

THE APRIL 1933

RADIO IN INDEX

THE ALL-WAVE RADIO MAGAZINE



25^c

Cutting Out Line Noise

Building a Filtering Device

Amending the DX Rules

Short Wave Stations of the World by
Frequencies and Wave Lengths

No. 68

APRIL 1, 1933



RADIO INDEX

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NINTH YEAR

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Frontispiece—Sarah Ann McCabe

With "Singing Strings" week-days at 10:45 and 11:00 a. m. NBC-WJZ

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ADDRESS ALL CORRESPONDENCE TO CLEVELAND OFFICE

APRIL DX CALENDAR

Special Programs for Distant Listeners

A. M. time is given as the night before. Thus early Monday morning programs are listed under Sunday night. Time is given in Eastern Standard so that programs may be listed in proper sequence.

SUNDAY NIGHT

April 23rd

4:00-5:00 OAX, 790, Lima, Peru

April 30

4:00-4:30-KGAR, 137, Tucson, Ariz.

April 2nd, 9th, 16th, 23rd, 30th

12:00-1:00-WSAZ, 580, Huntington, W. Va.

12:15-1:00-KSOO, 1110, Sioux Falls, S. D.

1:00-3:00-WGES, 1360, Chicago, Ill.

MONDAY NIGHT

April 3rd, 17th

4:30-5:15-WEAO, 570, Columbus, Ohio.

April 3rd, 17th, May 1st

5:00-6:00-WAWZ, 1350, Zarephath, N. J.

April 24th

3:00-4:00-KDLR, 1210, Devils Lake, N. D.

April 3rd, 10th, 17th, 24th

12:00-2:30-WMIL, 1500, Brooklyn, N. Y.

1:00-5:00-WABZ, 1200, New Orleans, La.

1:00-5:00-WSUI, 880, Iowa City, Iowa

2:00-4:00-KOY, 1390, Phoenix, Ariz.

3:00-4:00-CFJC, 1120, Kamloops, B. C.

5:15-5:30-WHP, 1430, Harrisburg, Pa.

TUESDAY NIGHT

April 4th, May 2nd

3:00-6:00-WOPI, 1500, Bristol, Tenn.

April 11th

2:00-3:00-WDEV, 550, Waterbury, Vt.

April 18th

2:00-3:00-WJMS, 1420, Ironwood, Mich.

April 25th

2:30-3:30-WCLO, 1200, Janesville, Wis.

April 4th, 11th, 18th, 25th

12:00-1:00-XEH, 1132, Monterey, Mex.

5:00-6:00-KFGQ, 1310, Boone, Iowa

WEDNESDAY NIGHT

April 5th

2:00-2:30-WHBF, 1210, Rock Island, Ill.

April 19th

2:30-5:00-10-BI, 1200, Prince Albert, Sask.

April 5th, 12th, 19th, 26th

11:30-1:00-KFUO, 550, St. Louis, Mo.

12:00-1:00-WHBL, 1410, Sheboygan, Wis.

2:00-3:00-KFXJ, 1310, Grand Junction, Colo.

2:30-4:30-CWXX, 730, Vancouver, B. C.

2:30-4:30-KGFF, 1420, Shawnee, Okla.

THURSDAY NIGHT

April 6th, 20th

11:30-3:00-WMBC, 1420, Detroit, Mich.

April 20th

5:30-7:00-WRAK, 1370, Williamsport, Pa.

April 6th, 13th, 20th, 27th

12:00-2:00-WHOM, 1450, Jersey City, N. J.

12:00-2:30-WMIL, 1500, Brooklyn, N. Y.

1:00-2:00-WENC, 1420, Americus, Ga.

2:00-3:00-CFAC, 690, Calgary, Alta.

FRIDAY NIGHT

March 31st

2:00-4:00-10-BQ, 1200, Brantford, Ont.

4:00-4:30-KGAR, 1370, Tucson, Ariz.

4:00-6:00-WOV, 1130, New York City.

March 31st, April 14th

1:00-5:00-KASA, 1210, Elk City, Okla.

April 7th, 21st

4:00-5:00-XES, 1055, Tampico, Mex.

April 14th

2:00-4:00-WHET, 1210, Troy, Ala.

4:00-6:00-KFBI, 1050, Abilene, Kans.

April 21st

5:00-6:00-WJBU, 1210, Lewisburg, Pa.

April 7th, 14th, 21st, 28th

12:30-1:30-WCAJ, 590, Lincoln, Neb.

1:00-2:00-CFCN, 985, Calgary, Alta.

1:00-3:00-CKCL, 580, Toronto, Ont.

1:30-3:30-KGEK, 1200, Yuma, Colo.

4:30-5:00-CMJH, 1150, Ciego de Avila, Cuba

SATURDAY NIGHT

April 1st

12:00-2:00-CMCH, 1405, Havana, Cuba.

12:00-4:00-WRBX, 1410, Roanoke, Va.

1:00-2:00-CMCY, 1325, Havana, Cuba.

1:30-2:30-CHGS, 1120, Summerside, P. E. I.

1:30-2:30-WTAG, 550, Worcester, Mass.

2:00-3:00-CHML, 880, Hamilton, Ont.

2:00-3:00-CHWK, 665, Chilliwack, B. C.

2:30-4:30-KXO, 1500, El Centro, Calif.

3:00-5:00-KPCB, 650, Seattle, Wash.

April 1st, 8th

1:00-5:00-WJEL, 1210, Hagerstown, Md.

April 1st, 15th

2:00-4:00-10-AB, 1200, Moose Jaw, Sask.

3:00-5:00-10-AT, 1055, Trail, B. C.

April 8th, 22nd

1:00-3:00-KUSD, 890, Vermilion, S. D.

April 15th

2:00-3:00-WTOC, 1260, Savannah, Ga.

April 22nd

3:00-4:00-WFAS, 1210, White Plains, N. Y.

April 29th

12:00-4:00-WIBW, 580, Topeka, Kans.

April 1st, 8th, 15th, 22nd, 29th

9:00-2:00-WWRL, 1500, Woodside, N. Y.

12:00-1:00-WGBI, 880, Scranton, Pa.

12:00-1:00-WJBK, 1370, Detroit, Mich.

12:00-1:30-WWVA, 1160, Wheeling, W. Va.

12:00-2:00-WCAH, 1430, Columbus, Ohio.

12:00-3:00-CMCD, 925, Havana, Cuba.

12:30-3:00-WBBZ, 1200, Ponca City, Okla.

1:00-1:30-WKY, 900, Oklahoma City, Okla.

1:00-2:00-KQV, 1380, Pittsburgh, Pa.

1:00-2:00-KTFI, 1240, Twin Falls, Idaho.

1:00-2:00-WGBF, 630, Evansville, Ind.

1:00-3:00-KRLD, 1040, Dallas, Texas.

1:00-3:00-WGES, 1360, Chicago, Ill.

1:00-3:30-WOW, 590, Omaha, Neb.

1:00-4:00-KGU, 750, Honolulu, T. H.

1:15-2:30-WOMT, 1210, Manitowoc, Wis.

1:30-3:00-KMAC, 1370, San Antonio, Texas.

2:00-3:00-CMGE, 1337, Cardenas, Cuba.

2:00-4:00-KFEL, 920, Denver, Colo.

2:00-4:00-WWAE, 1200, Hammond, Ind.

2:00-5:00-WMMN, 890, Fairmont, W. Va.

2:30-4:30-CWXX, 730, Vancouver, B. C.

2:30-5:00-10-BI, 1200, Prince Albert, Sask.

3:00-5:00-CFCT, 630, Victoria, B. C.

3:00-4:00-KDB, 1500, Santa Barbara, Calif.

3:00-4:00-KFXM, 1210, San Bernardino, Calif.

3:00-4:00-KGER, 1360, Long Beach, Calif.

3:00-4:00-KXL, 1420, Portland, Ore.

3:00-5:00-CKOV, 1200, Kelowna, B. C.

3:00-6:00-KGCV, 1310, Wolf Point, Mont.

4:00-6:00-KVOA, 1260, Tucson, Ariz.

4:00-6:00-XFB, 840, Jalapa, Mex.

MINIMIZING the *Noise* NUISANCE

• • • *By the* TECHNICAL EDITOR

IT is next to impossible to distinguish between the many forms of static which crash from our loud speakers. Natural static is quite beyond our control. Inductive, or "man-made" static is elusive, for, like natural static, it is picked up by the antenna and ground wires. But it can be controlled to a certain extent. Another important source of radio noise is in the 110-volt power line leading directly into the receiver. Battery operated sets, obviously, are free from line interference, but it is the a.c. set that gets every known form of static and noise.

The problem of noise elimination in a.c. and d.c. receivers has been attacked by most radio engineers and scientists. Progress has been made in devising new antenna systems which filter out some inductive and natural static before it reaches the radio set. But, in this discussion we are concerned with the noise that originates in the source of electrical power that operates the receiver. It seems to be more practicable and possible to conquer power-line noises than to eliminate other forms of static.

Power line noises account for more static than most people realize. Electric light lines that lead directly into a.c. or d.c. sets are a part of a vast system used for the transmission of electrical energy. The wires collect stray oscillations which appear in the form of radio interference or static noises. In the congested areas, such as built-up districts where apartment houses, hotels, office buildings, and others abound, these power lines are connected to electrical apparatus and devices that are operated by the opening and closing of contacts.

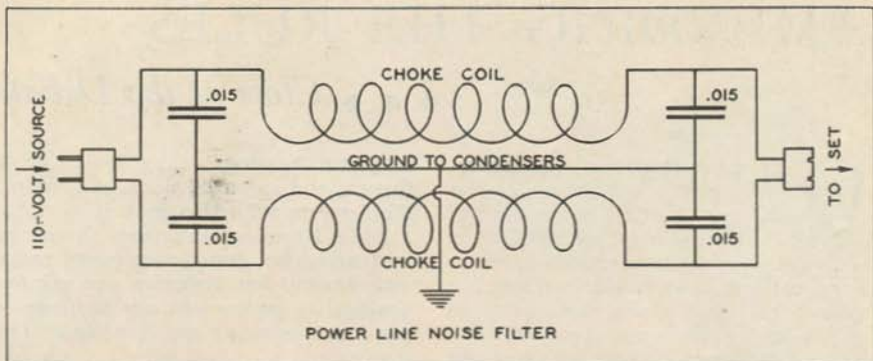
When a contact is made or broken

a heavy inductive surge of current takes place; sparks are produced; waves of high-frequency and damped oscillations occur; and there flows out over the line a radio-frequency current that is detected in all radio sets as a quick, sharp crash of static noise. The intensity of the flash when the electric contact is broken depends upon the amperage used in the apparatus, and this controls the strength of the surge over the wires and the degree of noise which is heard.

Radio receivers made for operation on 110-volt electric lines are equipped with filter devices. But these are particularly for the purpose of smoothing hum and ripple from the rectified current within the set so as to make the set humless. But such filters are



Gertrude Niesen, exotic young singer and impersonator. On the CBS Saturday at 10:45 p. m. and with Columbia Revue Monday and Friday at 10 p. m. EST.



designed for the elimination of 60-cycle hum; they do not take into account stray surges coming into the set over the power line at a much higher frequency.

Choking the H. F. Noise

The problem, then, is to provide additional and external filtering devices that will effectively block the higher frequency noise oscillations, but still permit the 60-cycle alternating current needed for the operation of the set to pass unmolested or unchanged in characteristics. While it is impossible, of course, to block out all noise coming over the power line, it is practicable to reduce the intensity of all, and totally to eliminate much. This is due to the inductive reactance of a coil of wire, called a choke, when it is placed in the power lines. Reactance is the resistance offered to the flow of an alternating current by a coil, and the larger it is the greater will be its reactance. A low frequency current, such as the 60-cycle a.c. source, will flow through a coil that effectively blocks currents of a higher frequency. Small coils, which are used in short wave work, choke back high frequencies very easily, while much larger coils are needed to control the low frequencies.

Power-line noises are created by frequency cycles much higher than the 60 cycles used in alternating current in the line. It is possible, then, to use choke coils of less reactance

than would be required to block the 60-cycle current. Therefore, no resistance to the flow of power for the operation of the receiver is introduced, provided the d.c. resistance of the coil in ohms is held down by using a wire of sufficient size. But, since a coil of fixed size must be used, it is likely that some noise surges will leak through, for these coils cannot be tuned so easily only to the 60-cycle alternating current.

If we provide a filtering device constructed of choke coils and by-pass condensers, which will permit slowly alternating currents to pass while rapidly oscillating currents are blocked or absorbed by the reactive resistance of the coil and reflected back into the power line, we take a step toward the reduction of noise caused by sudden changes produced by the opening and closing of circuits when elevators, light switches, refrigerators, fans, motors, cleaners, and other types of electrical machinery are operated.

Building Your Filter

The filter described herewith for RADEX readers consists of two choke coils, each connected in one of the leads of the a.c. power line between the lighting socket and the radio receiver. Each end of a coil is grounded through by-pass condensers to shunt any stray oscillations into the earth. The two coils are wound on fiber or bakelite tubes that are about six

(Continued on page 80)

AMENDING THE RULES

● ● ● *Close of the Debate*

OUT of a bushel of letters regarding the proper rules for DX, we can find room for but a dozen but these are typical of them all. Only one rule meets unanimous approval and that is No. 1 which we repeat here: Do not log a station nor ask for verification unless you are positive in your own mind of the identity of the station. Our correspondents are agreed that the so-called Dixer who shoots in a report to the most likely prospect on or near the wave he heard, is hurting the game fearfully by tending to bring all DXers into disrepute with the station authorities. An example of this has just come to our attention.

Early in the fall station CKPR, Fort William, Ontario, notified us that, commencing in November they would have a DX program every Saturday morning at one o'clock. For some reason they were unable to carry out their plan and overlooked notifying us. As a result this program appeared in our DX Calendar. Notwithstanding the fact that the station was not on the air "we have been pestered with letters from would-be DXers who comment on the clarity, etc., of our programs" says Ralph H. Parker of that station. Surely even the most obtuse of DXers must see that incidents of this kind bring an impulse to station managers to throw all DX letters and reports into the waste-basket.

There are listeners who, if they cannot understand a program, immediately look for the foreign station nearest to that channel and report reception of that station! If a man happens to be giving a Dutch monolog on the program, they look for a German station. If it is the Volga Boat Song, they look for a Russian. If it happens to be the

"Peanut Vendor," they look for a Cuban, and so on *ad nauseum*. What shall we do with this sort of person?

Rule Number One may therefore be framed and hung over every radio set. *Do not log a station nor ask for verification unless you are positive in your own mind of the identity of the station.*

The Diverse Views

The other five rules are the subject of furious debate. Each has its defenders and each has its opponents. We can only present some typical letters regarding them before we proceed to draw our conclusions.

Murray Bryce, R. M. D. 1, Royal Oak, V. I., B. C., agrees that the DX family certainly needs to agree on one set of rules. He thinks that one's log should be an honest measure of results. "I think it ridiculous to count a station twice merely because of a change in call letters. I disagree with your rules in counting a station twice because of a frequency change. Take KRLD for example, could anyone fairly say that it is five stations, just because it has changed its frequency that many times?"

Robert Brady, Jr., 47 Eastman Ave., Rochester, N. Y., thinks a change of locations should not count unless it is a material one in distance. He does not think that a change in frequency should permit a station to be counted again.

Says William P. Hinkelman, 385 Elizabeth St., Pasadena, Calif., "A glance at some of the DX logs reported in your magazine, indicates that they have been logged over a long period of time, from far and near, operating and deleted and new ones added each time some minor changes are made. This I would call *gross collecting* and it should not belong to DXing. I think DXing ought to be along the lines of mile-

age collected from distant stations logged during the period of a year's time, then submitted for comparison, instead of dragging out a log covering a period of four or five or more years. Then the beginner would have an equal chance with the old timers. It is my firm belief that rules along the above lines would be welcomed by true DXers everywhere, would eliminate confusion and shooting for mileage would make for real DXing."

Howard Judson, Route 2, Rochester, Mich., agrees with A. E. Armstrong of Glendale, Calif., who, thinks Mr. Judson, has really the best idea of any yet submitted. "When a station changes its call letters (said Mr. Armstrong in the January issue) I also change the letters on my log but I do not count it as a new station." Mr. Judson comments: "If that idea were adopted and changes in frequency and call letters and minor changes in location were not counted, the totals would give a true impression of the number of transmitters actually heard.

"You certainly keep yourself in hot water," sympathizes Mrs. L. R. Ledbetter, 1109 Grammar Street, Vicksburg, Miss., "so here I am for the defense. Anyone who knows radio realizes that tuning is sharper on the higher frequencies. I have received CJGC, London, Ont., clearly before dark on 960 kcs., but I consider it impossible for me to log it on 695. CFRB came in on 960 as early as four p. m. but they are seldom heard on 690."

Channel Changes

Wm. A. Stead, 736 West 181 St., New York City, objects to the count of call letters each time they are changed. "Take, for instance, KMIC, Inglewood, Calif. They changed their call to KMCS and now it is KRKD. How the same station could be logged as three stations, is beyond my comprehension. I have logged 940 stations since 1922 and if I had included stations that had changed their frequencies and call letters, my



Well, well, here are "Goldy & Dusty" back again after five long years. On an Eastern CBS net every morning except Saturday and Sunday at 9:15.

log would now be about 2,000 stations."

Stuart Walmsley, 1641 West 60th Street, Los Angeles, Calif., agrees that a station should not be counted a second time merely because it changes its call letters. "Of course, if one has a large number of stations, it makes a fine showing in print but after all is said and done, it is not the number of calls that counts so much as the stations received."

Richard D. Caddell, 1115 Pender St. W., Vancouver, B. C., writes: "I do not count a station that changes its call letters as a new station but, on the other hand, I do count a station that moves to a new location. It seems foolish to consider a station that merely changes its call letters as a new station."

Harry P. Rosenbrock, 252 East 4th Street, Clifton, N. J., gets close to the heart of the matter when he says: "My opinion is that a DXer should have two logs—one a list of active stations he has received and

the other a list of all the stations he has received. It seems a bit foolish for me to count all the stations I've received since 1922 or earlier."

Simplicity is the keynote of the plan used by A. L. Long, 523 N. Dewey, Oklahoma City: "I do not worry about DX rules. I never log a station unless I hear the call letters as I do not want to take a chance on logging the wrong station. I do not ask for verifications because I know I have the station. I am DX-ing for my own pleasure and do not care whether anyone else believes that my log is correct or not. I keep my log up to date with the latest issue of RADEX. If a station has been deleted I drop it from my log. If new stations have been added I try to get them."

Verifies His Locals

Heinz Milark, 102-10 135th St., Richmond Hill, N. Y., and E. L. Kimmons, 309 Leland St., Austin, Texas, takes exception to the rule against verifying local or nearby stations. Says the former: "I disagree about not writing to locals for verifications for I am sorry I have not done just that; many of my locals got the ax." And from Mr. Kimmons: "I take exception to the matter of 'wall-papering.' I have a verification—a personal letter from the manager—of our own local station, not because the report on volume or tone was any benefit to him, but it did let him know that I enjoy his station and I feel sure any local station will be glad to verify his home-town DXers." In regard to the other rules, Mr. Kimmons says: "Let's take rule No. 1. I certainly agree with you on this. About two months ago I copied a program from WWSW, a little 100-watter in Pittsburgh, for one hour and thirty minutes before I was positive it was WWSW. Their selections were clear at times but the static messed up the announcements; finally I got a break and heard his station call several times. The same thing happened to YV1BC. Now if all DXers would stop jumping at con-

clusions and send a correct report to the right station all of us would receive our verifications more promptly and the stations wouldn't get sore at us because of another's faults.

"Now let's take rule No. 2: Last year two little stations in Iowa, (KWCR at Cedar Rapids was on 1310 and WIAS at Ottumwa was on 1420) changed frequencies. I already had those stations verified but on their first night on the changed waves, I heard both programs. Under your rule I would have had four stations."

Robert Emory Base, 4105 Alto Road, Windsor Hills, Baltimore, Md., quotes from a letter he received from Frank Scott in charge of issuing the DX certificates for the Newark News Radio Club: "In counting stations, we count calls only. If a station moves from one part of a state to another part of the same state, and uses the same call, it should be counted only as one station. If a station keeps the same call and moves to another state you may count it as another station. If a station remains in the same state and changes call, you may count it as another station."

Radically Different

An old DXer who asks that his name be not used has this to say: "I agree with you that there should be a uniform system of logging stations. I also agree with you that your proposed method is technically correct. However, it is so radically different from the methods generally used that I do not intend to follow it. Here are my reactions to the six points: First, to this point I give my wholehearted support, absolutely and completely. This is one of the cardinal points of DX I think. Trying to guess the identity of stations by type of program, frequency or operating hours accounts for a very large portion of the unanswered reports, verifications refused and unfavorable attitude toward DXers as taken by many station officials.

"If a station changes its frequen-

cy, I do not relog it. Your argument is technically correct, a change in frequency gives an entirely new problem. Still I prefer to use the simpler system. Third, if a station changes its call I am going to relog it, the call being really the name of the station. The records will show that hardly ever is a call changed without some other major changes being made. Rule 4: To this one I agree—it's not an important one (rather silly to count phantom calls)—but every one seems to be doing it and I am too. Rule 5: I don't believe in logging police and other stations from outside the broadcast band but heard on harmonics or on sets which reach below the b.c.b. According to my way of thinking, a broadcast log should be a broadcast log and such other stations should be listed in a separate log."

Summing It Up

Earle H. Morris, 716 Beech Ave., Charleston, W. Va., sums the matter up thusly: "It isn't often that I mix in controversies raging in magazines but in this case of DX rules, I have very strong convictions. I agree wholly with your rules Nos. 1, 4, 5 and 6 but as to Nos. 2 and 3 I would like to offer this suggestion:

"What we DXers are really after is to keep as large a number of the present broadcasting stations upon our DX lists as possible. Stations that have been deleted are so much water under the bridge. Why keep them on our lists? As for old call letters, just because Mary Jones changes her name to Smith but continues to live at the same location, there is no reason for sending her two invitations to a party, is there? Rewrite No. 2 as follows: If a station moves to a new location it is to be deleted from your log. It is to be logged again only when received at its new location. No. 3: A station merely changing its power or call letters at the same location makes no change in the list."

There are the arguments, for and against. As some of the debaters



Claire Willis, 23-year-old singer, with the Travelers Quartet and Dolph Martin's Orchestra, Monday, Wednesday and Friday, Columbia network at 7:30 p. m. EST.

point out, there are really two sorts of records in DXing. The clubs all seem to award honors in accordance with the aggregate logs, that is the grand total of stations received whether in one year or ten. This magazine, on the other hand, is much more interested in logs of existing stations. The fact that a DXer received a WPDQ when that station existed a number of years ago, is not nearly so interesting to us as it would be to know that he has received WKEU, the new station we are adding this month.

We have avoided publishing huge logs very many times, not because we doubted them, but because those DXers were not in a class with the great majority of our listeners. It was too much like entering a golf pro whose usual score was in the sixties, in a public-course contest where breaking a hundred was a major

(Continued on page 80)

HELPFUL ADVICE

to the TROUBLED

• • • *Improving Your Set*

IHAVE a Silvertone 93 receiver that uses two -26 tubes which rapidly weaken after being inserted in the sockets. Should I use some of the new tubes in this set, or what do you advise to remedy this expensive tube trouble?

The -26 tubes in your set are the second and third radio-frequency amplifiers, and the obvious reason for weakening is overheating of the filaments and damage to the coating of thorium material through an excess potential. The rated voltage to be applied is 1.5 volts, and the current should be 1.05 amperes, approximately 1.6 watts per tube. Test across the filament contacts of these two tube sockets with a sensitive voltmeter while the set is turned on and operating. The potential should read slightly less than 1.5 volts. If it is higher steps must be taken to reduce to the rated voltage by suitable resistances. The -26 tube requires only a very low temperature (a dull red) to operate satisfactorily.

The first -27 tube (first radio-frequency) may be replaced by a new 56. The -71As cannot be replaced with -45s with any degree of satisfaction. The -71A tube requires only .25 ampere while the -45 consumes 1.5 amperes, or 6 times as much. The -45 uses only 2.5 volts while the -71A takes 5.0 volts, thus necessitating the insertion of suitable resistors to cut down the filament potential. It would be likely that the powerpack unit would be overheated in order to supply this additional current.

Mysterious Interference

A strange buzzing sound appears at intervals in my set. It ceases upon disconnecting the aerial. When it oc-

curred the other night I went to several neighbors' homes and they found that the noise stopped too when the antenna was disconnected. How can we locate this interference, or to whom shall I communicate for aid?

The fact that the sets in the neighborhood hear the same buzzing sounds shows that the trouble does not lie in your receiver. Such troubles are hard to locate. It is likely that some X-ray machine, or similar appliance, is being operated evenings in your neighborhood. Does some physician reside nearby? There are other electrical devices—motors, fans, cars, etc., with sparking parts that cause serious interference.

The District Radio Supervisor in charge of your section can give you some good advice. He will be found in New York City. Or you can write the Federal Radio Commission, in Washington, D. C., for the name of your local radio inspector, who may be prepared to locate this interference for you.

Foreign Tubes

As I contemplate a journey to Germany I wish to take my little International radio set. Can I buy tubes in that country which will fit this set, or should I carry a supply of American tubes?

German tubes can not be substituted for our own forms. The Telefunken tube has longer and slimmer prongs which may not fit your sockets, and, as the International uses types 36, 38, 39 and the special rectifier KR1, it is advisable to carry proper tubes. Also, much German broadcasting is on longer waves, and the tuning limits of your receiver may not give you satisfactory reception in that country.

Grebe Control Values

Can I use new type tubes in my Grebe model 6 receiver? What are the values of the volume control and tone control used in this set?

We doubt whether substitution of 58s for the -35s in your set would be worth-while, and it is likely that the adapters under the 58s would raise them so high that they would interfere with shielding. Try 56s in place of -27s in the second detector and first audio "driver" tube sockets. Do



Edwin C. Hill on "The Human Side of the News" Monday, Tuesday and Wednesday at 10:30 p. m. And—don't miss this—Fridays at 9:30 p. m. "The Inside Story of Names that Make News." All CBS.

not use in the oscillator.

It is our understanding that the resistance of the volume control is 5,000 ohms, while that of the tone or "color" control is 100,000 ohms.

Wants Circuit Diagrams

If I install new tubes in my Philco model 90-A will they improve its performance? Can you furnish me with circuit diagrams for the Steinite receiver using -99 and -12A tubes, and advise me the value of its voltage divider? I also would like a diagram

of my Stewart-Warner short-wave converter Can I run the converter from my Philco?

New tubes for old in the Philco 90A is not recommended. This modern receiver is critical and replacements of tubes for which the circuit was not designed will tend to upset the balance. The 90A is an excellent set as it is.

A circuit diagram of the model 991 Steinite has been mailed you. None of the new tubes can be used to replace the -99s and the -12A in this set, for all the -99s are connected in series. A complete change of wiring would be necessary. A -71A can be substituted for the -12A, but a greater grid bias may be necessary. A 22½-volt "C" battery can be attached in series with the lead to the grid of the present -12A socket and experiments made until the proper C voltage is obtained. It is not easy to provide greater C negative bias from the voltage divider.

The voltage divider is a series resistance made into several sections—1,000, 1,000, 250, 0, 250-ohms. A duplicate of the original may be procured from Wholesale Radio Service, 100 Sixth Avenue, New York City.

A schematic diagram of the Stewart-Warner short-wave converter has been sent to you. The plate voltage may be obtained from your Philco 90A at some point delivering filtered DC at a potential of the recommended 250 volts. A wafer adapter is the best method of tapping the plate contacts, together with the plate plug tip of the converter.

Wants Police Calls

What sort of simple device can I purchase to attach on my RCA Victor 10-tube receiver so that it will bring in the police calls in addition to the regular broadcasts?

Any short-wave converter, when attached to a broadcast receiver, will enable one to receive broadcasts made on the shorter waves, including the police calls. But, for the latter, a small and less sensitive device will be satisfactory. Such a single tube,

inexpensive short-wave converter for police calls, airplane and Coast Guard communications, is made by the Insuline Corporation of America, 23 Park Place, New York City, and may be ordered direct or through RADEX.

Tubes For Sparton

My Sparton 79A receiver uses the special Cardon tubes. Can you tell me what other standard types will match the tubes in this set?

Type -10 tube can be used in place of the Cardon 585 used in the Sparton receiver. The latter uses 7.5 volts on the filament the same as the -10. The six 484s, all of which are radio-frequency tubes and a detector, may be replaced by -27s. These -27s can not be replaced by the newer 56s to advantage in this set. The 485, replaced in your set by a serviceman, is the detector. Sylvania also makes tubes similar to the Cardons, for Sparton receivers.

The 484 and 485 uses 3.0 volts on the filament while -27s and 56s use only 2.5 volts. This means that -27s, when used in place of 484s, are slightly overloaded with filament current, but it may not materially shorten the effective life of the -27.

Bosch Plate Voltages

I wish to use a 2-tube Doerle short-wave converter with my 8-tube Bosch receiver and at the same time take off the necessary operating current for the two tubes. How, and where, may I find proper filament and plate potentials?

We assume you have Bosch model 58, using four -24s and one -27, with two -45s in power push-pull and -80 rectifier. Unfortunately, we have no data on the Doerle short-wave receiver. However, if this set's two tubes are similar to the above, you may take 2.5 volts off the filament secondary of the main power transformer which supplies the filaments of all the tubes without risk of serious overheating. Plate voltages may be taken from certain tubes of the Bosch. The plates of the first three

radio-frequency tubes have a potential of 170 volts; the -27 uses 150 volts; the plates of the two -45s take 250 volts; and 75 volts may be found on the screens of all the -24s. These tube plate voltages may be tapped by means of wafer adapters slipped over the prongs of the tube which is to furnish the voltage needed.

Unsatisfactory Connections

I have been using a General Motors short-wave converter with my Philco 77 receiver, but the volume is very weak. There is a wire 25 feet in length running from the converter to the broadcast set. If I use the new tubes will it make the short waves work better?

The heterodyne converter should be placed as close as practicable to the broadcast receiver and the connecting high potential lead made as short and direct as possible—a few inches being too much in some cases. The long extension cord used by you is far too much.

Changing the -27 tube in the Philco will not increase sensitivity, for it is



"John Henry, Black River Giant" (Juano Hernandez) with Georgia Burke of the all-negro cast on the Columbia network Sundays at 8:00 and at 8:45 p. m.

an audio tube. A 56, in this socket, may improve the volume a small fraction. We do not recommend changing the -45s over to -47s in your set. No changes must be made in the converter.

New Tube Oscillates

After reading that a 56 type tube could be used to replace a -27 I inserted one in my Majestic 62 set. Now the circuit oscillates and fails to operate as it did before with the -27. Why is this?

When you substituted a 56 for the -27 tube in your Majestic it was the oscillator that you replaced. This portion of the circuit is very critical and cannot be altered. It is not good to replace oscillators with 56s or other tubes. Many changes in wiring and resistors would be necessary to permit the use of a 56 in place of your -27 in this instance.

Adding A Power Stage

As I wish to use a phonograph attachment on my RCA 60 receiver I believe another audio stage must be added to give me more power. Is this a practicable step, and how can it be accomplished?

The RCA model 60 utilizes one stage of audio amplification with one -71A power tube. This is insufficient for phonograph amplification. A new stage can be connected to the two terminals to which the present loud speaker is attached.

Connect the ends of the primary coil of a low-ratio (2½ or 3 to 1) audio transformer to these two terminals in place of the loud speaker. The secondary coil is connected to another -71A tube in the same way the existing -71A is wired. G of the transformer secondary goes to the grid of the new tube, and F to the lower end of the grid coil that connects to the grid of the old -71A tube. Plate (P) of the new tube goes to the loudspeaker and thence to the B supply which is taken off the plate of the old -71A tube with a wafer adapter. If the loudspeaker has no output



Fred Waring's little brother, Tom, is heard in the vocal choruses when Old Gold broadcasts Wednesdays at 10 p. m. He also doubles at the piano. CBS.

transformer, one must be used and connected into the plate circuit, with the speaker across the secondary output coil to prevent the plate direct current from burning out the speaker coil.

Converter And Headphones

I am using a Philco short-wave converter with my Philco 8-tube neutrodyne receiver. Will new tubes improve it? But I am particularly anxious to use headphones with the converter, if possible.

There will be no advantage in substituting the 56 for the -27, because the location of the latter, in the circuit, is such that the benefits of the 56 cannot be obtained. The Philco converter must be attached to the antenna terminal of the Philco receiver. Earphones cannot be used on the converter. The purpose of these converters is to take a weak signal of

(Continued on page 76)

VISITING RADIO STARDOM

with "Betty"

TO innumerable thousands, Annette Hanshaw is known as Gay Ellis, Dot Dare and Patsy Young—names she has used over a period of years on the air and in making recordings. A native of New York, Annette first learned music from her talented father. She attended New York public schools until the family moved to Florida. Then she attended several convent schools and later a boarding school.

Her musical talent was apparent early in her life. Before she was fifteen, Miss Hanshaw had been offered two musical scholarships, but turned them both down to study art. She came to New York to attend the National Academy of Design, and for the time being completely forgot her music, which was to bring her fame in a comparatively short time.

After a year of art work she began to study piano. Later she took up the ukulele, and learned to play well enough to accompany herself. Her fame as an entertainer soon enabled her to get work at social functions in New York and nearby points. It was at one of these parties that a representative of a recording company asked her to make a test. That was in 1928, and since that time she has been heard in many parts of the world. Then she sailed with her mother and younger brother for Florida. The moment her boat docked, she was asked to appear on the radio. She signed for a series of commercial broadcasts for a real estate firm in Clearwater, Florida.

Again she returned to New York where she turned down an offer from the late Florenz Ziegfeld to join one of his shows, but instead moved to Mount Kisco in Westchester, New York. There, between recording engagements, she opened a music shop. It was during this music shop era that

several sponsors of radio programs asked Miss Hanshaw to appear for them. She was invariably signed up after the first audition.

During the next two years she sang on many outstanding programs, and her voice is now heard on the Maxwell House Show Boat and with the Clicquot Club Eskimos. On the latter program she is known as Gay Ellis.

She spends her winters in New York and her summers in Scarsdale, but when it comes to vacation, she prefers Maine woodlands. She is not married because she hasn't "met him yet." She loves to go to bed late nights, read until she falls asleep and to remain in bed as late as possible. She is one of the best dressed artists in radio, and prefers blue.

Julia Sanderson

Julia Sanderson was born in Springfield, Mass., the only child of Mr. and Mrs. Albert Sackett. Instead of meeting discouragement when she proposed going on the stage, her parents helped her at every opportunity. At the age of thirteen she was going to school in the morning and studying for the stage in the afternoon. When she was fifteen, Miss Sanderson went to New York to engage in chorus work. Her first show was "Winsome Winnie," where Shubert saw her and offered her a contract. After she had made her debut, other opportunities came rapidly. But her first great chance came when Charles Frohman heard her sing and decided to star her. She went into the rehearsals of "Sunshine Girl" and was an immediate success. Marion Davies was in the chorus.

Other successes followed, and then she joined "Tangerine" in 1922. At the very first rehearsal she met Frank Crumit. He was her leading man and from that moment on they hit it off and have been together ever since.

Five years ago they married. Their last show was "Oh Kay!"

They finally decided they were weary of travel and began to plan their home. They chose an ideal spot at Longmeadow, near Springfield, Mass., which they appropriately called "Dunrovin." It has been a happy home, says Miss Sanderson, for there she has found peace and quiet that the road could never give. Frank keeps up with his golf and she maintains her own garden and oversees her charming home. She also assists Frank in the preparation of their Blackstone Plantation programs and writes many of the personal letters that go to their listeners.

Miss Sanderson is five feet, three inches tall and weighs 126 pounds. Her complexion is fair and her hair is golden. Her hobby is collecting photographs and autographs of stage celebrities. She has almost 500 photographs.

Frank Crumit

Frank Crumit was born in Jackson, Ohio, September 26, 1889. Was graduated from old Jackson High, went to Culver Military Academy, and later matriculated at Ohio University at Athens. He went into vaudeville with a couple of fraternity brothers and in 1915 broke into "Queen of the Movies" with his uke. But vaudeville called again and Frank returned to the stage to bill himself as the "One Man Glee Club."

From then on, Frank clicked. He starred in "Betty Be Good" in 1918, and "Greenwich Village Follies" in 1920. In that year he made many records and found himself nationally famous because of them. In 1922 he accepted an offer to play the lead in "Tangerine" and met, as he puts it, "a girl with a funny little giggle."

While listening to a radio program one day at their cottage at Longmeadow, Frank suddenly got the notion that radio was for both of them. It had never entered Miss Sanderson's head to appear publicly again. Life stretched before her with ease and comfort a delightful certainty.



Gay Ellis, Dot Dare, Patsy Young and Annette Hanshaw—all in one.

But once ignited, their enthusiasm was boundless and the two famous musical comedy stars were soon familiarizing themselves with all of the technique of broadcasting. They began their air careers over NBC in 1928 and have been heard without a break since.

Pictures of Miss Sanderson and Mr. Crumit appear on page 17.

STAR DUST

Roy Atwell, the word-scrambler heard on Fred Allen's Revue, has a featured part in "Strike Me Pink", the new Brown and Henderson musical show. Others starred in the production are Jimmie Durante, Hope Williams, Lupe Valez and Hal LeRoy.

* * *

Sunday evening is both the busiest and the pleasantest time of the week for Ernest Hutcheson, the distinguished pianist who is heard in weekly CBS recitals. Mr. and Mrs. Hutcheson regularly give Sunday evening parties for approximately twenty of

the outstanding young students at the Juilliard Graduate School of Music, of which Mr. Hutcheson is Dean. Following supper and a few games of bridge and ping-pong, the party journeys to the CBS studios, where the student group witnesses the radio recital from select seats directly beside the distinguished pianist. Following the broadcast, the Hutchesons usually drop in at one of Author John Erskine's regular Sunday night parties, where Hutcheson frequently entertains those present with his playing until the small hours of the morning.

* * *

After years and years of struggling along on their own resources, Amos 'n' Andy (Freeman Gosden and Charles Correll) have employed a secretary. Now the two NBC comics admit that it keeps them busy trying to find enough work to keep her busy.

* * *

Jack Pearl, the Baron Munchausen of the Thursday night Magic Carpet, has postponed his movie career until June 27th. He'll return in October to the air waves, but there'll be a national convention of Baron Munchausen clubs held in Central Park Mall in New York early in June—before Der Baron turns film star.

* * *

Don't be surprised if Carson Robinson, noted hillbilly exponent, lands on a Middle Western station this summer. They're begging him to come out to do his stuff nightly.

* * *

Many of the torrid arrangements for Ben Bernie's orchestra come from the facile pen of Dick Stabell, saxophone player for the Old Maestro. And of his work Ben says, "Dick puts fire in his arrangements, but sometimes we have to put his arrangements in the fire."

* * *

B. A. Rolfe's startling return to the air was engineered by Douglas Storer, New York advertising agency man, who pointed out to NBC that since the Magic Carpet was giving up

the Saturday night spot where Rolfe became famous, that if they put Rolfe in there to hold listeners, he'd get a sponsor for the hour within a week's time. NBC called his offer—so an auto manufacturer (Hudson-Essex) sponsors the hour. That's radio history, because the famous "ten-to-eleven" hour was saved with the same music listeners have been getting at that spot for four years. The "Men About Town" also appear on the hour.

* * *

Those "Three California Nuts", Ken Browne, Cliff Arkell and Red Corcoran, who appear at 7:30 p. m. EST Sunday nights over the WEAFF network, were the "Three Public Enemies" on the Pacific Coast. Unless all experts are wrong, they will be radio's next great comedy sensation.

* * *

At last an Irish baritone is looming on the horizon. For years the words "Irish" and "tenor" went together. But Tommy McLaughlin, the "Romantic Bachelor," is making folks like an Irish baritone. Incidentally, Tommy holds the radio record for being a godfather, standing up for four different children in five weeks.

* * *

How do you like the new "Sammy" and "Rosie" on the Goldberg's program?

* * *

Brickbats

"I think Ray Perkins is the most tiresome person on the air. His efforts to be funny are pathetic."

Mrs. R. C. F., Topeka, Kans.

"I always jump for the dials when I hear that dirge that precedes 'Chandu the Magician.' Do you suppose anyone listens to it?"

J. L. K., McKeesport, Pa.

"Advertisers who pay good money to put murders and gangster stories on the air, have a queer sense of values."

Miss B. C. J., Denver, Colo.

Bouquets

"I never used to care for Rudy Vallee but I think he is now putting on the very best show on the air."

K. L. S., St. Petersburg, Fla.

"Don't you think 'The Magic Voice' is unusually well prepared and presented? I do. You are always anxious to hear the next one."

Miss F. C. J., Kalamazoo, Mich.

"In my opinion the dramatic interview of Warden Lawes by Edwin C. Hill in 'The Inside Story' was the best thing I ever heard."

W. A. B., Shreveport, La.

The INTRIGUING Field of the SHORT WAVES

••• By PAGE TAYLOR

EDITOR'S NOTE: This department of our magazine has aroused a widespread interest among those readers who have heretofore confined their tuning to the broadcast band. These listeners are anxious to try the short waves with their present receivers. Mr. Dashiell and Mr. Bradford of the National Radio Institute are collaborating on an article on a simple but efficient short-wave converter which Mr. Bradford has designed. This article will appear in the May issue of this magazine and will present full instructions for building this inexpensive converter.



ATENTION is invited to the complete list of the Short Wave Stations of the World in the present issue. It is true that a shorter list presenting only those stations that can be heard at the present time has its advantages, but due to the fact that short wave reception conditions change rapidly and long-forgotten stations sometimes suddenly reappear, it is well to give, occasionally, a complete list such as this one to facilitate the identification of those stations.

The advantages of this list can readily be appreciated by recalling that the list which appeared in RADEX last October included such stations as PHI, DJC, DJD and DJE, none of which was, at that time, on the air. They have since been heard, however, and RADEX readers who heard them were not handicapped in identifying them as one would be who uses the shorter lists exclusively.

Warning!

Because most point-to-point stations (telephone stations) transmit material of a nature private to the

user of this service, whether it be radio telephone service or program material intended for some foreign point, both the station and any chance listener are required by International Treaty and United States Law not to divulge the nature or even the existence of such transmissions. For this reason listeners are advised not to request confirmation of reception from these stations. However, since foreign telephony stations often request reports regarding the interception of their experimental transmissions this advice cannot be made to apply in all cases. Stations that do not acknowledge reports from listeners are indicated in our lists by an asterisk (*).



Here is Augustus Barratt who writes the scripts and takes a prominent role in "The Magic Voice" Tuesdays and Saturdays on CBS at 8:15 p. m.

Easy Lesson in H. F.

This paragraph is written especially for beginners. In previous issues of RADEX instructions were given with regard to careful and patient tuning. Included here are two more important rules to remember. First, do not expect foreign stations to be weak and thereby pass up all the loud stations; many times a foreign station will be the loudest one in the band. Secondly, do not pass up a station if it is playing American jazz or announcing in English, as it may be German, Spanish or even Japanese. One never knows. It is quite possible that some of you are overlooking distant stations due to the volume or the nature of the program, as this has been done many times by even veteran tuners. This month we are listing ten stations that have been regularly received at good speaker volume in nearly every part of the continent. If you are having trouble finding foreign stations our suggestion is that you concentrate on this small group until you have heard some and learned how easy it is to tune them in. The time given is about when they reach maximum volume. Time shown is in EST.

6.050 49.56 GSA.	Daventry, England, 8:30 p. m. daily.
6.119 49.00 YV1BC.	Caracas, Venezuela, 8:00 p. m., daily.
6.618 45.31 PRADO.	Riobamba, Ecuador, 10 p. m., Thursday.
7.872 28.47 HBP.	Geneva, Switzerland, 5:00 p. m., Sunday.
9.503 31.55 VK3ME.	Melbourne, Australia, 5:00 a. m. Wednesday and Saturday.
9.585 31.28 GSC.	Daventry, England, 4:00 p. m., daily.
9.862 30.40 EAQ.	Madrid, Spain, 6:00 p. m., daily.
11.711 25.60	Pontoise, France, 5:00 p. m., daily.
11.753 25.51 DJD.	Zeesen, Germany, 3:00 p. m., daily.
11.800 25.40 I2RO.	Rome, Italy, 5:00 p. m. daily.

The Thrill of Big Ben

Undoubtedly one of the most famous time signals in the world is Big Ben atop the Houses of Parliament in London, which thousands of short wave listeners throughout the world have heard chiming the hour of midnight through station G5SW. With the passing of 5SW in December, however, Big Ben was not discarded as the new Daventry stations continue the custom of broadcasting this bell.

Any short wave fan who has never heard the thunderous, deep-throated tones of Big Ben should tune in GSA just a few moments before 8:00 p.m. any night and hear the Westminster chimes, which will be followed by Big Ben striking one o'clock.

Old Friends Back

One of the world's pioneer short wave stations has returned to the air after an absence of nearly three years. This is PHI located at Huizen, Holland, and operating on 16.88 meters. We understand, unofficially, that it will soon be heard on 25.57 meters with the call letters PHOHI.

Another old friend, VE9DR, has also returned and, judging by the volume with which it is received most listeners thought the original power of 2000 watts was used but the station officials inform us that the power has been reduced to 50 watts and the transmitter is now located in the heart of the City of Montreal. The present schedule is: Daily except Sunday, from 7:30 a.m. to midnight, and on Sunday from noon to 11:15 p.m.

The Maritime Broadcasting Co., Ltd., of Halifax, Nova Scotia, advise us that their station VE9HX has been moved down to 48.95 meters and uses a power of 200 watts.

For Code Readers

Mr. L. F. Stetson, 3420 Janssen Ave., Chicago, Ill., kindly sends information which will be of interest to anyone who can read code transmissions. He writes: "Amateur station VU2FY, Mr. O. A. F. Spindler, Coromandel P. O., South India, will be carrying out a special series of tests on CW on the 13th, 14th and 15th of April, wavelength 41.5 meters, frequency 7,224 kc/s. at 5:00 a.m. Indian Standard Time (6:30 p.m. E.S.T.). He will be grateful if all British amateurs, members of the B. E. R. U. and A. R. R. L. and all USA fans will look out for him. Each test will last fifteen minutes and all reports should be sent direct which will be acknowledged by a special

QSL card. The call sign will be sent frequently with a series of V's, then call sign, and a short message will follow. This message must be correctly read to get the QSL."

Some Good Reports

A long and interesting letter was received from J. G. Richard Heckscher, 1558 Massachusetts Ave., Cambridge, Mass., from which we quote the following: "... I have forwarded to you a copy of my log for the past five months. In logging these stations I have followed the inviolable rule that a station does not go on the log until it is either positively identified by its call letters or by an announcement of its location in conjunction with its frequency; consequently I am reasonably sure of the reception of many stations which do not appear in the log. In every case they are stations which come in very well here in Cambridge despite my receiver's being surrounded by apartment houses, situated in one itself, within two hundred feet of a trolley line. This log should be an adequate reply to many of your more cynical correspondents as to what is actually possible in even the worst of locations with a good high frequency receiver in conjunction with a little patience; this in five months only and using the set only at odd times during the day and night."

We regret that we have not the space to include Mr. Heckscher's log in its entirety, but it includes all of the commonly received broadcast and telephone stations, in addition to numerous police, airport and ship stations. Some of the seldom-heard stations are T1RC, 9.505 megs., San José, Costa Rica; RV59, Moscow; FRO, St. Assise, France, on 19,420 kc/s. and FTO on 18,250 kc/s. His log shows a total of 232 stations, which is a good record for any s.w. fan and particularly outstanding as a record of only five months' tuning.

"I have a Kennedy long and short wave 12-tube super-het with rather ordinary aerial equipment," writes George K. Glass, 1320 Cadillac Blvd.,



Julia Sanderson and Frank Crumit

Detroit, Mich. "Short waves sure are full of thrills," he continues, "but as yet have heard nothing in England. Here are all the calls I have had since November, 1932: EAQ, DJB, YV1BC, YV11BMO, PRBA, HKD, I2RO, FQE, KKP, PRADO, TGW, HBL and HBP. I listened from 1 to 3 a.m. this morning for VK2ME and am sending them a log with comments on every bit of their program. Tuned them in so loud on a couple of selections that I woke up the wife.

"I've solved the problem regarding dial settings for any desired station. I have plotted curves between dial settings as actually found and wave lengths. Then I can take any desired wave length and hit the probable dial setting almost on the nose." This is a very good idea that Mr. Glass suggests and one that we recommend to all our readers as it solves quickly and surely the problem of where to find any desired station.

Distressing calls for help come from two of our readers. Frank R.

Slama, c/o First National Bank, St. Paul, Minn., uses a Midwest converter with an 11-tube Philco while Henry King, Jr., 743 Simpson St., N. W., Atlanta, Ga., uses a long and short wave 11-tube Philco. These two gentlemen have had their sets for a year and have not yet located any foreign stations. They both would like to hear from users of similar sets who can offer them any assistance. In the meantime Mr. Glass' suggestion regarding curves between known stations might be of some help.

More Help Wanted

"I am much interested in DX and short wave programs," comments C. C. Turner, Box 186, Oceanside, Calif., "Though I devote much time to the set I have little success receiving distant stations. It does not seem possible that the trouble could be in the sets I am using (a Lincoln 33 and a Sparton converter with a Sparton 410 set). I am a semi-invalid, and by reason of this have the entire twenty four hours of each day to codger with my radio. I would be pleased to hear from anyone who could give me any idea about an antenna that would enable me to bring in foreign s.w. programs."

Verifies Geneva

"EAQ, Spain, on 30.4 meters comes in with volume enough to be heard 200 feet away every Saturday from 1 to 3 p.m." reports Edmund J. Bieglecki, 3309 E. Warren Ave., Detroit, Mich. "I2RO and HBP are very good. I am sending a verification from HBP and hope it will prove of interest to your readers. My receiver is the 16-tube Midwest and I would like to hear from other owners of this set." The verification follows:

"In reply to your letter, I am glad to be able to tell you that you have in fact picked up one of our broadcasts.

"Since September 25th, broadcasts on the work of the League of Nations are given every Sunday from the League wireless station 'Radio-Nations,' in English from 5:00 to 5:15 p. m.; in French from 5:15 to 5:30 p. m.; in Spanish from 5:30 to 5:45 p. m. (Eastern Standard Time) on wavelengths 31.3 and 38.47 meters.

"We carry our weekly programmes, on some Sundays giving talks by statesmen known to audiences all over the world, on

others interviews between a journalist and an official of the Secretariat of the League of Nations on current problems.

"Any letters on our programmes and their reception will be welcome.

"Perhaps you would address them to G. Gallarati, League of Nations, Geneva, Switzerland."

Does J1AA Scramble?

"Did I hear J1AA on February 24th?" asks George W. Burns, 2466 Wahl Terrace, Cincinnati, Ohio. "I first heard this station this afternoon shortly before three o'clock talking in a high, sing-song voice close to 15,760 kc/s. (19.02 m.). The talking was unlike anything I have ever heard before. The station was rather faint at first, later coming up until it equalled the Hawaiian phones in volume and clarity. After preliminary talking and calling, a 'scrambler' was used, making the speech unintelligible. The station went off at 3:45 p.m. Perhaps some of those west-coasters who have heard other Japs will be able to help." This question is respectfully submitted to our readers; this station has never been reported using inverted speech, but perhaps some other fan heard this same transmission and can identify Mr. Burns' station.

More Records

"The best short wave stations I am hearing at the present time," advises Edward C. Houlgate, 351 Adelaide St., London, Canada, "are Pontoise on 25.6 m. at 3:30 p. m. EAQ Madrid, 30.4 meters from 5:30 to 7:00 p.m. GSA 49.6 meters, 8 to 10 p.m. YV1BC from about 6 to 10 p.m. I2RO during the afternoon, sometimes DJD on 25.51 during the afternoon. When on the air they usually sign off around 4:30 p.m. Also hear YVQ on 22.48 working with WNC at Hialeah, Fla., on 19.91 during the afternoon. At the present time VE9DR seems to be on nearly all day as I get them regularly."

Eleven-year old Bill Reeder, 729 Belvidere Ave., Plainfield, N. J., is interested in the 75-meter amateurs, having heard all the districts and X5N in Mexico. He would like to

(Continued on page 79)

READING the Editor's MAIL

• • • *Our Readers' Views*

ONCE more let us advise our readers to be sure to get copies of May and June issues of this magazine. In these issues will appear full instructions and diagrams for building the simple short wave converter mentioned in Page Taylor's department on another page. In the May issue our regular Index by Frequencies will make way for a new list by frequencies which will give the data used by stations in making their announcements including the name of hotel or building housing the main studio, the full name of owner and the mail address and the slogan used. This list should be carefully preserved as it will be of inestimable value in identifying those stations whose announcements are caught only in part.

The Whole World

In the June issue, in addition to the second and concluding part of the article on building a short wave converter, the Index by Frequencies will contain not only the usual North American broadcasting stations but those of the whole world as well. This is an issue that should be kept for years.

And again the warning: The number printed of the May and June issues is always very much smaller than the run in the winter months. This means that these editions must be spread much more thinly and some of the smaller dealers may not receive any at all. If, therefore, you do not find the May and June issues on your favorite newsstand on the first day of those months, send your order direct to us.

Are We Punctual?

Beginning with the February number we changed our entire method of distribution in the hope of increasing our coverage and getting all cop-

ies on the newsstands not later than the first day of each month. Very naturally this resulted in some confusion and a few dealers and even some cities lost out. We have been greatly helped by readers who called these omissions to our attention. We will consider it a very great favor if our readers will notify us promptly if their favorite dealer does not have this magazine on sale on the first day of each month. Be sure to give us dealer's name and address.

Let us now open the month's mail,

Those Wave "Hogs"

When we rage over the super-power stations growing up on the Mexican side of the Rio Grande and filling the ether with rubbish, it looks like it might be a case of the pot calling the kettle black. Some of the U. S. A. stations are boring our neighboring nations greatly, particularly those that "hog" their wave all night and even 24 hours a day. Writes Alfred H. Bacon, 928 13th St., New Westminster, British Columbia: "A number of DXers here have asked me to take up the following matter with you. In your DX Calendar are quite a number of early morning programs on the 1200 frequency. Sir, on the coast here we have the 24-hour-a-day station KGFJ, Los Angeles, Calif., 100 watts, 1200 kcs. 'Hogging it' you hear him right through the night and morning advertising the Consolidated Hotels program with recordings. This early Sunday morning was terrible on 1200. I never heard such miserable broadcasting in my six or seven years with receiving sets. Cannot something be accomplished through your channels to overcome this nuisance? Is there any medium whatever in which KGFJ could be approached and asked to show a little courtesy by going off the air, say for two hours, while those DX programs

are on? The interference is nightly, not now and then. After about 1:00 a. m. KGFJ opens up wide and just throws his broadcasts to the air regardless of his wave-length. Just abuse, I would call it."

Stations which adopt a "public-bdamned" policy are digging their own graves. If the National Association of Broadcasters cannot control pests like this they are going to bring about a censorship of the air as sure as fate. There is no station in existence that can provide worth-while programs for 24 hours a day, seven days in the week. They must use trash and, sooner or later, something is going to be done to take this trash off the air.

That Amateur Chatter

"Isn't there something that can be done for these amateurs?" plaintively inquires Mrs. G. H. Morton, East Marion, N. Y. "The difficulty these young fellows have in keeping up a conversation is actually painful to listen to. I just turned off a poor fellow who kept saying 'Hi there, old boy, you were doing fine business. Ha Ha.' over and over again so many times that I became desperate. Now I like to tune in these amateurs because they are different but it surely becomes tiresome to hear a boy repeat the same thing over and over a dozen times. Is there any law against their expressing views on politics, news, movies, jokes, etc.? If they only would I'd rather listen to them than to a regular broadcast. It might increase the sale of short wave sets too." We suppose every one of our readers who listens to the short waves will sympathize with Mrs. Morton in her "pet peeve." Under the laws that govern them, these amateurs are forbidden to use any matter smacking of broadcasting but it does seem as if some concerted movement should be undertaken to develop their conversational powers. Almost without exception their talk seems painfully forced and it is evident that they just don't know what to say next. "Well, I guess that'll be all

now, old man" and then after some long ah-hhhs—"You are coming through fine, old man; well I guess that'll be all now, old man" and so on and on and on. We recommend to their excellent organization, the American Radio Relay League, that these youngsters be taught how to talk as well as how to send code and the suggestion is a serious one, for the sort of palaver that goes on now is bound to create a strong public feeling that the boys are merely encumbering the air and ought to give up their choice wave-lengths to some more valuable purpose. QST; please copy.

Army Broadcasters

Those mysterious stations, EQ-7 and EW-7 have been traced to their respective lairs by our readers. E. A. Feichtner, 53 Chestnut Lane, Erie, Pa., and Earl R. Roberts, Cambridge, Ohio, report upon them as follows: EW-7 is located in Jackson, Michigan, and is owned by the 119th Field Artillery, Headquarters Battery, 2nd Battalion of the U. S. Army Corp. John B. Osburn, 1321 North Waterloo Ave., Jackson, Mich., in charge. EQ-7 is at Lansing, Corp. Cross in charge. These are both Army stations and their permits are issued by the War Department. The stations use 50 watts power and are supposed to reach out about twenty miles although the distance from Jackson to Lansing is about 38 miles. They test with each other on Tuesdays at 2:00 a. m. EST. Mr. Roberts comments as follows: "I picked them up Tuesday, Feb. 14th, at 3:00-3:17 a. m. EST. on 750 kcs. EW-7 uses a directional aerial pointing East and has been heard in Hartford, Conn." Mr. Feichtner adds: "They expect to broadcast every Tuesday and Wednesday morning between 2:00 and 3:30 on 750 or 800 kcs. EW-7 is anxious to see how far out he is getting so if you live at a distance, he would greatly appreciate hearing from you. They use code quite a bit but they announce often."

It seems very strange that our laws

permit the Army to set up stations on the broadcast band and use as their call the letter E which belongs to other nations.

Experience with Batteries

"We have been using the Ever-ready 1000-hour aircell A battery," reports P. J. Hoffmann, Anaheim, Sask. "This held up well but last fall we decided to try a two-volt wet battery. The results were unsatisfactory and we noticed our set did not seem to reach out as far as it used to do with the aircell battery. We found that we should have taken out the resistor which was used with the set when using the aircell. We did not remove it but put in a jump-wire which eliminated the resistor. Immediately our set functioned better than ever; in fact, daylight reception of U. S. A. stations which had been very difficult, was so much improved that one day we got WABC, New York, at 10:30 a. m., MST. At night we are able to reach out and have no difficulty pulling in most eastern stations such as KDKA, WBZ, WBZA, WOR, WTIC, WBT, WLWL, WRVA and many others. Last night at 11:45 p. m. MST, we caught KGU, Honolulu. There was considerable static and we had quite a time holding on until the station announcement was made; we got the call letters but nothing else but we are certain we can catch this station again and then verify our reception."

KZRM AGAIN

"After having read in several issues of RADEX that KZRM will not verify reports of reception," says Dora Newcomb, Oxnard, Calif., "wish to say that I believe they will if approached in the right manner. For instance, when writing to them on October 24th, after logging their entire program from 2:51 to 4:00 a. m. PST, I particularly asked them to write 'Reception verified' on their usual blue card of acknowledgment. I told them of the necessity of this as I could not count their station as logged without this notation. When the card arrived,



The profit and loss account of the "Easy Aces" is something terrible. Jane thinks Ace is "downright abdominal" about it. CBS Tuesday, Thursday and Saturday at 8:00 p. m. EST. Photo by Maurice Seymour Studios

Mr. B. H. Silen, Broadcast Manager, had complied with my request. In a few days another fine verification arrived in the form of a letter from Rajah Chanda, Astrologer, of KZRM. I believe if the DX fans will go carefully into detail about the necessity of verifications, giving plenty of material for verification, that KZRM will be glad to do it. Impress upon them the necessity of those precious words, 'Reception verified.'

Raymond Corbett, 619 12th St., Sacramento, Calif., also submits his original verification card received from KZRM. He received them but once but heard them then very clearly. Raymond is getting XGOA, Nanking, China, quite regularly, but best at 3:00 a. m. PST. He also reports that KGU comes in in great shape between midnight and 12:30 PST.

Verifying XEPN

Those who have had trouble getting verification from XEPN, will appreciate this information which comes from Homer G. Gosney, 431 South Elena Ave., Redondo Beach, Calif.: "I have received a reply at last from this station, therefore, on behalf of those concerned, pleased be advised that Jessie Doak, bookkeeper, is in charge of XEPN's correspondence, address Yolanda Hotel, Eagle Pass, Texas. She advised me that XEPN's new postcards would be ready in the near future."

Changing Aerial Works Wonders

"I enjoy RADEX," is the pleasant opening of an interesting letter from Mrs. Carol Ross, P. O. Box 296, Middletown, N. Y. "I have been ill with pneumonia since last Christmas and here it is February, but I have passed the time pleasantly for the most part. Have a four-tube Emerson electric radio and hooked up to that a Sears-Roebuck Silvertone four-tube short wave converter. I found I could not get anything much but locals and calls between 'hams.' Although my husband thought it wouldn't make any difference, I got the radio man to change the aerial from north-south to east-west and, oh, what a difference it made. The very first week long distance stations rolled in. It wasn't any trouble at all to get the big French station in Montreal and I got stations all over the world. EAQ, Madrid, came in fine during its evening broadcast."

Those "Outlaws"

"I got quite a surprise today," writes R. B. Rolfe, 1741 Burnett Ave., Waco, Texas. "While listening to KFJZ in Fort Worth, I heard a station in the background and was very pleasantly surprised to hear the announcer say 'You are listening to WSVS, Buffalo, N. Y.' a 50-watt station." Mr. Rolfe tells us there is a small station at Rosebud, Texas, on the air every day at 9:45-11:00 a. m., but he does not give us their call or frequency. Earl Roberts of Cam-

bridge, Ohio, also mentions some outlaws, WJM, which is the former WAIR moved to Massillon, Ohio, and still using 850 kcs. WUMS is another located somewhere in southern Ohio on about 1385 kcs. What are the Radio Inspectors doing about these unlicensed stations?

Old Issues Available

"I have in my possession every edition of RADEX from No. 51 (September, 1931) to date, and I am curious to know what editions are available prior to No. 51," writes Richard Labate, RFD No. 1, Bordentown Road, Bordentown, N. J. We still have a few copies of the following old issues: 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 38 and from No. 41 to date. These are available as long as our supply lasts. The price is 25c per copy, five for \$1.00 or ten for \$1.75. We also have a very few of No. 2, published in 1925, but this number was in a 50c edition.

"I would like to ask a couple of questions, perhaps your readers can answer them," remarks Carl M. Hansman, Bethel, Maine. "Where is station NPG? And has CMAY been broadcasting lately on 1200 keys? Friday, February 10th, from about 11:00 to 11:30 p. m. EST, there was a Cuban broadcasting on 1200 kcs. I heard the call in English two or three times, and it sounded like CMAY, but the only Cuban on that wave listed in my February RADEX is CMGB. Can anyone explain this?"

How to be an Amateur

We receive a great many inquiries from readers who have become interested in code through their experiences on the short waves. Most of them ask how they may become amateurs. This subject has been fully covered in a booklet issued by the American Radio Relay League, West Hartford, Conn., which may be secured for twenty-five cents.

The chapters include the following: Learning the Code, Building the Receiver, Operation of the Receiver,

Building the Transmitter, the Power Supply, the Transmitting Antenna, Tuning the Transmitter, Arranging the Station, Getting Your Licenses, Going on the Air.

The Long-Wave Stations

A. Gottfried, 2241 Creston Ave., Bronx, N. Y., wants a list of the long wave stations, that is, those below 550 kcs., as he intends to build the one-tube described in the March and May, 1932, issues of this magazine. We listed fifty such stations in September, 1931, issue No. 51, which we can send to those who do not have it.

"What do you know about a new station in Mexico operating on about 1170 kcs. but announcing 1185?" is an inquiry from P. J. Hauss, 221 S. Butler Ave., Indianapolis, Ind., that the Editor cannot answer. "I am quite sure the call was XETN and I believe he said the power was ten watts."

Has CMW changed back to 1180 from 585? Edward J. Bieglecki, 3309 E. Warren Ave., Detroit, Mich., reports positively identifying CMW on 1180 kcs., Saturday night, Feb. 4th. A new official Cuban list just received shows CMW changed from 585 only to 590.

In answer to a query from Alfredo Rozzundo in the February issue, Howard Sharpless, 564 N. Pearl St.,

Bridgeton, N. J., says: "WKAQ, 1240 kcs., San Juan, Porto Rico, broadcasts regularly from 12:30 to 3:00 a. m. and from 6:30 to 10:00 p. m. their time."

Samuel A. Meyer, Jr., 83 Canterbury Road, Rochester, N. Y., tells us that XEP did not move from Nuevo Laredo to Mexico City but that the N. Laredo station burned down and was not rebuilt. XEP, Mexico City, is a new station with the old call.

"This Tuesday morning (February 28th) I listened to a station in Havana on 1345 kcs., whose call was like CMBD or CMBE," reports Earl R. Roberts, 105 Gomber Ave., Cambridge, Ohio. "KFPY interfered. The time was 1:30-2:30 a. m."

"What station in Texas broadcasting on 1370 kcs., uses the sound of an airplane as they sign off?" queries I. E. Beitman, 249 Gates Ave., Elyria, Ohio. He heard them on Feb. 11th at 1:06 a. m. EST.

Allen E. Knain, Northwood, N. Dak., experienced interference on 720 kcs. and by careful tuning he brought it out and it was 2YA. Now he says he can raise this station every night three times out of four.

D. C. Hamilton, Jr., picked up a station on 720 kcs. on Feb. 17th which announced the time at intervals in Pacific Standard. Our guess is that this was one of the British Columbia stations on 730.

Jim Hanvey, the famous detective of Octavus Roy Cohen (Thurston Hall) is putting Ann Townsend (Joyce Meredith) and "Shirley Pemberton" (Elaine Temple) "on the spot" while Chief of Detectives "Al Sheppard" (John Hamilton) looks on. On NBC-WJZ net Tuesdays, Thursdays and Saturdays at 7:45 and 11:15 p. m. EST.



The FRC has denied the application for renewal of license of KGDA, Mitchell, S. Dak., for reasons unknown and also refused permission to move the station from Mitchell to Aberdeen.

"What station on 1310 after 11 p. m. CST, announces 'Little Holland, Come to Little Holland,' asks Miss C. A. Brinkerhoff, 317 Clinton Ave., Oak Park, Ill.

A Phonograph with Tubes

AND now the phonograph has gone completely Radio!

Here is a really portable phonograph which uses an electric amplifier and dynamic speaker which reproduces records with a tone quality and volume formerly associated only with large radio-phonograph combinations. Volume may be controlled from a mere whisper to auditorium intensity and a tone-control permits the emphasis of either the high or low frequencies.

The Ansley Portable Dynaphone is manufactured by the Ansley Radio



Corp., 147 West 23rd Street, New York, N. Y. It operates on either alternating or direct current. The turntable is operated by a universal motor. The four-tube amplifier uses one -37, two -89s in push-pull and one -80. The change from a. c. to d. c. is made by a simple plug arrangement. Provision is made for use with a microphone as a portable public address system.

The case, which may be secured in either black or brown, measures 20x14x8½ inches and the weight is 30 pounds.

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| <input type="checkbox"/> One copy of the next RADEX..... | 25c |
| <input type="checkbox"/> Trial subscription, next five issues of RADEX..... | \$1.00 |
| <input type="checkbox"/> One year's subscription to RADEX, 10 issues and World Map-Converter, free..... | 1.75 |
| <input type="checkbox"/> Two subscriptions to RADEX with one leatherette cover and Map-Converter, both free..... | 3.50 |
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67

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Verifying

Foreign Stations

By OLLIE ROSS

THE greatest disappointment to a DX fan is to receive a program from a distant foreign station, write for verification and then, after weeks of waiting, have the verification fail to come. The fault cannot always be blamed to the broadcasting station for they are happy to verify especially for their distant listeners. The trouble seems to be with the DX fans themselves, for, in nine-tenths of the cases, the report of reception is lacking in details or items heard.

I would advise DXers writing for foreign verifications to use the following course and I am sure they will not be disappointed. First, be absolutely sure to get the call letters of the station, the city and country or any special identification. Second, be sure to have enough of the program so that it can be verified; don't just say "I heard your program" for in this case the station cannot verify. They must know that their program was actually received. Third, be sure always to give the time—your own local standard time. Do not try to figure out their time for often mistakes are made in converting. Fourth, state exactly on what wave length their program was received for in many cases foreign broadcasting stations change their wave lengths without notice.

But the main thing is first to be sure of the station broadcasting, for here, I find, DXers make most of their mistakes. They receive a program on a certain wave length but being unable to get the call, it is often taken for granted that the station listed in the log on that particular wave length is the one that was heard. In many instances this is the wrong station entirely.

During my European tour of broadcasting stations I was allowed to read the letters of our American DXers writing for verifications, and, really,

nine-tenths of them could not have been verified at all. In many instances the date was given one or two days later than the actual broadcast, the exact time was omitted, no details nor items of identification were given.

It must be remembered that broadcasting stations receive hundreds and hundreds of such letters from the DX fans, often two and three weeks after the day of the broadcast, and they must search through their logs to ascertain each particular broadcast for verification.

Every station will verify providing of course enough proof is submitted that their program was received. I have over 1300 verifications and in seven years I have never found a station that refused to verify.

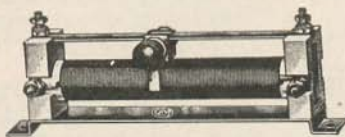
Editor's note: Let us repeat once more—do not send U. S. postage stamps to foreign stations; they are worthless to them. Get an International Reply Coupon from your postmaster and send that for the return postage.

A New

RHEOSTAT

A SMALL, high-quality, inexpensive slide wire rheostat for radio experimenters is presented by G-M Laboratories, Inc., 1735 Belmont Ave., Chicago. Wound on one-piece porcelain form with adjustable contact for varying the resistance, it will dissipate 75 watts continuously. They are supplied in twelve ratings from 5000 ohms, 0.12 amperes to 4.8 ohms, 4 amperes. For service-men a special kit of six rheostats of different ratings, is supplied.

Binding screws at each end of the winding permit the use of this rheostat as a potentiometer.



4-RK Verifies Cricket Game Also . . .

WE thought we had written "finis" to that series of cricket broadcasts. There seemed to be no doubt left that they came from the studios of Poste Parisien on 914 kcs. Many of our readers were chalking up the Paris station in their logs with glee. But—and here's the catch—4RK, Rockhampton, Queensland, Australia, on 910 kcs. is now verifying the reception of the same games! J. W. Robinson, Acting-Manager of 4RK, writes Clyde I. Boyer, 204 N. 2nd St., Darby, Pa., as follows: "We are in receipt of your letter of Dec. 3rd, reporting reception from 4RK. Reference to our log confirms your reception and we congratulate you. We presume you are aware that 4RK is a relay station simultaneously broadcasting 4QG's programs and only on very rare occasions does it provide a local entertainment." P. J. Hauss, 221 S. Butler Ave., Indianapolis, Ind., also received a verification from 4RK but he is now convinced that it was Poste Parisien he heard instead. He bases this conclusion upon the fact that his reception faded as it went on whereas Australia would have been apt to get better.

Of course there is no doubt that Poste Parisien sent out broadcasts covering these games from cable reports but evidently 4RK sent out the actual game play-by-play. Harry R. Kenney, 607 Mt. Vernon St., Camden, N. J., is sure his report was from "ring-side" as one statement was "The heat here is terrible." Leslie G. Briscoe, 3743 Hutchison St., Montreal, is also sure his reception was not read from cables as the announcer mentioned the plays exactly such as "they cross once—twice—three runs" slowly just as they would be called.

Those who logged these cricket matches will have to decide for themselves whether they were tuned to

Poste Parisien or 4RK. Theodore Vail Bullard, South Orleans, Mass., says it is no longer a novelty to tune in Poste Parisien on Cape Cod between 4:30 and 5:30 p. m. When he first tuned them in he was surprised at their volume and clarity and called up some of his friends to tune in and see if they heard what he did and even those with less powerful sets had no difficulty in receiving PP at the same time. Herbert J. Blythe, 3 North Cornwall Ave., Ventnor City, N. J., reports that PP should be an easy catch for Eastern listeners during the early evening hours as he has heard this station several times within the past few days (Feb. 10th) as strong as most U. S. A. high-powered stations. Joaquin T. Russe, 21 Standish St., Provincetown, Mass., thought he had CFLC, Prescott, Ont., on 915, but he distinctly heard "Poste de Parisien, Paree" and then a moment later in the background "CFLC, Prescott." The latter station seemed to be three or four kcs. higher than PP.

E. L. Peters, Box 65, Westport, N. S., tells us that Poste Parisien also broadcast the results of the U. S. A. elections, working in conjunction with the European edition of the Chicago Tribune and the New York Herald-Tribune.

From D. Miller, 88 Eastgate, Inverness, Scotland, comes confirmation of the relay of the cricket games by Poste Parisien which agrees with the reports of the broadcast published in previous issues of this magazine. Mr. Miller adds that he receives the following stations on his "three-valve" set although not regularly: WCAU, Philadelphia, WPG, Atlantic City, WTAM, Cleveland, WTIC, Hartford, WBZ, Springfield and WABC, New York.

Inquiries still come to us regarding mysterious interference between

910 and 915 kcs. Perry Worisiheck, 5 Walnut St., Teaneck, N. J., says he listened to this station which he thought was a Cuban or Mexican for an hour and a half without hearing an announcement. The interfering station on this channel is undoubtedly Poste Parisien.

P. J. Soper, 256 Burroughs Terrace, Union, N. J., sends the schedule of Poste Parisien. Daily, including Sunday, it begins at 5:00 p. m. EST. and ends as follows: Tuesday, Thursday and Friday, 5:30; Monday 5:45; Sunday and Wednesday, 6:00; Saturday, 7:00. After giving news items in French they play the "Marseilles" and leave the air. This station comes in just a hairline below the setting of XEW, Mexico City.

Now A Wrestling Match

HAVING disposed of the cricket games, now comes a mysterious report of a wrestling bout. The report is from T. W. Rowe, Grand Junction, Colo., who says: "On the morning of Saturday, Jan. 28th, at 4:00 o'clock, I set my dial at 760 kcs. for JQAK, Darien, Japan. Was rewarded with one hour and fifteen minutes of a wrestling or boxing match, very plain and in English. Now what was mystifying was this: I have never heard a wrestling match announced by rounds or a boxing match by such terms as 'hammerlock, toe-hold, neck-hold or shoulders on the mat.' The cheering of the crowd was immense at stages of the game. At the beginning of the fourth round the announcer said, 'You ought to be here and see the crowd that is here tonight.' It was then just 4:30 a. m. MST. (Editor's note: This would have been 8:30 p. m. in Japan and 11:00 p. m. in New Zealand.)

"The match or bout went to or through the eighth round where one of the contestants, a Greek, refused to shake hands with the other. In

a moment the crowd was in an uproar and were yelling 'They are fighting, they are fighting' and a band began playing. During all this time I never heard one word that would give me any idea where this event was taking place, no station announcement nor name of city. KFAB, Lincoln, went on the air at 6:15 a. m. and cut me out altogether.

"I will thank you very much if there is any way by which you could help me ascertain where this match or bout happened or tell me if it is usual anywhere in North America to hold sporting events at the hour this took place—4:00 to 5:15 a. m. MST—remembering that the announcer used the words 'Tonight'."

Did any other Radexers catch this program?

NNRC DX Tips

The following stations broadcast DX tips for the Newark News Radio Club weekly:

WAAT—Jersey City, N. J.
WHBU—Anderson, Ind.
WDEV—Waterbury, Vt.
WSIX—Springfield, Tenn.
WFAS—White Plains, N. Y.
WHOM—Jersey City, N. J.
WWRL—Woodside, L. I.
WTFI—Athens, Ga.
KFOR—Lincoln, Neb.
WHET—Troy, Ala.
WTAG—Worcester, Mass.
WOMT—Manitowoc, Wis.
CKOV—Kelowna, B. C.
CFCO—Chatham, Ont.
KFXM—San Bernardino, Cal.
KTFI—Twin Falls, Ida.
WNBH—New Bedford, Mass.
10AB—Moose Jaw, Sask.
WMMN—Fairmont, W. Va.
WMBH—Joplin, Mo.
CKPC—Preston, Ont.
KGER—Long Beach, Cal.

Try for OAX, Lima, Peru, on 790 kcs. Monday morning, April 24th, at 4:00 to 5:00 o'clock.

RECEPTION Reports by Readers

• • • *From Scotland to Zealand*

TH**ERE** is no doubt about it. Our Radexers are pulling in real foreign stations with much greater frequency than in the past. With the wide-spread reception of Poste Parisien broadcasting the now-famous cricket matches from Europe, South America is coming to the front with both YV1BC at Caracas, Venezuela, and HJN at Bogota, Colombia. Both of the latter stations are now so generally received that we are listing them in our regular indices. Following are a few of our readers who have tuned in HJN recently: George Fabian, 1463 Virginia Park, Detroit; Colvin MacCracken, Vassar College, Poughkeepsie, N. Y.; J. C. Arp, 208 Washington Blvd., Williamsport, Pa.; O. R. Spittler, 4835 Thomas St., Chicago; R. N. Putnam, 920 12th Ave. No., Fargo, N. Dak.; J. A. Shanks, Russellville, Tenn.; A. L. Beaty, 1207 33rd Ave., Tampa, Fla.; Mrs. R. Furlley, R. 6, Mt. Vernon, Ohio; R. M. Ballard, Visalia, Calif.; T. R. Grosvenor, 302 S. Lorraine, Wichita, Kans.

Regarding HJN, Mr. Fabian says: "I think RADEX is right in listing this station on 685 kcs. (Page 78, No. 63) I listened to their very interesting program dedicated to the people of the U. S. A., from 3:14 a. m. until sign-off at 5:02 a. m. EST, Feb. 26th. They were on exactly 685 kcs. and came in with enormous volume. Gave call and location 15 times." Mr. Arp says HJN announced that verifications for the reception of the program on December 17th are now being sent out.

From New Zealand

"Hands across the sea" are reached out to us this month by two readers in New Zealand. "You may be interested in a few remarks on DXing in Invercargill—the most southerly city in the world," writes S. Robson,

of 100 Islington St., in that city, who is, by the way, the President of the New Zealand DX Club. "In some ways we have an excellent locality as we have the whole world to receive. Unlike most parts of New Zealand, we in this city find your American stations the hardest to receive well. Very few of your 100-watters can be heard here and yet Mr. Barnett (December RADEX No. 64) only 110 miles north has a wonderful log of these stations. Europeans are very easily received here; I have heard nearly 70 of them and have just received two of my best verifications—Berlin, Germany, 715 kcs. power 1500 watts, and Lyons, France, 644 kcs., 1500 watts. My best American verifications are KPCB, CFRB, WKBF, WBIG, WCSH, WQBC, KTRH, KTBS, WSMB, and XETR. I have logged at least one station in every continent and, with the exception of a South American station whose verification is not due yet, I have a station on all continents verified. My set is a six-valve Stewart-Warner; aerial 85 feet long, 35 feet high. I have a number of log books on American stations but RADEX is by far the best."

From George E. Bott, 507 Southampton St., Hastings, New Zealand, comes a list of changes in Australasian stations and these corrections together with some from Mr. Robson, will appear in the Index to All World Broadcasting stations which will be found in the coming June issue. Mr. Bott uses a Grebe five-valve battery receiver about six years old with which he has logged 183 stations including about 80 from the U. S.

A Society of Experts

"The International DXers Alliance is unique," writes its President, Charles A. Morrison, 1204 No. Prai-

rie St., Bloomington, Ill., "in that it is open only to those DXers who have verifications from foreign stations on the broadcast band at least 2000 miles away (excluding Cuba, Canada and Mexico). The membership is not restricted to the U. S., as we have members and representatives in Alaska, Yukon, Nova Scotia, Newfoundland, South Africa, Switzerland, Canary Islands, England, Malay, Hawaii, Australia, New Zealand, Siam, West Indies, etc. These qualifying verifications must be passed upon by the President, or one of the directors, before membership is allowed. The dues of \$1.00 a year, in the U. S. and Canada, or \$2.00 in foreign countries, are used to publish a monthly bulletin called the 'Globe Circler,' which contains the latest and most authentic information available concerning the activities of foreign broadcasting stations, letters, special broadcast tips, honor rolls, 'The Best Catch of the Month,' etc. Those possessing necessary verifications may obtain information and application blank from the President, at the above address. Those living in Australia or New Zealand may apply to Mr. F. H. A. Barnett, Dunedin, New Zealand, and those in Europe to Mr. George Evans, Lime Tree Park, Coventry, England."

The T-P Log Brought Them

"Through your Trans-Pacific log I tuned in all the larger Japanese stations, nine of the chain, anyway," reports Len Cooper, 334 Milton St., Nanaimo, B. C. "Other Pacific stations are KGU (which comes in regularly here), ZL2YA, 1YA, VK2BL and 5CK. The Alaskans, KGBU and KFQD, come in good immediately after the nearer stations leave the air. I think your correspondents who calmly jump on reports of freak reception and judge truth by mileage, must not listen in during the early hours. I have a 1932 Marconi 7-tube, and while trying for a small Washington station, heard the announcer state, 'WEXL, Royal Oak, of 50 watts strength,' yet equal in pow-

er at the time to a Vancouver station. Then during the day WIOD came in very strong, although KALE almost local, on the same wave, was missing completely. I have logged 240 stations and heard from all but three states, i. e., Maine, New Hampshire and Vermont, which never seem to do any DX broadcasting. There seemed to be a second broadcast of the cricket match over 850 kcys., and as the announcer continued the program, several listeners here make it from VK2BL."

His Lucky Month

"February has been my lucky month for foreign reception, as well as local this winter," says Earl R. Roberts, 105 Gomber Ave., Cambridge, Ohio. "I received the following foreigners: SBH, Horby, Sweden, on 1166 kcys., from 1:35-2:00 a. m., on a Tuesday morning; Frankfort-am-Main, Germany, on 1157 kcys., from 1:08-1:32 that same morning; Heilsberg, Germany, on 1085 kcys., from 2:05-2:30 a. m., also that morning. Remember my saying I wrote to Heilsberg, thinking that was the station I heard on 1157? Well, I received a card from them saying the station I had was Frankfort, since they used 1085 kcys. Might have known RADEX was right and not that DXer who claimed it was Heilsberg. Consequently, I don't have my veri from Germany yet, but should receive two from there and SBH at about the same time next month. That makes four Europeans now. On the other hand, I logged 2YA, 5CK and 2BL and received my veri from 4BC. Seems funny to me why I cannot get the Japs. I have never even thought I heard one."

"Best Yet" Says Soper

"Radio reception this season is the best in my experience," concludes P. J. Soper, 256 Burroughs Terrace, Union, N. J., "and I have DXed since 1922. There have been few nights this winter when static prevented the reception of a west-coast station. I have kept a log since 1925 and for

the seasons since then I have had KFI on an average of three times a week. This season I am sure there has not been a single night since October that KFI was not audible. No doubt other old-timers could make the same report. I can remember the time when I would be willing to lose a night's sleep in order to hear a Cuban or Mexican station—now I would gladly lose a night's sleep figuring out a way to keep from hearing them interfere with better stations. Mexico must have little respect for quality in radio entertainment when permits to broadcast are given to so many high-powered stations sending out the cheapest form of entertainment. I must, however, make exception of XEW. This station in Mexico City does have fine program features."

A Half-Mile Aerial

"Thanks to RADEX, I have been fortunate enough to log YV1BC (Feb. 11th)," records K. C. Zabawski, Pine Ridge, Manitoba. "To me it seems almost unbelievable to receive such a distant station with volume to spare. I have been DXing just a little over six weeks and my log is now at 223 stations, all heard on the loudspeaker. My best catches are WEXL, 2YA, CMJE and, of course, YV1BC. I have a few hundred-watt stations in Mexico, U. S., and Canada. I own a Minerva 8-tube Super, battery model, and I am sure pleased with it. I get tremendous volume from my barbed-wire aerial which I have found by experiment works the best. I just had an insulated wire soldered to an ordinary fence wire which stretches for half a mile, yet selectivity is just as good as on my 60-foot filtered aerial. I have the Ollie Ross ground and I think it is a good combination. Your magazine is really a Radio Encyclopedia. I have introduced it to quite a few of my neighbors and they, too, say they won't ever be without it."

"I made very good use of your DX tips Saturday night, Feb. 11th," reports J. A. Ringness, Morris, Minn.

"YV1BC came in clearly at 1:25 a. m. CST. after XEAW signed off. Also I heard plainly KGU at Honolulu. Besides these I added to my log WGNV, KIEV, WTRC, KTW, 10-AT, 10-BQ—a pretty good night's work when one already has 665 stations logged. I seemed to be tuned to KZRM at about 4:00 a. m., Sunday morning, but it would blast at that frequency when I increased the volume. This seemed strange as this did not occur at any other place or any other time. Can you tell me what station was broadcasting Newark News Radio Club tips at 1:00 a. m., CST. on 1500 kcs.? I heard some of the tips but did not catch the call letters."

A number of readers have heard stations broadcasting NNRC DX tips and, through the kindness of Louis Hahn, we are giving elsewhere a list of the stations which broadcast for the NNRC regularly.

From Station 10-AT

"We have had wonderful success with our DX programs," writes 10-AT, Trail, B. C. "Using 25 watts we have had thousands of verifications from the Atlantic to the Pacific and as far away as the Hawaiian Islands. We make one stipulation for all verifications: exact time and name of selection played must be given. We have had numerous requests for verifications and many DX fans evidently think because they hear "10-" and some letters that it is 10-AT. As 10-BI in Saskatchewan sometimes uses 1155 kcs. for DX and 10-AB at Moose Jaw is on 1190, they are confusing as to call letters and we will not give verification on call letters only. We are anxious to have our listeners write to us but we wish to be sure that it is 10-AT they heard."

"I received a station on 1360 or 1370 kcs., but could not get the call letters or city," reports Earl Sucher, 6340 Isabella Ave., St. Louis, Mo. "The only thing I could get was their slogan 'The Voice of the West.' I

am very anxious to find out what station this is." In the Index by Frequencies in the May issue of this magazine, we will give, in place of our usual data, the owners, mail addresses, and points that are usually given in announcements such as the names of buildings, hotels, etc., and the slogans used. Unfortunately we do not find among them, the slogan "The Voice of the West." Who can identify it?

A Night of Nights

"The night of January 27th-28th can go down in radio history as a night of nights for strength of radio signals," concludes Hugo L. Markland, Box 401, Steamboat Springs, Colo. "I started at 1500 kcs. and after pulling in KPQ, Wenatchee, Wash., and KVO, El Centro, Calif., a couple of hundred-watters, I kept going up the dial picking up five other 100-watters. Then at 2:05 a. m. MST., after KHJ signed off, I picked up KGBU, Ketchikan, Alaska, with his program and advice to fur trappers, and then in quick order I got the following: 2BL, 4QG, 2YA, JOQK, JOAK, JOIK, JOHK, and JOBK."

"I have no opportunity to DX except during holidays and occasionally weekends," says Carl M. Hansman, Bethel, Maine. "But despite this great handicap, I have built up a log totaling 433. I have received stations from 46 states and the District of Columbia (Arizona and Wyoming alone being missing) and I have also had stations in seven foreign countries. I have heard 30 stations on the Pacific Coast, and have a total of 48 stations from over 2000 miles."

From a Cuban DXer

From a subscriber in Cienfuegos, Cuba, Enrique Hidalgo, Prado 210, comes a report of his DX experiences: "I do not think there is a more fascinating hobby than DXing although the geographical location of this city is not good for DX purposes. My best catch so far is KGNO, a 100-

watter, of Dodge City, Kansas, 1500 miles from Cienfuegos. Other good catches are WKAQ, HIM and HJN, Bogota. You are responsible for my tuning in WOPI, WNAD and YV1BC. What a thrilling moment I had when YV1BC bade goodbye saying 'Buenas noches' three times and then 'Good night.'"

"KFAB and WBBM still continue to exchange signals with very bad results," observes Gerald McGrath, 2211 South Clinton St., Sioux City, Iowa. "WBBM makes a bad mess of KFAB. Chicago has plenty of radio service and WBBM ought to move out and let KFAB hold that wave or else make up their mind on when to share time." Gerald says 2BL comes in on some of their morning programs loud enough to be heard across the street. He has a variometer, evidently in series with his antenna, which he says boosts volume and helps selectivity.

One from Mexico

Manuel R. Medrano, 710 Juarez Ave., Juarez, Chih., Mexico, states that although his location is "terrible" he has received 339 stations of which 28 are 100 watts or less. He uses a Model 480, 1933 Atwater Kent all-wave receiver and suffers greatly from power-line noises which are "working in my set 24 hours a day." We feel sure that our Juarez friend and many other similarly afflicted will benefit from Mr. Dashiell's article in this issue.

"Very disgustedly yours," signs Joaquin T. Russe, 21 Standish St., Provincetown, Mass. In spite of the fact that he can pull in YV1BC at 5:15 any night and WKAQ at 5:30 and has had KOA and KNX at 7:00 p. m., yet he just cannot get a JO or a VK even though he gets up at three and four o'clock every morning. He says his new Majestic 12-tube will bring in hundred-watters on the Pacific Coast without any trouble at all but his heart is set on Australia and Japan and he wants someone in the East who gets the T-P's to tell him how and when.

G. Dana Boylan, 2205 Monroe St., Wilmington, Del., tells us his two-tube battery set is regenerative as we suspected (page 25, January) but as Dana is in the radio business we feel sure he is able to keep it from oscillating and driving his neighbors insane. He now reports logging KGMB, the 250 watt Honolulu station, on the morning of Jan. 3rd, and he considers their verification his prize.

J. T. Campus, P. O. Box 252, Strathmore, Calif., says he picks up KGU, Honolulu, every night around ten o'clock, PST., but they come in best after 10:30 after XER signs off. Mr. Campus used to live in Hawaii and would like to hear from readers in the Islands. He uses a Model 95 Philco and receives Alaska, Porto Rico, Manila, Manchuria, Korea, Salvador, New Zealand, Cuba, Australia, and Japan.

"The last two Sunday mornings I have tuned in on CMJK, Camaguey, Cuba, on 790 kcys., from 3 to 4:30 a. m.," comments A. W. Jollin, 44 Benefit St., Worcester, Mass. "They were reading letters sent in by fans from the U. S. As they do not send verifications, they would verify the fans' letters over the station by reading the letter and then saying, 'O. K., verified!'"

Is VPN Back Again?

Paul W. Craven, 190 Commonwealth Ave., Buffalo, N. Y., reports receipt of a verification from VPN, Nassau, Bahamas, dated Jan. 30th. He picked them up from 1:00 to 1:30 p. m., on Jan. 22nd. Evidently this station is again on the air. Who else has heard them and what was their frequency?

"At last I have a catch that anyone can be proud of," declares Robert Rosenberger, 17 Janssen Place, Kansas City, Mo. "Although I have had stations in 26 different countries, I consider RV26 in Stalino my best yet. They were doing some 'Gazot-skies' and announcing in Russian."

Station WHDL notifies the NRRC

that it has adopted a strict rule that only those reports will be verified which bear a postmark within 24 hours of the broadcast. This is a policy that could well be adopted by all stations.

Thumb-Nail Records

"I thought that you would be interested in having a DX record that I have kept from September 25th to December 9, 1932," writes Granville H. Wood, 249 Thomas Ave. So., Minneapolis, Minn. "During this time I have received 214 stations including 29 out of 48 states in the U. S. Also have received 7 Canadian stations, and 6 Mexican. They are XER, XEB, XEFO, XEGN, XEW and XEPN. These stations were received using a 5-tube superhet Jackson Bell receiver."

"There is one thing I have been looking for in RADEX that I have been unable to find," remarks C. L. Powell, 6837 Ave. S., Houston, Texas. "I have not seen any letters from a Texan showing their log for distance. I would like to hear from someone in Texas who is breaking through all these Mexican and Cuban stations. I have a 12-tube Silvertone and in the month I have had it, have received over 150 stations, but only on the North American Continent and Cuba."

"I am 16 years old," admits Reinhold Peterson, 2516 So. Lenox St., Milwaukee, Wis., "and I have been DXing since January, 1931. I have been using a pair of your headphones and adapter for a year. So far my log totals 398 stations, including 29 in California, 8 in Washington, 8 in Oregon. I have heard every state except several in the New England group. On December 4th I heard KG CX, Wolf Point, Mont., coming in fine, for about four straight hours."

"I have logged about 75 stations during the past few months," writes Ralph V. Caldwell, R. D. 1, Clarks-ville, Pa. "I have at least one station in all states but Wyoming, with 20 in California. I have 125 stations

of 100 watts or less with a total of 548. I have a dozen Cuban stations, including CMGC, a 30-watter; CMGE, 30-watter; also WKAQ, Porto Rico. Most of these I have received on a 3-tube Philmore radio."

"I use a Crosley 42-S which I have had for three years," says W. H. Waters, Wyaconda, Mo. "I think my best catch is KPCB, 100 watts, Seattle. I picked this station up one morning as loud as some thousand-watters. I use the ground wire on the antenna post; nothing on the ground post. I have every channel from 540 to 1500 and 41 of the states. My total is 299 on the b. c. band with 10 or 15 police."

"I have a 9-tube Philco baby-grand superhet and have logged 166 stations," reports Fred Ansell, 3101 N. Natoma Ave., Chicago, Ill. "I have 39 states, quite a few Canadians and Mexicans and one Cuban, CMC. I use a short picture mold aerial and no ground. The reason for no ground is this: When I run a wire from the radiator or cold-water pipe there is quite a large spark."

Likes the DX Calendar

"I hope you continue to print the DX calendar, for without it I probably would not have over 75 percent of the stations that I have logged," says N. A. O'Harra, 1712 N. 4th St., Columbus, Ohio. "I got six new Canadians within a space of twenty-five minutes, which brought my total to 481, using an Amrad 81 receiver, with 90 feet of aerial including lead to the set."

"With my Atwater Kent Model 82 I have been successful in tuning in 548 stations," advises Fred Wake-rell, 68 Rochester St., Ottawa, Ont., "according to your way of counting stations. Do you really think a frequency change should count as a new station? My best efforts are 2CO, Corowa; YV1BC, Caracas; KGBU, Ketchikan; HHK, Port-au-Prince, and WKAQ, San Juan."

"Thanks to your tips," says Earl R. Roberts, 105 Gomber Ave., Cambridge, Ohio, "I logged CMJF very

loud, CKIC like a local, and CFJC weakly, this morning. Last night I heard CMBW at 9:30 on 955 kcys., and CMBZ loud at 8:30 on 1005 kcys. XEAW, Reynosa, has been very loud on 960 kcys., to midnight and after. Also XEPN, Piedras Negras, on 885, with 75 kw to 11 p. m."

His Greatest Season

"This year has been the greatest DX season for me in my three years of trying," says Bruce Vaughan, 1312 Tenth Ave., Huntington, W. Va. "I have logged a new one each day since early August. I now have 28 Californians and have only six states yet to log, namely, Delaware, Idaho, Montana, Nevada, Wyoming and Vermont. I use a Majestic model 70."

"I have received eighty 100-watt stations, 43 being over 500 miles distant, 13 over 1,000 miles, and 4 over 1,500 miles; also five 50-watters and two 10-watters," reports Walter W. Bronson, 2nd, 1485 Chapel St., New Haven, Conn. "The best catches on my log of 370 stations are: ZYA, 4QG, YV1BC, KUMA, KIDW, KFXJ, KGEK and KGGM."

"I have been Dxing for about two years, but as my parents have not become as interested in it as I am, I haven't been able to sit up very late at night," confesses James Owen, 1019 W. Webster St., Springfield, Mo. "Up to this time, however, I have received 327 different stations, including 8 shortwave."

"I use a one-tube d.c. receiver, using a 201-A tube. I had the set built last March and since then I have received 150 stations," writes George Greensward, Brampton, Ont. "Here are some of my best catches: KECA, Los Angeles; KNX, Hollywood; KEX, Portland, Oregon; WDAE, Tampa; KVOR, Colorado Springs."

"Although I have not verified any, my total number of stations is 209," reports Clayton Lamb, 125 W. Cleveland St., Stockton, Calif. "Some of my best catches are XEN, JOAK, JOIK, JOCK, JFAK, WRHM, JOBK,

(Continued on page 79)

The Book of the Air

WITH the introduction of the new, small tubes, efficient radio receivers are being packed in unbelievably small cabinets. Resembling a pair of beautiful books, this Stewart-Warner Receiver operates on both a. c. and d. c. and special adapter cords make it available for use on 6, 12 and 32-volt d. c. as well as the 220-volt currents of steamships and foreign countries.



An ingenious, powerful circuit embodies the latest tube equipment—36 power output, -39 r. f. and 12Z3 rectifier. It has a wide range of tuning enabling the listener to bring in police calls in addition to the regular b. c. stations.

The manufacturers claim that the quality of tone is surprising, comparing favorably with large radios. The sets come in seven editions, a variety of colors in handsome leatherette and

rich leather bindings with gold stamping on the backs and covers.

What a far cry from the huge, ugly cabinets of just a few years ago.

This Month's Changes

FREQUENCIES

579 HIX	Santo Domingo, D. R., from 630
590 CMW	Havana, Cuba, from 585
660 CMAF	Havana, Cuba, from 680
1015 XEJ	Juarez, Mexico, from 1000
1020 XEFC	Merida, Mexico, from 1050
1185 CMBN	Havana, Cuba, from 1444
1230 CMBY	Havana, Cuba, from 1235
1230 CMCA	Havana, Cuba, from 1235
1240 CMJN	Camaguey, Cuba, from 1270
1335 CMJI	Ciego de Avila, Cuba, from 1260
1340 KGDY	Huron, S. D., from 1200
1360 CMJP	Moron, Cuba, from 1310
1365 CMCR	Havana, Cuba, from 1375
1405 CMCH	Havana, Cuba, from 1395
1405 CMCM	Havana, Cuba, from 1395
1485 CMBR	Havana, Cuba, from 1500

POWER

660 CMAF	Havana, Cuba, 1000 to 500
780 WEAN	Providence, R. I., 250 to 500
890 WJAR	Providence, R. I., 250 to 500
1015 XEJ	Juarez, Mexico, 100 to 500
1030 XEB	Mexico City, Mexico, 1000 to 10000
1075 XEG	Mexico City, Mexico, 250 to 500
1110 CMJO	Ciego de Avila, Cuba, 15 to 50
1150 CMJH	Ciego de Avila, Cuba, 50 to 30
1185 CMBN	Havana, Cuba, 30 to 150
1230 CMBY	Havana, Cuba, 350 to 250
1290 KLCN	Blytheville, Ark., 50 to 100
1335 CMJI	Ciego de Avila, Cuba, 5 to 45
1340 KGDY	Huron, S. D., 100 to 250
1370 XEPV	Juarez, Mexico, 50 to 100
1460 KSTP	St. Paul, Minn., 10000 to 25000

NEW

560 XEAO	Mexicali, Mexico
660 XEM	Matamoros, Mexico
685 HJN	Bogota, Colombia
875 XEAD	Mexico City, Mexico
1090 XEAI	Mexico City, Mexico
1295 XEAC	San Luis Potosi, Mexico
1340 WLEC	Portland, Maine
1450 XEAB	N. Laredo, Mexico

OWNERS

630 WMAL	Washington, D. C., to National Broadcasting Co.
970 KJR	Seattle, Wash., to Fishers Blend Stations, Inc.
1185 CMBN	Havana, Cuba, to G. de Sequeira
1200 KGHJ	Little Rock, Ark., to Lloyd Judd Co.

PERMIT TO CHANGE LOCATION

560 KTAB	San Francisco, Calif., to Oakland, Calif.
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AMPLIVOX LABORATORIES, 82 East 95th St., Brooklyn, N. Y.

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).....WABC NATIONAL, Red (R).....WEAF NATIONAL, Blue (B).....WJZ

Call	Dial	Call	Dial

Call	Dial	Call	Dial

Call	Dial	Call	Dial

TIME—E Eastern Standard; C Central Standard; M Mountain Standard; P Pacific Standard.

RADEX is the only publication listing stations in alphabetical order for your convenience.

Editor's Note: These programs are correct at the time of going to press but are subject to change thereafter.

MONDAY

E-5:45 p.m., C-4:45, M-3:45, P-2:45
B—Little Orphan Annie
 CKGW KDKA WBAL WBZA WCKY
 WGAR WHAM WIS WJAX WJR
 WJZ WRVA WWCN

E-6:00 p.m., C-5:00, M-4:00, P-3:00
C—Elizabeth Barthell
 CFRB CKOK KFAB KFH KLZ
 KMOX KSCJ KSL KTRH KVOR
 WAAB WABC WADC WBCM WBIG
 WBRC WBT WDAE WDBJ WDOD
 WDRC WDSU WFAN WFBL WFEA
 WGR WGST WHEC WIP WISN
 WJAX WKBH WKBN WLWB WLWB
 WNAX WNOX WODX WOKO WORC
 WQAM WRBC WSBT WSFA WSJS
 WSPD WTAQ WTOG

R—Waldorf-Astoria Orchestra
 CKGW KFYR KGO KOA KPRC
 KSD KTBS WBN WCAE WCKY
 WCSH WDAF WEAF WENR WFBR
 WFI WHO WIBA WIOD WJAR
 WKY WMC WOAI WOC WRC WSB
 WSMB WTAG WWCN

E-6:15 p.m., C-5:15, M-4:15, P-3:15
C—Reis and Dunn
 CFRB CKOK KFAB KFH KLZ
 KMOX KSCJ KSL KTRH KVOR
 WAAB WADC WBCM WBIG WBRC
 WBT WCAO WDAE WDBO WDOD
 WDSU WFAN WGR WHEC
 WIP WISN WJAX WJSV WKBH
 WLWB WLWB WNAX WOKO WORC
 WQAM WSBT WSFA WSJS WSPD
 WTAQ WTAR WTOG

E-6:30 p.m., C-5:30, M-4:30, P-3:30
C—Jad Salt Program
 CFRB WABC WCAO WCAU WHK
 WKBW WKRC WSPD
R—King Kong Drama
 KFYR KGO KGW KHQ KOA KOMO
 KPRC KSD KTBS KTHS KVOO
 WEAF WFBR WFI WIBA WIS
 WMAQ WMC WOAI WSB WSMB
B—Three X Sisters
 KSO KWCR KWK WBAL WJZ
 WREN WYSR

E-6:45 p.m., C-5:45, M-4:45, P-3:45
C—Just Plain Bill
 CKOK WAAB WABC WCAO WCAU
 WHK WJSV WKBW
R—Andrea Marsh
 KFSB EGO KGW KOMO KSD
 WBN WCAE WDAF WEAF WFBR
 WHO WIS WJAR WMAQ WMC
 WOC WSAI WSB WSM WTAG
 WWCN

B—Lowell Thomas
 CKGW KDKA WBAL WBZ WBZA
 WGAR WHAM WJR WJZ WLW
B—Little Orphan Annie
 KFYR KOIL KPRC KSO KSTP
 KTBS KWCR KWK WBAP WDAY
 WEBC WENR WKY WOAI WREN

E-7:00 p.m., C-6:00, M-5:00, P-4:00
C—Myrt and Marge
 CKOK KRLL WABC WADC WCAO
 WCAU WDRC WEAN WFBL WGR
 WHK WJAX WJSV WKRC WNAC
 WOKO WSBT WSPD WYVA

B—Amos 'n' Andy
 CKGW KDKA WBAL WBZ WBZA
 WCRY WFLA WGAR WHAM WIOD
 WJAX WJR WJZ WLW WPTT WRC
 WRVA WWCN
R—Gruen and Hall, Piano Duo
 KDYL KFI KFSB KFYR KGO KOA
 KSTP KTBS KVOO KYW WCSH
 WDAF WEAF WECB WFBR WGY
 WHO WIBA WKY WOC WOW WSAI
 WSM WTAM

E-7:15 p.m., C-6:15, M-5:15, P-4:15
C—Buck Rogers—Year 2433
 CKOK KMOX WABC WBBM WCAU
 WCOG WGR WHAS WHK
R—Wheatonville Ray Knight
 WDAF WEAF WEEI WGY WHO
 WJAR WLIT WMAQ WOC WOW
 WRC WTAM WWJ
B—Tastycast Jesters
 KDKA WBAL WBZ WBZA WCKY
 WHAM WJZ

E-7:30 p.m., C-6:30, M-5:30, P-4:30
B—Five Star Theatre
 KDKA KTBS WBAL WBZ WBZA
 WHAM WIS WJZ WMAL WMC
 WPTT WRVA WSAZ WSMB WWCN
C—Dolph Martin's Orchestra
 WABC WCAO WCAU WDRC WEAN
 WFBL WFEA WGR WHEC WHP
 WJAX WJSV WLWB WNAC WOKO
 WORC
R—Elvia Allman
 WCKY WCSH WDAF WEAF WEEI
 WENR WFBR WGY WJAR WSAI
 WTAG

E-7:45 p.m., C-6:45, M-5:45, P-4:45
C—Boake Carter, News Flashes
 CKOK KMOX WABC WBBM
 WBT WCAO WCAU WCOG WGR
 WHAS WHK WJSV WNAC
R—The Goldbergs
 KFYR KPRC WBN WCAE WCSH
 WEAF WEEI WFAA WFBR WGY
 WJAR WKY WLIT WOAI WRC
 WTAG WTAM WWJ

E-8:00 p.m., C-7:00, M-6:00, P-5:00
C—Whispering Jack Smith
 CKOK KMOX WABC WADC
 WCAO WCAU WDRC WEAN WFBL
 WFBM WGN WGR WHAS WHK
 WJAX WJSV WKRC WNAC WOKO
 WSPD

R—Soconyland Sketches
 WBN WCSH WEAF WEEI WGY
 WJAR WTAG WTIC
B—Cliequot Club Eskimos
 KDKA KOIL KSO KWCR KWK
 WBAL WBZ WBZA WCKY WGAR
 WHAM WJZ WLS WREN

E-8:15 p.m., C-7:15, M-6:15, P-5:15
C—Singin' Sam
 CKOK KMOX WABC WADC
 WCAU WCOG WDRC WEAN WFBL
 WFBM WGN WGR WHK WJAX
 WJSV WKRC WNAC WOKO WSPD

E-8:30 p.m., C-7:30, M-6:30, P-5:30
C—Fu Manchu Mystery
 CFRB CKOK KMOX KRLL
 WABC WADC WBT WCAO WCAU
 WDRC WEAN WFBM WGN WGR
 WHAS WHK WJAX WJSV WKRC
 WNAC WOKO WOVOW WSPD

R—Voice of Firestone
 CFCE CKGW KPRC KSD KTBS
 KVOO WBN WCAE WCSH WEAF
 WEEI WFAA on 8:45 WFBR WFLA
 WGY WHO WIOD WIS WJAR WJDX
 WKY WLIT WLW WMAQ WMC
 WOAI WOC WOW WRC WTV
 WSB WSM WSMB WTAG WTAM
 WTIC WWJ WWCN
B—Don Carney Dog Chats
 KDKA KWK WBAL WBZ WBZA
 WGAR WJR WJZ WLS WREN

E-9:00 p.m., C-8:00, M-7:00, P-6:00
C—Chesterfield Program
 CKOK KBD KERN KFBK KFPY
 KFCR KGB KHJ KLRA KLZ KMOX
 KMJ KMOX KOH KOIN KOL KOLA
 KRLL KSL KTRH KTSB KVI KWG
 WABC WADC WBRB WBT WCAH
 WCAO WCAU WCOG WDAE WDBJ
 WDBO WDRC WDSU WEAN WFBL
 WFBM WGN WGST WHAS WHEC
 WHK WISN WJAX WJSV WKBW
 WKRC WLAC WLWB WMBG WMT
 WNAC WOKO WORC WOVOW WPG
 WQAM WREC WSTD WTAR WTOG
R—A. & P. Gypsies
 KSD WBN WCAE WCSH WDAF
 WEAF WEEI WGY WHO WJAR
 WLIT WMAQ WOC WOW WRC
 WSAI WTAG WTAM WTIC WWJ

MONDAY—(Continued)

B — Sinclair Minstrels

KDKA KFYR KOIL KPRC KSO
KSTP KTBS KTHS KVOO KWCR
KWK WAFI WBAL WFLB WBZA
WDAY WEBC WFAA WFLA WGAR
WHAM WIBA WIOB WIS WJAX
WJDX WJR WJZ WKY WLW WMC
WAOI WREN WRVA WSB WSM
WSMB WTMJ WUNC

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

C — The Mills Brothers

CFBK KMOX KMOX WABC WADC
WCAO WCAU WDRG WEAN WFBL
WGN WHAS WHK WJAS WJSV
WKBW WKRC WNAC WOKO WSPD

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

C — Mysteries in Paris

CFBK KMOX KMOX WABC WADC
WBT WCAO WCAU WEAN WFBL
WGN WHK WJAS WJSV WKBW
WKRC WNAC WOKO WOVO WSPD

R — Paul Whiteman and Orchestra

KDYL KFI KFSD KFYR KGH
KGR KGO KGW KHQ KOA KOMO
KPRC KSD KSTP KTAR KTHS
WBEN WCAE WCHS WDAF WDAY
WEAF WEBC WEEL WFAA WFB
WFLA WGY WHO WIBA WIOD
WJAR WJAX WJDX WKY WLIT
WMAQ WMC WOI WOC WRC
WRVA WSAI WSB WSM WSMB
WTAG WTAM WTMJ WJZ WUNC
WJR WJZ WLW

D — Jack Frost's Melody Moments

KDKA WBAL WENR WGAR WHAM
WJR WJZ WLW

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

R — Contented Program

CFPC CKGW KFYR KPRC KSD
KSTP WBEN WCAE WDAF WEAF
WEBC WENR WFAA WFLA WGY
WHO WIOD WJAX WKY WMC
WAOI WOC WRVA WSAI WSB
WSM WTAM WTMJ WJZ

C — Columbia Revue

CFBK KSK KLRA KLZ KMBC
KSCJ KSL KTRH KTSa KVR
WAAB WABC WADC WBBM WBCM
WBIG WBRB WBT WCAH WCAO
WCAU WCCO WDAE WDBJ WDOD
WDRG WDSU WFBL WFBM WFEA
WGST WHAS WHEC WHK WHP
WJAS WJSV WKBH WKBN WKBW
WLBW WLBZ WMBD WMT WNAX
WNOX WODX WOKO WORC WPG
WQAM WREC WSJS WSPD WTOC

B — The Sizzlers, Harmony Trio

KDKA KDYL KFSD KGH
KGR KOA KOIL KSO KWCR KWK WBAL
WKY WGAR WJR WJZ WMAQ
WREN WSYR

E-10:15 p.m., C-9:15, M-8:15, P-7:15

B — Vic and Sade

KDYL KFSD KGO KOA KWCR
KWK KYW WBAL WKY WJZ
WREN WSYR

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

C — Edwin C. Hill

CFBK KSK KLRA KLZ KMBC
KMOX KSCJ KTRH KTSa KVR
WAAB WABC WADC WBCM WBIG
WBRB WBT WCAH WCAO WCCO
WDAE WDBJ WDOD WDRG WDSU
WFAN WFBL WFBM WFEA WGST
WHAS WHEC WHK WIP WIS
WJAS WJSV WKBH WKBN WKBW
WLBW WLBZ WMBD WNAX WNOX
WODX WOKO WORC WQAM WREC
WSJS WSPD WTOC

R — National Radio Forum

KECA KGA KPO KSD KTAR KTS
WBEN WCHS WDAF WEAF WEEL
WENR WFBR WFLA WIBA WIOD
WIS WJAR WJDX WKY WOI
WRC WRVA WSAI WTAG WTAM
WJZ WUNC

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

C — Myrt and Marge

KDB KERN KFBK KFPY KFRC
KGO KHJ KLZ KMBC KMJ KMOX
KOLN KOL KSL KVI KWG WBBM
WCCO WDSU WFBM WHAS WLC

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

C — Howard Barlow's Symphony

CFBK KSK KFBK KFH KLZ
KMBC KSCJ KSL KTRH KVR
WAAB WABC WADC WBCM WBRB
WBT WCAO WDOD WDRG WDSU
WEAN WFAN WFBM WJK WIBW
WICC WIP WISN WHS WJSD
WKNB WKBW WLBW WLBZ WMBD
WNAX WODX WOKO WORC WQAM
WSBT WSJS WSPD WTAR WTOC

R — Ted Weems and Orchestra

KFYR KGO KOA KSD WBEN WCAE
WKY WDAF WEAF WEBC WFB
WGY WHO WIBA WJAR WOC WRC
WTAG WTAM WJZ

D — Amos 'n' Andy

KDYL KFI KFSD KGO KGW KHQ
KOA KOIL KOMO KPRC KSTP
KTHS KWK WBAP WDAF WENR
WJDX WKY WMAQ WMC WOI
WREN WBS WSM WTMJ

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

C — Guy Lombardo and Orchestra

CFBK KSK KFBK KFH KLZ
KMBC KMOX KSCJ KSL KTRH
KVR WAAB WABC WADC WBCM
WBRB WBT WCAO WCAU WCCO
WDOD WDRG WDSU WEAN WFBM
WHK WIBW WICC WISN WJSV
WKNB WKBW WLBW WLBZ WMBD
WNAC WODX WOKO WORC WPG
WQAM WSBT WSJS WSPD WTAR
WTOC

R — Jack Denny and Orchestra

WEAF WFBW WJAR WRC WTAG
WTIC

R — Voice of Firestone

KDYL KFI KFSD KFYR KGH
KGR KGO KGU KGW KHQ KOA
KOMO KSTP KTAR WDAY WEBC
WIBA WTMJ

B — Harold Sanford's Brass Band

CFPC CKGW KFYR KSO KSTP
KWCR KWK WBAW WKY WDAY
WEBC WENR WFLA WGAR WHAM
WIBA WIS WJAX WJZ WREN
WSYR WUNC

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

C — Abe Lyman and Orchestra

CFBK KFBK KLZ KMBC KMOX
KRLD KSCJ KSL KTRH KVR
WABC WBRB WBT WCAU WCCO
WDOD WDSU WIBW WICC WISN
WJSV WKBW WLBW WMBD WNAC
WNAX WOKO WPG WSBT WSPD
WTOC

B — Freddie Martin and Orchestra

KDKA KOIL KWCR KWK KYW
WBZ WBZA WGAR WJZ WRC
WREN

R — The Goldbergs

KDYL KECA KEX KGA KJR KOA
KPO

TUESDAY

E-5:45 p.m., C-4:45, M-3:45, P-2:45

B — Orphan Annie, See Monday

E-8:00 p.m., C-5:00, M-4:00, P-3:00

C — Reis and Dunn

CFBK CKOK KFBK KFH KLZ
KSCJ KSL KVR WAAB WABC
WACO WBIG WBRB WDAE WDBJ
WDBO WDOD WDRG WDSU WFEA
WGST WHK WICC WIP WISN
WKBH WKBN WLBW WLBZ WMT
WNAX WNOX WODX WOKO WORC
WQAM WREC WSBT WSPA WJSV
WSPD WTAG WTAR WTOC

R — Waldorf-Astoria, See Monday

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

R — Mid-Week Hymn Sing

KFYR KGO KOA KOMO KTBS
KTHS KVOO WBEN WDAF WEAF
WFBW WFI WIS WMAQ WMC
WAOI WPTA WSB WSMB WTAG
WUNC

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

B — Lowell Thomas, See Monday

R — Orphan Annie, See Monday
C — Just Plain Bill, See Monday
R — Harding Sisters, Piano Duo
WBEN WEAF WFBW WFI WIS
WJAR WMAQ WPTA WRC WSAI
WSM WTAG WUNC

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

R — Vincent Lopez and Orchestra

KDYL KFSD KFYR KGO KHQ
KOA KOMO KTBS WCHS WDAF
WDAY WEAF WEBC WFBW WFI
WHO WIBA WJAR WMAQ WMC
WOC WRC WSAI WTAG WJZ
C — Myrt and Marge, See Monday
B — Amos 'n' Andy, See Monday

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

C — Buck Rogers, See Monday

R — Wheatonville, See Monday
B — Radio in Education
KDKA KDYL KECA KEX KFSD
KFYR KGA KGR KJR KOA KOIL
KPO KTBS KVOO KWCR WBZ
WBZA WENR WFLA WIBA WIS
WJDX WJZ WMC WOI WPTA
WREN WSB WSMB WUNC

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

C — Keller, Sargent and Ross

CFBK KMOX KMOX WABC WCAO
WCAU WDRG WGN WGR WHAS
WHK WJAS WJSV WKRC WNAC

R — James Melton Tenor

KYW WBEN WCHS WDAF WEAF
WFBW WFI WGY WHO WOC WSAI
WTAG WJZ

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

B — Octavian Roy Cohen Mystery

KDKA KOIL KSO KWCR KWK
KYW WBZ WBZA WGAR WJZ
WREN WSYR

C — Boake Carter, See Monday

R — The Goldbergs, See Monday

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

C — Easy Aces

CFBK KMOX KMOX WABC WADC
WCAO WCAU WCCO WEAN WFBL
WFBM WGN WGR WHAS WHK
WJAS WJSV WKRC WNAC WOKO
WSPD

R — Blackstone, Sanderson-Crumit

KSD KSTP KYW WBEN WCAE
WCHS WDAF WEAF WEBC WEEL
WFI WGY WHO WJAR WOC WOW
WRC WSAI WTAG WTAM WJZ
B — Eno Crime Club
KDKA KOIL KSO KWCR KWK

TUESDAY—(Continued)

WBAL WBZ WBZA WGAR WHAM
WJZ WLW WMAQ WREN

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

C—Magic Voice
CKOK KMBC KMOX WABC WADC
WCAO WCAU WDRG WEAN WFBL
WFBM WGN WGR WHAS WHK
WJAS WJSV WKRC WNAC WOKO
WSPD

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

C—Kate Smith
CKOK KMBC KMOX WABC WADC
WBGM WCAH WCAO WCAU WCCO
WFBL WFBM WGN WGR WHAS
WHK WHK WISN WJAS WJSV
WKBB WKRC WOKO WOVO WSPD
R—Wayne King and Orchestra
KSD KSTP WBNB WCAE WCKY
WCSH WEAF WEBC WEEL WFBR
WFI WGY WHO WJAZ WJAZ
WMAQ WOC WOV WRC WSAI
WTAG WTAM WTMJ WWJ
B—Horlick-Health Talks
KDKA KOIL KWCR KWK WBAL
WBZ WBZA WGAR WHAM WJZ
WLS WLW WREN

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

C—Abe Lyman and Orchestra
CKOK KMBC KMOX WABC WADC
WCAO WCAU WDRG WEAN WFBL
WFBM WGN WGR WHAS WHK
WJAS WJSV WKRC WNAC WOKO
WOVO WSPD

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

C—Chesterfield, See Monday
R—Ben Bernie and Orchestra
KFYR KOA KPRC KSTP WBAP
WBNB WCAE WCKY WCSH WDAF
WDAY WEAF WEEL WFLB WFI
WGY WHO WJAZ WKY WLW WMC
WOAI WOC WOV WRC WRVA
WSAI WSB WSM WSMB WTAG
WTAM WWJ
B—Household Musical Memories
KDKA KSO KWK WBAL WBZ
WBZA WHAM WJR WJZ WMAQ
WREN

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

C—Thresholds of Happiness
CKOK KDB KERN KFRK KFH
KFYR KPRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOIN KOA
KRLD KSL KTRH KTSB KVI KMG
KWB WADC WBRG WBT WCAO
WCAU WCCO WDAE WDBO WDDO
WDRG WDSU WEAN WFBL WFBM
WGN WGST WHAS WHEC WHK
WJAS WJSV WKBB WKRC WLAC
WNAC WOC WOV WQAM WREC
WSPD WTAR WTOC

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

R—Ed Wynn-Don Voorhees
CFPC KDYL KFI KFSB KFYR
KGLH KGIR KGO KGW KHQ KOA
KOMO KPRC KSD KSTP KTAR
KTBS KTBS KVGO WBAW WBNB
WCAE WCSH WDAF WDAY WEAF
WEBC WEEL WFBR WFI WFLA
WGY WHO WJAZ WLW WJAZ
WJAZ WDX WXY WLW WMAQ
WMAQ WOAI WOC WOV WRC
WRVA WSB WSM WSMB WTAG
WTAM WTMJ WWJ WNNC

C—California Melodies

CFBR CKOK KFH KLZ KMBC
KMOX KSCJ KSL KTRH KTSB

WABC WBCM WBIG WBRC WBT
WCAO WCAU WCCO WDAE WDDO
WDRG WEAN WFBM WFEA WHEC
WHK WIBW WJAS WKBW WKBN
WLWB WLZB WMBD WNAC WNAX
WODX WOKO WQAM WSJS WTAR
WTOC.

B—Willard Robinson and Orchestra
KDKA KSO KWK WBAL WBZ
WBZA WCKY WENR WJR WJZ
WREN WYSR

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

C—Five Star Theatre
KLRA WABC WBIG WBT WCAO
WCAU WDBJ WDDO WDRG WDSU
WEAN WFBL WFEA WHP WICC
WJAS WJSV WKBW WLAC WMBG
WNAC WNOX WOBU WOKO WORC
WREC WSJS WTAR
B—Sigmund Spaeth, Tune Detective
CFPC KDKA KOIL KSO KWCR
KWK WBAL WCKY WGAR WHAM
WJR WJZ WMAQ WREN WYSR

E-10:15 p.m., C-9:15, M-8:15, P-7:15

B—Vic and Sade, See Monday

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

C—Edwin C. Hill, See Monday
B—Ilomay Bailey, Soprano
KSO KWCR KWK WBAL WCKY
WGAR WHAM WJR WJZ WMAQ
WREN

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

C—Charles Carlile, Tenor
CFBR CKOK KFAB WAAB WABC
WADC WBCM WDRG WFAN WFBL
WFEA WHEC WHK WIP WJAS
WJSV WKBW WKBW WLZB WOKO
WORC WPG WSBT WSPD
B—Professor Jack McLallen
CKGW KDKA KOLY KSO KWCR
KWK WBAL WCKY WGAR WHAM
WJR WJZ WMAQ WREN WYSR
C—Myrt and Marge, See Monday

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

C—Howard Barlow, See Monday
B—Amos 'n' Andy, See Monday
R—Dennis and Reese
CKGW KSD WCAE WCKY WEAF
WFBR WHO WOC WRC WSAI WWJ

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

B—Heart Songs, Women's Octet
CFPC CKGW KFYR KGIR KPRC
KSTP KTBS KWK WBAL WCKY
WENR WFLA WGAR WHAM WJAZ
WIS WJR WJZ WMC WRC WREN
WSM WYSR WNNC
B—Octavus Roy Cohen Mystery
KDYL KECA KEX KFYR KGA KJR
KOA KPO KPRC KSTP KTBS WDAY
WEBC WFAA WJAZ WJDX WKY
WMC WOAI WSB WSMB WTMJ

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

C—Isham Jones and Orchestra
CFBR CKOK KFAB KFH KLZ
KMBC KSCJ KSL KTRH WAAB
WABC WADC WBCM WBRG WBT
WCAO WCAU WCCO WDAE WDBO
WDDO WDRG WDSU WEAN WFBM
WHEC WHK WIBW WICC WISN
WJSV WKBW WKBW WLWB WLZB
WMBD WNAX WODX WOKO WORC
WPG WQAM WSJS WSPD WTAR
WTOC WVVV

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

R—The Goldbergs, See Monday

B—Cab Calloway and Orchestra
KDKA KOIL KPRC KSO KTBS
KWCR KWK WAPI WBZ WBZA
WFLA WGAR WIOD WJR WJZ WMY
WMC WREN WSB WSM WSMB
WNNC

C—Joe Haymes and Orchestra
CKOK KFAB KLZ KMBC KSCJ KSL
KTRH KVOR WABC WBRG WBT
WCAH WCAU WDAE WDDO WDSU
WFBL WGST WHAS WHK WHP
WISN WJAS WJSV WKBW WLWB
WMBD WMT WNAX WNOX WOKO
WPG WREC WSBT WSPD WTOC

E-12:30 a.m., C-11:30, M-10:30, P-9:30

R—Sam Robbins and Orchestra
WAPI WCAE WEAQ WFBR WFI
WFLA WIOD WJAZ WMAQ WMC
WRC WSB WSM WSMB WTAM
WNNC

R—Ben Bernie and Orchestra
KFI KFSB KGO KHQ KOMO KSD
KTAR

B—Mark Fisher and Orchestra
KOIL KPRC KSO KSTP KTBS
KWCR KWK WDAY WEBC WENR
WFAA WGAR WJAZ WJR WJZ
WKY WLW WOAI WREN WTMJ

WEDNESDAY

E-5:45 p.m., C-4:45, M-3:45, P-2:45

B—Orphan Annie, See Monday

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

C—Dick Mansfield and Orchestra
CFBR CKOK KFH KLZ KSCJ KSL
KVOR WAAB WABC WACO WBIG
WBRG WDAE WDBJ WDBO WDDO
WDRG WDSU WFEA WGST WHAS
WHEC WHP WISN WKBW WKBN
WLWB WLZB WMT WNAX WNOX
WODX WOKO WORC WQAM WREC
WSBT WSPA WSJS WSPD WTAQ
WTOC
R—Waldorf-Astoria, See Monday

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

C—Jad Salt, See Monday
B—Three X Sisters, See Monday
R—Back of the News—Wm. Hard
KECA KEX KFYR KGA KJR KOA
KPO KSD KTBS KTHS WBNB
WCKY WDAF WEAF WFBR WJAZ
WIOD WIS WJAZ WMAQ WMG
WOAI WSB WTAG WNNC

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

R—Andy Sannella
KECA KEX KFSB KGA KJR KPO
KSD WBNB WCAE WCSH WEAF
WFBR WFI WHO WIS WJAZ WMAQ
WMC WOC WOV WRC WSAI WSM
WTAG WTAM
C—Just Plain Bill, See Monday
B—Lowell Thomas, See Monday
B—Orphan Annie, See Monday

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

C—Myrt and Marge, See Monday
B—Amos 'n' Andy, See Monday
R—Jacqueline Solomons, Violinist
KDYL KFYR KGO KHQ KOA
KOMO KTBS KYW WDAF WEAF
WFBR WGY WHO WJAZ WJAZ
WMC WOC WRC WSAI WSB WSM
WTAG

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

C—Buck Rogers, See Monday
R—Wheatenaville, See Monday

WEDNESDAY—(Con'd)

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

C—Delph Martin, See Monday

R—Elvia Ailman, See Monday

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

C—Boake Carter, See Monday

R—The Goldbergs, See Monday

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

C—Whispering Jack Smith, See Mon.

B—Evo Crime Club, See Tuesday

R—George Olsen-Fanny Brice

KSD WBN WCAE WCSH WDAF
WEAF WEEL WFBF WGY WHO
WJAR WLIT WLS WOC WOW WRC
WSAI WTAG WTAM WTIC WWJ

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

C—Singin' Sam, See Monday

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

C—Kate Smith, See Tuesday

R—The Shadow, Mystery Drama

WBN WCSH WEAF WEEL WFBF
WGY WJAR WLIT WRC WTAG
WTIC
B—Pickens Sisters

KDKA KWCR KWK WBAL WGAR
WHAM WIS WJAX WJR WJZ WLS
WREN WWNC

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

C—Abe Lyman, See Tuesday

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

C—Chesterfield, See Monday

B—Sherlock Holmes

CFCC CKGW KDKA KOIL KWCR
KWK WBAL WBZ WBZA WGAR
WHAM WJR WJZ WLS WLW WREN
R—General Tire Program

KFI KFSD KFYR KGHL KGIR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAR KTBS KVOO
WBN WCAE WCSH WDAF WDAY
WEAF WEGC WEEL WFBF WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WMAQ WOA
WOC WOW WRC WRVA WSAI
WSB WSM WTAG WTAM WTIC
WTMJ WWJ WWNC

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

C—Romantic Bachelor

CKOK KDB KERN KFBK KFH
KFPY KPRC KGB KHJ KLRA KLZ
KMBC KML KMOX KOIN KOL
KOMA KRLD KSCJ KSL KTRH
KTSa KVI KWG WABC WACO
WADC WBIG WBRC WBT WCAO
WCAU WCCO WDBJ WDOD WDRC
WDSU WEAN WFBL WFBM WGN
WGST WHAS WHK WIBW WISN
WJAS WJSV WKBH WKWB WKRC
WLAC WLWZ WMBG WMT WNAC
WNAX WNOX WODX WOKO WOWO
WREC WSPD WTAR

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

C—Guy Lombardo-Burns and Allen

CKOK KMBC KMOX KOMA KRLD
KTRH KTSa WABC WADC WCAO
WCAU WCCO WDRC WEAN WFBL
WFBM WGN WHK WJAS WJSV
WKWB WKRC WNAC WOKO WOWO
WSPD
B—Morton Downey and Donald Novis

KDKA KDYL KFI KGHL KGIR
KGO KGW KHQ KOA KOIL KOMO
KPRC KTAR KTBS KTSa KVOO
KWCR KWK WBAL WBZ WBZA
WENR WFAA WGAR WHAM WJDX

WJR WJZ WKY WLW WOA! WREN

WSB WSM WSMB

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

C—Old Gold—Fred Waring

CKOK KDB KERN KFBK KFPY
KFRC KGB KHJ KLRA KLZ KMBC
KML KMOX KOIN KOL KOMO
KSL KTAT KTRH KTSa KVI KWG
WAAB WABC WADC WBRC WBT
WACH WCAU WCAU WCCO WDAE
WDOD WDOD WDRC WDSU WFBL
WFBM WGN WGST WHAS WHEC
WHK WIBW WJAS WJSV WKWB
WKRC WODX WOKO WOWO WQAM
WREC WRR WSPD

R—Corn Cob Pipe Club

KDYL KFI KGHL KGIR KGO KGW
KHQ KOA KOMO KSD WBN
WCAE WCSH WDAF WEAF WEEL
WENR WFBF WGY WHO WJAR
WLIT WLW WOC WOW WRC WRVA
WTAG WTAM WTIC WWJ

B—D. W. Griffith's Hollywood

KDKA KOIL KPRC KWK WBAL
WBZ WBZA WFAA WGAR WJR WJZ
WKY WMAQ WMC WREN WSB
WSMB

E-10:15 p. m., C-9:15, M-8:15, P-7:15

B—Vic and Sade, See Monday

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

B—Ruth Lylyn Soprano

KSO KWCR KWK WBAL WENR
WFLA WHAM WIOD WJR WJZ
WRC WREN WSYR WWNC
R—Carveth Wells

KDYL KFYR KGA KGHL KGIR
KOA KPRC KSD KSTP KTBS KTHS
WDAF WDAY WEAF WEGC WFAA
WFBF WHO WIBA WKY WMAQ
WOAI WOC WOW WRVA WTMJ
C—Edwin C. Hill, See Monday

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

C—Myrt and Marge, See Monday

C—Little Jack Little

CFRC CKOK WAAB WABC WCAO
WDRC WEAN WHEC WLWB WLZ
WOKO WORC WSPD

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

C—Howard Barlow, See Monday

B—Amos 'n' Andy, See Monday

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

C—Isham Jones, See Tuesday

B—Sixteen Male Voices

KSO KWCR KWK WBAL WBZ
WBZA WCKY WENR WGAR WHAM
WJZ WREN

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

C—Eddie Duchin and Orchestra

CKOK KFAB KLZ KMBC KSCJ
KTRH KVOR WABC WBRC WBT
WCAH WCAU WCCO WDAE WDOD
WDSU WEAN WFBL WGST WHAS
WHK WHP WICO WISN WJAS
WJSV WKWB WLWB WMBD WMT
WNAC WNAX WNOX WOKO WORC
WPG WREC WSBT WSPD WTOC
R—The Goldbergs, See Monday

B—Ben Bernie and Orchestra

KDKA KFYR KOIL KSO KWCR
KWK WBZ WBZA WECB WENR
WFLA WGAR WIBA WIOD WJZ
WREN WWNC

E-12:15 p. m., C-11:15, M-10:15, P-9:15

B—Sherlock Holmes

KDYL KFI KFSD KGHL KGIR
KGO KGW KHQ KOA KOMO KTAR

THURSDAY

E-5:45 p. m., C-4:45, M-3:45, P-2:45

B—Orphan Annie, See Monday

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

R—Waldorf-Astoria, See Monday

C—H. V. Kallenborn

CFRB CKOK KFAB KFH KLZ
KSCJ KVOR WAAB WABC WACO
WBIG WBRC WDAE WDBJ WDOD
WDOD WDRC WDSU WEAN WFEA
WGST WHAS WHEC WHP WICC
WIP WISN WKBH WKBN WLWB
WLWB WMT WNAX WNOX WODX
WOKO WORC WQAM WREC WSBT
WSFA WSJS WSPD WTAG WTAR
WTOC

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

C—Ozzie Nelson and Orchestra

CFRB CKOK WAAB WABC WACO
WBIG WBRC WCAO WDAE WDBJ
WDOD WDOD WDRC WDSU WFEA
WGST WHEC WHP WLWB WLZ
WNOX WODX WOKO WORC WQAM
WREC WSBT WSFA WSJS WSPD
WTAR WTOC

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

R—Three Keys

KECA KEX KFSD KFYR KGA
KJR KOA KPO KSD KTBS KTHS
WAPI WDAF WDAY WEAF WFBF
WFI WIBA WIS WJAR WMAQ
WMC WAO WSAI WSB WSMB
WTAG WWJ WWNC

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

C—Just Plain Bill, See Monday

B—Lowell Thomas, See Monday

B—Orphan Annie, See Monday

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

C—Myrt and Marge, See Monday

B—Amos 'n' Andy, See Monday

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

C—Buck Rogers, See Monday

R—Wheatenaville, See Monday

B—Concert Footlights

KOA KOIL KSO KWCR WBAL
WIS WJZ WMAQ WREN WSM
WSYR WWMC

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

C—Keller, Sargent, See Tuesday

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

B—Murder Mystery, See Tuesday

C—Boake Carter, See Monday

R—The Goldbergs, See Monday

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

R—Rudy Vallee and Orchestra

CFCC CKGW KDYL KFI KFYR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTAR WAPI WBAP
WBN WCAE WCKY WCSH WDAF
WDAY WEAF WEGC WEEL WFBF
WFI WFLA WGY WHO WIOD WJAR
WJAX WJDX WKY WMAQ WMC
WOAI WOC WOW WRC WRVA
WSAI WSB WSM WSMB WTAG
WTAM WTMJ WWJ
C—Easy Aces, See Tuesday

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

C—Whispering Jack Smith

CKOK KMBC KMOX WABC WADC
WCAO WCAU WDRC WEAN WFBL
WFBM WGN WGR WHAS WHK
WJAS WJSV WKRC WNAC WOKO
WSPD

THURSDAY—(Continued)**E-8:30 p.m., C-7:30, M-6:30, P-5:30**

C—Kate Smith, See Tuesday
B—Rin Tin Tin Thriller
 KDKA KOIL KWK WBZ WBZA
 WGAR WHAM WJZ WLS WLW
 WREN

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

C—Abe Lyman, See Tuesday
B—Howard Thurston, Magician
 KDKA KOIL KWK WBZ WBZA
 WGAR WHAM WJR WJZ WLS
 WLW WREN

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

R—Maxwell House Showboat
 KDYL KFI KFSD KGO KGW KHQ
 KOA KOMO KPRC KSD KSTP
 KTAR KTBS WAPI WBNB WCAE
 WCKY WCHS WDAF WFAF WVEE
 WFRB WFI WFLA WGY WHO
 WIOD WIS WJAR WJAX WJDX
 WKY WMAQ WMC WOAI WOC
 WOW WRC WRVA WSAI WSB WSM
 WSBM WTAG WTAM WTMJ WWJ
 WWNC

C—Chesterfield, See Monday**B**—Death Valley Days

KDKA KOIL KWK WBAL WBZ
 WBZA WGAR WHAM WJR WJZ
 WLS WLW WREN

E-9:15 p.m., C-8:15, M-7:15, P-6:15**C**—Mills Brothers, See Monday**E-9:30 p.m., C-8:30, M-7:30, P-6:30****C**—Col. Stoopnagle and Budd

CRK KDB KERN KFBK KFH
 KPFC KFRC KGB KHJ KLRA KLZ
 KMBC KMG KMOX KOIN KOL
 KOMA KSCJ KSL KTRH KTAT
 KTSa KVI KWG WABC WADC
 WBRG WBT WCAH WCAO WCAU
 WCCO WDAE WDBO WDCB WDSU
 WEAN WFBL WFBM WGN WGST
 WHAS WHEC WHK WJAS WJVS
 WKBW WKRC WLAC WNAC WOKO
 WOW WQAM WREC WRR WSPD
 WTAR

B—Wayne King and Orchestra

KDKA KOIL KSO KWCR KWK
 WBAL WBZ WBZA WENR WJZ
 WREN

E-10:00 p.m., C-9:00, M-8:00, P-7:00**C**—The Foreign Legion

CFRB CRK KLRA KLZ KSCJ
 KTRH KTSa KVOR WAAB WABC
 WBBM WBIG WBRG WCAO WCAU
 WCCO WDAE WDBJ WDBO WDOD
 WDRG WDSU WEAN WFBM WFEA
 WGST WHEC WHK WHP WIBW
 WICC WKBN WLWB WLWZ WMT
 WNAW WNOX WODX WOKO WORC
 WQAM WREC WSJS WSPD WTAR
 WTOC

R—Lucky Strike—Jack Pearl

KDYL KFI KFSD KFGR KGO KGW
 KHQ KOA KOMO KPRC KSD KSTP
 KTAR KTBS KTHS KVOO WBAF
 WBNB WCAE WCHS WDAF WDAY
 WFAF WBEBC WEEI WENR WFRB
 WFI WFLA WGY WHO WIBA WIOD
 WIS WJAR WJAX WJDX WKY
 WLW WMC WOAI WOC WOW WRC
 WRVA WSB WSM WSBM WTAG
 WTAM WTMJ WWJ WWNC

B—Carson Robison's Pioneers

CFRC CKGW KDKA KOIL KSO
 KWCR KWK WBAL WCKY WJR
 WJZ WMAQ WREN WSYR

E-10:15 p.m., C-9:15, M-8:15, P-7:15**B**—Vic and Sae, See Monday**E-10:45 p.m., C-9:45, M-8:45, P-7:45****C**—Myrt and Marge, See Monday**C**—Morton Downey

CRK WAAB WABC WADC WBCM
 WCAU WDRG WEAN WFBL WFEA
 WHEC WHK WICC WJAS WJVS
 WKWB WLWB WLWZ WOKO WORC
 WOWO WSPD

E-11:00 p.m., C-10:00, M-9:00, P-8:00**R**—James Melton, Tenor

KSD WCAE WCKY WFAF WFRB
 WRC WSAI WTAG WWJ

C—Howard Barlow, See Monday**B**—Amos 'n' Andy, See Monday**E-11:15 p.m., C-10:15, M-9:15, P-8:15****B**—Murder Mystery, See Tuesday**E-11:30 p.m., C-10:30, M-9:30, P-8:30****C**—Isham Jones, See Tuesday**R**—Jack Denny, See Monday**B**—Willard Robison and Orchestra

CFRC CKGW KDYL KEX KFSD
 KFGR KGA KJR KOA KOIL KPO
 KSO KWCR KWK WBAL WBZ
 WBZA WBS WFLA WGAR WHAM
 WIBA WIS WJAX WJR WJZ WMC
 WRC WREN WSB WSBM WWNC

E-12:00 p.m., C-11:00, M-10:00, P-9:00**R**—The Goldbergs, See Monday**FRIDAY****E-5:45 p.m., C-4:45, M-3:45, P-2:45****B**—Orphan Annie, See Monday**E-6:00 p.m., C-5:00, M-4:00, P-3:00****R**—Waldorf-Astoria, See Monday**C**—Do Re Mi Girls

CFRB CRK KFH KLZ KSCJ KSL
 KTRH KVOR WAAB WABC WACO
 WBIG WBRG WDAE WDBJ WDBO
 WDOD WDRG WDSU WFEA WGST
 WHAS WHEC WHK WJAS WJVS
 WKBW WKRC WLAC WNAC WOKO
 WOW WQAM WREC WRR WSPD
 WTAR WTOC

E-6:30 p.m., C-5:30, M-4:30, P-3:30**B**—Three X Sisters, See Monday**E-6:45 p.m., C-5:45, M-4:45, P-3:45****C**—Just Plain Bill, See Monday**B**—Lowell Thomas, See Monday**B**—Orphan Annie, See Monday**E-7:00 p.m., C-6:00, M-5:00, P-4:00****C**—Myrt and Marge, See Monday**B**—Amos 'n' Andy, See Monday**R**—Donald Novis, Tenor

KDYL KFGR KGO KOA KOMO
 KSTP KTBS KYW WAPI WCHS
 WDAF WDAY WFAF WBEBC WEEI
 WFRB WGY WIBA WJAR WMC
 WOW WRC WSAI WSB WSM WTAM
 WWJ

E-7:15 p.m., C-6:15, M-5:15, P-4:15**C**—Buok Rogers, See Monday**E-7:30 p.m., C-6:30, M-5:30, P-4:30****B**—Five Star Theatre, See Monday**C**—Edwin Martin, See Monday**E-7:45 p.m., C-6:45, M-5:45, P-4:45****C**—Boake Carter, See Monday**R**—The Goldbergs, See Monday**E-8:00 p.m., C-7:00, M-6:00, P-5:00****C**—Trade and Mark

CRK KLZ KMBC KMOX KSL
 WABC WADC WCAO WCAU WCCO
 WDRG WEAN WFBL WFBM WGN
 WGR WHAS WHK WJVS WKRC
 WNAC WOKO WSPD

R—Cities Service Concert

CRGW KDYL KOA KPRC KSD
 KSTP KTBS KYW WBNB WCAE
 WCHS WDAF WFAF WBEBC WEEI
 WFAA WFER WGY WHO WJAR
 WKY WLIT WOAI WOC WOW WRC
 WSAI WTAG WTAM WTIC WTMJ
 WWJ

B—Nestle's Program

KDKA KOIL KWK WBAL WBZ
 WBZA WGAR WHAM WJR WJZ
 WLS WREN

E-8:15 p.m., C-7:15, M-6:15, P-5:15**C**—Singin' Sam, See Monday**E-8:30 p.m., C-7:30, M-6:30, P-5:30****C**—March of Time

CRK KDB KERN KFBK KPFF
 KFRC KGB KHJ KLZ KMBC KMJ
 KMOX KOIN KOL KSL KVI KWG
 WABC WADC WCAO WCAU WCCO
 WDRG WEAN WFBL WFBM WGN
 WGR WHAS WHK WJAS WJVS
 WKRC WNAC WOKO WOW WSPD
B—Horlick Program, See Tuesday

E-8:45 p.m., C-7:45, M-6:45, P-5:45**B**—Howard Thurston, See Thursday**E-9:00 p.m., C-8:00, M-7:00, P-6:00****C**—Chesterfield, See Monday**B**—First Nighter, Drama

KDKA KDYL KFI KFSD KGO KGW
 KHQ KOA KOIL KOMO KPRC
 KSTP KTAR KTBS KWK WAPI
 WBAL WBZ WBZA WCKY WBEBC
 WGAR WHAM WJR WJZ WKY WLS
 WOAI WREN WSB WSM WSBM
 WTMJ

R—Musical Grocery Store

KSD WBNB WCAE WCHS WDAF
 WFAF WFRB WGY WJAR WLIT
 WMAQ WRC WTAG WTAM WTIC

E-9:15 p.m., C-8:15, M-7:15, P-6:15**C**—Mary Eastman, Soprano

CFRB CRK KFH KLRA KLZ
 KMBC KMOX KSCJ KSL KTRH
 KTSa KVOR WAAB WABC WACO
 WADC WBCM WBIG WBT WCAH
 WCAO WCCO WDAE WDBJ WDOD
 WDRG WDSU WEAN WFBL WFBM
 WFEA WGST WHAS WHEC WHP
 WIBW WICC WISN WJAS WJVS
 WKBW WKWB WLWB WLWZ WNAW
 WNOX WODX WOKO WORC WQAM
 WREC WSBT WSJS WSPD WTOC

E-9:30 p.m., C-8:30, M-7:30, P-6:30**R**—Pond's Program

KSD WBNB WCAE WCHS WDAF
 WFAF WENR WFRB WGY WHO
 WJAR WLIT WOC WOW WRC WSAI
 WTAG WTAM WWJ

C—Edwin C. Hill, Inside Story

CRK KFH KLRA KMBC KMOX
 KOMA KRLD KTRH KTSa WABC
 WADC WBCM WCAH WCAO WCAU
 WCCO WDRG WEAN WFBL WFBM
 WGN WHAD WHAS WHK WHP
 WIBW WJAS WJVS WKWB WKWB
 WKRC WLWB WLWZ WMBD WNAC
 WOKO WORC WOW WREC WSPD
B—Armour Program
 KDKA KDYL KFI KGO KGW KHQ

FRIDAY—(Continued)

KOA KOIL KOMO KPRC KSO KSTP
KWK WAPI WBAL WBZ WBCA
WBEC WFAP WGAR WHAM WIOD
WJAX WJR WJZ WKY WMAQ
WMC WOAI WREN WRVA WSB
WSM WSMB WTMJ WWNC

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

R—Chevrolet—Jack Benny
KDYL KFI KFSB KFYP KGHL
KGR KGO KGW KHQ KOA KOMO
KPRC KSD KSTP KTAR KTBS
KTHS KV00 WBN WCAE WCSH
WDAF WDAY WEAF WEBC WEEI
WENR WFAP WFRB WFLA WGY
WHO WIBA WIOD WIS WJAR
WJAX WKY WLIT WLW WMC
WOAI WOC WOW WRC WRVA WSB
WSM WSMB WTAG WTAM WTTT
WTMJ WWJ WWNC

B—Dorothy Fields—Jimmy McHugh
CFCC KOIL KPRC KSO WBAL
WCKY WHAM WJR WJZ WMAQ
WREN WSYR

E-10:15 p.m., C-9:15, M-8:15, P-7:15

B—Vic and Sade, See Monday

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

R—Neighbors—Dramatic Sketch
KSD WBN WCAE WCKY WCSH
WDAF WEAF WEEI WENR WFRB
WGY WHO WJAR WOC WOW WRC
WSAI WTAG WTAM WWJ

B—Ilomay Bailey, See Tuesday

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

C—Fray and Braggiotti
CFRB CKOK WAAB WABC WCAO
WDRG WEAN WFEA WHEC WICC
WIP WJAS WJSV WKBW WLWB
WLWB WOKO WORC WPG WSPD
B—Jack McLallen, See Tuesday
B—Myrt and Marge, See Monday

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

C—Howard Barlow, See Monday
B—Amos 'n' Andy, See Monday

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

B—Welcome Lewis, Vocalist
CFCC CKGW KSO KSTP KWCR
KWK WBAL WBZ WBZA WCKY
WFLA WGAR WHAM WIBA WIOD
WIS WJAX WJR WJZ WREN WSYR
WWNC

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

C—Abe Lyman and Orchestra
CFRB CKOK KFAB KFH KLZ
KMBC KSCJ KSL KTRH KVOR
WAAB WABC WADC WBCM WBRC
WBT WCAO WCAU WCCO WDAE
WDBO WDOD WDRG WDSU WEAN
WFBM WHEC WHK WICC WISN
WJSV WLWB WLWB WMBD WNAX
WOKO WORC WQAM WSBT WSJS
WSPD WTAR WTOC

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

C—Ben Pollack and Orchestra
CKOK KFAB KLZ KMBC KRLD
KSCJ KSL KTRH KVOR WABC
WBRC WBT WCAU WCCO WDAE
WDOD WDSU WICC WISN WJSV
WLWB WMBD WNAC WNAX WOKO
WPG WSBT WSPD WTOC
R—The Goldbergs, See Monday
B—Cab Calloway, See Tuesday

SATURDAY

E-5:45 p.m., C-4:45, M-3:45, P-2:45

B—Orphan Annie, See Monday

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

C—America's Grub Street
CFRB CKOK KFAB KFH KSCJ KSL
KTRH KVOR WAAB WABC WADC
WBMM WBCM WBIG WBRC WBT
WCAO WCAU WCCO WDAE WDBO
WDOD WDRG WDSU WEAN WFBM
WHEC WICC WISN WJSV WKBH
WLWB WLWB WNAX WOKO WORC
WQAM WSBT WSFA WSJS WSPD
WTAQ WTAR WTOC WWVA
R—Waldorf-Astoria, See Monday

E-6:30 p.m., C-5:40, M-4:40, P-3:30

B—Laws That Safeguard
KDYL KEX KFSB KFYP KGA KGIR
KJR KOA KOIL KPO KPRC KSO
KSTP KTAR KTBS KTHS KWCR
KWK WBAL WBZ WBZA WCKY
WECB WFLA WIBA WIOD WIS
WJAX WJR WJZ WKY WMAQ
WMC WOAI WREN WRVA WSB
WSMB WWNC
R—King Kong, See Monday

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

C—The Funybonders
CFRB CKOK KFAB KFH KLZ
KMBC KSCJ KTRH KVOR WAAB
WABC WACO WBBM WBIG WBRC
WCAO WCAU WDAE WDBJ WDOD
WDRG WDSU WEAN WFEA WGST
WHAS WHEC WHP WISN WJAS
WKBW WLAC WLWB WLWB WMT
WNAX WNOX WODX WOKO WORC
WQAM WREC WSBT WSFA WSJS
WSPD WTAQ WTAR WTOC WWVA
B—Fields and Hall
WBAL WGAR WHAM WIOD WIS
WJR WJZ WMC
B—Orphan Annie, See Monday

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

B—Vincent Lopez and Orchestra
CFCC CKGW KDKA KDYL KFYP
KOA KSO KTBS KWK WBAL WBZ
WBZA WCKY WECB WFLA WGAR
WHAM WIBA WJR WJZ WLW
WMC WSB WSMB WWNC
C—Frederic William Wile
KMBC KRLD KTRH WABC WADC
WBMM WBCM WBIG WBRC WBT
WCAO WCAU WDAE WDBO WDOD
WDRG WDSU WEAN WFBM WFEA
WGR WHEC WHK WICC WJAS
WJSV WLWB WLWB WNAC WOKO
WQAM WSFA WSPD WTAR WWVA

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

B—Merle Thorpe Talk
KDYL KECA KEX KFSB KFYP
KGA KJR KOA KOIL KPO KPRC
KSTP KTBS KWCR KWK WBAL
WBZ WBZA WECB WENR WFLA
WGAR WHAM WIBA WIOD WIS
WJDX WJZ WKY WMC WOAI
WREN WSB WSMB WWNC

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

C—Street Singer
CFRB CKOK KMBC KMOX KRLD
KSCJ KSL KTRH KVOR WABC
WADC WBCM WBIG WBRC WBT
WCAO WCAU WCCO WDAE WDBO
WDOD WDRG WDSU WEAN WFBM
WFEA WGR WHEC WISN WJAS
WJSV WKBH WLWB WLWB WNAC
WOKO WQAM WSFA WSPD WTAQ
WTAR WTOC
B—Murder Mystery, See Tuesday

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

C—Easy Aces, See Tuesday

R—Archer Gibson, Organist
KEX KGA KJR KOA KPO KPRC
KSD KTBS WBN WDAF WEAF
WEBC WEEI WFI WHO WIBA WIS
WJAR WMAQ WMC WOAI WOC
WSB WSMB WTAG WTAM WWJ
WWNC

B—American Taxpayers' League

KDKA KDYL KEX KFSB KFYP
KGA KGHL KGR KJR KOA KOIL
KPO KPRC KTAR KWK WAPI
WBAL WCKY WDAY WEBC WFLA
WHAM WIBA WIOD WJAX WJDX
WJZ WLS WRC WREN WSM WSMB
WWNC

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

C—Magic Voice, See Tuesday
B—Boston Symphony Orchestra
CFCC CKGW KDKA KOIL KSO
KWCR KWK WBAL WBZ WBZA
WCKY WGAR WHAM WJR WJZ
WREN

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

R—Economic World Today
KDYL KFSB KFYP KGA KPHL
KGIR KJR KOA KPO KPRC KSD
KSTP WAPI WBAF WBN WBSH
WDAF WDAY WEAF WEBC WEEI
WFRB WFI WFLA WGY WHO WIBA
WIOD WIS WJAR WJDX WKY
WMAQ WMC WOAI WOC WOW
WRC WSAI WSMB WTAG WTAM
WWJ WWNC

C—Isham Jones and Orchestra

CFRB CKOK KFH KLRA KLZ
KMBC KSCJ KTRH KTHS KVOR
WABC WBIG WBRC WCAO WCAU
WCCO WDAE WDBJ WDBO WDOD
WDRG WDSU WEAN WFBM WFEA
WGST WHEC WHK WHP WIBW
WICC WISN WJAS WKBH WLAC
WLWB WLWB WMT WNAC WNAX
WNOX WODX WOKO WORC WQAM
WREC WSFA WSPD WTAQ WTAR
WTOC

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

R—Riesenfeld's Viennese Program
KDYL KFI KFSB KFYP KGO
KGW KHQ KOA KOMO KPRC KSD
KSTP KTAR KTBS WAPI WBAP
WBN WCAE WCSH WDAF WDAY
WEAF WEEI WFRB WGY WIBA
WJAR WJDX WKY WMAQ WMC
WOAI WRC WSAI WSB WSMB
WTAG WTAM WWJ
C—Chesterfield, See Monday

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

C—Boswell Sisters
CFRB CKOK KFH KLRA KLZ
KMBC KMOX KRLD KSCJ KSL
KTRH KTHS KVOR WAAB WABC
WACO WADC WBBM WBCM WBIG
WBRC WBT WCAH WCAO WCCO
WDAE WDBJ WDBO WDOD WDSU
WEAN WFBM WFEA WGST
WHAS WHEC WIBW WICC WIP
WISN WJAS WJSV WKBH WKBW
WLWB WLWB WMT WNAC WNOX
WODX WOKO WORC WOWO WQAM
WREC WSPD WTAR WTOC

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

R—George Olsen and Orchestra
KDYL KFI KFSB KFYP KGO KGW
KHQ KOA KOMO KSD KSTP WBAP
WBN WCAE WCSH WDAF WDAY
WEAF WEBC WEEI WFRB WFI
WGY WHO WIBA WJAR WKY WLW
WMAQ WOAI WOC WOW WRC
WSAI WSB WTAG WTAM WTMJ
WWJ

SATURDAY—(Continued)

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

C—Guy Lombardo and Orchestra
CFRB CKOK KFH KLRA KLZ
KMBC KMOX KSCJ KSL KTRH
KTSB KFOR WAAB WABC WBBM
WBIG WBRC WCAO WCAU WCCO
WDAE WDBJ WDBO WDOE WDRC
WDSU WEAN WFBM WFEA WGST
WHAS WHEC WHK WHP WIBW
WICC WJAS WJSV WKBB WKWB
WLAC WLWB WLWB WMBD WMT
WNAW WNOX WODX WOKO WORC
WQAM WREC WSJS WSPD WTAR
WTOC

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

R—B. A. Rolfe and Orchestra
CFCC CKGW KDYL KFI KGO
KOA KSD KSTP WBAP WBBN
WCAE WCSH WDAF WEAF WEEL
WFBW WFI WGY WHO WJAR
WLW WMAQ WOC WOW WRC
WSB WSMB WTAG WTAM WWJ

E-10:15 p.m., C-9:15, M-8:15, P-7:15

C—Public Affairs Institute
KFB KLZ KSCJ KTRH KTSB KFOR
WAAB WABC WADC WBBM WBCM
WBIG WBRC WBT WCAO WCAU
WCCO WDAE WDBO WDOE WDRC
WDSU WEAN WFBM WFEA WHEC
WICC WJAS WJSV WKBB WLWB
WLWB WMBD WNAW WOKO WORC
WPG WQAM WSBT WSJS WSPD
WTAR WTOC WWVA

B—Salon Singers

CFCC CKGW KDKA KOIL KSO
KWCR WBAL WBZ WBYA WGAR
WHAM WJZ WMAQ WREN

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

B—Cuckoo Program
CKGW KDKA KOIL KSO KWCR
KWK KYW WBAL WCKY WGAR
WHAM WJZ WREN WSYR

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

C—Gertrude Niesen
CFRB CKOK KFH KLRA KLZ
KMBC KSCJ KTRH KTSB KFOR
WAAB WABC WBIG WCAO WDAE
WDBJ WDBO WDOE WDRC WDSU
WEAN WFEA WGST WHAS WHEC
WHK WHP WICC WIP WISN WJAS
WJSV WKBB WLAC WLWB WLWB
WMBD WMT WNAW WNOX WODX
WOKO WORC WPG WQAM WREC
WSBT WSJS WSPD WTAR WTOC
WWVA

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

B—Buccaners, Vocal Trio
CFCC KDKA KOIL KSO KWCR
KWK WBAL WBZ WHAM WJZ
WREN

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

R—Jack Denny and Orchestra
KSD WBEN WCAE WCKY WCSH
WDAF WEAF WEEL WFBW WFI
WGY WHO WJAR WMAQ WOC
WRC WSAI WTAG WWJ

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

B—Low White, Organist
KOIL KSO KWCR KWK WBAL WBZ
WBYA WGAR WHAM WJR WJZ
WRC WREN

B—Murder Mystery, See Tuesday

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

C—Leon Belasco and Orchestra
CFRB CKOK KFBK KLZ KLZ

KMBC KSCJ KTRH KFOR WAAB
WABC WACO WBRC WCAO WDAE
WDBJ WDBO WDOE WDRC WDSU
WEAN WGST WHK WHP WIBW
WICC WIP WISN WJAS WJSV
WKBB WLAC WLWB WLWB WMBD
WMT WNAW WNOX WODX WOKO
WORC WQAM WREC WSBT WSJS
WSPD WTAR WTOC WWVA

R—Harold Stern and Orchestra

KSD WBEN WCAE WCKY WCSH
WDAF WEAF WEEL WFBW WFI
WGY WHO WJAR WMAQ WOC
WRC WSAI WTAG WTAM WWJ

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

B—Mark Fisher's Orchestra
KOIL KSO KWCR KWK KYW
WGAR WJZ WLW WRC WREN

R—Ted Weems and Orchestra

KDYL KFSB KFYR KGA KGH
KJR KOA KPO KPRC KSD KSTP
KTAR KTBS WCAE WCKY WDAF
WDAF WEAF WFAA WFBW WFI
WGY WHO WIBA WIOD WJAR
WJAX WMAQ WMC WQAI WOC
WRC WSB WSMB WTAG WTAM
WWNC

C—Joe Haymes, See Tuesday

E-12:30 a.m., C-11:30, M-10:30, P-9:30

R—Don Erwin and Orchestra

KSD WBEN WCAE WCKY WDAF
WEAF WFBW WFI WHO WJAR
WOC WRC WTAG WTAM

B—Sam Robbins' Bermudians

KDYL KECA KEX KFSB KFYR
KGA KJR KOIL KPO KPRC KSTP
KTBS KVOO KWCR KWK KYW
WDAF WEBC WFAA WFLA WGAR
WHAM WIBA WIOD WJAX WJZ
WKY WLW WMC WQAI WREN
WSB WSMB WWNC

SUNDAY

E-11:15 a.m., C-10:15, M-9:15, P-8:15

R—Major Bowes' Family

KDYL KEX KFSB KFYR KGA KJR
KOA KPO KPRC KVOO WBAP
WDAF WDAY WEAF WFBW WFLA
WGY WHO WIOD WJAR WJAX
WKY WMC WOC WRC WSM WSMB
WTAG WTAM WTMJ WWJ WWNC

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

C—Salt Lake Tabernacle Choir

CFRB CKOK KFBK KLZ KSCJ KSL
KTRH KTSB KFOR WABC WADC
WBCM WBIG WBT WCAO WCAU
WCCO WDAE WDBO WDOE WDRC
WDSU WEAN WFEA WGR WHEC
WHK WIBW WISN WJAS WJSV
WKBB WKBN WLWB WLWB WMBD
WNAW WNAW WODX WOKO WORC
WPG WQAM WSBT WSJS WSPD
WTAG WTAR WWVA

E-12:15 p.m., C-11:15, M-10:15, P-9:15

B—Roxy's Gang

CFCC CKGW KDKA KDYL KECA
KEX KFSB KFYR KGA KJR KOA
KOIL KPO KPRC KSTP KTAR
KVOO KWK WAPI WBAL WBZ
WBYA WDAY WEBC WFAA WFLA
WGAR WHAM WIBA WIOD WIS
WJAX WJR WJZ WKY WLW WMAQ
WQAI WRC WREN WRYA WSB
WSM WSMB WSYR WWNC

E-12:30 p.m., C-11:30, M-10:30, P-9:30

R—Walter Ligon Pop Concert

CFCC CKGW KDYL KFYR KOA
KPRC KSTP KTBS KVOO WAPI

WBEN WCAE WCKY WCSH WDAF
WDAY WEAF WEBC WEEL WFAA
WFBW WFI WGY WHO WIBA
WIOD WIS WJAR WKY WQAI
WOC WRYA WSAI WWSB WSM
WSMB WTAG WTAM WWJ WWNC

E-12:45 p.m., C-11:45, M-10:45, P-9:45

C—Street Singer

CFRB CKOK KFBK KLZ KMBC
KSCJ KSL KTRH KTSB KFOR
WABC WADC WBCM WBIG WBT
WCAO WCCO WDAE WDBO WDOE
WDSU WGR WHEC WHK WIBW
WISN WJAS WJSV WKBB WKBN
WLWB WLWB WMBD WNAW WODX
WOKO WPG WQAM WSJS WSPD
WTAG WTAR WTOC WWVA

E-1:15 p.m., C-12:15, M-11:15, P-10:15

B—Cook Travelogues

KDKA WBAL WBZ WBYA WCKY
WGR WHAM WJR WJZ WML
WMAQ WSYR

E-1:30 p.m., C-12:30, M-11:30, P-10:30

R—Moonshine and Honeyuckle

CFCC CKGW KFI KFSB KFYR
KGO KGW KHQ KOA KOMO KPRC
KSD KSTP KTBS KVOO WAPI
WBEN WCAE WCKY WCSH WDAF
WDAF WEAF WEBC WFAA WFI
WGY WHO WIBA WIOD WIS WJAR
WJAX WKY WMAQ WQAI WOC
WOW WRC WRYA WSAI WWSB
WSM WSMB WTAG WTAM WWJ
WWNC

C—Columbia Church of the Air

CFRB CKOK KLZ KSCJ KSL KTRH
KTSB KFOR WAAB WABC WADC
WBCM WBIG WCAO WCCO WDAE
WDBO WDOE WDRC WDSU WGR
WHEC WIBW WJAS WJSV WKBB
WLWB WLWB WNAW WODX WOKO
WPG WQAM WSBT WSJS WSPD
WTAG WTAR WTOC WWVA

E-2:00 p.m., C-1:00, M-12:00, P-11:00

C—Smiling Ed McConnell

CKOK KERN KFBK KFPY KFCR
KGB KHJ KVL KZ KMBC KMOX KOIN
KOL KSL KVI KVG WABC WBBM
WBT WCCO WDSU WGR WGST
WHAS WHEC WJAS WJSV WKRC
WLAC WNAW WOWO WQAM WRR

B—Monarch Mystery Tenor

KDKA KDYL KFI KFYR KGO KOA
KOIL KSO KSTP KWCR KWK WBZ
WBYA WCKY WDAY WEBC WGAR
WHAM WIBA WJAR WJAX WJR
WJZ WMAQ WREN WTMJ WWNC
R—Clyde Doerr's Saxophone Octet
CFCC KSD KTBS KTHS WAPI
WBEN WCAE WCKY WEAF WFAA
WFBW WGY WHO WJAR WJDX
WMC WQAI WOC WOW WSAI
WSM WSMB WTAG WTAM WWJ

E-2:15 p.m., C-1:15, M-12:15, P-11:15

C—Albert Bartlett Tango King

CKOK KMBC KMOX WABC WBBM
WCAO WCAU WGR WHEC WHK
WJAS WJSV WKRC WNAW WOKO
WOWO

R—International Radio Forum

CFCC KDYL KFI KFSB KFYR
KGLH KGR KGO KHQ KOA KOMO
KPRC KSD KTAR KTBS KTHS
KVOO KYW WAPI WBEN WCAE
WCKY WDAY WEAF WEBC WFAA
WFBW WFLA WGY WIBA WIOD
WIS WJAR WJAX WJDX WKY
WMC WQAI WOW WPTF WRYA

SUNDAY—(Continued)

WSAI WSM WSMB WTAG WTAM
WWJ WWNC

E-2:30 p.m., C-1:30, M-12:30, P-11:30

C — Charlie Agnew's Orchestra
KDKA KDYL KFI KFSD KFYR
KGHL KGIR KGO KGW KOA KOIL
KOL KONO KOPRC KSO KSTP
KTAR KTBS KTHS KVOO KWCR
KWK KYW WAPI WBAL WBZ
WBZA WDAY WECB WFAP WFLA
WGAR WHAM WIOD WIS WJAX
WJDX WJR WJZ WKY WLW WMC
WOAI WPTF WREN WRVA WSB
WSM WSMB WSYR WTMJ WWNC

C — Victor Arden and Orchestra
CKOK KMBC KMOX WABC WBBM
WCAO WCAU WGR WHEC WHK
WJAS WJSV WKRC WNAC WOKO
WOWO

E-3:00 p.m., C-2:00, M-1:00, P-12:00

C — N. Y. Philharmonic Orchestra
CFRB CKOK KFAB KFH KLZ KMBC
KRLD KSCJ KSL KTRH KVOR
WAAB WABC WADC WBCM WBIG
WBRC WBT WCAO WCCO WDAE
WDBO WDDO WDRC WDSU WFAN
WFBM WFEA WHEC WHK WIBW
WICC WIP WISN WJAS WJSV WKHB
WKBN WKBW WLWB WLBZ WMBD
WODX WOKO WORC WQAM WBSB
WSFA WSJS WSPD WTAR WTAT
WTOC WVVVA

R — Wayne King and Orchestra
KDYL KFI KGO KGW KHQ KOA
KOMO KPRC KSD KSTP KTBS
KTHS KVOO KYW WBNB WCAE
WCKY WCSH WDAF WDAF WECB
WEEI WFAP WFRB WGY WHO
WIBA WJAR WKY WLIT WOAI
WOC WOW WRC WSAI WTAG
WTAM WTMJ WWJ

B — Our American Music
KOIL KWCR KWK WBAL WFLA
WGAR WIOD WJAX WJZ WMAQ
WREN WRVA WSB WSM WSMB
WWNC

E-3:30 p.m., C-2:30, M-1:30, P-12:30

R — Dr. S. Parkes Cadman
KDYL KFSD KFYR KGHL KGO
KGW KHQ KOA KOMO KPRC KSD
KSTP KTAR KTHS KVOO WBNB
WCAE WCSH WDAF WDAY WDAF
WECB WEEI WFRB WGY WHO
WIBA WJAR WKY WLIT WOAI
WOC WOW WRC WSAI WTAM WWJ

B — Manhattan Merry-Go-Round
KDKA KOIL KWCR KWK KYW
WBAL WBZ WBZA WHAM WJZ
WREN

E-4:00 p.m., C-3:00, M-2:00, P-1:00

Father Coughlin
KMOX KSTP KYW WCAO WCAU
WDRB WEAN WFBL WFEA WGR
WGR WHB WNC WJAS WJR WLWB
WLW WMT WMAO WNBW WOC
WOL WOKO WORC WQAM

B — Temple of Song
CFPC KDKA KFI KFSD KFYR
KGHL KGO KGW KOA KOIL KSO
KSTP KTBS KWCR KWK WBAL
WBZ WBZA WCKY WECB WGAR
WHAM WIBA WIOD WIS WJAX
WJR WJZ WKY WMAQ WMC WREN
WRVA WSB WSM WSMB WWNC

E-4:15 p.m., C-3:15, M-2:15, P-1:15

R — Wildcat—Vee Lawnhurst
KDYL KFI KGO KGW KHQ KOA
KOMO WBNB WCAE WCSH WDAF

WEAF WEEI WFRB WGY WJAR
WLIT WMAQ WOW WRC WSAI
WTAG WTAM WWJ

E-4:30 p.m., C-3:30, M-2:30, P-1:30

R — Squibb's Program
WBNB WCAE WCSH WDAF WDAF
WEEI WFRB WGY WJAR WMAQ
WOW WRC WTAG WTAM WWJ

B — National Youth Conference
KDYL KFSD KFYR KGHL KGO
KGW KHQ KOA KOIL KOMO KPRC
KSO KSTP KTAR KVOO KWCR
KWK WAPI WBAL WBZ WBZA
WDAY WECB WENR WHAM WIOD
WIS WJAX WJDX WJZ WMC WOAI
WPTF WREN WRVA WSB WSM
WWNC

E-5:00 p.m., C-4:00, M-3:00, P-2:00

C — Roses and Drums
CKOK KMBC KMOX KRLD WAAB
WABC WADC WCAO WCCO WDSU
WGN WGR WHAS WHK WJAS
WJSV WKRC

R — Lowell Thomas
WBNB WCAE WEAF WEEI WFRB
WGY WJAR WRC WSAI WTAG
WTAM WWJ

B — National Vespers
KFSD KFYR KGHL KGO KGW
KHQ KOA KOIL KOMO KPRC KSO
KTAR KTBS KWCR KWK WAPI
WBAL WBPB WBZ WBZA WECB
WFLA WGAR WIOD WIS WJAX
WJDX WJZ WOAI WPTF WREN
WSB WSM WSMB WWNC

E-5:15 p.m., C-4:15, M-3:15, P-2:15

R — Big Ben's Dream Dramas
WBNB WCAE WCSH WEAF WEEI
WFRB WFI WGY WJAR WMAQ
WRC WSAI WTAG WTAM WWJ

E-5:30 p.m., C-4:30, M-3:30, P-2:30

C — Blue Coal Musical Revue
WAAB WABC WCAO WCAU WDRB
WEAN WFBL WGR WHEC WHP
WOKO

B — Pages of Romance, Drama
KDKA KOIL KSO KWCR KWK
KYW WBAL WBZ WBZA WGAR
WJR WJZ WLW WREN

B — Josef Koestner's Orchestra
KDYL KFI KFYR KGHL KGIR
KGO KGW KHQ KOA KOMO KPRC
KSTP KTAR KTBS KVOO WAPI
WBAP WDAF WDAY WECB WIBA
WJDX WKY WMC WOAI WWS
WSM WSMB WTMJ

R — Swift Garden Program
CRGW KSD WBNB WCAE WCSH
WDAF WEAF WEEI WFRB WFI
WGY WHO WJAR WMAQ WOC
WOW WRC WSAI WTAG WTAM
WWJ

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

R — Catholic Hour
KDYL KEX KFYR KGHL KGIR
KJR KOA KPRC KSD KTAR KTBS
KVOO WAPI WBPB WBNB WCAE
WCKY WCSH WDAF WDAY WDAF
WECB WEEI WENR WFRB WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLIT WMC
WOAI WOC WOW WRC WRVA
WSAI WSB WSM WSMB WTAG
WTAM WWJ WWNC

B — Josef Koestner's Orchestra
KDKA KOIL KSO KWCR KWK
WBAL WBZ WBZA WCKY WENR
WGAR WHAM WJR WJZ WREN

C — The Lawyer and Public
CFRB KFAB KFH KLZ KRLD

KSCJ KSL KVOR WAAB WABC
WACO WBCM WBIG WBRC WCAO
WCCO WDAE WDBJ WDBO WDDO
WDRB WDSU WEAN WFEA WGST
WHAS WHP WIBW WICC WISN
WKHB WLWB WLWB WNAX WNOX
WODX WOKO WORC WPG WQAM
WREC WSFA WSJS WSPD WTAQ
WTAR WTOC WVVVA

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

C — Cathedral Hour
CFRB CKOK KFH KLZ KMBC
KRLD KSCJ KSL KVOR WAAB
WABC WADC WBBM WBCM WBIG
WBRC WBT WCAO WCAU WCCO
WDAE WDBO WDDO WDRB WDSU
WFBM WFEA WHEC WIBW WICC
WISN WJAS WJSV WKHB WKBN
WVKB WLWB WLWB WNAX WOKO
WORC WQAM WBSB WSFA WSJS
WSPD WTAR WTOC WVVVA

R — Our American Schools
KDYL KECA KEX KFSD KFYR
KGA KOA KPO KPRC ISD KSTP
KTBS KVOO WBPB WBNB WCAE
WCSH WDAY WEAF WECB WEEI
WENR WFRB WFLA WGY WIBA
WIOD WJAR WKY WLIT WMC
WOAI WOW WPTF WRC WRVA
WSAI WSM WSMB WTAG WWJ
WWNC

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

C — H. V. Kaltenborn
KFAB KFH KLZ KMBC KSCJ KSL
KTRH KVOR WABC WACO WBCM
WBIG WBRC WCAO WDAE WDBJ
WDBO WDDO WDRB WDSU WEAN
WFBM WFEA WGST WHAS WHP
WIBW WICC WIP WISN WKHB
WKBN WLWB WLWB WMT WNAC
WNAX WNOX WOKO WORC WPG
WQAM WREC WBSB WSFA WSPD
WTAR WTOC WVVVA

R — James Melton Tenor
KDYL KFYR KOA KPRC KSD
KSTP KTBS KVOO WBNB WDAF
WDAY WEAF WECB WEEI WFRB
WFLA WGY WIBA WIOD WIS
WJAR WMAQ WOAI WRVA WSAI
WSMB WTAG WWJ WWNC

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

C — Morton Downey
CKOK KFAB KFH KLZ KMBC
KSCJ KSL KTRH KVOR WABC
WACO WBCM WBDG WBRC WDAE
WDBJ WDBO WDDO WDRB WDSU
WEAN WFBM WFEA WGST WHAS
WHP WIBW WICC WIP WISN
WKHB WKBN WLWB WLWB WMT
WNAX WNAX WNOX WORC WQAM
WREC WSB WSFA WSJS WSPD
WTAR WTOC WVVVA

R — Wheatonville, See Monday

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

B — Great Moments in History
KDKA KDYL KFI KFSD KFYR
KGO KGW KHQ KOA KOIL KOMO
KPRC KSTP KTAR KVOO KWCR
KWK WBAL WBZ WBZA WDAY
WECB WFAP WFLA WGAR WHAM
WIBA WIOD WJAX WJDX WJR
WJZ WKY WLS WLW WMC WOAI
WPTF WREN WRVA WSB WSM
WSM WTMJ WWNC

C — Fray and Braggiotti
CKOK KLRA KLZ KMBC KSCJ
KSL KTRH KVOR WABC WACO
WBCM WBIG WCAO WCCO WDAE
WDBJ WDBO WDDO WDRB WDSU
WEAN WFBM WFEA WGST WHAS
WHP WIBW WIP WISN WKHB

SUNDAY—(Continued)

WKBN WLBW WLBZ WMT WNAC
WNAX WNOX WOKO WORC WQAM
WREC WSBT WSFA WSJS WSPD
WTAR WTOG WWSA

R — Three California Nuts

WCSH WEAF WEEI WJAR WTAG
WTIC

E-7:45 p.m., C-8:45, M-5:45, P-4:45**C — Angelo Patri, Your Child**

CRK KMBK KMOX WABC WCAO
WCAU WCCO WFBL WGN WGR
WHAS WHK WJAS WJSV WKRC
WNAC

R — Trade and Mark

KSD WBEN WCAE WDAF WEAF
WFBZ WGY WJAR WMAQ WRC
WSAI WTAG WTAM WWJ

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

CFCE CKGW KDYL KFI KFSD
KFYR KGO KGW KHQ KOA KOMO
KPRC KSD KSTP KATR KYOO
WBEN WCAE WCSH WDAF WDAY
WEAF WEBC WFAA WFBZ WFLA
WGY WHO WIOD WIS WJAR WJDX
WKY WLIT WLW WMAQ WMC
WOAI WOC WOW WRC WSB WSM
WSMB WTAG WTAM WTIC WTMJ
WWJ WWSA

C — John Henry-River Giant

CRK KLRA KLZ KMBK KRLD
KSCJ KSL KTRH KTSB KVOR
WABC WACO WADC WBBM WBCM
WBRC WBT WCAH WCAO WCCO
WDAE WDBJ WDDO WDRD WDSU
WFBL WFBM WFEA WGR WGST
WHCC WHK WHP WISN WJAS
WKBH WLWB WLWZ WNAX WNOX
WOKO WORC WREC WSFA WSJS
WSPD WWSA

E-8:15 p.m., C-7:15, M-6:15, P-5:15**C — Andre Kostelanetz Presents**

CRK KLZ KMBK KMOX KRLD
KSCJ KSL KTRH KTSB KVOR
WABC WACO WADC WBBM WBCM
WBRC WBT WCAH WCAO WCCO
WDAE WDBJ WDDO WDRD WDSU
WFBL WFBM WFEA WGR WHCC
WHK WHP WISN WJAS WKBH
WKBN WLWB WLWZ WNAX WOKO
WORC WSBT WSFA WSJS WSPD
WTAR WTOG WWSA

E-8:45 p.m., C-7:45, M-6:45, P-5:45**C — John Henry—River Giant**

CRK KLRA KLZ KMBK KRLD
KSCJ KSL KTRH KTSB KVOR
WABC WACO WADC WBBM WBCM
WBRC WBT WCAH WCAO WCCO
WDAE WDBJ WDDO WDRD WDSU
WFBL WFBM WFEA WGR WHCC
WHK WHP WISN WJAS WKBH
WKBN WLWB WLWZ WNAX WOKO
WORC WSBT WSFA WSJS WSPD
WTAR WTOG WWSA

E-8:45 p.m., C-8:00, M-7:00, P-6:00**C — Fred Allen's Bath Club**

CRK KDB KERN KFBK KFPY
KFKO KGB KHJ KLRA KLZ KMBK
KEMJ KMX KOIN KOL KOMA KSCJ
KSL KVI KWG WABC WADC WBT
WCAH WCAO WCAU WCCO WDAE
WDBJ WDDO WDRD WDSU WEAN
WFBL WFBM WGN WGR WGST
WHAS WHCC WHK WISN WJAS
WJSV WKRC WLAC WMT WNAC
WOKO WORC WWOV WQAM WREC
WSPD WTAR

R — General Electric Concert

KDYL KFI KFSD KFYR KGO KGW

KHQ KOA KOMO KPRC KSD KSTP
KTAR KTBS KTHS WAPI WBEN
WCAE WCSH WDAF WDAY WEAF
WEBC WENR WFAA WFBZ WFI
WFLA WGY WHO WIBA WIS WJAR
WJAX WJDX WKY WOAI WOC
WOW WRC WRVA WSAI WSB WSM
WSMB WTAG WTAM WTMJ WWJ
WWSA

B — Warden Lawes—Sing Sing

KDKA KOIL KSO KWCR KWK
KYW WBAL WBSZ WBSA WGAR
WHAM WJR WJZ WLW WREN

E-9:30 p.m., C-8:30, M-7:30, P-6:30**C — Pennzoil Parade**

CRK KLRA KMBK KMOX KOMA
KTSB WABC WADC WBRD WBT
WCAO WCAU WCCO WDRD WEAN
WFBL WGN WGR WGST WHAS
WHCC WJAS WJSV WKRC WLAC
WLWZ WNAC WOKO WSPD

R — Album of Familiar Music

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

B — Walter Winchell

KDKA KOIL KSO KWCR KWK
KYW WBAL WBSZ WBSA WGAR
WHAM WJR WJZ WLW WREN

E-9:45 p.m., C-8:45, M-7:45, P-6:45**B — Pickens Sisters**

CFCE CKGW KDKA KOIL KSO
KWCR KWK KYW WBAL WHAM
WJR WJZ WREN WWSA

E-10:00 p.m., C-9:00, M-8:00, P-7:00**B — D. W. Griffith, See Wednesday****R — David Lawrence**

KDYL KFI KFSD KFYR KGO KGW
KHQ KOA KOMO KPRC KSTP
KTBS WBEN WCAE WCKY WCSH
WDAF WDAY WEAF WEBC WEEI
WFBZ WFI WFLA WGY WHO WIBA
WIOD WIS WJAR WJAX WKY WMC
WOAI WOC WRC WSAI WSM WSMB
WTAG WTAM WTIC WWJ WWSA

E-10:15 p.m., C-9:15, M-8:15, P-7:15**R — Rex Chandler and Orchestra**

CKGW WBEN WCAE WCKY WCSH
WDAF WEAF WEEI WFBZ WFI
WFLA WGY WIS WJAR WOW WRC
WSAI WTAG WTAM WTIC WWJ WWSA

C — Ernest Hutcheson, Pianist

CFRB CRK KFH KLRA KLZ
KMBK KSCJ KTRH KTSB KVOR
WAAB WABC WADC WBBM WBCM
WBIG WBT WCAH WCAO WCAU
WCCO WDAE WDBJ WDDO WDRD
WDSU WFBL WFBM WFEA WGR
WGST WHCC WHK WHP WISN
WJAS WKBN WKWB WLWB WLWZ
WMBD WMT WNAX WNOX WODX
WOKO WORC WPG WQAM WREC
WRSB WSSJ WSPD WTOG

B — Vincent Lopez; Pratt-Sherman

KDKA KDYL KFI KGO KGW KHQ
KOA KOIL KOMO KPRC KSTP
KTHS KWK WBAL WBAF WBSZ
WBSA WGAR WIBA WJDX WJR
WJZ WKY WLW WMAQ WOAI
WREN WSB WSM WSMB WTMJ

E-10:30 p.m., C-9:30, M-8:30, P-7:30**R — Donald Novis Tenor**

CFCE CKGW KYW WBEN WCAE

WCKY WCSH WDAF WEAF WEEI
WFBZ WFI WFLA WGY WHO
WIOD WIS WJAR WOC WOW WRC
WRVA WSAI WTAG WTAM WTIC
WWJ WWSA

E-10:45 p.m., C-9:45, M-8:45, P-7:45**R — Sunday at Seth Parker's**

CFCE CKGW KDYL KFSD KFYR
KGHL KGIR KGO KGW KHQ KOA
KPRC KSTP KTAR KTBS KTHS
KYW WAPI WBAF WBEN WCAE
WCKY WCSH WDAF WDAY WEAF
WEBC WEEI WFBZ WFI WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WMC WOAI WOC
WOW WRC WRVA WSAI WSB WSM
WSMB WTAG WTAM WTMJ WWJ
WWSA

B — Orange Lantern, Mystery Drama

KDKA KSO KWCR KWK WBAL
WGAR WHAM WJZ WREN

C — The Gauchos

CRK KFAB KFH KLZ KSCJ KTRH
KVOR WAAB WABC WADC WBCM
WBRD WBT WCAO WDAE WDBO
WDDO WDRD WDSU WEAN WFAN
WFBM WGR WHCC WIBW WICC
WIP WISN WJAS WJSV WKBN
WLWB WLWZ WMBD WNAX WODX
WOKO WPG WQAM WJSV WSPD
WTAR WTOG

E-11:15 p.m., C-10:15, M-9:15, P-8:15**C — Isham Jones and Orchestra**

KLRA KTRH WAAB WABC WBCM
WBRD WCAO WDAE WDBJ WDBO
WDDO WDRD WDSU WEAN WGST
WGC WLWZ WNOX WODX WORC
WPG WQAM WREC WSSJ WTAR
WTOG

B — Walter Winchell

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

E-11:30 p.m., C-10:30, M-9:30, P-8:30**C — Eddie Duchin and Orchestra**

CRK KFAB KFH KLRA KLZ
KMOX KSCJ KTRH KVOR WAAB
WABC WBCM WDBJ WDCO WCAU
WCCO WDAE WDBJ WDBO WDDO
WDRD WDSU WEAN WGST WHK
WHP WISN WJAS WKBN
WLWB WLWZ WMBD WMT WNAC
WNAX WNOX WOKO WPG WQAM
WREC WSBT WSJS WSPD WTAR
WTOG

B — Jesse Crawford, Organist

KDKA KOIL KSO KWCR KYW
WBAL WBSZ WBSA WCKY WHAM
WJZ WREN

E-12:00 p.m., C-11:00, M-10:00, P-9:00**C — Ben Pollack and Orchestra**

CRK KFAB KLZ KMOX KSCJ
KTRH KVOR WABC WBCB WBT
WCAU WCCO WDAE WDDO WEAN
WGR WIBW WICC WISN WJSV
WLWB WMBD WNAC WNAX
WOKO WPG WSBT WSPD

B — William Stoess and Orchestra

KFYR KGHL KGO KGW KHQ KOA
KOIL KOMO KPRC KSTP KTBS
KWCR KWK WBAF WBSZ WDAY
WEBC WENR WFLA WGAR WHAM
WIBA WIOD WIS WJR WJZ WKY
WLW WMC WREN WSB WSM
WSMB WWSA

R — Joe Furst and Orchestra

WCAE WEAF WFBZ WGY WJAR
WOW WTAM WTIC

CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Standard

CONCERTS

Howard Barlow, 11:00 p.m., daily, ex. Sat. and Sun., C
Boston Symphony, 8:15 p.m., Saturday, B
Concert Footlights, 7:15 p.m., Thursday, B
Gauchos, 10:45 p.m., Sunday, C
General Electric, 9:00 p.m., Sunday, R
Walter Logan, 12:30 p.m., Sunday, R
New York Philharmonic, 3:00 p.m., Sunday, C
Riesenhof's Viennese, 9:00 p.m., Saturday, R
Jacqueline Solomons, 7:00 p.m., Wednesday, R
Waldorf-Astoria, 6:00 p.m., daily, ex. Sunday, R

DANCE BANDS

Charlie Agnew, 2:30 p.m., Sunday, B
Victor Arden, 2:30 p.m., Sunday, C
Albert Bartlett, 2:15 p.m., Sunday, C
Leon Belasco, 11:30 p.m., Saturday, C
Ben Bernie, 12 mid. Wed., B; 9:00 p.m. and 12:30 a.m., Tuesday, R
Cab Calloway, 12 mid., Tuesday and Friday, B
 Rex Chandler, 10:15 p.m., Sunday, R
Jack Denny, 11:30 p.m., Mon. and Thurs.; 11:10 p.m., Saturday, R
Clyde Doerr, 2:00 p.m., Sunday, R
Eddie Duchin, 11:30 p.m., Sun.; 12 mid., Wednesday, C
Don Erwin, 12:30 a.m., Saturday, R
Mark Fisher, 12:30 a.m., Tues. and Wed., 12 mid. Sat. B
Joe Furst, 12 mid., Sunday, R
Joe Haymes, 12 mid., Tuesday and Saturday, C
Isham Jones, 11:15 p.m., Sun.; 11:30 p.m., Tues., Wed., Thurs.; 8:30 p.m., Saturday, C
Wayne King, 3:00 p.m., Sun.; 8:30 p.m., Tues., R; 9:30 p.m., Thursday, B
Guy Lombardo, 11:30 p.m., Mon.; 9:30 p.m., Wed.; 9:45 p.m., Saturday, C
Vincent Lopez, 7:00 p.m., Tues., R; 10:15 p.m., Sun., 7:00 p.m., Saturday, B
Abe Lyman, 12 mid., Mon.; 11:30 p.m., Fri.; 8:45 p.m., Tuesday, Wednesday, Thursday, C
Dick Mansfield, 6:00 p.m., Wednesday, C
Dolph Martin, 7:30 p.m., Mon., Wed., Fri., C
Freddie Martin, 12 mid., Monday, B
Ozzie Nelson, 6:15 p.m., Thursday, C
George Olsen, 8:00 p.m., Wednesday; 9:30 p.m., Saturday, R
Ben Pollack, 12 mid., Sunday and Friday, C
Sam Robbins, 12 mid., Thurs.; 12:30 a.m., Saturday, B
Willard Robison, 9:30 p.m., Tues.; 11:30 p.m., Thurs., B
B. A. Rolfe, 10:00 p.m., Saturday, R
Harold Sanford, 11:30 p.m., Monday, B
Harold Stern, 11:30 p.m., Saturday, R
William Stoess, 12 mid., Sunday, B
Rudy Vallee, 8:00 p.m., Thursday, R
Fred Waring, 10:00 p.m., Wednesday, C
Ted Weems, 11:00 p.m., Monday; 12 mid., Saturday, R
Paul Whiteman, 9:30 p.m., Monday, R

DIALOG

Fred Allen, 9:00 p.m., Sunday, C
Amos 'n' Andy, 7 and 11 p.m., daily, ex. Sat. and Sun., B
Jack Benny, 10:00 p.m., Friday, R
Burns and Allen, 9:30 p.m., Wednesday, C
Cuckoo, 10:30 p.m., Saturday, B
Easy Aces, 8:00 p.m., Tues., Thurs. and Saturday, C
Funnyboners, 6:45 p.m., Saturday, C
Tom Howard, 9:00 p.m., Friday, R
Marx Bros., 7:30 p.m., Monday, B
Jack McLallen, 10:45 p.m., Tues. and Friday, B
Baron Munchausen, 10:00 p.m., Thursday, R
Jack Osterman, 2:30 p.m., Sunday, C
Drs. Pratt and Sherman, 10:15 p.m., Sunday, R
Reis and Dunn, 6:15 p.m., Mon.; 6:00 p.m., Tuesday, C
Stoopnagle and Budd, 9:30 p.m., Thursday, C
Three California Nuts, 7:30 p.m., Sunday, R
Vic and Sade, 10:15 p.m., daily, ex. Sat. and Sunday, B
Solly Ward, 10:00 p.m., Tuesday, C

DRAMA

Big Ben, 5:15 p.m., Sunday, R
Octavus R. Cohen Mystery, 7:45 and 11:15 p.m., Tues., Thurs., Sat., B
Death Valley Days, 9:00 p.m., Thursday, B
Eno Crime Club, 8:00 p.m., Tuesday and Wednesday, B

First Nighter, 9:00 p.m., Friday, B
Foreign Legion, 10:00 p.m., Thursday, C
Fu Manchu Mystery, 8:30 p.m., Monday, C
General Tire, 9:00 p.m., Wednesday, R
Goldbergs, 7:45 p.m., and 12 mid., daily, ex. Sat. and Sun., R
Great Moments in History, 7:30 p.m., Sunday, B
Griffith's Hollywood, 10:00 p.m., Sun. and Wed., B
John Henry, 8:00 and 8:45 p.m., Sunday, C
Sherlock Holmes, 9:00 p.m., and 12:15 a.m., Wednesday, B
King Kong, 6:30 p.m., Monday and Saturday, R
Magic Voice, 8:15 p.m., Tuesday and Saturday, C
March of Time, 8:30 p.m., Friday, C
Moonshine and Honeysuckle, 1:30 p.m., Sunday, R
Myrt and Marge, 7:00 and 10:45 p.m., daily, ex. Sat. and Sunday, C
Mysteries in Paris, 9:30 p.m., Monday, C
Neighbors, 10:30 p.m., Friday, R
Orange Lantern, 10:45 p.m., Sunday, B
Pages of Romance, 5:30 p.m., Sunday, B
Rin Tin Tin, 8:30 p.m., Thursday, B
Buck Rogers, 7:15 p.m., daily, ex. Sat. and Sun., C
Roses and Drums, 5:00 p.m., Sunday, C
The Shadow, 8:30 p.m., Wednesday, R
Soonyland Sketches, 8:00 p.m., Monday, R
Squibb's 4:30 p.m., Sunday, R
Wheatenaville, 7:15 p.m., daily ex. Friday and Saturday, R

PIANO AND ORGAN

Jesse Crawford, 11:30 p.m., Sunday, B
Fray and Braggiotti, 7:30 p.m., Sunday; 10:30 p.m., Thurs. 10:45 p.m., Friday, C
Archer Gibson, 8:00 p.m., Saturday, R
Gruen and Hall, 7:00 p.m., Monday, R
Harding Sisters, 6:45 p.m., Tuesday, R
Ernest Hutcheson, 10:15 p.m., Sunday, C
Vee Lawnhurst, 4:15 p.m., Sunday, R
Ohman and Arden, 2:30 p.m., Sun., C.; 9:30 p.m., Sun., R
Lew White, 11:15 p.m., Saturday, B

POPULAR PROGRAMS

A. & P. Gypsies, 9:00 p.m., Monday, R
Album of Familiar Music, 9:30 p.m., Sunday, R
Armour Program, 9:30 p.m., Friday, B
Bath Club, 9:00 p.m., Sunday, C
Blue Coal Revue, 5:30 p.m., Sunday, C
Major Bowes' Family, 11:15 a.m., Sunday, R
California Melodies, 9:30 p.m., Tuesday, C
Chase and Sanborn, 8:00 p.m., Sunday, R
Chevrolet Program, 10:00 p.m., Friday, R
Cities Service, 8:00 p.m., Friday, R
Chequot Club Eskimos, 8:00 p.m., Monday, B
Columbia Revue, 10:00 p.m., Monday and Friday, C
Contented Program, 10:00 p.m., Monday, R
Corn Cob Pipe Club, 10:00 p.m., Wednesday, R
Firestone, 8:30 and 11:30 p.m., Monday, R
Five Star Theatre, 10:00 p.m., Tues., C.; 7:30 p.m., Mon. and Friday, B
Jack Frost's Melody, 9:30 p.m., Monday, B
Household Musical Memories, 9:00 p.m., Tuesday, B
Inside Story, 9:30 p.m., Friday, C
Jad Salt, 6:30 p.m., Monday and Wednesday, C
Lucky Strike, 10:00 p.m., Thursday, R
Manhattan Merry-Go-Round, 3:30 p.m., Sunday, B
Maxwell House, 9:00 p.m., Thursday, R
Nestle's Program, 8:00 p.m., Friday, B
Old Gold, 10:00 p.m., Wednesday, C
Pennzoil Parade, 9:30 p.m., Sunday, C
Pond's Program, 9:30 p.m., Friday, R
Rox's Gang, 12:15 p.m., Sunday, B
Royal Vagabonds, 8:00 p.m., Wednesday, R
Aunt Sanelle, 6:45 p.m., Wednesday, R
Sinclair Minstrels, 9:00 p.m., Monday, B
Swifts' Garden, 5:30 p.m., Sunday, R
Wildroot Institute, 4:15 p.m., Sunday, R
Ed Wynn, 9:30 p.m., Tuesday, R

QUARTETS

Mills Brothers, 9:15 p.m., Monday and Thursday, C
Revelers, 4:30 p.m., Sunday, R
Rollickers, 9:30 p.m., Monday, R
Singing Cylinders, 5:30 and 6:00 p.m., Sunday, B

RELIGIOUS

Dr. S. Parkes Cadman, 3:30 p.m., Sunday, R
 Cathedral Hour, 6:30 p.m., Sunday, C
 Catholic Hour, 6:00 p.m., Sunday, R
 Church of the Air, 1:30 p.m., Sunday, C
 Rev. Charles E. Coughlin, 4:00 p.m., Sunday
 Mid-Week Hymn Sing, 6:30 p.m., Tuesday, R
 National Vespers, 5:00 p.m., Sunday, B
 National Youth Conference, 4:30 p.m., Sunday, B
 Our American Music, 3:00 p.m., Sunday, B
 Seth Parker's, 10:45 p.m., Sunday, R
 Salt Lake Choir, 12 noon, Sunday, C
 Temple of Song, 4:00 p.m., Sunday, B

SINGERS

Frances Alda, 6:00 p.m., Tuesday, R
 Elvia Allman, 7:30 p.m., Monday and Wednesday, R
 Ilomay Bailey, 10:30 p.m., Tuesday and Friday, B
 Elizabeth Barthell, 6:00 p.m., Monday, C
 Boswell Sisters, 9:15 p.m., Saturday, C
 Fanny Brice, 8:00 p.m., Wednesday, R
 Buccaneers, 11:00 p.m., Saturday, B
 Eddie Cantor, 8:00 p.m., Sunday, R
 Charles Carlile, 10:45 p.m., Tuesday, C
 Richard Crooks, 8:30 and 11:30 p.m., every other Monday, R
 Bing Crosby, 9:00 p.m., Wednesday and Saturday, C
 Dennis and Reese, 11:00 p.m., Tuesday, R
 Do Re Mi, 6:00 p.m., Friday, C
 Morton Downey, 7:15 p.m., Sun., 10:45 p.m., Thurs., C;
 9:30 p.m., Wednesday, B
 Jessica Dragonette, 8:00 p.m., Friday, R
 Mary Eastman, 8:15 p.m., Sunday; 9:15 p.m., Friday, C
 Ruth Etting, 9:00 p.m., Monday and Thursday, C
 Fields and Hall, 6:45 p.m., Saturday, B
 Fields and McHugh, 10:00 p.m., Friday, B
 Jane Froman, 9:00 p.m., Tuesday and Friday, C
 Keller, Sargent and Ross, 7:30 p.m., Tues. and Thurs., C
 Jeanne Lang, 9:30 p.m., Thursday, C; 9:00 p.m., Friday, R
 Welcome Lewis, 11:15 p.m., Friday, B
 Little Jack Little, 10:45 p.m., Wednesday, C
 Ruth Lyon, 10:30 p.m., Wednesday, B
 Andrea Marsh, 6:45 p.m., Monday, R
 Nine Martino, 11:00 p.m., Wednesday and Friday, C
 Smiling Ed McConnell, 2:00 p.m., Sunday, C
 Tommy McLaughlin, 9:15 p.m., Tuesday, C
 James Melton, 7:00 p.m., Sun.; 7:30 p.m., Tues.; 11:00 p.m.,
 Thursday, R
 Monarch Mystery Tenor, 2:00 p.m., Sunday, B
 Frank Munn, 9:30 p.m., Sunday, R
 Gertrude Niesen, 6:30 p.m., Thurs.; 10:45 p.m., Sat., C
 Donald Novis, 10:30 p.m., Sun.; 7:00 p.m., Fri., R; 9:30
 p.m., Wednesday, B
 Pickens Sisters, 9:30 p.m., Mon., R; 9:45 p.m., Sun., 8:30
 p.m., Wednesday, B

Carson Robison's Pioneers, 10:00 p.m., Thursday, B
 Lanny Ross, 9:00 p.m., Thursday, R
 Romantic Bachelor, 9:15 p.m., Wednesday, C
 Salon Singers, 10:15 p.m., Saturday, B
 Sanderson-Crumit, 8:00 p.m., Tuesday, R
 Ethel Shutta, 9:30 p.m., Saturday, R
 Singin' Sam, 8:15 p.m., Monday, Wednesday, Friday, C
 Sixteen Male Voices, 11:30 p.m., Wednesday, B
 Sizzlers Trio, 10:00 p.m., Monday, B
 Kate Smith, 8:30 p.m., Tuesday, Wednesday, Thursday, C
 Street Singer, 12:45 p.m., Sunday; 7:45 p.m., Saturday, C
 Tastyest Jesters, 7:15 p.m., Monday, B
 Three Keys, 6:30 p.m., Thursday, R; 10:45 p.m., Tuesday
 and Friday, B
 Three X Sisters, 6:30 p.m., Mon., Wed., Friday, B
 Lawrence Tibbett, 8:30 and 11:30 p.m., every other Mon-
 day, R
 Trade and Mark, 8:00 p.m., Fri., C; 7:45 p.m., Sunday, R
 Gus Van, 9:30 p.m., Saturday, R
 Whispering Jack Smith, 8:00 p.m., Mon. and Wed.; 8:15
 p.m., Thurs., C
 Women's Octet, 11:15 p.m., Tuesday, B

TALKS

America's Grub Street, 6:00 p.m., Saturday, C
 American Taxpayers' League, 8:00 p.m., Saturday, B
 Boake Carter, 7:45 p.m., daily, ex. Sat. and Sun., C
 Don Carney Dog Chats, 8:30 p.m., Monday, B
 Cook Travelogues, 1:15 p.m., Sunday, B
 Economic World Today, 8:30 p.m., Saturday, R
 William Hard, 6:30 p.m., Wednesday, R
 Edwin C. Hill, 10:30 p.m., Mon., Tues., Wed.; 9:30 p.m.,
 Friday, C
 Horlick's Health, 8:30 p.m., Tuesday and Friday, B
 International Forum, 2:15 p.m., Sunday, R
 H. V. Kaltenborn, 7:00 p.m., Sunday; 6:00 p.m., Thurs., C
 Warden Lawes, 9:00 p.m., Sunday, B
 David Lawrence, 10:00 p.m., Sunday, R
 Laws That Safeguard, 6:30 p.m., Saturday, B
 Lawyer and Public, 6:00 p.m., Sunday, C
 National Radio Forum, 10:30 p.m., Monday, R
 Our American Schools, 6:30 p.m., Sunday, R
 Angelo Patri, 7:45 and 11:15 p.m., Sunday, C
 Public Affairs Institute, 10:15 p.m., Saturday, C
 Radio in Education, 7:15 p.m., Tuesday, B
 Sigmund Spaeth, 10:00 p.m., Tuesday, B
 Lowell Thomas, 6:45 p.m., daily, ex. Sat. and Sun., E; 5:00
 p.m., Sunday, R
 Merle Thorpe, 7:15 p.m., Saturday, B
 Howard Thurston, 8:45 p.m., Thurs. and Fri., B
 Carveth Wells, 10:30 p.m., Wednesday, R
 Frederic William Wile, 7:00 p.m., Saturday, C
 Walter Winchell, 9:30 and 11:15 p.m., Sunday, B

KEY TO SYMBOLS

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. R-C indicates Remote Control. Where space permits, names of hotels or other buildings used in announcements are shown in parenthesis. These are not mail addresses.

Second Column Symbols	B National "Blue" network.	P Has construction permit only.
a Verifies reception for return post- age.	C Columbia network.	Q Great Lakes network.
b Verifies only occasionally.	D Daytime only.	R National "Red" network.
c Does not verify.	Dn Daytime with occasional evening hours.	S Sunday only.
d Verification 10c; letter 25c.	E Trans-Canada network.	T Don Lee system.
e Sends Ekko stamp for 10c.	F Canadian National Railways net- work.	U Dixie network.
f Sends Ekko stamp for 5c.	G All Canadian networks.	V Maritime Broadcasting network
g Sends Ekko stamp for postage.	H Yankee network.	W Curtis-Indiana network.
h Sends own station stamp for 10c.	I Orange and gold network.	X Has permit to increase power.
i Sends own station stamp for 5c.	J Mexican networks.	Y Has permit to change location.
j Sends own station stamp for post- age.	K Canadian Pacific Ry. network (Dominion).	Z Has permit to change frequency.
k Has no stamps.	L Canadian Radio Corp. network.	a-b-c. Small letters show stations using same transmitter.
z No information available.	N National "Red" and "Blue" net- works.	1-2-3. Figures denote stations sharing time.
Fourth Column Symbols		..... No information.
A These stations are synchronized.		

As Shown in the Index by
 Frequencies and Dial Numbers

INDEX BY FREQUENCIES AND DIAL NUMBERS

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FOR KEY TO SYMBOLS SEE PAGE 45

540 kilocycles 555.2 meters

CKOK	ae	5000	CG	Windsor, Ont.
XEY	z	105	546.8	Merida, Mex.

Essex Broadcasters, Ltd.
Partido Socialista S. E.

550 kilocycles 545.1 meters

KFDY	ae	1000	1	Brookings, S. D.
KFUO	ae	1000	2(1)	St. Louis, Mo.
KFYR	ah	1000	1N(2.5)	Bismarck, No. Dakota
KOAC	ak	1000	.....	Corvallis, Ore.
KSD	ak	500	2R	St. Louis, Mo.
WDEV	ae	500	D	Waterbury, Vt.
WGR	ae	1000	C	Buffalo, N. Y.
WKRC	ak	1000	C	Cincinnati, Ohio

South Dakota State College
Evangelical Lutheran Church
Meyer Broadcasting Co.
Oregon State Agricultural College
Pulitzer Publishing Co.
Harry G. Whitehill
Buffalo Broadcasting Corp.
WKRC, Inc., Hotel Alms

560 kilocycles 535.4 meters

KFDM	ak	500	(1)	Beaumont, Texas
KLZ	ae	1000	C	Denver, Colo.
KTAB	ae	1000	Y	San Francisco, Calif.
WFI	ae	500	1R	Philadelphia, Pa.
WIBO	ae	1000	(1.5)a	Chicago, Ill.
WLIT	ak	500	1R	Philadelphia, Pa.
WNOX	ak	1000	C(2)	Knoxville, Tenn.
WPCC	ak	500	Sa	Chicago, Ill.
WQAM	ae	1000	C	Miami, Fla.
XEAO	z	7.5	.....	Mexicali, Mex.

Sabine Broadcasting Co., Inc.
Reynolds Radio Co., Inc.
Associated Broadcasters, Inc.
WFI Broadcasting Co.
Nelson Bros. Bond & Mtg. Co.
Lit Bros. Broadcasting System, Inc.
WNOX Inc.
North Shore Congregational Church
Miami Broadcasting Co.
Luis L. Castro

570 kilocycles 526.0 meters

HIX	ah	1000	579	Santo Domingo, D. R.
KGKO	z	250	(.5)	Wichita Falls, Texas
KMTR	ae	500	.....	Hollywood, Calif.
KVI	ae	500	C	Tacoma, Wash.
WEAO	ae	1000	1	Columbus, Ohio
WKBN	ak	500	1C	Youngstown, Ohio
WMCA	ak	500	3	New York, N. Y.
WNAX	ae	1000	C(2.5)	Yankton, S. D.
WNYC	ak	500	3	New York, N. Y.
WSYR	ak	250	B2	Syracuse, N. Y.
WWNC	ae	1000	N	Asheville, N. C.

The Dominican Government
Wichita Falls Broadcasting Co.
KMTR Radio Corp.
Puget Sound Broadcasting Co.
Ohio State University
WKBN Broadcasting Corp.
Knickerbocker Broadcasting Co., Inc.
House of Gurney, Inc.
Dept. of Plant & Structures
Central N. Y. Brdctg. Corp., (WMAC)
Citizens Broadcasting Co., Inc.

580 kilocycles 516.9 meters

CFCY	ae	500	E	Charlottetown, P. E. I.
CHMA	ak	250	4S	Edmonton, Alta.
CKCL	aj	500	.....	Toronto, Ont.
CKUA	ak	500	4F	Edmonton, Alta.
CMDD	z	150	588	Havana, Cuba
KMJJ	ak	500	CT	Fresno, Calif.
KSAC	ak	500	2(1)	Manhattan, Kans.
WDBO	ae	250	CU	Orlando, Fla.
WIBW	ae	1000	C2	Topeka, Kans.
WOBU	ak	250	1(.5)	Charleston, W. Va.
WSAZ	ak	250	1(.5)	Huntington, W. Va.
WTAG	ae	250	R(.5)	Worcester, Mass.
XEPN	z	100000	585	Piedras Negras, Mex.

Island Radio Broadcasting Co., Ltd.
Christian & Missionary Alliance
The Dominion Battery Co.
University of Alberta
G. deSequeira
McClatchy Radio Stations (Fresno Bee)
State Agricultural College
Orlando Broadcasting Co., Inc.
Topeka Brodctg Assn., Inc.
WOBU, Inc., Ruffner Hotel
WSAZ, Inc.
Worcester Telegram Pub. Co., Inc.
(Yolanda Hotel), Eagle Pass, Texas

590 kilocycles 508.2 meters

CJGC	ae	5000	595GZ	London, Ont.
CMW	ae	1400	.....	Havana, Cuba
KHQ	ak	1000	N(2)	Spokane, Wash.
WCJ	ae	500	1	Lincoln, Neb.
WEEL	ak	1000	R	Boston, Mass.
WKZO	ae	1000	D	Kalamazoo, Mich.
WOW	ae	1000	1R	Omaha, Neb.

Free Press Printing Co., Ltd.
Troncoso y Gil
Louis Wasmer, Inc.
Nebraska Wesleyan University
Edison Electric Illuminating Co.
WKZO, Inc., Burdick Hotel
Woodmen of the World

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600 kilocycles 499.7 meters

CNRO	ak	500	F	Ottawa, Ont.
KFSD	ah	1000	N	San Diego, Calif.
WCAC	ak	250	2	Storrs, Conn.
WCAO	ae	250	C	Baltimore, Md.
WICC	ae	250	2H(.5)C	Bridgeport, Conn.
WMT	ak	500	C	Waterloo, Iowa
WREC	z	500	C(1)	Memphis, Tenn.

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Canadian National Railways
African Radio Corp.
Connecticut Agricultural College
Monumental Radio Co.
Bridgeport Bdctg. Station, Inc.
Waterloo Broadcasting Co.
WREC, Inc.

KCY.S.
680
MTRS.
440.9
DIAL

610 kilocycles 491.5 meters

KFRC	ae	1000	C	San Francisco, Calif.
WDAF	ae	1000	R	Kansas City, Mo.
WIP	ak	500	C	Philadelphia, Pa.
WJAY	ae	500	D	Cleveland, Ohio
XETR	z	1000	Mexico City, Mexico

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Don Lee Broadcasting System
Kansas City Star Co.
Pennsylvania Bdctg. Co. (WFAN)
Cleveland Radio Broadcasting Corp.
Cia. Difusora Mexicana S. A.

620 kilocycles 483.6 meters

KGW	ae	1000	N	Portland, Ore.
KTAR	ae	500	NJ(1)	Phoenix, Ariz.
WFLA	ae	1000	Na(2.5)	Clearwater, Fla.
WLBZ	ak	500	C	Bangor, Maine
WSUN	ae	1000	Na(2.5)	St. Petersburg, Fla.
WTMJ	ae	1000	N(2.5)	Milwaukee, Wis.

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Oregonian Publishing Co.
KTAR Broadcasting Co.
Florida West Coast Bdctg. Co., Inc.
Maine Broadcasting Co., Inc.
Florida West Coast Bdctg. Co., Inc.
Journal Company

630 kilocycles 475.9 meters

CFCT	ae	500	G	Victoria, B. C.
CJGX	ae	500	FL	Yorkton, Sask.
CKOC	ae	1000	635aG	Hamilton, Ont.
CKTB	ae	1000	635aL	St. Catharines, Ont.
CMCU	z	150	.....	Havana, Cuba
CMQ	z	250	.....	Havana, Cuba
CNRA	ae	700	F	Moncton, N. B.
KFRU	ak	500	I	Columbia, Mo.
KGFX	z	200	D	Tierre, S. D.
WGBF	ae	500	W-1	Evansville, Ind.
WMAL	ae	250	(.5)-B	Washington, D. C.
WOS	ak	500	1D	Jefferson City, Mo.
XETF	ak	500	K	Veracruz, Ver., Mexico
XFG	z	2000	638.3	Mexico City, Mexico

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Victoria Broadcasting Assn.
Winnipeg Grain Exchange
Wentworth Radio Bdctg. Co., Ltd.
Wentworth Radio Bdctg. Co., Ltd.
Jorge Garcia Serra
Jose Fernandez
Canadian National Railways
KFRU, Inc.
Dana McNeil
Evansville On the Air, Inc.
National Broadcasting Co.
Missouri State Marketing Bureau
Manuel Angel Fernandez
Sria. de Guerra y Marina

640 kilocycles 468.5 meters

CHRC	ak	100	645aG	Quebec, Que.
CKCI	ck	100	645a	Quebec, Que.
CKCR	ak	100	645G	Waterloo, Ont.
KFI	ah	50000	N1	Los Angeles, Calif.
WAIU	ae	500	I	Columbus, Ohio
WOI	ae	5000	D	Ames, Iowa

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CHRC, Ltd., Victoria Hotel
Le Soleil, Ltd.
Mitchell & Liddle
Earl C. Anthony, Inc.
Associated Radiocasting Corp.
State College of Agriculture

650 kilocycles 461.3 meters

KPCB	ae	100	Seattle, Wash.
WSM	aej	50000	N	Nashville, Tenn.

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Queen City Broadcasting Co.
National Life & Accident Ins. Co.

660 kilocycles 454.3 meters

CHWK	ak	100	665	Chilliwack, B. C.
CJRM	z	500	665	Moose Jaw, Sask.
CJRW	z	1000	665	Fleming, Sask.
CMAF	ak	500	.....	Havana, Cuba
RUS	z	500	664	Salvador
WAAW	agh	500	D	Omaha, Neb.
WEAF	ak	50000	R	New York City
XEM	z	500000	Matamoros, Mex.

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Chilliwack Broadcasting Co., Ltd.
Jas. Richardson & Sons, Ltd.
Jas. Richardson & Sons, Ltd.
International Broadcasting Co.
Republic of El Salvador
Omaha Grain Exchange
National Broadcasting Co., Inc.
Gumaro Lizarraga

670 kilocycles 447.5 meters

WMAQ	ae	5000	N	Chicago, Ill.
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WMAQ, Inc. (NBC Lessees)

680 kilocycles 440.9 meters

HJN	z	2000	685	Bogota, Colombia
KFBQ	ae	2500	D	St. Joseph, Mo.
KPO	ak	5000	N	San Francisco, Calif.
WPTF	ae	1000	N Dn	Raleigh, N. C.

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Scroggin & Co., Bank
National Broadcasting Co., Inc.
Durham Life Insurance Co.

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690 kilocycles 434.5 meters

CFAC	ak	500	1G	Calgary, Alta.
CFRB	ae	10000	CM	Toronto, Ont.
CJCB	ak	500	1LE	Calgary, Alta.
NAA	z	1000	.....	Arlington, Va.
VAS	z	2000	685(4)	Glace Bay, N. S.
XET	ck	500	.....	Monterrey, Mexico

Calgary Herald, Ltd.
Rogers-Majestic Corp., Ltd.
Albertan Publishing Co., Ltd.
U. S. Navy
Canadian Marconi Co.
Cadena Radio Difusora Mexicana S. A.

700 kilocycles 428.3 meters

WLW	ae	50000	N	Cincinnati, Ohio
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The Crosley Radio Corporation

710 kilocycles 422.3 meters

KMPC	ae	500	Dn	Beverly Hills, Calif.
WOR	ak	5000	X	Newark, N. J.
XEN	agj	1000	711K	Mexico City

R. S. MacMillan
Bamberger's Broadcasting Service, Inc.
Cerveceria Modelo S. A.

720 kilocycles 416.4 meters

WGN	ak	25000	C	Chicago, Ill.
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WGN, Inc., Drake Hotel

730 kilocycles 410.7 meters

CHLS	ak	100	1b	Vancouver, B. C.
CHYC	z	5000	Sa	Montreal, Que.
CKAC	ak	5000	CaM	Montreal, Que.
CKCD	z	100	1b	Vancouver, B. C.
CKFC	ak	50	1	Vancouver, B. C.
CKMO	z	100	1	Vancouver, B. C.
CKWX	ak	100	1L	Vancouver, B. C.
CMK	ach	3150	.....	Havana, Cuba
XEF-XER	z	75000	735-665	Villa Acuna, Mexico

W. G. Hassell (Province Bldg.)
Northern Electric Co., Ltd.
La Presse Publishing Co., Ltd.
Vancouver Daily Province
United Church of Canada
Sprott-Shaw Radio Co.
Western Broadcasting Co., Ltd.
National Broadcasting Co. of Cuba
Villa Acuna Broadcasting Co., Inc.

740 kilocycles 405.2 meters

CJCA	ae	500	745EL	Edmonton, Alberta
KMMJ	bk	1000	Dn	Clay Center, Neb.
WSB	ach	5000	N	Atlanta, Ga.
WHEB	ak	250	D	Portsmouth, N. H.

Edmonton Journal, Ltd.
M. N. Johnson Co. (R/C Lincoln)
Atlanta Journal, Biltmore Hotel
Granite State Broadcasting Co.

750 kilocycles 399.8 meters

KGU	aj	2500	NX	Honolulu, Hawaii
VOWR	ak	750	.....	St. John's, N. F.
WJR	ak	10000	B	Detroit, Mich.
XEAN	ach	5000	.....	Juarez, Chih., Mexico

Advertiser Publishing Co.
Wesley United Church
WJR, The Goodwill Station, Inc.
Radio Difusora Nacional S. A.

760 kilocycles 394.5 meters

KXA	ae	250	(.5)	Seattle, Wash.
WBAL	ae	10000	BA	Baltimore, Md.
WEW	ae	1000	D	St. Louis, Mo.
WJZ	ck	50000	BA	New York City

American Radio Tel. Co.
(See 1060 kcys. also)
St. Louis University
National Broadcasting Co., Inc.

770 kilocycles 389.4 meters

KFAB	ae	5000	1C	Lincoln, Neb.
WBBM	ae	25000	1C	Chicago, Ill.

KFAB Broadcasting Co.
WBBM Bdctg. Corp. (Wrigley Bldg.)

780 kilocycles 384.4 meters

CKY	z	5000	.....	Winnipeg, Man.
CMBS	z	150	.....	Havana, Cuba
CMCQ	z	1000	.....	Havana, Cuba
KELW	ach	500	2	Burbank, Calif.
KTM	ae	500	2(1)	Los Angeles, Calif.
WEAN	ak	500	CH	Providence, R. I.
WMC	ak	500	N(1)	Memphis, Tenn.
WPOR	ach	500	b	Portsmouth, Va.
WTAR	ach	500	bC	Norfolk, Va.
XEP	z	1000	.....	Mexico City

Manitoba Telephone System
Enrique Artealejo
Andres Martinez
Magnolia Park, Ltd.
Pickwick Broadcasting Corp., Ltd.
Shepard Broadcasting Service, Inc.
Memphis Commercial Appeal, Inc.
WTAR Radio Corp. (Norfolk)
WTAR Radio Corp.
Cia. Difusora de Mexico S. A.

790 kilocycles 379.5 meters

CMHC	z	250	.....	Tuinucu, Cuba
CMJK	ach	300	.....	Camaguey, Cuba
KGO	ak	7500	N	San Francisco, Calif.
WGY	ak	50000	R	Schenectady, N. Y.

Frank H. Jones
Tano Gomez
General Electric Co. (Opr. NBC)
General Electric Co.

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800 kilocycles 374.8 meters

WBAP ak 5000 Na Fort Worth, Texas
 WFAP ak 5000 Na Dallas, Texas

Carter Publications, Inc.
 Dallas News-Dallas Journal

810 kilocycles 370.2 meters

CHNS ae 500 815aZG Halifax, N. S.
 CNRH ak 500 815aZ Halifax, N. S.
 VOAS ak 200 D St. John's, N. F.
 WCCO ae 5000 C Minneapolis, Minn.
 WPCB ak 500 D New York City
 XFC z 350 Aguascalientes, Mex.
 XFI z 1000 818 Mexico City, Mexico

Maritime Bdctg. Co., Ltd. Oprs.
 Canadian National Railways
 Ayre & Sons, Ltd.
 Northwestern Broadcasting, Inc.
 Eastern Broadcasters, Inc.
 Gobierno del Estado de Aguascalientes
 Sria. de Ind. C. y Trabajo

KCYB.

890

MTRB.

336.9

DIAL

820 kilocycles 365.6 meters

CMGC z 30 Matanzas, Cuba
 WHAS aj 25000 C Louisville, Ky.

Oscar S. Mechoso
 The Louisville Times Co., Inc.

830 kilocycles 361.2 meters

CMGA z 100 834 Colon, Cuba
 KOA ak 12500 NJ Denver, Colo.
 WEEU ak 1000 D Reading, Pa.
 WHDH ae 1000 D Boston, Mass.
 WRUF ae 5000 DnC Gainesville, Fla.
 XETW z 500 Mexico City, Mexico

L. Valdes Figueroa
 General Electric Co. (NBC Opr.
 Berks Broadcasting Co.
 Matheron Radio Co., Inc.
 State of Florida (Univ. of Fla.)
 Rafael M. Pena

840 kilocycles 356.9 meters

CHNC z 5000 a Toronto, Ont.
 CKGW ae 5000 NEa Toronto, Ont.
 CKLC ak 1000 G Red Deer, Alta.
 CMC z 500 Havana, Cuba
 CPRY ae 5000 La Toronto, Ont.
 XETH z 100 Puebla, Mexico
 XETM z 150,000 P845 Matamoros, Mex.
 XFB z 500 Jalapa, Mexico

Canadian National Carbon Co., Ltd.
 Gooderham & Worts, Ltd.
 Alberta Pacific Grain Co., Ltd.
 Cuban Telephone Co.
 Canadian Pacific Co., Royal York Hotel
 Ramon Huerta
 Miguel Musquiz, A.
 Estado de Vera Cruz

850 kilocycles 352.7 meters

KIEV z 100 D Glendale, Calif.
 KWKH ae 10000 1 Shreveport, La.
 WWL ak 10000 1DnX New Orleans, La.

Cannon Systems, Inc.
 Hello World Broadcasting Corp.
 WWL Development Co. (Loyola Univ.)

860 kilocycles 348.6 meters

VOGY z 500 P St. John's, N. F.
 WABC ae 50000 aC New York City
 WBQ ak 50000 a New York City
 WHB ae 500 D Kansas City, Mo.
 XFX z 500 Mexico City, Mexico

Atlantic Broadcasting Corp.
 Atlantic Broadcasting Corp. (tests)
 WHB Broadcasting Co.
 Secretaria de Educacion Publica

870 kilocycles 344.6 meters

WENR ak 5000 Na Chicago, Ill.
 WLS ae 5000 Na Chicago, Ill.
 XEAD z 250 875 Mexico City, Mex.

Great Lakes Bdctg. Co. NBC Opr.
 Agricultural Broadcasting Co.
 Julio Zetina Osorio

880 kilocycles 340.7 meters

CHML ae 50 4G Hamilton, Ont.
 CJCB ak 100 G Sydney, N. S.
 CKCV ak 100 Quebec, Que.
 CKPC ak 100 4L Preston, Ont.
 KFKA ak 500 2(1) Greeley, Colo.
 KLX ae 500 Oakland, Calif.
 KPOF ae 500 2 Denver, Colo.
 WCOE ae 500 (1) Meridian, Miss.
 WGBI ah 250 Q1 Scranton, Pa.
 WQAN ak 250 1 Scranton, Pa.
 WSUI ae 500 Iowa City, Iowa

Maple Leaf Radio Co., Ltd.
 Nathanson's Radio Headquarters
 Vandy, Inc.
 Cyrus Dolph
 Mid-Western Radio Corp.
 Tribune Publishing Co.
 Pillar of Fire
 Mississippi Broadcasting Co., Inc.
 Scranton Broadcasters, Inc.
 Scranton Times
 State University of Iowa

890 kilocycles 336.9 meters

CFBO z 500 St. John, N. B.
 CKCO z 100 3 Ottawa, Ont.
 CKPR ak 100 3G Fort William, Ont.
 CMCF ak 250 1 Havana, Cuba
 CMX ae 500 1 Havana, Cuba
 KARK ak 250 Little Rock, Ark.
 KFNF ak 500 2(1) Shenandoah, Iowa
 KSEI ae 250 (.5) Pocatello, Idaho
 KUSD ae 500 2 Vermillion, S. Dak.

C. A. Munro, Ltd.
 Dr. G. M. Geldert
 Dougall Motor Car Co., Ltd.
 Raoul Karman, Casa DelaPorte
 Casa "Lavin" Francisco A. Lavin, Adm.
 Arkansas Radio & Equipment Co.
 Henry Field Company
 Radio Service Corporation
 University of South Dakota

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VOGT WGST WILL WJAR WMMN XETU	ac ak ae neh z	400 250 250 500 250 100	893 C(.5) 2(.5) R (.5)	Wabana, N. F. Atlanta, Ga. Urbana, Ill. Providence, R. I. Fairmont, W. Va. Pachuca, Mexico	The Gaiety Theatre Southern Broadcasting Co. University of Illinois The Outlet Co. A. M. Rowe, Inc. Rodrigo Mariquez
900 kilocycles 333.1 meters					
KGBU KHJ WBEN WJAX WKY WLBL	ak ae ae neh N ae	500 1000 1000 1000 1000 2000	..... CT R N N D	Ketchikan, Alaska Los Angeles, Calif. Buffalo, N. Y. Jacksonville, Fla. Oklahoma City, Okla. Stevens Point, Wis.	Alaska Radio & Service Co. Don Lee Broadcasting System WBEN, Inc., Buffalo Evening News City of Jacksonville Oklahoma Publishing Co. Wis. Dept. Agriculture & Markets
910 kilocycles 329.6 meters					
CFQC CFLC TICR XEW XFF	z ae z ak z	500 100 50 5000 500	..... 915 911 915	Saskatoon, Sask. Prescott, Ont. San Jose, Costa Rica Mexico City, Mexico Chihuahua, Mex.	The Electric Shop, Ltd. Radio Association of Prescott Cadena Radio-difusora Mexicana S. A. Gobierno del Estado de Chihuahua
920 kilocycles 325.9 meters					
CMBW CMCN CMDE HHK KFEL KFXF KOMO KPRC WAAF WBSO WVJ	z z z z ak ae aj ae ak ae ak	150 250 250 1000 500 500 1000 1000 500 500 1000	925 925 925 1 1 N N(2.5) D D R	Havana, Cuba Havana, Cuba Havana, Cuba Port au Prince, Haiti Denver, Colo. Denver, Colo. Seattle, Wash. Houston, Texas Chicago, Ill. Babson Park, Mass. Detroit, Mich.	Alvarez-Moris Antonio Ginard Evilio Villar Republic of Haiti Gene O'Fallon (Albany Hotel) Colorado Radio Corp. Fisher's Blend Station, Inc. Houston Printing Co. (Houston Post Drivers Journal Publishing Co. Broadcasting Service Org., Inc. The Detroit News
930 kilocycles 322.4 meters					
CFCH CFRC CKX CMJF KFWI KGBZ KMA KROW WBRC WDBJ WIBG	ak ak ak z aj ak ae ak ak ae ae	100 50 500 200 200 500 500 500 500 250 25	3LM 3(.2) E 1 2(1) 2(1) 1(1) C(1) C(.5) D	North Bay, Ont. Kingston, Ont. Brandon, Manitoba Camaguey, Cuba San Francisco, Calif. York, Neb. Shenandoah, Iowa Oakland, Calif. Birmingham, Ala. Roanoke, Va. Glenside, Penna.	Northern Supplies, Ltd. Queen's University Manitoba Telephone System John L. Stowers Radio Entertainments, Ltd. Dr. Geo. R. Miller Earl E. May Seed & Nursery Co. Educational Broadcasting Corp. Birmingham Bdctg. Co., Inc. Times-World Corp. WIBG, Inc. (Keswick Bldg.)
940 kilocycles 319.0 meters					
KOIN WAAT WCSH WDAY WFIW WHA XEFO	zk ae ae ae ak ak ak	1000 300 1000 1000 1000 1000 5000	CT D R(2.5) N C D (3.5)	Portland, Ore. Jersey City, N. J. Portland, Maine Fargo, No. Dakota Hopkinsville, Ky. Madison, Wis. Mexico City, Mexico	KOIN, Inc. (New Heathman Hotel) Bremer Broadcasting Corp. Congress Square Hotel Co. WDAY, Inc. (Black Bldg.) WFIW, Inc. University of Wisconsin National Revolucionario Party (XFO)
950 kilocycles 315.6 meters					
CMHD KFWB KGHL KMBC VONA WRC	z ak ak ae z ak	250 1000 1000 1000 100 500	..... ..... NJ(2.5) C N	Caibarien, Cuba Los Angeles, Calif. Billings, Mont. Kansas City, Mo. St. John's, N. F. Washington, D. C.	Manual Alvarez Warner Bros. Broadcasting Corp. Northwestern Auto Supply Co. Midland Bdctg. Co. (Pickwick Hotel) Lane, Gillard & Avery National Broadcasting Co., Inc.
960 kilocycles 312.3 meters					
CHCK CHWC CKCK CKNC CMAV CMBD CMCW XEAW CMJL YVIBC	ak ak ak ak z z ak z z ak	100 500 500 500 150 150 150 10000 50 5000	V 3FL 3FL M 965 965 965 965	Charlottetown, P.E. I. Regina, Sask. Regina, Sask. Toronto, Ont. Havana, Cuba Havana, Cuba Havana, Cuba Reynosa, Mexico Camaguey, Cuba Caracas, Venezuela	J. A. Gesner & W. E. Burke R. H. Williams & Sons, Ltd. Leader Post, Ltd. (Leader Bldg.) Canadian National Carbon Co., Ltd. Eugenio Oliver Luis Perez Garcia Vilarino y Cervantes International Broadcasting Co. Enrique Artimes Broadcasting Caracas

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970 kilocycles 309.1 meters

KJR ae 5000 N Seattle, Wash.
 WCFL ak 1500 RX Chicago, Ill.

Fishers Blend Station, Inc.
 Chicago Federation of Labor

980 kilocycles 303.9 meters

CFCN ak 10000 985FL Calgary, Alberta
 CMGF z 100 987 Matanzas, Cuba
 KDKA ak 50000 B Pittsburgh, Pa.

The Voice of the Prairies, Ltd.
 Bernabe R. de la Torre
 Westinghouse Elec. & Mfg. Co.

990 kilocycles 302.8 meters

WBZ ak 25000 BA Boston, Mass.
 WBZA ak 1000 BA Springfield, Mass.
 XEK z 101 Mexico City, Mexico

Westinghouse Elec. & Mfg. Co.
 Westinghouse Elec. & Mfg. Co.
 Arturo Martinez

1000 kilocycles 299.8 meters

KFVD ak 250 Dn Los Angeles, Calif.
 WHO z 5000 RAX Des Moines, Iowa
 WOC ak 5000 RAX Davenport, Iowa
 WORK aj 1000 D York, Pa.
 XEA ak 100 Guadalajara, Mexico
 XEC z 50 Toluca, Mexico
 XEFE z 100 N. Laredo, Tams., Mex.
 XEFI z 100 Chihuahua, Mexico
 XEFJ z 100 Monterrey, Mexico
 XEFs z 40 Queretaro, Mexico
 XEL ak 10 Saltillo, Mexico
 XETC z 100 Jalapa, Ver., Mexico

Los Angeles Broadcasting Co.
 Central Broadcasting Co.
 Central Broadcasting Co.
 York Broadcasting Co.
 Radiofonografica de Guadalajara, S.A.
 Jesus R. Benavides
 Rafael T. Carranza
 Feliciano Lopez Islas
 Rodolfo Junco de la Vega
 Salvador Sanchez
 Antonio Garza Castro y J. T. Perez
 Juventino Sanchez

KCYS.
 1050
 MTRS.
 285.5
 DIAL

1010 kilocycles 296.9 meters

CFCO ak 250 Chatham, Ont.
 CKIC ak 500 Wolfville, N. S.
 CMBZ ak 150 Havana, Cuba
 CMCX z 150 Havana, Cuba
 KGGF ak 500 2(1) Coffeyville, Kans.
 KQW ae 500 T San Jose, Calif.
 WHN ae 250 1 New York City
 WHS ae 500 N(1) Columbia, S. C.
 WNAD ae 500 2 Norman, Okla.
 WPAP ae 250 1a New York City
 WQAO ae 250 1a New York City
 WRNY z 250 1 New York City
 XEJ ak 500 K1015 Juarez, Mexico
 XEU ak 100 Veracruz, Mexico

John Beardall (Wm. Pitt Hotel)
 Acadia University
 Manuel & Guillermo Salas
 Diario "El Mundo"
 Powell & Platz
 Pacific Agricultural Foundation, Ltd.
 Marcus Loew Booking Agency
 WIS, Inc.
 University of Oklahoma
 Marcus Loew Booking Agency
 Marcus Loew Booking Agency
 Marcus Loew Booking Agency
 Juan G. Buttner & Leo Afande
 Baltasat Pazos Sosa

1020 kilocycles 293.9 meters

KYW ae 10000 N Chicago, Ill.
 WRAX ae 250 D Philadelphia, Pa.
 XEFC z 10 Merida, Yuc.
 XEFD z 300 Tijuana, Mex.

Westinghouse Elec. & Mfg. Co. (KFKX)
 WRAX Broadcasting Co.
 Hugo Molina Font
 Carlos de la Sierra

1030 kilocycles 291.1 meters

CFCF ae 500 NG Montreal, Que.
 CMHI ck 30 a Santa Clara, Cuba
 CMKC z 150 1034a Santiago de Cuba
 CNRV ak 500 Vancouver, B. C.
 XEB ak 10000 Mexico City, Mexico

Canadian Marconi Co.
 Laviz & Paz
 Pinol Batlle y Co.
 Canadian National Railways
 El Buen Tono, S. A.

1040 kilocycles 288.3 meters

CMGH z 15 Matanzas, Cuba
 KRLD ae 10000 IC Dallas, Tex.
 KTHS ae 10000 IN Hot Springs, Ark.
 WESG ae 1000 D Elmira, N. Y.
 WKAR ae 1000 D East Lansing, Mich.

O. y J. Alvarez
 KRLD Radio Corp. (Adolphus Hotel)
 Chamber of Commerce
 WESG, Inc.
 Michigan State College

1050 kilocycles 285.5 meters

CMJG z 50 Camaguey, Cuba
 KFBI ae 5000 Dn Abilene, Kans.
 KNX ae 25000 X Hollywood, Calif.
 XES dk 250 1055K Tampico, Mexico

Jose Antonio Lefran
 Farmers & Bankers Life Ins. Co.
 Western Broadcast Co.
 Difusora Portena

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1060 kilocycles 282.8 meters

KWJJ	z	500	Dn	Portland, Ore.
WBAL	ae	10000	1B	Baltimore, Md.
WJAG	ak	1000	Dn	Norfolk, Neb.
WTIC	ak	50000	1R	Hartford, Conn.

KWJJ Broadcast Co., Inc.
Consolidated Gas, Elec. L. & Pwr. Co.
Norfolk Daily News
Travelers' Bldg. Service Corp.

1070 kilocycles 280.2 meters

CMBG	z	225	.....	Havana, Cuba
KMCB	af	150	.....	Havana, Cuba
KJBS	ae	100	D	San Francisco, Calif.
WCAZ	ae	50	D	Carthage, Ill.
WDZ	ak	100	D	Tuscola, Ill.
WTAM	ak	50000	R	Cleveland, Ohio
XEG	z	500	1075	Mexico City, Mexico

John L. Stowers
Metropolitan-Radio de Cuba
Julius Brunton & Sons Co.
Superior Bldg. Service, Inc.
James L. Bush
National Broadcasting Co., Inc.
Ricardo Gonzales Montero

1080 kilocycles 277.6 meters

WBT	ae	25000	CU	Charlotte, N. C.
WCBD	ae	5000	1Dn	Zion, Ill.
WMBI	ck	5000	1Dn	Chicago, Ill.

Station WBT, Inc.
Wilbur Glenn Voliva
Moody Bible Institute

1090 kilocycles 275.1 meters

KMOX	ak	50000	C	St. Louis, Mo.
XEAI	z	100	.....	Mexico City, Mex.

Voice of St. Louis, Inc.
Carlos Gonzales Caballero

1100 kilocycles 272.6 meters

KGDM	ak	250	D	Stockton, Calif.
WLWL	ae	5000	1	New York City
WPG	ae	5000	1C	Atlantic City, N. J.

E. F. Peffer
Missionary Society of St. Paul
Municipality of Atlantic City

1110 kilocycles 270.1 meters

CMJO	z	50	.....	Ciego de Avila, Cuba
KSSO	ae	1000	Dn(2.5)	Sioux Falls, So. Dak.
WRVA	ae	5000	N	Richmond, Va.
XENT	z	150000	1115	Neuvo Laredo, Mex.

Rey-Borges
Sioux Falls Broadcast Assn., Inc.
Larus & Bros. Co., Inc.
Compania Industrial Universal, S. A.

1120 kilocycles 267.7 meters

CFCA	ak	500	G	Toronto, Ont.
CFJC	ak	100	EL	Kamloops, B. C.
CHGS	ce	100	VX	Summerside, P. E. I.
CJOC	ak	100	.....	Lethbridge, Alta.
CMHJ	ag	40	1125	Cienfuegos, Cuba
KFIO	ae	100	D	Spokane, Wash.
KFSG	ak	500	a	Los Angeles, Calif.
KRKD	neh	500	a	Los Angeles, Calif.
KRSC	ak	100	D	Seattle, Wash.
KTRH	ak	500	2C	Houston, Tex.
WDEL	aj	250	(.5)	Wilmington, Del.
WHAD	ae	250	1C	Milwaukee, Wis.
WISN	ak	250	1C	Milwaukee, Wis.
WTAW	ae	500	2	College Station, Texas

Toronto Daily Star
Review Publishing Co., Ltd.
R. T. Holman, Ltd.
Harold R. Carson
Victorino Lopez (Hotel Bristol)
Spokane Broadcasting Corp.
Echo Park Evangelistic Assn.
Fireside Broadcasting Co.
Radio Sales Corp. (Wash. Ath. Club)
KTRH Broadcasting Co. (Rice Hotel)
WDEL, Inc.
Marquette University
American Radio News Corp.
Agricultural & Mech. College

1130 kilocycles 265.3 meters

KSL	ae	50000	C	Salt Lake City, Utah
WJJD	ze	20000	Dn	Chicago, Ill.
WOW	ae	1000	D	New York City
XEH	ak	250	1132	Monterrey, Mexico

Radio Service Corp. of Utah
WJJD, Inc. (Palmer House)
International Broadcasting Corp.
Tarnava & Cia

1140 kilocycles 263.0 meters

CMBJ	z	150	.....	Havana, Cuba
CMCD	neh	250	.....	Havana, Cuba
KVOO	ae	5000	1N	Tulsa, Okla.
WAPI	aj	5000	1N	Birmingham, Ala.
XETA	z	250	.....	Mexico City, Mexico

Emilio Perera
Angel Bertematy y Garcia
Southwestern Sales Corp.
WAPI Broadcasting Corp.
Manuel Espinosa Tagle

1150 kilocycles 260.7 meters

CMJH	ak	30	.....	Ciego de Avila, Cuba
WHAM	ae	5000	BX	Rochester, N. Y.
XED	z	500	1155	Guadalajara, Mex.
10-AT	ak	25	1155	Trail, B. C.

Luis Marauri Mendoza
Stromberg-Carlson Tel. Mfg. Co.
International Broadcasting Co.
Trail Amateur Radio Assn.

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1160 kilocycles 258.5 meters

WOWO ac 10000 1C Fort Wayne, Ind.
 WWSA ac 5000 1C Wheeling, W. Va.

Main Auto Supply Co.
 West Virginia Broadcasting Corp.

1170 kilocycles 256.3 meters

CMJE z 50 1175 Camaguey, Cuba
 WCAU ac 50000 C Philadelphia, Pa.

Manuel Fernandez
 WCAU Broadcasting Co.

1180 kilocycles 254.1 meters

CMBN ak 150 1185 Havana, Cuba
 CMJC z 250 1185 Havana, Cuba
 KEX ak 5000 2N Portland, Ore.
 KOB ae 20000 2 Albuquerque, N. M.
 WDCY ak 1000 Dn Minneapolis, Minn.
 WINS ae 500 New York City
 WMAZ ak 500 Macon, Ga.

G. de Sequeira
 Rafael Rodriguez
 National Broadcasting Co.
 N. M. Coll. of Agr. & Mechanical Arts
 George W. Young
 American Radio News Corp.
 Southeastern Broadcasting Co.

1190 kilocycles 252.0 meters

WOAI aeh 50000 N San Antonio, Texas
 z 500 1195 St. John's, N. F.

Southern Equipment Co.
 Dominion Brdctg. Co., Ltd.

1200 kilocycles 249.9 meters

CHCH z 100 2 Montreal, Que.
 CHLP z 100 2 Montreal, Que.
 CKOV ak 100 Kelowna, B. C.
 CMGB z 30 1205 Matanzas, Cuba
 KBTM ak 100 D Paragould, Ark.
 KERN ak 100 CT Bakersfield, Calif.
 KFJB ak 100 (.25) Marshalltown, Iowa
 KFWF ak 100 5 St. Louis, Mo.
 KFXD ae 100 Nampa, Idaho
 KFXJ ak 100 Grand Junction, Colo.
 KGDE ae 100 (.25) Fergus Falls, Minn.
 KGEK ak 100 9 Yuma, Colo.
 KGEW ak 100 9 Ft. Morgan, Colo.
 KGFJ ae 100 Los Angeles, Calif.
 KGHI ak 100 Little Rock, Ark.
 KGVO ak 100 Missoula, Mont.
 KMLB ae 100 Monroe, La.
 KVOS z 100 Bellingham, Wash.
 KWG ak 100 CT Stockton, Calif.
 WABI ak 100 Bangor, Maine
 WABZ ak 100 1 New Orleans, La.
 WBBZ ak 100 Ponca City, Okla.
 WBHS ak 100 4 Huntsville, Ala.
 WCAT ak 100 D Rapid City, S. D.
 WCAZ ak 100 Burlington, Vt.
 WCLO ak 100 Janesville, Wis.
 WCOD ak 100 3 Harrisburg, Pa.
 WFAM ae 100 8C South Bend, Ind.
 WFBC z 100 (.25) Greenville, S. C.
 WFBE ak 100 (.25) Cincinnati, Ohio
 WHBC ak 100 Canton, Ohio
 WHBY ak 100 Green Bay, Wis.
 WIBX z 100 (.3) Utica, N. Y.
 WIL ae 100 5(.25) St. Louis, Mo.
 WJBC ae 100 6 LaSalle, Ill.
 WJBL ae 100 6 Decatur, Ill.
 WJBW ak 100 1 New Orleans, La.
 WKJC ae 100 3 Lancaster, Pa.
 WLAP ak 100 (.25) Louisville, Ky.
 WNBO ae 100 Washington, Pa.
 WNBW z 10 (.1) Carbondale, Pa.
 WORC ak 100 CH Worcester, Mass.
 WPHR ae 100 (.25) Petersburg, Va.
 WRBL ak 100 Columbus, Ga.
 WWAZ aeh 100 8 Hammond, Ind.
 10-AB ak 25 Moose Jaw, Sask.
 10-AK ak 15 Stratford, Ont.
 10-BI ak 25 Prince Albert, Sask.
 10-BP ak 25 1199 Wingham, Ont.
 10-BQ ak 15 Brantford, Ont.
 10-BU z 15 Canora, Sask.

Montreal Radio Corp.
 La Patrie, Ltd.
 Okanagan Broadcasters, Ltd.
 Jose Anorga
 Beard's Temple of Music
 Bee Bakersfield Broadcasting Co.
 Marshall Electric Co., Inc.
 St. Louis Truth Center, Inc.
 Frank E. Hurt (R/C Boise)
 Western Slope Brdctg. Co.
 Jaren Drug Co.
 Beehler Electrical Equipment Co.
 City of Fort Morgan
 Ben. S. McGlashan
 Lloyd Judd Co.
 Mosby's, Inc.
 Limer's Broadcasting Station, Inc.
 KVOS, Inc.
 McClatchy Newspapers
 First Universalist Society
 Samuel D. Reeks
 C. L. Carrell (R/C various cities)
 Radio Station WBHS, Inc.
 State School of Mines
 Burlington Daily News
 WCLO Radio Corp. (R/C Beioit)
 Keystone Broadcasting Corp.
 South Bend Tribune (WSBT)
 News-Piedmont Co.
 Radio Station WFBE, Inc.
 Edward P. Graham
 WHBY, Inc.
 WIBX, Inc.
 Missouri Broadcasting Corp.
 Kaskaskia Broadcasting Co.
 Commodore Broadcasting, Inc.
 C. C. Carlson
 Lancaster Bdtg. Service, Inc.
 American Broadcasting Corp. of Ky.
 Spriggs Symplex
 WNBW, Inc.
 A. F. Kleindienst
 WLBG, Inc.
 WRBL Radio Station, Inc.
 Hammond-Calumet Bdtg. Corp.
 Moose Jaw Radio Assn.
 M. I. Higgins Elec. & Radio Co.
 Prince Albert Radio Club
 W. T. Cruckshank
 Tom Brown & Harold Brown
 Canora Radio Assn.

KCYS.
 1210
 MTRS.
 247.8
 DIAL

1210 kilocycles 247.8 meters

CFNB ae 100 E Fredericton, N. B.

James S. Neill & Sons, Ltd.

INDEX BY FREQUENCIES AND DIAL NUMBERS

CJOR	ak	500	E	Vancouver, B. C.	George C. Chandler
CKMC	ak	100	8	Cobalt, Ont.	R. L. McAdam
KASA	ak	100	.....	Elk City, Okla.	E. M. Woody (Casa Grande Hotel)
KDLR	ak	100	.....	Devils Lake, N. Dak.	KDLR, Inc.
KFJI	ak	100	.....	Klamath Falls, Ore.	KFJI Broadcasters, Inc.
KFOR	ak	100	(.25)	Lincoln, Neb.	Howard A. Shuman
KFPV	ak	100	.....	Fort Smith, Ark.	Southwestern Hotel Co.
KFVS	ae	100	6	Cape Girardeau, Mo.	Oscar C. Hirsch
KFXM	ak	100	9	San Bernardino, Calif.	J. C. & E. W. Lee
KGCR	ah	100	.....	Watertown, S. Dak.	Greater Kampeska Radio Corp.
KGNO	ak	100	.....	Dodge City, Kans.	Dodge City Broadcasting Co.
KGY	ak	100	.....	Olympia, Wash.	KGY, Inc. (Capitol Park Bldg.)
KIEM	z	100	DP	Eureka, Calif.	Harold H. Hanseth
KPPC	ak	50	9	Pasadena, Calif.	Pasadena Presbyterian Church
KWEA	z	100	.....	Shreveport, La.	Hello World Broadcasting Corp.
WALR	ae	100	.....	Zanesville, Ohio	WALR Broadcasting Corp.
WBAX	ae	100	1	Wilkes-Barre, Pa.	John H. Stenger, Jr. (Morris Bldg.)
WBBL	ak	100	7S	Richmond, Va.	Grace Covenant Pres. Church
WCBS	ak	100	2	Springfield, Ill.	WCBS, Inc.
WCRW	ae	100	4	Chicago, Ill.	Clinton R. White
WEBQ	ae	100	6	Harrisburg, Ill.	Harrisburg Broadcasting Co.
WEDC	z	100	4	Chicago, Ill.	Emil Denemark, Inc.
WFAS	ak	100	3	White Plains, N. Y.	Westchester Broadcasting Corp.
WGBB	ae	100	3	Freeport, N. Y.	Harry H. Carman
WGCM	ae	100	.....	Gulfport, Miss.	Great Southern Land Co.
WGNV	ae	50	P	Chester, N. Y.	Peter Goelet (Orange County)
WHBF	ae	100	.....	Rock Island, Ill.	Rock Island Broadcasting Co.
WHBU	aj	100	.....	Anderson, Ind.	Anderson Broadcasting Corp.
WHET	ak	100	D	Troy, Ala.	Troy Broadcasting Co.
WIBU	ae	100	.....	Poynette, Wis.	Wm. C. Forrest
WJBI	ak	100	3	Red Bank, N. J.	Monmouth Broadcasting Co., Inc.
WJBU	ae	100	1	Lewisburg, Pa.	Bucknell University
WJBY	ae	100	.....	Gadsden, Ala.	Ingrams Broadcasting Co.
WJEJ	ae	100	D	Hagerstown, Md.	A. V. Tidmore
WJW	ae	100	.....	Akron, Ohio	WJW, Inc.
WKFI	ak	100	.....	Greenville, Miss.	J. Pat Scully
WMBG	aj	100	7C	Richmond, Va.	Havens & Martin, Inc.
WOCL	ak	50	.....	Jamestown, N. Y.	A. E. Newton
WOMT	ae	100	.....	Manitowoc, Wis.	Francis Mangin Kadow
WPAW	ak	100	aY	Providence, R. I.	Cherry & Webb Broadcasting Co.
WPRO	ak	100	aY	Providence, R. I.	Cherry & Webb Broadcasting Co.
WQDX	z	100	.....	Thomasville, Ga.	Stevens Luke
WSBC	z	100	4	Chicago, Ill.	WSBC, Inc.
WSEN	ak	100	.....	Columbus, Ohio	Columbus Bdctg. Corp. (Seneca Hotel)
WSIX	ae	100	.....	Springfield, Tenn.	638 Tire & Vulc. Co. (R/C WLW)
WSOC	ae	100	.....	Gastonia, N. C.	WSOC, Inc.
WTAX	ae	100	2	Springfield, Ill.	WTAX, Inc.
XEX	z	500	.....	Mexico City, Mexico	Excelsior, Cia Editorial S. A.

1220 kilocycles 245.8 meters

CMHK	z	15	1225	Cruces, Cuba
KFKU	ae	500	a	Lawrence, Kans.
KTW	z	1000	2S	Seattle, Wash.
KWSC	ae	1000	2(2)	Pullman, Wash.
WCAD	ak	500	D	Canton, N. Y.
WCAE	ae	1000	R	Pittsburgh, Pa.
WDAE	ak	1000	C	Tampa, Fla.
WREN	ak	1000	aB	Lawrence, Kans.

V. Villaneuva	University of Kansas
First Presbyterian Church	State College of Washington
St. Lawrence University	WCAE, Inc. and Sun-Telegraph
Tampa Daily Times (Tampa Terrace)	Jenny Wren Co.

1230 kilocycles 243.8 meters

CMBY	z	250	.....	Havana, Cuba
CMCA	z	150	.....	Havana, Cuba
KFOA	aj	250	.....	Anchorage, Alaska
KGGM	ak	250	(.5)	Albuquerque, N. M.
KYA	ae	1000	N	San Francisco, Calif.
WFBM	ae	1000	1C	Indianapolis, Ind.
WNAC	ae	1000	CH	Boston, Mass.
WSBT	ak	500	1C	South Bend, Ind.

Callejas-Estefani	Manuel Cruz
Anchorage Radio Club, Inc.	New Mexico Broadcasting Co.
Pacific Broadcasting Co.	Indianapolis Power & Light Co.
Shepard Broadcasting Service, Inc.	South Bend Tribune (WFAM)

1240 kilocycles 241.8 meters

CMAB	z	20	1249	Pinar del Rio, Cuba
CMJN	z	50	.....	Camaguey, Cuba
KGCV	ak	250	3	Mandan, N. Dak.
KLPM	ak	250	3	Minot, N. Dak.

Jose Silveira	E. de Ugarriza
Mandan Radio Assn.	John B. Cooley

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KTAT	ak	1000	1	Fort Worth, Texas	KTAT Broadcast Co., Inc.
KTFI	ak	500	Twin Falls, Idaho	Radio Broadcasting Corp. of Idaho
WACO	ak	1000	1C	Waco, Texas	Central Texas Broadcasting Co.
WKAQ	ae	1000	.....	San Juan, P. R.	Radio Corp. of Porto Rico
WXYZ	ak	1000	.....	Detroit, Mich.	Kunsky-Trendle Broadcasting Corp.
XEFW	z	70	.....	Tampico, Mex.	Jose Expedito Martinez

1250 kilocycles 239.9 meters

KFMX	aj	1000	2	Northfield, Minn.	Carleton College
KFOX	ae	1000	CT	Long Beach, Calif.	Nichols & Warinner, Inc
WAAM	ae	1000	1(2.5)	Newark, N. J.	WAAM, Inc.
WCAL	ae	1000	2	Northfield, Minn.	St. Olaf College
WDSU	ak	1000	C	New Orleans, La.	Jos. H. Uhalt
WGCP	ak	250	1	Newark, N. J.	May Radio Broadcasting Co.
WLB	ak	1000	2	Minneapolis, Minn.	University of Minnesota
WODA	z	1000	1	Paterson, N. J.	Richard E. O'Dea
WRHM	ae	1000	2	Minneapolis, Minn.	Minnesota Broadcasting Corp.
XEFA	z	500	.....	Mexico City, Mexico	Eduardo Limon Segui

1260 kilocycles 238.0 meters

KOIL	ak	1000	B	Council Bluffs, Iowa	Mona Motor Oil Co.
KRGV	ae	500	1	Harlingen, Texas	KRGV, Inc. (Rio Grande Na. Life Bldg.)
KVOA	ak	500	.....	Tucson, Arizona	Robert M. Riculfi
KWWG	z	500	1	Brownsville, Texas	Frank P. Jackson
WLBW	ae	500	C(1)	Erie, Pa.	Broadcasters of Pennsylvania, Inc.
WNBX	ak	250	D	Springfield, Vt.	WNBX Broadcasting Corp.
WTOC	ae	500	CU	Savannah, Ga.	Savannah Broadcasting Co., Inc.

1270 kilocycles 236.1 meters

CMBC	neh	150	.....	Havana, Cuba	Domingo Fernandez
KGCA	ak	100	D2	Decorah, Iowa	Chas. W. Greenley
KOL	ae	1000	CT	Seattle, Wash.	Seattle Broadcasting Co.
KVOR	ae	1000	C	Colorado Springs, Col.	Reynolds Radio Co., Inc.
KWLC	ak	100	D2	Decorah, Iowa	Luther College
WASH	ak	500	a	Grand Rapids, Mich.	Kunsky-Trendle Broadcasting Co.
WFBR	ae	500	R	Baltimore, Md.	Baltimore Radio Show, Inc.
WJDX	ak	1000	N	Jackson, Miss.	Lamar Life Insurance Co.
WOOD	ak	500	a	Grand Rapids, Mich.	Kunsky-Trendle Broadcasting Corp.

1280 kilocycles 234.2 meters

KFBB	ae	1000	(2.5)	Great Falls, Mont.	Buttrey Broadcast, Inc.
WCAM	ae	500	1	Camden, N. J.	City of Camden (City Hall Tower)
WCAP	ae	500	1C	Asbury Park, N. J.	Radio Industries Broadcast Co.
WDOD	ae	1000	C(2.5)	Chattanooga, Tenn.	WDOD Bldg. Corp. (Hotel Patten)
WIBA	ae	500	N(1)	Madison, Wis.	Badger Broadcasting Co., Inc.
WOAX	neh	500	1	Trenton, N. J.	Trenton Broadcasting Co.
WRR	neh	500	C	Dallas, Texas	City of Dallas (Hilton Hotel)

1290 kilocycles 232.4 meters

CMHL	z	20	.....	Cienfuegos, Cuba	Oscar Zayas
KDYL	ak	1000	N	Salt Lake City, Utah	Intermountain Broadcasting Corp.
KFUL	ak	500	1	Galveston, Texas	News Publishing Co. (Buccaneer Hotel)
KLCN	z	100	D	Blytheville, Ark.	C. L. Lintzenich
KTSA	ak	1000	1C(2.5)	San Antonio, Texas	Southwest Broadcast Co. (Plaza Hotel)
WEBC	ae	1000	N(2.5)	Superior, Wis.	Head of the Lakes Broadcasting Co.
WJAS	ak	1000	C(2.5)	Pittsburgh, Pa.	Pittsburgh Radio Supply House
WNBZ	z	50	D	Saranac Lake, N. Y.	Smith & Mr ce
XEAC	z	100	1295	San Luis Potosi, Mex.	Francisco de P. Cabrera

1300 kilocycles 230.6 meters

CMKJ	z	20	.....	Guantanamo, Cuba	Luis Morlote
KALE	ak	500	3C	Portland, Ore.	KALE, Inc.
KFAC	aj	1000	.....	Los Angeles, Calif.	Los Angeles Broadcasting Co.
KFH	ae	1000	C 1	Wichita, Kans.	Wichita Eagle—Hotel Lassen
KFJR	ag	500	3	Portland, Ore.	Ashley C. Dixon—KFJR, Inc.
WBRR	nej	1000	1	Brooklyn, N. Y.	Peoples Pulpit Assn.
WEVD	ae	500	1	New York City	Debs Memorial Radio Fund, Inc.
WFAB	z	1000	1	New York City	Fifth Avenue Broadcasting Corp.
WHAZ	ae	500	1	Troy, N. Y.	Rensselaer Polytechnic Institute
WIOD	neh	1000	N	Miami, Fla.	Isle of Dreams Broadcasting Corp.
WOQ	ae	1000	1	Kansas City, Mo.	Unity School of Christian'y

KYCS.

1300

MTRS.

230.6

DIAL

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1310 kilocycles 228.9 meters

KCRJ	ak	100	D	Jerome, Arizona	Chas. C. Robinson
KFBK	ak	100	C	Sacramento, Calif.	Jas. McClatchy Co.
KFGQ	ak	100	7	Boone, Iowa	Boone Biblical College
KFPL	ck	100	.....	Dublin, Texas	C. C. Baxter
KFPN	ae	15	.....	Greenville, Texas	New Furniture Co.
KFXR	ak	100	(.25)	Oklahoma City, Okla.	Exchange Ave. Baptist Church
KFYO	ak	100	(.25)Z	Lubbock, Texas	Kirksey Brothers
KGBX	ae	100	.....	Springfield, Mo.	KGBX, Inc.
KGCX	ak	100	(.25)	Wolf Point, Mont.	First State Bank of Vida
KGEZ	aj	100	.....	Kalispell, Mont.	Donald C. Treloar
KGFV	ah	100	.....	Kearney, Neb.	Central Nebraska Bdctg. Corp.
KIFH	z	100	.....	Juneau, Alaska	Juneau Broadcasting Co.
KIT	ak	100	.....	Yakima, Wash.	Valley Broadcasters, Inc.
KMED	ak	100	.....	Medford, Ore.	Mrs. W. J. Virgin
KRMD	ak	100	.....	Shreveport, La.	KRMD, Inc. (Jefferson Hotel)
KTSM	z	100	a	El Paso, Texas	Tri-State Broadcasting Co., Inc.
KXRO	ak	100	.....	Aberdeen, Wash.	KXRO, Inc. (Hotel Morck)
WAML	z	100	.....	Laurel, Miss.	Southland Radio Corp.
WBEO	z	100	.....	Marquette, Mich.	Lake Superior Broadcasting Co.
WBOW	ak	100	.....	Terre Haute, Ind.	Banks of Wabash, Inc.
WBRE	z	100	.....	Wilkes-Barre, Pa.	Louis G. Baltimore
WCLS	ae	100	b	Joliet, Ill.	WCLS, Inc.
WDAH	z	100	a	El Paso, Texas	Tri-State Broadcasting Co., Inc.
WEBR	ae	100	Q(.25)	Buffalo, N. Y.	Howell Broadcasting Station
WEXL	ak	50	.....	Royal Oak, Mich.	Royal Oak Broadcasting Co.
WFBG	ae	100	3	Altoona, Pa.	The Gable Broadcasting Co.
WFDF	ae	100	.....	Flint, Mich.	Frank D. Fallain (Union Ind. Bldg.)
WGAL	ae	100	5	Lancaster, Pa.	WGAL, Inc. (Lancaster Newsp. Bldg.)
WGH	ae	100	.....	Newport News, Va.	Hampton Roads Broadcasting Corp.
WHAT	ak	100	4	Philadelphia, Pa.	Independence Broadcasting Co.
WIAS	ak	100	7	Ottumwa, Iowa	Iowa Bdctg. Co. (Hotel Ottumwa)
WJAC	ae	100	3	Johnstown, Pa.	WJAC, Inc.
WKAV	ae	100	.....	Laconia, N. H.	Laconia Radio Club
WKBB	ae	100	bYZ	Joliet, Ill.	Richard W. Hoffman
WKBC	z	100	.....	Birmingham, Ala.	R. B. Broyles Furniture Co.
WLBC	ak	50	6	Muncie, Ind.	D. A. Burton—A. J. Marriott
WMBO	ak	100	.....	Auburn, N. Y.	WMBO, Inc. (Masonic Temple)
WNBH	ae	100	H(.25)	New Bedford, Mass.	New Bedford Bdctg. Co. (N. B. Hotel)
WOL	ae	100	.....	Washington, D. C.	American Broadcasting Co.
WRAW	ak	100	5X	Reading, Pa.	Reading Broadcasting Co.
WROL	ak	100	.....	Knoxville, Tenn.	Stuart Bdctg. Co. (Farragut Hotel)
WSAJ	ae	100	.....	Grove City, Pa.	Grove City College
WSJS	ae	100	C	Winston-Salem, N. C.	Winston-Salem Journal Co.
WTEL	ae	100	4	Philadelphia, Pa.	Foulkrod Radio Eng. Co., Inc.
WTJS	ak	100	(.25)	Jackson, Tenn.	Sun Publishing Co. (Sun Bldg.)
WTRC	ak	50	6 (.1)	Elkhart, Ind.	Elkhart Daily Truth
XEFC	ak	100	1315	Monterrey, N. L., Mex.	Quintanilla y Stevenson
XEI	ak	150	.....	Morelia, Mexico	Carlos Gutierrez M.

1320 kilocycles 227.1 meters

CMBF	z	150	1325	Havana, Cuba	Ramon Bardales
CMCY	ak	1000	1325	Havana, Cuba	M. D. Autran
KGHF	ak	250	(.5)	Pueblo, Colo.	C. P. Ritchie & Geo. J. Ikleman
KGMB	ak	250	C	Honolulu, Hawaii	Honolulu Broadcasting Co.
KID	ae	250	(.5)	Idaho Falls, Idaho	KID Broadcasting Co., Inc.
WADC	ae	1000	C	Akron, Ohio	Allan T. Simmons
WSMB	ae	500	N	New Orleans, La.	WSMB, Inc.

1330 kilocycles 225.4 meters

CMJI	ak	45	1335	Ciego de Avila, Cuba	Gilberto Gessa Lopez
KGB	ae	1000	CT	San Diego, Calif.	Don Lee Broadcasting System
KMO	ak	250	.....	Tacoma, Wash.	KMO, Inc. (Hotel Winthrop)
KSCJ	ah	1000	1C(2.5)	Sioux City, Iowa	Perkins Bros. Co.
WDRS	ae	500	CH	Hartford, Conn.	WDRS, Inc.
WSAI	ae	500	R(1)	Cincinnati, Ohio	The Crosley Radio Corp.
WTAQ	ae	1000	1C	Eau Claire, Wis.	The Gillette Rubber Co.

1340 kilocycles 223.7 meters

KFPY	ae	1000	CT	Spokane, Wash.	Symons Bdctg. Co. (Symons Bldg.)
KGDY	ak	250	.....	Huron, S. D.	Voice of South Dakota, Inc.
WCOA	agj	500	.....	Pensacola, Fla.	Pensacola Bdctg. Co. (San Carlos Hot.)
WLEC	z	250	P(.5)	Portland, Me.	Casto Bay Broadcasting Co.
WSPD	ae	1000	C	Toledo, Ohio	Toledo Bdctg. Co. (Com. Perry Hotel)

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1350 kilocycles 222.1 meters

KIDO	ak	1000	Boise, Idaho
KWK	ae	1000	B	St. Louis, Mo.
WAWZ	ae	250	1	Zarephath, N. J.
WBXN	ae	250	1a	New York City
WCDA	ae	250	1a	New York City
WEHC	ae	500	DY	Emory, Va.
WMSG	ae	250	1a	New York City

C. G. Phillips & Frank Hill
Thomas Patrick, Inc. (Hotel Chase)
Pillar of Fire
New York Met. Broadcasting Corp.
Italian Educ. Bdctg. Co., Inc.
Emory & Henry College
New York Met. Broadcasting Corp.

1360 kilocycles 220.4 meters

CMCR	z	150	1365	Havana, Cuba
CMJP	z	7.5	.....	Moron, Cuba
KGIR	ah	1000	.....	Long Beach, Calif.
KGIR	ak	500	NJ	Butte, Mont.
WCSC	ae	500	.....	Charleston, S. C.
WFBL	ak	1000	C(2.5)	Syracuse, N. Y.
WGES	ae	500	1(1)	Chicago, Ill.
WJKS	agj	1000	1Z	Gary, Ind.
WQBC	ak	500	.....	Vicksburg, Miss.
XEFH	z	250	P	Mexico City, Mexico

Aurelio Hernandez
Cesar Canals
Consolidated Bdctg. Co. (R/C Los An.)
KGIR, Inc.
So. Carolina Broadcasting Co., Inc.
Onondaga Radio Broadcasting Corp.
Oak Leaves Broadcasting Station, Inc.
Johnson-Kennedy Radio Corp.
Delta Bdctg. Co. (Post-Herald Station)
Francisco Hornedo

1370 kilocycles 218.8 meters

CMGE	z	30	1375	Cardenas, Cuba
KCRC	ak	100	2(.25)	Enid, Okla.
KFBL	aj	50	3	Everett, Wash.
KFJM	zk	100	.....	Grand Forks, N. Dak.
KFJZ	ae	100	.....	Fort Worth, Texas
KFLX	z	100	.....	Galveston, Texas
KGAR	ae	100	(.25)	Tucson, Arizona
KGDA	ak	100	.....	Mitchell, S. Dak.
KGFG	bk	100	2	Oklahoma City, Okla.
KGFL	zk	100	4	Santa Fe, N. Mex.
KGKL	ak	100	.....	San Angelo, Texas
KICA	z	100	4	Clovis, N. Mex.
KMAC	ak	100	5	San Antonio, Texas
KONO	ak	100	5	San Antonio, Texas
KOOS	ae	100	.....	Marshfield, Ore.
KRE	ak	100	.....	Berkeley, Calif.
KSO	z	100	B(.25)	Des Moines, Iowa
KUJ	ak	100	D	Walla Walla, Wash.
KVL	z	100	3	Seattle, Wash.
KWKC	z	100	.....	Kansas City, Mo.
WBTM	ak	100	Z	Danville, Va.
WCBM	ae	100	Z(.25)	Baltimore, Md.
WDAS	ae	100	(.25)	Philadelphia, Pa.
WGLC	z	50	(.1)	Hudson Falls, N. Y.
WGL	ae	100	C	Fort Wayne, Ind.
WHBD	bk	100	.....	Mount Orab, Ohio
WHBQ	ak	100	.....	Memphis, Tenn.
WHDF	ak	100	(.25)	Calumet, Mich.
WIBM	ae	100	1	Jackson, Mich.
WJBK	ae	100	1Q	Detroit, Mich.
WJEQ	z	100	6P	Williamsport, Pa.
WJTL	ae	100	.....	Atlanta, Ga.
WLEY	ae	100	(.25)	Lexington, Mass.
WLVA	ck	100	7	Lynchburg, Va.
WMBR	ak	100	.....	Tampa, Fla.
WPFB	ak	100	.....	Hattiesburg, Miss.
WQDM	ae	100	D	St. Albans, Vt.
WRAK	ak	100	6	Williamsport, Pa.
WRAM	ae	100	.....	Wilmington, N. C.
WRDO	ae	100	.....	Augusta, Maine
WRJN	ae	100	.....	Racine, Wis.
WVSJ	ak	50	.....	Buffalo, N. Y.
XEFV	z	100	.....	Juarez, Mexico

Genaro Sebater
Enid Radiophone Co. (Oxford Hotel)
Leese Bros.
University of North Dakota
Fort Worth Broadcasters, Inc.
George Roy Clough
Tucson Motor Service Co.
Mitchell Broadcasting Corp.
Oklahoma Broadcasting Co., Inc.
KGFL, Inc.
KGKL, Inc. (St. Angelus Hotel)
Southwest Broadcasting Co.
Walmac Co., Inc. (Blue Bonnet Stud.)
Mission Broadcasting Co.
H. H. Hanseth, Inc. (Hall Bldg.)
First Cong. Church of Berkeley
Iowa Broadcasting Co.
KUJ, Inc. (Marcus Whitman Hotel)
KVL, Inc.
Wilson Duncan Broadcasting Co.
Piedmont Broadcasting Corp.
Baltimore Broadcasting Corp.
WDAS Bdctg. Sta., Inc. (Elks Hotel)
O. T. Griffin & G. F. Bissell
F. C. Zieg
F. P. Moler
Station WHBQ, Inc. (Hotel Claridge)
Upper Michigan Broadcasting Co.
WIBM, Inc. (Otsega Hotel)
James F. Hopkins, Inc. (Curtiss Bldg.)
WRAK, Inc.
Oglethorpe University
Lexington Air Station
Lynchburg Broadcasting Corp.
F. J. Reynolds
Hattiesburg Broadcasting Co.
A. J. St. Antoine & E. J. Regan
WRAK, Inc.
Wilmington Radio Assn., Inc.
WRDO, Inc. (Augusta House)
Racine Bdctg. Corp. (Hotel Racine)
Seneca Vocational School
Jose Onofre Meza

KCYS.
1380
MTRS.
217.3
DIAL

1380 kilocycles 217.3 meters

CMJC	z	150	1382	Camaguey, Cuba
KOH	ak	500	C	Reno, Nevada
KQV	ak	500	2	Pittsburgh, Pa.
WKBH	aj	1000	1C	LaCrosse, Wis.
WSMK	ak	200	2	Dayton, Ohio
XETB	z	125	.....	Torreón, Coah., Mex.

Feliciano Isaac
McClatchy Newspapers
KQV Bdctg. Co. (Investment Bldg.)
WKBH, Inc. (Radio Bldg.)
Stanley M. Krohn, Jr.
Jose A. Berumen

INDEX BY FREQUENCIES AND DIAL NUMBERS

1390 kilocycles 215.7 meters

CMDB	z	40	1395	Havana, Cuba
KLRA	ae	1000	1C	Little Rock, Ark.
KOY	ae	500	C(1)	Phoenix, Arizona
KUOA	bk	1000	1	Fayetteville, Ark.
WHK	ae	1000	C(2.5)	Cleveland, Ohio

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Julio Powers
 Arkansas Broadcasting Co.
 Nielson Radio & Sporting Goods Co.
 Southwestern Hotel Co. (Ft. Smith)
 Radio Air Service Corp. (Higbee Store)

1400 kilocycles 214.2 meters

CMCH	ak	50	1405	Havana, Cuba
CMCM	z	15	1405	Havana, Cuba
KLO	ae	500	.....	Ogden, Utah
KOCW	z	250	(.5)	Chickasha, Okla.
WBAA	ak	500	1	Lafayette, Ind.
WBBC	ae	500	2	Brooklyn, N. Y.
WCGU	ak	500	2	Brooklyn, N. Y.
WFOX	ak	500	2	Brooklyn, N. Y.
WKBFB	ak	500	1W	Indianapolis, Ind.
WLTH	ae	500	2	Brooklyn, N. Y.

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Wifredo & Hum. Fontanals Sanchez
 Aurelio Balino
 Interstate Bcg. Corp.
 J. T. Griffin
 Purdue University
 Brooklyn Broadcasting Corp.
 United States Broadcasting Corp.
 Paramount Broadcasting Co.
 Indianapolis Broadcasting, Inc.
 Voice of Brooklyn, Inc.

1410 kilocycles 212.6 meters

KFLV	ak	500	4	Rockford, Ill.
KGRS	ae	1000	1	Amarillo, Texas
WAAB	ae	500	CH	Boston, Mass.
WBGM	ae	500	C	Bay City, Mich.
WDAG	ae	1000	1	Amarillo, Texas
WHBL	ae	500	4	Sheboygan, Wis.
WHIS	ak	250	2	Bluefield, W. Va.
WODX	ea	500	3CU	Mobile, Ala.
WRBX	ae	250	2	Roanoke, Va.
WSFA	ak	500	3C	Montgomery, Ala.

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Rockford Broadcasters, Inc.
 E. B. Gish
 Bay State Broadcasting Corp.
 James E. Davidson
 National Radio & Bdcgt. Corp.
 The Press Publishing Co.
 Daily Telegraph
 Mobile Broadcasting Corp.
 Richmond Development Corp.
 Montgomery Broadcasting Co., Inc.

1420 kilocycles 211.1 meters

KABC	ak	100	.....	San Antonio, Texas
KBPS	aj	100	4	Portland, Ore.
KCMC	ak	100	.....	Texarkana, Ark.
KFIZ	ak	100	.....	Fond du Lac, Wis.
KGFF	ak	100	.....	Shawnee, Okla.
KGCC	ak	100	.....	San Francisco, Calif.
KGIW	ak	100	1	Trinidad, Colo.
KGIX	ak	100	.....	Las Vegas, Nevada
KGKX	z	100	.....	Lewiston, Idaho
KICK	z	100	Y	Red Oak, Iowa
KIDW	ak	100	1	Lamar, Colo.
KORE	seh	100	.....	Eugene, Ore.
KUMA	ak	100	.....	Yuma, Arizona
KWCR	ae	100	B(.25)	Cedar Rapids, Iowa
KXL	ae	100	4	Portland, Ore.
WAGM	af	100	.....	Presque Isle, Maine
WAMC	ae	100	.....	Anniston, Ala.
WAZL	z	100	2	Hazleton, Pa.
WEHS	ak	100	a	Cicero, Ill.
WELL	z	50	.....	Battle Creek, Mich.
WENC	ak	100	D	Americus, Ga.
WERE	ae	100	.....	Erie, Pa.
WHDL	seh	100	D	Tupper Lake, N. Y.
WHFC	ae	100	a	Cicero, Ill.
WILM	ae	100	2	Wilmington, Del.
WJBO	z	100	D	New Orleans, La.
WJMS	ak	100	.....	Ironwood, Mich.
WKBI	ak	100	a	Cicero, Ill.
WLBF	ae	100	.....	Kansas City, Kans.
WMAS	ak	100	CH	Springfield, Mass.
WMBG	ae	100	(.25)	Detroit, Mich.
WMBH	ak	100	(.25)	Joplin, Mo.
WPAD	ak	100	Paducah, Ky.
WSPA	seh	100	(.25)	Spartanburg, S. C.
WTBO	ae	100	(.25)	Cumberland, Md.

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Alamo Bctg. Co., Inc. (Texas Theatre)
 Student Body Benson Polytech. School
 Texarkana Gazette & Daily News
 Reporter Printing Co.
 KGFF Bdcgt. Co. (Aldridge Hotel)
 Golden Gate Broadcasting Co.
 Leonard E. Wilson
 J. M. Heaton
 Sand Point Broadcasting Co.
 Red Oak Radio Corp.
 Lamar Broadcasting Co.
 Frank L. Hill & Curtis G. Phillips
 Dr. Albert H. Schermann
 Cedar Rapids Broadcast Co.
 KXL Broadcasters (Hotel Multnomah)
 Aroostook Broadcasting Corp.
 Raymond C. Hammett (Alabama Hot.
 Hazleton Brdcstg. Service, Inc.
 WEHS, Inc.
 Enquirer-News Co.
 Americus Broadcast Co.
 Erie Broadcasting Corp.
 Tupper Lake Broadcasting Co., Inc.
 WHFC, Inc.
 Delaware Broadcasting Co.
 Baton Rouge Brdcstg. Co., Inc.
 WJMS, Inc. (St. James Hotel)
 WKBI, Inc.
 WLBF Bdcgt. Co. (Aladdin Hotel)
 WMAS, Inc.
 Michigan Broadcasting Co.
 W. M. Robertson
 Paducah Bdcgt. Co. (Ritz Hotel)
 The Voice of South Carolina
 Associated Brdcstg. Corp.

1430 kilocycles 209.7 meters

KECA	ah	1000	N	Los Angeles, Calif.
KGNF	ak	500	D	North Platte, Neb.
WBAK	ak	500	1(1)	Harrisburg, Pa.

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Earle C. Anthony, Inc.
 Great Plains Broadcasting Co.
 Pennsylvania State Police

INDEX BY FREQUENCIES AND DIAL NUMBERS

WCAH	ac	500	1C	Columbus, Ohio
WFEA	ac	500	CH	Manchester, N. H.
WHEC	ac	500	C	Rochester, N. Y.
WHP	ak	500	1C(1)	Harrisburg, Pa.
WNBR	ac	500	.....	Memphis, Tenn.
WOKO	ac	500	C	Albany, N. Y.

Commercial Radio Service Co.
New Hampshire Broadcasting Co.
WHEC, Inc. (Roch. Sav. Bank Bldg.)
WHP, Inc. (Harrisburg, Telegraph)
Memphis Bdcgt. Co. (WGBG)
WOKO, Inc. (Hotel Ten Eyck)

1440 kilocycles 208.2 meters

CMBL	ak	20	1445	Havana, Cuba
KDFN	ak	500	.....	Casper, Wyo.
KLS	ae	250	D	Oakland, Calif.
KXYZ	ak	250	.....	Houston, Texas
WBIG	ae	500	C(1)	Greensboro, N. C.
WCBA	ah	250	a	Allentown, Pa.
WMBD	ae	500	3C(1)	Peoria, Ill.
WSAN	z	250	a	Allentown, Pa.
WTAD	ak	500	3	Quincy, Ill.

Julio C. Hidalgo
Donald L. Hathaway
Warner Bros.
Harris County Broadcast Co.
No. Carolina Broadcasting Co., Inc.
B. Bryan Musselman
Peoria Broadcasting Co.
Allentown Call Publishing Co., Inc.
Illinois Broadcasting Corp.

1450 kilocycles 206.8 meters

KTBS	ae	1000	N	Shreveport, La.
WGAR	ak	500	B(1.)	Cleveland, Ohio
WHOM	ae	250	1	Jersey City, N. J.
WNJ	ak	250	1	Newark, N. J.
WSAR	ae	250	.....	Fall River, Mass.
WTFI	ak	500	.....	Athens, Ga.
XEAB	z	7.5	.....	N. Laredo, Mex.

Tri-State Bdcgt. System, Inc.
WGAR Broadcasting Co., Inc.
New Jersey Broadcasting Corp.
Radio Investment Co., Inc.
Doughty & Welch Electric Co., Inc.
Liberty Broadcasting Co.
Humberto Garcia R.

1460 kilocycles 205.4 meters

KSTP	ae	25000	N	St. Paul, Minn.
WJSV	ck	10000	C	Washington, D. C.

National Battery Broadcasting Co.
Old Dominion Broadcasting Co.
(Transmitter at Alexandria, Va.)

1470 kilocycles 204.0 meters

KGA	ak	5000	B	Spokane, Wash.
WLAC	ae	5000	C	Nashville, Tenn.

Northwest Broadcasting System
Life & Casualty Insurance Co.

1480 kilocycles 202.6 meters

CMBK	z	15	1485	Havana, Cuba
CMBR	z	40	1485	Havana, Cuba
KOMA	ak	5000	C	Oklahoma City, Okla.
WKBW	ae	5000	C	Buffalo, N. Y.

Alberto Alvarez
Tomas Basail
National Radio Mfg. Co.
Buffalo Broadcasting Corp.

1490 kilocycles 201.2 meters

WCKY	ae	5000	N	Covington, Ky.
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L. B. Wilson, Inc. (Mabley & Carew)

1500 kilocycles 199.9 meters

KDB	ak	100	CT	Santa Barbara, Calif.
KGFI	aj	100	(.25)	Corpus Christi, Texas
KGFK	ak	100	.....	Moorhead, Minn.
KGIZ	ak	100	.....	Grant City, Mo.
KGKB	bk	100	.....	Tyler, Texas
KGKY	ck	100	.....	Scottsbluff, Neb.
KNOW	ak	100	.....	Austin, Texas
KPJM	ak	100	.....	Prescott, Arizona
KPO	aj	100	.....	Wenatchee, Wash.
KREG	ak	100	.....	Santa Ana, Calif.
KXO	az	100	.....	El Centro, Calif.
WFDV	ak	100	.....	Rome, Ga.
WHEF	ak	100	(.25)	Kosciusko, Miss.
WKBV	z	100	.....	Connerville, Ind.
WKBZ	ak	100	.....	Ludington, Mich.
WKEU	z	100	P	LaGrange, Ga.
WLOE	ak	100	(.25)	Boston, Mass.
WMBQ	ak	100	1	Brooklyn, N. Y.
WMIL	ak	100	1	Brooklyn, N. Y.
WMPC	ak	100	.....	Lapeer, Mich.
WNBFB	ak	100	.....	Binghamton, N. Y.
WOPI	ae	100	.....	Bristol, Tenn.
WPEN	ce	100	(.25)	Philadelphia, Pa.
WRDW	ae	100	.....	Augusta, Ga.
WSYB	ae	100	.....	Rutland, Vt.
WWRL	ak	100	1	Woodside, N. Y.
WWSW	ae	100	X(.25)	Pittsburgh, Pa.
XEFZ	ae	100	.....	Coyoacan, Mexico

Santa Barbara Broadcasters, Ltd.
Eagle Broadcasting Co., Inc.
Red River Broadcasting Co., Inc.
Grant City Park Corp.
East Texas Broadcasting Co.
Hilliard Co., Inc.
KUT Bdcgt. Co. (Driskill Hotel)
Scott & Sturm
Westcoast Broadcasting Co.
Voice of Orange Empire, Inc.
E. R. Irey and F. M. Bowles
Rome Broadcasting Corp.
Attala Milling & Produce Co.
William O. Knox
K. L. Ashbacher
Marshall & Malcolm
Boston Broadcasting Co.
Paul J. Gollhofer
Arthur Faske
First Methodist Protestant Church
Howitt-Wood Radio Co., Inc.
Radiophone Bdcgt. Station WOPI
Wm. Penn Broadcasting Co.
Musicove, Inc. (Relays WLW)
Philipp Weiss Music Co.
Long Island Broadcasting Corp.
Walker & Downing Radio Corp.
Manuel Zetina

KCY5
1500
MTRS
199.9
DIAL

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

ALABAMA			Watts	Kcys.	Watts			Kcys.
Anniston O-21 tr	100	WAMC	1420	San Jose J-1	500	KQW	1010	
Birmingham O-21	5000	WAPI N	1140	Santa Ana M-3	100	KREG	1500	
	500	WBRC C	930	Santa Barbara M-2	100	KDB C	1500	
	100	WKBC	1310	Stockton J-2	250	KGDM	1100	
	100	WJBY	1210		100	KWG C	1200	
Gadsden O-21	100	WBHS	1200	COLORADO				
Huntsville N-21 c	100	WODX C	1410	Colorado Springs K-11	1000	KVOR C	1270	
Mobile Q-20	500	WFA C	1410	Denver K-11	500	KFEL	920	
Montgomery P-21	500	WHET	1210		500	KFXF	920	
Troy P-21 rc	100				1000	KLZ C	560	
ALASKA					12500	KOA N	830	
Anchorage	250	KFQD	1230		500	KPOF	880	
Juneau	100	KIFH	1310	Fort Morgan J-11	100	KGWE	1200	
Ketchikan	500	KGBU	900	Grand Junction K-9 lc	100	KFXJ	1200	
ARIZONA					500	KFKA	890	
Jerome M-6	100	KCRJ	1310	Greeley J-11	100	KIDW	1420	
Phoenix N-6	500	KOY C	1390	Lamar L-12 lc	100	KGHF	1320	
	500	KTAR N	620	Pueblo L-11	250	KGIW	1420	
Prescott M-6	100	KPJM	1500	Trinidad L-11	100	KGIW	1420	
Tucson O-7	100	KGAR	1370	Yuma J-12	100	KGEK	1200	
	500	KVOA	1260	CONNECTICUT				
Yuma O-5 tl	100	KUMA	1420	Bridgeport H-27	250	WICC C	600	
ARKANSAS					500	WDR C	1330	
Blytheville M-19	100	KLCN	1290	Hartford H-27	50000	WTIC R	1060	
Fayetteville M-16	1000	KUOA	1390	Storrs H-28	250	WCAC	600	
Fort Smith N-16	100	KFPW	1210	DELAWARE				
Hot Springs N-17	10000	KTHS N	1040	Wilmington J-26	250	WDEL	1120	
Little Rock N-17	250	KARK	890		100	WILM	1420	
	100	KGHI	1200	DISTRICT OF COLUMBIA				
	1000	KLRA C	1390	Washington J-26	10000	WJSV C	1460	
Paragould M-18	100	KBMT	1200		250	WMAL B	630	
Texarkana O-17 bl	100	KCMC	1420		500	WRC N	950	
	500				100	WOL	1310	
CALIFORNIA				FLORIDA				
Bakersfield L-2 br	100	KERN C	1200	Clearwater R-24	1000	WFLA N	620	
Berkeley J-2	100	KRE	1370	Gainesville Q-24	5000	WRUF C	830	
Beverly Hills M-3 bl	500	KMPC	710	Jacksonville Q-24	1000	WJAX N	900	
Burbank M-3	500	KELW	780	Miami T-25	1000	WIOD N	1300	
El Centro N-4	100	KXO	1500		1000	WQAM C	560	
Eureka H-1 tc	100	KIEM	1210	Orlando R-24	250	WDBO C	580	
Fresno K-2	500	KMJ C	580	Pensacola Q-21	500	WCOA	1340	
Glendale M-3	100	KIEV	850	St. Petersburg S-24	1000	WSUN N	620	
Hollywood M-3	500	KMIR	570	Tampa R-24	1000	WDAE C	1280	
	25000	KNX	1050		100	WMBR	1370	
Long Beach M-3	1000	KFOX C	1250	GEORGIA				
	1000	KECA N	1430	Americus P-22 c	100	WENC	1420	
Los Angeles M-3	1000	KFAC N	1300	Athens N-23 bc	500	WTFI	1450	
	50000	KFI C	640	Atlanta O-22	250	WGST C	890	
	500	KFSG	1120		100	WJTL	1370	
	250	KFVD	1000	Augusta O-23	5000	WSB N	740	
	1000	KFWB	950	Columbus O-22	100	WRDW	1500	
	100	KGFJ C	1200	LaGrange O-22 1	100	WRBL	1200	
	1000	KHJ	900	Macon O-23	100	KBEU	1500	
	500	KRKD	1120	Rome N-22	500	WMAZ	180	
Oakland J-1	250	KTM	780	Savannah O-24	100	WFDV	1500	
	500	KLS	1440	Thomasville Q-22	500	WTOX C	1260	
	500	KLX	880		100	WQDX	1210	
	500	KROW	930	HAWAII				
Pasadena M-3	50	KPPC	1210	Honolulu	250	KGMB C	1320	
Sacramento J-2	100	KFBK C	1310		1000	KGU N	750	
San Bernardino M-3	1000	KFXM	1210	IDAHO				
San Diego N-3	1000	KFSD N	600	Boise G-5	1000	KIDO	1350	
	1000	KGB C	1330	Idaho Falls G-7	250	KID	1320	
	1000	KFRC C	610	Nampa G-5	100	KFXD	1200	
	500	KFWI	930	Pocatello H-7	250	KSEI	890	
	100	KGGC	1420	Peweston E-5 rc	100	KGKX	1420	
	7500	KGO N	790	Twin Falls H-6	500	KTFI	1240	
	100	KJBS	1070					
	5000	KPO N	680					
	1000	KTAB	560					
	1000	KYA N	1230					

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

ILLINOIS		Watts	Keys.
Carthage J-18	50	WCAZ	1070
Chicago I-20	10000	KFKX	1070
	10000	KYV N	1070
	500	WAAF	920
	25000	WBBM C	770
	1500	WCFL R	970
	100	WCRW	1210
	100	WEDC	1210
	50000	WENR N	870
	500	WGES	1360
	25000	WGN C	720
	1000	WIBO	560
	20000	WJJD	1130
	50000	WLS N	870
	5000	WMAQ N	670
	5000	WMBI	1080
	500	WPCC	560
	100	WSBC	1210
	100	WEHS	1420
	100	WHFC	1420
	100	WKBI	1420
	100	WJBL	1200
	100	WEBQ	1210
	100	WCLS	1310
	100	WKBB	1310
	100	WJBC	1200
	500	WMBD C	1440
	500	WTAD	1440
	500	KFLV	1410
	100	WHBF	1210
	100	WCBS	1210
	100	WTAX	1210
	100	WDZ	1070
	250	WILL	890
	5000	WCBD	1080
Cicero I-20			
Decatur K-19			
Harrisburg L-19			
Joliet I-19			
La Salle J-19			
Peoria J-19			
Quincy K-18			
Rockford I-19			
Rock Island I-18			
Springfield K-19			
Tuscola K-20			
Urbana J-20			
Zion I-20			

INDIANA		Watts	Keys.
Anderson J-21	100	WHBU	1210
Connerville K-21	100	WKBV	1500
Elkhart I-21 bc	50	WTRC	1310
Evansville L-20	500	WGBF	630
Fort Wayne J-21	100	WGL C	1370
	10000	WOWO C	1160
	1000	WJKS	1360
	100	WWAE	1200
	1000	WFEM C	1230
	500	WKBF	1400
	500	WBAA	1400
	50	WLBC	1310
	100	WFAM C	1200
	500	WSBT C	1230
	100	WBOW	1310
Terre Haute K-20			

IOWA		Watts	Keys.
Ames I-17	5000	WOI	640
Boone I-17	100	KFGQ	1310
Cedar Rapids I-18	100	KWCR B	1420
Council Bluffs J-16	1000	KOIL B	1260
Davenport I-18	5000	WOC R	1000
Decorah H-18	100	KGCA	1270
	100	KWLC	1270
	100	KSO B	1370
	5000	WHO R	1000
	500	WSUI	880
	100	KFJB	1200
	100	WIAS	1310
	100	KICK	1420
	500	KMNF	890
	500	KMA	930
	1000	KSCJ C	1330
	500	WMT C	600
Des Moines I-17			
Iowa City I-18			
Marshalltown I-17			
Ottumwa J-17			
Red Oak J-16			
Shenandoah J-16			
Sioux City I-15			
Waterloo I-17			

KANSAS		Watts	Keys.
Abilene K-15 bl	5000	KFBI	1050
Coffeyville M-15 tr	500	KGGF	1010
Dodge City L-13	100	KGNO	1210
Kansas City K-16	100	WLBf	1420
Lawrence K-16	500	KFKU	1220
	1000	WREN B	1220
	500	KSAC	580
	1000	WIBW C	580
	1000	KFH C	1300
Manhattan K-15			
Topeka K-16			
Wichita L-15			

KENTUCKY		Watts	Keys.
Covington K-22	5000	WCKY N	1490
Hopkinsville M-20	1000	WFIW C	940
Louisville L-21	25000	WHAS C	820
	100	WLAP	1200
	100	WPAD	1420
Paducah M-19			

LOUISIANA		Watts	Keys.
Monroe P-18	100	KMLB	1200
New Orleans R-19	100	WABZ	1200
	1000	WDSU C	1250
	100	WJBO	1420
	100	WJBW	1200
	500	WSMB N	1320
	10000	WWL	850
	100	KRMD	1310
	1000	KTBS N	1450
	100	KWEA	1210
	10000	KWKH	850
Shreveport P-17			

MAINE		Watts	Keys.
Augusta F-28	100	WRDO	1370
Bangor F-29	100	WABI	1200
	500	WLBZ C	620
	1000	WCSH R	940
	250	WLEC	1340
	100	WAGM	1420
Portland F-28			
Presque Isle D-29 1c			

MARYLAND		Watts	Keys.
Baltimore J-26	10000	WBAL B	1060
	250	WCAO C	600
	100	WCBM	1370
	500	WFBR R	1270
	100	WTBO	1420
	100	WJEJ	1210
Cumberland J-25			
Hagerstown J-25 rc			

MASSACHUSETTS		Watts	Keys.
Babson Park G-28	500	WBSO	920
Boston G-28	500	WAB B	1410
	25000	WBZ B	990
	1000	WEEI R	590
	1000	WHDH	830
	100	WLOE	1500
	1000	WNAC C	1230
	250	WSAR	1450
	100	WLEY	1370
	100	WNBH	1310
	1000	WBZA B	990
	100	WMAS	1420
	100	WORC C	1200
	250	WTAG R	580
Fall River H-28			
Lexington G-28			
New Bedford H-28			
Springfield H-27			
Worcester G-28			

MICHIGAN		Watts	Keys.
Battle Creek I-21	50	WELL	1420
Bay City H-22	500	WBCM C	1410
Calumet E-19	100	WHDF	1370
Detroit H-22	100	WJBK	1370
	10000	WJR B	750
	100	WMB C	1420
	1000	WVJ R	920
	1000	WXYZ	1240
	1000	WKAR	1040
East Lansing H-21			

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

	Watts		Kcys.		Watts		Kcys.
Flint H-22	100	WFDF	1310	NEVADA			
Grand Rapids H-21	500	WASH	1270	Las Vegas L-5	100	KGIX	1420
	500	WOOD	1270	Reno I-3	500	KOH	C 1380
Ironwood F-18 rc	100	WJMS	1420	NEW HAMPSHIRE			
Jackson I-21	100	WIBM	1370	Laconia G-28 lc	100	WKAU	1310
Kalamazoo I-21 tl	1000	WKZO	590	Manchester G-28	500	WFEA	C 1430
Lapeer H-22	100	WMPG	1500	Portsmouth G-28 tc	250	WHEB	740
Ludington H-20	100	WKBJ	1500	NEW JERSEY			
Marquette F-19	100	WBEQ	1310	Asbury Park I-27	500	WCAP	C 1280
Royal Oak H-22	50	WEXL	1310	Atlantic City J-27	5000	WPG	C 1100
MINNESOTA				Camden I-26	500	WCAM	1280
Fergus Falls F-15	100	KGDE	1200	Jersey City I-27	300	WAAT	940
Minneapolis G-17	50000	WCCO	C 810	Newark I-27	250	WHOM	1450
	1000	WDGY	1180	Paterson I-27	1000	WAAM	1250
	1000	WLB	1250	Red Bank I-27	250	WGCP	1250
Moorhead F-15	100	WRHM	1250	Trenton I-26	250	WNJ	1450
Northfield G-17	1000	KGFK	1500	Woreh I-27	5000	WOR	710
	1000	KFMX	1250	Woda I-27	1000	WODA	1250
St. Paul G-17	25000	WCAL	1250	Wjbi I-27	100	WJBI	1210
		KSTP	N 1460	Zarephath I-27	500	WOAX	1280
					250	WAWZ	1350
MISSISSIPPI				NEW MEXICO			
Greenville O-18	100	WKFI	1210	Albuquerque N-7	250	KGGM	1230
Gulfport Q-19	100	WGCM	1210	Clovis O-11 tr	20000	KOB	1180
Hattiesburg Q-19	100	WPFB	1370	Santa Fe M-10	100	KICA	1370
Jackson P-19	1000	WJDX	N 1270		100	KGFL	1370
Kosciusko O-19 bc	100	WHEF	1500	NEW YORK			
Laurel P-19 br	100	WAML	1310	Albany G-27 bl	500	WOKO	C 1430
Meridian P-20	500	WCOC	880	Auburn H-25	100	WMBO	1310
Vicksburg P-18	500	WQBC	1360	Binghamton H-26	100	WNBF	1500
MISSOURI				Brooklyn I-27	500	WBBC	1400
Cp. Girardeau L-19	100	KFVS	1210		1000	WBRR	1300
Columbia K-17	500	KFRU	630		500	WCGU	1400
Grant City J-16	100	KGIZ	1500		500	WFOX	1400
Jefferson City L-17	500	WOS	630		500	WLTH	1400
Joplin M-16	100	WMBH	1420		100	WMBQ	1500
Kansas City K-16	1000	KMBC	C 950		100	WMIL	1500
	100	KWKC	1370	Buffalo H-24	1000	WBEN	R 900
	1000	WDAF	R 610		100	WEBR	1310
	500	WHB	860		1000	WGR	C 550
	1000	WOQ	1300		5000	WKBW	C 1480
St. Joseph K-16	2500	KFEQ	680		50	WSVS	1370
St. Louis L-18	500	KFUO	550		500	WCAD	1220
	100	KFWF	1200		50	WGNV	1210
	50000	KMOX	C 1090		1000	WESG	1040
	500	KSD	R 550		100	WGBB	1210
	1000	KWK	B 1350		50	WGLC	1370
	1000	WEW	760		50	WOCL	1210
	100	WIL	1200		50000	WABC	C 860
Springfield M-17	100	KGBX	1310		250	WBNX	1350
					50000	WBOQ	860
MONTANA					250	WCDA	1350
Billings F-9	1000	KGHL	N 950		50000	WEAF	R 660
Butte F-7	500	KGIR	N 1360		500	WEVD	1300
Great Falls E-8	1000	KFBE	1280		1000	WFAB	1300
Kalispell D-7	100	KGEZ	1310		500	WINS	1180
Missoula E-7	100	KGVO	1200		250	WHN	1010
Wolf Point E-11	100	KGCX	1310		50000	WJZ	B 760
					5000	WLWL	1100
NEBRASKA					500	WMCA	570
Clay Center J-14	1000	KMMJ	740		250	WMSG	1350
Kearney J-14 bc	100	KGFW	1310		500	WNYC	570
Lincoln J-15	5000	KFAB	C 770		1000	WV	1130
	100	KFOR	1210		250	WPAP	1010
	500	WCAJ	590		500	WPCH	810
Norfolk I-15	1000	WJAG	1060		250	WQAO	1010
North Platte J-13	500	KGNF	1430		250	WRNY	1010
Omaha J-15	500	WAAW	660		5000	WHAM	B 1150
	1000	WOW	R 590		500	WHEC	C 1430
Scottsbluff I-11	100	KGKY	1500				
York J-15	500	KGBZ	930				

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

	Watts		Keys.
Saranac Lake F-26	50	WMBZ	1290
Schenectady G-27	50000	WGY R	790
Syracuse G-25	1000	WFBL C	1360
	250	WMAC	570
	250	WSYR B	570
Troy G-27	500	WHAZ	1300
Tupper Lake F-26	100	WHDL	1420
Utica G-26	100	WIBX	1200
Woodside I-27	100	WURL	1500
White Plains H-27 bl	100	WFAS	1210

NORTH CAROLINA

Asheville M-23	1000	WWNC N	570
Charlotte M-24	25000	WBT C	1080
Gastonia M-24	100	WSOC	1210
Greensboro M-24	500	WBIG C	1440
Raleigh M-25	1000	WPTF N	680
Wilmington N-26	100	WRAM	1370
Winston-Salem M-24	100	WSJS C	1310

NORTH DAKOTA

Bismarck F-13	1000	KFYR N	550
Devils Lake E-14	100	KDLR	1210
Fargo F-15	1000	WDAY N	940
Grand Forks E-15	100	KFJM	1370
Mandan F-13	250	KGCU	1240
Minot E-13	250	KLPM	1240

OHIO

Akron I-23	1000	WADC C	1320
	100	WJW	1210
Canton I-23	10	WBHC	1200
Cincinnati K-22	100	WFBE	1200
	1000	WKRC C	550
	50000	WLW N	700
Cleveland I-23	500	WSAI R	1330
	500	WGAR B	1450
	1000	WHK C	1390
	500	WJAY	610
Columbus J-22	50000	WTAM R	1070
	500	WAIU	640
	500	WCAH C	1430
	1000	WEAO	570
	100	WSEN	1210
Dayton J-22	200	WSMK	1380
Mount Orab K-22	100	WHBD	1370
Toledo I-22	1000	WSPD C	1340
Youngstown I-23	500	WKBN C	570
Zanesville J-23	100	WALR	1210

OKLAHOMA

Chickasha N-14	250	KOCW	1400
Elk City N-13	100	KASA	1210
Enid M-14	100	KCRC	1370
Norman N-15	500	WNAD	1010
Oklahoma N-15	100	KFXR	1310
	100	KGFG	1370
	5000	KOMA C	1480
	1000	WKY N	900
Ponca City M-15	1000	WBZZ	1200
Shawnee N-15	100	KGFF	1420
Tulsa M-15	5000	KVOO N	1140

OREGON

Corvallis E-2	1000	KOAC	550
Eugene F-2	100	KORE	1420
Klamath Falls G-3 c	100	KFJL	1210
Marshfield F-1	100	KOOS	1370
Medford G-2	100	KMED	1310

	Watts		Keys.
Portland E-3	500	KALE C	1300
	5000	KEX N	1180
	100	KBPS	1420
	500	KFJR	1300
	1000	KGW N	620
	1000	KOIN C	940
	500	KWJJ	1060
	100	KXL	1420

PENNSYLVANIA

Allentown I-26	250	WCBA	1440
	250	WSAN	1440
Altoona I-25	100	WFBG	1310
Carbondale H-26	10	WNBW	1200
Erie H-24	100	WERE	1420
	500	WLBW C	1260
	25	WIBG	930
Glenside I-26 rc	100	WSAJ	1310
Grove City I-24	500	WBAK	1430
Harrisburg I-25	100	WCOD	1200
	500	WHP C	1430
	100	WAZL	1420
Hazleton I-26 lc	100	WJAC	1310
Johnstown J-24	100	WGAL	1310
Lancaster I-26	100	WKJC	1200
	100	WJBU	1210
Lewisburg I-26	50000	WCAU C	1170
Philadelphia I-26	100	WDAS	1370
	500	WFI R	560
	100	WHAT	1310
	500	WIP C	610
	500	WLIT R	560
	100	WPEN	1500
	250	WRAX	1020
	100	WTEL	1310
Pittsburgh J-24	50000	KDKA B	980
	500	KQV	1380
	1000	WCAE R	1220
	1000	WJAS C	1290
	100	WWSW	1500
Reading I-26	1000	WEEU	830
	100	WRAW	1310
Scranton H-26	250	WGBI	880
	250	WQAN	880
Washington J-24	100	WNBO	1200
Wilkes-Barre I-26	100	WBAX	1210
	100	WBRE	1310
Williamsport I-25	100	WRAK	1370
	100	WJEQ	1370
York J-25 tr	1000	WORK	1000

PHILIPPINES

Cebu	500	KZRC	937.5
Manila	1000	KZKA	1110
	50000	KZRM	618.5

PORTO RICO

San Juan W-34	1000	WKAQ	1240
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RHODE ISLAND

Providence H-28	500	WEAN C	780
	500	WJAR R	890
	100	WPAW	1210
	100	WPRO	1210

SOUTH CAROLINA

Charleston O-25	500	WCSC	1360
Columbia N-24	500	WIS N	1010
Greenville N-23 tc	100	WFBC	1200
Spartanburg N-23	100	WSPA	1420

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

SOUTH DAKOTA		Watts	Keys.
Brookings H-15	1000	KFDY	550
Huron H-14	250	KGDY	1340
Mitchell H-14	100	KGDA	1370
Pierre G-13	200	KGFX	630
Rapid City H-12	100	WCAT	1200
Sioux Falls H-15	1000	KSOO	1110
Vermillion I-15	500	KUSD	890
Watertown G-15	100	KGGR	1210
Yankton I-15	1000	WNAX	C 570

TENNESSEE

Bristol L-23	100	WOPI	1500
Chattanooga N-21	1000	WDOD	C 1280
Jackson M-19 br	100	WTJS	1310
Knoxville M-22	1000	WNOX	C 560
	100	WROL	1310
Memphis N-19	100	WHBQ	1370
	500	WMC	N 780
	500	WNBR	1430
	500	WREC	C 600
Nashville M-21	5000	WLAC	C 1470
	50000	WSM	C N 650
Springfield M-20	100	WSIX	1210

TEXAS

Amarillo N-12	1000	KGRS	1410
	1000	WDAG	1410
Austin Q-14	100	KNOW	1500
Beaumont R-17	500	KFDM	560
Brownsville U-15	500	KWWG	1260
College Sta. Q-15	500	WTAW	1120
Corpus Christi S-14	100	KGFI	1500
Dallas P-15	10000	KRLD	C 1040
	50000	WFAA	N 800
	500	WRR	C 1280
Dublin P-14	100	KFPL	1310
El Paso P-9	100	KTSM	1310
	100	WDAH	1310
Fort Worth P-15	100	KFJZ	1370
	1000	KTAT	1240
	50000	WBAP	N 800
Galveston R-16	100	KFLX	1370
	500	KFUL	1290
Greenville O-15	15	KFPM	1310
Harlingen T-14	500	KRGV	1260
Houston R-16	1000	KPRC	N 920
	500	KTRH	C 1120
	250	KXYZ	1440
Lubbock O-12 tr	100	KFYO	1310
San Angelo Q-13	100	KGKL	1370
San Antonio R-14	100	KABC	1420
	100	KMAC	1370
	100	KONO	1370
	1000	KTSA	C 1290
	50000	WOAI	N 1190
Tyler P-16 rc	100	KGKB	1500
Waco Q-15	1000	WACO	C 1240
Wichita Falls O-14	250	KGKO	570

UTAH

Ogden I-7	500	KLO	1400
Salt Lake City I-7	1000	KDYL	N 1290
	50000	KSL	C 1130

VERMONT

Burlington F-27	100	WCAX	1200
Rutland G-27	100	WSYB	1500
St. Albans F-27	100	WQDM	1370
Springfield G-27	250	WNBX	1260
Waterbury F-27 c	500	WDEV	550

VIRGINIA		Watts	Keys.
Arlington J-25	1000	NAA	690
Danville L-25	100	WBTM	1370
Emory L-23	500	WEHC	1350
Lynchburg L-25	100	WLVA	1370
Newport News L-26	100	WGH	1310
Norfolk L-26	500	WTAR	C 1200
Petersburg L-26	100	WPHR	780
Portsmouth L-26 tc	500	WPOR	780
Richmond K-26	100	WBBL	1210
	100	WMBG	C 1210
	5000	WRVA	N 1110
Roanoke L-24	250	WDBJ	C 930
	250	WRBX	1410

WASHINGTON

Aberdeen D-2	100	KXRO	1310
Bellingham C-3	100	KVOS	1200
Everett C-3	50	KFBL	1370
Olympia D-3 tl	100	KGY	1210
Pullman E-5	1000	KWSC	1220
Seattle C-3	5000	KJR	N 970
	1000	KOL	C 1270
	1000	KOMO	N 920
	100	KPCB	650
	100	KRSC	1120
	1000	KTW	1220
	100	KVL	1370
	250	KXA	760
Spokane D-5	100	KFIO	1120
	1000	KFPY	C 1340
	5000	KGA	B 1470
	1000	KHQ	N 590
Tacoma D-3	250	KMO	1330
	500	KVI	C 570
Walla Walla E-5	100	KUJ	1370
Wenatchee D-4	100	KPQ	1500
Yakima D-4	100	KIT	1310

WEST VIRGINIA

Bluefield L-24	250	WHIS	1410
Charleston K-23	250	WOBU	580
Fairmont J-24	250	WMMN	890
Huntington K-23	250	WSAZ	580
Wheeling J-24	5000	WWVA	C 1160

WISCONSIN

Eau Claire G-18	1000	WTAQ	C 1330
Fond du Lac H-19	100	KFIZ	1420
Green Bay G-19	100	WHBY	1200
Janesville I-19	100	WCLO	1200
La Crosse H-18	1000	WKBH	C 1380
Madison H-19	1000	WHA	940
	500	WIBA	N 1280
Manitowoc H-20	100	WOMT	1210
Milwaukee H-19	250	WHAD	C 1120
	250	WISN	C 1120
	1000	WTMJ	N 620
Poynette H-19	100	WIBU	1210
Racine I-20	100	WRJN	1370
Sheboygan H-20	500	WHBL	1410
Stevens Point G-19	2000	WLBL	900
Superior F-17	1000	WBEC	N 1290

WYOMING

Casper H-10	500	KDFN	1440
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CANADA

ALBERTA		Watts	Keys.
Calgary B-7	500	CFAC	690
	10000	CFCN	985
	500	CJ CJ	690

INDEX BY LOCATIONS WITH MAP KEY

Columbia: C. National: Red, R; Blue, B; Both, N.

	Watts		Keys.		Watts		Keys.
Edmonton A-8	250	CHMA	580	Quebec D-27	100	CHRC	645
	500	CJCA	745		100	CKCI	645
	500	CKUA	580		100	CKCV	880
Lethbridge C-8	100	CJOC	1120	SASKATCHEWAN			
Red Deer A-8	1000	CKLC	840	Canora B-13 tl	15	10-BU	1200
BRITISH COLUMBIA				Fleming C-13	1000	CJRW	665
Chilliwack B-3	100	CHWK	665	Moose Jaw C-11	500	CJRM	665
Kamloops B-5	100	CJFC	1120		25	10-AB	1200
Kelowna C-6 tl	100	CKOV	1200	Prince Albert A-11 rc	25	10-BI	1200
Trail C-6 c	25	10-AT	1155	Regina C-12	500	CHWC	960
Vancouver B-3	100	CHLS	730	Saskatoon B-11	500	CKCK	960
	500	CJOR	1210	Yorkton B-13	500	CFQC	910
	100	CKCD	730		500	CJGJ	630
	50	CKFC	730	NEWFOUNDLAND			
	100	CKMO	730	St. Johns A-35	200	VOAS	810
	100	CKWX	730		500	VOGY	860
	500	CNRV	1030		100	VONA	950
	500	CFCT	630		500	VONF	1195
Victoria C-3					750	VOWR	750
				Wabana A-35	400	VOGT	893
MANITOBA				CENTRAL AMERICA			
Brandon D-14	500	CKX	930	COSTA RICA			
Winnipeg D-15	5000	CKY	780	San Jose FF-23	50	TICR	911
NEW BRUNSWICK				SALVADOR			
Fredericton D-29	100	CFNB	1210	Salvador CC-19 br	500	RUS	664
Moncton D-30	700	CNRA	630	MEXICO			
St. John D-30	500	CFBO	890	AGUASCALIENTES			
NOVA SCOTIA				Aguascalientes W-11 bc	350	XFC	805
Glace Bay C-32	2000	VAS	685	BAJA CALIFORNIA			
Halifax E-31	500	CHNS	815	Mexicali O-4 tc	7.5	XEAO	560
	500	CNRH	815	Tijuana N-3 bc	300	XEFD	1020
Sydney C-32	100	CJCB	880	CHIHUAHUA			
Wolfville D-31	50	CKIC	1010	Chihuahua R-9	100	XEFI	1000
ONTARIO					250	XFF	915
Brantford H-23 tr	15	10-BQ	1200	Juarez P-9	5000	XEAN	750
Chatham H-22	250	CFCO	1010		100	XEFV	1370
Cobalt E-23	100	CKMC	1210		500	XEJ	1015
Ft. William E-19 bl	100	CKPR	890	COAHUILA			
Hamilton H-24	50	CHML	880	Piedras Negras S-12 tr	100000	XEPN	585
	1000	CKOC	635	Salttillo, Coah. U-12	10	XEL	1000
Kingston G-25	50	CFRC	930	Torreón U-11 tl	125	XETB	1380
London H-23	5080	CJGC	595	Villa Acuna R-12 c	75000	XER-XEF	735
North Bay F-23 c	100	CFCH	930	D. F.			
Ottawa F-25	100	CKCO	890	Coyoacan Y-13	100	XEFZ	1500
	500	CNRO	600	Mexico City Y-13	250	XEAD	875
Prescott F-25	100	CFCL	915		100	XEAI	1090
Preston H-23	100	CKPC	880		10000	XEB	1030
St. Catharines H-24 tl	1000	CKTB	635		500	XEFA	1250
Stratford H-23 tc	15	10-AK	1200		250	XEFH	1360
Toronto G-24	500	CFCA	1120		500	XEG	1075
	10000	CFRB	690		100	XEK	990
	5000	CHNC	840		1000	XEN	711
	500	CKCL	580		5000	XEFO	940
	5000	CKGW	840		1000	XEP	780
	500	CKNC	960		250	XETA	1140
	5000	CPRY	840		1000	XETR	610
Waterloo G-23	100	CKCR	645		500	XETW	830
Windsor I-22 tc	5000	CKOK	540		5000	XEW	910
Wingham G-23	25	10-BP	1199		500	XEX	1210
PRINCE EDWARD ISLAND					2000	XFG	638
Charlottetown C-31	500	CFCY	580		1000	XFI	818
	100	CHCK	960		5000	XFO	940
Summerside C-31	100	CHGS	1120		500	XFX	860
QUEBEC					50	XEC	1000
Montreal E-26	500	CFCF	N 1030	Toluca Y-12			
	100	CHCH	1200				
	100	CHLP	1200				
	5000	CHYC	730				
	5000	CKAC	C 730				

INDEX BY LOCATIONS WITH MAP KEY

HIDALGO				Colon W-24			
	Watts		Keys.		Watts		Keys.
Pachuca Y-13 rc	100	XETU	890	Cruces	15	CMGH	834
JALISCO				Guantanamo X-28 tc			
Guadalajara, Ja. X-10	100	XEA	1000	Havana W-23	500	CMFJ	1300
	500	XED	1155		150	CMAY	965
MICHOACAN					150	CMBC	1270
Morelia, Mich. Y-12	125	XEI	1310		150	CMBD	965
NEUVO LEON					150	CMBF	1325
Monterrey, N. L. U-13	100	XEFB	1315		225	CMBG	1070
	100	XEFJ	1000		150	CMBJ	1140
	250	XEH	1132		15	CMBK	1485
	500	XET	690		20	CMBL	1445
PUEBLA					150	CMBN	1185
Puebla Z-13	100	XETH	840		40	CMBR	1485
QUERETARO					150	CMBS	780
Queretaro X-12 br	40	XEFS	1000		150	CMBW	925
SAN LUIS POTOSI					250	CMBY	1230
San Luis Potosi W-12 bc	100	XEAC	1295		150	CMBZ	1010
TAMAULIPAS					500	CMC	840
Matamoros U-14 tr	500000	XEM	660		150	CMCA	1230
	150000	XETM	845		150	CMCB	1070
N. Laredo S-13	7.5	XEAB	1450		250	CMCD	1140
	100	XEFE	1000		250	CMCF	890
	150000	XENT	1115		50	CMCH	1405
Reynosa, Tams. T-14	10000	XEAW	965		250	CMCJ	1185
Tampico, Tams. W-14	70	XEFW	1240		15	CMCM	1405
	250	XES	1055		250	CMCN	925
VERA CRUZ					1000	CMCQ	780
Jalapa Y-14	100	XETC	1000		150	CMCR	1365
	500	XFB	840		150	CMCU	630
Vera Cruz, Ver. Z-14	500	XETF	630		150	CMCW	965
	100	XEU	1010		150	CMCX	1010
YUCATAN					1000	CMCY	1325
Merida, Yuc. X-19	10	XEFC	1020		40	CMDB	1395
	105	XEY	546.8		150	CMDD	588
WEST INDIES					250	CMDE	925
CUBA					3150	CMK	730
Caibarien W-25	250	CMHD	950		250	CMQ	630
Camaguey W-26	150	CMJC	1382		1400	CMW	590
	50	CMJE	1175		500	CMX	890
	200	CMJF	930		30	CMGB	1205
	50	CMJG	1050		30	CMGC	820
	300	CMJK	790		100	CMGF	987
	50	CMJL	960		15	CMGH	1040
	50	CMJN	1240		7.5	CMJP	1360
Cardenas W-24	30	CMGE	1375		20	CMAB	1249
Ciego de Avila W-26	30	CMJH	1150		30	CMHI	1030
	45	CMJI	1335		150	CMKC	1034
	50	CMJO	1110		250	CMHC	790
Cienfuegos W-25	40	CMHJ	1125	DOMINICAN REPUBLIC			
	20	CMHL	1290	Santo Domingo X-31	1000	HIX	579
				HAITI			
				Port au Prince X-30	1000	HHK	920
				SOUTH AMERICA			
				Bogota, Colombia GG-30 c	2000	HJN	685
				Caracas Venez. DD-31	5000	YVIBC	960

Map Key: For locating cities not shown on the RADEX Map of North America, use the small letters following the square in which that city is located thus: tl top left, tc top center, tr top right, bl bottom left, bc bottom center, br bottom right, l left, c center, r right.

TIME CONVERSION TABLE

Atlantic	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00
Eastern	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00
Central	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00
Mountain	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00
Pacific	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00

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CFAC	690	Calgary, Alta., <i>MST.</i>	CMCA	1230	Havana, Cuba.	KFDY	550	Brookings, S. D., <i>CST.</i>
CFBO	890	St. John, N. B.	CMCB	1070	Havana, Cuba, <i>EST.</i>	KFEL	920	Denver, Colo., <i>MST.</i>
CFCA	1120	Toronto, Ont., <i>EST.</i>	CMCD	1140	Havana, Cuba, <i>EST.</i>	KFEQ	680	St. Joseph, Mo., <i>CST.</i>
CFCF	1030	Montreal, Que., <i>EST.</i>	CMCF	890	Havana, Cuba, <i>EST.</i>	KFFQ	1310	Boone, Iowa, <i>CST.</i>
CFCH	930	North Bay, Ont., <i>EST.</i>	CMCH	1405	Havana, Cuba, <i>EST.</i>	KFH	1300	Wichita, Kans., <i>CST.</i>
CFCN	985	Calgary, Alta., <i>MST.</i>	CMCJ	1185	Havana, Cuba.	KFI	640	Los Angeles, Calif., <i>PST.</i>
CFCO	1010	Chatham, Ont., <i>EST.</i>	CMCM	1405	Havana, Cuba.	KFIO	1120	Spokane, Wash., <i>PST.</i>
CFCT	630	Victoria, B. C., <i>PST.</i>	CMCN	925	Havana, Cuba.	KFJ	1420	Fond du Lac, Wis., <i>CST.</i>
CFCY	580	Charlottetown, P. E. I.	CMCQ	790	Havana, Cuba.	KFJB	1200	Marshalltown, Iowa.
CFJC	1120	Kamloops, B. C., <i>PST.</i>	CMCR	1365	Havana, Cuba.	KFJM	1210	Klamath Falls, Ore.
CFLE	915	Prescott, Ont., <i>EST.</i>	CMCS	630	Havana, Cuba.	KFJN	1370	Grand Forks, N. D.
CFNB	1210	Fredericton, N.B., <i>AST.</i>	CMCW	965	Havana, Cuba, <i>EST.</i>	KFJR	1300	Portland, Ore., <i>PST.</i>
CFQC	910	Saskatoon, Sask.	CMCX	1010	Havana, Cuba.	KFJZ	1370	Fort Worth, Texas, <i>CST.</i>
CFRB	690	Toronto, Ont., <i>EST.</i>	CMCY	1325	Havana, Cuba, <i>EST.</i>	KFKA	880	Greeley, Colo., <i>MST.</i>
CFRC	930	Kingston, Ont.	CMDB	1395	Havana, Cuba.	KFKU	1220	Lawrence, Kans., <i>CST.</i>
CHCH	1200	Montreal, Que.	CMDD	588	Havana, Cuba.	KFKX	1020	Chicago, Ill.
CHCK	960	Charlottetown, P. E. I.	CMDE	925	Havana, Cuba.	KFLV	1410	Rockford, Ill., <i>CST.</i>
CHGS	1120	Summerside, P. E. I.	CMGA	834	Colon, Cuba.	KFLX	1370	Galveston, Texas.
CHLP	1200	Montreal, Que.	CMGB	1205	Matanzas, Cuba.	KFMX	1250	Northfield, Minn., <i>CST.</i>
CHLS	730	Vancouver, B. C., <i>PST.</i>	CMGC	820	Matanzas, Cuba.	KFNF	890	Shenandoah, Iowa, <i>CST.</i>
CHMA	580	Edmonton, Alta., <i>MST.</i>	CMGE	1375	Cardenas, Cuba, <i>EST.</i>	KFOR	1210	Lincoln, Neb., <i>CST.</i>
CHML	880	Hamilton, Ont., <i>EST.</i>	CMGF	987	Matanzas, Cuba.	KFOX	1250	Long Beach, Calif., <i>PST.</i>
CHNC	840	Toronto, Ont.	CMGH	1040	Matanzas, Cuba	KFPL	1310	Dublin, Texas, <i>CST.</i>
CHNS	815	Halifax, N. S., <i>AST.</i>	CMHC	790	Tuinucu, Cuba.	KFPM	1310	Greenview, Texas, <i>CST.</i>
CHRC	645	Quebec, Que., <i>EST.</i>	CMHD	950	Caibarien, Cuba.	KFPW	1210	Fort Smith, Ark., <i>CST.</i>
CHWC	960	Regina, Sask., <i>MST.</i>	CMHI	1030	Santa Clara, Cuba, <i>EST.</i>	KFPY	1340	Spokane, Wash., <i>PST.</i>
CHWK	665	Chilliwack, B. C., <i>PST.</i>	CMHJ	1125	Cienfuegos, Cuba, <i>EST.</i>	KFQD	1230	Anchorage, Alaska.
CHYC	730	Montreal, Que.	CMHK	1225	Cruces, Cuba.	KFR	610	San Francisco, Calif.
CJCA	745	Edmonton, Alta., <i>MST.</i>	CMHL	1290	Cienfuegos, Cuba.	KFRU	630	Columbia, Mo., <i>CST.</i>
CJCB	880	Sydney, N. S., <i>AST.</i>	CMJ	1382	Camaguey, Cuba.	KFSD	600	San Diego, Calif., <i>PST.</i>
CJJC	690	Calgary, Alta., <i>MST.</i>	CMJE	1175	Camaguey, Cuba.	KFSG	1120	Los Angeles, Calif., <i>PST.</i>
CJGC	595	London, Ont., <i>EST.</i>	CMJF	930	Camaguey, Cuba.	KFUL	1290	Galveston, Texas, <i>CST.</i>
CJGX	630	Yorkton, Sask., <i>CST.</i>	CMJG	1050	Camaguey, Cuba.	KFUV	550	St. Louis, Mo., <i>CST.</i>
CJOC	1120	Lethbridge, Alta., <i>MST.</i>	CMJH	1150	Ciego de Avila, Cuba.	KFVD	1000	Los Angeles, Calif., <i>PST.</i>
CJOR	1210	Vancouver, B. C., <i>PST.</i>	CMJI	1335	Ciego de Avila, Cuba.	KFVS	1210	Cape Girardeau, Mo.
CJRM	665	Moose Jaw, Sask., <i>MST.</i>	CMJK	790	Camaguey, Cuba.	KFWB	950	Los Angeles, Calif., <i>PST.</i>
CJRW	665	Fleming, Sask., <i>MST.</i>	CMJL	960	Camaguey, Cuba.	KFWF	1200	St. Louis, Mo., <i>CST.</i>
CKAC	730	Montreal, Que., <i>EST.</i>	CMJN	1240	Camaguey, Cuba.	KFWI	930	San Francisco, Calif.
CKCD	730	Vancouver, B. C.	CMJO	1110	Ciego de Avila, Cuba.	KFXD	1200	Nampa, Idaho, <i>MST.</i>
CKCI	645	Quebec, Que., <i>EST.</i>	CMJP	1360	Moron, Cuba.	KFXF	920	Denver, Colo., <i>MST.</i>
CKCK	960	Regina, Sask., <i>MST.</i>	CMK	730	Havana, Cuba, <i>EST.</i>	KFXJ	1200	Grand Jet., Colo., <i>MST.</i>
CKCL	580	Toronto, Ont., <i>EST.</i>	CMKC	1034	Santiago, Cuba.	KFXM	1210	San Bernardino, Calif.
CKCO	890	Ottawa, Ont.	CMKJ	1300	Guantanamo, Cuba.	KFXR	1310	Oklahoma City, Okla.
CKCR	645	Waterloo, Ont., <i>EST.</i>	CMQ	630	Havana, Cuba.	KFY	1310	Lubbock, Texas, <i>CST.</i>
CKCV	880	Quebec, Que., <i>EST.</i>	CMW	590	Havana, Cuba, <i>EST.</i>	KFYR	550	Bismarck, N. D., <i>CST.</i>
CKFC	730	Vancouver, B. C.	CMX	890	Havana, Cuba, <i>EST.</i>	KGA	1470	Spokane, Wash., <i>PST.</i>
CKGW	840	Toronto, Ont., <i>EST.</i>	CMRA	630	Moncton, N. B., <i>AST.</i>	KGAR	1370	Tucson, Ariz., <i>MST.</i>
CKIC	1010	Wolffville, N. S., <i>AST.</i>	CMRH	815	Halifax, N. S., <i>AST.</i>	KGB	1330	San Diego, Calif., <i>PST.</i>
CKLC	840	Red Deer, Alta., <i>MST.</i>	CMRO	600	Ottawa, Ont., <i>EST.</i>	KGBU	900	Ketchikan, Alaska.
CKMC	1210	Cobalt, Ont., <i>EST.</i>	CMRV	1030	Vancouver, B. C., <i>PST.</i>	KGXB	1310	Springfield, Mo., <i>CST.</i>
CKMO	730	Vancouver, B. C.	CPRY	840	Toronto, Ont., <i>EST.</i>	KGZ	300	York, Neb., <i>CST.</i>
CKNC	960	Toronto, Ont., <i>EST.</i>	HHK	920	Port-au-Prince, Haiti.	KGCA	1270	Decorah, Iowa, <i>CST.</i>
CKOC	635	Hamilton, Ont., <i>EST.</i>	HIX	579	Santo Domingo, <i>EST.</i>	KGCR	1210	Watertown, S. D., <i>CST.</i>
CKOK	540	Windsor, Ont., <i>EST.</i>	HJN	685	Bogota, Colombia.	KGCU	1240	Mandan, N. D., <i>MST.</i>
CKOV	1200	Kelowna, B. C., <i>PST.</i>	KABC	1420	San Antonio, Tex., <i>CST.</i>	KGCC	1310	Wolf Point, Mont., <i>MST.</i>
CKPC	880	Preston, Ont., <i>EST.</i>	KALE	1300	Portland, Ore., <i>PST.</i>	KGDA	1370	Mitchell, S. D., <i>CST.</i>
CKPR	890	Ft. William, Ont., <i>EST.</i>	KARK	890	Little Rock, Ark., <i>CST.</i>	KGDE	1200	Fergus Falls, Minn.
CKTB	635	St. Catharines, Ont.	KASA	1210	Elk City, Okla., <i>CST.</i>	KGDM	1100	Stockton, Calif., <i>PST.</i>
CKUA	580	Edmonton, Alta., <i>MST.</i>	KBPS	1420	Portland, Ore., <i>PST.</i>	KGDY	1340	Huron, S. D., <i>CST.</i>
CKWX	730	Vancouver, B. C., <i>PST.</i>	KBTM	1200	Paragould, Ark., <i>CST.</i>	KGEK	1200	Yuma, Colo., <i>MST.</i>
CKX	930	Brandon, Man., <i>CST.</i>	KCMG	1420	Texarkana, Ark., <i>CST.</i>	KGER	1360	Long Beach, Calif., <i>PST.</i>
CKY	780	Winnipeg, Man., <i>CST.</i>	KCRC	1370	Enid, Okla., <i>CST.</i>	KGEW	1200	Ft. Morgan, Colo., <i>MST.</i>
CMAB	1249	Pinar del Rio, Cuba.	KCRJ	1310	Jerome, Ariz., <i>MST.</i>	KGEZ	1310	Kalispell, Mont., <i>MST.</i>
CMAB	660	Havana, Cuba, <i>EST.</i>	KDB	1500	Santa Barbara, Calif.	KGFF	1420	Shawnee, Okla., <i>CST.</i>
CMAY	965	Havana, Cuba.	KDFN	1440	Casper, Wyo., <i>MST.</i>	KGFG	1370	Oklahoma City, Okla.
CMBC	1270	Havana, Cuba, <i>EST.</i>	KDKA	980	Pittsburgh, Pa., <i>EST.</i>	KGFI	1500	Corpus Christi, Texas.
CMBD	965	Havana, Cuba.	KDLR	1210	Devils Lake, N. D., <i>CST.</i>	KGFI	1200	Los Angeles, Calif.
CMBF	1325	Havana, Cuba.	KDYL	1290	Salt Lake City, Utah	KGFK	1500	Moorehead, Minn., <i>CST.</i>
CMBG	1070	Havana, Cuba.	KECA	1430	Los Angeles, Calif., <i>PST.</i>	KGFL	1370	Santa Fe, N. M., <i>MST.</i>
CMBJ	1140	Havana, Cuba.	KEW	780	Burbank, Calif., <i>PST.</i>	KGFW	1310	Kearney, Neb., <i>CST.</i>
CMBK	1485	Havana, Cuba.	KERN	1200	Bakersfield, Calif., <i>PST.</i>	KGFX	630	Pierre, S. D.
CMBL	1445	Havana, Cuba, <i>EST.</i>	KEX	1180	Portland, Ore., <i>PST.</i>	KGGC	1420	San Francisco, Calif.
CMBN	1185	Havana, Cuba, <i>EST.</i>	KFAB	770	Lincoln, Neb., <i>CST.</i>	KGGF	1010	Coffeyville, Kans., <i>CST.</i>
CMBR	1485	Havana, Cuba.	KFAC	1300	Los Angeles, Calif., <i>PST.</i>	KGGM	1230	Albuquerque, N. M.
CMBS	780	Havana, Cuba.	KFB	1280	Great Falls, Mont., <i>MST.</i>	KGHF	1320	Pueblo, Colo., <i>MST.</i>
CMBW	925	Havana, Cuba.	KFBI	1050	Abilene, Kans., <i>CST.</i>	KGHI	1200	Little Rock, Ark., <i>CST.</i>
CMBY	1230	Havana, Cuba.	KFBK	1310	Sacramento, Calif., <i>PST.</i>	KGHL	950	Billings, Mont., <i>MST.</i>
CMBO	1010	Havana, Cuba, <i>EST.</i>	KFBL	1370	Everett, Wash., <i>PST.</i>	KGIR	1360	Butte, Mont., <i>MST.</i>
CMC	840	Havana, Cuba.	KFDM	560	Beaumont, Tex., <i>CST.</i>			

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KGII 1420	Trinidad, Colo., <i>MST.</i>	KROW 930	Oakland, Calif., <i>PST.</i>	WBAK 1430	Harrisburg, Pa., <i>EST.</i>
KGIX 1420	Las Vegas, Nev., <i>PST.</i>	KRSC 1120	Seattle, Wash., <i>PST.</i>	WBAL 1060	Baltimore, Md., <i>EST.</i>
KGIZ 1500	Grant City, Mo., <i>CST.</i>	KSAC 580	Manhattan, Kans., <i>CST.</i>	WBAP 800	Ft. Worth, Texas, <i>CST.</i>
KGKB 1500	Tyler, Texas, <i>CST.</i>	KSCJ 1330	Sioux City, Iowa, <i>CST.</i>	WBAX 1210	Wilkes Barre, Pa., <i>EST.</i>
KGKL 1370	San Angelo, Texas, <i>CST.</i>	KSD 550	St. Louis, Mo., <i>CST.</i>	WBBC 1400	Brooklyn, N. Y., <i>EST.</i>
KGKO 570	Wichita Falls, Texas.	KSEI 890	Pocatello, Idaho, <i>MST.</i>	WBBL 1210	Richmond, Va., <i>EST.</i>
KGKX 1420	Lewiston, Idaho.	KSL 1130	Salt Lake City, Utah.	WBBS 770	Chicago, Ill., <i>CST.</i>
KGKY 1500	Scottsbluff, Neb., <i>MST.</i>	KSO 1380	Des Moines, Iowa.	WBBS 1300	Brooklyn, N. Y., <i>EST.</i>
KGMB 1320	Honolulu, Hawaii.	KSOO 1110	Sioux Falls, S. D., <i>CST.</i>	WBBS 1200	Ponca City, Okla., <i>CST.</i>
KGMB 1430	North Platte, Neb.	KSTP 1460	St. Paul, Minn., <i>CST.</i>	WBCT 1410	Bay City, Mich., <i>EST.</i>
KGNO 1210	Dodge City, Kans.	KTAB 560	San Francisco, Calif.	WBEN 900	Buffalo, N. Y., <i>EST.</i>
KGGO 790	San Francisco, Calif.	KTAR 620	Phoenix, Ariz., <i>MST.</i>	WBEQ 1310	Marquette, Mich., <i>CST.</i>
KGGRS 1410	Amarillo, Texas, <i>CST.</i>	KTAT 1240	Ft. Worth, Texas.	WBHS 1200	Huntsville, Ala., <i>CST.</i>
KGU 750	Honolulu, Hawaii.	KTBS 1450	Shreveport, La., <i>CST.</i>	WBIG 1440	Greensboro, N. C., <i>EST.</i>
KGVO 1200	Missoula, Mont., <i>MST.</i>	KTFI 1240	Twin Falls, Idaho, <i>MST.</i>	WBNS 1350	New York City, <i>EST.</i>
KGW 620	Portland, Ore., <i>PST.</i>	KTHS 1040	Hot Springs, Ark., <i>CST.</i>	WBOQ 860	New York City.
KGY 1210	Olympia, Wash., <i>PST.</i>	KTM 780	Los Angeles, Calif., <i>PST.</i>	WBOW 1310	Terre Haute, Ind., <i>CST.</i>
KHJ 900	Los Angeles, Calif., <i>PST.</i>	KTRH 1120	Houston, Texas, <i>CST.</i>	WBRC 930	Birmingham, Ala., <i>CST.</i>
KHQ 590	Spokane, Wash., <i>PST.</i>	KTSA 1290	San Antonio, Tex., <i>CST.</i>	WBRE 1310	Wilkes Barre, Pa.
KICA 1370	Clovis, N. M.	KTSM 1310	El Paso, Texas.	WBSO 920	Babson Park, Mass.
KICK 1420	Red Oak, Iowa.	KTW 1220	Seattle, Wash.	WBT 1080	Charlotte, N. C., <i>EST.</i>
KID 1320	Idaho Falls, Idaho, <i>MST.</i>	KUJ 1370	Walla Walla, Wash.	WBTM 1370	Danville, Va., <i>CST.</i>
KIDO 1350	Boise, Idaho, <i>MST.</i>	KUMA 1420	Yuma, Ariz., <i>MST.</i>	WBZ 990	Boston, Mass., <i>EST.</i>
KIDW 1420	Lamar, Colo., <i>MST.</i>	KUOA 1390	Fayetteville, Ark., <i>CST.</i>	WBZA 990	Springfield, Mass., <i>EST.</i>
KIEM 1210	Eureka, Calif., <i>PST.</i>	KUSD 890	Yermilion, S. D., <i>CST.</i>	WCAC 600	Storrs, Conn., <i>EST.</i>
KIEV 859	Glendale, Calif., <i>PST.</i>	KVI 570	Tacoma, Wash., <i>PST.</i>	WCAD 1220	Canton, N. Y., <i>EST.</i>
KIFH 1310	Juneau, Alaska.	KVL 1370	Seattle, Wash.	WCAE 1220	Pittsburgh, Pa., <i>EST.</i>
KIT 1310	Yakima, Wash., <i>PST.</i>	KVOA 1260	Tucson, Ariz.	WCAH 1430	Columbus, Ohio, <i>EST.</i>
KJBS 1070	San Francisco, Calif.	KVOO 1140	Tulsa, Okla., <i>CST.</i>	WCAJ 590	Lincoln, Neb., <i>CST.</i>
KJR 870	Seattle, Wash., <i>PST.</i>	KVOR 1270	Colorado Springs, Colo.	WCAL 1250	Northfield, Minn., <i>CST.</i>
KLGN 1290	Blytheville, Ark.	KVOS 1200	Bellingham, Wash.	WCAM 1280	Camden, N. J., <i>EST.</i>
KLO 1400	Minot, N. D., <i>CST.</i>	KWCR 1420	Cedar Rapids, Ia., <i>CST.</i>	WCAO 600	Baltimore, Md., <i>EST.</i>
KLPM 1240	Ogden, Utah.	KWEA 1210	Shreveport, La.	WCAP 1280	Asbury Park, N. J., <i>EST.</i>
KLRA 1390	Little Rock, Ark., <i>CST.</i>	KWG 1200	Stockton, Calif., <i>PST.</i>	WCAT 1200	Rapid City, S. D., <i>CST.</i>
KLS 1440	Oakland, Calif., <i>PST.</i>	KWJ 1060	Portland, Ore.	WCAU 1170	Philadelphia, Pa., <i>EST.</i>
KLX 880	Oakland, Calif., <i>PST.</i>	KWK 1350	St. Louis, Mo., <i>CST.</i>	WCAX 1200	Burlington, Vt., <i>EST.</i>
KLZ 560	Denver, Colo., <i>MST.</i>	KWKC 1370	Kansas City, Mo.	WCAY 1070	Carthage, Ill., <i>CST.</i>
KMA 930	Shenandoah, Iowa, <i>CST.</i>	KWKC 850	Shreveport, La., <i>CST.</i>	WCBA 1440	Allentown, Pa., <i>EST.</i>
KMAC 1370	San Antonio, Tex., <i>CST.</i>	KWLC 1270	Decorah, Iowa, <i>CST.</i>	WCBD 1080	Zion, Ill., <i>CST.</i>
KMB 950	Kansas City, Mo., <i>CST.</i>	KWSC 1220	Pullman, Wash., <i>PST.</i>	WCBM 1370	Baltimore, Md., <i>EST.</i>
KMED 1310	Medford, Ore., <i>PST.</i>	KWVG 1260	Brownsville, Texas.	WCBT 1210	Springfield, Ill., <i>CST.</i>
KMJ 580	Fresno, Calif., <i>PST.</i>	KXA 760	Seattle, Wash., <i>PST.</i>	WCBO 810	Minneapolis, Minn.
KMLB 1200	Monroe, La., <i>CST.</i>	KXL 1420	Portland, Ore., <i>PST.</i>	WCDA 1350	New York City, <i>EST.</i>
KMMJ 740	Clay Center, Neb., <i>CST.</i>	KXO 1500	El Centro, Calif.	WCFL 970	Chicago, Ill., <i>CST.</i>
KMO 1330	Tacoma, Wash., <i>PST.</i>	KXRO 1310	Aberdeen, Wash., <i>PST.</i>	WCGU 1400	Brooklyn, N. Y., <i>EST.</i>
KMOX 1090	St. Louis, Mo., <i>CST.</i>	KXYZ 1440	Houston, Texas, <i>CST.</i>	WCKY 1490	Covington, Ky., <i>CST.</i>
KMP 710	Beverly Hills, Calif.	KYA 1230	San Francisco, Calif.	WCLO 1200	Janesville, Wis., <i>EST.</i>
KMTR 570	Hollywood, Calif., <i>PST.</i>	KYW 1020	Chicago, Ill., <i>CST.</i>	WCLS 1310	Joliet, Ill., <i>CST.</i>
KNOW 1500	Austin, Texas, <i>CST.</i>	KZRM 618.5	Manila, P. I.	WCOA 1340	Pensacola, Fla., <i>CST.</i>
KNX 1050	Hollywood, Calif., <i>PST.</i>	NAA 690	Arlington, Va.	WCOB 880	Meridian, Miss., <i>CST.</i>
KOA 830	Denver, Colo., <i>MST.</i>	RUS 664	Salvador.	WCOD 1200	Harrisburg, Pa., <i>EST.</i>
KOAC 559	Corvallis, Ore., <i>PST.</i>	TICR 911	San Jose, C. R.	WCRW 1210	Chicago, Ill., <i>CST.</i>
KOB 1189	Albuquerque, N. M.	VAS 685	Gloucester, N. S., <i>AST.</i>	WCSG 1360	Charleston, S. C., <i>EST.</i>
KOCW 1400	Chickasha, Okla.	VOAS 810	St. Johns, N. F.	WDSH 940	Portland, Maine, <i>EST.</i>
KOH 1380	Reno, Nev., <i>PST.</i>	VOGT 893	Wabana, N. F.	WDIA 1220	Tampa, Fla., <i>EST.</i>
KOIL 1260	Council Bluffs, Ia., <i>CST.</i>	VOGY 860	St. Johns, N. F.	WDFA 610	Kansas City, Mo., <i>CST.</i>
KOIN 940	Portland, Ore., <i>PST.</i>	VONA 950	St. Johns, N. F.	WDAG 1410	Amarillo, Texas, <i>CST.</i>
KOL 1270	Seattle, Wash., <i>PST.</i>	VONF 1195	St. Johns, N. F.	WDAS 1310	El Paso, Texas.
KOMA 1480	Oklahoma City, Okla.	VOWR 750	St. Johns, N. F.	WDAH 1370	Philadelphia, Pa., <i>EST.</i>
KOMO 920	Seattle, Wash., <i>PST.</i>	WAAB 1410	Boston, Mass., <i>EST.</i>	WDAY 940	Fargo, N. D., <i>CST.</i>
KONO 1370	San Antonio, Tex., <i>CST.</i>	WAAF 920	Chicago, Ill., <i>CST.</i>	WDBJ 930	Roanoke, Va., <i>EST.</i>
KOOS 1370	Marshallfield, Ore., <i>PST.</i>	WAAM 1250	Newark, N. J., <i>EST.</i>	WDBO 580	Orlando, Fla., <i>EST.</i>
KORE 1420	Eugene, Ore., <i>PST.</i>	WAAT 940	Jersey City, N. J., <i>EST.</i>	WDEL 1120	Wilmington, Del., <i>EST.</i>
KOY 1390	Phoenix, Ariz., <i>MST.</i>	WAAB 660	Omaha, Neb., <i>CST.</i>	WDEV 550	Waterbury, Vt., <i>EST.</i>
KPCB 650	Seattle, Wash., <i>PST.</i>	WABC 860	New York City, <i>EST.</i>	WDGY 1180	Minneapolis, Minn.
KPJM 1500	Prescott, Ariz., <i>MST.</i>	WABI 1200	Bangor, Maine, <i>EST.</i>	WDDD 1280	Chattanooga, Tenn.
KPO 880	San Francisco, Calif.	WABZ 1200	New Orleans, La., <i>CST.</i>	WDRC 1330	Hartford, Conn., <i>EST.</i>
KPOF 880	Denver, Colo., <i>MST.</i>	WACO 1240	Waco, Texas, <i>CST.</i>	WDSU 1250	New Orleans, La., <i>CST.</i>
KPPC 1210	Pasadena, Calif., <i>PST.</i>	WADC 1320	Akron, Ohio, <i>EST.</i>	WDZ 1070	Tuscola, Ill., <i>CST.</i>
KPQ 1500	Wenatchee, Wash., <i>PST.</i>	WAGM 1420	Presque Isle, Me., <i>EST.</i>	WEAF 660	New York City, <i>EST.</i>
KPRC 920	Houston, Texas, <i>CST.</i>	WAHU 640	Columbus, Ohio, <i>EST.</i>	WEAN 780	Providence, R. I., <i>EST.</i>
KPQV 1380	Pittsburgh, Pa., <i>EST.</i>	WALR 1210	Zanesville, Ohio, <i>EST.</i>	WEAO 570	Columbus, Ohio, <i>EST.</i>
KQW 1010	San Jose, Calif., <i>PST.</i>	WAMC 1420	Anniston, Ala., <i>CST.</i>	WEBC 1290	Superior, Wis., <i>CST.</i>
KRE 1370	Berkeley, Calif., <i>PST.</i>	WAML 1310	Laurel, Miss.	WEBO 1210	Harrisburg, Ill., <i>CST.</i>
KREG 1500	Santa Ana, Calif., <i>PST.</i>	WAPI 1140	Birmingham, Ala., <i>CST.</i>	WEBR 1310	Buffalo, N. Y., <i>EST.</i>
KRGV 1260	Harlingen, Texas, <i>CST.</i>	WASH 1270	Gd. Rapids, Mich., <i>EST.</i>	WEDC 1210	Chicago, Ill.
KRKD 1120	Los Angeles, Calif., <i>PST.</i>	WAWZ 1350	Zarephath, N. J., <i>EST.</i>	WEEL 590	Boston, Mass., <i>EST.</i>
KRLD 1040	Dallas, Texas, <i>CST.</i>	WAZL 1420	Hazleton, Pa., <i>EST.</i>	WEEU 830	Reading, Pa., <i>EST.</i>
KRMD 1310	Shreveport, Iowa, <i>CST.</i>	WBAA 1400	Lafayette, Ind., <i>CST.</i>	WEHC 1350	Emory, Va., <i>EST.</i>

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WEHS	1420	Cicero, Ill., <i>CST.</i>	WILL	899	Urbana, Ill., <i>CST.</i>	WMC	780	Memphis, Tenn., <i>CST.</i>
WELL	1420	Battle Creek, Mich.	WILM	1420	Wilmington, Del., <i>EST.</i>	WMCA	570	New York City, <i>EST.</i>
WENC	1420	Americus, Ga., <i>EST.</i>	WINS	1180	New York City, <i>EST.</i>	WMIL	1500	Brooklyn, N. Y., <i>EST.</i>
WENR	870	Chicago, Ill., <i>CST.</i>	WIOD	1300	Miami, Fla., <i>EST.</i>	WMNN	890	Fairmont, W. Va., <i>EST.</i>
WERE	1420	Erie, Pa., <i>EST.</i>	WIP	610	Philadelphia, Pa., <i>EST.</i>	WMPC	1500	Lapeer, Mich., <i>EST.</i>
WESG	1040	Elmira, N. Y.	WIS	1010	Columbia, S. C., <i>EST.</i>	WMSS	1350	New York City, <i>EST.</i>
WEVD	1300	New York City, <i>EST.</i>	WISN	1120	Milwaukee, Wis., <i>CST.</i>	WMT	600	Waterloo, Iowa, <i>CST.</i>
WEW	760	St. Louis, Mo., <i>CST.</i>	WJAC	1310	Johnstown, Pa., <i>EST.</i>	WNAC	1230	Norham, Mass., <i>EST.</i>
WEXL	1310	Royal Oak, Mich., <i>EST.</i>	WJAG	1060	Norfolk, Neb., <i>CST.</i>	WNAD	1010	Boston, Okla., <i>EST.</i>
WFAA	800	Dallas, Texas, <i>CST.</i>	WJAR	890	Providence, R. I., <i>EST.</i>	WNAX	570	Yankee, S. D., <i>CST.</i>
WFAB	1300	New York City, <i>EST.</i>	WJAS	1290	Pittsburgh, Pa., <i>EST.</i>	WNBF	1500	Binghamton, N. Y., <i>EST.</i>
WFAM	1200	South Bend, Ind., <i>CST.</i>	WJAX	900	Jacksonville, Fla., <i>EST.</i>	WNBH	1310	New Bedford, Mass.
WFAS	1210	White Plains, N. Y.	WJAY	610	Cleveland, Ohio, <i>EST.</i>	WNBO	1200	Washington, Pa., <i>EST.</i>
WFBC	1200	Greenville, S. C.	WJBC	1200	LaSalle, Ill., <i>CST.</i>	WNBK	1430	Memphis, Tenn., <i>CST.</i>
WFBE	1200	Cincinnati, Ohio, <i>EST.</i>	WJBI	1210	Red Bank, N. J., <i>EST.</i>	WNBW	1200	Carbondale, Pa., <i>EST.</i>
WFBG	1310	Altoona, Pa.	WJBK	1370	Detroit, Mich., <i>EST.</i>	WNBX	1260	Springfield, Va., <i>EST.</i>
WFBM	1360	Syracuse, N. Y., <i>EST.</i>	WJBL	1200	Decatur, Ill., <i>CST.</i>	WNBZ	1290	Saranac Lake, N. Y.
WFBP	1230	Indianapolis, Ind., <i>CST.</i>	WJBO	1420	New Orleans, La.	WNJ	1450	Newark, N. J., <i>EST.</i>
WFBT	1270	Baltimore, Md., <i>EST.</i>	WJBU	1210	Lewisburg, Pa., <i>EST.</i>	WNKX	560	Knoxville, Tenn., <i>CST.</i>
WFDI	1310	Flint, Mich., <i>EST.</i>	WJBW	1200	New Orleans, La., <i>CST.</i>	WNKY	570	New York City, <i>EST.</i>
WFDV	1500	Rome, Ga., <i>CST.</i>	WJBY	1210	Gadsden, Ala., <i>CST.</i>	WQAI	1190	San Antonio, Tex., <i>CST.</i>
WFEE	1430	Manchester, N. H., <i>EST.</i>	WJDX	1270	Jackson, Miss., <i>CST.</i>	WQAX	1280	Trenton, N. J., <i>EST.</i>
WFI	560	Philadelphia, Pa., <i>EST.</i>	WJEJ	1210	Hagerstown, Md.	WQBU	580	Charleston, W. Va., <i>EST.</i>
WFIW	940	Hopkinsville, Ky., <i>CST.</i>	WJEQ	1370	Williamsport, Pa.	WOC	1000	Davenport, Iowa, <i>CST.</i>
WFLA	620	Clearwater, Fla., <i>EST.</i>	WJFD	1130	Chicago, Ill., <i>CST.</i>	WOCL	1210	Jamestown, N. Y., <i>EST.</i>
WFOJ	1400	Brooklyn, N. Y., <i>EST.</i>	WJKS	1360	Gary, Ind., <i>CST.</i>	WODA	1250	Paterson, N. J.
WGAL	1310	Lancaster, Pa., <i>EST.</i>	WJMS	1420	Ironwood, Mich., <i>CST.</i>	WODX	1410	Mobile, Ala., <i>CST.</i>
WGAR	1450	Cleveland, Ohio, <i>EST.</i>	WJR	750	Detroit, Mich., <i>EST.</i>	WOI	640	Ames, Iowa, <i>CST.</i>
WGBB	1210	Freeport, N. Y., <i>EST.</i>	WJSV	1460	Washington, D. C., <i>EST.</i>	WOKO	1430	Albany, N. Y., <i>EST.</i>
WGBI	830	Evansville, Ind., <i>EST.</i>	WJTL	1370	Atlanta, Ga., <i>CST.</i>	WOL	1310	Washington, D. C., <i>EST.</i>
WGBM	880	Seranton, Pa., <i>EST.</i>	WJW	1210	Akron, Ohio, <i>EST.</i>	WOMT	1210	Manitowish, Wis., <i>EST.</i>
WGCM	1210	Gulfport, Miss., <i>CST.</i>	WJZ	780	New York City, <i>EST.</i>	WOOD	1270	Gd. Rapids, Mich., <i>EST.</i>
WGCP	1250	Newark, N. J., <i>EST.</i>	WKAQ	1240	San Juan, P. R., <i>AST.</i>	WOPI	1500	Bristol, Tenn., <i>EST.</i>
WGES	1360	Chicago, Ill., <i>CST.</i>	WKAR	1040	E. Lansing, Mich., <i>EST.</i>	WOQ	1300	Kansas City, Mo., <i>CST.</i>
WGH	1310	Newport News, Va.	WKAV	1310	Laconia, N. H., <i>EST.</i>	WOR	710	Newark, N. J., <i>EST.</i>
WGL	1370	Fort Wayne, Ind., <i>CST.</i>	WKBB	1310	Joliet, Ill., <i>CST.</i>	WORC	1200	Worcester, Mass., <i>EST.</i>
WGLC	1370	Hudson Falls, N. Y., <i>EST.</i>	WKBC	1310	Birmingham, Ala.	WORK	1000	York, Pa., <i>EST.</i>
WGN	720	Chicago, Ill., <i>CST.</i>	WKBF	1400	Indianapolis, Ind., <i>CST.</i>	WOS	630	Jefferson City, Mo.
WGNV	1210	Chester, N. Y., <i>EST.</i>	WKBH	1320	LaCrosse, Wis., <i>CST.</i>	WOV	1130	New York City, <i>EST.</i>
WGRY	550	Buffalo, N. Y., <i>EST.</i>	WKBI	1480	Cicero, Ill., <i>CST.</i>	WOW	590	Omaha, Neb., <i>CST.</i>
WGST	890	Atlanta, Ga., <i>CST.</i>	WKBN	570	Youngstown, Ohio, <i>EST.</i>	WOWD	1160	Fort Wayne, Ind., <i>CST.</i>
WGT	790	Schenectady, N. Y., <i>EST.</i>	WKBV	1500	Connersville, Ind., <i>CST.</i>	WPAD	1420	Paducah, Ky., <i>CST.</i>
WHA	940	Madison, Wis., <i>CST.</i>	WKBW	1480	Buffalo, N. Y., <i>EST.</i>	WPAP	1010	New York City, <i>EST.</i>
WHAD	1120	Milwaukee, Wis., <i>EST.</i>	WKBY	1500	Ludington, Mich., <i>CST.</i>	WPAP	1210	Providence, R. I., <i>EST.</i>
WHAM	1150	Rochester, N. Y., <i>EST.</i>	WKBU	1400	LaGrange, Ga.	WPCG	560	Chicago, Ill.
WHAS	820	Louisville, Ky., <i>CST.</i>	WKFI	1210	Greenville, Miss., <i>CST.</i>	WPCB	810	New York City, <i>EST.</i>
WHAT	1310	Philadelphia, Pa., <i>EST.</i>	WKJC	1200	Lancaster, Pa., <i>EST.</i>	WPEN	1500	Philadelphia, Pa., <i>EST.</i>
WHAZ	1300	Troy, N. Y., <i>EST.</i>	WKRC	550	Cincinnati, Ohio, <i>EST.</i>	WPFH	1370	Hattiesburg, Miss., <i>CST.</i>
WHB	860	Kansas City, Mo., <i>CST.</i>	WKY	900	Oklahoma City, Okla.	WPG	1100	Atlantic City, N. J., <i>EST.</i>
WHBB	1200	Canton, Ohio, <i>EST.</i>	WKZO	580	Kalamazoo, Mich., <i>EST.</i>	WPHR	1200	Petersburg, Va., <i>EST.</i>
WHBD	1370	Mt. Orab, Ohio, <i>EST.</i>	WLAC	1470	Nashville, Tenn., <i>CST.</i>	WPOR	780	Norfolk, Va.
WHBF	1210	Rock Island, Ill., <i>CST.</i>	WLAP	1200	Louisville, Ky., <i>CST.</i>	WPRO	1210	Providence, R. I., <i>EST.</i>
WHBL	1410	Sheboygan, Wis., <i>CST.</i>	WLK	1250	Minneapolis, Minn., <i>CST.</i>	WPRT	680	Raleigh, N. C., <i>EST.</i>
WHBQ	1370	Memphis, Tenn., <i>CST.</i>	WLBC	1310	Muncie, Ind., <i>CST.</i>	WQAM	560	Miami, Fla., <i>EST.</i>
WHBU	1210	Anderson, Ind., <i>CST.</i>	WLBF	1420	Kansas City, Kans., <i>CST.</i>	WQAN	890	Seranton, Pa., <i>EST.</i>
WHBY	1200	Green Bay, Wis., <i>CST.</i>	WLBL	900	Stevens Point, Wis., <i>CST.</i>	WQAD	1010	New York City, <i>EST.</i>
WHDF	1370	Calumet, Mich., <i>CST.</i>	WLWB	1260	Erie, Pa., <i>EST.</i>	WQBC	1360	Vicksburg, Miss., <i>CST.</i>
WHDH	830	Boston, Mass., <i>EST.</i>	WLBY	620	Bangor, Maine, <i>EST.</i>	WQDM	1370	St. Albans, Vt., <i>EST.</i>
WHDL	1420	Tupper Lake, N. Y., <i>EST.</i>	WLEC	1340	Portland, Me., <i>EST.</i>	WQDX	1210	Thomasville, Ga.
WHDB	740	Portsmouth, N. H., <i>EST.</i>	WLEF	1370	Lexington, Mass., <i>EST.</i>	WRAK	1370	Williamsport, Pa., <i>EST.</i>
WHDC	1430	Rochester, N. Y., <i>EST.</i>	WLIT	560	Philadelphia, Pa., <i>EST.</i>	WRAM	1370	Wilmington, N. C., <i>EST.</i>
WHDF	1500	Kosciusko, Miss.	WLOE	1500	Boston, Mass., <i>EST.</i>	WRAW	1310	Reading, Pa., <i>EST.</i>
WHET	1210	Troy, Ala., <i>CST.</i>	WLS	870	Chicago, Ill., <i>CST.</i>	WRAX	1020	Philadelphia, Pa., <i>EST.</i>
WHFC	1420	Cicero, Ill., <i>CST.</i>	WLTH	1400	Brooklyn, N. Y., <i>EST.</i>	WRBL	1200	Columbus, Ga., <i>CST.</i>
WHIS	1410	Bluefield, W. Va., <i>EST.</i>	WLVA	1370	Lynchburg, Va., <i>EST.</i>	WRBX	1410	Roanoke, Va., <i>EST.</i>
WHK	1390	Cleveland, Ohio, <i>EST.</i>	WLW	700	Cincinnati, Ohio, <i>EST.</i>	WRB	950	Washington, D. C., <i>EST.</i>
WHN	1010	New York City, <i>EST.</i>	WLWL	1100	New York City, <i>EST.</i>	WRDQ	1370	Augusta, Maine, <i>EST.</i>
WHO	1000	Des Moines, Iowa.	WMAC	570	Syracuse, N. Y.	WRDW	1500	Augusta, Ga., <i>EST.</i>
WHOM	1450	Jersey City, N. J., <i>EST.</i>	WAML	630	Washington, D. C., <i>EST.</i>	WREC	600	Memphis, Tenn.
WHP	1430	Harrisburg, Pa., <i>EST.</i>	WMAQ	670	Chicago, Ill., <i>CST.</i>	WREN	1220	Lawrence, Kans., <i>CST.</i>
WIAS	1310	Ottumwa, Iowa, <i>CST.</i>	WMAS	1420	Springfield, Mass., <i>EST.</i>	WRHM	1250	Minneapolis, Minn., <i>CST.</i>
WIBA	1280	Madison, Wis., <i>CST.</i>	WMAZ	1180	Macon, Ga., <i>EST.</i>	WRJN	1370	Racine, Wis., <i>CST.</i>
WIBG	330	Glenside, Pa., <i>EST.</i>	WMBC	1420	Detroit, Mich., <i>EST.</i>	WRNY	1010	New York City.
WIBM	1370	Jackson, Mich., <i>EST.</i>	WMBD	1440	Peoria, Ill., <i>CST.</i>	WROL	1310	Knoxville, Tenn., <i>CST.</i>
WIBO	560	Chicago, Ill., <i>CST.</i>	WMBG	1210	Richmond, Va., <i>EST.</i>	WRR	1200	Dallas, Texas, <i>CST.</i>
WIBU	1210	Poyette, Wis., <i>CST.</i>	WMBH	1420	Joplin, Mo., <i>CST.</i>	WRUF	830	Gainesville, Fla., <i>EST.</i>
WIBW	580	Topeka, Kans., <i>CST.</i>	WMBI	1080	Chicago, Ill., <i>CST.</i>	WRVA	1110	Richmond, Va., <i>EST.</i>
WIBX	1200	Utica, N. Y.	WMBO	1310	Auburn, N. Y., <i>EST.</i>	WSAI	1330	Cincinnati, Ohio, <i>EST.</i>
WICC	600	Bridgeport, Conn., <i>EST.</i>	WMBQ	1500	Brooklyn, N. Y., <i>EST.</i>	WSAJ	1310	Grove City, Pa.
WIL	1200	St. Louis, Mo., <i>CST.</i>	WMBR	1370	Tampa, Fla., <i>EST.</i>	WSAN	1440	Allentown, Pa., <i>EST.</i>

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WSAR 1450	Fall River, Mass., <i>EST.</i>	WWJ 920	Detroit, Mich., <i>EST.</i>	XEL 1000	Saltillo, Mex., <i>CST.</i>
WSAZ 580	Huntington, W. Va., <i>EST.</i>	WWL 850	New Orleans, La., <i>CST.</i>	XEM 660	Matamoros, Mex.
WSB 740	Atlanta, Ga., <i>CST.</i>	WWNC 570	Asheville, N. C., <i>CST.</i>	XEN 711	Mexico City, <i>CST.</i>
WSBC 1210	Chicago, Ill., <i>CST.</i>	WWRL 1500	Woodside, N. Y., <i>EST.</i>	XENT 1115	Neuvo Laredo, Mex.
WSBT 1230	South Bend, Ind., <i>CST.</i>	WWSW 1500	Pittsburgh, Va., <i>EST.</i>	XEP 780	Mexico City, Mex.
WSEN 1210	Columbus, Ohio, <i>EST.</i>	WVVA 1160	Wheeling, W. Va., <i>EST.</i>	XEPN 585	Piedras Negras, Mex.
WSFA 1410	Montgomery, Ala., <i>CST.</i>	WXYZ 1240	Detroit, Mich., <i>EST.</i>	XER 735	Villa Acuna, Mex.
WSIX 1210	Springfield, Tenn., <i>CST.</i>	XEA 1000	Guadalajara, Mex., <i>CST.</i>	XES 1055	Tampico, Mex., <i>CST.</i>
WSJS 1310	Winston-Salem, N. C., <i>EST.</i>	XEAB 1450	N. Laredo, Mex.	XET 690	Monterrey, Mex., <i>CST.</i>
WSM 650	Nashville, Tenn., <i>CST.</i>	XEAC 1295	San Luis Potosi, Mex.	XETA 1140	Mexico City, Mex.
WSMB 1320	New Orleans, La., <i>CST.</i>	XEAD 875	Mexico City, Mex.	XETB 1380	Torreon, Mex.
WSMC 1310	Dayton, Ohio, <i>EST.</i>	XEAI 1090	Mexico City, Mex.	XETC 1000	Salpala, Mex.
WSOC 1280	Gastonia, N. C., <i>EST.</i>	XEAN 750	Juarez, Mex., <i>MST.</i>	XETF 630	Veracruz, Mex., <i>CST.</i>
WSPA 1420	Spartanburg, S. C., <i>EST.</i>	XEAO 560	Mexicali, Mex.	XETH 840	Puebla, Mex.
WSPD 1340	Toledo, Ohio, <i>EST.</i>	XEAW 965	Reynosa, Mex.	XETM 845	Matamoros, Mex.
WSUI 880	Iowa City, Iowa, <i>CST.</i>	XEB 1030	Mexico City, Mex., <i>CST.</i>	XETR 610	Mexico City, Mex.
WSUN 620	St. Petersburg, Fla., <i>EST.</i>	XEC 1000	Toluca, Mex.	XETU 890	Pachuca, Mex.
WSVS 1370	Buffalo, N. Y., <i>EST.</i>	XED 1155	Guadalajara, Mex.	XETW 830	Mexico City, Mex.
WSYB 1500	Rutland, Vt., <i>EST.</i>	XEF 735	Villa Acuna, Mex.	XEU 1010	Veracruz, Mex., <i>CST.</i>
WSYR 570	Syracuse, N. Y., <i>EST.</i>	XEFA 1250	Mexico City, Mex.	XEW 910	Mexico City, Mex., <i>CST.</i>
WTAD 1440	Quincy, Ill., <i>CST.</i>	XEFB 1315	Monterrey, Mex., <i>CST.</i>	XEY 1210	Mexico City, Mex.
WTAG 580	Worcester, Mass., <i>EST.</i>	XEFC 1020	Merida, Mex.	XEY 546.8	Mexida, Mex.
WTAM 1070	Cleveland, Ohio, <i>EST.</i>	XEFD 1020	Tijuana, Mex.	XFB 840	Jalapa, Mex.
WTAQ 1330	Eau Claire, Wis., <i>CST.</i>	XEFE 1000	Laredo, Mex.	XFC 805	Agascalientes, Mex.
WTAR 780	Norfolk, Va., <i>EST.</i>	XEFH 1360	Mexico City, Mex.	XFG 638.3	Mexico City, Mex.
WTAW 1120	College Station, Texas.	XEFI 1000	Chihuahua, Mex.	XFI 818.1	Mexico City, Mex.
WTAX 1210	Springfield, Ill., <i>CST.</i>	XEFJ 1000	Monterrey, Mex.	XFO 940	Mexico City, Mex.
WTBO 1420	Cumberland, Md., <i>EST.</i>	XEFO 940	Mexico City, Mex., <i>CST.</i>	XFX 860	Mexico City, Mex.
WTLI 1310	Philadelphia, Pa., <i>EST.</i>	XEFS 1000	Queretaro, Mex., <i>CST.</i>	YVIBC 960	Caracas, Venez.
WTFI 1450	Athens, Ga., <i>EST.</i>	XEFV 1370	Juarez, Mex.	10-AB 1200	Moose Jaw, Sask., <i>MST.</i>
WTFI 1060	Hartford, Conn., <i>EST.</i>	XEFW 1240	Tampico, Mex.	10-AK 1200	Stratford, Ont., <i>EST.</i>
WTJS 1310	Jackson, Tenn., <i>CST.</i>	XEFZ 1500	Coyoacan, Mex., <i>CST.</i>	10-AT 1158	Trail, B. C., <i>PST.</i>
WTMJ 620	Milwaukee, Wis., <i>CST.</i>	XEG 1075	Mexico City, Mex.	10-BI 1200	Prince Albert, Sask., <i>MST.</i>
WTCJ 1260	Savannah, Ga., <i>EST.</i>	XEH 1132	Monterrey, Mex., <i>CST.</i>	10-BP 1199	Wingham, Ont., <i>EST.</i>
WTEC 1310	Elkhart, Ind., <i>CST.</i>	XEI 1310	Morelia, Mex., <i>CST.</i>	10-BQ 1200	Brantford, Ont., <i>EST.</i>
WWAE 1200	Hammond, Ind., <i>CST.</i>	XEJ 1015	Juarez, Mex., <i>CST.</i>	10-BU 1200	Canora, Sask.
		XEK 990	Mexico City, Mex.		

The World Short Wave Stations

According to Frequencies in Megacycles (thousands of kilocycles) and Wave Lengths in Meters. For time on the air, see the list of the "100 Best Short Wave Stations" in March issue. Stations marked with an asterisk (*) will not verify.

Megs.	Meters	Call	City, State or Country			WCK	Detroit, Mich.
1.558	192.43	KGPD	San Francisco, Calif.			WMO	Highland Park, Mich.
		WEY	Boston, Mass.			WPDA	Tulare, Calif.
1.570	191.08	WPEL	Middleboro, Mass.			WPDJ	Passaic, N. J.
		WPEQ	Baton Rouge, La.			WPDX	Detroit, Mich.
		WPEW	Northampton, Mass.			WPDY	Atlanta, Ga.
1.574	190.48	KGPY	Shreveport, La.			WRDR	Grosse Pt. Village, Mich.
		WMP	Framingham, Mass.	2.416	124.09	KGFB	Minneapolis, Minn.
		WRDS	East Lansing, Mich.			WPDS	St. Paul, Minn.
1.596	187.85	WCF	New York City			KGPE	Kansas City, Mo.
		WKDT	Detroit, Mich.			KGPG	Vallejo, Calif.
		WRDU	Brooklyn, N. Y.			KGZC	Topeka, Kansas
1.712	175.13	KGPC	St. Louis, Mo.			KSU	Berkeley, Calif.
		KGJX	Pasadena, Calif.			WPMJ	Buffalo, N. Y.
		KGJC	St. Louis, Mo.			WPDW	Washington, D. C.
		KGPL	Beaumont, Texas	2.430	123.45	CJW	St. John, N. B.
		KGFL	Los Angeles, Calif.			KGZD	San Diego, Calif.
		KGPR	Fort Worth, Texas			WPDI	Columbus, Ohio
		KGZB	Houston, Texas			WPDM	Dayton, Ohio
		KVP	Dallas, Texas			WPEK	New Orleans, La.
		UYR	Montreal, P. Q.	2.442	122.77	KGPP	Portland, Ore.
		WKDU	Cincinnati, Ohio			KGPN	Denver, Colo.
		WPDB	Chicago, Ill.			KGPH	Klamath Falls, Ore.
		WPDC	Chicago, Ill.			WMDZ	Indianapolis, Ind.
		WPDD	Chicago, Ill.			WPDE	Louisville, Ky.
		WPDU	Pittsburgh, Pa.			WPDF	Flint, Mich.
		WPED	Arlington, Mass.			WPDH	Richmond, Ind.
		WPEH	Sommerville, Mass.			WPDJ	Lansing, Mich.
2.004	149.61	VEGRM	Toronto, Ont.			WPEE	Grand Rapids, Mich.
2.100	142.80	VEGOS	Montreal, Que.			WPES	Saginaw, Mich.
2.414	124.20	KGPA	Seattle, Wash.	2.450	122.40	KGPH	Oklahoma City, Okla.
		KGPS	Bakersfield, Calif.			KGPO	Tulsa, Okla.
		KGZA	Fresno, Calif.			KGQK	Honolulu, Hawaii

WORLD SHORT WAVE STATIONS

		KGPZ	Wichita, Kans.	3.178	94.34	KFM	Sacramento, Calif.
		WPKD	Milwaukee, Wis.			KGE	Medford, Ore.
		WPEE	Brooklyn, N. Y.			KGT	Fresno, Calif.
		WPEF	Bronx, N. Y.			KQX	Bakersfield, Calif.
		WPEG	New York, N. Y.			KVO	Portland, Ore.
2.458	121.97	UYW	Winnipeg, Man.			KZJ	Seattle, Wash.
		WPDG	Youngstown, Ohio	3.189	94.01	KEU	Burbank, Calif.
		WPDN	Auburn, N. Y.	3.490	85.91	KGTF	San Diego, Calif.
		WPDO	Akron, Ohio			KGTS	Omaha, Neb.
		WPDR	Rochester, N. Y.			KGUA	El Paso, Tex.
		WPDV	Charlotte, N. C.			KGUB	Houston, Tex.
		WPEA	Syracuse, N. Y.			KGUC	Fort Worth, Tex.
2.470	121.40	WRDH	Cleveland, Ohio			KGUD	San Antonio, Tex.
		KGOZ	Cedar Rapids, Iowa			KGUE	Brownsville, Tex.
		KGPD	San Francisco, Calif.			KGUF	Dallas, Tex.
		KGPI	Omaha, Neb.			KGUG	Big Springs, Tex.
		KGPK	Sioux City, Iowa			KGUH	Waco, Tex.
		KGPM	San Jose, Calif.			KGUK	Shreveport, La.
		KGPN	Davenport, Iowa			KGUL	Abilene, Tex.
		KGPW	Salt Lake City, Utah			KGUM	Frijole, Tex.
		KGZG	Des Moines, Iowa			KGUN	Douglas, Ariz.
		WPDQ	Philadelphia, Pa.			KGUP	Phoenix, Ariz.
		WPDT	Kokomo, Ind.			KGUQ	Indio, Calif.
		WPDZ	Fort Wayne, Ind.			KGUR	Burbank, Calif.
		WPEC	Memphis, Tenn.			KGUS	Blythe, Calif.
		WPEM	Woonsocket, R. I.			KGUT	Robertson, Mo.
		WPEY	Chattanooga, Tenn.			KGUU	Little Rock, Ark.
		WRDQ	Toledo, Ohio			WAEJ	Springfield, Ill.
2.502	119.83	KGPV	Des Moines, Iowa			WQDP	Atlanta, Ga.
2.506	119.64	KGZE	San Antonio, Tex.			WQDQ	New Orleans, La.
2.589	115.80	WOU	Green Harbor, Mass.			WSDS	Jackson, Miss.
2.735	109.62	VE9CI	London, Ont.			WSDI	Tuscaloosa, Ala.
3.100	96.72	KGPL	Kingman, Ariz.			WSDJ	Louisville, Ky.
		KGSC	Oklahoma City, Okla.			WSDG	Chicago, Ill.
		KGTD	Wichita, Kans.			WSDH	Nashville, Tenn.
		KGTT	Las Vegas, Nev.			WSDI	Cincinnati, Ohio
		KGTV	Las Vegas, Nev.			WSDK	Memphis, Tenn.
		KGTR	Springfield, Mo.			WSDP	Columbus, Ohio
		KSI	St. Louis, Mo.			WSDZ	Indianapolis, Ind.
		KST	Los Angeles, Calif.	3.750	79.95	I3RO	Rome, Italy
		KSW	Kansas City, Mo.	4.095	73.21	*WND	Hialeah, Fla.
		KSX	Amarillo, Tex.	4.105	73.03	NAA	Arlington, Va.
		KSY	Albuquerque, N. M.	4.129	72.60	WEEB	Baltimore, Md.
		WAEA	Tulsa, Okla.			WEEC	Charleston, S. C.
		WAEB	Indianapolis, Ind.			WEEF	Spartansburg, S. C.
		WAEC	Columbus, Ohio			WEEG	Greensboro, N. C.
		WAED	Pittsburgh, Pa.			WEEJ	Jacksonville, Fla.
		WAEE	Harrisburg, Pa.			WEEM	Miami, Fla.
		WAEF	Camden, N. J.			WEEO	Orlando, Fla.
		WHG	Newark, N. J.			WEER	Richmond, Va.
		WHM	Columbus, Ohio	4.174	71.82	GDLJ	S.S. Homer
3.170	94.58	KDD	Indianapolis, Ind.			GFVW	S.S. Majestic
		KFO	Pasco, Wash.			KGFY	S.S. Minnetonka
		KGQZ	Oakland, Calif.			GLSQ	S.S. Olympic
		KGTE	San Diego, Calif.			GMBJ	S.S. Empress of Britain
		KJE	Wichita, Kans.			GMJQ	S.S. Belgenland
		KKO	Reno, Nev.			*VTXS	S.S. Monarch of Bermuda
		KMP	Elko, Nev.			*WSBN	S.S. Leviathan
		KMR	Omaha, Neb.			DDAC	S.S. Europa
		KNAS	No. Platte, Neb.			DDAS	S.S. Bremen
		KNAT	Kansas City, Mo.			DDBR	S.S. Berlin
		KNAV	Dallas, Tex.			DDCB	S.S. Columbus
		KOE	Oklahoma City, Okla.			DDCG	S.S. Resolute
		KQC	Cheyenne, Wyo.			DDCP	S.S. Cap Polonio
		KQD	Rock Springs, Wyo.			DDDT	S.S. Deutschland
		KQE	Salt Lake City, Utah			DDDX	S.S. Hamburg
		KQK	Cheyenne, Wyo.			DDEA	S.S. Cap Arcona
		KQM	Bakersfield, Calif.			DDED	S.S. New York
		KQQ	Des Moines, Iowa			DDFF	S.S. Reliance
		KRA	Iowa City, Iowa			DDFT	S.S. Oceana
		KRD	Boise, Idaho	4.273	70.65	DDNY	S.S. Albert Ballin
		KRF	Redding, Calif.	4.272	70.17	RW15	Khabarovsk, U.S.S.R.
		WNAK	Lincoln, Neb.	4.283	70.00	*WIR	Rocky Point, N. Y.
		WNAL	Cleveland, Ohio			IBEJ	S.S. Conte Rosso
		WNAM	Brooksville, Pa.			ICEJ	S.S. Rex
		WQDU	Bellefonte, Pa.	4.307	69.60	IDLI	S.S. Conte di Savoia
		WUCG	Aurora, Ill.	4.467	67.11	WTDV	St. Thomas, V. I.
			Chicago, Ill.	4.508	66.50	YID	Bagdad, Iraq
						VPN	Nassau, Bahamas

WORLD SHORT WAVE STATIONS

4.748	63.13	*WOO	Ocean Gate, N. J.	KGUG	Big Springs, Tex.		
4.782	62.70	CGA	Drummondville, Que.	KGUH	Waco, Tex.		
		W9XAM	Elgin, Ill.	KGUK	Shreveport, La.		
4.797	62.50	W2XV	Long Island City, N. Y.	KGUL	Ablene, Tex.		
4.975	60.27	GBC	Rugby, England	KGUM	Frijole, Tex.		
5.045	59.42	*VRT-ZFA	Hamilton, Bermuda	KGUN	Douglas, Ariz.		
5.143	58.30	PMY	Bandoeng, Java	KGUP	Phoenix, Ariz.		
5.169	58.00	OK1MPI	Prague, Czechoslovakia	KGUQ	Indio, Calif.		
5.257	57.03	*WQN	Rocky Point, N. Y.	KGUR	Burbank, Calif.		
5.373	55.80	KNWA	St. Paul, Minn.	KGUS	Blythe, Calif.		
		KNWB	Fargo, N. D.	KGUT	Robertson, Mo.		
		WAEH	Milwaukee, Wis.	KGUU	Little Rock, Ark.		
		WSDL	Duluth, Minn.	WAEJ	Springfield, Ill.		
		WSDR	Madison, Wis.	WQDP	Atlanta, Ga.		
		WSDS	Chicago, Ill.	WQDQ	New Orleans, La.		
.411	55.40	KGJW	Brownsville, Tex.	WSDB	Jackson, Miss.		
		WKDL	Miami, Fla.	WSDC	Tuscaloosa, Ala.		
		WMDU	San Juan, P. R.	WSDF	Louisville, Ky.		
5.560	53.92	KGPL	Kingman, Ariz.	WSPG	Chicago, Ill.		
		KGSC	Oklahoma City, Okla.	WSDH	Nashville, Tenn.		
		KGTD	Wichita, Kans.	WSDI	Cincinnati, Ohio		
		KG TJ	Las Vegas, Nev.	WSDK	Memphis, Tenn.		
		KG TN	Las Vegas, Nev.	WSDP	Columbus, Ohio		
		KG TQ	Springfield, Mo.	WSDZ	Indianapolis, Ind.		
		KG TR	St. Louis, Mo.	5.649	53.07	WEEB	Baltimore, Md.
		KSI	Los Angeles, Calif.	WEEC	Charleston, S. C.		
		KST	Kansas City, Mo.	WEEF	Spartansburg, S. C.		
		KSW	Amarillo, Tex.	WEEG	Greensboro, N. C.		
		KSX	Albuquerque, N. M.	WEEJ	Jacksonville, Fla.		
		KSY	Tulsa, Okla.	WEEW	Miami, Fla.		
		WAEA	Indianapolis, Ind.	WEEQ	Orlando, Fla.		
		WAEB	Columbus, Ohio	WEER	Richmond, Va.		
		WAEC	Pittsburgh, Pa.	5.657	53.00	KEU	Burbank, Calif.
		WAED	Harrisburg, Pa.	KPFM	Sacramento, Calif.		
		WAEE	Camden, N. J.	KGE	Medford, Ore.		
		WAEF	Newark, N. J.	KGT	Fresno, Calif.		
		WAE G	Cresson, Pa.	KQX	Bakersfield, Calif.		
		WHG	Columbus, Ohio	KVO	Portland, Ore.		
		WHM	Indianapolis, Ind.	KZJ	Seattle, Wash.		
5.600	53.54	KDD	Pasco, Wash.	WSDC	Newark, N. J.		
		KFO	Oakland, Calif.	WSDM	Albany, N. Y.		
		KGQZ	San Diego, Calif.	WSDO	Buffalo, N. Y.		
		KGTE	Wichita, Kans.	WSDQ	Cleveland, Ohio		
		KJE	Reno, Nev.	5.678	52.80	VK3LR	Melbourne, Australia
		KKO	Elko, Nev.	5.689	52.70	FIUI	Tanansarive, Madagascar
		KMP	Omaha, Neb.	5.766	52.00	XAM	Merida, Yucatan
		KMR	No. Platte, Neb.	5.868	51.09	*WNB	Lawrenceville, N. J.
		KNAS	Kansas City, Mo.	5.879	51.00	HKB	Tunja, Colombia
		KNAT	Dallas, Tex.	5.925	50.60	*XDA	Mexico City, Mex.
		KNAV	Oklahoma City, Okla.	5.968	50.26	HJ4ABE	Medellin, Colombia
		KOE	Cheyenne, Wyo.	5.996	50.00	HVJ	Vatican City, Rome
		KQC	Rock Springs, Wyo.			HJ1ABB	Barranquilla, Colombia
		KQD	Salt Lake City, Utah			RV59	Moscow, U.S.S.R.
		KQE	Cheyenne, Wyo.			ZGE	Kuala Lumpur, Malay
		KQK	Bakersfield, Calif.	6.000	49.97	EAJ25	Barcelona, Spain
		KQM	Des Moines, Iowa			YV2BC	Caracas, Venezuela
		KQQ	Iowa City, Iowa			ZL3ZC	Christchurch, N. Z.
		KRA	Boise, Idaho	6.005	49.93	VE9DR	Bucharest, Roumania
		KRD	Redding, Calif.	6.020	49.80	DJC	Montreal, P. Q.
		KRF	Lincoln, Neb.	6.036	49.67	*W4XB	Konigs Wusterhausen, Ger.
		WNAK	Cleveland, Ohio	6.040	49.64	W1XAL	Miami, Fla.
		WNAL	Brooksville, Pa.	6.050	49.56	GSA	Boston, Mass.
		WNAM	Bellefonte, Pa.	6.057	49.50	CMCI	Daventry, England
		WQDU	Aurora, Ill.			ZL2ZX	Havana, Cuba
		WUCG	Chicago, Ill.			W3XAU	Wellington, N. Z.
5.609	53.45	KGTV	Beaumont, Calif.	6.060	49.48	W8XAL	Philadelphia, Pa.
		KGUO	Tucson, Ariz.			VQ7LO	Cincinnati, Ohio
		WAEK	Mobile, Ala.	6.065	49.44	SAJ	Nairobi, Kenya, Africa
		WSDD	Boston, Mass.	6.070	49.39	VE9CS	Motala, Sweden
5.630	53.25	KGTF	San Diego, Calif.	6.072	49.37	UOR2	Vancouver, B. C.
		KGTS	Omaha, Neb.	6.076	49.34	W9XAA	Vienna, Austria
		KGUA	El Paso, Tex.	6.090	49.23	VE9BJ	Chicago, Ill.
		KGUB	Houston, Tex.	6.094	49.20	JB	St. John, N. B.
		KGUC	Fort Worth, Tex.	6.095	49.19	W9XF	Johannesburg, So. Africa
		KGUD	San Antonio, Tex.	6.096	49.18	W3XAL	Chicago, Ill.
		KGUE	Brownsville, Tex.	6.110	49.07	VUC	Boundbrook, N. J.
		KGUF	Dallas, Tex.	6.116	49.02	W2XE	Calcutta, Ind a
							Wayne, N. J.

WORLD SHORT WAVE STATIONS

6.119	49.00	YV1BC	Caracas, Venezuela	8.562	35.02	*WOO	Ocean Gate, N. J.
6.121	48.98	VE9HX	Halifax, N. S.	8.566	35.00	IBEJ	S.S. Conte Rosso
6.125	48.95	YV11BMO	Maracaibo, Venezuela			ICEJ	S.S. Rex
6.140	48.83	W8XK	E. Pittsburgh, Pa.			IDLI	S.S. Conte di Savoia
6.150	48.75	VE9CL	Winnipeg, Man.	8.646	34.56	GBC	Rugby, England
6.220	48.20	I2RO	Rome, Italy	8.690	34.50	W2XAC	Scenectady, N. Y.
6.250	47.97	CN8MC	Casablanca, Morocco	8.830	33.95	GDLJ	S.S. Homeric
6.335	47.33	VE9AP	Drummondville, Que.			GFVW	S.S. Majestic
6.378	47.00	HKS	Calif, Columbia			GKPY	S.S. Minnetonka
		HC1DR	Quito, Ecuador			GLSQ	S.S. Olympic
6.386	46.96	W3XL	Boundbrook, N. J.			GMBJ	S.S. Empress of Britain
6.430	46.63	PCM	The Hague, Holland			GMJQ	S.S. Belgenland
6.480	46.27	TGW	Guatemala City, Guatemala			*VTSX	S.S. Monarch of Bermuda
6.611	45.35	REN	Moscow, U.S.S.R.			WSBN	S.S. Leviathan
6.618	45.31	PRADO	Riobamba, Ecuador	8.872	33.79	NAA	Arlington, Va.
6.648	45.09	IAC	Coltana, Italy			NPO	Cavite, Manila, Ph. Is.
		XFD	Mexico City, Mex.	8.925	33.59	*WEC	Rocky Point, N. Y.
6.675	44.91	DGK	Nauen, Germany	8.945	33.52	*WEL-	
6.705	44.71	*WER	Rocky Point, N. Y.			*W2XBJ	Rocky Point, N. Y.
6.720	44.61	*WQO	Rocky Point, N. Y.	8.950	33.50	TXG	Guatemala City, Guatemala
6.732	44.54	*WEJ-		9.012	33.27	*KEJ	Bolinas, Calif.
		*W2XBJ	Rocky Point, N. Y.	9.014	33.26	GSC	Rugby, England
6.752	44.41	*WOA	Lawrenceville, N. J.	9.091	32.97	XFD	Mexico City, Mex.
		*WOB	Lawrenceville, N. J.	9.104	32.93	LST	Olivos, Argentina
6.791	44.15	GDB	Rugby, England	9.162	32.72	*WNA	Lawrenceville, N. J.
6.840	43.82	CFA	Drummondville, Que.	9.168	32.70	*YVR	Maracaibo, Venezuela
6.860	43.71	*KEL	Bolinas, Calif.	9.273	32.33	COB	Rugby, England
6.888	43.54	*KEQ	Kahuku, Hawaii	9.290	32.27	.....	Rabat, Morocco
6.900	43.45	IMA	Roma, Italy	9.340	32.10	CGA	Drummondville, Que.
		GDS	Rugby, England	9.370	32.00	CT3AQ	Funchel, Madeira
6.924	43.30	*WEZ	Rocky Point, N. Y.	9.375	31.97	*XDA	Mexico City, Mex.
7.105	42.20	HKN	Nedelin, Colombia	9.410	31.86	PLV	Bandoeng, Java
7.122	42.10	HKK	Calif, Columbia	9.448	31.74	*WES-	
7.139	42.00	HJ4ABB	Manizales, Colombia			*W2XBJ	Rocky Point, N. Y.
7.184	41.75	CM2MK	Havana, Cuba	9.455	31.71	*WKJ	Rocky Point, N. Y.
7.195	41.67	VK6AG	Perth, Australia	9.480	31.63	PLW	Bandoeng, Java
		VS1AB	Singapore, Straits Settlement	9.488	31.60	*WEF-	
7.207	41.60	EAR58	Teneriffe, Canary Islands			*W2BJ	Rocky Point, N. Y.
7.312	41.00	CM5RY	Matanzas, Cuba	9.492	31.58	PRBA	Rio de Janeiro, Brazil
7.384	40.60	ZLT	Wellington, N. Z.	9.500	31.56	YV3BC	Caracas, Venezuela
7.396	40.54	*WEM		9.503	31.55	VK3ME	Melbourne, Australia
		*W2XBJ	Rocky Point, N. Y.	9.510	31.53	GSB	Daventry, England
7.402	40.50	HKI	Bogota, Colombia	9.520	31.49	OXY	Copenhagen, Denmark
7.410	40.46	*WEG	Rocky Point, N. Y.	9.530	31.46	W2XAF	Scenectady, N. Y.
7.465	40.16	*HJB	Bogota, Columbia	9.552	31.38	DJA	Zeesen, Germany
7.501	39.97	RKI	Moscow, U.S.S.R.	9.560	31.36	W1XAZ	Springfield, Mass.
7.518	39.89	*KDK-		9.570	31.33	SRI	Poznan, Poland
		*KKH	Kahuku, Hawaii	9.580	31.30	HBL	Geneva, Switzerland
7.550	39.71	CGE	Calgary, Alta.	9.585	31.28	GSC	Daventry, England
		CKS	Calgary, Alta.			VK2ME	Sydney, Australia
		DIX	Dixon, Calif.			W3XAU	Philadelphia, Pa.
7.562	39.65	*KWY	Dixon, Calif.	9.592	31.25	CT1AA	Lisbon, Portugal
7.605	39.42	*KWX	Dixon, Calif.	9.600	31.23	LQA	Buenos Aires, Argentina
7.621	39.34	RIM	Irkutsk, U.S.S.R.	9.609	31.20	DGU	Nauen, Germany
7.685	39.01	TIR	Cartago, Costa Rica	9.670	31.00	T14NRH	Heredia, Costa Rica
7.715	38.86	*KEE	Bolinas, Calif.	9.702	30.90	GCA	Rugby, England
7.758	38.65	.....	Kootwijk, Holland	9.742	30.77	*WOF	Lawrenceville, N. J.
7.770	38.59	FTF	St. Assise, France	9.750	30.75	VK2ME-	
7.790	38.49	HBP	Geneva, Switzerland	9.772	30.68	VLK	Sydney, Australia
7.830	38.29	PDV	Kootwijk, Holland	9.798	30.60	EAM	Madrid, Spain
7.876	38.07	JIAA	Kemikawa-Cho, Japan	9.840	30.47	GCW	Rugby, England
7.940	37.76	VK2ME	Sydney, Australia	9.862	30.40	FTI	St. Assise, France
7.995	37.50	HC2JSB	Quito, Ecuador			WON	Lawrenceville, N. J.
8.103	37.00	HCJB	Quito, Ecuador			EAQ	Madrid, Spain
8.180	36.65	PSK	Rio de Janeiro, Brazil			JIAA	Kemikawa-Cho, Japan
8.328	36.00	DDAC	S.S. Europa	9.890	30.32	LSA	Buenos Aires, Argentina
		DDAS	S.S. Bremen	9.895	30.30	LSN	Buenos Aires, Argentina
		DDBR	S.S. Berlin	9.928	30.20	*HJY	Bogota, Columbia
		DDCB	S.S. Columbus	9.942	30.15	GBU	Rugby, England
		DDCG	S.S. Resolute	9.993	30.00	LSL	Buenos Aires, Argentina
		DDCP	S.S. Cap Polonio	10.000	29.98	.....	Belgrade, Yugo Slavia
		DDDT	S.S. Deutschland	10.051	29.83	SUV	Cairo, Egypt
		DDDX	S.S. Hamburg	10.060	29.80	*VRT-ZFB	Hamilton, Bermuda
		DDEA	S.S. Cap Arcona	10.135	29.58	OPM	Leopoldville, Belgian Congo.
		DDDE	S.S. New York	10.163	29.50	DDAC	S.S. Europa
		DDFF	S.S. Reliance			DDAS	S.S. Bremen
		DDFT	S.S. Oceana			DDBR	S.S. Berlin
		DDNY	S.S. Albert Ballin				
8.464	35.42	DAF	Norden, Germany				

WORLD SHORT WAVE STATIONS

		DDCB	S.S. Columbus	13.074	22.93	JIAA	Kemikawa-Cho, Japan
		DDCG	S.S. Resolute	13.220	22.68	GDLJ	S.S. Homeric
		DDCP	S.S. Cap Polonio			GFVV	S.S. Majestic
		DDDT	S.S. Deutschland			GKPY	S.S. Minnetonka
		DDDX	S.S. Hamburg			GLSQ	S.S. Olympic
		DDEA	S.S. Cap Arcona			GMBJ	S.S. Empress of Britain
		DDED	S.S. New York			GMJQ	S.S. Belgenland
		DDFF	S.S. Reliance			*VTSX	S.S. Monarch of Bermuda
		DDFT	S.S. Oceana			WSBN	S.S. Leviathan
		DDNY	S.S. Albert Ballin	13.296	22.55	CGA	Drummondville, Que
10.212	29.35	PSH	Rio de Janeiro, Brazil	13.337	22.48	*YVQ	Maracay, Venezuela
10.250	29.25	PMN	Bandoeng, Java	13.380	22.40	*WMA	Lawrenceville, N. J.
10.285	29.15	DIQ	Zeesen, Germany	13.469	22.26	*WAJ	Rocky Point, N. Y.
10.324	29.04	ORK	Brussels, Belgium	13.591	22.06	GBB	Rugby, England
10.345	29.98	LSX	Buenos Aires, Argentina			GBC	Rugby, England
10.410	28.80	*KEZ	Bolinas, Calif.	13.671	21.93	HAS	Skékésfehevar, Hungary
		LSY	Buenos Aires, Argentina	13.690	21.90	*KKZ	Bolinas, Calif.
		PDK	Kootwijk, Holland	13.740	21.82	CGA	Drummondville, P. Q.
		PKP	Medan, Sumatra	13.776	21.77	*KKW	Dixon, Calif.
10.520	28.50	VK2ME	Sydney, Australia	13.816	21.70	SUZ	Cairo, Egypt
10.540	28.44	*WOK	Lawrenceville, N. J.	13.860	21.63	*W1Y-	
10.601	28.28	*WEA	Rocky Point, N. Y.			*W2XBJ	Rocky Point, N. Y.
10.664	28.12	*CEC	Santiago, Chile	13.925	21.53	*WIK	Rocky Point, N. Y.
10.761	27.86	GBP	Rugby, England	14.310	20.95	G2NM	Sonning-on-Thames, England
10.830	27.68	*KWV	Dixon, Calif.	14.450	20.75	GBW	Rugby, England
10.962	27.35	*OCI	Lima, Peru	14.464	20.73	*WMF	Lawrenceville, N. J.
10.980	27.30	ZLW	Wellington, N. Z.	14.480	20.70	LSN	Buenos Aires, Argentina
11.111	26.98	XFD	Mexico City, Mex.	14.545	20.69	*RXC	Panama City, Panama
11.174	26.83	CT3AQ	Funchal, Madeira	14.530	20.65	LSA	Buenos Aires, Argentina
11.187	26.80	XAM	Merida, Yucatan	14.550	20.60	HBJ	Geneva, Switzerland
11.470	26.15	IBDK	S.S. Electra	14.582	20.56	*WMN	Lawrenceville, N. J.
11.644	25.75	PPQ	Rio de Janeiro, Brazil	14.630	20.50	*XDA	Chapultepec, Mex.
11.680	25.67	*YVQ	Maracay, Venezuela	14.682	20.42	PSS	Rio de Janeiro, Brazil
		*KIO	Kahuku, Hawaii	14.706	20.27	*WKU-	
11.711	25.60	.....	Pontoise, France			*W2XBJ	Rocky Point, N. Y.
		VE9JR	Winnipeg, Man.	14.930	20.08	*HJB	Bogota, Colombia
11.725	25.57	PHOHI	Huizen, Holland	15.051	19.92	*WNC	Hialeah, Florida
11.753	25.51	DJD	Koenigs wusterhausen, Germany	15.066	19.90	T14NRH	Heredia, Costa Rica
		GSD	Davenport, England	15.104	19.85	RAU	Tashkent, U.S.S.R.
11.760	25.50	*XDA	Mexico City, Mex.	15.120	19.83	HVJ	Vatican City, Italy
11.790	25.42	W1XAL	Boston, Mass.	15.140	19.81	GSF	Davenport, England
11.800	25.40	I2RO	Rome, Italy	15.190	19.73	DJB	Zeesen, Germany
11.822	25.36	W2XE	Wayne, N. J.	15.234	19.68	W8XK	Pittsburgh, Pa.
		.....	Pontoise, France	15.280	19.62	.....	Wayne, N. J.
11.870	25.27	VUC	Calcutta, British India	15.320	19.57	W2XAD	Schenectady, N. Y.
		GSE	Davenport, England	15.344	19.54	*KWU	Dixon, Calif.
11.872	25.25	WSXK	Pittsburgh, Pa.	15.410	19.46	*KWO	Dixon, Calif.
11.898	25.20	.....	Pontoise, France	15.681	19.12	FTK	St. Assise, France
11.923	25.16	RW50	Moskva Imeni Popova, USSR	15.760	19.02	JIAA	Tokyo, Japan
11.935	25.12	FTA	St. Assise, France	15.950	18.90	PLG	Bandoeng, Java
11.969	25.05	*KKQ	Bolinas, Calif.	16.024	18.71	*KKP	Kahuku, Hawaii
12.000	24.99	FZG	Saigon, Indo-China	16.060	18.66	NAA	Arlington, Va.
12.045	24.89	NAA	Arlington, Va.	16.150	18.56	GBX	Rugby, England
		NSS	Annapolis, Md.	16.162	18.55	PSA	Rio de Janeiro, Brazil
12.150	24.68	FQO-FQE	St. Assise, France	16.200	18.51	FZR	Saigon, Indo-China
12.190	24.60	GBS	Rugby, England	17.080	17.55	GBC	Rugby, England
		GBX	Rugby, England	17.110	17.52	*WOO	Ocean Gate, N. J.
12.290	24.40	PLM	Bandoeng, Java	17.122	17.51	HAS	Skékésfehevar, Hungary
		ZLW	Wellington, N. Z.	17.260	17.37	DAF	Norden, Germany
12.394	24.19	DAF	Norden, Germany	17.287	17.34	IBEJ	S.S. Conte Rosso
12.780	23.46	GBC	Rugby, England			ICEJ	S.S. Rex
12.785	23.45	IAC	Coltana, Italy			IDL1	S.S. Conte di Savoia
12.820	23.38	.....	Rabat, Morocco			DFB	Nauen, Germany
12.836	23.36	*WOO	Ocean Gate, N. J.	17.512	17.12	GDLJ	S.S. Homeric
13.040	23.00	DDAC	S.S. Europa	17.580	17.05	GFVV	S.S. Majestic
		DDAS	S.S. Bremen			GKPY	S.S. Minnetonka
		DDBR	S.S. Berlin			GLSQ	S.S. Olympic
		DDCB	S.S. Columbus			GMBJ	S.S. Empress of Britain
		DDCG	S.S. Resolute			GMJQ	S.S. Belgenland
		DDCP	S.S. Cap Polonio			*VTSX	S.S. Monarch of Bermuda
		DDDT	S.S. Deutschland			WSBN	S.S. Leviathan
		DDDX	S.S. Hamburg			HSP	Bangkok, Siam
		DDEA	S.S. Cap Arcona	17.719	16.92	DJE	Konigswusterhausen, Ger.
		DDED	S.S. New York	17.760	16.88	GSG	Davenport, England
		DDFF	S.S. Reliance			PHI	Huizen, Holland
		DDFT	S.S. Oceana			W3XAL	Bound Brook, N. J.
		DDNY	S.S. Albert Ballin	17.772	16.87		

17.780	16.86	W8XK	Pittsburgh, Pa.	19.282	15.55	FTM	St. Assise, France
17.830	16.82	PCV	Kootwijk, Holland	19.400	15.45	FRO-FRE	St. Assise, France
17.850	16.80	W2XAO	New Brunswick, N. J.	19.460	15.40	FZU	Tamatoro, Madagascar
		PLF	Bandoeng, Java	19.678	15.24	*CEC	Santiago, Chile
17.894	16.76	*WLL	Rocky Point, N. Y.	19.684	15.23	EAQ	Madrid, Spain
18.000	16.67	*KQJ	Bolinas, Calif.	19.816	15.13	*WKN	Lawrenceville, N. J.
18.105	16.56	W9XAA	Chicago, Ill.	19.830	15.12	FTD	St. Assise, France
18.170	16.50	CGA	Drummondville, Que.	19.895	15.07	LSG	Buenos Aires, Argentina
		PMC	Bandoeng, Java	19.950	15.03	DIH	Nauen, Germany
18.193	16.48	GAW	Rugby, England	20.028	14.97	DHO	Nauen, Germany
18.240	16.44	FRO-FRE	St. Assise, France			OPL	Leopoldville, Belgian Congo
		FTE	St. Assise, France	20.140	14.88	DWG	Nauen, Germany
18.296	16.39	*YVQ	Maracay, Venezuela	20.400	14.70	GBA	Rugby, England
18.310	16.38	FZS	Saigon, Indo-China	20.600	14.55	PMB	Bandoeng, Java
		GAS	Rugby, England	20.680	14.50	FSR	Paris-Saigon, Indo-China
18.340	16.35	*WLA	Lawrenceville, N. J.			LSN	Monte Grande, Argentina
		ZLW	Wellington, N. Z.	20.710	14.47	LSX	Buenos Aires, Argentina
18.365	16.32	FZA	Saigon, Indo-China	21.000	14.28	OKI	Buenos Aires, Argentina
18.400	16.29	PCK	Kootwijk, Holland	21.020	14.27	LSN	Buenos Aires, Argentina
18.444	16.25	*HJY	Bogota, Colombia	21.054	14.24	*WKA	Lawrenceville, N. J.
18.600	16.12	PDM	Kootwijk, Holland	21.069	14.23	PSA	Rio de Janeiro, Brazil
18.620	16.10	GBJ	Bodmin, England	21.129	14.19	LSM	Buenos Aires, Argentina
		GAU	Rugby, England	21.400	14.01	*WKK	Lawrenceville, N. J.
18.670	16.06	*OCI	Lima, Peru	21.420	14.00	W2XDJ	Deal, N. J.
18.820	15.93	PLE	Bandoeng, Java	21.470	13.96	GSH	Daventry, England
18.856	15.90	ZSS	Capetown, S. Africa	21.540	13.92	W8XK	Pittsburgh, Pa.
18.892	15.87	*WDS	Rocky Point, N. Y.	22.291	13.45	GBU	Rugby, England
18.958	15.82	*LSR	Buenos Aires, Argentina	29.803	10.06	IAF	Fiumicino, Italy
18.963	15.81	GAG	Rugby, England	30.593	9.80	IAG	Golfo Aranci, Sardinia
19.012	15.77	*WKW-		31.000	9.67	W8XI	Pittsburgh, Pa.
		*W2XBJ	Rocky Point, N. Y.	34.600	8.67	W2XB	New Brunswick, N. J.
19.121	15.68	ISM	Buenos Aires, Argentina	42.530	7.05	.....	Berlin, Germany
19.194	15.62	ORG	Brussels, Belgium	51.400	5.83	W2XBC	New Brunswick, N. J.
19.207	15.61	*WKF	Lawrenceville, N. J.	51.724	5.79	RW6I	Moakva Vei, U.S.S.R.
19.240	15.58	DFA	Nauen, Germany	59.964	5.00	PK4PA	Palembang, Sumatra
19.270	15.57	PPU	Rio de Janeiro, Brazil				

The Hundred Best S. W. Stations by Calls . . .

British Ships	P	DJD Zeesen, Germany	B	GSB Daventry, England	B
13.219 22.68		11.753 25.51		9.510 31.53	Broadcasts for South Africa 1:00-3:00 p.m.; West Africa 3:00-5:30 p.m.; Canada 8-10 p.m.
8.831 33.95		DJE Zeesen, Germany	B		
4.174 71.82		17.761 16.88			
CEC Santiago, Chile	P	EAQ Madrid, Spain	B	GSC Daventry, England	B
19.678 15.24 11 a.m.-4 p.m.		9.862 30.40 5:30-7 p.m.; Sat. 3 p.m.		9.685 31.28	
CGA Drummondville, Que.	P	19.684 15.23 Phones		GSD Daventry, England	B
13.296 22.55 9 a.m. to 2 p.m.		19.282 15.55 10 a.m.-2 p.m.		11.750 25.51	Broadcasts for Australasia 4:30-6:30 a.m.; 1:00-3:00 p.m.; 3:30-5:30 p.m.
CMCI Havana, Cuba	B	FZS Saigon, Indo-China	P	GSE Daventry, England	B
6.057 49.50 9 p.m.-11 p.m.		12.000 24.98 9-10 a.m.		11.865 25.27	Broadcasts for India 9:30-11:30 a.m.
CM5RY Matanzas, Cuba	B	German Ships	P	GSF Daventry, England	B
7.312 41.03 Sat. 10:45-11:30 p.m.		13.035 23.00		15.140 19.51	
CNR Rabat, Morocco	P	10.163 29.50		GSG Daventry, England	B
12.820 23.38		8.328 36.00		17.770 16.90	Broadcasts for India 9:30-11:30 a.m.
CT1AA Lisbon, Portugal	B	4.174 71.82		GSH Daventry, England	B
9.592 31.25 Tues.-Fri. 5-7 p.m.		GBB Rugby, England	P	21.470 13.96	
CT3AQ Funchal, Madeira	B	13.500 22.09		HBJ Geneva, Switzerland	P
11.174 26.83 Tues.-Thur. 5-6:30 p.m.; Sun. 10:30-noon		GBC Rugby, England	P	14.550 20.60	
DAF Norden, Germany	P	12.780 23.46		HLB Geneva, Switzerland	B
17.260 17.37 Talks to Ships		17.080 17.55		9.580 31.30	Sun. 5-5:45 p.m.
12.394 24.19		GBW Rugby, England	P	HBP Geneva, Switzerland	B
8.464 35.42		14.450 20.75 6 a.m.-6 p.m.		7.790 38.49	Sun. 5-5:45 p.m.
DFB Nauen, Germany	P	GBX Rugby, England	P	HCJB Quito, Ecuador	B
17.512 17.12 Phones YVQ		16.150 18.55 4 p.m.-11 p.m.		8.103 37.0	7:30-9:45 p.m.; except Monday
DGK Nauen, Germany	P	GSA Daventry, England	B	HJB Bogota, Colombia	P
6.675 44.91		6.050 49.56		14.930 20.08	
DHO Nauen, Germany	P			HJY Bogota, Colombia	P
20.028 14.97				9.928 30.20	
DIQ Nauen, Germany	B			18.444 16.25	11 a.m.-4 p.m.
10.246 29.26					
DJA Zeesen, Germany	B				
9.552 31.38 2 p.m.-6:30					
DJB Zeesen, Germany	B				
15.190 19.73 8 a.m.-noon					

HJ1ABB	Barranquilla, Colombia	B	PLW	Bandoeng, Java	P	VRT-ZFB	Hamilton, Bermuda	P
5.996	50.0	8-10 p.m.	9.480	31.63		10.060	29.80	
HJ4ABB	Manizales, Colombia	B	PMC	Bandoeng, Java	P	WKA	Lawrenceville, N. J.	P
7.139	42.00	Sat. 10 p.m.-mid.	18.170	16.50	3:30-9 a.m.	21.054	14.24	8 a.m.-4 p.m.
HJ4ABE	Medellin, Colombia	B	Pontoise, France			WKK	Lawrenceville, N. J.	P
5.925	50.60	Mon., Wed., Fri., 7:30-10:30 p.m.; Tues., Thurs., Sat. and Sun., 6-8 p.m.	15.234	19.68	8-11 a.m.	21.400	14.01	8 a.m.-4 p.m.
			11.898	25.20	11:30 a.m.-2:30 p.m.	WNC	Hialeah, Florida	P
			11.710	25.60	4-7 p.m.	15.051	19.92	Phones Pan-American stations
HVJ	Vatican City	B	PPU	Rio de Janeiro, Brazil	P	WOO	Ocean Gate, N. J.	P
15.120	19.83	5-5:15 a.m.	19.270	15.57	10:30 a.m.-3:30 p.m.	12.839	23.36	Phones Ships
IAC	Coltano, Italy	P	PRADO	Riobamba, Ecuador	B	8.561	35.02	
6.648	45.10		6.618	45.31	Thurs., 9-11 p.m.	4.749	63.13	
I2RO	Roma, Italy	B	PSA	Rio de Janeiro, Brazil	P	W1XAL	Boston, Mass.	B
11.800	25.40	11 a.m.-12:30 p.m.; 2:30-5:30 p.m.	21.069	14.23	8 a.m.	6.040	49.64	Irregular
Italian Ships		P	PSH	Rio de Janeiro, Brazil	P	W1XAZ	Springfield, Mass.	B
8.566	35.00		10.212	29.35		9.560	31.36	7:00 a.m.-1:00 a.m.
4.283	70.00		PSR	Rio de Janeiro, Brazil	P	W2XAD	Schenectady, N. Y.	B
J1AA	Kemikawa-Cho, Japan	B	14.682	20.42	5-6 p.m.	15.320	19.57	Daily 1-3 p.m.; Sat., Sun. to 4.
9.862	30.40	5:00-7:45 a.m.	9.290	32.27	Sun., 3-5 p.m.			
13.074	22.83	Phones	RAU	Tashkent, USSR.	P	W2XAF	Schenectady, N. Y.	B
15.760	19.02	Phones	15.104	19.85	Phones Moscow	9.530	31.46	Daily, 7-11 p.m.
KDK-KKH	Kahuku, Hawaii	P	RV-15	Khabarovsk, USSR.	B	W3XAL	Boundbrook, N. J.	B
7.518	39.89	9 p.m.-2 a.m.	4.273	70.65	3-9 a.m.	6.096	49.17	Sat. 4:30 p.m.-1 a.m.
KEJ	Bolinas, Calif.	P	RV59	Moscow, USSR.	P	17.772	16.57	8 a.m.-4 p.m.
9.012	33.27		5.995	50.0	3-7 p.m.	W3XAU	Philadelphia, Pa.	B
KKP	Kahuku, Hawaii	P	RXC	Panama City, Panama	P	9.585	31.28	Irregular
16.024	18.71		14.485	20.69		6.057	49.50	
KWO	Dixon, Calif.	P	SR-1	Poznan, Poland	B	W4XB	Miami, Fla.	B
15.410	19.46	2-5 p.m.	9.570	31.33	Tues., 6-8 a.m.	6.036	49.67	
KWV	Dixon, Calif.	P	SUZ	Cairo, Egypt	P	W8XAL	Cincinnati, Ohio	B
10.830	27.68		13.816	21.70	7 a.m.-3:30 p.m.	6.060	49.48	Relays WLW 6 a.m.- 10:30 a.m.; 1:30- 3:30 p.m.; 7 p.m.- 1:30 a.m.
LSG	Buenos Aires, Arg.	P	VE9AP	Drummondville, Que.	B	W8XK	Pittsburgh, Pa.	B
19.895	15.07	10:30 a.m.-3:30 p.m.	6.335	47.35		6.140	48.83	Relays KDKA 4-11 p.m.
LSN	Buenos Aires, Arg.	P	VE9BJ	St. John, N. B.	B	11.872	25.25	
9.895	30.30	6 p.m.-6 a.m.	6.090	49.23	5 p.m.-11 p.m.	15.204	19.72	Relays KDKA 9 a. m.-4 p.m.
21.020	14.27	8 a.m.-4 p.m.	VE9CI	London, Ont.	B	W9XAA	Chicago, Ill.	B
LSR	Buenos Aires, Arg.	P	2.735	109.62	Daily 9-11 p.m.; Sun. 11 a.m.-7 p.m.	6.076	49.34	Sun. 11 a.m.-9 p.m.
18.958	15.82	11 a.m.-4 p.m.	VE9CS	Vancouver, B. C.	B	W9XF	Chicago, Ill.	B
LSY	Buenos Aires, Arg.	P	6.070	49.39	Daily, 8-10 p.m.	6.095	49.18	4:30-8 p.m.; 9:30-2 a.m.
20.820	14.40		VE9DR	Drummondville, Que.	B	XAM	Merida, Yucatan	P
OCI	Lima, Peru	P	6.005	49.93	7:30 a.m.-mid.; Sun., noon to 11:15 p.m.	5.766	52.00	
18.670	16.06	2 p.m.	VE9JR	Winnipeg, Man.	B	11.530	26.00	
OPM	Leopoldville, B. Congo	P	11.710	25.60	Tues. 6:30-8:30 p.m. Fri. to 9.	XDA	Mexico City	P
10.090	29.70		VK2ME	Sydney, Australia	B	5.879	51.00	
ORK	Brussels, Belgium	P	9.585	31.28	Sun. 1-3 a.m.; 5-9 a.m.; 9:30-11 a.m.	11.760	25.50	
10.340	28.99		VK3ME	Melbourne, Australia	B	YVQ	Maracay, Venezuela	P
OXY	Skamleback, Denmark	B	9.503	31.55	Wed. 5-6:30 a.m.; Sat. 5-7 a.m.	13.278	22.58	
9.520	31.49	2-6:30 p.m.	VPN	Nassau, Bahamas.	P	11.680	25.67	5-7 p.m.
PCK	Kootwijk, Holland	P	4.508	66.50	Phones WNC	18.296	16.39	
18.400	16.29		VQ7LO	Nairobi, Kenya	B	YVIBC	Caracas, Venez.	B
PCV	Kootwijk, Holland	P	6.060	49.48	Daily 11 a.m.-3:30 p.m.; Tues. 3-4 a.m.; Thur. 8-9 a.m.	8.119	49.00	Relays 960 kcs.; 10:30 a.m.-1 p.m.; 5:15-10 p.m.
17.830	16.82	6-9 a.m.	VRT-ZFA	Hamilton, Bermuda	P	6.125	48.95	8-11 p.m.
PHI	Huizen, Holland	B	5.045	59.42				
17.761	16.88	Irregular						
PHOHI	Huizen, Holland	B						
11.725	25.57							
PLE	Bandoeng, Java	P						
18.820	15.93	Tues., Fri., 10:40 a.m.						

Helpful Advice

(Continued from page 11)

changed radio frequency to the broadcast receiver in the same way a broadcast signal is carried into the set from the antenna. Headphones may be used on the Philco broadcast receiver to listen to the short-wave signals supplied by the converter.

"RADEX is compact, complete, convenient and correct" alliterates A. C. Spear, 1825 Hamlin St., N. E., Washington, D. C.

Using A Microphone

I have tried to attach a microphone to a model 931 Sparton broadcast receiver without results except a severe shock and the detuning of the set. Please tell me how to use the microphone.

The shock and detuning of the set came from crossing with some plate circuit having high potential, and detuning was caused by changing a grid circuit through improper attachment.

The small microphones usually come fitted with a wafer adapter to be slipped beneath the second detector tube for connection between the grid and cathode, or in the grid circuit.

The best results are obtained by using the microphone with an input transformer and external battery. Connect the microphone in series with a single dry cell and the primary coil of a small audio transformer. The secondary coil should then be placed in the grid circuit return by opening that lead between the bottom of the grid coil and the cathode of the detector tube. The volume control is turned down to stop all broadcast reception. Turn up the volume control to bring back broadcasting. It may be necessary to use a small switch across the secondary coil of the transformer to short circuit it when the microphone is being used to prevent any chances of detuning the circuit.

Larger Speaker

After changing the -45s and -27s in my radio set to -47s and 56s, I find that the volume of sound is about doubled. This now gives some trouble because of the small speaker (8-inch) and I wish to know whether I can use a larger speaker.

This additional volume appears to be too much for the 8-inch speaker. You can replace it with a 10-inch dynamic speaker provided it will fit into your cabinet space. The 10-inch speaker will be approximately 10½ inches in diameter and nearly one inch deeper than the 8-inch speaker. You must procure a speaker having an input transformer for two -47s in push-pull, and a field resistance of 2,500 ohms.

Choking And Fading

I have a model 91 Philco which appears to choke up and fade at times. Do you think the new tubes will help? This trouble seems a serious matter and hardly caused by station interference

Sometimes these symptoms are due to heterodyne action effects between

stations. But serious fading and choking of signals in the receiver frequently is due to broken down coupling condensers in the audio amplifier. A defective grid resistor in the audio system would cause similar trouble if one has broken open at some place in the circuit. A defective plate resistor will have the same effect on the operation of the receiver. We advise testing all grid and plate resistors in the set, and replace those showing incorrect values or open circuits.

The following require particular attention: Locate from the manufacturer's diagram accompanying the set, resistors numbers 3, 26, 38 and 43 (all of 1,000,000 ohms); No. 32 (99,000 ohms); No. 39 (490,000 ohms); numbers 40 and 41 (25,000 ohms each); and No. 14 (1,000 ohms). Trouble may appear in the condensers, particularly numbers 6, 24, 13, 35 and 42.

Philco 91 employs 6.3-volt tubes and, therefore, the new 50 series cannot be substituted because of the difference in filament voltages. This circuit, with tubes, is efficient, and there could be no gain in changing tubes. Tubes are not causing the trouble you are experiencing.

Telephone Adapter On Scott

Please tell me how to use an ICA headphone adapter on my Scott all-wave set.

See the article in the February issue of RADEX. The adapter may be inserted into the second detector—a -27 tube, which must be removed. This connects the phones between the grid input of the -27 tube and the filament side. Two adapters, placed in the -45 push-pull sockets with phones and tips in series, will give maximum volume. Or one adapter may be used with the remaining -45 tube removed to quiet the speaker.

Hum In Philco 87

My Philco, model 87 receiver, has a steady hum between 1000 and 1190 kilocycles which drowns out all recep-

tion on that portion of the dial. While a power line is a long distance away, I do not see how that can cause the trouble, and hope you can advise me what to do.

Usually man-made static affects all settings of the dial equally. Such is not always the case as there is an effect known as tunable hum or tunable interference. Sometimes it is caused by internal conditions such as dust on some part of the condenser plates, or the shaft of the condensers may make poor contact at some positions of the dial.

Your location may have something to do with this trouble. The fact that a power line is some distance off may make little difference. Again, a heterodyne effect between two nearby powerful stations may influence your locality. You can ascertain whether or not this noise is in the receiver by removing the antenna. If the hum interference reduces in the same proportion as the signal intensity it obviously is outside interference. If there is no change it is in the set. In this latter case we advise that you have the neutralization and tuning of the circuits checked. The facts given by you do not permit of a complete analysis, but we suggest that the above points be carefully checked.

Distortion Troubles

When the automatic volume control of my ten-tube Crosley set goes into action there is a very disagreeable form of distortion. I hope you can help me out and tell me why this is and what must be done to remedy the mushy distortion.

Some distortion of this type is characteristic when two stations are operating on almost the same frequency. When the station being received fades away badly the automatic volume control goes into action with full energy in an attempt to bring up the sound level of the fading station, but the adjacent station interference, which has not faded, or may be becoming stronger at that

moment, becomes louder and there is apt to be some heterodyne action and disagreeable distorting interference.

Other than this the action of a properly designed and adjusted automatic volume control is at all times absolutely noiseless, and the only indication that it is functioning is the disappearance of background noises when a station is approached on the dial, or the failure of the signal to exceed a certain gain in intensity. Sometimes the opening of the plate by-pass condenser of the automatic volume control tube will cause trouble, or a defective resistor filter in the grid return of the tubes controlled by the a.v.c. will show similar effects. As the serviceman's set analyzer is practically useless in searching for this trouble, it is recommended that each piece of suspicious apparatus associated with the a.v.c. tube be tested individually, but not until you have exhausted the possibilities of station heterodyne interferences as outlined in the first paragraph.

Headphones And Oscillation

I have an Atwater Kent 55 set and use headphones with adapter in one -45 socket after removing both tubes. If I turn the volume control higher to increase the signal of the station the set whistles, but as soon as the volume is cut down the station comes in. On frequencies from 1100 to 550 kilocycles I can turn the volume on full and the whistling ceases.

We believe that the oscillation occurs on the stated frequencies because it is taking place in the radio-frequency amplifier of the Atwater Kent model 55 receiver because of excessive plate voltage, excessive screen voltage, or an open cathode or screen-grid by-pass condenser. The obvious treatment is to test the two types of by-pass condensers mentioned on the -24 i.f. tubes. Also test the plate by-pass condensers between the positive end of the voltage divider and ground and the last resistance of the divider leading to the -24 cath-

odes. It does not seem possible to us that the introduction of the adapter can cause oscillation unless it is due to the removal of the two -45 power tubes and consequent unbalancing of the power from the rectifier unit.

In May Mr. Dashiell will give instructions and diagrams for building that simple short wave converter.

Reception Reports

(Continued from page 33)

JOGK, CMK, CKGW, KGBU, CJOC, WDAE, WSPA, WNAD, WMPC, WBOL, WBZ, KGU, WPG and WCAU."

"In eight nights I have picked up 216 stations," reports Warren R. Davee, 222 No. Monitor St., West Point, Nebr., "16 of which are in Australia, 2 in New Zealand, 5 in Japan, 2 in Hawaii, 12 in Canada, 3 in Mexico, one in Porto Rico and one in Cuba."

"I have had 251 stations on a one-tube receiver, using a 227-tube with 90 volts on the plate," writes Herbert Chambers, 4335 Belmar Ave., Toledo, Ohio. "78 of these stations are of 250 watts and under, the farthest one being KABC, San Antonio, Texas, 1175 miles."

"I have picked up KFI night after night as early as 8:45 EST," reports Philip A. Fecher, 3027 Chesterfield Ave., Baltimore, Md. "KOA at Denver, XER, XEPN, etc., all regulars from the beginning. I use a 10-tube a.c. superhet, Sonora 1932 model."

Robert Rosenberger, 17 Janssen Place, Kansas City, Mo., has a Majestic 291 with which he is very much pleased. He reports receiving Radio Kaiserslautern, Germany, LV7, 5CK, G5GB and CMAK with a total of thirty different countries.

"Thanks to your very fine DX table," remarks E. L. Williams, 4295 W. Buena Vista Ave., Detroit, Mich., "I was able last weekend to hear KGU, Honolulu; CFBO, St. John, N.

B.; CMCY, Havana; XEJ, Juarez, and XES, Tampico."

"I have had a radio only since March, 1932," writes Robert E. Lee Hunt, 1105 Harmon Ave., Danville, Ill., "but I have logged 380 stations. I started to verify only last August and now have 260. I use a 7-tube Sentinel RCA."

"In the 13 weeks I have had my Philco Model 20, 7-tubes, I have heard 120 stations," records J. S. Goral, R 2, Box 35, Latrobe, Pa. "I have been interested in radio ever since KDKA and a few others were the only stations on the air."

"I've been logging those elusive stations since early in 1929 and to date have just passed the 500 mark," writes Henry Larent, 243 Rand St., Central Falls, R. I.

"I have every issue of RADEX since March, 1930, and wouldn't part with them for anything," writes George Nahas, 147 Seeley Street, Brooklyn, N. Y.

Field of Short Waves

(Continued from page 18)

hear from other boys of his age who tune on 75 meters.

"I just recently purchased a new Stewart-Warner all-wave set," remarks Carl S. Seigfreid, 1022 Madison Ave., Reading, Pa. "I have had the set a week and have received 15 police stations, 8XK, 1XAL, 2XAF. On the foreign s.w. band I have not done so well. I receive GSA at Daventry, England, every night in the week from 8 to 10 p.m. I also hear EAQ each night. This is all I have been able to pick up on the foreign bands. Have any owners of Stewart-Warner radios done better? I would appreciate it if other owners of this set will write to me and tell me their experiences on the short and long wave bands."

Clarence Sargent, 18 Clinton St., Dansville, N. Y., reports reception of LSN, XAM, EAQ, YV1BC, GSE, DJD and RXC.

"I have answered several foreign

stations and sent return postage," writes R. F. Brink, E. Stroudsburg, Pa., "but I have never received a reply. Can you account for their not answering?" We cannot account for their not answering, but there are several things to be remembered in writing to foreign stations. United States stamps are of no use to them, so International Reply Coupons should be sent; these can be purchased at any post office. Furthermore, those stations receive a tremendous amount of mail every day from all parts of the world and they necessarily require considerable time for reading and answering these letters. Do not forget to ask for a verification, and most important of all, be sure to give at least a part of the program heard to prove the reception.

F. L. Naylor, Jr., 176 Argyle Place, Arlington, N. J., writes, "I picked up several stations, VE9JR, GSD, VE9DR, I2RO, GSE, EAQ and several stations in America. I think it would have been impossible to have received any of these without the aid of RADEX."

Amending The Rules

(Continued from page 7)

event.

We aren't nearly so much interested in knowing how many different calls a listener has heard since 1919 as in how many of the stations he has logged in this month's Index by Frequencies at their present location and on their present frequency. The more we consider the problem, the more we are convinced that we should leave the professional or all-time records to the radio clubs and publish in this magazine only those records composed of stations which appear in this magazine. All-time records are not fair to beginners or those who have taken up DXing in the last two or three years. They can never hope to catch up with their competitors because scores and hundreds of stations on the latter's logs have dis-

appeared never to return again.

We fear it is quite out of the question to get all clubs to agree upon a uniform set of rules as each one naturally thinks that its present rules are the right ones. We think it much simpler to make a set of rules for the guidance of this publication and then to publish those records which comply with such rules. The formulation of these rules will be given further study and our plan will be fully set forth in a future issue of this magazine. In the meantime, we welcome suggestions of our readers resulting from their consideration of this article.

The Noise Nuisance

(Continued from page 3)

inches in length and two inches in diameter. The wire used is No. 18 gage double-cotton-covered and is wound in two layers of 100 turns each over a length of five inches. The d.c. resistance of each of the coils will be less than one ohm.

The condenser arrangement requires four by-pass condensers each having a capacity of .015 microfarads at about 200 volts. They must be arranged by pairs in series and connected between the ends of the coils as shown in the diagram. The inner common terminals are connected together, and this contact must be well grounded to a cold water pipe with a separate wire. Do not use the wire that grounds the radio receiver.

A number of filter devices can be purchased at radio supply houses if the reader does not care to make one up for himself. They are very efficient and should give satisfaction. Two outstanding makes are universally in use. The Insuline Corporation of America filters come in several sizes to cover various intensities of noise sources, from the little ICA Junior, to the ICA Popular, Utility, Service and Senior models. The Tobe Deutschmann filterizer has been described at length on page 6 in the October, 1932 (No. 62) issue of RADEX.

Here's Something You Have Wanted . . .

◆ ◆ A RADIO PROGRAM

RADIO PROGRAMS

“SLATE” ◆ ◆

Time	MONDAY		TUESDAY	
	Program	Call Dial	Program	Call Dial
6:00				
6:15				
6:30				
6:45				
7:00				
7:15				
7:30				
7:45				
8:00				
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9:45				
10:00				
10:15				
10:30				
10:45				
11:00				
11:15				
11:30				
11:45				
12:00				

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