

N.S.E.

THE MAY 1937

25<sup>c</sup>

# RADIO INDEX

The All-wave DX Log of the World



South American Stations  
The New Television  
Revised Frequency Checks  
Most Complete Shortwave List

No. 109

# The Frequency Checks

In order to include many of the new stations which have recently come on the air, the engineers of the Federal Communications Commission have revised their list of monthly frequency check broadcasts. The latest schedule, with times given in Eastern Standard, follows:

The Second Monday		
2:00-2:20	WLNH 1310	Laconia, N. H.
	WJBO 1420	Baton Rouge, La.
2:10-2:30	WBRB 1210	Red Bank, N. J.
	WHBB 1500	Selma, Ala.
2:20-2:40	WMAS 1420	Springfield, Mass.
	WIOD 1300	Miami, Fla.
2:30-2:50	WWRL 1500	Woodside, N. Y.
	WJBW 1200	New Orleans, La.
2:40-3:00	WOKO 1430	Albany, N. Y.
	WMBR 1370	Jacksonville, Fla.
2:50-3:10	WCAX 1200	Burlington, Vt.
	WOPI 1500	Bristol, Tenn.
3:00-3:20	KTRH 1290	Houston, Tex.
	WMBO 1310	Auburn, N. Y.
	WMSD 1420	Sheffield, Ala.
3:10-3:30	WOC 1370	Davenport, Ia.
	WCAD 1220	Canton, N. Y.
	WMFN 1210	Clarksdale, Miss.
3:20-3:40	KWLC 1270	Decorah, Ia.
	WMBQ 1500	Brooklyn, N. Y.
	WNBK 1430	Memphis, Tenn.
3:30-3:50	WFPV 1210	Fort Smith, Ark.
	WMFF 1310	Plattsburg, N. Y.
	WDBO 580	Orlando, Fla.
3:40-4:00	KABC 1420	San Antonio, Tex.
	WQDM 1390	St. Albans, Vt.
	WSMB 1320	New Orleans, La.
3:50-4:10	KADA 1200	Ada, Okla.
	WFAS 1210	White Plains, N. Y.
	WHEF 1500	Kosciusko, Miss.
4:00-4:20	KFDM 560	Beaumont, Tex.
	WCAP 1280	Asbury Park, N. J.
	KLS 1280	Oakland, Calif.
	WAGF 1370	Dothan, Ala.
4:10-4:30	KCRJ 1310	Jerome, Ariz.
	KMLB 1200	Monroe, La.
4:20-4:40	KLUF 1370	Galveston, Tex.
	WDEV 550	Waterbury, Vt.
	KGDM 1100	Stockton, Calif.
	WDNC 1500	Durham, N. C.
4:30-4:50	KROC 1310	Rochester, Minn.
	KGAR 1370	Tucson, Ariz.
	KALB 1420	Alexandria, La.
4:40-5:00	KOVC 1500	Valley City, N. D.
	WBNO 1200	New Orleans, La.
4:50-5:10	KEUB 1420	Price, Utah
	KRE 1370	Berkeley, Calif.
	WLAK 1310	Lakeland, Fla.
5:00-5:20	KBST 1500	Big Spring, Tex.
	KIEM 1450	Eureka, Calif.
	WFOY 1210	St. Augustine, Fla.
5:10-5:30	KDON 1210	Del Monte, Calif.
	WMIN 1370	St. Paul, Minn.
	WTAL 1310	Tallahassee, Fla.
5:20-5:40	KUMA 1420	Yuma, Ariz.
5:30-5:50	KFGQ 1370	Boone, Ia.
	KWG 1200	Stockton, Calif.
	WGCM 1210	Gulfport, Miss.
5:40-6:00	KGMB 1320	Honolulu, T. H.

The Second Tuesday		
2:00-2:20	WBAX 1210	Wilkes Barre, Pa.
2:10-2:20	WDAS 1370	Philadelphia, Pa.
2:20-2:40	WBBL 1210	Richmond, Va.
2:30-2:50	WFBG 1310	Alltoona, Pa.
2:40-3:00	WMBG 1210	Richmond, Va.
2:50-3:10	WEBR 1310	Buffalo, N. Y.
3:00-3:20	KDAL 1500	Duluth, Minn.
	KFIZ 1420	Fond du Lac, Wis.
	WLVA 1200	Lynchburg, Va.
3:10-3:30	KPAC 1260	Port Arthur, Tex.
	WBTM 1370	Manitowoc, Wis.
	WOMT 1210	Danville, Va.
3:20-3:40	KCKN 1310	Kansas City, Kans.
	WKRC 550	Cincinnati, Ohio
	WHEC 1430	Rochester, N. Y.
3:30-3:50	WNAD 1010	Norman, Okla.
	WMBC 1420	Detroit, Mich.
	WRAK 1370	Williamsport, Pa.
3:40-4:00	KFVS 1210	Cape Girardeau, Mo.
	WTAD 900	Quincy, Ill.
	WJAC 1310	Johnstown, Pa.
3:50-4:10	WTAW 1120	College Station, Tex.
	WBNS 1430	Columbus, Ohio
	WBNY 1370	Buffalo, N. Y.
4:00-4:20	WCOL 1210	Columbus, Ohio
	KOOS 1200	Marshfield, Ore.
	WBRE 1310	Wilkes Barre, Pa.
4:10-4:30	KLPM 1240	Minot, N. Dak.
	WPAR 1420	Parkersburg, W. Va.
	KPQ 1500	Wenatchee, Wash.
	WPAY 1370	Portsmouth, Ohio
4:20-4:40	KRMD 1310	Shreveport, La.
	KFIO 1120	Spokane, Wash.
	WCLO 1200	Janesville, Wis.
	WSYR 570	Syracuse, N. Y.
4:30-4:50	KGCA 1270	Decorah, Ia.
	KORE 1420	Eugene, Ore.
	WJAY 610	Cleveland, Ohio
	WNBF 1500	Binghamton, N. Y.
4:40-5:00	KTEM 1370	Temple, Tex.
	KGBU 900	Ketchikan, Alaska
	WGH 1310	Newport News, Va.
	WHBC 1200	Canton, Ohio
4:50-5:10	KGVO 1260	Missoula, Mont.
	KRLH 1420	Midland, Tex.
	WHK 1390	Cleveland, Ohio
	WWSW 1500	Pittsburgh, Pa.
5:00-5:20	KGCX 1450	Wolf Point, Mont.
	WSAY 1210	Rochester, N. Y.
	WSPD 1340	Toledo, Ohio
5:10-5:30	KAST 1370	Astoria, Ore.
	KNET 1420	Palestine, Tex.
	WAVE 940	Louisville, Ky.
5:20-5:40	KSMO 1370	Kansas City, Mo.
	KFJI 1210	Klamath Falls, Ore.
	WKYZ 1240	Detroit, Mich.
5:30-5:50	KIDW 1420	Lamar, Colo.
	WGAR 1450	Cleveland, Ohio
5:40-6:00	KQV 1380	Pittsburgh, Pa.
	WCAT 1200	Rapid City, S. Dak.
5:50-6:10	KLAH 1210	Carlsbad, N. Mex.

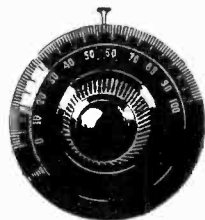
The Second Wednesday		
2:00-2:20	WMFJ 1420	Daytona Beach, Fla.
2:10-2:20	WAIN 1200	Anderson, S. C.
2:20-2:40	KVOL 1310	Lafayette, La.
2:30-2:50	WHBQ 1370	Memphis, Tenn.
2:40-3:00	WKAQ 1240	San Juan, P. R.
2:50-3:10	WSJS 1310	Winston-Salem, N. C.
3:00-3:20	KABR 1420	Aberdeen, S. Dak.
	WFAM 1200	South Bend, Ind.
	WMFD 1370	Wilmington, N. C.

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MAY 1, 1937



# RADIO INDEX



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THIRTEENTH YEAR

NUMBER 109

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# Closing The Mystery DX CONTEST

. . . . Announcing the Winners

**A**FTER nearly a month of careful checking, the books have been closed on the 1937 edition of the Mystery DX Contest. The determination of the ultimate winners was no easy task and the final decision was reached only after consideration of all pertinent factors.

In arriving at the final standings, it was necessary to triplecheck the entries. First of all, summary sheets were gone over and non-participating stations crossed out. Then the distances for all contest stations were confirmed—and points added or subtracted when necessary. Finally, the individual station reports were checked with the logs submitted by the broadcasters.

As was the case last year, contestants reported numerous stations which were not broadcasting for the contest. The list totaled no less than 64 different stations, and included all of the all-nighters as well as every station which transmitted a test or DX program on the three nights of the contest.

Most frequently reported of the non-participating stations was WKAR, which was claimed by 12 contestants. KGNO and KGCX were each reported 10 times. KGGM was next with 8 claims, CJCJ had 6, CFRN had 5 and KDFN had 4. Before definitely eliminating the claims from consideration, we checked with the stations and learned positively that they did not dedicate a program to the contest.

With the final returns in and all reports checked, it has been established that 36 stations actually broadcast for the contest:

## February 20th

0200-0300	CJIC	890	Sault Ste. Marie, Ont.
	WHAM	1150	Rochester, N. Y.
	WRUF	830	Gainesville, Fla.
0300-0400	CFCO	630	Chatham, Ont.
	KMPC	710	Beverly Hills, Calif.
	KFSD	600	San Diego, Calif.
	KVOE	1500	Santa Ana, Calif.
	WEXL	1310	Royal Oak, Mich.
0400-0500	KFVD	1000	Los Angeles, Calif.



	KMO	1330	Tacoma, Wash.
0500-0600	WFBC	1300	Greenville, S. C.

## February 21st

0200-0300	WAAW	660	Omaha, Neb.
	WBIG	1440	Greensboro, N. C.
0300-0400	KDB	1500	Santa Barbara, Calif.
	KDYL	1290	Hollywood, Calif.
	KFXM	1210	San Bernardino, Calif.
	KGB	1330	San Diego, Calif.
	KUJ	1370	Walla Walla, Wash.
	KXA	760	Seattle, Wash.
0400-0500	CKOV	1200	Kelowna, B. C.
	KIRO	710	Seattle, Wash.
	KWSC	1220	Pullman, Wash.
	WAAF	920	Chicago, Ill.
	WPHR	880	Petersburg, Va.
0500-0600	KJBS	1070	San Francisco, Calif.
	WHA	940	Madison, Wis.
	WTRC	1310	Elkhart, Ind.

## February 22nd

0200-0300	WFBR	1270	Baltimore, Md.
	WIBM	1370	Jackson, Mich.
0300-0400	WMMN	890	Fairmont, W. Va.
	WNBX	1260	Springfield, Vt.
	WOI	640	Ames, Iowa.
0400-0500	CMHJ	1160	Cienfuegos, Cuba.
	KFNF	890	Shenandoah, Iowa.
	KVI	570	Tacoma, Wash.
	WADC	1320	Akron, Ohio.

It will be noted that this list corresponds with that given last month, with the exception of six stations. After definitely agreeing to broadcast for the contest, KOMA, KXBY, KFWB and CKNX failed to put in an appearance. WSUI had transmitter difficulties on February 20th, preventing its program on that date, and was unable to contact us in time to schedule another hour. WSYR did not definitely agree to come on and its inclusion in the list last month was purely on the assumption that

it might broadcast at the last moment.

### Distances Inaccurate

That many DXers still have need for a good map of the United States was shown when mileages were checked. It was here that the greatest number of points were subtracted—and only because contestants apparently did not know when a station was within 200 miles, or more than 2000 miles distant.

One listener in Missouri confidently claimed 2500 miles for stations heard on the Pacific Coast, while another in Detroit was positive that Chatham, Ont., was 350 miles away. Other cases, equally fantastic, could be cited, and rare indeed was the report which had all stations in the proper mileage classifications.

In checking all distances, the large Rand McNally map of the United States was considered as the final authority. It was essential that we have a standard method of measuring, and it was felt that this map was admirably suited for the purpose.

Whenever possible, contestants were given the benefit of any real doubt about distance, and it is believed that all entries received credit for every point actually earned. However, it was necessary to draw the line somewhere and, consequently, a tolerance of 15 to 20 miles was the absolute limit.

### General Reception Poor

When the individual station reports were compared with the logs submitted by the broadcasters, it was demonstrated that general reception throughout the country had indeed been poor. Many contestants agreed that the week-end of the contest was the worst within memory and this fact was confirmed by the general quality of the reports.

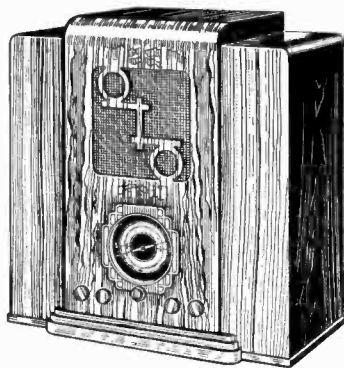
With this in mind, entries were judged with a degree of leniency. Reports from most of the distant sta-

tions were sketchy and lacking in detail, and yet full credit was given whenever possible. In a few cases, a correct time announcement or call letters in Morse code were accepted in lieu of a selection when granting the maximum number of points.

As might be expected in a contest of this type, a number of ties resulted among the winners. In breaking these ties—at least insofar as the awarding of prizes was concerned—two essential points were considered.

Naturally, the first of these was the general quality of all the reports. If one listener had clean-cut reports from all stations and consistently was able to list his three successive selections or 10 minutes of program, he was entitled to preference over the contestant who just qualified for points by the skin of his teeth.

The other point concerned strict adherence to the rules of the contest as set forth in preceding issues of RADEX and in the bulletin sent to all contestants. One of these rules definitely stated that the contestant should list the prizes in order of



*The Midwest K-11 receiver, an 11-tube receiver that tunes from 150 kilocycles to 23 megacycles (13 to 2000 meters). This handsome radio set was given as second prize in the RADEX Mystery DX Contest. George Publow of Picton, Ontario was the lucky winner.*

preference in the space provided on the summary sheet.

It was surprising to note the number of contestants who failed to do so, or merely stated: "Will take what comes. Report probably too poor for much of a prize. Headphones, aerial or RADEX subscription in order named." In such cases, the judges could not act as mind-readers and, all other things being equal, the contestant will have to "take what comes."

### The Winners!

And so, after considering all of the factors involved in the final decisions, we come to the winners of the 1937 edition of the RADEX Mystery DX Contest.

In first place and the winner of the latest 23-tube Scott Full Range High Fidelity receiver, we find Floyd Biss, Brittmount, Minn. Scoring a total of 465 points on 24 stations heard, all but one of which fell in the 20-point "E" classification, Mr. Biss used an Airline receiver with an inverted-L aerial to demonstrate his right to be classed as a fortunate Scott owner. Having had this model Scott on test for the past winter, we can appreciate the full measure of radio enjoyment in store for him, and we wish him many miles of successful DXing. Incidentally, Mr. Biss claims the NNRC, NRC and CDXR as his radio alma maters.

In second place is George Publow, King St., Picton, Ontario, a member of the NNRC. With perfect reports from 22 stations, two of which were more than 2000 miles and one less than 200, Mr. Publow used a Masterpiece IV to score 450 points and win a Midwest Model K-11 receiver.

Third place was won by a West Coast contestant, Dale Smith, RFD 3, Box 536, Eugene, Ore., who scored 440 points on 16 20-point stations and four 2000-milers. A member of no radio club, Mr. Smith used an Atwater Kent Model 545 receiver with

a triangular antenna, and claimed the Hallcrafters Sky Buddy receiver as his prize.

Tied close behind were Arthur E. Forester, 1213 Bosart Ave., Indianapolis, Ind., and T. J. Sanders, Box 32 Bly, Ore. NNRC member Forester will soon have a pair of the famous Trimm Featherweight headphones to plug into his Majestic 344B. A member of no radio club, Mr. Sanders "hoped to place for a Perfect Phone Adapter" and that is just what he will be able to use on his Philco 16B.

Two Erie, Pa., members of the GCDXC, Harry M. Gordon and Harold Wagner, tied with NRC and CDXR member Arthur L. Robb, Topeka, Kans., with 430 points. Twelve tried and true National Union tubes will shortly grace the 12 sockets of Mr. Robb's Airline receiver, while the study and reference texts of the National Radio Institute should help Mr. Wagner know more about the workings of his Philco 34. Next time Mr. Gordon goes DXing on his Scott Allwave Deluxe, one of our World Globes will show how far he has traveled.

Next in line and tied at 420 points each are Frank W. Hoxie, South Orrington, Maine, and Robert Patterson, Roanoke, Va. A member of the NNRC, Mr. Hoxie used a Philco 650X to win a set of six Arcurus tubes, while Mr. Patterson, a member of no club, will soon be hooking an RCA Spider Web antenna to his Philco 89L.

Close behind comes NNRC member Bireley Ross, Austin, Texas, whose Philco 116X won a year's subscription to RADEX for its skilled operator.

The final prize winners, all of whom tied at 400 points and were awarded a year's subscription to RADEX, are C. E. Fultz, Columbus, Ohio; Fred Van Voorhees, Miller Place, N. Y.; Frank Zavadil, Jr., St. Louis, Mo.; and Evelyn Warner,

Medford, Ore. Mr. Fultz is a member of the NNRC and operates a Midwest 18 receiver, while Mr. Van Voorhees gives credit to the UDXC and the Midwest K-11. Members of no radio clubs, Miss Warner DXes with a Grunow 1241 and Mr. Zavadil is another booster for the Philco 116X.

Place prizes of a year's subscription to RADEX go to Rulon Cloud, Norristown, Pa., a member of no radio club; Donald Hill, Broken Bow, Neb., NNRC; P. M. Dillingham, Luseland, Sask., CDXR; and to Nancy Lee Saxton, Chicago, Ill., NNRC.

Honorable Mention is an unsatisfactory term when there is no prize attached, but we cannot overlook a passing tribute to the tuning skill of E. L. Peters, Westport, N. S.; Jack Horner, Elizabethtown, Pa.; Owen E. Cummins, Fortville, Ind.; Howard C. Simpson, Concord, N. C.; Lemuel Cavileer, Haddon Heights, N. J.; Roy E. Dement, Plainview, Texas; Earl R. Roberts, Indianapolis, Ind.; Clark O. Wohlert, Omaha, Neb.; Cecil F. Smith, Denison, Texas; and James E. Critchett, Lincoln, Neb. These contestants scored between 375 and 395 points and we only regret that there weren't enough prizes to go around.

We believe that readers will be interested to know that every step leading up to these final standings has been checked and approved by two men well known to most DXers—Samuel F. Owens, president of the old Atlantic Radio Club, and Alfred J. Stansfield, president of the Universal DX Club. They have seen the reports and have verified the points which have been awarded. They confirm our opinion that the prizes have been distributed exactly as merited.

#### **The Verification Question**

In view of the comment concerning the last-minute change in the

policy concerning verification of contest stations, perhaps a word of explanation might not be amiss.

The contest was not planned as a means of increasing a DXer's list of veries. If that had been the case, we would have lined up an entirely different group of stations—selecting those which are seldom heard and certainly not as easy to log. The whole idea was to build up a week-end of unusual dialing for the DXers—and we believe that we accomplished that purpose. Thus, since none of the contest stations would have been difficult to hear under respectable weather conditions, there should have been no great demand for verifications.

Thus, we started out to follow the precedent established last year—to have all requests for confirmations go direct to the stations themselves. However, a number of stations came right back and asked to be relieved of that responsibility. They were willing to go to the expense of putting on a broadcast for the contest, but felt that their obligation should cease at that point.

That put us on the proverbial spot. We couldn't come right out and say that such-and-such stations *would* verify, while certain others would not. We couldn't cut out the verification entirely, since some of the stations—such as CFCO, KVI, WFBC, WHAM and others—were perfectly willing to issue veries.

Finally we hit upon the idea of issuing the veries ourselves. The charge was tacked on for two reasons—first, to discourage requests and, second, to pay the expense of handling those which did come in.

We had some cards printed, and the call letters and locations of the various contest stations were lettered in. The listener who wanted but one confirmation, received a personal letter; the DXer wanting more than one verie, received cards for each station correctly reported.

## Looking It Over

And so we come to a final survey of the contest. For the most part, we believe that it was rather a success, and scores of letters from contestants confirm this opinion. The DXers had a week-end of concentrated listening, and some very worthwhile prizes are going out to those who showed the best records.

Weather conditions throughout the country were not favorable to long distance listening, but this handicap failed to dampen the enthusiasm of the midnight marauders. And since poor reception prevailed practically everywhere, contestants listened on an equal basis.

While we cannot assume the responsibility for the tricks of Nature, we do believe that a possible repetition of the contest should be held at an earlier date—perhaps during the first week or two of January. Reception probably would be more favorable at that time.

When we worked out the new system of scoring, we were of the opinion that it would eliminate advantages of location. From the final results, we believe that such was the case. The fifteen prize winners were distributed over a wide area—coast to coast, border to border—and in no case was there a very large difference in the number of points scored.

After checking the reports, it is evident that it will be well to establish a future policy concerning the all-night stations. Last year, we had four broadcasts from these stations, and many contestants lost points through failure to dial the respective frequencies. This year, WEXL was the only all-nighter and contestants complained that the time spent dialing the other late stations was lost.

Perhaps it would be well to schedule no programs from stations  
(Please turn to page 51)

## Stations of Peru

We present herewith an official list of all the Peruvian broadcasting stations, through the courtesy of Sr. F. Pardo de Zela, Consul General of Peru, 21 West St., New York City. These stations appear in our list of the broadcasting stations of South America, so below we give only the call signs, locations, slogans and addresses.

OAX4A, "Radio Nacional," Peruvian Government, Avenida Petit-Thouars, Lima.

OAX4B, "Radio Grellaud," Roberto Grellaud y Cia., Sen Abancay 915/23, Lima.

OAX4C, "Radio Landa," Maximo J. Landa, Sucre 409, Arequipa.

OAX4E, "Radio Goicochea," Ing. Juan P. Goicochea, Ocona 158, Lima.

OAX4F, "Radio Castellano," F. W. Castellano y Hno., Union 650, Lima.

OAX4H, "Radio Davila," Samuel Davila, Filipinas 154, Lima.

OAX4J, "Radio Internacional," Radio Internacional, S. A., Ed. Minería 605, Lima.

OAX4L, "Radio Miraflores," Radio Miraflores, S. A., Manco Capac 347, Miraflores, Lima.

OAX4O, "La Voz de la Capital," Gildred Corporation, Baquijano 790, Lima.

It is understood that most of these stations broadcast daily from at least 8 pm until at least 11 pm, EST.

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KIDO, the Boise, Idaho station on 1350 kcs., will become an NBC outlet at about the same time that KOB in Albuquerque takes over the NBC programs. Both Red and Blue features will be carried.

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The general call WOOL has been assigned to all the ships on the Great Lakes.



# QUESTIONS of Vital Interest

• • • By the TECHNICAL EDITOR

## Red Eye

**I** HAVE a RCA-Victor receiver, model 9T, and when I turn the set on the "Magic Eye" sets very red. Then I turn the set off as I am afraid something is wrong. Can you tell me what might be causing this trouble and how to fix it?

This is a question that seems to bother many readers and set owners. Since it may be caused by something seriously out of order in the set, other than the tube itself, it calls for some discussion this month.

The Magic Eye feature of the RCA-Victor line is a novel use of the cathode-ray tube in visual tuning. A visual-indicator tube, known as the 6E5, was originally designed as a visual-tuning indicator for radio receivers. The tube has a cone-shaped fluorescent target and a blade-like ray-control electrode; the latter connected to the plate. This fluorescent surface is made to resemble the human eye and is visible through a panel opening. When the "eye" is working properly it blinks forth with a green light that shows a fan-shaped shadow beneath its center. The opening or closing of this sector or shadow indicates the accuracy with which the set has been tuned. The bright pattern with its shadow is caused by electrons striking the coated target in the top of the tube.

Now, should the tube become defective, or if some part of the circuit in which the tube is connected fails, it may be that the tube will be given a higher voltage than it is designed to stand. In this case the tube will burn red. And, although the set may appear to operate about as well as ever it is not wise to continue the operation until repairs have been made or the tube replaced. While the tube can be tested like any radio

tube, it requires certain apparatus and not all service shops are so equipped.

## A Bass Hum

*I have a Philco No. 112 11-tube set that gives perfect reception with the exception of a loud bass hum on the strong stations, such as nearby WEAf, WABC, etc. While I think this is heterodyning, I am not sure, and hope that you might be able to suggest some remedy.*

The question of hum is a matter of much discussion among service men. But hum that accompanies loud nearby station reception often is quite easily located. In fact, it frequently is caused by vibration or resonance in the speaker and cabinet. We wonder whether you have loosened the screws that attach your set chassis down to the shelf in the cabinet over the loud speaker. These bolts enable the chassis to be freed of its support to some extent and prevent resonance and microphonic vibration and resulting hum.

On the other hand the speaker could be slightly out of adjustment, or the tone control defective enough to cause a rather severe bass tone which would turn to hum or resonance on very loud signals or impulses, such as the loud deep notes of a band. If the trouble were due to improper filtering in the power unit the hum would be present all the time on any station. And, it may be that there is some heterodyning causing the hum. This will occur when another station is operating only a few kilocycles from the one that is tuned in. However, the result is not so much of a hum as it is a whistle and wavering music or voice. Distortion is usually present. All this can be corrected by realigning the set, particularly in the i. f. cir-

cuits. The testing of the tubes is indicated, of course. Trouble in the audio circuit, especially in the coupling circuits, can give this trouble. We suggest that this is a case for a careful checking by a good service man. It should be an inexpensive and brief undertaking.

### **A Skipping Set**

*My set is an 11-tube Airline, and the one disadvantage is that it skips the bands between 16, 19, 25 and 49 meters. These bands, as just given, are marked on the dial by heavy lines. Because of this handicap my reception is limited to stations only on the heavy marks on the dials. How can I change the set to overcome this trouble? How can I attach a pair of headphones to this set?*

We think this set is capable of tuning in any station all along the band that embraces that portion between 16 and 49 meters. The portions of the wave band you have observed marked with heavy lines or underscoring are where the important voice broadcasting stations are located, in this country and abroad. These heavy lines are merely aids to tuning. All stations between the heavy lines will be received just as well. However, because the heavy lines indicate where stations will be found, it also means that there are few if any stations along the band between the lines that can be received on that particular set. What voice stations happen to be there might be too weak or too far away to be heard. As a rule, however, the intermediate portions of the band are given over to code stations on land and ships at sea. Aviation also takes in part of the band. Remember, a set tunes in all frequencies between the two ends of the dial, and just because nothing is heard you must not assume that the set is dead at those spots. Short-wave broadcasting does not cover the entire band from end

to end at regularly spaced intervals as it does in the limited broadcast band, as only certain portions of the bands are allotted to different kinds of broadcasting or communication services.

Headphones can be attached to this set by the use of the Perfect Phone Adapters which you will find advertised in this magazine. However, you can locate the plate of the output power tube, or both tubes, if in pushpull, and run a well-insulated wire a very short distance away and then connect to each wire, if both are used, a heavy .0005 fixed condenser (500 volt). The phones or jack is connected between the two condensers. Or you may use one condenser and connect the headphones between it and the chassis. In this way only one tube (plate) is utilized. Turn the set down low so the speaker is almost quiet and the headphones will work nicely. However, we advise adapters as they are easy to install, and they are safe and simple to use.

### **Building Booster**

*I would like to build the signal booster that was described in RADEX some time ago. But, instead of the tubes required in your article, may I use a 77 or 78 as I could then get the right voltage from my set?*

Radio tubes of the 77 and 78 types are very similar to 57s and 58s. However, the 70 series uses 6.3 volts on the filament while the 50 series utilizes 2.5 volts. It would be entirely possible to use the 77 or 78 tubes in place of the 57 or 58 in this booster circuit so as to benefit by the 6.3 volt filament supply in the receiver.

### **Philco Hums**

*There is a low-pitched hum in my Philco 14L receiver. It disappears when I disconnect the ground wire from the chassis. This hum also changes as the volume control posi-*

tion changes. It disappears at the high volume end and the low volume end of the control movement. It has two peak positions between these ends.

It appears that hum of this kind is present in the audio system, and some perhaps in the filter system. This latter effect is brought out by the fact the hum disappears when the ground wire is removed. This is likely a straight a. c. hum through the power unit system. However, hum that is tunable, as well as that which can be eliminated by the volume control, usually occurs within the different circuits of the receiver. It could be caused by one of the tubes or a defective condenser, such as the coupling condenser in the audio circuit. We believe that a careful check by a competent service man can quickly and inexpensively cure this set of its trouble. Checking a radio set in this way is beyond the ability of the owner because certain instrumental equipment is quite necessary.

### Replacing Speaker

*I have a Philco 36-116B which has an 8-inch speaker. I would like to add a larger speaker in a separate cabinet. Is it possible to obtain field excitation from the set or must I have a separate supply? Is it possible to build a filter that will prevent bass notes from getting into the smaller speaker in the set?*

Of course, you must realize that your set was built carefully to certain specifications. It has an output that is rated in watts (volts multiplied by milliamperes of plate current). The tube used for the power output has definite limitations, and it is very likely that all of its energy is consumed by the present sound or audio circuit.

While it is possible to utilize an additional loud speaker of large diameter and which will give greater emphasis to the deep, bass notes, provided its field is magnetized by



*Ernie Smith, one of the announcers of WBIG, Greensboro, N. C. who was heard on the program broadcast by that station for the RADEX Mystery DX Contest.*

a separate source, it is not advisable in this case to do so. Certainly the field cannot be fed from a source that is capable of supplying only the needs of the set as it is. You must provide a quiet power source for this.

But as soon as you begin to cast around for ways to feed the voice coil, you meet with some trouble. The coil must have a certain a. c. resistance to match the output of the power transformer that feeds it. If it is less, or more, than the coil now in use, some of the current will be shunted off through the coil having the lowest resistance. If you place the two coils in series, you add to the impedance, and that does not help. Try finding a voice coil that closely matches the present coil. Using both speakers together at the same time prevents any attempt of filtering to keep all bass notes from the smaller speaker. The low frequencies can get through most any circuit; it's the high frequencies that can be choked back with greater

ease. A large speaker naturally aids the bass notes, while the small speaker accentuates the higher notes.

### Using A Converter

*My problem is that I have a RCA-Victor model 120 and a U. S. Apex short-wave converter. Please tell me how to use this converter with the receiver, or will it be necessary for me to make some changes in either the set or the converter? Advise me also about the proper aerial to use.*

The use of the converter with any receiver is very simple. The output of the converter should be attached directly to the antenna terminal of the receiver. The broadcast receiver utilizes tubes that take 2.5 volts, and the converter with its type 27 and 24A tubes also uses 2.5 volts. The converter, therefore, could take its power supply from some over-powered receivers. However, since your converter's tubes take more than 3 amperes it could not be used with your receiver's power supply. This fact was recognized by the Apex builders, for a power pack and type 80 rectifier was built into the converter. So all that is necessary is to plug the converter in an electric outlet and attach its output to the receiver input. Ground wires are connected as indicated by the terminals on the sets. Set the radio receiver to a point around 500 meters, between stations where no sound is heard. Turn up the control for volume. Tune the converter slowly until a short-wave station is heard. Any type of antenna can be used; about 40 feet "L" type with a single wire. The doublet types are not satisfactory with this converter unless you use an universal transformer between the converter and the antenna twisted-wire leadin.

### Ten Meter Antenna

*I have a new RCA set that operates down to 10 meters or less. I purchased a "fishpole" antenna that was 9 feet long, possibly iron. I con-*

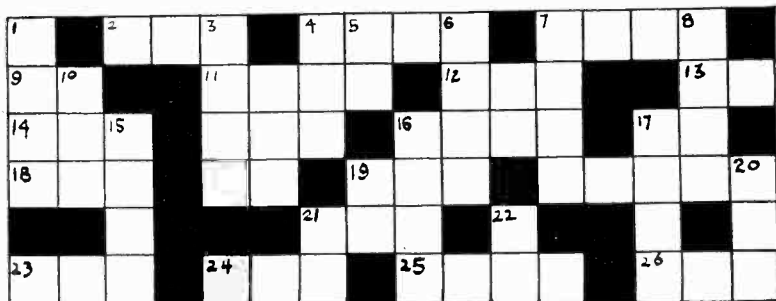
*nected it to the A1 terminal. The fishpole was erected outside the window. A short leadin of about 2 feet was brought to the set. But I have not been able to hear anything except one or two 10-meter amateurs. Can you help me in my difficulty so I can get more pleasure out of the 10-meter band?*

It has been found that a good half-wave doublet type of antenna is about the best there is for 5 and 10 meter work. And a horizontal antenna is most effective, according to general belief. But in the erection of this shortwave antenna, direction also is important. In this case you must use the two terminals on the set—A1 and A2 which are provided for connection to leadin of a doublet antenna.

A half-wave antenna on the 10-meter band means that the total length of the antenna (the two horizontal halves placed in line) must total exactly 5 meters or approximately 16¼ feet. It is best to make this from some stiff aluminum rod or heavy bare copper wire (although aluminum is preferred). Cut two pieces, each 8'-1½" long. Attach them at the center to some sort of insulator (porcelain) so the ends are two inches apart. Support the antenna horizontal and broadside to the direction from which you wish to hear. Drop down from the center ends of the antenna halves two wires each 8'-1" long, placed two inches apart. Separate the two down-leads carefully with two or three insulators, so the leads hang vertical and even. Your antenna now resembles the letter T. This antenna may be placed at a convenient distance from the house and in the open so as not to be "shadowed" by nearby buildings, hills, or dense trees. From the ends of the vertical leads you can now attach two copper wires, about No. 14, and bring them to the house by using 2" trans-

(Please turn to page 79)

# The RADEX Puzzle Page



The Call-O-Gram submitted to our readers this month was prepared by Raymond C. Corbett, 619 12th St., Sacramento, Calif. The definitions are given below and the solution will appear on this page in the June issue.

## HORIZONTAL

2. Sister station of KEX.
4. Terre Haute.
7. Hotel Keystone.
9. Last two letters of a Texan.
11. Havana.
12. 1540 Broadway.
13. Last two letters of a 1000 watt Mexican.
14. First word of a slogan.
16. Kentucky.
17. Radio fans like this.
18. And they compile this.
19. Another word in a slogan.
21. Daytime in Missouri.
23. Listed on 1160 kcs.
24. Recently joined NBC in Calif.
25. Formerly 10-AT.
26. A MBS key station.

## VERTICAL

1. 100 watts in Georgia.
3. In the "Old Line State."
4. Nation's Capital.
5. Last two letters of Springfield.
6. Divides time with WFAM.
7. An all-nighter.
8. Just 50 watts.
10. Central Broadcasting Co.
15. A Cuban (reversed).
16. 1200 kcs.
17. Brooklyn (in reverse).
19. Middle two letters of a health resort.
20. Germany on shortwaves.
21. First two letters of 25 U. S. stations.
22. Last two letters of a Westinghouse broadcaster.

The facilities of KALE and KFJR, Portland, Ore., have been combined, resulting in the deletion of KFJR. KALE, 1300 kcs., now operates on unlimited time.

## Guess Again, DXers!

• • • By Moe Luff

1. What two stations have their cities represented in full in their call letters?
2. What station in New York City is paradoxical?
3. What do the call letters WIOD-WMBF stand for?
4. What is the only station having a written numeral in its call letters?
5. What do the following call letters represent?  
WTHT, WSBT, WBEN, WESG, KPND, WTMJ, CFPL, WTCN.
6. What do the call letters KASA represent?
7. What were the call letters of the stations located in these cities, in 1926? Big Bear Lake, Calif.? Holy City, Calif.? Takoma Park, Md.? Omro, Wis.?
8. Where was KYW located before moving to Philadelphia?
9. What call sign did WXYZ used to have, and what did the letters stand for?
10. What do the call letters WHJB stand for?

(Answers on Page 36)

WMAZ in Macon, Ga. (1180 kcs.) and WCOC, Meridian, Miss. (880 kcs.), have joined the Columbia Broadcasting System.

# What About Reports?

● ● ● By Morton W. Blender  
*Chief Announcer, WCOB*

**A**S YEARS go by, everyone seriously considers the activities of those vitally interested in and connected with radio. The DXer is one who, more than others, follows the changes and developments with the most interest. There is one good reason why he is so intensely alert to perceive changes in the world of broadcasting. For him, a verification card is at stake.

As one connected with a radio station, this business of verification cards and DX programs has become somewhat of a study, and I would like to record herewith some of the findings which have resulted from a perusal of reports and activities of DXers.

The most outstanding aspect of DXing today is the almost blind disregard for the station, its owners and engineers. This is particularly evident in broadcast band listening. On the short waves, there are considerably more listeners who realize that a short wave broadcaster wants to get out into the world. But, for the broadcast band listener, why must DXers submit reports which are contrary to all the teachings of the experienced old-timers?

I have in my possession thousands of reports that have been collected from many programs from this station and others. The good reports—those which mean something to the stations—can be counted on the fingers of two hands.

It is true that American broadcasting stations, as well as those of many other countries, are primarily interested in the "service area" covered by their signal. This is the area which will give results to the advertisers, or at least will give his product some listeners. Obviously, announcements in Los Angeles do not mean very much in Buffalo.

However, the situation on the broadcast band remains the same as on short waves. The engineer wants to know what happened to this or that DX program.

Most DX periods are arranged by Courtesy Programs Committee, and the time is generously given by the station managers or owners. DXers will always agree, when they read an article of expostulation such as this, that they owe a measure of thanks to the station which operates after regular hours for their particular benefit.

But what happens in practice? The stations usually receive a poor report, a tremendous list of musical selections—when only a few are needed; complimentary words inserted to make certain of a verie card; and little else. The technical report, if any, is hardly a true picture of what happened at the receiver.

All technical data on DX programs should be based on one system of codes—the R system for volume, the QSA system of readability, as well as information on fading, interference (QRM), atmospherics (QRN), local weather, temperature, antenna, ground, receiver (including make, model, number of tubes and unusual characteristics such as AVC, crystal, etc.), approximate distance from transmitter, and a general summary. There are DXers who take a few minutes more in making out their reports, in order to include an elaborate technical review of just what happened at their listening posts. Engineers appreciate this—and make no mistake about it!

Now look what happened when I announced several DX broadcasts from two different stations during 1935 and 1936. I received 4387 reports from the boys and girls. Of this tremendous total, only 88 gave a complete report of what they heard; 109 gave a rather sketchy

technical report; 354 gave a mere outline in a few words about our signal; and 820 said practically the same thing—"Your signal was fine." What about the rest? Just a long list of what they heard from the microphone! Is it possible that 2316 DXers, many of whom belong to established DX clubs, could have forgotten the principal portion of their reports? Or did they pass it by for reasons unknown?

The true DXer of today has to contend with the situation resulting from these conditions. Stations refuse DX programs. A few will not verify under any conditions. Some managers have taken a hostile attitude towards DXers and their clubs—and all with good reason. No one can blame a station staff for refusing to broadcast a DX period when the DXers return the favor as they do today. Instead of the type of response they want and which would repay them for their efforts, they get reports which are disheartening and inadequate. Too often the reports are too few in number, indicating lack of co-operation on the part of the DXer.

Another unfortunate case today is that of the DXer who insists on making out technical reports which are gross exaggerations of what really was heard. When a signal is coming in R6, why do these persons put R9 in their reports? When it was QSA3, why say QSA5? These reports are entirely misleading and are decidedly unfair to the station engineer.

The answer as to the "why" is obvious. For fear of losing a chance at a verie, the DXer doesn't want to report that a signal faded badly, that the quality was poor, or that the volume was never better than an R4 or 5.

The DXer should remember that the station engineer or manager will not refuse a veri or take on a grouch just because the signal re-

port was unfavorable. He should remember that a station in Boston cannot expect to be R9 on the West Coast, especially when it has low power. A report which gives false information makes a bad impression, particularly when other reports do not bear out the consistency of the data.

What about short waves? Even though veries from high frequency stations are a little more costly and listeners are a little more careful, the same conditions exist. Despite the fact that technical data is of vast importance to these stations, which are on the air for the distance they can cover with the utmost efficiency, poor reports are commonplace. I have a number of friends associated with foreign short wave broadcast stations, and letters from them indicate that the number of slipshod reports is astonishing. I find that even "fake" reports are received by these stations in numbers that make the situation rather serious.

The final result makes itself apparent. In the event that the tactics of DXers become more obnoxious to radio stations, the seekers of veries will soon find that the prized pasteboards will not be forthcoming. It does not take much for one engineer to convince another—and there you are! Radio clubs do their best to show why stations should broadcast special programs for the members, but what is their word when compared with the authoritative voice of an experienced engineer? The stations will be entirely justified in taking action against the DXer—and many of them have already.

Does this all sound rather deplorable? Rather threatening? Rather pessimistic? Most certainly it does! Only the DXers can remedy the faults that exist—and the future of DXing is entirely in their hands.

The short wave clubs, the BCB  
*(Please turn to Page 36)*

# SHORTWAVES from A to Z

## Argentina

**T**HERE is a new Argentine station in the neighborhood of 7 megs., but thus far the call letters and exact frequency are not known. It is owned by the Municipality of Vicente Lopez, a suburb of Buenos Aires, a fine residential district. Broadcasts commence daily at 1800 EST, and consist of talks and a few recordings.

LPI (or LPY), Correos y Telegrafos de Buenos Aires, is testing with telephony. The frequency, according to the announcer, is 11111 kcs.

Some Argentine stations, such as LSY, LSN and others, make occasional relays of musical programs. These are not broadcasts but point-to-point transmissions, and the purpose is to send important programs originating in Buenos Aires to distant cities in the interior, such as Tucuman, where there is no telephone link.

## Australia

VK6ME is now working on 9590 kcs with 500 watts from 0600 to 0730 on Mondays, Wednesdays and Fridays. This broadcaster, located in Perth, Western Australia, is owned by Amalgamated Wireless, (A/sia), Ltd. (GCDXC).

## Bolivia

The new Bolivian station on 6240 is CP1, "Radio Chuquisaca," located in the city of Sucre.

## Canada

An official list of broadcasting stations has been received from Canada, and our lists are found to be in agreement, except for the following variations. VE9BK, Vancouver, on 4795 kcs., is not shown in the list. CFCX, Montreal, has 75 watts, and VE9DN, Drummondville, on 6005 kcs, uses 6000 watts. The Sydney, N. S. station on 6010 is given as VE9GA instead of CJCX. VE9BJ,

St. John, N. B., is shown on 6030 instead of 6090, and VE9CS, Vancouver, is listed on 6080 instead of 6090 kcs.

The evening transmissions of VE9CS, Vancouver, are from 2330 to 0200, EST, and this schedule should provide the best reception for eastern listeners. VE9CS, on 6080, is operated by the Standard Broadcasting System, Ltd., 1001-1004 Stock Exchange Bldg. (A. C. Tarr, 909 W. Lee St., Seattle, Wash.)

## Canary Islands

According to the GCDXC, EAJ43, Santa Cruz, on 10370 kcs., transmits daily from 1800 to 2015, EST. Geo. Glass, 9284 Boleyn St., Detroit, Mich., reports it around 1900-2000, broadcasting an English program until 2000. A Spanish program follows. Reception is very good, R7, QSA5, through heavy QRM on the high frequency side. The address is P. O. Box 225.

## China

XGOX, Nanking, is received well in Seattle every morning on 6848 kcs., on their new schedule which starts at 0615 EST. The signal has been much improved, both in modulation and in signal strength (A. C. Tarr).

## Colombia

HJ4ABU is on the air daily except Sundays from 1900 to 2000 EST.

HJ4ABD, "La Voz de Catia," Medellin, has moved to 5970 kcs, but it has been heard as high as 5980, reports R. B. Oxrieder, 122 Hamilton Ave., State College, Pa.

## Costa Rica

Mr. Oxrieder says the station reported as TIMS is really TILS.

"A station unlisted and unreported by anyone (including myself) is TIWX, which uses the choice wave of 9000 kcs with 50 watts," submits Samuel A. Meyer, 83 Canterbury Road, Rochester, N. Y. "I know of



the station's existence from reading an advertisement in a Costa Rican newspaper. TIWX is located in Heredia, home city of the famous TI4NRH.

### Cuba

Programs from COCX are broadcast on weekdays from 0900 to 0200, EST, and on Sundays from 0900-1300 and 1900 to 2300.

CLA5, a government station, broadcasts simultaneously with CO3BG, Santiago de Cuba, both in the 14 meg. amateur band, near 2000 EST.

### Dominican Republic

HIX, Trujillo City, has added some new frequencies and made changes in call signs. Call letters HIX are used on 800 kcs. HI1X is on 6340, HI2X on 11970 (announced as 11960), and HI3X is on 15270. HI1X and HI3X relay HIX on Sunday mornings and near noontime daily. HI1X and HI2X relay HIX on an evening schedule. (R. B. Oxrieder).

HIN, Trujillo, is reported on 12490 kcs. by Howard M. Phillips, 3907 20th St., N. E., Washington, D. C., and on 12410 kcs. by Wm. Buchanan, 189 Park St., Sydney, N. S.

HI1S has moved from Puerto Plata to Santiago de los Caballeros, and is now heard best around 1800. (Meyer.)

A new station, HI8Q, 6200 kcs., "Emisora Real," "La Voz de los Muchachos," is located in Trujillo. (Oxrieder).

### Ecuador

On some evenings a powerful new station can be heard about seven to ten kcs. away from COCH and is often much interfered with by the Havana broadcaster. The call is understood by Samuel Meyer to be HC0DA, and by R. B. Oxrieder as HC2RA. There is no doubt about the slogan, however. It is "La Voz del Alma," and the frequency is 9435 kcs generally. HC(20)DA is situated in Guayaquil.

HC2RL, Guayaquil, may be best heard on the Pacific Coast on Tues-

**I**f you are interested in television, you ought to understand radio. Mr. B. Francis Dashiell, the author of the Story of Television running currently in RADEX, has written a book called

## The Beginners' Story of Radio

in which the fascinating story of radio is written in plain English so everyone can understand it.

This leatherette-bound book, illustrated with 63 diagrams, explains everything that takes place within a radio receiver.

We will send you a copy for  
only 35 cents.

## The RADEX PRESS Conneaut, Ohio

days from 1800 to 2000 PST, on 6635 kcs. (A. C. Tarr).

Manuel Barbera has a card from J. Leonardo Ponce, P. O. Box 664, Quito, stating that his station, HC1PM, "El Palomar," works on 5725 kcs Saturday evenings from 2100 to 2300 EST.

### Fiji

Anthony Tarr says the Suva station on 8719 announces as VPD2 instead of VPD3.

### Germany

DJT is heard quite often in the late afternoons with DZH and DZC, sending programs to South and Central America. DJT uses 15360 kcs. (Oxrieder).

### **Great Britain**

The Empire programs from Daventry are now transmitted on a revised schedule. The new transmitting time is shown below.

Transmission 1, 0000-0215

Transmission 2, 0545-0855

Transmission 3, 0915-1200

Transmission 4, 1220-1800

Transmission 5, 1820-2030

Transmission 6, 2100-2300

Bernard Ahman and Carroll Weyrich will monitor the transmissions of the British Empire transmitters on the first Saturday and Sunday of each month. Listeners desiring positive verifications of these stations should tune at the times shown below, and send their reports to Carroll Weyrich, 4310 Evans Chapel Road, Baltimore, Md. Reports should be in the mail within 24 hours after the close of the broadcasts, and contain the names of at least two musical selections transmitted, or an accurate description of talks. Attractive QSL cards with the call letters of the station in large red letters will be sent to all who report correctly, and submit five cents for each verification requested. The Editor has seen samples of the cards and believes they are well worth the small amount asked, which, incidentally, is less than the cost of an international Reply Coupon.

Transmissions will be monitored on May 1 and 2, and June 5 and 6. Saturdays, 0600-0700; 0900-1000; 1800-1900; 2100-2200. Sundays, 0300-0400; 1445-1545; 1600-1700.

### **Guatemala**

TG2 in Guatemala City was heard on 6215 kcs. relaying TG1 one evening. Reports were requested, to be addressed to Director General of Electrical Communications. Mr. Oxrieder, who reports this catch, adds, "No, I didn't forget the letter after the number; calls given are correct."

### **Honduras**

A. C. Tarr receives HRP1 on 6351 kcs and reports they sign off at 2200.

### **Hong Kong**

ZBW now uses the 9525 kcs. frequency exclusively. (Tarr).

### **Hungary**

From Mr. B. Marschalko, Engineer-in-Chief of the Hungarian station at Budapest, we received the new time-schedule for the shortwave transmissions from HAS3 and HAT4. HAS3, 15370 kcs, works on Sundays from 0900-1000 EST. HAT4, 9125 kcs, works on Sundays and Wednesdays from 1900-2000, and on Saturdays from 1800-1900. Reports on transmissions from these stations should be addressed to Radiolabor, Gyali-ut 22, Budapest.

### **Italy**

A station has been heard announcing as "Radio Milan," but it is believed that it is located in Barcelona, Spain. See listing under "Spain" for further details.

### **Japan**

The Japanese Embassy in Buenos Aires informs Manuel Barbera that JVN and JVJ broadcasts daily from 1600 to 1700 EST, in English, the programs being addressed to North and South America. The transmissions open with announcements in English and Japanese; news is given at 1605 in English. At 1615 Japanese music is played and at 1640 the news is read in Japanese. Programs terminate with the Japanese National Anthem, Kimigayo.

A good catch for DXers is J2AA, the Haneda Airdrome, Tokyo. It can be heard every night from 0200-0600, EST, giving weather reports. Two frequencies are used, 6500 and 9840, usually alternating from one night to the next. When on 9840 they frequently relay JVN. (Tarr).

### **Kenya**

The Nairobi station, VQ7LO on 6059 kcs, is heard five days a week (daily except Saturday and Sunday), from 0545 to 0615. (GCDXC).

### **Martinique**

"Radio Fort de France," Martinique, is reported by Wm. Buchanan on 9435 kcs, badly QRM'd by COCH.

# Time Conversion Table

The time given throughout RADEX, unless otherwise specified, is Eastern Standard by the 24-hour clock. Our chart this month shows Mountain Standard Time converted to the EST 24-hour clock, and GMT.

MST	EST 24-hr. clock	GMT
10 p.m.	0000	0500
11 p.m.	0100	0600
Midn't	0200	0700
1 a.m.	0300	0800
2 a.m.	0400	0900
3 a.m.	0500	1000
4 a.m.	0600	1100
5 a.m.	0700	1200
6 a.m.	0800	1300
7 a.m.	0900	1400
8 a.m.	1000	1500
9 a.m.	1100	1600
10 a.m.	1200	1700
11 a.m.	1300	1800
Noon	1400	1900
1 p.m.	1500	2000
2 p.m.	1600	2100
3 p.m.	1700	2200
4 p.m.	1800	2300
5 p.m.	1900	2400
6 p.m.	2000	0100
7 p.m.	2100	0200
8 p.m.	2200	0300
9 p.m.	2300	0400

For times throughout the entire world consult the RADEX Time Converter.

## Mexico

Two Mexican stations are heard working each other often at about 2100 EST. One is on 6710 and the other on 6720. Anthony Tarr requests the assistance of readers in identifying these strangers.

XBA, working on 6977 kcs, is operated by the Servicio Meteorologico Mexicano, at Tacubaya, D. F. Their schedule is generally 2245 to 2305 daily. (Meyer).

XEBM, Mazatlan, 15440 kcs, "El Pregonero del Pacifico," relays XELB, about four nights a week from 2000-2230. Address, Apartado 50. An interval signal of four chimes is used, and they sign off with a selection called "Quimbamba." (Tarr).

XEBQ, Mazatlan, 6030 kcs, "La Voz del Pacifico," also uses an interval signal of four chimes, and signs off with the "Luxemburg

March." They work with 50 watts power, daily from 2000 to 2400. Their address is Apartado 95. (Tarr).

XEBR, Hermosillo, has been heard on 11830, relaying XEBH, between 2300 and 2400 EST, by Sgt. A. W. Brummond, Box 56, Fort Douglas, Utah. Anthony Tarr reports them on 11820 with an R9 plus signal, from 2100 to 2400. 150 watts is used. The interval signal varies . . . it may be four chimes, either up or down the scale, or five chimes in varying sequence. At 2200 bugle calls are sounded, followed by news bulletins in Spanish. The address is Apartado 68.

XEBT, Mexico City, 6000 kcs, Apartado 69-44, transmits daily from 0800 to 0100. This one kilowatt station uses a cuckoo call for an interval signal, and signs off with Liebestraum.

XECR, Mexico City, the Mexican Government station, works on 7380. Programs are broadcast on Sundays only, from 1900 to 2000 EST, with 20kw. in the aerial.

XECU is no longer on 6115. Mr. Tarr says this Guadalajara station has moved to 6075 and uses a train whistle for identification, transmitting programs daily from 2000 to 2330. Reports are to be addressed to Av. Hidalgo 579.

"XEDQ is wandering around the dial like a drunken sailor," says Anthony Tarr. They have been heard between 9445 and 9480 kcs. Their four chimes are played in descending scale. The programs of XED are relayed daily from 2000 to 2400, signing off with "Jarabe Tapatío." Address, Apartado 197.

XEFT, the 20 watt Veracruz station on 9505 kcs, concludes their programs with the "Vals Poetico." Their address is Av. Independencia 28.

XEPW announces its frequency as 6130, but it is heard between 6110 and 6120, and occasionally goes as high as 6125. (Oxrieder).

XEWI, 11900 kcs, Apartado 2874, Mexico City, works on Monday, Wednesday and Friday from 2100 to 2400 and on Tuesdays and Thursdays from 1930 to 2400, with 250 watts power.

XEUW signs off with "La Golondrina," and programs are broadcast daily from 2000 to 2430. Their address is Av. Independencia 98, Veracruz.

XEUZ, "National Broadcasting Co. of Mexico," in Mexico City, works on 6120, relaying the programs of XEFO. Their programs, radiated with 5 kw power, are heard daily from 1800 to 0300, except on Sundays, when they sign off at midnight. All reports should be addressed to broadcast band station XEFO. They wish all listeners to become members of their radio friendship club. (Oxrieder; Tarr).

#### Netherland East Indies

YDE2, Solo, Java, on 4810 kcs, commences broadcasting at 0600 EST, when classical orchestral music usually is played. A little bit above them, on 4860, a Japanese 'phone station can be heard. (Tarr).

#### Netherlands

Experimental station PCJ has been transferred from Eindhoven to Huizen, Netherlands, and reports regarding reception are to be addressed to PCJ Studio, Hilversum. The revised broadcasting schedule for this station is now: Tues. 0430-0600 and Wed. 0800-1100 EST on 15220 kcs. On 9590 kcs. the programs are radiated on Tues. from 1330 to 1500 and on Wed. from 1900 to 2200 EST.

#### Norway

The operators of LKJ1, Jeloy, advise that the power will be raised from 1 to 5 kilowatts sometime this year. The Norwegian National Program is relayed every day from about 0500 to 0800, on 9530, and from 1100 to 1700 on 6130 kcs.

Alan H. Graham in the Australasian Radio World reports that in

the near future a number of new Norwegian transmitters will be on the air, including the following: LKC (9.5), LKD (9.5), LKE (9.5), LKJ (9.5), LKL (6), LKQ (11), LKU (11), LKV (15), LKW (18), LKX (18) and LKZ (21). The number in parentheses indicates the frequency band in which each station will be found.



*Lucia Graeser has won a regular place as soprano soloist of the Sealtest Saturday Night Party heard weekly at 8 pm over the NBC-Red Network. Baritone Donald Dickson is often heard with her in duet numbers.*

#### Panama

HP5I, the new station in Aguadulce, "La Voz del Interior," varies in frequency from 11896 to 11900 kcs. Broadcasts open and close with a typical native Panamanian song, "El Tambor de la Alegria," according to a card received by R. B. Oxrieder. Three notes on a gong on the hours and half hours help to identify the station. The operating schedule is from 1930 to 2130 EST.

"A new station on my dial is HP5I, on 11895 kcs," reports Samuel Meyer. "This station is inter-

ferred with by XEWI early in the evening. Incidentally, Aguadulce is a seaport on the western coast of Panama, with a population of 21,500."

### Peru

We are indebted to Sr. F. Pardo de Zela, Consul General del Peru, 21 West St., New York City, for an official list of the Peruvian shortwave stations. This list, prepared by the Department of Radio of the Government of Peru, is accepted as authentic and our indices corrected in accordance with it, although it is a fact that most of these stations operate on frequencies varying more or less from their assigned channels.

OAX1A, Chiclayo, listed as 6150 kcs, actually works on 6164. They sign off at 2300. (Oxrieder).

OAX4D, Lima, is now on the air Wednesdays and Saturdays from 1900 to 2330.

All our readers report OAX4J, "Radio Internacional," but the government list gives this as OAX4I. This Lima station, 8350 kcs, works daily from 1200-1400 and 1800 to 2400, concluding their programs with the Peruvian National Anthem. An unusual amount of American phonograph recordings is played during the programs. (Oxrieder).

OAX4P, Huancayo, has moved to about 6000 kcs, no doubt to avoid interference from CXA4. Their programs commence at 1800.

OAX4Z, "Radio Nacional," Lima, relays OAX4A, signing off at 2330. (Oxrieder).

The owner of "Radio Universal," OAX5A and OAX5B, Ica, Peru, in a letter to our South American representative, states that his stations were off the air for a few days on account of repairs, but now they are back on their regular schedule, which is daily from 1200 to 1600, and 1900 to 2300, EST, and on Sundays and holidays from 1200 to 1600

only. The present frequency is 11796, but application has been made for an additional transmitter to work on 6000 kcs.

Mr. Oxrieder believes that the shortwave call of the Ica station is OAX5B, but it is given in the Peru list as OAX5A and the "B" call is on the broadcast band. The assigned frequency is 11800, but they move around between 11796 and 11807 kcs. The announcer says "La Voz de Ica."

### Portugal

Weekly program folios from CSW, Emissora Nacional, Rua do Quelhas 2, Lisbon, disclose that they operate with a power of 5 kw, relaying but a small part of the program of their 629 kcs broadcasting station, the latter with a power of 20 kw. Operating hours for the s.w. station are daily, 1200-1800, EST, on 11040. During the last two hours of this transmission Aerial No. 2, directed towards Portuguese Colonies, is used. Programs are radiated on 9940 kcs. with Aerial No. 1 directed to Brazil, from 1800 to 2000. CSW has also been reported on 11840.

### Siam

The Bangkok aircaster, HS8PJ, 19.020 megs, is well-heard in Detroit on their Monday transmissions. This station signs off at 1000. (G. K. Glass).

### Spain

A "Phantom" station is reported by our Buenos Aires correspondent, announcing as "Radio Milan," claiming that it is the "Stazione del Partito Comunista Italiano." It is heard daily from 1715 to 1815, EST, on 10430 kcs (some reporters give 10650 as the frequency). The announcer begs the listeners to excuse them for not being able to give their exact location, for obvious reasons, but asks them to write to a certain address in Paris. It is believed this station is located in Barcelona.

### Spanish Morocco

Radio Guardia Civil, Tetuan, Sp. Morocco, is heard on 6530. (Oxrieder).

### Straits Settlements

"My best catch of the year has been ZHI in Singapore, heard on approximately 6000 kcs at 0730, giving news bulletins. It was not a strong signal, but as good as could be expected. They were still on the air at 0800." (A. C. Tarr).

### Surinam

A station believed to be PZH, Paramaribo, was heard on 6788 kcs, speaking Dutch and Spanish, with an occasional English announcement. Reception was between 2000 and 2045 EST. (Oxrieder).

### Switzerland

Jerome Roberts, 1573 Packard Ave., Racine, Wis., has a card from Geneva which gives the frequency of HBL as 9345 and 9595 kcs.

An announcement was heard from the League of Nations stations that their frequencies have been changed to HBP 11402 kcs, for South America, and HPL 14535 kcs for North America. It was also stated that in future their programs would not originate in Geneva, but in Basle.

### Tahiti

FO8AA in Papeete, using a power of 200 watts, can be heard on 7100 kcs every Tuesday and Friday night from 2300 to 0045 or later the following morning. Although badly QRM'd by American CW amateurs they put a good signal into Seattle. Programs consist chiefly of selections by Hawaiian guitars and group singing. (Tarr).

### Union of South Africa

ZTJ, Johannesburg, is on 6097 daily from 2315 until about 0015, except Saturdays. (GCDXC).

### United States

The General Electric Co. has applied for a construction permit for a new international station to be

located near Belmont, Calif. The frequencies of 9530 and 15330 kcs are requested, as well as 20 kw power. The purpose of this application is to obtain further use of these channels which are now licensed to W2XAD and W2XAF at Schenectady, in order that satisfactory transmission may be made to the Far East.

The languages used regularly by W9XF, when signing off, are Russian, Japanese, Spanish, French, Swedish, Italian, German and English. (Weyrich).

### Uruguay

Almost as soon as CXA2, Montevideo, came on the air, it was forced to discontinue broadcasting, due to some difficulty with the government. It was licensed for 6000 kcs. with 500 watts.

### Venezuela

YV1RG, "Radio Valera," has moved from 6345 to 6225 kcs, but claims its frequency as 6230. (Oxrieder).

"I received a verification from YV1RH in Maracaibo, Venezuela," contributes A. E. Blick, 125 Tappin Ave., Toronto, Ont. "Every Thursday from 2200 to 2245 this station reads letters, thanks those who have written and invites others to write to them. From the verification card I learn that they relay YV1RF, 1120 kcs, and the owner is Nicolas Vale Quintero, Apartado 261. YV1RH is on 6360 kcs."

One of the best of the new stations is YV1RI, according to Samuel Meyer, Jr. "This station uses a frequency of about 6205 and has a good R9 signal, rivalling COCH in volume," he writes. YV1RI, Coro, claims to be on 6210 but is actually on 6205. (Oxrieder).

A letter from YV1RL to R. B. Oxrieder gives the following data: YV1RK, 1250 kcs., is not yet on the air. YV1RL, 5930 (but actually on 5937), with 300 watts in the antenna, employs the slogan "Ra-

dio Popular." The opening and closing selection is the "National Emblem March." Announcements are made every fifteen minutes in Spanish and every half hour in English. The owner is Mr. Jose A. Higuera M, a young and enterprising business man, P. O. Box 247, Maracaibo. Programs are radiated on weekdays from 1130 to 1330 and 1700 to 2200, and on Sundays from 0900 to 1500. This is Maracaibo time, which is 13 minutes 16 seconds faster than EST.

### Strangers

"I heard a Cuban several times on about 12.5 megs. No call letters were heard but a bugle call was heard, a wedding march on an organ, and the location was given as Havana." Ollie A. Landgraf, 97 Park St., Chilton, Wis., would appreciate the help of our readers on this problem, and also would like to know what station he heard on 10.56 megs. between 1800 and 2300 EST, announcing in Spanish.

A mysterious station on 10430 kcs. is heard nightly by Anthony Tarr of Seattle, commencing their programs at midnight and signing off anywhere between 0030 and 0105. Announcements are made in a slight English accent, when readable, but generally the signal is very fluttery and hard to read. Once the announcer said, "This is shortwave station . . ." and at another time evidently it was being used as a commercial 'phone, for I heard, "OK, thank you, good bye." Music has been played at times, but sometimes the carrier is on the air for long periods without being modulated.

Another mystery station is reported by Mr. Tarr, this one on 12060 kcs. They are heard at 2245, when a man and a lady are heard talking, sometimes in French, sometimes in another language, believed to be Russian. After midnight they have been heard using inverted speech,

and they remain on the air until 0130 at least, as they fade out at about that time. Code station OXR interferes with it continuously.

### Correspondents

Anthony Tarr, 909 W. Lee St., Seattle, Wash., wishes to correspond with SWL's.

"Please put my name in your columns for exchanging SWL cards," Wm. Buchanan, 189 Park St., Sydney, N. S., Canada.

"I would be pleased to hear from anyone using a Zenith 8-tube 1937 table model receiver. My best catches on this set have been JZJ Tokyo 11800 kcs., JZI Tokyo 9535, RAN Moscow 9600, several of the German stations, PCJ, 2RO, EAQ, Daventry, TPA4, Prague, ZBW in Hong Kong, Australians, Javans, all the Cubans and many other stations." Jerome Pickard, General Delivery, Dodge City, Kans.

"I would like to exchange SWL cards. I have been DXing for a year and am interested in the 'phone amateurs." Norman Glover, 305 S. 8th St., Ponca City, Okla.

"I am interested in SW broadcast DXing, ham 20-meter 'phone and broadcast band. I will SWL 100% with anyone anywhere." Henry C. Hendrickson, Jr., Route 1, McGregor, Iowa.

"I wish to exchange SWL cards with other listeners. I will send out my SWL the same day that I receive one. Especially would like to exchange with foreign listeners." Ollie Landgraf, 97 Park St., Chilton, Wis.

Boake Carter, Philco radio news commentator, established a new record in March when he completed fifty consecutive months of broadcasting over a nation-wide hookup on the Columbia System. This is the longest continuous program on the Columbia chain at the present time.

# The New TELEVISION

• • • By B. FRANCIS DASHIELL

**T**HE new television has been freed of all mechanical and moving parts. No longer the thin whirring disc of Nipkow is needed to create pictures by television. It is to two men, Dr. Vladimar K. Zworykin, of RCA, and Mr. Philo T. Farnsworth, that the new electronic television owes its start. Their pioneer work with the cathode ray tube and its application to television has eliminated all mechanical scanning and reproduction.

We have learned that a picture or view must be broken down from its two dimensions to a single dimension—that of length. This is accompanied in *any* television system by splitting the picture into many fine horizontal lines. The lights and shadows of the image, as cut into strips by the lines, are converted into electric currents having pulsations proportionate to the degree of illumination along the line. The scanning disc, or other mechanical "spot-light" motion, as we have seen, has been necessary to break down the picture into lines. But now we have no moving parts whatever.

The scanning unit in the studio or the reproducer in the home receiver, does not possess a single mechanical moving part. A simple camera-like unit, placed upon a tripod, is all that is needed to televise any subject or image of a distant scene. It does not even possess a clicking shutter like the camera we know so well. The picture signals are put on the air simultaneously with their associated sound waves; and in the home a silent, reproducing tube recreates the image while a loud speaker gives forth the accompanying sound.

## Electronic Television

What, then, is electronic television? Many of us will feel that it must be some strange, mysterious force, so complicated in nature that none can understand its operation. And, perhaps at first glance it does seem to be so. But, if one chooses to study the subject diligently, the theory and practice of electronic television can be mastered by anyone. The subject, however, can only be discussed briefly in these papers, yet the reader will be given a working knowledge of the new television which has come to stay.

Instead of scanning the subject by means of a swiftly moving spot of light, scanning is accomplished by a flashing cathode ray or beam of electrons. An electron beam is a narrow pencil of negatively charged particles of electricity moving with a velocity of 30,000 miles a second. Most of us are familiar with the cathode ray in the form of the X-ray. A cathode always is the negative terminal of an electric source. From it a flow of negative electricity, or electrons, pours out into the circuit.

Opposite the cathode we find the anode or positive terminal. In our radio tubes the filament is the heated element that directly or indirectly emits a flow of electrons. It is the cathode. And, because *unlike* electric charges *attract* one another, the cloud of electrons flies toward the anode or positively charged plate of the tube, and the flow of current is established in the circuit.

## The Cathode Ray

But the cathode ray tube, however, shoots a ray or beam of electrons in one direction. This may be likened to a garden hose that directs



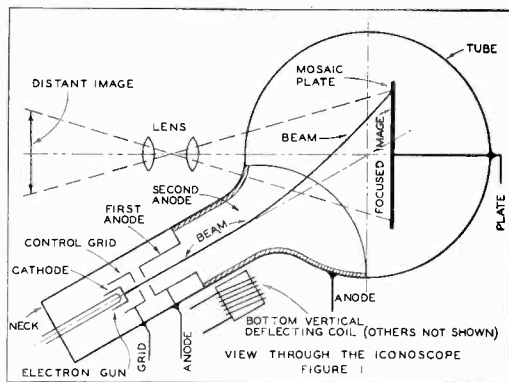
a stream of water at will. This ray is not only utilized to scan the image in the radio studio, but also to create the reassembled picture in the home receiver. Its movement is similar to the spot of light of the old television systems, for it sweeps across the image or reproducing screen in a series of instantly appearing lines.

We have seen that these lines should be close together if the picture is to have good definition. In printed pictures, such as the half tones in this magazine, the picture is resolved into a large number of tiny dots placed in close rows. The definition is indicated by the number of dots and rows to the square inch. Finer pictures require a large number of dots and close lines. Similarly, in television, when we speak of 30, 60, 120 or 240 line definition, we mean that the reproduced image is composed of that number of lines. And each line is broken up into several hundred "dots" or elements of illumination. For sufficient detail at least 240 lines is now regarded as the minimum.

When 360 lines across the image are used we obtain excellent definition, but it is now agreed that 441 lines provide perfection of reproduction, almost comparable to a photographic enlargement. The size of the reproduced picture usually is in the ratio of 3 to 4, and this is called the "aspect ratio." A succession of at least 24 of these complete pictures or frames each second is satisfactory. However, by a method known as "interlaced scanning," 48 frames a second can be obtained with an absence of flickering. All this requires many changes in the intensity of the beam shot from the tube; approximately 2,000,000 a second when a minimum number of lines is used.

### Different Systems

In the United States three sys-



tems of modern electronic television are being developed in a big way. They are rather similar. Both the Farnsworth systems and the Philco Radio and Television Corporation appear to be co-operating. But the RCA system, invented by Dr. Zworykin and associates, stands alone. In Europe, where television is turning an inquiring eye toward America, the Farnsworth system is being tried by Baird and Fernseh, while RCA has patent connections with Marconi—E.M.I. and Telefunken.

It should be obvious to the reader that a brief explanation, such as this, cannot describe *every* television system. However, electronic television is basically uniform. They all use the cathode-ray tube at the transmitting point. RCA calls this tube the "Iconoscope," after the Greek word "icon," meaning image, and "scope," meaning "observe." It becomes, therefore, an "image observer." The Farnsworth engineers call their tube an "Image Dissector."

A second cathode ray tube is utilized at the receiving end. It reproduces transmitted pictures or scenes directly before the eyes of the observers at the receiver. In the RCA system this tube is called the "Kinescope," which means "observe motion." Likewise in the Farnsworth scheme, the receiving tube is given the name of "Oscil-light." Certain forms of the latter tubes are found in radio service shops as "oscillographs," and in

radio receivers as visual tuning units or "magic eyes."

### The "Iconoscope"

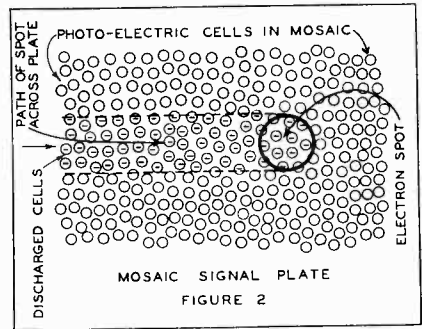
So let us, then, discuss the Iconoscope as an example of cathode ray tube and electron gun. It has taken ten years to bring this "electric eye" to its present state of development. The light-sensitive cell has made possible the Iconoscope. Then, in addition, the method of controlling the flow of electrons from the cathode, by a device known as the "electron gun," made possible not only the Iconoscope but also the Kinescope.

The Iconoscope is a large glass tube, 18 inches long and 8 inches in diameter at the bulge of its spherical body. It is evacuated of all air. It has a drawn-out stem, and within this neck is fitted the electron gun. A section through the Iconoscope is shown in Figure 1. In the sphere is a signal plate, supported so as to face the open end of the "gun," but mounted at an angle to it.

The important feature of the Iconoscope is its light-sensitive unit. This is commonly referred to as the "mosaic." This plate, about 3 by 4 inches, consists of hundreds of thousands of very tiny photo cells. The image to be transmitted is optically focused on this plate in the same manner that a photographer sees the picture on the ground-glass plate of his camera. A set of lenses are placed in position so as to focus the picture sharply upon the mosaic signal plate. The inclined position of the plate is necessary so as to allow the optical projection of the scene upon the mosaic. In this way any outdoor scene can be concentrated on the plate.

#### Mosaic Signal Plate

The mosaic plate consists of a very thin dielectric or insulator. Mica is excellent for this purpose. The back of the dielectric is coated



with thin metal to which one contact of the Iconoscope is made. The face of the mica is coated with a photo-electric element, such as silver oxide and caesium. When dry and evaporated this material consists of a smooth and glossy mass of minute silver globules that are rather uniformly distributed over the surface, yet they are completely isolated from each other. See Figure 2.

Each globule becomes one plate of a tiny electric condenser. The mica dielectric separates these from the second plate or sheet of metal on the back. Every one of these tiny condensers is capable of being electrically charged and discharged. These photo cells assume individual charges, depending upon the degree of illumination falling upon the plate from the lights and shadows of the optical image to be transmitted. If we discharge these condensers we obtain an electric current that is in proportion to the energy stored momentarily in the condensers. This, too, is in proportion to the illumination from the image in focus on the signal plate.

Passing a conductor across the plate, such as ruling it in fine parallel lines with a metal point, will scan the mosaic and its optical image, and discharge the condensers or cells so as to obtain an electric current that fluctuates in unison with the degree of light on each cell. But such mechanical ac-

tion is impracticable because it is slow and awkward.

### The Scanning Beam

The charges on the cells or tiny condensers can be removed or discharged by scanning the signal plate with an electron beam shot from an "electron gun" located opposite the mosaic plate. See Figure 2. The gun is designed to emit a cathode ray having a diameter equal to the width of one line used for scanning the picture. If the plate is 3 inches high, this means that when 441 scanning lines are drawn across it, the diameter of the electron spot will be about  $3/441$  of an inch.

This beam of electrons scans the mosaic plate in horizontal lines, from left to right, in the same manner that the reader scans the pages of this magazine. Its force and impact may be likened to a garden hose held in the hand so the stream of water from the nozzle will trace wet streaks across the side of a wall, beginning at the top and ending with the final parallel mark at the bottom. The electron beam moves across the plate and discharges all the charged cells that it touches along the line of travel. See Figure 2. When each cell has its individual charge removed there is a tiny impulse of current that is directly in proportion to the degree of illumination falling upon it.

When the beam reaches the edge of the plate at the right it quickly returns to the left and then traces a second line directly below the first. Then it returns again very quickly. As soon as the last line is traced across the bottom of the mosaic plate the beam is returned to the top to begin the second frame.

### The "Electron Gun"

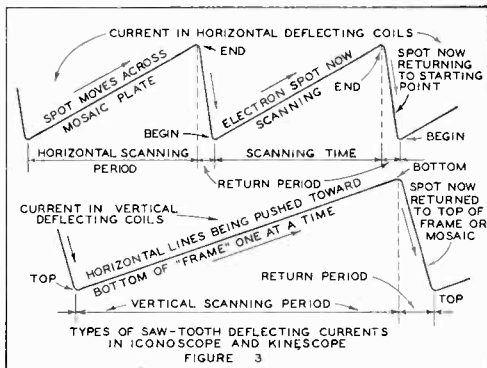
The term "electron gun" is quite new. It refers to that part of the cathode ray tube which emits the electron beam. The "gun" focuses and generates a spot of electrons,

either for scanning or for reproduction purposes. It has a width of one scanning line, usually about .008-inch in diameter. The gun has an indirectly heated cathode with a flat electron-emitting surface located at the top. See Figure 1. The cathode is placed in front of an aperture in a controlling element or grid. A negative bias on this grid will repel the beam or ray and extinguish it entirely. Or it varies the intensity of the flow of electrons in the Kinescope so that all shades of light will be created to reproduce the original image focused in the Iconoscope.

Beyond the masking aperture that shapes the beam is an anode. It has a positive charge, and tends to accelerate the speed of the negative electrons from the gun. Part of the inner surface of the tube is given a metallic coating so as to provide a second anode, and that tends to speed the beam still more. As a result of the electro-static field that exists in the space between two anodes having different potentials, there is created a sort of electric lens that helps to direct and focus the beam. This is a new branch of physics, and *electron optics* and the *electronic lens* are newcomers in the field of television.

### Deflecting the Beam

It has long been known that a stream of electrons, whether flow-



ing silently or appearing in the hot, brilliant path of an electric arc, can be deflected from its normal direction by an external magnetic field. Bring one pole of a magnet close, and the ray will curve away from its straight path. The deflecting motion of the electron beam for scanning the mosaic signal plate of the Iconoscope or the viewing surface of the Kinescope, or kindred tubes, is accomplished by an electromagnetic or electro-static field. Four coils are placed about the neck of the tube. The upper and lower coils control the vertical movement of the beam, and the two side coils control the horizontal movement.

Electric impulses are fed into the two sets of coils. For instance, the coils that swing the beam across the plate while scanning horizontal lines, have "saw tooth" shaped electric currents flowing through them. See Figure 3. This current increases steadily (up the slope of one "tooth") and, as the magnetic field grows in strength, it pushes the electron beam across the plate from left (where no magnetic field exists) to right (where the maximum repelling effect is felt). Then (at the apex or point of the saw-tooth) the current in the coil drops suddenly back to zero (the bottom of the notch between the teeth) and the beam, freed of all deflecting pressure, flies back to its original starting point at the left of the plate.

At the same time, however, while the beam is passing back and forth across the signal plate, it is also being steadily pushed down toward the bottom of the plate by a similar type of "saw tooth" current flowing through the upper and lower deflecting coils. See Figure 3. When the current reaches full intensity at the zero or return point, the beam flies up to the top of the frame. Deflecting currents are obtained from tube circuits having

certain condenser capacities and established frequencies. The scanning or horizontal movement operates as high as 10,000 "saw teeth" (each representing one line) a second, while the vertical motion occurs 24 times a second, or one "saw tooth" (representing one frame) every 1/24th of a second.

### The "Kinescope"

The Kinescope, or receiving tube, has an electron gun similar to that in the transmitting Iconoscope. But there is no signal plate. Instead, the upper end of the tube is about 10 inches in diameter, and permits of a picture about 6 by 9 inches to be reproduced. The flat end of the conical tube is covered on the inside with a translucent coating of zinc ortho-silicate phosphor. This provides a fluorescent screen that becomes luminous when struck with electrons from the gun.

The intensity of the electron beam from the gun is controlled by the grid aperture just as any radio tube is automatically controlled by the grid surrounding the cathode. But this intensity of electronic emission corresponds exactly to the degree of illumination falling upon the mosaic signal plate in the Iconoscope. The flying beam impinges upon the inner surface of the fluorescent screen which absorbs the electrical energy and thus emits light. And the many fine, horizontal lines, remaining visible on the screen for 1/24th of a second, reproduce the image that is being projected simultaneously on the mosaic of the Iconoscope studio camera at the broadcasting station. Since the fluorescent screen is very thin, a large portion of the light is transmitted outside the tube, and watchers gazing at the outer end will see the reproduced image.

The electron beam, sweeping the screen with 441 horizontal lines in 1/24th of a second, also reaches  
*(Please turn to page 51)*

# NOTES From The DX WORLD

• • • By CARLETON LORD

AS ANOTHER winter of DXing draws to a close, listeners in the Northern Hemisphere are turning from dial twisting to more seasonable interests. Headphones once more are relegated to the moth balls and the electric companies note the decrease in consumption of midnight oil.

Many DXers are not sorry to conclude their tuning activities for a few months, as the past winter was not kind to long distance reception. Early predictions of adverse conditions were fulfilled to the disgust of not a few static-drunk dialers, and attempts at real DX were blocked by weak signals and surges of atmospheric noises.

It was not a particularly good year for the midnight marauders and indeed it may be one to be remembered for its shortcomings, but we did have a lot of fun and most of us will be raring to go again in the fall.

And so, while there is a lull in actual tuning activities, the next few months offer an excellent opportunity to look ahead and make plans for the coming season. The DXer can well take advantage of the summer to follow up delinquent veries, check over his receiving equipment and, perhaps, erect a new aerial.

We of RADEX will as usual devote most of our time to preparations for next year. Possible improvements in make-up will be gone over in detail, ideas for new features will be discussed. The customary questionnaires will be sent to all North American stations, while the incoming data will be tabulated and made ready for the first fall issue.

Facing the radio clubs are a number of problems which should be



*The "Human Chatterbox," Arlene Harriess, who threatens Floyd Gibbons' record as the fastest talker on the radio, is heard on Tuesday nights on the CBS with Al Pearce and His Gang.*

discussed and settled during the off season. Some of these are simple questions of policy, while others are of considerable importance. All of them should receive the attention of members and officials alike.

Perhaps the most vital problem of all concerns the courtesy programs work. This has been a subject for discussion many times in the past and yet it remains one which today is more than ever in need of careful consideration. To say that the real future of organized DXing depends upon a satisfactory solution would not be a misstatement.

The question might have been let slide indefinitely but for the an-

nouncement last month that Emily Griswold would be unable to continue after this year as Operator of the ICCP Clearing House. This puts the problem squarely up to the radio club officials and it is for them to decide what course is to be followed.

The Clearing House has now been in operation for two winter seasons and it should now be possible to determine whether it has fulfilled the hopes of its sponsors. If it has succeeded in reducing the number of clashing special programs, then it has accomplished one essential purpose. If it has disclosed unsuspected weaknesses in the present system of club operations, it has been well worth the effort.

Should it be decided that the Clearing House system of scheduling programs leaves little to be desired, the clubs would do well to take immediate steps to insure its continuation. If necessary alterations and changes are apparent, then they should be put into effect. But the vital point is that some action should be taken, even if it is merely to renew the present agreement, select a new Clearing House Operator and make ready for next season.

It would be an easy matter just to let the question ride. DXing would then follow the path of least resistance and undoubtedly slide back to its former status of an unorganized hobby, replete with confusion and clashing programs. As things stand today, this would be DX suicide, pure and simple, and such a lapse should not be tolerated by those who have the interests of DXers at heart.

#### **Co-operative Scheduling**

In the January issue, Arthur R. Willis, of St. Thomas, Ont., put forth a suggestion which has met with the unqualified approval of many readers. He proposed that all Courtesy Programs Committees be combined into one organization which would function for the benefit

of all clubs. The members of such a combined committee would be assigned definite frequencies and it would naturally be impossible to have conflicting programs. As such, the scheme would thus eliminate the need of a Clearing House and might conceivably be the ultimate solution to the problem.

On the surface, the idea has many features to commend it, most important of which would be the reduction in the number of special programs during the course of a season. This would be a goal long advocated by RADEX from the standpoint of station and listener alike.

It has long been realized that the demands put upon stations have often been unreasonable. Program managers seldom can hope to grant requests for special programs from five or six different clubs, and yet to recognize one club brings additional demands from the others. Obviously, therefore, one central committee would reduce the demands upon each station and should materially increase the possibility of getting at least one special from a greater number of stations during the course of a season.

In the same vein, every station has the right to expect a reasonable response from each of its courtesy programs. By having its special broadcasts dedicated to all clubs, it would be assured of a potentially greater audience and a better response than on a dedication for a single club. Furthermore, with fewer programs to report, each listener would be more sure of getting off a card or letter of appreciation for each one heard.

#### **Objections**

Although no objections to the idea have been forthcoming as yet, it is not difficult to realize what they may be. As pointed out when the suggestion was first published, some clubs may protest that the scheme would rob them of their individu-

ality. That may be so, but might not the advantages to be obtained compensate for this loss?

Perhaps the most serious flaw would be the elimination of a certain degree of friendly rivalry between the clubs. While program scheduling is by no means the most important activity of a radio organization, it does provide the competition which is often necessary for the best interests of the hobby. Curtailment of this rivalry might do considerable harm.

These are, however, questions which must be discussed by club members and officials. Unquestionably they must receive their share of attention and, as we started out to say, the coming summer months provide an excellent opportunity to go over them in detail. We hope that some definite policy will have been decided upon before the fall season rolls around.

#### **Dialing South America**

"How are chances of giving us a revised list of the BCB Brazilians?" asks E. L. Peters, Box 65, Westport, N. S. "Many changes evidently have taken place and it is almost impossible to determine what station is being heard on a given frequency. PRA9 is using 1220 kcys., while PRE8 has been on 980 since about September 1st. There seems to have been a general reallocation of frequencies in that country and the identities of the others are almost as mysterious as your contest was supposed to be. All SA's on the broadcast band have been very active recently and the other night, between 1930 and 2030 AST, I found no less than 46 channels occupied by them. In arriving at this total, I checked all frequencies where Spanish was heard and eliminated all obvious Cubans and Mexicans. Two unlisted Colombians have recently been logged—HJ3ABX, Bogota, 1050 kcys, and HJ1ABJ, Santa Marta, 1150 kcys. Both of these announced

in English. The station on 1285 kcys is in Rio de Janeiro, Brazil, but I don't know his call. CX30 is the one which is heterodyning KSL on 1130. He runs until 0200 AST on Sundays, 0100 AST weekdays. His clock strikes on the hour and the time is one hour earlier than AST."

(A completely revised list of the South American broadcasting stations will be found in this issue of RADEX. Ed.)

"While checking over your February issue," reminds Richard W. Fales, Intervale Ave., Roslyn, N. Y., "I notice that you have left out a Cuban station which is being heard on 1160 kcys. This is CMKG of Santiago, where they are located in the Bacardi Building. Although I do not know the power, they operate daily from 1700 to 1800 and 2130 to 2230 EST and on Sundays from 0000 to 0100 EST. They operate in conjunction with their short wave station COKG on 6.20 megs."

"On March 3rd I completed my second year of DXing," reports Arthur Seidenschwartz, 2104 N. 64th St., Wauwatosa, Wis. "At that time the log stood at 653, but I am hoping to boost it a bit before the end of the season. I have a new Scott super and some of the better catches include KPPC, KGU, LR1, LR4, LR5, LS2, LS4 and 1YA. I also was able to tune in CJRM at noon. CMCD has been heard consistently of late between 942 and 945 kcys, while KFOR comes in strong Sunday mornings after 0100 EST with programs of the Mutual network."

#### **Weather Spoils Reception**

"As far as this part of the country is concerned," notes Robert Hough, 234 E. 63rd St., Apt. 4A, New York City, "the weather has been terrible. Stations which are usually easy to hear did not come in at all. Although I have received many Europeans during the past few years and as many as nine French stations in one night, not a single TA could be



*Felix the Cat is not very distinct in this picture. This is the way he looked when transmitted with the early 60 line definition television, which has now been abandoned for the much improved 441 line system.*

heard the past month. During the nights of the contest, such stations as KFI and KPO did not come in at all and KNX, while slightly better, was still very poor."

"For some unknown reason," states Anthony C. Tarr, 909 W. Lee St., Seattle, Wash., "I haven't been able to hear any East Coast stations this year. On the three nights of the Mystery DX contest, although I stayed up all night, I was unable to hear a single contest station outside of Washington, Oregon and California. On the first morning, however, I heard 2YA, 4QN, 5CK, 1YA, 2CO, 2NR, 3YA, 2BL, 4YA, 3GI, 2GZ, 2WL, 4BH, 4BC and 4AK. On the second morning, static was at a high level and the only new station heard well enough to report was 2UE. The third morning found conditions at their best and, in addition to the stations noted above, I heard 7NT, 5CL, 4QG, 2UW, 2CH, 3WR, 2KY, 2HD and 4MK. And yet on all three

mornings, not a single Eastern station could be heard for the contest. Figure it out if you like; I can't."

"Although my broadcast log stands at but 371," offers Harold Heckart, Drakeville, Iowa, "I expect to boost it to 500 before the end of the season. Some of the better catches to date include LR1, KGMB, KHBC, KINY, WPRP and others. I do not verify stations heard, as my DXing is primarily for my own pleasure and it is immaterial what someone else thinks of the probability of a catch."

### On Getting Veries

"What's a fellow going to do about this verification system?" queries Jim Walker, Romney, W. Va. "You indicate in your listing the stations which will verify for return postage, yet just look at these which have not as yet done so for me: KSFO, WIP, KFAB, KSOO, WHN, WSAY, WPG, WHJB, WFBG and WLVA. Then you list the ones that aren't supposed to verify, and so far KDKA, KFRC, KSUN and several others have come through for me."

A number of readers have been complaining that WSAY was not living up to its announced promise to verify correct reports. William Vornkahl, Jr., Westport, Conn., decided to put WSAY in the WMFO-WJRD category and accordingly offered to print verie cards, which would be sent to all listeners who sent him a three-cent stamp and a correct report of a frequency check broadcast.

A recent NNRC bulletin, however, quotes a letter from WSAY which advises that a fire in the printer's shop destroyed the first batch of cards and that a second order is being run. Perhaps the cards will have been mailed out by the time this issue is released. At least, we hope so.

Regardless of the outcome, a word of thanks is due Mr. Vornkahl for his kind offer. And while on the subject of this voluntary monitor-



ing, thanks are also due Arthur E. Foerster, Carroll Weyrich and other DXers who have been issuing veries for stations which otherwise would have remained unconfirmed.

John H. Wheeler, 25 Denison Ave., Mystic, Conn., is of the same opinion and writes: "Orchids and roses to Arthur Foerster for his generous offer in the February RADEX regarding veries for WMFO and WJRD. DXing will surely live a long while with such fine fellows contributing their time and money for the benefit of others."

In the January issue, a reader reported that it was impossible to obtain verifications from KGKY, WMFO, WHJB, WJRD and KASA. At the time we remarked that verifications had been forthcoming from WMFO and WJRD. John E. Ott, 70-A Quad, Iowa City, Iowa, reports veries from KGKY, WHJB and WMFO and goes on to remark: "As I have been unable to verify some stations which are known to confirm reports, I have come to the conclusion that a person's success depends on the quality of his report and the chance that it will not be misplaced at the station."

"I have had very few stations which did not verify my reports," supplies Charles E. Roach, 816 N. 7th St., Camden, N. J., who also has verified WHJB and WMFO, "and I believe that the primary reason is that I send along a self-addressed, stamped envelope with my reports. All the station has to do is sign them and drop them in the mail."

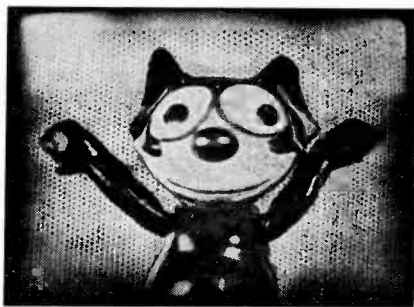
It is now definitely known that WMFO and WJRD will not verify, but they have been taken care of by Mr. Foerster's generous co-operation. KASA makes no bones about the fact that it will ignore requests for confirmations, and listeners can only abide by that decision.

#### **Bury Dead Veries**

"I have always had a distaste for verifications from stations which

have been deleted or have changed their call," confides Julian Schaefer, 2036 W. 83rd St., Cleveland, Ohio. "Hence, I always throw them in the waste basket and report my log as having so many active stations verified. I was glad to note in the February issue that James Steel listed his catches as 'active stations.' Whoever he is, he is a man of my own heart. If some of the older DXers would subtract their deleted calls and veries, their totals wouldn't make the lists of the newer DXers look so small and would not tend to discourage the new listeners."

On the other side of the fence we find Moe Luff, 2039 Hughes Ave., Bronx, N. Y., who writes: "I think the best way to count verifications is by calls and locations, and to include stations which have been deleted or which changed calls. First of all, radio stations are required to announce call and location at regular intervals, so these two items go together. The station brings out a new letterhead or card if it changes either call or location, so why wouldn't that be a new verie to count? Certainly a DXer never had one like it before! And if the sta-



*Felix sits around the NBC experimental television studio night and day, proud of the fact that he is the subject used most often for television experiments. He seems pleased at the clarity of this picture, transmitted by the improved 441 line system. The two pictures shown on this page show clearly the remarkable improvements that have been made in picture transmission.*

tion goes out of existence, that doesn't alter the fact that it was once received and verified."

"Until this season," preambles Nancy Lee Saxton, 6039 Kenmore Ave., Apt. 44, Chicago, Ill., "I did all of my DXing in Joplin, Mo., where I lived for eight years. After listening here for a while, I find there is a great deal of difference in the locations. It seems to be very hard to get the small West Coast stations in Chicago, although it was formerly no trouble at all. Even so, I like this location much better—but then I would, as this is the old home town!"

### Station Allocations

"In regard to your recent comments about station separation on the broadcast band," refer C. K. Koloa and William McCoy, Cayuga, Ind., "we believe that 10-kilocycles is not enough room between two adjacent channels. The modern receiver is not capable of separating stations as close together as they are today."

"In the event that the broadcast band is re-allocated," indicates Anthony S. Nichols, 204 N. Court St., Florence, Ala., "I think there should be two general classifications. In the first would be stations of 50 KW and up—and they should have a clear channel. All other stations should have no more than 100 watts—and they should be bunched together. At present, the stations with one, five and even ten kilowatts do not give good reception. Except in their own immediate areas, they interfere with one another—so why give them more than 100 watts?"

"Apparently the FCC uses a grab-bag system when selecting stations for various frequencies," complains Raymond C. Corbett, 619 Twelfth St., Sacramento, Calif. "They must reach in the hat and pull out a station and a frequency, regardless of consequences. For instance, KHUB in Watsonville and KROY at Sacra-

mento were assigned to the 1310 channel. When this took place, I began to feel sorry for the listeners who lived just outside these two towns. And now we find that the same frequency is going to be used by another new station in Santa Rosa. As all three are supposed to be daytime stations, there is no reason why they could not be assigned to one of scores of other channels where they would create no interference.

"KWG in Stockton has long been a favorite of local listeners, for it broadcasts many splendid programs. So the FCC decided to put KVCV of Redding on the same frequency, with the result that reception for valley listeners is ruined on both stations."

"After 12 years of using battery receivers, I have recently purchased a new 7-tube Stromberg Carlson AC model," announces R. A. Butts, Ellensburg, Wash., "and am fired with enthusiasm as I start my 13th season. In less than a month, this set has pulled in 326 stations, of which 17 were on short waves. Total mileage for this group is 512,983, which means an average of about 1573 per station. To reach my goal of 500 stations for the season, I still have to log 192 stations before spring and have no doubt but what I'll do it. Checking over my log for the past 12 years, I have tuned 602 different stations on the broadcast band with a total mileage of 1,014,439 and an average of 1685 miles per station."

### Logs New Station

"On the morning of February 22nd," greets Howard E. Ziegler, Jr., 2 Cedar Lane, Merion, Pa., "I tuned in WFTC, Kinston, N. C., during a terrific storm. Although the static was very heavy, they came in very well, except for occasional fading. They verified my reception promptly for return postage. You haven't had

that information in your lists, so I just thought I'd let you know."

"My present log stands at 392 stations heard and 235 verified," avers Harold Tear, 1317 Thomas Ave., Roanoke, Va. "My best catches are WEXL, KGER, KTAR, KOL, KFVD, KFAC, LS2, CMCQ, XEB, CMBY, XEZ and NAA. I am on the artist bureau of WDBJ of this city and have two programs a week. All of the station equipment is by RCA and they have just built beautiful new modernistic studios. The antenna is a 312 foot vertical radiator which puts a good R9 signal into most parts of Virginia and North Carolina."

"Will you advise your readers that we verify correct reports for return postage?" asks John Richards, Program Director of KEUB, Price, Utah. "Our regular monthly frequency check takes place on the second Monday of the month, between 0450 and 0510 EST. We have daily Transradio news broadcasts at 1145 and 1545 MST."

"Having never worked the frequency tests," advises Leonard Krier, Wheeler, Kans., "I made my first attempt between 0100 and 0400 CST the second Tuesday in March. During this period, I was able to hear 30 of the first 40 stations scheduled. The 1200 and 1210 channels were not cleared until after 0200, while 1310 was not cleared at all. WBNS and WCLO did no broadcasting at all—just let the transmitters run and gave their call letters several times. My object was to try for KGBU, but XERA and XENT blotted out this frequency."

When WRVA joins the CBS on June 29, WMBG in Richmond will affiliate with the NBC. WMBG has been granted permission to increase its power from 100 to 250 watts nights, and from 250 to 500 watts daytime.

## Tuning the AMATEURS

● ● ● B, B. L. Ahman, Jr.

Some very interesting letters have been received this month from our readers. Especially interesting was one sent by Elmer Rahmes, operator of W8JFC. He states he is primarily interested in 10-meters, and on reading his list of over 200 calls worked outside the United States our desire is whetted for 10-meter exploration.

We have been informed, via Nick Hock, that VP6TR states there are only five of the ten amateur stations in Barbados licensed to operate. Only VP6YB is licensed for 20-meters, and the other four for 40 meters. They are VP6TR, VP6MY, VP6NW and VP6FO. Unlicensed phones are 6MO, 40 cw and 20 phone; 6HA, 40 only; 6WD, 40 only, and VP6RB and 6LN.

There are several Hong Kong stations, and one or two Japanese on 20 meters. Tune carefully and examine every suspicious noise. These stations come in at the same time as the Australians. In connection with this, we might say that usually QSL cards are received much more quickly from the hard-to-get stations, because easily heard stations are always swamped with mail and consequently are slow in replying.

Any number of Australian stations should be heard on any decent morning from 0230 until dawn, EST. If a "shush" or a weak voice is heard, one should leave the dial set, for the VK's fade back and forth very rapidly, sometimes from R0 to R9 within a second.

Apropos of nothing, the month's prize for amusing incidents goes to the Mexican ham with an American op, and the Venezuelan who hooked up in this fashion:

American: CQ, CQ, calling CQ.  
Venezuelan: Llamada general, llamada general. How are you, OM?

American: OK OM. Can you speak English?

Venez.: No, I only know Spanish, no other English words.

American: Well, I can't speak Spanish.

Venez.: No speak English.

American: Well, then there's nothing to talk about. 73's OM.

Venez.: 73's. Muy buenos noches.

American: Calling CQ 20, calling CQ, CQ.

Venez.: Llamada general, llamada general . . .

### Some Rare Catches

Two recently widely heard amateurs on twenty from a rare country to log are:

VU7FY, O. A. F. Spindler, Coromandel P. O., Maysore State, South India.

VU2CQ, M. Mozoomder, Golab, Mohal, Flat 36, Tardeo, Bombay 7, India.

Carroll Weyrich says that the Hollanders and Belgian 'phones are packing an R9 wallop right now. Many have been heard recently.

The new Virgin Island ham, K4ENY, is located at the Marine Base at Charlotte Amalie, and in case you haven't heard, Charlotte Amalie is the new name for the city of St. Thomas.

"I have logged 61 different countries during the seven weeks I have had my new RCA 10-tube receiver," offers James L. Steele, Denville, N. J. "Twenty meters interests me particularly as DX can be had at all times. In this band 41 nations have been definitely logged, with Australia being the most frequently heard. All told, I have had 68 of the VK hams, the best being 2AZ (25 watts), 3AL (always an R9 signal), 4RG, 5AI, 6MW and 7NC. Other DX includes PK1MX, FT4AG, OE1CM, OQ5AA and VU2CQ. I would be in-

terested in hearing from other 20-meter fans who use an RCA receiver."

Most people DX for two reasons. First, to hear as many distant stations as possible, and second, to verify them. That being the case, the amateur bands should be considered as the productive field of the radio spectrum, for in these bands it is possible to hear stations in the most remote parts of the world. Amateur stations exist in some places where broadcasting stations never will be located. Baffin Land, Fanning Island, Gilbert and Ellice, Rarotonga, Tibet, Liberia and many other far-away places are to be logged. And verifications are nearly always received!

James B. Rowe, 833½ Main St., Conneaut, Ohio, showed us his log of 20-meter amateurs heard for three evenings. The most consistent stations heard were VP9R, Bermuda, TI3AV Costa Rica, TI2DC Costa Rica, PAOWV, Amsterdam, Netherlands, G5JA Cambridge Great Britain, YV5AA Caracas, Venezuela, VO1I, St. John's, Nfld., G5NI, Birmingham, Gt. Britain, EI2J in Dublin, Ireland, and VE5TV in Baffin Land, Canada. All of these stations are received prior to 2300 EST nearly any evening, on the low frequency end of the band. Mr. Rowe's list included, in addition, several other Costa Ricans, many Cubans, Mexicans Canadians and west coast United States stations.

Mr. H. Wilcox of Los Angeles airmails that he wants more news about foreign DX. Well, that's what we are here for, but we would like to hear from all the 20 meter addicts so we can get a good picture of amateur reception throughout the entire country. Special thanks this month go to E. Roberts, G. C. Shaffer, Bill Oldenwalder, NNRC and the UDXC, the latter two for bulletins on ham news.

# Frequency Checks

(Continued from inside cover)

3:10-3:30	KLCN 1290	Blytheville, Ark.	4:40-5:00	KHSL 950	Chico, Calif.
	WPAX 1210	Thomasville, Ga.		KRRV 1310	Sherman, Tex.
3:20-3:40	KFPX 1310	Dublin, Tex.	4:50-5:10	WTMV 1500	East St. Louis, Ill.
	WKBN 570	Youngstown, Ohio		KERN 1370	Bakersfield, Calif.
	WRDW 1500	Augusta, Ga.	5:00-5:20	WHBF 1210	Rock Island, Ill.
3:30-3:50	KGBX 1230	Springfield, Mo.		WTRC 1310	Elkhart, Ind.
	WELL 1420	Battle Creek, Mich.	5:10-5:30	KTRB 740	Modesto, Calif.
	WQBC 1360	Vicksburg, Miss.		WWAE 1200	Hammond, Ind.
3:40-4:00	KFXJ 1200	Grand Junction, Colo.	5:20-5:40	WIBM 1370	Jackson, Mich.
	KPLC 1500	Lake Charles, La.		WALR 1210	Zanesville, Ohio
	WADC 1320	Akron, Ohio			
3:50-4:10	KARK 890	Little Rock, Ark.		<b>The Second Friday</b>	
	WGPC 1420	Albany, Ga.	2:00-2:20	WGNV 1210	Newburgh, N. Y.
	WOSU 570	Columbus, Ohio	2:10-2:30	WCNW 1500	Brooklyn, N. Y.
4:00-4:20	KFJZ 1370	Fort Worth, Tex.	2:20-2:40	WGBB 1210	Freeport, N. Y.
	WHBU 1210	Anderson, Ind.	2:30-2:50	WABY 1370	Albany, N. Y.
	WJNO 1200	W. Palm Beach, Fla.	2:40-3:00	WNRI 1200	Newport, R. I.
4:10-4:30	WBEO 1310	Marquette, Mich.	2:50-3:10	WSYB 1500	Rutland, Vt.
	WCOO 880	Meridian, Miss.	3:00-3:20	KICA 1370	Clovis, N. Mex.
	WLB 1250	Minneapolis, Minn.		WEBQ 1210	Harrisburg, Ill.
4:20-4:40	KSO 1430	Des Moines, Ia.	3:10-3:30	WABI 1200	Bangor, Me.
	WKEU 1500	Griffin, Ga.		WACO 1420	Waco, Tex.
	WMPC 1210	Lapeer, Mich.	3:20-3:40	WLBC 1310	Muncie, Ind.
4:30-4:50	WEXL 1300	Royal Oak, Mich.		WEW 760	St. Louis, Mo.
	WHLE 1370	Virginia, Minn.		WIBX 1200	Utica, N. Y.
4:40-5:00	KPLT 1500	Paris, Tex.	3:30-3:50	WKBB 1500	East Dubuque, Ill.
	WJMS 1420	Ironwood, Mich.		KUOA 1260	Fayetteville, Ark.
	WJRD 1200	Tuscaloosa, Ala.		WAGM 1420	Payette Isle, Me.
4:50-5:10	KFXR 1310	Oklahoma City, Okla.		WHDF 1370	Akron, Ohio
	WTAX 1210	Springfield, Ill.	3:40-4:00	WJW 1210	Calumet, Mich.
	WBIG 1440	Greensboro, N. C.		WNBZ 1290	Saranac Lake, N. Y.
5:00-5:20	KFJB 1200	Marshalltown, Ind.	3:50-4:10	WJBK 1500	Detroit, Mich.
	WEOA 1370	Evansville, Ind.		WMBH 1420	Joplin, Mo.
5:10-5:30	KPDN 1310	Pampa, Tex.	4:00-4:20	WRDO 1370	Augusta, Me.
	WDZ 1020	Tuscola, Ill.		KIUL 1210	Garden City, Kans.
5:20-5:40	KELD 1370	Eldorado, Ark.		WCMI 1310	Ashland, Ky.
	WAYX 1200	Waycross, Ga.	4:10-4:30	WTHT 1200	Hartford, Conn.
5:30-5:50	KDLR 1210	Devils Lake, N. D.		WCAZ 1070	Carthage, Ill.
5:40-6:00	KRBC 1420	Abilene, Tex.	4:20-4:40	WNLC 1500	New London, Conn.
				WMFQ 1210	Hibbing, Minn.
			4:30-4:50	WTAQ 1330	Green Bay, Wis.
				KIUP 1370	Durango, Colo.
			4:40-5:00	WPAD 1420	Paducah, Ky.
				KNOW 1500	Austin, Tex.
			4:50-5:10	WEMP 1310	Milwaukee, Wis.
				KGDE 1200	Fergus Falls, Minn.
				WGRC 1370	New Albany, Ind.
			5:00-5:20	KIUN 1420	Pecos, Tex.
			5:10-5:30	KGEK 1200	Sterling, Colo.
			5:20-5:40	KMAC 1370	San Antonio, Tex.
			5:30-5:50	WIL 1200	St. Louis, Mo.
			5:40-6:00	KGFG 1370	Oklahoma City, Okla.
			5:50-6:10	KANS 1210	Wichita, Kans.
				<b>The Second Saturday</b>	
			2:00-2:20	WMFR 1200	High Point, N. C.
			2:10-2:30	WMFO 1370	Decatur, Ala.
			2:20-2:40	WSOC 1210	Charlotte, N. C.
			2:30-2:50	WTJS 1310	Jackson, Tenn.
			2:40-3:00	WSIX 1210	Nashville, Tenn.
			2:50-3:10	WROL 1310	Knoxville, Tenn.
			3:00-3:20	KOTN 1500	Pine Bluff, Ark.
				WQAM 560	Miami, Fla.
			3:10-3:30	KWYO 1370	Sheridan, Wyo.
				WCLS 1310	Joliet, Ill.
				WPRP 1420	Ponce, P. R.
			3:20-3:40	KGCU 1240	Mandan, N. Dak.
				WHBY 1200	Green Bay, Wis.
				WNEL 1290	San Juan, P. R.
			3:30-3:50	KXYZ 1440	Houston, Tex.
				WAML 1310	Laurel, Miss.
				WKBV 1500	Richmond, Ind.
			3:40-4:00	KRFV 1260	Weslaco, Tex.
				WFGV 1370	Hattiesburg, Miss.
				WJBL 1200	Decatur, Ill.
			3:50-4:10	KNEL 1500	Brady, Tex.
				WEED 1420	Rocky Mount, N. C.
				WGBF 630	Evansville, Ind.
			4:00-4:20	KFQD 780	Anchorage, Alaska
				KVSO 1210	Ardmore, Okla.
				WFDF 1310	Flint, Mich.

4:10-4:30	KONO	1370	San Antonio, Tex.
	KVOS	1200	Bellingham, Wash.
	WKBZ	1500	Muskegon, Mich.
4:20-4:40	KRLC	1420	Lewiston, Idaho
	KTSM	1310	El Paso, Tex.
4:30-4:50	KOCA	1210	Kilgore, Tex.
	KUJ	1370	Walla Walla, Wash.
4:40-5:00	KCMC	1420	Texarkana, Ark.
	KRNR	1500	Roseburg, Ore.
4:50-5:10	KEEN	1370	Seattle, Wash.
	KWTN	1210	Watertown, S. Dak.
5:00-5:20	KGFF	1420	Shawnee, Okla.
	KIT	1310	Yakima, Wash.
5:10-5:30	KBTM	1200	Paragould, Ark.
	KRKO	1370	Everett, Wash.
5:20-5:40	KFRO	1370	Longview, Tex.
	KGEZ	1310	Kalispel, Mont.
5:30-5:50	KBIX	1500	Muskogee, Okla.
	KFXD	1200	Nampa, Idaho
5:40-6:00	KFJM	1410	Grand Forks, N. D.
	KXRO	1310	Aberdeen, Wash.
5:50-6:10	KGY	1210	Olympia, Wash.
6:00-6:20	KINY	1310	Juneau, Alaska
6:10-6:30	KMED	1410	Medford, Ore.

## About Reports

(Continued from Page 13)

societies and the radio magazines are doing work in the right direction. You of RADEX continually publish articles on the *Methods of DXing*. You give instruction on the art of listening. The R and Q systems are completely described. The helps given in the station listings make DXing quite easy for those who would but read and absorb the information given by those experienced in the field. The DX clubs have report forms that are complete in every detail. Members are warned against unusual practices which work against DXing.

When DXers begin to realize the importance of co-operation with the station, when they appreciate the necessity of sending in accurate and consistent reports, then will both DXer and station feel the results of such conduct. The DXer *can* make out a report with a view to assisting the station in producing a better program for listeners all over the world. The point is—will he do it?

Having DXed actively for 12 years, I am not a total stranger to the wild and wooly frequency spectrum, and so this is being written from the standpoint of a DXer. It does not in any way state the policy

of WCOP with regard to DX programs.

## Answers

(Questions on Page 11)

1. WACO, Texas, and Waycross (WAYX) Georgia.
2. WBNX, abbreviation of West Bronx, is located in the East Bronx, New York City.
3. Wonderful Isle of Dreams, Miami Beach, Fla.
4. WSIX, Nashville, Tenn.
5. WTHT, The Hartford Times. WSBT, South Bend Tribune. WBEN, Buffalo Evening News. WESG, Elmira Star Gazette. KPDN, Pampa Daily News. WTMJ, The Milwaukee Journal. CFPL, Free Press, London. WTCN, Twin City News.
6. CASA Grande Hotel, Elk City, Okla.
7. KFXB, KFQU, WBES and WJBR.
8. Chicago.
9. WGHP, George Harrison Phelps.
10. H. J. Brennan.

The Seattle Independent station, KIRO, will take CBS programs, commencing January 1, 1938, or earlier if arrangements can be made. KIRO will replace KOL as the CBS outlet in Seattle. The president of the station announced at the same time that a new transmitter will be purchased, new studios built, and a directional antenna installed. Application has been made for an increase in power from 1000 to 5000 watts.

\* \* \*

Four new stations will be added to the Don Lee Network, and perhaps to the MBS. They are KIRO Seattle, KIEM Eureka, KVCV Redding and KHSL Chico.

\* \* \*

From China comes the information that all Chinese stations are supposed to relay XGOA from midnight to 1 am. But do they?—



**I**F SOME of the reports received in the Mystery DX Contest may be considered typical of the DX mail sent to the stations, the broadcasting lads must get quite a few chuckles on the side.

Of course, it is admitted that weather conditions for the contest were pretty awful. Static and noise swallowed many an inoffensive signal, and a chap was lucky indeed if he was able to identify his three successive selections.

Even so, the composer himself might have wondered at the bizarre titles attached to some of the numbers played by the various stations. The immortal "Blue Danube Waltz," for instance, became the "Blue Daniel Waltz." From this, one might suspect that Daniel was blue because of the punk reception.

The same idea followed when "Sweet Mystery of Life" was reported as "Sweet Misery of Life." There seems to be no doubt but what many a blue contestant had a miserable night of listening.

Henry Busse has a swell record of "Riding To Glory On A Trumpet," but one DXer avowed that the steed was a "broncho." "New River Train" was transferred to the "Coo Coo Train" in all seriousness, while the number "High Hat, Piccolo and Cane" was twice reported to be "I've Got A Piccolo On A String."

After considerable research, "Main Line Casey" was translated into "Me And My Baby." A lettuce

leaf and a spot of French Dressing were probably used to transform "Solitude" into "Saliditude." The "Sweetheart of Sigma Chi" was reported by one non-Greek as "Swede Heart of Sig Ma Kl." Good, old Radex Press received a report addressed to "Ray Teck's Express."

#### Not So Funny

One other phase of the contest reports, however, was not at all humorous. In fact, it demonstrated conclusively that DXers are still very careless when reporting to stations.

Five listeners in a Mid-Western city reported reception of KVI on its February 22nd broadcast between 0400 and 0500 EST. The signal strength was listed on the five reports as "R3," "Fair," "R4," "R5-7" and "R6." Fading was respectively given as "Little," "SSS," "SS," "SS," and "Every 3 minutes." Static was reported to be "XXX," "Heavy," "XX," "XXXX" and "None." Quality was observed as "Good," "QSA-3," "Fair," "QSA 4," and "QSA-5."

One cannot help but wonder at the reaction of KVI when those five reports are checked over. The difference between an R3 signal and one which was R5-7 is really tremendous, with the latter supposedly twice as strong. Even allowing for periods of fading, it is apparent that the two extremists had entirely different views of the R scale.

The variation on the question of

fading might conceivably be explained by the locations in the city, but there is no explanation as to why a station would be QSA-3 on one receiver and QSA-5 on another.

The matter of static will undoubtedly raise a few KVI eyebrows. It will be noted this varied from "Heavy" and "XXXX" down to "XX" and "None." Such a tremendous difference is as absurd as it is impossible to explain.

Other cases of contradicting reports from the same cities were observed in great number, and it is unnecessary to go into them in detail. They all bear out the original contention that may DXers are either very careless with their reports or they are ignorant of how to report what they hear. In either event, it is certainly time that they come down to earth and realize the unfavorable impressions which they are making.

There has been a great deal of talk in years past concerning the possible value of technical data to the various stations. Some listeners contend that the broadcasters don't care about reception information, and a few engineers have gone on record as being of the same opinion. However, the majority of those interested in this phase of radio agree that technical details can be of decided value to station officials.

Thus, it has been conceded time and again that reports should contain details about signal strength, quality, readability, interference, local weather, receiver used, fading, static, etc. The inclusion of this information with a report can do no harm, it certainly shows the desire to co-operate on the part of the DXer, and it may be quite helpful to the station.

Obviously it goes without saying that the information sent to the station should be accurate. The listener should be able to determine

whether a signal is R4 or R7, and he certainly should give the data just as he hears it. Stations are not interested in undeserved compliments, and nothing sours an engineer more than a report which has been made flattering in an attempt to wheedle a verification.

Inaccurate reports—whether resulting from carelessness or lack of knowledge—put the DX fraternity in a bad light with the broadcasters. Let's correct this evil before it is too late!

### **Cheese Champs**

For some reason or other, nearly everyone has a secret desire to be champion of something. Be it the Frog Hollow Horseshoe League or the Podunk Husking Bee, most of us would like to be known as the absolute tops. Psychologists may have an explanation for this urge, but that's another story.

In many instances, championships are not difficult to establish. The boxer who can knock the tar out of everyone he meets, is champion until he gets licked. The golfer who breezes through major tournaments without defeat is rated as a champion. The tennis world acknowledged Fred Perry as the amateur king because the Englishman was able to trim the rest of the simon-pures.

DXing happens to be a sport in which it is difficult, if not impossible, to determine a champion. There are too many factors involved, too many varying conditions to consider, for anyone to single out a particular listener and say, "He's the champion DXer of the world."

Of course, that doesn't mean that we haven't had "champion DXers." There's one fellow, for instance, who got up early every morning for a year or so and dialed a couple of Aussie short waves. He got a letter from the stations saying that no one else had ever sent in so many reports. Accordingly, we are to be-



lieve that he is the champ. That anyone else—perhaps troubled with insomnia and having nothing better to do—could have done the same thing is beside the point.

From time to time, open competitions have been held to determine the champion of this-or-that. Even though the contestants listened under comparable conditions, which is highly improbable, the winner could only be classed as the chap who turned in the highest score.

Our own Mystery DX Contests have not attempted to designate a champion. The judges have merely determined the winners and this was considered ample recognition. Perhaps it would be possible to stretch a point and say that S. R. Lewis was champion North American DXer for the week-end of February 22-24, 1936 and that Floyd Biss won the same title for the week-end of February 20-22, 1937.

In the same vein, it would be possible to toss some posies at Arthur E. Foerster, Bireley Ross and Harry M. Gordon—all of whom placed among the winners in two straight Mystery DX Contests. For consistently excellent DXing, they deserve a world of praise, but it is doubtful if they would come out and claim to be champions of something-or-other.

And so, it might be a good idea to reserve championship recognitions for sports where there is some real basis for comparison. If we tried it in DXing, the delicate aroma of limberger might leave us with a cheese champ on our hands.

When someone does an exceptionally good bit of dialing, it is always interesting to know the receiver which was used. We note from the contest that Floyd Biss, Grand Prize winner, scored his points at the dial of an Airline receiver. George Publow, who placed second, used a Masterpiece IV.

Among the first 15 prize winners,

there were no less than six Philco receivers in use. The only other makes to be represented more than once were Midwest and Airline, each of which was used by two winners.

Going over the entries of all contestants, Philco again led the list with 45 owners. Next in line was RCA Victor with 31, and then came Scott with 16. The Hallicrafters models were represented by 14 contestants and Zenith chalked up a like number. The Sears Silver-tone appeared 12 times, while Grunow and Midwest each claimed 10 contestants.

Other receivers represented included: General Electric—9; Airline—7; Atwater Kent—6; Knight, Stewart Warner and Stromberg Carlson—5 each; Crosley, Sparton and Westinghouse—4 each; Emerson—3; American Bosch, Columbia, Grebe, Silver Masterpiece, Majestic, Packard Bell, and Silver Marshall—2 each; and Brunswick, Eilen, Erla, Empire, Fairbanks Morse, Fada, Gloritone, Hammarlund, Kennedy, National, Root, Sentinel and True-tone—one each. Seven receivers were home-made.

Add those up—if you're mathematically inclined—and you'll have the 238 entries which found their way into the hands of the judges. Find out what happened to the 213 forms which were ordered and never used, and you can be our reception prognosticator for next year!

*Pictures of the Contest winners will appear in the Midsummer Edition of RADEX.*

Ray H. Zorn, Troy Grove, Ill., has some DX literature, including a couple years' files of RADEX and the FCC's Bulletins, as well as a lot of miscellaneous magazines and old radio log and call books. He would like to see them placed in the hands of appreciative persons. Any of our readers who collect this kind of material should get in touch with Mr. Zorn.

## New Station Addresses

Following are the names of owners and addresses of all the new radio stations licensed since last October, at which time RADEX published a complete listing of the addresses of the radio stations of North America.

CRCY, 1420, Canadian Broadcasting Corp., 805 Davenport Road, Toronto, Ont.  
 KAND, 1310, Navarro Broadcasting Ass'n., Corsicana, Texas.  
 KATE, 1200, Albert Lea Brdcastg. Corp., Albert Lea, Minn.  
 KAWM, 1500, A. W. Mills, Gallup, N. Mexico.  
 KDAL, 1500, Red River Brdcastg. Co., Inc., Duluth, Minn.  
 KELO, 1200, Sioux Falls Broadcast Ass'n., Inc., Sioux Falls, S. Dak.  
 KOAM, 790, Pittsburgh Brdcastg. Co., Pittsburgh, Kans.  
 KOKO, 1370, Southwest Brdcastg. Co., La Junta, Colo.  
 KPFA, 1210, Peoples Forum of the Air, Helena, Mont.  
 KRIS, 1330, Gulf Coast Brdcastg. Co., Corpus Christi, Texas.  
 KRMC, 1310, Roberts McNab Co., Jamestown, N. Dak.  
 KSJS, 1500, Salina Journal, Salina, Kans.  
 KSRO, 1310, Press Democrat Publishing Co., Santa Rosa, Calif.  
 KSUB, 1310, Johnson & Perry, El Escalante Hotel, Cedar City, Utah.  
 KTKC, 1190, Tulare-Kings Counties, Visalia, Calif.  
 KTMS, 1220, News Press Publishing Co., Santa Barbara, Calif.  
 KVGB, 1370 Ernest Edward Ruehlen, Great Bend, Kans.  
 KVOX, 1310, Robert K. Herbst, Moorhead, Minn.  
 KWNO, 1200, Winona Radio Service, Winona, Minn.  
 KWOS, 1310, Tribune Printing Co., Jefferson City, Mo.

KYCA, 1500, Southwest Brdcastg. Co., Prescott, Ariz.  
 WBHP, 1200, Wilton Harvey Pollard, Huntsville, Ala.  
 WDSM, 1200, Fred A. Baxter, Superior, Wis.  
 WEAU, 1050, Central Brdcastg. Co., Eau Claire, Wis.  
 WFTC, 1200, Jonas Weiland, Kinston, N. C.  
 WGVA, 1050, Glenn Van Auken, Indianapolis, Ind.  
 WICA, 940, C. A. Rowley, Star-Beacon, Ashtabula, Ohio  
 WMBS, 1420, Fayette Brdcastg. Corp., Uniontown, Pa.  
 WNNY, 1420, Black River Valley Broadcast, Inc., Watertown, N. Y.  
 WOLS, 1200 O. Lee Stone, Florence, S. C.  
 WRTD, 1500, Times Dispatch Publishing Co., Richmond, Va.  
 WSAU, 1370, Northern Brdcastg. Co., WAUSAU, Wis.  
 WSNJ, 1210, Eastern States Brdcastg. Corp., Bridgeton, N. J.  
 W3XJ, 1060, McNary & Chambers, College Park, Md.  
 . . . 950, Harold F. Grow & Edmund C. Shields, Saginaw, Mich.



*The principals of one of radio's most popular dramatic shows, the First Nighter, are shown here. Cliff Soubier, Barbara Luddy and Don Ameche, are called upon to act in a new play every week—romances, tragedies, comedies, mysteries or melodramas—they are all the same to these versatile actors. The First Nighter is heard on Fridays at 10 pm on the NBC-Red.*

# Summer Program Changes

• • • By Betty

**DANCING BANANAS:** A new sophisticated program called "Coronet on the air" features Deems Taylor in the role of Master of Ceremonies, and Robert Armbruster's band. This program follows no set pattern and presents whatever mad-cap ideas in the realm of music and art that Mr. Taylor can concoct.

One of Mr. Taylor's vagaries is playing all four movements of Grieg's "Peer Gynt Suite" at once. His favorite exploit so far, however, was the presentation in music of a photograph of four bananas dancing on a piece of wallboard.

This program is on the NBC-Blue Friday nights at 9:30.

**KING OF JAZZ:** Paul Whiteman, with his orchestra and entertainers totalling thirty artists, is heard over the coast-to-coast Mutual Network on Friday nights. The programs originate at Chicago's Drake Hotel, and this marks his first appearance in that city since 1931, and his first appearance on the Mutual Chain.

When most of today's radio maestros were studying their A-B-C's this Denver-born musician was touring the hinterlands, blaring jazz in its earliest forms. Pioneer Paul was the first modern musician to crash the solid of Carnegie Hall, and the first to adopt dance arrangements of the classics.

**TWIN STARS:** Two veteran comedians, Victor Moore and Helen Broderick, with Buddy Roger's orchestra, are heard over 66 stations of the Columbia Broadcasting System on the "1937 Edition of Twin Stars." Their new time is 8 to 8:30 pm Sundays.

Victor Moore broke into the big time while playing at Hammerstein's in New York City in 1905,



*When George Burns and Gracie Allen switched to the NBC, Ken Murray and his stooge, Oswald took over the Wednesday night spot. Assisting them are vocalists Tony Martin and Shirley Ross, while Lud Gluskin provides the dance music.*

when George M. Cohan wrote the part of "Kid" Burns into his "Forty-Five Minutes from Broadway" especially to fit Moore's talents. Following this he scored in "Shorty McCabe" and "The Happiest Night of His Life." More recent hits have been "Of Thee I Sing," "Let 'em Eat Cake" and "Anything Goes."

Miss Broderick commenced her stage career at 14 as a chorus girl. For eight seasons she remained in the chorus line until her ability to make her sister chorines laugh backstage prompted a try-out as a comedienne back of the footlights. Her first starring vehicle on Broadway was "Fifty Million Frenchmen," which was followed by "The Band Wagon" and "As Thousands Cheer."

**TIME MARCHES ON:** The March of Time will go forward into the spring and summer over an augmented CBS network under a new sponsor. The new series will be

heard at the usual time of 10:30 pm on Thursdays.

This program is now in its seventh year on the air, and from the start it has set a high standard for realism in broadcasting. Each program requires the services of more than 20 actors, 19 musicians, eight production, service and sound-effects experts, and 11 editorial and research workers.

To give the cast and workers a rest, the March of Time will leave the air about the middle of July, resuming the series early in September under the auspices of Time and Life magazines.

**THE BAMBINO:** Babe Ruth, baseball's "Sultan of Swat," unleashes inside "dope" on his favorite sport and interviews its stars in a new twice-weekly radio series over the WABC-Columbia network on Wednesdays and Fridays from 10:30 to 10:45 pm.

An all-base ball feature, programs are comprised of topical Big League news and comments on the sport in general. The Babe gives intimate insights into the comparative strength of the major league teams and predicts winners, reviews important games, interviews players and dwells on interesting incidents in the different games and their decisive plays.

**OH YEAH:** "Oswald," Ken Murray's famous side-kick, made his professional debut playing the piano accordion, at which he is adept, as well as the clarinet and saxophone. This amazing person toured European concert fields for ten years as a musician, and four years ago wrote the score for a London Musical hit, "Night Shadows." On returning to America his old friend Ken Murray selected him as his stooge, and they have been inseparable ever since. His favorite sport is heckling Casey Stengel from the sidelines with his "Oh Yeah", and

his small toothbrush moustache is his pride and joy.

**SIDELIGHTS:** Richard Gordon, famous Sherlock Holmes of the air, is now playing the part of the doctor in Pepper Young's Family . . . Several New York music firms are republishing Franz Schubert's composition "The Bee" to meet the demand created as a result of the now famous Fred Allen-Jack Benny feud. . . . When Parkyakarkus rehearses for his appearance on the Al Jolson show he recites his lines in a polished Bostonian accent. The Greek dialect is added when he goes on the air. It's merely a dial act! . . . At one stage of his career Morton Downey sat in Paul Whiteman's orchestra pretending to play a French horn. The stunt was to amaze the customers by having so remarkable a singer step right out of the band. . . .

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Norman Brokenshire, one of the most popular announcers on the air a few years ago, is now radio director of a New York advertising agency. He is heard over the air on WOR now on Sunday mornings.

\* \* \*

Burns and Allen have shifted their network and time to 8 pm Mondays on the Red, and Ken Murray with "Oswald" are filling the time left vacant on the CBS, 8:30 pm Wednesdays.

\* \* \*

Gracie Allen has a solution to the parking problems of the nation. She would simply pass a law prohibiting the parking of all cars until they were completely paid for.

\* \* \*

Construction of the new Salt Lake City station, KUTA, has been suspended while its case is being determined by the Court of Appeals at Washington. KUTA had a construction permit for 1500 kcs.

# The MONTH'S CHANGES in STATION DATA

This information is compiled just before we go to press, after the forms for most of the other pages are closed. Some very recent changes, received too late to index in this issue, are here included, and will be incorporated next month in our main indices.

## Shortwaves

New	
....	KAIA, Beverley Hills, Calif.
1642	WRDH, Houghton Heights, Mich.
1712	WPIA, Warren, R. I.
2414	KAPH, Stockton, Calif.
2442	WAMG, Kalamazoo, Mich.
2458	WAMN, Lorain, Ohio
2726	WAJU, Guayama, Puerto Rico
2726	WAJV, Mayaguez, Puerto Rico
6000	OAX5C, Ica, Peru
6030	XEBC, Mazatlan, Sin.
6080	OAX4Z, Lima, Peru
6118	ZEUZ, Mexico City, D. F.
6122	OAX4P, Huancayo, Peru
6122	OAX6A, Arequipa, Peru
6128	OAX7A, Cuzco, Peru
6200	H18Q, Trujillo, D. R.
6230	OAX4G, Lima, Peru
6500	J2AA, Tokyo, Japan
6977	XBA, Tacubaya, D. F.
9335	OAX4L, Lima, Peru
9355	WNK, Hiلاه, Fla.
9435	HC20DA, Guayaquil, Ecuador
9450	..... Fort de France, Martinique
9504	OLR3B, Prague, Czechoslovakia
9550	OLR3A, Prague, Czechoslovakia
9562	OAX4T, Lima, Peru
9590	W8XAL, Cincinnati, Ohio
9840	J2AA, Tokyo, Japan
11040	CSW, Lisbon, Portugal
11840	CSW, Lisbon, Portugal
11895	HP5I, Aguadulce, Panama
11900	OLR4D, Prague, Czechoslovakia
11970	H12X, Trujillo, D. R.
15320	OLR5B, Prague, Czechoslovakia
15270	H13X, Trujillo, D. R.
Calls	
6010	OLR2A, Prague, Czechoslovakia
6080	OLR2B, Prague, Czechoslovakia
6115	OLR2C, Prague, Czechoslovakia
6340	H1LX, Trujillo, D. R., from H1X
11760	OLR3B, Prague, Czechoslovakia
11840	OLR4A, Prague, Czechoslovakia
11875	OLR4C, Prague, Czechoslovakia
15116	OLR5C, Prague, Czechoslovakia
15230	OLR5A, Prague, Czechoslovakia
Locations	
9590	PCJ, Hulzen, Netherlands,
	from Hilversum
15220	PCJ, Hulzen, from Hilversum

## Broadcast Band

New	
940	WICA, Ashtabula, Ohio
1050	WGVA, Indianapolis, Ind.
1200	KATE, Albert Lea, Minn.
1200	KWNO, Winona, Minn.
1220	KTMS, Santa Barbara, Calif.
1370	KOKO, La Junta, Colo.
1420	WMBS, Uniontown, Pa.

Power	
1450	CMHM, Cienfuegos, Cuba, 100 w.
Location	
1420	KCMC, Texarkana, Tex., from Ark.
Call Letters	
1370	KTOK, Oklahoma City, Okla., from KGFG
Network	
600	WICC, Bridgeport, Conn., new MBS
780	WEAN, Providence, R. I., new Blue
880	KFXA, Greeley, Colo., new MBS
880	WCOC, Meridian, Miss., new CBS
1160	WOWO, Fort Wayne, Ind., new Blue
1180	WMAZ, Macon, Ga., new CBS
1200	KADA, Ada, Okla., new MBS
1200	WBBZ, Ponca City, Okla., new MBS
1210	KASA, Elk City, Okla., new MBS
1210	KVSO, Ardmore, Okla., new MBS
1240	KTAT, Fort Worth, Texas, new MBS
1280	WRR, Dallas, Texas, new MBS
1320	KGMB, Honolulu, T. H., new MBS
1340	WSPD, Toledo, Ohio, Blue from CBS
1350	KIDO, Boise, Idaho, new NBC
1360	KCRC, Enid, Okla., new MBS
1370	KTOK, Oklahoma City, Okla., new MBS
1400	KHBC, Hilo, T. H., new MBS
1420	KGFF, Shawnee, Okla., new MBS
1420	WPAR, Parkersburg, W. Va., new CBS
1500	KBIX, Muskogee, Okla., new MBS
Owner	
1210	KANS, Wichita, Kans.,
	KANS Brdctg. Co.
1310	KCKN, Kansas City, Kans.,
	KCKN Brdctg. Co.
1500	KRNR, Roseburg, Ore.,
	News-Review Co.
Delete	
1300	KFJR, Portland, Ore.
Permit to Change Frequency	
890	WILL, Urbana, Ill., to 580
950	KHSL, Chico, Calif., to 1260
1210	WMBG, Richmond, Va., to 1350
1310	KIT, Yakima, Wash., to 1250
1310	WOL, Washington, D. C., to 1230
1420	KRLC, Lewiston, Idaho, to 1390
1420	WJBO, Baton Rouge, La., to 1120
Permit to Change Power	
560	KSFO, San Francisco, to 5 kw days
630	WGBF, Evansville, Ind., 1000 from 500
800	WILL, Urbana, Ill., 1000 from 250
1210	WJTN, Jamestown, N. Y., 100 from 50
1210	WMBG, Richmond, Va., 500 from 100
1310	KIT, Yakima, Wash., 250 from 100
1310	WOL, Washington, D. C., 1000 from 100
1420	KRLC, Lewiston, Idaho, 250 from 100
1420	WJBO, Baton Rouge, La., 500 from 100
1490	WCKY, Covington, Ky., 10000 from 5000

560 **Permit to Change Location**  
KSFO, San Francisco to Oakland, Calif.  
880 WPHR, Petersburg, Va., to Richmond  
(will be WRNL)  
1450 WTFI, Athens, Ga., to Atlanta

## Coronation Programs

Tentative plans have now been made for the transmission of programs from the Empire Broadcasting Station at Daventry on May 12 (Coronation Day). On this day, after the end of Transmission I, the normal system of program distribution by six transmissions will be replaced by five broadcasts known as A, B, C, D, and E. The following programs have now been arranged, but full details are at present lacking.

### Transmission A

0415 EST A description of the processions from Buckingham Palace to Westminster Abbey.

0515, The Coronation Service.

0815, Description of the return of the procession.

0945, The Coronation Service, electrically recorded.

### Transmission B

1320, A program entitled "The Empire's Homage," to which the Dominions and some of the Colonies will contribute.

1400, A message by H. M. King George VI.

### Transmission C

1430, Coronation Service, electrically recorded.

1645, A description of the processions, electrically recorded.

### Transmission D

1820, Coronation Service, electrically recorded.

2035, Description of the processions, electrical recording.

2150, "The Empire's Homage," electrically recorded.

2230, The King's Message, recorded.

### Transmission E

2300, Coronation Service, recorded.

## Most Distant Contestant

The most distant report on reception of a RADEX Mystery DX Contest program comes from Dunedin, New Zealand.

Mr. Alan Hutchison, 15 Embo St., Dunedin, writing under date of Feb. 22, reported to us his reception of WHA, Madison, Wisconsin, 940 kcs., which broadcast its program from 5 to 6 am on Feb. 21.

"This station was very difficult to log," Mr. Hutchison writes. "Interference from JOBK2, Osaka, Japan, on the same frequency increased the difficulty, so I consider I was fortunate to be able to read any of the program.

"Results obtained on the contest were disappointing, although I did log two new stations. The contest was held too late in the season for us, as the Australians are well in by sunset here (3 am in USA), and these stations cover the majority of frequencies.

"I hope next year you will give your New Zealand readers a chance to compete."

Mr. Hutchison's report, which we forwarded to WHA, included several announcements, almost verbatim, a piano solo, dance music, and a Fletcher Henderson recording.

## Station News

DELEGATIONS from the United States, Canada, Cuba and Mexico met in Havana recently, at the invitation of the Cuban government, to consider a number of radio problems and to draw up treaties to be presented at a convention which will meet in Havana in November. The November convention will be attended by all the governments in the New World.

It is hoped something definite can be determined concerning the removal from the air of the Mexican border stations which interfere greatly

with United States and Canadian stations. Other problems which no doubt will receive the attention of the delegations will be a system of re-allocation among North American broadcasters to provide interference-free reception; frequency separation between channels on the broadcast band; allocation of stations in the international shortwave broadcasting bands, and the allocation of the ultra-high frequencies for television and broadcasting.

A number of good readers have taken the trouble to write us telling what they would like to see in RADEX. Letters of this kind are always welcome, and we are more than glad to give any good idea a trial. Already, in response to requests from readers, we have completely re-made our shortwave lists; we have added Canadian and Mutual network programs to our program listings; we are showing the month's changes in shortwave data as well as broadcast band changes; the puzzle page has been revived, and a monthly amateur column added. In the present issue we are pleased to call to our readers' attention several additional features, all suggested by good radio fans.

Most important is the completely new list of South American stations, which shows (believe it or not) 95 changes or additions to our former listing of these stations. The Brazilian stations underwent frequency revisions the first of the year, and the call letters of all the Venezuelan stations have been changed.

Commencing with this issue, at the request of a reader, we will show the addresses and the names of the owners of all the new radio stations as they come on the air, instead of waiting until we publish the complete listing of station addresses.

A roster of the DX Clubs is also presented this month. Secretaries of

all clubs are requested to check this information and to advise us of any changes that may occur so the list will be both complete and accurate.

Mr. Bill Bailey, Director of Publicity for stations WLW and WSAI, furnishes us with the schedule of news broadcasts transmitted by WLW Cincinnati, 700 kcs. News flashes are heard at 11 am and 11 pm on Sundays; at 7:45 am daily except Sunday, and at 11 pm daily except Saturday. Additional flashes are given at 10 am on Saturdays and at 12:05 am on Sundays. Lowell Thomas is also heard on his regular network broadcasts at 6:45 pm, EST, five days a week.

Information on Australian changes is received from the Postmaster General's Department, Melbourne:

#### New Licenses Granted

2BS, Bathurst Broadcasters, Ltd., Keppell St., Bathurst, NSW. 1500 kcs., 100 watts.

2NZ, Northern Broadcasters, Ltd., Invernell, NSW. Transmitter located at Litt'e Plain, near Invernell. 1170 kcs., 2 kilowatts.

#### Alterations

3WR, Shepparton, changed to 3SR.  
4TO, Townsville, changed from 1170 kcs to 1160 kcs.

#### Cancellation

2LV, Invernell, deleted. Replaced by 2NZ.

Ten more stations, including the eight stations of the Oklahoma Network, and two Texas broadcasters, have been added to the MBS coast-to-coast chain, bringing the total of stations on the MBS to 51.

The new stations include KTOK Oklahoma City, KCRC Enid, KGFF Shawnee, KBIX Muskogee, KADA Ada, KVSO Ardmore, WBBZ Ponca City and KASA Elk City. The two Texans are KTAT at Fort Worth and WRR at Dallas.

# The Story of XEWI

● ● ● By Francisco C. Alvarado

SHORTWAVE broadcasting station XEWI, popularly known as "My Voice to the World from Mexico," was inaugurated for service in September, 1935. It is owned and operated by the *Fraternidad de la Nueva Vida* (Fraternity of the New Life), which is the primary branch of the *Institucion Mundial de la Vida Impersonal*, and is located at the headquarters of the institute at No. 56 Mina St., in Mexico City.

This is what is known in Mexico as a cultural station, its broadcasts being limited to subjects of a cultural or educational nature, and it is prohibited from handling any commercial broadcasts or anything from which remuneration might be received. Actually, it is used for the purpose of broadcasting the transcendental teachings of the Brotherhood which sponsors it, and lectures are transmitted at present in five languages: English, Spanish, German, French and Esperanto. In the very near future it is hoped to add lectures in Polish, Swedish and Italian.

When first inaugurated the station was known as XEVI, corresponding very nicely to the initials of *Vida Impersonal* (The Impersonal Life), but on Feb. 1, as a result of the regulations of the International Radio Convention, the station was required to change to XEWI.

Good reports of reception have been received by this station from Australia, New Zealand and South America, as well as from all parts of the United States, Canada and England. At present the station operates with 250 watts but it is hoped in the near future to increase its output to one kilowatt. The actual frequency employed is 11900 kcs., corresponding to 25.19 meters.

The programs transmitted over XEWI, being of a philosophical na-

ture, are designed to be interesting and enlightening. Music of only the best kind is broadcast and the talks and lectures are of a kind that tends to serve as a guide to mankind to make the world a better place to live in.

Reports from our listeners are always appreciated. Our postal address is XEWI, Radio Estacion Cultural, Apartado 2874, Mexico City, D. F.

## An All-Wave Station

● ● ● By the Technical Editor

THE only radio broadcasting station ever licensed to broadcast on *all* waves and frequencies in use today, is now operating continuously in Maryland.

Special experimental station, W3XFE, owned by the Carnegie Institution of Washington, transmits on all waves successively from 516 to 16,000 kilocycles. It requires 15 minutes to pass over this entire range of signals, and each signal consists of but five short clicks lasting one-half second.

The signals are fired upward into the stratosphere against the radio "ceiling". In this way the scientists are conducting their studies of the radio reflecting layers or "mirrors" and how the different wave lengths behave when turned loose.

The transmitter is automatically tuned so as to broadcast signals on all frequencies throughout the period of fifteen minutes. It then begins again and repeats the cycle. The short signals offer no interference to listeners for they occur only once every 15 minutes and last but half a second on any band to which the receiver happens to be tuned.

Furthermore, the set is attached to a special antenna so that the greater part of the signal energy is directed upward to the reflecting layer where it bounces back to earth



and is captured by a special receiver. The tuning of this set is carefully synchronized with the emitted signal, so the two work together. The received signals are recorded for future study. The waves go up at least 100 kilometers, so this makes the return path about 125 miles. While the transmitter and receiver are in the same building, they are in reality miles apart. It is expected that this unique broadcaster will provide much data that will bear upon some of the unknown things that affect radio reception, and permit of better radio in years to come.

---

"In a recent issue of RADEX I read a DXer's letter which states he has a 9-tube set which brings in German, Italian and South American stations with good volume, but that he would like to get more distance," recalls Charles D. Richardson, Jr., 713 Harbaugh St., Sewickley, Pa. "I am the owner of a 6-tube all-wave RCA-Victor which brings in stations from all parts of the world, regularly and with good volume. I think my reception disputes the claim that multi-tubed receivers are necessary to enjoy world-wide reception.

"On this receiver, which I have had for only three months, I have heard 104 shortwave stations, of which 70 are foreign. I get London, Berlin, Rome and Buenos Aires regularly with tremendous volume. London and Berlin are fully as loud as KDKA, our local station. Station 3ME in Melbourne, Australia is very well received near 0700 EST, and Hong Kong comes in on certain days. The Lisbon station CT1AA is also included among my catches.

---

Fibber McGee and Molly have moved from 8 to 8:30 pm Mondays into the spot vacated when Warden Lawes' 20,000 Years in Sing Sing left the air for the summer.

Statistics issued by the Canadian Broadcasting Corporation covering its program activities from November 2, when it assumed control of the national system, to March 1 reveal that the greatest amount of network broadcasting was devoted to musical programs, there having been 347 broadcasts of concert music and 113 broadcasts of vocal recitals. The total number of all musical programs, including symphonies, operas, and operettas, was 1,184. The statistics, which cover a four months' period, show that the CBC broadcast during that time 3356 programs and that the total number of broadcasting hours was 1,303.



*Doris Hare, versatile comedienne from London, has become a regular NBC attraction. Her brand of tomfoolery moves back and forth between cockney and Mayfair, with a smattering of Broadway. Hear her at 7:15 pm on Wednesdays on the Blue Chain.*

Vick's Open House with Nelson Eddy and Nadine Conner has signed off for the season, and the Twin Stars program with Victor Moore and Helen Broderick moved into the spot vacated by the Vicks program.

*Announcing the New*

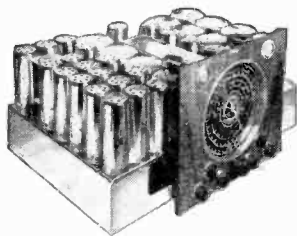


**YOUR CHOICE OF FIFTEEN EXQUISITE CABINETS**



# SCOTT *Philharmonic*

## 30 TUBES



**Clearer, MORE Powerful, FOREIGN Reception!**

You'll find hearing the 30-tube Scott Philharmonic a *stirring* new musical experience. Scott Research Laboratories have accomplished in this new receiver standards of performance considered impossible by many radio engineers and masters of music. Eight startling improvements (patents applied for) are built into this new instrument. Now, perfect reproduction of the entire tonal range of the human ear is a reality. *Every tone*, from the very lowest to the highest, is captured with an almost uncanny realism that seems to bring you into the very presence of the musical rendition. New developments give more power, greater sensitivity and sharper selectivity. Again, Scott leadership as the World's Supreme Long Distance Receiver is established. The Philharmonic is custom built by hand and is guaranteed for 5 years.

### A STUDY OF THE TECHNICAL DETAILS

A Comparison of Its Overall Fidelity, Selectivity, Sensitivity, Power Output, Torque Balance, 10,000 Cycle Attenuation, Loud Speaker Response, Noise Suppression, and Automatic Gain Control, as shown by proved Laboratory Curves (sent upon request) will prove conclusively that The Philharmonic:

1. Covers a Greater Wave Length Range. (3.75 to 2000 Meters.)
2. Has Finer Tone and Higher Overall Fidelity. (From 30 to 16,000 Cycles.)
3. Has a Smoother and More Highly Perfected Continuously Variable High Fidelity Range.
4. Has Sharper and More Complete Attenuation at 10,000 Cycles.
5. Has Purer and More Perfect Fundamental Bass Response which is Free from Cabinet Boom and Resonance.
6. Has More Perfect Tonal Balance at all degrees of Volume—giving the Same Perfect Reproduction of the Bass and Higher Frequencies at Low as well as High Volumes.
7. Has Greater Pure Class A Output with Less Harmonic Distortion.
8. Has Smoother Loud Speaker Frequency Response from 30 to 16,000 Cycles.
9. Has a Higher Degree of Selectivity, which is Continuously Variable from 2 to 16 Kc.
10. Has More Perfect Automatic Gain Control Systems on both R.F. and I.F. Amplifiers.
11. Has More Usable Sensitivity.
12. Will Give Smoother and More Noise-Free Reception of All Programs, Especially in Difficult Receiving Locations.
13. Has a More Highly Developed and Distortionless Program Volume Range Expansion System.
14. Will Give More Perfect Reproduction from Phonograph Recordings, Especially the Latest High Fidelity Records.
15. Will Eliminate Phonograph Needle Scratch at Low Volumes, Without Affecting Reproduction of Low, Mid, or High Frequencies in Any Way at Normal or High Volumes.
16. Is Custom Built with Greater Precision—And from Higher Quality Parts.
17. Has More Advanced Engineering Features Incorporated in Its Design.

**MORE, WE BELIEVE, THAN ANY OTHER RADIO RECEIVER IN THE WORLD TODAY.**

**GET ALL THE STARTLING DETAILS • MAIL THE COUPON NOW!**



**E. H. SCOTT RADIO LABORATORIES, INC.**

**4424 N. RAVENSWOOD AVE., DEPT. 15H7, CHICAGO, U. S. A.**

Please send details about the new Scott Philharmonic. (No dealers. Sold only direct from Scott Laboratories. 30-day free trial.)

Name.....

Address.....

## THE BROADCASTING STATIONS OF SOUTH AMERICA

Compiled from official sources and checked by our South American representative. Brazilian information from "Antenna" of Rio de Janeiro and Argentine data from Asociacion de Broadcasters Argentinos.

ARGENTINA									
		<b>Bauru</b>	1440	250	<b>San Salvador</b>			<b>CB144A</b>	1440 100
		<b>PRG8</b>			<b>PRA4</b>	1090	50	<b>CB144B</b>	1440 100
		<b>Belem</b>			<b>PRF6</b>	630	50	<b>CB144C</b>	1440 150
<b>Bahia Blanca</b>		<b>PRC5</b>	670	100	<b>PRF8</b>	580	500	<b>CB144D</b>	1440 100
<b>LU2</b>	900 2000	<b>Bello Horizonte</b>			<b>Santos</b>			<b>CB150</b>	1500 10000
<b>LU7</b>	1240 2000	<b>PRC7</b>	690	250	<b>PRB4</b>	1450	1000	<b>Talca</b>	
		<b>Buenos Aires</b>			<b>PRG5</b>	580	750	<b>CC143</b>	1430 100
<b>LRA</b>	750 10000	<b>PRH6</b>	1300	...	<b>Sao Paulo</b>			<b>Talcahuano</b>	
<b>LR1</b>	1070 50000	<b>PR13</b>	880	...	<b>PRA5</b>	1260	500	<b>CC84</b>	840 100
<b>LR2</b>	910 12000	<b>Blumenau</b>			<b>PRA6</b>	800	10000	<b>Temuco</b>	
<b>LR3</b>	950 31000	<b>PRC4</b>	1370	...	<b>PRB6</b>	1200	1000	<b>CC58</b>	580 500
<b>LR4</b>	990 16000	<b>Campinas</b>			<b>PRB9</b>	1000	10000	<b>CC137</b>	1370 100
<b>LR5</b>	830 29000	<b>PRC9</b>	1170	250	<b>PRD9</b>	1320	250	<b>Valdivia</b>	
<b>LR6</b>	870 26000	<b>Campos</b>			<b>PRE4</b>	1340	...	<b>CD132</b>	1320 100
<b>LR7</b>	750 15000	<b>PRF7</b>	1460	...	<b>PRE7</b>	1410	5000	<b>Valparaiso</b>	
<b>LR8</b>	1150 7000	<b>Cruzeiro</b>			<b>PRF3</b>	960	5000	<b>CB68</b>	680 1000
<b>LR9</b>	1030 5000	<b>PRG6</b>	1440	250	<b>PRG2</b>	1040	10000	<b>CB76</b>	760 10000
<b>LR10</b>	790 10250	<b>Curityba</b>			<b>PRG9</b>	1100	500	<b>CB84</b>	840 1000
<b>LS1</b>	710 5000	<b>PRB2</b>	1480	250	<b>PRH3</b>	1180	10000	<b>CB90</b>	900 1000
<b>LS2</b>	1190 30000	<b>Fortaleza</b>			<b>PRH4</b>	1320	...	<b>CB116</b>	1160 1000
<b>LS3</b>	630 5000	<b>PRE9</b>	1320	500	<b>PRH9</b>	840	...	<b>CB120</b>	1200 1000
<b>LS4</b>	670 7000	<b>Franca</b>			<b>PRD7</b>	690	250	<b>CB124</b>	1240 250
<b>LS5</b>	1110 5000	<b>PRB5</b>	1480	50	<b>Uberaba</b>			<b>CB132</b>	1320 1000
<b>LS6</b>	1350 6000	<b>Jaboticabal</b>			<b>PRE5</b>	1170	250	<b>CB139</b>	1390 1000
<b>LS7</b>	1310 10000	<b>PRG4</b>	1470	250	<b>CHILE</b>			<b>Vina del Mar</b>	
<b>LS8</b>	1230 15000	<b>Jahu</b>						<b>CB64</b>	640 1000
<b>LS9</b>	1270 6000	<b>PRG7</b>	590	250	<b>Antofagasta</b>			<b>CB111</b>	1110 1000
<b>LS10</b>	590 6000	<b>Joao Pessoa</b>			<b>CA127</b>	1270	100	<b>COLOMBIA</b>	
<b>Cordoba</b>		640	...		<b>Concepcion</b>			<b>Barranquilla</b>	
<b>LV2</b>	960 2000	<b>Juiz de Fora</b>			<b>CC64</b>	640	100	<b>HJ1ABA</b>	1330 100
<b>LV3</b>	620 2000	<b>PR13</b>	620	250	<b>CC117</b>	1170	100	<b>Bogota</b>	
<b>Corrientes</b>		<b>Marilla</b>			<b>CC141</b>	1410	100	<b>HJN</b>	681 500
<b>LT7</b>	1340 500	<b>PR12</b>	1370	...	<b>Curico</b>			<b>HJ3AD</b>	1100 50
<b>La Plata</b>		<b>Nittheroy</b>			<b>CC96</b>	960	100	<b>HJ3ABE</b>	1200 1000
<b>LR11</b>	1390 500	<b>PRD8</b>	1320	1000	<b>CD103</b>	1030	100	<b>HJ3ABH</b>	1005 2000
<b>LR11</b>	1440 700	<b>PRG6</b>	1170	...	<b>CD111</b>	1110	100	<b>HJ3ABK</b>	1320 50
<b>La Rioja</b>		<b>Pelotas</b>			<b>CD136</b>	1360	100	<b>HJ3ABX</b>	1050
<b>LV14</b>	1240 500	<b>Pernambuco</b>			<b>Osorno</b>			<b>Call</b>	
<b>Mar del Plata</b>		<b>PRB8</b>	730	3000	<b>CD112</b>	1120	100	<b>HJ5ABE</b>	1500
<b>LU6</b>	1300 500	<b>Petropolis</b>			<b>CD121</b>	1210	100	<b>Cartagena</b>	
<b>Mendoza</b>		<b>PRD3</b>	1480	250	<b>Quillota</b>			<b>HJ1ABM</b>	1154 50
<b>LV6</b>	690 500	<b>Pracicaba</b>			<b>Rancagua</b>			<b>Medellin</b>	
<b>LV10</b>	1210 500	<b>PRD6</b>	630	...	<b>CC109</b>	1090	100	<b>HJ4ABK</b>	1230 300
<b>Parana</b>		<b>Pocos de Caldas</b>			<b>CC145</b>	1450	100	<b>Santa Marta</b>	
<b>LT11</b>	1470 500	<b>PRH5</b>	1450	...	<b>San Antonio</b>			<b>HJ1ABJ</b>	1150
<b>Resistencia</b>		<b>Porto Alegre</b>			<b>CB140</b>	1400	100	<b>ECUADOR</b>	
<b>LT5</b>	1160 500	<b>PRC2</b>	680	3000	<b>San Felipe</b>			<b>Guyaquil</b>	
<b>Rosario</b>		<b>PRF9</b>	1440	500	<b>CB146</b>	1460	100	<b>HC2ET</b>	1153 300
<b>LT1</b>	780 5000	<b>PRH2</b>	600	25000	<b>Santiago</b>			<b>HC2JB</b>	1250 30
<b>LT3</b>	1080 4500	<b>Ribeirao Preto</b>			<b>CB57</b>	570	5000	<b>Quito</b>	
<b>LT8</b>	840 500	<b>PRA7</b>	670	50	<b>CB62</b>	620	1000	<b>HCJB</b>	974
<b>San Juan</b>		<b>Rio Claro</b>			<b>CB73</b>	730	1000	<b>PARAGUAY</b>	
<b>LV1</b>	730 1000	<b>PRE2</b>	1460	250	<b>CB78</b>	780	1000	<b>Asuncion</b>	
<b>LV5</b>	1120 500	<b>Rio de Janeiro</b>			<b>CB82</b>	820	1000	<b>ZP1</b>	1135 1000
<b>Santa Fe</b>		<b>PRA2</b>	780	1500	<b>CB88</b>	880	1000	<b>ZP3</b>	1000 300
<b>LT9</b>	1200 500	<b>PRA3</b>	860	2500	<b>CB89</b>	890	1000	<b>ZP4</b>	1275 150
<b>LT10</b>	1300 500	<b>PRB7</b>	900	500	<b>CB93</b>	930	2500	<b>ZP5</b>	1465 150
<b>Tucuman</b>		<b>PRC6</b>	1160	1000	<b>CB99</b>	990	1000	<b>ZP7</b>	1083 700
<b>LV7</b>	820 1000	<b>PRC8</b>	1360	1000	<b>CB87</b>	870	1000	<b>ZP9</b>	898 1500
<b>BOLIVIA</b>		<b>PRD2</b>	1240	1000	<b>CB97</b>	970	1000	<b>Villarica</b>	
<b>La Paz</b>		<b>PRD5</b>	1400	5000	<b>CB101</b>	1010	1000	<b>ZP15</b>	700
<b>CPX</b>	1300 5000	<b>PRE2</b>	1430	500	<b>CB106</b>	1060	5000		
<b>CP4</b>	1040 10000	<b>PRE8</b>	980	7000	<b>CB114</b>	1140	5000		
<b>BRAZIL</b>		<b>PRF4</b>	940	10000	<b>CB118</b>	1180	16000		
<b>Araraquara</b>		<b>PRG3</b>	1280	10000	<b>CB125</b>	1250	1000		
<b>PRD4</b>	1090 250	<b>PRH8</b>	1080	5000	<b>CB130</b>	1300	1000		
		<b>Rio Preto</b>			<b>CB134</b>	1340	1000		
		690	...		<b>CB138</b>	1380	5000		

## THE BROADCASTING STATIONS OF SOUTH AMERICA

PERU			Durazno			CX28 1090 3000			CW31 1160 250		
Arequipa			CW25 1040 500			CX30 1130 500			San Jose		
OAX6B 1405 60			Florida			CX32 1170 500			CW41 1360 50		
Lima			CW33 1200 75			CX34 1210 500					
OAX4A 850 10000			Lavelleja			CX36 1250 250			<b>VENEZUELA</b>		
OAX4B 1200 350			CW43 1400 100			CX38 1290 500			Barquisimeto		
OAX4C 1300 80			Mercedes			CX40 1330 500			YV3RA 1270 ....		
OAX4E 960 200			CW29 1120 500			CX42 1370 1000			Caracas		
OAX4F 1080 100			Montevideo			CX44 1410 200			YV5RA 960 5000		
OAX4H 1150 60			CX4 810 1000			CX46 1450 1500			YX5RB 1200 ....		
OAX4J 1100 250			CX6 650 10000			CX48 1490 1500			YV5RE 1100 ....		
OAX4L 1250 60			CX8 890 500			Paysandu			YV5RG 1010 ....		
OAX4O 1000 100			CX10 730 1000			CW35 1240 250			YV5RQ 880 ....		
URUGUAY			CX12 770 1000			CW39 1320 100			Maracalbo		
Canelones			CX14 810 5000			Rivera			YV1RF 1120 ....		
CW47 1480 100			CX16 850 10000			CW19A 1340 60			Maracay		
Colonia			CX18 890 1000			Rocha			YV4RA 1350 ....		
CW37 1400 25			CX20 930 2000			CW19 1340 50					
			CX22 970 250			Salto					
			CX24 1010 2500			CW23 820 250					
			CX26 1050 2000			CW27 680 250					

### Closing the Contest

*(Continued from Page 6)*

which broadcast regularly during the hours of the contest. Listeners could refer to our time-on-the-air lists and stay away from the broadcasters found to have a daily schedule during these hours. This might be the logical sequence to the policy established this year, where no stations in the Pacific Time Zone were scheduled during the first hour each morning.

The future of the Mystery DX Contest rests in the hands of our readers. If our first two attempts have been successful and if DXers believe that the contest should be an annual event, a repetition would be assured. If readers feel that it is too complicated and that it cannot be planned for the benefit of everyone, it would be well to drop preparations before they are commenced.

But regardless of what the outcome may be, it is necessary that readers let us know their opinions. If we are to undertake plans for another contest, we must have evidence that such is the wish of the majority—and the only way we can know this is to have a pile of letters before us.

So the verdict is up to you and you and you! What do you think?

### The New Television

*(Continued from Page 26)*

the bottom of the plate or screen in the same time. It must now return to the top position from which it starts anew to trace another series of parallel half-tone lines. Any such movement of the beam would show an undesirable light trace. But a synchronizing signal follows at the end of the frame every 1/24th of a second, and this negative bias, quickly applied to the control aperture and grid of the electron gun, extinguishes the beam during its return to the starting point and renders its path invisible.

Synchronization of the receiver is obtained through the two deflecting "saw tooth" frequencies that fade out at the end of each horizontal line and at the bottom of the frame. They are fed into the transmitter along with the picture signals from the Iconoscope, but do not interfere. They come at an instant when the picture is not being transmitted during the return of the beam to its starting point. Vertical synchronization operates the same way, as the impulses for that purpose come at the completion of the frame and while the beam is being returned to the top to begin a new frame. In this manner the repro-

duced picture is brought into step with the transmitter at the end of every horizontal line each 1/10,000th of a second, and at the end of every frame each 1/24th of a second!

(The next and concluding article of this series will discuss further the new electronic scanning, and give details and operation of television receivers.)

## Roster of DX Clubs

All-Wave All-World DX Club 214 George St., Sydney, NSW, Australia. Life membership, 3/6.

Canadian DX Relay, C. Hesterman, 2014 Lorne Ave., Saskatoon, Sask., Canada. \$1 per year; bulletin twice monthly.

Chicago Short Wave Radio Club, Harold Wright, President. C. J. Hughes, Secretary. \$1 per year for 26 bulletins. New members receive a valuable bulletin explaining shortwave reception. P. O. Box 240, Chicago, Ill.

Globe Circlers' DX Club, Raphael Geller, President, 1652 Radcliff Ave., Bronx, N. Y.

International DXers' Alliance, Charles P. Morrison, President, Bloomington, Ill. \$1.00 per year (\$1.25 in foreign countries). Monthly magazine.

International Short Wave Club, A. J. Green, President, E. Liverpool, Ohio. \$1.00 per year for monthly shortwave magazine.

KDKA DX Club. No dues; no bulletins. Broadcasts every Saturday morning 0000-0030 by Ed Lips, over KDKA and W8XK.

Liga Colombiana Radio DXers Alliance, c/o Aurelio Linero, Apartado 330, Bogota, Colombia.

National Radio Club, Robert M. Weaver, Pres., 603 W. Market St., York, Pa. \$1.25 per year. Bulletin issued weekly during season, monthly from May to Sept.

Newark News Radio Club, Irving H. Potts, Pres., 215 Market St., Newark, N. J. \$2.00 per year,

weekly bulletin.

New Zealand DX Club, Box 1680, Wellington, N. Z. Annual fee about 60 cents. Official organ, the "N. Z. Radio Times," subscription, 24 cents per copy.

New Zealand DX Radio Association, P. O. Box 437, Dunedin C1, New Zealand. Publishes "Tune In," a monthly magazine at \$1.56 per year. An entrance fee of 60 cents is required.

Phoenix Shortwave Listeners' Club, John Binder, Pres., 1025 N. 9th St., Phoenix, Ariz. \$1 per year for monthly bulletin.

Quixote Radio Club, Box 772, Santa Barbara, Calif. Active members receive the weekly bulletin "The Reporter" for 20 weeks for \$1, while inactive members receive 10 for \$1. Active members are required to submit one report weekly.

Radio Club de Cuba, Lealtad 136, Havana, Cuba.

Universal DX Club, Elbert Hoppenstedt, Pres., 345 Maple Ave., Oradell, N. J. "Universal News" semi-monthly.

Universal Radio DX Club, Charles C. Norton, Pres., 2018 Green St., San Francisco, Calif. \$1 per year, for weekly bulletin.

Ohio's first regional chain, known as the Buckeye Network, began operation on March 15. The stations are WHK and WJAY, Cleveland, WHKC Columbus and WKBN Youngstown.

\* \* \*

The Toronto studios of the CBC announce a new program series to commence Tuesday, March 30, at 8:00 p. m. EST. The program, "Shadows of the Evening," will be devoted to the world's best loved ballads and songs of tender sentiment. An orchestra under the direction of Percy Faith will be featured and Billie Bell, the well known radio contralto, will be regularly heard as vocalist.

# WHAT'S ON THE AIR TONIGHT

Fill in the calls and frequencies of the stations through which you best receive the network programs. You can then turn quickly to the one that has the feature you want.

Network	Stations
Canadian (CBC)	
Columbia (C)	
Mutual (M)	
National Red (R)	
National Blue (B)	

Time: ED Eastern Daylight; E Eastern; C Central; M Mountain.

For Pacific Time subtract one hour from Mountain.

Due to change to Daylight Saving Time on April 25, some of the stations will be unable to carry particular features.

## MONDAY

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

**C — Pretty Kitty Kelly**

KFAB KFII KLRA KMBC KMOX KOMA KRLL KRNT KSCJ KSL KTUL KWKH WABC WADC WBBM WBNS WCCO WDRC WEEI WFBM WGR WHEC WHIO WHK WIBX WISN WJR WJSV WKBN WMAS WMBG WOC WREC WSPD WVVVA

**B — Lowell Thomas**

CRCT KDKA WBAL WBZ WBZA WFLA WIOD WJAX WJZ WLW WMAL WOOD WRVA WSYR WTAM WXYZ

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

**C — Poetic Melodies; Jack Fulton**

WABC WADC WBT WCAO WCAU WDRC WEAN WEEL WFBL WGR WHEC WHK WJAS WJR WJSV WKRC WOKO WSPD WTOC WVVVA

**R — Amos 'n' Andy**

KYW WBEN WCAE WCSH WFAE WEEI WFBR WGY WJAR WLW WRC WTAG WTIC

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

**C — "Ma and Pa;" Sketch**

WABC WADC WBIG WBNS WBT WCAO WCAU WDBJ WDRC WEEI WFBL WGR WHEC WHK WHP WIBX WJAS WMAS WMBG WNBK WOKO WORC WPRO WSJS WVVVA

**B — Uncle Extra's Radio Station**

KPRC KTBS KTHS KV00 KYW WBAP WBEN WCAE WCKY WCSH WDAF WFAE WEEI WFBR WGY WIRE WJAR WKY WMAQ WOAI WOOD WOW WRC WTAG WTAM WTIC

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

**B — Lum and Abner**

WBZ WBZA WENR WJZ WLW WMC WSM WSYR

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

**C — Boake Carter**

KMBC KMOX KOMA KRLL WABC

WBBM WBT WCAU WCCO WDRC WEAN WFBL WGR WHAS WHK WJAS WJR WJSV WKRC WNAK

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

**C — Horace Heidt and Orchestra**

KDB KERN KFAB KFBK KFII KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KRLL KRNT KSL KTRII KTSNA KTUL KVI KWG WABC WBBM WBRW WBT WCAO WCAU WCCO WDRC WFBL WFBM WGR WGST WHAS WHK WJAS WJR WJSV WKRC WLAC WMBR WNAK WNAK WOKO WREC WWL

**R — Burns and Allen**

Station list not available.

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

**C — Pick and Pat**

KFAB KMBC WABC WADC WBBM WBT WCAO WCAU WDRC WEAN WFBL WGR WGST WHEC WHK WHP WICC WJAS WJR WJSV WKRC WLBS WMAS WNAK WOKO WORC WSPD

**R — Voice of Firestone**

CFCF CRCT KFYY KPRC KSD KSTP KTBS KV00 KYW WAVE WBEN WCAE WJSC WJSH WDAF WDAY WFAE WFCB WEEI WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOE WTAG WTAM WTAR WTIC WTMJ WWJ WYWC

**B — Frank Munn; Abe Lyman**

KDKA KOIL KSO KWK WBAL WBZ WBCA WCKY WEAN WEBR WFIL WGAR WHAM WICC WJZ WLX WMAL WMT WREN WSYR WXYZ

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

**C — Lux Radio Theatre**

CFRB CKAC KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLL KRNT KSL KTRII KTSNA KTUL KVI KWG

WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDRC WEAN WFBL WFBM WGST WHAS WHEC WHK WICO WISN WJAS WJR WJSV WKBW WKRC WLAC WNAK WNAK WOKO WORC WQAM WREC WWL

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

**R — Phil Spitalny's Girl Orchestra**

Station list not available

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

**R — Contented Program**

CFCF CRCT KDYL KPI KGW KHQ KOA KOMO KPO KFRC KSD KYW WBEI WCAE WCSH WDAF WFAE WEEI WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WTAG WTAM WTAR WTIC WWJ WYWC

**B — Richard Himber; Stuart Allen**

KDKA KECA KEX KFSD KGA KGO KJR KLO KOIL KSO KVOD KWK WBAL WBZ WBZA WCKY WEAN WEBR WENR WFIL WGAR WHAM WICC WJZ WMAL WMT WREN WSYR WTCN WXYZ

**C — Wayne King and Orchestra**

KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRNT KSL KVI KWG WAAB WABC WADC WBBM WBNS WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WHAS WHK WIBW WJAS WJR WJSV WKBW WKRC WOKO WSPD WWL

**ED-11:00 pm., E-10:00, C-9:00, M-8:00**

**C — Poetic Melodies; Jack Fulton**

KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMOX KOIN KOL KOMA KRLL KRNT KSL KTRII KTSNA KVI WBBM WBRW WCCO WFBM WGST WLAC WREC WWL

**R — Amos 'n' Andy**

KDYL KPI KGW KHQ KOA KOMO KPO KFRC KSD WBAP WDAF WHO WKY WLW WMC WOAI WOW WSB WSM WSMB WTAM WWJ

## TUESDAY

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

**B** — Lowell Thomas, See Monday  
**C** — Kitty Kelly, See Mon.

ED-10:30 p.m., E-6:00, C-5:00, M-4:00

**C** — Poetic Melodies, See Monday  
**R** — Amos 'n' Andy, See Monday  
**B** — Easy Aces  
 KDKA KDYL KFI KGW KHQ KOA  
 KOIL KOMO KPO KSO KWK WBAL  
 WBZ WBSA WCKY WENR WFIL  
 WGR WHAM WHIO WIRE WJZ  
 WMAL WMT WSYR WXYZ

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

**C** — "Ma and Pa," See Mon.

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

**B** — Lum and Abner, See Monday  
**C** — Alexander Woolcott  
 KFAB KFH KLRA KMOX KRLD  
 KTRH KTSa KWKH WABC WADC  
 WALA WBBM WBNS WBRC WBT  
 WCAO WCAU WCCO WDAE WDBO  
 WDRC WEEL WFBL WFBM WGR  
 WGBT WHIS WHEC WHIO WHK  
 WHM WISN WJAS WJR WJSV  
 WKRC WLAC WLBZ WMAS WMBG  
 WMBR WOKO WRB WPRO WQAM  
 WREC WTOC WWL WWVA

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

**C** — Boake Carter, See Monday

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

**C** — Hammerstein Music Hall  
 KFAB KMOX KRNT WABC WADC  
 WBBM WBNS WCAO WCAU WRB  
 WEAN WFBL WFBM WGR WHS  
 WHK WJAS WJR WJSV WKRC  
 WMAS WNAC WOKO WSPD

**R** — Johnny with Russ Morgan

KFYR KPRC KSD KSTP KTBS  
 KTHS KVOO KYW WAVE WBAP  
 WBEN WCAE WCHH WDAF WDAY  
 WEAF WEBC WFBR WFLA WGy  
 WHO WIBA WIOD WIS WJAR  
 WJAX WJDX WKY WLW WMAQ  
 WMC WNA@ WOW WPTF WRC  
 WRVA WSB WSM WSMB WSOC  
 WSNW WTAG WTMJ WTAR WTMJ  
 WTMJ WWJ WNNC

**B** — Husbands and Wives

KDKA KECA KEX KFSH KGA KGO  
 KJR KLO KOIL KSO KVOD KWK  
 WABY WBAL WBZ WBSA WCKY  
 WEAN WEBH WFIL WGAR WHAM  
 WICC WJZ WIS WMAL WMT  
 WREN WSYR WXYZ

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

**C** — Al Jolson; Parkyakarkas  
 CFRB KFAB KFH KLRA KMBC  
 KMOX KOMA KRLD KRNT KTRH  
 KTSa KTUL WABC WADC WBBM  
 WBNS WBRC WBT WCAO WCAU  
 WCCO WDAE WDBJ WDRC WEEL  
 WFBL WFBM WGR WGST WHAS  
 WHEC WHIO WHK WIBX WJAS  
 WJR WJSV WKRC WLAC WMAS

WMBD WMBG WNAX WOKO  
 WORC WPRO WQAM WREC WWL

**R** — Wayne King and Orchestra

KFYR KPRC KSD KSTP KTBS  
 KVOO KYW WAVE WBAP WBEN  
 WCAE WCKY WCHH WDAF WDAY  
 WEAF WEBC WEEL WFBR WGY  
 WHO WHIO WIBA WIRE WJAR  
 WJDX WJZ WMAQ WMC WOAI  
 WOW WRC WSB WSM WSMB  
 WTAG WTMJ WTMJ WTMJ WWJ

**B** — Edgar Guest, It Can Be Done

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

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

**C** — Al Pearce and Gang  
 CFRB CKAC KFAB KFH KGKO  
 KLRA KMBC KMOX KOMA KRLD  
 KRNT KSCJ KTRH KTSa KTUL  
 KWKH WABC WACO WADC WALA  
 WBBM WBIG WBNS WBRC WBT  
 WCAO WCAU WCCO WDAE WDBJ  
 WDBO WDNC WDOO WDRC WEAN  
 WFBL WFBM WFEA WGST WHAS  
 WHEC WHK WHP WIBW WIBX  
 WICC WISN WJAS WJR WJSV  
 WKBH WKBN WKBW WKRC  
 WLAC WLBZ WMAS WMBD WMBG  
 WMBR WMNN WNAC WNAX  
 WNBW WNOX WOC WOKO WORC  
 WOWO WPG WQAM WREC WWSL  
 WWSA WSJS WSPD WTOC WWL

**R** — Vox Pop; Sidewalk Interviews

KSD KYW WBEN WCAE WCKY  
 WCHH WDAF WEAF WEEL WFBR  
 WGY WHO WIRE WJAR WMAQ  
 WOW WRC WTAG WTMJ WTMJ  
 WWJ

**B** — Ben Bernie and Orchestra

KDKA KDYL KFI KFSH KFYR  
 KGW KHQ KOA KOIL KOMO KPO  
 KRC KSO KSTP KTAR KTBS  
 KVOO KWK WAVE WBAL WBAP  
 WBZ WBZA WDAY WEBC WFIL  
 WFLA WGAR WHAM WIBA WIOD  
 WIS WJAX WJDX WJZ WJY WLS  
 WLW WMAL WMC WMT WOAI  
 WPTF WREN WRVA WSB WSM  
 WSMB WSOC WSYR WTAR WTMJ  
 WNNC WXYZ

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

**C** — Jack Oakie's College  
 KFAB KFH KFYR KGKO KLRA  
 KLZ KMBC KMOX KNX KOIN KOL  
 KOMA KRLD KRNT KSCJ KSFQ  
 KSL KTRH KTSa KTUL KVI KVOR  
 KWKH WABC WACO WADC WALA  
 WBBM WBIG WBNS WBRC WBT  
 WCAO WCAU WCCO WDAE WDBJ  
 WDBO WDNC WDOO WDRC WEEL  
 WFBL WFBM WGST WHAS WHEC  
 WHIO WHK WHP WIBW WIBX  
 WISN WJAS WJR WJSV WKBN  
 WKBW WKRC WLAC WLBZ WMAS  
 WMBD WMBG WMBR WNAX  
 WNBW WNOX WOC WOKO WORC  
 WOWO WPG WPRO WQAM WREC  
 WBSL WWSA WSJS WTOC WWL

**R** — Fred Astaire; Johnny Green

CRCT KDYL KFI KFYR KGW  
 KHQ KOA KOMO KPO KPRC KSD  
 KSTP KTBS KTHS KVOO KYW

WAVE WBAP WBEN WCAE WCKY  
 WCHH WDAF WDAY WEAF WEBC  
 WEEL WFBR WFLA WGY WHO  
 WIBA WIOD WIRE WIS WJAR  
 WJAX WJDX WKY WMAQ WMC  
 WOAI WOW WPTF WRC WRVA  
 WSM WSMB WSOC WTAG WTMJ  
 WTMJ WTMJ WTMJ WWJ WNNC

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

**R** — Jimmy Fidler Hollywood Gossip  
 KDYL KFI KGW KHQ KOA KOMO  
 KPO KSD KTAR KYW WBEN  
 WCAE WCHH WDAF WEAF WFBR  
 WGY WHO WJAR WLW WMAQ  
 WNAC WOOD WOW WRC WTAG  
 WTMJ WTMJ WWJ

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

**C** — Poetic Melodies, See Monday  
**R** — Amos 'n' Andy, See Monday

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

**C** — Al Jolson; Parkyakarkus  
 KFYR KGMB KLZ KNX KOIN  
 KOL KSFQ KSL KVI

## WEDNESDAY

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

**C** — Kitty Kelly, See Monday  
**B** — Lowell Thomas, See Monday

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

**C** — Poetic Melodies, See Monday  
**R** — Amos 'n' Andy, See Monday  
**B** — Easy Aces, See Tuesday

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

**C** — "Ma and Pa," See Monday  
**R** — Uncle Ezra, See Monday

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

**B** — Lum and Abner, See Monday

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

**C** — Boake Carter, See Monday

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

**C** — Cavalcade of America  
 KDB KERN KFAB KFBC KFYR  
 KPRC KGB KHJ KLZ KMBC KMPJ  
 KMOX KOIN KOL KRLD KRNT  
 KSL KVI KWG WABC WBBM  
 WBNS WCAU WCCO WDRC WEAN  
 WFBL WFBM WGR WHAS WHEC  
 WHK WJAS WJR WJSV WKRC  
 WLAC WMBG WNAC WOKO WTOC  
 WWL

**R** — One Man's Family

KDYL KFI KFYR KGW KHQ KOA  
 KOMO KPO KPRC KSD KSTP  
 KTAR KTBS KTHS KVOO KYW  
 WAPI WAVE WBAP WBEN WCAE  
 WCHH WDAF WDAY WEAF WEBC  
 WEEL WFPA WFBR WFLA WGY  
 WHO WIBA WIOD WIS WJAR  
 WJAX WJDX WKY WLW WMAQ  
 WMC WOAI WOW WPTF WRC  
 WRVA WSB WSM WSMB WSOC  
 WSNW WTAG WTMJ WTAR WTMJ  
 WTMJ WWJ WNNC



Wednesday (Continued)

B — Broadway Merry-go-Round
KDKA KOIL KSO KWK WBAL WBZ
WBZA WCKY WEAN WEBR WFIL
WGAR WHAM WICC WJZ WLZ
WMAL WMT WREN WSYR WXYZ

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

C — Ken Murray; Tony Martin
CFR1 CKAC KFAB KFH KLRA
KMBC KMOX KOMA KRLD KRNT
KSCJ KTRH K TSA KTUL KWKH
WABC WADC WBBM WBNS WBRC
WBT WCAO WCAU WCCO WDAE
WDBJ WDBO WDRC WEEI WFEL
WFBM WGR WGST WHAS WHEC
WHIO WHK WHF WIBW WIBX
WIAS WJR WJW WJZ WLAC
WLBZ WMAS WMBD WMBG
WMBR WNAX WNOX WOKO WORC
WOWO WPG WQAM WREC
WVL

R — Wayne King, See Tuesday

B — Ethel Barrymore, Drama
KDKA KOIL KSO KWK WBAL WBZ
WBZA WCKY WEAN WEBR WFIL
WGAR WHAM WICC WJZ WLZ
WMAL WMT WREN WSAI
WSYR WXYZ

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

C — Kostelanetz; Lily Pons
KDB KERN KFAB KFBB KFH
KFPY KPRC KGB KGKO KGMB
KHJ KLRA KLZ KMBC KMJ KMOX
KOH KOIN KOL KOMA KRLD
KRNT KSCJ KSL KTRH K TSA
KTUL KVI KVOR KWG KWKH
WABC WACO WADC WALA WBBM
WBIG WBNS WBRC WBT WCAO
WCAU WCCO WCOA WDAE WDBQ
WDBO WDNC WDOB WDRS WEAN
WELB WFEL WFA WGST WHAS
WHEC WHK WHF WIBW WIBX
WICG WISN WJAS WJR WJSV
WKBH WKBW WKRC WLAC WLZB
WMAS WMBD WMBG WMBR
WNAC WNAX WNBW WNOX WOKO
WOKO WORC WOWO WPG WQAM
WREC WSFA WSJS WSPD WTOC
WVL

R — Town Hall Tonight
KFYR KPRC KSD KSTP KTBS
KTBS KV00 KYW WAVE WBEN
WCAE WCSH WDAF WDAY WFAE
WIBC WEEI WFAA WFBR WFLA
WGY WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLW WMAQ
WMC WOAI WOW WPTF WRC WSB
WSM WSMB WSOB WTAG WTAM
WTAR WTIC WTMJ WJZ WNCN

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

C — Jessica Dragonette
KDB KERN KFAB KFBB KFH
KFPY KPRC KGB KGMB KHJ
KLRA KLZ KMBC KMJ KMOX
KOLN KOL KOMA KRLD KRNT
KSL KTRH K TSA KTUL KVI KWG
KWKH WABC WBBM WBNS WBRC
WBT WCAO WCAU WCCO WDAE
WDBJ WDBO WDRS WEAN WFEL
WFBM WGST WHAS WHEC WHK
WICC WISN WJAS WJR WJSV
WKBH WKRC WLAC WLZB WMBG
WMBR WNAC WOKO WORC WOWO
WQAM WREC WTOC WVL

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

C — Crime Crusade; Phil Lord
KDB KERN KFAB KFBB KFH
KFPY KPRC KGB KHJ KLRA KLZ
KMBC KMJ KMOX KOIN KOL
KOMI KRLD KRNT KSL KTRH
KTSA KTUL KVI KWG KWKH
WABC WACO WBBM WBNS WBRC
WBT WCAO WCAU WCCO WDAE
WDBJ WDBO WDRS WEAN WFEL
WFBM WGST WHAS WHEC WHK
WICC WISN WJAS WJR WJSV
WKBW WKRC WLAC WLZB WMBG
WMBR WNAC WOKO WORC WOWO
WQAM WREC WTOC WVL

R — Your Hit Parade

KDYL KEX KFI KFYR KGHJ
KGIR KGU KGW KHQ KOA KOMO
KPO KPRC KSD KSTP K TAR KTBS
KTBS KV00 KYW WAVE WCAE
WCSC WCSH WDAF WDAY WFAE
WIBC WFAA WFBR WFLA WGY
WHO WIBA WIOD WIS WJAR
WJAX WJDX WKY WLW WMAQ
WMC WNAC WOAI WOW WPTF
WRC WRVA WSB WSM WSMB
WSOC WSUN WSYR WTAG WTAM
WTAR WTIC WTMJ WJZ WNCN

B — Vic and Sade

KDKA KOIL KSO KWK WBAL
WBZ WBZA WCKY WEAN WEBR
WENR WFIL WGAR WHAM WICC
WJZ WMAL WMT WREN WSYR
WTCN WXYZ

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

C — Babe Ruth; Baseball Talks
Station list not available.

R — Gladys Swarthout

KDYL KFI KGW KHQ KOA KOMO
KPO KPRC KSD KSTP K TAR
KTBS KV00 KYW WAPI WAVE
WBEN WCAE WCSH WDAF WFAE
WFAA WFBR WFLA WGY WHO
WIBA WIOD WIRE WIS WJAR
WJAX WJDX WKY WMAQ WMC
WNAC WOAI WOW WPTF WRC
WRVA WSB WSM WSMB WSOB
WTAG WTAM WTAR WTIC WTMJ
WJZ WNCN

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

C — Poetic Melodies, See Monday
R — Amos 'n' Andy, See Monday

THURSDAY

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

C — Kitty Kelly, See Monday
B — Lowell Thomas, See Monday

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

C — Poetic Melodies, See Monday
R — Amos 'n' Andy, See Monday
B — Easy Aces, See Tuesday

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

C — "Ma and Pa," See Monday

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

C — Alexander Woollcott, See Tuesday
B — Lum and Abner, See Monday

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

C — Boake Carter, See Monday

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

C — A & P Bandwagon
KFAB KMBC KMOX KRLD KRNT
KTRH WABC WADC WBBM WBIG
WBNS WBRC WBT WCAO WCAU
WCCO WDAE WDBJ WDRS WEEI
WFEL WFBM WGR WGST WHAS
WHEC WHK WHF WIBX WJAS
WJR WJSV WKBW WKRC WLZB
WMAS WMBG WMBR WOC WOKO
WORC WPRO WQAM WTOC WVL
WVVA

R — Rudy Vallee's Variety Hour

CFR2 CRCT KDYL KFI KFYR
KGIR KHQ KOA KOMO KPO KSD
KSTP K TAR KYW WBEN WCAE
WCSH WDAF WDAY WFAE WIBC
WEEI WFBM WGY WHO WJAR
WLW WMAQ WOW WRC WTAM
WTIC WTMJ WJZ

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

M — Guy Lombardo Orchestra
CKLW KDB KDON KFLB KFRC
KFXM KGB KGDM KHJ KPMC
KSO KV06 KWK KNOBAYWIAL
WFIL WGAR WKBW WMT WOL
WOR WSAI WSYR WWSW
Also on Canadian Network

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

C — Major Bowes' Amateurs
CFR2 CKAC KDB KERN KFAB
KFBB KFH KFPY KPRC KGB
KGKO KLRA KLZ KMBC KMJ
KMOX KOIN KOL KOMA KRLD
KRNT KSCJ KSL KTRH K TSA
KTUL KVI KVOR KWG KWKH
WABC WACO WADC WALA WBBM
WBIG WBNS WBRC WBT WCAO
WCAU WCCO WCOA WDAE WDBJ
WDBO WDNC WDOB WDRS WEAN
WFEL WFBM WFEA WGST WHAS
WHEC WHK WHF WIBW WIBX
WICC WISN WJAS WJR WJSV
WKBW WKBW WKRC WLAC WLZB
WMAS WMBD WMBG WMBR
WMMN WNAC WNAX WOC WOKO
WORC WOWO WPG WQAM WREC
WSFA WSJS WSPD WTOC WVL

R — Maxwell House Show Boat

KDYL KFI KPSD KFYR KGHJ
KGIR KWK KHQ KOA KOMO KPO
KPRC KSD KSTP K TAR KTBS
KYW WAPI WAVE WBAE WBEN
WCAE WCSH WDAF WDAY WFAE
WIBC WEEI WFBR WFLA WGY
WHO WIBA WIOD WIRE WIS WJAR
WJAX WJDX WKY WMAQ WMC
WOAI WOW WPTF WRC WRVA
WSAI WSB WSM WSMB WSOB
WTAG WTAM WTAR WTIC WTMJ
WJZ WNCN

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

C — Your True Adventures
KFAB KFH KFPY KLRA KLZ
KMBC KMOX KNX KOIN KOL
KOMI KRLD KRNT KSPD KSL
KTRH K TSA KTUL KVI KWKH
WABC WBBM WBNS WBRC WBT
WCAO WCAU WCCO WDAE WDBJ
WDBO WDRS WEEI WFEL WFBM
WGST WHAS WHEC WHIO WHK

# THURSDAY (Continued)

WISN WJAS WJIR WJSV WKBW WKRC WLAC WLWB WMBG WMBR WOKO WORC WPRO WQAM WRC WTCO WWL

**R — Bing Crosby; Bob Burns**  
CFBC CRCT KDYL KFI KFJR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KTHS KV00 KYW WAVE WBAP WBBN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFRB WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOCT WTAG WTAM WTAR WTCO WTMJ WWJ WWNC

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**C — March of Time**  
KFAB KFPY KLZ KMBC KMOX KNX KOIN KOL KOMA KRNT KSFO KSL KVI WABC WBBM WBNS WCAO WCAU WCCO WDRB WDEI WFBL WFBM WGST WHAS WHEC WHK WJAS WJIR WJSV WKBW WKRC WOKO WPRO WWL

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

# FRIDAY

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

**ED-7:00 p.m., E-6:00, C-5:00, M-4:00**  
**C — Mortimer Gooch, Sketch**  
WABC WADC WBT WCAO WCAU WDRB WEAN WEEI WFBL WGR WHEC WHK WJAS WJR WJSV WKRC WOKO WSPD WTCO WWVA

**R — Amos 'n' Andy, See Monday**

**ED-7:15 p.m., E-6:15, C-5:15, M-4:15**  
**C — "Ma and Pa," See Monday**  
**R — Uncle Ezra, See Monday**

**B — Stainless Show; Mario Cozzi**  
KDKA KECA KEX KFSD KGA KGO KJR KLO KOIL KSO KVOD KWK WBAL WBZ WBZA WEBR WENR WFIL WGAR WHAM WJZ WMAL WMT WSAI WSyr WXYZ

**ED-7:30 p.m., E-6:30, C-5:30, M-4:30**  
**B — Lum and Abner, See Monday**

**ED-7:15 p.m., E-6:15, C-5:15, M-4:15**  
**C — Boake Carter, See Monday**

**ED-8:00 p.m., E-7:00, C-6:00, M-5:00**  
**C — Broadway Varieties**  
KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRNT KSL KVI KWG WABC WBBM

WBNS WBRC WBT WCAO WCAU WCCO WDRB WEAN WFBL WFBM WGR WGST WHAS WHK WJAS WJR WJSV WKRC WMAS WMBG WNAO WOKO WWL

**R — Cities Service Concert**  
CRCT CFYR KOA KPRC KSD KSTP KTBS KTHS KV00 KYW WBAP WBBN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFRB WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOCT WTAG WTAM WTCO WTMJ WWJ

**B — Irene Rich; Drama**  
KDKA KDYL KFI KGW KHQ KOIL KOMO KPO KSO KTAR KWK WAVE WBAL WBZ WBZA WCKY WFIL WGAR WHAM WIRE WJZ WLS WMAL WMC WMT WREN WSB WSM WSyr WXYZ

**ED-8:15 p.m., E-7:15, C-6:15, M-5:15**  
**B — Singin' Sam**  
KDKA KOIL KSO KWK WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WMAL WMT WREN WSyr WXYZ

**ED-8:30 p.m., E-7:30, C-6:30, M-5:30**  
**C — Hal Kemp; Kay Thompson**  
KFAB KFH KGKO KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRH K TSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOO WDRB WEEI WFIL WFBM WFEA WGR WGST WHAS WHEC WHHO WHK WHF WIBW WIBX WISN WJAS WJR WJSV WKBN WKRC WLAC WLWB WMAS WMBD WMBG WMBR WMNN WNAX WNBW WNOX WOC WOKO WORC WOWO WPG WPRO WQAM WREC WSFA WSJS WSPD WTCO WWL

**B — Death Valley Days**  
KDKA KDYL KFI KGW KHQ KOIL KOMO KPO KSO KWK WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WLW WMAL WMT WREN WSyr WXYZ

**ED-9:00 p.m., E-8:00, C-7:00, M-6:00**  
**C — Hollywood Hotel**  
CFRB CKAC KDB KERN KFAB KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH K TSA KTUL KVI KVOR KWG KWKH WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRB WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHF WIBW WIBX WICC WJAS WJR WJSV WKBW WKRC WLAC WLWB WMAS WMBD WMBG WMBR WNNC WNAX WNOX WOKO WORC WPG WQAM WREC WSPD WWL

**R — Frank Munn; Bernice Claire**  
KSD KYW WBN WCAE WCSH WDAF WEAF WEEI WFRB WGY WJAR WLW WMAQ WOW WRC WTAG WTAM WWJ

**ED-9:30 p.m., E-8:30, C-7:30, M-6:30**  
**R — True Story Court**  
KSD KYW WBN WCAE WCSH WEAF WEEI WFRB WGY WHO WHO WJAR WMAQ WOW WRC WTAG WTAM WTCO WWJ

**B — Coronet; Deems Taylor**  
Station list not available.

**ED-10:00 p.m., E-9:00, C-8:00, M-7:00**  
**R — First Nighter; Drama**  
KDYL KFI KFJR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTBS KTHS KYW WAVE WBBN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFEA WFRB WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WPTF WRC WRVA WSB WSM WSMB WSOCT WTAG WTAM WTAR WTCO WTMJ WWJ WWNC

**B — Jack Pearl; Morton Bowe**  
KDKA KECA KFSD KGA KGO KJR KLO KOIL KSO KWK WABY WBAL WBZ WBZA WCKY WCOL WEAN WEBR WENR WFIL WFLA WGAR WHAM WICC WIOD WIS WJAX WJZ WMAL WMT WOOD WPTF WREN WRVA WSOCT WSUN WSyr WTAR WWNC WXYZ

**ED-10:30 p.m., E-9:30, C-8:30, M-7:30**  
**C — Babe Ruth, See Wednesday**

**R — Pontiac Varsity Show**  
KARK KDYL KFBK KFI KFJR KGBX KGHJ KGIR KGNC KGW KHQ KMJ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KTHS KV00 KWG KYW WAPI WAVE WBN WCAE WCOC WOSC WCSH WDAF WEAF WEBC WFEA WEBC WFRB WFLA WGL WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WNAO WOAI WOOD WOW WPTF WRVA WSB WSM WSMB WSOCT WSUN WTAG WTAM WTAR WTCO WTMJ WWJ WWNC

**ED-11:00 p.m., E-10:00, C-9:00, M-8:00**  
**C — Mortimer Gooch, Sketch**  
KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH K TSA KVI WBBM WBRB WCCO WFBM WGST WLAC WREC WWL

**R — Amos 'n' Andy, See Monday**

**ED-11:30 p.m., E-10:30, C-9:30, M-8:30**  
**C — Hal Kemp; Kay Thompson**  
KFBB KFH KGMB KGVO KLZ KNX KOH KOIN KOL KSFO KSL KVI KVOR

# SATURDAY

**ED-7:00 p.m., E-6:00, C-5:00, M-4:00**  
**C — Saturday Swing Club**  
KFBB KFH KFPY KGKO KGVO KLZ KNOV KOH KOL KOMA KRLD KSCJ KSFO KSL KTRH K TSA KVI KVOR KWKH WABC WACO WADC

**SATURDAY (Continued)**

WBIG WBNS WBT WCAO WCAU  
 WCCO WDAE WDBO WDRG WEEI  
 WFBL WGR WHEC WHK WHP  
 WIWV WIBX WISN WJAS WLWB  
 WMAS WMBD WMBG WNBX WOC  
 WOKO WORC WPRO WSJS WVVV

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

**C - Carborundum Band**

KFAB KMBC KNOX WABC WBBM  
 WBT WCAO WCCO WEAN WEEI  
 WFBL WGR WHAS WHK WJAS  
 WJR WKRC

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

**C - Professor Quiz**

KFAB KFBB KFH KFPY KLRA  
 KLZ KMBC KMOX KNN KOIN KOL  
 KOMA KRLL KRNT KSFO KSL  
 KTRH KTSB KVI KWKH WABC  
 WBBM WBNS WBRG WBT WCAO  
 WCAU WCCO WDAE WDBO WDRG  
 WEEI WFBL WFBM WGST WHAS  
 WHEC WHK WISN WJAS WJR  
 WJSV WKRC WLAC WLHJ WMBG  
 WMBR WNOX WOKO WORC WPRO  
 WQAM WREC WWL WVVV

**R - Saturday Night Party**

KSD KYW WAPI WAVE WBBN  
 WCAE WCSG WCSH WDAF WFAF  
 WFBR WFLA WGY WHIO WIOD  
 WISN WJAR WJAX WJDX WMAQ  
 WMC WNAC WOW WPTF WRC  
 WSB WTAM WSOB WSUN WTG  
 WTAR WTCR WTVR WVVV

**B - Ed Wynn; Don Voorhees**

KDKA KFJR KOIL KPBC KSO  
 KSTP KTBS KWK WABY WBAL  
 WBAP WBZ WBZA WCKY WDAY  
 WEBC WEHR WFIL WGAJ WHAM  
 WIHA WIRE WJZ WKY WLS WMAL  
 WMT WOAI WREN WSYR WTMJ  
 WXYZ

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

**C - Phil Ducey; Russ Morgan**

KFAB KFH KMBC KMOX KRNT  
 WABC WADC WBBM WBIG WBNS  
 WBT WCAO WCAU WCCO WCOA  
 WDRG WEEI WFBL WFBM WGR  
 WGST WHAS WHEC WHIO WHK  
 WHP WISN WJAS WJR WJSV  
 WKRC WMBD WMBG WNBX WOC  
 WOKO WPRO WSBT WVVV

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

**C - Floyd Gibbons; Vincent Lopez**

KDB KERN KFAB KFBB KFPY  
 KPBC KGB KHJ KLRA KLZ KMBC  
 KMIJ KMOX KOIN KOL KOMA  
 KRLL KRNT KSL KTRH KTSB  
 KVI KWG WABC WBBM WBNS  
 WDBO WDRG WDAE WDBJ  
 WDBO WDRG WEAN WFBL WFBM  
 WJAS WJR WJSV WKRC WMBD  
 WMBR WOKO WQAM WREC WSPD  
 WWL

**R - Snow Village Sketches**

KSD KYW WBBN WCAE WCSH  
 WDAF WFAF WFBR WGY WJAR  
 WMAQ WNAC WOW WRC WTG  
 WTAM WTCR WVVV

**B - National Barn Dance**

KDKA KOIL KPBC KSO KTBS  
 KTBS KWK WABY WAPI WAVE  
 WBAL WBAP WBZ WBZA WFIL  
 WFLA WGAR WHAM WIOD WIRE  
 WIS WJAX WJDX WJZ WKY WLS  
 WMAL WMC WMT WOAI WOOD  
 WPTF WREN WRVA WSB WSNB  
 WSOB WSUN WSYR WTAR WVMC  
 WXYZ

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

**C - Mary Eastman; Gus Haenschel**

KDB KERN KFAB KFBB KFH  
 KFPY KPBC KGB KGKO KHJ  
 KLRA KLZ KMBC KMIJ KMOX  
 KOIN KOL KOMA KRLL KTRH  
 KTSB KTRH KVI KWG KWKH  
 WALA WBBM WBIG WBNS WBRG  
 WBT WCAO WCOA WDAE WDBO  
 WDDO WEAN WFBL WFBM WGST  
 WHAS WHEC WHK WJAS WJR  
 WJSV WKRC WLAC WMBD WMBR  
 WNOX WOC WQAM WREC WSPA  
 WSPD WTCR WWL WVVV

**R - Shell Chateau**

KDYL KFI KFSD KFJR KGH  
 KGIR KGW KHQ KOA KOMO KPO  
 KSD KSTP KTAR KYW WBBN  
 WCAE WCSH WDAF WDAY WFAF  
 WEBC WEEI WFBR WGY WIBA  
 WJAR WLW WMAQ WOW WRC  
 WTG WTAM WTCR WTMJ WVVV

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

**C - Your Hit Parade**

KERN KFAB KFBB KFH KFPY  
 KPBC KGB KGKO KGMB KHJ  
 KLRA KLZ KMBC KMIJ KMOX  
 KOH KOIN KOL KOMA KRLL  
 KRNT KSCJ KSL KTRH KTSB  
 KTRH KVI KWOR KWG KWKH  
 WABC WABC WADC WALA WBBM  
 WBIG WBNS WBRG WBT WCAO  
 WCAU WCCO WCOA WDAE WDBJ  
 WDBO WDRG WDDO WDRG WEAN  
 WFBL WFBM WFGA WGST WHAS  
 WHEC WHK WHP WIBV WIBX  
 WICC WISN WJAS WJR WJSV  
 WKRC WKRC WLAC WLHJ WMBD  
 WMBD WMBG WMBR WNAC  
 WNAX WNOX WOC WOKO WORC  
 WPG WQAM WREC WSBT WSPA  
 WSJS WSPD WTCR WWL WVVV

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

**R - Irvin S. Cobb**

KDYL KFI KFJR KGH  
 KGIR KGW KHQ KOA KOMO KPO  
 KSD KSTP KTAR KTBS KTHS  
 KYOO KYW WAVE WBAP WBBN  
 WCAE WCSH WDAF WDAY WFAF  
 WEBC WFBR WFLA WGY WIBA  
 WIOD WIS WJAR WJAX WJDX  
 WKY WMAQ WMC WNAC WOOD  
 WOW WPTF WRC WRVA WSB  
 WSBM WSOB WSUN WTG WTAM  
 WTAR WTCR WTMJ WVVV

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

**CBC - The Northern Messenger**

CFAC CFCH CFCC CFJC CFPL  
 CFQC CHWK CJAT CJCA CJCX  
 CJKL CJOC CJRM CJRO CJRX  
 CKBI CKCK CKGB CKOC CKOV  
 CKPR CKCO CKTB CKX CKY

CRCK CHGM CRGO CRCS CRCT  
 CRCV CROW CROX

**B - National Barn Dance**

KDYL KFI KFSD KFJR KGH  
 KGIR KGW KHQ KOA KOMO  
 KPO KSTP KTAR WDAY WEBC  
 WIBA WLW WTMJ

**SUNDAY**

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

**C - Major Bowes' "Family"**

CFRB KERN KFAB KFBB KFBK  
 KFH KFPY KPBC KGB KGVO  
 KMBC KOH KOL KRLL KSL KTRH  
 KTSB KVI KWOR KWG KWKH  
 WABC WACO WADC WALA WBNS  
 WBRG WCAO WCCO WDAE WDBJ  
 WDBO WDRG WESG WFBL WFGA  
 WHAS WHK WIBX WJAS WJR  
 WKRC WLHJ WMBD WMBR  
 WMMN WOC WOKO WORC WPG  
 WQAM WSBT WSJS WSPD WTCR

**B - Morton Bowe, Tenor**

KOIL KPBC KSO KSTP KWK WAPI  
 WAVE WBAL WRZ WBZA WFIL  
 WIBA WJDX WJZ WLW WMAL  
 WMAQ WMC WMT WREN WSW  
 WSM WSBM WXYZ

**ED-Noon, E-11:00 a.m., C-10:00, M-9:00**

**R - Paramount on Parade**

Station list not available

**ED-12:30 p.m., E-11:30 a.m., C-10:30, M-9:30**

**C - Salt Lake Tabernacle Choir**

CFRB KFAB KFBB KFBK KFH  
 KFPY KPBC KGB KLZ KOH KOL  
 KRLL KSL KTRH KTSB KVI KWOR  
 KWG WABC WACO WADC WALA  
 WBIG WBNS WBRG WCAO WCCO  
 WDAE WDBJ WDBO WESG WFBL  
 WFGA WGR WHAS WCC WJAS  
 WJR WKRC WLHJ WMBR WMMN  
 WOC WOKO WORC WQAM WSBT  
 WSJS WSPD WTCR

**B - Radio City Music Hall**

CFCH CRCT KDKA KDYL KFI  
 KFJR KGO KGW KHQ KOIL KOMO  
 KPBC KSO KVVO WAPI WBAL  
 WBZ WBZA WCKY WDAY WEBC  
 WGAR WHAM WIS WJDX WJZ  
 WKY WMAL WOAI WREN WSMB  
 WSYR WVVV

**ED-1:00 p.m., E-Noon, C-11:00 a.m., M-10:00**

**C - Church of the Air**

KFBK KFH KFPY KPBC KGB  
 KHJ KMOX KOH KOL KOMA KRLL  
 KRNT KSCJ KSL KTRH KTSB KVI  
 KWOR KWG WABC WALA WBNS  
 WBT WCAO WCCO WDAE WDBJ  
 WDBO WDRG WESG WFBL WFBM  
 WGR WHAS WHP WIBX WJAS  
 WJSV WKBN WKRC WLAC WLHJ  
 WMBR WNBX WOC WOKO WORC  
 WPG WQAM WREC WSBT WSJS  
 WSPD WTCR WVVV

# SUNDAY (Continued)

ED-2:00 p.m., E-1:00, C-Noon, M-11:30 a.m.

## B — Magic Key of RCA

CFCC CRCT KDKA KDYL KFI KFYR KGU KGW KHQ KOA KOIL KOMO KPO KPRC KSO KSTP KTBS KTHS KVOO KWK WAPI WAVE WBAL WBZ WBZA WCKY WDAY WEBC WENR WFPA WFIL WFLA WGAR WHAM WHIO WIBA WIOD WIRE WIS WJAX WJDX WJZ WKY WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WSYR WTAR WTMJ WWNC WXYZ

ED-2:45 p.m., E-1:45, C-12:45, M-11:45 a.m.

## C — Cook's Travelogue

CKAC WABC WBBM WBRC WBT WCAO WCAU WEEI WGST WJAS WJSV WLAC WREC WWL

ED-3:00 p.m., E-2:00, C-1:00, M-Noon

## C — New York Philharmonic

CFRB CKAC KERN KFAB KFBB KFBZ KFH KFPY KFCR KGB KGVO KLRA KLZ KMBC KNOW KOH KOL KRLD KSL KTRH K TSA KVI KVOR KWKH WABC WACO WADC WALA WBIG WBNS WBRC WCAO WCOO WDAE WDBJ WDIO WDNC WDOB WDRC WEAN WEEI WESG WFBL WFPM WFEA WHAS WHEC WHO WHK WIBX WICC WJAS WJR WKBW WKRC WLBB WMBD WMBG WMBR WMMN WOC WOKO WORC WQAM WWSB WSJS WSPD WTOC

## Also on Canadian Network

## M — Fr. Charles E. Coughlin

KOIL WAAB WBRV WCAU WJGX WEAN WFEA WHB WICC WJYR WKBW WLBB WLLH WLNH WMCA WNBH WRDO WSAR WSPR WTHH

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

## R — Grand Hotel; Drama

KDYL KFI KFYR KGW KHQ KOA KOMO KPO KSD KSTP KYW WBN WEAE WCSH WDAF WDAY WFAE WFCR WFBZ WGY WIO WIBA WJAR WMAQ WNAC WOV WRC WSAI WTAG WTAM WTMJ WWJ

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

## R — Musical Camera; Willie Morris

DYL KFI KGW KHQ KOA KOMO KPO KYW WBN WEAE WCSH WFAE WGY WJAR WLW WMAQ WOV WRC WSB WSMB WTAM WTMJ WWJ

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

## C — Your Unseen Friend; Drama

KFAB KLZ KMOX KSL KWKH WABC WADC WBBM WBNS WCAO WCAU WCOA WDAE WDBJ WDOB WDRC WEAN WEEI WESG WFBL WHAS WHEC WHK WHB WIPX WJAS WJR WKBW WKRC WLAC WLBB WMAS WMBG WMMN

WNX WOKO WORC WOV WQAM WREC WSMK WSPD WWL WWVA

## R — Marion Talley, Soprano

KDYL KFI KFYR KGW KHQ KOA KOMO KPO KSTP KYW WBN WEAE WCKY WCSH WDAF WDAY WFAE WEBC WBA WGY WIBA WIRE WJAR WMAQ WNAC WOV WRC WTAG WTAM WTMJ WTMJ WWJ

## B — We, The People; Phil Lord

KDKA KECA KEX KFSD KGA KGHL KGIR KGO KJR KLO KOIL KPRC KSO KTBS KTHS KVOO KWK WABY WAPI WAVE WBAL WBAP WBZ WBZA WEBR WENR WFIL WFLA WGAR WHAM WIOD WIS WJAX WJDX WJZ WKY WLW WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WSUN WSYR WTAR WWNC WXYZ

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

## C — Guy Lombardo and Orchestra

KFH KMBC KMOX KOMA KTUL WAAB WABC WBNS WCAO WCAU WDRC WEAN WFBL WFPM WGR WHAS WHEC WHK WIBX WICC WJR WJSV WMAZ WOKO WORC WSPD WWVA

## R — Smiling Ed McConnell

KDYL KFI KFYR KGIR KGW KHQ KOMO KPO KSTP KYW WBN WEAE WCSH WDAF WDAY WFAE WEBC WFBZ WGY WIO WIBA WJAR WLW WMAK WNAC WOV WRC WTAG WTAM WTMJ WTMJ WWJ

## B — Stoopnagle and Budd

KDKA KECA KEX KFSD KGA KGO KJR KLO KOIL KSO KWK WBAL WBZ WBZA WCKY WENR WFIL WGAR WHAM WHIO WIRE WJZ WMAL WMT WREN WSYR WXYZ

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

## C — Joe Penner; Jimmy Grier

KFAB KFPY KLZ KMBC KMOX KNX KOIN KOL KOMA KRLD KRNT KSPD KSL KTRH K TSA KVI WABC WBBM WBNS WBRC WBT WCAO WCAU WCOO WDAE WDRC WEEI WFBL WFPM WGST WHAS WHEC WHK WJAS WJR WJSV WKBW WKRC WMBG WMBR WOKO WORC WPRO WQAM WREC WWL

## M — Ray Knight; Arnold Johnson

CKLW KHJ KWK WAAB WBAL WFIL WGAR WGN WLW WOR

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

## C — Rubinoff and His Violin

KDB KERN KFAB KFBB KFBK KFH KFPY KFCR KGB KOGO KHJ KLRA KLZ KMJ KMOX KOH KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH K TSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU

WCOO WCOA WDAE WDBJ WDBO WDNC WDOB WDRC WEEI WFBL WFPM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WISN WJAS WJR WJSV WKBN WKBW WKRC WLAC WLBB WMAS WMBD WMBG WMBR WNAX WNOX WOC WOKO WORC WPG WQAM WREC WSBT WSPA WSJS WSMK WSPD WTOC WWL WWVA

## R — A Tale of Tojay

WBN WFAE WGY WJAR WMAQ WOV WRC WTAM

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

## C — Columbia Workshop

KFAB KFBB KFH KFPY KGKO KGVO KNOW KOH KOIN KOL KOMA KRLD KRNT KSCJ KSPD KTRH K TSA KTUL KVI KVOR KWKH WABC WACO WADC WALA WBBM WBNS WBRC WBT WCAO WCOO WCOA WDAE WDBO WDNC WFBL WFBM WGR WGST WHEC WHIO WHK WHP WIBX WISN WJAS WJNO WKRC WLBB WMAS WMBG WMMN WNOX WOKO WORC WPG WREC WSBT WSJS WSPD WTOC

## R — Jack Benny; Mary Livingstone

KSD KYA KYW WBN WEAE WCSH WDAF WFAE WFBZ WGY WIO WJAR WLW WMAQ WNAC WOV WRC WTAG WTAM WTMJ WTMJ WWJ

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

## C — Phil Baker; Oscar Bradley

KLRA KLZ KRLD KTRH K TSA KTUL KWKH WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WCOA WDAE WDBJ WDOB WDNC WDOB WDRC WEAN WFBL WFPM WFEA WGR WGST WHAS WHEC WHK WHP WIBX WICC WJAS WJR WJSV WKBN WKRC WLAC WLBB WMAS WMBR WNAC WNOX WOKO WORC WQAM WREC WSBT WSPA WSJS WSMK WSPD WTOC WWL WWVA

## R — Fireside Recitals

KSD KYW WBN WEAE WCSH WDAF WFAE WFBZ WGY WIRE WJAR WMAQ WOV WRC WSAI WTAG WTAM WTMJ WWJ

## B — Ozzie Nelson; Bob Ripley

KDKA KOIL KPRC KSO KTBS KTHS KVOO KWK WAPI WAVE WBAL WBAP WBZ WBZA WCKY WFIL WGAR WHAM WHIO WIRE WJDX WJZ WKY WLS WML WMC WMT WOAI WREN WSB WSM WSMB WSYR WXYZ

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

## R — Sunset Dreams; Morin Sisters

KFCF CRCT KSD KYW WBN WEAE WCSH WDAF WFAE WFBZ WGY WIO WIRE WJAR WLW WMAQ WOAI WOOD WOV WRC WTAG WTAM WTMJ WWJ

## C — Victor Moore; Helen Broderick

KFAB KFH KFPY KLRA KLZ KMBC KMOX KNX KOIN KOL

**SUNDAY (Continued)**

KOMA KRLL KRNT KSCJ KSPD  
KSL KTRH KTSa KTUL KVI  
KWKH WABC WADC WBBM WBIG  
WBNS WBRC WBT WCAO WCAU  
WCCO WDAE WDBJ WDBO WDRC  
WEEI WFBL WFBM WGR WGST  
WHAS WHEC WHIO WHK WHP  
WIBX WJAS WJR WJSV WKBN  
WKRC WLAC WLBB WMSB WMBO  
WMBR WNAX WNBW WNOX WOKO  
WORC WPRO WQAM WREC WSBT  
WWL WWVA

**R — Want to be an Actor?**

CFCF CRCT KDYL KFI KFYY  
KGW KHQ KOA KOMO KPO KPRC  
KSD KSTP KTAR KTBS KVOO  
KYW WAVE WBEN WCAE WCHS  
WDAF WDAY WEAF WEBC WFAA  
WFBR WFLA WGY WHO WIBA  
WIOD WIS WJAR WJAX WJDX  
WKY WLW WMAQ WMC WNAC  
WOAI WOW WPTF WRC WRVA  
WSB WSM WSMB WSOC WSUN  
WTAG WTAM WTR WTIC WTMJ  
WWJ WWNC

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

**C — Eddie Cantor; Bobby Brean**

KFAB KFH KGKO KLRA KMBC  
KMOX KOMA KRLL KRNT KSCJ  
KTRH KTSa KTUL KWKH WABC  
WACO WADC WALA WBBM WBIG  
WBNS WBRC WBT WCAO WCAU  
WCCO WCOA WDAE WDBJ WDBO  
WDNC WDOD WDRG WEAN WFBL  
WFBM WFEA WGR WGST WHAS  
WHEC WHK WHP WIBW WIBX  
WICC WISN WJAS WJR WJSV  
WKBN WKRC WLAC WLBB WMSB  
WMBD WMBR WMMN WNAX  
WNOX WOC WOKO WORC WQAM  
WREC WSBT WSFA WSJS WSMK  
WSPD WTOC WWL WWVA

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

**B — Frank Parker; Shep Fields**

KDKA KECA KFSD KGA KGHL  
KGHR KGO KJR KLO KOIL KSO  
KTAR KWK WBAL WBZ WBZA  
WBCB WEBR WENR WFIL WGAR  
WHAM WICC WJZ WLW WMAL  
WMT WREN WSYR WXYZ

**R — Manhattan Merry-Go-Round**

CFCF KDYL KFI KFYY KGW  
KHQ KOA KOMO KPO KPRC KSD

KSTP KTBS KTHS KYW WAVE  
WBEN WCAE WCKY WCHS WDAF  
WDAY WEAF WEBC WEEI WFAA  
WFBR WFLA WGY WHO WIBA  
WIOD WIRE WIS WJAR WJAX  
WJDX WKY WMAQ WMC WOAI  
WOW WPTF WRC WRVA WSB  
WSM WSMB WSOC WTAG WTAM  
WTR WTIC WTMJ WWJ WWNC

**C — Ford Sunday Evening Hour**

CFRB CKAC KDB KERN KFAB  
KFBB KFH KFY KPRC KGB  
KGKO KHJ KLRA KLZ KMBC  
KMJ KMOX KOH KOIN KOMA  
KRLL KRNT KSCJ KSL KTRH  
KTSa KTUL KVI KVOR KWG  
KWKH WABC WACO WADC WALA  
WBBM WBIG WBNS WBRC WBT  
WCAO WCAU WCCO WCOA WDAE  
WDBJ WDBO WDNC WDOD WDRG  
WEAN WFBL WFBM WFEA WGR  
WGST WHAS WHEC WHK WHP  
WIBX WJAS WICC WISN WJAS  
WJR WJSV WKBN WKRC WL C  
WLBB WMSB WMBD WMBR WN. C  
WNAX WOC WOKO WORC WQAM  
WREC WSBT WSFA WSJS WSPD  
WTOC WWL WWVA

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

**R — Album of Familiar Music**

CFCF CRCT KDYL KFI KFYY  
KGW KHQ KOA KOMO KPO KPRC  
KSD KSTP KTBS KYW WAPI  
WAVE WBEN WCAE WCHS WDAF  
WDAY WEAF WEBC WEEI WFAA  
WFBR WFLA WGY WHO WIBA  
WIOD WIS WJAR WJAX WJDX  
WKY WMAQ WMC WOAI WOW  
WPTF WRC WRVA WSAL WSB  
WSM WSMB WSOC WTAG WTAM  
WTR WTIC WTMJ WWJ WWNC

**B — Walter Winchell**

KDKA KECA KEX KFSD KGA  
KGHL KGIR KGO KJR KLO KOIL  
KSO KTAR KWK WBAL WBZ  
WBZA WENR WFIL WGAR WHAM  
WJZ WLW WMAL WMT WREN  
WSYR WXYZ

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

**C — Gillette Community Sing**

CFRB CKAC KDB KERN KFAB  
KFBB KFH KFY KPRC KGB  
KGKO KGM B KGVO KHJ  
KLRA KLZ KMBC KMJ KMOX  
KOH KOIN KOL KOMA KRLL

KRNT KSCJ KSL KTRH KTSa  
KTUL KVI KVOR KWG KWKH  
WABC WACO WADC WALA WBBM  
WBIG WBNS WBRC WBT WCAO  
WCAU WCCO WCOA WDAE WDBJ  
WDBO WDNC WDOD WDRG WEAN  
WFBL WFBM WFEA WGST WHAS  
WHEC WHK WHP WIBW WIBX  
WICC WISN WJAS WJR WJSV  
WKBN WKBW WKRC WLAC WLBB  
WMSB WMBD WMBO WMBR  
WMMN WNAC WNAX WNOX WOC  
WOKO WORC WOWO WPG WQAM  
WREC WSBT WSFA WSJS WSMK  
WSPD WTOC WWL

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

**C — Kaitenborn Edits the News**

KFH KGKO KNOW KOH KOIN KOL  
KOMA KRLL KRNT KSCJ KSPD  
KTRH KTSa KTUL KVI KWKH  
WABC WACO WADC WALA WBIG  
WBNS WDAE WDBJ WDBO WDNC  
WDRG WEEI WFBL WHAS WHEC  
WHK WHP WIBW WIBX WJAS  
WJR WJSV WKBW WLBB WMSB  
WMBR WMMN WNAX WNBW WNOX  
WOC WOKO WORC WOWO WPRO  
WQAM WREC WSBT WSFA WSJS  
WSPD WTOC

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

**C — Eddie Cantor; Bobby Brean**

KERN KFBB KFBK KPHY KPRC  
KGB KGVO KHJ KLZ KMJ KOH  
KOL KSL KVI KVOR

**R — Sunset Dreams; Morin Sisters**

KDYL KFI KFSD KGW KHQ KOA  
KOMO KPO KPRC KTAR KTBS  
KTHS WBAP WDAF WKY

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

**B — Walter Winchell**

KDYL KFI KFSD KGHL KGHR  
KGW KHQ KOA KOMO KPO KPRC  
KTAR KTBS KTHS WAPI WAVE  
WBAP WJDX WKY WMC WOAI  
WSB WSM WSMB

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

**B — Frank Parker; Shep Fields**

KPRC KTBS KTHS KVOD WAPI  
WAVE WBAP WJDX WKY WMC  
WOAI WSB WSM WSMB

**CLASSIFIED INDEX TO CHAIN PROGRAMS**

*Time in Eastern Standard*

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

**CONCERTS**

Frank Black, 2 p.m. Sun., B  
Rosario Bourdon, 8 p.m. Fri., R  
Ford Concert, 9 p.m. Sun., C  
New York Philharmonic, 3 p.m. Sun., C

Radio City Music Hall, 12:30 p.m. Sun., B  
Don Voorhees, 8 p.m. Wed., C

**DANCE BANDS**

Victor Arden, 8 p.m. Fri., C

Ben Bernie, 9 p.m. Tues., B  
 Bunny Berigan, 7 p.m. Sat., C  
 Oscar Bradley, 7:30 p.m. Sun., C  
 Jimmie Dorsey, 10 p.m. Thurs., R  
 Tommy Dorsey, 10 p.m. Fri., B  
 Shep Fields, 9:00 and 11:30 p.m. Sun., B  
 Lud Gluskin, 8:30 Wed., C  
 Al Goodman, 9 and 11:15 p.m. Thurs., R  
 Benny Goodman 9:30 p.m. Tues., C  
 Johnny Green, 9:30 p.m. Tues., R  
 Jimmy Grier, 6 p.m., Sun., C  
 Gus Haenschen, 9:30 p.m. Sat., C  
 Phil Harris, 7 and 11:30 p.m. Sun., R  
 Horace Heidt, 8 p.m. Mon., C  
 Richard Himber, 10 p.m. Mon., B  
 Arnold Johnson, 6 p.m. Sun., M  
 Hal Kemp, 8:30 and 11:30 p.m. Fri., C  
 Henry King, 8:30 and 11:30 p.m. Wed., C  
 Wayne King, 8:30 p.m. Tues. and Wed., R;  
 10 p.m. Mon., C  
 Andre Kostelanetz, 9 p.m. Wed., C  
 Guy Lombardo, 5:30 p.m. Sun., C;  
 8:30 Thurs., M  
 Vincent Lopez, 9 p.m. Sat., C  
 Abe Lyman, 8:30 p.m. Mon., B; 9 p.m. Fri., R;  
 10 p.m. Wed., R  
 Russ Morgan, 8:30 and 11:30 p.m. Sat., C;  
 8 p.m. Tues., R  
 Ozzie Nelson, 7:30 p.m. Sun., B  
 Ray Noble, 8 p.m. Mon., R  
 Raymond Paige, 9 p.m. Fri., C  
 Jacques Renard, 8:30 and 11 p.m. Sun., C  
 Joe Rines, 11:30 a.m. Sun., B  
 Andy Sanella, 9 p.m. Sun., R  
 Phil Spitalny, 9:30 Mon., R  
 Rudy Vallee, 8 p.m. Thurs., R  
 Peter Van Steeden, 9 p.m. Wed., R  
 Don Voorhees, 5:30 p.m. Sun.; 8 p.m. Sat., B  
 Victor Young, 8:30 and 11:30 p.m. Tues., C

#### DIALOG

Fred Allen, 9 p.m. Wed., R  
 Amos 'n' Andy, 7 and 11 p.m. daily, except  
 Sat. and Sun., R  
 Phil Baker, 7:30 p.m. Sun., C  
 Jack Benny, 7 and 11 p.m. Sun., R  
 Milton Berle, 10 p.m. Sun., C  
 Bob Burns, 10 p.m. Thurs., R  
 Burns and Allen, 8 p.m. Mon., R  
 Charles Butterworth, 9:30 Tues., R  
 Judy Canova, 9:15 and 11:30 Sun., B  
 Eddie Cantor, 8:30 and 11 p.m. Sun., C  
 Irvin S. Cobb, 10:30 p.m. Sat., R  
 Easy Aces, 7 p.m. Tues., Wed., Thurs., B  
 Ray Knight, 6 p.m. Sun., M  
 Beatrice Lillie, 8 p.m. Wed., B  
 Lum and Abner, 7:30 p.m. daily except Sat.  
 and Sun., B  
 Victor Moore; Helen Broderick, 8 p.m. Sun., C  
 Ken Murray, 8:30 Wed., C  
 Jack Oakie, 9:30 p.m. Tues., C

Parkyakarkus, 8:30 Tues., C  
 Jack Pearl, 10 p.m. Fri., B  
 Joe Penner, 6 p.m. Sun., C  
 Pick and Pat, 8:30 and 11:30 p.m. Mon., C  
 Popeye the Sailor, 7:15 Mon., Wed., Fri., C  
 Stoopnagle and Budd, 5:30 p.m. Sun., B  
 Uncle Ezra's Radio Station, 7:15 p.m. Mon.,  
 Wed., Fri., R  
 Ed Wynne, 8 p.m. Sat., B

#### DRAMA

Ethel Barrymore, 8:30 p.m. Wed., B  
 Columbia Workshop, 7 p.m. Sun., C  
 Death Valley Days, 8:30 p.m. Fri., B  
 First Nighter, 10 p.m. Fri., R  
 Gang Busters, 10 p.m., Wed., C  
 Grand Hotel, 3:30 p.m. Sun., R  
 Hollywood Hotel, 9 p.m. Fri., C  
 It Can Be Done, 8:30 Tues., B  
 Phillips Lord, 10 p.m. Wed., C  
 Lux Radio Theater, 9 p.m. Mon., C  
 Ma and Pa, 7:15 p.m. Mon. through Fri., C  
 One Man's Family, 8 p.m. Wed., R  
 Pretty Kitty Kelly, 6:45 p.m. Mon. through  
 Fri., C  
 Irene Rich, 8 p.m. Fri., B  
 Snow Village Sketches, 9 p.m. Sat., R  
 Tale of Today, 6:30 p.m. Sun., R  
 True Story Court, 9:30 p.m. Fri., R  
 Vic and Sade, 10 p.m. Wed., B  
 Your Unseen Friend, 5 p.m. Sun., C

#### POPULAR PROGRAMS

A & P Bandwagon, 8 p.m. Thurs., C  
 Album of Familiar Music, 9:30 p.m. Sun., R  
 Armco Band, 10 p.m. Tues., B  
 Major Bowes, 11:30 a.m. Sun. and 9 p.m.  
 Thurs., C  
 Broadway Merry-go-Round, 8 p.m. Wed., B  
 Carborundum Band, 7:30 p.m. Sat., C  
 Cavalcade of America, 8 p.m. Wed., C  
 Chesterfield Program, 9 p.m. Wed., C  
 Cities Service Concert, 8 p.m. Fri., R  
 Contented Program, 10 p.m. Mon., R  
 Cook's Travelogues, 2:45 p.m. Sun., C  
 Do You Want to be an Actor? 8 p.m. Sun., R  
 Community Sing, 10 p.m. Sun., C  
 Fireside Recitals, 7:30 p.m. Sun., R  
 Fleischmann Variety Hour, 8 p.m. Thurs., R  
 Hammerstein's Music Hall, 8 p.m. Tues., C  
 Hit Parade, 10 p.m. Wed., R; 10 p.m. Sat., C  
 Hollywood Hotel, 9 p.m. Fri., C  
 Husbands and Wives, 8:00 p.m. Tues., B  
 Magic Key of RCA, 2 p.m. Sun., B  
 Manhattan Merry-Go-Round, 9 p.m. Sun., R  
 March of Time, 10:30 p.m. Thurs., C  
 Maxwell House Show Boat, 9 p.m. Thurs., R  
 National Barn Dance, 9 and 11:30 p.m. Sat., B  
 Packard Hour, 9:30 p.m. Tues., R

Palmolive Hour, 9:30 p.m. Wed., C  
 Paramount on Parade, 12 noon Sun., R  
 Al Pearce and His Gang, 9 p.m. Tues., C  
 Pontiac Variety Show, 10:30 p.m. Fri., R  
 Professor Quiz, 8 p.m. Sat., C  
 Rubinoff, 6:30 p.m. Sun., C  
 Shell Chateau, 9:30 p.m. Sat., R  
 Studebaker Champions, 10 p.m. Mon., B  
 True Adventures, 10 p.m., Thurs., C  
 Voice of Firestone, 8:30 p.m. Mon., R  
 Vox Pop, 9 p.m. Tues., R  
 Waltz Time, 9 p.m. Fri., R  
 Watch The Fun Go By, 9 p.m. Tues., C  
 We, the People, 5 p.m. Sun., B

Dorothy Page, 10:30 p.m. Sat., R  
 Frank Parker, 9:00 and 11:30 p.m. Sun., B  
 Jan Peerce, 6:30 p.m. Sun., C  
 Lily Pons, 9 p.m. Wed., C  
 Carmella Ponselle, 8 p.m. Fri., C  
 Virginia Rea, 6:30 p.m. Sun., C  
 Martha Raye, 8:30 and 11:30 p.m. Tues., C  
 Lanny Ross, 9 p.m. Thurs., R  
 Shirley Ross, 8:30 p.m. Wed., C  
 Singin' Sam, 8:15 Fri., B  
 Kate Smith, 8 p.m. Thurs., C  
 Margaret Speaks, 8:30 and 11:30 p.m. Mon., R  
 Gladys Swarthout, 10:30 p.m. Wed., R  
 Marion Talley, 10 p.m. Fri., R  
 Conrad Thibault, 9:30 p.m. Tues., R  
 Kay Thompson, 8:30 and 11:30 p.m. Fri., C  
 Trudy Woods, 9:30 p.m. Tues., R

### SINGERS

Stuart Allen, 10 p.m. Mon., B  
 Fred Astaire, 9:30 p.m. Tues., R  
 Gene Austin, 6 p.m. Sun., C  
 Kenny Baker, 7 and 11:30 p.m. Sun., R  
 Natalie Bodanya, 8:30 p.m. Mon., B  
 Morton Bowe, 11:30 a.m. Sun., B;  
 10 p.m. Fri., B  
 Bobby Breen, 8:30 and 11 p.m. Sun., C  
 Rachel Carlay, 9 p.m. Sun., R  
 Bernice Claire, 9 p.m. Fri., R  
 Mario Cozzi, 7:15 p.m. Fri., B  
 Vivian Della Chiesa, 10 p.m. Mon., R  
 Bing Crosby, 10 p.m. Thurs., R  
 Gogo deLys, 5:30 p.m. Sun., B  
 Edith Dick, 10 p.m. Sat., C  
 Jessica Dragonette, 8 p.m. Fri., R; 9:30 p.m.  
 Wed., C  
 Phil Ducey, 8 and 11:30 p.m. Tues., R; 8:30  
 Sat., C  
 Deanna Durbin, 8:30 and 11 p.m. Sun., C  
 Mary Eastman, 9:30 p.m. Sat., C  
 Nick Foran, 8 p.m. Mon., R  
 Jack Fulton, 7 and 11 p.m. Mon. thru Thurs., C  
 Wendell Hall, 10 p.m. Sun., C  
 Helen Jepson, 9 and 11:15 p.m. Thurs., R  
 Al Jolson, 8:30 and 11:30 p.m. Tues., C  
 Jones and Hare, 10 p.m. Sun., C  
 Frances Langford, 9 p.m. Fri., C  
 Shirley Lloyd, 7:30 p.m. Sun., B  
 Lullaby Lady, 10 p.m. Mon., R  
 Elizabeth Lennox, 8 p.m. Fri., C  
 Fred MacMurray, 9 p.m. Fri., C  
 Lucille Manners, 8 p.m. Fri., R  
 Helen Marshall, 7:30 p.m. Sun., R  
 Tony Martin, 8:30 and 11:30 p.m. Wed., C  
 Ed McConnell, 5:30 p.m. Sun., R  
 Lucy Monroe, 9:30 p.m. Sun., R  
 Grace Moore, 9 p.m. Sat., C  
 Morin Sisters, 7:45 and 11 p.m. Sun., R  
 Willie Morris, 4:30 p.m. Sun., R  
 Frank Munn, 9:30 p.m. Sun. and 9 p.m. Fri.,  
 R; 8:30 p.m. Mon., B

### TALKS

Boake Carter, 7:45 p.m. Mon. thru Fri., C  
 Father Coughlin, 3:00 p.m. Sun., M  
 Jimmy Fidler, 10:30 p.m. Tues., R  
 Floyd Gibbons, 9 p.m. Sat., C; 10 p.m. Thurs., C  
 Eddie Guest, 8:30 p.m. Tues., B  
 H. V. Kallenborn, 10:45 p.m. Sun., C  
 Bob Ripley, 7:30 p.m. Sun., B  
 Babe Ruth, 10:30 Wed. and Fri., C  
 Sidewalk Interviews, 9 p.m. Tues., R  
 Deems Taylor, 9:30 p.m. Fri., R  
 Lowell Thomas, 6:45 p.m. Mon. thru Fri., B  
 Trans-Atlantic Broadcast, 12:45 p.m. Sun., C  
 Walter Winchell, 9:30 and 11:15 p.m. Sun., B  
 Alexander Woolcott, 7:30 p.m. Tues. and  
 Thurs., C

The new broadcast band station LS11, belonging to the Government of the Province of Buenos Aires, is now on the air on its assigned frequency of 1310 kcs. For the present time only 10 kw. power will be radiated, but it is hoped, by the operators, that this can be increased to 60 kw. by June. We understand that the Post Office Department, which controls radio matters in the Argentine, does not permit stations outside the Capital to use more than 2000 watts. The Governor of B. A. Province, however, has assumed superior authority and is making his radio laws to suit himself, claiming that the provinces are independent of the Federal Government.—*Sintonia*.

# A Two Year Contest

Under the direction of Oliver Amlie, the International 6000-12500 Mile All Wave Club is sponsoring a "Round the World Champion DX Contest," in which prizes will be given to shortwave listeners, broadcast band tuners and amateurs. The winners in each class will be named the World's Champion DXer in his own class.

The prize list, incomplete at the present time, includes a 20-tube Masterpiece V, given by McMurdo Silver of Chicago, Ill. A Sky Buddy set has been donated by Hallcrafters, Inc. Burgess batteries, slide rules given by United Transformer Co., condensers provided by Newark Electric Co. and cash from the Hetro Electric Industries of Chicago are also included.

The Club will give to winners of first, second and third prizes, large certificates printed in colors and bearing in the upper right hand corner a picture of the winning receiver or transmitter. In the left corner will be the winner's picture, and flags of all nations will be seen in the center.

The first contest will take place throughout December, 1937 and end the last of January, 1938. The short-wave contest will be staged during June and July of 1938, and the amateurs will have their sixty days during August and September, 1938.

Further details will be published in RADEX from time to time, or information may be obtained by addressing Oliver Amlie, 56th City Line Ave., Overbrook, Philadelphia, Pa.

## SHORT WAVE STATIONS BY FREQUENCIES

*Frequencies are given in megacycles per second. Power is given in parentheses in kilowatts and decimals hereof. In our indices we show assigned frequencies. Actual frequencies on which stations are heard, when differing from those assigned, are shown in parentheses in kilocycles.*

### Abbreviations:

Ann: Announces  
Add: Address  
Int: Interval signal  
s/o: Sign on and sign off  
(\*): Will not verify  
Tr: Transmitter

NA: North America  
SA: South America  
CA: Central America  
NYC: New York City  
Aptdo: Apartado (Box No.)

4.002	CT2AJ, Ponta Delgada, Azores.	5.820	TIGPH, San Jose, Costa Rica. "Alma Tica." Add: Aptdo 800.
4.107	HCJB, Quito, Ecuador. (.15). "La Voz de los Andes." Int: 4 strokes on gong. Add: Clarence W. Jones, Casilla 691.	5.850	YV1RB, Maracaibo, Venez. "Ecos del Zulia." Relays YV1RA. s/o: "Strike Up the Band." Add: Aptdo 37.
4.273	RV15, Khabarovsk, USSR (Siberia). (20.)	5.855	HI1J, San Pedro de Macoris, D. R. (.04). s/o: "All I Do is Dream of You." Add: Aptdo 204.
4.600	HC2ET, Guayaquil, Ecuador. Int: 12 chimes. Add: Box 249.	5.875	HRN, Tegucigalpa, Honduras. (.4) (*). "La Voz de Honduras."
4.795	VE9BK, Vancouver, B. C. (.25). Add: 780 Beatty St.	5.880	YV3RB, Barquisimelo, Venez. "La Voz de Lara." Relays YV3RA.
4.810	YDE2, Solo, Java, N. E. I. (.2). Add: Solosche Radio Vereeninging.	5.885	HI9B, Santiago, D. R. Add: Hotel Mercedes.
4.865	YDG5, Batavia, Java, N.E.I. (.25). Bataviasche Radio Vereeninging.	5.905	TIMS (or TILS?), Puntarenas, Costa Rica.
5.415	PMY, Bandoeng, Java, N.E.I. (.45).	5.910	HH2S, Port-au-Prince, Haiti (5925). Add: Boite 103
5.500	T15HH, San Ramon, Costa Rica. (.2). "La Voz de S. R."		YV4RH, Valencia, Venez. (5918). "Radio Valencia." Relays YV4RE.
5.710	YV2RA, San Cristobal, Venez. "La Voz de la Tachira." s/o: "El Capitan." TGS, Guatemala City, Guat. (.2)	5.920	XERV, Allente de Bravo, Mexico.
5.720	RV15, Khabarovsk, USSR. (Siberia)	5.930	YV1RL, Maracaibo, Venez. "Radio Popular." Relays YV1RM.
5.725	HC1PM, Quito, Ecuador. (5735)	5.940	TG2X, Guatemala City, Guat. (.2). Policia Nacional.
5.758	YNOP, Managua, Nicaragua. "Radiodifusora Bayer."	5.950	HJN, Bogota, Colombia. Add: Ministerio de Correos y Telegrafos.
5.780	OAX4D, Lima, Peru. "Radio Dusa, La Voz de Peru." s/o: In code. Add: All America Cables, Inc., Casilla 2336	5.970	HJ4BD, Medellin, Colombia. (also on 6138). "La Voz de Catia."
5.800	YV5RC, Caracas, Venez. (1). "Radio Caracas, la habla a la Nacion." Relays YV5RA. s/o: "March One BC." Add: Aptdo. 2009.	5.980	HJ2ABD, Bucaramanga, Colombia. (.67) (5987-5993). Add: Calle 2a No. 1205.
		5.996	RV59, Moscow, USSR. (20.). Mme. Inna Marr, Petrovka 12.



## SHORTWAVE STATIONS BY FREQUENCIES

- 6.000 XEBT, Mexico City, D. F. (1.) Add: Aptdo 79-44.
- 6.005 CFCX, Montreal, P. Q. (.075). Relays CFCF- Add: Canadian Marconi Co., Ltd., Box 1690.  
HP5K, Colon, Panama. "La Voz de la Victor." Add: Aptdo 33.  
VE9DN, Montreal, P. Q. Relays CFCF Irreg. See CFCX 6005 kcs.
- 6.010 VE9GA, Sydney, N. S. (1.) Relays CJCB. Add: N. Nathanson  
COCO, Havana, Cuba. (.3) Add: Box 98.  
OLRZA, Prague, Czecho. See 9.550 megs.  
VK9MI, M. V. Kanimbla. (.05). McIlwraith & McEacharn, Ltd., Adelaide, Australia.  
VP3MR, Georgetown, British Guiana. (5980; 5975; 6017). "The Voice of Guiana."
- 6.012 HJ3ABH, Bogota, Colombia. (1.2) "La Voz de la Victor." Same call on BCB. s/o: "Russian Lullaby." Add: Aptdo 565
- 6.015 HI3U, Santiago de los Caballeros, D. R. (.025) (6017) "La Voz del Comercio." Add: Sr. F. Bertran.  
XEWI, Mexico City, D. F. (4.). "My Voice to the World from Mexico." Add: Aptdo 2874.
- 6.018 ZHI, Singapore, Straits Settlements. (.09). Add: 2 and 4 Orchard Road.
- 6.020 DJC, Berlin, Germany. (8.) Tr: Zeesen. Int: Music box tune. s/o: Two national anthems. Add: Reichs-Rundfunk-Gesellschaft, Haus des Rundfunk, Masurenallee, Berlin-Charlottenburg 9.  
XEUW, Veracruz, Ver. (.02). "El Eco de Sotavento desde Veracruz." Int: "Las Golondrinas." Three cents USA postage for veri. Add: Independencia 98.
- 6.025 HJ1ABJ, Santa Marta, Colombia. (.05) "La Voz de Santa Marta."
- 6.030 HJ4ABP, Medellin, Colombia. (1.) (6033) "Radio Philco".  
HP5B, Panama City, Panama. (1) Add: Aptdo 910.
- 6.030 OLR2B, Prague, Czecho. See 9.550 megs.
- 6.035 CXA2, Montevideo, Uruguay. (.5). (6000). Tr: Sayago. Add: Rio Negro 1631.
- 6.040 PRA8, Pernambuco, Brazil. (3.) "A Voz do Norte." Add: Av. Cruz Cabuga 394.  
W1XAL, Boston, Mass. (10.) "Dedicated to Enlightenment." Add: University Club.  
W4XB, Miami, Fla. (5.). Relays WIOD- Add: Isle of Dreams Brdcstg. Corp.  
YDA, Tandjong Priok, Java, N.E.I. (10.) s/o: "End of a Perfect Day." This is the Key Station for the NIROM Network.
- 6.042 HJ1ABG, Barranquilla, Colombia. (.15) "Emisora Atlantico". Same call on BCB. Add: Aptdo 445.
- 6.050 GSA, London, Gt. Britain. (20.). "A for Aerial." Tr: Davenport. Int: Bow Bells; time signal on even hours; Big Ben strikes hours irreg. preceded by Westminster Chimes. s/o: God Save the King. Add: British Broadcasting Corp., London W1.  
XEXF, Mexico City, D. F. (.6). Secretaria de Economia.
- 6.055 HJ3ABD, Bogota, Colombia (.05). "Colombia Broadcasting." Add: Aptdo 509.
- 6.060 VQ7LO, Nairobi, Kenya. Cable and Wireless, Ltd., Box 777.  
W3XAU, Philadelphia, Pa. (10.). Tr: Newton Square. Relays CBS-WCAU. Add: 1622 Chestnut St.  
W8XAL, Cincinnati, Ohio. (10.) Tr: Mason. Relays WLW-NBC. Add: Crosley Radio Corp., 1329 Arlington St.
- 6.070 CFRX, Toronto, Ont. (1.). Relays CFRB. Add: Rogers-Majestic Corp.  
HJ3ABF, Bogota, Colombia. (.05) (6068; 6073). "La Voz de Bogota". Ann: Estacion HKF. s/o: "Song of the Islands."  
YV1RD, Maracabo, Venez. (6075). "Radio-difusora Maracabo." Relays YVIRE.
- 6.075 XEBW, Guadalajara, Jal. (.045). Ramon Loreto.
- 6.080 DJM, Berlin, Germany. See DJC 6.020 megs.  
HP5F, Colon, Panama. (6074; 6078)  
W9XAA, Chicago, Ill. (20.) "The Voice of Labor." Tr: York Township. Relays NBC-WCFL. s/o: English, French, German, Norwegian, Polish, Russian, Spanish. This transmitter uses aerial directed to Central Europe. Add: Chicago Federation of Labor. 666 Lake Shore Drive.  
ZHJ, Penang, Straits Settlements. (.049). "J for Jubilee".
- 6.085 HJ5ABD, Cali, Colombia. "La Voz del Valle." Aptdo 270.
- 6.090 CRCX, Toronto, Ont. (1.) Relays CRC-CRCT  
HJ4ABC, Ibague, Colombia, "Ecos de Combelma."  
VE9BJ, St. John, N. B. (.05) Admiral Beatty Hotel.  
VE9CS, Vancouver, B. C. (.01). Relays CKFC. Add: 1001-1004 Stock Exchange Bldg.  
XECU, Guadalajara, Jal.  
ZBW2, Hong Kong. (2.4). Add: Box 200.
- 6.092 OAX4Z, Lima, Peru. "Radiodifusora Oficial, Radio Nacional." Relays OAX4A.
- 6.095 JZH, Nazaki, Japan.
- 6.097 HJ4ABE, Medellin, Colombia. (1.) "La Voz de Antioquia." Relays HJ4ABK. Int: 3 chimes precede ann. Add: Emisora 4ABE.
- 6.100 W3XAL, New York, N. Y. (35.) Tr.: Bound Brook, N. J. Relays NBC-WJZ. Ann: Eng., French, German, Italian and Spanish. s/o: "The Star Spangled Banner." Add: NBC, Rockefeller Plaza, NYC.  
W9XF, Chicago, Ill. (5.) Tr: Downers Grove. Relays NBC-WENR. s/o: Eng., French, German, Italian, Japanese, Russian, Spanish, Swedish. Add: NBC, Inc., Merchandise Mart.  
..... Belgrade, Yugo-Slavia. (1.) "Radio Beograd".
- 6.108 HJ4ABB, Manizales, Colombia. "Radio Manizales."
- 6.110 GSL, London, Gt. Britain. "L for Liberty." See GSA 6.050 megs.
- 6.115 HJ1ABB, Barranquilla, Colombia. (.3) (6447). "La Voz de Barranquilla." Relays HJ1ABA. Int: 3 chimes. Add: Aptdo 715

## SHORTWAVE STATIONS BY FREQUENCIES

- OLR2C, Prague, Czechoslovakia. (35.). See 9.550 megs.
- 6.118 XEUX, Mexico City, D. F. "Radio Nacionales." Relays XEFO
- 6.120 W2XE, New York, N. Y. (10.). Tr: Wayne, N. J. Relays CBS-WABC s/o: "The Star Spangled Banner." Add: CBS, 485 Madison Ave., NYC.
- XEFT, Veracruz, Ver. (.012). Jose Rodriguez Lopez.
- XEPW, Mexico City, D. F. "La Voz del Aguila Azteca desde Mexico." Relays XEJW.
- YDAS, Bandoeng, Java, N.E.I. (1.5). Add: NIROM (N. V. Nederlandsche Indische Radio Omroep Moatschappij), Tegallagah 0.23, Bandoeng.
- 6.122 HJ3ABX, Bogota, Colombia. "La Voz de Colombia." Same call on BCB.
- 6.125 CXA4, Montevideo, Uruguay. (1.). Add: Martin Fierro 2603.
- 6.130 COCD, Havana, Cuba. (.35). "La Voz del Aire." Int: 4 chimes. Relays CMCD. s/o: "Good Night Waltz." Add: Calle 25 y "G", Vedado.
- VE9HX, Halifax, N. S. Add: Box 998.
- VP3BG, Georgetown, British Guiana.
- 6.138 HJ4ABD, Medellin, Colombia. "La Voz de Catia." Also works on 5.970 megs.
- 6.140 W8XK, Pittsburgh, Pa. (40.). Tr: Saxonburg. "The World's Pioneer Radio Station." Relays NBC-KDKA. Add: Grant Bldg.
- 6.145 HJ4ABU, Pereira, Colombia. "La Voz de Pereira."
- 6.150 CB615, Santiago de Chile. "Radiodifusora Pilot." s/o: "Rhapsody in Blue." Add: Cia Internacional de Radio, Casilla 16-D.
- CJRO, Winnipeg, Man. (2.). James Richardson & Sons, 157 Royal Alexandra Hotel.
- 6.153 HI5N, Santiago, D. R. (1.). Sr. M. Smester.
- 6.156 YV5RD, Caracas, Venez. "Radiodifusora Venez." Relays YV5RB.
- 6.160 VPB, Colombo, Ceylon. (.3). Add: Central Telegraph Office.
- 6.164 OAX1B, Chiclayo, Peru. (.3). "La Voz de Chiclayo." Relays OAX1A. Add: Apto 9.
- 6.182 XEXA, Mexico City, D. F. (6174). Relays XEXM. S/o: "March of the Toys." Add: Secretaria de Educacion Publica.
- 6.190 HI1A, Santiago de los Caballeros, D. R. (.05). "La Voz del Yaque."
- 6.200 COKG, Santiago de Cuba, (.05). "Ask for Bacardi." Relays CMKG. Add: Sres. Grau y Caminero, Apto 137.
- HI8Q, Trujillo, D. R. (6198). "Emisora Carta Real, La Voz de los Muchachos."
- XEXS, Portable and Mobile in Mexico. (.1). Departamento de Salubridad Publica.
- 6.210 YV1RI, Coro, Venez. (.15) (6205). "La Voz de Coro."
- 6.230 YV1RC, Valera, Venez. (6225). "Radio Valera."
- 6.235 HRD, La Ceiba, Honduras. (.25). "La Voz de Atlantida."
- 6.243 HIN, Trujillo, D. R. (.75). s/o: National anthem. Add: Apto 604.
- 6.250 YV5RJ, Caracas, Venezuela. "La Voz de la Esfera." Relays YV5RI.
- 6.260 OAX4G, Lima, Peru. Relays OAX4B. Add: R. Grellaud y Cia.
- 6.270 YV5RP, Caracas, Venez. (1.2). "La Voz de Philco." Relays YV5RQ. Add: Apto 508.
- 6.280 COHB, Sancti-Spiritus, Cuba. (.15) (6281). Relays CMHB. Add: Apto. 85.
- HIG, Trujillo, D. R. (.05). Int: a bawlin<sup>9</sup> call. Add: A. Cordero P.
- 6.300 YV4RD, Maracay, Venezuela. "La Voz de Aragua." Relays YV4RG.
- 6.315 HI2, Trujillo, D. R. (.1). Add: Calle Duarte No. 68.
- 6.340 HI1X, Trujillo, D. R. (.5).
- 6.350 HRP1, San Pedro Sula, Honduras.
- 6.360 YV1RH, Maracaibo, Venezuela. "Ondas del Lago, Emisora Philco." Relays YV1RF.
- 6.380 YV5RF, Caracas, Venezuela. "Ecos del Caribe." Relays YV5RE.
- 6.385 W09, Mitchell Field, L. I., N. Y. Army airport.
- 6.400 YV5RH, Caracas, Venezuela. "Ondas Populares." Relays YV5RG. Add: Apto 1931.
- 6.410 TIPG, San Jose, Costa Rica. (1.). "La Voz de la Victor." Add: Apto 224.
- 6.420 HI1S, Santiago de los Caballeros, D. R. (.02). "La Voz de la Hispaniola."
- 6.425 W2XGB, Hicksville, N. Y. (5.). Press Wireless, Inc.
- W3XL, New York, N. Y. (100.). Tr: Bound Brook, N. J. NBC control station and cue station for nearly all special broadcasts. Add: NBC, 30 Rockefeller Plaza, NYC.
- 6.440 KUP, San Francisco, Calif Press at 2200 EST.
- 6.477 HI4V, San Fransisco de Macoris, D. R. (.025). "La Voz de la Marina".
- 6.479 HI8A, Trujillo, D. R. "Fa Doc en el Aire."
- 6.490 Aeronautical point-to-point stations, Purple Chain: See 2.644 megs.
- 6.500 HIL, Trujillo, D. R. (.05). J2AA, Tokyo, Japan. Haneda Airdrome. YV1RM, Maracaibo, Venezuela. "Radiodifusora Maracaibo." Relays YV1RN.
- 6.510 Aeronautical point-to-point, Blue Chain: See 2.720 megs.
- 6.520 YV4RB, Valencia, Venez. "La Voz de Carabobo." Relays YV4RA. Add: Sres. Hermann y Williams Degwitz. Aeronautical point-to-point. Blue Chain: See 2.720 megs.
- 6.530 Aero. point-to-point, Blue Chain: See 2.720 megs.
- 6.534 EDR4, Palma, Majorca, Balearic Islands. (6565; 6583).
- 6.540 YN1GG, Managua, Nicaragua. "La Voz de los Lagos." Aero. point-to-point, Brown Chain: See 2.612 megs.
- 6.545 YV6RB, Bolivar, Venezuela. "Ecos del Orinoco." Relays YV6RA.
- 6.550 Aeronautical point-to-point, Brown Chain: See 2.612 megs.
- 6.555 HI4D, Trujillo, D. R. (.025). "La Voz de Quisqueya."

## SHORTWAVE STATIONS BY FREQUENCIES

- 6.560 Aero. point-to-point, Brown Chain. See 2.612 megs.
- 6.570 Aircraft, Orange Chain. See 2.648 and 2.870 megs.
- 6.580 Aero. point-to-point, Orange Chain. See 2.648 megs.
- 6.590 Aeronautical Green Chain. See 2.608 and 2.854 megs.
- 6.600 Aero. point-to-point, Green Chain. See 2.608 megs.
- 6.615 Aeronautical: See 2.930 megs.
- 6.620 PRADO, Rio Bamba, Ecuador. (6618; 6625). "Estacion El Prado." Ann: Sometimes by a lady, Srta. Judy. Add: Apto 98.
- 6.630 HIT, Trujillo, D. R. (.2). "La Voz de la RCA-Victor." Add: Apto 1105.
- 6.635 HC2RL, Guayaquil, Ecuador. (6650; 6667). "Quinta Piedad." Add: Apto 759.
- 6.662 WXH, Ketchikan, Alaska. Phones Seattle.
- 6.672 YVQ, Maracay, Venez.
- 6.690 TIEP, San Jose, Costa Rica. "La Voz de los Istmo". Add: Apto 257.
- 6.720 CFU, Rossland, B. C. Consolidated Mining & Smelting Co. of Canada, Ltd.  
PMH, Bandoeng, Java, N.E.I. (1.5). See YDA5 6.120 megs.
- 6.730 HI3C, La Romana, D. R. "La Voz de la Feria."
- 6.750 JVT, Nazaki, Japan. (20.) Works U.S.A.
- 6.755 WOA, Lawrenceville, N. J. (\*) Works London nights.
- 6.762 TDA, Shinkio, Manchukuo. (20.). Works San Francisco. Add: Manchukuo Telegraph and Telephone Co., Ltd.
- 6.775 HIM, San Pedro de Macoris, D. R. (.15). "La Voz de Higuamo."
- 6.785 WFD, New Orleans, La. Press in winter.
- 6.800 HI7P, Trujillo, D. R. (frequency drifts),
- 6.820 XGOX, Nanking, China. (.5).
- 6.860 KEL, Bolinas, Calif. (\*). Works Manila.
- 6.905 GDS, Rugby, Gt. Britain. (15.) Works NYC nights. See GBW 14.440 megs.
- 6.950 GBY, Rugby, Gt. Britain. Works NYC irreg. See GBW 14.440 megs.
- 6.977 XBA, Tacubaya, D. F. Servicio Meteorológico Mexicano.
- 7.000 PZH, Paramaribo, Surinam.  
7.000 to  
7.300 megs. Amateurs. United States and Canada use code only in this band. Most other countries use voice.
- 7.004 EA9AH, Tetuan, Spanish Morocco. Add: Apto 124.
- 7.100 FO8AA, Papeete, Tahiti (.2). Radio Club Oceanien.  
TI2RS, San Jose, Costa Rica. "Radio Athena."
- 7.200 YNAM, Managua, Nicaragua. (7180). "La Voz del Pacifico."
- 7.380 XECR, Mexico City, D. F. (20.). Ann: English and Spanish. Add: Departamento de Publicidad de la Secretaria de Relaciones Exteriores.
- 7.520 HCK, Quito, Ecuador.  
KKH, Kahuku, Hawaii. (\*). Phones Bolinas.
- 7.555 ..... Lawrenceville, N. J. (20.) (\*). Works London.
- 7.565 KWY, Dixon, Calif. (\*).  
..... Lawrenceville, N. J. (20.) (\*). Works London and Paris.
- 7.570 TDG, Shinkio, Manchukuo. Works Berlin. Manchukuo Telegraph & Telephone Co., Ltd.
- 7.610 KWX, Dixon, Calif. (40.) (\*).
- 7.620 IUB, Addis Ababa, Ethiopia.
- 7.700 Aeronautical point-to-point, daytime operation only, Brown Chain. See 2.612 megs.
- 7.715 KEE, Bolinas, Calif. (40.) (\*).
- 7.797 HBP, Geneva, Switzerland. (20.) "Radio Nations." Tr: Prangins. Add: M. G. Gallarati, Information Section, League of Nations.
- 7.850 HC2JSB, Guayaquil, Ecuador. "Ecuador Radio." Int: one gong. Add: Juan S. Behr.
- 7.901 LSL1, Buenos Aires, Arg. Works Rio de J. nights. Cia. Internacional de Radio, S. A., Defensa 143.
- 7.920 GDP, Rugby, Gt. Britain. Works Australia. See GBW 14.440 megs.
- 7.968 HSJ, Bangkok, Siam. Post & Telegraph Dept.
- 7.970 XGL, Shanghai, China. See XOJ 15.800 megs.
- 8.015 Aeronautical point-to-point, daytime operation only, Blue Chain: See 2.730 megs.
- 8.050 WXA, Juneau, Alaska. Works WVD at 2400 EST.
- 8.070 Aero. point-to-point, Yellow Chain. See 2.640 megs.
- 8.075 IRF, Rome, Italy.  
WEZ, Rocky Point, N. Y. (W2XBJ) (\*). Works Paris.
- 8.095 VLK, Sydney, Australia.
- 8.130 Aero. point-to-point, daytime operation only: Green Chain, see 2.608 megs. Purple Chain, see 2.644 megs.
- 8.220 Aircraft, Orange Chain. See 2.648 and 2.870 megs. Clipper Service, see 2.986 megs.
- 8.360 WHD, New York, N. Y. Press at 0100 EST.
- 8.370 KFS, Palo Alto, Calif. Press at 0100 EST.
- 8.430 WSC, Tuckerton, N. J. Press at 2315 EST.
- 8.500 YNLG, Managua, Nicaragua. (.5). "Nicaragua Patria de Darío."
- 8.543 IBG1, S. S. Conte Verde. See ICEJ 8.770.
- 8.560 WOO, Ocean Gate, N. J. (20.) (\*). Phones Ships. "Cast" frequency.
- 8.600 HPF4, Panama City, Panama. Works Hialeah nights.  
Seattle, Wash. Works Alaska at 2400 EST. Alaskan Telephone Co., 517 Federal Office Bldg.
- 8.630 VOWQ, Northwest River, Labrador. Nfld. Skyways, Ltd.
- 8.665 CO9JQ, Camaguey, Cuba. (2.4). Add: Calle Gnrl. Gomez 4.
- 8.680 GBC, Rugby, Gt. Britain. Works Ships Days. See GBW 14.440 megs.
- 8.690 VWZ, Kirkee, Poona, India. (10.). Assigned 8691, 8693, 8700 and 8708 kcs. also. Phones London. Add: Indian Radio & Cable Communication Co., Poona 6.
- 8.710 KBB, Manila, Philippine Isl. (\*)

## SHORTWAVE STATIONS BY FREQUENCIES

- 8.720 VPD2 (VPD3?), Suva, Fiji. "Radio Suva." s/o: "God Save the King." Add: Amalgamated Wireless, Ltd.
- 8.730 GCI, Rugby, Gt. Britain. See GBW 14.440.
- 8.740 WXV, Fairbanks, Alaska.
- 8.770 ICEJ, S. S. Rex. Works IAC and WOO. Add: Italian Lines, 1 State St., NYC.
- 8.798 HKV, Bogota, Colombia. Add: Ministerio de Guerra.
- 8.810 FNSK, S. S. Normandie. Works Paris nights. Add: French Lines, Pier 88, North River, Foot of W. 48th St., NYC.
- IBLI, S. S. Conte di Savoia. Works IAC and WOO. See ICEJ 8.770 mags.
- 8.830 British Ships. Work GBC and WOO. Add: International Marine Radio, Connaught House, 63 Aldwych, London WC2.
- GBTT, R. M. S. Queen Mary.
- GBZW, S. S. Berengaria.
- GDLJ, S. S. Homeric.
- GFVW, S. S. Majestic.
- GLRZ, S. S. Aquitania.
- French Ships. For address see FNSK 8.810 mags.
- FNSK, S. S. Normandie. Works WOO nights.
- FNSM, S. S. Paris.
- FNTQ, S. S. Ile de France.
- Furness-Bermuda Lines. Work ZFA-B and WOO. (\*)
- VQJM, S. S. Monarch of Bermuda.
- VQJP, S. S. Queen of Bermuda.
- German Ships. See 4.413 mags.
- DBBR, S. S. Berlin.
- DDCP, S. S. Cap Polonia.
- DDFF, S. S. Reliance.
- DDFT, S. S. Oceana.
- DHAO, S. S. Hansa.
- DHDL, S. S. Cap Arcona.
- DHEY, S. S. Deutschland.
- DHJZ, S. S. Hamburg.
- DHRL, S. S. New York.
- DOAH, S. S. Bremen.
- DOAI, S. S. Europa.
- 8.840 ZMBJ, M. V. Amatea. Phones Australia and New Zealand. Add: United S.S. Co., Auckland, N. Z.
- 8.948 HCJB, Quito, Ecuador. (.15) "La Voz de los Andes." Int: 4 strokes of wand. Add: Casilla 691.
- 9.010 KEJ, Bolinas, Calif. (\*)
- 9.020 GCS, Rugby, Gt. Britain. (15.). Phones NYC nights. See GBW 14.440 mags.
- 9.038 VWY, Kirkee, Poona, India. See VWZ 8.690.
- 9.040 TYA2, Pontoise, France. (10.). Works Algeria and ships. Add: Service de la T.S.F., 5 Rue Froidevaux, Paris XIV.
- 9.045 VWY, Kirkee, Poona, India. Add: See VWZ 8.690 mags.
- 9.050 NPO, Cavite, Philippine Isl. Time signals at 1255 GMT.
- 9.125 HAT4, Budapest, Hungary. (20.). "Justice for Hungary." Tr: Szekesfehervar. Ann: English, French, Hungarian, usually by lady. s/o: National anthem. Add: Radiolabor, Kiserletl Allomas, Budapest IX, Gyali-ut 22.
- 9.168 YVR, Maracay, Venezuela.
- 9.180 ZSR, Klipheuvell, Union of S. Africa. Add: Box 962, Capetown.
- 9.250 NAA/NSS, Arlington, Va. Time signals at 0955 and 2155 EST.
- 9.280 GCB, Rugby, Gt. Britain. (15.). Works Canada nights. See GBW 14.440.
- XGU, Shanghai, China. See XOJ 15.800.
- 9.285 XPC, Shanghai, China. See XOJ 15.800.
- 9.310 Aircraft, Orange Chain: See 2.648 mags.
- 9.332 CGA4, Drummondville, P. Q. Phones London. See CFCX. 6.005 mags.
- 9.335 OAX4J, Lima, Peru. (9328-9340). "Radio Internacional, La Voz de Lima." Relays OAX4I.
- 9.350 HS8PJ, Bangkok, Siam. Ann: "Happiness Siam Eight Progress Jubilee." Int: 3 chimes. Add: Post and Telegraph Dept.
- 9.415 PLV, Bandoeng, Java, N.E.I. (80.). Governements Radio-Dienst.
- 9.425 NAA/NSS, Arlington, Va. Time signals at 0055, 0155, 0255, 0355, 0755, 1155, 1355, 1555, 1755, 1855, 2355 EST.
- 9.428 COCH, Havana, Cuba. (.15). General Electric Co. of Cuba, No. 2 "B" St., Vedado.
- 9.435 HC20DA, Guayaquil, Ecuador. "La Voz del Aire."
- 9.448 WES, Rocky Point, N. Y. (\*)
- 9.450 TGWA, Guatemala City, Guat. (.2). "Radio Nacional". Relays TGW. Add: Ministerio de Fomento. "Radio Fort de France," Martinique. Add: Boulanger Films.
- 9.460 ICK, Tripoli. (2.).
- WKJ, New Brunswick, N. J. (\*)
- XEFT, Veracruz, Ver. (.02). "La Voz de Veracruz." Add: Av. Independencia 28.
- XGOX, Nanking, Kian-su, China. (.5)
- 9.470 WET, Rocky Point, N. Y. (\*)
- Works SA irreg.
- 9.475 EAH, Madrid, Spain. Ann: UGT1. (UGT for Union General de Tranajadores Network)
- 9.480 KES, Bolinas, Calif. (\*)
- XEDQ, Guadalajara, Jal. Int: 4 chimes in descending scale. Relays XED. Add: Apto 197.
- 9.490 OXY, Copenhagen, Denmark.
- XTV, Canton, China.
- 9.500 VK3ME, Melbourne, Australia (5.). Tr: Braybank. Add: Amalgamated Wireless (A/sia) Ltd., Box 1272L, Elizabeth St. P. O.
- HJ1ABE, Cartagena, Colombia. (.18). "La Voz de los Laboratorios Fuentes." Add: Apto 31.
- PRF5, Rio de Janeiro, Brazil. (60.). "A Voz do Brasil." Add: Cia. Internacional do Brasil, Box 709.
- 9.504 OLR3B, Prague, Czecho. See 9.550.
- 9.510 GSB, London, Gt. Britain. (20.). "B for Broadcasting." See GSA 6.050 mags.
- HJU, Buenaventura, Colombia. "La Voz del Pacifico". National Railroads of Colombia.
- 9.520 HJ4ABH, Armenia, Colombia. "La Voz de Armenia." Relays HJ4ABN.
- XEME, Merida, Yuc. (.015). (8190). "La Voz de Yucatan desde Merida." Relays XEFC. Add: 59 No. 517.
- 9.525 ZBW3, Hong Kong. Add: Box 200.
- 9.530 LKJ1, Jelcy, Norway. (1.).
- W2XAF, Schenectady, N. Y. (40.). Relays NBC-WGY. Programs commence with electrical discharge of 10,000,000 volts. Add: The General Electric Co.
- 9.535 JZI, Tokyo, Japan.
- 9.540 DJN, Berlin, Germany. See DJB, 15.200 mags.
- VPD2, Suva, Fiji. "Radio Suva." s/o: "God Save the King"
- 9.550 OLR3A, Prague, Czecho. (35.). "Radio Podesbrady." Tr: Podesbrady. Int: trumpet tune from New World Symphony. Add: Praha XII, Fochova Tr. 16.
- 9.560 DJA, Berlin, Germany. (8.). See DJB 15.200 mags.

## SHORTWAVE STATIONS BY FREQUENCIES

- HJ1ABB**, Barranquilla, Colombia. (.3) (Daytime only). "La Voz de Barranquilla." Relays HJ1ABA. Add: Apto 715.
- 9.565 **VUB**, Bombay, India. (4.5). Add: All India Radio, Irwin House, Sprott Road, Ballard Estate.
- YV3RB**, Venezuela. "La Voz de Lara."
- 9.570 **W1XK**, Boston, Mass. (10.) (\*) Tr: Millis. Relays NBC-WBZ-WBA.
- W8XK**, Pittsburgh, Pa. (40.) (\*). This frequency loaned to W1XK.
- 9.575 **HJ2ABC**, Cucuta, Colombia. (.25). "La Voz de Cucuta."
- 9.580 **GSC**, London, Gt. Britain. (.20.). "C for Corporation." See GSA 6.050 mags.
- 3LR**, Melbourne, Australia. Tr: Lyndhurst.
- 9.585 **VK2ME**, Sydney, Australia. (20.). "The Voice of Aust." Tr: Pennant Hills. Int: Laughing notes of kookaburra. Add: Amalgamated Wireless, (A/sia) Ltd., 47 York St.
- 9.590 **PCJ**, Huizen, Netherlands. "The Happy Station." Ann: Dutch, English, French, German, Malay, Portuguese, Spanish. s/o: National anthem. Add: N. V. Philips Radio, Hilversum.
- VK6ME**, Perth, W. A., Australia. (.5). Amalgamated Wireless, (A/sia), Ltd.
- W3XAU**, Philadelphia, Pa. (10.). Tr: Newton Square. Relays CBS-WCAU. Add: 1622 Chestnut St.
- W8XAL**, Cincinnati, Ohio (under const.)
- 9.595 **HBL**, Geneva, Switzerland. (18.). "Radio Nations." Tr: Prangins. Add: M. G. Gallarati, Information Section, League of Nations.
- RAN**, Moscow, USSR.
- 9.600 **CB960**, Santiago de Chile. "Radiodifusora Pilot." s/o: "Rhapsody in Blue." Add: Cia. Internacional de Radio, Casilla 16-D.
- 9.605 **HP5J**, Panama City, Panama. (1.). "La Voz de Panama." Add: Apto 867.
- 9.618 **HJ1ABP**, Cartagena, Colombia. (.75). "Radio Cartagena." Add: Apto 37.
- 9.635 **I2RO**, Rome, Italy. (25.) Ann: "Radio Roma-Napoli." usually by a lady. Add: EJAR, Via Montello 5, Rome.
- 9.640 **CQN**, Macau, Portuguese China.
- 9.645 **HH3W**, Port-au-Prince, Haiti. (.03). Add: Box A-117.
- 9.650 **YDB**, Sourabaya, Java, N.E.I. (1.) (9660).
- 9.660 **LRX**, Buenos Aires, Argentina. (5.). "Radio El Mundo." Relays LRI. Add: Calle Maipú 555.
- 9.665 **CT1AA**, Lisbon, Portugal. (2.). (9650; 9693; 9770). "Radio Coloniale." Int: 3 cuckoos. Add: Senhor Abilio Nunes das Santos Jr., Av. Antonio Augusto d'Aguilar 144.
- 9.670 **TI4NRH**, Heredia, Costa Rica. (9695). Amanda Cespedes Marin, Apto 40.
- 9.675 **DZA**, Berlin, Germany. See DJB 15.200 mags.
- 9.750 **COCQ**, Havana, Cuba. "de la RCA-Victor." Relays CMQ. s/o: "Siboney." Add: Calle 25 No. 445, Vedado.
- WOF**, Lawrenceville, N. J. (\*). Phones Paris.
- 9.840 **J2AA**, Tokyo, Japan. Hameda Airdrome.
- 9.860 **EAQ**, Madrid, Spain. (20.) (varies to 10060). "La Voz de Espana." Tr: Aranjuez Ann: English and Spanish. Broadcasts IBC programs from London. s/o: National anthem "Himno del Reigo." IBC programs s/o "Good Night Waltz." Add: Transradio Espanola, Apto 951.
- 9.870 **WON**, Lawrenceville, N. J. (20.) (\*).
- 9.890 **LSN2**, Buenos Aires, Argentina. Works NYC nights. See LSL1, 7.901 mags.
- 9.940 **CSW**, Lisbon, Portugal. (5.). "Emisora Nacional." "CSW, Confidence, Surety, Wisdom." Add: Rua do Quelhas.
- ..... San Juan, Puerto Rico. (.4). Works Hialeah. Radio Corp. of Puerto Rico.
- 9.950 **GCU**, Rugby, Gt. Britain. (15.). Works NYC nights. See GBW 14.440 mags.
- 9.990 **KAZ**, Manila, Philippine Isl. (40.) (\*).
- 10.000 **WWV**, Beltsville, Md. (1.). Standard frequency transmissions Wednesdays 1315-1415 EST.
- 10.042 **DZB**, Berlin, Germany. See DJB 15.200 mags.
- 10.055 **SUV**, Cairo, Egypt. (10.). Tr: Abu Zabal.
- ZFB**, Hamilton, Bermuda. (1.5). (\*) Tr: St. George. Works NYC days.
- 10.065 **TDE**, Shinkio, Manchukuo. Works Tokyo. Manchukuo Telegraph and Telephone Co., Ltd.
- 10.080 **RIR**, Tiflis, USSR.
- 10.105 **TDB**, Shinkio, Manchukuo. (20.). Works San Francisco. See TDE 10.065 mags.
- 10.125 Aeronautical point-to-point, Blue Chain. Daytime operation only. See 2.720 mags.
- 10.135 **OPM**, Leopoldville, Belgian Congo. Works ORK.
- 10.190 Aeronautical point-to-point, daytime only. Brown Chain. See 2.612 mags.
- 10.220 **PSH**, Rio de Janeiro, Brazil. (12.). Works LSX. Cia Radiotelegrafica Brasileira, Caixa Postal 500.
- 10.230 **CED**, Antofagasta, Chile. Cia. de Telefonos de Chile.
- 10.250 **LSK3**, Buenos Aires, Argentina (5.). Tr: Hurlingham. See LSL1, 7.901.
- 10.260 **PMN**, Bandoeng, Java, N.E.I. (1.5). Works VLJ. Gouvernements Radio-Dienst.
- DZC**, Berlin, Germany. See DJB 15.200 mags.
- 10.300 **LSL2**, Buenos Aires, Arg. Works London and Rio nights. See LSL1, 7.901.
- 10.310 **PPM**, Rio de Janeiro, Brazil.
- 10.330 **ORK**, Brussels, Belgium. (11.). Works Leopoldville and broadcasts. Tr: Ruysselede.
- 10.335 **ZFD**, Hamilton, Bermuda. (1.5) (\*). Tr: St. George.
- 10.350 **LSX**, Buenos Aires, Argentina. (20.). Tr: Monte Grande. Add: Cia. Radiotelegrafica Arg. S. A., San Martin 329.
- 10.370 **EAJ43**, Tenerife, Canary Isl. Add: Apto 225.
- 10.400 **KEZ**, Bolinas, Calif. (\*).
- 10.420 **XGW**, Shanghai, China. See XOJ 15.800.
- 10.430 **TYE3**, Pontoise, France. Works NYC.
- 10.460 **WFD**, New Orleans, La. Press in summer time.
- 10.535 **JIB**, Taihoku, Taiwan. (6.). Tr: Chureki. Works Tokyo. Add: Kokusai Denwa Kaisha, Chureki Station, Chureki Gai, Shinchiku, Taiwan.
- 10.578 **FYB**, Pontoise, France. Time, signals 1955 to 2000 GMT.
- 10.610 **WEA**, Rocky Point, N. Y. (40.) (\*).
- 10.660 **JVN**, Tokyo, Japan. Tr: Nazaki.
- 10.670 **CEC**, Santiago de Chile. (4.). Tr: La Granja. Add: Cia. Internacional de Radio, Casilla 16-D.
- 10.740 **JVM**, Tokyo, Japan. (20.). Tr: Nazaki.
- 10.770 **GCP**, Rugby, Gt. Britain. (15.). Works Sydney. See GBW 14.440 mags.
- 10.840 **KWV**, Dixon, Calif. (20.) (\*). Works Asia.
- 10.955 **HS8PJ**, Bangkok, Siam. (5.). Tr: Sala Daeng. Add: Radio Service, Post & Telegraph Dept.
- 10.990 **ZLT**, Wellington, New Zealand. Works Australia. Add: Post & Telegraph Dept.

## SHORTWAVE STATIONS BY FREQUENCIES

- 11.000 PLP, Bandoeng, Java, N.E.I. (1.5). Gouvernements Radio-Dienst.  
ZLT4, Wellington, New Zealand. See ZLT 10.990 mags.
- 11.018 GBTT, S. S. Queen Mary. See 8.830 mags.
- 11.040 CSW, Lisbon, Port. (5.). Works also on 9.940 and 11.840 mags.
- 11.280 HIN, Trujillo, D. R. (.75). s/o: National anthem. Add: Aptdo 604.
- 11.435 COCX, Havana, Cuba. "La Casa Lavin." (frequency varies widely). Relays CMX. Relays the 9 o'clock curfew cannon shot. Add: Box 32.
- 11.500 PMK, Bandoeng, Java, N.E.I.  
11.540 XGR, Shanghai, China. Works England. See XOJ 15.800.
- 11.595 VRR4, Stoney Hill, Jamaica. Works Hialeah.  
11.660 JVL, Tokyo, Japan. Tr: Nazaki.  
11.670 PPO, Rio de Janeiro, Brazil. Tr: Santa Cruz. Works Europe, SA, Rocky Point irreg. Add: Cia. Radiotelegraphica Brasileira, Caixa Postal 500.
- 11.680 KIO, Kahuku, Hawaii. (\*)  
11.705 SM5SX, Stockholm, Sweden. (.5). Royal Technical University.
- 11.715 TPA4, Paris, France. Tr: Pontoise. "Radio Coloniale." Add: Ministere des Postes, Telegraphes et Telephones, 98 bis, Blvd. Haussmann.
- 11.720 CJRX, Winnipeg, Man. (2.). Add: James Richardson & Sons, 157 Royal Alexandra Hotel.
- 11.730 PHI, Hilversum, Netherlands. (23.6) (Winter frequency). PHOHI. See: PCJ 9.590 mags.
- 11.740 HP5L, David, Chiriqui, Panama. (.35). "Las Ondas del Baru." Add: Aptdo 129.  
11.750 GSD, London, Gt. Britain. (20.). "D for Daventry." Tr: Daventry. Int: Bow Bells; time signal on even hours; Big Ben strikes hours irreg. preceded by Westminster chimes. s/o: God Save the King. Add: British Broadcasting Corp., London W1.
- 11.760 OLR4B, Prague, Czecho. See 15.230 mags.  
11.770 DJD, Berlin, Germany. (8.) See DJB 15.200 mags.
- 11.780 OER2, Vienna, Austria. (1.5) (11778). "Radio Wien."
- 11.790 W1XAL, Boston, Mass. (10.). "Dedicated to Enlightenment." Add: Educational Director, University Club.
- 11.795 DJO, Berlin, Germany. See DJB 15.200 mags.  
11.796 OAX5B, Ica, Peru. (11796-11807). "Radio Universal."
- 11.800 JZJ, Tokyo, Japan. Tr: Nazaki.  
11.810 I2RO4, Rome, Italy. (25.). "Radio Roma-Napoli." Add: usually by a lady. Int: chirping of a bird. s/o: two national anthems, "Giovinezza" and "Marcia Reale." Add: Ente Italiano per le Audizioni Radiofoniche, Via Montello 5.
- 11.820 GSN, London, Gt. Britain. See GSD, 11.750 mags.  
XEBR, Hermosillo, Sonora. Relays XEBH, Add: Aptdo 68
- 11.830 W2XE, New York, N. Y. (10.). Tr: Wayne, N. J. Relays CBS-WABC. s/o: "Star Spangled Banner." Add: Columbia Broadcasting System, 485 Madison Ave., NYC.  
W9XAA, Chicago, Ill. (20.). This transmitter uses aerial directed to the Antipodes. For details see 6.080 mags.
- 11.840 CSW, Lisbon, Port. (5.). Works also on 9.940 and 11.040.  
OLR4A, Prague, Czecho. (35.). See 15.230.  
11.855 DJP, Berlin, Germany. See DJB, 15.200 mags.
- 11.860 GSE, London, Gt. Britain. (20.). "E for Empire." See GSD 11.750 mags.  
YDB, Sourabaya, Java, N.E.I. (1.).  
11.870 W8XK, Pittsburgh, Pa. See W8XK 15.210 mags.
- 11.875 OLR4C, Prague, Czecho. See 15.230.  
11.880 TPA3, Paris, France. See TPA4 11.715 mags.  
11.880 XEXA, Mexico City, D. F. (.1). Add: Secretaria de Educacion Publica.
- 11.895 HP5I, Aguadulce, Panama. "La Voz del Interior." Int: 3 notes on gond. s/o: "El Tambor de la Alegria."
- 11.900 OLR4D, Prague, Czecho. See 15.230.  
XEWI, Mexico City, D. F. (.25) "My Voice to the World from Mexico." Add: Aptdo 2874.
- 11.950 KKQ, Bolinas, Calif. (\*) Relays programs to Hawaii.  
11.955 IUC, Addis Ababa, Ethiopia.  
11.970 H12X, Trujillo, D. R. (.5). J. R. Saladin.  
12.000 RNE, Moscow, USSR. (20.). Programs in English, Czech, Dutch, French, German, Hungarian, Russian, Spanish and Swedish. Int: Kremlin chimes on the hour. s/o: "Internationale." Add: Mme. Inna Marr. Solianka 12.
- 12.150 GBS, Rugby, Gt. Britain. (15.). Works NYC afternoons. See GBW 14.440 mags.
- 12.235 TFI, Reykjavik, Iceland. (7.5). Icelandic State Brdcstg. Service, Box 547.
- 12.290 GBU, Rugby, Gt. Britain. Works NYC nights. See GBW 14.440 mags.
- 12.295 CB615, Santiago, Chile. "Radio Service."  
12.330 Aircraft and aero., Orange Chain. See 2.870 mags. Clipper Service, see 2.986 mags.
- 12.630 NAA/NSS, Arlington, Va. Time signals at 0955 EST.
- 12.830 CNR, Rabat, Morocco. (12.). Direction de l'Office des Postes, des Telegraphes et des Telephones.
- 12.840 WOO, Ocean Gate, N. J. (20.) (\*). Works ships. "Boy" frequency.
- 12.885 NPG, San Francisco, Calif. Time signals at 1655 GMT.
- 13.040 German ships. See 4.413 mags.  
DDBR, S. S. Berlin.  
DDCP, S. S. Cap Polonia.  
DDFF, S. S. Reliance.  
DDFT, S. S. Oceana.  
DHAO, S. S. Hansa.  
DHDL, S. S. Cap Arcona.  
DHEY, S. S. Deutschland.  
DHJZ, S. S. Hamburg.  
DHRL, S. S. New York.  
DOAH, S. S. Bremen.
- 13.050 Italian ships: see 4,280 mags.  
IBEJ, S. S. Conte Rosso.  
IBGI, S. S. Conte Verde.  
IBLI, S. S. Conte di Savoia.  
ICEJ, S. S. Rex.
- 13.075 VPD, Suva, Fiji. s/o: "God Save the King." Add: Amalgamated Wireless, (A/sia) Ltd., Suva.
- 13.190 FNSK, S. S. Normandie. Works Paris afternoons. See FNSK 13.210 mags.
- 13.210 DOAI, S. S. Europa. (.07). See 4.413 mags.  
FNSK, S. S. Normandie. Works WOO afternoons. Add: French Lines, Pier 88, North River, Foot of W. 48th St., NYC.
- 13.320 British Ships, see 8.830 mags.  
GBZW, S. S. Berengaria.  
GDLJ, S. S. Homeric.

## SHORTWAVE STATIONS BY FREQUENCIES

	GFVW, S. S. Majestic.	14.940	HJR, Trujillo, D. R. Works WNC daily.
	GLRZ, S. S. Aquitania.		HJAS, Barranquilla, Colombia. Works WNC
13.337	YVQ, Maracay, Venezuela. Works WNC days.	14.960	ROU, Moscow, USSR.
13.380	IDU, Asmara, Eritrea. Works Rome.		YSL, San Salvador, El Salvador. Add: Telegrafos, Telefonos y Radio Nacionales.
13.410	WCT, San Juan, Puerto Rico. (.4). Works WNC. Add: Radio Corp. of Puerto Rico.	14.970	LZA, Sofia, Bulgaria. "Radio Sofia."
13.530	TDH, Shinkio, Manchukuo. Works Berlin.	14.980	KAY, Manila, Philippine Isl. (*). Works Germany, England mornings; KWU nights.
13.585	GBB, Rugby, Gt. Britain. Works Canada and Egypt. See GBW 14.440 mags.	15.000	WWV, Beltsville, Md. Standard frequency transmissions.
13.635	SPW, Warsaw, Poland. Tr: Babice.	15.040	RKI, Moscow, USSR.
13.690	KKZ, Bolinas, Calif. (*). Works Asia.	15.055	WNC, Miami, Fla. (.4) (*). Tr: Hialeah. Works CA, SA and West Indies daily.
13.745	CGA2, Drummondville, P. Q. Works Ships.	15.080	RKI, Moscow, USSR.
13.760	TYE2, Pontoise, France. (20.). Works NYC. Add: 79 Blvd. Haussmann, Paris.		RV96, Moscow, USSR.
13.780	KKW, Bolinas, Calif. (*).	15.110	DJL, Berlin, Germany. See DJB 15.200 mags.
13.820	SUZ, Cairo, Egypt. Tr: Abu Zabal. Phones Germany, England.	15.116	OLR5C, Prague, Czecho. See 15.230.
13.880	VJZ, Raboul, New Guinea.	15.120	HVJ, Vatican City. (10.). Int: ticking of clock. Ann: "Laudatur Jesus Christus." Add: Pontificia Accademia Della Scienze, Roma-Castina Pio IV.
13.900	WQP, Rocky Point, N. Y. (*). Works Europe.	15.140	GSF, London, Gt. Britain. (15.). "F for Fortune." See GSD 11.750 mags.
13.980	TDC, Shinkio, Manchukuo. Works San Francisco.	15.150	YDC, Bandoeng, Java, N.E.I. (3.).
13.990	GBA2, Rugby, Gt. Britain. Works SA. See GBW 14.440 mags.	15.160	JZK, Tokyo, Japan.
14.000 to		15.175	RV96, Moscow, USSR.
14.400	Amateurs. Amateur 'phones are heard between 14.150 and 14.250 mags. Foreign amateurs usually work on the upper and lower edges of the band.	15.180	G50, London, Gt. Britain. See GSD 11.750 mags.
14.440	GBW, Rugby, Gt. Britain. (15.). Works WMA, WMF. Uses Inverted Speech and sometimes a "wobbled carrier" as well. Add: G. P. O., Armour House, St. Martin's le Grande, London EC1.	15.190	ZBW4, Hong Kong. (2.4). Add: Box 200.
14.460	DZH, Berlin, Germany. See DJB, 15.200 mags.	15.200	DJB, Berlin, Germany. (8.). Tr: Zeesen. Int: Music box tune. s/o: Two national anthems. Add: Reichs-Rundfunk-Gesellschaft, Haus des Rundfunk, Masurenallee, Berlin-Charlottenburg 9.
14.470	WMF, Lawrenceville, N. J. (*). Works Rugby.	15.210	WSXK, Pittsburgh, Pa. (40.) (*). Tr: Saxonburg. Relays NBC-KDKA.
14.480	YNA, Managua, Nicaragua. Works WNC daily.	15.220	PCJ, Huizon, Netherlands. See PCJ 9.590 mags.
14.485	YSJ, San Salvador, El Salvador. Works WNC daily. Add: Telegrafos, Telefonos y Radio Nacionales.	15.230	OLR5A, Prague, Czechoslovakia. (35.) "Radio Podebrady." Tr: Podebrady. Int: trumpet tune from New World Symphony. Add: Praha XII. Fochova Tr. 16.
	HRL5, La Lima, Honduras. Works WNC daily.	15.245	TPA2, Paris, France. See TPA4 11.715 mags.
	HRM, Tegucigalpa, Honduras. Works WNC daily.	15.250	W1XAL, Boston, Mass. (10.). "Dedicated to Enlightenment." Add: University Club.
14.500	LSM2, Buenos Aires, Arg. Works Madrid, Paris, Berlin, morning and evening. Add: Defensa 143.	15.260	GSI, London, Gt. Britain. "I for Island." See GSD 11.750 mags.
14.530	LSN1, Buenos Aires, Arg. Works NYC morning and evening. Add: Defensa 143.	15.270	W2XE, New York, N. Y. See 11.830 mags.
14.545	HPF, Panama City, Panama. Works WNC daily.	15.280	DJQ, Berlin, Germany. See DJB 15.200 mags.
	TGF, Guatemala City, Guat. Works WNC daily.		LRU, Buenos Aires, Argentina. "Radio El Mundo." Relays LRL. Add: Calle Maipu 555.
	TIU, Cartago, Costa Rica. Works WNC daily. Add: Cia. Radiografica Int. de C. R.	15.300	XEBM, Mazatlan, Sin. (.05). (15440). Ignacio L. Saiz.
14.590	WMN, Lawrenceville, N. J. (20.) (*). Works Rugby.	15.310	GSP, London, Gt. Britain. "P for Progress." See GSD 11.750 mags.
14.635	GBL, Rugby, Gt. Britain. Works Japan. See GBW 14.440 mags.	15.320	OLR5B, Prague, Czecho. See 15.230.
14.640	JVH, Tokyo, Japan. (20.) Tr: Nazaki.	15.330	W2XAD, Schenectady, N. Y. (25.). Relays NBC-WGY. See W2XAF 9.530 mags.
14.800	WQV, Rocky Point, N. Y. (*).	15.340	DJR, Berlin, Germany. See DJE 17.760 mags.
14.845	OCJ2, Lima, Peru. Phones SA.	15.355	KWU, Dixon, Calif. (15.). Works Hawaii, Philippines, Japan. Add: Trans-pacific Communication Co., 140 New Montgomery St., San Francisco.
14.910	JVG, Tokyo, Japan.	15.360	DZG, Berlin, Germany. See DJE, 17.760 mags.
14.915	LZA, Sofia, Bulgaria. s/o: national anthem.		
14.930	HJB, Bogota, Colombia. Works WNC and SA daily.		

## SHORTWAVE STATIONS BY FREQUENCIES

- 15.370 **HAS3**, Budapest, Hungary (20.). See **HAT4** 9.125 megs.
- 15.415 **KWO**, Dixon, Calif. (20.). Works N.E.I. and Japan nights. See **KWU** 15.355 megs.
- 15.800 **XOJ**, Shanghai, China. Chinese Gov't. Radio Administration, Sassoon House, Jinkee Road.
- 15.810 **LSL3**, Buenos Aires, Arg. Works London and Rio, morn. and evening. Add: Defensa 143.
- 15.905 **TDI**, Shinkio, Manchukuo. Works Berlin.
- 16.140 **GBX**, Rugby, Gt. Britain. Works SA. Uses inverted speech. Add: G.P.O., Armour House, St. Martins le Grand, London. EC1.
- 16.440 Aircraft and aeronautical, Orange Chain: See 2.870 megs.  
**Cilpper Service**, see 2.986 megs.
- 16.460 **DHEY**, S. S. Deutschland. Works DAF, WOO. Add: North German Lloyd, Pier 4, Foot of 58th St., Brooklyn.
- 16.600 **DOAI**, S. S. Europa. See **DHEY** 16.460 megs.
- 16.765 **DHTY**, S. S. Resolute.
- 16.820 **NAA**, Arlington, Va. Time signals at 0955 EST.
- 17.080 **GBC**, Rugby, Gt. Britain. (5.). Works ships. See **GBX** 16.140 megs.
- 17.120 **WOO**, Ocean Gate, N. J. (20.) (\*). Works ships. "Able" frequency.
- 17.225 **ICEJ**, S. S. Rex.
- 17.310 **W3XL**, New York, N. Y. (20.). See **W3XAL** 6.100 megs.
- 17.480 **VWY2**, Kirkee, Poona, India. Works GAU mornings. Indian Radio and Cable Communications Co., Ltd., Poona 6.
- 17.755 **ZBW5**, Hong Kong. (2.4) Add: Box 200.
- 17.760 **DJE**, Berlin, Germany. Tr: Zeesen. Int: music box tune. s/o: two national anthems. Add: Reichs-Rundfunk-Gesellschaft, Haus des Rundfunks, Masurenallee, Berlin-Charlottenburg 9.
- W2XE**, New York, N. Y. (10.) See 11.830 megs.
- 17.775 **PHI**, Hilversum, Netherlands. (23.6). Summer frequency. See **PCJ** 9.590 megs.
- 17.780 **W3XAL**, New York, N. Y. (35.) See 6.100 megs.
- W8XK**, Pittsburgh, Pa. (40.). (Not used at present).
- W9XAA**, Chicago, Ill. (5.) (Not used at present).
- W9XF**, Chicago, Ill. (10.) (Not used at present).
- 17.785 **JZL**, Tokyo, Japan.
- 17.790 **GSQ**, London, Gt. Britain. (15.). "G for Greeting." Tr: Daventry. Int: Bow Bells; time signal on even hours; Big Ben strikes hours irreg. preceded by Westminster Chimes. s/o: "God Save the King." Add: British Brdcstg. Corp., London W1.
- 18.090 **TYE**, Pontoise, France. Works NYC. See **TYE2**, 13.760.
- 18.270 **IUD**, Addis Ababa, Ethiopia.
- 18.310 **GAS**, Rugby, Gt. Britain. Works NYC mornings. See **GBX** 16.140 megs.
- 18.350 **WLA**, Lawrenceville, N. J. (\*). Works London mornings
- 18.620 **GAU**, Rugby, Gt. Britain. (15.). Works India, NYC and Capetown. See **GBX** 16.140 megs.
- 18.830 **PLE**, Bandoeng, Java, N.E.I. (40.). Works Dixon nights and Tokyo mornings. Governments Radio-Dienst.
- 19.140 **LSM3**, Buenos Aires, Arg. Works Madrid, Berlin, Paris, days. Add: Defensa 143.
- 19.480 **GAD**, Rugby, Gt. Britain. Works Kenya Colony. See **GBX** 16.140 megs.
- 19.630 **VQG**, Nairobi, Kenya Colony. Works London. Cable & Wireless, Ltd. Box 777
- 20.380 **GAA**, Rugby, Gt. Britain. (15.). See **GBX** 16.140 megs.
- 21.020 **LSN6**, Buenos Aires, Arg. Works NYC days. Defensa 143.
- 21.160 **LSL4**, Buenos Aires, Arg. Works London and Rio, days. Add: Defensa 143.
- 21.450 **OLR6A**, Prague, Czecho. See 15.230.
- 21.460 **W1XAL**, Boston, Mass. (10.) (Not used at present).
- 21.470 **GSH**, London, Gt. Britain. "H for Home." See **GSQ** 17.790 megs.
- 21.480 **W2XAD**, Schenectady, N. Y. (Not used at present).
- 21.520 **JZM**, Tokyo, Japan.
- W2XE**, New York, N. Y. See 11.830 megs.
- 21.530 **G5J**, London, Gt. Britain. "J for Justice." See **GSQ** 17.790 megs.
- 21.540 **W8XK**, Pittsburgh, Pa. (\*). Tr: Saxonburg. Relays NBC-KDKA. Westinghouse Electric & Mfg. Co.
- 25.950 **W4XH**, Spartanburg, S. C. (.05) (WSPA)  
**W6KKG**, Los Angeles, Calif. (.1) (KGFJ)
- 26.100 **GSK**, London, Gt. Britain. "K for King." See **GSQ** 17.790 megs.
- ..... Charleston, W. Va. (.05) (WCHS)  
**W9XAZ**, Milwaukee, Wis. (.5) (WTMJ)
- 26.400 to 28.000  
30.000 Amateurs. Amateur 'phones are used between 28 and 29 megs.
- 30.100 Police Emergency Stations, experimental.
- 30.604 **IAG**, Golfo Aranci, Sardinia. (5.)
- 31.600 **W1XEQ**, Fairhaven, Mass. (.1) (WNBH).  
**W1XER**, Boston, Mass. (.5) (WNAC)  
**W1XKA**, Boston, Mass. (.05) (WNBZ)  
**W1XKB**, E. Springfield, Mass. (.5) (WBZA)  
**W2XDG**, New York, N. Y. (5.) (WEAF-WJZ)  
**W2XDV**, New York, N. Y. (WABC)  
**W2XHG**, Bound Brook, N. J. (.15) (WJZ)  
**W3XES**, Baltimore, Md. (.3) (WCAO)  
**W3XEX**, Norfolk, Va. (.05) (WTAR)  
**W3XEY**, Baltimore, Md. (.1) (WFBR)  
**W3XKA**, Philadelphia, Pa. (.05) (KYW)  
**W4XBW**, Chattanooga, Tenn. (.1) (WDOD)  
**W4XCA**, Memphis, Tenn. (.25) (WMC)  
**W5XAU**, Oklahoma City, Okla. (.1) (WKY)  
**W6XAS**, San Francisco, Calif. (.01) (KJBS)  
**W8XAI**, Rochester, N. Y. (.1) (WHAM)  
**W8XH**, Buffalo, N. Y. (.1) (WBN)  
**W8XKA**, Pittsburgh, Pa. (.15) (KDKA)  
**W8XWJ**, Detroit, Mich. (.1) (WWJ)  
**W9XBS**, Chicago, Ill. (2.5) (WENR).  
**W9XER**, Kansas City, Mo. (.05) (KMBC).  
**W9XHW**, Minneapolis, Minn. (.05) (WCCO).  
**W9XJL**, Superior, Wis. (.08) (WEBC).  
**W9XOK**, St. Louis, Mo. (.1).  
**W9XPD**, St. Louis, Mo. (.1) (KSD).
- 33.100 Police Emergency Stations.
- 35.600 High Frequency Broadcasting Stations. Same as 31.600 megs.
- 37.100 Police Emergency Stations.
- 38.600 High Frequency Brdcstg. Stations. Same as 31.600.
- 40.100 Police Emergency Stations.
- 41.000 High Frequency Brdcstg. Stations. Same as 31.600.
- 56.000 to 60.000 Amateurs. Amateur 'phones are heard in the entire band.
- 110.000 megs. to infinity. Amateurs.



# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

## KEY TO SYMBOLS

Frequency is given in kilocycles; wave lengths 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.

- |  |   |   |
|--|---|---|
| <p><b>Second Column Symbols</b></p> <p>a Verifies reception for return postage.</p> <p>b Verifies only occasionally.</p> <p>c Does not verify.</p> <p>d Verification 10c; letter 25c.</p> <p>h Sends own station stamp for 10c.</p> <p>i Sends own station stamp for 5c.</p> <p>j Sends own station stamp for postage.</p> <p>k Has no stamps.</p> <p>m Verifies for 5c.</p> | <p>n Weather or time only.</p> <p>z No information available.</p> <p><b>Fourth Column Symbols</b></p> <p>B National "Blue" network.</p> <p>C Columbia network.</p> <p>D Day time only.</p> <p>Dn Day time with occasional evening hours.</p> <p>F Canadian Brdcstg. Corp.</p> <p>M Mutual Brdcstg. Sys.</p> <p>N National "Red" and "Blue" networks.</p> <p>P Has construction permit only.</p> | <p>R National "Red" network.</p> <p>S Sunday only.</p> <p>Sy Synchronized.</p> <p>X Has permit to increase power.</p> <p>Y Has permit to change location.</p> <p>Z Has permit to change frequency.</p> <p>a-b-c. Small letters show stations using same transmitter.</p> <p>1-2-3. Figures denote stations sharing time.</p> <p>..... No information.</p> |
|--|---|---|

### 540 kcys. (555.2)

CJRM ak 1000 F ..... Regina, Sask.

WCHS	ak 500	C (1)	Charleston, W. Va.
WDBO	ak 1000		Orlando, Fla.
WIBW	ak 1000	C2 (5)	Topeka, Kans.
WTAG	ak 1000	R	Worcester, Mass.
XELQ	ak 5000		Piedras Negras, Coah.

### 550 kcys. (545.1)

CFNB	mk 500	F (1)	Fredericton, N. B.
KFUO	ak 500	2 (1)	St. Louis, Mo.
KFYR	ak 1000	N (5)	Bismarck, N. D.
KOAC	ak 1000		Corvallis, Ore.
KSD	ak 1000	2R (5)	St. Louis, Mo.
KTSA	ak 1000	C (5)	San Antonio, Tex.
WDEV	ak 500	D	Waterbury, Vt.
WGR	ak 1000	C	Buffalo, N. Y.
WKRC	ak 1000	C (5)	Cincinnati, Ohio
WSVA	ak 500	D	Harrisonburg, Va.
XEFC	ak 100		Merida, Yuc.

### 590 kcys. (508.2)

KHO	ak 1000	R (2.5)	Spokane, Wash.
WEEI	ak 1000	C (5)	Boston, Mass.
WKZO	ak 1000	D	Kalamazoo, Mich.
WOW	ak 5000	R	Omaha, Nebr.

### 560 kcys. (535.4)

KFDM	ak 500	(1)	Beaumont, Tex.
KLZ	ak 1000	C (5)	Denver, Colo.
KSFO	ak 1000	C	San Francisco, Cal.
KWTO	ak 5000	D	Springfield, Mo.
WFIL	ak 1000	BM	Philadelphia, Pa.
WIND	ak 1000	(5)	Gary, Ind.
WIS	ak 1000	N (5)	Columbia, S. C.
WOAM	ak 1000	C	Miami, Fla.
XEAO	ak 250		Mexicali, L. C.

### 600 kcys. (499.7)

CFCE	ak 400	FN	Montreal, Que.
CJOR	ak 500		Vancouver, B. C.
CMW	ak 1400		Havana, Cuba
CRCW	ak 500	F (1)	Windsor, Ont.
KFSB	ak 1000	B	San Diego, Calif.
WCAO	ak 500	C (1)	Baltimore, Md.
WICC	ak 500	BM (1)	Bridgeport, Conn.
WMT	ak 1000	BM (5)	Cedar Rapids, Ia.
WREC	e 1000	C (5)	Memphis, Tenn.

### 570 kcys. (526.0)

CMCX	z 150	.....	Havana, Cuba
KGKO	ak 250	C (1) Y	Wichita Falls, Tex.
KMTR	ak 1000		Hollywood, Calif.
KVI	ak 1000	C (5)	Tacoma, Wash.
WKBN	ak 500	1C	Youngstown, Ohio
WMCA	ak 1000		New York, N. Y.
WNAX	ak 1000	C (5)	Yankton, S. D.
WOSU	ak 750	1 (1)	Columbus, Ohio
WSYR	ak 1000	B	Syracuse, N. Y.
WWNC	ak 1000	N	Asheville, N. C.

### 610 kcys. (491.5)

KFRC	ak 1000	M (5)	San Francisco, Cal.
WDAF	ak 1000	R (5)	Kansas City, Mo.
WIP	ak 1000		Philadelphia, Pa.
WJAY	ak 500	D	Cleveland, Ohio
XEXM	ak 500		Mexico City, D. F.

### 580 kcys. (516.9)

CFPR	ak 50	.....	Prince Rupert, B. C.
CHRC	ak 100	F	Quebec, Que.
CKCL	ag 100	F	Toronto, Ont.
CKUA	ak 500		Edmonton, Alta.
KMJ	ak 500	N (1)	Fresno, Calif.
KSAC	ak 500	2 (1)	Manhattan, Kans.

### 620 kcys. (483.6)

KGW	ak 1000	R (5)	Portland, Ore.
KTAR	ak 1000	N	Phoenix, Ariz.
WFLA	ak 1000	Na (5)	Clearwater, Fla.
WHJB	ak 250	DC	Greensburg, Pa.
WLBZ	ak 500	CM (1)	Bangor, Maine
WSUN	ak 1000	Na (5)	St. Petersburg, Fla.
WTMJ	ak 1000	N (5)	Milwaukee, Wis.

### 630 kcys. (475.9)

CFCO	ak 100	F	Chatham, Ont.
CFCY	ak 1000	F	Charlottetown, P. E. I.
CJRC	ak 500	F (1)	Winnipeg, Man.
CKOV	ak 100	F	Kelowna, B. C.
KFRU	ak 500	1 (1)	Columbia, Mo.
KGFX	ak 200	D	Pierre, S. D.

## NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

WGBF ak 500 1 NX ..... Evansville, Ind.  
 WMAL ak 250 B (5) ..... Washington, D. C.  
 WPRO ak 500 C (1) ..... Providence, R. I.  
 XEZ z 500 ..... Merida, Yuc.

640 kcys. (468.5)

CMCB ak 150 ..... Havana, Cuba  
 KFI ak 50000 R ..... Los Angeles, Calif.  
 WGAN z 500 DP ..... Portland, Me.  
 WHKC ak 500 ..... Columbus, Ohio  
 WOI ak 5000 D ..... Ames, Iowa  
 XEBX z 250 ..... Sabinas, Coah.

650 kcys. (461.3)

WSM ak 50000 NM ..... Nashville Tenn.

660 kcys. (454.3)

WAAW ak 500 D ..... Omaha, Neb.  
 WFAF ak 50000 R ..... New York, N. Y.  
 XEAL z 1000 ..... Mexico City, D. F.

670 kcys. (447.5)

WMAQ ak 50000 N ..... Chicago, Ill.

680 kcys. (440.9)

CMCG ak 1000 ..... Havana, Cuba  
 KFEQ ak 2500 D ..... St. Joseph, Mo.  
 KPO ak 50000 R ..... San Francisco, Cal.  
 VAS akn 2000 685 ..... Glace Bay, N. S.  
 VOWR ck 500 681 ..... St. John's, Nfld.  
 WPTF ak 1000 N (5) ..... Raleigh, N. C.

690 kcys. (434.5)

CFRB ak 10000 C ..... Toronto, Ont.  
 CJCJ ak 100 F ..... Calgary, Alta.  
 XET ak 500 ..... Monterrey, N. L.

700 kcys. (428.3)

WLW ak 500000 NM ..... Cincinnati, Ohio

710 kcys. (422.3)

KIRO ak 1000 ..... Seattle, Wash.  
 KMPC ak 500 ..... Beverly Hills, Cal.  
 WOR ak 50000 M ..... Newark, N. J.

720 kcys. (416.4)

WGN ak 50000 M ..... Chicago, Ill.  
 XEH ak 250 ..... Monterrey, N. L.

730 kcys. (410.7)

CFPL ak 100 F ..... London, Ont.  
 CJCA ak 1000 F ..... Edmonton, Alta.  
 CKAC ak 5000 C ..... Montreal, Que.  
 CKPR ak 100 F ..... Fort William, Ont.  
 CMK ak 3000 ..... Havana, Cuba  
 XEBC ak 5000 ..... Agua Caliente, L. C.  
 XEPN ak 100000 ..... Piedras Negras, Ch.

740 kcys. (405.2)

KMMJ ak 1000 D ..... Clay Center, Neb.  
 KTRB ak 250 D ..... Modesto, Calif.  
 WHEB ak 250 D ..... Portsmouth, N. H.  
 WSB ak 50000 N ..... Atlanta, Ga.

750 kcys. (399.8)

CMCW dk 150 ..... Havana, Cuba  
 KGU aj 2500 N ..... Honolulu, T. H.  
 WJR ak 50000 C ..... Detroit, Mich.  
 XEAM ak 25 ..... Matamoros, Tams.

760 kcys. (394.5)

CMFX ak 200 ..... Cienfuegos, Cuba  
 KXA ak 250 (5) ..... Seattle, Wash.  
 WBAL ak 2500 BMSy ..... Baltimore, Md.  
 WEW ak 1000 D ..... St. Louis, Mo.  
 WJZ ak 50000 BSy ..... New York, N. Y.  
 XEOK ak 2500 ..... Tijuana, B. Cfa.

770 kcys. (389.4)

CMBS ak 150 ..... Havana, Cuba  
 KFAB ak 10000 CSy ..... Lincoln, Neb.  
 WBBM ae 50000 CSy ..... Chicago, Ill.

780 kcys. (384.4)

CHWK dk 100 F ..... Chilliwack, B. C.  
 CKSO ak 1000 F ..... Sudbury, Ont.  
 CMJK ak 250 ..... Camaguey, Cuba  
 KEHE ak 1000 (5) ..... Los Angeles, Calif.  
 KFDY ak 1000 D ..... Brookings, S. D.  
 KFQD ck 250 ..... Anchorage, Alaska  
 KGHL ak 1000 N (5) ..... Billings, Mont.  
 WEAN ak 1000 MB ..... Providence, R. I.  
 WMC ak 1000 N (5) ..... Memphis, Tenn.  
 WTAR ak 500 NX (1) ..... Norfolk, Va.  
 XEL z 1000 ..... Mexico City, D. F.

790 kcys. (379.5)

CMGH ak 500 ..... Matanzas, Cuba  
 KGO ak 7500 B ..... San Francisco, Cal.  
 KOAM z 1000 D1P ..... Pittsburg, Kans.  
 WGY ak 50000 R ..... Schenectady, N. Y.

800 kcys. (374.8)

HIX ak 800 ..... Trujillo, D. R.  
 WBAP ak 50000 Na ..... Fort Worth, Tex.  
 WFAA ak 50000 Na ..... Dallas, Tex.  
 WTBO ak 250 D ..... Cumberland, Md.

810 kcys. (370.2)

CMCF ak 600 ..... Havana, Cuba  
 WCCO ak 50000 C ..... Minneapolis, Minn.  
 WNYC ak 1000 D ..... New York, N. Y.  
 XEXC z 350 ..... Aguascalientes, Ags.

820 kcys. (365.6)

CMHW ak 100 ..... Cienfuegos, Cuba  
 WHAS aj 50000 C ..... Louisville, Ky.  
 XEBG z 1000 ..... Tijuana, B. Cfa.

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

## 830 kcys. (361.2)

CMJX	ak 500		Camaguey, Cuba
KOA	ak 5000	N	Denver, Colo.
WEHU	ak 1000	D	Reading, Pa.
WHDH	ak 1000	Dn	Boston, Mass.
WRUF	ak 5000	Dn	Gainesville, Fla.

## 840 kcys. (356.9)

CFQC	ak 100	F	Saskatoon, Sask.
CRCT	ak 5000	FN	Toronto, Ont.
VOGY	ak 400		St. John's, Nfld.
XERA	ck 350000		Villa Acuna, Coah.

## 850 kcys. (352.7)

KIEV	ak 250	D	Glendale, Calif.
TIEP	z 500		San Jose, C. R.
WESG	ak 1000	CD	Elmira, N. Y.
WKAR	ak 1000	D	East Lansing, Mich.
WWL	ak 10000	C	New Orleans, La.

## 860 kcys. (348.6)

WABC	ak 50000	C	New York, N. Y.
WHB	ak 1000	DM	Kansas City, Mo.
XEMO	ak 5000		Tijuana, L. C.
XENC	z 50		Mexico City

## 870 kcys. (344.6)

WENR	ak 50000	Na	Chicago, Ill.
WLS	ak 50000	Na	Chicago, Ill.
XEFB	ak 200		Monterrey N. L.

## 880 kcys. (340.7)

CFJC	ak 100	F	Kamloops, B. C.
CMQ	ak 500		Havana, Cuba
CRCO	ak 1000	F	Ottawa, Ont.
KFKA	ak 500	2 (1) M	Greeley, Colo.
KLX	ak 1000		Oakland, Calif.
KPOF	ak 500	2	Denver, Colo.
WCOC	ak 500	(1) C	Meridian, Miss.
WGBI	ak 500	1	Scranton, Pa.
WPHR	ak 500	DY	Petersburg, Va.
WQAN	ak 250	1	Scranton, Pa.
WSUI	ak 500	(1)	Iowa City, Iowa

## 890 kcys. (336.9)

KARK	ak 500	(1) N	Little Rock, Ark.
KFNF	ak 500	2 (1)	Shenandoah, Iowa
KFPY	ak 1000	C (5)	Spokane, Wash.
KUSD	ak 500	2	Vermillion, S. D.
WBAA	ak 500	(1)	W. Lafayette, Ind.
WGST	ak 1000	C (5)	Atlanta, Ga.
WILL	ak 250	(1) XZ	Urbana, Ill.
WJAR	ak 1000	R	Providence, R. I.
WMMN	ak 500	C (1)	Fairmont, W. Va.
XEW	ak 50000		Mexico City, D. F.

## 900 kcys. (333.1)

KGBU	ak 500	X	Ketchikan, Alaska
KHJ	ak 1000	M (5)	Los Angeles, Calif.
KSEI	ak 250	(5)	Pocatello, Idaho
WBEH	ak 1000	R (5)	Buffalo, N. Y.
WELI	ak 500	D	New Haven, Conn.
WFMD	ak 500	D	Frederick, Md.
WJAX	ak 1000	N (5)	Jacksonville, Fla.
WKY	ak 1000	N (5)	Oklahoma City, Okla.

WLBL	ak 2500	DX	Stevens Point, Wis.
WTAD	ak 1000	D	Quincy, Ill.

## 910 kcys. (329.6)

CJAT	ak 1000	F	Trail, B. C.
CKY	ak 15000	F	Winnipeg, Man.
CRCM	ak 5000	F	Montreal, Que.
XENT	ak 150000		Nuevo Laredo, Tams.

## 920 kcys. (325.9)

CMX	ak 1000		Havana, Cuba
HHK	ak 1000		Port-au-Prince, Haiti
KFEL	ak 500	aM	Denver, Colo.
KOMO	ak 1000	R (5)	Seattle, Wash.
KPRC	ak 1000	N (5)	Houston, Texas
KVOD	ak 500	aB	Denver, Colo.
WAAF	ak 1000	D	Chicago, Ill.
WORL	ak 500	D	Boston, Mass.
WPEN	ak 250	(5) 1	Philadelphia, Pa.
WRAX	ak 250	1 (5)	Philadelphia, Pa.
WSPA	ak 1000	D	Spartanburg, S. C.
WWJ	ak 1000	R (5)	Detroit, Mich.
XEAA	ak 200		Mexico, L. C.

## 930 kcys. (322.4)

CFAC	ak 100	F	Calgary, Alta.
CFCH	ak 100	F	North Bay, Ont.
CFLO	ak 100		Prescott, Ont.
CHNS	ak 1000	F	Halifax, N. S.
CKPC	ak 100	F	Brantford, Ont.
KMA	ak 1000	(5)	Shenandoah, Iowa
KROW	ak 1000		Oakland, Calif.
WBRC	ak 1000	C	Birmingham, Ala.
WDBJ	ak 1000	C (5)	Roanoke, Va.
XEBH	ak 500		Hermosillo, Sonora

## 940 kcys. (319.0)

KOIN	ak 1000	C (5)	Portland, Ore.
VOAS	ak 100		St. John's, Nfld.
WAAT	ak 500	D	Jersey City, N. J.
WAVE	ak 1000	N	Louisville, Ky.
WCBS	ak 1000	R (2.5)	Portland, Maine
WDAX	ak 1000	N (5)	Fargo, N. D.
WHA	ak 5000	D	Madison, Wis.
WICA	z 250	DP	Ashtabula, Ohio
XEFO	ak 5000	(XFO)	Mexico City, D. F.
XEYO	z 500		Mexico City, D. F.

## 950 kcys. (315.6)

CJOC	ak 100	F	Lethbridge, Alta.
CMCD	ak 250		Havana, Cuba
CRCS	ak 100	F	Chicoutimi, Que.
KFWB	ak 1000	(5)	Hollywood, Calif.
KHSL	ak 250	Dz	Chico, Calif.
KMBC	ak 1000	C (5)	Kansas City, Mo.
WRC	ak 500	R (1)	Washington, D. C.
	z 500	DP	Saginaw, Mich.

## 960 kcys. (312.3)

CFRN	ak 100	F	Edmonton, Alta.
CHNC	ak 1000	F	New Carlisle, Que.
XEAW	ck 50000		Reynosa, Tams.

## 970 kcys. (309.1)

CMBY	z 150		Havana, Cuba
KJR	ak 5000	B	Seattle, Wash.

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

WCFL ak 5000 B ..... Chicago, Ill.  
 WIBG ak 100 D ..... Glenside, Pa.

980 kcys. (306.0)

KDKA c 50000 B ..... Pittsburgh, Pa.  
 XEAC ak 250 ..... Tijuana, B. Cfa.

990 kcys. (302.8)

WBZ c 50000 BSy ..... Boston, Mass.  
 WBZA c 1000 BSy ..... Springfield, Mass.  
 XEAF ak 750 ..... Nogales, Sonora  
 XEK ak 100 ..... Mexico City, D. F.  
 XES dk 250 ..... Tampico, Tams.

1000 kcys. (299.8)

CMBZ ak 500 (1) ..... Havana, Cuba  
 KFVD ak 250 DnX ..... Los Angeles, Calif.  
 VOCM z 200 (1006) ..... St. John's, Nfld.  
 WHO ak 50000 R ..... Des Moines, Iowa  
 XEBI ak 25 ..... Aguascalientes, Ags.  
 XEBK ak 100 ..... Nuevo Laredo, Tams.  
 XEXS z 100 ..... Portable in Mexico

1010 kcys. (296.9)

CHML ak 100 F ..... Hamilton, Ont.  
 CKDC ak 100 1 ..... Vancouver, B. C.  
 CKCK ak 500 F ..... Regina, Sask.  
 CKCO ak 100 F ..... Ottawa, Ont.  
 CKIC ak 50 ..... Wolfville, N. S.  
 CKWX ak 100 F 1 ..... Vancouver, B. C.  
 CMJA ak 300 ..... Camaguey, Cuba  
 KGF ak 1000 2 ..... Coffeyville, Kans.  
 KQG ak 1000 ..... San Jose, Calif.  
 WEN ak 1000 (5) ..... New York, N. Y.  
 WNAD ak 1000 2 ..... Norman, Okla.  
 WNOX ak 1000 C (2) ..... Knoxville, Tenn.  
 XEU ak 250 ..... Veracruz, Ver.

1020 kcys. (293.9)

KYW ak 10000 R ..... Philadelphia, Pa.  
 WDZ ak 250 D ..... Tuscola, Ill.  
 XEJ ak 1000 ..... Juarez, Chih.

1030 kcys. (291.1)

CFCN ak 10000 ..... Calgary, Alta.  
 CKLW ak 5000 M ..... Windsor, Ont.  
 CMCY ak 5000 ..... Havana, Cuba  
 XEB ak 10000 ..... Mexico City, D. F.

1040 kcys. (288.3)

KRLD ak 10000 C ..... Dallas, Texas  
 KWJJ ak 500 D ..... Portland, Ore.  
 KYOS z 250 D ..... Merced, Calif.  
 WTIC ah 50000 R ..... Hartford, Conn.

1050 kcys. (285.5)

CMKD ak 250 ..... Santiago, Cuba  
 CRCK ak 1000 F ..... Quebec, Que.  
 KFBI ak 5000 Dn ..... Abilene, Kans.  
 KNX ak 50000 C ..... Los Angeles, Calif.  
 WEAU z 1000 DP ..... Eau Claire, Wis.  
 WGVA z 1000 DP ..... Indianapolis, Ind.

1060 kcys. (282.8)

KTHS ak 10000 N ..... Hot Springs, Ark.  
 VOAC z 40 1065 ..... St. John's, Nfld.  
 WBAL ak 10000 BM ..... Baltimore, Md.  
 WJAG ak 1000 D ..... Norfolk, Neb.  
 W3XJ z 100 P ..... College Park, Md.  
 XEAD ak 125 ..... Guadalajara, Jal.  
 XEMG z 100 ..... Atcaputzaco, D. F.  
 ..... z 100 P ..... College Park, Md.

1070 kcys. (280.2)

CMBX ak 500 ..... Havana, Cuba  
 CMHA z 50 ..... Saguala Grande, O.  
 IGJS ak 500 ..... San Francisco, Cal.  
 WCAZ ak 100 D ..... Carthage, Ill.  
 WTAM ak 50000 R ..... Cleveland, Ohio

1080 kcys. (277.6)

WBT ak 50000 C ..... Charlotte, N. C.  
 WCBD ak 5000 1Dn ..... Chicago, Ill.  
 WMBI ak 5000 1Dn ..... Chicago, Ill.  
 XEBI z 20 ..... Guzman, Jal.

1090 kcys. (275.1)

KMOX ak 50000 C ..... St. Louis, Mo.  
 XEAQ ak 1000 ..... Rosarito, L. C.

1100 kcys. (272.6)

CMCJ ak 500 ..... Havana, Cuba  
 CRCV ak 5000 F ..... Vancouver, B. C.  
 KGDm ak 1000 DM ..... Stockton, Calif.  
 KWKH ak 10000 O ..... Shreveport, La.  
 WLWL ak 5000 1 ..... New York, N. Y.  
 WPG ak 5000 1C ..... Atlantic City, N. J.

1110 kcys. (270.1)

KSOO ak 2500 Dn ..... Sioux Falls, S. D.  
 WRVA ak 5000 CM ..... Richmond, Va.

1120 kcys. (267.7)

CHLP ak 100 F ..... Montreal, Que.  
 CHSJ ak 500 F (1) ..... St. John, N. B.  
 CKOC ak 500 F (1) ..... Hamilton, Ont.  
 CKX ak 100 F ..... Brandon, Man.  
 CMGF dk 150 ..... Matanzas, Cuba  
 CMKM ak 200 ..... Manzanillo, Cuba  
 KFIO ak 100 D ..... Spokane, Wash.  
 KFSG ak 500 a (2.5) ..... Los Angeles, Calif.  
 KRRD ak 500 a (2.5) ..... Los Angeles, Calif.  
 KRSC ak 250 ..... Seattle, Wash.  
 WCOP ak 500 D ..... Boston, Mass.  
 WDEL ak 250 (5) ..... Wilmington, Del.  
 WISN ak 250 (1) C ..... Milwaukee, Wis.  
 WTAW ak 500 ..... College Station, Tex.

1130 kcys. (265.3)

CMJI ak 150 ..... Clego de Avila, Cuba  
 KSL ak 50000 C ..... Salt Lake City, Utah  
 WJJD ak 20000 Dn ..... Chicago, Ill.  
 WOV ak 1000 D ..... New York, N. Y.  
 XEJP z 100 ..... Mexico City, D. F.

1140 kcys. (263.0)

CMBG z 200 ..... Havana, Cuba

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**KVOO** ak 25000 1N ..... Tulsa, Okla.  
**WAPI** ak 5000 1N ..... Birmingham, Ala.  
**WSPR** ak 500 DM ..... Springfield, Mass.

**II 50 kcys. (260.7)**

**CMFJ** z 200 ..... Camaguey, Cuba  
**WHAM** ak 50000 B ..... Rochester, N. Y.  
**XEC** ak 100 ..... Tijuana, B. Cfa.  
**XEDW** z 20 ..... Minatitlan, Ver.

**II 60 kcys. (258.5)**

**CMHJ** ak 175 ..... Cienfuegos, Cuba  
**CMKG** z ..... Santiago, Cuba  
**WOWO** c 10000 1B ..... Fort Wayne, Ind.  
**WVVA** ak 5000 1C ..... Wheeling, W. Va.  
**XEAS** ak 50 ..... Saltillo, Coah.  
**XEBJ** z 20 ..... Merida, Yuc.  
**XEBZ** ad 100 ..... Mexico City, D. F.  
**XED** ak 2500 ..... Guadalajara, Jal.  
**XEP** ak 500 ..... Juarez, Chih.

**II 70 kcys. (256.3)**

**CMBD** ak 500 ..... Havana, Cuba  
**WCAU** ak 50000 C ..... Philadelphia, Pa.

**II 80 kcys. (254.1)**

**CMJO** ak 50 ..... Ciego de Avila, Cuba  
**KEX** ak 5000 2B ..... Portland, Ore.  
**KOB** ak 10000 2 N ..... Albuquerque, N. M.  
**WDGY** ak 1000 Dn (5) ..... Minneapolis, Minn.  
**WINS** ak 1000 ..... New York, N. Y.  
**WMAZ** ak 1000 C ..... Macon, Ga.  
**XEFA** z 500 ..... Tacuba, D. F.

**II 90 kcys. (252.0)**

**CMKX** z ..... Santiago, Cuba  
**KTKC** z 250 DP ..... Visalia, Calif.  
**VONF** ak 500 1195 ..... St. John's, Nfld.  
**WATR** ak 100 D ..... Waterbury, Conn.  
**WOAI** ak 50000 C ..... San Antonio, Tex.  
**WSAZ** ak 1000 ..... Huntington, W. Va.

**II 200 kcys. (249.9)**

**CHAB** ak 100 F ..... Moose Jaw, Sask.  
**CKNX** ak 50 ..... Wingham, Ont.  
**CKTB** ak 100 F ..... St. Catharines, Ont.  
**CMCO** ad 250 ..... Havana, Cuba  
**KADA** ak 100 DM ..... Ada, Okla.  
**KATE** z 100 DP ..... Albert Lea, Minn.  
**KBTM** ak 100 D ..... Jonesboro, Ark.  
**KDNC** z 100 P(.25) ..... Lewiston, Mont.  
**KELO** z 100 P ..... Stouxs Falls, S. Dak.  
**KFJB** ak 100 (.25) ..... Marshalltown, Iowa  
**KFXD** ak 100 (.25) ..... Nampa, Idaho  
**KFXJ** ak 100 (.25) ..... Grand Junc., Colo.  
**KGDE** ak 100 (.25) ..... Fergus Falls, Minn.  
**KGKE** ak 100 ..... Sterling, Colo.  
**KGJF** ak 100 ..... Los Angeles, Calif.  
**KGHI** ak 100 (.25) ..... Little Rock, Ark.  
**KMLB** ak 100 (.25) ..... Monroe, La.  
**KOOS** ak 250 D ..... Marshfield, Ore.  
**KSUN** c 100 (.25) ..... Lowell, Ariz.  
**KVCV** z 100 ..... Redding, Calif.  
**KVEC** z 250 DP ..... San Luis Obispo, Cal.  
**KVOS** dk 100 ..... Bellingham, Wash.  
**KWG** ak 100 N ..... Stockton, Calif.  
**KWNO** z 100 DP ..... Winona, Minn.  
**WABI** ak 100 (.25) ..... Bangor, Maine

**WAIM** ak 100 **XZ** ..... Anderson, S. C.  
**WAYX** ak 100 ..... Waycross, Ga.  
**WBBZ** ak 100 M ..... Ponca City, Okla.  
**WBHP** z 100 P ..... Huntsville, Ala.  
**WBNO** ak 100 1 ..... New Orleans, La.  
**WCAT** ak 100 D ..... Rapid City, S. D.  
**WCAX** ak 100 ..... Burlington, Vt.  
**WCLO** ak 100 (.25) ..... Janesville, Wis.  
**WCPO** ak 100 (.25) ..... Cincinnati, Ohio  
**WDSM** z 100 F ..... Superior, Wis.  
**WEST** ak 100 3 (.25) ..... Easton, Pa.  
**WFAM** ak 100 8 ..... South Bend, Ind.  
**WFTC** z 100 (.25) P ..... Kinston, N. C.  
**WHBC** ak 100 (.25) ..... Canton, Ohio  
**WHBY** ak 100 (.25) ..... Green Bay, Wis.  
**WIBX** ak 100 (.3) C ..... Utica, N. Y.  
**WIL** ak 100 (.25) ..... St. Louis, Mo.  
**WJBC** ak 100 6 (.25) ..... Bloomington, Ill.  
**WJBL** ak 100 6 ..... Decatur, Ill.  
**WJBW** ak 100 1 ..... New Orleans, La.  
**WJNO** ak 100 C ..... W. Palm Beach, Fla.  
**WJRD** c 100 D ..... Tuscaloosa, Ala.  
**WKBO** ak 100 3 (.25) ..... Harrisburg, Pa.  
**WLVA** ak 100 (.25) ..... Lynchburg, Va.  
**WMFR** ak 100 D ..... High Point, N. C.  
**WMPC** ak 100 (.25) ..... Lapeer, Mich.  
**WNRI** ak 100 (.25) ..... Newport, R. I.  
**WOLS** z 100 DP ..... Florence, S. C.  
**WRBL** ak 100 ..... Columbus, Ga.  
**WTHT** ak 100 DM ..... Hartford, Conn.  
**WWAE** ak 100 8 ..... Hammond, Ind.

**II 210 kcys. (247.8)**

**CJCS** ak 50 ..... Stratford, Ont.  
**CJCU** z 50 ..... Aklavik, N. W. T.  
**CKBI** ak 100 F ..... Prince Albert, Sask.  
**CKCH** ak 100 F ..... Hull, Que.  
**CKMC** ak 50 ..... Cobalt, Ont.  
**CMHI** ak 150 ..... Santa Clara, Cuba  
**KANS** ak 100 ..... Wichita, Kans.  
**KASA** ck 100 M ..... Elk City, Okla.  
**KDLR** ak 100 ..... Devils Lake, N. D.  
**KDON** z 100 M ..... Monterey, Calif.  
**KFJI** ak 100 ..... Klamath Falls, Ore.  
**KFOR** ak 100 CM(.25) ..... Lincoln, Neb.  
**KFPW** ak 100 ..... Fort Smith, Ark.  
**KFVS** ak 100 6(.25) Cape Girardeau, Mo.  
**KFXM** ak 100 M9 ..... San Bernardino, Calif.  
**KGLO** z 100 ..... Mason City, Iowa  
**KGY** ak 100 ..... Olympia, Wash.  
**KIUL** ak 100 ..... Garden City, Kans.  
**KLAH** ak 100 ..... Carlsbad, N. Mex.  
**KOCA** z 100 ..... Kilgore, Texas  
**KPFA** z 100 DP ..... Helena, Mont.  
**KPPC** ak 100 9 ..... Pasadena, Calif.  
**KROY** z 100 DP ..... Sacramento, Calif.  
**KVSO** ak 100 M ..... Ardmore, Okla.  
**KWTN** ak 100 ..... Watertown, S. D.  
**TGW** ak 10000 ..... Guatemala City  
**WALR** ak 100 ..... Zanesville, Ohio  
**WBAX** ak 100 ..... Wilkes Barre, Pa.  
**WBBL** ak 100 S ..... Richmond, Va.  
**WBLY** ak 100 D ..... Lima, Ohio  
**WBRB** ak 100 3 ..... Red Bank, N. J.  
**WCOL** ak 100 N ..... Columbus, Ohio  
**WCRW** ak 100 4 ..... Chicago, Ill.  
**WEBQ** ak 100 6(.25) ..... Harrisburg, Ill.  
**WEDC** ak 100 4 ..... Chicago, Ill.  
**WFAS** ak 100 3 ..... White Plains, N. Y.  
**WFOY** z 100 ..... St. Augustine, Fla.  
**WGBB** ak 100 3 ..... Freeport, N. Y.  
**WGCM** ak 100 (.25) ..... Gulfport, Miss.  
**WGNY** ak 100 3 ..... Newburgh, N. Y.  
**WHBF** ak 100 (.25) ..... Rock Island, Ill.  
**WHBU** ak 100 ..... Anderson, Ind.  
**WIBU** ak 100 (.25) ..... Poynette, Wis.

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

WJBY	ak	100	.....	Gadsden, Ala.
WJEJ	ak	100	D	Hagerstown, Md.
WJMI	z	100	(.25)	Lansing, Mich.
WJTN	ak	50	X	Jamestown, N. Y.
WJW	ak	100	(.25)	Akron, Ohio
WKOK	ak	100		Sunbury, Pa.
WLUM	z	100	P	Middlesboro, Ky.
WNBG	ak	100	CXZ	Richmond, Va.
WNFG	ak	100	(.25)	Hibbing, Minn.
WNFN	ak	100		Grenada, Miss.
WOMT	ak	100		Manitowoc, Wis.
WPAX	ak	100	D	Thomasville, Ga.
WSAY	z	100	D	Rochester, N. Y.
WSBC	ak	100	4(.25)	Chicago, Ill.
WSIX	ak	100		Nashville, Tenn.
WSNJ	z	100	DP	Bridgeton, N. J.
WSOC	ak	100	N(.25)	Charlotte, N. C.
WTAX	ak	100		Springfield, Ill.
XEAT	ak	250		Parral, Chih.
XEE	ak	50		Durango, Dgo.
XEFV	ak	100		Juarez, Chih.
XETH	ak	100		Puebla, Pue.
.....	z	100	P	Helena, Mont.

1260 kcys. (238.0)				
KGVO	ak	1000	C	Missoula, Mont.
KOIL	ak	1000	MB (2.5)	Omaha, Nebr.
KPAC	ak	500	D	Port Arthur, Texas
KRGV	ak	500	X	Weslaco, Texas
KUOA	ak	2500	D	Sloam Spgs., Ark.
KVOA	ak	1000		Tucson, Ariz.
WHIO	ak	1000	C (5)	Dayton, Ohio
WNBX	ak	1000		Springfield, Vt.
WTOC	ak	1000	C	Savannah, Ga.

## 1220 kcys. (245.8)

CMJE	z	50	.....	Camaguey, Cuba
KFKU	ak	1000	a (5)	Lawrence, Kans.
KTMS	z	500	P	Santa Barbara, Calif.
KTW	ak	1000	S2	Seattle, Wash.
KWSC	ak	1000	2 (5)	Pullman, Wash.
WCAD	ak	500	D	Canton, N. Y.
WCAE	ak	1000	MR (5)	Pittsburgh, Pa.
WDAE	ak	1000	C (5)	Tampa, Fla.
WREN	ak	1000	Ba (5)	Lawrence, Kans.
XEBL	z	50		Mazatlan, Sin.
XEDA	z	200		Gra. Anaya, D. F.
XETF	ak	30		Veracruz, Ver.

## 1270 kcys. (236.1)

CMHD	dk	250		Cuibarten, Cuba
KGCA	ak	100	2D	Decorah, Iowa
KOL	ak	1000	C (5)	Seattle, Wash.
KVOR	ak	1000	C	Colorado, Sp'gs, Colo.
KWLC	ak	100	2D	Decorah, Iowa
WASH	ak	500	aN	Grand Rapids, Mich.
WFBR	ak	500	R (1)	Baltimore, Md.
WJDX	ak	1000	N (2.5)	Jackson, Miss.
WOOD	ak	500	aN	Grand Rapids, Mich.
XEXB	ak	50		Jalapa, Ver.

## 1280 kcys. (234.2)

CMCU	ak	500		Havana, Cuba
CMKO	z			Holgulin, Cuba
KFBB	ak	1000	C (2.5)	Great Falls, Mont.
KLS	ak	250		Oakland, Calif.
WCAM	ak	500	1	Camden, N. J.
WCAP	ak	500	1	Asbury Park, N. J.
WDOD	ak	1000	C (5)	Chattanooga, Tenn.
WIBA	ak	1000	N (5)	Madison, Wis.
WORC	ak	500	C	Worcester, Mass.
WRR	ak	500	M	Dallas, Texas
WTNJ	ak	500	1	Trenton, N. J.
XEMX	z	100		Mexico City, D. F.

## 1230 kcys. (243.8)

KGBX	ak	500		Springfield, Mo.
KGGM	ak	250	(.5)X	Albuquerque, N. M.
KYA	ak	1000		San Francisco, Calif.
WFBM	ak	1000	C (5)	Indianapolis, Ind.
WNAC	ak	1000	R (5)	Boston, Mass.
XEFJ	ak	100		Monterrey, N. L.

## 1290 kcys. (232.4)

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

## 1240 kcys. (241.8)

CJCB	ak	1000	F	Sydney, N. S.
CMHB	z	50		Sancti Spiritus, Cuba
KGCU	ak	250	1	Mandan, N. D.
KLPM	ak	250	1	Minot, N. D.
KTAT	ak	1000	M	Fort Worth, Texas
KTFI	ak	1000		Twin Falls, Idaho
WKAQ	ak	1000		San Juan, P. R.
WXYZ	ak	1000	B	Detroit, Mich.
XEKL	z	500		Leon, Guan.
XELA	z	50		Satillo, Coah.

## 1300 kcys. (230.6)

KALE	ak	500	C	Portland, Ore.
KFAC	ak	1000		Los Angeles, Calif.
KFH	ak	1000	C	Wichita, Kans.
WBRR	ak	1000	1	Brooklyn, N. Y.
WEVD	ak	1000	1	New York, N. Y.
WFAB	ak	1000	1	New York, N. Y.
WFBC	ak	1000	(5) N	Greenville, S. C.
WHAZ	ak	500	1X	Troy, N. Y.
WHBL	ak	250		Sheboygan, Wis.
WIOD	ak	1000	N	Miami, Fla.

## 1250 kcys. (239.9)

CMKC	ak	150	.....	Santiago, Cuba
KFOX	ak	1000		Long Beach, Calif.
WAIR	z	250	DP	Winston-Salem
WCAL	ah	1000	2 (2.5)	Northfield, Minn.
WDSU	ak	1000		New Orleans, La.
WHBI	ak	1000	1 (2.5)	Newark, N. J.
WLB	ak	1000	2	Minneapolis, Minn.
WNEW	ak	1000	1 (2.5)	New York, N. Y.
WFCN	ak	1000	2B (5)	Minneapolis, Minn.
XEXH	z	250		San Luis Potosi, S.L.P.

## 1310 kcys. (228.9)

CHCK	ak	50		Charlottetown, P.E.I.
CJKL	ak	100	F	Kirkland Lake, Ont.
CJLS	ak	100		Yarmouth, N. S.
CKCV	ak	100	F	Quebec, Que.
KAND	z	100	DP	Coriscana, Texas
KCKN	ak	100		Kansas City, Kans.
KCRJ	ak	100	D	Jerome, Ariz.
KFPL	dk	100	(.25)	Dublin, Texas
KPXR	ak	100	(.25)	Oklahoma City, Okla.

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

KFYO	ak	100	(.25)	Lubbock, Texas
KGEZ	ak	100		Kaliapel, Mont.
KGFV	ak	100		Kearney, Nebr.
KHUB	z	250	DP	Watsonville, Calif.
KKNY	ak	100		Juneau, Alaska
KIT	ak	100	(.25)	Yakima, Wash.
KMED	ek	100	YZ (.25)	Medford, Ore.
KPDN	ak	100	D	Pampa, Texas
KRMC	z	100	1P (.25)	Jamestown, N. D.
KRMD	ak	100		Shreveport, La.
KROC	ak	100		Rochester, Minn.
KRQA	ak	100		Santa Fe, N. Mex.
KRRV	z	250	D	Sherman, Texas
KSRO	z	250	DP	Santa Rose, Calif.
KSUB	z	100	P	Cedar City, Utah
KTSM	ak	100	(.25)	El Paso, Texas
KVOL	ak	100		Lafayette, La.
KVOX	z	100	1P	Moorhead, Minn.
KWOS	z	100	D	Jefferson City, Mo.
KXRO	ak	100		Aberdeen, Wash.
WAML	ak	100		Laurel, Miss.
WBEO	ak	100	D	Marquette, Mich.
WBOW	ak	100	(.25) N	Terre Haute, Ind.
WBRE	ak	100		Wilkes Barre, Pa.
WCLS	ak	100		Joliet, Ill.
WDCI	ak	100	(.25)	Ashland, Ky.
WDHA	ak	100	S	El Paso, Texas
WEBR	ak	100	B (.25)	Buffalo, N. Y.
WEMP	ak	100	D	Milwaukee, Wis.
WEXL	ak	50		Royal Oak, Mich.
WFGB	ak	100	3	Altoona, Pa.
WFDF	ak	100		Flint, Mich.
WGH	ak	100	(.25)	Newport News, Va.
WHAT	ak	100	4	Philadelphia, Pa.
WJAC	ak	100	3 (.25)	Johnstown, Pa.
WLAK	z	100		Lakeland, Fla.
WLBC	ak	100	(.25)	Muncie, Ind.
WLNH	ak	100	M	Laconia, N. H.
WMBO	ak	100	(.25)	Auburn, N. Y.
WMFF	ak	100	(.25)	Plattsburg, N. Y.
WNBH	ak	100	M (.25)	New Bedford, Mass.
WOL	ak	100	XZ	Washington, D. C.
WRWA	ak	100		Reading, Pa.
WROL	ak	100	(.25)	Knoxville, Tenn.
WSAJ	ak	100		Grove City, Pa.
WSGN	ak	100	(.25)	Birmingham, Ala.
WSJS	ak	100	C	Winston-Salem, N. C.
WTAL	ak	100		Tallahassee, Fla.
WTEL	ak	100	4	Philadelphia, Pa.
WTJS	ak	100	(.25)	Jackson, Tenn.
WTRC	ak	100	(.25)	Elkhart, Ind.
XEAG	z	10		Cordoba, Ver.
XECW	ak	10		Mexico City, D. F.
XEFW	ak	250		Tampani, Tams.
XFTB	ak	125		Torreón, Coah.
XEX	ak	125		Monterrey, N. L.

WSAI	ak	1000	MR(2.5)	Cincinnati, Ohio
WTAQ	ak	1000		Green Bay, Wis.

## 1340 kcys. (223.7)

CMAB	z			Pinar del Rio, Cuba
CMJL	z	75		Camaguey, Cuba
KGDY	ak	250	D	Huron, S. D.
KGIR	ak	1000	N(2.5)	Butte, Mont.
KGNO	ak	250		Dodge City, Kans.
WCOA	ak	500	C	Pensacola, Fla.
WFEA	ak	500	NM(1)	Manchester, N. H.
WSPD	ak	1000	B (5)	Toledo, Ohio
XEPE	z	250		Nuevo Laredo, Tams.
XEXD	z	350		Jalapa, Ver.

## 1350 kcys. (222.1)

CMCA	ak	450		Havana, Cuba
CMKV	z			Santlago, Cuba
KIDO	ak	1000	N (2.5)	Boise, Idaho
KWK	ak	1000	M(5)	St. Louis, Mo.
WAWZ	ak	500	1(1)	Zarephath, N. Y.
WBNX	ak	1000	1	New York, N. Y.

## 1360 kcys. (220.4)

CMJH	dk	50		Ciego de Avila, Cuba
KCRC	ak	250	M	Enid, Okla.
KGER	ak	1000		Long Beach, Calif.
WCSC	ak	500	(1)N	Charleston, S. C.
WFBL	ak	1000	C(5)	Syracuse, N. Y.
WGES	ak	500	1(1)	Chicago, Ill.
WQBC	ak	1000	D	Vicksburg, Miss.
WSBT	ak	500	1	South Bend, Ind.

## 1370 kcys. (218.8)

CKCW	ak	100	F	Moncton, N. B.
CMGE	ak	150		Cardenas, Cuba
KAST	ak	100	D	Astoria, Ore.
KCMO	ak	100		Kansas City, Mo.
KEEN	ak	100	1	Seattle, Wash.
KELD	z	100		El Dorado, Ark.
KERN	ak	100	B	Bakersfield, Calif.
KFGQ	ak	100	D	Boone, Iowa
KFJZ	ak	100	(.25)	Fort Worth, Texas
KFRO	ak	100	D	Longview, Texas
KGAR	ak	100	(.25)	Tucson, Ariz.
KGFL	ak	100	4	Roswell, N. M.
KGKL	ak	100	(.25)	San Angelo, Texas
KICA	ak	100	4	Clovis, N. M.
KIUF	ak	100		Durango, Colo.
KLUF	ak	100		Galveston, Texas
KMAC	ak	100	5 (.25)	San Antonio, Tex.
KOBH	ak	100		Rapid City, S. Dak.
KOKO	z	100	P	La Junta, Colo.
KONO	ak	100	5	San Antonio, Tex.
KRE	ak	100	(.25)	Berkeley, Calif.
KRKO	ak	50	1	Everett, Wash.
KSLM	ak	100		Salem, Ore.
KTEM	z	100	D	Tempe, Texas
KTKO	bk	100	M	Oklahoma City, Okla.
KUJ	ak	100		Walla Walla, Wash.
KVGB	z	100	P	Great Bend, Kans.
KWYO	ak	100	(.25)	Sheridan, Wyo.
WABY	ak	100	B	Albany, N. Y.
WAGF	ak	250	D	Dothan, Ala.
WATL	ak	100	(.25)	Atlanta, Ga.
WBLK	z	100	DP	Clarksburg, W. Va.
WBNY	ak	100	2(.25)	Buffalo, N. Y.
WBTR	ak	100	(.25)	Danville, Va.
WCBM	ak	100	(.25)	Baltimore, Md.
WDAS	ak	100	(.25)	Philadelphia, Pa.
WDWS	ak	100	D	Champaign, Ill.

## 1320 kcys. (227.1)

CMOX	ak	200		Havana, Cuba
KGHF	sm	500	B	Pueblo, Colo.
KGMB	ak	1000	CM	Honolulu, T. H.
KID	ak	500	(1)	Idaho Falls, Idaho
KRNT	ak	500	C(1)X	Des Moines, Iowa
WADC	ak	1000	C(5)	Akron, Ohio
WORK	ak	1000		York, Pa.
WSMB	ak	1000	N	New Orleans, La.

## 1330 kcys. (225.4)

CMHK	z	250		Cruces, Cuba
KGB	ak	1000	M	San Diego, Calif.
KMO	ak	250	X	Tacoma, Wash.
KRIS	z	250	(.5)F	Corpus Christi, Tex.
KSCJ	ak	1000	C(5)	Sioux City, Iowa
WDRC	ak	1000	C(5)	Hartford, Conn.

# NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

WEOA	z	100	(.25)	Evansville, Ind.	KABC	ak	100	(.25)	San Antonio, Texas
WFOR	ak	100		Hattiesburg, Miss.	KABR	ak	100		Aberdeen, S. Dak.
WGL	ck	100	C	Fort Wayne, Ind.	KALB	z	100	D	Alexandria, La.
WGRO	ak	250	D	New Albany, Ind.	KBFS	ak	100	4	Portland, Ore.
WBBQ	ak	100		Memphis, Tenn.	KCMC	ak	100		Texarkana, Texas
WHDF	ak	100	(.25)	Calumet, Mich.	KEUB	ak	100		Price, Utah
WHLB	ak	100		Virginia, Minn.	KFIZ	ak	100		Fond du Lac, Wis.
WBIM	ak	100	(.25)	Jackson, Mich.	KGFF	ak	100	M (.25)	Shawnee, Okla.
WLLH	ak	100	M (.25)	Lowell, Mass.	KGGG	ak	100		San Francisco, Cal.
WMBR	ak	100	C (.25)	Jacksonville, Fla.	KGIW	ak	100	1	Alamosa, Colo.
WMFD	ak	100	D	Wilmington, N. C.	KIDW	ak	100	1	Lamar, Colo.
WMFO	ak	100	D	Decatur, Ala.	KIUN	ak	100		Pecos, Texas
WMIN	ak	100	(.25)	St. Paul, Minn.	KNET	z	100	D	Palestine, Texas
WOC	ak	100	C (.25)	Davenport, Iowa	KORE	ak	100		Eugene, Ore.
WPAV	ak	100		Portsmouth, Ohio	KRBC	ak	100	(.25)	Ablene, Tex.
WPRA	z	100	(.25) P	Mayaguez, P. R.	KRLC	ak	100	XZ	Lewiston, Idaho
WRAC	ak	100	(.25)	Williamsport, Pa.	KRLH	z	100	D	Midland, Tex.
WRDO	ak	100	M	Augusta, Maine	KUMA	ak	100		Yuma, Ariz.
WRJN	ak	100	(.25)	Racine, Wis.	KWBG	ak	100		Hutchinson, Kans.
WSAU	z	100	D	Wausau, Wis.	KXL	ak	100	4 (.25)	Portland, Ore.
WSSV	ak	50	D2	Buffalo, N. Y.	WAGO	ak	100	C	Waco, Texas
XECZ	z	100		San Luis Potosi, S.L.P.	WAGM	ak	100		Presque Isle, Maine
XEI	ak	125		Morelia, Mich.	WAFD	ak	100	D	Chattanooga, Tenn.
XELZ	z	100		Mexico City, D. F.	WAZL	ak	100	2	Hazleton, Pa.

## 1380 kcys. (217.3)

KOH	ak	500	C	Reno, Nev.
KQV	ak	500	1C	Pittsburgh, Pa.
WALA	af	500	C (1)	Mobile, Ala.
WKBB	ak	1000		LaCrosse, Wis.
WNBC	ak	250	D	New Britain, Conn.
WSMK	ak	200	1C	Dayton, Ohio

## 1390 kcys. (215.7)

CJGX	ak	100	F	Yorkton, Sask.
CMJC	z	150		Camaguey, Cuba
KLRA	ak	1000	C (2.5)	Little Rock, Ark.
KOY	ak	500	C (1)	Phoenix, Ariz.
WHK	ak	1000	C (2.5)	Cleveland, Ohio
WQDM	d	1000	D	St. Albans, Vt.

## 1400 kcys. (214.2)

CMGC	ad	150		Matanzas, Cuba
CMKR	z	100		Santiago, Cuba
KHBC	z	250	M	Hilo, T. H.
KLO	ak	500	B	Ogden, Utah
KTUL	ak	500	C (1)	Tulsa, Okla.
WARD	ak	500	2	Brooklyn, N. Y.
WBBC	ak	500	2 (1)	Brooklyn, N. Y.
WHDL	ak	250	D	Olean, N. Y.
WIRE	ak	1000	MR (5)	Indianapolis, Ind.
WLTH	ak	500	2	Brooklyn, N. Y.
WVFW	ak	500	2	Brooklyn, N. Y.

## 1410 kcys. (212.6)

CKFC	ak	50	5	Vancouver, B. C.
CKMO	ak	100	5F	Vancouver, B. C.
CMCQ	ak	250		Havana, Cuba
KFJM	ak	500	(1)	Grand Forks, N. D.
KGNC	ak	1000	N (2.5)	Amarillo, Texas
WAAB	ak	500	M	Boston, Mass.
WBGM	ak	500		Bay City, Mich.
WHIS	ak	500	(1)	Bluefield, W. Va.
WROK	ak	500		Rockford, Ill.
WSFA	ak	500	C (1)	Montgomery, Ala.

## 1420 kcys. (211.1)

CKGB	ak	100	F	Timmins, Ont.
CRCY	ak	100	F	Toronto, Ont.

KALB	z	100	D	Alexandria, La.
KBFS	ak	100	4	Portland, Ore.
KCMC	ak	100		Texarkana, Texas
KEUB	ak	100		Price, Utah
KFIZ	ak	100		Fond du Lac, Wis.
KGFF	ak	100	M (.25)	Shawnee, Okla.
KGGG	ak	100		San Francisco, Cal.
KGIW	ak	100	1	Alamosa, Colo.
KIDW	ak	100	1	Lamar, Colo.
KIUN	ak	100		Pecos, Texas
KNET	z	100	D	Palestine, Texas
KORE	ak	100		Eugene, Ore.
KRBC	ak	100	(.25)	Ablene, Tex.
KRLC	ak	100	XZ	Lewiston, Idaho
KRLH	z	100	D	Midland, Tex.
KUMA	ak	100		Yuma, Ariz.
KWBG	ak	100		Hutchinson, Kans.
KXL	ak	100	4 (.25)	Portland, Ore.
WAGO	ak	100	C	Waco, Texas
WAGM	ak	100		Presque Isle, Maine
WAFD	ak	100	D	Chattanooga, Tenn.
WAZL	ak	100	2	Hazleton, Pa.
WCBS	ak	100		Springfield, Ill.
WCHV	ak	100	3 (.25)	Charlottesville, Va.
WEED	ak	100	3 (.25)	Rocky Mt., N. C.
WELL	ak	100		Battle Creek, Mich.
WGPC	ak	100		Albany, Ga.
WHFO	ak	100	(.25)	Cicero, Ill.
WILM	aj	100	2	Wilmington, Del.
WJBO	ak	100	XZ	Baton Rouge, La.
WJBR	z	100	P	Gastonia, N. C.
WJMS	ak	100		Ironwood, Mich.
WLAP	ak	100	(.25)	Lexington, Ky.
WLEU	ak	100	(.25)	Erie, Pa.
WMAS	ak	100	C (.25)	Springfield, Mass.
WMBC	ak	100	(.25)	Detroit, Mich.
WMBH	ak	100	(.25)	Joplin, Mo.
WMBS	z	250	DP	Untontown, Pa.
WMFJ	ak	100		Daytona Beach, Fla.
WMSD	ak	100		Sheffield, Ala.
WNNY	z	100	(.25) P	Watertown, N. Y.
WPAD	ak	100	(.25)	Paducah, Ky.
WPAR	ak	100	C	Parkersburg, W. Va.
WPRP	z	100	P (.25)	Ponce, P. R.

## 1430 kcys. (209.7)

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

## 1440 kcys. (208.2)

CMOA	z	150		Havana, Cuba
KDFN	ak	500		Casper, Wyo.
KXYZ	ak	1000		Houston, Texas
WBIG	ak	1000	C	Greensboro, N. C.
WCBA	aj	500	a	Allentown, Pa.
WMBD	ak	500	C (1)	Peoria, Ill.
WSAN	aj	500	a	Allentown, Pa.
XEFI	ak	250		Chihuahua, Chih.

## 1450 kcys. (206.8)

CFCT	ak	50		Victoria, B. C.
CHGS	ak	50	F	Summerside, P.E.I.
CMHM	z	100		Cienfuegos, Cuba
KGCX	ak	1000		Wolf Point, Mont.



## NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

KIEM	ak	500	.....	Eureka, Calif.
KTBS	ak	1000	N	Shreveport, La.
WGAR	ak	500	MB(1)	Cleveland, Ohio
WHOM	ak	250		Jersey City, N. J.
WSAR	ak	1000	M	Fall River, Mass.
WTFI	ak	500	Y	Athens, Ga.
XEF	ak	100		Juarez, Chih.

1460 kcys. (205.4)

CMKF	z	50		Holguin, Cuba
KSTP	ak	10000	R (25)	St. Paul, Minn.
WJSV	ak	10000	C	Washington, D. C.

1470 kcys. (204.0)

CMOK	z	150		Havana, Cuba
KGA	ak	5000	B	Spokane, Wash.
WLAC	ak	5000	C	Nashville, Tenn.

1480 kcys. (202.6)

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

1490 kcys. (201.2)

KFPB	ak	5000	N	Sacramento, Calif.
WCKY	ak	5000	BX	Covington, Ky.

1500 kcys. (199.9)

CJIC	ak	100		Sault Ste. Marie, Ont.
CMCN	z			Havana, Cuba
KAWM	z	100	P	Gallup, N. Mex.
KBIX	ak	100	M	Muskogee, Okla.
KBST	z	100		Big Spring, Tex.
KDAL	ak	100		Duluth, Minn.
KDB	ak	100	M(25)	Santa Barbara, Cal.
KGFI	ak	100	(25)	Corpus Christi, Tex.
KGKB	ak	100	(25)	Tyler, Texas
KGKY	ak	100	(25)	Scottsbluff, Neb.
KNEL	ak	100	D	Brady, Texas
KNOW	ak	100	C	Austin, Texas
KOTN	ak	100	D	Plne Bluff, Ark.
KOVC	ak	100		Valley City, N. Dak.
KPLC	ak	100	(.25)	Lake Charles, La.

KPLT	z	100	D	Paris, Texas
KPO	ak	100	(.25)	Wenatchee, Wash.
KRNR	ak	100	(.25)	Roseburg, Ore.
KROD	z	100	F	El Paso, Texas
KSJS	z	100	P	Salina, Kans.
KTEP	z	100	P	El Paso, Texas
KUTA	z	100	P	Salt Lake City, Utah
KVOE	ak	100	M	Santa Ana, Calif.
KXO	ak	100		El Centro, Calif.
KYCA	z	100	(.25)P	Prescott, Ariz.
WCNW	ak	199	1 (.25)	Brooklyn, N. Y.
WDNC	ak	100	C	Durham, N. C.
WGAL	ak	100	(.25)	Lancaster, Pa.
WHBB	ak	100	D	Selma, Ala.
WHEF	ak	100	(.25)	Kosciusko, Miss.
WJBK	ak	100	(.25)	Detroit, Mich.
WKBB	ak	100	(.25)	E. Dubuque, Ill.
WKBV	ak	100	(.25)	Richmond, Ind.
WKBZ	ak	100	(.25)	Muskegon, Mich.
WKEU	ak	100	D	Griffin, Ga.
WMBW	ak	100	1	Brooklyn, N. Y.
WMEX	ak	100	(.25)	Boston, Mass.
WNBF	ae	100	C	Binghamton, N. Y.
WNLC	ak	100	D	New London, Conn.
WOPI	ak	100		Bristol, Tenn.
WRDW	ak	100		Augusta, Ga.
WRGA	ak	100	(.25)	Rome, Ga.
WRTD	z	100	1	Richmond, Va.
WSYB	ak	100		Rutland, Vt.
WTMV	ak	100	(.25)	East St. Louis, Ill.
WWRL	ak	100	1 (.25)	Woodside, N. Y.
WWSW	ak	100	(.25)	Pittsburgh, Pa.

1510 kcys. (198.6)

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

1530 kcys. (196.0)

KXBY	ak	1000		Kansas City, Mo.
WBRY	ak	1000	M	Waterbury, Conn.

1550 kcys. (193.4)

KPMC	ak	1000	M	Bakersfield, Calif.
WQXR	ak	1000		New York, N. Y.

## Questions of Interest

*(Continued from page 10)*

position blocks. This transposes the antenna leadin every two feet. If you wish to use the 5 meter end of the dial, as your set tunes to 60,000 kilocycles, you must cut the antenna and down-lead portions of the antenna to just half of the dimensions given for 10 meters. However, as you go lower into the ultra-short waves you reach what may be termed visual radio, and your distance is the horizon of the earth if there are no intervening buildings or hills. The ten-meter band is dif-

ferent, and fine DX work can be expected.

However, the ten meter band is mysteriously erratic. It might stay closed tightly for a long while and then suddenly open up for good reception. It seems to be a daytime band, starting up frequently after the sun has been several hours high. Also, few receivers that work all waves are highly efficient on 10 and 5 meters. The reason is obvious. Some, however, give satisfactory results, but slow and careful tuning is needed to reveal the 10 meter signals. This is radio's most critical tuning band.

## NORTH AMERICAN B. C. STATIONS BY LOCATIONS

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

ALABAMA	CALIFORNIA	Santa Barbara	FLORIDA
Birmingham	Bakersfield	KDB 1500 100M	Clearwater
WAFI 1140 5000 N	KERN 1370 100 B	KTMS 1220 500	WFLA 620 1000 N
WBRC 930 1000 C	KPMC 1550 1000M	Santa Rosa	Daytona Beach
WSGN 1310 100	Berkeley	KRSO 1310 250	WMPJ 1420 100
Decatur	KRE 1370 100	Stockton	Gainesville
WMFO 1370 100	Beverly Hills	KGDM 1100 1000M	WRUF 830 5000
Dothan	KMPC 710 500	KWG 1200 100 N	Jacksonville
WAGF 1370 250	Chico	Visalla	WJAX 900 1000 N
Gadsden	KHSL 950 250	KTKC 1190 250	WMBR 1370 100 C
WJBY 1210 100	El Centro	Watsonville	Lakeland
Huntsville	KKO 1500 100M	KHUB 1310 250	WLAK 1310 100
WBHP 1200 100	Eureka	COLORADO	Miami
Moble	KIEM 1450 500	Alamosa	WIOD 1300 1000 N
WALA 1380 500 C	Fresno	KGIW 1420 100	WQAM 560 1000 C
Montgomery	KMJ 580 500 N	Colorado Springs	Orlando
WSFA 1410 500 C	Glendale	KVOR 1270 1000 C	WDBO 580 1000 C
Selma	KIEV 850 250	Denver	Pensacola
WBBB 1500 100	Hollywood	KFEL 920 500M	WCOA 1340 500 C
Sheffield	KFWB 950 1000	KLZ 560 1000 C	St. Augustine
WMSD 1420 100	KMTR 570 1000	KOA 830 50000 N	WFOY 1210 100
Tuscaloosa	Long Beach	KPOF 880 500	St. Petersburg
WJRD 1200 100	KFOX 1250 1000	KVOD 920 500 B	WSUN 620 1000 N
	KGER 1360 1000	Durango	Tallahassee
	Los Angeles	KIUP 1370 100	WTAL 1310 100
	KECA 1430 1000 B	Grand Junction	Tampa
	KEFE 780 1000	KPJX 1200 100	WDAE 1220 1000 C
	KFAC 1300 1000	Greeley	West Palm Beach
	KFI 640 50000 R	KPKA 880 500M	WJNO 1200 100 C
	KFSG 1120 500	La Junta	
	KFVD 1000 250	KOKO 1370 100	GEORGIA
	KGFI 1200 100	Lamar	Albany
	KHJ 900 1000M	KIDW 1420 100	WGFC 1420 100
	KNX 1050 50000	Pueblo	Athens
	KRKD 1120 500	KGHF 1320 500 B	WTFI 1450 500
	Merced	Sterling	Atlanta
	KYOS 1040 250	KGEE 1200 100	WATL 1370 100
	Modesto		WGST 890 1000 C
	KTRB 740 250	CONNECTICUT	WSB 740 50000 N
	Monterrey	Bridgeport	Augusta
	KIDN 1210 100M	WICC 600 500M	WRDW 1500 100
	Oakland	Hartford	Columbus
	KLS 1280 250	WDFC 1330 1000 C	WRBL 1200 100
	KLX 880 1000	WTCJ 1040 50000 R	Griffin
	KROW 930 1000	WTHT 1200 100M	WKEU 1500 100
	Pasadena	New Britain	Macon
	KPPC 1210 100	WNBC 1380 250	WMAZ 1180 1000 C
	Redding	New Haven	Rome
	KVCV 1200 100	WELI 900 500	WRGA 1500 100
	Sacramento	New London	Savannah
	KFBK 1490 5000 N	WNLC 1500 100	WTOC 1260 1000 C
	KROY 1210 100	Waterbury	Thomasville
	San Bernardino	WATR 1190 100	WPAX 1210 100
	KFXM 1210 100M	WBRV 1530 1000M	Wayercross
	San Diego		WVAY 1200 100
	KFSD 600 1000 R	DELAWARE	
	KGB 1330 1000M	Wilmington	
	San Francisco	WDEL 1120 250	HAWAII
	KFRG 610 1000M	WILM 1420 100	Hilo
	KGCC 1420 100		KHBC 1400 250M
	KGO 790 7500 B		Honolulu
	KJBS 1070 500		KGMB 1320 1000 C
	KPO 680 50000 R		KGU 750 2500 N
	KSFO 560 1000 C		
	KYA 1230 1000	DISTRICT OF COLUMBIA	
	San Jose	Washington	
	KQW 1010 1000	WJSV 1460 10000 C	
	San Luis Obispo	WMAL 630 250 B	
	KVCE 1200 250	WOL 1310 100	
	Santa Ana	WRC 950 500 R	
	KVOE 1500 100M		IDAHO
			Boise
			KIDO 1350 1000 N

# NORTH AMERICAN B. C. STATIONS BY LOCATIONS

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## NORTH AMERICAN B. C. STATIONS BY LOCATIONS

<p><b>Duluth</b></p> <p><b>KDAL</b> 1500 100  <b>WBEC</b> 1290 1000 N  <b>Fergus Falls</b>  <b>KGDE</b> 1200 100  <b>Hibbing</b>  <b>WMFG</b> 1210 100  <b>Minneapolis</b>  <b>WCCO</b> 810 50000 C  <b>WDGY</b> 1180 1000  <b>WLB</b> 1250 1000  <b>WTCN</b> 1250 1000 B  <b>Moorhead</b>  <b>KVOX</b> 1310 100  <b>Northfield</b>  <b>WCAL</b> 1250 1000  <b>Rochester</b>  <b>KROC</b> 1310 100  <b>St. Paul</b>  <b>KSTP</b> 1460 10000 R  <b>WMIN</b> 1370 100  <b>Virginia</b>  <b>WHLB</b> 1370 100  <b>Winona</b>  <b>KWNO</b> 1200 100</p> <hr/> <p style="text-align: center;"><b>MISSISSIPPI</b></p> <hr/> <p><b>Grenada</b>  <b>WMFN</b> 1210 100  <b>Gulfport</b>  <b>WGCM</b> 1210 100  <b>Hattiesburg</b>  <b>WFOR</b> 1370 100  <b>Jackson</b>  <b>WJDX</b> 1270 1000 N  <b>Kosciusko</b>  <b>WHFF</b> 1500 100  <b>Laurel</b>  <b>WAML</b> 1310 100  <b>Meridian</b>  <b>WCOC</b> 880 500 C  <b>Vicksburg</b>  <b>WQBC</b> 1360 1000</p> <hr/> <p style="text-align: center;"><b>MISSOURI</b></p> <hr/> <p><b>Cape Girardeau</b>  <b>KFVS</b> 1210 100  <b>Columbia</b>  <b>KFRU</b> 630 500  <b>Jefferson City</b>  <b>KWOS</b> 1310 100  <b>Joplin</b>  <b>WMBH</b> 1420 100  <b>Kansas City</b>  <b>KCMO</b> 1370 100  <b>KMBC</b> 950 1000 C  <b>KXBY</b> 1530 1000  <b>WDAF</b> 610 1000 R  <b>WHB</b> 860 1000M  <b>St. Joseph</b>  <b>KFEQ</b> 680 2500  <b>St. Louis</b>  <b>KFUO</b> 550 500  <b>KMOX</b> 1090 50000 C  <b>KSD</b> 550 1000 R  <b>KWK</b> 1350 1000 B  <b>WEW</b> 760 1000  <b>WIL</b> 1200 700  <b>Springfield</b>  <b>KGBX</b> 1230 500  <b>KWTO</b> 560 5000</p>	<p style="text-align: center;"><b>MONTANA</b></p> <hr/> <p><b>Billings</b>  <b>KGHL</b> 780 1000 N  <b>Butte</b>  <b>KGIR</b> 1340 1000 N  <b>Great Falls</b>  <b>KFBB</b> 1280 1000 C  <b>Helena</b>  <b>KPFA</b> 1210 100  <b>Kallispell</b>  <b>KGEZ</b> 1310 100  <b>Lewistown</b>  <b>KDNC</b> 1200 100  <b>Missoula</b>  <b>KGVO</b> 1260 1000 C  <b>Wolf Point</b>  <b>KGXC</b> 1450 1000</p> <hr/> <p style="text-align: center;"><b>NEBRASKA</b></p> <hr/> <p><b>Clay Center</b>  <b>KMMJ</b> 740 1000  <b>Kearney</b>  <b>KGFW</b> 1310 100  <b>Lincoln</b>  <b>KFAB</b> 770 10000 C  <b>KPOR</b> 1210 100 C  <b>Norfolk</b>  <b>WJAG</b> 1060 1000  <b>North Platte</b>  <b>KGNF</b> 1430 1000  <b>Omaha</b>  <b>KOIL</b> 1260 1000 B  <b>WAAW</b> 660 500  <b>WOW</b> 590 5000 R  <b>Scottsbluff</b>  <b>KGKY</b> 1500 100</p> <hr/> <p style="text-align: center;"><b>NEVADA</b></p> <hr/> <p><b>Reno</b>  <b>KOH</b> 1380 500 C</p> <hr/> <p style="text-align: center;"><b>NEW HAMPSHIRE</b></p> <hr/> <p><b>Laconia</b>  <b>WLNH</b> 1310 100M  <b>Manchester</b>  <b>WFEA</b> 1340 500 N  <b>Portsmouth</b>  <b>WHFB</b> 740 250</p> <hr/> <p style="text-align: center;"><b>NEW JERSEY</b></p> <hr/> <p><b>Asbury Park</b>  <b>WCAP</b> 1280 500  <b>Atlantic City</b>  <b>WPG</b> 1100 5000 C  <b>Bridgeton</b>  <b>WSNJ</b> 1210 100  <b>Camden</b>  <b>WCAM</b> 1280 500  <b>Jersey City</b>  <b>WAAT</b> 940 500  <b>WHOM</b> 1450 250  <b>Newark</b>  <b>WHBI</b> 1250 1000  <b>WNEW</b> 1250 1000  <b>WOR</b> 710 50000M  <b>Red Bank</b>  <b>WBRB</b> 1210 100  <b>Trenton</b>  <b>WTNJ</b> 1280 500  <b>Zarephath</b>  <b>WAWZ</b> 1350 500</p>	<p style="text-align: center;"><b>NEW MEXICO</b></p> <hr/> <p><b>Albuquerque</b>  <b>KGGM</b> 1230 250  <b>KOB</b> 1180 10000 N  <b>Carlsbad</b>  <b>KLAH</b> 1210 100  <b>Clovis</b>  <b>KICA</b> 1370 100  <b>Gallup</b>  <b>KAVM</b> 1500 100  <b>Roswell</b>  <b>KGFL</b> 1370 100  <b>Santa Fe</b>  <b>KRQA</b> 1310 100</p> <hr/> <p style="text-align: center;"><b>NEW YORK</b></p> <hr/> <p><b>Albany</b>  <b>WBAB</b> 1370 100  <b>WOKO</b> 1430 500 C  <b>Auburn</b>  <b>WMBO</b> 1310 100  <b>Binghamton</b>  <b>WNBF</b> 1500 100 C  <b>Brooklyn</b>  <b>WARD</b> 1400 500  <b>WBBC</b> 1400 500  <b>WBRR</b> 1300 1000  <b>WCNW</b> 1500 100  <b>WLTH</b> 1400 500  <b>WMBQ</b> 1500 100  <b>WVVF</b> 1400 500  <b>Buffalo</b>  <b>WBEN</b> 900 1000 R  <b>WBNY</b> 1370 100  <b>WEBR</b> 1310 100 B  <b>WGR</b> 550 1000 C  <b>WKBW</b> 1480 5000 C  <b>WSVS</b> 1370 50  <b>Canton</b>  <b>WCAD</b> 1220 500  <b>Elmira</b>  <b>WESG</b> 850 1000 C  <b>Freeport</b>  <b>WGBB</b> 1210 100  <b>Jamestown</b>  <b>WJTN</b> 1210 50  <b>Newburgh</b>  <b>WGNV</b> 1210 100  <b>New York</b>  <b>WABC</b> 860 50000 C  <b>WBNX</b> 1350 10000  <b>WBOQ</b> 860 50000  <b>WEAF</b> 660 50000 R  <b>WEVD</b> 1300 1000  <b>WFB</b> 1300 1000  <b>WHN</b> 1010 1000  <b>WNS</b> 1180 1000  <b>WJZ</b> 760 50000 B  <b>WLWL</b> 1100 5000  <b>WMCA</b> 570 1000  <b>WNEV</b> 1250 1000  <b>WNYC</b> 810 100  <b>WQV</b> 1130 1000  <b>WQXR</b> 1550 1000  <b>Olean</b>  <b>WHDL</b> 1400 250  <b>Plattsburg</b>  <b>WMFF</b> 1310 250  <b>Rochester</b>  <b>WHAM</b> 1150 50000 B  <b>WHFC</b> 1430 500 C  <b>WSAY</b> 1210 100</p>	<p><b>Saranac Lake</b>  <b>WNBZ</b> 1290 100  <b>Schenectady</b>  <b>WGY</b> 790 50000 R  <b>Syracuse</b>  <b>WFBL</b> 1380 1000 C  <b>WSYR</b> 570 1000 B  <b>Troy</b>  <b>WHAZ</b> 1300 500  <b>Utica</b>  <b>WBX</b> 1200 100 C  <b>Watertown</b>  <b>WNNY</b> 1420 100  <b>White Plains</b>  <b>WFAS</b> 1210 100  <b>Woodside</b>  <b>WWRL</b> 1500 100</p> <hr/> <p style="text-align: center;"><b>NORTH CAROLINA</b></p> <hr/> <p><b>Asheville</b>  <b>WWNC</b> 570 100 N  <b>Charlotte</b>  <b>WBT</b> 1080 50000 C  <b>WSOC</b> 1210 100 N  <b>Durham</b>  <b>WDNC</b> 1500 100 C  <b>Gastonia</b>  <b>WJBR</b> 1420 100  <b>Greensboro</b>  <b>WBIG</b> 1440 1000 C  <b>High Point</b>  <b>WAIF</b> 1200 100  <b>Kinston</b>  <b>WFCT</b> 1200 100  <b>Raleigh</b>  <b>WPPT</b> 680 1000 N  <b>Rocky Mount</b>  <b>WEED</b> 1420 100  <b>Wilmington</b>  <b>WMFD</b> 1370 100  <b>Winston-Salem</b>  <b>WAIR</b> 1250 250  <b>WSJS</b> 1310 100 C</p> <hr/> <p style="text-align: center;"><b>NORTH DAKOHA</b></p> <hr/> <p><b>Bismarck</b>  <b>KFYR</b> 550 1000 N  <b>Devils Lake</b>  <b>KDLR</b> 1210 100  <b>Fargo</b>  <b>WDAY</b> 940 1000 N  <b>Grand Forks</b>  <b>KFJM</b> 1410 500  <b>Jamestown</b>  <b>KRMC</b> 1310 100  <b>Mandan</b>  <b>KGCU</b> 1240 250  <b>Minot</b>  <b>KLPN</b> 1240 250  <b>Valley City</b>  <b>KOVC</b> 1500 100</p> <hr/> <p style="text-align: center;"><b>OHIO</b></p> <hr/> <p><b>Akron</b>  <b>WADC</b> 1320 1000 C  <b>WJW</b> 1210 100  <b>Ashtabula</b>  <b>WICA</b> 940 250  <b>Canton</b>  <b>WHBC</b> 1200 100</p>
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# NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Cincinnati		
WCPO	1200	100
WKRC	550	1000 C
WLW	700	500000 N
WSAI	1330	1000 R
Cleveland		
WGAR	1450	500 B
WHK	1390	1000 C
WJAY	610	500
WTAM	1070	50000 R
Columbus		
WBNS	1430	500 C
WCOL	1210	100 N
WHKC	640	500
WOSU	570	750
Dayton		
WHIO	1260	1000 C
WSMK	1380	200 C
Lima		
WBLV	1210	100
Portsmouth		
WPAY	1370	100
Toledo		
WSPD	1340	1000 B
Youngstown		
WKBN	570	500 C
Zanesville		
WALR	1210	100

## OKLAHOMA

Ada		
KADA	1200	100M
Ardmore		
KVSO	1210	100M
Elk City		
KASA	1210	100M
Enid		
KCRC	1360	250M
Muskogee		
KBIX	1500	100M
Norman		
WNAD	1010	1000
Oklahoma City		
KFKR	1310	100
KOMA	1480	5000 C
KTKO	1370	100M
WKY	900	1000 N
Ponca City		
WBBZ	1200	100M
Shawnee		
KGFF	1420	100M
Tulsa		
KTUL	1400	500 C
KVOO	1140	25000 N

## OREGON

Astoria		
KAST	1370	100
Corvallis		
KOAC	550	1000
Eugene		
KORE	1420	100
Klamath Falls		
KFJI	1210	100
Marshfield		
KOOS	1200	250
Medford		
KMED	1310	100
Portland		
KALE	1300	500 C
KBPS	1420	100
KEX	1180	5000 N
KGW	620	1000 R

KOIN	940	1000 C
KWJZ	1040	500
KXL	1420	100
Roseburg		
KRNR	1500	100
Salem		
KSLM	1370	100

## PENNSYLVANIA

Allentown		
WCBA	1440	500
WSAN	1440	500
Altoona		
WFBG	1310	100
Easton		
WEST	1200	100
Erie		
WLEU	1420	100
Glenide		
WBG	970	100
Greensburg		
WHJB	620	250 C
Grove City		
WSAJ	1310	100
Harrisburg		
WHP	1430	500 C
WKBO	1200	100
Hazleton		
WAZL	1420	100
Johnstown		
WJAC	1310	100
Lancaster		
WGAL	1500	100
Philadelphia		
KYV	1020	10000 R
WCAU	1170	50000 C
WDAS	1370	100
WFLL	560	1000 B
WHAT	1310	100
WIP	610	1000
WPEN	920	250
WRAX	920	250
WTEL	1310	100
Pittsburgh		
KDKA	980	50000 B
KQV	1380	500 C
WCAE	1220	1000 R
WJAS	1290	1000 C
WWSW	1500	100
Reading		
WEEU	830	1000
WRAW	1310	100
Scranton		
WGBI	880	500
WQAN	880	250
Sunbury		
WKOK	1210	100
Uniontown		
WMBS	1420	250
Wilkes-Barre		
WRAX	1210	100
WBRE	1310	100
Williamsport		
WRAK	1370	100
York		
WORK	1320	1000

## PUERTO RICO

Mayaguez		
WPRA	1370	100
Ponce		
WPRP	1420	100

San Juan		
WKAQ	1240	1000
WNEL	1290	1000

## RHODE ISLAND

Newport		
WNRI	1200	100
Providence		
WEAN	780	1000M
WJAR	890	1000 R
WPRO	630	500 C

## SOUTH CAROLINA

Anderson		
WAIM	1200	100
Charleston		
WCSC	1360	500 N
Columbia		
WIS	560	1000 N
Florence		
WOLS	1200	100
Greenville		
WFBC	1300	1000 N
Spartanburg		
WSPA	920	1000

## SOUTH DAKOTA

Aberdeen		
KABR	1420	100
Brookings		
KFDY	780	1000
Huron		
KGDY	1340	250
Pierre		
KGFX	630	200
Rapid City		
KOBH	1370	100
WCAT	1200	100
Sioux Falls		
KELO	1200	100
KS00	1110	2500
Vermillion		
KUSD	890	500
Watertown		
KWTN	1210	100
Yankton		
WNAX	570	1000 C

## TENNESSEE

Bristol		
WOPI	1500	100
Chattanooga		
WAO	1420	100
WDOD	1280	1000 C
Jackson		
WTJS	1310	100
Knoxville		
WNOX	1010	1000 C
WR0L	1310	100
Memphis		
WHBQ	1370	100
WMC	780	1000 N
WNBR	1430	500
WREC	600	1000 C
Nashville		
WLAC	1470	5000 C
WSIX	1210	100
WSM	650	50000 N

## TEXAS

Ablene		
KRBC	1420	100

Amarillo		
KGNC	1410	1000 N
Austin		
KNOW	1500	100 C
Beaumont		
KFTM	560	500
Big Spring		
KBST	1500	100
Brady		
KNEL	1500	100
College Station		
WTAW	1120	500
Corpus Christi		
KGFI	1500	100
KRIS	1330	250
Corsicana		
KAND	1310	100
Dallas		
KRLD	1040	10000 C
WFAA	800	50000 N
WRR	1280	500M
Dublin		
KFPF	1310	100
El Paso		
KROD	1500	100
KTSM	1310	100
WDAH	1310	100
Fort Worth		
KFJZ	1370	100
KTAT	1240	1000M
WBAP	800	50000 N
Galveston		
KLUF	1370	100
Houston		
KPRC	920	1000 N
KTRH	1290	1000 C
KXVZ	1440	1000
Kilgore		
KOCA	1210	100
Longview		
KFR0	1370	100
Lubbock		
KFY0	1310	100
Midland		
KRLH	1420	100
Palestine		
KNET	1420	100
Pampa		
KPDN	1310	100
Paris		
KPLT	1500	100
Pecos		
KFUN	1420	100
Port Arthur		
KPAC	1260	500
San Angelo		
KGKL	1370	100
San Antonio		
KABC	1420	100
KMAC	1370	100
KONO	1370	100
KTSA	550	1000 C
KOAI	1190	50000 C
Sherman		
KRRV	1310	250
Temple		
KTEM	1370	100
Texarkana		
KCMC	1420	100
Tyler		
KGKB	1500	100
Waco		
WACO	1420	100 C
Weslaco		
KRGV	1260	500

NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Wichita Falls  
KGKO 570 250 C

UTAH

Cedar City  
KSUB 1310 100  
Ogden  
KLO 1400 500 B  
Price  
KEUB 1420 100  
Salt Lake City  
KDYL 1290 1000 R  
KSL 1130 50000 C  
KUTA 1500 100

VERMONT

Burlington  
WCAX 1200 100  
Rutland  
WSYB 1500 100  
St. Albans  
WQDM 1390 1000  
Springfield  
WNBX 1260 1000  
Waterbury  
WDEV 550 500

VIRGINIA

Charlottesville  
WCHV 1420 100  
Danville  
WBTM 1370 100  
Harrisonburg  
WSVA 550 500  
Lynchburg  
WLVA 1200 100  
Newport News  
WGH 1310 100  
Norfolk  
WTAR 780 50 N  
Petersburg  
WPHR 880 500  
Richmond  
WBBL 1210 100  
WMBG 1210 100 C  
WRTD 1500 100  
WRVA 1110 5000 C  
Roanoke  
WDBJ 930 1000 C

WASHINGTON

Aberdeen  
KKRO 1310 100  
Bellingham  
KVOS 1200 100  
Everett  
KRKO 1370 50  
Olympia  
KGY 1210 100  
Pullman  
KWSC 1220 1000  
Seattle  
KEEN 1370 100  
KIRO 710 1000  
KJRH 970 5000 B  
KOL 1270 1000 C  
KOMO 920 1000 R  
KRSC 1120 250  
KTW 1220 1000  
KXA 760 250  
Spokane  
KFIO 1120 100

KFPY 890 1000 C  
KGA 1470 5000 B  
KHQ 590 1000 R

Tacoma

KMO 1330 250  
KVI 570 1000 C  
Walla Walla  
KUJ 1370 100  
Wenatchee  
KFPQ 1500 100  
Yakima  
KIT 1310 100

WEST VIRGINIA

Bluefield  
WHIS 1410 500  
Charleston  
WCHS 580 500 C  
Clarksburg  
WBLK 1370 100  
Fairmont  
WMMN 890 500 C  
Huntington  
WSAZ 1190 1000  
Parkersburg  
WPAR 1420 100 C  
Wheeling  
WWVA 1160 5000 C

WISCONSIN

Eau Claire  
WEAU 1050 1000  
Fond du Lac  
KFIZ 1420 100  
Green Bay  
WBYP 1200 100  
WTAQ 1330 1000  
Janesville  
WCLO 1200 100  
LaCrosse  
WKBH 1380 1000  
Madison  
WHA 940 5000  
WIBA 1280 1000 N  
Manitowoc  
WOMT 1210 100  
Milwaukee  
WEWP 1310 100  
WISN 1120 250 C  
WTMJ 620 1000 N  
Poynette  
WBU 1210 100  
Racine  
WRJN 1370 100  
Sheboygan  
WBFL 1300 250  
Stevens Point  
WLBL 900 2500  
Superior  
WDSM 1200 100  
Wausau  
WSAU 1370 100

WYOMING

Casper  
KDFN 1440 500  
Sheridan  
KWYO 1370 100

CANADA

ALBERTA

Calgary  
CFAC 930 100 F  
CFCN 1030 10000  
CJ CJ 690 100 F  
Edmonton  
CFRN 960 100 F  
CJCA 730 1000 F  
CKUA 580 500  
Lethbridge  
CJOC 950 100 F

BRITISH COLUMBIA

Chilliwack  
CHWK 780 100 F  
Kamloops  
CFJC 880 100 F  
Kelowna  
CKOV 630 100 F  
Prince Rupert  
CFPR 580 50  
Trail  
CJAT 910 1000 F  
Vancouver  
CJOR 600 500  
CKCD 1010 100  
CKFC 1410 50  
CKMO 1410 100 F  
CKWX 1010 100 F  
CRCV 1100 5000 F  
Victoria  
CFCT 1450 50

MANITOBA

Brandon  
CKN 1120 100 F  
Winnipeg  
CJRC 630 500 F  
CKY 910 15000 F

NEW BRUNSWICK

Fredericton  
CFNB 550 500 F  
Moncton  
CKOW 1370 100 F  
St. John  
CHSJ 1120 500 F

N. W. TERRITORY

Aklavik  
CJCU 1210 50

NOVA SCOTIA

Glace Bay  
VAS 685 2000  
Halifax  
CHNS 930 1000 F  
Sydney  
CJCB 1240 1000 F  
Wolfville  
CJCC 1010 50  
Yarmouth  
CJLS 1310 100

ONTARIO

Brantford  
CKPC 930 100 F

Chatham  
CFCO 630 100 F

Cobalt  
CKMC 1210 50  
Fort William  
CKPR 730 100 F  
Hamilton  
CHML 1010 100 F  
CKOK 1120 500 F  
Kingston  
CFRC 1510 100 F  
Kirkland Lake  
CJKL 1310 100 F  
London

CFPL 730 100 F

North Bay  
CFCH 930 100 F

Ottawa  
CKCO 1010 100 F  
CRCO 880 1000 F

Prescott  
CFCL 930 100

St. Catharines  
CKTB 1200 100 F

Sault Ste. Marie  
CJIC 1500 100

Stratford  
CJCS 1210 50

Sudbury  
CKSO 780 1000 F

Timmins  
CKGB 1420 100 F

Toronto  
CFRB 690 10000 C  
CKCL 580 100 F  
CRCT 840 5000 N  
CRCY 1420 100 F

Waterloo  
CKCR 1510 100

Windsor  
CKLW 1030 5000 M  
CRCW 600 500 F

Winham  
CKNX 1200 50

Prince Edward Island

Charlottetown  
CFCY 630 1000 F

CHCK 1310 50

Summerside  
CHGS 1450 50 F

QUEBEC

Chicoutimi  
CRCS 950 100 F

Hull  
CKCH 1210 100 F

Montreal  
CFCE 600 400 N  
CHLP 1120 100 F  
CKAC 730 5000 C  
CRCM 910 5000 F

New Carlisle  
CHNC 960 1000 F

Quebec  
CHRC 580 100  
CKCV 1310 100 F  
CRCK 1050 1000 F

SASKATCHEWAN

Moose Jaw  
CHAB 1200 100 F

# NORTH AMERICAN B. C. STATIONS BY LOCATIONS

<p><b>Prince Albert</b>  <b>CKBI</b> 1210 100 F  <b>Regina</b>  <b>CJRM</b> 540 1000  <b>CKCK</b> 1010 500 F  <b>Saskatoon</b>  <b>CFQC</b> 840 1000 F  <b>Yorkton</b>  <b>CJGX</b> 1390 100 F</p> <hr/> <p style="text-align: center;"><b>NEWFOUNDLAND</b></p> <p><b>St. John's</b>  <b>VOAC</b> 1065 40  <b>VOAS</b> 940 100  <b>VOCM</b> 1006 200  <b>VOGY</b> 840 400  <b>VONF</b> 1195 500  <b>VOWR</b> 681 500</p> <hr/> <p style="text-align: center;"><b>COSTA RICA</b></p> <p><b>San Jose</b>  <b>TIEP</b> 850 500</p> <hr/> <p style="text-align: center;"><b>GUATEMALA</b></p> <p><b>Guatemala City</b>  <b>TGW</b> 1210 10000</p> <hr/> <p style="text-align: center;"><b>MEXICO</b></p> <p style="text-align: center;"><b>AGUASCALIENTES</b></p> <p><b>Aguascalientes</b>  <b>XEBI</b> 1000 25  <b>XEXC</b> 810 350</p> <hr/> <p style="text-align: center;"><b>CHIHUAHUA</b></p> <p><b>Chihuahua</b>  <b>XEFI</b> 1440 250  <b>Juarez</b>  <b>XEFV</b> 1210 100  <b>XEF</b> 1450 100  <b>XEFJ</b> 1020 1000  <b>XFP</b> 1160 500  <b>Parral</b>  <b>XEAT</b> 1210 250</p> <hr/> <p style="text-align: center;"><b>COAHUILA</b></p> <p><b>Piedras Negras</b>  <b>XELO</b> 580 50000  <b>XEPN</b> 730 100000  <b>Sabinas</b>  <b>XEBX</b> 640 250  <b>Salttillo</b>  <b>XEAS</b> 1160 50  <b>XELA</b> 1240 50  <b>Torreón</b>  <b>XETB</b> 1310 125  <b>Villa Acuña</b>  <b>XERA</b> 840 350000</p> <hr/> <p style="text-align: center;"><b>D. F.</b></p> <p><b>Atzacapotzalco</b>  <b>XEMG</b> 1060 100</p>	<p><b>Gra. Anaya</b>  <b>XEDA</b> 1220 200  <b>Mexico City</b>  <b>XEAL</b> 660 1000  <b>XEB</b> 1030 10000  <b>XEBZ</b> 1160 100  <b>XECW</b> 1310 10  <b>XEFO</b> 940 5000  <b>XEJP</b> 1130 100  <b>XEK</b> 990 100  <b>XEL</b> 780 1900  <b>XELZ</b> 1370 100  <b>XEMX</b> 1280 100  <b>XENC</b> 860 50  <b>XEW</b> 890 50000  <b>XEXM</b> 610 500  <b>XEYO</b> 940 500  <b>Tacuba</b>  <b>XEFA</b> 1180 500</p> <hr/> <p style="text-align: center;"><b>DURANGO</b></p> <p><b>Durango</b>  <b>XEE</b> 1210 50</p> <hr/> <p style="text-align: center;"><b>GUANAJUATO</b></p> <p><b>Leon</b>  <b>XEKL</b> 1240 500</p> <hr/> <p style="text-align: center;"><b>JALISCO</b></p> <p><b>Guadalajara</b>  <b>XEAD</b> 1060 125  <b>XED</b> 1160 2500  <b>Guzman</b>  <b>XEBA</b> 1080 20</p> <hr/> <p style="text-align: center;"><b>BAJA CALIFORNIA</b></p> <p><b>Agua Caliente</b>  <b>XEBC</b> 730 5000  <b>Mexicali</b>  <b>XEAA</b> 920 200  <b>XEAO</b> 560 250  <b>Rosarito</b>  <b>XEAQ</b> 1090 1000  <b>Tijuana</b>  <b>XEAC</b> 980 250  <b>XEBG</b> 820 1000  <b>XEC</b> 1150 100  <b>XEMO</b> 860 5000  <b>XEOK</b> 760 2500</p> <hr/> <p style="text-align: center;"><b>MICHOACAN</b></p> <p><b>Morelia</b>  <b>XFI</b> 1370 125</p> <hr/> <p style="text-align: center;"><b>NUEVO LEON</b></p> <p><b>Monterrey</b>  <b>XEPB</b> 870 200  <b>XEFJ</b> 1230 100  <b>XEH</b> 720 250  <b>XET</b> 690 500  <b>XEX</b> 1310 125</p>	<p style="text-align: center;"><b>PUEBLA</b></p> <p><b>Puebla</b>  <b>XETH</b> 1210 100</p> <hr/> <p style="text-align: center;"><b>SAN LUIS POTOSI</b></p> <p><b>San Luis Potosi</b>  <b>XECZ</b> 1370 100  <b>XEXH</b> 1250 250</p> <hr/> <p style="text-align: center;"><b>SINALOA</b></p> <p><b>Mazatlan</b>  <b>XEBL</b> 1220 50</p> <hr/> <p style="text-align: center;"><b>SONORA</b></p> <p><b>Hermasillo</b>  <b>XEBH</b> 930 500  <b>Nogales</b>  <b>XEAF</b> 990 750</p> <hr/> <p style="text-align: center;"><b>TAMAULIPAS</b></p> <p><b>Matamoros</b>  <b>XEAM</b> 750 25  <b>Neuva Laredo</b>  <b>XEBK</b> 1000 100  <b>XEFE</b> 1340 250  <b>XENT</b> 910 150000  <b>Reynosa</b>  <b>XEAW</b> 960 50000  <b>Tampico</b>  <b>XEFW</b> 1310 250  <b>XES</b> 990 250</p> <hr/> <p style="text-align: center;"><b>VERACRUZ</b></p> <p><b>Cordoba</b>  <b>XEAG</b> 1310 10  <b>Jalapa</b>  <b>XEXB</b> 1270 250  <b>XEXD</b> 1340 350  <b>Minatitlan</b>  <b>XEDW</b> 1150 20  <b>Veracruz</b>  <b>XETF</b> 1220 30  <b>XEU</b> 1010 250</p> <hr/> <p style="text-align: center;"><b>YUCATAN</b></p> <p><b>Merida</b>  <b>XEBJ</b> 1160 20  <b>XEFC</b> 650 100  <b>XEZ</b> 630 500</p>	<p><b>CMJI</b> 1130 150  <b>CMJO</b> 1180 50  <b>Cienfuegos</b>  <b>CMHJ</b> 1160 175  <b>CMHM</b> 1450 100  <b>CMHW</b> 820 100  <b>CMHX</b> 760 290  <b>Crucce</b>  <b>CMHK</b> 1330 250  <b>Havana</b>  <b>CMBD</b> 1170 500  <b>CMBG</b> 1140 200  <b>CMBS</b> 770 150  <b>CMBX</b> 1070 500  <b>CMBY</b> 970 150  <b>CMBZ</b> 1000 500  <b>CMCA</b> 1350 450  <b>CMCB</b> 640 150  <b>CMCD</b> 950 250  <b>CMCF</b> 810 600  <b>CMCG</b> 680 1000  <b>CMCJ</b> 1100 500  <b>CMCN</b> 1450  <b>CMCO</b> 1200 250  <b>CMCQ</b> 1410 250  <b>CMCU</b> 1280 500  <b>CMCV</b> 750 150  <b>CMCX</b> 570 150  <b>CMCY</b> 1030 5000  <b>CMK</b> 730 3000  <b>CMOA</b> 1440 150  <b>CMOK</b> 1470 150  <b>CMOX</b> 1320 200  <b>CMQ</b> 880 500  <b>CMW</b> 600 1400  <b>CMX</b> 920 1000  <b>Holguin</b>  <b>CMFK</b> 1460 250  <b>CMKO</b> 1280  <b>Manzanillo</b>  <b>CMKM</b> 1120 200  <b>Matanzas</b>  <b>CMGC</b> 1400 150  <b>CMGF</b> 1120 150  <b>CMGH</b> 790 500  <b>Moron</b>  <b>CMJP</b> 1430 75  <b>Pinar del Rio</b>  <b>CMAB</b> 1340  <b>Sagua la Grande</b>  <b>CMHA</b> 1070 50  <b>Sancti Spiritus</b>  <b>CMHB</b> 1240 50  <b>Santa Clara</b>  <b>CMHI</b> 1210 150  <b>Santiago</b>  <b>CMKC</b> 1250 150  <b>CMKD</b> 1050 250  <b>CMKG</b> 1160  <b>CMKR</b> 1400 100  <b>CMKW</b> 1350  <b>CMKX</b> 1190</p> <hr/> <p style="text-align: center;"><b>DOMINICAN REPUBLIC</b></p> <p><b>Trujillo</b>  <b>HIX</b> 890 800</p> <hr/> <p style="text-align: center;"><b>HAITI</b></p> <p><b>Port-au-Prince</b>  <b>HHK</b> 920 1000</p>
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## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>CFAC</b> 930 100	<b>CJFK</b> 1310 100	<b>CMBD</b> 1170 500
Calgary, Alta.	Kirkland Lake, Ont.	Havana, Cuba
<b>CFCF</b> 600 400	<b>CJLS</b> 1310 100	<b>CMBG</b> 1140 200
Montreal, Que.	Yarmouth, N. S.	Havana, Cuba
<b>CFCH</b> 930 100	<b>CJOC</b> 950 100	<b>CMBS</b> 770 150
North Bay, Ont.	Lethbridge, Alta.	Havana, Cuba
<b>CFCN</b> 1030 10000	<b>CJOR</b> 600 500	<b>CMBX</b> 1070 500
Calgary, Alta.	Vancouver, B. C.	Havana, Cuba
<b>CFCO</b> 630 100	<b>CJRC</b> 630 500	<b>CMBY</b> 970 150
Chatham, Ont.	Winnipeg, Man.	Havana, Cuba
<b>CFCT</b> 1450 50	<b>CJRM</b> 540 1000	<b>CMBZ</b> 1000 500
Victoria, B. C.	Regina, Sask.	Havana, Cuba
<b>CFCY</b> 630 1000	<b>CKAC</b> 730 5000	<b>CMCA</b> 1350 450
Charlottetown, P.E.I.	Montreal, Que.	Havana, Cuba
<b>CFJC</b> 880 100	<b>CKBI</b> 1210 100	<b>CMCB</b> 640 150
Kamloops, B. C.	Prince Albert, Sask.	Havana, Cuba
<b>CFLC</b> 930 100	<b>CKCD</b> 1010 100	<b>CMCD</b> 950 250
Prescott, Ont.	Vancouver, B. C.	Havana, Cuba
<b>CFNB</b> 550 500	<b>CKCH</b> 1210 100	<b>CMCF</b> 810 600
Fredericton, N. B.	Hull, Que.	Havana, Cuba
<b>CFPL</b> 730 100	<b>CKCK</b> 1010 500	<b>CMCG</b> 680 1000
London, Ont.	Regina, Sask.	Havana, Cuba
<b>CFPR</b> 580 50	<b>CKCL</b> 580 100	<b>CMCJ</b> 1100 500
Prince Rupert, B. C.	Toronto, Ont.	Havana, Cuba
<b>CFQC</b> 840 1000	<b>CKCO</b> 1010 100	<b>CMCN</b> 1500
Saskatoon, Sask.	Ottawa, Ont.	Havana, Cuba
<b>CFRB</b> 690 10000	<b>CKCR</b> 1510 100	<b>CMCO</b> 1200 250
Toronto, Ont.	Waterloo, Ont.	Havana, Cuba
<b>CFRC</b> 1510 100	<b>CKCV</b> 1310 100	<b>CMCQ</b> 1410 250
Kingston, Ont.	Quebec, Que.	Havana, Cuba
<b>CFRN</b> 960 100	<b>CKCW</b> 1370 100	<b>CMCU</b> 1280 500
Edmonton, Alta.	Moncton, N. B.	Havana, Cuba
<b>CHAB</b> 1200 100	<b>CKFC</b> 1410 50	<b>CMCW</b> 750 150
Moose Jaw, Sask.	Vancouver, B. C.	Havana, Cuba
<b>CHCK</b> 1310 50	<b>CKGB</b> 1420 100	<b>CMCX</b> 570 150
Charlottetown, P.E.I.	Timmins, Ont.	Havana, Cuba
<b>CHGS</b> 1450 50	<b>CKIC</b> 1010 50	<b>CMCY</b> 1030 5000
Summerside, P.E.I.	Wolfville, N. S.	Havana, Cuba
<b>CHLP</b> 1120 100	<b>CKLW</b> 1030 5000	<b>CMCG</b> 1400 150
Montreal, Que.	Windsor, Ont.	Matanzas, Cuba
<b>CHML</b> 1010 100	<b>CKMC</b> 1210 50	<b>CMGE</b> 1370 150
Hamilton, Ont.	Cobalt, Ont.	Cardenas, Cuba
<b>CHNC</b> 960 1000	<b>CKMO</b> 1410 100	<b>CMGF</b> 1120 150
New Carlisle, Que.	Vancouver, B. C.	Matanzas, Cuba
<b>CHNS</b> 930 1000	<b>CKNX</b> 1200 50	<b>CMGH</b> 790 500
Halifax, N. S.	Wingham, Ont.	Matanzas, Cuba
<b>CHRC</b> 580 100	<b>CKOC</b> 1120 500	<b>CMHA</b> 1070 50
Quebec, Que.	Hamilton, Ont.	Sagua la Grande, Cu.
<b>CHSJ</b> 1120 500	<b>CKOV</b> 630 100	<b>CMHB</b> 1240 50
St. John, N. B.	Kelowna, B. C.	Sancti Spiritus, Cuba
<b>CHWK</b> 780 100	<b>CKPC</b> 930 100	<b>CMHD</b> 1270 250
Chilliwack, B. C.	Brantford, Ont.	Caibarien, Cuba
<b>CJAT</b> 910 1000	<b>CKPR</b> 730 100	<b>CMHI</b> 1210 150
Trail, B. C.	Fort William, Ont.	Santa Clara, Cuba
<b>CJCA</b> 730 1000	<b>CKSO</b> 780 1000	<b>CMHJ</b> 1160 175
Edmonton, Alta.	Sudbury, Ont.	Cienfuegos, Cuba
<b>CJCB</b> 1240 1000	<b>CKTB</b> 1200 100	<b>CMHK</b> 1330 250
Sydney, N. S.	St. Catharines, Ont.	Cruces, Cuba
<b>CJCJ</b> 690 100	<b>CKUA</b> 580 500	<b>CMHM</b> 1450 100
Calgary, Alta.	Edmonton, Alta.	Cienfuegos, Cuba
<b>CJCS</b> 1210 50	<b>CKWX</b> 1010 100	<b>CMHW</b> 820 100
Stratford, Ont.	Vancouver, B. C.	Cienfuegos, Cuba
<b>CJCU</b> 1210 50	<b>CKX</b> 1120 100	<b>CMHX</b> 760 200
Aklavik, N. W. T.	Brandon, Man.	Cienfuegos, Cuba
<b>CJGX</b> 1390 100	<b>CKY</b> 910 15000	<b>CMJA</b> 1010 300
Yorkton, Sask.	Winnipeg, Man.	Camaguey, Cuba
<b>CJIC</b> 1500 100	<b>CMAB</b> 1340	<b>CMJC</b> 1390 150
S. Ste. Marie, Ont.	Pinar del Rio, Cuba	Camaguey, Cuba



## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>CMJE</b> 1220 50 Camaguey, Cuba	<b>HIX</b> 800 800 Trujillo, D. R.	<b>KELO</b> 1200 100 Sioux Falls, S. Dak.
<b>CMJF</b> 1150 200 Camaguey, Cuba	<b>KABC</b> 1420 100 San Antonio, Texas	<b>KERN</b> 1370 100 Bakersfield, Calif.
<b>CMJH</b> 1360 100 Ciego de Avila, Cuba	<b>KABR</b> 1420 100 Aberdeen, S. Dak.	<b>KEUB</b> 1420 100 Price, Utah
<b>CMJI</b> 1130 150 Ciego de Avila, Cuba	<b>KADA</b> 1200 100 Ada, Okla.	<b>KEX</b> 1180 5000 Portland, Ore.
<b>CMJK</b> 780 250 Camaguey, Cuba	<b>KALB</b> 1420 100 Alexandria, La.	<b>KFAB</b> 770 10000 Lincoln, Neb.
<b>CMJL</b> 1340 100 Camaguey, Cuba	<b>KALE</b> 1300 500 Portland, Ore.	<b>KFAC</b> 1300 1000 Los Angeles, Calif.
<b>CMJO</b> 1180 50 Ciego de Avila, Cuba	<b>KAND</b> 1310 100 Corsicana, Texas	<b>KFBB</b> 1280 1000 Great Falls, Mont.
<b>CMJP</b> 1430 75 Camaguey, Cuba	<b>KANS</b> 1210 100 Wichita, Kans.	<b>KFBI</b> 1050 5000 Abilene, Kans.
<b>CMJX</b> 830 500 Camaguey, Cuba	<b>KARK</b> 890 500 Little Rock, Ark.	<b>KFBK</b> 1490 5000 Sacramento, Calif.
<b>CMK</b> 730 3000 Havana, Cuba	<b>KASA</b> 1210 100 Elk City, Okla.	<b>KFDM</b> 560 500 Beaumont, Texas
<b>CMKO</b> 1250 150 Santiago, Cuba	<b>KAST</b> 1370 100 Astoria, Ore.	<b>KFDY</b> 780 1000 Brookings, S. D.
<b>CMKD</b> 1050 250 Santiago, Cuba	<b>KATE</b> 1200 100 Albert Lea, Minn.	<b>KFEF</b> 920 500 Denver, Colo.
<b>CMKF</b> 1460 250 Holguin, Cuba	<b>KAWM</b> 1500 100 Gallup, N. Mex.	<b>KFEQ</b> 680 2500 St. Joseph, Mo.
<b>CMKG</b> 1160 ... Santiago, Cuba	<b>KBIX</b> 1500 100 Muskogee, Okla.	<b>KFGQ</b> 1370 100 Boone, Iowa
<b>CMKM</b> 1120 200 Manzanillo, Cuba	<b>KBPS</b> 1420 100 Portland, Ore.	<b>KFH</b> 1300 1000 Wichita, Kans.
<b>CMKO</b> 1280 ... Holguin, Cuba	<b>KBST</b> 1500 100 Big Spring, Texas	<b>KFI</b> 640 50000 Los Angeles, Calif.
<b>CMKR</b> 1400 100 Santiago, Cuba	<b>KBTM</b> 1200 100 Jonesboro, Ark.	<b>KFIO</b> 1120 100 Spokane, Wash.
<b>CMKW</b> 1350 ... Santiago, Cuba	<b>KCKN</b> 1310 100 Kansas City, Kans.	<b>KFIJ</b> 1420 100 Fond du Lac, Wis.
<b>CMKX</b> 1190 ... Santiago, Cuba	<b>KCMC</b> 1420 100 Texarkana, Texas	<b>KFJB</b> 1200 100 Marshalltown, Iowa
<b>CMOA</b> 1440 150 Havana, Cuba	<b>KCMO</b> 1370 100 Kansas City, Mo.	<b>KFJI</b> 1210 100 Klamath Falls, Ore.
<b>CMOK</b> 1470 150 Havana, Cuba	<b>KCRC</b> 1360 250 Enid, Okla.	<b>KFJM</b> 1410 500 Grand Forks, N. D.
<b>CMOX</b> 1320 200 Havana, Cuba	<b>KCRJ</b> 1310 100 Jerome, Ariz.	<b>KFJZ</b> 1370 100 Fort Worth, Texas
<b>CMQ</b> 890 500 Havana, Cuba	<b>KDAL</b> 1500 100 Duluth, Minn.	<b>KFFA</b> 850 500 Greeley, Colo.
<b>CMW</b> 600 1400 Havana, Cuba	<b>KDB</b> 1500 100 Santa Barbara, Calif.	<b>KFKU</b> 1220 1000 Lawrence, Kans.
<b>CMX</b> 920 1000 Havana, Cuba	<b>KDFN</b> 1440 500 Casper, Wyo.	<b>KFNF</b> 890 500 Shenandoah, Iowa
<b>CRCK</b> 1050 1000 Quebec, Que.	<b>KDKA</b> 980 50000 Pittsburgh, Pa.	<b>KFOR</b> 1210 100 Lincoln, Neb.
<b>CRCM</b> 910 5000 Montreal, Que.	<b>KDLR</b> 1210 100 Devils Lake, N. D.	<b>KFOX</b> 1250 1000 Long Beach, Calif.
<b>CRCO</b> 880 1000 Ottawa, Ont.	<b>KDNC</b> 1200 250 Lewistown, Mont.	<b>KFPL</b> 1310 100 Dublin, Texas
<b>CRCS</b> 980 100 Chicoutimi, Que.	<b>KDON</b> 1210 100 Monterrey, Calif.	<b>KFPW</b> 1210 100 Fort Smith, Ark.
<b>CRCT</b> 840 5000 Toronto, Ont.	<b>KDYL</b> 1290 1000 Salt Lake City, Utah	<b>KFPY</b> 890 1000 Spokane, Wash.
<b>CRCV</b> 1100 5000 Vancouver, B. C.	<b>KECA</b> 1430 1000 Los Angeles, Calif.	<b>KFQD</b> 780 250 Anchorage, Alaska
<b>CRCW</b> 600 500 Windsor, Ont.	<b>KEEN</b> 1370 100 Seattle, Wash.	<b>KFRK</b> 610 1000 San Francisco, Calif.
<b>CRCY</b> 1420 100 Toronto, Ont.	<b>KEHE</b> 780 1000 Los Angeles, Calif.	<b>KFRE</b> 1370 100 Longview, Texas
<b>HHK</b> 920 1000 Port-au-Prince, Haiti	<b>KELD</b> 1370 100 El Dorado, Ark.	<b>KFRU</b> 630 500 Columbia, Mo.



## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>KOH</b> 1380 500	<b>KRLH</b> 1420 100	<b>KTOK</b> 1370 100
Reno, Nev.	Midland, Texas	Oklahoma City, Okla.
<b>KOIL</b> 1260 1000	<b>KRMC</b> 1310 100	<b>KTRB</b> 740 250
Omaha, Neb.	Jamestown, N. Dak.	Modesto, Calif.
<b>KOLN</b> 940 1000	<b>KRMD</b> 1310 100	<b>KTRH</b> 1290 1000
Portland, Ore.	Shreveport, La.	Houston, Texas
<b>KOKO</b> 1370 100	<b>KRNR</b> 1500 100	<b>KTSA</b> 550 1000
La Junta, Colo.	Roseburg, Ore.	San Antonio, Texas
<b>KOL</b> 1270 1000	<b>KRNT</b> 1320 500	<b>KTSM</b> 1310 100
Seattle, Wash.	Des Moines, Iowa	El Paso, Texas
<b>KOMA</b> 1480 5000	<b>KROC</b> 1310 100	<b>KTUL</b> 1400 500
Oklahoma City, Okla.	Rochester, Minn.	Tulsa, Okla.
<b>KOMO</b> 920 1000	<b>KROD</b> 1500 100	<b>KTW</b> 1220 1000
Seattle, Wash.	El Paso, Texas	Seattle, Wash.
<b>KONO</b> 1370 100	<b>KKROW</b> 930 1000	<b>KUJ</b> 1370 100
San Antonio, Texas	Oakland, Calif.	Walla Walla, Wash.
<b>KOOS</b> 1200 250	<b>KROY</b> 1210 100	<b>KUMA</b> 1420 100
Marshfield, Ore.	Sacramento, Calif.	Yuma, Ariz.
<b>KORE</b> 1420 100	<b>KRQA</b> 1310 100	<b>KUOA</b> 1260 2500
Eugene, Ore.	Santa Fe, N. Mex.	Siloam Springs, Ark.
<b>KOTN</b> 1500 100	<b>KRRV</b> 1310 250	<b>KUSD</b> 890 500
Pine Bluffs, Ark.	Sherman, Texas	Vermillion, S. Dak.
<b>KOVC</b> 1500 100	<b>KRSC</b> 1120 250	<b>KUTA</b> 1500 100
Valley City, N. Dak.	Seattle, Wash.	Salt Lake City, Utah
<b>KOY</b> 1390 500	<b>KSAC</b> 580 500	<b>KVLT</b> 1200 100
Phoenix, Ariz.	Manhattan, Kans.	Redding, Calif.
<b>KPAC</b> 1260 500	<b>KSCJ</b> 1330 1000	<b>KVEC</b> 1200 150
Port Arthur, Texas	Sioux City, Iowa	San Luis Obispo, Cal.
<b>KPDN</b> 1310 100	<b>KSD</b> 550 1000	<b>KVGB</b> 1370 100
Pampa, Texas	St. Louis, Mo.	Great Bend, Kans.
<b>KPFA</b> 1210 100	<b>KSEI</b> 900 250	<b>KVI</b> 570 1000
Helena, Mont.	Pocatello, Idaho	Tacoma, Wash.
<b>KPLC</b> 1500 100	<b>KSFO</b> 500 1000	<b>KVOA</b> 1260 1000
Lake Charles, La.	San Francisco, Calif.	Tucson, Ariz.
<b>KPLT</b> 1500 100	<b>KSJS</b> 1500 100	<b>KVOD</b> 920 500
Paris, Texas	Salina, Kans.	Denver, Colo.
<b>KPMC</b> 1550 1000	<b>KSL</b> 1130 50000	<b>KVOE</b> 1500 100
Bakersfield, Calif.	Salt Lake City, Utah	Santa Ana, Calif.
<b>KPO</b> 680 50000	<b>KSLM</b> 1370 100	<b>KVOL</b> 1310 100
San Francisco, Calif.	Salem, Ore.	Lafayette, La.
<b>KPOF</b> 880 500	<b>KSO</b> 1430 500	<b>KVOO</b> 1140 25000
Denver, Colo.	Des Moines, Iowa	Tulsa, Okla.
<b>KPPC</b> 1210 100	<b>KSOO</b> 1100 2500	<b>KVOR</b> 1270 1000
Pasadena, Calif.	Sioux Falls, S. Dak.	Colorado Sprgs., Colo.
<b>KPQ</b> 1500 100	<b>KSRO</b> 1310 250	<b>KVOS</b> 1200 100
Wenatchee, Wash.	Santa Rosa, Calif.	Bellingham, Wash.
<b>KPRO</b> 920 1000	<b>KSTP</b> 1460 10000	<b>KVOX</b> 1310 100
Houston, Texas	St. Paul, Minn.	Moorhead, Minn.
<b>KQV</b> 1380 500	<b>KSUB</b> 1310 100	<b>KVSO</b> 1210 100
Pittsburgh, Pa.	Cedar City, Utah	Ardmore, Okla.
<b>KQW</b> 1010 1000	<b>KSUN</b> 1200 100	<b>KWBG</b> 1420 100
San Jose, Calif.	Lowell, Ariz.	Hutchinson, Kans.
<b>KRBC</b> 1420 100	<b>KTAR</b> 620 1000	<b>KWG</b> 1200 100
Abilene, Texas	Phoenix, Ariz.	Stockton, Calif.
<b>KRE</b> 1370 100	<b>KTAT</b> 1240 1000	<b>KWJJ</b> 1040 500
Berkeley, Calif.	Fort Worth, Texas	Portland, Ore.
<b>KRGV</b> 1260 500	<b>KTBS</b> 1450 1000	<b>KWK</b> 1350 1000
Welasco, Texas	Shreveport, La.	St. Louis, Mo.
<b>KRIS</b> 1330 250	<b>KTEM</b> 1370 100	<b>KWKH</b> 1100 10000
Corpus Christi, Tex.	Temple, Texas	Shreveport, La.
<b>KRKD</b> 1120 500	<b>KTFI</b> 1240 1000	<b>KWLC</b> 1270 100
Los Angeles, Calif.	Twin Falls, Idaho	Decorah, Iowa
<b>KRKO</b> 1370 50	<b>KTHS</b> 1060 1000	<b>KWNO</b> 1200 100
Everett, Wash.	Hot Springs, Ark.	Winona, Minn.
<b>KRLC</b> 1420 100	<b>KTKC</b> 1190 250	<b>KWOS</b> 1310 100
Lewiston, Idaho	Visalia, Calif.	Jefferson City, Mo.
<b>KRLD</b> 1040 10000	<b>KTMS</b> 1220 500	<b>KWSC</b> 1220 1000
Dallas, Texas	Santa Barbara, Calif.	Pullman, Wash.

## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>KWTN</b> 1210	100	<b>WAIR</b> 1250	250	<b>WBNY</b> 1370	100
Watertown, S. Dak.		Winston-Salem, N. C.		Buffalo, N. Y.	
<b>KWTO</b> 560	5000	<b>WALA</b> 1380	500	<b>WBOQ</b> 860	5000
Springfield, Mo.		Mobile, Ala.		New York, N. Y.	
<b>KWYO</b> 1370	100	<b>WALR</b> 1210	100	<b>WBOW</b> 1310	100
Sheridan, Wyo.		Zanesville, Ohio		Terre Haute, Ind.	
<b>KXA</b> 760	250	<b>WAML</b> 1310	100	<b>WBRR</b> 1210	100
Seattle, Wash.		Laurel, Miss.		Red Bank, N. J.	
<b>KXBY</b> 1530	1000	<b>WAPI</b> 1140	5000	<b>WBRC</b> 930	1000
Kansas City, Mo.		Birmingham, Ala.		Birmingham, Ala.	
<b>KXL</b> 1420	100	<b>WAPQ</b> 1420	100	<b>WBRE</b> 1310	100
Portland, Ore.		Chattanooga, Tenn.		Wilkes-Barre, Pa.	
<b>KXO</b> 1500	100	<b>WARD</b> 1400	500	<b>WBRY</b> 1530	1000
El Centro, Calif.		Brooklyn, N. Y.		Waterbury, Conn.	
<b>KXRO</b> 1310	100	<b>WASH</b> 1270	500	<b>WBT</b> 1080	5000
Aberdeen, Wash.		Grand Rapids, Mich.		Charlotte, N. C.	
<b>KXYZ</b> 1440	1000	<b>WATL</b> 1370	100	<b>WBTM</b> 1370	100
Houston, Texas		Atlanta, Ga.		Danville, Va.	
<b>KYA</b> 1230	1000	<b>WATR</b> 1190	100	<b>WBZ</b> 990	5000
San Francisco, Calif.		Waterbury, Conn.		Boston, Mass.	
<b>KYCA</b> 1500	100	<b>WAVE</b> 940	1000	<b>WBZA</b> 990	1000
Prescott, Ariz.		Louisville, Ky.		Springfield, Mass.	
<b>KYOS</b> 1040	250	<b>WAWZ</b> 1350	500	<b>WCAD</b> 1220	500
Merced, Calif.		Zarephath, N. J.		Canton, N. Y.	
<b>KYW</b> 1020	10000	<b>WAYX</b> 1200	100	<b>WCAE</b> 1220	1000
Philadelphia, Pa.		Waycross, Ga.		Pittsburgh, Pa.	
<b>TGW</b> 1210	10000	<b>WAZL</b> 1420	100	<b>WCAL</b> 1250	100
Guatemala, Gua.		Hazleton, Pa.		Northfield, Minn.	
<b>TIEP</b> 850	500	<b>WBBA</b> 890	500	<b>WCAM</b> 1280	500
San Jose, C. R.		West Lafayette, Ind.		Camden, N. J.	
<b>VAS</b> 685	2000	<b>WBAL</b> 760	2500	<b>WCAO</b> 600	500
Glace Bay, N. S.		Baltimore, Md.		Baltimore, Md.	
<b>VOAC</b> 1065	40	<b>WBAL</b> 1060	10000	<b>WCAP</b> 1280	500
St. John's, Nfld.		Baltimore, Md.		Asbury Park, N. J.	
<b>VOAS</b> 940	100	<b>WBAP</b> 800	50000	<b>WCAT</b> 1200	100
St. John's, Nfld.		Fort Worth, Texas		Rapid City, S. Dak.	
<b>VOCM</b> 1006	200	<b>WBAX</b> 1210	100	<b>WCAU</b> 1170	50000
St. John's, Nfld.		Wilkes-Barre, Pa.		Philadelphia, Pa.	
<b>VOGY</b> 840	400	<b>WBBC</b> 1400	500	<b>WCAX</b> 1200	100
St. John's, Nfld.		Brooklyn, N. Y.		Burlington, Vt.	
<b>VONF</b> 1195	500	<b>WBBL</b> 1210	100	<b>WCAZ</b> 1070	100
St. John's, Nfld.		Richmond, Va.		Carthage, Ill.	
<b>VOWR</b> 681	500	<b>WBEN</b> 770	50000	<b>WCBA</b> 1440	500
St. John's, Nfld.		Chicago, Ill.		Allentown, Pa.	
<b>WAAB</b> 1410	500	<b>WBBR</b> 1300	1000	<b>WCBD</b> 1080	5000
Boston, Mass.		Brooklyn, N. Y.		Chicago, Ill.	
<b>WAAF</b> 920	1000	<b>WBBZ</b> 1200	100	<b>WCBM</b> 1370	100
Chicago, Ill.		Ponca City, Okla.		Baltimore, Md.	
<b>WAAT</b> 940	500	<b>WBCM</b> 1410	500	<b>WCBS</b> 1420	100
Jersey City, N. J.		Bay City, Mich.		Springfield, Ill.	
<b>WAAW</b> 660	500	<b>WBEN</b> 900	1000	<b>WCCO</b> 810	50000
Omaha, Neb.		Buffalo, N. Y.		Minneapolis, Minn.	
<b>WABC</b> 860	50000	<b>WBEO</b> 1310	100	<b>WCFL</b> 970	5000
New York, N. Y.		Marquette, Mich.		Chicago, Ill.	
<b>WABI</b> 1200	100	<b>WBHP</b> 1200	100	<b>WCHS</b> 580	500
Bangor, Maine		Huntsville, Ala.		Charleston, W. Va.	
<b>WABY</b> 1370	100	<b>WBIG</b> 1440	1000	<b>WCHV</b> 1420	100
Albany, N. Y.		Greensboro, N. C.		Charlottesville, Va.	
<b>WACO</b> 1420	100	<b>WBLK</b> 1370	100	<b>WCKY</b> 1490	5000
Waco, Texas		Clarksburg, W. Va.		Covington, Ky.	
<b>WADC</b> 1320	1000	<b>WBLY</b> 1210	100	<b>WCLO</b> 1200	100
Akron, Ohio		Lima, Ohio		Janesville, Wis.	
<b>WAGF</b> 1370	250	<b>WBNO</b> 1200	100	<b>WCLS</b> 1310	100
Dothan, Ala.		New Orleans, La.		Joliet, Ill.	
<b>WAGM</b> 1420	100	<b>WBNS</b> 1430	500	<b>WCMI</b> 1310	100
Presque Isle, Me.		Columbus, Ohio		Ashland, Ky.	
<b>WAIM</b> 1200	100	<b>WBXN</b> 1350	1000	<b>WCNW</b> 1500	100
Anderson, S. C.		New York, N. Y.		Brooklyn, N. Y.	

## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>WCOA</b> 1340 Pensacola, Fla.	500	<b>WEEU</b> 830 Reading, Pa.	1000	<b>WGCM</b> 1210 Gulfport, Miss.	100
<b>WCOC</b> 880 Meridian, Miss.	500	<b>WELI</b> 900 New Haven, Conn.	500	<b>WGES</b> 1360 Chicago, Ill.	500
<b>WCOL</b> 1210 Columbus, Ohio	100	<b>WELL</b> 1420 Battle Creek, Mich.	100	<b>WGH</b> 1310 Newport News, Va.	100
<b>WCOP</b> 1120 Boston, Mass.	500	<b>WEMP</b> 1310 Milwaukee, Wis.	100	<b>WGL</b> 1370 Fort Wayne, Ind.	100
<b>WCPO</b> 1200 Cincinnati, Ohio	100	<b>WENR</b> 870 Chicago, Ill.	50000	<b>WGN</b> 720 Chicago, Ill.	50000
<b>WCRW</b> 1210 Chicago, Ill.	100	<b>WEOA</b> 1370 Evansville, Ind.	100	<b>WGNV</b> 1210 Newburgh, N. Y.	100
<b>WCSC</b> 1360 Charleston, S. C.	500	<b>WESG</b> 850 Elmira, N. Y.	1000	<b>WGFC</b> 1420 Albany, Ga.	100
<b>WCSH</b> 940 Portland, Me.	1000	<b>WEST</b> 1200 Easton, Pa.	100	<b>WGR</b> 550 Buffalo, N. Y.	1000
<b>WDAE</b> 1220 Tampa, Fla.	1000	<b>WEVD</b> 1300 New York, N. Y.	1000	<b>WGRG</b> 1370 New Albany, Ind.	250
<b>WDAF</b> 610 Kansas City, Mo.	1000	<b>WEW</b> 760 St. Louis, Mo.	1000	<b>WGST</b> 890 Atlanta, Ga.	1000
<b>WDAH</b> 1310 El Paso, Texas	100	<b>WEXL</b> 1310 Royal Oak, Mich.	50	<b>WGVA</b> 1050 Indianapolis, Ind.	1000
<b>WDAS</b> 1370 Philadelphia, Pa.	100	<b>WFAA</b> 800 Dallas, Texas	50000	<b>WGY</b> 790 Schenectady, N. Y.	50000
<b>WDAY</b> 940 Fargo, N. Dak.	1000	<b>WFAB</b> 1300 New York, N. Y.	1000	<b>WHA</b> 940 Madison, Wis.	5000
<b>WDBJ</b> 930 Roanoke, Va.	1000	<b>WFAM</b> 1200 South Bend, Ind.	100	<b>WHAM</b> 1150 Rochester, N. Y.	50000
<b>WDBO</b> 580 Orlando, Fla.	1000	<b>WFAS</b> 1210 White Plains, N. Y.	100	<b>WHAS</b> 820 Louisville, Ky.	50000
<b>WDEL</b> 1120 Wilmington, Del.	250	<b>WFBC</b> 1300 Greenville, S. C.	1000	<b>WHAT</b> 1310 Philadelphia, Pa.	100
<b>WDEV</b> 550 Waterbury, Vt.	500	<b>WFBG</b> 1310 Altoona, Pa.	100	<b>WHAZ</b> 1300 Troy, N. Y.	500
<b>WDGY</b> 1180 Minneapolis, Minn.	1000	<b>WFBL</b> 1360 Syracuse, N. Y.	1000	<b>WHB</b> 860 Kansas City, Mo.	1000
<b>WDNC</b> 1500 Durham, N. C.	100	<b>WFBM</b> 1230 Indianapolis, Ind.	1000	<b>WHBB</b> 1500 Selma, Ala.	100
<b>WDOD</b> 1280 Chatanooga, Tenn.	1000	<b>WFBR</b> 1270 Baltimore, Md.	500	<b>WHBC</b> 1200 Canton, Ohio	100
<b>WDRC</b> 1330 Hartford, Conn.	1000	<b>WFDF</b> 1310 Flint, Mich.	100	<b>WHBF</b> 1210 Rock Island, Ill.	100
<b>WDSM</b> 1200 Superior, Wis.	100	<b>WFEB</b> 1340 Manchester, N. H.	500	<b>WHBI</b> 1250 Newark, N. J.	1000
<b>WDSU</b> 1250 New Orleans, La.	1000	<b>WFIL</b> 560 Philadelphia, Pa.	1000	<b>WHBL</b> 1300 Sheboygan, Wis.	250
<b>WDWS</b> 1370 Champaign, Ill.	100	<b>WFLA</b> 620 Clearwater, Fla.	1000	<b>WHBQ</b> 1370 Memphis, Tenn.	100
<b>WDZ</b> 1020 Tuscola, Ill.	250	<b>WFMD</b> 900 Frederick, Md.	500	<b>WHBU</b> 1210 Anderson, Ind.	100
<b>WEAF</b> 660 New York, N. Y.	50000	<b>WFOR</b> 1370 Hattiesburg, Miss.	100	<b>WHBY</b> 1200 Green Bay, Wis.	100
<b>WEAN</b> 780 Providence, R. I.	1000	<b>WFOY</b> 1210 St. Augustine, Fla.	100	<b>WHDF</b> 1370 Calumet, Mich.	100
<b>WEAU</b> 1050 Eau Claire, Wis.	1000	<b>WFTC</b> 1200 Kinston, N. C.	100	<b>WHDH</b> 830 Boston, Mass.	1000
<b>WEBC</b> 1290 Duluth, Minn.	1000	<b>WGAL</b> 1500 Lancaster, Pa.	100	<b>WHDL</b> 1400 Olean, N. Y.	250
<b>WEBQ</b> 1210 Harrisburg, Ill.	160	<b>WGAN</b> 640 Portland, Me.	500	<b>WHEB</b> 740 Portsmouth, N. H.	250
<b>WEBR</b> 1310 Buffalo, N. Y.	100	<b>WGAR</b> 1450 Cleveland, Ohio	500	<b>WHFC</b> 1430 Rochester, N. Y.	500
<b>WEDC</b> 1210 Chicago, Ill.	100	<b>WGBB</b> 1210 Freeport, N. Y.	100	<b>WHEF</b> 1500 Kosciusko, Miss.	100
<b>WEED</b> 1420 Rocky Mound, N. C.	160	<b>WGBF</b> 630 Evansville, Ind.	500	<b>WHIC</b> 1420 Cicero, Ill.	100
<b>WEI</b> 590 Boston, Mass.	1000	<b>WGBI</b> 880 Scranton, Pa.	500	<b>WHIO</b> 1260 Dayton, Ohio	1000

## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>WHIS</b> 1410 500	<b>WJBK</b> 1500 100	<b>WLAP</b> 1420 100
Bluefield, W. Va.	Detroit, Mich.	Lexington, Ky.
<b>WHJB</b> 620 250	<b>WJBL</b> 1200 100	<b>WLB</b> 1250 1000
Greensburg, Pa.	Decatur, Ill.	Minneapolis, Minn.
<b>WHK</b> 1390 1000	<b>WJBO</b> 1420 100	<b>WLBC</b> 1310 100
Cleveland, Ohio	Baton Rouge, La.	Muncie, Ind.
<b>WHKC</b> 640 500	<b>WJBR</b> 1420 100	<b>WLHL</b> 900 2500
Columbus, Ohio	Gastonla, N. C.	Stevens Point, Wis.
<b>WHLB</b> 1370 100	<b>WJBW</b> 1200 100	<b>WIBZ</b> 620 500
Virginia, Minn.	New Orleans, La.	Bangor, Me.
<b>WHN</b> 1010 1000	<b>WJBY</b> 1210 100	<b>WLEU</b> 1420 100
New York, N. Y.	Gadsden, Ala.	Erie, Pa.
<b>WHO</b> 1000 50000	<b>WJDX</b> 1270 1000	<b>WLH</b> 1370 100
Des Moines, Iowa	Jackson, Miss.	Lowell, Mass.
<b>WHOM</b> 1450 250	<b>WJEJ</b> 1210 100	<b>WLMO</b> 1210 100
Jersey City, N. J.	Hagerstown, Md.	Middlesboro, Ky.
<b>WHP</b> 1430 500	<b>WJEM</b> 1210 100	<b>WLNH</b> 1310 100
Harrisburg, Pa.	Lansing, Mich.	Laconia, N. H.
<b>WIBA</b> 1280 1000	<b>WJJD</b> 1130 20000	<b>WLS</b> 870 50000
Madison, Wis.	Chicago, Ill.	Chicago, Ill.
<b>WIBG</b> 970 100	<b>WJMS</b> 1420 100	<b>WLTH</b> 1400 500
Glenside, Pa.	Ironwood, Mich.	Brooklyn, N. Y.
<b>WIBM</b> 1370 100	<b>WJNO</b> 1200 100	<b>WLVA</b> 1200 100
Jackson, Mich.	W. Palm Beach, Fla.	Lynchburg, Va.
<b>WIBU</b> 1210 100	<b>WJR</b> 750 50000	<b>WLW</b> 700 500000
Poynette, Wis.	Detroit, Mich.	Cincinnati, Ohio
<b>WIBW</b> 580 1000	<b>WJRD</b> 1200 100	<b>WLWL</b> 1100 5000
Topeka, Kans.	Tuscaloosa, Ala.	New York, N. Y.
<b>WIBX</b> 1200 100	<b>WJSV</b> 1460 10000	<b>WMAL</b> 630 250
Utica, N. Y.	Washington, D. C.	Washington, D. C.
<b>WICA</b> 940 250	<b>WJTN</b> 1210 50	<b>WMAQ</b> 670 50000
Ashtabula, Ohio	Jamestown, N. Y.	Chicago, Ill.
<b>WICC</b> 600 500	<b>WJW</b> 1210 100	<b>WMAS</b> 1420 100
Bridgeport, Conn.	Akron, Ohio	Springfield, Mass.
<b>WIL</b> 1200 100	<b>WJZ</b> 760 50000	<b>WMAZ</b> 1180 1000
St. Louis, Mo.	New York, N. Y.	Macon, Ga.
<b>WILL</b> 890 250	<b>WKAQ</b> 1240 1000	<b>WMBC</b> 1420 100
Urbana, Ill.	San Juan, P. R.	Detroit, Mich.
<b>WILM</b> 1420 100	<b>WKAH</b> 850 1000	<b>WMBD</b> 1440 500
Wilmington, Del.	East Lansing, Mich.	Peoria, Ill.
<b>WIND</b> 860 1000	<b>WKBB</b> 1500 100	<b>WMBG</b> 1210 100
Gary, Ind.	East Dubuque, Ill.	Richmond, Va.
<b>WINS</b> 1180 1000	<b>WKSH</b> 1380 1000	<b>WMBH</b> 1420 100
New York, N. Y.	LaCrosse, Wis.	Joplin, Mo.
<b>WIOD</b> 1300 1000	<b>WKBN</b> 870 500	<b>WMBI</b> 1080 5000
Miami, Fla.	Youngstown, Ohio	Chicago, Ill.
<b>WIP</b> 610 1000	<b>WKBO</b> 1200 100	<b>WMBO</b> 1310 100
Philadelphia, Pa.	Harrisburg, Pa.	Auburn, N. Y.
<b>WIRE</b> 1400 1000	<b>WKBV</b> 1500 100	<b>WMBQ</b> 1500 100
Indianapolis, Ind.	Richmond, Ind.	Brooklyn, N. Y.
<b>WIS</b> 560 1000	<b>WKBW</b> 1480 5000	<b>WMBR</b> 1370 100
Columbia, S. C.	Buffalo, N. Y.	Jacksonville, Fla.
<b>WISN</b> 1120 250	<b>WKBZ</b> 1500 100	<b>WMBB</b> 1420 250
Milwaukee, Wis.	Muskegon, Mich.	Uniontown, Pa.
<b>WJAC</b> 1310 100	<b>WKFE</b> 1500 100	<b>WMC</b> 780 1000
Johnstown, Pa.	Griffin, Ga.	Memphis, Tenn.
<b>WJAG</b> 1060 1000	<b>WKOK</b> 1210 100	<b>WMCA</b> 570 1010
Norfolk, Neb.	Sunbury, Pa.	New York, N. Y.
<b>WJAR</b> 890 1000	<b>WKRC</b> 550 1000	<b>WMEX</b> 1500 100
Providence, R. I.	Cincinnati, Ohio	Boston, Mass.
<b>WJAS</b> 1290 1000	<b>WKY</b> 900 1000	<b>WMFD</b> 1370 100
Pittsburgh, Pa.	Oklahoma City, Okla.	Wilmington, N. C.
<b>WJAX</b> 900 1000	<b>WKZO</b> 590 1000	<b>WMFF</b> 1310 250
Jacksonville, Fla.	Kalamazoo, Mich.	Plattsburg, N. Y.
<b>WJAY</b> 610 500	<b>WLAC</b> 1470 5000	<b>WMFG</b> 1210 100
Cleveland, Ohio	Nashville, Tenn.	Hibbing, Minn.
<b>WJBC</b> 1200 100	<b>WLAK</b> 1310 100	<b>WMFJ</b> 1420 100
Bloomington, Ill.	Lakeland, Fla.	Daytona Beach, Fla.

## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>WMFN</b> 1210 Grenada, Miss.	100	<b>WORC</b> 1280 Worcester, Mass.	500	<b>WRBK</b> 1410 Rockford, Ill.	500
<b>WMFO</b> 1370 Decatur, Ala.	100	<b>WORK</b> 1320 York, Pa.	1000	<b>WRDL</b> 1310 Knoxville, Tenn.	100
<b>WMFR</b> 2200 High Point, N. C.	100	<b>WORL</b> 920 Boston, Mass.	500	<b>WRR</b> 1280 Dallas, Texas	500
<b>WMIN</b> 1370 St. Paul, Minn.	100	<b>WOSU</b> 570 Columbus, Ohio	750	<b>WRTD</b> 1500 Richmond, Va.	100
<b>WMMN</b> 890 Fairmont, W. Va.	500	<b>WOV</b> 1130 New York, N. Y.	1000	<b>WRUF</b> 830 Gainesville, Fla.	5000
<b>WMPC</b> 1200 Lapeer, Mich.	100	<b>WOW</b> 590 Omaha, Neb.	5000	<b>WRVA</b> 1110 Richmond, Va.	5000
<b>WMSD</b> 1420 Sheffield, Ala.	100	<b>WOWO</b> 1160 Fort Wayne, Ind.	10000	<b>WSAI</b> 1330 Cincinnati, Ohio	1000
<b>WMT</b> 600 Cedar Rapids, Iowa	1000	<b>WPAD</b> 1420 Paducah, Ky.	100	<b>WSAJ</b> 1310 Grove City, Pa.	100
<b>WNAC</b> 1230 Boston, Mass.	1000	<b>WPAR</b> 1420 Parkersburg, W. Va.	100	<b>WSAN</b> 1440 Allentown, Pa.	500
<b>WNAD</b> 1010 Norman, Okla.	1000	<b>WPAX</b> 1210 Thomasville, Ga.	100	<b>WSAR</b> 1450 Fall River, Mass.	1000
<b>WNAX</b> 570 Yankton, S. D.	1000	<b>WPAY</b> 1370 Portsmouth, Ohio	100	<b>WSAU</b> 1370 Wausau, Wis.	100
<b>WNBC</b> 1380 New Britain, Conn.	250	<b>WPEN</b> 920 Philadelphia, Pa.	250	<b>WSAY</b> 1210 Rochester, N. Y.	100
<b>WNBK</b> 1500 Binghamton, N. Y.	100	<b>WPG</b> 1100 Atlantic City, N. J.	5000	<b>WSAZ</b> 1190 Huntington, W. Va.	1000
<b>WNBH</b> 1310 New Bedford, Mass.	100	<b>WPHR</b> 880 Petersburg, Va.	500	<b>WSB</b> 740 Atlanta, Ga.	50000
<b>WNBR</b> 1430 Memphis, Tenn.	500	<b>WPRA</b> 1370 Mayaguez, P. R.	100	<b>WSBC</b> 1210 Chicago, Ill.	100
<b>WNBX</b> 1260 Springfield, Vt.	1000	<b>WPRO</b> 630 Providence, R. I.	500	<b>WSBT</b> 1360 South Bend, Ind.	500
<b>WNBZ</b> 1290 Saranac Lake, N. Y.	100	<b>WPRP</b> 1420 Ponce, P. R.	100	<b>WSFA</b> 1410 Montgomery, Ala.	500
<b>WNEL</b> 1290 San Juan, P. R.	1000	<b>WPTF</b> 680 Raleigh, N. C.	1000	<b>WSGN</b> 1310 Birmingham, Ala.	100
<b>WNEW</b> 1250 New York, N. Y.	1000	<b>WQAM</b> 560 Miami, Fla.	1000	<b>WSIX</b> 1210 Nashville, Tenn.	100
<b>WNLC</b> 1500 New London, Conn.	100	<b>WQAN</b> 880 Scranton, Pa.	250	<b>WSJS</b> 1310 Winston-Salem, N. C.	100
<b>WNNY</b> 1420 Watertown, N. Y.	100	<b>WQBC</b> 1360 Vicksburg, Miss.	1000	<b>WSM</b> 650 Nashville, Tenn.	50000
<b>WNOX</b> 1010 Knoxville, Tenn.	1000	<b>WQDM</b> 1390 St. Albans, Vt.	1000	<b>WSMB</b> 1320 New Orleans, La.	1000
<b>WNPI</b> 1200 Newport, R. I.	100	<b>WQXR</b> 1550 New York, N. Y.	1000	<b>WSMK</b> 1380 Dayton, Ohio	200
<b>WNYC</b> 810 New York, N. Y.	1000	<b>WRAK</b> 1370 Williamsport, Pa.	100	<b>WSNJ</b> 1210 Bridgeport, N. J.	100
<b>WOAI</b> 1190 San Antonio, Texas	50000	<b>WRAW</b> 1310 Reading, Pa.	100	<b>WSOC</b> 1210 Charlotte, N. C.	100
<b>WOC</b> 1370 Davenport, Iowa	100	<b>WRAX</b> 920 Philadelphia, Pa.	250	<b>WSJA</b> 920 Spokane, S. C.	1000
<b>WOI</b> 640 Ames, Iowa	5000	<b>WRBL</b> 1200 Columbus, Ga.	100	<b>WSPD</b> 1340 Toledo, Ohio	1000
<b>WOKO</b> 1430 Albany, N. Y.	500	<b>WRC</b> 550 Washington, D. C.	500	<b>WSPR</b> 1140 Springfield, Mass.	500
<b>WOL</b> 1310 Washington, D. C.	100	<b>WRDO</b> 1370 Augusta, Me.	100	<b>WSUI</b> 880 Iowa City, Iowa	500
<b>WOLS</b> 1200 Florence, S. C.	100	<b>WRDW</b> 1500 Augusta, Ga.	100	<b>WSUN</b> 620 St. Petersburg, Fla.	1000
<b>WOMT</b> 1210 Manitowoc, Wis.	100	<b>WREC</b> 600 Memphis, Tenn.	1000	<b>WSVA</b> 550 Harrisonburg, Va.	500
<b>WOOD</b> 1270 Grand Rapids, Mich.	500	<b>WREN</b> 1220 Lawrence, Kans.	1000	<b>WSVS</b> 1370 Buffalo, N. Y.	50
<b>WOPI</b> 1500 Bristol, Tenn.	100	<b>WRGA</b> 1500 Rome, Ga.	100	<b>WSYB</b> 1500 Rutland, Vt.	100
<b>WOR</b> 710 Newark, N. J.	50000	<b>WRJN</b> 1370 Racine, Wis.	100	<b>WSYR</b> 570 Syracuse, N. Y.	1000

## NORTH AMERICAN B. C. STATIONS BY CALLS

<b>WTAD</b> 900 1000	<b>WTAD</b> 900 1000	<b>WTAD</b> 900 1000	<b>Quincy, Ill.</b>	<b>XEAG</b> 1310 10	<b>XEAG</b> 1310 10	<b>XEAG</b> 1310 10	<b>Cordoba, Ver.</b>	<b>XEI</b> 1370 125	<b>XEI</b> 1370 125	<b>XEI</b> 1370 125	<b>Morella, Mich.</b>
<b>WTAG</b> 580 1000	<b>WTAG</b> 580 1000	<b>WTAG</b> 580 1000	<b>Worcester, Mass.</b>	<b>XEAL</b> 660 1000	<b>XEAL</b> 660 1000	<b>XEAL</b> 660 1000	<b>Mexico City, D. F.</b>	<b>XEJ</b> 1020 1000	<b>XEJ</b> 1020 1000	<b>XEJ</b> 1020 1000	<b>Juarez, Chih.</b>
<b>WTAL</b> 1310 100	<b>WTAL</b> 1310 100	<b>WTAL</b> 1310 100	<b>Tallahassee, Fla.</b>	<b>XEAM</b> 750 25	<b>XEAM</b> 750 25	<b>XEAM</b> 750 25	<b>Matamoros, Tams.</b>	<b>XEPF</b> 1130 100	<b>XEPF</b> 1130 100	<b>XEPF</b> 1130 100	<b>Mexico City, D. F.</b>
<b>WTAM</b> 1070 50000	<b>WTAM</b> 1070 50000	<b>WTAM</b> 1070 50000	<b>Cleveland, Ohio</b>	<b>XEAO</b> 560 250	<b>XEAO</b> 560 250	<b>XEAO</b> 560 250	<b>Mexicali, B. C.</b>	<b>XEK</b> 990 100	<b>XEK</b> 990 100	<b>XEK</b> 990 100	<b>Mexico City, D. F.</b>
<b>WTAQ</b> 1330 1000	<b>WTAQ</b> 1330 1000	<b>WTAQ</b> 1330 1000	<b>Green Bay, Wis.</b>	<b>XEAQ</b> 1090 1000	<b>XEAQ</b> 1090 1000	<b>XEAQ</b> 1090 1000	<b>Rosarito, L. C.</b>	<b>XEKL</b> 1240 500	<b>XEKL</b> 1240 500	<b>XEKL</b> 1240 500	<b>Leon, Guan.</b>
<b>WTAR</b> 780 500	<b>WTAR</b> 780 500	<b>WTAR</b> 780 500	<b>Norfolk, Va.</b>	<b>XEAS</b> 1100 50	<b>XEAS</b> 1100 50	<b>XEAS</b> 1100 50	<b>Saltillo, Coah.</b>	<b>XEL</b> 780 1000	<b>XEL</b> 780 1000	<b>XEL</b> 780 1000	<b>Mexico City, D. F.</b>
<b>WTAW</b> 1120 500	<b>WTAW</b> 1120 500	<b>WTAW</b> 1120 500	<b>College Station, Tex.</b>	<b>XEAT</b> 1210 250	<b>XEAT</b> 1210 250	<b>XEAT</b> 1210 250	<b>Paral, Chih.</b>	<b>XELA</b> 1240 50	<b>XELA</b> 1240 50	<b>XELA</b> 1240 50	<b>Saltillo, Coah.</b>
<b>WTAX</b> 1210 100	<b>WTAX</b> 1210 100	<b>WTAX</b> 1210 100	<b>Springfield, Ill.</b>	<b>XEAW</b> 960 50000	<b>XEAW</b> 960 50000	<b>XEAW</b> 960 50000	<b>Reynosa, Tams.</b>	<b>XELO</b> 580 50000	<b>XELO</b> 580 50000	<b>XELO</b> 580 50000	<b>Piedras Negras, Coah.</b>
<b>WTBO</b> 800 250	<b>WTBO</b> 800 250	<b>WTBO</b> 800 250	<b>Cumberland, Md.</b>	<b>XEB</b> 1030 10000	<b>XEB</b> 1030 10000	<b>XEB</b> 1030 10000	<b>Mexico City, D. F.</b>	<b>XELZ</b> 1370 100	<b>XELZ</b> 1370 100	<b>XELZ</b> 1370 100	<b>Mexico City, D. F.</b>
<b>WTCN</b> 1250 1000	<b>WTCN</b> 1250 1000	<b>WTCN</b> 1250 1000	<b>Minneapolis, Minn.</b>	<b>XEBA</b> 1080 20	<b>XEBA</b> 1080 20	<b>XEBA</b> 1080 20	<b>Guzman, Jal.</b>	<b>XEMG</b> 1060 100	<b>XEMG</b> 1060 100	<b>XEMG</b> 1060 100	<b>Atzacapotzalco, D. F.</b>
<b>WTEL</b> 1310 100	<b>WTEL</b> 1310 100	<b>WTEL</b> 1310 100	<b>Philadelphia, Pa.</b>	<b>XEBB</b> 730 5000	<b>XEBB</b> 730 5000	<b>XEBB</b> 730 5000	<b>Agua Caliente, L. C.</b>	<b>XEMO</b> 860 5000	<b>XEMO</b> 860 5000	<b>XEMO</b> 860 5000	<b>Tijuana, L. C.</b>
<b>WTFI</b> 1450 500	<b>WTFI</b> 1450 500	<b>WTFI</b> 1450 500	<b>Athens, Ga.</b>	<b>XEBG</b> 820 1000	<b>XEBG</b> 820 1000	<b>XEBG</b> 820 1000	<b>Tijuana, B. Cfa.</b>	<b>XEMX</b> 1280 100	<b>XEMX</b> 1280 100	<b>XEMX</b> 1280 100	<b>Mexico City, D. F.</b>
<b>WTHF</b> 1200 100	<b>WTHF</b> 1200 100	<b>WTHF</b> 1200 100	<b>Hartford, Conn.</b>	<b>XEBH</b> 930 500	<b>XEBH</b> 930 500	<b>XEBH</b> 930 500	<b>Hermosillo, Sonora</b>	<b>XENC</b> 860 50	<b>XENC</b> 860 50	<b>XENC</b> 860 50	<b>Mexico City, D. F.</b>
<b>WTIC</b> 1040 50000	<b>WTIC</b> 1040 50000	<b>WTIC</b> 1040 50000	<b>Hartford, Conn.</b>	<b>XEBJ</b> 1160 20	<b>XEBJ</b> 1160 20	<b>XEBJ</b> 1160 20	<b>Merida, Yuc.</b>	<b>XENT</b> 910 150000	<b>XENT</b> 910 150000	<b>XENT</b> 910 150000	<b>Nuevo Laredo, Tams.</b>
<b>WTJS</b> 1310 100	<b>WTJS</b> 1310 100	<b>WTJS</b> 1310 100	<b>Jackson, Tenn.</b>	<b>XEBK</b> 1000 100	<b>XEBK</b> 1000 100	<b>XEBK</b> 1000 100	<b>Nuevo Laredo, Tams.</b>	<b>XEOK</b> 760 2500	<b>XEOK</b> 760 2500	<b>XEOK</b> 760 2500	<b>Tijuana, L. C.</b>
<b>WTMJ</b> 620 1000	<b>WTMJ</b> 620 1000	<b>WTMJ</b> 620 1000	<b>Milwaukee, Wis.</b>	<b>XEBX</b> 640 250	<b>XEBX</b> 640 250	<b>XEBX</b> 640 250	<b>Sabinas, Coah.</b>	<b>XEOX</b> 640 500	<b>XEOX</b> 640 500	<b>XEOX</b> 640 500	<b>Saltillo, Coah.</b>
<b>WTMV</b> 1500 100	<b>WTMV</b> 1500 100	<b>WTMV</b> 1500 100	<b>East St. Louis, Ill.</b>	<b>XEBZ</b> 1160 100	<b>XEBZ</b> 1160 100	<b>XEBZ</b> 1160 100	<b>Mexico City, D. F.</b>	<b>XEP</b> 1160 500	<b>XEP</b> 1160 500	<b>XEP</b> 1160 500	<b>Juarez, Chih.</b>
<b>WTNJ</b> 1290 500	<b>WTNJ</b> 1290 500	<b>WTNJ</b> 1290 500	<b>Trenton, N. J.</b>	<b>XEC</b> 1150 100	<b>XEC</b> 1150 100	<b>XEC</b> 1150 100	<b>Tijuana, L. C.</b>	<b>XEPN</b> 730 100000	<b>XEPN</b> 730 100000	<b>XEPN</b> 730 100000	<b>Piedras Negras, Coah.</b>
<b>WTOC</b> 1260 1000	<b>WTOC</b> 1260 1000	<b>WTOC</b> 1260 1000	<b>Savannah, Ga.</b>	<b>XECW</b> 1310 10	<b>XECW</b> 1310 10	<b>XECW</b> 1310 10	<b>Mexico City, D. F.</b>	<b>XERA</b> 840 350000	<b>XERA</b> 840 350000	<b>XERA</b> 840 350000	<b>Villa Acuna, Coah.</b>
<b>WTRC</b> 1310 100	<b>WTRC</b> 1310 100	<b>WTRC</b> 1310 100	<b>Elkhart, Ind.</b>	<b>XECZ</b> 1370 100	<b>XECZ</b> 1370 100	<b>XECZ</b> 1370 100	<b>San Luis Potosi, S.L.P.</b>	<b>XES</b> 990 250	<b>XES</b> 990 250	<b>XES</b> 990 250	<b>Tampico, Tams.</b>
<b>WVFW</b> 1400 500	<b>WVFW</b> 1400 500	<b>WVFW</b> 1400 500	<b>Brooklyn, N. Y.</b>	<b>XED</b> 1160 2500	<b>XED</b> 1160 2500	<b>XED</b> 1160 2500	<b>Guadalajara, Jal.</b>	<b>XET</b> 690 500	<b>XET</b> 690 500	<b>XET</b> 690 500	<b>Monterrey, N. L.</b>
<b>WWAE</b> 1200 100	<b>WWAE</b> 1200 100	<b>WWAE</b> 1200 100	<b>Hammond, Ind.</b>	<b>XEDA</b> 1220 200	<b>XEDA</b> 1220 200	<b>XEDA</b> 1220 200	<b>Gra. Anaya, D. F.</b>	<b>XETB</b> 1310 125	<b>XETB</b> 1310 125	<b>XETB</b> 1310 125	<b>Torreon, Coah.</b>
<b>WWJ</b> 920 1000	<b>WWJ</b> 920 1000	<b>WWJ</b> 920 1000	<b>Detroit, Mich.</b>	<b>XEDW</b> 1150 20	<b>XEDW</b> 1150 20	<b>XEDW</b> 1150 20	<b>Minatitlan, Ver.</b>	<b>XETF</b> 1220 30	<b>XETF</b> 1220 30	<b>XETF</b> 1220 30	<b>Veracruz, Ver.</b>
<b>WWL</b> 850 10000	<b>WWL</b> 850 10000	<b>WWL</b> 850 10000	<b>New Orleans, La.</b>	<b>XEE</b> 1210 50	<b>XEE</b> 1210 50	<b>XEE</b> 1210 50	<b>Durango, Dgo.</b>	<b>XETH</b> 1210 100	<b>XETH</b> 1210 100	<b>XETH</b> 1210 100	<b>Puebla, Pue.</b>
<b>WWNC</b> 570 1000	<b>WWNC</b> 570 1000	<b>WWNC</b> 570 1000	<b>Asheville, N. C.</b>	<b>XEF</b> 1450 100	<b>XEF</b> 1450 100	<b>XEF</b> 1450 100	<b>Juarez, Chih.</b>	<b>XEU</b> 1010 250	<b>XEU</b> 1010 250	<b>XEU</b> 1010 250	<b>Veracruz, Ver.</b>
<b>WWRL</b> 1500 100	<b>WWRL</b> 1500 100	<b>WWRL</b> 1500 100	<b>Woodside, N. Y.</b>	<b>XEFA</b> 1180 500	<b>XEFA</b> 1180 500	<b>XEFA</b> 1180 500	<b>Tacuba, D. F.</b>	<b>XEW</b> 890 50000	<b>XEW</b> 890 50000	<b>XEW</b> 890 50000	<b>Mexico City, D. F.</b>
<b>WWSW</b> 1500 100	<b>WWSW</b> 1500 100	<b>WWSW</b> 1500 100	<b>Pittsburgh, Pa.</b>	<b>XEFB</b> 870 200	<b>XEFB</b> 870 200	<b>XEFB</b> 870 200	<b>Monterrey, N. L.</b>	<b>XEX</b> 1310 125	<b>XEX</b> 1310 125	<b>XEX</b> 1310 125	<b>Monterrey, N. L.</b>
<b>WWVA</b> 1160 5000	<b>WWVA</b> 1160 5000	<b>WWVA</b> 1160 5000	<b>Wheeling, W. Va.</b>	<b>XEFC</b> 550 250	<b>XEFC</b> 550 250	<b>XEFC</b> 550 250	<b>Merida, Yuc.</b>	<b>XEXB</b> 1270 50	<b>XEXB</b> 1270 50	<b>XEXB</b> 1270 50	<b>Jalapa, Ver.</b>
<b>WXYZ</b> 1240 1000	<b>WXYZ</b> 1240 1000	<b>WXYZ</b> 1240 1000	<b>Detroit, Mich.</b>	<b>XEFE</b> 1340 250	<b>XEFE</b> 1340 250	<b>XEFE</b> 1340 250	<b>Laredo, Tams.</b>	<b>XEXC</b> 810 350	<b>XEXC</b> 810 350	<b>XEXC</b> 810 350	<b>Aguascalientes, Ags.</b>
<b>W3XJ</b> 1060 100	<b>W3XJ</b> 1060 100	<b>W3XJ</b> 1060 100	<b>College Park, Md.</b>	<b>XEFI</b> 1440 250	<b>XEFI</b> 1440 250	<b>XEFI</b> 1440 250	<b>Chihuahua, Chih.</b>	<b>XEXD</b> 1340 350	<b>XEXD</b> 1340 350	<b>XEXD</b> 1340 350	<b>Jalapa, Ver.</b>
<b>XEAA</b> 920 200	<b>XEAA</b> 920 200	<b>XEAA</b> 920 200	<b>Mexicali, B. C.</b>	<b>XEFJ</b> 1230 100	<b>XEFJ</b> 1230 100	<b>XEFJ</b> 1230 100	<b>Monterrey, N. L.</b>	<b>XEXH</b> 1250 250	<b>XEXH</b> 1250 250	<b>XEXH</b> 1250 250	<b>San Luis Potosi, S.L.P.</b>
<b>XEAC</b> 980 250	<b>XEAC</b> 980 250	<b>XEAC</b> 980 250	<b>Tijuana, L. C.</b>	<b>XEFO</b> 940 5000	<b>XEFO</b> 940 5000	<b>XEFO</b> 940 5000	<b>Mexico City, D. F.</b>	<b>XEXM</b> 610 500	<b>XEXM</b> 610 500	<b>XEXM</b> 610 500	<b>Mexico City, D. F.</b>
<b>XEAD</b> 1060 125	<b>XEAD</b> 1060 125	<b>XEAD</b> 1060 125	<b>Guadalajara, Jal.</b>	<b>XEFV</b> 1210 100	<b>XEFV</b> 1210 100	<b>XEFV</b> 1210 100	<b>Juarez, Chih.</b>	<b>XEXS</b> 1000 100	<b>XEXS</b> 1000 100	<b>XEXS</b> 1000 100	<b>Portable in Mexico</b>
<b>XEAF</b> 990 250	<b>XEAF</b> 990 250	<b>XEAF</b> 990 250	<b>Nogales, Son.</b>	<b>XEFW</b> 1310 250	<b>XEFW</b> 1310 250	<b>XEFW</b> 1310 250	<b>Tampico, Tams.</b>	<b>KEYO</b> 940 500	<b>KEYO</b> 940 500	<b>KEYO</b> 940 500	<b>Mexico City, D. F.</b>
				<b>XEH</b> 720 250	<b>XEH</b> 720 250	<b>XEH</b> 720 250	<b>Monterrey, N. L.</b>	<b>KEZ</b> 830 500	<b>KEZ</b> 830 500	<b>KEZ</b> 830 500	<b>Merida, Yuc.</b>



# At DEADLINE . . .

Call letters WJOY have been assigned to the new station on 950 kcs. at Saginaw, Mich.

\* \* \*

New police stations licensed are WRDH, Houghton Heights, Mich., of the Michigan State Police. New municipal stations are KADQ, Brea, Calif., WASC, Peru, Ind., and WASD, Madison, Wis.

\* \* \*

A new station at Daventry, Great Britain, is GST, on 21550 kcs.

\* \* \*

William Buchanan of Sydney, N. S., Canada, reports a new Spanish station, EAQ2, on 9475 kcs. The announcer stated they were on the air on Tuesdays and Fridays from 1400 to 1600 EST.

\* \* \*

A new Bolivian station has just appeared. Its name is "Radio Chuquisaca," call letters being unknown at this time. It is heard on Sunday mornings in the 6 meg. band.

\* \* \*

TYA2, a regional station of the French government, was heard on 9030 kcs. with music at 0200 EST.

\* \* \*

Ronald Self of King Cove, Alaska, submits information on three Alaskan stations. KAEW, Umnak, KAJJ, Atka, and KAQF, Unalaska, each works on 2616, 5207 and 8070 kcs.

\* \* \*

NBC has added two outlets to bring its total station strength to a new high of 121. The new territories served are Erie, Pa., with its station WLEU becoming an optional outlet of the Basic Blue Network, and station KANS in Wichita, Kans., which is now an optional outlet available to either the Red or the Blue Chain.

# DON'T Miss THIS . . .

## DAILY

1321, EST, News, 2RO, 9635 kcs.  
 1630, News, W1XAL, 11790 (except Sunday)  
 1800, News, W1XAL, 11790 (except Sunday)  
 1800, News, YV5RC, 5800  
 2010, News, GSB, 9510; GCS, 9580; GSD, 11750  
 2230, News, DJB, 15200; DJD, 11770  
 2240, News, GSB, 9510; GSC, 9580; GSD, 11750  
 2330, News, TPA4, 11720

## EVERY SATURDAY

0000, KDKA Dx Club, KDKA, 980; W8XX, 6140  
 1400, Metropolitan Opera, W2XAD, 15330;  
 W2XAF, 9530; W3XAL, 17780  
 2200, American DXers' Program, HJLABP, 9600  
 2300, Northern Messenger, CJRO, 6150; CJRX, 11720

## EVERY SUNDAY

0000, Far North Broadcasts, KDKA, 980; W8XX, 6140

## EVERY MONDAY

1900, 2RO Mail Bag, 2RO, 9635  
 1930, Modern Radio Course, W1XAL, 6040  
 2030, Code Practice Lessons, W1XAL, 6040  
 2045, Amateur Hour, YV5RC, 5800

## EVERY MONDAY, WEDNESDAY, FRIDAY

1800, American Hour, 2RO, 9635

### April 22

2345, "Count of Luxemburg," TPA4, 11720

### April 26

1900, Ladies' Night, 2RO, 9635  
 1930, "Fading and Static," W1XAL, 6040

### May 12

Coronation Ceremonies from Daventry

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# A Timely Suggestion

The RADEX Map of the World with Time Converting Dial is the most useful accessory any radio fan could ask for.

The list of international call letter assignments has been completely revised. This up-to-the-minute list enables one to identify all stations by their call signs. A glance at the World Map gives their location, and a twirl of the dial instantly shows their time.

No calculation is necessary. The dial does all the work.

You Can't Get Along Without It.

Price only 25 cents, and we pay the postage.  
(26 cents to Ohio residents)

**THE RADEX PRESS**  
**Conneaut, Ohio**

## INSURE YOUR RADIO ENJOYMENT SEND THIS BLANK TODAY

The Radex Press  
Conneaut, Ohio:

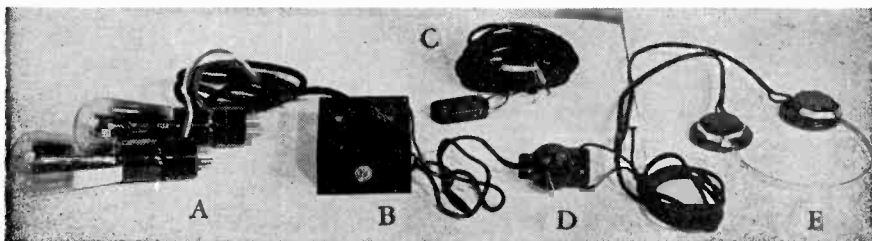
Enclosed find \$..... for which send me postpaid my choice of your offers as checked below:

- Program "slates"       1 for 10c       2 for 15c       4 for 25c
- One Radio World Map and Time Converter ..... 25c
- One copy of the next RADEX ..... 25c
- One year's subscription to RADEX, 10 issues ..... \$1.75
- Two years ..... \$3.25       Three years ..... \$4.75
- Beginner's Story of Radio ..... .35  
(If you live in Ohio, add 3% for State Sales Tax. No tax on subscriptions.)

Print Name Plainly .....

Street and Number .....

City and State .....



## The "Perfect" Phone Adapter

The device which makes it easy to attach headphones to any radio set. Anyone can install it, without tools, in no time at all. It cannot harm the receiver and the operation of the set is not affected in any way.

### IDEAL FOR THE HARD-OF-HEARING

Those who are very hard of hearing can enjoy radio reception by using our new HOH Model Phone Adapter. It gives sufficient volume on the headphones without it being necessary to increase the volume of the receiver above normal.

**The HOH Model Perfect Phone Adapter . . . . . \$ 3.95**

**The Phone Adapter with Trimm Featherweight Headphones . . . . . \$12.00**

**The Phone Adapter with a good pair of Trimm Headphones . . . . . \$ 6.70**

We can also supply accessories for group hearing aids and for "silent listening," as well as adapters to enable the hard of hearing to use their bone conduction or air conduction units with the Perfect Phone Adapter. Write us for information.

**We pay the postage on all orders**  
*If you live in Ohio add 3% for Sales Tax*

*In ordering be sure to give make and model of receiver and a list of the tubes used.*

**The Radex Press**  
**Conneaut, Ohio**



**J. E. SMITH, President  
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The man who has directed the home study training of more men for the Radio Industry than any other man in America.

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**Earned \$50  
First Month  
In Spare Time**

"I knew nothing about Radio. After four lessons I

began servicing Radios, earning \$50 the first month. Last winter I made as high as \$100 a month in spare time."—G. F. WALTON, 508 West Olney Road, Norfolk, Va.

**Own  
Business  
Pays  
\$300  
a Month**



"I now have my own Radio business which shows three hundred dollars a month profit—thanks again to National Radio."—FRANK T. REESE, 39 N. Felton St., Philadelphia, Penna.

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on Radio Servicing Tips**

Here's proof that N. R. I. Training is practical money-making information—that it is easy to understand—that it is just what you need to master Radio. The sample lesson text, "Radio Receiver Troubles—Their Cause and Remedy," covers a long list of Radio receiver troubles in universal, auto, T.R.F., superheterodyne, all-wave and other types of sets. Get this lesson Free. Mail Coupon.

# I WILL TRAIN YOU TO START A SPARE TIME OR FULL TIME RADIO SERVICE BUSINESS WITHOUT CAPITAL

Do you want to make more money? The world-wide use of Radio has made many opportunities for you to have a spare time or full time Radio service business of your own. Three out of every four homes in the United States have Radio sets which regularly require repairs, servicing, new tubes, etc. Many sets are old and will soon be replaced by new models. I will train you at home in your spare time to sell, install, service, all types of Radio sets—to start your own Radio business and build it up on money you make in your spare time while learning. Mail coupon for my 64-page book. It's Free—it shows what I have done for others.

**Many Make \$5, \$10, \$15  
a Week Extra**

**In Spare Time While Learning**

Practically every neighborhood needs a good spare time serviceman. The day you enroll I start sending you Extra Money Job Sheets. They show you how to do Radio repair jobs that you can cash in on quickly. Throughout your training I send plans and ideas that have made good spare time money for hundreds of fellows. I send special equipment which gives you practical experience—shows you how to conduct experiments and build circuits which illustrate important Radio principles.

**There's a Real Future in Radio  
for Well Trained Men**

Radio already gives jobs to more than 300,000 people. In 1935 over \$300,000,000 worth of sets, tubes and parts were sold—an increase of 20% over 1934! Over 1,100,000 auto Radios were sold in 1935, 25% more than in 1934! 22,000,000 homes are today equipped with radios, and every year millions of these sets go out of date and are replaced with newer models. Millions more need servicing, new tubes, repairs, etc. Broadcasting stations pay their employees (exclusive of artists) more than \$23,000,000 a year! And Radio

is a new industry, still growing fast! A few hundred \$30, \$50, \$75-a-week jobs have grown to thousands in less than 20 years.

**Get Ready Now for Your Own  
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Broadcasting stations employ engineers, operators, station managers and pay up to \$5,000 a year. Spare time Radio set servicing pays as much as \$200 to \$500 a year—full time servicing jobs pay as much as \$30, \$50, \$75 a week. Many Radio Experts own their own full or part time Radio businesses. Radio manufacturers and jobbers employ testers, inspectors, foremen, engineers, servicemen, paying up to \$5,000 a year. Radio operators on ships get good pay and see the world. Automobile, police, aviation, commercial Radio, and loud speaker systems offer good opportunities now and for the future. Television promises many good jobs soon. Men I trained have good jobs in these branches of Radio.

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Act Today. Mail the coupon now for my Free Lesson and my book "Rich Rewards in Radio." Both are free to anyone over 16 years old. My book describes Radio's spare time and full time opportunities and those coming in Television; tells about my Training in Radio and Television; shows you actual letters from men I have trained, telling what they are doing and earning, tells about my Money-Back Agreement. Find out what Radio offers YOU! MAIL THE COUPON in an envelope, or paste it on a penny post card—NOW!



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Dear Mr. Smith: Without obligation, send me the Sample Lesson and your book free about spare time and full time Radio opportunities, and how I can train for them at home in spare time. (Please write plainly.)

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Address.....

City..... State..... 14X1