calgary
WPRP 1420 100	WDAH 1310 100	KVOS 1200 100	CFAC 930 100 F
San Juan	Fort Worth	Everett	CFGN 1030 10000 F
WKAQ 1240 1000	KFJZ 1370 100	KRKO 1370 50	CJGJ 690 100 F
WNEL 1290 500	KTAT 1240 1000 C	Olympia	Edmonton
RHODE ISLAND	WBAP 800 50000 N	KGY 1210 100	CFRN 1260 100
Providence	Galveston	Pullman	CJCA 730 1000 F
WEAN 780 500 C	KLUF 1370 100	KWSC 1220 1000	CKUA 580 500
WJAR 890 500 R	Houston	Seattle	Lethridge
WPRO 630 250 A	KPRC 920 1000 N	KJR 970 5000 N	CJOC 1230 100 F
SOUTH CAROLINA	KTRH 1290 1000 C	KOL 1270 1000 C	BRITISH COLUMBIA
Anderson	KXYZ 1440 1000	KOMO 920 1000 N	Chilliwack
WAIM 1200 100	Longview	KPCB 710 250	CHWK 780 100 F
Charleston	KFRQ 1370 100	KRSC 1120 100	Kamloops
WCSC 1360 500	Lubbock	KTW 1220 1000	CFJC 880 100 F
Columbia	KFYO 1310 100	KVL 1370 100	Kelowna
WIS 1010 1000 N	Pecos	KXA 760 250	CKOV 630 100 F
Greenville	KIUN 1420 100	Spokane	Traill
WFCB 1300 1000	Port Arthur	KFIO 1120 100	CJAT 910 250 F
Spartanburg	KPAC 1260 500	KFPY 1340 1000 C	Vancouver
WSPA 920 1000	San Angelo	KGA 1470 5000 N	CJOR 600 500
WVC 1420 1000	KGKL 1370 100	KHQ 590 1000 N	CKCD 1010 100
SOUTH DAKOTA	San Antonio	Tacoma	CKFC 1410 50
Aberdeen	KABC 1420 100	KMO 1330 250	CKMO 1410 100 F
KABR 1420 100	KMAC 1370 100	KVI 570 1000 C	CKWX 1010 100 F
Brookings	KONO 1370 100	Walla Walla	GRCV 1100 1000 F
KFDY 780 1000	KTSA 550 1000 C	KUJ 1370 100	Victoria
Huron	WOAI 1190 50000 N	Wenatchee	CFCT 1450 75
KGDY 1340 250	Tyler	KPO 1500 100	MANITOBA
Pierre	KGKB 1500 100	Yakima	Brandon
KGFX 630 200	Waco	KIT 1310 100	CKX 1120 100 F
Rapid City	WACO 1420 100 C	WEST VIRGINIA	Winnipeg
WCAT 1200 100	Weslaco	Bluefield	CJRC 1390 100 F
Sioux Falls	KRGV 1260 500	WHIS 1410 250	CKY 960 15000 F
KSOU 1110 2500	Wichita Falls	Charleston	NEW BRUNSWICK
Vermillion	KGKO 570 500 C	WCBS 580 500	Fredrickton
KUSD 890 500	UTAH	Fairmont	CFNB 550 1000 F
Watertown	Ogden	WMMN 890 500	Moncton
KWTN 1210 100	KLO 1400 500 C	Huntington	CKCW 1370 100 F
Yankton	Salt Lake City	WSAZ 1190 1000	St. John
WNAX 570 1000 C	KDYL 1290 1000 N	Parkersburg	CHSJ 1120 100 F
TENNESSEE	KSL 1130 50000 C	Wheeling	N. W. TERRITORY
Bristol	VERMONT	WWVA 1160 5000 C	Aklavik
WOPI 1500 100	Burlington	WISCONSIN	CJCU 1210 50
Chattanooga	WCAX 1200 100	Eau Claire	NOVA SCOTIA
WDOD 1280 1000 C	Rutland	WTAO 1330 1000	Glace Bay
Jackson	WSYB 1500 100	Fond du Lac	VAS 685 2000
WTJS 1310 100	St. Albans	KEIZ 1420 100	Halifax
Knoxville	WQDM 1370 100	Green Bay	CHNS 930 1000 F
WNOX 560 1000 C	Springfield	WHBY 1200 100	Sydney
WROL 1310 100	WNBX 1260 1000		CJCB 1240 1000 F

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Wolville
 CKIC 1010 50
 Yarmouth
 CJLS 1310 100
ONTARIO
 Brantford
 CKPC 930 100 F
 Chatham
 CFCO 1050 100 F
 Cobalt
 CKMC 1210 50
 Fort William
 CKPR 930 100 F
 Hamilton
 CHML 1010 50 F
 CKOC 1120 500 F
 Kingston
 CFRC 1510 100
 Kirkland Lake
 CJKL 1310 100
 London
 CFPL 730 100 F
 North Bay
 CFCH 930 100 F
 Ottawa
 CKCO 1010 100
 CRCO 880 1000 F
 Prescott
 CFLG 930 100
 St. Catharines
 CKTB 1200 100 F
 Sault Ste. Marie
 CJIC 890 100
 Stratford
 10-AK 1200 15
 Sudbury
 CKSO 780 1000
 Timmins
 CKGB 1420 100
 Toronto
 CFRB 690 10000 C
 CKCL 580 100 F
 CKNC 1420 100 F
 CRCT 840 5000 N
 Waterloo
 CKWR 1510 100
 Windsor
 CKLW 1030 5000 C
 CRCW 600 1000 F
 Wingham
 10-BP 1200 25
PRINCE EDWARD
ISLAND
 Charlottetown
 CF CY 630 1000 F
 CHGC 1310 50
 Summerside
 CHGS 1450 50 F
QUEBEC
 Chicoutimi
 CRCS 950 100 F
 Hull
 CKCH 1210 100 F
 Montmagny
 VE9K 1185 10
 Montreal
 CFCE 600 400 N
 CHLP 1120 100
 CKAC 730 5000 C
 CRCM 910 5000 F
 New Carlisle
 CHNC 1210 100 F
 Quebec
 CHRC 580 100 F
 GKCV 1310 50 F
 CRCK 1050 1000 F
SASKATCHEWAN
 Moose Jaw
 CHAB 1200 100 F
 CJRM 540 1000 F

Prince Albert
 CKBJ 1210 100 F
 Regina
 CHWC 1010 500 F
 CKCK 1010 500 F
 Saskatoon
 CFQC 840 1000 F
 Yorkton
 CJGX 630 500 F
NEWFOUNDLAND
 St. John's
 VOAC 1065 40
 VOAS 940 100
 VOGY 840 400
 VONF 950 5000
 VOWR 681 500

MIQUELON
 St. Pierre
 FQN 609 250

CENTRAL AMERICA
COSTA RICA

Cartago
 TIES 1441 7.5
 TIGA 1014 30
 San Jose
 TIEP 850 500
 TIFA 1050 75
 TIGH 1000 500
 TIRC 1100 75
 TIRH 930 50

GUATEMALA
 Guatemala City
 TGW 565 10000
 TGX 1400 150
EL SALVADOR
 San Salvador
 RDN 706 500

MEXICO

AGUASCALIENTES
 Aguascalientes
 XFC 810 350
BAJA CALIFORNIA
 Agua Caliente
 XEBC 730 5000
 Ensenada
 XEG 1270 500
 Mexicali
 XEAA 920 200
 XEAO 560 250
 Tijuana
 XEC 1270 50
 XEFL 1160 5000
 XEMO 865 2500
 XEOK 765 2500
CAMPECHE
 Cazaca
 XEAJ 1310 15
CHIHUAHUA
 Chihuahua
 XEFI 1440 250
 Juarez
 XEFV 1210 100
 XEJ 1020 1250
COAHUILA
 Piedras Negras
 XELO 1110 10000
 XEPN 590 50000
 Saltillo
 XELA 1240 50
 XEOX 640 250
 Torreon
 XETB 1310 125
 D. F.
 Mexico City
 XEAI 1240 100
 XEB 1030 10000
 XECW 1310 10
 XEFA 1180 500

XEFG 1100 250
 XEFO 940 5000
 XEFZ 1370 100
 XEK 990 100
 XELC 740 100
 XEMX 1280 12
 XEN 710 1000
 XEO 940 5000
 XEP 840 500
 XETW 820 500
 XEW 890 50000
 XEWZ 1150 100
 XEXX 845 500
 XEYZ 780 10000
 XFX 610 1000

DURANGO

Durango
 XEE 1210 50
 Mineral del Monte
 XELM 1310 15

GUANAJUATO

Guanajuato
 XEAZ 1420 7
 Leon
 XEKL 1240 500

JALISCO

Gudalajara
 XEA 1060 125
 XED 1160 500

MICHOACAN

Morelia
 XEI 1370 125

NEUVO LEON

Monterrey
 XEFB 1420 100
 XEFJ 1230 100
 XEH 1150 250
 XET 690 500
 XEX 1310 125

PUEBLA

Puebla
 XETH 1210 100
SAN LUIS POTOSI
 San Luis Potosi
 XEZZ 1370 100

SONORA

Nogales
 XEAF 1010 250

TAMAULIPAS

Nuevo Laredo
 XEAM 960 50
 XEFE 920 250
 XENT 910 60000

REYNOSA

XEAW 960 10000
Tampico
 XEFW 1310 250
 XEMA 1080 50
 XES 990 250

VERACRUZ

Jalapa
 XFB 1270 250
 Orizaba
 XFD 1340 350
 Veracruz
 XETF 1220 12
 XEU 1010 250

YUCATAN

Merida
 XEFC 1310 100
 XEZ 630 500

WEST INDIES

CUBA

Caibarien
 CMHD 1270 250
 Camaguey
 CMJC 1380 150
 CMJE 1220 50
 CMJF 1150 200
 CMJG 1010 50

CMJK 760 150
 CMJL 960 50
 Cardenas
 CMGE 1370 30

Ciego de Avila

CMJH 1360 50
 CMJI 1130 45
 CMJO 1180 50

Cienfuegos

CMHJ 1180 100
 CMHW 810 100

Colon

CMGI 1420 30
Cruces
 CMHK 1330 250

Guantanamo

CMKJ 1300 20

Havana

CMAF 730 250
 CMBC 940 195
 CMBD 1170 163
 CMBG 1140 325
 CMBS 770 130
 CMBX 1380 171
 CMBY 640 125
 CMBZ 1000 120
 CMC 835 500
 CMCA 1350 435
 CMCB 1230 112
 CMCD 960 180
 CMCF 815 250
 CMCG 1255 162
 CMCH 1200 500
 CMCI 1500 162
 CMCO 1110 150
 CMCP 1270 150
 CMCQ 680 250
 CMCR 1410 122
 CMCU 1280 152
 CMCW 750 117
 CMCX 660 250
 CMCY 1030 1000
 CMK 1060 1500
 CMOA 790 72
 CMOK 1470 184
 CMOX 1320 250
 CMQ 840 500
 CMW 600 1000
 CMX 920 650

Holquin

CMKF 1460 30
Manzanillo
 CMKM 940 100

Matanzas

CMGC 1400 100
 CMGF 1120 100
 CMGH 1040 15

Moron

CMJP 1430 75
Sagua la Grande
 CMHA 1070 50

San Spiritus

CMHB 1240 30
Santa Clara
 CMHI 1210 150

Santiago

CMKC 1250 150

DOMINICAN REPUBLIC

San Pedro de Marcoris
 HHH 1395 15
Santo Domingo
 HJ 1195 15
 HIX 1270 1000
 HIZ 1300 10

HAITI

Port-au-Prince
 HHK 920 1000

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CFAC 930 100	Calgary, Alta.	CJOR 600 500	Vancouver, B. C.
Calgary Herald, Southam Bldg.		G. C. Chandler, Hotel Grosvenor	
CFCF 600 400	Montreal, Que.	CJRC 1390 100	Winnipeg, Man.
Mt. Royal Hotel		Royal Alexandra Hotel	
CFCH 930 100	North Bay, Ont.	CJRM 540 1000	Moose Jaw, Sask.
Capitol Theatre Bldg.		311 Main St. No.	
CFCN 1030 10000	Calgary, Alta.	CKAC 730 5000	Montreal, Que.
Toronto Gen. Trust Bldg.		980 St. Catherine St. W.	
CFCO 1050 100	Chatham, Ont.	CKBJ 1210 100	Prince Albert, Sask.
Wm. Pitt Hotel		Canada Bldg.	
CFCT 1450 75	Victoria, B. C.	CKCD 1010 100	Vancouver, B. C.
620 Vlew St.		142 Hastings St. W.	
CFCY 630 1000	Charlottetown, P.E.I.	CKCH 1210 100	Hull, Que.
143 Great George St.		Standish Hall Hotel	
CFJC 880 100	Kamloops, B. C.	CKCK 1010 500	Regina, Sask.
Wilcox-Hall Bldg.		1853 Hamilton St.	
CFLC 930 100	Prescott, Ont.	CKCL 580 100	Toronto, Ont.
Hoy Bldg., 307 George St.		444 University Ave.	
CFNB 550 1000	Fredericton, N. B.	CKCO 1010 100	Ottawa, Ont.
York St.		272 Somerset St. W.	
CFPL 730 100	London, Ont.	CKCR 1510 100	Waterloo, Ont.
Richmond St.		24 King St. So.	
CFQC 840 1000	Saskatoon, Sask.	CKCV 1310 50	Quebec, Que.
216 First Ave., No.		264 Ave. Marguerite	
CFRB 690 10000	Toronto, Ont.	CKCW 1370 100	Moncton, N. B.
37 Bloor St. W.		Moncton Brdstg. Co., Ltd.	
CFRC 1510 100	Kingston, Ont.	CKFC 1410 50	Vancouver, B. C.
Queens University		Hemlock & 12th Ave.	
CFRN 1260 100	Edmonton, Alta.	CKGB 1420 100	Timmins, Ont.
Blrks Bldg.		R. H. Thompson, Press Bldg.	
CHAB 1200 100	Moose Jaw, Sask.	CKIC 1010 50	Wolfville, N. S.
Grant Hall Hotel		Acadia University	
CHCK 1310 50	Charlottetown, P.E.I.	CKLW 1030 5000	Windsor, Ont.
36 Upper Hillsboro St.		Guaranty Trust Bldg.	
CHGS 1450 50	Summerside, P. E. I.	CKMC 1210 50	Cobalt, Ont.
180 Water St.		R. L. MacAdam	
CHLP 1120 100	Montreal, Que.	CKMO 1410 100	Vancouver, B. C.
Sun Life Bldg.		1604 Bekins Bldg.	
CHML 1010 50	Hamilton, Ont.	CKNC 1420 100	Toronto, Ont.
47 Main St. E.		805 Davenport Road	
CHNC 1210 100	New Carlisle, Que.	CKOC 1120 500	Hamilton, Ont.
Gaspeian Radio Brdstg. Co.		Wentworth Bldg.	
CHNS 930 1000	Hallfax, N.[S.	CKOY 630 100	Kelowna, B. C.
Lord Nelson Hotel		Okanagan Broadcasters, Ltd., Box 243	
CHRC 580 100	Quebec, Que.	CKPC 930 100	Brantford, Ont.
CHRC, Ltd., Victoria Hotel		Arcade Bldg.	
CHSJ 1120 100	St. John, N. B.	CKPR 930 100	Fort William, Ont.
Admiral Beatty Hotel		Roya Edward Hotel	
CHWC 1010 500	Regina, Sask.	CKSO 780 1000	Sudbury, Ont.
Williams Building		W. E. Mason, Grand Theatre Bldg.	
CHWK 780 100	Chilliwack, B. C.	CKTB 1200 100	St. Catharines, Ont.
Wellington Ave.		E. T. Sandell, Welland House	
CJAT 910 250	Trail, B. C.	CKUA 580 500	Edmonton, Alta.
Kootenay Erdestg. Co.		University of Alberta.	
CJCA 730 500	Edmonton, Alta.	CKWX 1010 100	Vancouver, B. C.
10122-100A St.		Hotel Georgia	
CJCB 1240 1000	Sydney, N. S.	CKX 1120 100	Brandon, Man.
318 Charlotte St.		Rosser Ave.	
CJCJ 690 100	Calgary, Alta.	CKY 960 15000	Winnipeg, Man.
New Albertan Bldg.		Sherbrooke St.	
CJCU 1210 50	Aklavik, N. W. T.	CMAF 730 250	Havana, Cuba
Dr. J. A. Urquhart, Dept. of Interior		1 y 8 Rept. Miramar	
CJGX 630 500	Yorkton, Sask.	CMBC 940 195	Havana, Cuba
188 Grain Exchange Bldg. (Winnipeg)		Domingo Fernandez, Maximo Gomez No. 139	
CJIC 890 100	S. Ste. Marie, Ont.	CMBD 1170 163	Havana, Cuba
Windsor Hotel		Luis Perez Garcia, Calle 17 y O, Vedado	
CJKL 1310 100	Kirkland Lake, Ont.	CMBG 1140 325	Havana, Cuba
O. J. Thorpe		John L. Stowers, Hospital No. 100	
CJLS 1310 100	Yarmouth, N. S.	CMBS 770 130	Havana, Cuba
Laurie L. Smith, Grand Hotel		Calzada y H. St., Vedado	
CJOC 1230 100	Lethbridge, Alta.	CMBX 1380 171	Havana, Cuba
Marquis Hotel		Alberto Alvarez, San Miguel 194	

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CMBY 640	125	Havana, Cuba	CMJI 1130	45	Ciego de Avila, Cuba
Infanta 132 esq. Jevellar			Gilberto Gessa Lopez, Independencia 95		
CMBZ 1000	120	Havana, Cuba	CMJK 760	150	Camaguey, Cuba
Manuely G. Salas, San Rafael No. 14			Cla. Nacional de Radio, Finlay No. 3		
CMC 835	500	Havana, Cuba	CMJL 960	50	Camaguey, Cuba
Agulla y Dragones			Enrique Artime, Cuba No. 27		
CMCA 1350	435	Havana, Cuba	CMJO 1180	50	Ciego de Avila, Cuba
Galiano No. 102			Jose M. Rey, C. Central & Maceo		
CMCB 1230	112	Havana, Cuba	CMJP 1430	75	Moron, Cuba
O'Reilly y Aguacate			Cesar Canall, Callejas No. 28		
CMCD 960	180	Havana, Cuba	CMK 1060	1500	Havana, Cuba
Calle G y 25, Vedado			Hotel Plaza		
CMCF 815	250	Havana, Cuba	CMKC 1250	150	Santiago, Cuba
Raoul Karman, Rayo No. 67			J. A. Saco, Alta 23		
CMCG 1255	162	Havana, Cuba	CMKF 1460	30	Holguin, Cuba
Malecon No. 340 Altos			Libertad esq. Arias		
CMCJ 1200	500	Havana, Cuba	CMKJ 1300	20	Guantanamo, Cuba
Rafael Rodriguez, Estevez No. 4			Luis Morlote, East Giro 11		
CMCK 1320	100	Havana, Cuba	CMKM 940	100	Manzanillo, Cuba
Manuel Autran G., Vedado			Jesus Armetse, Merchant y P. Figuerado		
CMCN 1500	162	Havana, Cuba	CMAO 790	72	Havana, Cuba
Reina y Ave. Buen Retiroe, Marianao			Juan Fernandez, Aguiar 126 Altes		
CMCO 1110	150	Havana, Cuba	CMOK 1470	184	Havana, Cuba
Oficios 116			Rafael Valdez, Marques Gonzales 52		
CMCP 1270	150	Havana, Cuba	CMOX 1320	250	Havana, Cuba
Calzada de Luyane No. 132			10 entre 17 y 19, Vedado		
CMCQ 680	250	Havana, Cuba	CMQ 840	500	Havana, Cuba
Vista Alegre No. 80, Vibora			25 Numero 445, Vedado		
CMCR 1410	122	Havana, Cuba	CMW 600	100	Havana, Cuba
Milagros No. 35, Vibora			Paseo de Marti 103		
CMCU 1280	152	Havana, Cuba	CMX 920	650	Havana, Cuba
San Francisco No. 13, Vibora			Casa "Lavin," Ave. de la Republica 99A		
CMCW 750	117	Havana, Cuba	CRCK 1050	1000	Quebec, Que.
Galiano y San Lazaro Sts.			Chateau Frontenac Hotel		
CMCX 660	250	Havana, Cuba	CRCM 910	5000	Montreal, Que.
Maceo No. 7, Guanabacoa			1231 St. Catherine St. W.		
CMCY 1030	1000	Havana, Cuba	CRCO 880	1000	Ottawa, Ont.
Manuel D. Autran, Calle G 215, Vedado			Chateau Laurier Hotel		
CMGC 1400	100	Matanzas, Cuba	CRCS 950	100	Chicoutimi, Que.
Independencia No. 56			4 Rue Larouche		
CMGE 1370	30	Cardenas, Cuba	CRCT 840	5000	Toronto, Ont.
Genaro Sebatel, Cespedes No. 180			805 Davenport Road		
CMGF 1120	100	Matanzas, Cuba	CRCV 1100	1000	Vancouver, B. C.
G. Betancourt No. 51			C. N. R. Station Bldg.		
CMGH 1040	15	Matanzas, Cuba	CRCW 600	1000	Windsor, Ont.
B. Byrne No. 113			Guaranty Trust Bldg.		
CMGI 1420	30	Colon, Cuba	FQN 609	250	St. Pierre, Miq.
Armando Linanza, Marti No. 35					
CMHA 1070	50	Sagua Grande, Cuba	HHK 920	1000	Port-au-Prince, Hait
Abelardo Menocal, Carrillo No. 1			Haitian Government		
CMHB 1240	30	San Spiritus, Cuba	HIH 1395	15	San Pedro de M., D.R
Independencia No. 33			Domingo Dominguez		
CMHD 1270	250	Caibarien, Cuba	HIJ 1195	15	Santo Domingo, D.R
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CMHI 1210	150	Santa Clara, Cuba	HIX 1270	1000	Santo Domingo, D.R
Javis y Paz, Independencia No. 34			J. R. Saladin, Director General		
CMHJ 1180	100	Cienfuegos, Cuba	HIZ 1300	100	Santo Domingo, D.R
Romoualde Ugalde, Sta. Elena 104			Abbes and Garcia		
CMHK 1330	250	Cruces, Cuba	KABC 1420	100	San Antonio, Texas
Heredia No. 61			Texas Theatre Bldg.		
CMHW 810	100	Cienfuegos, Cuba	KABR 1420	100	Aberdeen, S. Dak.
Arguelles No. 200			Aberdeen Broadcast Co.		
CMJC 1380	150	Camaguey, Cuba	KADA 1200	100	Ada, Okla.
Cisneros y G. Gomez			C. C. Morris		
CMJE 1220	50	Camaguey, Cuba	KALE 1300	500	Portland, Ore.
(Manuel) Fernandez, Hnos. Aguerre No. 2			Kale, Inc., New Heathman Hotel		
CMJF 1150	200	Camaguey, Cuba	KARK 890	250	Little Rock, Ark.
John L. Stowers, Republica No. 88			N. S. L. Bldg.		
CMJG 1010	50	Camaguey, Cuba	KASA 1210	100	Elk City, Okla.
Maceo No. 1			E. M. Woody, Casa Grande Hotel		
CMJH 1360	50	Ciego de Avila, Cuba	KAST 1370	100	Astoria, Ore.
Luis Marauri, H. Castilla 37			Abraham Shapiro		

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KBPS 1420 100 Portland, Ore. E. 12th & Hoyt Sts.	KFNF 890 500 Shenandoah, Iowa 407 Sycamore St.
KBTM 1200 100 Jonesboro, Ark. Jay P. Beard	KFOR 1210 100 Lincoln, Neb. Howard Shuman, Hotel Lincoln
KCMC 1420 100 Texarkana, Ark. Box 865	KFOX 1250 1000 Long Beach, Calif. 220 E. Anaheim St.
KCRC 1370 100 Enid, Okla. Enid Radiophone Co., Oxford Hotel	KFPL 1310 100 Dublin, Texas C. C. Baxter, Box 176
KCRJ 1310 100 Jerome, Ariz. Chas. C. Robinson, Drawer D.	KFPW 1210 100 Fort Smith, Ark. Goldman Hotel
KDB 1500 100 Santa Barbara, Calif. 15-17 E. Haley St.	KFPY 1340 1000 Spokane, Wash. Symons Bldg.
KDFN 1440 500 Casper, Wyo. Donald Lewis Hathaway	KFQD 780 250 Anchorage, Alaska 411-4th Ave.
KDKA 980 5000 Pittsburgh, Pa. Hotel Wm. Penn	KKFC 610 1000 San Francisco, Calif. 1000 Van Ness Ave.
KDLR 1210 100 Devils Lake, N. D. KDLR, Inc., 1025 3rd Street	KKFR 1370 100 Longview, Texas Voice of Longview
KDYL 1290 1000 Salt Lake City, Utah Ezra Thompson Bldg.	KFRU 630 500 Columbia, Mo. KFRU, Inc., 9th and Elm Sts.
KECA 1430 1000 Los Angeles, Calif. 1000 S. Hope St.	KFSD 600 1000 San Diego, Calif. U. S. Grant Hotel
KELD 1370 100 El Dorado, Ark. T. H. Barton	KFSG 1120 1000 Los Angeles, Calif. 1100 Glendale Blvd.
KELW 780 500 Burbank, Calif. 3702 Magnolia Park Blvd.	KFUO 550 500 St. Louis, Mo. 801 De Mun St.
KERN 1370 100 Bakersfield, Calif. Elk's Club	KFVD 1000 250 Los Angeles, Calif. E. L. Cord, 645 S. Mariposa
KEX 1180 5000 Portland, Ore. Oregonian Bldg.	KFVS 1210 100 Cape Girardeau, Mo. Oscar C. Hirsch, Box 275
KFAB 770 10000 Lincoln, Neb. Cornhusker Hotel	KFWB 950 1000 Hollywood, Calif. Warner Bros. Motion Pictures, Inc.
KFAC 1300 1000 Los Angeles, Calif. E. L. Cord, 645 So. Mariposa	KFXD 1200 100 Nampa, Idaho Frank E. Hurt, 1024 12th Ave., S.
KFBB 1280 1000 Great Falls, Mont. Buttrey Broadcast., Inc.	KFXJ 1200 100 Grand Jct., Colo. Hillcrest Manor
KFBI 1050 5000 Abilene, Kans. Box 345	KFXM 1210 100 San Bernardino, Calif. California Hotel
KFBK 1310 100 Sacramento, Calif. Sacramento Bee	KFXR 1310 100 Oklahoma City, Okla. 541 Hightower Bldg.
KFDM 560 500 Beaumont, Texas Beaumont Hotel, P. O. Box 2950	KFYO 1310 100 Lubbock, Texas Kirksey Bros., Hotel Lubbock
KFDY 780 1000 Brookings, S. D. South Dakota State College	KFYR 550 1000 Bismarck, N. D. 320 Broadway
KFEL 920 500 Denver, Colo. Albany Hotel	KGA 1470 5000 Spokane, Wash. 1023 W. Riverside Ave.
KFEQ 680 2500 St. Joseph, Mo. Schneider Bldg.	KGAR 1370 100 Tucson, Ariz. 142 S. 6th Ave.
KFGQ 1370 100 Boone, Iowa 924 W. 2nd St.	KGB 1330 1000 San Diego, Calif. 1012-1st St.
KFH 1300 1000 Wichita, Kans. 124 1/2 S. Market St.	KGBU 900 500 Ketchikan, Alaska Mile 5, Wards Cove Rd.
KFI 640 50000 Los Angeles, Calif. 1000 S. Hope St.	KGBX 1230 500 Springfield, Mo. KGBX, Inc., C. of C. Bldg.
KFIO 1120 100 Spokane, Wash. 213 Riverside Ave.	KGBZ 930 1000 York, Neb. KGBZ Broadcasting Co., 715 Grant Ave.
KFIZ 1420 100 Fond du Lac, Wis. 18 W. 1st St.	KGCA 1270 100 Decorah, Iowa Charles W. Greenley, 201 Water St.
KFJB 1200 100 Marshalltown, Iowa 1603 W. Main St.	KGCU 1240 250 Mandan, N. D. 404 W. Main St.
KFJI 1210 100 Klamath Falls, Ore. KFJI Broadcasters, Inc., Willard Hotel	KGCX 1310 100 Wolf Point, Mont. E. E. Krebsbach.
KFJM 1370 100 Grand Forks, N. D. University of North Dakota	KGDE 1200 100 Fergus Falls, Minn. C. L. Jaren
KFJR 1300 500 Portland, Ore. 622 Lumbermen's Bldg.	KGDM 1100 1000 Stockton, Calif. E. F. Pepper, 42 S. Calif. St.
KFJZ 1370 100 Fort Worth, Texas Texas Hotel	KGDY 1340 250 Huron, S. D. Voice of S. D., Inc., 347 Dakota Ave.
KFKA 880 500 Greeley, Colo. Box 735	KGEK 1200 100 Sterling, Colo. Elmer G. Beehler, 109 W. 2nd St.
KFKU 1220 1000 Lawrence, Kans. University of Kansas	KGER 1360 1000 Long Beach, Calif. 435 Pine Ave.

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KGEZ 1310 100 Kallispell, Mont. Donald C. Treloar, Box 1	KIDO 1350 1000 Boise Idaho Hotel Boise
KGFF 1420 100 Shawnee, Okla. 9th & Bell Sts.	KIDW 1420 100 Lamar Colo. Lanar Broadcasting Co., Box 688
KGFG 1370 100 Oklahoma City, Okla. Okla. Broadcasting Co., 1113 N. Broadway	KIEM 1210 100 Eureka, Calif. Redwood Bdcstg. Co., Vance Hotel
KGFI 1500 100 Corpus Christi, Texas Eagle Broadcasting Co., Inc., P. O. Box 1508	KIEV 850 250 Glendale, Calif. Cannon System, Ltd., Glendale Hotel
KGJJ 1200 100 Los Angeles, Calif. Ben S. McGlashan, 1417 S. Figueroa.	KINY 610 250 Juneau, Alaska Northwest Advertising Co.
KGFK 1500 100 Moorhead, Minn. 722 Center Ave.	KIT 1310 100 Yakima, Wash. 109 1/2 E. Yakima Ave.
KGFL 1370 100 Roswell, N. M. KGFL, Inc., 507 N. Main St.	KIUJ 1310 100 Santa Fe, N. Mex. J. H. Speck
KGFW 1310 100 Kearney, Neb. Midway Hotel	KIUL 1210 100 Garden City, Kans. Garden City Brdstg. Co.
KGFX 630 200 Pierre, S. D. Dana McNeil, 510 Summit Ave.	KIUN 1420 100 Pecos, Texas J. H. Hawkins & B. H. Hubbs
KGGC 1420 100 San Francisco, Calif. 230 Eddy St.	KJBS 1070 500 San Francisco, Calif. 1380 Bush St.
KGGF 1010 1000 Coffeyville, Kans. Coffeyville Journal Bldg.	KJR 970 5000 Seattle, Wash. Skinner Bldg.
KGGM 1230 250 Albuquerque, N. M. Franciscan Hotel	KLCN 1290 100 Blytheville, Ark. C. L. Lintzenich, Main and Division St.
KGHF 1320 500 Pueblo, Colo. C. P. Ritchie, 113 Broadway	KLO 1400 500 Ogden, Utah 405 — 25th St.
KGHI 1200 100 Little Rock, Ark. Arkansas Brdstg. Co., Marion Hotel	KLPM 1240 250 Minot, N. D. John B. Cooley, Box 707
KGHL 780 1000 Billings, Mont. 5th & N. Broadway	KLRA 1390 1000 Little Rock, Ark. Arkansas Broadcasting Co., Box 550
KGIR 1360 1000 Butte, Mont. KGIR, Inc., 121 W. Broadway	KLS 1440 250 Oakland, Calif. Warner Bros., 2201 Telegraph Ave.
KGIW 1420 100 Alamosa, Colo. Leonard E. Wilson, 326 N. Commercial	KLUF 1370 100 Galveston, Texas Geo. R. Clough, Buccaneer Hotel
KGIX 1420 100 Las Vegas, Nev. J. M. Heaton, Box 656	KLX 880 1000 Oakland, Calif. Tribune Tower
KGKB 1500 100 Tyler, Texas 115 S. College	KLZ 560 1000 Denver, Colo. Shirley-Savoy Hotel
KGKL 1370 100 San Angelo, Texas KGKL, Inc., St. Angelus Hotel	KMA 930 1000 Shenandoah, Iowa Earl E. May Seed & Nursery Co.
KGKO 570 500 Wichita Falls, Texas 9th St. & Indiana Ave.	KMAC 1370 100 San Antonio, Texas W. W. McAllister, Blue Bonnet Hotel
KGKY 1500 100 Scottsbluff, Neb. Hilliard Co., Inc., 1517 1/2 Broadway	KMBC 950 1000 Kansas City, Mo. Plekwick Hotel
KGMB 1320 1000 Honolulu, T. H. Honolulu Broadcasting Co., Box 2663	KMED 1310 100 Medford, Ore. Mrs. W. J. Virgin, Sparta Bldg
KGNF 1430 1000 North Platte, Neb. Great Plains Broadcasting Co., W. 12th St.	KMJ 580 1000 Fresno, Calif. Van Ness & Calaveras Sts.
KGNO 1340 250 Dodge City, Kans. First Natl. Bank Bldg.	KMLB 1200 100 Monroe, La. Francis Hotel
KGO 790 7500 San Francisco, Calif. 111 Sutter St.	KMMJ 740 1000 Clay Center, Neb. The M. M. Johnson Co.
KGRS 1410 1000 Amarillo, Texas Plains Radio Broadcasting Co.	KMO 1330 250 Tacoma, Wash. KMO, Inc., Hotel Winthrop
KGU 750 2500 Honolulu, T. H. Kapiolani at South St.	KMOX 1090 50000 St. Louis, Mo. 401 S. 12th St.
KGVO 1260 1000 Missoula, Mont. Mosbys, Inc., 240 N. Higgins	KMPC 710 500 Beverly Hills, Calif. 9631 Wilshire Blvd.
KGW 620 1000 Portland, Ore. 325 Adler St.	KMTR 570 1000 Hollywood, Calif. KMTR Radio Corp., 915 N. Formosa Ave.
KGY 1210 100 Olympia, Wash. KGY, Inc., 11th and Capitol Way	KNOW 1500 100 Austin, Texas Norwood Building
KHJ 900 1000 Los Angeles, Calif. 7th at Bixel	KNX 1050 50000 Hollywood, Calif. West. Broadcast Co., Inc., 1558 N. Vine St.
KHK 590 1000 Spokane, Wash. Sprague Ave. & Post St.	KOA 830 50000 Denver, Colo. General Electric Co., 1370 Krameria St.
KHSL 950 250 Chico, Calif. Golden Empire Brdstg. Co.	KOAC 550 1000 Corvallis, Ore. Oregon State Agricultural College
KICA 1370 100 Clovis, N. M. Southwest Broadcasting Co.	KOB 1180 10000 Albuquerque, N. M. Albuquerque Journal, Box 667
KID 1320 250 Idaho Falls, Idaho Park Ave. & Broadway	KOH 1380 500 Reno, Nev. 440 N. Virginia St.

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KOIL 1260 1000 Council Bluffs, Iowa Mona Motor Oil Co.	KSEE 890 250 Pocatello, Idaho Radio Service Corp., 141 S. 6th Ave.
KOIN 940 1000 Portland, Ore. KOIN, Inc., New Heathman Hotel	KSL 1130 50000 Salt Lake City, Utah Vermont Bldg
KOL 1270 1000 Seattle, Wash. Northern Life Tower	KSLM 1370 100 Salem, Ore. Oregon Radio, Inc.
KOMA 1480 5000 Oklahoma City, Okla Biltmore Hotel	KSO 1430 250 Des Moines, Iowa Des Moines Register & Tribune
KOMO 920 1000 Seattle, Wash. Skinner Bldg	KSOO 1110 2500 Sioux Falls, S. D. Sioux Falls Brdest. Assn., Carpenter Hotel
KONO 1370 100 San Antonio, Texas Mission Broadcast. Co., St. Anthony Hotel	KSTP 1460 10000 St. Paul, Minn. St. Paul Hotel
KOOS 1200 250 Marshfield, Ore. H. H. Hanseth, Hall Bldg.	KSUN 1200 100 Lowell, Ariz. Copper Electrical Co., Drawer C
KORE 1420 100 Eugene, Ore. 733 Willamette St.	KTAB 560 1000 San Francisco, Calif. 5th & Mission Sts.
KOTN 1500 100 Pine Bluff, Ark. Universal Brdestg. Corp., Hotel Pines	KTAR 620 1000 Phoenix, Ariz. 116 N. Central Ave.
KOY 1390 500 Phoenix, Ariz. 621 N. Central Ave.	KTAT 1240 1000 Fort Worth, Texas Ft. Worth Natl. Bank Bldg
KPAC 1260 500 Port Arthur, Texas Port Arthur College	KTBS 1450 1000 Shreveport, La. Box 1642
KPCB 710 100 Seattle, Wash. Tower Bldg.	KTFI 1240 1000 Twin Falls, Idaho Radio Broadcasting Corp., Box 521
KPJM 1500 100 Prescott, Ariz. Scott & Sturm, P. O. Box 782	KTHS 1060 10000 Hot Springs, Ark. Chamber of Commerce, Box 886
KPLC 1500 100 Lake Charles, La. Calcaisieu Brdestg. Co.	KTM 780 500 Los Angeles, Calif. 214 S. Vermont St.
KPO 680 50000 San Francisco, Calif. 111 Sutter St.	KTRB 740 250 Modesto, Calif. McTammany & Bates
KPOF 880 500 Denver, Colo. Pillar Of Fire, 1845 Champa St.	KTRH 1290 1000 Houston, Texas KTRH Broadcasting Co., Rice Hotel
KPPC 1210 50 Pasadena, Calif. 585 E. Colorado St.	KTSA 550 1000 San Antonio, Texas Southwest Broadcasting Co., Plaza Hotel
KPQ 1500 100 Wenatchee, Wash. KPQ Bldg.	KTSM 1310 100 El Paso, Texas P. O. Box 1976
KPRC 920 1000 Houston, Texas 2204 Shell Bldg.	KTUL 1400 500 Tulsa, Okla. National Bank of Tulsa Bldg.
KQV 1380 500 Pittsburgh, Pa. KQV Broadcasting Co., Investment Bldg.	KTW 1220 1000 Seattle, Wash. 77th Ave. & Spring St.
KQW 1010 1000 San Jose, Calif. 87 E. San Antonio St.	KUJ 1370 100 Walla Walla, Wash. KUJ, Inc., Marcus Whitman Hotel
KRE 1370 100 Berkeley, Calif. 2345 Channing Way	KUMA 1420 100 Yuma, Ariz. Dr. A. H. Schermann, Box 267
KREG 1500 100 Santa Ana, Calif. 3rd & Sycamore Sts.	KUOA 1260 1000 Fayetteville, Ark. KUOA, Inc., Washington Hotel
KRGV 1260 500 Weslaco, Texas KRGV Inc.	KUSD 890 500 Vermillion, S. D. University of South Dakota
KRKD 1120 1000 Los Angeles, Calif. 815 Spring Arcade Bldg.	KVI 570 1000 Tacoma, Wash. W. R. Rust Bldg.
KRKO 1370 50 Everett, Wash. Lee Mudgett, 2814 Rucker Ave.	KVL 1370 100 Seattle, Wash. KVL, Inc., 5th and Virginia St.
KRLC 1420 100 Lewiston, Idaho H. E. Studebaker	KVOA 1260 500 Tucson, Ariz. Cons. Natl. Bank Bldg.
KRLD 1040 10000 Dallas, Texas KRLD Radio Corp., Adolphus Hotel	KVOD 920 500 Denver, Colo. Continental Oil Bldg.
KRMD 1310 100 Shreveport, La. Jefferson Hotel	KVOO 1140 25000 Tulsa, Okla. Wright Bldg.
KRNT 1320 500 Des Moines, Iowa Des Moines Register Tribune	KVOR 1270 1000 Colorado Spg., Colo. Mining Exchange Bldg.
KROC 1310 100 Rochester, Minn. Southern Minnesota Broadcasting Co.	KVOS 1200 100 Bellingham, Wash. 115 W. Magnolia St.
KROW 930 1000 Oakland, Calif. 1803 Franklin St.	KVSO 1210 100 Ardmore, Okla. Ardmore Pub. Co., Inc.
KRSC 1120 100 Seattle, Wash. Radio Sales Corp., Washington Athletic Club	KWBG 1420 100 Hutchinson, Kans. W. B. Greenwald
KSAC 580 500 Manhattan, Kans. State College of Agriculture	KWEA 1230 100 Shreveport, La. Spring & Fannin Sts.
KSBJ 1330 1000 Sioux City, Iowa Perkins Bros. Co., 415 Douglas St.	KWG 1200 100 Stockton, Calif. Medico-Dental Bldg.
KSD 550 1000 St. Louis, Mo. 12th & Olive Sts.	KWJJ 1040 500 Portland, Ore. 622 S. W. Salmon St.

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KWK 1350 1000	St. Louis, Mo. Thomas Patrick, Inc., Hotel Chase
KWKC 1370 100	Kansas City, Mo. 39th & Main Sts.
KWKH 1100 10000	Shreveport, La. Spring & Fannin Sts.
KWLC 1270 100	Decorah, Iowa Luther College
KWSC 1220 1000	Pullman, Wash. State College of Washington
KWTN 1210 100	Watertown, S. D. Citizens Bank Bldg.
KWTO 560 5000	Springfield, Mo. KGBX Inc.
KWYO 1370 100	Sheridan, Wyo. Big Horn Brdstg. Co.
KXA 760 250	Seattle, Wash. American Radio Tel. Co., 218 Bigelow Bldg.
KXL 1420 100	Portland, Ore. KXL Broadcasters, Multnomah Hotel
KXO 1500 100	El Centro, Calif. F. M. Bowles, Box 140
KXRO 1310 100	Aberdeen, Wash. KXRO, Inc., Hotel Morck
KXYZ 1440 1000	Houston, Texas Fannin & Rusk Sts.
KYA 1230 1000	San Francisco, Calif. 988 Market St.
KYW 1020 10000	Philadelphia, Pa. 1622 Chestnut Street
NAA 690 1000	Arlington, Va. United States Navy
RDN 706 500	San Salvador, E. S. Republic of El Salvador
TGW 565 10000	Guatemala, Gua. Gobierno de Guatemala
TGX 1400 150	Guatemala City
TIEP 850 500	San Jose, C. R.
TIFA 1050 75	San Jose, C. R.
TIFS 1441 7.5	Cartago, C. R.
TIGA 1014 30	Cartage, C. R.
TIGH 1000 500	San Jose, C. R.
TIRC 1100 75	San Jose, C. R. Perry Girton, Apdo. 225
TIRH 930 50	San Jose, C. R.
VAS 685 2000	Glace Bay, N. S. Canadian Marconi Co., Ltd.
VESEK 1185 10	Montmagny, Que. J. A. Marquis, P. O. Box 52
VOAC 1065 40	St. John's, Nfld.
VOAS 940 100	St. John's N. F. Ayre & Sons, Ltd., Water St.
VOGY 840 400	St. John's, N. F. Newfoundland Hotel
VONF 950 5000	St. John's N. F. Dominion Broadcasting Co., Ltd., Box 135
VOWR 681 500	St. John's, N. F. Wesley United Church, Box 157
WAAB 1410 500	Boston, Mass. 21 Brookline Ave.
WAAF 920 500	Chicago, Ill. Palmer House
WAAT 940 500	Jersey City, N. J. Bremer Broadcasting Corp., 50 Journal Sq.
WAAW 660 500	Omaha, Neb. Omaha Grain Exchange
WABC 860 50000	New York, N. Y. 485 Madison Ave.
WABI 1200 100	Bangor, Maine First Universalist Society Park St.
WABY 1370 100	Albany, N. Y. Strand Theatre Bldg.
WACO 1420 100	Waco, Texas Amicable Bldg.
WADC 1320 1000	Akron, Ohio Allen T. Simmons, P. O. Box 29
WAGF 1370 100	Dothan, Ala. Houston Hotel
WAGM 1420 100	Presque Isle, Me. Aroostook Broadcasting Corp., Mala St.
WAIM 1200 100	Anderson S. C. Wilton E. Hall
WAIU 640 500	Columbus, Ohio Deshler-Wallack Hotel
WALA 1380 500	Mobile, Ala. Battle House
WALR 1210 100	Zanesville, Ohio First Trust & Savs. Bank Bldg.
WAML 1310 100	Laurel, Miss. Southland Radio Corp., Box 26
WAPI 1140 5000	Birmingham, Ala. Protective Life Bldg.
WARD 1400 500	Brooklyn, N. Y. 427 Flatbush Ave., Ext.
WASH 1270 500	Grand Rapids, Mich. Grand Rapids Natl. Bank Bldg.
WATR 1190 100	Waterbury, Conn. WATR Co. Inc. 47 Grand St.
WAVE 940 1000	Louisville, Ky. WAVE, Inc., 1525 Brown Hotel
WAWZ 1350 500	Zarephath, N. J. Pillar of Fire.
WAZL 1420 100	Hazleton, Pa. Hazleton Broadcasting Service, Inc.
WBAA 890 1000	West Lafayette, Ind. Purdue University
WBAL 1060 10000	Baltimore, Md. Lexington Bldg., Amer. Radio News Corp.
WBAP 800 50000	Fort Worth, Texas Blackstone Hotel
WBAX 1210 100	Wilkes-Barre, Pa. John H. Stenger, Jr., 70 S. Main St.
WBBC 1400 500	Brooklyn, N. Y. 552-54 Atlantic Ave.
WBBL 1210 100	Richmond, Va. 1627 Monument Ave.
WBMM 770 50000	Chicago, Ill. WBMM Broadcasting Corp., Wrigley Bldg.
WBRR 1300 1000	Brooklyn, N. Y. 124 Columbia Heights
WBZZ 1200 100	Ponca City, Okla. C. L. Carrell, 407 W. South Ave.
WBCM 1410 500	Bay City, Mich. James E. Davidson, Hotel Wenoah
WBEN 900 1000	Buffalo, N. Y. WBEN, Inc., Hotel Statler
WBEQ 1310 100	Marquette, Mich. 146 W. Washington St.
WBIG 1440 500	Greensboro, N. C. Box 408
WBNO 1200 100	New Orleans, La. Hotel New Orleans
WBNS 1430 500	Columbus, O. 33 N. High St.
WBNX 1350 250	New York, N. Y. 260 E. 161st St.

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WBOQ 860 50000 New York, N. Y. Atlantic Broadcasting Corp.	WCRW 1210 100 Chicago, Ill. Clinton R. White, 2756 Pine Grove Ave.
WBOW 1310 100 Terre Haute, Ind. Banks of Wabash, Inc., 19 Beach Block	WCSC 1360 500 Charleston, S. C. Francis Marion Hotel
WBRB 1210 100 Red Bank, N. J. 63 Broad St.	WCSH 940 1000 Portland, Me. 579 Congress St
WBRC 930 1000 Birmingham, Ala. Bankhead Hotel	WDAE 1220 1000 Tampa, Fla. Tampa Times Co., Tampa Terrace
WBRE 1310 100 Wilkes-Barre, Pa. Louis G. Baltimore, 16 N. Main	WDAF 610 1000 Kansas City, Mo. 1729 Grand Ave.
WBSO 920 500 Babson Park, Mass. Drawer B	WDAG 1410 1000 Amarillo, Texas Box 306
WBT 1080 50000 Charlotte, N. C. Station WBT, Inc., Wilder Bldg.	WDAH 1310 100 El Paso, Texas Box 1976
WBTM 1370 100 Danville, Va. Miller Bldg.	WDAS 1370 100 Philadelphia, Pa. WDAS Brdstrg. Co., Inc., Broadwood Hotel
WBZ 990 50000 Boston, Mass. Hotel Bradford	WDAY 940 1000 Fargo, N. D.
WBZA 990 1000 Springfield, Mass. Hotel Kimball	WDAY , Inc., Black Bldg., 118 Broadway
WCAC 600 500 Storrs, Conn. Connecticut State College	WDBJ 930 1000 Roanoke, Va. Times World Corp., P. O. Box 150
WCAD 1220 500 Canton, N. Y. St. Lawrence University	WBDO 580 1000 Orlando, Fla. 655 N. Orange Ave.
WCAE 1220 1000 Pittsburgh, Pa. 6th Ave. & Smithfield St.	WDEL 1120 250 Wilmington, Del. WDEL, Inc., 10th and King Sts.
WCAL 1250 1000 Northfield, Minn. St. Olaf College	WDEV 550 500 Waterbury, Vt. Harry C. Whitehill, Stowe St.
WCAM 1280 500 Camden, N. J. City of Camden, City Hall	WDGY 1180 1000 Minneapolis, Minn. Dr. Geo. W. Young, 909 W. Broadway
WCAO 600 500 Baltimore, Md. 811 W. Lanvale St.	WDNC 1500 100 Durham, N. C. Washington Duke Hotel
WCAP 1280 500 Asbury Park, N. J. Convention Hall	WDDO 1280 1000 Chattanooga, Tenn. WDDO Broadcasting Corp., Hotel Patten
WCAT 1200 100 Rapid City, S. D. South Dakota State School of Mines	WDRC 1330 1000 Hartford, Conn. W.D.R.C., Inc., Corning Bldg., 11 Asylum St.
WCAU 1170 50000 Philadelphia, Pa. WCAU Broadcasting Co., 1622 Chestnut	WDSU 1250 1000 New Orleans, La. WDSU Inc., Hotel Monteleone
WCAX 1200 100 Burlington, Vt. 203 College St.	WDZ 1070 100 Tuscola, Ill. James L. Bush, Star Store Bldg.
WCAZ 1070 100 Carthage, Ill. 97 1/2 Adams St.	WEAF 660 50000 New York, N. Y. 30 Rockefeller Plaza
WCBA 1440 500 Allentown, Pa. B. Bryan Musselman, 39-41 10th St.	WEAN 780 500 Providence, R. I. New Crown Hotel
WCBD 1080 5000 Waukegan, Ill. 75 E. Wacker Drive, Chicago	WEBC 1290 1000 Superior, Wis. Spaulding Hotel, Duluth, Minn.
WCBM 1370 100 Baltimore, Md. Keith Theatre Bldg.	WEBQ 1210 100 Harrisburg, Ill. 100 E. Poplar St.
WCBS 1210 100 Springfield, Ill. WCBS, Inc., 208 1/2 S. 5th.	WEBR 1310 100 Buffalo, N. Y. Howel Broadcasting Co., Inc., 735 Main
WCCO 810 50000 Minneapolis, Minn. Nicollet Hotel	WEDC 1210 100 Chicago, Ill. Emil Denemark, 3860 Ogden Ave.
WCFL 970 1500 Chicago, Ill. 666 Lake Shore Drive	WEED 1420 100 Rocky Mount, N. C. Wm. Avera Wynne, Box 221
WCFS 580 500 Charleston, W. Va. WOBU, Inc., Ruffner Hotel	WEEI 590 1000 Boston, Mass. 182 Tremont St.
WCKY 1490 5000 Covington, Ky. 6th & Madison Sts.	WEEU 830 1000 Reading, Pa. Berks Broadcasting Co., 533 Penn.
WCLO 1200 100 Janesville, Wis. 200 E. Milwaukee St.	WEHC 1420 100 Charlottesville, Va. 7th & Main Sts.
WCLS 1310 100 Joliet, Ill. WCLS, Inc., 301 E. Jefferson St.	WEHS 1420 100 Cicero, Ill. WEHS, Inc., 6138 W. Cermak Rd.
WCMI 1310 100 Ashland, Ky. Ashland Broadcasting Co.	WELL 1420 100 Battle Creek, Mich. Enquirer News, 38 W. State St.
WCNW 1500 100 Brooklyn, N. Y. Arthur Fasko, 1525 Pitkin Ave.	WENR 870 50000 Chicago, Ill. 222 N. Bank Drive
WCOA 1340 500 Pensacola, Fla. San Carlos Hotel	WESG 850 1000 Elmira, N. Y. Mark Twain Hotel
WCOC 880 500 Meridian, Miss. Box 603	WEVD 1300 1000 New York, N. Y. Jewish Daily Forward, Hotel Claridge
WCOL 1210 100 Columbus, Ohio WCOL Inc., 30 N. High St	WEW 760 1000 St. Louis, Mo. St. Louis University, 221 N. Grand Blvd.
	WEXL 1310 50 Royal Oak, Mich. 212 W. 6th St.

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WFAA 800 50000	Dañas, Texas	WHBC 1200 100	Canton, Ohio
Baker Hotel		Edw. P. Graham, 319	Tusc. St., W.
WFAB 1300 1000	New York, N. Y.	WHBF 1210 100	Rock Island, Ill.
Fifth Avenue Broadcasting Corp.		Hotel (farms)	
WFAM 1200 100	South Bend, Ind.	WHBI 1250 1000	Newark, N. J.
South Bend Tribune, 225 W. Colfax Ave.		100 Shipman St.	
WFAS 1210 100	White Plains, N. Y.	WHBL 1410 500	Sheboygan, Wis.
Hotel Roger Smith		Press Publishing Co.,	Press Bldg.
WFBC 1300 1000	Greenville, S. C.	WHBQ 1370 100	Memphis, Tenn.
Imperial Hotel		Brdstg. Sta. WNBQ, Inc.	Hotel Claridge
WFBE 1200 100	Cincinnati, Ohio	WHBU 1210 100	Anderson, Ind.
WFBE, Inc., Hotel Sinton		Anderson Broadcasting Corp.,	Box 816
WFBC 1310 100	Altoona, Pa.	WHBY 1200 100	Green Bay, Wis.
Gable Broadcasting Co., 13th Av. & 13th St.		WHBY, Inc., Bellin Bldg.	
WFBL 1360 1000	Syracuse, N. Y.	WHDF 1370 100	Calumet, Mich.
Onondaga Hotel		Box 643	
WFBM 1230 1000	Indianapolis, Ind.	WHDH 830 1000	Boston, Mass.
48 Monument Circle		Matheson Radio Co.,	62 Boylston
WFBR 1270 500	Baltimore, Md.	WHOL 1420 100	Olean, N. Y.
7 St. Paul St.		Exchange Natl. Bank Bldg.	
WFDF 1310 100	Flint, Mich.	WHEB 740 250	Portsmouth, N. H.
Union Industrial Bldg.		Box 522, 39 Congress St.	
WFEA 1340 500	Manchester, N. H.	WHEC 1430 500	Rochester, N. Y.
Carpenter Hotel		WHEC, Inc., 40 Franklin St.	
WFIL 560 1000	Philadelphia, Pa.	WHEF 1500 100	Kosciusko, Miss.
WFIL Broadcasting Co., 801 Market		417 W. Adams St.	
WFLA 620 1000	Clearwater, Fla.	WHFC 1420 100	Cicero, Ill.
Box 119		WHFC, Inc., 6138 W. Cermak Road	
WFMD 900 500	Frederick, Md.	WHIO 1260 1000	Dernak, Ohio
Monocacy Broadcasting Co.		39 S. Ludlow St.	
WGAL 1500 100	Lancaster, Pa.	WHIS 1410 250	Bluefield, W. Va.
WGAL, Inc., 8 W. King St.		Bland St.	
WGAR 1450 500	Cleveland, Ohio	WHJB 620 250	Greensburg, Pa.
WGAR Broadcasting Co., Hotel Statler		Penn-Albert Hotel, 128 Pa. Ave.	
WGGB 1210 100	Freeport, N. Y.	WHK 1390 1000	Cleveland, Ohio
H. H. Carman, 64 S. Grove St.		1311 Terminal Tower	
WGBF 630 500	Evansville, Ind.	WHN 1010 1000	New York, N. Y.
519 Vine St.		1540 Broadway	
WGBI 880 500	Scranton, Pa.	WHO 1000 50000	Des Moines, Iowa
116 N. Washington Ave.		Central Brdstg. Co.,	914 Walnut St.
WGCM 1210 100	Mississippi City	WHOM 1450 250	Jersey City, N. J.
Great Southern Golf Club		2870 Boulevard	
WGES 1360 500	Chicago, Ill.	WHP 1430 500	Harrisburg, Pa.
128 N. Crawford Ave.		WHP, Inc., 216 Locust St.	
WGH 1310 100	Newport News, Va.	WIBA 1280 1000	Madison, Wis.
2813 Washington Ave.		111 King St.	
WGL 1370 100	Fort Wayne, Ind.	WIBG 970 100	Glenside, Pa.
F. C. Zieg, 213 W. Main St.		WIBG, Inc., Keswick Bldg.	
WGN 720 50000	Chicago, Ill.	WIBM 1370 100	Jackson, Mich.
WGN, Inc., Tribune Tower		WIBM, Inc., 306 W. Michigan Ave.	
WGNV 1210 100	Chester, N. Y.	WIBU 1210 100	Poynette, Wis.
Peter Goelet (Orange County)		Wm. C. Forrest, R. F. D. No. 3	
WGPC 1420 100	Albany, Ga.	WIBW 580 1000	Topeka, Kans.
Rylander Theatre Bldg.		11th & Topeka Blvd.	
WGR 550 1000	Buffalo, N. Y.	WIBX 1200 100	Utica, N. Y.
Rand Bldg.		WIBX, Inc., 1st Natl. Bank Bldg.	
WGST 890 500	Atlanta, Ga.	WICC 600 500	Bridgeport, Conn.
Ansley Hotel		Southern Conn. Broadcasting Corp.	
WGY 790 50000	Schenectady, N. Y.	WIL 1200 100	St. Louis, Mo.
1 River Road		Melbourne Hotel	
WHA 940 2500	Madison, Wis.	WILL 890 1000	Urbana, Ill.
University of Wisconsin		University of Illinois	
WHAM 1150 50000	Rochester, N. Y.	WILM 1420 100	Wilmington, Del.
100 Carlson Road		920 King St.	
WHAS 820 50000	Louisville, Ky.	WIND 560 1000	Gary, Ind.
300 W. Liberty St.		504 Broadway	
WHAT 1310 100	Philadelphia, Pa.	WINS 1180 1000	New York, N. Y.
Public Ledger Bldg.		110 E. 58th St., Hearst Radio, Inc.	
WHAZ 1300 500	Troy, N. Y.	WIOD 1300 1000	Miami, Fla.
8th St.		Herald Bldg., Metropolitan Pub. Co.	
WHB 860 1000	Kansas City, Mo.	WIP 610 500	Philadelphia, Pa.
WHB Broadcasting Co., Scarritt Bldg.		Gimbel Bldg.	

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WIRE 1400 500 Indianapolis, Ind. 540 N. Meridian St.	WIS 1010 1000 Columbia, S. C. Station WIS, Inc., 1811 Main St.
WISN 1120 250 Milwaukee, Wis. 123 W. Michigan St., Hearst Radio, Inc.	WJAC 1310 100 Johnstown, Pa. WJAC, Inc., Locust St.
WJAG 1060 1000 Norfolk, Neb. Norfolk Daily News	WJAR 890 500 Providence, R. I. Outlet Co., Weybossett St.
WJAS 1290 1000 Pittsburgh, Pa. Chamber of Commerce Bldg.	WJAX 900 1000 Jacksonville, Fla. City of Jacksonville
WJAY 610 500 Cleveland, Ohio 1224 Huron Road	WJBC 1200 100 Bloomington, Ill. Kaskaskia Broadcasting Co.
WJBK 1500 100 Detroit, Mich. 6559 Hamilton Ave.	WJBL 1200 100 Decatur, Ill. Gushard Bldg.
WJBO 1420 100 Baton Rouge, La. Baton Rouge Broadcasting Co., Inc.	WJBW 1200 100 New Orleans, La. C. C. Carlson, Godchaux Bldg.
WJBY 1210 100 Gadsden, Ala. Gadsden Broadcasting Co., 112 N. 8th St.	WJDX 1270 1000 Jackson, Miss. Lamar Life Bldg.
WJEJ 1210 100 Hagerstown, Md. Lovely Dame Bldg.	WJIM 1210 100 Lansing, Mich. Capital City Brdcastg. Co.
WJJD 1130 20000 Chicago, Ill. WJJD, Inc., 201 N. Wells St.	WJMS 1420 100 Ironwood, Mich. WJMS, Inc., St. James Hotel
WJR 750 10000 Detroit, Mich. WJR, Inc., Fisher Bldg.	WJSV 1460 10000 Washington, D. C. Earle Building
WJTL 1370 100 Atlanta, Ga. Oglethorpe University	WJW 1210 100 Akron, Ohio WJW, Inc., 41 S. High St.
WJZ 760 50000 New York, N. Y. 30 Rockefeller Plaza	WKAQ 1240 1000 San Juan, P. R. Radio Corp. of Porto Rico, P. O. Box 358
WKAR 1040 1000 East Lansing, Mich. Michigan State College	WKBB 1500 100 East Dubuque, Ill. Richard W. Hoffman
WKBH 1380 1000 LaCrosse, Wis. WKBH, Inc., 409 Main St.	WKBI 1420 100 Cicero, Ill. WKBI, Inc., 6138 W. Cermak Road
WKBN 570 500 Youngstown, Ohio 17 N. Champion St.	WKBO 1200 100 Harrisburg, Pa. Penn Harris Hotel
WKBV 1500 100 Richmond, Ind. Knox Radio Corp., Box 308	WKBW 1480 5000 Buffalo, N. Y. Rand Bldg.
WKBZ 1500 100 Muskegon, Mich. Karl L. Ashbacher & Sons	WKEU 1500 100 Griffin, Ga. Radio Station WKEU, 906 Hill St.

WKJC 1200 100 Lancaster, Pa. 16 W. King St.	WKOK 1210 100 Sunbury, Pa. 1150 N. Front St.
WKRC 550 1000 Cincinnati, Ohio WKRC, Inc., Hotel Alms	WKY 900 1000 Oklahoma City, Okla. Plaza Court Bldg.
WKZO 590 1000 Kalamazoo, Mich. John E. Fetser, Burdick Hotel	WLAC 1470 5000 Nashville, Tenn. 159—4th Ave. No. WLAC Inc.
WLAP 1420 100 Lexington, Ky. Main & Esplanade	WLB 1250 1000 Minneapolis, Minn. University of Minnesota
WLBC 1310 50 Muncie, Ind. D. A. Burton, Anthony Bldg.	WLBK 1420 100 Kansas City, Kans. WLBK Broadcasting Co., Huron Bldg.
WLBL 900 2500 Stevens Point, Wis. Wisconsin Dept. of Agriculture and Markets	WLBZ 620 500 Bangor, Me. Maine Broadcasting Co., Inc., 100 Main
WLEU 1420 100 Erie, Pa. Leo J. Omelian	WLLH 1370 100 Lowell, Mass. Albert S. Moffat, Box D
WLNH 1310 100 Laconia, N. H. 523 Main St.	WLS 870 50000 Chicago, Ill. 1230 W. Washington Blvd.
WLTH 1400 500 Brooklyn, N. Y. 305 Washington St.	WLVA 1200 100 Lynchburg, Va. 915 Main St.
WLW 700 50000 Cincinnati, Ohio 1329 Arlington St.	WLWL 1100 5000 New York, N. Y. 415 W. 59th St.
WMAL 630 250 Washington, D. C. 712—11th St., N. W.	WMAQ 670 50000 Chicago, Ill. Merchandise Mart
WMAS 1420 100 Springfield, Mass. WMA8, Inc., 70 Chestnut St.	WMAZ 1180 1000 Macon, Ga. 211 Cotton Ave.
WMBC 1420 100 Detroit, Mich. 7310 Woodward Ave.	WMBD 1440 500 Peoria, Ill. 114 N. Madison St.
WMBG 1210 100 Richmond, Va. 914 W. Broad St.	WMBH 1420 100 Joplin, Mo. 1334 Roosevelt St.
WMBI 1080 5000 Chicago, Ill. 153 Institute Place	WMBO 1310 100 Auburn, N. Y. WMBO, Inc., Metcalf Bldg.
WMBQ 1500 100 Brooklyn, N. Y. Paul J. Gollhofer, 95 Leonard St.	WMBR 1370 100 Jacksonville, Fla. F. J. Reynolds, Carling Hotel
WMC 780 1000 Memphis, Tenn. WMC, Inc., Hotel Gayoso	WMCA 570 500 New York, N. Y. 1697 Broadway
WMEX 1500 100 Boston, Mass. The Northern Corp., Hotel Manger	WMFD 1370 100 Wilmington, N. C. Richard Austin Dunlea

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WMFE 1380 250 New Britain, Conn. William J. Sanders	WOS 630 500 Jefferson City, Mo. State Highway Control, Capitol Bldg.
WMFF 1310 100 Plattsburg, N. Y. Plattsburg Broadcasting Corp.	WOSU 570 750 Columbus, Ohio Ohio State University
WMFG 1210 100 Hibbing, Minn. Head of the Lakes Brdstg. Co.	WOV 1130 1000 New York, N. Y. 132 West 43rd St.
WMFH 1120 500 Boston, Mass. Joseph M. Kirby	WOW 590 1000 Omaha, Neb. Woodmen of the World, 4th and Farnam
WMFI 900 500 ^X New Haven, Conn. Patrick J. Goode	WOWO 1160 10000 Fort Wayne, Ind. Main Auto Supply Co., 213 W. Main
WMFJ 1420 100 Daytona Beach, Fla. W. Wright Esch	WPAD 1420 100 Paducah, Ky. 2201 Broadway
WMFN 1210 100 Clarksdale, Miss. Attala Brdstg. Corp.	WPAX 1210 100 Thomasville, Ga. H. Wimpy, 135 E. Jackson St.
WMFO 1370 100 Decatur, Ala. James R. Doss, Jr.	WPAY 1370 100 Portsmouth, Ohio F. P. Moler
WMMN 890 500 Fairmont, W. Va. West Va. Brdstg. Corp., 325 Main St.	WPEN 920 250 Philadelphia, Pa. 22nd & Walnut Sts.
WMPC 1200 100 Lapeer, Mich. S1 Liberty St.	WPFB 1370 100 Hattiesburg, Miss. Forest Brdstg. Co.
WMT 600 1000 Cedar Rapids, Iowa Hotel Montrose	WPG 1100 5000 Atlantic City, N. J. Convention Hall
WNAC 1230 1000 Boston, Mass. 21 Brookline Ave	WPHR 880 500 Petersburg, Va. WLBG, Inc., Medical Arts Bldg.
WNAD 1010 1000 Norman, Okla. University of Oklahoma	WPRO 630 250 Providence, R. I. Cherry & Webb Brdstg. Co., 15 Chestnut
WNAX 570 1000 Yankton, S. D. House of Gurney, Inc., 2nd and Capital St.	WPRP 1420 100 Ponce, P. R. Julio M. Conesa
WNB 1500 100 Binghamton, N. Y. Arlington Hotel	WPTF 680 1000 Raleigh, N. C. 324 Fayetteville St.
WNBH 1310 100 New Bedford, Mass. 251 Union St.	WQAM 560 1000 Miami, Fla. Miami Brdstg. Co., Inc., 327 N. E. 1st Ave.
WNBZ 1430 500 Memphis, Tenn. Memphis Broadcasting Co., Hotel DeVoy	WQAN 880 250 Scranton, Pa. Scranton Times, 149 Penn Ave.
WNBX 1260 1000 Springfield, Vt. WNBX Broadcasting Corp., 39 Main St.	WQBC 1360 1000 Vicksburg, Miss. Delta Broadcasting Co., Hotel Vicksburg
WNBZ 1290 100 Saranac Lake, N. Y. Smith & Mace, 70 Broadway	WQDM 1370 100 St. Albans, Vt. 42 N. Main St.
WNEL 1290 500 San Juan, P. R. Box 1252	WRAK 1370 100 Williamsport, Pa. WRAK, Inc., 244 W. 4th St.
WNEW 1250 1000 Newark, N. J. Wodanm Corp., 1060 Broad	WRAX 1310 100 Reading, Pa. Reading Broadcasting Co., 533 Penn St.
WNOX 560 1000 Knoxville, Tenn. WNOX, Inc., Hotel Andrew Johnson	WRAX 920 250 Philadelphia, Pa. WRAX Broadcasting Co., 217 S. Broad St.
WNRA 1420 100 Muscle Shoals, Ala. Kathryn Jones, P. O. Box 486, Sheffield, Ala.	WRBL 1200 100 Columbus, Ga. Royal Theatre Bldg.
WNYC 810 1000 New York, N. Y. Centre & Duane Sts.	WRBX 1410 250 Roanoke, Va. P. O. Box 2389
WOAI 1190 50000 San Antonio, Texas Southland Industries, Inc., 1038 Navarro	WRC 950 500 Washington, D. C. National Press Bldg.
WOC 1370 100 Davenport, Iowa Palmer School of Chiropractic	WRDO 1370 100 Augusta, Me. WRDO, Inc., Augusta House
WOCL 1210 50 Jamestown, N. Y. A. E. Newton, 840 N. Main St.	WRDW 1500 100 Augusta, Ga. Augusta Brdstg. Co., 309 8th St.
WOI 640 5000 Ames, Iowa Iowa State College	WREC 600 1000 Memphis, Tenn. WREC, Inc., Hotel Peabody
WOKO 1430 500 Albany, N. Y. WOKO, Inc., Hotel Ten Eyck	WREN 1220 1000 Lawrence, Kans. WREN Brdstg. Co., 8th and Vermont St.
WOL 1310 100 Washington, D. C. American Broadcasting Co., Annapolis Hotel	WRGA 1500 100 Rome, Ga. 10 Third Ave.
WOMT 1210 100 Manitowoc, Wis. Francis M. Kadow, Box 326	WRJN 1370 100 Racine, Wis. Racine Broadcasting Corp., Hotel Racine
WOOD 1270 500 Grand Rapids, Mich. Grand Rapids Natl. Bank Bldg.	WROK 1410 500 Rockford, Ill. 109 So. Water St.
WOPI 1500 100 Bristol, Tenn. 22nd & State Sts.	WROL 1310 100 Knoxville, Tenn. Stuart Broadcasting Corp., 524 S. Gay
WOR 710 50000 Newark, N. J. 147 Market St.	WRR 1280 500 Dallas, Texas City of Dallas, Southland Life Bldg.
WORC 1280 500 Worcester, Mass. Alfred F. Kleindienst, 60 Franklin St.	WRUF 830 5000 Gainesville, Fla. State University
WORK 1320 1000 York, Pa. York Broadcasting Co., 15 S. Beaver St.	WRVA 1110 5000 Richmond, Va. Larus & Bros Co., Inc., 22nd and Gary St.

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WSAI 1330 1000 Cincinnati, Ohio Crosley Radio Corp., 1329 Arlington	WTIC 1040 50000 Hartford, Conn. 26 Grove St.
WSAJ 1310 100 Grove City, Pa. Grove City College, 418 Poplar St.	WTJS 1310 100 Jackson, Tenn. Sun Publishing Co., Sun Bldg.
WSAN 1440 500 Allentown, Pa. WSAN, Inc., 39 10th St.	WTMJ 620 1000 Milwaukee, Wis. The Journal Co., 333 W. State St.
WSAR 1450 250 Fall River, Mass. Academy of Music Bldg.	WTMV 1500 100 East St. Louis, Ill. Mississippi Valley Brdsg. Co.
WSAZ 1190 1000 Huntington, W. Va. WSAZ, Inc., P. O. Box 729	WTNJ 1280 500 Trenton, N. J. Trenton Brdsg. Co., Stacy Trent Hotel
WSB 740 50000 Atlanta, Ga. Atlanta Journal, 7 N. Forsyth St.	WTOC 1260 1000 Savannah, Ga. Savannah Brdsg. Co., De Soto Hotel
WSBC 1210 100 Chicago, Ill. Gene T. Dyer, 1258 S. Michigan Ave.	WTRC 1310 50 Elkhart, Ind. Truth Pub. Co., Inc., Hotel Elkhart
WSBT 1360 500 South Bend, Ind. South Bend Tribune, 225 W. Colfax Ave.	WVFW 1400 500 Brooklyn, N. Y. Paramount Brdsg. Co., 1 Nevins St.
WSFA 1410 500 Montgomery, Ala. Jefferson Davis Hotel	WWAE 1200 100 Hammond, Ind. 402 Hammond Bldg.
WSGN 1310 100 Birmingham, Ala. R. B. Broyles, Tutwiler Hotel	WWC 1420 1000 Spartanburg, S. C. Virgil V. Evans, Ravenal & Avant St.
WSIX 1210 100 Springfield, Tenn. 638 Tire & Vulcanizing Co.	WWJ 920 1000 Detroit, Mich. Evening News Assn., 616 Lafayette Blvd.
WSJS 1310 100 Winston-Salem, N. C. Winston-Salem Journal Co., 416 N. Marshall	WWL 850 10000 New Orleans, La. Loyola University, Roosevelt Hotel
WSM 650 50000 Nashville, Tenn. 301—7th Ave. No.	WWNC 570 1000 Asheville, N. C. Citizen Brdsg. Co., Inc., Flatiron Bldg.
WSMB 1320 1000 New Orleans, La. WSMB, Inc., Malson Blanche Bldg.	WWPA 850 250 Clarion, Pa.
WSMK 1380 200 Dayton, Ohio WSMK Inc., Loew Theatre Bldg.	WWRL 1500 100 Woodside, N. Y. 4130—58th St.
WSOC 1210 100 Charlotte, N. C. WSOC, Inc., Box 730	WWSW 1500 100 Pittsburgh, Pa. Hotel Schenley
WSPA 920 1000 Spartanburg, S. C. Virgil V. Evans, Ravenal and Avant St.	WWVA 1160 5000 Wheeling, W. Va. Hawley Bldg.
WSPD 1340 1000 Toledo, Ohio Toledo Broadcasting Co., 505 Jefferson	WXYZ 1240 1000 Detroit, Mich. Madison Theatre Bldg.
WSUI 880 500 Iowa City, Iowa State University of Iowa	WIXBS 1530 1000 Waterbury, Conn. 61 Leavenworth St., Amer. Republican, Inc.
WSUN 620 1000 St. Petersburg, Fla. Chamber of Commerce	WZXR 1550 1000 Long Island City, N. Y. Scientific Brdsg. Serv., 41 Park Row, N. Y.
WSVA 550 500 Staunton, Va. Marion K. Gilliam	W6XA 1550 1000 Bakersfield, Calif. Pioneer Mercantile Co.
WSVS 1370 50 Buffalo, N. Y. 666 E. Delavan Ave.	W9XBV 1530 1000 Kansas City, Mo. First National Television Inc.
WSYB 1500 100 Rutland, Vt. Phillip Weiss Music Co., 80 West St.	XEA 1060 125 Guadalajara, Jal. Alberto Palos Souza, Apdo. 197
WSYR 570 250 Syracuse, N. Y. E. Onondaga & S. Warren Sts.	XEAA 920 200 Mexicali, B. C. Carlos Blando, Apdo. 42
WTAD 900 500 Quincy, Ill. Illinois Brdsg. Corp., State and 6th	XEAF 1010 250 Nogales, Son. Francisco G. Elias, Hote Central
WTAG 580 500 Worcester, Mass. 18 Franklin St.	XEAI 1240 100 Mexico City, D. F. Carlos Gonzales Caballero, Insurgentes 366
WTAL 1310 100 Tallahassee, Fla. Florida Capitol Broadcasters, Inc.	XEAJ 1310 15 Cazaca, Cam. Enrique M. Cihuela, 3a. Guerrero 18
WTAM 1070 50000 Cleveland, Ohio 1367 E. 6th St.	XEAM 960 50 Nuevo Laredo, Tams. Edificio Banco Longoria
WTAQ 1330 1000 Eau Claire, Wis. Gillette Rubber Co., Hotel Eau Claire	XEAO 560 250 Mexicali, B. C. Luis L. Castro, C. Altamirano 156
WTAR 780 500 Norfolk, Va. WTAR Radio Corp., Walnwright Bldg.	XEAW 960 10000 Reynosa, Tams. Internacional Broadcasting Co., S. A.
WTAW 1120 500 College Station, Tex. Agricultural and Mechanical College	XEAZ 1420 7 Guanajuato, Gto. Antonio Zavala, Pasco de la Presa 85
WTAX 1420 100 Springfield, Ill. WTAX, Inc., 416 E. Capitol Ave.	XEB 1030 10000 Mexico City, D. F. El Buen Tono, S. A., Apdo. 79-44
WTBO 800 250 Cumberland, Md. Associated Brdsg. Corp., Box 794	XEBC 730 5000 Agua Caliente, B. C. Alberto V. Aldrete
WTCN 1250 1000 Minneapolis, Minn. Wesley Temple Bldg.	XEC 1310 50 Tijuana, B. C. Luis F. Enciso, Teatro Zaragoza
WTEL 1310 100 Philadelphia, Pa. Broad & Erie Ave.	XECW 1310 10 Mexico City, D. F. Maria Elena Bravo de Cordero Ave. Juarez 104
WTFI 1450 500 Athens, Ga. 133 E. Washington St.	XED 1160 500 Guadalajara, Jal. Cla. Radiofonografica, Apdo. 197

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XEE 1210 50 Durango, Dgo. 20 de Nov. 112 (Apdo. 148)	XENT 910 60000 Nuevo Laredo, Tams. Box 410, Laredo, Texas
XEFA 1180 500 Mexico City, D. F. Eduardo Limon Segul, Meditarraneo 236	XEOK 765 2500 Tijuana, L. C. Carlos de la Sierra, Calle 5a 312
XEFB 1420 100 Monterrey, N. L. Jesus Quintanilla, P. O. Box 317	XEOX 640 250 Saltillo, Coah. Victoria No. 4, Altos.
XEFC 1310 100 Merida, Yuc. J. Molina Font, Calle 59, 517	XEP 840 500 Mexico City, D. F. Cla Difusora de Mexico S. A., Rembrandt 11
XEFE 920 250% Laredo, Tams. R. T. Carranza, Km. 4 Carretera Laredo Mt.	XEPN 590 50000 Piedras Negras, Coah. Piedras Negras Brdsgt. Co., Madero 53
XEFG 1100 250 Mexico City, D. F. Ricardo Gonzales Montero, Tepic 48	XES 990 250 Tampico, Tams. Fernando Sada, Box 309
XEFI 1440 250 Chihuahua, Chih. Feliciano Lopez Isles, Ap. 157	XET 690 500 Monterrey, N. L. P. O. Box 203, Hidalgo
XEFJ 1230 100 Monterrey, N. L. R. Junco de la Vega, P. O. Box 186	XETB 1310 125 Torreon, Coah. Jose A. Berumen, R. Corona 317
XEFL 1160 500 Tijuana, B. C. (P. O. Box 6, San Diego, Calif.)	XETF 1220 12 Veracruz, Ver. Jose M. Lopez, Independencia 20
XEFO 940 5000 Mexico City, D. F. Reforma No. 137	XETH 1210 100 Puebla, Pue. Ramon Huerta G., Calle 17 Oriente 11
XEFV 1210 100 Juarez, Chih. Cordova & Prieto, Ave. Ferrocarril 104	XETW 820 500 Mexico City, D. F. Rafael M. Pena, Ave. 16 de Sep. 83
XEFW 1310 250 Tampico, Tams. J. E. Martinez, Salvador Diaz Miron 6	XEU 1010 250 Veracruz, Ver. Fernando Pazos Sosa, Independencia 98
XEFZ 1370 100 Mexico City, D. F. Manuel Zetina, Calzada Nonoalco 481	XEW 890 50000 Mexico City, D. F. P. O. Box 2516
XEG 1270 500 Ensenada, B. C. Juan C. Chavez	XEWZ 1150 100 Mexico City, D. F. Medellin e Insurgentes
XEH 1150 250 Monterrey, N. L. Tarnava y Cia, P. O. Box 147	XEX 1310 125 Monterrey, N. L. L. F. Petit Jean, P. O. Box 10
XEI 1370 125 Morelia, Mich. Carlos Gutierrez M., F. I. Madero 545	XEXX 845 500 Mexico City, D. F. Av. Pino Suarez 9
XEJ 1020 1250 Juarez, Chih. Juan G. Buttner, P. O. Box 111	XEYZ 780 10000 Mexico City, D. F. Angel M. Diez, Ave. Juarez 48
XEK 990 100 Mexico City, D. F. Arturo Martinez, Jalapa No. 51	XEZ 630 500 Merida, Yuc. Jorge L. Falomeque, Estanores Ctd 214
XEKL 1240 500 Leon, Guan. 6 de Mayo 26	XEZZ 1370 100 San Luis Potosi, SLP Emilio Delgado R. Ave. Chicosein 32
XELA 1240 50 Saltillo, Coah. Enrique Gomez, Chauhemos 28 Sur	XFB 1270 1000 Jalapa, Ver. Gobierno del Estado de Veracruz
XELC 740 100 Mexico City, D. F. Manuel Valdes Bravo, C. Central 112	XFC 810 350 Aguascalientes, Ags. Gobierno del Estado de Aguascalientes
XELM 1310 15 Mineral del Monte, Dgo. Jose Sanchez, Abesolo 1-A	XFD 1340 350 Orizaba, Ver. Gobierno Estado de Veracruz
XELO 1110 10000 Piedras Negras, Coah. Piedras Negras Brdsgt. Co.	XFO 940 5000 Mexico City, D. F. Nat. Rev. Party Ave. Morelos 110
XEMA 1080 50 Tampico, Tams. Manuel M. Pier, Aretsanos 10	AFX 610 1000 Mexico City, D. F. Secretaria de Educacion Publica
XEMO 865 2500 Tijuana, B. C. P. O. Box 202, San Diego, Calif.	10-AK 1200 15 Stratford, Ont. M. I. Higgins, 151 Ontario St.
XEMX 1280 12 Mexico City, D. F. Alfonzo T. Avales	10-BP 1200 25 Wingham, Ont. W. T. Cruickshank, Box 65
XEN 710 1000 Mexico City, D. F. Cerveceria Modelo Ave. Juarez 77	

100 Best Shortwave Stations by Call Letters

Frequencies are given in megacycles and the time is Eastern Standard. In this list, the location of the transmitter is given. For a more complete list of the shortwave stations by frequencies, by calls and by countries, see the *DX Log of the World*.

Amateur phones are heard between	Broadcast Pickup stations:	COC. Havana, Cuba, 6.010.	8:30
1.875 and 2.000 megs.	1.622; 1.646; 2.102; 2.150; 2.190;	a.m. to 12:30 p.m.;	4-7 p.m.
3.900 and 4.000 megs.	2.390.	Sat., 11:30-12:30	
7.000 and 7.300 megs. (Foreign only).	CJRO, Middlechurch, Man., 6.150.	COH, Havana, Cuba, 9.428.	5-6;
14.150 and 14.250 megs.	CJRX, Middlechurch, Man., 11.720.	8-9 p.m.	

AROUND the CLOCK on the SHORT WAVES

MIDNIGHT TO NOON (EST)

GMT	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	COC DJB DJQ GSB GSD VE9CA VPD VK2ME W3XAL W8XAL W8XK	DJB DJQ GSB GSD VE9CA VPD VK2ME W8XAL W9XF	W8XAL W9XF	DJB DJN RV15	DJB DJN GSF GSG JVM RV15 VK2ME VK3LR	DJB DJN GSF GSG JVM RV15 LKJ1 RNE RV15 VK2ME VK3LR VK3ME	DJB DJN GSF GSG JVM RV15 VK2ME VK3LR VK3ME W8XAL	GSF GSG JVM LKJ1 Pont. Rabat RV15 VE9GW Rabat. VK3LR VK3ME W8XAL W8XK	DJB DJE DJQ GSF GSG PCJ PHI Pont. Rabat. VK3LR VK3ME W8XAL W8XK	DJB DJE DJQ GSF GSG HASP PCJ PHI Pont. VE9CA VE9GW W1XK W3XAL W8XK	DJB DJE DJQ GSF GSG HVJ PCJ PHI Pont. RNE VE9GW W1XK W8XAL W8XK W9XAA	DJB DJE DJQ GSF GSG Pont. Rabat. W3XAL W8XK W9XAA

NOON TO MIDNIGHT (EST)

GMT	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	1:00	2:00	3:00	4:00
AST	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
EST	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
CST	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
MST	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
PST	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00
	DJC DJD EAQ GSB GSD Pont. VE9GW W1XK W2XE W3XAU W8XAL W8XK W9XAA	DJC DJD EAQ GSB GSD IRO Pont. VE9CA VE9GW W1XK W3XAU W8XK W9XAA XEBT	DJC DJD GSB GSD IRO Rabat VE9CA VE9GW W1XK W3XAU W8XK W9XAA XEBT	DJC DJD GSB GSD IRO Rabat RV59 VE9GW W1XK W3XAU W8XK W9XAA XEBT	COC CT1AA DJC DJD GSB GSD IRO Rabat RV59 HBL HJ1ABB Pont. PRF5 Rabat RV59 VE9GW W1XK W3XAU W8XK W9XAA XEBT YV3RC	COC COH CT1AA DJA DJD DUN EAQ GSB GSD HAT4 HC9RL HJ1ABB HJ2ABC HJ4ABA IRA Pont. Rabat RV59 VE9GW W1XK W3XAU W8XK W9XAA XEBT YV3RC YV4RC YV5RMO	COC CT1AA DJA DJD DUN EAQ GSB GSD HAT4 HC9RL HJ1ABB HJ2ABC HJ4ABA IRA Pont. Rabat RV59 VE9GW W1XK W3XAU W8XK W9XAA XEBT YV3RC YV4RC YV5RMO	DJA DJD DUN GSB GSD HC2RL HJ1ABB HJ1ABG HP5B HJ1ABB HJ1AB TTEP TIGPH VE9GW W2XAF W2XE W3XAU W8XK W9XAA W8XK W9XAA YV2RC YV3RC YV4RC YV5RMO	CJRO CJRX COH CP5 DJA DJD DUN HC2RT HIX HP5B HJ1ABB HJ1AB HP5B OAX4D PRADO TIGPH VE9GW W1XK W2XAF W2XE W3XAU W8XK W9XAA XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJRX DJD DJD DJC HC2RT HC2RL HIX HP5B HJ1ABB HP5B OAX4D PRADO TIGPH VE9GW W1XK W2XAF W2XE W3XAU W8XK W9XAA XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJRX DJD DJD DJC HC2RT HC2RL HIX HP5B HJ1ABB HP5B OAX4D PRADO TIGPH VE9GW W1XK W2XAF W2XE W3XAU W8XK W9XAA XEBT YV2RC YV3RC YV4RC YV5RMO	CJRO CJRX COC HJ4ABL GSC GSL HC2RL HC2ET HP5B HJ1AB HP5B PRADO TIGPH VE9GW W1XK W2XAF W2XE W3XAU W8XK W9XAA XEBT YV2RC

CP5, La Paz, Bolivia, 6.080. 8-9 p.m.
 CT1AA, Lisbon, Portugal, 9.590.
 Tues., Thurs., Sat., 4:30-7 p.m.
 CT1GO, Lisbon, Portugal, 6.190.
 Sat., 8-9 p.m.; Tues, Thurs.,
 7:30-8:15 p.m.
 12.330; Sat., Sun., 9-10 a.m.
 DJA, Zeesen, Germany, 9.560.
 5:05-9:15 p.m.
 DJB, Zeesen, Germany, 15.200.
 3:45-7:15 a.m.; 12:30-2 a.m.
 8-11:30 a.m.
 DJC, Zeesen, Germany, 6.020. Noon
 to 4:30 p.m.; 9:30-10:30 p.m.
 DJD, Zeesen, Germany, 11.760. Noon
 to 4:30 p.m.; 5:05-10:30 p.m.
 DJE, Zeesen, Germany, 17.760. 8-
 11:30 a.m.
 DJN, Zeesen, Germany, 9.540.
 3:45-7:15 a.m.; 5:05-10:30 p.m.
 DJQ, Zeesen, Germany, 15.250. 12:30-
 2 a.m.; 8-11:30 a.m.
 EAQ, Aranjuez, Spain, 9.862. 5:30-
 7 p.m.; Sat. noon to 2 p.m.
 GBB, Rugby, England, 13.500. Phones
 Canada.
 GBS, Rugby, England, 12.150. Phones
 N.Y.
 GBU, Rugby, England, 12.240. Phones
 N.Y.
 GBW, Rugby, England, 14.440.
 Phones N. Y. 6-8 p.m.
 GSA, Daventry, England, 6.050.
 GSB, Daventry, England, 9.510
 11:30 p.m. to 1:30 a.m.; 11 a.m.
 to N.; 12:15-4:40 p.m.; 6-8 p.m.
 GSC, Daventry, England, 9.580.
 6-8 p.m.; irreg. 10-11 p.m.
 GSD, Daventry, England, 11.750.
 11:30 p.m. to 1:30 a.m.; 12:15-
 4:40 p.m.; irreg. 10-11 p.m.
 GSE, Daventry, England, 11.860.
 9 a.m. to noon.
 GSF, Daventry, England, 15.140.
 4:45-8:45 a.m.
 GSG, Daventry, England, 17.790.
 4:45-8:45 a.m.; 9-10:45 a.m.
 GSL, Daventry, England, 6.110.
 irreg., 10-11 p.m.
 HAS3, Szekesfehervar, Hun-
 gary, 15.370. Sun., 9-10 a.m.
 HAT4, Budapest, Hungary, 9.125.
 Sun., 6-7 p.m.
 HBL, Prangins, Switzerland, 9.595.
 Sat. 5:30-6:15 p.m.
 HBP, Prangins, Switzerland, 7.797.
 Sat. 5:30-6:15 p.m.
 HC2IL, Guayaquil, Ecuador, 6.659.
 Tues. 9:14-11:14 p.m.; Sun.
 5:45-7:45 p.m.
 HIII, San Pedro de Macoris, D. R.,
 6.810. 4-7:30 p.m. daily, and
 3-4 a.m. Sunday.
 HIX, Santo Domingo, D. R., 5.948.
 Tues. and Fri., 8-10 p.m.
 HJA2, Bogota, Colombia, 5.825.
 HJA3, Barranquilla, Colombia, 12.830
 HJB, Bogota, Colombia, 14.930.
 HJ1AB, Barranquilla, Colombia,
 6.447. 5-10 p.m.
 HJ1ABG, Barranquilla, Colombia
 6.042. 7-10 p.m.
 HJ2ABC, Cucuta, Colombia, 5.975.
 6-9 p.m.
 HJ3ABD, Bogota, Colombia, 7.406.
 "Colombia Broadcasting." 6-9
 p.m. daily.
 HJ4ABA, Medellin, Colombia,
 11.720. 5 p.m.—?
 HJ4ABE, Medellin, Colombia, 5.900
 7-11 p.m.
 HJ4ABL, "Ecos del Occidente,"
 Manizales, Colombia, 6.100.
 Sat., 11 p.m. to 12:30 a.m.
 HJ5ABD, Cali, Colombia, 6.490.
 Thurs., Sat., Sun., 7-9 p.m.
 HPF, Panama City, Panama, 14.545.
 Phones Haleah.
 HP5B, Panama City, Panama,
 6.030. 7-10:30 p.m.
 HP5J, Panama City, Panama, 9.596.
 8-11 p.m.
 HSJ, Bangkok, Siam, 7.980.
 HVJ, Vatican City 15.120. 5-5:15
 a.m. daily except Sunday. Oc-
 casionally from 10-10:30 a.m.
 IRA, Rome, Italy, 6.070. Mon.,
 Wed, Fri., 6-7:30 p.m.
 IRE, Rome, Italy, 11.810. 9-10 a.m.
 IS3, Bolling Field, Va., 6.412.
 I2RO, Rome, Italy.
 9:600; 2:30-5 p.m.; 7:45-9:15
 p.m.
 JVE, Nazaki, Japan, 15.660. Phones
 Java, nights.
 JVP, Nazaki, Japan, 15.620. Phones
 Dixon, 5-11 p.m.
 JVM, Nazaki, Japan, 10.740. 4-
 8 a.m.
 KAY, Manila, P. I., 14.980. Phone
 Dixon.
 KKH, Kahuku, T. H., 7.520. Phone
 Dixon.
 KKP, Kahuku, T. H., 16.030. Phone
 Dixon.
 KNRA, "Seth Parker", 6.160; 6.660;
 6.670; 8.230; 8.820; 8.840; 13.200
 KWO, Dixon, Calif., 15.415. Phones
 Hawaii and Manila.
 KWU, Dixon, Calif., 15.355. Phones
 Japan.
 KWX, Dixon, Calif., 7.610. Phones
 Hawaii.
 LKJ1, Jeloy, Norway, 9.540. 5-8 a.m.
 OAX4D, Lima, Peru, 5.780. Wed. and
 Sat., 9-11:30 p.m.
 ORK, Ruysselede, Belgium, 10.330.
 1:30-3 p.m.
 PCJ, Hilversum, Netherlands,
 15.220; 7:30-10 a.m. daily exc.
 Tues., Wed.
 PHI, Hilversum, Netherlands,
 17.775; 7:30-10 a.m. daily exc.
 Tues., Wed.

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Police Stations, on frequencies: 1.596; 1.634; 1.642; 1.658; 1.666; 1.674; 1.682; 1.706; 1.712; 2.382; 2.406; 2.414; 2.416; 2.422; 2.430; 2.442; 2.450; 2.452; 2.458; 2.466; 2.474; 2.482; 2.490.

PRADO, Rlobamba, Ecuador, 6.618. Thurs., 9-11:30 p.m.

PRF5, Rio de Janeiro, Brazil, 9.505. 5:30-6:15 p.m.

Radio Coloniale, Pontose, France, 11.710; 1:15-5 p.m.; 5:15-9 p.m.; 10 p.m. to midnight; 11.905; 11:15 a.m. to 5 p.m. 15.243; 7:30-11 a.m.

Rabat, Morocco, 8.035. Sun., 11 a.m. to noon, 2-7 p.m. 12.830. Sun., 7-9 a.m.

RKI, Moscow, U.S.S.R., 7.520. Phones USA.

RNE, Moscow, U.S.S.R., 12.000. Sun., 6 a.m. and 10 a.m.

RV15, Khabarovsk, U.S.S.R., 4.273. 3-9 a.m.

RV59, Moscow, U.S.S.R., 5.996. 3-6 p.m.

TIEP, San Jose, Costa Rica, 6.710. 7-10 p.m.

TIGPH, San Jose, Costa Rica, 5.820. 7-10 p.m.

VE9CA, Calgary, Alta., 6.030. Thurs., 9 a.m. to 2 a.m. Fri.; Sun., noon to midn.; other days 9 a.m. to midnight.

VE9GW, Bowmanville, Ont., 6.095. Sun., noon to 8 p.m.; Mon., Tues., Wed., 2-11 p.m.; Thur., Fri., Sat., 6 a.m. to 11 p.m.

VE9HX, Halifax, N. S., 6.110. 5-11 p.m.

VK1, Selfridge Field, Mich. 6.425.

VK2ME, Pennant Hills, Australia, 9.585. Mid. to 2 a.m. and 4:30-8:30 a.m., Sundays only.

VK3LR, Melbourne, Australia, 9.580. Daily exc. Sun. 4-8 a.m.

VK3ME, Braybank, Australia, 9.503. Wed., Thurs., Fri., 5-6:30 a.m.; Sat. 5-7 a.m.

VPD, Suva, Fiji, 13.045. 12:30-1:30 a.m.

VUB, Bombay, India, 9.565. Testing Sunday, 7 a.m.

WTR, Albrook Field, Canal Zone, 6.385.

WOO, Ocean Gate, N. J., 4.273; 4.753; 8.560; 12.840. Phones Ships.

W1NAL, Boston, Mass., 6.040. Tues., Thurs., 7:30-9:30; Sunday, 5-7 p.m.

W1NK, Mills, Mass., 9.570. 6 a.m. to midnight.

W2XAD, Schenectady, N. Y., 15.340. 2:30-3:30 p.m.

W2XAF, Schenectady, N. Y., 9.530. 7:40-11 p.m.

W2XE, Wayne, N. J., 6.120. 6-11 p.m. 11.830. 3-5 p.m. 15.270. 11 a.m. to 1 p.m.

W3XAL, Boundbrook, N. J., 6.100. Mon., Wed., Fri., 5-6 p.m. 17.780; daily 9-10 a.m.; Tues., Thurs., Sat., 3-4 p.m.

W3XAU, Newton Sq., Pa., 6.060. 8 p.m. to 11 p.m. 9.590. Noon to 8 p.m.

W8XAL, Mason, Ohio, 6.060. Irregular.

W8XX, Saxonburg, Pa., 6.140. 4:30 p.m. to 12:30 a.m. 11.870. 4:30-10 p.m. 15.210. 10 a.m. to 5:15 p.m. 21.540. 7 a.m. to 2 p.m.

W9XAA, Chicago, Ill., 6.080. Sun., 11:30 a.m. to 9 p.m. Tues. Thur. Sat. 4-12 p.m. Mon., Wed. Fri. 4:30-7 p.m.

W9XF, Downer's Grove, Ill., 6.100. Daily exc. Sat. and Sun., 4:30. 8 p.m.; 9:30 p.m. to 2 a.m. Sunday, 4:30-7 p.m. and 9 p.m. to 2 a.m.

NETB, Mexico City, D. F., 6.610. Relays NEB, 10 a.m. to 11 p.m.

NECW, del Caballero del Santokan, Mexico, D. F., 5.980. 11-12 p.m.

YNA, Managua, Nicaragua, 14.480. Phones Hialeah.

YNIGG, Managua, Nicaragua, "La Voz de los Lagos", 6.385. 7-10:30 p.m.

YVQ, Maracay, Venezuela, 6.672. Relays Caracas BC stations occasionally.

YVR, Maracay, Venezuela, 9.168. Phones Madrid.

YV2RC, Caracas, Venezuela, 6.112. 5:15-10 p.m.

YV3RC, Caracas, Venezuela, 6.150. 5-10 p.m.

YV4RC, Caracas, Venezuela, 6.375; 4:30-10:30 p.m.

YV5RMO, Maracaibo, Venezuela, 5.850; 5:15-10:15 p.m.

YV6RV, Valencia, Venezuela, 6.520. "La Voz de Carabobo."

ZFB, St. George, Bermuda, 10.060.

ZFS, Nassau, Bahamas, 4.513.

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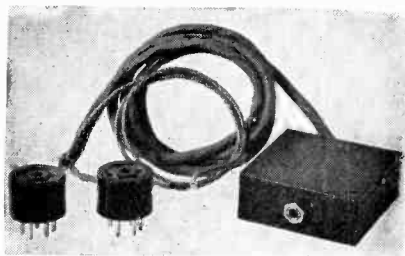
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